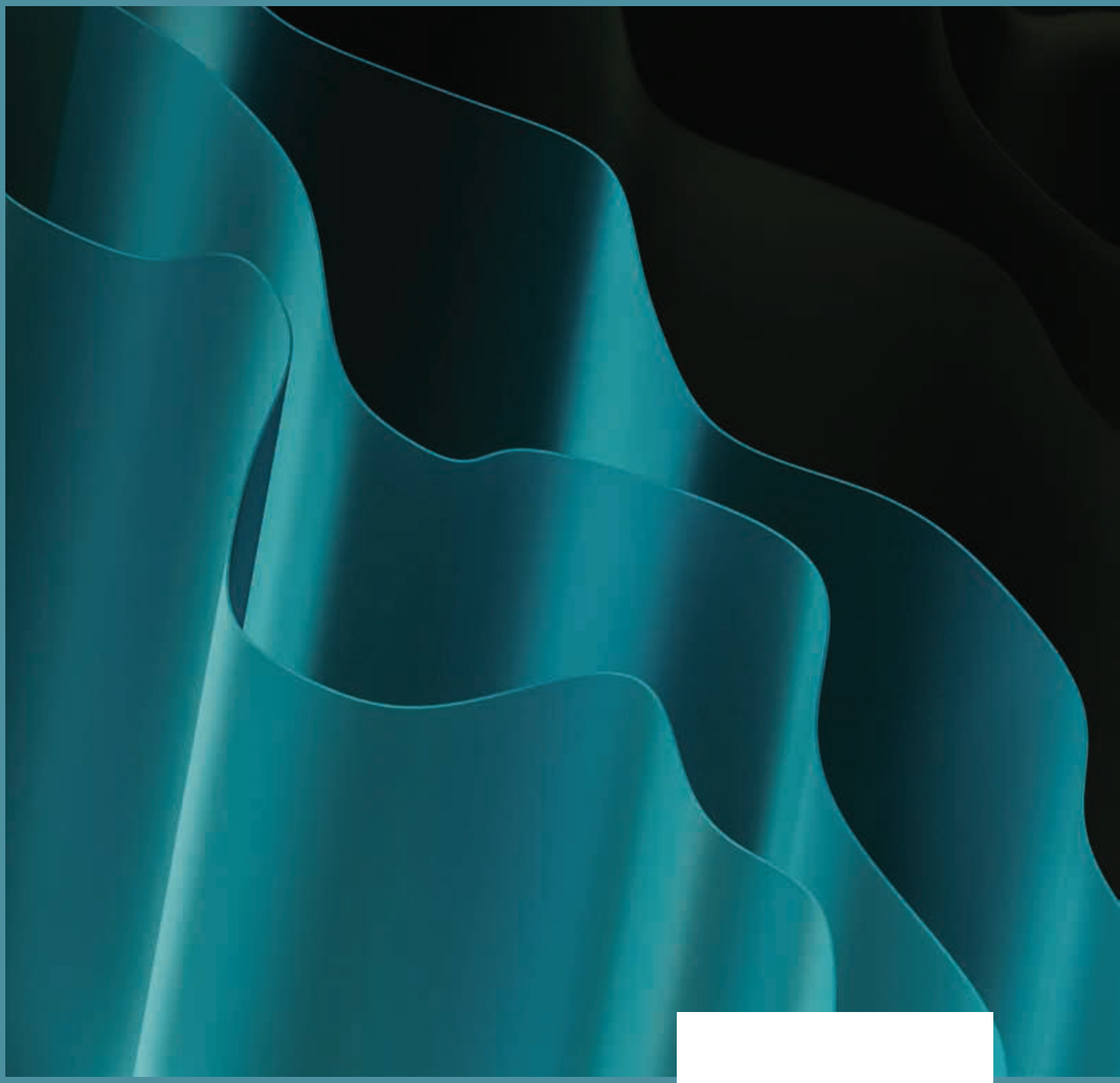


# Catalog

Professional 2023

argo

improve your life

www.tpiab.com

# CONTENTS

# OUR **HISTORY**

We are an historical Italian company specialized in the production and sale of air conditioning products and heating systems, founded in 1929 in Cavaria, near Varese, where production, R&D, IT and quality control are still operating on an area of 42.000 sqm. The headquarters are nowadays based in Alfianello, close to Brescia, where the company established its logistic and commercial departments with a warehouse of 20.000 sqm.

## SINCE 1929

# OUR **TEAM**

We have an extensive sales network all over Europe which allows us to be easily reachable and aligned with local supply needs that, also due to different climatic conditions, require specific know-how.

# TECHNICAL **ASSISTANCE**

In addition to the sales network, we have 500 service centres (CAT) all over Italy, that are constantly trained and strictly connected to the headquarters, and that ensure answers and timely and qualified interventions all over the country.

# PRODUCT
# RESEARCH AND DEVELOPMENT

**OUR COMPLETE AUTONOMY IN INDUSTRIAL AND ENGINEERING INTELLIGENCE IS PART OF OUR COMPANY'S ASSETS WHICH HAS BEEN GROWING FOR MORE THAN 90 YEARS.**

Research, experimentation and forefront production technologies and equipment allow us to offer quality systems with high technical performance. The developed skills range from mechanical design to calculations and thermodynamic simulations, product engineering, electronic design, control algorithm definition, field test supervision and testing systems.

# ARGO **ACADEMY**

**ARGO ACADEMY IS AN INNOVATIVE SPACE THAT HAS RECENTLY BEEN OPENED IN THE PRODUCTION PREMISES IN GALLARATE.**

Argo Academy is provided with the most modern work equipment and welcomes customers and collaborators for training activities that are structured on several specialisation levels.

To ensure high learning standards, the training offer combines theoretical activities with several operative sessions, thanks to the full functionality of the systems installed inside the training room.

## MAIN GOALS

- **TECHNICAL TRAINING** on several levels for operators who work in the air conditioning and heating sector
- **COMMERCIAL TRAINING** with constant updates on the Argo product range

## THE RECIPIENTS OF OUR TRAINING OFFER

- INSTALLER
- AGENTS - DISTRIBUTORS - CLIENTS
- DESIGNERS - HEATING ENGINEERS

## TYPES OF TRAINING OFFER

To pursue high learning standards, our training offer is divided by type of product, application sector and level of detail in the topics:

1. **Product type**: direct expansion/hydronic solutions
2. **Application sector**: residential/commercial/big systems
3. **Specialisation level**: base - installers/advanced - designers

## THE COURSES

The training offer is initially articulated in the following courses:

1. Residential – air conditioning and direct expansion: monosplit and multiplit systems
2. Residential – hydronic heat pumps: monobloc units (iM) and (iSERIES) split systems
3. Commercial and big systems


argo

# HEAT PUMPS

**iSERIES**: air/air and air/water heat pump SPLIT

**iM**: air/water heat pump MONOBLOC

**X3 Air to water heat pumps**: residential and commercial applications

**HEAT PUMPS:** accessories

**X3 MODULAR HEAT PUMPS**

**HEAT PUMPS FOR DOMESTIC HOT WATER**

# RENEWABLE ENERGY SYSTEMS FOR MAXIMUM COMFORT

## With iSERIES, you can build your dream home with:

- Heating and cooling of rooms with fan coils, direct-expansion units or using a combination of both
- Domestic hot water production with high-efficiency systems and energy recovery capability (EMIX and EMIX TANK models)
- Domestic hot water production with 3-way valve and DHW tank

# MAIN FEATURES

## HOW iSERIES WORKS

iSERIES is a system integrated into a heat hump that enables:

- heating
- cooling
- production of domestic hot water

What makes iSERIES unique is that it has both an outdoor unit and corresponding indoor units within the same system, which can exchange energy, either with the hydronic terminals or directly with the ambient air.

iSERIES combines two different technologies:

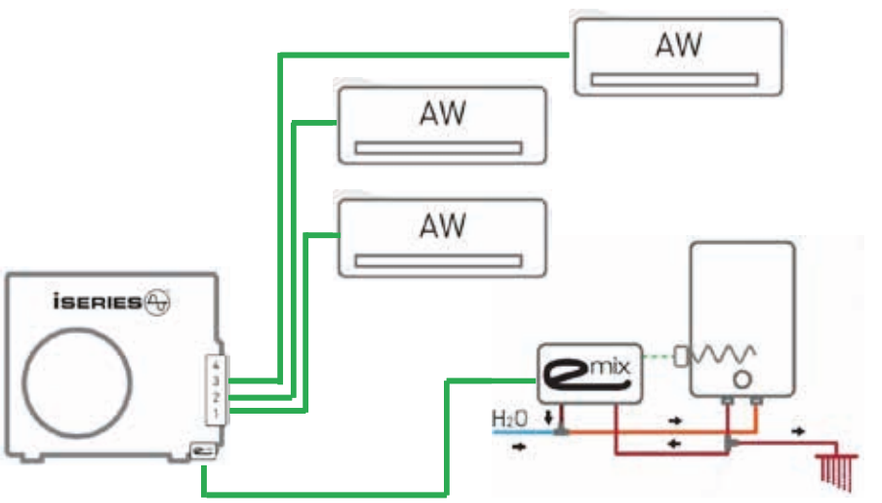
- Direct-expansion technology (Single and multi-split)
- Technology for heat exchange with water (radiant systems, fan coil units, radiators).

**A2A** **A2W**

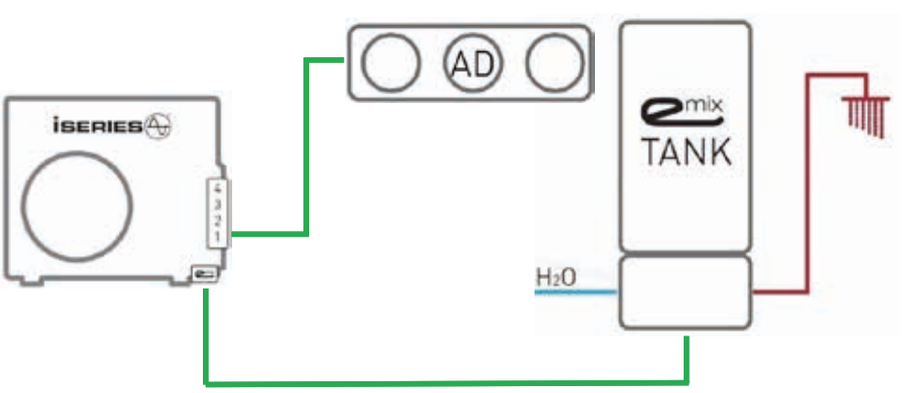
By adding specific indoor units, such as EMIX or EMIX TANK, domestic hot water can be produced at the same time as heating or cooling rooms and during heat recovery in cooling mode during the summer.

# WHAT YOU CAN BUILD WITH iSERIES

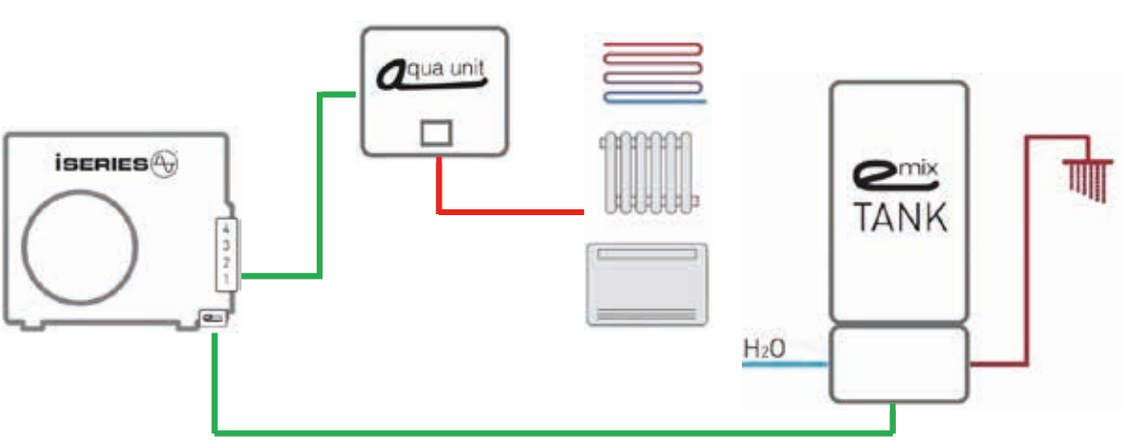
With iSERIES you can create a vast range of system solutions to meet all kinds of needs, be it for residential or small-scalecommercial use. By way of example, some of the possible and versatile combinations of indoor/outdoor units are listed below.



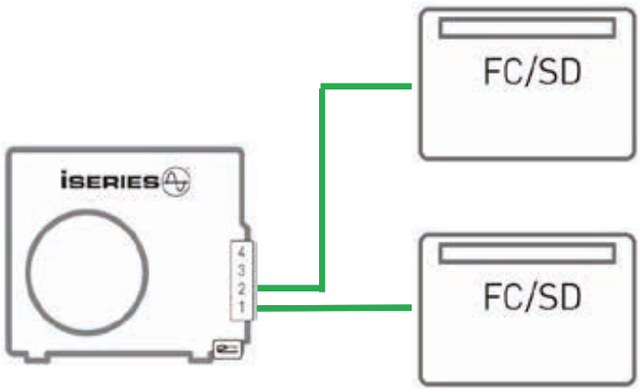

Multi-split system for residential installations with DHW production



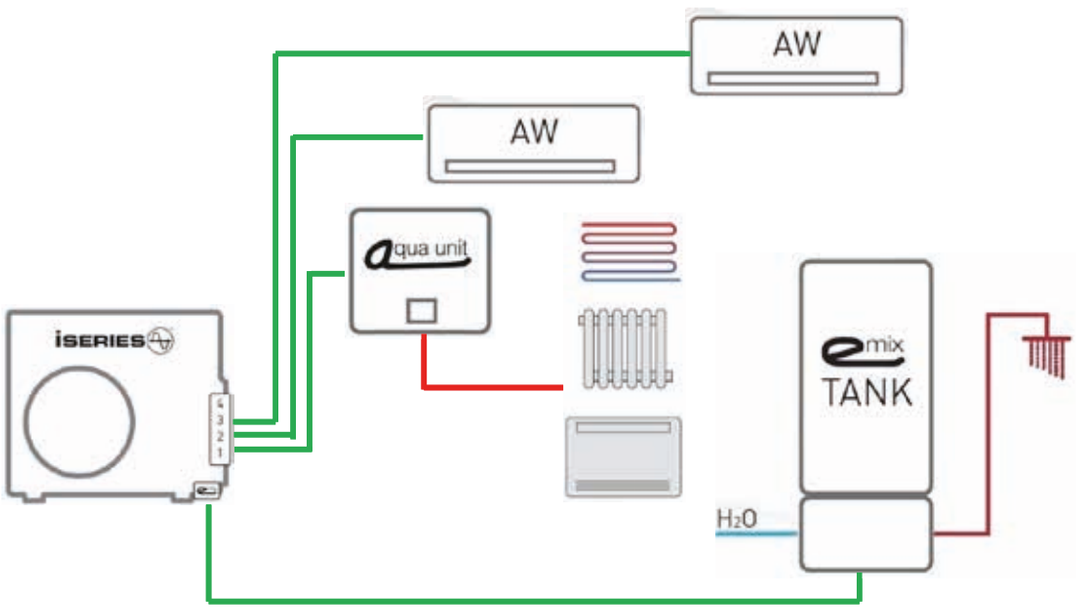

Single-split system with DHW production



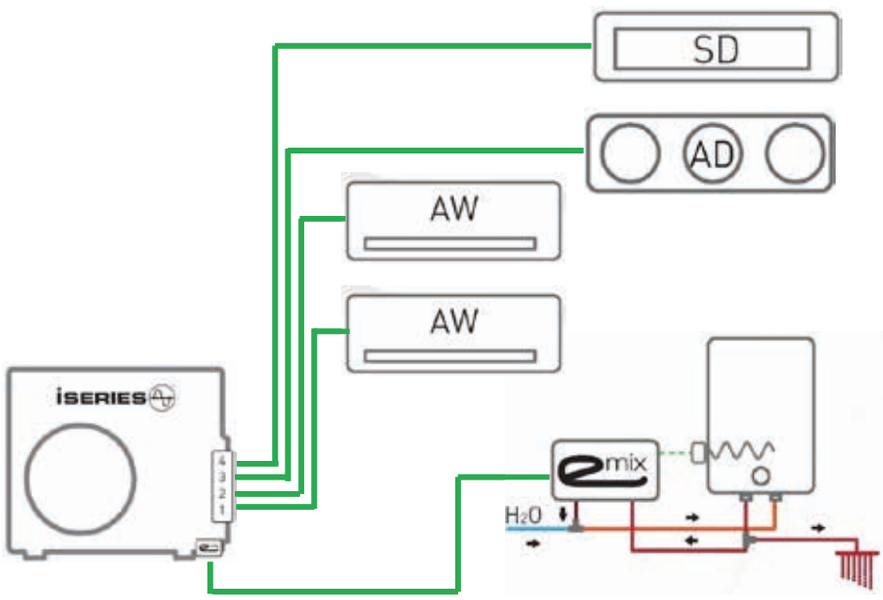

Hydronic system with DHW production




Single/multi-split system for computer rooms




Hydronic and multi-split system with DHW production

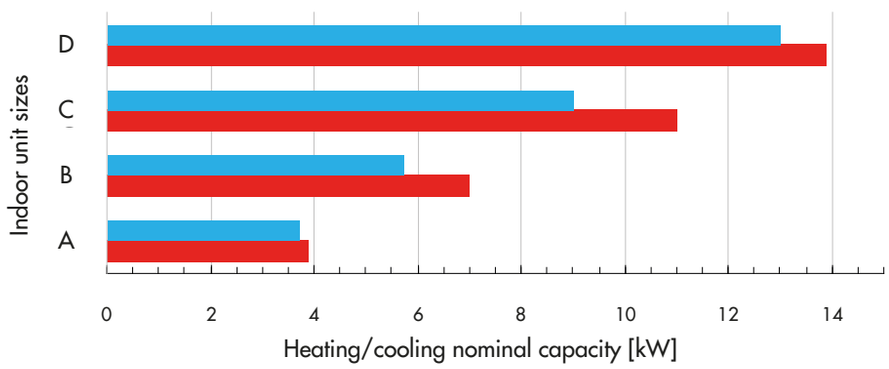



Multi-split system for commercial installations with DHW production

# SIZES AND CAPACITY

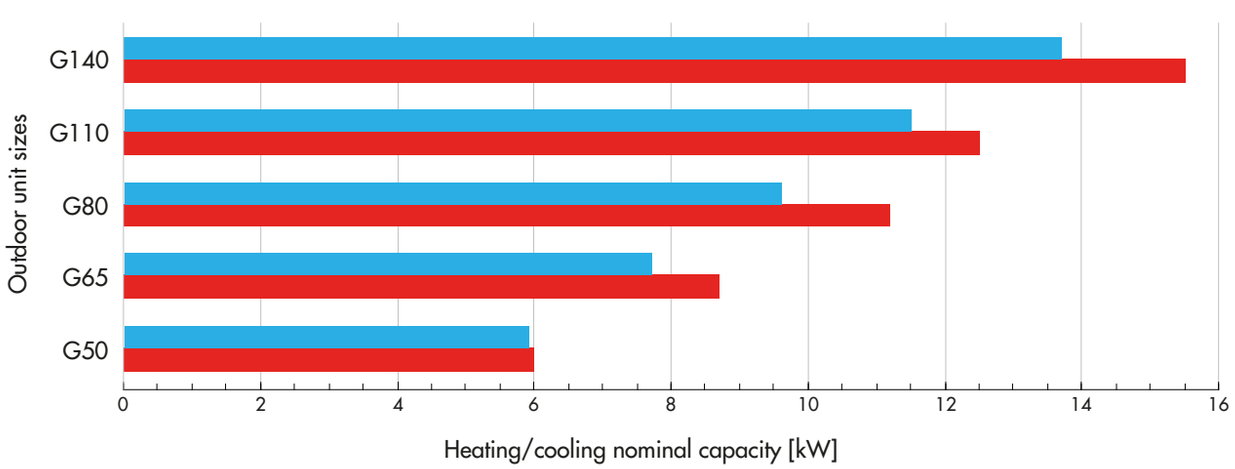
## INDOOR UNITS

The graph below shows the nominal heat/cooling capacity of iSERIES indoor units.
Four reference sizes were defined based on the different output values, labelled A, B, C and D respectively. For example, a size-A indoor unit represents a nominal heat capacity of 3.9 kW and a cooling capacity of 3.7 kW.




## OUTDOOR UNITS

Giving each indoor unit a size makes it quick and easy to work out the corresponding outdoor unit that it can be linked up to, based on a specific series of combinations between indoor units/outdoor units, so as to ensure that the system operates correctly, in line with the now widely used multi-split systems. Linking up indoor units/outdoor units naturally depends on the capacity of these units, as summarised in the graph below (for more specific data, please refer to individual data sheets).




Cooling capacity
Heating capacity

The values presented are based on the following operating conditions:
- A2A heating: t outside air = 7 °C, t ambient air = 20 °C
- A2A cooling: t outside air = 35 °C, t ambient air = 27 °C


argo

# OUTDOOR UNITS

## Full DC Inverter

# iSERIES

iSERIES is a split system heat pump for heating, cooling and production of domestic hot water. The system is composed by a range of 6 outdoor units in R410A with Twin Rotary Full DC Inverter compressor. The models in configuration air/air can also be combined with hydronic indoor units, as AQUA UNIT, for air/water applications. The EMIX door, for EMIX and EMIX TANK connection, allows to achieve mixed applications with production of domestic hot water at the same time. The range is able to satisfy both residential and commercial needs and the working range varies from -20 °C to + 43 °C.


AEI1G30


AEI1G50


AEI1G65


AEI1G80

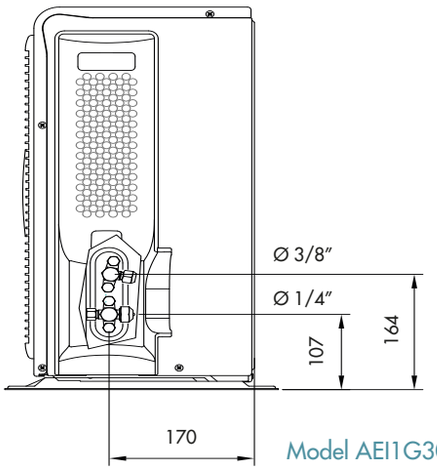

AEI1G110


AEI1G140

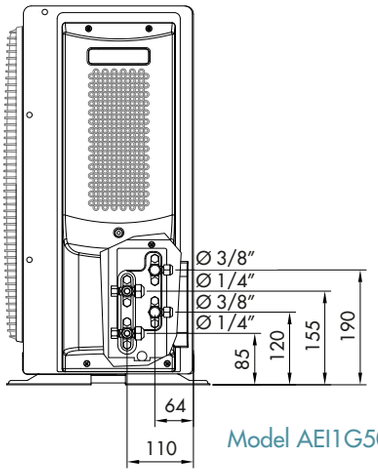

| Code | Model | Configuration | *Heating nominal capacity (A2W) [kW] | **Cooling nominal capacity (A2W) [kW] |
|---|---|---|---|---|
| 387007220 | AEI1G30EMX | Mono | 3.30 (A2A)*** | 3.60 (A2A)*** |
| 387007216 | AEI1G50EMX | Dual | 5.0 | 4.9 |
| 387007217 | AEI1G65EMX | Tri | 6.5 | 5.8 |
| 387007226 | AEI1G65EMX3PH | Tri | 6.5 | 5.8 |
| 387007233 | AEI1G80BEMX | Quad | 8.0 | 6.9 |
| 387007227 | AEI1G80EMX3PH | Quad | 8.0 | 6.9 |
| 387007234 | AEI1G110BEMX | Quad | 11.0 | 8.7 |
| 387007228 | AEI1G110EMX3PH | Quad | 11.0 | 8.7 |
| 387007229 | AEI1G140EMX | Penta | 12.0 | 10.6 |
| 387007230 | AEI1G140EMX3PH | Penta | 12.0 | 10.6 |

Reference condition:
*Heating capacity with outdoor air temperature 7 °C, outlet water temperature 30/35 °C
**Cooling capacity with outdoor air temperature 35 °C, outlet water temperature 23/18 °C
***Cooling capacity with outdoor air temperature 35 °C, inlet water temperature 27 °C
Heating capacity with outdoor air temperature 7 °C, inlet water temperature 20 °C

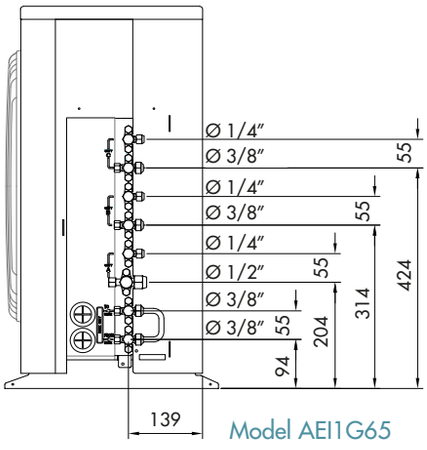
# REFRIGERANT GAS CONNECTIONS



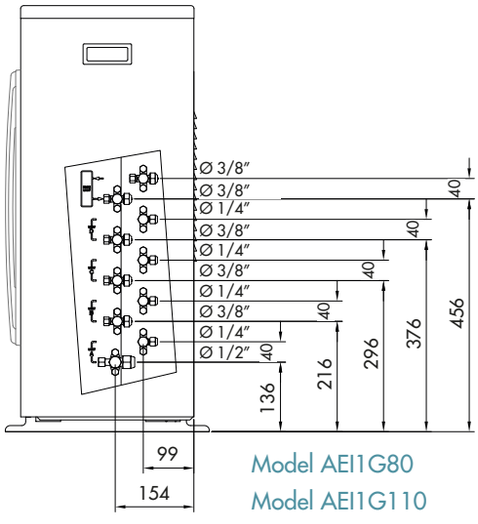

Model AEI1G30



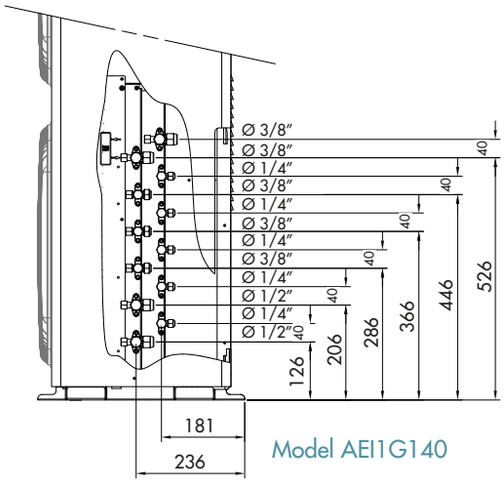

Model AEI1G50




Model AEI1G65



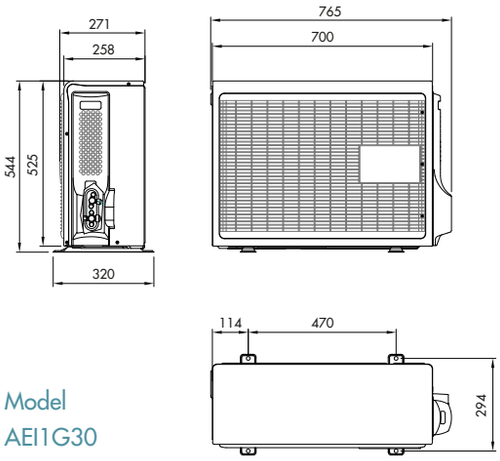

Model AEI1G80
Model AEI1G110



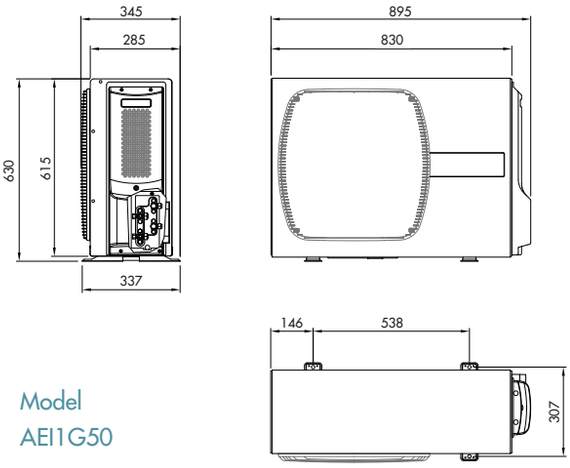

Model AEI1G140

| Model | Weight (kg) |
|---|---|
| AEI1G30EMX | 35 |
| AEI1G50EMX | 56 |
| AEI1G65EMX | 64 |
| AEI1G65EMX3PH | 64 |
| AEI1G80BEMX | 87 |
| AEI1G80EMX3PH | 87 |
| AEI1G110BEMX | 90 |
| AEI1G110EMX3PH | 90 |
| AEI1G140EMX | 145 |
| AEI1G140EMX3PH | 145 |

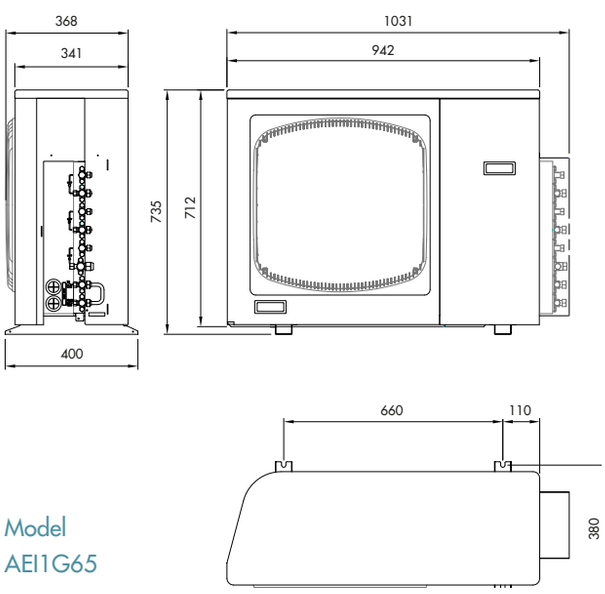
# DIMENSIONAL DRAWINGS



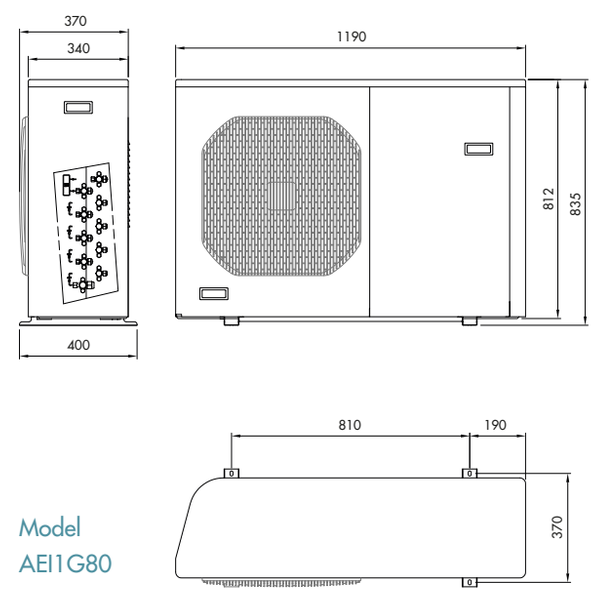

Model
AEI1G30



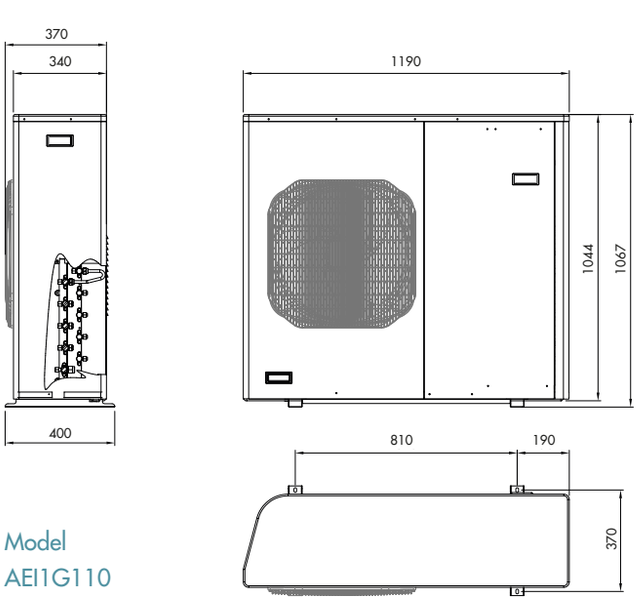

Model
AEI1G50



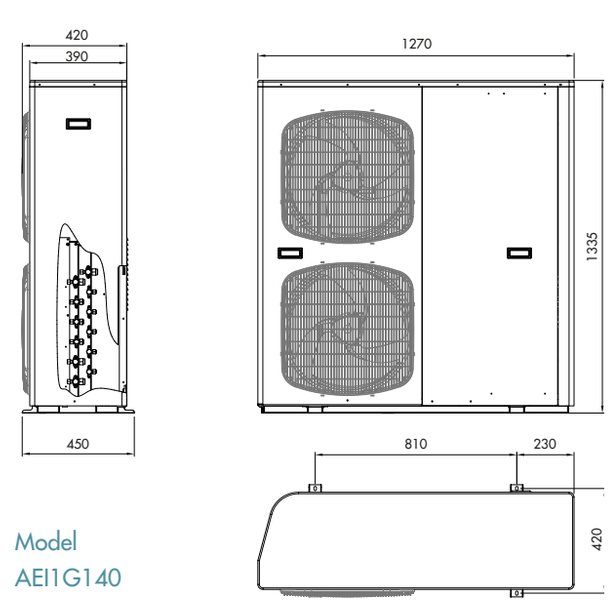

Model
AEI1G65




Model
AEI1G80




Model
AEI1G110




Model
AEI1G140

# POSSIBLE MATCHINGS

| SYSTEM CONFIGURATION | A2W | A2A / A2W | A2A |
|---|---|---|---|
| **Model** | **AEI1G30EMX** | | |
| | | | A |
| | | | ● |
| **Model** | **AEI1G50EMX** | | |
| | | | A ● |
| | | | B ● |
| | | | A + A |
| | | | A + B |
| **Model** | **AEI1G65EMX/AEI1G65EMX 3PH** | | |
| | AUBV | AUBV + A + A ● | B ● |
| | AUBV ● | AUBV + B ● | A + A ● |
| | | | A + B ● |
| | | | A + A + A |
| **Model** | **AEI1G80EMX/AEI1G80EMX 3PH** | | |
| | AUCV | AUAH + A + A + A ● | C ● |
| | AUCV ● | AUAH + A + B ● | A + B ● |
| | | AUBV + A + A + A ● | B + B |
| | | AUCV + A + B ● | A + A + A ● |
| | | AUCV + A + A ● | A + A + B ● |
| | | | A + A + A + A |
| **Model** | **AEI1G110BEMX/AEI1G110EMX 3PH** | | |
| | AUCV | AUBV + A + A + A ● | D ● |
| | AUCV ● | AUBV + A + A + B ● | A + C ● |
| | | AUBV + B + B ● | A + B ● |
| | | AUBV + C ● | B + B ● |
| | | AUCV + A + A + A ● | A + A + A ● |
| | | AUCV + A + B ● | A + A + B ● |
| | | | A + B + B |
| | | | A + A + A + A ● |
| | | | A + A + A + B |
| **Model** | **AEI1G140EMX/AEI1G140EMX 3PH** | | |
| | AUDV | AUCV + A + A + A ● | A + D ● |
| | AUDV ● | AUCV + A + A + B ● | B + C ● |
| | | AUCV + A + A + A + A ● | B + D |
| | | AUCV + A + A + A + B ● | C + C |
| | | AUCV + B + B ● | A + A + D |
| | | AUDV + A + B ● | A + A + C ● |
| | | AUDV + A + A + A ● | A + A + A + C |
| | | | A + A + A + A ● |
| | | | A + A + A + B ● |
| | | | A + A + A + A + A ● |
| | | | A + A + A + A + B |

● With EMIX/EMIX TANK

● Mixed configuration: air/air for cooling and air/water for heating

AIR/AIR AND AIR/WATER SIMULTANEOUS OPERATION IS NOT POSSIBLE

# TECHNICAL DATA

| MODELS | | | | G30EMX | G50EMX | G65EMX<br>G65EMX3PH |
|---|---|---|---|---|---|---|
| **Matchable units for Domestic Hot Water (DWH) production** | | | | EMIX TANK V2 200-300 liters | | |
| | | | | EMIX V1 + DHW Tank | | |
| | | | | NO | External Tank + 3-way valve | |
| **Matchable air/air indoor units** | | | | see technical datasheets | | |
| **Matchable air/water indoor units** | | | | NO | AUAH | AUBH |
| **AIR/WATER** | | | | | | |
| **Performance according to EN 14511** | Air +35 °C - Water 23/18 °C | Nominal-max. Cooling capacity | kW | - | 5.30 - 5.40 | 5.74 - 6.10 |
| | | Nominal electric power input | $kW_{el}$ | - | 1.44 | 1.54 |
| | | Nominal EER | | - | 3.68 | 3.64 |
| | Air +35 °C - Water 12/7 °C | Nominal Cooling capacity | kW | - | 3.70 | 4.14 |
| | | Nominal electric power input | $kW_{el}$ | - | 1.55 | 1.89 |
| | | Nominal EER | | - | 2.38 | 2.12 |
| | Air +7 °C - Water 30/35 °C | Nominal-max. Heating capacity | kW | - | 4.00 - 5.57 | 6.40 - 8.13 |
| | | Nominal electric power input | $kW_{el}$ | - | 1.03 | 1.56 |
| | | Nominal COP | | - | 4.09 | 4.17 |
| | Air -7 °C - Water 30/35 °C | Nominal Heating capacity | kW | - | 2.50 | 5.10 |
| | | Nominal electric power input | $kW_{el}$ | - | 1.12 | 2.01 |
| | | Nominal COP | | - | 2.24 | 2.54 |
| **Air/water LOW temperature heating** | | | | | | |
| **Perfomance according to ERP Ecodesign EN 14825** | AVERAGE climate | Nominal Heating capacity | kW | - | 3.00 | 6.00 |
| | | Seasonal energy efficiency $\eta_s$ | % | - | 151 | 153 |
| | | SCOP | | - | 3.83 | 3.90 |
| | | Energy efficiency class | | - | A++ | A++ |
| **Air/water MEDIUM temperature heating** | | | | | | |
| **Perfomance according to ERP Ecodesign EN 14825** | AVERAGE climate | Nominal Heating capacity | kW | - | 3.00 | 5.00 |
| | | Seasonal energy efficiency $\eta_s$ | % | - | 111 | 110 |
| | | SCOP | | - | 2.84 | 2.83 |
| | | Energy efficiency class | | - | A+ | A+ |
| **AIR/AIR** | | | | | | |
| **Performance according to EN 14511** | Outdoor air +35 °C<br>Indoor air 27 °C<br><br>Outdoor air +7 °C<br>Indoor air 20 °C | Nominal (min./max.) Cooling capacity | kW | 3.25 (1.37/3.60) | 4.92 (0.84/5.90) | 5.75 (1.57/7.65) |
| | | Nominal electric power input | $kW_{el}$ | 0.82 | 1.47 | 1.58 |
| | | Nominal EER | | 3.96 | 3.35 | 3.64 |
| | | $Pdesign_c/Pdesign_h$ | kW | 3.6 | 5.4 | 6.5 |
| | | SEER | | 6.2 | 6.4 | 6.5 |
| | | Energy efficiency class | | A++ | A++ | A++ |
| | | Nominal (min./max.) Heating capacity | kW | 3.00 (0.93/3.32) | 5.00 (0.95/6.00) | 6.5 (1.82/8.67) |
| | | Nominal electric power input | $kW_{el}$ | 0.62 | 1.16 | 1.50 |
| | | COP | | 4.82 | 4.29 | 4.32 |
| **Performance according to ERP Ecodesign EN14825** | AVERAGE climate | $Pdesign_c/Pdesign_h$ | kW | 3.2 | 4.3 | 6.4 |
| | | COP | | 4.4 | 4 | 4 |
| | | Energy efficiency class | | A+ | A+ | A+ |
| **DOMESTIC HOT WATER** | | | | | | |
| **DHW Performance according to EN 16147** | With 300 L tank<br><br>With Emix Tank 200 V2 | Load profile | | XL | XL | XL |
| | | Energy efficiency class | | A | A | A |
| | | COP ACS | | | 2.23 | 2.21 |
| | | ERP efficiency | % | | 90 | 90 |
| | | Load profile | | | L | L |
| | | Energy efficiency class | | | A | A |
| | | COP ACS | | | 2.57 | 2.51 |
| | | ERP efficiency | % | | 106 | 104 |
| | | Heating-up time from 10 °C to 48 °C | h:m | | 2:47 | 2:36 |
| **GENERAL SPECIFICATIONS** | | | | | | |
| Operation data | | Outdoor temperature operating range | °C | -15 / +43 | | |
| | | Indoor temperature operating range | °C | +10 / +47 | | |
| | | Outdoor temperature operating range | °C | -15 / +24 | | |
| | | Indoor temperature operating range | °C | +5 / +27 | | |
| | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1+T/50-60 | 230/1+T/50-60 | 230/1+T/50-60 (1ph)<br>400/3+N+T/50 (3ph) |
| | | Maximum electric consumption | kW/A | 1.55/6.9 | 1.79/7.8 | 2,6/12 (1ph)<br>5,2/10x3 (3ph) |
| | | Sound pressure | dB(A) | 45 | 45 | 45 |
| | | Sound power | dB(A) | 57 | 58 | 64 |
| Components and refrigerant | | Fan air flow rate | $m^3/h$ | 1000 | 1700 | 2400 |
| | | Compressor type | | Single Rotary | Twin Rotary | |
| | | Type and GWP | | R410A / 2088 kg $CO_2$ eq. | | |
| | | Standard charge | kg/$CO_2$ eq. | 0.81/1.69 | 1.3/2.71 | 2.7/5.63 |

Data declared in accordance with REGULATION (EU) N. 811/2013 of 18 February 2013 with regarde to the energy labelling of space heaters and combination heaters and with COMMISION REGULATION (EU) N. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regarde to ecodesign requirements for space heaters and combination heaters.

| MODELS | | | | G80BEMX G80EMX3PH | G110BEMX G110EMX3PH | G140EMX G140EMX3PH |
|---|---|---|---|---|---|---|
| **Matchable units for Domestic Hot Water (DWH) production** | | | | EMIX TANK V2 200-300 litri | | |
| | | | | EMIX V1 + DHW Tank | | |
| | | | | External Tank + 3-way valve | | |
| **Matchable air/air indoor units** | | | | see technical datasheets | | |
| **Matchable air/water indoor units** | | | | AUCH | AUCH | AUDH |
| **AIR/WATER** | | | | | | |
| **Performance according to EN 14511** | Air +35 °C - Water 23/18 °C | Nominal-max. Cooling capacity | kW | 8.68 - 9.50 | 9.56 - 12.10 | 11.60 - 12.10 |
| | | Nominal electric power input | $kW_{el}$ | 2.37 | 2.64 | 3.20 |
| | | Nominal EER | | 3.65 | 3.62 | 3.63 |
| | Air +35 °C - Water 12/7 °C | Nominal Cooling capacity | kW | 4.90 | 6.50 | 8.30 |
| | | Nominal electric power input | $kW_{el}$ | 2.30 | 3.16 | 3.79 |
| | | Nominal EER | | 2.13 | 2.06 | 2.19 |
| | Air +7 °C - Water 30/35 °C | Nominal-max. Heating capacity | kW | 8.00 - 11.06 | 10.45 - 14.17 | 13.80 - 15.89 |
| | | Nominal electric power input | $kW_{el}$ | 1.92 | 2.58 | 3.44 |
| | | Nominal COP | | 4.15 | 4.05 | 4.01 |
| | Air -7 °C - Water 30/35 °C | Nominal Heating capacity | kW | 6.30 | 7.30 | 10.50 |
| | | Nominal electric power input | $kW_{el}$ | 2.47 | 3.29 | 4.1 |
| | | Nominal COP | | 2.55 | 2.22 | 2.56 |
| **Air/water LOW temperature heating** | | | | | | |
| **Perfomance according to ERP Ecodesign EN 14825** | AVERAGE climate | Nominal Heating capacity | kW | 7.00 | 8 | 12 |
| | | Seasonal energy efficiency $\eta_s$ | % | 153 | 150 | 167 |
| | | SCOP | | 3.90 | 3.83 | 4.24 |
| | | Energy efficiency class | | A++ | A++ | A++ |
| **Air/water MEDIUM temperature heating** | | | | | | |
| **Perfomance according to ERP Ecodesign EN 14825** | AVERAGE climate | Nominal Heating capacity | kW | 6 | 7 | 11 |
| | | Seasonal energy efficiency $\eta_s$ | % | 110 | 110 | 112 |
| | | SCOP | | 2.83 | 2.83 | 2.87 |
| | | Energy efficiency class | | A+ | A+ | A+ |
| **AIR/AIR** | | | | | | |
| **Performance according to EN 14511** | Outdoor air +35 °C Indoor air 27 °C<br>Outdoor air +7 °C Indoor air 20 °C | Nominal (min./max.) Cooling capacity | kW | 6.87 (1.60/9.62) | 8.65 (1.8/11.5) | 10.60 (2.60/13.70) |
| | | Nominal electric power input | $kW_{el}$ | 1.86 | 2.46 | 3.12 |
| | | Nominal EER | | 3.70 | 3.51 | 3.40 |
| | | $Pdesign_c/Pdesign_h$ | kW | 9.00 | 10.60 | 13.60 |
| | | SEER | | 6.70 | 6.60 | 5.11 |
| | | Energy efficiency class | | A++ | A++ | A++ |
| | | Nominal (min./max.) Heating capacity | kW | 8.00 (1.7/11.2) | 11.00 (1.9/13.5) | 12.00 (3.10/15.5) |
| | | Nominal electric power input | $kW_{el}$ | 1.90 | 2.59 | 2.18 |
| | | COP | | 4.22 | 4.24 | 5.50 |
| **Performance according to ERP Ecodesign EN14825** | AVERAGE climate | $Pdesign_c/Pdesign_h$ | kW | 7.70 | 9.40 | 11.50 |
| | | COP | | 4.10 | 4.10 | 4.13 |
| | | Energy efficiency class | | A+ | A+ | A+ |
| **DOMESTIC HOT WATER** | | | | | | |
| **DHW Performance according to EN 16147** | With 300 L tank<br>With Emix Tank 200 V2 | Load profile | | XL | XL | XL |
| | | Energy efficiency class | | A | A | A |
| | | COP ACS | | 2.23 | 2.14 | 2.12 |
| | | ERP efficiency | % | 87 | 87 | 86 |
| | | Load profile | | XL | XL | XL |
| | | Energy efficiency class | | A | A | A |
| | | COP ACS | | 2.78 | 2.57 | 2.71 |
| | | ERP efficiency | % | 116 | 106 | 112 |
| | | Heating-up time from 10 °C to 48 °C | h:m | 3:04 | 2:47 | 2:08 |
| **GENERAL SPECIFICATIONS** | | | | | | |
| Operation data | | Outdoor temperature operating range | °C | -15 / +43 | | |
| | | Indoor temperature operating range | °C | +10 / +47 | | |
| | | Outdoor temperature operating range | °C | -15 / +24 | | |
| | | Indoor temperature operating range | °C | +5 / +27 | | |
| | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1+T/50-60 (1ph)<br>400/3+N+T/50 (3ph) | 230/1+T/50-60 (1ph)<br>400/3+N+T/50 (3ph) | 230/1+T/50-60 (1ph)<br>400/3+N+T/50 (3ph) |
| | | Maximum electric consumption | kW/A | 3.3 / 15 (1ph)<br>5.2 / 10x3 (3ph) | 4.4 / 20 (1ph)<br>5.2 / 10x3 (3ph) | 4.4 / 20 (1ph)<br>5.2 / 10x3 (3ph) |
| | | Sound pressure | dB(A) | 45 | 45 | 45 |
| | | Sound power | dB(A) | 64 | 65 | 65 |
| Components and refrigerant | | Compressor type | | Twin Rotary | | |
| | | Fan air flow rate | $m^3/h$ | 3000 | 3500 | 3500 |
| | | Type and GWP | | R410A / 2088 kg $CO_2$ eq. | | |
| | | Standard charge | kg/$CO_2$ eq. | 2.9/6.05 | 3.38/7.05 | 4.4/9.18 |

The equipment described in this catalogue contains HFC-410A-type flourinated greenhouse gases. These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014

# TECHNICAL DATA

## AIR/AIR CONFIGURATION

### Heating

LAT: Leaving air temperature
Qh: Heat capacity
COP: Coefficient of performance

### Cooling

LAT: Leaving air temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

## G30EMX model

### Heating

| LAT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10 (11) | | -7 (-8) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 20 | 2.70 | 2.43 | 2.80 | 2.61 | 2.70 | 2.40 | 3.30 | 3.51 | 4.50 | 4.10 |

### Cooling

| LAT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 27 (19) | 3.60 | 2.84 |

## G50EMX model

### Heating

| LAT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10 (11) | | -7 (-8) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 20 | 3.70 | 2.68 | 3.90 | 2.91 | 3.70 | 2.57 | 6.00 | 3.35 | 6.70 | 3.86 |

### Cooling

| LAT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 27 (19) | 5.90 | 3.15 |

## G65EMX/G65EMX3PH models

### Heating

| LAT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10 (11) | | -7 (-8) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 20 | 5.30 | 2.25 | 5.90 | 3.09 | 5.60 | 2.94 | 8.70 | 3.22 | 9.10 | 3.50 |

### Cooling

| LAT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 27 (19) | 7.70 | 3.32 |

## G80BEMX/G80EMX3PH models

### Heating

| LAT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10 (11) | | -7 (-8) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 20 | 6.50 | 2.36 | 6.80 | 2.45 | 6.10 | 2.36 | 11.20 | 3.27 | 11.60 | 3.55 |

### Cooling

| LAT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 27 (19) | 9.60 | 3.74 |

## G110BEMX/G110EMX3PH models

### Heating

| LAT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10 (11) | | -7 (-8) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 20 | 7.50 | 2.40 | 8.30 | 2.36 | 9.40 | 2.64 | 12.50 | 3.07 | 13.20 | 3.45 |

### Cooling

| LAT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 27 (19) | 11.50 | 3.36 |

## G140EMX/G140EMX3PH models

### Heating

| LAT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -10 (11) | | -7 (-8) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 20 | 8.20 | 2.29 | 10.10 | 2.76 | 10.90 | 2.46 | 15.50 | 3.10 | 16.30 | 3.51 |

### Cooling

| LAT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 27 (19) | 13.70 | 2.60 |

# AIR/WATER CONFIGURATION

## Heating

LWT: Leaving water temperature
Qh: Heat capacity
COP: Coefficient of performance

Application data
Water inlet/outlet temperature difference = 5 °C, 8 °C for LWT = 55 °C

## Cooling

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency auto

Application data
Water inlet/outlet temperature difference = 5 °C

## G50EMX model

### Heating

| LWT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -7 (-8) | | -2 (-3) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 35 | 2.50 | 2.24 | 2.65 | 2.74 | 2.80 | 3.14 | 4.00 | 4.09 | 4.50 | 4.66 |
| 45 | 2.20 | 1.87 | 2.29 | 1.99 | 2.47 | 2.37 | 3.83 | 3.03 | 4.29 | 3.56 |
| 55 | 2.51 | 1.75 | 2.39 | 1.79 | 2.31 | 1.80 | 4.10 | 2.39 | 4.01 | 3.01 |

### Cooling

| LWT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 7 | 3.70 | 2.38 |
| 18 | 5.3 | 3.68 |

## G65EMX/G65EMX3PH models

### Heating

| LWT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -7 (-8) | | -2 (-3) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 35 | 5.10 | 2.54 | 5.29 | 3.21 | 6.05 | 3.45 | 6.40 | 4.17 | 7.58 | 4.66 |
| 45 | 4.60 | 2.02 | 4.95 | 2.29 | 5.53 | 2.57 | 6.50 | 3.10 | 7.22 | 3.47 |
| 55 | 4.00 | 1.59 | 4.59 | 1.54 | 4.76 | 1.86 | 5.19 | 2.19 | 5.95 | 2.70 |

### Cooling

| LWT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 7 | 4.14 | 2.12 |
| 18 | 5.74 | 3.64 |

## G80BEMX/G80EMX3PH models

### Heating

| LWT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -7 (-8) | | -2 (-3) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 35 | 6.30 | 2.55 | 7.09 | 2.89 | 7.80 | 3.34 | 8.00 | 4.15 | 11.46 | 4.62 |
| 45 | 5.70 | 2.03 | 6.38 | 2.48 | 7.20 | 2.79 | 8.00 | 3.12 | 10.02 | 3.64 |
| 55 | 4.90 | 1.60 | 4.99 | 1.99 | 5.49 | 2.10 | 7.08 | 2.32 | 7.78 | 2.71 |

### Cooling

| LWT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 7 | 4.90 | 2.13 |
| 18 | 8.68 | 3.65 |

## G110BEMX/G110EMX3PH models

### Heating

| LWT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -7 (-8) | | -2 (-3) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 35 | 7.30 | 2.22 | 8.14 | 2.80 | 9.14 | 3.29 | 10.45 | 4.07 | 12.15 | 4.70 |
| 45 | 7.50 | 1.97 | 8.73 | 2.28 | 9.95 | 2.61 | 9.59 | 3.02 | 11.94 | 3.37 |
| 55 | 5.80 | 1.49 | 6.24 | 1.93 | 7.03 | 2.02 | 9.67 | 2.31 | 8.85 | 2.41 |

### Cooling

| LWT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 7 | 6.50 | 2.06 |
| 18 | 9.56 | 3.62 |

## G140EMX/G140EMX3PH models

### Heating

| LWT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -7 (-8) | | -2 (-3) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 35 | 10.50 | 2.56 | 10.14 | 2.78 | 11.20 | 3.21 | 13.80 | 4.01 | 14.65 | 4.62 |
| 45 | 9.50 | 1.96 | 10.20 | 2.22 | 11.05 | 2.58 | 13.40 | 3.00 | 14.15 | 3.28 |
| 55 | 8.30 | 1.48 | 7.73 | 1.90 | 8.65 | 2.00 | 9.10 | 2.15 | 11.15 | 2.38 |

### Cooling

| LWT [°C] | Inlet outdoor air temperature °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 7 | 8.30 | 2.19 |
| 18 | 11.60 | 3.63 |

# POSSIBLE MATCHINGS AND PRATICAL EXAMPLES

The product information sheet for each outdoor unit lists the matchings that can be used when designing systems with iSERIES. By way of example, the matchings that can be made with the AEI1G80EMX outdoor unit and the corresponding system diagrams are shown below.

## 1 MATCHING

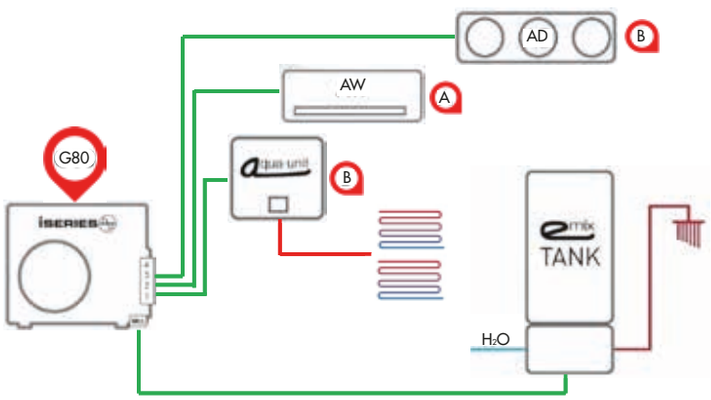
G80 outdoor unit in winter mode with size B hydronic module (AUBH) and in summer mode with two size A and size B direct-expansion units. Domestic hot water production with EMIX TANK.

| A2W | A2A / A2W | A2A |
|---|---|---|
| AUCH | AUAH + A + A + A ● | C ● |
| AUCH ● | AUAH + A + B ● | A + B ● |
| | AUBH + A + A + A ● | B + B |
| | AUBH + A + B ● | A + A + A ● |
| | AUCH + A + A ● | A + A + B ● |
| | | A + A + A + A |

● With EMIX/EMIX TANK

● Mixed configuration: air/air for cooling and air/water for heating

SIMULTANEOUS OPERATION IS NOT POSSIBLE




## 2 MATCHING

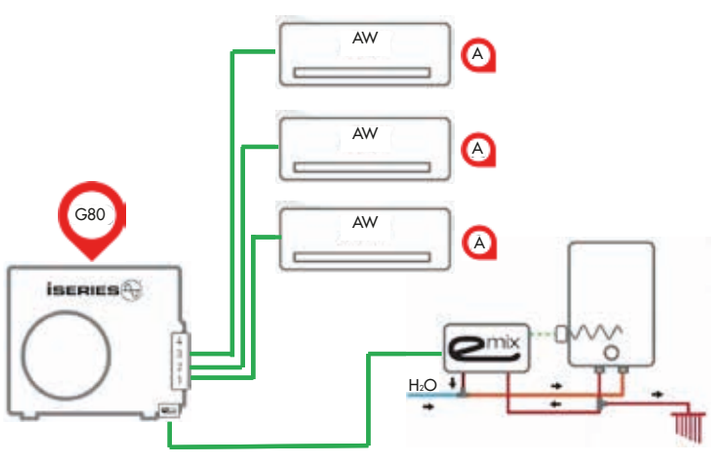
G80 outdoor unit in summer/winter mode with three size A direct-expansion units. Domestic hot water production with EMIX.

| A2W | A2A / A2W | A2A |
|---|---|---|
| AUCH | AUAH + A + A + A ● | C ● |
| AUCH ● | AUAH + A + B ● | A + B ● |
| | AUBH + A + A + A ● | B + B |
| | AUBH + A + B ● | A + A + A ● |
| | AUCH + A + A ● | A + A + B ● |
| | | A + A + A + A |

● With EMIX/EMIX TANK

● Mixed configuration: air/air for cooling and air/water for heating

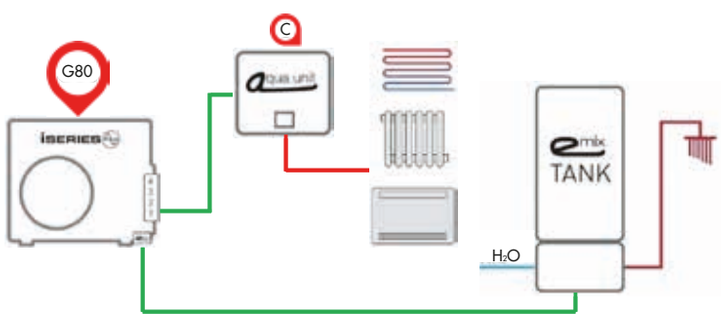
SIMULTANEOUS OPERATION IS NOT POSSIBLE



# 3 MATCHING

G80 outdoor unit in winter mode (and possibly summer mode) with size C hydronic module (AUCH). Domestic hot water production with EMIX TANK.

| A2W | A2A / A2W | A2A |
|---|---|---|
| AUCH | AUAH + A + A + A ● | C ● |
| AUCH ● | AUAH + A + B ● | A + B ● |
| | AUBH + A + A + A ● | B + B |
| | AUBH + A + B ● | A + A + A ● |
| | AUCH + A + A ● | A + A + B ● |
| | | A + A + A + A |




● With EMIX/EMIX TANK

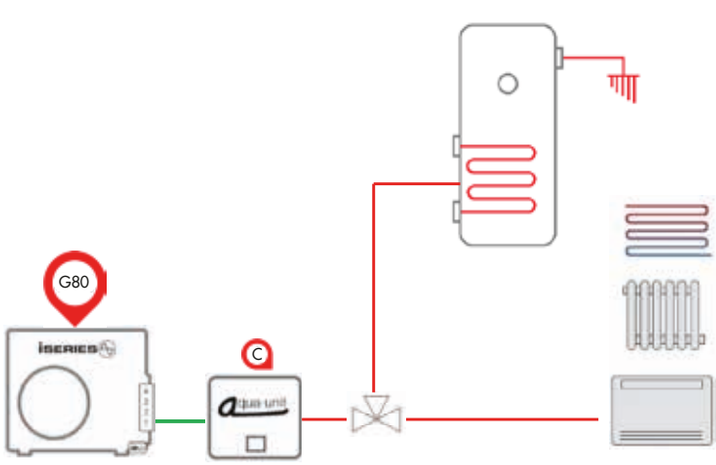
● Mixed configuration: air/air for cooling and air/water for heating

SIMULTANEOUS OPERATION IS NOT POSSIBLE

# 4 MATCHING

G80 outdoor unit in winter mode (and possibly summer mode) with one only size C hydronic module (AUCH). Domestic hot water production with diverter valve and third-party tank.

| A2W | A2A / A2W | A2A |
|---|---|---|
| AUCH | AUAH + A + A + A ● | C ● |
| AUCH ● | AUAH + A + B ● | A + B ● |
| | AUBH + A + A + A ● | B + B |
| | AUBH + A + B ● | A + A + A ● |
| | AUCH + A + A ● | A + A + B ● |
| | | A + A + A + A |




● With EMIX/EMIX TANK

● Mixed configuration: air/air for cooling and air/water for heating

SIMULTANEOUS OPERATION IS NOT POSSIBLE

# REFRIGERANT PIPE LENGTHS

For the iSERIES system to operate correctly, the refrigerant gas lines must adhere to the sizes and height differences shown in the table on the next page.

## HOW TO PERFORM A PROPER CHECK?

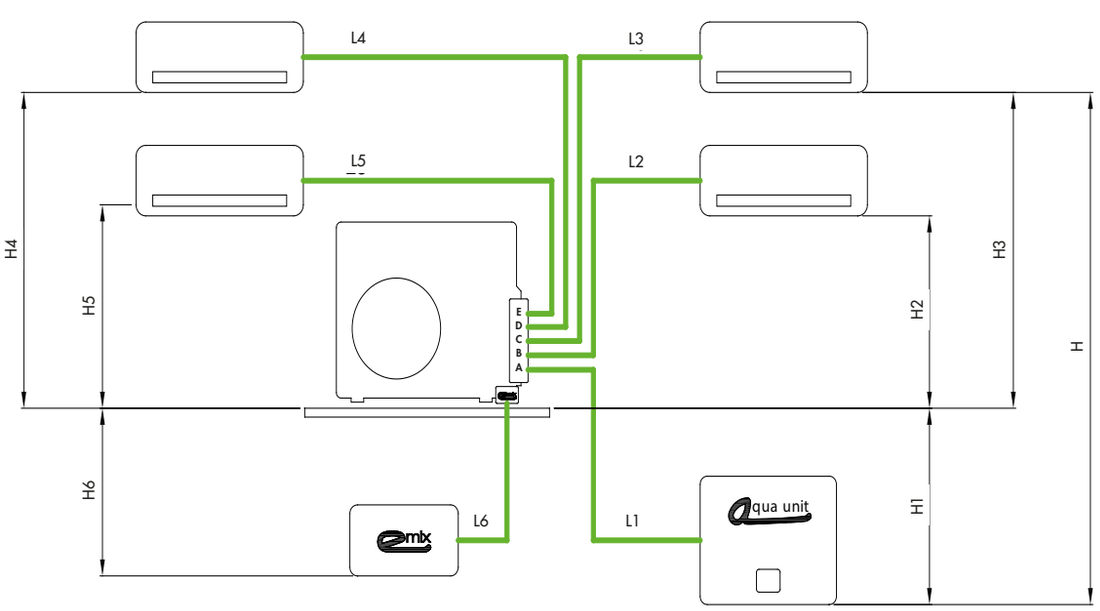
**1** Choose the configuration for the outdoor unit based on the number of indoor units to be fitted (include AQUA UNIT and EMIX/EMIX TANK).

**2** Check that the total length of the pipes (tot L) is less than or equal to the reference length listed in the table in the STANDARD CHARGE column. If the restriction is not adhered to, carry out a further check using the values shown in the ADDITIONAL CHARGE column. In this instance, an additional refrigerant charge calculated following the guidelines specified on the next pages should be provided.

**3** Similarly, check that the maximum length of each pipe (Ln) falls within the restrictions set.

**4** Check the limits set for the minimum length, the maximum height difference between the indoor units and the maximum height difference between the indoor units and outdoor unit (including AQUA UNIT and EMIX/EMIX TANK).

**5** Pay close attention to length L6 in the diagram which represents the length of the EMIX/EMIX TANK pipe: the maximum length allowed is **10 m.**



## TABLE SHOWING DATA FOR REFRIGERANT GAS PIPE LENGTHS

| | Configuration | STANDARD CHARGE | | ADDITIONAL CHARGE | | MINIMUM LENGHT |
|---|---|---|---|---|---|---|
| | | L tot [m] | L n [m] | L tot [m] | L n [m] | L min [m] |
| AEI1G30EMX | Single | 7.5 | | 15 | | 5 |
| AEI1G50EMX | Single | 7.5 | - | 20 | - | 5 |
| | Dual | 15 | 12 | 30 | 25 | 5 |
| AEI1G65EMX | Single | 20 | - | 35 | - | 5 |
| | Dual | 30 | 25 | 45 | 30 | 5 |
| | Tri | 30 | 20 | 45 | 25 | 5 |
| AEI1G80EMX | Single | 30 | - | 50 | - | 5 |
| | Dual | 40 | 30 | 65 | 30 | 5 |
| | Tri | 40 | 30 | 65 | 30 | 5 |
| | Quad | 40 | 30 | 65 | 30 | 5 |
| AEI1G110EMX | Single | 30 | - | 50 | - | 5 |
| | Dual | 40 | 30 | 65 | 30 | 5 |
| | Tri | 40 | 30 | 65 | 30 | 5 |
| | Quad | 40 | 30 | 65 | 30 | 5 |
| AEI1G140EMX | Single | 40 | - | 50 | - | 5 |
| | Dual | 40 | 30 | 100 | 30 | 5 |
| | Tri | 40 | 30 | 100 | 30 | 5 |
| | Quad | 40 | 30 | 100 | 30 | 5 |
| | Penta | 40 | 30 | 100 | 30 | 5 |

L tot = maximum total pipe lenght (L1 + L2 + L3...)
L n = maximum pipe lenght for unit (n = 1,2,3...)

Additional gas charge
For pipes 1/4" - 3/8" = 15 g/m
For pipes 1/4" - 1/2" = 20 g/m
For EMIX pipes 3/8" = 15 g/m

Maximum height difference - outdoor unit/indoor unit (H1, H2, H3, H4, H5, H6) = 10 m
Maximum height difference between indoor units (H) = 5 m

## OPERATING LIMITS

- Maximum conditions in Cooling Mode
  Outdoor temperature: 43 °C B.S.
  Indoor temperature: 32 °C B.S./23 °C B.U.

- Minimum conditions in Cooling Mode
  Outdoor temperature: -15 °C B.S.
  Indoor temperature: 10 °C B.S./6 °C B.U.

- Maximum conditions in Heating Mode
  Outdoor temperature: 24 °C B.S./18 °C B.U.
  Indoor temperature: 27 °C B.S.

- Minimum conditions in Heating Mode
  Outdoor temperature: -20 °C B.S.
  Indoor temperature: 5 °C B.S.

# INDOOR UNITS

Hydronic and direct expansion

# AQUA UNIT

## HYDRONIC INDOOR UNIT


HOME AUTOMATION | EC PUMP

| Code | Description |
|---|---|
| 387030220 | Wired control for iSERIES indoor units - **Mandatory accessory** |

## HYDRONIC UNIT FOR iSERIES

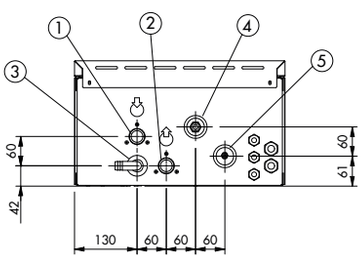
The AQUA UNIT indoor units combined with the outdoor units from the iSERIES range are used to heat and cool hydronic systems, such as radiant systems, low-temperature radiators and fan coil units.

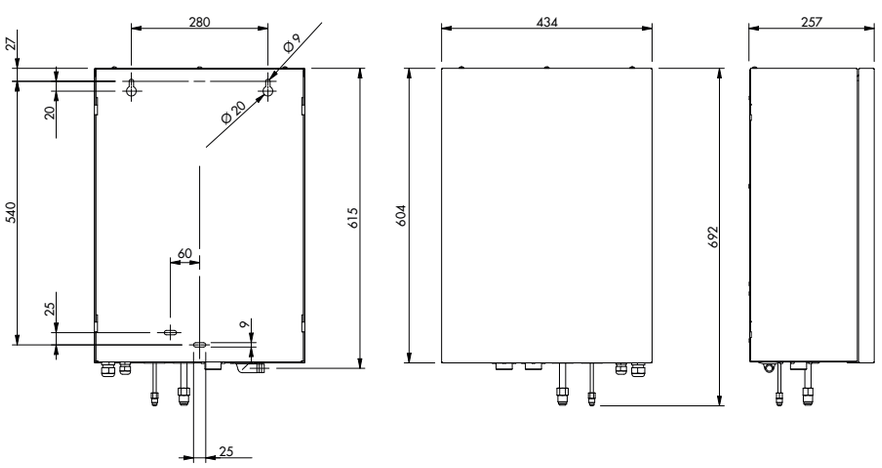
| Code | Model | Size | Capacity (kW) | Description |
|---|---|---|---|---|
| 387135037 | AUBV V2 | B | 6.5 kW heating<br>5.6 kW cooling | Internal Hydronic module, with inverter pump, wall-hung. |
| 387135038 | AUCV V2 | C | 10.6 kW heating<br>9.1 kW cooling | Internal Hydronic module, with inverter pump, wall-hung. |
| 387135039 | AUDV V2 | D | 13.6 kW heating<br>11.6 kW cooling | Internal Hydronic module, with inverter pump, wall-hung. |

Reference condition
Heating: water temperature 35/30 °C, outdoor air temperature 7 °C
Cooling: water temperature 18/23 °C, outdoor air temperature 35 °C

## DIMENSION AND WEIGHT

| TECHNICAL DATA | | AUBV | AUCV | AUDV |
|---|---|---|---|---|
| Water inlet connection | | 1" M | 1" M | 1" M |
| Water outlet connection | | 1" M | 1" M | 1" M |
| Condensate drain connection | mm | Ø 18 | Ø 18 | Ø 18 |
| Gas refrigerant connection | | 1/2" | 1/2" | 5/8" |
| Liquid refrigerant connection | | 1/4" | 1/4" | 3/8" |
| Grommet | | - | - | - |
| Weight | kg | 25 | 27 | 28 |



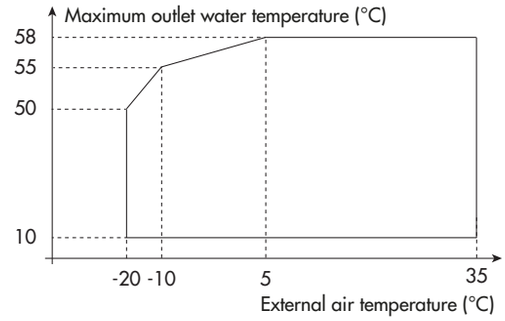



| TECHNICAL DATA | | AUBV | AUCV | AUDV |
|---|---|---|---|---|
| Electrical power supply | V/Ph/Hz | 220-240/1/50 | | |
| Maximum electricity consumption | W | 77 | | |
| Minimum electricity consumption | W | 6 | | |
| Hydraulic connection | inch | 1" M | | |
| DWV evacuation connection | mm | 18 | | |
| Outdoor unit connection circuit | | circuit A (1) | | |
| Cooling circuit connections (gas) | inch | 1/2" | 1/2" | 5/8" |
| Cooling circuit connections (liquido) | inch | 1/4" | 1/4" | 3/8" |
| Refrigerant type | | R410A | | |
| Minimum cooling pipe lenght | m | 3 | | |
| Maximum cooling pipe lenght | m | Ref. to outdoor unit datasheets | | |
| Maximum height difference between indoor unit and outdoor unit | m | | | |
| Maximum height difference between indoor unit (installation with other UI) | m | | | |
| Additional gas charge (if required) | g/m | | | |
| Minimum operating water pressure | bar | 1,5 | | |
| Maximum operating water pressure | bar | 2 | | |
| Pressure relief valve set | bar | 3 | | |
| Expansion vessel capacity | L | 6 | | |
| Expansion vessel pre-charge | bar | 1 | | |
| Maximum water outlet temperature | °C | up to 58 (2) | | |
| Minimum water volume | L | 40 | 80 | 80 |
| Net weight | kg | 25 | 27 | 28 |
| Net dimension (Alt/Lar/Pro) | mm | 604x434x257 | | |

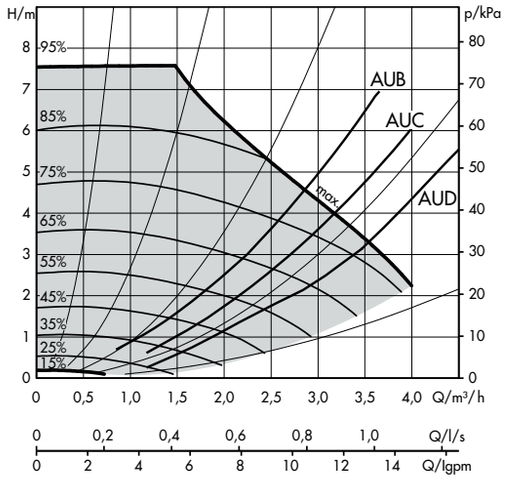
(1) Connect only to circuit A of the outdoor unit
(2) With reference to diagram of "Maximum outlet water temperature"

## OPERATING CONDITIONS

**Maximum outlet water temperature**




## CHARACTERISTIC CURVE OF PUMPS AND LOAD LOSS IN THE UNITS



# CONNECTIVITY

## INPUTS AND OUTPUTS OF VERTICAL AQUA UNIT


N° 3 DIGITAL INPUTS (dry contacts or configurable 24 VAC contacts)

1) ON/OFF: stand by or operating;
2) Summer/Winter: summer/winter switching.

N° 5 DIGITAL OUTPUTS

1) 230 VAC output for the DHW diverter valve servomotor (deviation towards DHW);
2) 230 VAC output for the DHW diverter valve servomotor (re-deviation towards heating system - optional);
3) 230 VAC output for ALARM/DEFROST which can be configured individually or in combination;
4) 230 VAC output for additional heat source (electric heating element, boiler, etc.) through external relay switch if needed;
5) 230 VAC output for DHW tank electric heater through external relay switch.

N° 1 ANALOGIC INPUT

1) DHW temperature sensor input: used for reading the value of the water temperature inside the DHW tank.

N° 1 MODBUS CONNECTION

1) Used to connect the control panel, can be used otherwise for a third-party MODBUS controller.

# NOTE

# **A19** DIRECT-EXPANSION INDOOR UNIT HIGH WALL MODEL

| Code | Model | Size |
|---|---|---|
| 387004103 | AWIAS19 | A |
| 387004104 | AWIBS19 | B |

Built in a compact and efficient structure in high quality PS, A19 easily integrates into any type of residential and commercial environment. The rounded design and fine finish, embellished with chrome details and original side processing, make the unit elegant and attractive.

## MAXIMUM COMFORT WITH ECO - POWER - IFEEL - SWING

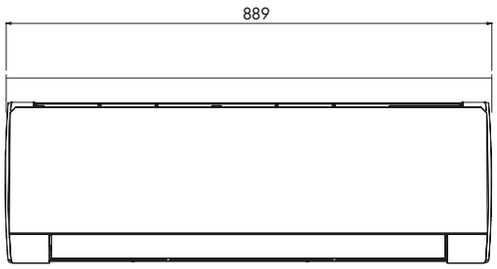
The operation modes "Eco" and "High Power" ensure maximum comfort and can be activated to save energy or have maximum silence, or, on the other side, to enjoy maximum comfort in the shortest time possible. Furthermore, the iFeel function ensures comfort conditions in the exact point where the remote control is. The adjustable flap can be set to various positions or it can automatically swivel, ensuring an optimal air distribution in the room.

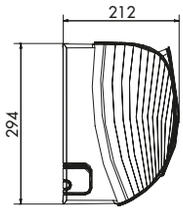
## AIR IS EVEN MORE PURE WITH THE PLASMA MONOLITHIC FILTER

A19 is equipped with washable filters aimed to protect the exchanger, and with a sophisticated electronic monolithic plasma filter which does not need maintenance and can be controlled from the remote control. The plasma filter deactivates bacteria and oxidises several polluting organic and inorganic particles. In addition, the special Autoclean function protects the heat exchanger from mould and bacteria.

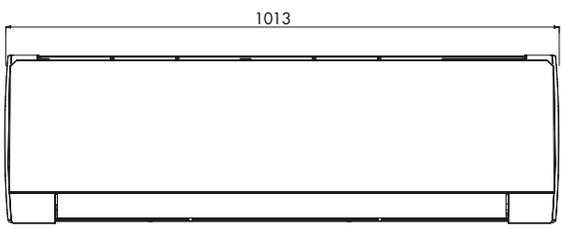
# DIMENSIONAL DRAWINGS

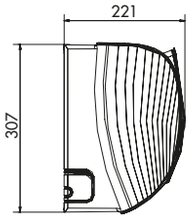
A AWIAS19




B AWIBS19




# TECHNICAL DATA

| Model | | AWIAS19 | AWIBS19 |
|---|---|---|---|
| Heating/Cooling capacity | kW | up to 3.7/3.9 | up to 5.7/7.0 |
| Size | | A | B |
| Air flow rate (el.-l.-m.-h.-eh.) | $m^3/h$ | 390-420-490-620-680 | 470-520-610-720-800 |
| Dehumidification | l/h | 1,4 | 1,8 |
| Fan speed | n° | 5 | 5 |
| Sound pression at 2 m (el.-l.-m.-h.-eh.) | dB(A) | 26-29-34-38-42 | 31-34-38-43-45 |
| Sound power (el.-l.-m.-h.-eh.) | dB(A) | 38-41-46-50-57 | 45-48-52-57-59 |
| Electric power supply | V/Ph/Hz | 230/1/50 | 230/1/50 |
| Tipe of motor | | DC Inverter | DC Inverter |
| Power usage | W | 20 | 35 |
| Liquid pipe diameter | mm (inch) | 6.35 (1/4") | 6.35 (1/4") |
| Gas pipe diameter | mm (inch) | 9.52 (3/8") | 12.7 (1/2") |
| Net dimension (H./W./D.) | mm | 294/889/212 | 307/1013/221 |
| Net weight | kg | 11 | 13.5 |
| Remote control supplied | | Yes | Yes |
| Ambient temperature adjustment range | °C | from +10 to +32 | from +10 to +32 |
| "Cold Plasma" purification system | | Yes | Yes |

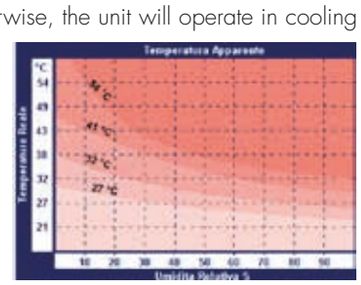
# **AF** DIRECT-EXPANSION INDOOR UNIT CONSOLE MODEL

| Code | Model | Size |
|---|---|---|
| 387005017 | AFIAS11DC V2 | A |
| 387005018 | AFIBS11DC V2 | B |

AF is a console made from premium ABS for low wall mounting, just a few centimeters above the floor, occupying little space. The air flow is two-way, upper and lower, for maximum comfort both in summer and in winter. At 22 db(A), the unit is extremely quiet thanks to its specially designed structure and two tangential fans operated by inverter-controlled DC motors. Furthermore, it's equipped with a humidity sensor that is used to modulate the temperature and adjust the rooms humidity percentage.

## RELATIVE HUMIDITY SENSOR

The relative humidity sensor in the indoor units allows the choice between the cooling and dehumidification mode, based on the relative humidity value. If this value exceeds a given threshold, the unit will run in dehumidification mode. Otherwise, the unit will operate in cooling mode or with alternating cooling and dehumidification cycles.



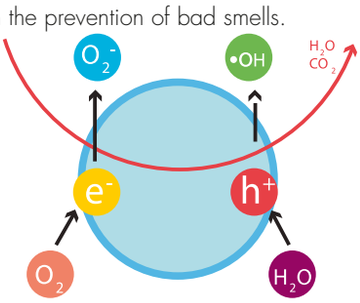

The signal transmitted by this sensor is used by the control software, which takes account of the relative humidity of the room in relation to the temperature. This results in the HUMIDEX index that measures the temperature perceived by the human body (which is a combination of these two factors) and, consequently, adjusts the set-point to optimise the user's comfort.

## TITANIUM DIOXIDE PHOTOCATALYTIC FILTER

Photocatalytic filters base their operation on a photocatalyst which is usually a semiconductor material which polarizes the electrons creating a surface electric current. This determines such a high oxidizing power that it can oxidize most of the organic contaminants. This type of filter is particularly suitable for eliminating bacteria, inhibiting the activity of viruses, dust abatement as well as in the prevention of bad smells.

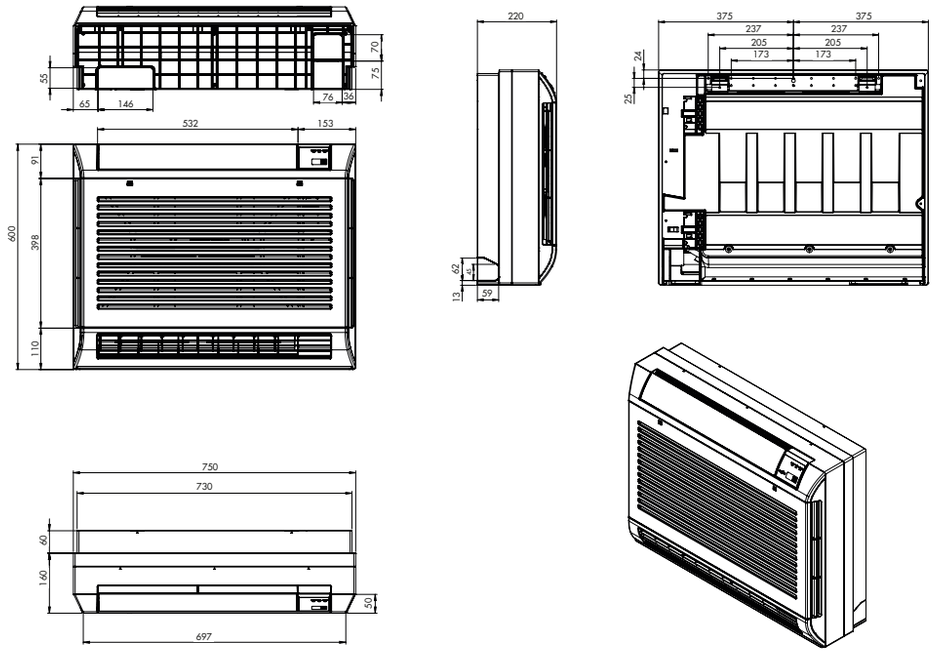
## HOW THIS TECHNOLOGY IS APPLIED TO THE iSERIES INDOOR UNITS

Titanium dioxide is a photocatalyst semiconductor that is deposited on a beehive filter, which is very similar to the active carbon filter. The air intake from the indoor unit passes through this filter.




REMOTE CONTROL | $TIO_2$ FILTER | IFEEL | DC MOTOR | RH% CONTROL

# DIMENSIONAL DRAWINGS



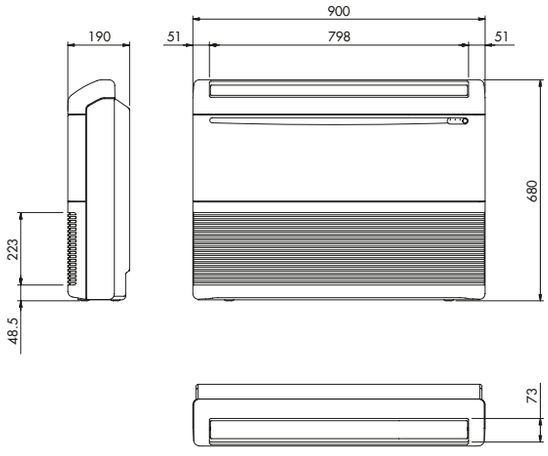

# TECHNICAL DATA

| Model | | AFIAS11DC V2 | AFIBS11DC V2 |
|---|---|---|---|
| Heating/Cooling capacity | kW | up to 3.7/3.9 | up to 5.7/7.0 |
| Size | | A | B |
| Air flow rate (sl.-l.-m.-h.) | $m^3/h$ | 450-500-590-700 | 615-665-760-830 |
| Dehumidification | l/h | 1.3 | 2.3 |
| Fan speed | n° | 3 + auto - by remote control | 3 + auto - by remote control |
| Sound pression at 2 m (sl.-l.-m.-h.) | dB(A) | 22-26-30-37 | 28-30-37-45 |
| Electric power supply | V/Ph/Hz | 230/1/50 | 230/1/50 |
| Tipe of motor | | DC Inverter | DC Inverter |
| Electric power input | W | 12 | 19 |
| Liquid pipe diameter | mm (inch) | 6.35 (1/4") | 6.35 (1/4") |
| Gas pipe diameter | mm (inch) | 9.52 (3/8") | 12.7 (1/2") |
| Net weight (H./W./D.) | mm | 600/750/220 | 600/750/220 |
| Net dimension | kg | 8 | 12 |
| Remote control supplied | | Yes | Yes |
| Room temperature adjustament range | °C | from +10 to +32 | from +10 to +32 |
| $TiO_2$ filter | | Yes | Yes |
| Relative humidity sensor | | Yes | Yes |

# FC DIRECT-EXPANSION INDOOR UNIT FLOOR/CEILING MODEL

| Code | Model | Size |
|---|---|---|
| 387005013 | FCIAS8DC | A |
| 387005014 | FCIBS9DC | B |

Reversible indoor unit for floor or ceiling use and can be fitted in sight. Integrates perfectly into any space. The depth of only 19 cm and quiet operation at 24 dB(A) make this unit an excellent solution for villas, offices, hotel rooms, restaurants and public spaces. Featuring easy installation and condensation discharge, the unit is simple and convenient to maintain. It's equiped with a special humidity sensor.


| MODEL | | FCIAS8DC | FCIBS9DC |
|---|---|---|---|
| Heating/Cooling capacity | kW | up to 3.7/3.9 | up to 5.7/7.0 |
| Size | | A | B |
| Air flow rate (sl.-l.-m.-h.) | $m^3/h$ | 310-390-430-520 | 450-510-610-720 |
| Dehumidification | l/h | 1.3 | 2.3 |
| Fan speed | n° | 3 + auto - by remote control | 3 + auto - by remote control |
| Sound pressure at 2 m (sl.-l.-m.-h.) | dB(A) | 24-26-30-37 | 35-40-46-49 |
| Electrical power supply | V/Ph/Hz | 230/1/50-60 | 230/1/50-60 |
| Type of motor | | DC Inverter | DC Inverter |
| Electrical power input | W | 0.037 | 0.075 |
| Power input | A | 0.17 | 0.33 |
| Liquid pipe diameter | mm (inch) | 6.35 (1/4") | 6.35 (1/4") |
| Gas pipe diameter | mm (inch) | 9.52 (3/8") | 12.7 (1/2") |
| Net Dimension (H./W./D.) | mm | 680/900/190 | 680/900/190 |
| Net weight | kg | 23.5 | 23.5 |
| Remote control supplied | | Yes | Yes |
| Room temperature adjustment range | °C | from +10 to +32 | from +10 to +32 |
| Relative humidity sensor | | Yes | Yes |

# AS DIRECT-EXPANSION INDOOR UNIT CASSETTE MODEL

| Code | Model | Size | Description |
|---|---|---|---|
| 387006190 | ASIAS8DC | A | |
| 387006191 | ASIBS9DC | B | |
| 387027154 | ASGIDC | - | Grid with temperature and humidity sensor for ASIAS8DC and ASIBS9DC models |
| 387006192 | ASICS10DC | C | |
| 387027155 | ASGI25DC | - | Grid temperature and humidity sensor for ASICS10DC model |
| 387006193 | ASIDS13DC | D | |
| 387027156 | ASGI48DC | - | Grid temperature and humidity sensor for ASIDS13DC model |

Perfect for large to small commerical and public spaces, offices, shops and restaurants. AS is made from insulated metal and consists of a calibrated fan, flaps that can be positioned as desired, a built-in waterspout and air exchange capabilities. The grille is made from high quality plastic


A ASIA S8 DC

B ASIB S9 DC

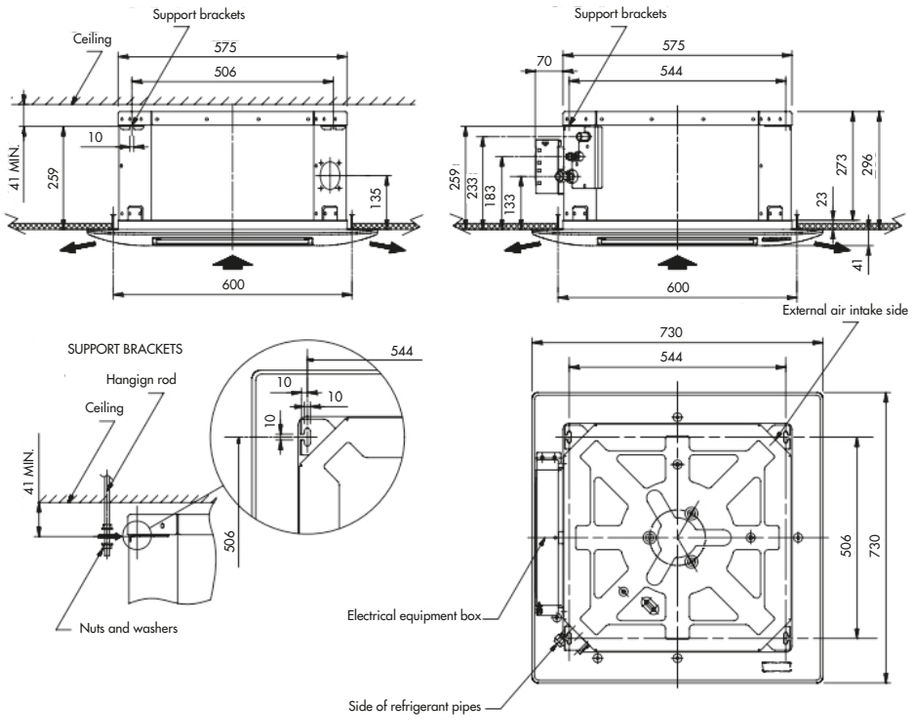
C ASIC S11 DC

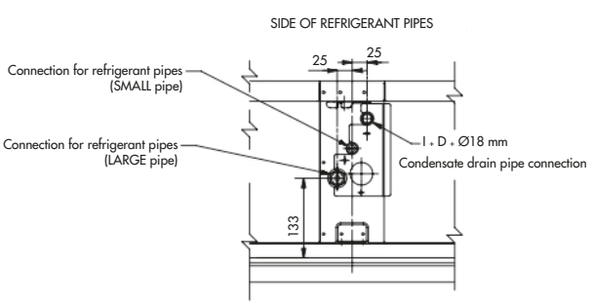
D ASID S13 DC

| MODEL | | ASIAS8DC | ASIBS9DC | ASICS10DC | ASIDS13DC |
|---|---|---|---|---|---|
| Heating/Cooling capacity | kW | up to 3.7/3.9 | up to 5.7/7.0 | up to 9.0/11.0 | up to 13.0/13.9 |
| Size | | A | B | C | D |
| Air flow rate (sl.-l.-m.-h.) | $m^3/h$ | 200-530-630-750 | 200-530-630-750 | 850-1060-1160-1300 | 1200-1700-1980-2300 |
| Dehumidification | l/h | 1.2 | 2.3 | 3.6 | 3.6 |
| Condensation pump static pressure | mm.c.a. | 250 | 250 | 250 | 250 |
| Fan speed | n° | 3 + auto - by remote control | 3 + auto - by remote control | 3 + auto - by remote control | 3 + auto - by remote control |
| Sound pressure at 2 m (sl.-l.-m.-h.) | dB(A) | 27-43-46-50 | 27-43-46-50 | 38-43-44-46 | 38-44-48-52 |
| Electrical power supply | V/Ph/Hz | 230/1/50-60 | 230/1/50-60 | 230/1/50-60 | 230/1/50-60 |
| Type of motor | | DC Inverter | DC Inverter | DC Inverter | DC Inverter |
| Electrical power input | W | 8-24-28-36 | 8-24-28-36 | 13-20-25-41 | 22-36-43-64 |
| Liquid pipe diameter | mm (inch) | 6.35 (1/4") | 6.35 (1/4") | 6.35 (1/4") | 6.35 (1/4") |
| Gas pipe diameter | mm (inch) | 9.52 (3/8") | 12.7 (1/2") | 12.7 (1/2") | 12.7 (1/2") |
| Net dimensions (H./W./D.) | mm | 296/575/575 | 296/575/575 | 310/760/760 | 338/1050/760 |
| Net dimensions of grille (H./W./D.) | mm | 41/730/730 | 41/730/730 | 30/860/860 | 30/1150/860 |
| Net weight | kg | 19 | 20.5 | 22 | 27 |
| Remote control supplied | | Yes | Yes | Yes | Yes |
| Room temperature adjustment range | °C | from +10 to +32 | from +10 to +32 | from +10 to +32 | from +10 to +32 |
| Relative humidity sensor | | Yes | Yes | Yes | Yes |

# AS DIRECT-EXPANSION INDOOR UNIT CASSETTE MODEL

## ASIAS8DC and ASIBS9DC units

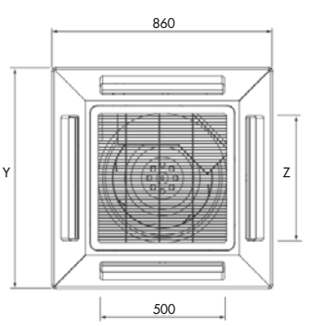


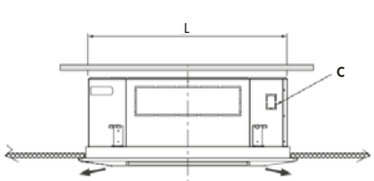



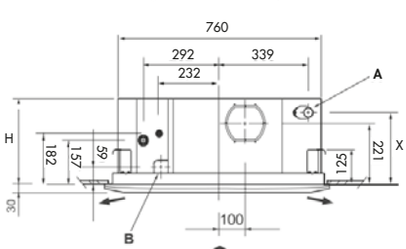

## ASICS10DC and ASIDS13DC units

| MODEL | L | H | X | Y | Z |
|---|---|---|---|---|---|
| ASIC S10 | 760 | 310 | 260 | 860 | 500 |
| ASID S13 | 1050 | 340 | 290 | 1150 | 750 |

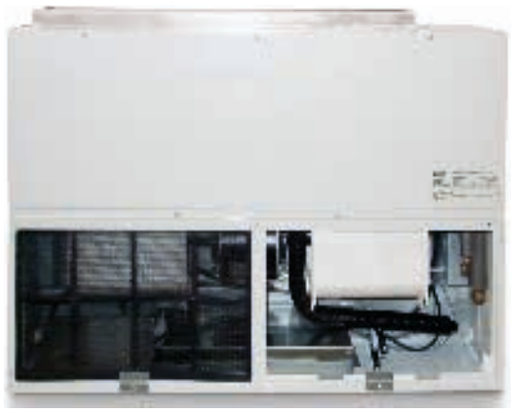
A Condensation drain pipe hole: external diameter of 32 mm



# SD DIRECT-EXPANSION INDOOR UNIT VERTICAL/HORIZONTAL BUILT-IN

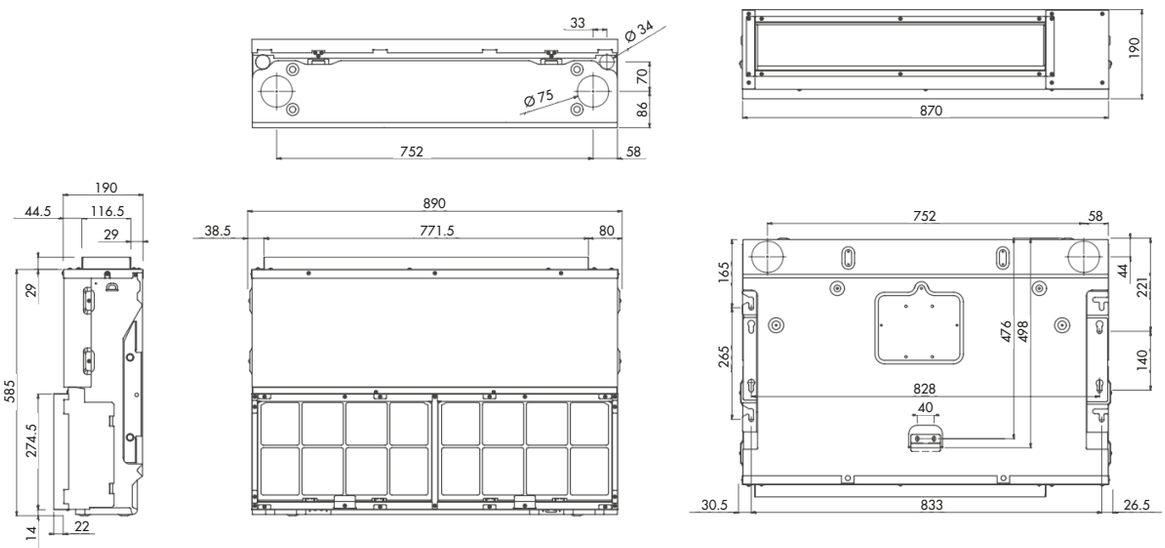


| Code | Model | Size |
|---|---|---|
| 387006188 | SDIAS23DC | A |
| 387006189 | SDIBS23DC | B |

Compact and reversible indoor ductable unit with only 19 cm of depth suitable for villas, offices, hotel rooms, restaurants and public spaces. SD can be fitted both vertically and horizontally hidden in specially made spaces. It is operated by remote control by installing a specific infrared receiver and a 5 m cable (supplied).

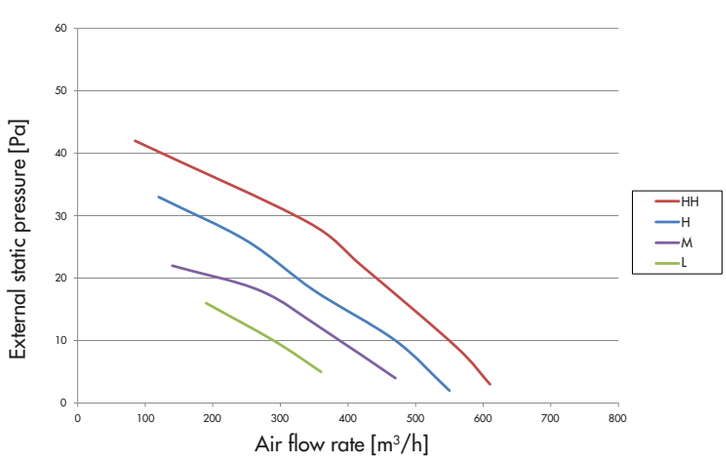

| MODEL | | SDIAS23DC | SDIBS23DC |
|---|---|---|---|
| Heating/Cooling capacity | kW | up to 3.7/3.9 | up to 5.7/7.0 |
| Size | | A | B |
| Air flow rate (sl.-l.-m.-h.) | $m^3/h$ | 310-390-430-520 | 450-510-610-720 |
| Dehumidification | l/h | 1.3 | 2.3 |
| Fan speed | n° | 3 - auto - by remote control | 3 - auto - by remote control |
| Sound pressure at 2 m (sl.-l.-m.-h.) | dB(A) | 24-26-30-37 | 35-40-46-49 |
| Electrical power supply | V/Ph/Hz | 230/1/50-60 | 230/1/50-60 |
| Type of motor | | DC Inverter | DC Inverter |
| Electrical power input | W | 37 | 75 |
| Power input | A | 0.17 | 0.33 |
| Liquid pipe diameter | mm (inch) | 6.35 (1/4") | 6.35 (1/4") |
| Gas pipe diameter | mm (inch) | 9.52 (3/8") | 12.7 (1/2") |
| Net dimensions (H./W./D.) | mm | 680/900/190 | 680/900/190 |
| Net weight | kg | 25 | 25 |
| Remote control supplied | | Yes | Yes |
| Room temperature adjustment range | °C | from +10 to +32 | from +10 to +32 |
| Relative humidity sensor | | Yes | Yes |

# **SD** DIRECT-EXPANSION INDOOR UNIT VERTICAL/HORIZONTAL BUILT-IN

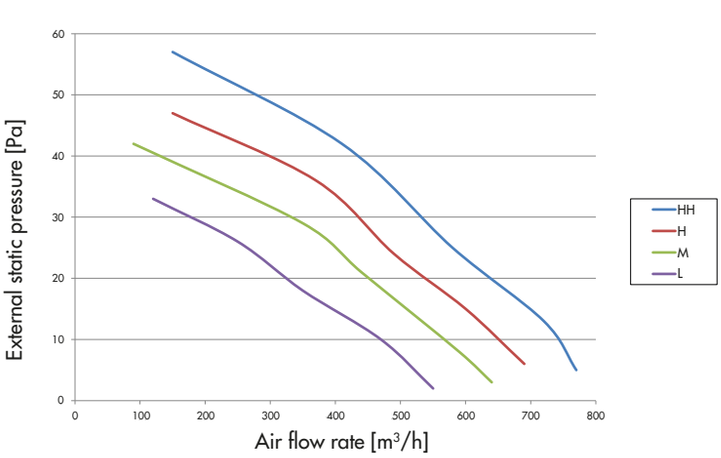



## EXTERNAL STATIC PRESSURE/AIR FLOW RATE DIAGRAM

### SDIAS8DC unit




### SDIBS9DC unit



# AD DIRECT-EXPANSION INDOOR UNIT DUCTED

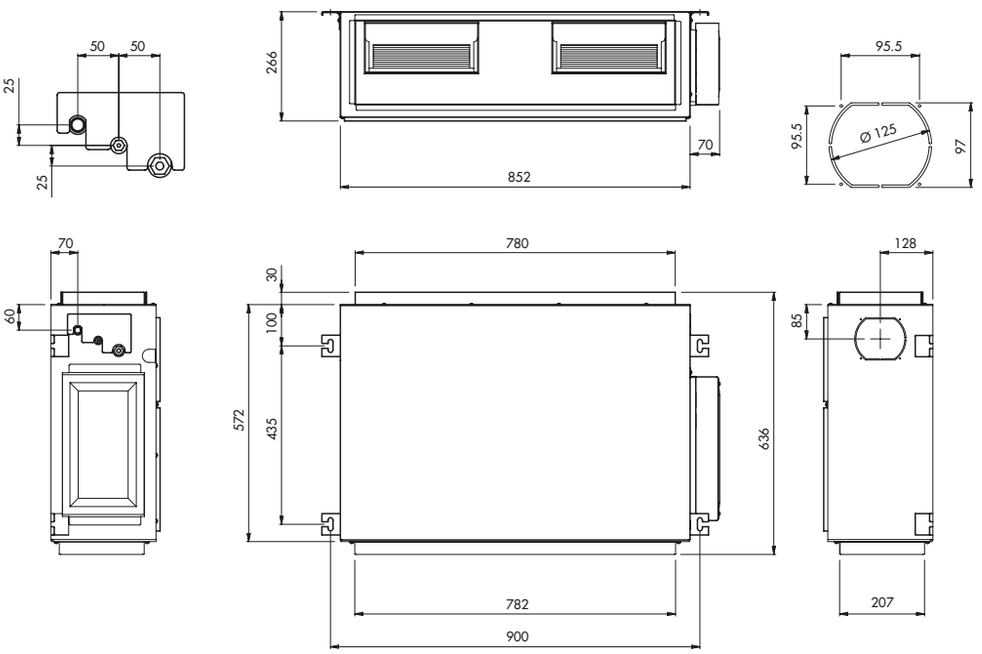
| Code | Model | Size |
|---|---|---|
| 387006196 | ADIAS19DC | A |
| 387006194 | ADIBS13DC | B |
| 387006195 | ADICS13DC | C |

Medium prevalence ductable unit, to be combined with build-on-site plenums with or without the aid of the two-way (ADIA) and three-way (ADIB - ADIC) conveyor. It is built with great attention to material selection and assembly of components and it is suitable for mounting on false ceilings. This unit can also be connected to a fresh air inlet. A special function can be activated by removing a "jumper" from the circuit board to increase the static pressure. AD, even thought it was designed to be built-in and therefore concealed, can be operated by remote control by installing a receiver.

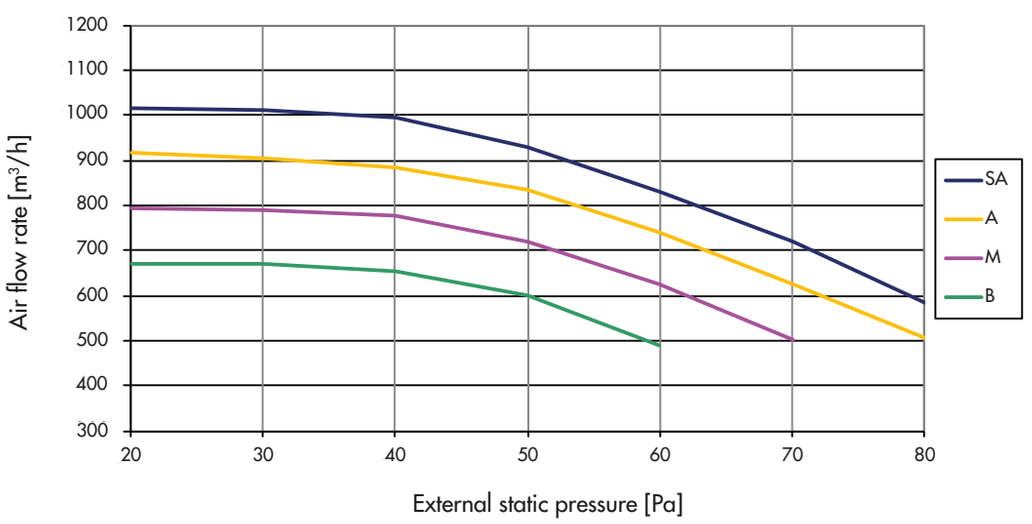

| MODEL | | ADIAS19DC | ADIBS13DC | ADICS13DC |
|---|---|---|---|---|
| Heating/Cooling capacity | kW | up to 4.2/4.4 | up to 5.7/7.0 | up to 9.0/11.0 |
| Size | | A | B | C |
| Air flow rate (l.-m.-h.-eh.) | $m^3/h$ | 600-720-835-930 | 630-855-1010-1170 | 630-855-1010-1170 |
| Dehumidification | l/h | 0.8 | 2.3 | 2.5 |
| Condensation pump static pressure | mm.c.a | 250 | 250 | 250 |
| Fan speed | n° | 3 + auto - by remote control | 3 + auto - by remote control | 3 + auto - by remote control |
| Standard static pressure/JP2 contact | Pa | 50/60 | 50/70 | 50/70 |
| Sound pressure at 2 m (l.-m.-h.-eh.) | dB(A) | 35-40-43-45 | 32-35-42-47 | 35-40-46-49 |
| Sound power (l.-m.-h.-eh.) | dB(A) | 44-49-53-54 | 41-44-51-56 | 44-49-55-58 |
| Electric power supply | V/Ph/Hz | 230/1/50-60 | 230/1/50-60 | 230/1/50-60 |
| Type of motor | | DC Inverter | DC Inverter | DC Inverter |
| Electric power input | W | 56 | 76 | 118 |
| Liquid pipe diameter | mm (inch) | 6.35 (1/4") | 6.35 (1/4") | 6.35 (1/4") |
| Gas pipe diameter | mm (inch) | 9.52 (3/8") | 12.7 (1/2") | 12.7 (1/2") |
| Plenum (type - accessory code) | | 2-way - 387027973 | 3-way - 387027974 | 3-way - 387027974 |
| Diameter of the plenum ducted | mm | 200 | 200 | 200 |
| Net dimension (H./W./D.) | mm | 266/852/572 | 266/1060/572 | 266/1060/572 |
| Net dimension with plenum (H./W./D.) | mm | 266/852/772 | 266/1060/772 | 266/1060/772 |
| Net weight | kg | 30 | 35 | 35 |
| Remote control with receiver | | Yes | Yes | Yes |
| Room temperature adjustment range | °C | from +10 to +32 | from +10 to +32 | from +10 to +32 |
| Relative humidity sensor | | Yes | Yes | Yes |

# **AD** DIRECT-EXPANSION INDOOR UNIT DUCTED MODEL

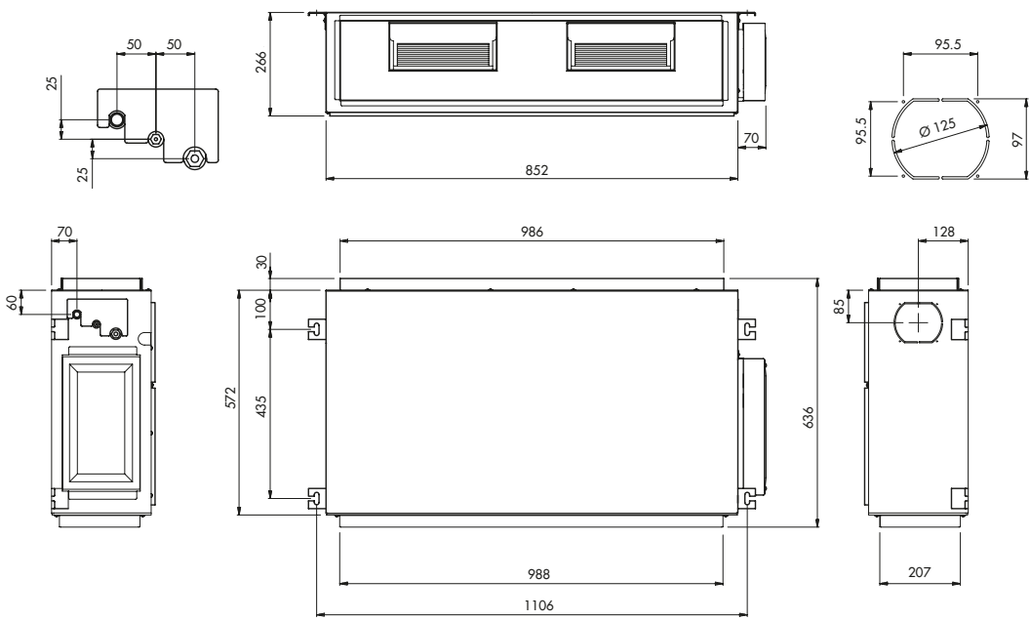
## ADIAS19DC unit



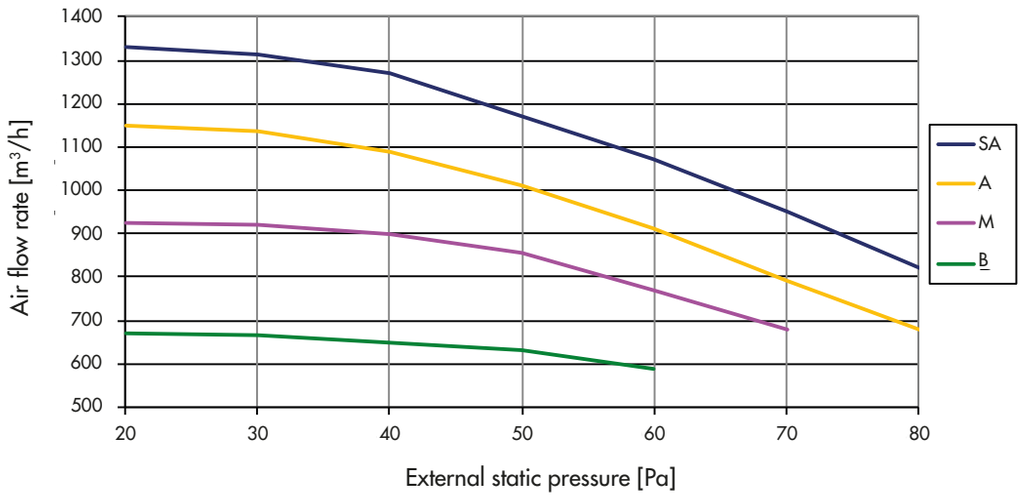

## STATIC PRESSURE/AIR FLOW RATE DIAGRAM - ADIAS19DC UNIT



## ADIBS13DC unit
## ADICS13DC unit




## STATIC PRESSURE/AIR FLOW RATE DIAGRAM - ADIBS13DC - ADICS13DC UNITS



# DHW PRODUCTION SOLUTIONS

## 1 ARGO EXCLUSIVE TECHNOLOGY

EMIX TANK is directly connected to the outdoor unit, which is fitted with a special gas connection specifically for this purpose. The EMIX TANK is available in the version with a storage tank designed to hold from 200 to 300 litres of domestic hot water, and is provided with an internal exchanger with forced circulation for solar thermal energy.

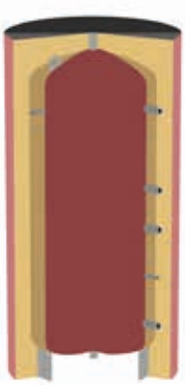
EMIX TANK 200

EMIX TANK 300

## 2 ARGO EXCLUSIVE TECHNOLOGY

EMIX is directly connected to the outdoor unit, which is fitted with a special gas connection specifically for this purpose. The storage tank for domestic hot water, to be combined with the unit which can be supplied by third parties, must have a volume between 80 and 300 litres.

EMIX



Tank (from 80 to 300 litres)

## 3 STANDARD TECHNOLOGY

The production of domestic hot water occurs by increasing the delivery temperature of the heat-transfer fluid and the switching of a three-way valve towards the exchanger of the dedicated tank. This tank can be supplied by the company (300 litres volume, equipped with suitable exchanger for heat pump, electric heating element and control panel) or by third parties.

Diverter valve

Control panel

200-300 litres tank

## PRODUCTION OF DOMESTIC HOT WATER AND AT THE SAME TIME HEATING AND COOLING OF ROOMS

EMIX/EMIX TANK is a component of the iSERIES/iM system and is part of the wide range of indoor units; it can produce domestic hot water using a thermodynamic source all year round, by working simultaneously with the system regardless of its operating mode. This innovative concept goes beyond the 'traditional' methods of producing domestic hot water, which instead involves transferring energy using diverter valves, which actually interrupt the flow of the fluid towards the system.

## PRODUCTION OF DOMESTIC HOT WATER FOR FREE AS YOU COOL ROOMS

While the heat pump is operating in cooling mode, EMIX/EMIX TANK is able to transfer the heat extracted from the environment directly to the domestic hot water (ENERGY RECOVERY FUNCTION). By taking advantage of the desuperheating heat from the refrigerating cycle, EMIX/EMIX TANK can actually produce **domestic hot water free of charge of up to 75 °C** (when at least one indoor unit is operating) by directly using the energy of the single heat pump.

# EMIX and EMIX TANK

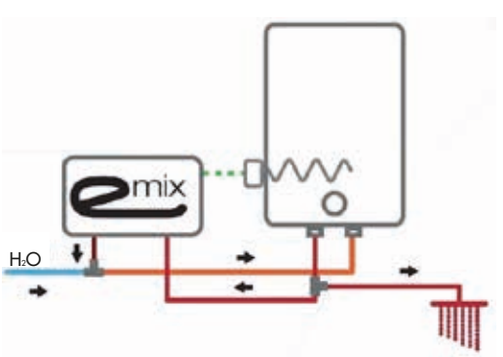
## MAIN FEATURES

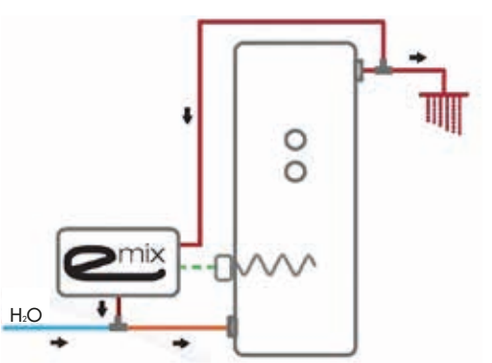
### CONNECTION OF EMIX/EMIX TANK WITH ISERIES AND iM

The outdoor units from the iSERIES and IM range are fitted with a special connection port exclusively for connecting the EMIX/EMIX TANK unit via cooling pipes.

### HOW EMIX WORKS

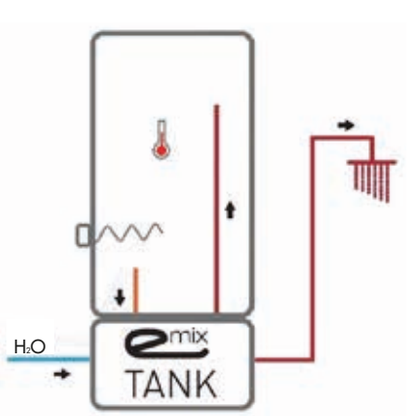
EMIX does not offer an instantaneous solution for domestic hot water production, like a gas boiler, for example. For EMIX to operate correctly, it must heat the water in any type of tank, from an electric boiler to a storage tank with integration of a solar heat system. The unit will periodically sample water from the storage tank, take the temperature of the water and, if necessary, increase the temperature value until it reaches the set-point configured.
Operating one or more electric heating elements (up to three), if built-in to the storage tank, will generate an anti-legionella cycle (if required) and a back-up that can be used if fast heating is needed or in the event of a system malfunction. An optional temperature sensor can be installed in the storage tank to optimise the thermal load.




### HOW EMIX TANK WORKS

EMIX TANK integrates a refrigerant gas/domestic hot water heat exchanger and a glazed ceramic-coated steel storage tank all in a single solution.
The unit is fitted with two temperature sensors (which can be selected alternately) based on the set-point configured, which activate the modulating, variable speed pump. There are two electric heating elements available to produce an anti-legionella cycle (if required) and a back-up that can be used if fast heating is needed or in the event of a system malfunction. The set-up is complete with a thermostatic mixing valve to provide the correct water temperature for the user.

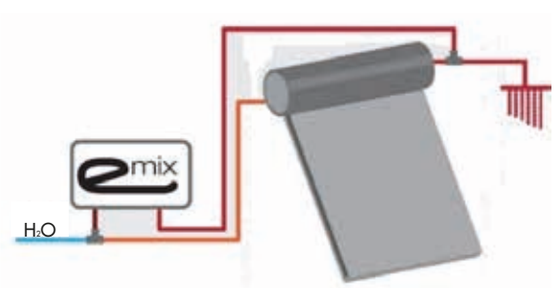


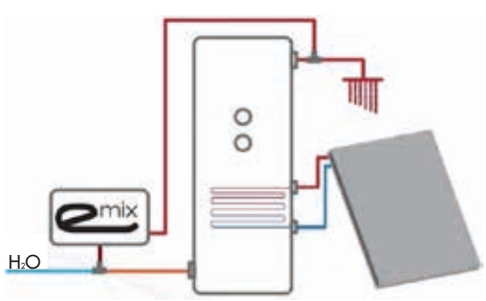
## OPERATING MODE

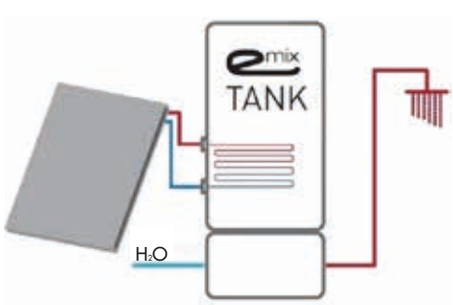
Setting the desired temperature (set-point) for domestic hot water is very easy. The set-point is configured using one button alone and the temperature level is indicated via five green LEDs.
The EMIX/EMIX TANK regulation system will take care of the rest and will aim to meet all the heat load requirements, distributing the energy from the heat pump autonomously to ensure that the rooms are heated and that domestic hot water is produced.

## INTEGRATION WITH SOLAR HEAT SYSTEMS

The solar heat systems that are specifically designed to produces domestic hot water are widely used throughout Europe (especially southern Europe).
There are two types of solar heaters; natural circulation and forced circulation.
EMIX can be connected to both of these types of systems. In this case, it will function as an integrated component, producing hot water when the efficiency of the solar panels is low (in winter or at night), or when the user's water demand becomes significant.



# EMIX

| Code | Model |
|---|---|
| 387135030 | EMIX V1 |

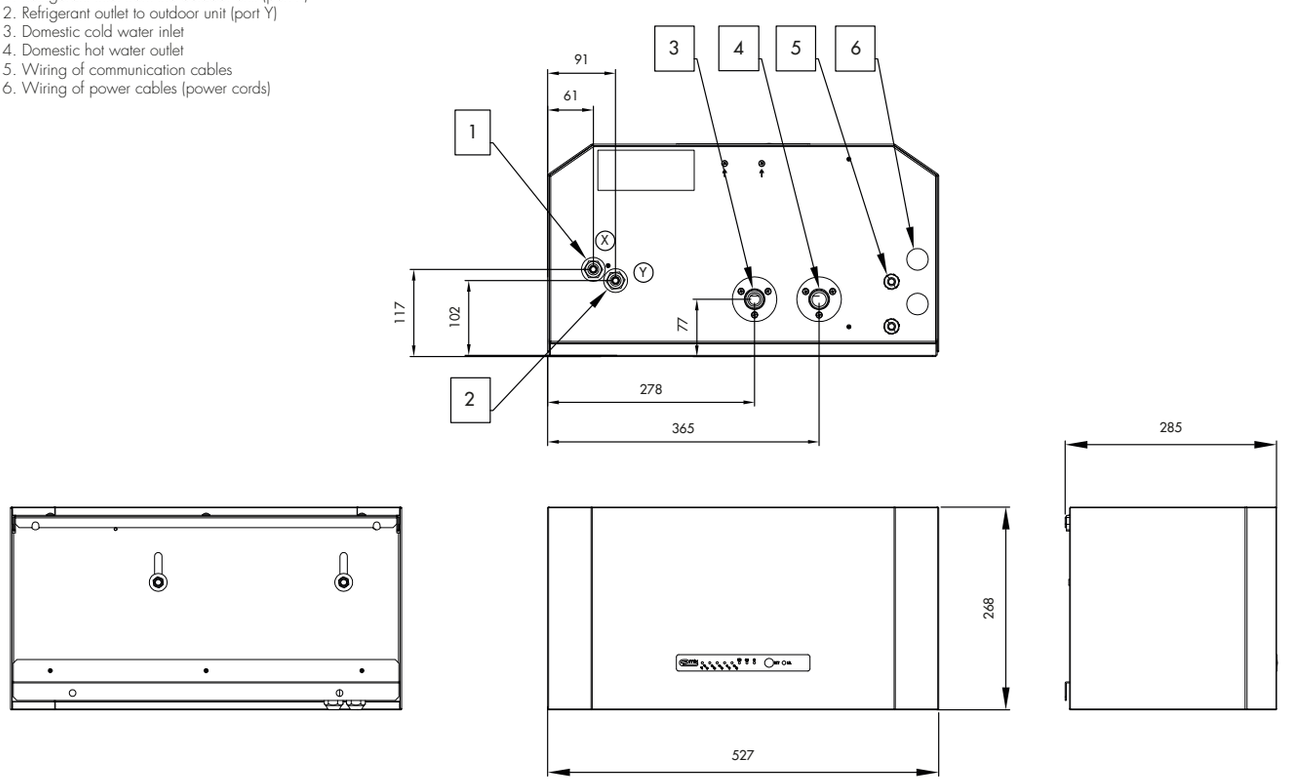
EMIX V1 is DHW module which can be combined with any tank (min. 80 litres - max. 300 litres). It is provided with inverter pump and stratification sensor and it can be integrated with both natural and forced circulation solar thermal energy systems. The unit is provided with a double-wall exchanger to ensure maximum safe and purified domestic water and is able to manage an integration or backup resistance.

## ACCESSORIES (INCLUDED)

- 3/4" mesh filter
- Temperature sensor

DOUBLE WALL | EC PUMP | ELECTRIC BACK UP | iCOP

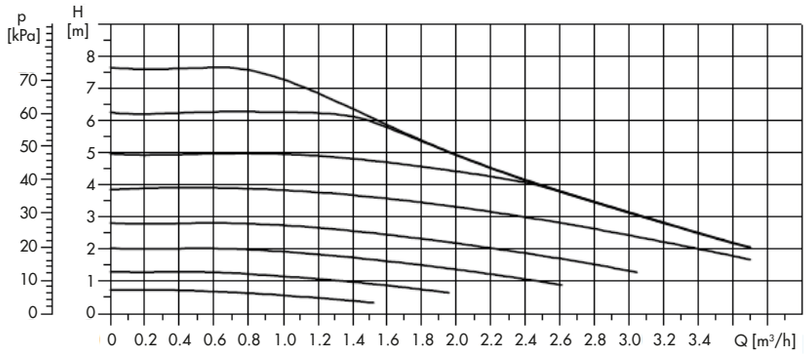
1. Refrigerant inlet from the outdoor unit (port X)
2. Refrigerant outlet to outdoor unit (port Y)
3. Domestic cold water inlet
4. Domestic hot water outlet
5. Wiring of communication cables
6. Wiring of power cables (power cords)



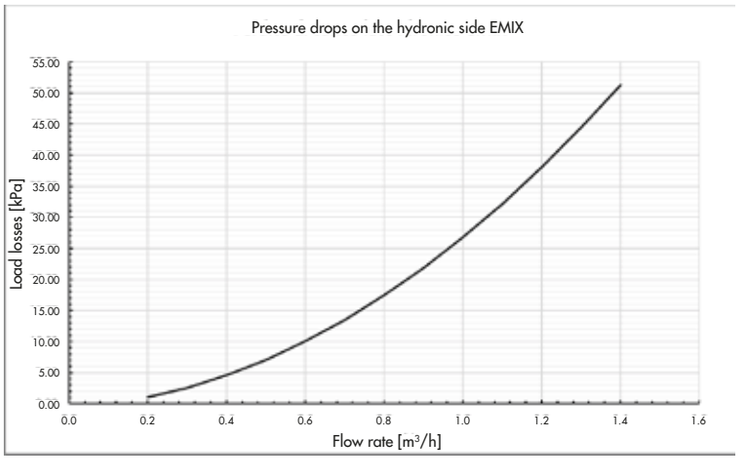
| Technical data EMIX V1 | | |
|---|---|---|
| Electrical power supply | V/Ph/Hz | 230/1/50 |
| Minimum power / current input | W/A | 15/0.20 |
| Maximum power / current input | W/A | 70/0,53 |
| Hydraulic connections | inch | 3/4" - 3/4" (1/2"-1/2" per AEI1G140EMX) |
| Gas connections | inch | 3/8" - 3/8" |
| Net weight U.I. | kg | 16.5 |
| Net dimension U.I (H./W./D.) | mm | 268/527/285 |
| Additional heaters | kW | activation only |
| Portata acqua consigliata | L/min | 10-12 |
| Maximum operating pressure | bar | 6 |
| Sound power level | dB(A) | 35 |

| MODEL | | EMIX V1 | | | |
|---|---|---|---|---|---|
| **Connected to** | | **AEI1G65EMX** | **AIM06EMX** | **AEI1G80EMX** | **AIM08EMX** |
| ERP class (*) | - | A | A | A | A |
| Load profile (tapping) | - | L | L | XL | XL |
| Reference DHW tank volume | L | 200 | 200 | 300 | 300 |
| Water heating energy efficiency (**) | $\eta_{WH}$ | 104 | 105 | 116 | 106 |
| Annual energy consumption (**) | kWh | 981 | 972 | 1447 | 1587 |
| $COP_{DHW}$ | - | 2.51 | 2.51 | 2.78 | 2.56 |
| Heating-up time (from 10 °C) | h:m | 2:36 | 3:09 | 3:04 | 3:33 |
| Final reference water temperature | °C | 50 | 50 | 48 | 48 |
| Maximum quantity of mixed water at 40 °C | l | 240 | 240 | 354 | 354 |

(*) with test method according to EN 16147
(**) avarage seasons




Operating curve of EMIX




Recommended design flow rate: 10-12 l/min

# INSTALLATION DIAGRAMS

## DIAGRAM 1

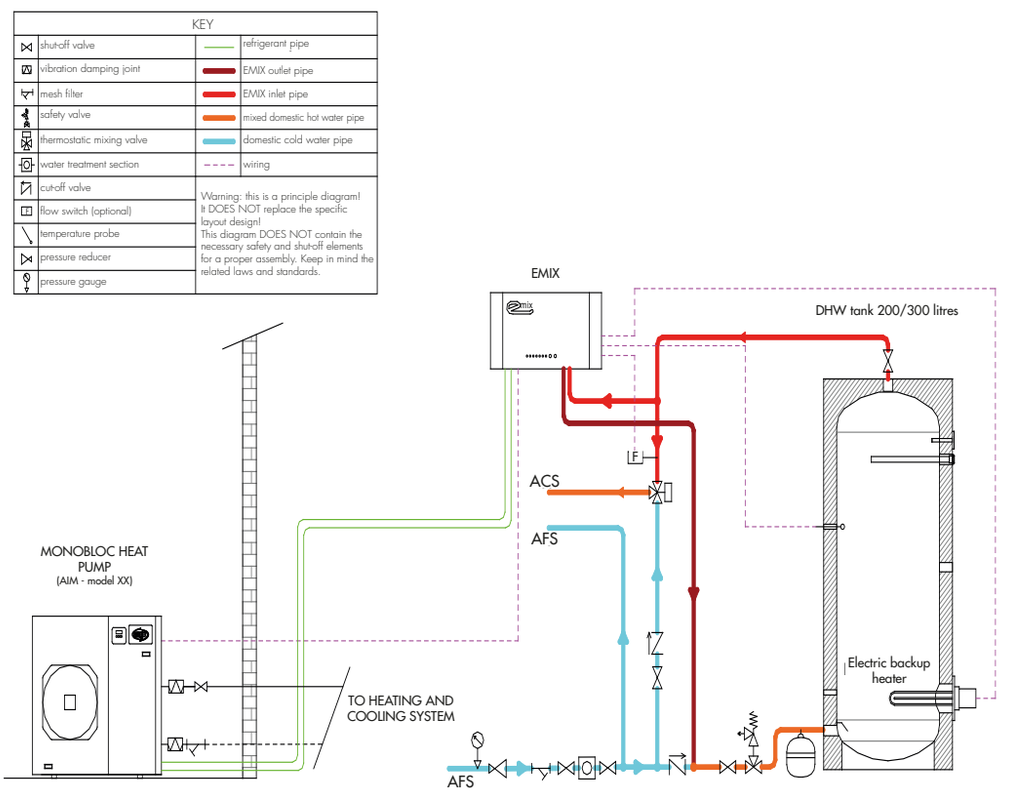



Diagram showing EMIX coupled with a domestic hot water tank with electric backup heater, managed directly by EMIX. Stratification DHW sensor and flow switch (optional) to optimise the anti-legionella cycle. The EMIX is connected to an iM heat pump.

# DIAGRAM 2

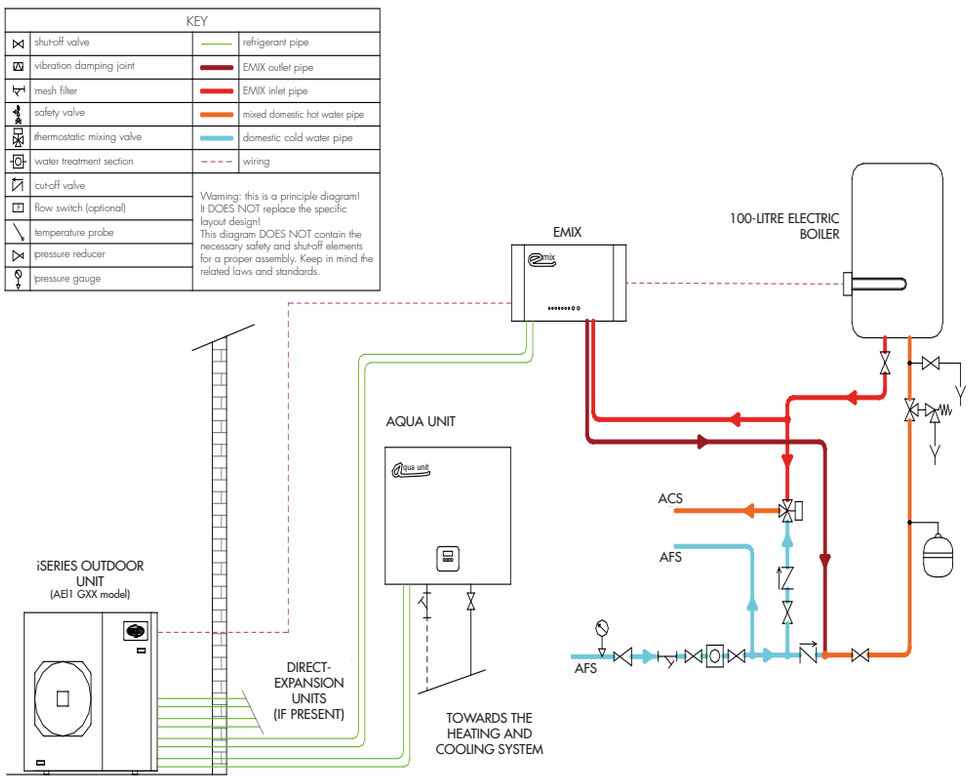



Diagram showing EMIX supplied by a small domestic hot water storage tank with suitable electric heating element, operated directly by EMIX. DHW temperature management by periodic sampling of stored water. The EMIX is connected to an iSERIES system outdoor unit.

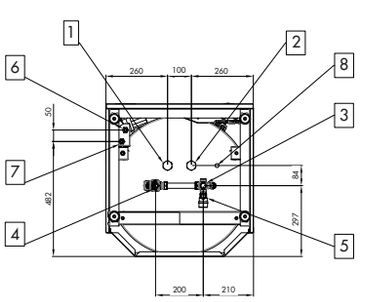
# EMIX TANK

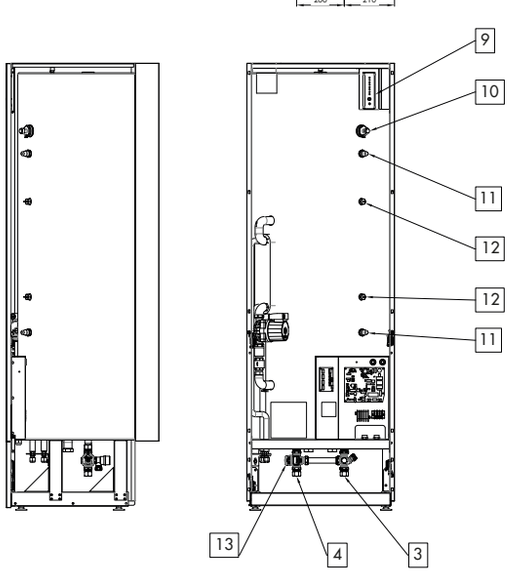
EMIX TANK 200 V2 EMIX TANK 300 V2

| Code | Model |
|---|---|
| 387030198 | EMIX TANK 200 V2 |
| 387030199 | EMIX TANK 300 V2 |

EMIX TANK 200 V2 and EMIX TANK 300 V2, with the same features as the EMIX but fitted inside a rectangular white metal chassis, with a built-in ceramic-coated tank with a 200-300 litres capacity, suitable for domestic hot water, provided with backup heater, circulation pump and solar exchanger for connection to third-party solar panels.

DOUBLE WALL | EC PUMP | ELECTRIC BACK UP | iCOP




1. Solar thermal energy exchanger inlet
2. Solar thermal energy exchanger outlet
3. Domestic cold water inlet
4. Domestic hot water outlet
5. Safety valve
6. Refrigerant gas inlet
7. Refrigerant gas outlet
8. Solar thermal energy sensor probe
9. Control panel
10. Magnesium anode
11. Electric backup heater
12. Temperature sensors
13. Thermostatic mixing valve

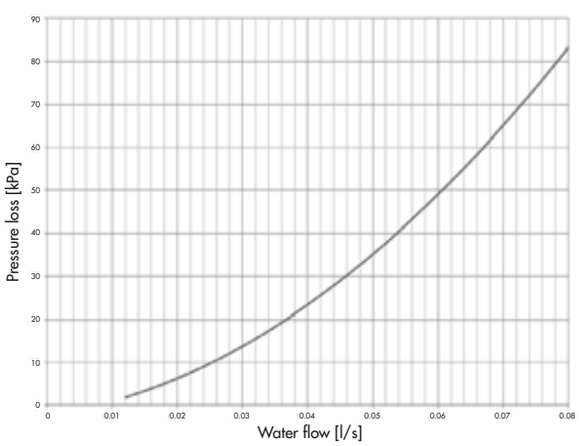
| Technical data | | EMIX TANK 200 V2 | EMIX TANK 300 V2 |
|---|---|---|---|
| Electric power supply | V/Ph/Hz | 230/1/50 | |
| Maximum power input (without electric heater) | W | 60 | |
| Maximum power input (with electric heater) | W | 2000 | |
| Hydraulic connections | mm | Ø 22 | |
| Gas connections | inch | 3/8" - 3/8" (1/2" - 1/2" per AEI1G140EMX) | |
| Solar thermal energy exchanger connections | inch | G 1" | |
| Maximum refrigerant pipe length | m | 10 | |
| Maximum height difference between indoor unit and outdoor unit | m | 10 | |
| Maximum height difference to other iSERIES indoor unit | m | 5 | |
| Additional gas charge (if required) | g/m | 15 for pipes G 3/8" - G 3/8" (20 per G1/2") | |
| Tank volume | l | 200 | 300 |
| Net weight | kg | 103 | 133 |
| Weight with packaging | kg | 115 | 145 |
| Net dimension (H./W./D.) | mm | 1460/620/640 | 1875/620/640 |
| Maximum operating pressure (PSV set) | bar | 6 | |
| Sound power level | dB(A) | 35 | |

| MODEL | | EMIX TANK 200 V2 | | | |
|---|---|---|---|---|---|
| **Connected to** | | **AEI1G42EMX** | **AEI1G50EMX** | **AEI1G65EMX** | **AIM06EMX** |
| ERP class (*) | - | A | A | A | A |
| Load profile (tapping) | - | L | L | L | L |
| Water heating energy efficiency (**) | $\eta_{HW}$ | 106 | 105 | 104 | 105 |
| Annual energy consumption (**) | kWh | 967 | 979 | 981 | 972 |
| $COP_{DHW}$ | - | 2.54 | 2.53 | 2.51 | 2.51 |
| Heating-up time (from 10 °C) | h:m | 2:51 | 2:47 | 2:36 | 3:09 |
| Final reference water temperature | °C | 50 | 50 | 50 | 50 |
| Maximum quantity of mixed water at 40 °C | l | 240 | 240 | 240 | 240 |

| MODEL | | EMIX TANK 300 V2 | | | | | |
|---|---|---|---|---|---|---|---|
| **Connected to** | | **AEI1G80EMX** | **AIM08EMX** | **AEI1G110EMX** | **AIM11EMX** | **AEI1G140EMX** | **AIM14EMX** |
| ERP class (*) | - | A | A | A | A | A | A |
| Load profile (tapping) | - | XL | XL | XL | XL | XL | XL |
| Water heating energy efficiency (**) | $\eta_{HW}$ | 116 | 106 | 106 | 106 | 112 | 105 |
| Annual energy consumption (**) | kWh | 1447 | 1587 | 1581 | 1586 | 1490 | 1601 |
| $COP_{DHW}$ | - | 2.78 | 2.56 | 2.57 | 2.55 | 2.71 | 2.51 |
| Heating-up time (from 10 °C) | h:m | 3:04 | 3:33 | 2:47 | 2:25 | 2:08 | 2:24 |
| Final reference water temperature | °C | 48 | 48 | 48 | 48 | 48 | 48 |
| Maximum quantity of mixed water at 40 °C | l | 354 | 354 | 354 | 354 | 354 | 354 |

(*) with test method according to EN 16147
(**) avarage season

## SOLAR THERMAL ENERGY EXCHANGER DROPS




Exchanger surface area: 1.4 $m^2$

# INSTALLATION DIAGRAMS

## DIAGRAM 1

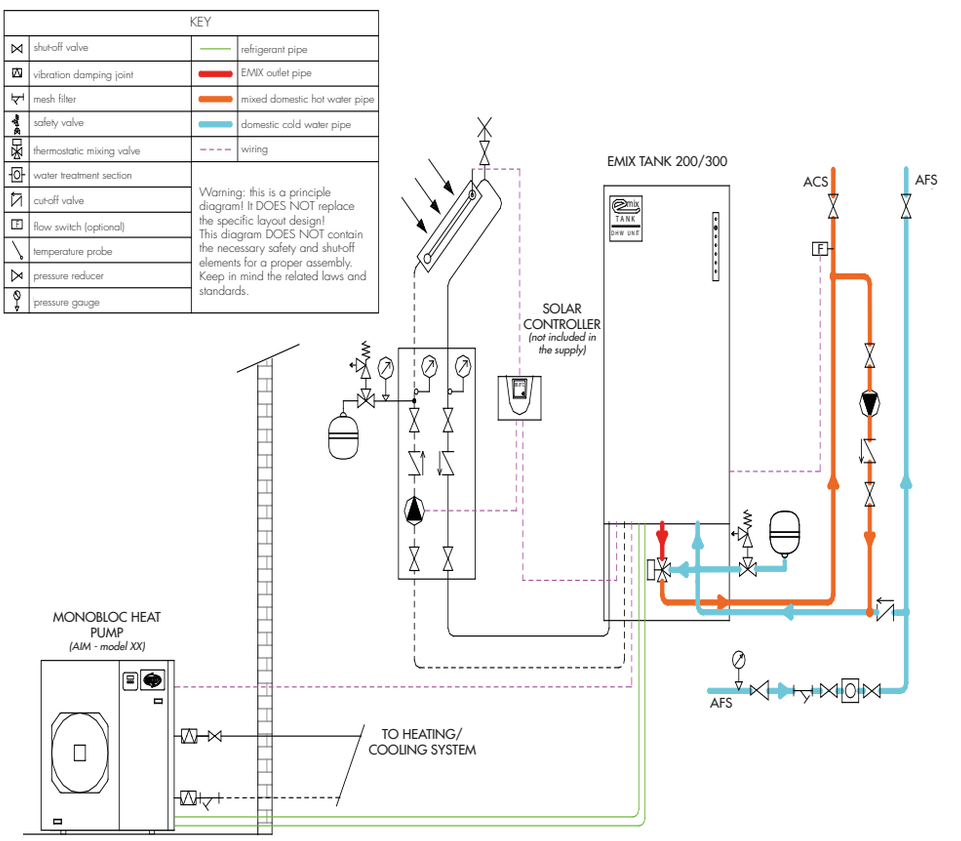



Diagram showing EMIX TANK connected to an iM heat pump.
Flow switch (optional) to optimise the anti-legionella cycle and connection to a solar thermal system (not in our scope of supply).

## DIAGRAM 2

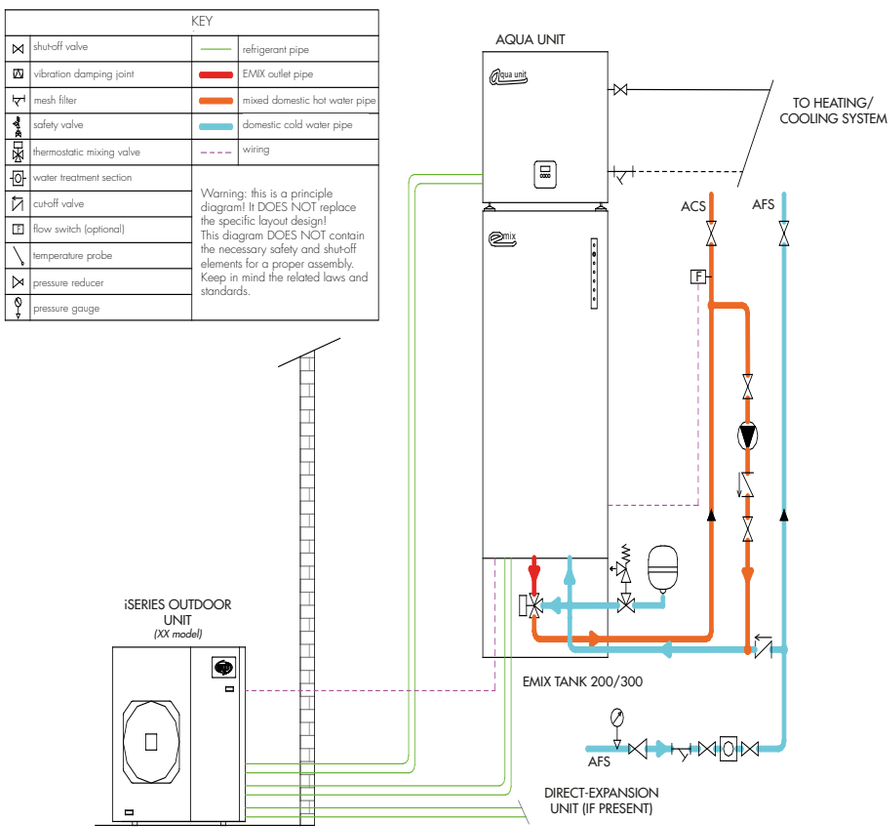
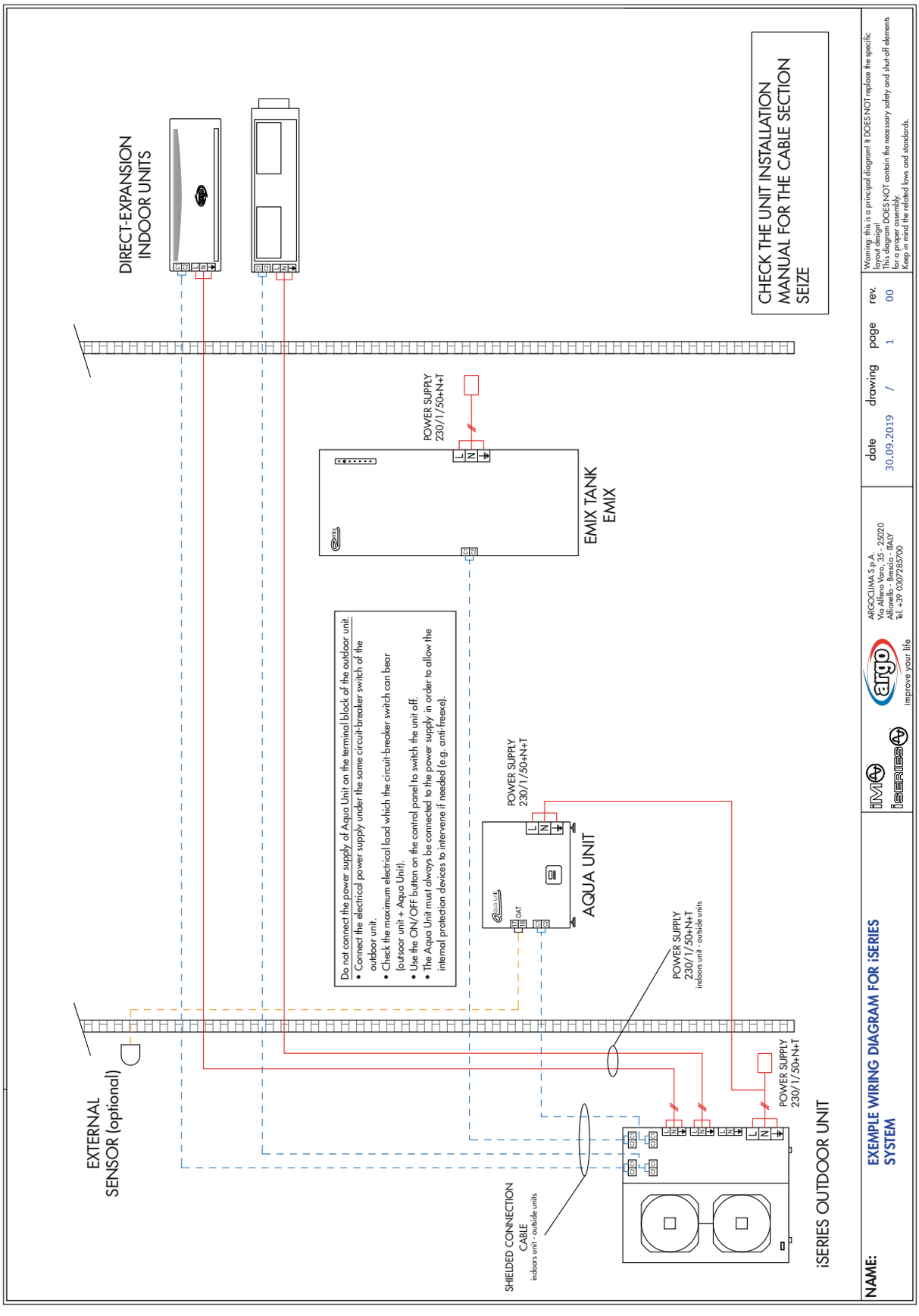



Diagram showing EMIX TANK connected to an iSERIES system.
The AQUA UNIT module easily and practically fits on top of the EMIX TANK, reducing the installation space.
Flow switch (optional) to optimise the anti-legionella cycle.

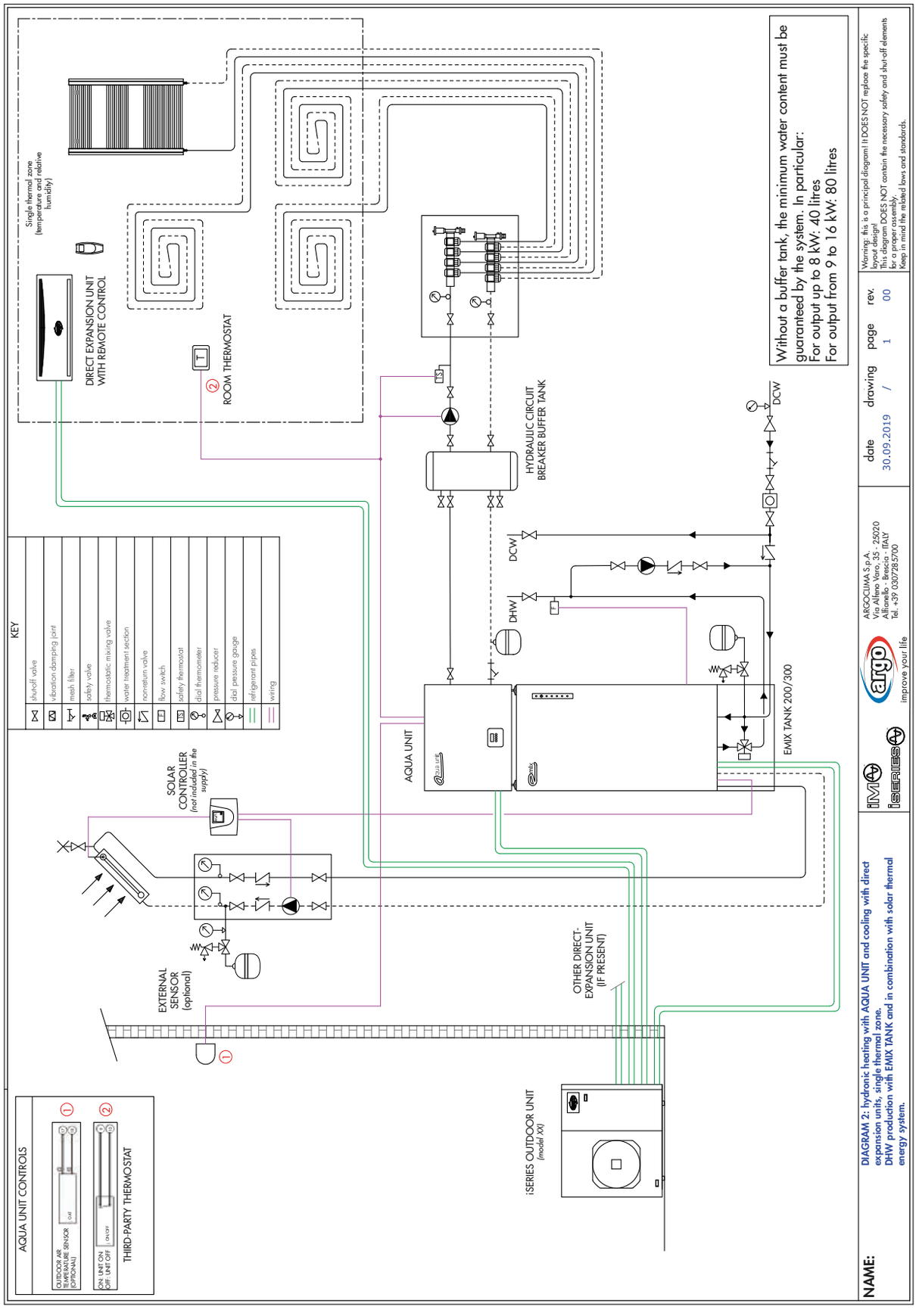
# iSERIES

## EXAMPLE WIRING DIAGRAM

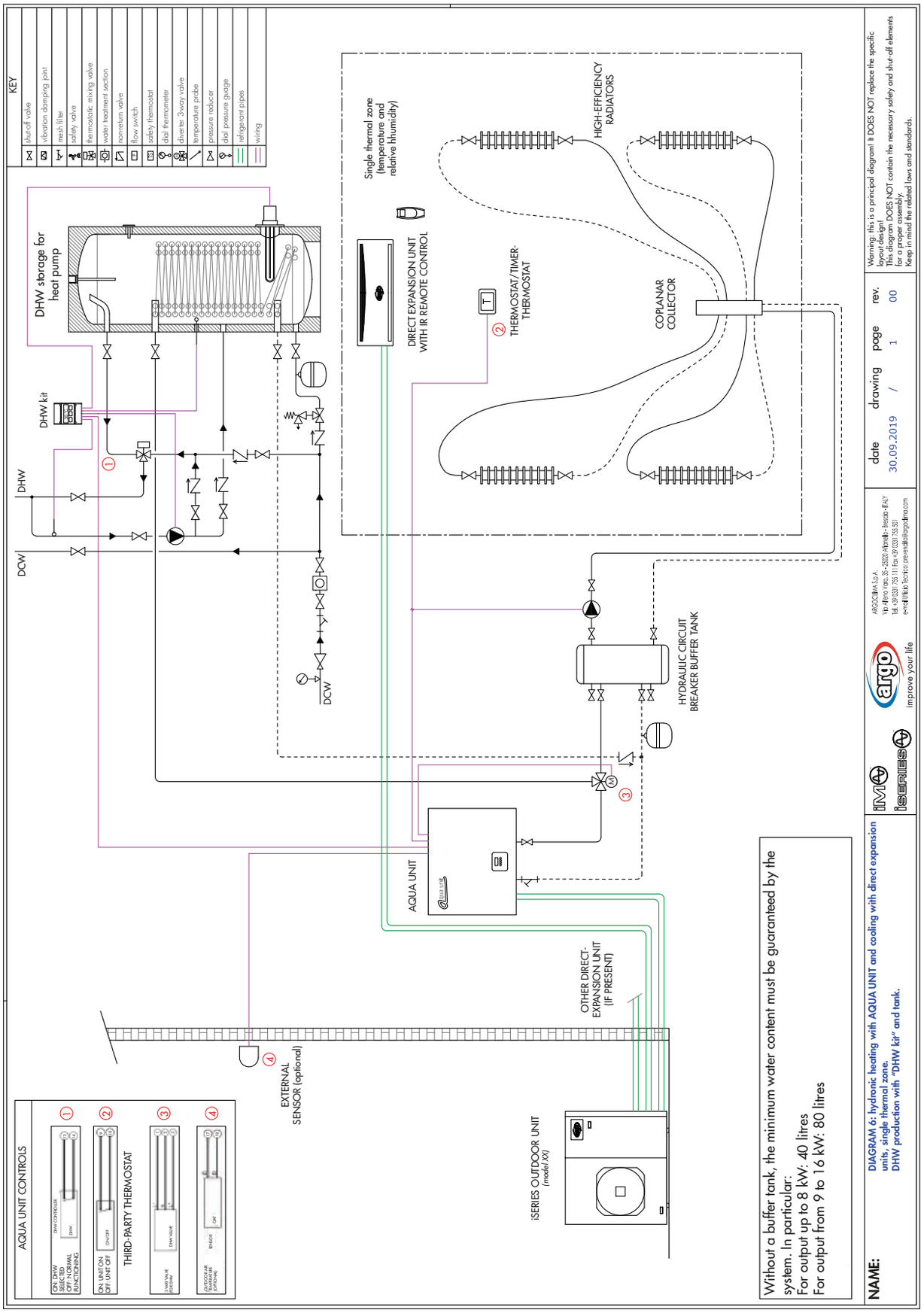


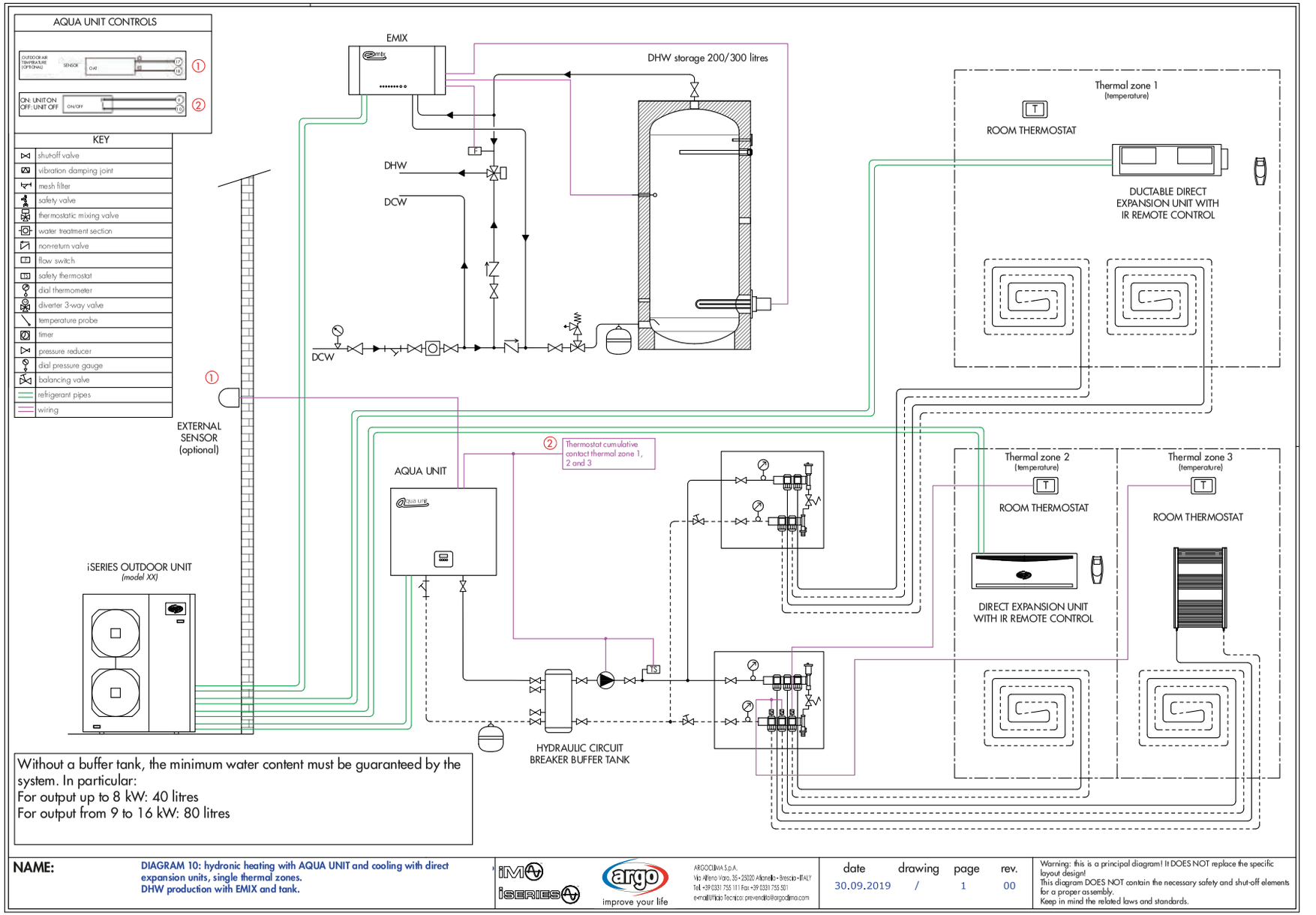
# iSERIES

## INSTALLATION EXAMPLES

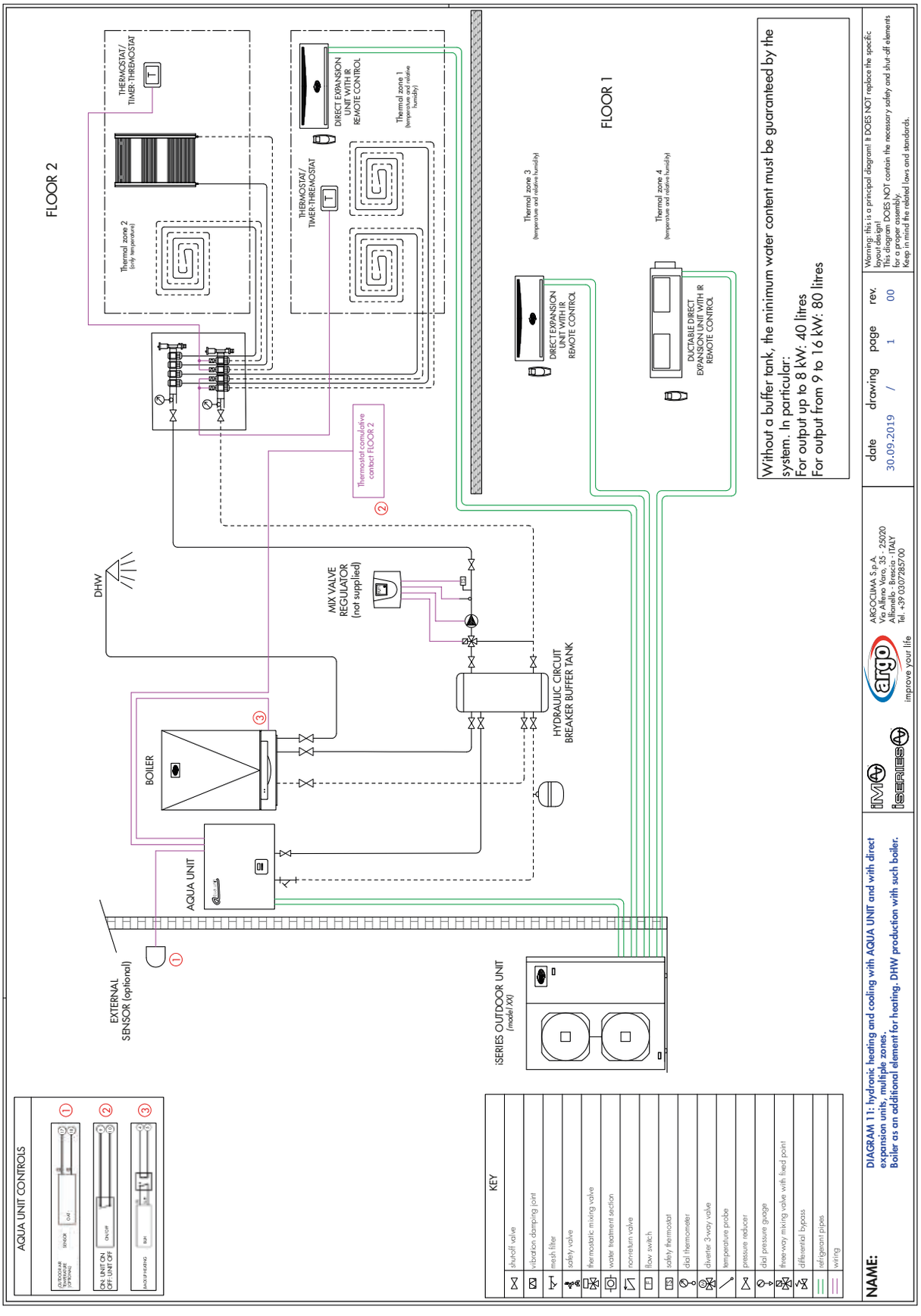


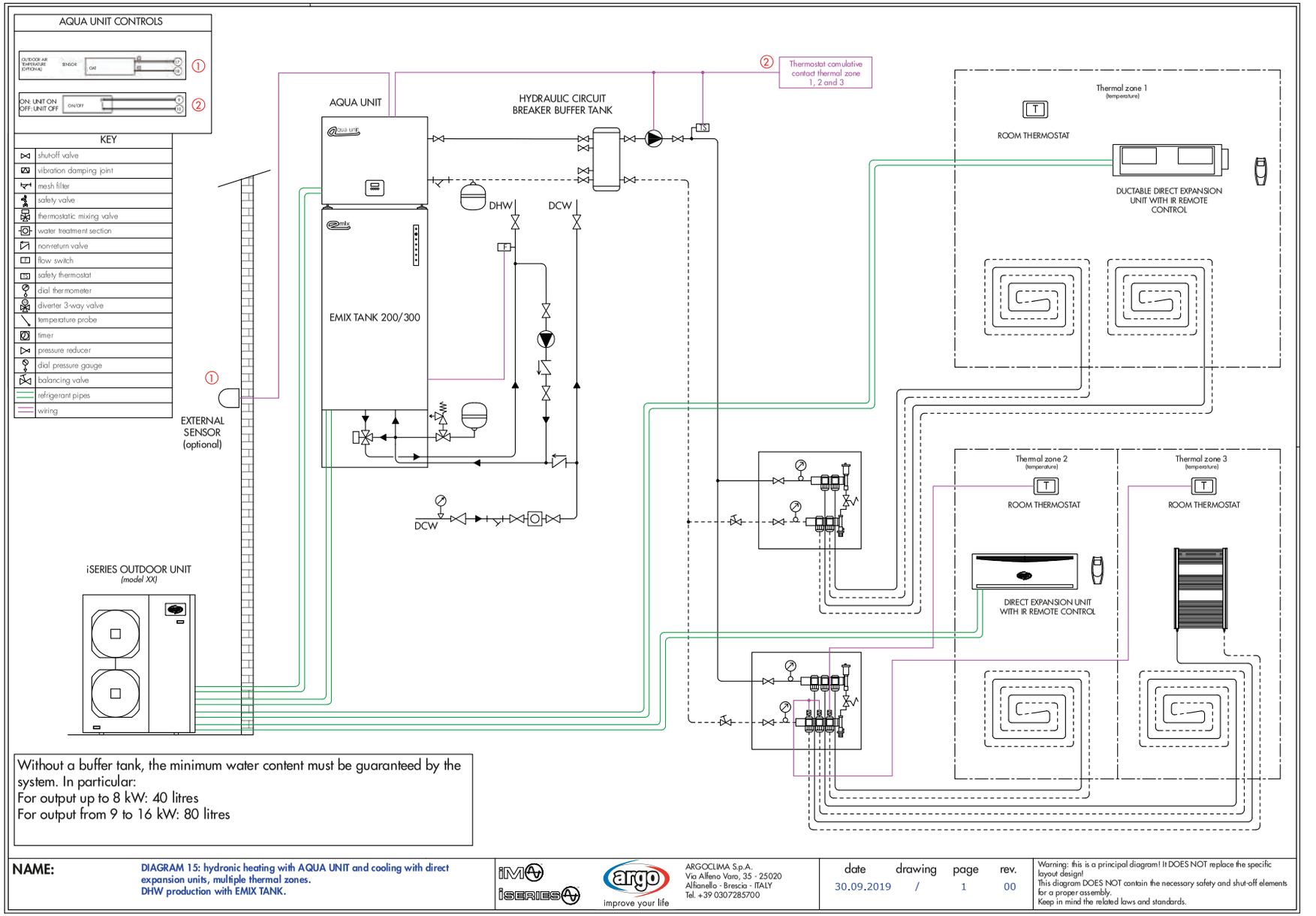
# INSTALLATION EXAMPLES




AQUA UNIT CONTROLS
OUTDOOR AIR TEMPERATURE (OPTIONAL)
SENSOR
OAT
ON: UNIT ON
OFF: UNIT OFF
ON/OFF
KEY
shut-off valve
vibration damping joint
mesh filter
safety valve
thermostatic mixing valve
water treatment section
non-return valve
flow switch
safety thermostat
dial thermometer
diverter 3-way valve
temperature probe
timer
pressure reducer
dial pressure gauge
balancing valve
refrigerant pipes
wiring
EMIX
DHW storage 200/300 litres
DHW
DCW
DCW
EXTERNAL SENSOR (optional)
AQUA UNIT
Thermostat cumulative contact thermal zone 1, 2 and 3
iSERIES OUTDOOR UNIT
(model XX)
HYDRAULIC CIRCUIT BREAKER BUFFER TANK
Thermal zone 1
(temperature)
ROOM THERMOSTAT
DUCTABLE DIRECT EXPANSION UNIT WITH IR REMOTE CONTROL
Thermal zone 2
(temperature)
ROOM THERMOSTAT
DIRECT EXPANSION UNIT WITH IR REMOTE CONTROL
Thermal zone 3
(temperature)
ROOM THERMOSTAT
Without a buffer tank, the minimum water content must be guaranteed by the system. In particular:
For output up to 8 kW: 40 litres
For output from 9 to 16 kW: 80 litres
NAME:
DIAGRAM 10: hydronic heating with AQUA UNIT and cooling with direct expansion units, single thermal zones.
DHW production with EMIX and tank.
improve your life
ARGOCLIMA S.p.A.
Via Alfieno Varo, 35 • 25020 Alfianello • Brescia • ITALY
Tel. +39 0331 755 111 Fax +39 0331 755 501
e-mail Ufficio Tecnico: prevendita@argoclima.com
date
30.09.2019
drawing
/
page
1
rev.
00
Warning: this is a principal diagram! It DOES NOT replace the specific layout design!
This diagram DOES NOT contain the necessary safety and shut-off elements for a proper assembly.
Keep in mind the related laws and standards.

# INSTALLATION EXAMPLES




AQUA UNIT CONTROLS
OUTDOOR AIR TEMPERATURE (OPTIONAL)
SENSOR
CAR
ON: UNIT ON
OFF: UNIT OFF
ON/OFF
KEY
shut-off valve
vibration damping joint
mesh filter
safety valve
thermostatic mixing valve
water treatment section
non-return valve
flow switch
safety thermostat
dial thermometer
diverter 3-way valve
temperature probe
timer
pressure reducer
dial pressure gauge
balancing valve
refrigerant pipes
wiring
EXTERNAL SENSOR (optional)
AQUA UNIT
HYDRAULIC CIRCUIT BREAKER BUFFER TANK
Thermostat cumulative contact thermal zone 1, 2 and 3
EMIX TANK 200/300
DHW
DCW
DCW
iSERIES OUTDOOR UNIT
(model XX)
Thermal zone 1
(temperature)
ROOM THERMOSTAT
DUCTABLE DIRECT EXPANSION UNIT WITH IR REMOTE CONTROL
Thermal zone 2
(temperature)
ROOM THERMOSTAT
DIRECT EXPANSION UNIT WITH IR REMOTE CONTROL
Thermal zone 3
(temperature)
ROOM THERMOSTAT
Without a buffer tank, the minimum water content must be guaranteed by the system. In particular:
For output up to 8 kW: 40 litres
For output from 9 to 16 kW: 80 litres
NAME:
DIAGRAM 15: hydronic heating with AQUA UNIT and cooling with direct expansion units, multiple thermal zones.
DHW production with EMIX TANK.
improve your life
ARGOCLIMA S.p.A.
Via Alfeno Varo, 35 - 25020
Alfianello - Brescia - ITALY
Tel. +39 0307285700
date
drawing
page
rev.
30.09.2019
/
1
00
Warning: this is a principal diagram! It DOES NOT replace the specific layout design!
This diagram DOES NOT contain the necessary safety and shut-off elements for a proper assembly.
Keep in mind the related laws and standards.



# BUILT-IN SOLUTIONS

# BUILT-IN SOLUTIONS

## FOR iSERIES SYSTEMS WITH EMIX

### MAIN FEATURES

The cabinet allows built-in wall-mounted installation of EMIX, the unit from the iSERIES range devoted to DHW production.
This specific solution allows you to reduce and optimise installation spaces in situations where rooms are heated and cooled with direct-expansion indoor units.
The galvanised sheet metal cabinet contains all the elements required for a DHW production system:

- DHW storage tank in stainless steel;
- Connection kit to the EMIX unit, with suitably arranged and insulated pipes;
- Safety and control devices.

### BUILT-IN MODULE COMPONENTS

| Code | Description |
|---|---|
| 387030626 | Built-in cabinet |
| 387030627 | DHW 200 litres storage tank kit |
| 387030628 | EMIX connection kit |

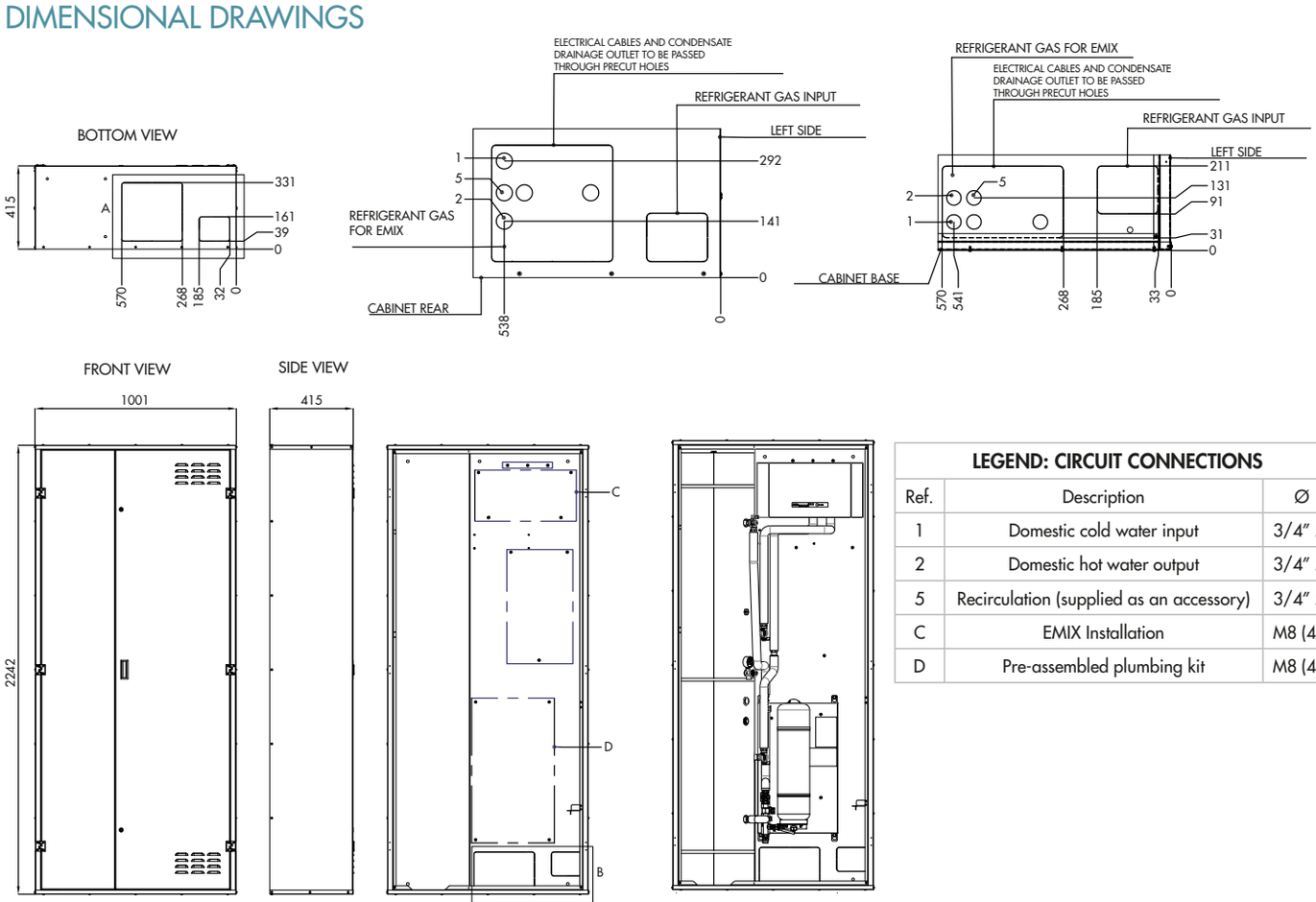
### ACCESSORIES

| Code | Description |
|---|---|
| 387030630 | 3/4" domestic water inlet filter |
| 387030631 | Pair of 3/4" domestic water shut-off valves |
| 387030632 | 1.5 kW electric heating element for DHW tank |

### INDOOR UNIT

| Code | Description |
|---|---|
| 387135030 | EMIX V1 |

### DIMENSIONAL DRAWINGS




| LEGEND: CIRCUIT CONNECTIONS | | |
|---|---|---|
| Ref. | Description | Ø |
| 1 | Domestic cold water input | 3/4" M |
| 2 | Domestic hot water output | 3/4" M |
| 5 | Recirculation (supplied as an accessory) | 3/4" M |
| C | EMIX Installation | M8 (4X) |
| D | Pre-assembled plumbing kit | M8 (4X) |

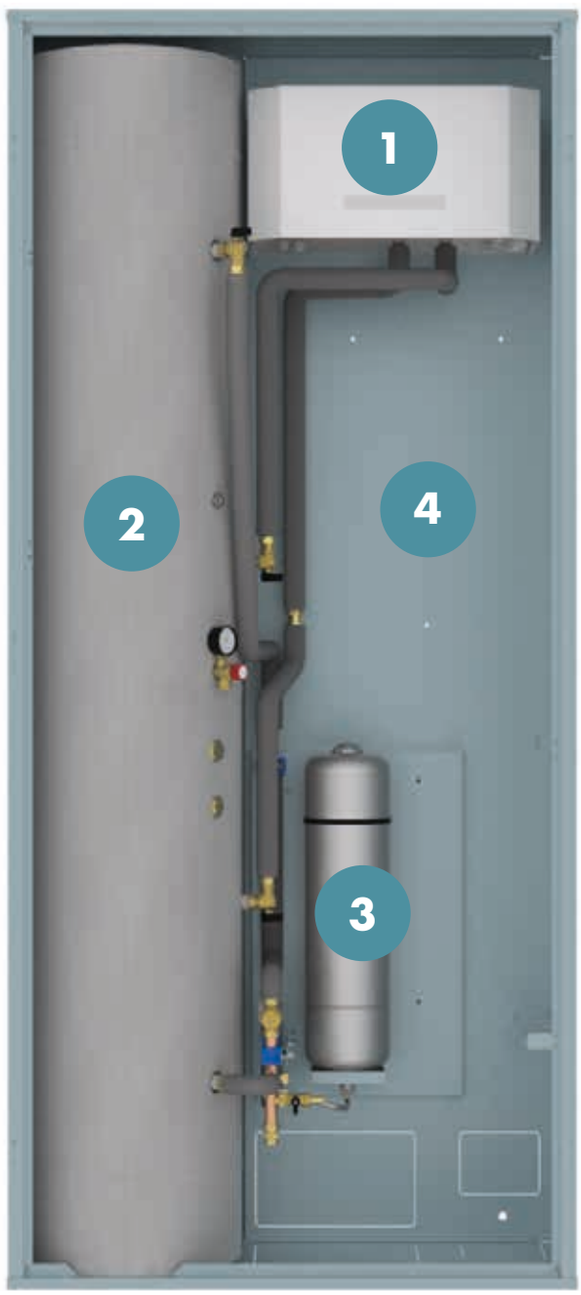
## MAIN COMPONENTS

**1** EMIX

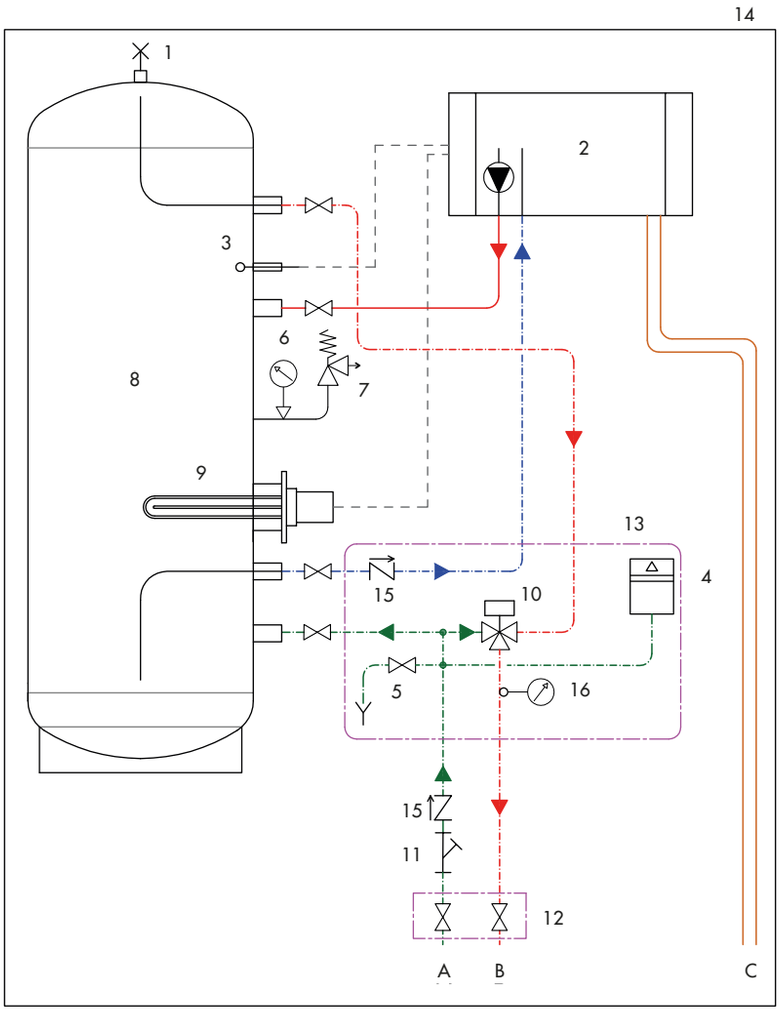
**2** DHW tank with the following characteristics:
- volume 200 litres;
- structure in AISI 316 L stainless steel;
- insulation in EPS with graphite, 25 mm thick.

**3** Kit for plumbing connections to EMIX unit, whose main components are:
- thermostatic mixer 25-50 °C;
- 6 bar expansion tank on domestic water side, 12 litres;
- 6 bar safety valve
- insulated connection pipes

**4** Built-in cabinet in galvanised sheet metal, size 1000x415x2242 mm.



# REFERENCE PLUMBING DIAGRAM



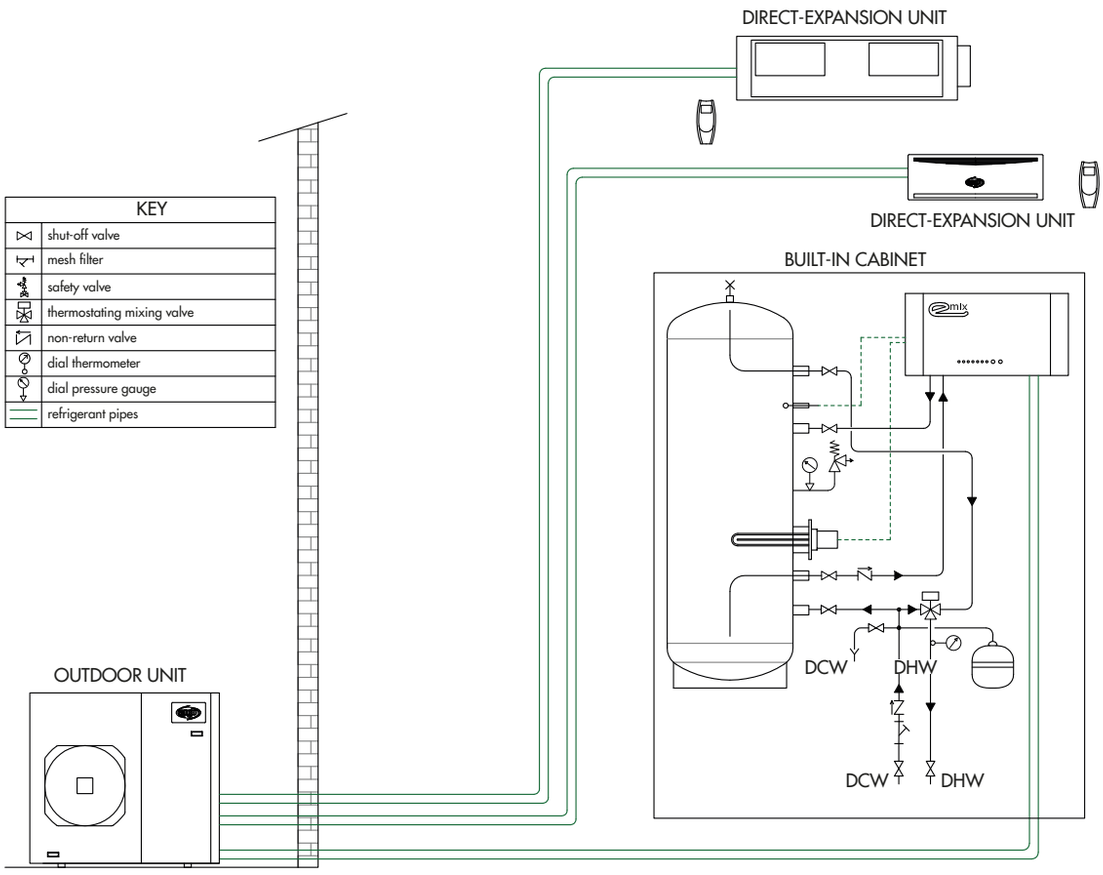

## Legend of components

1. DHW tank manual air release
2. eMIX indoor unit
3. temperature probe well Ø 6 mm x 130 mm
4. 6 bar domestic water expansion tank - 12 litres
5. drain valve Ø 1/2"
6. 0-6 bar pressure gauge
7. 6 bar safety valve for domestic water
8. 200 litres DHW tank in AISI 316L stainless steel - pmax 8 bar
9. 1.5 kW electric heating element (optional)
10. thermostatic mixer valve 25 °C-50 °C Kv=2.3 $m^3/h$
11. domestic cold water filter
12. 3/4" shut off valve kit (optional)
13. pre-assembled hydronic module borders
14. metal cabinet border
15. non-return valve
16. contact thermometer

## Legend of connections

A. 3/4'' M domestic cold water input
B. 3/4'' M domestic hot water output
C. refrigerant pipes connections 3/8" - 3/8"

# INSTALLATION EXAMPLE



# BUILT-IN SOLUTIONS

## FOR iSERIES SYSTEMS WITH AQUA UNIT

### MAIN FEATURES

The cabinet allows built-in wall-mounted installation of AQUA UNIT, the hydronic unit from the iSERIES system. This specific solution allows you to reduce and optimise installation spaces in situations where rooms are heated and cooled with hydronic terminals (radiating systems, fan coil units, etc.).

DHW is produced by means of a three-way valve. The specific nature for possible room cooling is kept unchanged through direct expansion units.

The galvanised sheet metal cabinet contains all the elements required for a room heating and/or cooling system and a DHW production system:

- DHW storage tank in stainless steel, fitted with a corrugated coil fixed heat exchanger to increase heat exchange;
- Connection kit to the AQUA UNIT, with suitably arranged and insulated pipes and buffer tank. Possibility to directly use the pump fitted to the unit or a second one in the primary/secondary circuit configuration;
- Safety and control devices on domestic water and system side.

### BUILT-IN MODULE COMPONENTS

| Code | Description |
|---|---|
| 387030626 | Built-in cabinet |
| 387030637 | DHW storage tank kit for 200 litres with heat exchanger |
| 387030643 | AQUA UNIT connection kit |

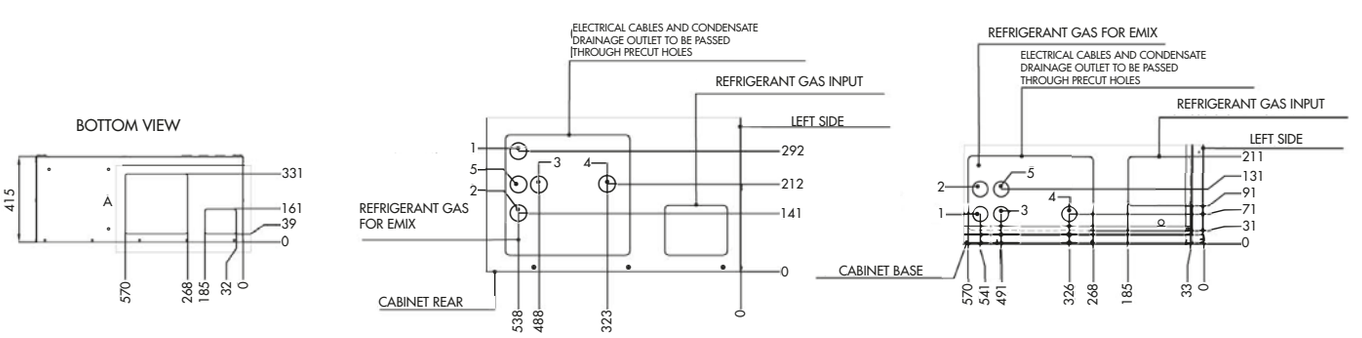
### ACCESSORIES

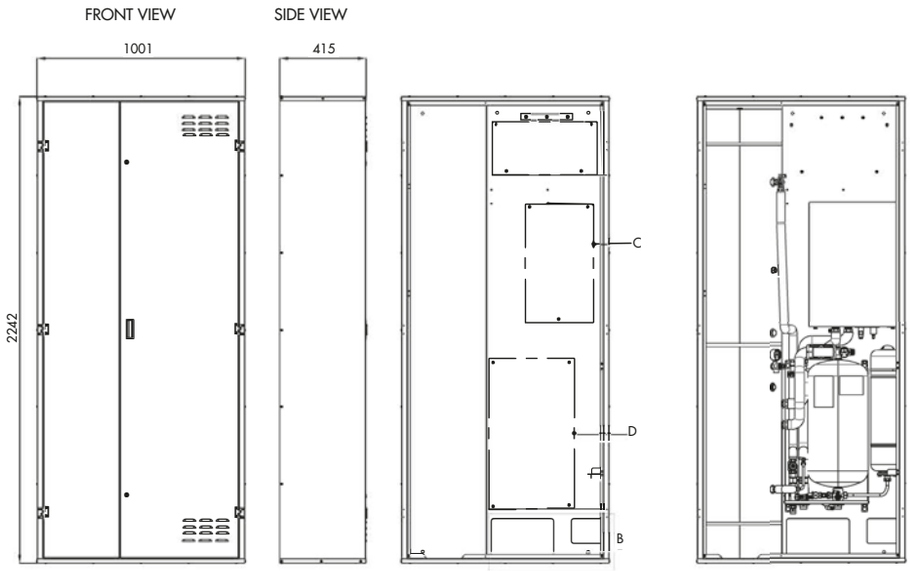
| Code | Description |
|---|---|
| 387030630 | 3/4" domestic water inlet filter |
| 387030631 | Pair of 3/4" domestic water shut-off valves |
| 387030632 | 1.5 kW electric heating element for DHW tank |
| 387030633 | 3/4" system outlet filter |
| 387030634 | Pair of 1" system shut-off valves |

### INDOOR UNITS

| Code | Description |
|---|---|
| 387135037 | AUBV - hydronic module AQUA UNIT size B - wall-mounted |
| 387135038 | AUCV - hydronic module AQUA UNIT size C - wall-mounted |
| 387135039 | AUDV - hydronic module AQUA UNIT size D - wall-mounted |
| 387030220 | Wired control for iSERIES indoor units - **Mandatory accessory** |

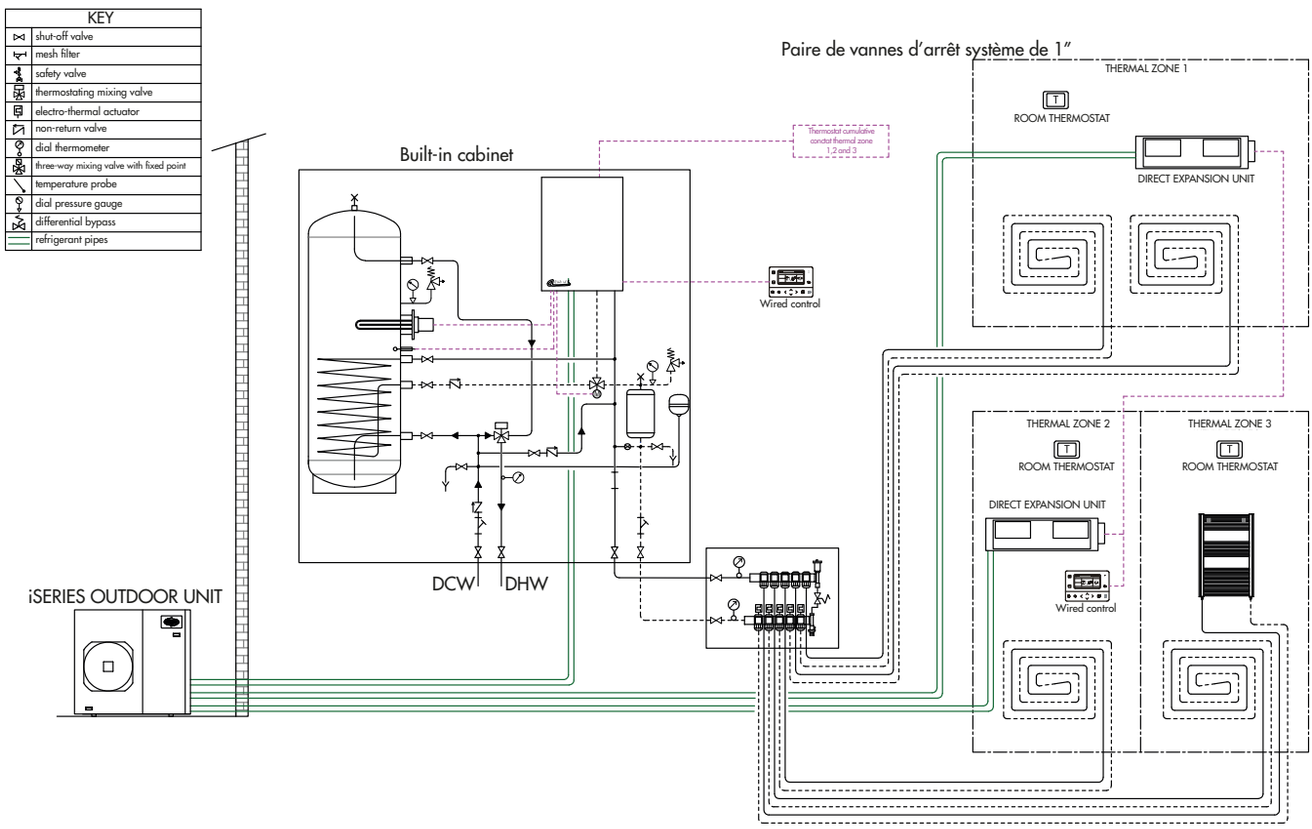
### DIMENSIONAL DRAWINGS






| LEGEND: CIRCUIT CONNECTIONS | | |
|---|---|---|
| Ref. | Description | Ø |
| 1 | Domestic cold water input | 3/4" M |
| 2 | Domestic hot water output | 3/4" M |
| 3 | Supply to system | 1" M |
| 4 | Return from system | 1" M |
| 5 | Recirculation (supplied as an accessory) | 3/4" M |
| C | AQUA UNIT Installation | M8 (4X) |
| D | Pre-assembled plumbing kit | M8 (4X) |

## INSTALLATION EXAMPLE



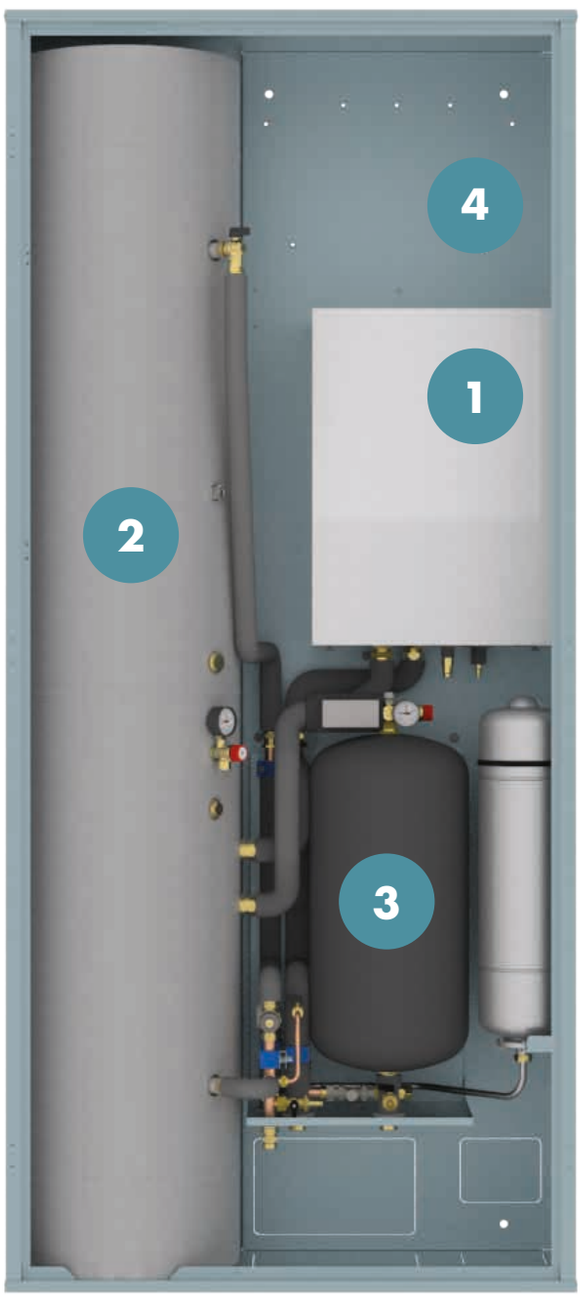
# MAIN COMPONENTS

**1** AQUA UNIT

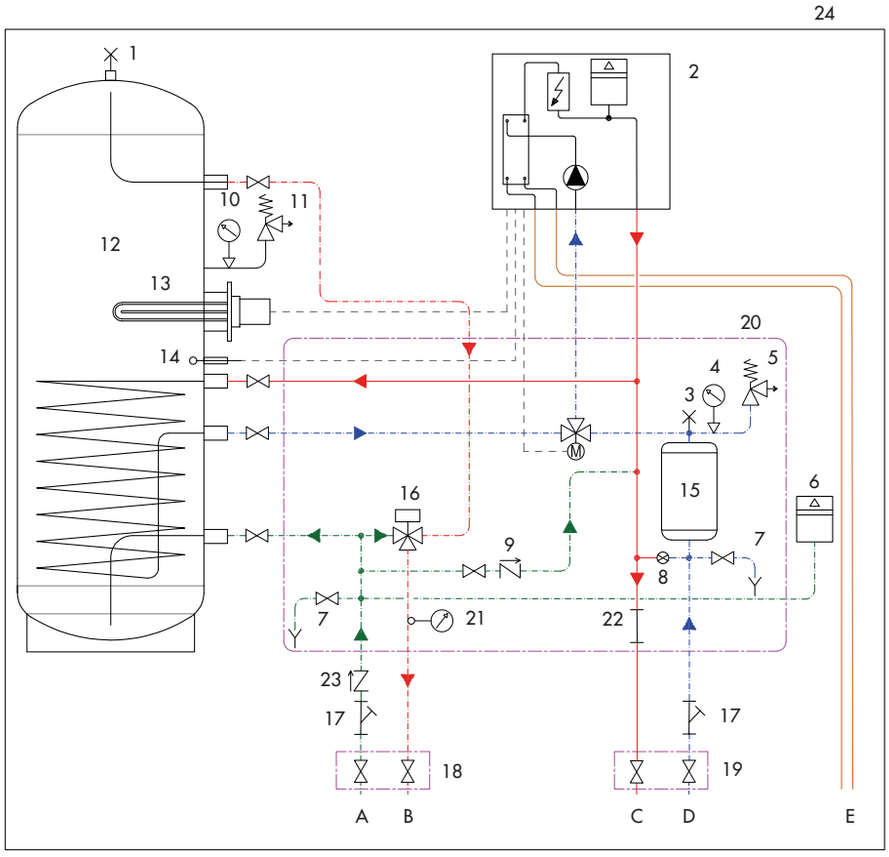
**2** DHW tank with the following characteristics:
- volume 200 litres;
- structure in AISI 316 L stainless steel;
- fixed heat exchanger in AISI 316 L stainless steel;
- insulation in EPS with graphite, 25 mm thick.

**3** Kit for plumbing connections to AQUA UNIT, whose main components are:
- 25 litres buffer tank in AISI 316 L stainless steel;
- thermostatic mixer 25-50 °C;
- 6 bar expansion tank on domestic water side, 12 litres;
- 6 bar safety valve on domestic water side and 3 bar safety valve on system side;
- motorised 3-way diverter valve for switching system to domestic water and vice versa;
- insulated connection pipes

**4** Built-in cabinet in galvanised sheet metal, size 1000x415x2242 mm.



# REFERENCE PLUMBING DIAGRAM




With the simplified solution, the use of an immersion thermostat does not allow direct reading of the DHW storage tank temperature. In addition, the electric heating element (if envisaged) must be managed separately since there is no specific available connection with AQUA UNIT.

## Legend of connections

A. 3/4'' M domestic cold water input
B. 3/4'' M domestic hot water output
C. 1" M system supply
D. 1" M system return
E. refrigerant pipes

## Legend of components

1. DHW tank manual air release
2. indoor AUBV (AUCV) unit
3. system manual air relief valve
4. system 0-4 bar pressure gauge
5. 3 bar safety valve for system
6. 6 bar DHW expansion tank - 12 litres
7. drain valve ∅ 1/2"
8. shut-off valve (normally closed)
9. non-return valve
10. 0-6 bar pressure gauge
11. 6 bar safety valve for domestic water
12. 200 litres DHW tank in AISI 316L stainless steel - pmax 8 bar
13. 1,5 kW electric heater
14. immersion thermostat well ∅ 6 mmx130 mm
15. system 25 litres technical storage tank in AISI 316L stainless steel
16. thermostatic mixer valve 25 °C-50 °C Kv=2.3 $m^3/h$
17. system and DHW filters
18. 3/4" shut off valve kit (optional)
19. 1" M shut off valve kit (optional)
20. pre-assembled hydronic module borders
21. contact thermometer
22. connection section for secondary circuit hydronic pump
23. DHW non-return valve
24. metal cabinet border

# BUILT-IN SOLUTIONS

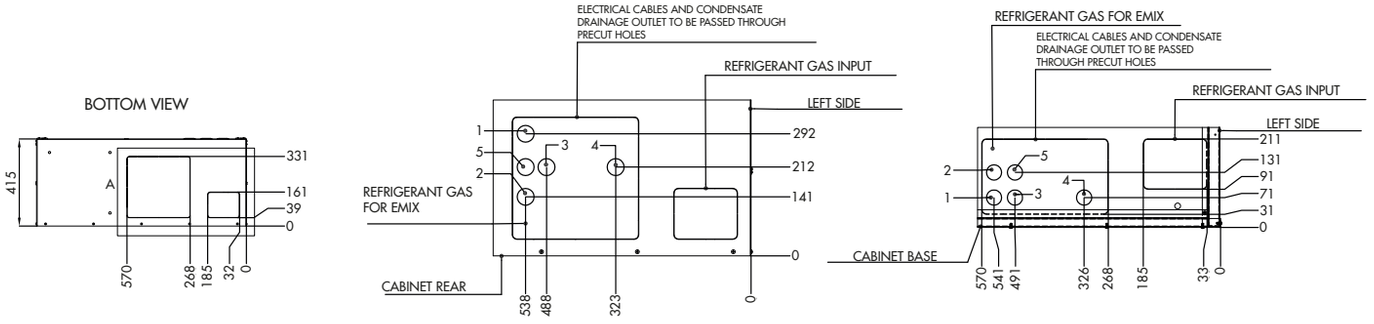
## FOR iSERIES SYSTEMS WITH EMIX AND AQUA UNIT

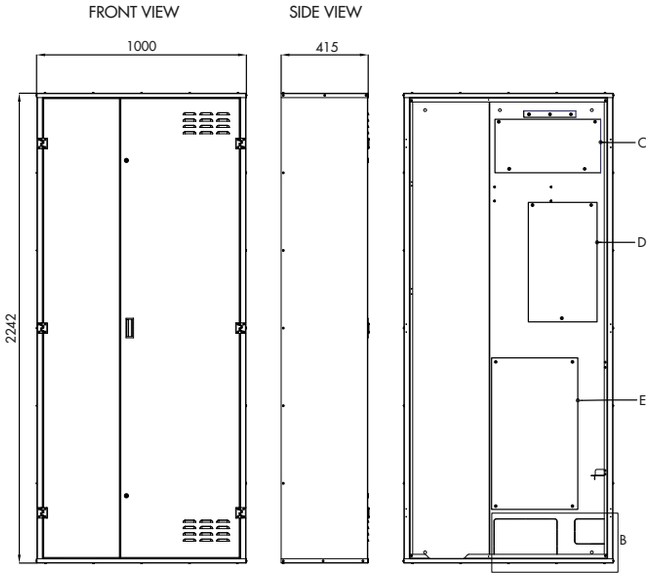
### MAIN FEATURES

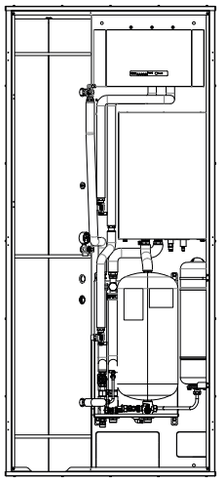
The cabinet allows built-in wall-mounted installation of an indoor hydronic unit (AQUA UNIT) and a DHW production unit (eMIX). This specific solution allows you to reduce and optimise installation spaces in situations where rooms are heated with hydronic terminals (radiating systems, fan coil units, etc.), while maintaining unchanged the specific possibility of cooling by using direct expansion units.
DHW is produced by using the heat recovered when cooling with the direct expansion unit. The galvanised sheet metal cabinet contains all the elements required for a room heating and/or cooling system and for the DHW production system:

- DHW storage tank in stainless steel;
- Connection kit to the eMIX unit and AQUA UNIT, with suitably arranged and insulated pipes and buffer tank. Possibility to directly use the pump fitted to the unit or a second one in the primary/secondary circuit configuration;
- Safety and control devices on domestic water and system side.

### DIMENSIONAL DRAWINGS



| LEGEND: CIRCUIT CONNECTIONS | | |
|---|---|---|
| Ref. | Description | Ø |
| 1 | Domestic cold water input | 3/4" M |
| 2 | Domestic hot water output | 3/4" M |
| 3 | Supply to system | 1" M |
| 4 | Return from system | 1" M |
| 5 | Recirculation (supplied as an accessory) | 3/4" M |
| C | EMIX Installation | M8 (4X) |
| D | AQUA UNIT Installation | M8 (4X) |
| E | Pre-assembled plumbing kit | M8 (4X) |

## BUILT-IN MODULE COMPONENTS

| Code | Description |
|---|---|
| 387030626 | Built-in cabinet |
| 387030627 | DHW 200 litres storage tank kit |
| 387030629 | EMIX and AQUA UNIT connection kit |

## ACCESSORIES

| Code | Description |
|---|---|
| 387030630 | 3/4" domestic water inlet filter |
| 387030631 | Pair of 3/4" domestic water shut-off valves |
| 387030632 | 1.5 kW electric heating element for DHW tank |
| 387030633 | 3/4" system outlet filter |
| 387030634 | Pair of 1" system shut-off valves |

## INDOOR UNITS

| Code | Description |
|---|---|
| 387135037 | AUBV - hydronic module AQUA UNIT size B - wall-mounted |
| 387135038 | AUCV - hydronic module AQUA UNIT size C - wall-mounted |
| 387135039 | AUDV - hydronic module AQUA UNIT size D - wall-mounted |
| 387030220 | Wired control for iSERIES indoor units - **Mandatory accessory** |
| 387135030 | EMIX V1 |

## MAIN COMPONENTS

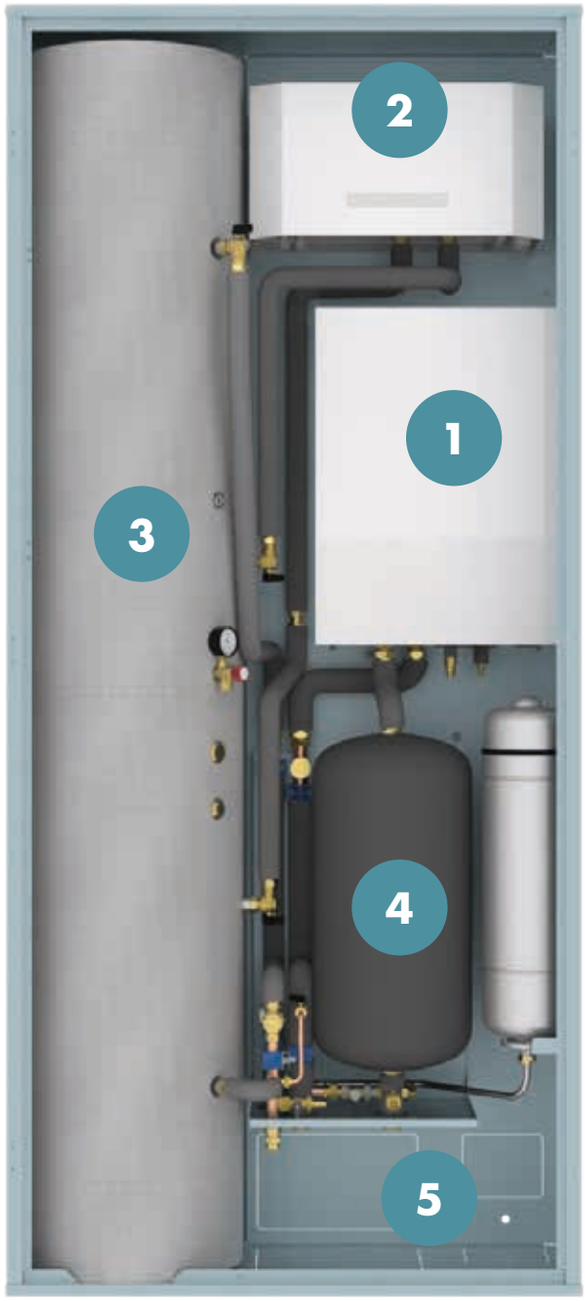
**1** AQUA UNIT

**2** EMIX

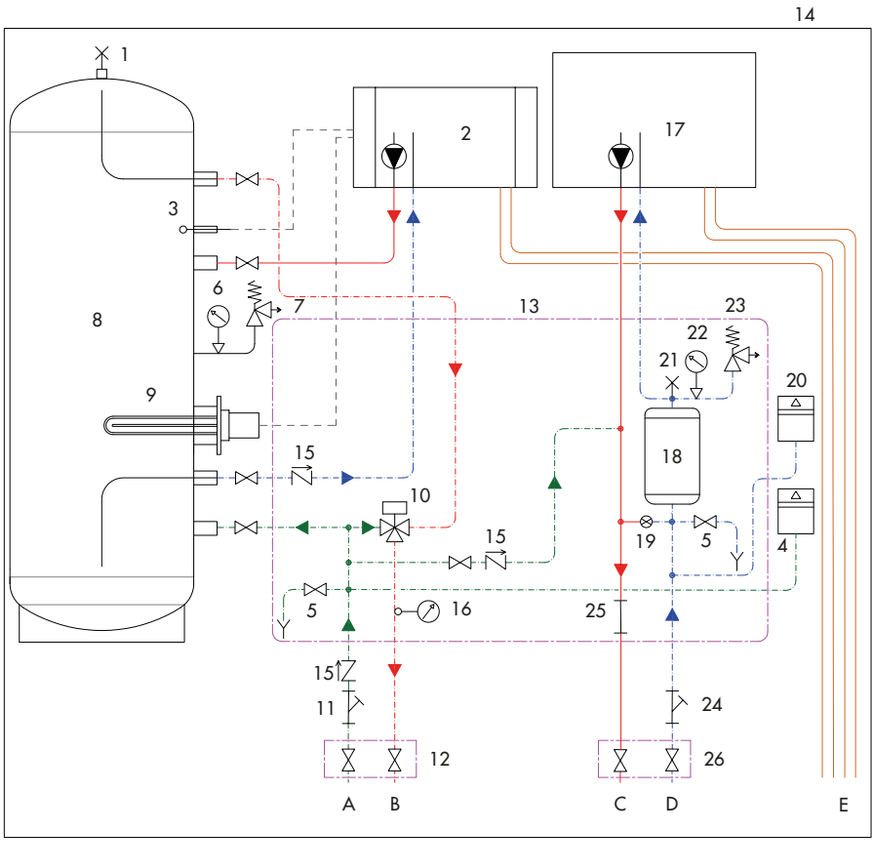
**3** DHW tank with the following characteristics:
- volume 200 litres;
- structure in AISI 316 L stainless steel;
- insulation in EPS with graphite, 25 mm thick.

**4** Kit for plumbing connections to AQUA UNIT and EMIX, whose main components are:
- 25 litres buffer tank in AISI 316 L stainless steel;
- thermostatic mixer 25-50 °C;
- 6 bar expansion tank on domestic water side, 12 litres;
- 6 bar safety valve on domestic water side and 3 bar safety valve on system side;
- insulated connection pipes

**5** Built-in cabinet in galvanised sheet metal, size 1000x415x2242 mm.



# REFERENCE PLUMBING DIAGRAM



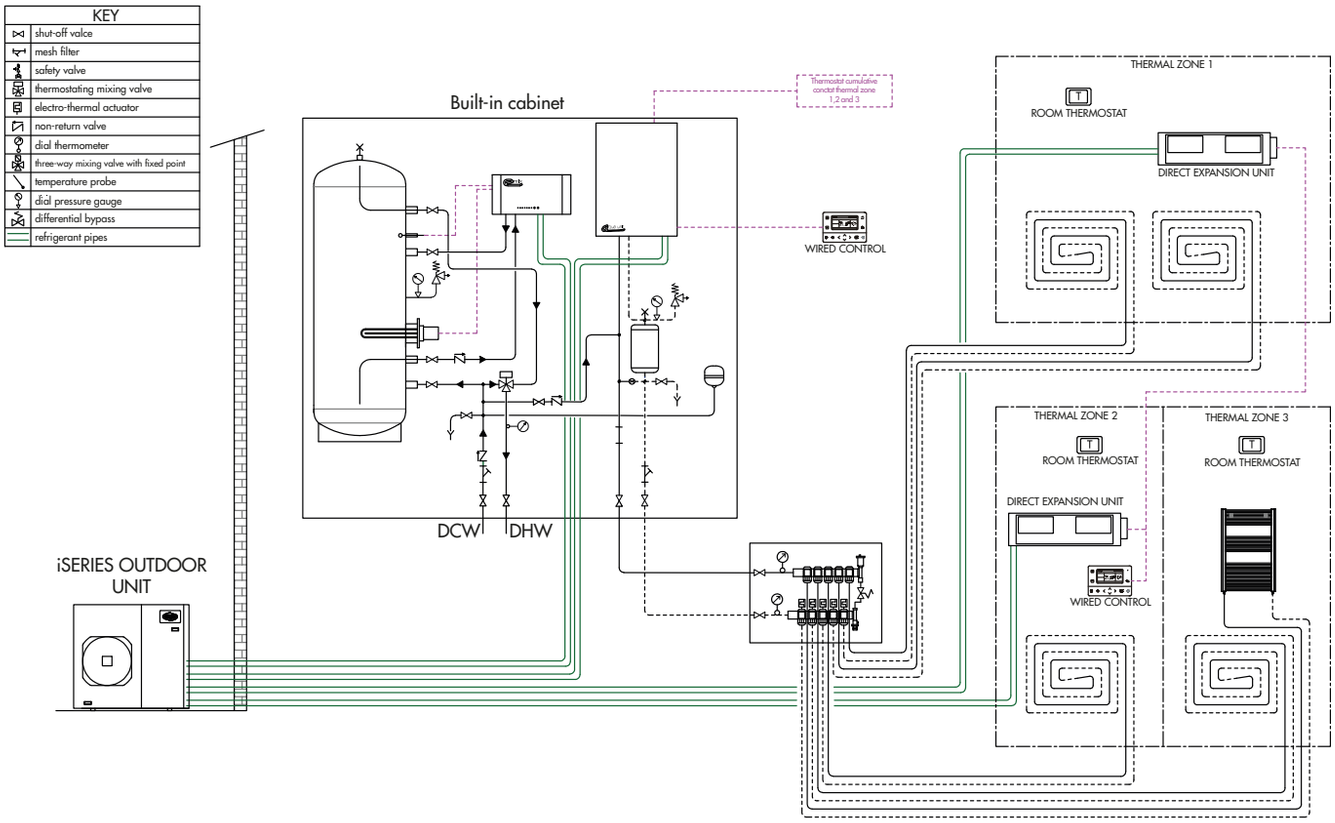

## Legend of components

1. DHW tank manual air release
2. EMIX indoor unit
3. temperature probe well Ø 6 mmx130 mm
4. 6 bar domestic water expansion tank - 12 litres
5. drain valve Ø 1/2"
6. 0-6 bar pressure gauge
7. 6 bar safety valve for domestic water
8. 200 litres DHW tank in AISI 316L stainless steel - pmax 8 bar
9. 1.5 kW electric heating element (optional)
10. thermostatic mixer valve 25 °C-50 °C Kv=2.3 $m^3/h$
11. domestic cold water filter
12. 3/4" shut off valve kit (optional)
13. pre-assembled hydronic module borders
14. metal cabinet border
15. non-return valve
16. contact thermometer
17. indoor AQUA UNIT
18. system 25 litres technical storage tank in AISI 316 L stainless steel
19. shut-off valve
20. system expansion tank - 12 litres
21. system manual air release
22. 0-4 bar pressure gauge
23. 3 bar safety valve for system
24. system filter
25. connection section for secondary circuit hydronic pump
26. 1" M shut off valve kit (optional)

## Legend of connections

A. 3/4'' M domestic cold water input
B. 3/4'' M domestic hot water output
C. 1" M system supply
D. 1" M system return
E. connection for EMIX and AQUA UNIT refrigerant pipes

# INSTALLATION EXAMPLE




argo

# iM

## MONOBLOC
## air/water heat pump

# iM
# ADVANTAGES

## Unique and innovative

iM is the only heat pump capable of producing domestic hot water at the same time as heating and cooling rooms, thanks to a special refrigerant gas connection. During cooling mode, water is heated free of charge using EMIX and EMIX TANK heat recovery technology.

## High performance and savings

Thanks to the FULL DC INVERTER technology, which can optimise the operation of the compressor and fans, iM achieves an energy efficiency class A++ for heating and an energy efficiency class A for domestic hot water production, ensuring comfort and energy savings.

## Efficient and silent

iM is equipped with circulation pump, compressor and DC inverter fans that modulate the power and speed based on real needs. The high level of soundproofing, the ability of the Argo-exclusive electronics to optimally operate the compressor cycle ("Smooth defrost") and the implementation of the ECO function all guarantee a low running noise.

## Everything under control

iM is equipped with temperature control systems for the water and gas so as to optimise the system operation.
It is also fitted with control systems for the refrigerant pressure and water flow rate of the system to protect the system under any operating conditions.

## Open and flexible system

iM is compatible with third-party control systems and advanced systems too, and can be integrated with additional external heating sources (gas boilers, solid-fuel generators, etc.). It can also be combined with solar panels used to provide hot water and heating or to generate electricity.

## Simple and intuitive interface

Featuring an LCD display, the digital control panel is easy to use, both for operators (fitters and Service Centres) and for end users, who can also decide to add a second drive board to their household.

# RENAWABLE ENERGY SYSTEM FOR MAXIMUM COMFORT

## With iM, can you build your dream home with:

- Heating and cooling of rooms with hydronic terminals
- Domestic hot water production with high-efficiency systems and energy recovery features (EMIX and EMIX TANK models)
- Domestic hot water production with 3-way valve and DHW tank

# iM

iM is a monoblock heat pump for heating, cooling and domestic hot water production. The range is composed by 6 outdoor units in R410A with a Twin Rotary Full DC Inverter compressor. It can be connected to EMIX and EMIX TANK to produce domestic hot water directly from the thermodynamic source, using heat recovery during air-conditioning mode in summer. The range is able to satisfy residential and commercial spaces and the heating capacity varies from 6 kW to 14 kW.

AIM06EMX

AIM08EMX

AIM11EMX
AIM11EMX3PH

AIM14EMX
AIM14EMX3PH


| Code | Model | *Heating nominal capacity [kW] | **Cooling nominal capacity [kW] |
|---|---|---|---|
| 387032080 | AIM06EMX | 5.8 | 4.8 |
| 387032081 | AIM08EMX | 8.1 | 5.9 |
| 387032082 | AIM11EMX | 10.4 | 7.7 |
| 387032083 | AIM11EMX3PH | 10.4 | 7.7 |
| 387030086 | AIM14EMX | 13.6 | 10.0 |
| 387032084 | AIM14EMX3PH | 13.6 | 10.0 |

Reference condition:
* Heating capacity with outdoor air temperature 12/7 °C, outlet water temperature 30/35 °C
**Cooling capacity with outdoor air temperature 30/35 °C, outlet water temperature 23/18 °C

# CONNECTIVITY

## INPUTS AND OUTPUTS OF iM

### N° 4 DIGITAL INPUTS (dry contacts or configurable 24 VAC contacts)

1) ON/OFF: stand by or operating;
2) Summer/Winter: summer/winter switching;
3) DHW SET POINT or SECOND SET POINT;
4) ECO MODE: if the contact is open, the maximum usable electric power is 100%; if it's closed it can be set with a parameter which is a percentage of the maximum value.

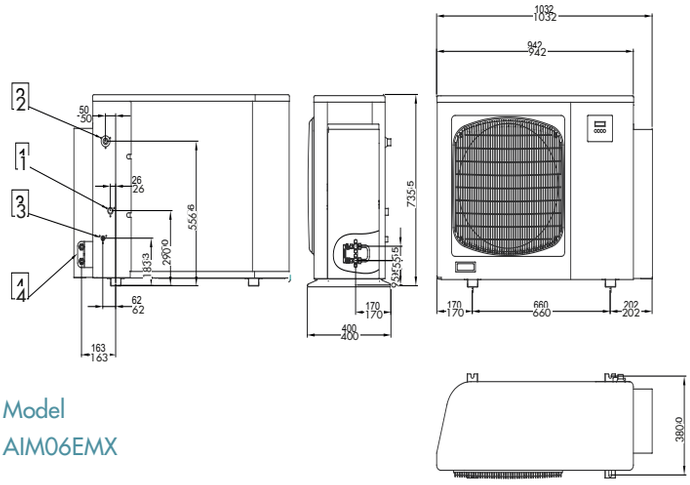
### N° 4 DIGITAL OUTPUTS

1) 230 VAC output for the DHW diverter valve servomotor (deviation towards DHW);
2) 230 VAC output for the DHW diverter valve servomotor (re-deviation towards system - optional);
3) 230 VAC output for ALARM/DEFROST/DHW PRODUCTION which can be configured individually or in combination;
4) 230 VAC output for additional element (electric heating element and boiler, etc.) through external dedicated relay switch if required.

### N° 2 ANALOGIC INPUTS

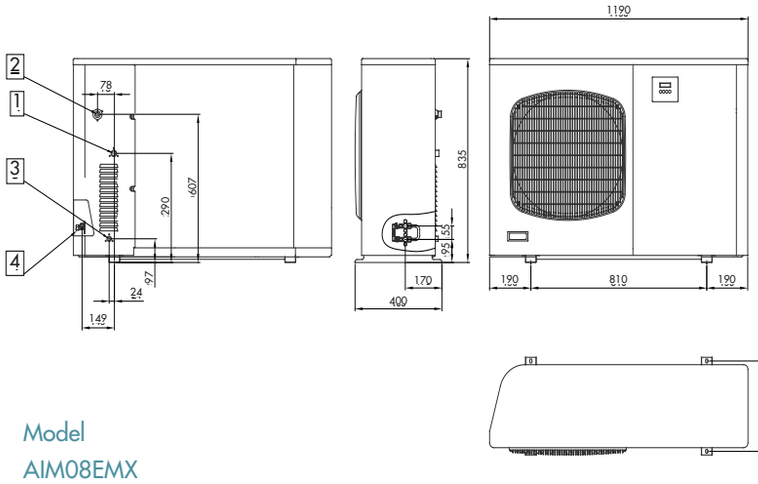
1) Analogue input 0÷10 V for external regulator or advanced room thermostat;
2) Input for additional external air sensor: installation of a second external air sensor to read the temperature in a more suitable position (if required). Automatic recognition of the unit.

# DIMENSIONAL DATA



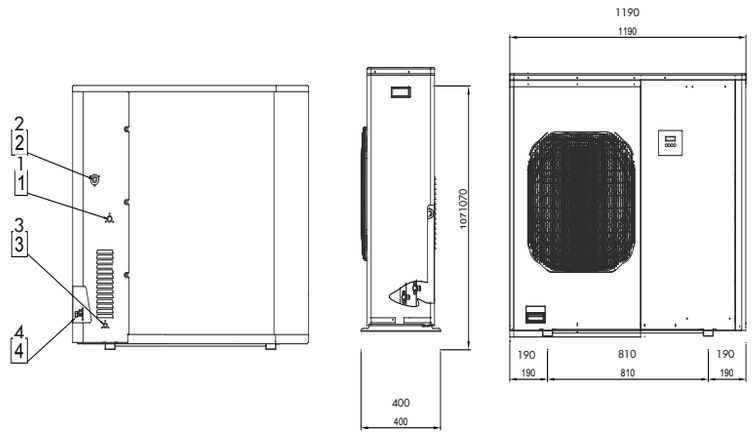

Model
AIM06EMX

Key
1. 3/4'' M water inlet
2. 3/4'' M water outlet
3. 1/2'' M refiling/draining water circuit
4. Inlet/outlet of refrigerant pipes for EMIX



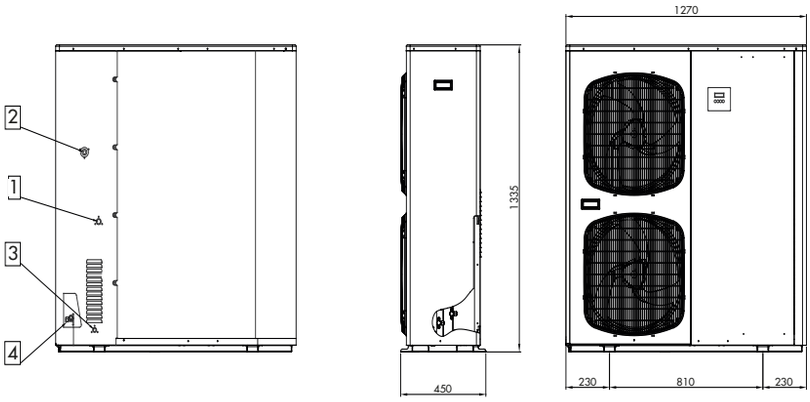

Model
AIM08EMX

Key
1. 3/4'' M water inlet
2. 3/4'' M water outlet
3. 1/2'' M refiling/draining water circuit
4. Inlet/outlet of refrigerant pipes for EMIX




Models
AIM11EMX
AIM11EMX3PH

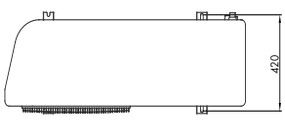
Key
1. 3/4'' M water inlet
2. 3/4'' M water outlet
3. 1/2'' M refiling/draining water circuit
4. Inlet/outlet of refrigerant pipes for EMIX




Models

AIM14EMX

AIM14EMX3PH




Key

1. 3/4'' M water inlet
2. 3/4'' M water outlet
3. 1/2'' M refiling/draining water circuit
4. Inlet/outlet of refrigerant pipes for EMIX

| Model | Weight (kg) |
|---|---|
| AIM06EMX | 64 |
| AIM08EMX | 73 |
| AIM11EMX | 90 |
| AIM11EMX3PH | 90 |
| AIM14EMX | 160 |
| AIM14EMX3PH | 160 |

# TECHNICAL DATA

| MODEL | | | | AIM06EMX | AIM08EMX |
|---|---|---|---|---|---|
| Matchable units for Domestic Hot Water (DWH) production | | | | EMIX TANK V2 200-300 litres<br>EMIX V1<br>Esternal Tank | |
| **AIR/WATER** | | | | | |
| Performance according to EN 14511 | Air +35 °C - Water 23/18 °C | Nominal-max. Cooling capacity | kW | 5.15 - 5.85 | 6.24 - 7.0 |
| | | Nominal electric power input | $kW_{el}$ | 1.42 | 1.73 |
| | | Nominal EER | | 3.63 | 3.61 |
| | Air +35 °C - Water 12/7 °C | Nominal Cooling capacity | kW | 3.57 | 5.12 |
| | | Nominal electric power input | $kW_{el}$ | 1.48 | 2.12 |
| | | Nominal EER | | 2.41 | 2.41 |
| | Air +7 °C - Water 30/35 °C | Nominal-max. Heating capacity | kW | 5.8 - 6.8 | 8.1 - 9.1 |
| | | Nominal electric power input | $kW_{el}$ | 1.41 | 1.93 |
| | | Nominal COP | | 4.12 | 4.19 |
| | Air -7 °C - Water 30/35 °C | Nominal Heating capacity | kW | 4.60 | 5.76 |
| | | Nominal electric power input | $kW_{el}$ | 1.69 | 2.11 |
| | | Nominal COP | | 2.71 | 2.74 |
| **Air/water LOW temperature heating** | | | | | |
| Performance according to ERP Ecodesign EN 14825 | AVERAGE climate | Nominal Heating capacity | kW | 5 | 7 |
| | | Seasonal energy efficiency $\eta_s$ | % | 153 | 159 |
| | | SCOP | | 3.89 | 4.05 |
| | | Energy efficiency class | | A++ | A++ |
| **Air/water MEDIUM temperature heating** | | | | | |
| Performance according to ERP Ecodesign EN 14825 | AVERAGE climate | Nominal Heating capacity | kW | 4 | 6 |
| | | Seasonal energy efficiency $\eta_s$ | % | 111 | 113 |
| | | SCOP | | 2.85 | 2.91 |
| | | Energy efficiency class | | A+ | A+ |
| **DHW with 300 L tank and diverting valve - AVERAGE** | | | | | |
| DHW Performance according to EN 16147 | | Load profile | | XL | XL |
| | | Energy efficiency class | | A | A |
| | | DHW COP | | 2.19 | 2.26 |
| | | ERP efficiency | % | 91 | 94 |
| | | Heating-up time from 10 °C to 47 °C | | 04:04 | 3:41 |
| **DHW with EMIX TANK 200 V2 (AIM06) and with EMIX TANK 300 V2 (AIM08) - AVERAGE** | | | | | |
| DHW Performance according to EN 16147 | | Load profile | | L | XL |
| | | Energy efficiency class | | A | A |
| | | DHW COP | | 2.52 | 2.58 |
| | | ERP efficiency | % | 105 | 106 |
| | | Heating-up time from 10 °C to 50 °C | h:m | 03:09 | 3:33 |
| **GENERAL SPECIFICATIONS** | | | | | |
| Operation data | | Maximum outlet water temperature | °C | Fino a 58 | |
| | | Outdoor temperature range | °C | -20 / +35 | |
| | | Outdoor temperature range | °C | +10 / +47 | |
| | | Nominal water flow rate to 35 °C | $m^3/h$ | 1.00 | 1.39 |
| | | Nominal water flow rate to 45 °C | | 0.76 | 1.31 |
| | | Nominal water flow rate to 55 °C | | 0.45 | 0.70 |
| | | Minimum efficient water volume of the system | l | 40 | 40 |
| | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1+T/50 | 230/1+T/50 |
| | | Maximum electric consumption | kW/A | 2.3/10 | 3.5/15.9 |
| | | Fuse | | 16 A | 20 A |
| | | Sound pressure | dB(A) | 40 | 44 |
| Components | | Expansion vessel | l | 2 | 4 |
| | | Maximum pump pressure | m.c.a. | 6 (vedi grafici H/Q) | 7 (vedi grafici H/Q) |
| | | Water connection | inch (") | 3/4" | 3/4" |
| | | Safety valve | bar | 3 | |
| | | Compressor type | | Twin Rotary | |
| Refrigerant pipes to EMIX / EMIX TANK | | Diameters (gas/liquid) | inch (") | 3/8" | 3/8" |
| | | Maximum lenght | m | 10 | |
| | | Minimum lenght | m | 5 | |
| | | Max height difference IU-OU | m | 10 | |
| Refrigerant | | Type and GWP | | R410A / 2088 kg $CO_2$ eq. | |
| | | Standard charge | kg/Tonn $CO_2$ eq. | 1.30/2.71 | 1.46/ 3.05 |

Data declared in accordance with REGULATION (EU) N. 811/2013 of 18 February 2013 with regarde to the energy labelling of space heaters and combination heaters and with COMMISION REGULATION (EU) N. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regarde to ecodesign requirements for space heaters and combination heaters.

| MODEL | | | | AIM11EMX AIM11EMX3PH | AIM14EMX AIM14EMX3PH |
|---|---|---|---|---|---|
| Matchable units for Domestic Hot Water (DWH) production | | | | EMIX TANK V2 200-300 litres | |
| | | | | EMIX V1 | |
| | | | | Esternal Tank | |
| **AIR/WATER** | | | | | |
| Performance according to EN 14511 | Air +35 °C - Water 23/18 °C | Nominal-max. Cooling capacity | kW | 7.85 - 9.0 | 10.66 - 12.73 |
| | | Nominal electric power input | $kW_{el}$ | 2.17 | 2.94 |
| | | Nominal EER | | 3.62 | 3.62 |
| | Air +35 °C - Water 12/7 °C | Nominal Cooling capacity | kW | 6.47 | 8.45 |
| | | Nominal electric power input | $kW_{el}$ | 2.65 | 3.50 |
| | | Nominal EER | | 2.44 | 2.41 |
| | Air +7 °C - Water 30/35 °C | Nominal-max. Heating capacity | kW | 10.16 - 12.5 | 13.57 - 17.10 |
| | | Nominal electric power input | $kW_{el}$ | 2.54 | 3.35 |
| | | Nominal COP | | 4.00 | 4.06 |
| | Air -7 °C - Water 30/35 °C | Nominal Heating capacity | kW | 7.00 | 9.48 |
| | | Nominal electric power input | $kW_{el}$ | 2.49 | 3.5 |
| | | Nominal COP | | 3.81 | 2.71 |
| **Air/water LOW temperature heating** | | | | | |
| Performance according to ERP Ecodesign EN 14825 | AVERAGE climate | Nominal Heating capacity | kW | 8 | 9.83 |
| | | Seasonal energy efficiency $\eta_s$ | % | 151 | 153 |
| | | SCOP | | 3.86 | 3.91 |
| | | Energy efficiency class | | A++ | A++ |
| **Air/water MEDIUM temperature heating** | | | | | |
| Performance according to ERP Ecodesign EN 14825 | AVERAGE climate | Nominal Heating capacity | kW | 7 | 9.52 |
| | | Seasonal energy efficiency $\eta_s$ | % | 114 | 111 |
| | | SCOP | | 2.92 | 2.84 |
| | | Energy efficiency class | | A+ | A+ |
| **DHW with 300 L tank and diverting valve - AVERAGE** | | | | | |
| DHW Performance according to EN 16147 | | Load profile | | XL | XL |
| | | Energy efficiency class | | A | A |
| | | DHW COP | | 2.14 | 2.06 |
| | | ERP efficiency | % | 89 | 85 |
| | | Heating-up time from 10 °C to 47 °C | | 2:40 | 2:40 |
| **DHW with EMIX TANK 300 V2** | | | | | |
| DHW Performance according to EN 16147 | | Load profile | | XL | XL |
| | | Energy efficiency class | | A | A |
| | | DHW COP | | 2.57 | 2.53 |
| | | ERP efficiency | % | 106 | 105 |
| | | Heating-up time from 10 °C to 50 °C | h:m | 2:25 | 2:24 |
| **GENERAL SPECIFICATIONS** | | | | | |
| Operation data | | Maximum outlet water temperature | °C | Fino a 58 | |
| | | Outdoor temperature range | °C | -20 / +35 | |
| | | Outdoor temperature range | °C | +10 / +47 | |
| | | Nominal water flow rate to 35 °C | $m^3/h$ | 1.35 | 2.31 |
| | | Nominal water flow rate to 45 °C | | 1.68 | 2.18 |
| | | Nominal water flow rate to 55 °C | | 0.89 | 1.16 |
| | | Minimum efficient water volume of the system | l | 80 | 80 |
| | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1+T/50-60 (1ph) 400/3+N+T/50 (3ph) | 220-240/1+T/50 (1ph) 400/3+N+T/50 (3ph) |
| | | Maximum electric consumption | kW/A | 4.5/19.1 (1ph) 4.2/6.7 (3ph) | 5.2/23.8 (1ph) 5.2/9 (3ph) |
| | | Fuse | | 25 A (1ph)/30 A (3ph) | 10 A |
| | | Sound pressure | dB(A) | 44 | 45 |
| Components | | Expansion vessel | l | 6 | 8 |
| | | Maximum pump pressure | m.c.a. | 7.5 (vedi grafici H/Q) | 7.5 (vedi grafici H/Q) |
| | | Water connection | inch (") | 1" | 1" |
| | | Safety valve | bar | 3 | |
| | | Compressor type | | Twin Rotary | |
| Refrigerant pipes to EMIX / EMIX TANK | | Diameters (gas/liquid) | inch (") | 3/8" | 1/2" |
| | | Maximum lenght | m | 10 | |
| | | Minimum lenght | m | 5 | |
| | | Max height difference IU-OU | m | 10 | |
| Refrigerant | | Type and GWP | | R410A / 2088 kg $CO_2$ eq. | |
| | | Standard charge | kg/Tonn $CO_2$ eq. | 2.50/5.22 | 3.10/6.47 |

The equipment described in this catalogue contains HFC-410A-type flourinated greenhouse gases. These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014

# TECHNICAL DATA

## AIM06EMX model

### Heating

| LWT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -7 (-8) | | -2 (-3) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| **35** | 4.60 | 2.71 | 3.99 | 3.06 | 3.50 | 3.34 | 5.80 | 4.12 | 6.56 | 4.69 |
| **45** | 3.90 | 2.01 | 3.38 | 2.27 | 2.97 | 2.48 | 4.63 | 2.73 | 5.24 | 3.11 |
| **55** | 3.10 | 1.70 | 2.81 | 1.68 | 2.57 | 1.67 | 4.09 | 1.98 | 4.34 | 2.10 |

**LWT**: Leaving water temperature
**Qh**: Heat capacity
**COP**: Coefficient of performance

Application data
Water inlet/outlet temperature difference = 5 °C, 8 °C for LWT = 55 °C

### Cooling

| LWT [°C] | Inlet outdoor air temperature - °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| **7** | 3.57 | 2.41 |
| **18** | 5.15 | 3.63 |

**LWT**: Leaving water temperature
**Qc**: Cooling capacity
**EER**: Energy efficiency ratio

Applicationdata
Water inlet/outlet temperature difference = 5 °C

## AIM08EMX model

### Heating

| LWT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -7 (-8) | | -2 (-3) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| **35** | 5.76 | 2.74 | 5.09 | 3.08 | 4.54 | 3.35 | 8.10 | 4.19 | 9.52 | 4.94 |
| **45** | 5.43 | 2.38 | 4.78 | 2.68 | 4.27 | 2.91 | 7.11 | 3.31 | 8.38 | 3.95 |
| **55** | 4.87 | 1.83 | 4.66 | 2.01 | 4.50 | 2.15 | 6.89 | 2.37 | 7.87 | 2.79 |

**LWT**: Leaving water temperature
**Qh**: Heat capacity
**COP**: Coefficient of performance

Application data
Water inlet/outlet temperature difference = 5 °C, 8 °C for LWT = 55 °C

### Cooling

| LWT [°C] | Inlet outdoor air temperature - °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| **7** | 5.12 | 2.41 |
| **18** | 6.24 | 3.61 |

**LWT**: Leaving water temperature
**Qc**: Cooling capacity
**EER**: Energy efficiency ratio

Applicationdata
Water inlet/outlet temperature difference = 5 °C

## AIM11EMX/AIM11EMX3PH models

### Heating

| LWT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -7 (-8) | | -2 (-3) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 35 | 7.00 | 2.81 | 6.44 | 3.04 | 6.00 | 3.23 | 10.16 | 4.00 | 11.61 | 4.67 |
| 45 | 6.90 | 2.33 | 6,35 | 2.52 | 5.92 | 2.68 | 9.89 | 3.16 | 10.80 | 3.06 |
| 55 | 6.11 | 1.62 | 5.90 | 1.72 | 5.73 | 1.81 | 7.92 | 1.92 | 8.94 | 2.20 |

LWT: Leaving water temperature
Qh: Heat capacity
COP: Coefficient of performance

Application data
Water inlet/outlet temperature difference = 5 °C, 8 °C for LWT = 55 °C

### Cooling

| LWT [°C] | Inlet outdoor air temperature - °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 7 | 6.47 | 2,44 |
| 18 | 7.85 | 3.62 |

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

Applicationdata
Water inlet/outlet temperature difference = 5 °C

## AIM14EMX/AIM14EMX3PH models

### Heating

| LWT [°C] | Outdoor air temperature - Dry Bulb (Wet Bulb) - °C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | -7 (-8) | | -2 (-3) | | 2 (1) | | 7 (6) | | 12 (11) | |
| | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 35 | 9.48 | 2.71 | 8.21 | 2.97 | 7.20 | 3.18 | 13.57 | 4.06 | 16.20 | 4.89 |
| 45 | 8.69 | 1.91 | 8.05 | 2.08 | 7.06 | 2.23 | 12.04 | 3.12 | 14.37 | 3.76 |
| 55 | 8.42 | 1.58 | 7.97 | 1.61 | 7.61 | 1.64 | 10.26 | 2.13 | 10.58 | 2.18 |

LWT: Leaving water temperature
Qh: Heat capacity
COP: Coefficient of performance

Application data
Water inlet/outlet temperature difference = 5 °C, 8 °C for LWT = 55 °C

### Cooling

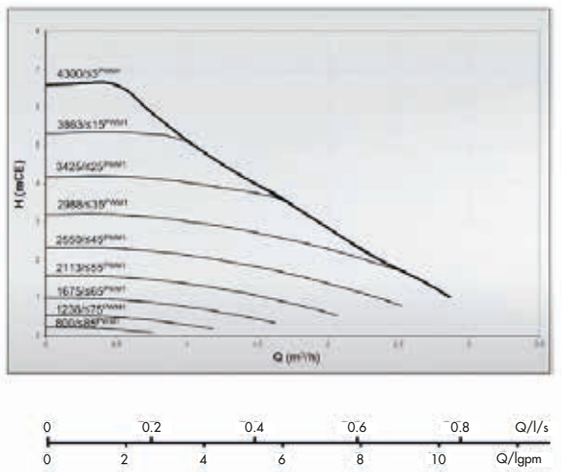
| LWT [°C] | Inlet outdoor air temperature - °C | |
|---|---|---|
| | 35 | |
| | Qc [kW] | EER |
| 7 | 8.45 | 2.41 |
| 18 | 10.66 | 3.62 |

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

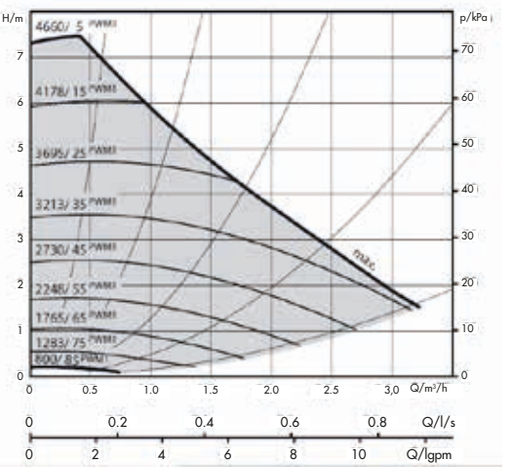
Applicationdata
Water inlet/outlet temperature difference = 5 °C

# CHARACTERISTIC CURVE OF THE PUMP

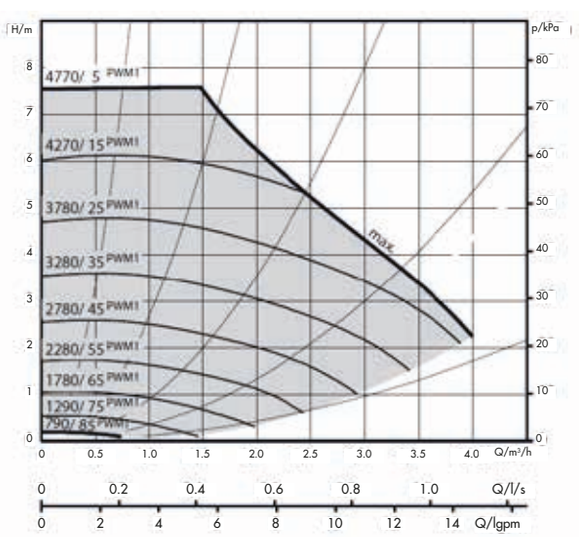
## AIM06EMX



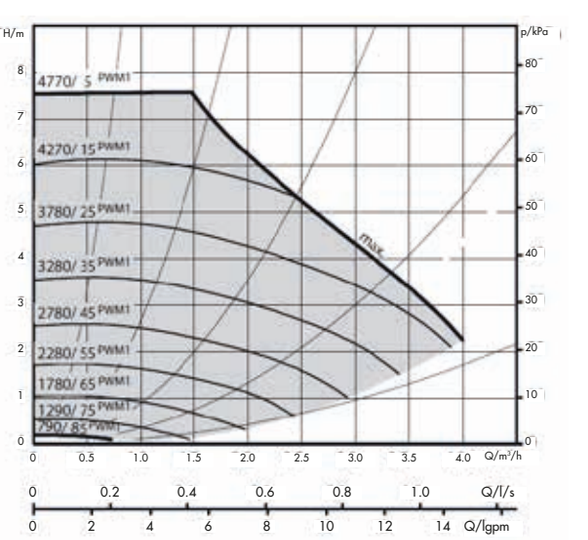

## AIM08EMX



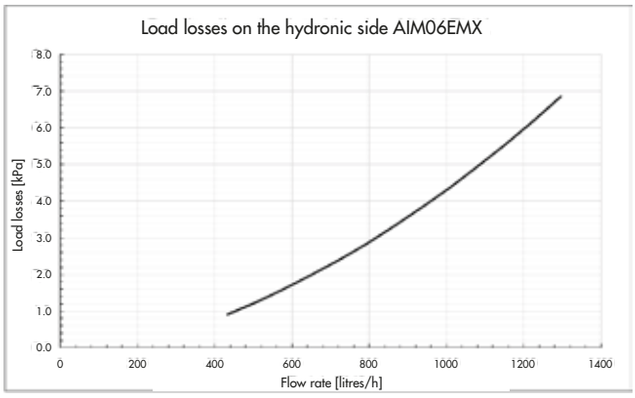

## AIM11EMX

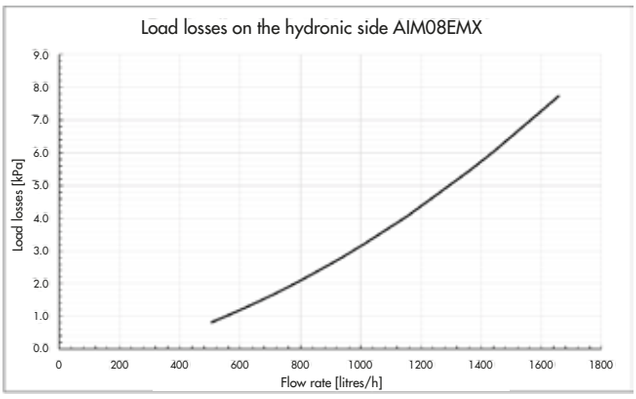


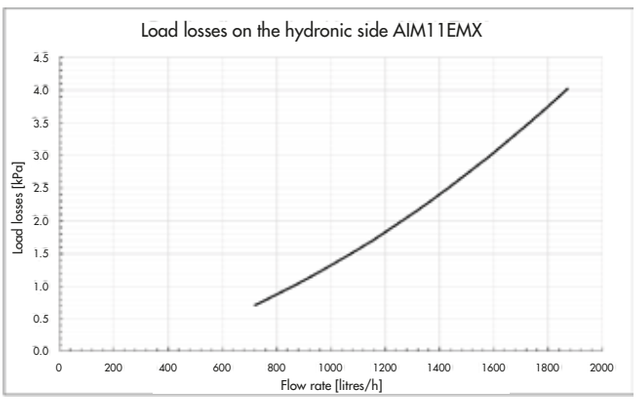

## AIM14EMX

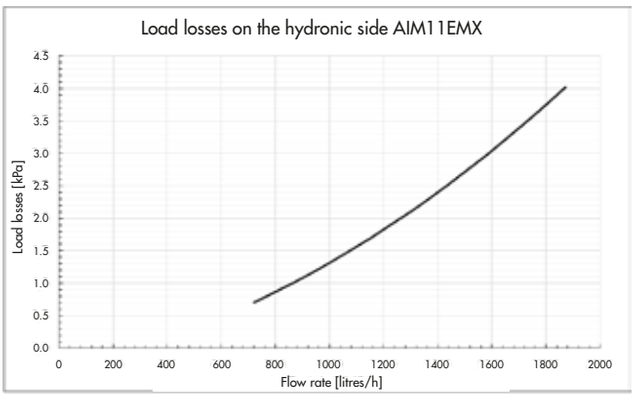


# LOAD LOSSES IN THE UNIT

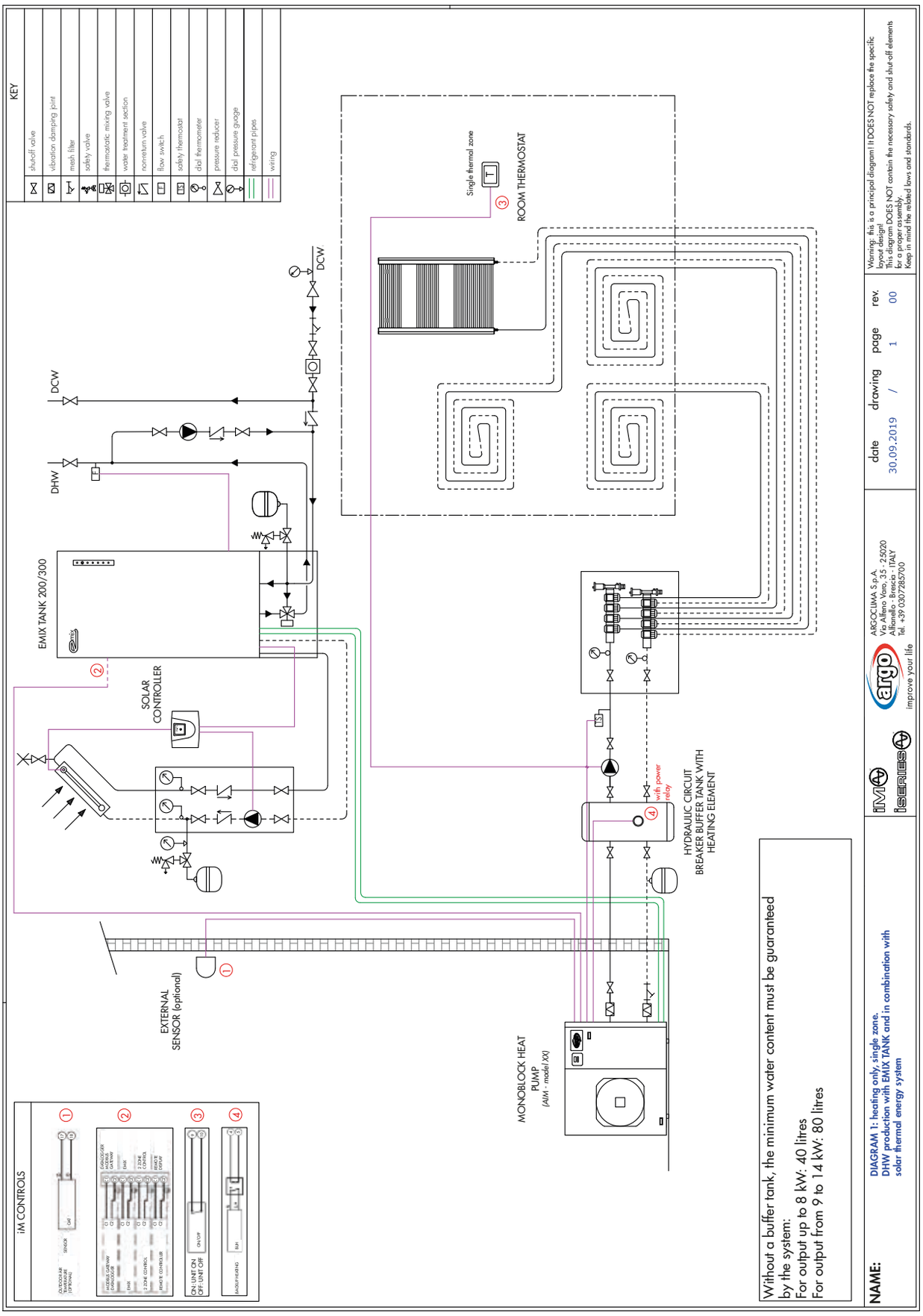


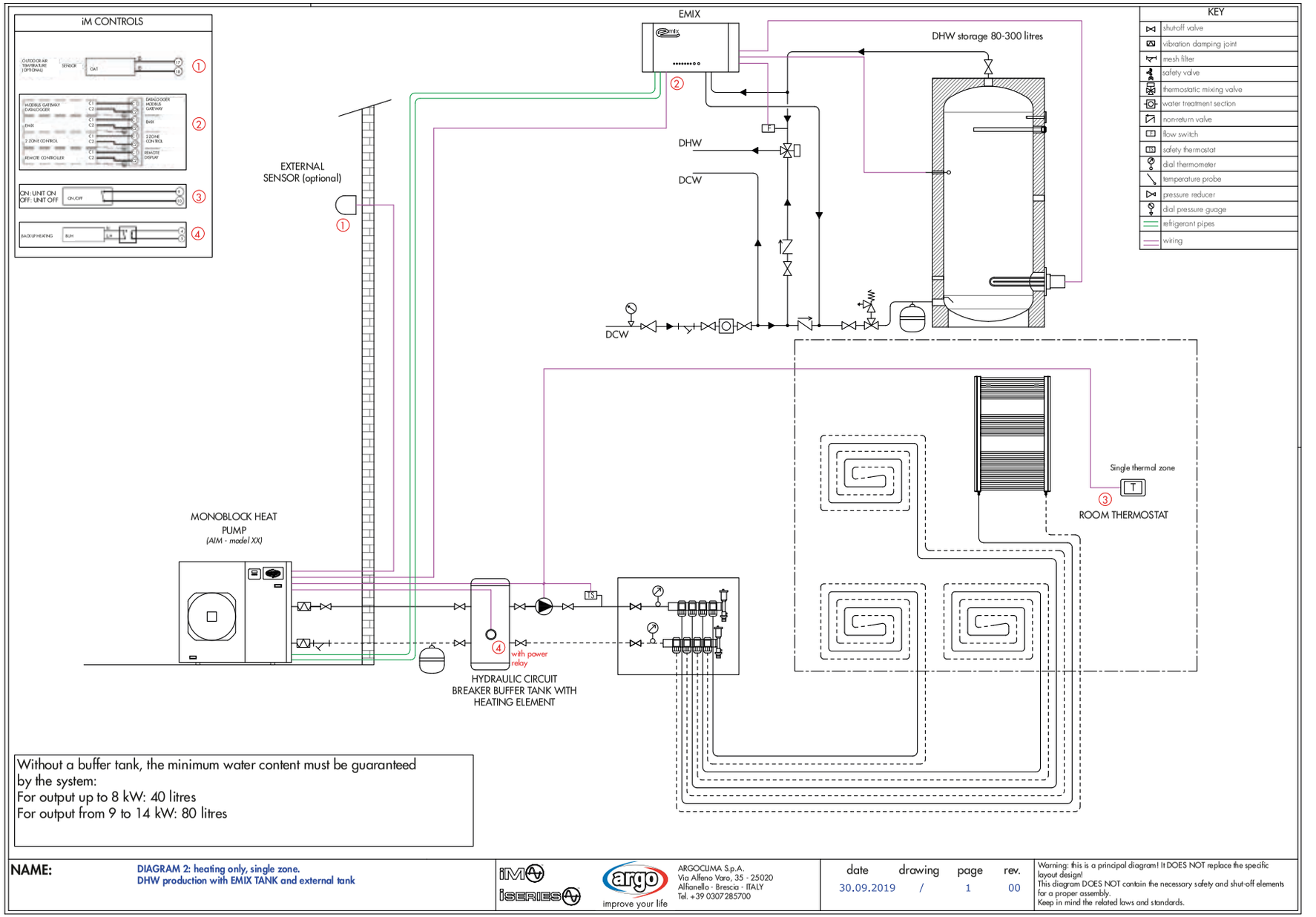



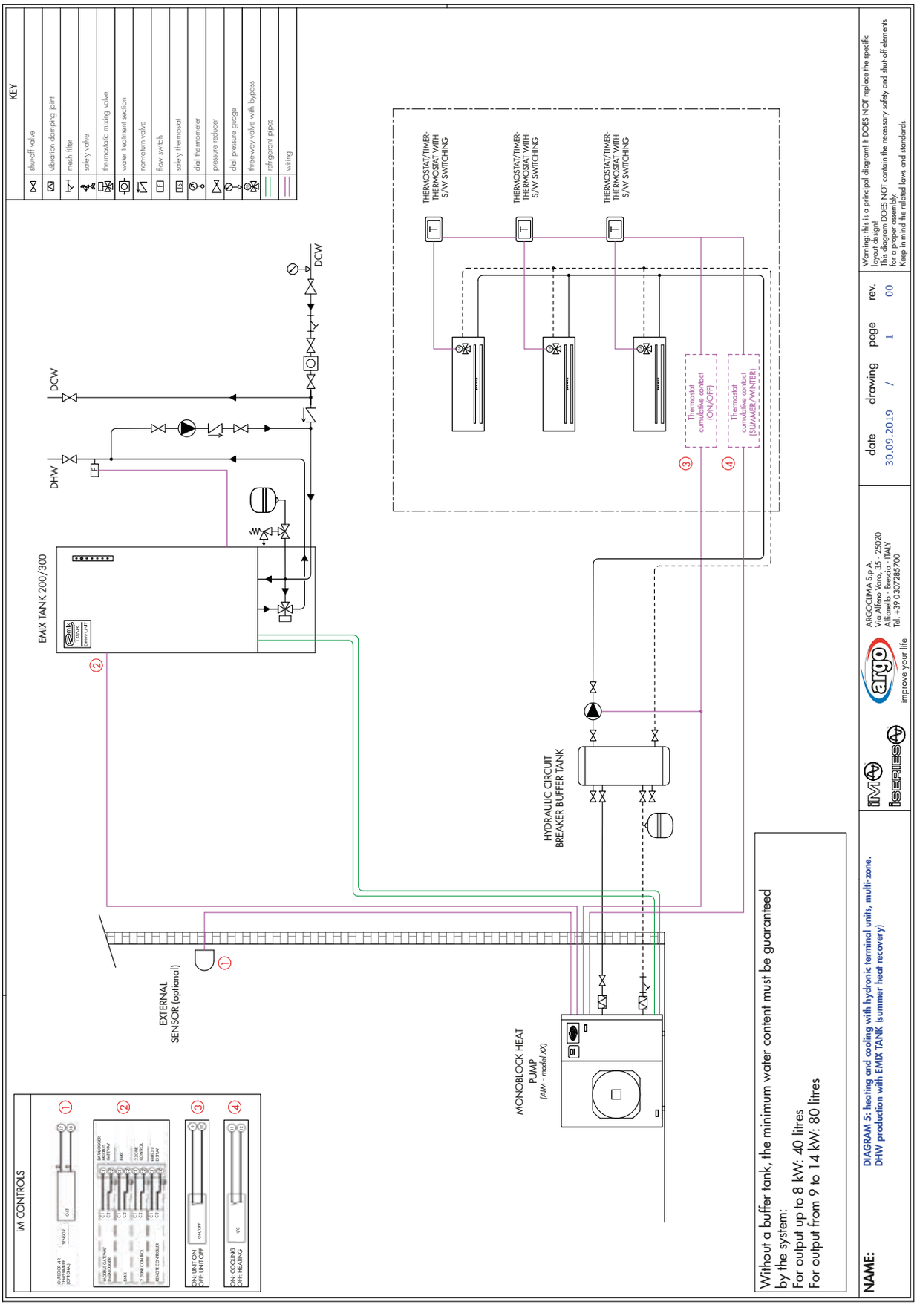



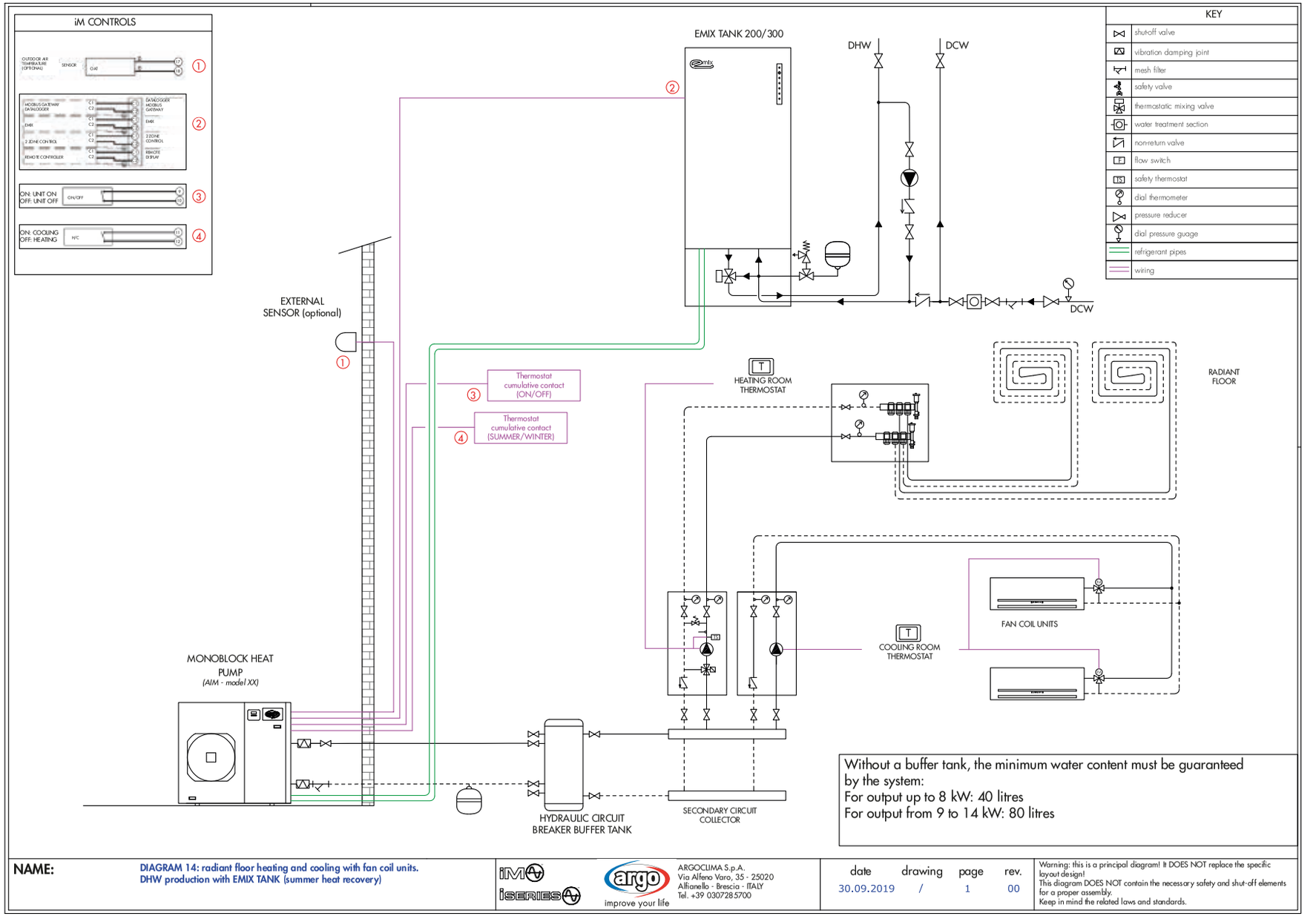
# INSTALLATION EXAMPLES




iM CONTROLS
OUTDOOR AIR TEMPERATURE (OPTIONAL)
SENSOR
OAT
MODBUS GATEWAY DATALOGGER
DATALOGGER MODBUS GATEWAY
BMX
2 ZONE CONTROL
REMOTE CONTROLLER
ON: UNIT ON
OFF: UNIT OFF
ON-OFF
BACKUP HEATING
BUH
EMIX
DHW storage 80-300 litres
DHW
DCW
EXTERNAL SENSOR (optional)
KEY
shut-off valve
vibration damping joint
mesh filter
safety valve
thermostatic mixing valve
water treatment section
non-return valve
flow switch
safety thermostat
dial thermometer
temperature probe
pressure reducer
dial pressure guage
refrigerant pipes
wiring
Single thermal zone
ROOM THERMOSTAT
MONOBLOCK HEAT PUMP
(AIM - model XX)
with power relay
HYDRAULIC CIRCUIT BREAKER BUFFER TANK WITH HEATING ELEMENT
Without a buffer tank, the minimum water content must be guaranteed by the system:
For output up to 8 kW: 40 litres
For output from 9 to 14 kW: 80 litres
NAME:
DIAGRAM 2: heating only, single zone.
DHW production with EMIX TANK and external tank
ARGOCLIMA S.p.A.
Via Alfeno Varo, 35 - 25020
Alfianello - Brescia - ITALY
Tel. +39 0307 285700
improve your life
date 30.09.2019
drawing /
page 1
rev. 00
Warning: this is a principal diagram! It DOES NOT replace the specific layout design!
This diagram DOES NOT contain the necessary safety and shut-off elements for a proper assembly.
Keep in mind the related laws and standards.

# INSTALLATION EXAMPLES






**NAME:** DIAGRAM 14: radiant floor heating and cooling with fan coil units. DHW production with EMIX TANK (summer heat recovery)

ARGOCLIMA S.p.A.
Via Alfeno Varo, 35 - 25020
Alfianello - Brescia - ITALY
Tel. +39 030728.5700

improve your life

| date | drawing | page | rev. |
|---|---|---|---|
| 30.09.2019 | / | 1 | 00 |

Warning: this is a principal diagram! It DOES NOT replace the specific layout design!
This diagram DOES NOT contain the necessary safety and shut-off elements for a proper assembly.
Keep in mind the related laws and standards.

# X3 AIR TO WATER HEAT PUMPS

Residential and commercial applications - R32 DC Inverter

- Monobloc
- Split
- Built-in solution for split heat pumps
- All in one
- Accessories

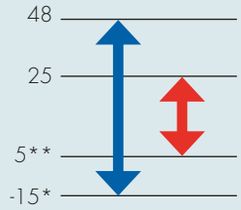
# X3 AIR TO WATER HEAT PUMPS
## PLUS

### WIDE OPERATING RANGE

The outdoor temperature range varies between -25 °C and +35 °C, while the leaving water temperature interval is 20–60 °C: this means that the heat pump can be used with radiant floor systems, fan coil units and also medium-temperature radiators.

**Cooling mode**

from –15 °C* to 48 °C
from 5 °C** to 25 °C




* +10 °C for split and all-in-one models
** +7 °C for split and all-in-one models
*** 60 °C for split and all-in-one models

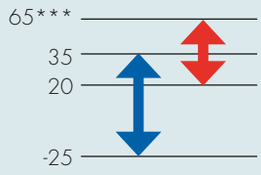
**DHM production**

from -25 °C to 45 °C
from 40 °C to 60 °C
(80 °C with electric heater)


Outdoor air temperature
Water temperature

**Heating mode**

from -25 °C to 35 °C
from 20 °C to 65 °C***




### VERSATILITY AND EASE OF INSTALLATION

The unit is compact and has reduced overall dimensions: it can therefore be used also in tight spaces and is easy to carry and to install. In addition, it can be paired with heating systems that use medium-temperature radiators, as well as with radiant floor systems and fan coil units. It is not necessary to create any connection to the cooling circuit: the hydraulic connections are sufficient.

### R32 REFRIGERANT WITH LOW ENVIRONMENTAL IMPACT

Heat pumps run on GREEN technology that uses renewable energy: this system captures the thermal energy present in the air and transfers it from one place to another, multiplying it. For every kW consumed, it produces over 4 kW of thermal energy: 75% of the energy is free, renewable and clean. The use of R32, a refrigerant gas with a low global environmental impact, makes these heat pumps even more environment-friendly.

### REMOTE CONTROL

The unit can be integrated with a BMS supervision system, using the Modbus protocol.
By installing the EWPE application on the smartphone, most of the heat pump's parameters can be controlled remotely in a comfortable way.


MONOBLOC
SPLIT
ALL IN ONE

# THE ADVANTAGES

## HIGH ENERGY EFFICIENCY

### Steam-injection compressor

- With low outdoor temperatures, the compressor with steam injection reduces the thermal capacity losses and has a greater efficiency compared to a traditional compressor.
- In the same conditions, the compressor's high discharge temperatures and other problems can be completely avoided, making the compressor significantly more reliable.
- Two-stage compression, two-stage lamination and steam injection increase the leaving water temperature and improve the control accuracy.

### Heat exchanger fins

The heat exchange batteries are subjected to a special "Golden Fin" anti-corrosion protective treatment. The battery fins, made of aluminium-manganese (Al-Mn), are coated with a special layer of epoxy resin, which gives them their typical golden colour, and a further hydrophilic layer.
This special treatment is able to protect the heat exchanger against rust and corrosion in zones where the air is very salty, typical of coastal areas.

### Circulator pump

The high-efficiency Class A inverter hydronic pump satisfies the requirements imposed by the European ErP directive. Its operating frequency adapts to the system's load. In this way, it is possible to improve the efficiency and temperature control of the heat transfer fluid.

### DC brushless axial fans

The DC inverter axial fan with high air flow rate controls the volume of air delivered in a precise way and guarantees operating stability.

### Plate heat exchanger

- The heat exchanger has a compact structure, minimal overall dimensions and a reduced pressure loss. Moreover, it guarantees a highly efficient heat exchange and boasts excellent resistance to corrosion.
- It is coated externally with anti-condensate material and is equipped with a heating element to protect it against frost build-up.

# TOUCH-SCREEN CONTROL PANEL

The control panel, supplied with the heat pump or installed on board the corresponding internal unit, allows the complete management and parameterization of the unit.


In particular it is possible to:

- Define the operating mode of the heat pump and its priorities (heating, cooling, production of Domestic Hot Water)
- Set all the main operating parameters (set point, hysteresis, etc.)
- Activate external (or internal) systems to integrate or replace the heating and Domestic Hot Water production unit
- Manage the commissioning of the unit
- Display the status of the operating parameters of the main components of the heat pump
- Manage the unit remotely via MODBUS gateway or Wi-Fi module directly integrated into the panel.

Specific auxiliary functions are also available in the control panel, including:

- Automatic management of the flow temperature of the fluid according to the external temperature (climate curve)
- Programming of weekly and hourly operation
- Activation of "silent" operation
- Emergency management in case of unit failure
- Programmable activation of the anti-legionella cycle
- Automatic activation of the antifreeze protection.

# MONOBLOC

Single-phase 6-8 kW range

Single/three-phase 10-12-14-16 kW range

# MONOBLOC HEAT PUMPS

## MAIN FEATURES


(Standard)
Touch-screen control panel

- Monobloc Air/Water heat pump with new-generation DC Inverter technology.
- Equipped with the heating, cooling and domestic hot water production functions.
- Single-phase version with 6-8 kW heating capacity.
- Single/three-phase version with 10-12-14-16 kW heating capacity.
- Achieves very high efficiency levels in heating mode, up to 5 COP.
- Its integrated structure, which includes all the hydraulic components, ensures easy installation and, consequently, savings on the relative costs.
- It uses R32, a refrigerant with low impact on global warming and ozone layer, characterised by high energy efficiency and a 30% lower charge compared to R410A.
- The vapour-injection compressor, thanks to its special technology, guarantees exceptional performances and a wide operating range.
- The leaving water temperature range is 20 °C-65 °C: this means that the heat pump can be used with radiant floor systems, fan coil units and also medium-temperature radiators.
- The DC brushless axial fans are designed to ensure aerodynamic optimisation: they guarantee low noise levels coupled with high efficiency and a high air flow rate.
- It is equipped with a heating element on the base to prevent ice build-up during winter operation.
- It is equipped with an electronic expansion valve.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Internal copper groove | Quiet mode | Weekly timer | Heating down to low temperatures | Door control | Full protection | Timer | Child lock | Wide operating range | Wide voltage range | Auto diagnosis | Low-voltage start-up | |
| Auto restart memory | Intelligent defrosting | °C / °F switching | Long-distance monitoring | Exch. condenser gold fin treatment | -25 °C Min. outdoor temp. heating | +35 °C Max. outdoor temp. heating | -15 °C Min. outdoor temp. cooling | +48 °C Max. outdoor temp. cooling | -25 °C Min. outdoor temp. DHW | +45 °C Max. outdoor temp. DHW | 60 °C Max. output temp. DHW | |

A+++ Heating mode 35 °C

A++ Heating mode 55 °C

A DHW

A++ Heating mode 35 °C for sizes 14/16 kW

# THE RANGE

| | Model | Code | | | Rated capacity according to EN14511 (kW) | |
|---|---|---|---|---|---|---|
| | | | 1PH | 3PH | Heating (1) | Cooling (2) |
|  | AG4HP061PH | 398600069 | ● | | 6.0 | 6.5 |
| | AG4HP081PH | 398600071 | ● | | 8.2 | 8.3 |
| | AG4HP101PH | 398600072 | ● | | 10.2 | 10.2 |
| | AG4HP121PH | 398600073 | ● | | 12.0 | 12.0 |
| | AG4HP141PH | 398600074 | ● | | 14.2 | 13.7 |
| | AG4HP161PH | 398600075 | ● | | 15.7 | 15.5 |
| | AG4HP103PH | 398600076 | | ● | 10.0 | 10.2 |
| | AG4HP123PH | 398600077 | | ● | 12.0 | 12.0 |
| | AG4HP143PH | 398600078 | | ● | 14.2 | 13.9 |
| | AG4HP163PH | 398600079 | | ● | 15.7 | 15.4 |

(1) Water temperature 30 °C/35 °C, outdoor air temperature 7 °C DB/6 °C WB
(2) Water temperature 23 °C/18 °C, outdoor air temperature 35 °C

## INCLUDED ACCESSORIES

| |
|---|
| Ambient air temperature sensor |
| DHW temperature sensor |
| Additional system water temperature sensor |
| Y-shaped filter |
| Remote control panel |

# TECHNICAL DATA 6 kW

| Model | | | | | AG4HP061PH | |
|---|---|---|---|---|---|---|
| **Matchable units for domestic hot water production (DHW)** | | | | | **200/300 litres external tank with diverting valve** | |
| | | | | | Cooling | Heating |
| COMFORT IN ENVIRONMENT | **Performance according to EN 14511** | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 6.50 | 6.00 |
| | | | Rated electrical power input | $kW_{el}$ | 1.27 | 1.11 |
| | | | EER/COP | | 5.10 | 5.40 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 5.70 | 6.80 |
| | | | Rated electrical power input | $kW_{el}$ | 1.65 | 1.66 |
| | | | EER/COP | | 3.45 | 4.10 |
| | **Performance according to Ecodesign (ERP) EN 14825** | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 6 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 199 | |
| | | | Energy efficiency class | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 5 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 135 | |
| | | | Energy efficiency class | | A++ | |
| DHW | **DHW performance according to EN 16147** | With 300 litres tank and diverting valve AVERAGE climate | Load profile | | XL | |
| | | | Energy efficiency class | | A+ | |
| | | | ERP efficiency | % | 127 | |
| Unit operation data | | | Maximum delivery water temperature | °C | Up to 65 | |
| | | | Outdoor temperature range (heating) | °C | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | -15/+48 | |
| | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 1.03 |
| | | | | | at 45 °C | 1.01 |
| | | | | | at 55 °C | 0.97 |
| | | | | | at 7 °C | 0.84 |
| | | | | | at 18 °C | 1.12 |
| | | | Minimum efficient water volume of the system | litres | 40 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1/50 | |
| | | | Maximum electricity consumption | A | 25 | |
| | | | Sound pressure level (cooling mode) | dB(A) | 56 | |
| | | | Sound pressure level (heating mode) | dB(A) | 58 | |
| Components and dimensions | | | Expansion vessel | litres | 2 | |
| | | | Maximum circulator pump head | kPa | (see H/Q graphs) | |
| | | | Hydraulic connections | inches | G1" | |
| | | | Safety valve | bar | 3 | |
| | | | Weight | kg | 90 | |
| | | | Dimensions (H/W/D) | mm | 733/1150/372 | |
| | | | Compressor type | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$eq | |
| | | | Quantity | kg | 0.95 | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to Regulations (EU) 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2018 STANDARD

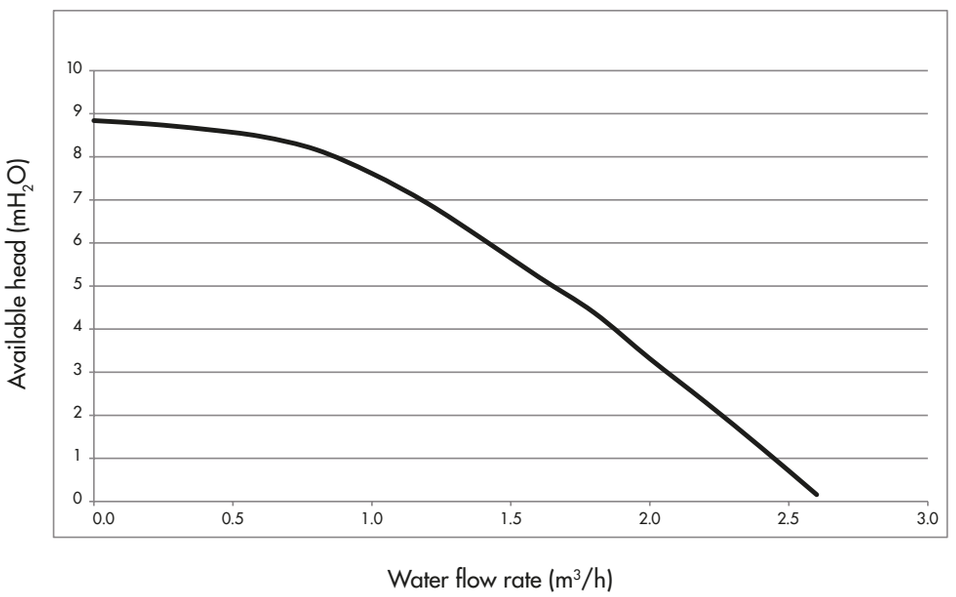
| | **COOLING - Dry bulb outdoor air temperature in °C - (AG4HP061PH)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 5.25 | 6.31 | 5.00 | 5.69 | 4.79 | 5.11 | 6.16 | 4.52 | 5.87 | 3.97 | 5.70 | 3.45 | 3.13 | 2.99 | 2.27 | 2.37 | 2.08 | 1.92 |
| 8 | 5.42 | 6.53 | 5.16 | 5.89 | 4.94 | 5.28 | 6.35 | 4.68 | 6.06 | 4.11 | 5.88 | 3.57 | 3.23 | 3.09 | 2.34 | 2.45 | 2.15 | 1.99 |
| 9 | 5.59 | 6.75 | 5.32 | 6.09 | 5.09 | 5.46 | 6.55 | 4.83 | 6.25 | 4.24 | 6.06 | 3.69 | 3.33 | 3.20 | 2.41 | 2.53 | 2.21 | 2.06 |
| 10 | 5.75 | 6.97 | 5.48 | 6.28 | 5.25 | 5.64 | 6.75 | 4.99 | 6.43 | 4.38 | 6.25 | 3.81 | 3.43 | 3.30 | 2.49 | 2.61 | 2.28 | 2.12 |
| 11 | 5.92 | 7.19 | 5.64 | 6.48 | 5.40 | 5.81 | 6.94 | 5.15 | 6.62 | 4.52 | 6.43 | 3.93 | 3.53 | 3.40 | 2.56 | 2.70 | 2.35 | 2.19 |
| 12 | 6.09 | 7.41 | 5.80 | 6.68 | 5.55 | 5.99 | 7.14 | 5.30 | 6.81 | 4.65 | 6.61 | 4.05 | 3.63 | 3.50 | 2.63 | 2.78 | 2.41 | 2.26 |
| 13 | 6.26 | 7.62 | 5.96 | 6.87 | 5.71 | 6.17 | 7.34 | 5.46 | 7.00 | 4.79 | 6.79 | 4.17 | 3.73 | 3.61 | 2.70 | 2.86 | 2.48 | 2.32 |
| 14 | 6.43 | 7.84 | 6.12 | 7.07 | 5.86 | 6.34 | 7.53 | 5.61 | 7.19 | 4.93 | 6.98 | 4.28 | 3.83 | 3.71 | 2.78 | 2.94 | 2.54 | 2.39 |
| 15 | 6.59 | 8.06 | 6.28 | 7.27 | 6.01 | 6.52 | 7.73 | 5.77 | 7.37 | 5.06 | 7.16 | 4.40 | 3.93 | 3.81 | 2.85 | 3.02 | 2.61 | 2.46 |
| 18 | 7.07 | 8.71 | 6.73 | 7.86 | 6.44 | 7.05 | 8.29 | 6.24 | 7.90 | 5.48 | 6.50 | 5.10 | 4.21 | 4.12 | 3.05 | 3.27 | 2.80 | 2.66 |
| 20 | 7.43 | 9.14 | 7.08 | 8.24 | 6.78 | 7.39 | 8.72 | 6.54 | 8.31 | 5.74 | 8.07 | 5.00 | 4.43 | 4.33 | 3.21 | 3.43 | 2.94 | 2.79 |
| 23 | 7.91 | 9.80 | 7.53 | 8.83 | 7.21 | 7.92 | 9.27 | 7.01 | 8.84 | 6.16 | 8.58 | 5.35 | 4.71 | 4.64 | 3.42 | 3.67 | 3.13 | 2.99 |
| 25 | 8.21 | 10.23 | 7.82 | 9.22 | 7.49 | 8.27 | 9.63 | 7.32 | 9.18 | 6.43 | 8.91 | 5.59 | 4.89 | 4.84 | 3.55 | 3.84 | 3.25 | 3.12 |

| | **HEATING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 2.31 | 2.24 | 2.48 | 2.64 | 2.97 | 3.04 | 3.25 | 3.56 | 3.58 | 3.96 | 4.02 | 4.52 | 4.35 | 5.02 | 5.94 | 6.60 | 6.12 | 6.77 | 6.84 | 7.36 | 5.88 | 7.82 | 6.44 | 8.28 | 5.36 | 8.66 | 5.80 | 8.99 |
| 30 | 2.37 | 2.06 | 2.53 | 2.42 | 3.03 | 2.79 | 3.30 | 3.27 | 3.63 | 3.64 | 4.07 | 4.15 | 4.40 | 4.60 | 6.00 | 6.06 | 6.18 | 6.21 | 6.90 | 6.76 | 5.92 | 7.18 | 6.49 | 7.60 | 5.40 | 7.95 | 5.83 | 8.26 |
| 35 | 2.37 | 1.84 | 2.53 | 2.16 | 3.03 | 2.49 | 3.30 | 2.92 | 3.63 | 3.25 | 4.07 | 3.71 | 4.40 | 4.11 | 6.00 | 5.41 | 6.18 | 5.55 | 6.90 | 6.03 | 5.92 | 6.41 | 6.49 | 6.79 | 5.40 | 7.10 | 5.83 | 7.37 |
| 40 | 2.37 | 1.62 | 2.53 | 1.90 | 3.03 | 2.19 | 3.30 | 2.57 | 3.63 | 2.86 | 4.07 | 3.26 | 4.40 | 3.62 | 6.00 | 4.76 | 6.18 | 4.88 | 6.90 | 5.31 | 5.92 | 5.64 | 6.49 | 5.97 | 5.40 | 6.25 | 5.83 | 6.49 |
| 45 | 2.37 | 1.47 | 2.53 | 1.73 | 3.03 | 1.99 | 3.30 | 2.34 | 3.63 | 2.60 | 4.07 | 2.96 | 4.40 | 3.29 | 6.80 | 4.10 | 6.18 | 4.44 | 6.90 | 4.83 | 5.92 | 5.13 | 6.49 | 5.43 | 5.40 | 5.68 | 5.83 | 5.90 |
| 50 | | | 2.48 | 1.56 | 2.97 | 1.79 | 3.25 | 2.10 | 3.58 | 2.34 | 4.02 | 2.67 | 4.35 | 2.96 | 5.94 | 3.90 | 6.12 | 3.99 | 6.84 | 4.34 | 5.88 | 4.62 | 6.44 | 4.89 | 5.36 | 5.11 | 5.77 | 5.31 |
| 55 | | | | | 2.97 | 1.57 | 3.25 | 1.84 | 3.58 | 2.04 | 4.02 | 2.33 | 4.35 | 2.59 | 5.80 | 3.15 | 6.12 | 3.49 | 6.84 | 3.80 | 5.88 | 4.04 | 6.44 | 4.28 | 5.36 | 4.47 | 5.77 | 4.64 |
| 60 | | | | | | | | | 3.52 | 1.82 | 3.96 | 2.08 | 4.29 | 2.30 | 5.88 | 3.03 | 6.06 | 3.11 | 6.76 | 3.38 | 5.80 | 3.59 | 6.36 | 3.80 | 5.29 | 3.98 | 5.72 | 4.13 |
| 65 | | | | | | | | | | | | | | | 5.82 | 2.71 | 5.99 | 2.77 | 6.69 | 3.02 | 5.74 | 3.21 | | | | | | |

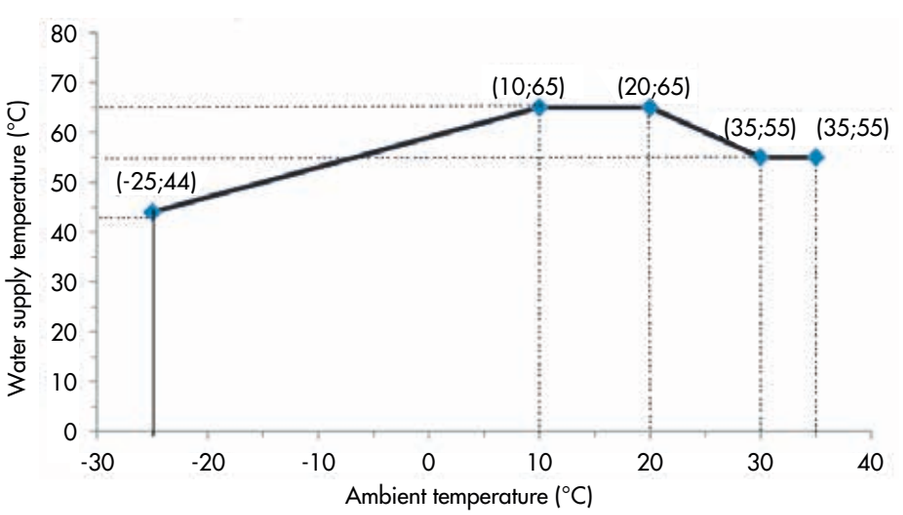
LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

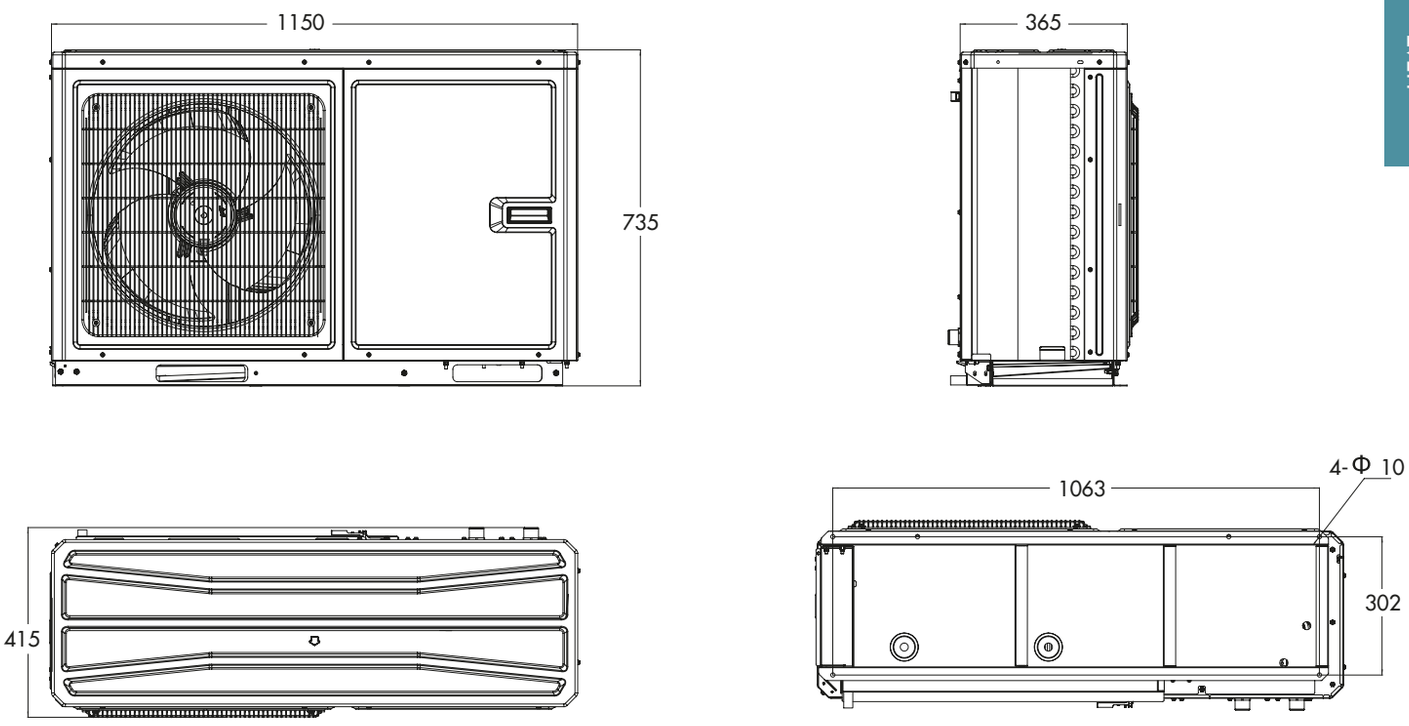
# FLOW RATE CURVES FOR 6 kW



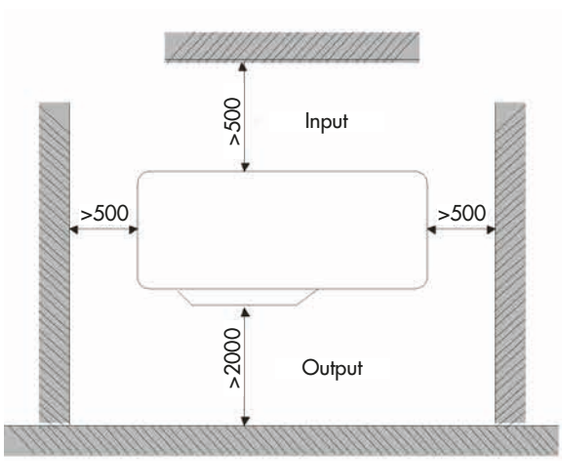

# MAXIMUM TEMPERATURE IN HEATING 6 kW

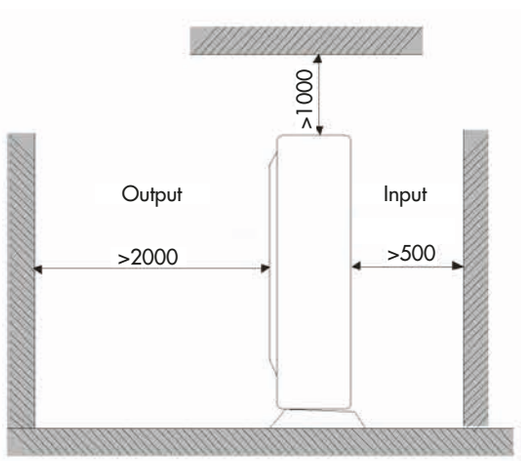


# DIMENSIONAL DRAWINGS 6 kW




# SPACE REQUIRED FOR INSTALLATION 6 kW



# TECHNICAL DATA FOR 8-10-12-14-16 kW

| Model | | | | | AG4HP081PH | |
|---|---|---|---|---|---|---|
| **Matchable units for domestic hot water production (DHW)** | | | | | **200/300 litres external tank with diverting valve** | |
| | | | | | Cooling | Heating |
| COMFORT IN ENVIRONMENT | **Performance according to EN 14511** | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 8.30 | 8.20 |
| | | | Rated electrical power input | $kW_{el}$ | 1.56 | 1.54 |
| | | | EER/COP | | 5.32 | 5.32 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 7.40 | 8.30 |
| | | | Rated electrical power input | $kW_{el}$ | 2.00 | 1.90 |
| | | | EER/COP | | 3.70 | 4.36 |
| | **Performance according to Ecodesign (ERP) EN 14825** | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 8 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 187 | |
| | | | Energy efficiency class | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 9 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 146 | |
| | | | Energy efficiency class | | A++ | |
| DHW | **DHW performance according to EN 16147** | With 300 litres tank and diverting valve AVERAGE climate | Load profile | | XL | |
| | | | Energy efficiency class | | A | |
| | | | ERP efficiency | % | 123 | |
| Unit operation data | | | Maximum delivery water temperature | °C | Up to 65 | |
| | | | Outdoor temperature range (heating) | °C | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | -15/+48 | |
| | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 1.41 |
| | | | | | at 45 °C | 1.40 |
| | | | | | at 55 °C | 1.34 |
| | | | | | at 7 °C | 0.98 |
| | | | | | at 18 °C | 1.43 |
| | | | Minimum efficient water volume of the system | litres | 40 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1/50 | |
| | | | Maximum electricity consumption | A | 25 | |
| | | | Sound pressure level (cooling mode) | dB(A) | 60 | |
| | | | Sound pressure level (heating mode) | dB(A) | 62 | |
| Components and dimensions | | | Expansion vessel | litres | 3 | |
| | | | Maximum circulator pump head | kPa | (see H/Q graphs) | |
| | | | Hydraulic connections | inches | G1" | |
| | | | Safety valve | bar | 3 | |
| | | | Weight | kg | 120 | |
| | | | Dimensions (H/W/D) | mm | 878/1206/445 | |
| | | | Compressor type | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$eq | |
| | | | Quantity | kg | 1.6 | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2018 STANDARD

| | **COOLING - Dry bulb outdoor air temperature in °C - (AG4HP081PH)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 9.25 | 6.77 | 8.81 | 6.11 | 8.44 | 5.48 | 7.99 | 4.85 | 7.62 | 4.26 | 7.40 | 3.70 | 5.15 | 3.07 | 4.70 | 2.37 | 3.73 | 1.98 |
| 8 | 9.55 | 7.01 | 9.09 | 6.32 | 8.71 | 5.67 | 8.25 | 5.02 | 7.87 | 4.40 | 7.64 | 3.83 | 5.32 | 3.18 | 4.85 | 2.45 | 3.85 | 2.05 |
| 9 | 9.84 | 7.24 | 9.37 | 6.53 | 8.98 | 5.86 | 8.50 | 5.18 | 8.11 | 4.55 | 7.87 | 3.96 | 5.48 | 3.28 | 5.01 | 2.53 | 3.97 | 2.11 |
| 10 | 10.14 | 7.48 | 9.65 | 6.74 | 9.25 | 6.05 | 8.76 | 5.35 | 8.35 | 4.70 | 8.11 | 4.08 | 5.65 | 3.39 | 5.16 | 2.61 | 4.09 | 2.18 |
| 11 | 10.43 | 7.71 | 9.93 | 6.95 | 9.52 | 6.23 | 9.01 | 5.52 | 8.60 | 4.84 | 8.35 | 4.21 | 5.81 | 3.50 | 5.31 | 2.70 | 4.21 | 2.25 |
| 12 | 10.73 | 7.94 | 10.21 | 7.16 | 9.79 | 6.42 | 9.27 | 5.69 | 8.84 | 4.99 | 8.58 | 4.34 | 5.98 | 3.60 | 5.46 | 2.78 | 4.33 | 2.32 |
| 13 | 11.03 | 8.18 | 10.50 | 7.37 | 10.06 | 6.61 | 9.53 | 5.85 | 9.09 | 5.14 | 8.82 | 4.47 | 6.14 | 3.71 | 5.61 | 2.86 | 4.45 | 2.39 |
| 14 | 11.32 | 8.41 | 10.78 | 7.58 | 10.33 | 6.80 | 9.78 | 6.02 | 9.33 | 5.28 | 9.06 | 4.60 | 6.31 | 3.81 | 5.76 | 2.94 | 4.57 | 2.45 |
| 15 | 11.62 | 8.64 | 11.06 | 7.79 | 10.60 | 6.99 | 10.04 | 6.19 | 9.57 | 5.43 | 9.29 | 4.72 | 6.47 | 3.92 | 5.91 | 3.02 | 4.69 | 2.52 |
| 18 | 12.45 | 9.34 | 11.85 | 8.42 | 11.35 | 7.56 | 10.76 | 6.69 | 10.26 | 5.87 | 8.30 | 5.32 | 6.93 | 4.24 | 6.33 | 3.27 | 5.03 | 2.73 |
| 20 | 13.10 | 9.80 | 12.47 | 8.84 | 11.95 | 7.93 | 11.32 | 7.02 | 10.79 | 6.16 | 10.48 | 5.36 | 7.30 | 4.45 | 6.66 | 3.43 | 5.29 | 2.86 |
| 23 | 13.93 | 10.51 | 13.26 | 9.47 | 12.70 | 8.50 | 12.04 | 7.52 | 11.48 | 6.60 | 11.14 | 5.74 | 7.76 | 4.76 | 7.08 | 3.67 | 5.62 | 3.07 |
| 25 | 14.47 | 10.97 | 13.77 | 9.89 | 13.19 | 8.87 | 12.50 | 7.85 | 11.92 | 6.90 | 11.57 | 6.00 | 8.06 | 4.98 | 7.36 | 3.84 | 5.84 | 3.20 |

| | **HEATING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 4.73 | 2.17 | 4.95 | 2.56 | 6.27 | 2.94 | 6.49 | 3.45 | 7.15 | 3.84 | 7.48 | 4.26 | 8.10 | 4.73 | 8.12 | 6.49 | 8.36 | 6.65 | 9.35 | 7.24 | 8.75 | 6.48 | 9.59 | 6.86 | 8.94 | 8.92 | 9.66 | 9.26 |
| 30 | 4.84 | 2.00 | 5.06 | 2.35 | 6.38 | 2.70 | 6.60 | 3.17 | 7.26 | 3.52 | 7.59 | 3.91 | 8.20 | 4.34 | 8.20 | 5.96 | 8.45 | 6.11 | 9.43 | 6.64 | 8.82 | 5.95 | 9.66 | 6.30 | 9.00 | 8.18 | 9.72 | 8.50 |
| 35 | 4.84 | 1.78 | 5.06 | 2.10 | 6.38 | 2.41 | 6.60 | 2.83 | 7.26 | 3.14 | 7.59 | 3.49 | 8.20 | 3.88 | 8.20 | 5.32 | 8.45 | 5.45 | 9.43 | 5.93 | 8.82 | 5.31 | 9.66 | 5.62 | 9.00 | 7.31 | 9.72 | 7.59 |
| 40 | 4.84 | 1.57 | 5.06 | 1.84 | 6.38 | 2.12 | 6.60 | 2.49 | 7.26 | 2.77 | 7.59 | 3.07 | 8.20 | 3.41 | 8.20 | 4.68 | 8.45 | 4.80 | 9.43 | 5.22 | 8.82 | 4.67 | 9.66 | 4.95 | 9.00 | 6.43 | 9.72 | 6.68 |
| 45 | 4.84 | 1.43 | 5.06 | 1.68 | 6.38 | 1.93 | 6.60 | 2.26 | 7.26 | 2.52 | 7.59 | 2.79 | 8.20 | 3.10 | 8.30 | 4.36 | 8.45 | 4.36 | 9.43 | 4.75 | 8.82 | 4.25 | 9.66 | 4.50 | 9.00 | 5.85 | 9.72 | 6.07 |
| 50 | | | 4.95 | 1.51 | 6.27 | 1.74 | 6.49 | 2.04 | 7.15 | 2.26 | 7.48 | 2.52 | 8.10 | 2.79 | 8.12 | 3.83 | 8.36 | 3.93 | 9.35 | 4.27 | 8.75 | 3.82 | 9.59 | 4.05 | 8.94 | 5.26 | 9.62 | 5.46 |
| 55 | | | | | 6.27 | 1.52 | 6.49 | 1.78 | 7.15 | 1.98 | 7.48 | 2.20 | 8.10 | 2.44 | 7.81 | 3.20 | 8.36 | 3.44 | 9.35 | 3.74 | 8.75 | 3.34 | 9.59 | 3.54 | 8.94 | 4.60 | 9.62 | 4.78 |
| 60 | | | | | | | | | 7.04 | 1.76 | 7.38 | 1.96 | 8.00 | 2.17 | 8.04 | 2.98 | 8.28 | 3.05 | 9.24 | 3.32 | 8.64 | 2.97 | 9.47 | 3.15 | 8.82 | 4.09 | 9.53 | 4.25 |
| 65 | | | | | | | | | | | | | | | 7.95 | 2.66 | 8.19 | 2.73 | 9.15 | 2.97 | 8.56 | 2.65 | | | | | | |

LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

# TECHNICAL DATA FOR 8-10-12-14-16 kW

| Model | | | | | AG4HP101PH | | AG4HP103PH | |
|---|---|---|---|---|---|---|---|---|
| **Matchable units for domestic hot water production (DHW)** | | | | | **200/300 litres external tank with diverting valve** | | **200/300 litres external tank with diverting valve** | |
| | | | | | Cooling | Heating | Cooling | Heating |
| COMFORT IN ENVIRONMENT | **Performance according to EN 14511** | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 10.20 | 10.20 | 10.20 | 10.20 |
| | | | Rated electrical power input | $kW_{el}$ | 2.00 | 2.02 | 2.13 | 2.06 |
| | | | EER/COP | | 5.10 | 5.05 | 4.79 | 4.95 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 9.00 | 10.20 | 9.10 | 10.20 |
| | | | Rated electrical power input | $kW_{el}$ | 2.65 | 2.50 | 2.80 | 2.60 |
| | | | EER/COP | | 3.40 | 4.08 | 3.25 | 3.92 |
| | **Performance according to Ecodesign (ERP) EN 14825** | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 9 | | 9 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 178 | | 190 | |
| | | | Energy efficiency class | | A+++ | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 10 | | 10 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 136 | | 141 | |
| | | | Energy efficiency class | | A++ | | A++ | |
| DHW | **DHW performance according to EN 16147** | With 300 litres tank and diverting valve AVERAGE climate | Load profile | | XL | | XL | |
| | | | Energy efficiency class | | A | | A | |
| | | | ERP efficiency | % | 123 | | 123 | |
| Unit operation data | | | Maximum delivery water temperature | °C | Up to 65 | | Up to 65 | |
| | | | Outdoor temperature range (heating) | °C | -25/+35 | | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | -15/+48 | | -15/+48 | |
| | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 1.75 | at 35 °C | 1.75 |
| | | | | | at 45 °C | 1.74 | at 45 °C | 1.74 |
| | | | | | at 55 °C | 1.67 | at 55 °C | 1.67 |
| | | | | | at 7 °C | 1.24 | at 7 °C | 1.24 |
| | | | | | at 18 °C | 1.75 | at 18 °C | 1.75 |
| | | | Minimum efficient water volume of the system | litres | 80 | | 80 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1/50 | | 400/3/50 | |
| | | | Maximum electricity consumption | A | 25 | | 9 | |
| | | | Sound pressure level (cooling mode) | dB(A) | 60 | | 57 | |
| | | | Sound pressure level (heating mode) | dB(A) | 62 | | 60 | |
| Components and dimensions | | | Expansion vessel | litres | 3 | | 3 | |
| | | | Maximum circulator pump head | kPa | (see H/Q graphs) | | (see H/Q graphs) | |
| | | | Hydraulic connections | inches | G1" | | G1" | |
| | | | Safety valve | bar | 3 | | 3 | |
| | | | Weight | kg | 120 | | 134 | |
| | | | Dimensions (H/W/D) | mm | 878/1206/445 | | 878/1206/445 | |
| | | | Compressor type | | Twin Rotary with vapour injection | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$eq | | R32/675 kg $CO_2$eq | |
| | | | Quantity | kg | 1.6 | | 1.6 | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

PRELIMINARY data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2018 STANDARD

| | **COOLING - Dry bulb outdoor air temperature in °C - (AG4HP101PH)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 11.25 | 6.22 | 10.71 | 5.61 | 10.26 | 5.03 | 9.72 | 4.45 | 9.27 | 3.91 | 9.00 | 3.40 | 5.65 | 3.07 | 5.16 | 2.37 | 3.87 | 1.98 |
| 8 | 11.61 | 6.44 | 11.05 | 5.81 | 10.59 | 5.21 | 10.03 | 4.61 | 9.57 | 4.05 | 9.29 | 3.52 | 5.83 | 3.18 | 5.32 | 2.45 | 4.00 | 2.05 |
| 9 | 11.97 | 6.65 | 11.40 | 6.00 | 10.92 | 5.38 | 10.34 | 4.76 | 9.86 | 4.18 | 9.58 | 3.64 | 6.01 | 3.28 | 5.49 | 2.53 | 4.12 | 2.11 |
| 10 | 12.33 | 6.87 | 11.74 | 6.19 | 11.24 | 5.56 | 10.65 | 4.92 | 10.16 | 4.32 | 9.86 | 3.75 | 6.19 | 3.39 | 5.65 | 2.61 | 4.24 | 2.18 |
| 11 | 12.69 | 7.08 | 12.08 | 6.39 | 11.57 | 5.73 | 10.96 | 5.07 | 10.46 | 4.45 | 10.15 | 3.87 | 6.37 | 3.50 | 5.82 | 2.70 | 4.37 | 2.25 |
| 12 | 13.05 | 7.30 | 12.42 | 6.58 | 11.90 | 5.90 | 11.28 | 5.22 | 10.75 | 4.59 | 10.44 | 3.99 | 6.55 | 3.60 | 5.98 | 2.78 | 4.49 | 2.32 |
| 13 | 13.41 | 7.51 | 12.77 | 6.77 | 12.23 | 6.08 | 11.59 | 5.38 | 11.05 | 4.72 | 10.73 | 4.11 | 6.73 | 3.71 | 6.15 | 2.86 | 4.62 | 2.39 |
| 14 | 13.77 | 7.73 | 13.11 | 6.97 | 12.56 | 6.25 | 11.90 | 5.53 | 11.35 | 4.86 | 11.02 | 4.22 | 6.91 | 3.81 | 6.31 | 2.94 | 4.74 | 2.45 |
| 15 | 14.13 | 7.94 | 13.45 | 7.16 | 12.89 | 6.42 | 12.21 | 5.69 | 11.64 | 4.99 | 11.30 | 4.34 | 7.09 | 3.92 | 6.48 | 3.02 | 4.86 | 2.52 |
| 18 | 15.14 | 8.59 | 14.42 | 7.74 | 13.81 | 6.94 | 13.08 | 6.15 | 12.48 | 5.40 | 10.20 | 5.10 | 7.60 | 4.24 | 6.94 | 3.27 | 5.21 | 2.73 |
| 20 | 15.93 | 9.01 | 15.17 | 8.12 | 14.53 | 7.29 | 13.76 | 6.45 | 13.13 | 5.66 | 12.74 | 4.92 | 8.00 | 4.45 | 7.30 | 3.43 | 5.48 | 2.86 |
| 23 | 16.94 | 9.65 | 16.13 | 8.70 | 15.45 | 7.81 | 14.64 | 6.91 | 13.96 | 6.07 | 13.55 | 5.28 | 8.51 | 4.76 | 7.77 | 3.67 | 5.83 | 3.07 |
| 25 | 17.60 | 10.08 | 16.75 | 9.09 | 16.05 | 8.15 | 15.20 | 7.22 | 14.50 | 6.34 | 14.08 | 5.51 | 8.83 | 4.98 | 8.07 | 3.84 | 6.06 | 3.20 |

| | **HEATING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 5.07 | 2.03 | 5.31 | 2.39 | 6.73 | 2.75 | 6.96 | 3.23 | 7.67 | 3.59 | 8.03 | 4.38 | 8.69 | 4.86 | 10.10 | 6.16 | 10.40 | 6.32 | 11.63 | 6.87 | 9.25 | 7.95 | 10.14 | 8.42 | 9.69 | 8.92 | 10.47 | 9.26 |
| 30 | 5.19 | 1.87 | 5.43 | 2.20 | 6.84 | 2.52 | 7.08 | 2.96 | 7.79 | 3.29 | 8.14 | 4.02 | 8.80 | 4.46 | 10.20 | 5.66 | 10.51 | 5.80 | 11.73 | 6.31 | 9.32 | 7.30 | 10.21 | 7.73 | 9.75 | 8.18 | 10.53 | 8.50 |
| 35 | 5.19 | 1.67 | 5.43 | 1.96 | 6.84 | 2.25 | 7.08 | 2.65 | 7.79 | 2.94 | 8.14 | 3.59 | 8.80 | 3.98 | 10.20 | 5.05 | 10.51 | 5.18 | 11.73 | 5.63 | 9.32 | 6.52 | 10.21 | 6.90 | 9.75 | 7.31 | 10.53 | 7.59 |
| 40 | 5.19 | 1.47 | 5.43 | 1.72 | 6.84 | 1.98 | 7.08 | 2.33 | 7.79 | 2.59 | 8.14 | 3.16 | 8.80 | 3.50 | 10.20 | 4.44 | 10.51 | 4.56 | 11.73 | 4.96 | 9.32 | 5.74 | 10.21 | 6.07 | 9.75 | 6.43 | 10.53 | 6.68 |
| 45 | 5.19 | 1.33 | 5.43 | 1.57 | 6.84 | 1.80 | 7.08 | 2.12 | 7.79 | 2.35 | 8.14 | 2.87 | 8.80 | 3.19 | 10.20 | 4.08 | 10.51 | 4.14 | 11.73 | 4.50 | 9.32 | 5.21 | 10.21 | 5.52 | 9.75 | 5.85 | 10.53 | 6.07 |
| 50 | | | 5.31 | 1.41 | 6.73 | 1.62 | 6.96 | 1.91 | 7.67 | 2.12 | 8.03 | 2.58 | 8.69 | 2.87 | 10.10 | 3.64 | 10.40 | 3.73 | 11.63 | 4.05 | 9.25 | 4.69 | 10.14 | 4.97 | 9.69 | 5.26 | 10.42 | 5.46 |
| 55 | | | | | 6.73 | 1.42 | 6.96 | 1.67 | 7.67 | 1.85 | 8.03 | 2.26 | 8.69 | 2.51 | 10.30 | 3.12 | 10.40 | 3.26 | 11.63 | 3.55 | 9.25 | 4.11 | 10.14 | 4.35 | 9.69 | 4.60 | 10.42 | 4.78 |
| 60 | | | | | | | | | 7.55 | 1.65 | 7.92 | 2.01 | 8.58 | 2.23 | 10.00 | 2.83 | 10.30 | 2.90 | 11.50 | 3.15 | 9.14 | 3.65 | 10.01 | 3.87 | 9.56 | 4.09 | 10.32 | 4.25 |
| 65 | | | | | | | | | | | | | | | 9.89 | 2.53 | 10.19 | 2.59 | 11.38 | 2.82 | 9.04 | 3.26 | | | | | | |

| | **HEATING - Dry bulb outdoor air temperature in °C - (AG4HP103PH)** | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 5.07 | 2.05 | 5.31 | 2.42 | 6.73 | 2.78 | 6.96 | 3.26 | 7.67 | 3.62 | 8.03 | 4.17 | 8.69 | 4.63 | 10.10 | 6.04 | 10.40 | 6.19 | 11.63 | 6.73 | 9.25 | 7.45 | 10.14 | 7.89 | 9.69 | 8.34 | 10.47 | 8.66 |
| 30 | 5.19 | 1.88 | 5.43 | 2.22 | 6.84 | 2.55 | 7.08 | 2.99 | 7.79 | 3.33 | 8.14 | 3.83 | 8.80 | 4.25 | 10.20 | 5.54 | 10.51 | 5.68 | 11.73 | 6.18 | 9.32 | 6.84 | 10.21 | 7.24 | 9.75 | 7.66 | 10.53 | 7.95 |
| 35 | 5.19 | 1.68 | 5.43 | 1.98 | 6.84 | 2.28 | 7.08 | 2.67 | 7.79 | 2.97 | 8.14 | 3.42 | 8.80 | 3.79 | 10.20 | 4.95 | 10.51 | 5.07 | 11.73 | 5.52 | 9.32 | 6.10 | 10.21 | 6.46 | 9.75 | 6.84 | 10.53 | 7.10 |
| 40 | 5.19 | 1.48 | 5.43 | 1.74 | 6.84 | 2.00 | 7.08 | 2.35 | 7.79 | 2.61 | 8.14 | 3.01 | 8.80 | 3.34 | 10.20 | 4.36 | 10.51 | 4.46 | 11.73 | 4.86 | 9.32 | 5.37 | 10.21 | 5.69 | 9.75 | 6.02 | 10.53 | 6.25 |
| 45 | 5.19 | 1.35 | 5.43 | 1.58 | 6.84 | 1.82 | 7.08 | 2.14 | 7.79 | 2.38 | 8.14 | 2.73 | 8.80 | 3.03 | 10.20 | 3.92 | 10.51 | 4.06 | 11.73 | 4.42 | 9.32 | 4.88 | 10.21 | 5.17 | 9.75 | 5.47 | 10.53 | 5.68 |
| 50 | | | 5.31 | 1.43 | 6.73 | 1.64 | 6.96 | 1.92 | 7.67 | 2.14 | 8.03 | 2.46 | 8.69 | 2.73 | 10.10 | 3.56 | 10.40 | 3.65 | 11.63 | 3.97 | 9.25 | 4.39 | 10.14 | 4.65 | 9.69 | 4.92 | 10.42 | 5.11 |
| 55 | | | | | 6.73 | 1.43 | 6.96 | 1.68 | 7.67 | 1.87 | 8.03 | 2.15 | 8.69 | 2.39 | 10.30 | 3.05 | 10.40 | 3.20 | 11.63 | 3.48 | 9.25 | 3.84 | 10.14 | 4.07 | 9.69 | 4.31 | 10.42 | 4.47 |
| 60 | | | | | | | | | 7.55 | 1.66 | 7.92 | 1.91 | 8.58 | 2.12 | 10.00 | 2.77 | 10.30 | 2.84 | 11.50 | 3.09 | 9.14 | 3.42 | 10.01 | 3.62 | 9.56 | 3.83 | 10.32 | 3.98 |
| 65 | | | | | | | | | | | | | | | 9.89 | 2.48 | 10.19 | 2.54 | 11.38 | 2.76 | 9.04 | 3.05 | | | | | | |

| | **COOLING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 11.25 | 5.89 | 10.71 | 5.31 | 10.26 | 4.77 | 9.72 | 4.22 | 9.27 | 3.70 | 9.10 | 3.25 | 5.65 | 2.81 | 5.16 | 2.16 | 3.87 | 1.93 |
| 8 | 11.61 | 6.10 | 11.05 | 5.50 | 10.59 | 4.93 | 10.03 | 4.37 | 9.57 | 3.83 | 9.29 | 3.33 | 5.83 | 2.90 | 5.32 | 2.24 | 4.00 | 2.00 |
| 9 | 11.97 | 6.30 | 11.40 | 5.68 | 10.92 | 5.10 | 10.34 | 4.51 | 9.86 | 3.96 | 9.58 | 3.44 | 6.01 | 3.00 | 5.49 | 2.31 | 4.12 | 2.06 |
| 10 | 12.33 | 6.51 | 11.74 | 5.87 | 11.24 | 5.26 | 10.65 | 4.66 | 10.16 | 4.09 | 9.86 | 3.55 | 6.19 | 3.10 | 5.65 | 2.39 | 4.24 | 2.13 |
| 11 | 12.69 | 6.71 | 12.08 | 6.05 | 11.57 | 5.43 | 10.96 | 4.80 | 10.46 | 4.22 | 10.15 | 3.67 | 6.37 | 3.19 | 5.82 | 2.46 | 4.37 | 2.20 |
| 12 | 13.05 | 6.91 | 12.42 | 6.23 | 11.90 | 5.59 | 11.28 | 4.95 | 10.75 | 4.34 | 10.44 | 3.78 | 6.55 | 3.29 | 5.98 | 2.54 | 4.49 | 2.26 |
| 13 | 13.41 | 7.12 | 12.77 | 6.42 | 12.23 | 5.75 | 11.59 | 5.09 | 11.05 | 4.47 | 10.73 | 3.89 | 6.73 | 3.39 | 6.15 | 2.61 | 4.62 | 2.33 |
| 14 | 13.77 | 7.32 | 13.11 | 6.60 | 12.56 | 5.92 | 11.90 | 5.24 | 11.35 | 4.60 | 11.02 | 4.00 | 6.91 | 3.48 | 6.31 | 2.69 | 4.74 | 2.40 |
| 15 | 14.13 | 7.52 | 13.45 | 6.78 | 12.89 | 6.08 | 12.21 | 5.38 | 11.64 | 4.73 | 11.30 | 4.11 | 7.09 | 3.58 | 6.48 | 2.76 | 4.86 | 2.46 |
| 18 | 15.14 | 8.13 | 14.42 | 7.33 | 13.81 | 6.58 | 13.08 | 5.82 | 12.48 | 5.11 | 10.20 | 4.79 | 7.60 | 3.87 | 6.94 | 2.99 | 5.21 | 2.66 |
| 20 | 15.93 | 8.53 | 15.17 | 7.69 | 14.53 | 6.90 | 13.76 | 6.11 | 13.13 | 5.36 | 12.74 | 4.66 | 8.00 | 4.06 | 7.30 | 3.13 | 5.48 | 2.79 |
| 23 | 16.94 | 9.14 | 16.13 | 8.24 | 15.45 | 7.39 | 14.64 | 6.54 | 13.96 | 5.75 | 13.55 | 5.00 | 8.51 | 4.35 | 7.77 | 3.36 | 5.83 | 2.99 |
| 25 | 17.60 | 9.55 | 16.75 | 8.61 | 16.05 | 7.72 | 15.20 | 6.84 | 14.50 | 6.00 | 14.08 | 5.22 | 8.83 | 4.55 | 8.07 | 3.51 | 6.06 | 3.13 |

LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

# TECHNICAL DATA FOR 8-10-12-14-16 kW

| Model | | | | | AG4HP121PH | | AG4HP123PH | |
|---|---|---|---|---|---|---|---|---|
| **Matchable units for domestic hot water production (DHW)** | | | | | **200/300 litres external tank with diverting valve** | | **200/300 litres external tank with diverting valve** | |
| | | | | | Cooling | Heating | Cooling | Heating |
| COMFORT IN ENVIRONMENT | **Performance according to EN 14511** | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 12.00 | 12.00 | 12.00 | 12.00 |
| | | | Rated electrical power input | $kW_{el}$ | 2.45 | 2.43 | 2.61 | 2.49 |
| | | | EER/COP | | 4.90 | 4.94 | 4.60 | 4.82 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 11.10 | 13.00 | 11.10 | 13.00 |
| | | | Rated electrical power input | $kW_{el}$ | 3.58 | 3.45 | 3.58 | 3.45 |
| | | | EER/COP | | 3.10 | 3.77 | 3.10 | 3.77 |
| | **Performance according to Ecodesign (ERP) EN 14825** | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 12 | | 12 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 188 | | 180 | |
| | | | Energy efficiency class | | A+++ | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 12 | | 12 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 144 | | 137 | |
| | | | Energy efficiency class | | A++ | | A++ | |
| DHW | **DHW performance according to EN 16147** | With 300 litres tank and diverting valve AVERAGE climate | Load profile | | XL | | XL | |
| | | | Energy efficiency class | | A | | A | |
| | | | ERP efficiency | % | 110 | | 110 | |
| Unit operation data | | | Maximum delivery water temperature | °C | Up to 65 | | Up to 65 | |
| | | | Outdoor temperature range (heating) | °C | -25/+35 | | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | -15/+48 | | -15/+48 | |
| | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 2.06 | at 35 °C | 2.06 |
| | | | | | at 45 °C | 2.06 | at 45 °C | 2.06 |
| | | | | | at 55 °C | 1.98 | at 55 °C | 1.98 |
| | | | | | at 7 °C | 1.49 | at 7 °C | 1.49 |
| | | | | | at 18 °C | 2.06 | at 18 °C | 2.06 |
| | | | Minimum efficient water volume of the system | litres | 80 | | 80 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1/50 | | 400/3/50 | |
| | | | Maximum electricity consumption | A | 29 | | 11.5 | |
| | | | Sound pressure level (cooling mode) | dB(A) | 61 | | 61 | |
| | | | Sound pressure level (heating mode) | dB(A) | 63 | | 63 | |
| Components and dimensions | | | Expansion vessel | litres | 3 | | 3 | |
| | | | Maximum circulator pump head | kPa | (see H/Q graphs) | | (see H/Q graphs) | |
| | | | Hydraulic connections | inches | G1" | | G1" | |
| | | | Safety valve | bar | 3 | | 3 | |
| | | | Weight | kg | 138 | | 144 | |
| | | | Dimensions (H/W/D) | mm | 878/1206/445 | | 878/1206/445 | |
| | | | Compressor type | | Twin Rotary with vapour injection | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$eq | | R32/675 kg $CO_2$eq | |
| | | | Quantity | kg | 2.2 kg | | 2.2 kg | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2018 STANDARD

| | **COOLING** - Dry bulb outdoor air temperature in °C - (AG4HP121PH) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 11.88 | 5.67 | 11.31 | 5.12 | 10.83 | 4.59 | 10.26 | 4.06 | 9.79 | 3.57 | 11.10 | 3.10 | 8.19 | 2.95 | 6.72 | 2.37 | 6.16 | 1.92 |
| 8 | 12.26 | 5.87 | 11.67 | 5.29 | 11.18 | 4.75 | 10.59 | 4.20 | 10.10 | 3.69 | 11.46 | 3.21 | 8.45 | 3.05 | 6.94 | 2.45 | 6.36 | 1.99 |
| 9 | 12.64 | 6.07 | 12.03 | 5.47 | 11.52 | 4.91 | 10.92 | 4.34 | 10.41 | 3.81 | 11.81 | 3.32 | 8.71 | 3.15 | 7.15 | 2.53 | 6.55 | 2.06 |
| 10 | 13.02 | 6.26 | 12.39 | 5.65 | 11.87 | 5.07 | 11.24 | 4.48 | 10.72 | 3.94 | 12.17 | 3.42 | 8.97 | 3.25 | 7.37 | 2.61 | 6.75 | 2.12 |
| 11 | 13.40 | 6.46 | 12.75 | 5.82 | 12.22 | 5.22 | 11.57 | 4.62 | 11.04 | 4.06 | 12.52 | 3.53 | 9.24 | 3.35 | 7.58 | 2.70 | 6.95 | 2.19 |
| 12 | 13.78 | 6.65 | 13.11 | 6.00 | 12.56 | 5.38 | 11.90 | 4.76 | 11.35 | 4.18 | 12.88 | 3.64 | 9.50 | 3.46 | 7.80 | 2.78 | 7.15 | 2.26 |
| 13 | 14.16 | 6.85 | 13.48 | 6.18 | 12.91 | 5.54 | 12.23 | 4.90 | 11.66 | 4.30 | 13.23 | 3.74 | 9.76 | 3.56 | 8.01 | 2.86 | 7.34 | 2.32 |
| 14 | 14.54 | 7.05 | 13.84 | 6.35 | 13.26 | 5.70 | 12.56 | 5.04 | 11.98 | 4.43 | 13.59 | 3.85 | 10.02 | 3.66 | 8.23 | 2.94 | 7.54 | 2.39 |
| 15 | 14.92 | 7.24 | 14.20 | 6.53 | 13.60 | 5.86 | 12.89 | 5.18 | 12.29 | 4.55 | 13.94 | 3.96 | 10.28 | 3.76 | 8.44 | 3.02 | 7.74 | 2.46 |
| 18 | 15.98 | 7.83 | 15.22 | 7.06 | 14.58 | 6.33 | 13.81 | 5.60 | 13.17 | 4.92 | 12.00 | 4.90 | 11.02 | 4.07 | 9.05 | 3.27 | 8.29 | 2.66 |
| 20 | 16.82 | 8.21 | 16.01 | 7.41 | 15.34 | 6.64 | 14.53 | 5.88 | 13.86 | 5.16 | 15.72 | 4.49 | 11.59 | 4.27 | 9.52 | 3.43 | 8.72 | 2.79 |
| 23 | 17.88 | 8.80 | 17.03 | 7.94 | 16.31 | 7.12 | 15.45 | 6.30 | 14.74 | 5.53 | 16.72 | 4.81 | 12.33 | 4.57 | 10.12 | 3.67 | 9.28 | 2.99 |
| 25 | 18.57 | 9.19 | 17.68 | 8.29 | 16.94 | 7.43 | 16.05 | 6.58 | 15.30 | 5.78 | 17.36 | 5.02 | 12.81 | 4.77 | 10.51 | 3.84 | 9.63 | 3.12 |

| | **HEATING** - Dry bulb outdoor air temperature in °C | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 5.80 | 2.03 | 6.21 | 2.39 | 7.45 | 2.74 | 8.14 | 3.22 | 8.97 | 3.58 | 10.07 | 4.09 | 10.90 | 4.53 | 11.88 | 6.03 | 12.24 | 6.18 | 13.68 | 6.72 | 11.25 | 7.60 | 12.33 | 8.05 | 11.92 | 8.57 | 12.88 | 8.89 |
| 30 | 5.93 | 1.86 | 6.35 | 2.19 | 7.59 | 2.52 | 8.28 | 2.96 | 9.11 | 3.29 | 10.21 | 3.75 | 11.04 | 4.16 | 12.00 | 5.53 | 12.36 | 5.67 | 13.80 | 6.17 | 11.34 | 6.98 | 12.42 | 7.39 | 12.00 | 7.86 | 12.96 | 8.16 |
| 35 | 5.93 | 1.66 | 6.35 | 1.96 | 7.59 | 2.25 | 8.28 | 2.64 | 9.11 | 2.93 | 10.21 | 3.35 | 11.04 | 3.72 | 12.00 | 4.94 | 12.36 | 5.06 | 13.80 | 5.51 | 11.34 | 6.23 | 12.42 | 6.60 | 12.00 | 7.02 | 12.96 | 7.29 |
| 40 | 5.93 | 1.46 | 6.35 | 1.72 | 7.59 | 1.98 | 8.28 | 2.32 | 9.11 | 2.58 | 10.21 | 2.95 | 11.04 | 3.27 | 12.00 | 4.35 | 12.36 | 4.46 | 13.80 | 4.85 | 11.34 | 5.49 | 12.42 | 5.81 | 12.00 | 6.18 | 12.96 | 6.42 |
| 45 | 5.93 | 1.33 | 6.35 | 1.56 | 7.59 | 1.80 | 8.28 | 2.11 | 9.11 | 2.35 | 10.21 | 2.68 | 11.04 | 2.97 | 13.00 | 3.77 | 12.36 | 4.05 | 13.80 | 4.41 | 11.34 | 4.99 | 12.42 | 5.28 | 12.00 | 5.62 | 12.96 | 5.83 |
| 50 | | | 6.21 | 1.41 | 7.45 | 1.62 | 8.14 | 1.90 | 8.97 | 2.11 | 10.07 | 2.41 | 10.90 | 2.68 | 11.88 | 3.56 | 12.24 | 3.65 | 13.68 | 3.97 | 11.25 | 4.49 | 12.33 | 4.75 | 11.92 | 5.06 | 12.83 | 5.25 |
| 55 | | | | | 7.45 | 1.42 | 8.14 | 1.66 | 8.97 | 1.85 | 10.07 | 2.11 | 10.90 | 2.34 | 12.00 | 3.05 | 12.24 | 3.19 | 13.68 | 3.47 | 11.25 | 3.93 | 12.33 | 4.16 | 11.92 | 4.42 | 12.83 | 4.59 |
| 60 | | | | | | | | | 8.83 | 1.64 | 9.94 | 1.88 | 10.76 | 2.08 | 11.76 | 2.77 | 12.11 | 2.84 | 13.52 | 3.08 | 11.11 | 3.49 | 12.17 | 3.70 | 11.76 | 3.93 | 12.70 | 4.08 |
| 65 | | | | | | | | | | | | | | | 11.64 | 2.47 | 11.99 | 2.53 | 13.39 | 2.75 | 11.00 | 3.12 | | | | | | |

| | **HEATING** - Dry bulb outdoor air temperature in °C - (AG4HP123PH) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 5.80 | 1.95 | 6.21 | 2.29 | 7.45 | 2.63 | 8.14 | 3.09 | 8.97 | 3.43 | 10.07 | 3.92 | 10.90 | 4.35 | 11.88 | 5.88 | 12.24 | 6.03 | 13.68 | 6.56 | 11.25 | 7.30 | 12.33 | 7.73 | 11.92 | 8.22 | 12.88 | 8.53 |
| 30 | 5.93 | 1.79 | 6.35 | 2.10 | 7.59 | 2.42 | 8.28 | 2.84 | 9.11 | 3.15 | 10.21 | 3.60 | 11.04 | 3.99 | 12.00 | 5.40 | 12.36 | 5.53 | 13.80 | 6.02 | 11.34 | 6.70 | 12.42 | 7.10 | 12.00 | 7.54 | 12.96 | 7.83 |
| 35 | 5.93 | 1.59 | 6.35 | 1.88 | 7.59 | 2.16 | 8.28 | 2.53 | 9.11 | 2.81 | 10.21 | 3.21 | 11.04 | 3.56 | 12.00 | 4.82 | 12.36 | 4.94 | 13.80 | 5.37 | 11.34 | 5.98 | 12.42 | 6.34 | 12.00 | 6.73 | 12.96 | 6.99 |
| 40 | 5.93 | 1.40 | 6.35 | 1.65 | 7.59 | 1.90 | 8.28 | 2.23 | 9.11 | 2.48 | 10.21 | 2.83 | 11.04 | 3.14 | 12.00 | 4.24 | 12.36 | 4.35 | 13.80 | 4.73 | 11.34 | 5.27 | 12.42 | 5.58 | 12.00 | 5.93 | 12.96 | 6.15 |
| 45 | 5.93 | 1.28 | 6.35 | 1.50 | 7.59 | 1.73 | 8.28 | 2.03 | 9.11 | 2.25 | 10.21 | 2.57 | 11.04 | 2.85 | 13.00 | 3.77 | 12.36 | 3.95 | 13.80 | 4.30 | 11.34 | 4.79 | 12.42 | 5.07 | 12.00 | 5.39 | 12.96 | 5.59 |
| 50 | | | 6.21 | 1.35 | 7.45 | 1.55 | 8.14 | 1.82 | 8.97 | 2.03 | 10.07 | 2.31 | 10.90 | 2.57 | 11.88 | 3.47 | 12.24 | 3.56 | 13.68 | 3.87 | 11.25 | 4.31 | 12.33 | 4.56 | 11.92 | 4.85 | 12.83 | 5.03 |
| 55 | | | | | 7.45 | 1.36 | 8.14 | 1.60 | 8.97 | 1.77 | 10.07 | 2.02 | 10.90 | 2.25 | 12.00 | 2.91 | 12.24 | 3.11 | 13.68 | 3.39 | 11.25 | 3.77 | 12.33 | 3.99 | 11.92 | 4.24 | 12.83 | 4.40 |
| 60 | | | | | | | | | 8.83 | 1.58 | 9.94 | 1.80 | 10.76 | 2.00 | 11.76 | 2.70 | 12.11 | 2.77 | 13.52 | 3.01 | 11.11 | 3.35 | 12.17 | 3.55 | 11.76 | 3.77 | 12.70 | 3.92 |
| 65 | | | | | | | | | | | | | | | 11.64 | 2.41 | 11.99 | 2.47 | 13.39 | 2.69 | 11.00 | 2.99 | | | | | | |

| | **COOLING** - Dry bulb outdoor air temperature in °C | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 11.88 | 5.67 | 11.31 | 5.12 | 10.83 | 4.59 | 10.26 | 4.06 | 9.79 | 3.57 | 11.10 | 3.10 | 8.19 | 2.80 | 6.72 | 2.25 | 6.16 | 1.83 |
| 8 | 12.26 | 5.87 | 11.67 | 5.29 | 11.18 | 4.75 | 10.59 | 4.20 | 10.10 | 3.69 | 11.46 | 3.21 | 8.45 | 2.89 | 6.94 | 2.33 | 6.36 | 1.89 |
| 9 | 12.64 | 6.07 | 12.03 | 5.47 | 11.52 | 4.91 | 10.92 | 4.34 | 10.41 | 3.81 | 11.81 | 3.32 | 8.71 | 2.99 | 7.15 | 2.41 | 6.55 | 1.96 |
| 10 | 13.02 | 6.26 | 12.39 | 5.65 | 11.87 | 5.07 | 11.24 | 4.48 | 10.72 | 3.94 | 12.17 | 3.42 | 8.97 | 3.09 | 7.37 | 2.49 | 6.75 | 2.02 |
| 11 | 13.40 | 6.46 | 12.75 | 5.82 | 12.22 | 5.22 | 11.57 | 4.62 | 11.04 | 4.06 | 12.52 | 3.53 | 9.24 | 3.18 | 7.58 | 2.56 | 6.95 | 2.08 |
| 12 | 13.78 | 6.65 | 13.11 | 6.00 | 12.56 | 5.38 | 11.90 | 4.76 | 11.35 | 4.18 | 12.88 | 3.64 | 9.50 | 3.28 | 7.80 | 2.64 | 7.15 | 2.15 |
| 13 | 14.16 | 6.85 | 13.48 | 6.18 | 12.91 | 5.54 | 12.23 | 4.90 | 11.66 | 4.30 | 13.23 | 3.74 | 9.76 | 3.38 | 8.01 | 2.72 | 7.34 | 2.21 |
| 14 | 14.54 | 7.05 | 13.84 | 6.35 | 13.26 | 5.70 | 12.56 | 5.04 | 11.98 | 4.43 | 13.59 | 3.85 | 10.02 | 3.47 | 8.23 | 2.80 | 7.54 | 2.27 |
| 15 | 14.92 | 7.24 | 14.20 | 6.53 | 13.60 | 5.86 | 12.89 | 5.18 | 12.29 | 4.55 | 13.94 | 3.96 | 10.28 | 3.57 | 8.44 | 2.88 | 7.74 | 2.34 |
| 18 | 15.98 | 7.83 | 15.22 | 7.06 | 14.58 | 6.33 | 13.81 | 5.60 | 13.17 | 4.92 | 12.00 | 4.60 | 11.02 | 3.86 | 9.05 | 3.11 | 8.29 | 2.53 |
| 20 | 16.82 | 8.21 | 16.01 | 7.41 | 15.34 | 6.64 | 14.53 | 5.88 | 13.86 | 5.16 | 15.72 | 4.49 | 11.59 | 4.05 | 9.52 | 3.26 | 8.72 | 2.65 |
| 23 | 17.88 | 8.80 | 17.03 | 7.94 | 16.31 | 7.12 | 15.45 | 6.30 | 14.74 | 5.53 | 16.72 | 4.81 | 12.33 | 4.34 | 10.12 | 3.50 | 9.28 | 2.84 |
| 25 | 18.57 | 9.19 | 17.68 | 8.29 | 16.94 | 7.43 | 16.05 | 6.58 | 15.30 | 5.78 | 17.36 | 5.02 | 12.81 | 4.53 | 10.51 | 3.65 | 9.63 | 2.97 |

LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

# TECHNICAL DATA FOR 8-10-12-14-16 kW

| Model | | | | | AG4HP141PH | | AG4HP143PH | |
|---|---|---|---|---|---|---|---|---|
| **Matchable units for domestic hot water production (DHW)** | | | | | **200/300 litres external tank with diverting valve** | | **200/300 litres external tank with diverting valve** | |
| | | | | | Cooling | Heating | Cooling | Heating |
| COMFORT IN ENVIRONMENT | **Performance according to EN 14511** | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 13.7 | 14.20 | 13.90 | 14.20 |
| | | | Rated electrical power input | $kW_{el}$ | 3.00 | 2.99 | 3.32 | 3.09 |
| | | | EER/COP | | 4.57 | 4.75 | 4.19 | 4.60 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 13.30 | 14.20 | 13.30 | 14.20 |
| | | | Rated electrical power input | $kW_{el}$ | 4.75 | 3.84 | 4.75 | 3.84 |
| | | | EER/COP | | 2.80 | 3.70 | 2.80 | 3.70 |
| | **Performance according to Ecodesign (ERP) EN 14825** | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 13 | | 13 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 185 | | 179 | |
| | | | Energy efficiency class | | A+++ | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 13 | | 13 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 145 | | 138 | |
| | | | Energy efficiency class | | A++ | | A++ | |
| DHW | **DHW performance according to EN 16147** | With 300 litres tank and diverting valve AVERAGE climate | Load profile | | XL | | XL | |
| | | | Energy efficiency class | | A | | A | |
| | | | ERP efficiency | % | 110 | | 110 | |
| Unit operation data | | | Maximum delivery water temperature | °C | Up to 65 | | Up to 65 | |
| | | | Outdoor temperature range (heating) | °C | -25/+35 | | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | -15/+48 | | -15/+48 | |
| | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 2.44 | at 35 °C | 2.44 |
| | | | | | at 45 °C | 2.42 | at 45 °C | 2.42 |
| | | | | | at 55 °C | 2.32 | at 55 °C | 2.32 |
| | | | | | at 7 °C | 1.64 | at 7 °C | 1.64 |
| | | | | | at 18 °C | 2.36 | at 18 °C | 2.36 |
| | | | Minimum efficient water volume of the system | litres | 80 | | 80 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1/50 | | 400/3/50 | |
| | | | Maximum electricity consumption | A | 30 | | 12 | |
| | | | Sound pressure level (cooling mode) | dB(A) | 61 | | 61 | |
| | | | Sound pressure level (heating mode) | dB(A) | 63 | | 63 | |
| Components and dimensions | | | Expansion vessel | litres | 3 | | 3 | |
| | | | Maximum circulator pump head | kPa | (see H/Q graphs) | | (see H/Q graphs) | |
| | | | Hydraulic connections | inches | G1" | | G1" | |
| | | | Safety valve | bar | 3 | | 3 | |
| | | | Weight | kg | 138 | | 144 | |
| | | | Dimensions (H/W/D) | mm | 878/1206/445 | | 878/1206/445 | |
| | | | Compressor type | | Twin Rotary with vapour injection | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$eq | | R32/675 kg $CO_2$eq | |
| | | | Quantity | kg | 2.2 | | 2.2 | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2018 STANDARD

| | **COOLING** - Dry bulb outdoor air temperature in °C - (AG4HP141PH) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 12.69 | 5.12 | 12.08 | 4.62 | 11.57 | 4.14 | 10.96 | 3.67 | 10.45 | 3.22 | 13.30 | 2.80 | 8.42 | 2.95 | 6.80 | 2.37 | 6.24 | 1.92 |
| 8 | 13.09 | 5.30 | 12.47 | 4.78 | 11.94 | 4.29 | 11.31 | 3.80 | 10.79 | 3.33 | 13.73 | 2.90 | 8.69 | 3.05 | 7.02 | 2.45 | 6.44 | 1.99 |
| 9 | 13.50 | 5.48 | 12.85 | 4.94 | 12.31 | 4.43 | 11.66 | 3.92 | 11.12 | 3.44 | 14.15 | 2.99 | 8.96 | 3.15 | 7.24 | 2.53 | 6.64 | 2.06 |
| 10 | 13.91 | 5.66 | 13.24 | 5.10 | 12.68 | 4.57 | 12.01 | 4.05 | 11.46 | 3.55 | 14.58 | 3.09 | 9.23 | 3.25 | 7.46 | 2.61 | 6.84 | 2.12 |
| 11 | 14.31 | 5.83 | 13.62 | 5.26 | 13.05 | 4.72 | 12.37 | 4.18 | 11.79 | 3.67 | 15.00 | 3.19 | 9.50 | 3.35 | 7.67 | 2.70 | 7.04 | 2.19 |
| 12 | 14.72 | 6.01 | 14.01 | 5.42 | 13.42 | 4.86 | 12.72 | 4.30 | 12.13 | 3.78 | 15.43 | 3.28 | 9.77 | 3.46 | 7.89 | 2.78 | 7.23 | 2.26 |
| 13 | 15.12 | 6.19 | 14.40 | 5.58 | 13.79 | 5.00 | 13.07 | 4.43 | 12.46 | 3.89 | 15.85 | 3.38 | 10.04 | 3.56 | 8.11 | 2.86 | 7.43 | 2.32 |
| 14 | 15.53 | 6.36 | 14.78 | 5.74 | 14.16 | 5.15 | 13.42 | 4.56 | 12.80 | 4.00 | 16.28 | 3.48 | 10.31 | 3.66 | 8.33 | 2.94 | 7.63 | 2.39 |
| 15 | 15.94 | 6.54 | 15.17 | 5.90 | 14.53 | 5.29 | 13.77 | 4.68 | 13.13 | 4.11 | 16.70 | 3.57 | 10.58 | 3.76 | 8.55 | 3.02 | 7.83 | 2.46 |
| 18 | 17.08 | 7.07 | 16.26 | 6.38 | 15.57 | 5.72 | 14.75 | 5.06 | 14.07 | 4.44 | 13.70 | 4.57 | 11.34 | 4.07 | 9.16 | 3.27 | 8.40 | 2.66 |
| 20 | 17.97 | 7.42 | 17.10 | 6.69 | 16.38 | 6.00 | 15.52 | 5.31 | 14.80 | 4.66 | 18.83 | 4.05 | 11.93 | 4.27 | 9.63 | 3.43 | 8.83 | 2.79 |
| 23 | 19.11 | 7.95 | 18.19 | 7.17 | 17.43 | 6.43 | 16.51 | 5.69 | 15.74 | 5.00 | 20.03 | 4.34 | 12.68 | 4.57 | 10.25 | 3.67 | 9.39 | 2.99 |
| 25 | 19.84 | 8.30 | 18.89 | 7.49 | 18.10 | 6.72 | 17.14 | 5.94 | 16.35 | 5.22 | 20.80 | 4.54 | 13.17 | 4.77 | 10.64 | 3.84 | 9.75 | 3.12 |

| | **HEATING** - Dry bulb outdoor air temperature in °C | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 6.22 | 2.01 | 6.66 | 2.37 | 7.99 | 2.72 | 8.73 | 3.20 | 9.62 | 3.55 | 10.80 | 4.05 | 11.69 | 4.50 | 14.06 | 5.80 | 14.48 | 5.94 | 16.19 | 6.46 | 11.50 | 7.60 | 12.60 | 8.05 | 12.22 | 8.53 | 13.20 | 8.86 |
| 30 | 6.36 | 1.85 | 6.81 | 2.17 | 8.14 | 2.50 | 8.88 | 2.93 | 9.77 | 3.26 | 10.95 | 3.72 | 11.84 | 4.13 | 14.20 | 5.32 | 14.63 | 5.45 | 16.33 | 5.93 | 11.59 | 6.98 | 12.70 | 7.39 | 12.30 | 7.83 | 13.28 | 8.13 |
| 35 | 6.36 | 1.65 | 6.81 | 1.94 | 8.14 | 2.23 | 8.88 | 2.62 | 9.77 | 2.91 | 10.95 | 3.32 | 11.84 | 3.69 | 14.20 | 4.75 | 14.63 | 4.87 | 16.33 | 5.30 | 11.59 | 6.23 | 12.70 | 6.60 | 12.30 | 6.99 | 13.28 | 7.26 |
| 40 | 6.36 | 1.45 | 6.81 | 1.71 | 8.14 | 1.96 | 8.88 | 2.30 | 9.77 | 2.56 | 10.95 | 2.92 | 11.84 | 3.24 | 14.20 | 4.18 | 14.63 | 4.28 | 16.33 | 4.66 | 11.59 | 5.49 | 12.70 | 5.81 | 12.30 | 6.16 | 13.28 | 6.39 |
| 45 | 6.36 | 1.32 | 6.81 | 1.55 | 8.14 | 1.78 | 8.88 | 2.10 | 9.77 | 2.33 | 10.95 | 2.66 | 11.84 | 2.95 | 14.20 | 3.70 | 14.63 | 3.90 | 16.33 | 4.24 | 11.59 | 4.99 | 12.70 | 5.28 | 12.30 | 5.60 | 13.28 | 5.81 |
| 50 | | | 6.66 | 1.40 | 7.99 | 1.61 | 8.73 | 1.89 | 9.62 | 2.10 | 10.80 | 2.39 | 11.69 | 2.65 | 14.06 | 3.42 | 14.48 | 3.51 | 16.19 | 3.81 | 11.50 | 4.49 | 12.60 | 4.75 | 12.22 | 5.04 | 13.15 | 5.23 |
| 55 | | | | | 7.99 | 1.41 | 8.73 | 1.65 | 9.62 | 1.83 | 10.80 | 2.09 | 11.69 | 2.32 | 13.80 | 2.95 | 14.48 | 3.07 | 16.19 | 3.34 | 11.50 | 3.93 | 12.60 | 4.16 | 12.22 | 4.41 | 13.15 | 4.58 |
| 60 | | | | | | | | | 9.47 | 1.63 | 10.66 | 1.86 | 11.54 | 2.06 | 13.92 | 2.66 | 14.33 | 2.73 | 16.00 | 2.97 | 11.36 | 3.49 | 12.44 | 3.70 | 12.05 | 3.92 | 13.02 | 4.07 |
| 65 | | | | | | | | | | | | | | | 13.77 | 2.38 | 14.19 | 2.43 | 15.84 | 2.65 | 11.24 | 3.12 | | | | | | |

| | **HEATING** - Dry bulb outdoor air temperature in °C - (AG4HP143PH) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 6.22 | 1.93 | 6.66 | 2.27 | 7.99 | 2.61 | 8.73 | 3.06 | 9.62 | 3.40 | 10.80 | 3.89 | 11.69 | 4.31 | 14.06 | 5.61 | 14.48 | 5.75 | 16.19 | 6.26 | 11.50 | 7.30 | 12.60 | 7.73 | 12.22 | 8.18 | 13.20 | 8.50 |
| 30 | 6.36 | 1.77 | 6.81 | 2.08 | 8.14 | 2.40 | 8.88 | 2.81 | 9.77 | 3.12 | 10.95 | 3.57 | 11.84 | 3.96 | 14.20 | 5.15 | 14.63 | 5.28 | 16.33 | 5.74 | 11.59 | 6.70 | 12.70 | 7.10 | 12.30 | 7.51 | 13.28 | 7.80 |
| 35 | 6.36 | 1.58 | 6.81 | 1.86 | 8.14 | 2.14 | 8.88 | 2.51 | 9.77 | 2.79 | 10.95 | 3.19 | 11.84 | 3.53 | 14.20 | 4.60 | 14.63 | 4.72 | 16.33 | 5.13 | 11.59 | 5.98 | 12.70 | 6.34 | 12.30 | 6.71 | 13.28 | 6.96 |
| 40 | 6.36 | 1.39 | 6.81 | 1.64 | 8.14 | 1.88 | 8.88 | 2.21 | 9.77 | 2.46 | 10.95 | 2.80 | 11.84 | 3.11 | 14.20 | 4.05 | 14.63 | 4.15 | 16.33 | 4.51 | 11.59 | 5.27 | 12.70 | 5.58 | 12.30 | 5.90 | 13.28 | 6.13 |
| 45 | 6.36 | 1.26 | 6.81 | 1.49 | 8.14 | 1.71 | 8.88 | 2.01 | 9.77 | 2.23 | 10.95 | 2.55 | 11.84 | 2.83 | 14.20 | 3.70 | 14.63 | 3.77 | 16.33 | 4.10 | 11.59 | 4.79 | 12.70 | 5.07 | 12.30 | 5.37 | 13.28 | 5.57 |
| 50 | | | 6.66 | 1.34 | 7.99 | 1.54 | 8.73 | 1.81 | 9.62 | 2.01 | 10.80 | 2.29 | 11.69 | 2.54 | 14.06 | 3.31 | 14.48 | 3.39 | 16.19 | 3.69 | 11.50 | 4.31 | 12.60 | 4.56 | 12.22 | 4.83 | 13.15 | 5.01 |
| 55 | | | | | 7.99 | 1.35 | 8.73 | 1.58 | 9.62 | 1.76 | 10.80 | 2.01 | 11.69 | 2.23 | 13.80 | 2.85 | 14.48 | 2.97 | 16.19 | 3.23 | 11.50 | 3.77 | 12.60 | 3.99 | 12.22 | 4.23 | 13.15 | 4.39 |
| 60 | | | | | | | | | 9.47 | 1.56 | 10.66 | 1.78 | 11.54 | 1.98 | 13.92 | 2.58 | 14.33 | 2.64 | 16.00 | 2.87 | 11.36 | 3.35 | 12.44 | 3.55 | 12.05 | 3.76 | 13.02 | 3.90 |
| 65 | | | | | | | | | | | | | | | 13.77 | 2.30 | 14.19 | 2.36 | 15.84 | 2.56 | 11.24 | 2.99 | | | | | | |

| | **COOLING** - Dry bulb outdoor air temperature in °C | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 12.69 | 5.12 | 12.08 | 4.62 | 11.57 | 4.14 | 10.96 | 3.67 | 10.45 | 3.22 | 13.30 | 2.80 | 8.42 | 2.80 | 6.80 | 2.25 | 6.24 | 1.83 |
| 8 | 13.09 | 5.30 | 12.47 | 4.78 | 11.94 | 4.29 | 11.31 | 3.80 | 10.79 | 3.33 | 13.73 | 2.90 | 8.69 | 2.89 | 7.02 | 2.33 | 6.44 | 1.89 |
| 9 | 13.50 | 5.48 | 12.85 | 4.94 | 12.31 | 4.43 | 11.66 | 3.92 | 11.12 | 3.44 | 14.15 | 2.99 | 8.96 | 2.99 | 7.24 | 2.41 | 6.64 | 1.96 |
| 10 | 13.91 | 5.66 | 13.24 | 5.10 | 12.68 | 4.57 | 12.01 | 4.05 | 11.46 | 3.55 | 14.58 | 3.09 | 9.23 | 3.09 | 7.46 | 2.49 | 6.84 | 2.02 |
| 11 | 14.31 | 5.83 | 13.62 | 5.26 | 13.05 | 4.72 | 12.37 | 4.18 | 11.79 | 3.67 | 15.00 | 3.19 | 9.50 | 3.18 | 7.67 | 2.56 | 7.04 | 2.08 |
| 12 | 14.72 | 6.01 | 14.01 | 5.42 | 13.42 | 4.86 | 12.72 | 4.30 | 12.13 | 3.78 | 15.43 | 3.28 | 9.77 | 3.28 | 7.89 | 2.64 | 7.23 | 2.15 |
| 13 | 15.12 | 6.19 | 14.40 | 5.58 | 13.79 | 5.00 | 13.07 | 4.43 | 12.46 | 3.89 | 15.85 | 3.38 | 10.04 | 3.38 | 8.11 | 2.72 | 7.43 | 2.21 |
| 14 | 15.53 | 6.36 | 14.78 | 5.74 | 14.16 | 5.15 | 13.42 | 4.56 | 12.80 | 4.00 | 16.28 | 3.48 | 10.31 | 3.47 | 8.33 | 2.80 | 7.63 | 2.27 |
| 15 | 15.94 | 6.54 | 15.17 | 5.90 | 14.53 | 5.29 | 13.77 | 4.68 | 13.13 | 4.11 | 16.70 | 3.57 | 10.58 | 3.57 | 8.55 | 2.88 | 7.83 | 2.34 |
| 18 | 17.08 | 7.07 | 16.26 | 6.38 | 15.57 | 5.72 | 14.75 | 5.06 | 14.07 | 4.44 | 13.90 | 4.19 | 11.34 | 3.86 | 9.16 | 3.11 | 8.40 | 2.53 |
| 20 | 17.97 | 7.42 | 17.10 | 6.69 | 16.38 | 6.00 | 15.52 | 5.31 | 14.80 | 4.66 | 18.83 | 4.05 | 11.93 | 4.05 | 9.63 | 3.26 | 8.83 | 2.65 |
| 23 | 19.11 | 7.95 | 18.19 | 7.17 | 17.43 | 6.43 | 16.51 | 5.69 | 15.74 | 5.00 | 20.03 | 4.34 | 12.68 | 4.34 | 10.25 | 3.50 | 9.39 | 2.84 |
| 25 | 19.84 | 8.30 | 18.89 | 7.49 | 18.10 | 6.72 | 17.14 | 5.94 | 16.35 | 5.22 | 20.80 | 4.54 | 13.17 | 4.53 | 10.64 | 3.65 | 9.75 | 2.97 |

LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

# TECHNICAL DATA FOR 8-10-12-14-16 kW

| Model | | | | | AG4HP161PH | | AG4HP163PH | |
|---|---|---|---|---|---|---|---|---|
| **Matchable units for domestic hot water production (DHW)** | | | | | **200/300 litres external tank with diverting valve** | | **200/300 litres external tank with diverting valve** | |
| | | | | | Cooling | Heating | Cooling | Heating |
| COMFORT IN ENVIRONMENT | **Performance according to EN 14511** | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 15.50 | 15.70 | 15.40 | 15.70 |
| | | | Rated electrical power input | $kW_{el}$ | 3.60 | 3.45 | 4.05 | 3.57 |
| | | | EER/COP | | 4.31 | 4.55 | 3.80 | 4.40 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 13.80 | 16.20 | 13.80 | 16.20 |
| | | | Rated electrical power input | $kW_{el}$ | 5.09 | 4.49 | 5.09 | 4.49 |
| | | | EER/COP | | 2.71 | 3.61 | 2.71 | 3.61 |
| | **Performance according to Ecodesign (ERP) EN 14825** | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 14 | | 13 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 184 | | 179 | |
| | | | Energy efficiency class | | A+++ | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 14 | | 14 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 144 | | 138 | |
| | | | Energy efficiency class | | A++ | | A++ | |
| DHW | **DHW performance according to EN 16147** | With 300 litres tank and diverting valve AVERAGE climate | Load profile | | XL | | XL | |
| | | | Energy efficiency class | | A | | A | |
| | | | ERP efficiency | % | 110 | | 110 | |
| Unit operation data | | | Maximum delivery water temperature | °C | Up to 65 | | Up to 65 | |
| | | | Outdoor temperature range (heating) | °C | -25/+35 | | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | -15/+48 | | -15/+48 | |
| | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 2.70 | at 35 °C | 2.70 |
| | | | | | at 45 °C | 2.69 | at 45 °C | 2.69 |
| | | | | | at 55 °C | 2.58 | at 55 °C | 2.58 |
| | | | | | at 7 °C | 1.86 | at 7 °C | 1.86 |
| | | | | | at 18 °C | 2.67 | at 18 °C | 2.67 |
| | | | Minimum efficient water volume of the system | litres | 80 | | 80 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 230/1/50 | | 400/3/50 | |
| | | | Maximum electricity consumption | A | 30 | | 12.5 | |
| | | | Sound pressure level (cooling mode) | dB(A) | 61 | | 61 | |
| | | | Sound pressure level (heating mode) | dB(A) | 63 | | 63 | |
| Components and dimensions | | | Expansion vessel | litres | 3 | | 3 | |
| | | | Maximum circulator pump head | kPa | (see H/Q graphs) | | (see H/Q graphs) | |
| | | | Hydraulic connections | inches | G1" | | G1" | |
| | | | Safety valve | bar | 3 | | 3 | |
| | | | Weight | kg | 138 | | 144 | |
| | | | Dimensions (H/W/D) | mm | 878/1206/445 | | 878/1206/445 | |
| | | | Compressor type | | Twin Rotary with vapour injection | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$eq | | R32/675 kg $CO_2$eq | |
| | | | Quantity | kg | 2.2 | | 2.2 | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2018 STANDARD

| | **COOLING** - Dry bulb outdoor air temperature in °C - (AG4HP161PH) | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 13.49 | 4.96 | 12.84 | 4.47 | 12.30 | 4.01 | 11.65 | 3.55 | 11.11 | 3.12 | 13.80 | 2.71 | 9.02 | 2.95 | 7.14 | 2.37 | 6.55 | 1.92 |
| 8 | 13.92 | 5.13 | 13.25 | 4.63 | 12.69 | 4.15 | 12.03 | 3.67 | 11.47 | 3.23 | 14.24 | 2.80 | 9.30 | 3.05 | 7.37 | 2.45 | 6.75 | 1.99 |
| 9 | 14.35 | 5.30 | 13.66 | 4.78 | 13.09 | 4.29 | 12.40 | 3.80 | 11.82 | 3.33 | 14.68 | 2.90 | 9.59 | 3.15 | 7.60 | 2.53 | 6.96 | 2.06 |
| 10 | 14.78 | 5.48 | 14.07 | 4.94 | 13.48 | 4.43 | 12.77 | 3.92 | 12.18 | 3.44 | 15.12 | 2.99 | 9.88 | 3.25 | 7.83 | 2.61 | 7.17 | 2.12 |
| 11 | 15.21 | 5.65 | 14.48 | 5.09 | 13.88 | 4.57 | 13.14 | 4.04 | 12.54 | 3.55 | 15.57 | 3.09 | 10.17 | 3.35 | 8.05 | 2.70 | 7.38 | 2.19 |
| 12 | 15.65 | 5.82 | 14.89 | 5.25 | 14.27 | 4.70 | 13.52 | 4.16 | 12.89 | 3.66 | 16.01 | 3.18 | 10.46 | 3.46 | 8.28 | 2.78 | 7.59 | 2.26 |
| 13 | 16.08 | 5.99 | 15.31 | 5.40 | 14.66 | 4.84 | 13.89 | 4.29 | 13.25 | 3.76 | 16.45 | 3.27 | 10.75 | 3.56 | 8.51 | 2.86 | 7.80 | 2.32 |
| 14 | 16.51 | 6.16 | 15.72 | 5.55 | 15.06 | 4.98 | 14.26 | 4.41 | 13.60 | 3.87 | 16.89 | 3.37 | 11.04 | 3.66 | 8.74 | 2.94 | 8.01 | 2.39 |
| 15 | 16.94 | 6.33 | 16.13 | 5.71 | 15.45 | 5.12 | 14.64 | 4.53 | 13.96 | 3.98 | 17.33 | 3.46 | 11.32 | 3.76 | 8.97 | 3.02 | 8.22 | 2.46 |
| 18 | 18.15 | 6.84 | 17.28 | 6.17 | 16.56 | 5.53 | 15.69 | 4.90 | 14.96 | 4.30 | 15.50 | 4.31 | 12.14 | 4.07 | 9.61 | 3.27 | 8.81 | 2.66 |
| 20 | 19.10 | 7.18 | 18.18 | 6.47 | 17.42 | 5.81 | 16.50 | 5.14 | 15.74 | 4.51 | 19.54 | 3.92 | 12.77 | 4.27 | 10.11 | 3.43 | 9.27 | 2.79 |
| 23 | 20.31 | 7.69 | 19.34 | 6.94 | 18.52 | 6.22 | 17.55 | 5.51 | 16.74 | 4.84 | 20.78 | 4.20 | 13.58 | 4.57 | 10.75 | 3.67 | 9.86 | 2.99 |
| 25 | 21.09 | 8.04 | 20.08 | 7.25 | 19.24 | 6.50 | 18.23 | 5.75 | 17.38 | 5.05 | 21.58 | 4.39 | 14.10 | 4.77 | 11.17 | 3.84 | 10.24 | 3.12 |

| | **HEATING** - Dry bulb outdoor air temperature in °C | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 6.64 | 2.00 | 7.11 | 2.35 | 8.53 | 2.70 | 9.32 | 3.18 | 10.27 | 3.53 | 11.53 | 4.03 | 12.48 | 4.47 | 15.54 | 5.55 | 16.01 | 5.69 | 17.90 | 6.19 | 11.75 | 7.53 | 12.88 | 7.98 | 13.11 | 8.42 | 14.17 | 8.74 |
| 30 | 6.79 | 1.84 | 7.27 | 2.16 | 8.69 | 2.48 | 9.48 | 2.92 | 10.43 | 3.24 | 11.69 | 3.70 | 12.64 | 4.10 | 15.70 | 5.10 | 16.17 | 5.22 | 18.06 | 5.68 | 11.84 | 6.91 | 12.97 | 7.32 | 13.20 | 7.73 | 14.26 | 8.03 |
| 35 | 6.79 | 1.64 | 7.27 | 1.93 | 8.69 | 2.22 | 9.48 | 2.60 | 10.43 | 2.89 | 11.69 | 3.30 | 12.64 | 3.66 | 15.70 | 4.55 | 16.17 | 4.66 | 18.06 | 5.07 | 11.84 | 6.17 | 12.97 | 6.54 | 13.20 | 6.90 | 14.26 | 7.17 |
| 40 | 6.79 | 1.44 | 7.27 | 1.70 | 8.69 | 1.95 | 9.48 | 2.29 | 10.43 | 2.54 | 11.69 | 2.91 | 12.64 | 3.22 | 15.70 | 4.00 | 16.17 | 4.10 | 18.06 | 4.46 | 11.84 | 5.43 | 12.97 | 5.75 | 13.20 | 6.08 | 14.26 | 6.31 |
| 45 | 6.79 | 1.31 | 7.27 | 1.54 | 8.69 | 1.77 | 9.48 | 2.08 | 10.43 | 2.31 | 11.69 | 2.64 | 12.64 | 2.93 | 16.20 | 3.61 | 16.17 | 3.73 | 18.06 | 4.06 | 11.84 | 4.94 | 12.97 | 5.23 | 13.20 | 5.52 | 14.26 | 5.73 |
| 50 | | | 7.11 | 1.39 | 8.53 | 1.60 | 9.32 | 1.87 | 10.27 | 2.08 | 11.53 | 2.38 | 12.48 | 2.64 | 15.54 | 3.28 | 16.01 | 3.36 | 17.90 | 3.65 | 11.75 | 4.45 | 12.88 | 4.71 | 13.11 | 4.97 | 14.11 | 5.16 |
| 55 | | | | | 8.53 | 1.40 | 9.32 | 1.64 | 10.27 | 1.82 | 11.53 | 2.08 | 12.48 | 2.31 | 15.40 | 2.90 | 16.01 | 2.94 | 17.90 | 3.20 | 11.75 | 3.89 | 12.88 | 4.12 | 13.11 | 4.35 | 14.11 | 4.52 |
| 60 | | | | | | | | | 10.11 | 1.62 | 11.38 | 1.85 | 12.32 | 2.05 | 15.39 | 2.55 | 15.85 | 2.61 | 17.69 | 2.84 | 11.61 | 3.46 | 12.71 | 3.66 | 12.94 | 3.87 | 13.97 | 4.01 |
| 65 | | | | | | | | | | | | | | | 15.23 | 2.28 | 15.69 | 2.33 | 17.51 | 2.54 | 11.49 | 3.09 | | | | | | |

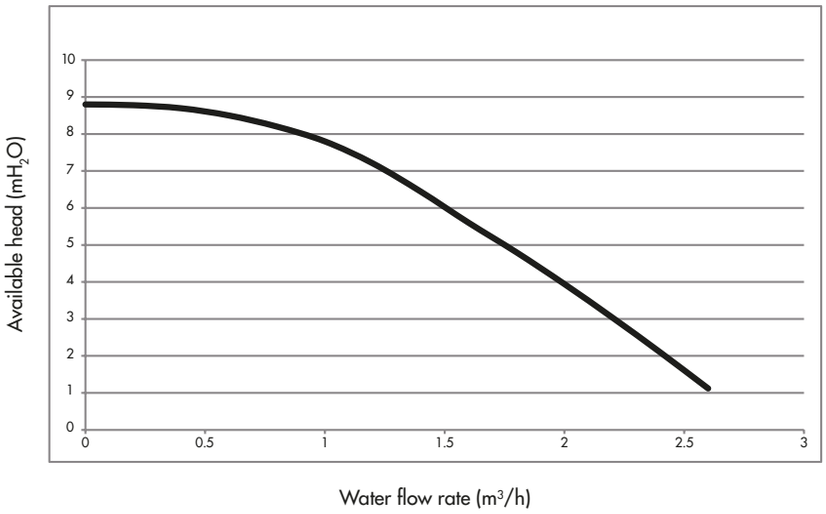
| | **HEATING** - Dry bulb outdoor air temperature in °C - (AG4HP163PH) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 6.64 | 1.92 | 7.11 | 2.25 | 8.53 | 2.59 | 9.32 | 3.04 | 10.27 | 3.38 | 11.53 | 3.86 | 12.48 | 4.28 | 15.54 | 5.37 | 16.01 | 5.50 | 17.90 | 5.99 | 11.75 | 7.23 | 12.88 | 7.66 | 13.11 | 8.07 | 14.17 | 8.38 |
| 30 | 6.79 | 1.76 | 7.27 | 2.07 | 8.69 | 2.38 | 9.48 | 2.79 | 10.43 | 3.10 | 11.69 | 3.54 | 12.64 | 3.93 | 15.70 | 4.93 | 16.17 | 5.05 | 18.06 | 5.49 | 11.84 | 6.64 | 12.97 | 7.03 | 13.20 | 7.41 | 14.26 | 7.69 |
| 35 | 6.79 | 1.57 | 7.27 | 1.85 | 8.69 | 2.13 | 9.48 | 2.49 | 10.43 | 2.77 | 11.69 | 3.16 | 12.64 | 3.51 | 15.70 | 4.40 | 16.17 | 4.51 | 18.06 | 4.91 | 11.84 | 5.93 | 12.97 | 6.28 | 13.20 | 6.62 | 14.26 | 6.87 |
| 40 | 6.79 | 1.38 | 7.27 | 1.63 | 8.69 | 1.87 | 9.48 | 2.20 | 10.43 | 2.44 | 11.69 | 2.78 | 12.64 | 3.09 | 15.70 | 3.87 | 16.17 | 3.97 | 18.06 | 4.32 | 11.84 | 5.21 | 12.97 | 5.52 | 13.20 | 5.82 | 14.26 | 6.05 |
| 45 | 6.79 | 1.26 | 7.27 | 1.48 | 8.69 | 1.70 | 9.48 | 2.00 | 10.43 | 2.22 | 11.69 | 2.53 | 12.64 | 2.81 | 16.20 | 3.61 | 16.17 | 3.61 | 18.06 | 3.92 | 11.84 | 4.74 | 12.97 | 5.02 | 13.20 | 5.29 | 14.26 | 5.50 |
| 50 | | | 7.11 | 1.33 | 8.53 | 1.53 | 9.32 | 1.80 | 10.27 | 2.00 | 11.53 | 2.28 | 12.48 | 2.53 | 15.54 | 3.17 | 16.01 | 3.25 | 17.90 | 3.53 | 11.75 | 4.27 | 12.88 | 4.52 | 13.11 | 4.76 | 14.11 | 4.95 |
| 55 | | | | | 8.53 | 1.34 | 9.32 | 1.57 | 10.27 | 1.75 | 11.53 | 1.99 | 12.48 | 2.21 | 15.40 | 2.75 | 16.01 | 2.84 | 17.90 | 3.09 | 11.75 | 3.73 | 12.88 | 3.95 | 13.11 | 4.17 | 14.11 | 4.33 |
| 60 | | | | | | | | | 10.11 | 1.55 | 11.38 | 1.77 | 12.32 | 1.97 | 15.39 | 2.46 | 15.85 | 2.53 | 17.69 | 2.75 | 11.61 | 3.32 | 12.71 | 3.51 | 12.94 | 3.71 | 13.97 | 3.85 |
| 65 | | | | | | | | | | | | | | | 15.23 | 2.20 | 15.69 | 2.26 | 17.51 | 2.45 | 11.49 | 2.96 | | | | | | |

| | **COOLING** - Dry bulb outdoor air temperature in °C | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 13.49 | 4.96 | 12.84 | 4.47 | 12.30 | 4.01 | 11.65 | 3.55 | 11.11 | 3.12 | 13.80 | 2.71 | 9.02 | 2.25 | 7.14 | 1.73 | 6.55 | 1.41 |
| 8 | 13.92 | 5.13 | 13.25 | 4.63 | 12.69 | 4.15 | 12.03 | 3.67 | 11.47 | 3.23 | 14.24 | 2.80 | 9.30 | 2.33 | 7.37 | 1.80 | 6.75 | 1.46 |
| 9 | 14.35 | 5.30 | 13.66 | 4.78 | 13.09 | 4.29 | 12.40 | 3.80 | 11.82 | 3.33 | 14.68 | 2.90 | 9.59 | 2.41 | 7.60 | 1.85 | 6.96 | 1.51 |
| 10 | 14.78 | 5.48 | 14.07 | 4.94 | 13.48 | 4.43 | 12.77 | 3.92 | 12.18 | 3.44 | 15.12 | 2.99 | 9.88 | 2.48 | 7.83 | 1.91 | 7.17 | 1.56 |
| 11 | 15.21 | 5.65 | 14.48 | 5.09 | 13.88 | 4.57 | 13.14 | 4.04 | 12.54 | 3.55 | 15.57 | 3.09 | 10.17 | 2.56 | 8.05 | 1.97 | 7.38 | 1.60 |
| 12 | 15.65 | 5.82 | 14.89 | 5.25 | 14.27 | 4.70 | 13.52 | 4.16 | 12.89 | 3.66 | 16.01 | 3.18 | 10.46 | 2.64 | 8.28 | 2.03 | 7.59 | 1.65 |
| 13 | 16.08 | 5.99 | 15.31 | 5.40 | 14.66 | 4.84 | 13.89 | 4.29 | 13.25 | 3.76 | 16.45 | 3.27 | 10.75 | 2.72 | 8.51 | 2.09 | 7.80 | 1.70 |
| 14 | 16.51 | 6.16 | 15.72 | 5.55 | 15.06 | 4.98 | 14.26 | 4.41 | 13.60 | 3.87 | 16.89 | 3.37 | 11.04 | 2.79 | 8.74 | 2.15 | 8.01 | 1.75 |
| 15 | 16.94 | 6.33 | 16.13 | 5.71 | 15.45 | 5.12 | 14.64 | 4.53 | 13.96 | 3.98 | 17.33 | 3.46 | 11.32 | 2.87 | 8.97 | 2.21 | 8.22 | 1.80 |
| 18 | 18.15 | 6.84 | 17.28 | 6.17 | 16.56 | 5.53 | 15.69 | 4.90 | 14.96 | 4.30 | 15.40 | 3.80 | 12.14 | 3.10 | 9.61 | 2.39 | 8.81 | 1.94 |
| 20 | 19.10 | 7.18 | 18.18 | 6.47 | 17.42 | 5.81 | 16.50 | 5.14 | 15.74 | 4.51 | 19.54 | 3.92 | 12.77 | 3.26 | 10.11 | 2.51 | 9.27 | 2.04 |
| 23 | 20.31 | 7.69 | 19.34 | 6.94 | 18.52 | 6.22 | 17.55 | 5.51 | 16.74 | 4.84 | 20.78 | 4.20 | 13.58 | 3.49 | 10.75 | 2.69 | 9.86 | 2.19 |
| 25 | 21.09 | 8.04 | 20.08 | 7.25 | 19.24 | 6.50 | 18.23 | 5.75 | 17.38 | 5.05 | 21.58 | 4.39 | 14.10 | 3.64 | 11.17 | 2.81 | 10.24 | 2.28 |

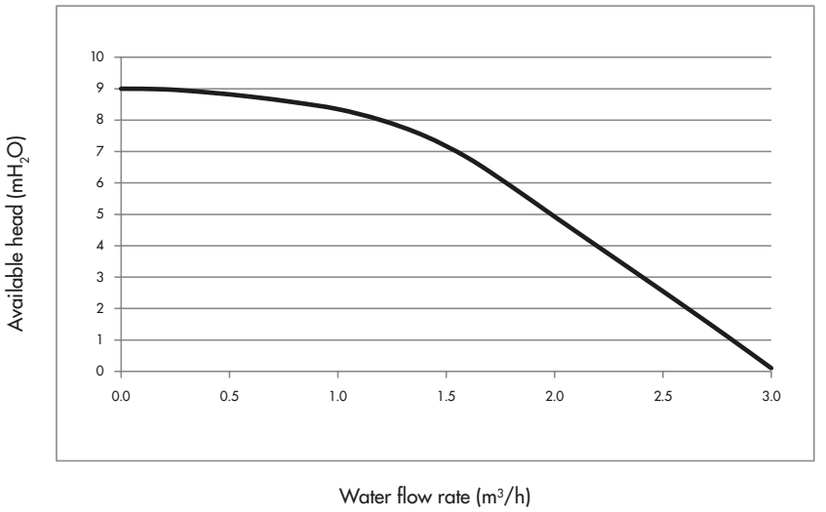
LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

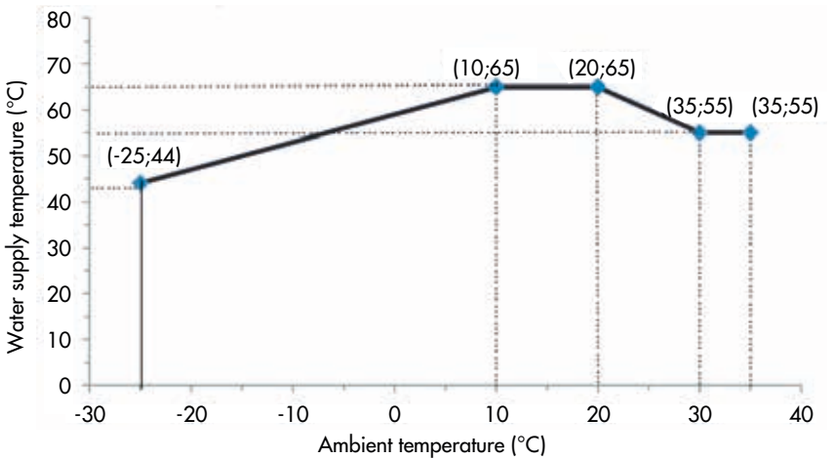
# TECHNICAL DATA FOR 8-10 kW



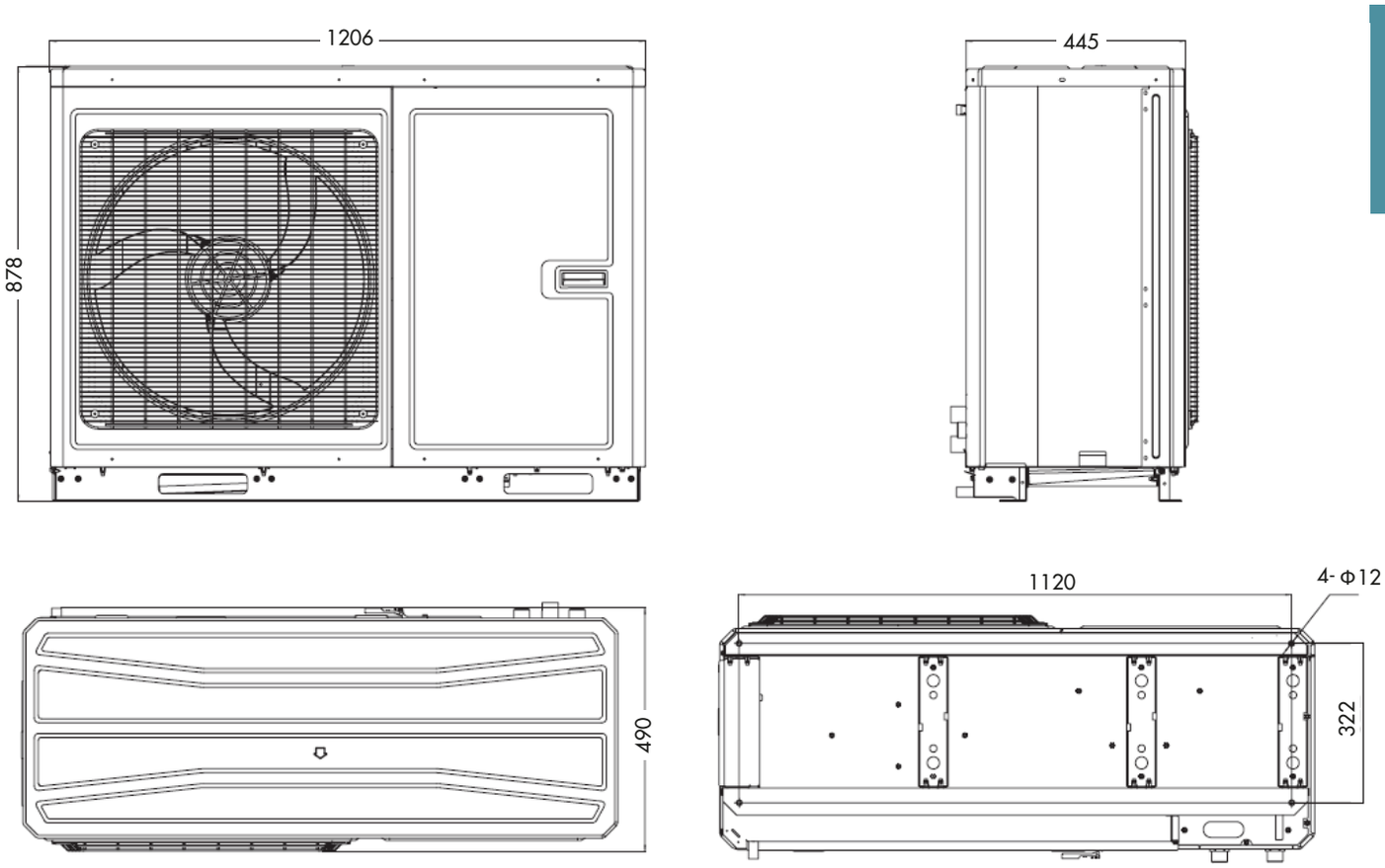

# TECHNICAL DATA FOR 12-14-16 kW



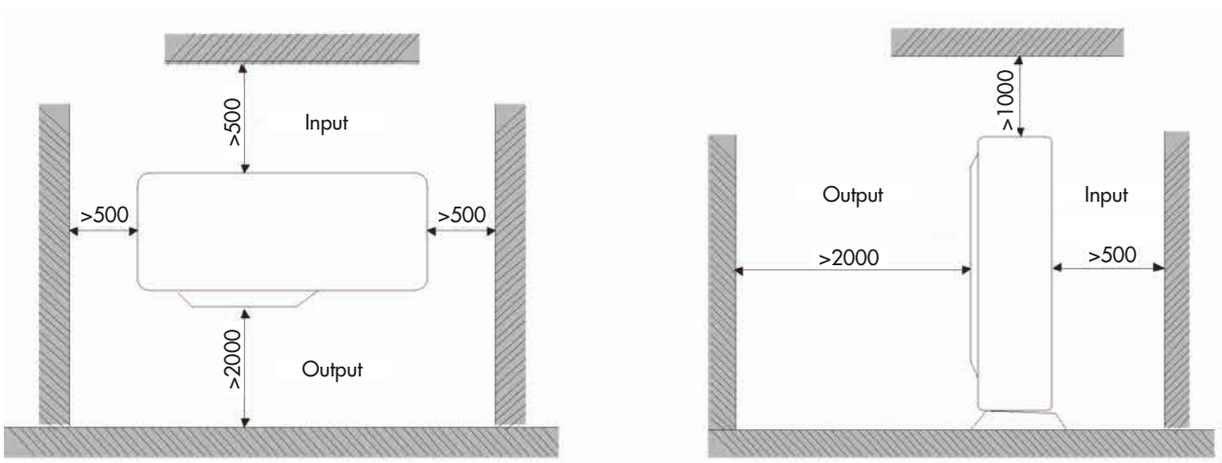

# MAXIMUM TEMPERATURE IN HEATING 8-10-12-14-16 kW



# DIMENSIONAL DRAWINGS 8-10-12-14-16 kW



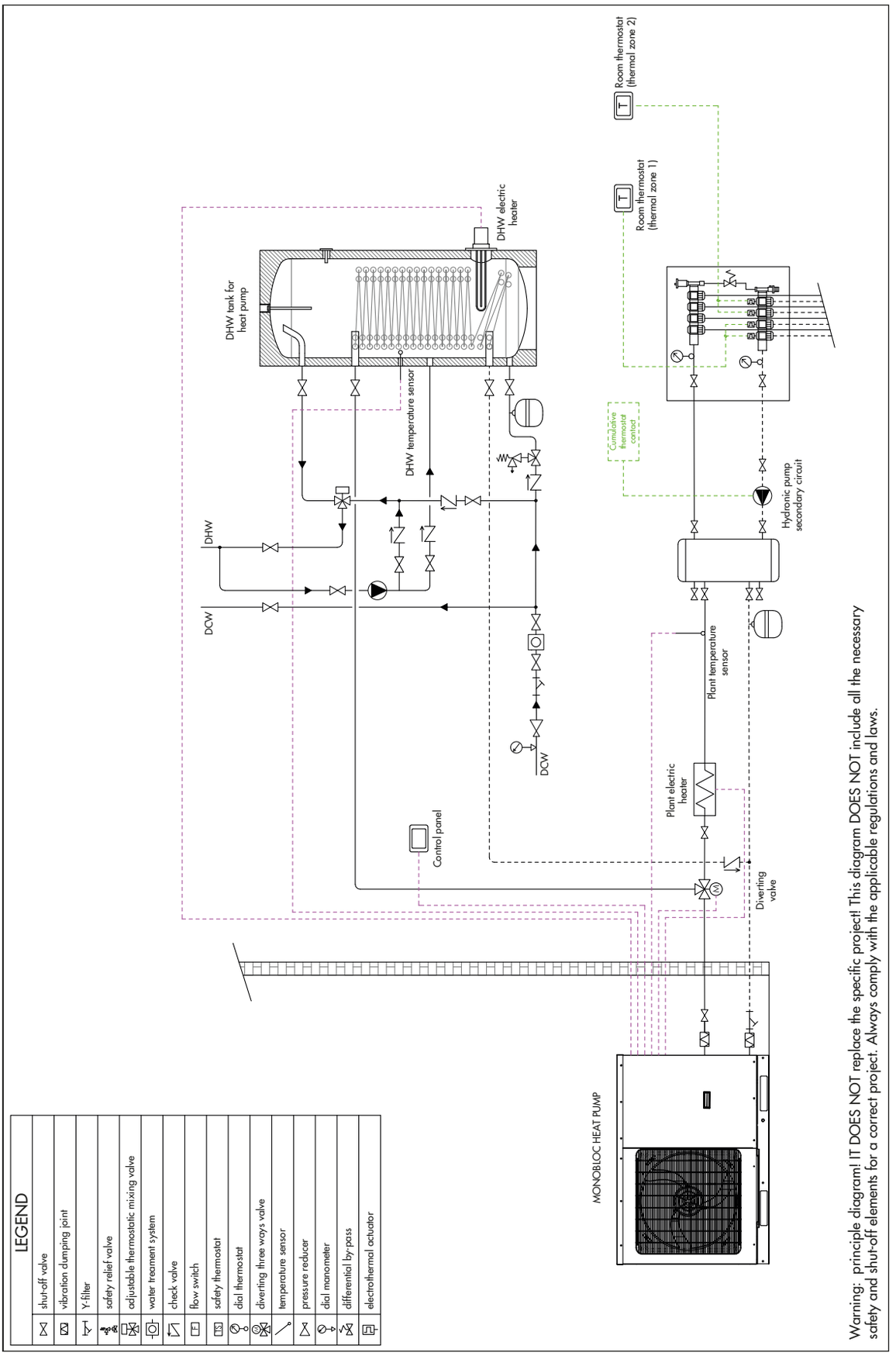

# SPACE REQUIRED FOR INSTALLATION 8-10-12-14-16 kW



# INSTALLATION EXAMPLES

## EXAMPLE 1

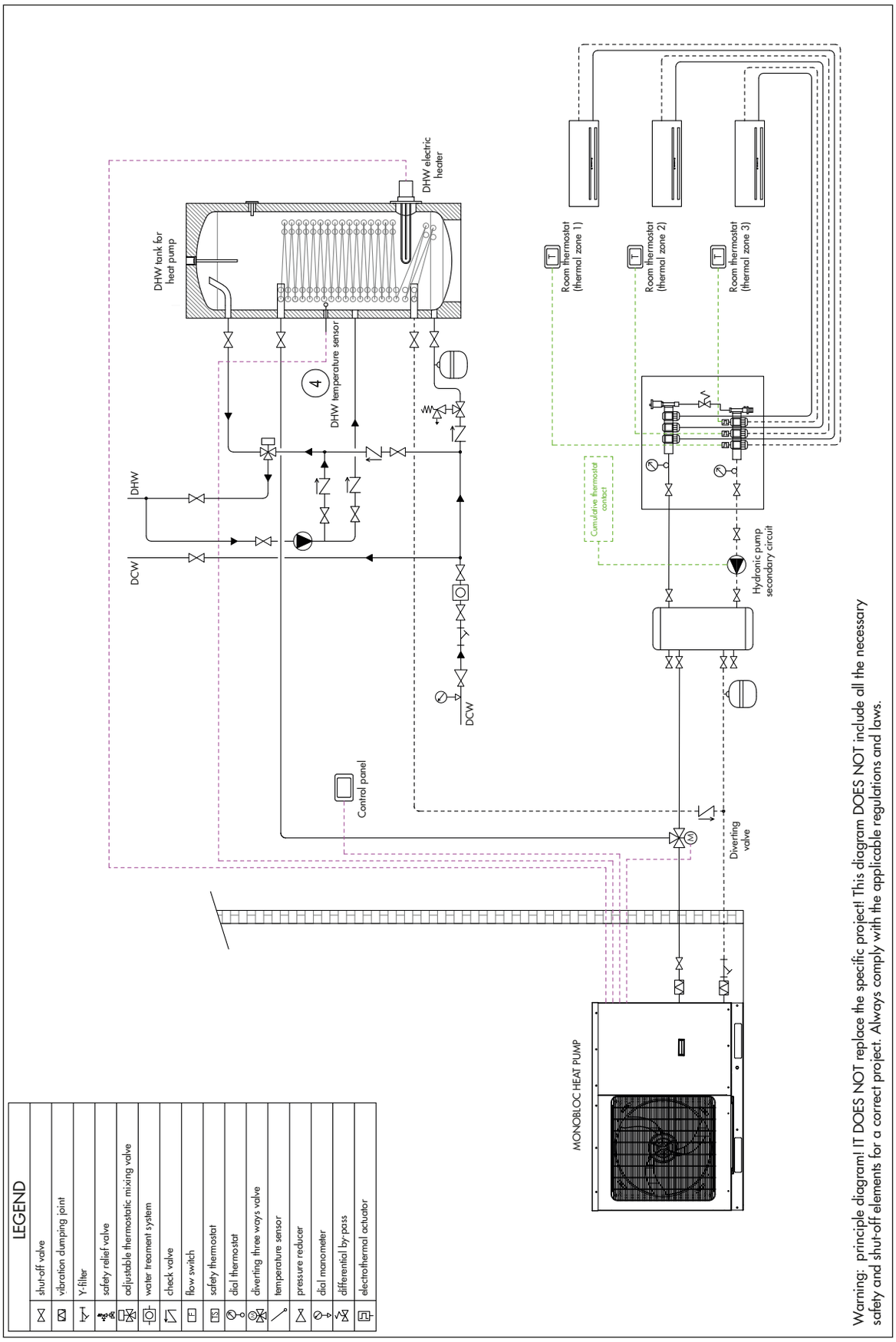
Radiant heating and DHW with three-way valve and tank



# INSTALLATION EXAMPLES

## EXAMPLE 2

Heating (cooling) with fan coil units and DHW with three-way valve and tank

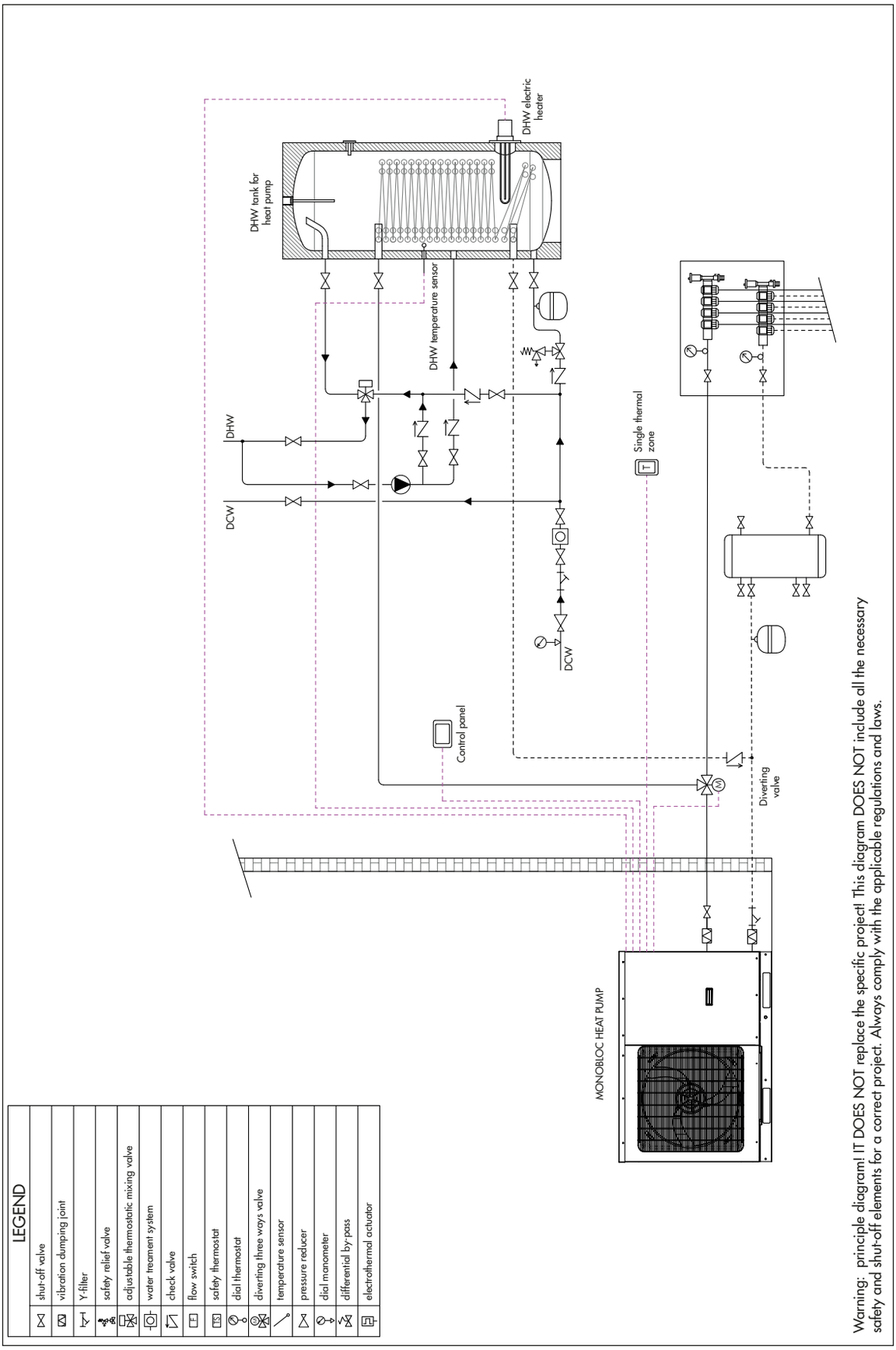



Warning: principle diagram! IT DOES NOT replace the specific project! This diagram DOES NOT include all the necessary safety and shut-off elements for a correct project. Always comply with the applicable regulations and laws.

# INSTALLATION EXAMPLES

## EXAMPLE 3

Radiant heating, single thermal zone and DHW with three-way valve and tank

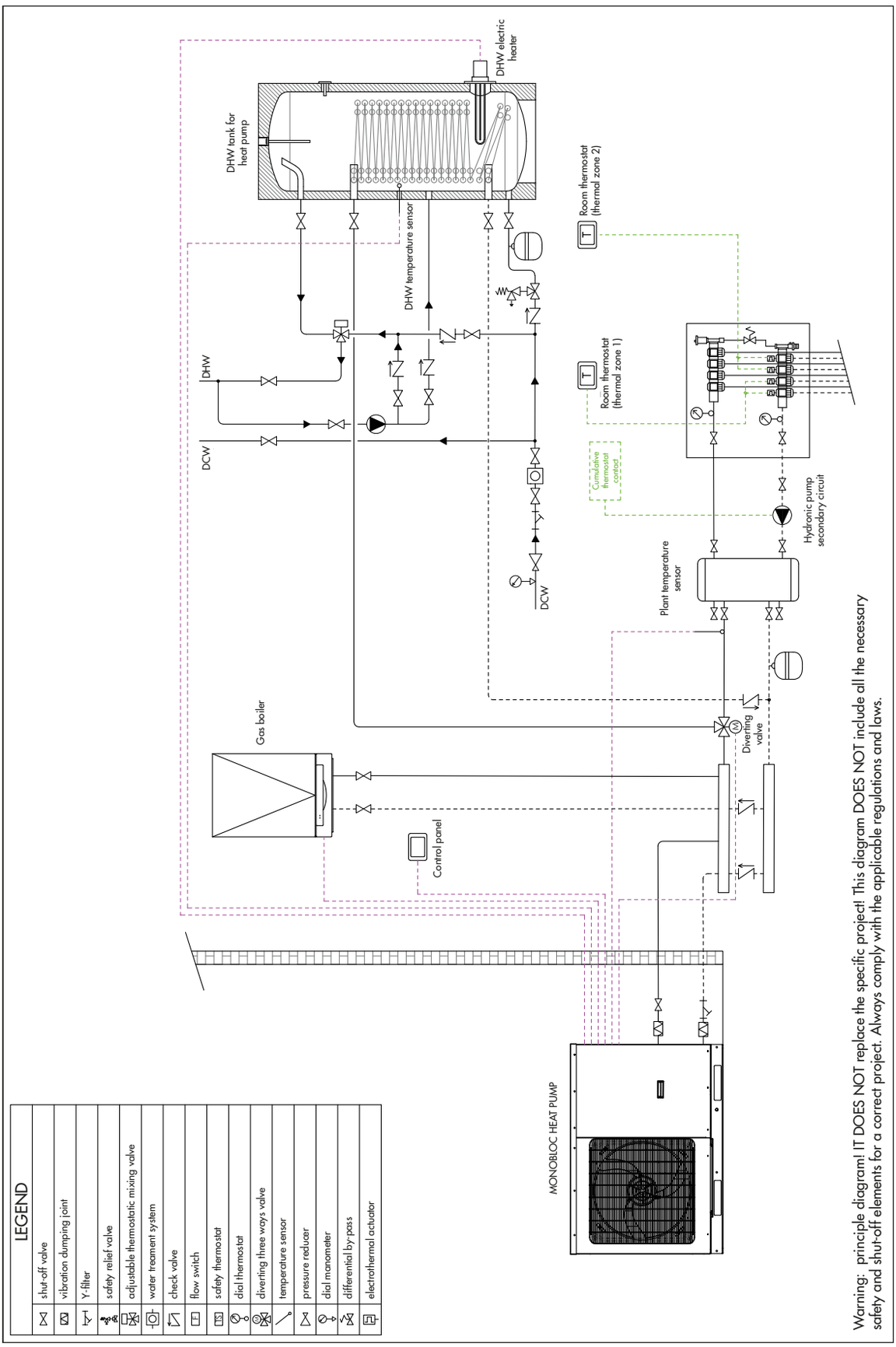



Warning: principle diagram! IT DOES NOT replace the specific project! This diagram DOES NOT include all the necessary safety and shut-off elements for a correct project. Always comply with the applicable regulations and laws.

# INSTALLATION EXAMPLES

## EXAMPLE 4

Radiant heating, integration with gas boiler and DHW with three-way valve and tank




Warning: principle diagram! IT DOES NOT replace the specific project! This diagram DOES NOT include all the necessary safety and shut-off elements for a correct project. Always comply with the applicable regulations and laws.



# SPLIT

Single-phase 6-10 kW range

# SPLIT HEAT PUMPS

## MAIN FEATURES

(Standard)

Touch-screen control panel installed on the indoor unit

- Split Air/Water heat pump with new-generation DC Inverter technology.
- Equipped with the heating, cooling and domestic hot water production functions.
- Single-phase version with 6-8-10 kW heating capacity.
- Achieves very high efficiency levels in heating mode, up to 5 COP.
- It uses R32, a refrigerant with low impact on global warming and ozone layer, characterised by high energy efficiency and a 30% lower charge compared to R410A.
- The vapour-injection compressor, thanks to its special technology, guarantees exceptional performances within a wide operating range.
- The leaving water temperature range is 20 °C-60 °C: this means that the heat pump can be used with radiant floor systems, fan coil units and also medium-temperature radiators.
- The DC brushless axial fans are designed to ensure aerodynamic optimisation: they guarantee low noise levels coupled with high efficiency and a high air flow rate.
- It is equipped with a heating element on the base to prevent ice build-up during winter operation.
- The outdoor unit is equipped with an electronic expansion valve, while the indoor unit contains all the hydraulic components: inverter pump, plate heat exchanger, expansion vessel, safety valve, flow switch and water filter supplied (installation mandatory).

Internal copper groove | Quiet mode | Weekly timer | Heating down to low temperatures | Door control | Full protection | Timer | Child lock | Wide operating range | Wide voltage range | Auto diagnosis | Low-voltage start-up

Auto restart memory | Intelligent defrosting | °C / °F switching | Long-distance monitoring | Exch. condenser gold fin treatment | -25 °C Min. outdoor temp. heating | +35 °C Max. outdoor temp. heating | +10 °C Min. outdoor temp. cooling | +48 °C Max. outdoor temp. cooling | -25 °C Min. outdoor temp. DHW | +45 °C Max. outdoor temp. DHW | 60 °C Max. output temp. DHW

**A+++** Heating mode 35 °C **A++** Heating mode 55 °C **A** DHW

# THE RANGE

| | | Model | Code | 1PH | Rated capacity according to EN14511 (kW) Heating (1) | Cooling (2) |
|---|---|---|---|---|---|---|
| OUTDOOR UNIT - 1PH |  | AGHPSA061SH | 398600012 | ● | 6.0 | 5.8 |
| | | AGHPSA081SH | 398600013 | ● | 8.0 | 7.0 |
| | | AGHPSA101SH | 398600014 | ● | 9.5 | 8.5 |
| HYDRONIC INDOOR UNIT |  | AGHPS061W | 398600016 | ● | 6.0 | 5.8 |
| | | AGHPS081W | 398600017 | ● | 8.0 | 7.0 |
| | | AGHPS101W | 398600018 | ● | 9.5 | 8.5 |

(1) Water temperature 30 °C/35 °C, outdoor air temperature 7 °C DB/6°C WB
(2) Water temperature 23 °C/18 °C, outdoor air temperature 35 °C

## INCLUDED ACCESSORIES

| |
|---|
| Ambient air temperature sensor |
| DHW temperature sensor |
| Additional system water temperature sensor |
| Y-shaped filter |
| Control panel integrated into the indoor unit |

# TECHNICAL DATA FOR 6 kW

| MODEL | | | | | AGHPSA061 | |
|---|---|---|---|---|---|---|
| Outdoor unit model | | | | | AGHPSA061SH | |
| Hydronic indoor unit model | | | | | AGHPS061W | |
| Matchable units for domestic hot water production (DHW) | | | | | 200/300 litres external tank with diverting valve | |
| | | | | | Cooling | Heating |
| COMFORT IN ENVIRONMENT | Performance according to EN 14511 | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 5.80 | 6.00 |
| | | | Rated electrical power input | $kW_{el}$ | 1.32 | 1.20 |
| | | | EER/COP | | 4.39 | 5.00 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 4.09 | 5.90 |
| | | | Rated electrical power input | $kW_{el}$ | 1.28 | 1.51 |
| | | | EER/COP | | 3.20 | 3.91 |
| | Performance according to Ecodesign (ERP) EN 14825 | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 6.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 178.7 | |
| | | | Energy efficiency class | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 5.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 127.4 | |
| | | | Energy efficiency class | | A++ | |
| DHW | DHW performance according to EN 16147 | With 300 litres tank and diverting valve AVERAGE climate | Load profile | | XL | |
| | | | Energy efficiency class | | A | |
| | | | Water heating efficiency - ERP $\eta_{wh}$ | % | 107.5 | |
| Indoor unit | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 1.03 |
| | | | | | at 45 °C | 1.02 |
| | | | | | at 7 °C | 0.70 |
| | | | | | at 18 °C | 1.00 |
| | | | Minimum efficient water volume of the system | litres | 40 | |
| | | | Maximum delivery water temperature | °C | Up to 60 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 220-240/1/50 | |
| | | | Electrical power input | kW | 3.10 | |
| | | | Heating element | nxkW | 2x1.5 | |
| | | | Expansion vessel | litres | 10 | |
| | | | Maximum circulator pump head | kPa | see H/Q graph | |
| | | | Hydraulic connections | inches | G1" female | |
| | | | Safety valve | bar | 3 | |
| | | | Indoor unit sound pressure | dB(A) | 29 | 29 |
| | | | Net weight | kg | 62 | |
| | | | Dimensions (H/W/D) | mm | 860/460/318 | |
| Outdoor unit | | | Outdoor temperature range (heating) | °C | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | +10/+48 | |
| | | | Electrical power supply | V/Ph/Hz | 220-240~/1/50 | |
| | | | Maximum power input (cooling) | kW | 2.30 | |
| | | | Maximum power input (heating) | kW | 2.30 | |
| | | | Maximum current draw (cooling) | A | 10 | |
| | | | Maximum current draw (heating) | A | 10 | |
| | | | Liquid cooling pipe diameter | mm (inches) | 6.35 (1/4) | |
| | | | Gas cooling pipe diameter | mm (inches) | 12.7 (1/2) | |
| | | | Outdoor unit sound pressure | dB(A) | 52 | 52 |
| | | | Fan air flow rate | $m^3/h$ | 3200 | |
| | | | Net weight | kg | 55 | |
| | | | Dimensions (H/W/D) | mm | 702/975/396 | |
| | | | Compressor type | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$ eq. | |
| | | | Quantity | | 1 kg/0.675 tons $CO_2$ eq. | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2013 STANDARD

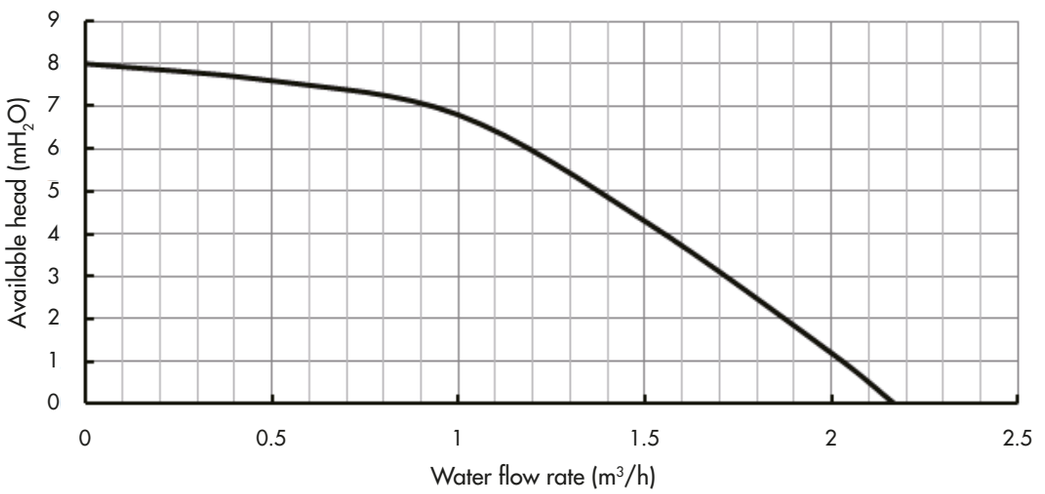
| | **COOLING - Dry bulb outdoor air temperature in °C - (AGHPSA061)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 3.35 | 4.35 | 3.72 | 4.19 | 3.93 | 4.06 | 4.17 | 3.87 | 4.25 | 3.55 | 4.09 | 3.20 | 3.72 | 2.65 | 2.90 | 1.95 | 2.45 | 1.57 |
| 8 | 3.48 | 4.47 | 3.89 | 4.31 | 4.09 | 4.19 | 4.34 | 3.99 | 4.42 | 3.64 | 4.25 | 3.29 | 3.89 | 2.75 | 3.03 | 2.01 | 2.54 | 1.63 |
| 9 | 3.64 | 4.67 | 4.01 | 4.47 | 4.21 | 4.35 | 4.46 | 4.12 | 4.54 | 3.80 | 4.38 | 3.42 | 4.01 | 2.84 | 3.15 | 2.08 | 2.66 | 1.66 |
| 10 | 3.72 | 4.79 | 4.13 | 4.60 | 4.38 | 4.47 | 4.62 | 4.25 | 4.70 | 3.90 | 4.54 | 3.51 | 4.13 | 2.91 | 3.23 | 2.17 | 2.74 | 1.73 |
| 11 | 3.84 | 4.92 | 4.29 | 4.76 | 4.50 | 4.60 | 4.79 | 4.41 | 4.91 | 4.06 | 4.70 | 3.64 | 4.29 | 3.00 | 3.31 | 2.20 | 2.82 | 1.76 |
| 12 | 3.97 | 5.08 | 4.42 | 4.92 | 4.66 | 4.76 | 4.95 | 4.54 | 5.07 | 4.15 | 4.87 | 3.74 | 4.42 | 3.10 | 3.44 | 2.30 | 2.90 | 1.85 |
| 13 | 4.13 | 5.24 | 4.58 | 5.05 | 4.79 | 4.89 | 5.11 | 4.67 | 5.19 | 4.28 | 4.99 | 3.87 | 4.58 | 3.20 | 3.56 | 2.33 | 2.99 | 1.89 |
| 14 | 4.25 | 5.40 | 4.66 | 5.21 | 4.95 | 5.05 | 5.28 | 4.79 | 5.36 | 4.41 | 5.15 | 3.96 | 4.66 | 3.29 | 3.68 | 2.43 | 3.07 | 1.95 |
| 15 | 4.34 | 5.53 | 4.83 | 5.34 | 5.11 | 5.18 | 5.44 | 4.92 | 5.52 | 4.51 | 5.32 | 4.09 | 4.83 | 3.39 | 3.76 | 2.49 | 3.19 | 1.98 |
| 18 | 4.74 | 5.98 | 5.24 | 5.75 | 5.52 | 5.59 | 5.89 | 5.34 | 6.01 | 4.89 | 5.77 | 4.41 | 5.24 | 3.64 | 4.09 | 2.68 | 3.48 | 2.17 |
| 20 | 4.95 | 6.29 | 5.52 | 6.07 | 5.85 | 5.88 | 6.18 | 5.59 | 6.30 | 5.14 | 6.05 | 4.63 | 5.52 | 3.83 | 4.34 | 2.84 | 3.64 | 2.27 |
| 23 | 5.36 | 6.74 | 5.93 | 6.49 | 6.26 | 6.33 | 6.67 | 6.01 | 6.79 | 5.50 | 6.54 | 4.95 | 5.93 | 4.12 | 4.62 | 3.00 | 3.93 | 2.43 |
| 25 | 5.60 | 7.03 | 6.22 | 6.77 | 6.54 | 6.58 | 6.95 | 6.29 | 7.12 | 5.75 | 6.83 | 5.18 | 6.22 | 4.31 | 4.87 | 3.16 | 4.09 | 2.56 |

| | **HEATING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 2.94 | 4.34 | 3.12 | 4.57 | 3.72 | 4.88 | 4.26 | 5.08 | 5.16 | 5.39 | 5.76 | 5.63 | 6.36 | 5.86 | 6.24 | 6.10 | 6.42 | 6.37 | 6.78 | 6.95 | 6.72 | 7.38 | 6.12 | 7.31 | 5.34 | 7.97 | 4.20 | 8.44 |
| 30 | 2.70 | 3.52 | 3.06 | 3.79 | 3.60 | 4.06 | 4.14 | 4.30 | 4.74 | 4.53 | 5.22 | 4.77 | 5.82 | 5.00 | 6.18 | 5.55 | 6.36 | 5.90 | 6.72 | 6.29 | 6.66 | 6.72 | 6.06 | 6.72 | 5.34 | 7.27 | 4.14 | 7.78 |
| 35 | 2.52 | 2.97 | 2.88 | 3.13 | 3.36 | 3.32 | 3.90 | 3.59 | 4.26 | 3.83 | 4.80 | 4.06 | 5.22 | 4.18 | 6.00 | 5.00 | 6.30 | 5.27 | 6.66 | 5.74 | 6.60 | 5.98 | 6.00 | 5.98 | 5.28 | 6.64 | 4.08 | 7.03 |
| 40 | 2.46 | 2.54 | 2.88 | 2.81 | 3.36 | 3.05 | 3.90 | 3.24 | 4.26 | 3.40 | 4.74 | 3.67 | 5.16 | 3.91 | 6.00 | 4.45 | 6.24 | 4.69 | 6.60 | 5.08 | 6.54 | 5.35 | 5.94 | 5.31 | 5.22 | 5.86 | 4.08 | 6.25 |
| 45 | | | 2.88 | 2.46 | 3.36 | 2.70 | 3.90 | 2.93 | 4.20 | 3.05 | 4.68 | 3.24 | 5.10 | 3.44 | 6.00 | 3.91 | 6.18 | 4.10 | 6.54 | 4.45 | 6.48 | 4.69 | 5.88 | 4.92 | 5.16 | 5.16 | 4.02 | 5.47 |
| 50 | | | | | 3.24 | 2.27 | 3.78 | 2.46 | 4.14 | 2.58 | 4.62 | 2.77 | 5.04 | 2.85 | 5.94 | 3.36 | 6.12 | 3.52 | 6.48 | 3.87 | 6.42 | 4.02 | 5.82 | 4.22 | 5.10 | 4.42 | 3.96 | 4.73 |
| 55 | | | | | | | 3.60 | 2.03 | 4.14 | 2.11 | 4.56 | 2.31 | 4.98 | 2.42 | 5.88 | 2.81 | 6.06 | 2.97 | 6.42 | 3.20 | 6.36 | 3.40 | 5.76 | 3.52 | 5.04 | 3.71 | 3.96 | 3.99 |
| 60 | | | | | | | | | 4.08 | 1.72 | 4.56 | 1.80 | 4.92 | 1.91 | 5.82 | 2.27 | 6.00 | 2.34 | 6.36 | 2.50 | 6.30 | 2.62 | 5.70 | 2.77 | 4.98 | 2.89 | 3.90 | 3.09 |

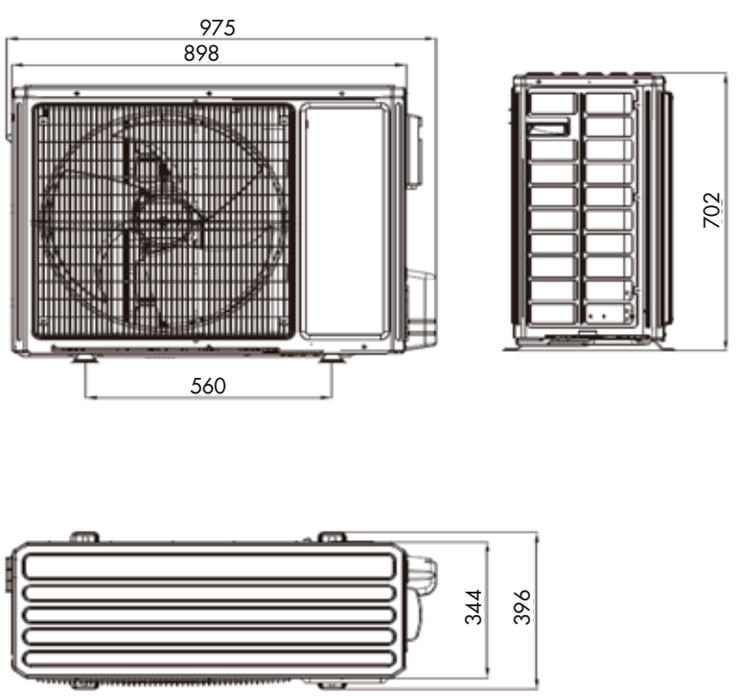
LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

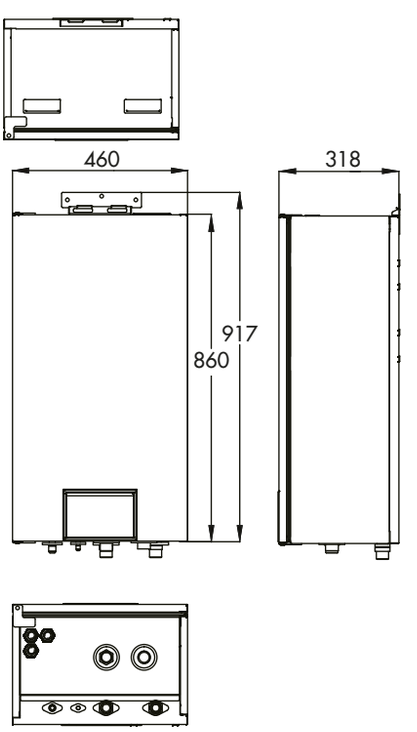
# FLOW RATE CURVES FOR 6 kW




# DIMENSIONAL DRAWINGS 6 kW

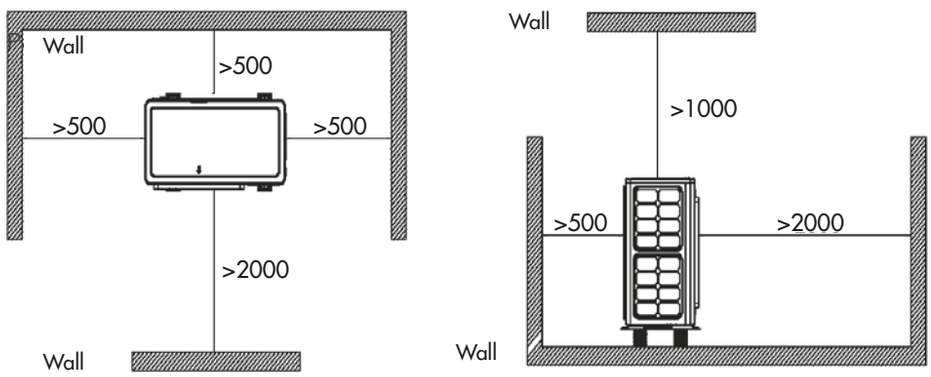



OUTDOOR UNIT 6 kW

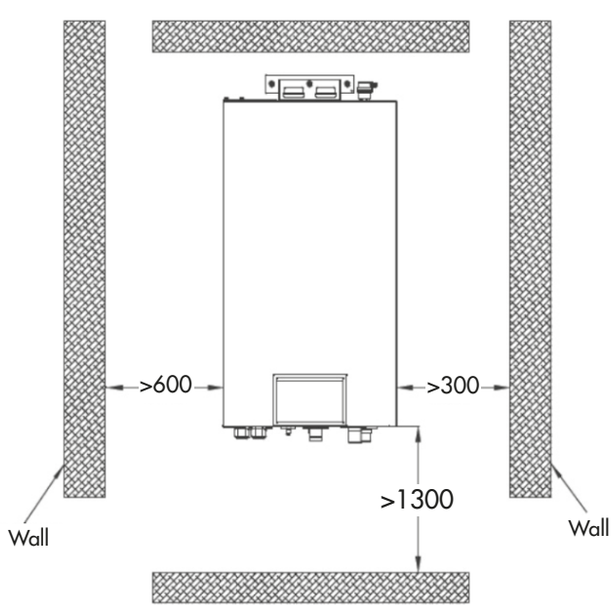



INDOOR UNIT 6 kW

# SPACE REQUIRED FOR OUTDOOR UNIT INSTALLATION 6 kW




# SPACE REQUIRED FOR INDOOR UNIT INSTALLATION 6 kW



# TECHNICAL DATA FOR 8 kW

| MODEL | | | | | AGHPSA081 | |
|---|---|---|---|---|---|---|
| Outdoor unit model | | | | | AGHPSA081SH | |
| Hydronic indoor unit model | | | | | AGHPS081W | |
| Matchable units for domestic hot water production (DHW) | | | | | 200/300 litres external tank with diverting valve | |
| | | | | | Cooling | Heating |
| COMFORT IN ENVIRONMENT | Performance according to EN 14511 | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 7.00 | 8.00 |
| | | | Rated electrical power input | $kW_{el}$ | 1.75 | 1.70 |
| | | | EER/COP | | 4.00 | 4.71 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 5.30 | 8.00 |
| | | | Rated electrical power input | $kW_{el}$ | 1.73 | 2.14 |
| | | | EER/COP | | 3.06 | 3.74 |
| | Performance according to Ecodesign (ERP) EN 14825 | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 7.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 181 | |
| | | | Energy efficiency class | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 7.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 129 | |
| | | | Energy efficiency class | | A++ | |
| DHW | DHW performance according to EN 16147 | With 300 litres tank and diverting valve AVERAGE climate | Load profile | | XL | |
| | | | Energy efficiency class | | A | |
| | | | Water heating efficiency - ERP $\eta_{wh}$ | % | 111 | |
| Indoor unit | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 1.38 |
| | | | | | at 45 °C | 1.38 |
| | | | | | at 7 °C | 0.91 |
| | | | | | at 18 °C | 1.20 |
| | | | Minimum efficient water volume of the system | litres | 40 | |
| | | | Maximum delivery water temperature | °C | Up to 60 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 220-240/1/50 | |
| | | | Electrical power input | kW | 3.10 | |
| | | | Heating element | nxkW | 2x3 | |
| | | | Expansion vessel | litres | 10 | |
| | | | Maximum circulator pump head | kPa | see H/Q graph | |
| | | | Hydraulic connections | inches | G1" female | |
| | | | Safety valve | bar | 3 | |
| | | | Indoor unit sound pressure | dB(A) | 29 | 29 |
| | | | Net weight | kg | 62 | |
| | | | Dimensions (H/W/D) | mm | 860/460/318 | |
| Outdoor unit | | | Outdoor temperature range (heating) | °C | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | +10/+48 | |
| | | | Electrical power supply | V/Ph/Hz | 220-240~/1/50 | |
| | | | Maximum power input (cooling) | kW | 4.32 | |
| | | | Maximum power input (heating) | kW | 3.00 | |
| | | | Maximum current draw (cooling) | A | 19 | |
| | | | Maximum current draw (heating) | A | 13 | |
| | | | Liquid cooling pipe diameter | mm (inches) | 6.35 (1/4) | |
| | | | Gas cooling pipe diameter | mm (inches) | 12.7 (1/2) | |
| | | | Outdoor unit sound pressure | dB(A) | 55 | 55 |
| | | | Fan air flow rate | $m^3/h$ | 3300 | |
| | | | Net weight | kg | 82 | |
| | | | Dimensions (H/W/D) | mm | 787/982/427 | |
| | | | Compressor type | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$ eq. | |
| | | | Quantity | | 1.6 kg/1.08 tons $CO_2$ eq. | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2013 STANDARD

| | **COOLING - Dry bulb outdoor air temperature in °C - (AGHPSA081)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 4.35 | 4.17 | 4.82 | 4.01 | 5.09 | 3.89 | 5.41 | 3.71 | 5.51 | 3.40 | 5.30 | 3.06 | 4.82 | 2.54 | 3.76 | 1.87 | 3.18 | 1.50 |
| 8 | 4.51 | 4.26 | 4.98 | 4.11 | 5.25 | 4.01 | 5.57 | 3.80 | 6.04 | 3.49 | 5.46 | 3.16 | 4.98 | 2.60 | 3.87 | 1.90 | 3.29 | 1.53 |
| 9 | 4.56 | 4.41 | 5.09 | 4.23 | 5.35 | 4.11 | 5.72 | 3.92 | 6.20 | 3.58 | 5.62 | 3.25 | 5.09 | 2.70 | 3.98 | 1.96 | 3.34 | 1.56 |
| 10 | 4.72 | 4.50 | 5.25 | 4.35 | 5.51 | 4.23 | 5.88 | 4.01 | 6.36 | 3.68 | 5.78 | 3.31 | 5.25 | 2.76 | 4.08 | 1.99 | 3.45 | 1.62 |
| 11 | 4.88 | 4.63 | 5.41 | 4.47 | 5.72 | 4.35 | 6.04 | 4.14 | 6.57 | 3.80 | 5.94 | 3.40 | 5.41 | 2.85 | 4.19 | 2.08 | 3.55 | 1.68 |
| 12 | 4.98 | 4.75 | 5.57 | 4.56 | 5.88 | 4.44 | 6.25 | 4.20 | 6.73 | 3.89 | 6.10 | 3.49 | 5.57 | 2.91 | 4.35 | 2.14 | 3.66 | 1.72 |
| 13 | 5.09 | 4.87 | 5.67 | 4.72 | 5.99 | 4.56 | 6.31 | 4.35 | 6.89 | 3.98 | 6.20 | 3.58 | 5.67 | 3.00 | 4.40 | 2.18 | 3.71 | 1.75 |
| 14 | 5.25 | 4.99 | 5.83 | 4.81 | 6.10 | 4.66 | 6.47 | 4.44 | 7.05 | 4.07 | 6.36 | 3.68 | 5.83 | 3.06 | 4.51 | 2.24 | 3.82 | 1.78 |
| 15 | 5.35 | 5.15 | 5.99 | 4.93 | 6.25 | 4.78 | 6.68 | 4.53 | 7.21 | 4.17 | 6.52 | 3.77 | 5.99 | 3.12 | 4.66 | 2.30 | 3.92 | 1.84 |
| 18 | 5.78 | 5.45 | 6.36 | 5.27 | 6.73 | 5.12 | 7.16 | 4.84 | 7.69 | 4.44 | 7.00 | 4.01 | 6.36 | 3.31 | 4.98 | 2.45 | 4.24 | 1.96 |
| 20 | 5.99 | 5.70 | 6.63 | 5.48 | 7.00 | 5.33 | 7.42 | 5.09 | 8.06 | 4.66 | 7.31 | 4.20 | 6.63 | 3.46 | 5.14 | 2.54 | 4.40 | 2.05 |
| 23 | 6.41 | 6.04 | 7.10 | 5.79 | 7.47 | 5.64 | 7.90 | 5.39 | 8.53 | 4.93 | 7.79 | 4.44 | 7.10 | 3.68 | 5.51 | 2.73 | 4.66 | 2.18 |
| 25 | 6.63 | 6.28 | 7.37 | 6.07 | 7.79 | 5.85 | 8.22 | 5.58 | 8.85 | 5.12 | 8.06 | 4.63 | 7.37 | 3.83 | 5.72 | 2.82 | 4.82 | 2.27 |

| | **HEATING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 3.44 | 4.04 | 4.16 | 4.26 | 4.96 | 4.56 | 5.68 | 4.75 | 6.08 | 5.05 | 6.80 | 5.27 | 7.52 | 5.46 | 7.36 | 5.72 | 7.60 | 5.94 | 8.00 | 6.50 | 7.92 | 6.88 | 7.20 | 6.84 | 6.32 | 7.44 | 4.96 | 7.89 |
| 30 | 3.36 | 3.29 | 4.08 | 3.59 | 4.80 | 3.81 | 5.52 | 4.04 | 5.92 | 4.26 | 6.56 | 4.49 | 7.28 | 4.71 | 7.76 | 5.23 | 8.00 | 5.53 | 8.48 | 5.94 | 8.40 | 6.32 | 7.60 | 6.32 | 6.64 | 6.84 | 5.20 | 7.29 |
| 35 | 3.28 | 2.77 | 3.84 | 2.92 | 4.48 | 3.10 | 5.20 | 3.40 | 5.60 | 3.59 | 6.24 | 3.81 | 6.80 | 3.93 | 8.00 | 4.71 | 8.24 | 4.97 | 8.72 | 5.38 | 8.64 | 5.61 | 7.84 | 5.61 | 6.88 | 6.24 | 5.36 | 6.62 |
| 40 | 3.28 | 2.39 | 3.84 | 2.65 | 4.48 | 2.92 | 5.20 | 3.10 | 5.60 | 3.25 | 6.24 | 3.51 | 6.80 | 3.70 | 8.00 | 4.22 | 8.24 | 4.45 | 8.72 | 4.86 | 8.64 | 5.08 | 7.84 | 5.05 | 6.88 | 5.57 | 5.36 | 5.94 |
| 45 | | | 3.84 | 2.36 | 4.48 | 2.58 | 5.20 | 2.80 | 5.60 | 2.92 | 6.24 | 3.10 | 6.80 | 3.29 | 8.00 | 3.74 | 8.24 | 3.93 | 8.72 | 4.26 | 8.64 | 4.49 | 7.84 | 4.71 | 6.88 | 4.93 | 5.36 | 5.23 |
| 50 | | | | | 4.32 | 2.21 | 5.04 | 2.39 | 5.44 | 2.50 | 6.08 | 2.69 | 6.56 | 2.77 | 7.76 | 3.25 | 8.00 | 3.40 | 8.48 | 3.74 | 8.40 | 3.93 | 7.60 | 4.11 | 6.64 | 4.30 | 5.20 | 4.60 |
| 55 | | | | | | | 4.80 | 1.98 | 5.12 | 2.09 | 5.76 | 2.28 | 6.24 | 2.39 | 7.36 | 2.77 | 7.60 | 2.92 | 8.00 | 3.18 | 7.92 | 3.33 | 7.20 | 3.48 | 6.32 | 3.66 | 4.96 | 3.93 |
| 60 | | | | | | | | | 4.88 | 1.72 | 5.44 | 1.79 | 5.92 | 1.91 | 6.96 | 2.28 | 7.20 | 2.32 | 7.60 | 2.50 | 7.52 | 2.62 | 6.80 | 2.77 | 6.00 | 2.88 | 4.64 | 3.10 |

LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

# TECHNICAL DATA FOR 10 kW

| MODEL | | | | | AGHPSA101 | |
|---|---|---|---|---|---|---|
| Outdoor unit model | | | | | AGHPSA101SH | |
| Hydronic indoor unit model | | | | | AGHPS101W | |
| Matchable units for domestic hot water production (DHW) | | | | | 200/300 litres external tank with diverting valve | |
| | | | | | Cooling | Heating |
| COMFORT IN ENVIRONMENT | Performance according to EN 14511 | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 8.50 | 9.50 |
| | | | Rated electrical power input | $kW_{el}$ | 2.24 | 2.07 |
| | | | EER/COP | | 3.79 | 4.59 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 6.50 | 9.50 |
| | | | Rated electrical power input | $kW_{el}$ | 2.27 | 2.64 |
| | | | EER/COP | | 2.86 | 3.60 |
| | Performance according to Ecodesign (ERP) EN 14825 | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 9.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 181 | |
| | | | Energy efficiency class | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 8.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 127 | |
| | | | Energy efficiency class | | A++ | |
| DHW | DHW performance according to EN 16147 | With 300 litres tank and diverting valve AVERAGE climate | Load profile | | XL | |
| | | | Energy efficiency class | | A | |
| | | | Water heating efficiency - ERP $\eta_{wh}$ | % | 111 | |
| Indoor unit | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 1.63 |
| | | | | | at 45 °C | 1.63 |
| | | | | | at 7 °C | 1.12 |
| | | | | | at 18 °C | 1.46 |
| | | | Minimum efficient water volume of the system | litres | 80 | |
| | | | Maximum delivery water temperature | °C | Up to 60 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 220-240/1/50 | |
| | | | Electrical power input | kW | 3.10 | |
| | | | Heating element | nxkW | 2x3 | |
| | | | Expansion vessel | litres | 10 | |
| | | | Maximum circulator pump head | kPa | see H/Q graph | |
| | | | Hydraulic connections | inches | G1" female | |
| | | | Safety valve | bar | 3 | |
| | | | Indoor unit sound pressure | dB(A) | 29 | 29 |
| | | | Net weight | kg | 62 | |
| | | | Dimensions (H/W/D) | mm | 860/460/318 | |
| Outdoor unit | | | Outdoor temperature range (heating) | °C | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | +10/+48 | |
| | | | Electrical power supply | V/Ph/Hz | 220-240~/1/50 | |
| | | | Maximum power input (cooling) | kW | 5.06 | |
| | | | Maximum power input (heating) | kW | 3.40 | |
| | | | Maximum current draw (cooling) | A | 22 | |
| | | | Maximum current draw (heating) | A | 15 | |
| | | | Liquid cooling pipe diameter | mm (inches) | 6.35 (1/4) | |
| | | | Gas cooling pipe diameter | mm (inches) | 12.7 (1/2) | |
| | | | Outdoor unit sound pressure | dB(A) | 55 | 55 |
| | | | Fan air flow rate | $m^3/h$ | 3300 | |
| | | | Net weight | kg | 82 | |
| | | | Dimensions (H/W/D) | mm | 787/982/427 | |
| | | | Compressor type | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$ eq. | |
| | | | Quantity | | 1.6 kg/1.08 tons $CO_2$ eq. | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2013 STANDARD

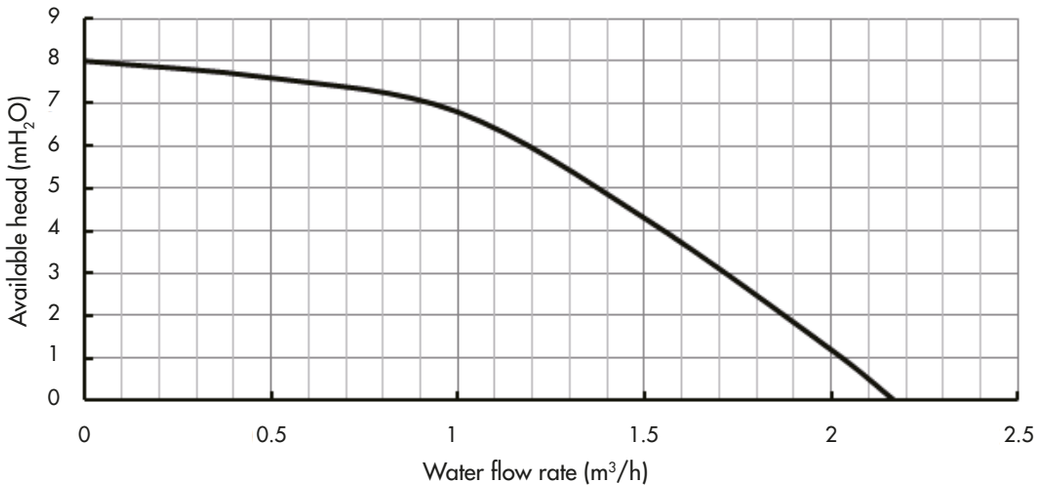
| | **COOLING - Dry bulb outdoor air temperature in °C - (AGHPSA101)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 5.33 | 3.89 | 5.92 | 3.75 | 6.24 | 3.64 | 6.63 | 3.46 | 6.76 | 3.18 | 6.50 | 2.86 | 5.92 | 2.38 | 4.62 | 1.75 | 3.90 | 1.40 |
| 8 | 5.46 | 4.01 | 6.11 | 3.87 | 6.44 | 3.75 | 6.83 | 3.58 | 6.96 | 3.26 | 6.70 | 2.95 | 6.11 | 2.43 | 4.75 | 1.78 | 4.03 | 1.46 |
| 9 | 5.66 | 4.15 | 6.24 | 4.01 | 6.57 | 3.87 | 7.02 | 3.69 | 7.15 | 3.38 | 6.89 | 3.04 | 6.24 | 2.52 | 4.94 | 1.86 | 4.10 | 1.52 |
| 10 | 5.79 | 4.24 | 6.37 | 4.09 | 6.70 | 3.95 | 7.22 | 3.81 | 7.35 | 3.46 | 7.02 | 3.12 | 6.37 | 2.58 | 5.01 | 1.92 | 4.23 | 1.52 |
| 11 | 5.92 | 4.35 | 6.57 | 4.21 | 6.96 | 4.07 | 7.35 | 3.87 | 7.54 | 3.58 | 7.22 | 3.21 | 6.57 | 2.66 | 5.07 | 1.95 | 4.36 | 1.57 |
| 12 | 6.11 | 4.47 | 6.70 | 4.30 | 7.15 | 4.18 | 7.54 | 3.98 | 7.67 | 3.67 | 7.41 | 3.29 | 6.70 | 2.72 | 5.27 | 2.00 | 4.49 | 1.60 |
| 13 | 6.24 | 4.61 | 6.89 | 4.44 | 7.35 | 4.30 | 7.74 | 4.09 | 7.87 | 3.78 | 7.61 | 3.38 | 6.89 | 2.83 | 5.40 | 2.09 | 4.55 | 1.66 |
| 14 | 6.44 | 4.70 | 7.15 | 4.52 | 7.48 | 4.41 | 7.93 | 4.21 | 8.13 | 3.84 | 7.80 | 3.46 | 7.15 | 2.89 | 5.53 | 2.12 | 4.68 | 1.72 |
| 15 | 6.57 | 4.84 | 7.28 | 4.64 | 7.67 | 4.50 | 8.19 | 4.30 | 8.32 | 3.92 | 8.00 | 3.55 | 7.28 | 2.95 | 5.72 | 2.15 | 4.81 | 1.75 |
| 18 | 7.02 | 5.18 | 7.74 | 5.01 | 8.13 | 4.84 | 8.65 | 4.61 | 8.91 | 4.24 | 8.52 | 3.81 | 7.74 | 3.15 | 6.05 | 2.32 | 5.14 | 1.86 |
| 20 | 7.35 | 5.44 | 8.13 | 5.21 | 8.58 | 5.10 | 9.10 | 4.84 | 9.30 | 4.44 | 8.91 | 3.98 | 8.13 | 3.32 | 6.31 | 2.43 | 5.33 | 1.98 |
| 23 | 7.74 | 5.76 | 8.58 | 5.53 | 9.04 | 5.38 | 9.62 | 5.13 | 9.82 | 4.70 | 9.43 | 4.24 | 8.58 | 3.49 | 6.63 | 2.58 | 5.66 | 2.06 |
| 25 | 8.00 | 5.98 | 8.91 | 5.78 | 9.36 | 5.58 | 10.01 | 5.33 | 10.21 | 4.90 | 9.82 | 4.41 | 8.91 | 3.67 | 6.96 | 2.69 | 0.00 | 2.18 |

| | **HEATING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 4.09 | 3.99 | 4.94 | 4.21 | 5.89 | 4.50 | 6.75 | 4.68 | 7.22 | 4.97 | 8.08 | 5.18 | 8.93 | 5.40 | 8.74 | 5.61 | 9.03 | 5.87 | 9.50 | 6.41 | 9.41 | 6.80 | 8.55 | 6.73 | 7.51 | 7.34 | 5.89 | 7.77 |
| 30 | 3.99 | 3.24 | 4.85 | 3.49 | 5.70 | 3.74 | 6.56 | 3.96 | 7.03 | 4.17 | 7.79 | 4.39 | 8.65 | 4.61 | 9.22 | 5.11 | 9.50 | 5.43 | 10.07 | 5.79 | 9.98 | 6.19 | 9.03 | 6.19 | 7.89 | 6.69 | 6.18 | 7.16 |
| 35 | 3.90 | 2.73 | 4.56 | 2.88 | 5.32 | 3.06 | 6.18 | 3.31 | 6.65 | 3.53 | 7.41 | 3.74 | 8.08 | 3.85 | 9.50 | 4.61 | 9.79 | 4.86 | 10.36 | 5.29 | 10.26 | 5.51 | 9.31 | 5.51 | 8.17 | 6.12 | 6.37 | 6.48 |
| 40 | 3.90 | 2.34 | 4.56 | 2.59 | 5.32 | 2.81 | 6.18 | 2.99 | 6.65 | 3.13 | 7.41 | 3.38 | 8.08 | 3.60 | 9.50 | 4.10 | 9.79 | 4.32 | 10.36 | 4.68 | 10.26 | 4.93 | 9.31 | 4.89 | 8.17 | 5.40 | 6.37 | 5.76 |
| 45 | | | 4.56 | 2.27 | 5.32 | 2.48 | 6.18 | 2.70 | 6.65 | 2.81 | 7.41 | 2.99 | 8.08 | 3.17 | 9.50 | 3.60 | 9.79 | 3.78 | 10.36 | 4.10 | 10.26 | 4.32 | 9.31 | 4.53 | 8.17 | 4.75 | 6.37 | 5.04 |
| 50 | | | | | 5.13 | 2.09 | 5.99 | 2.27 | 6.46 | 2.38 | 7.22 | 2.55 | 7.79 | 2.63 | 9.22 | 3.09 | 9.50 | 3.24 | 10.07 | 3.56 | 9.98 | 3.71 | 9.03 | 3.89 | 7.89 | 4.07 | 6.18 | 4.35 |
| 55 | | | | | | | 5.70 | 1.87 | 6.08 | 1.94 | 6.84 | 2.12 | 7.41 | 2.23 | 8.74 | 2.59 | 9.03 | 2.73 | 9.50 | 2.95 | 9.41 | 3.13 | 8.55 | 3.24 | 7.51 | 3.42 | 5.89 | 3.67 |
| 60 | | | | | | | | | 5.80 | 1.58 | 6.46 | 1.66 | 7.03 | 1.76 | 8.27 | 2.09 | 8.55 | 2.16 | 9.03 | 2.30 | 8.93 | 2.41 | 8.08 | 2.55 | 7.13 | 2.66 | 5.51 | 2.84 |

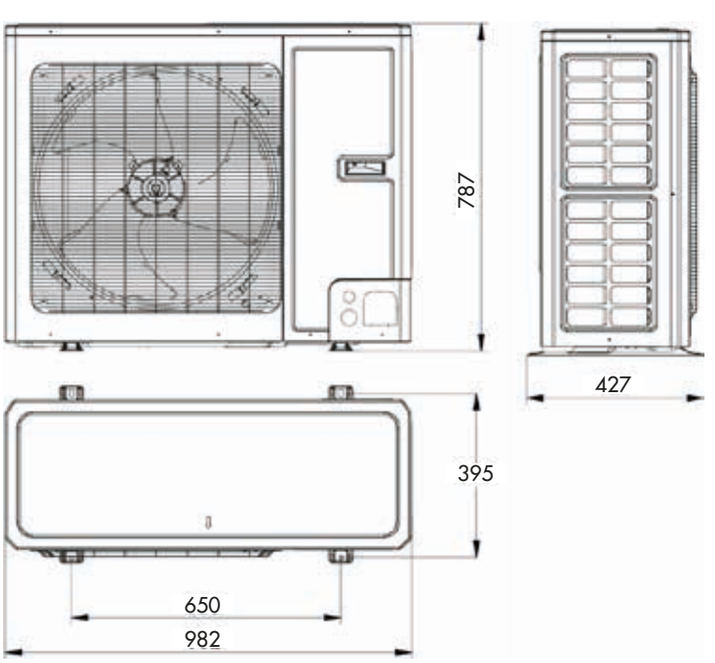
LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

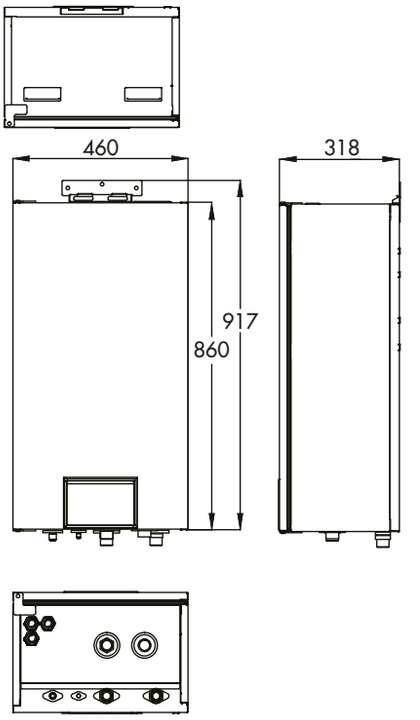
# FLOW RATE CURVES 8-10 kW




# DIMENSIONAL DRAWINGS 8-10 kW

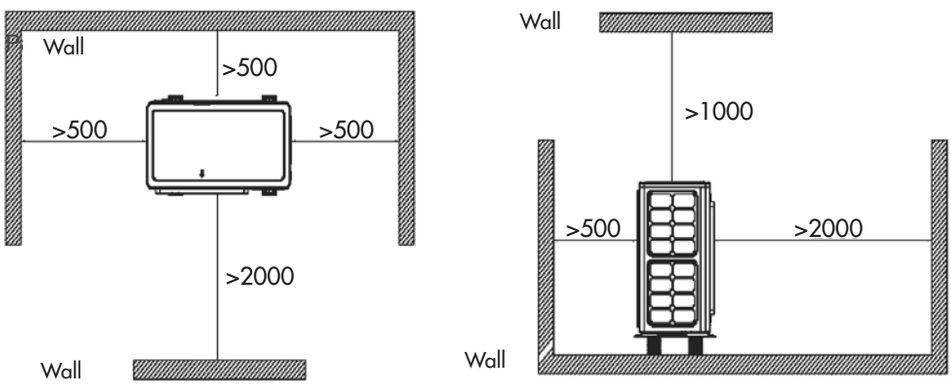



OUTDOOR UNIT 8-10 kW

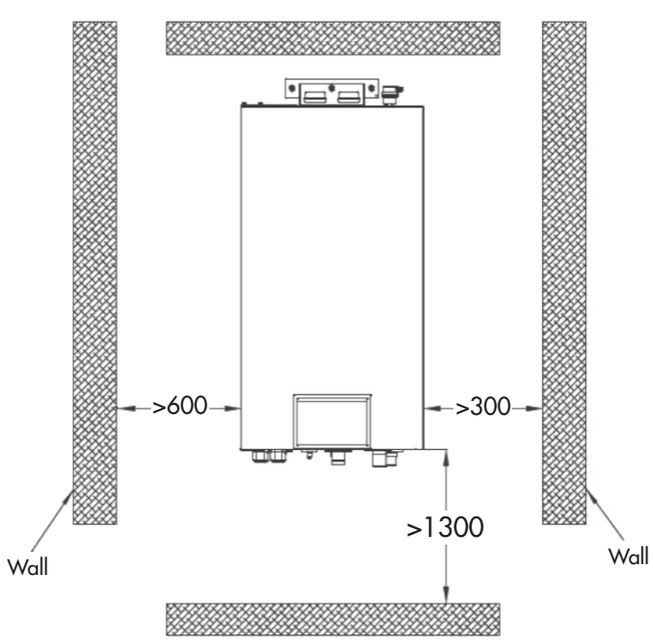



INDOOR UNIT 8-10 kW

# SPACE REQUIRED FOR OUTDOOR UNIT INSTALLATION 8-10 kW



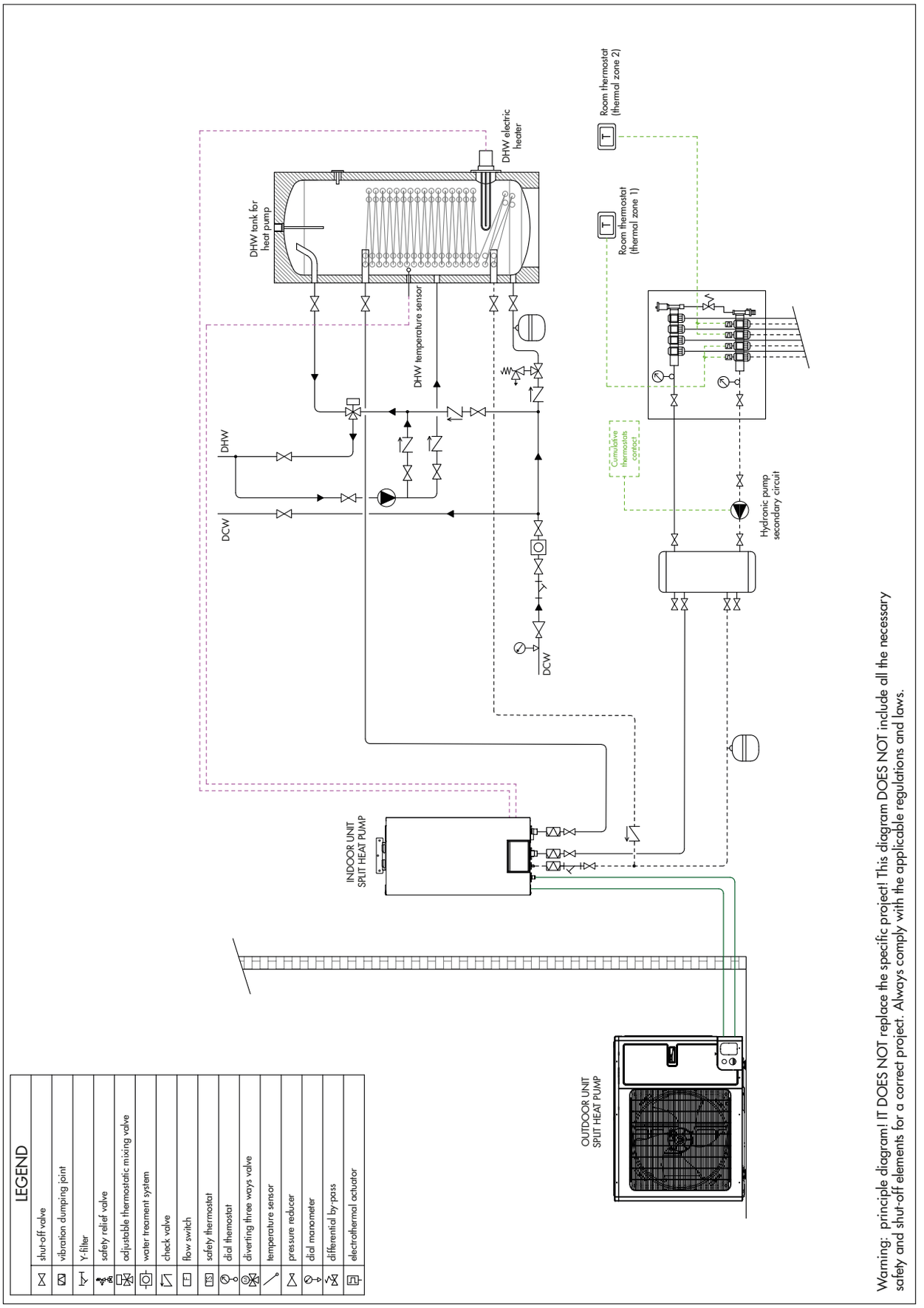

# SPACE REQUIRED FOR INDOOR UNIT INSTALLATION 8-10 kW



# INSTALLATION EXAMPLES

## EXAMPLE 1

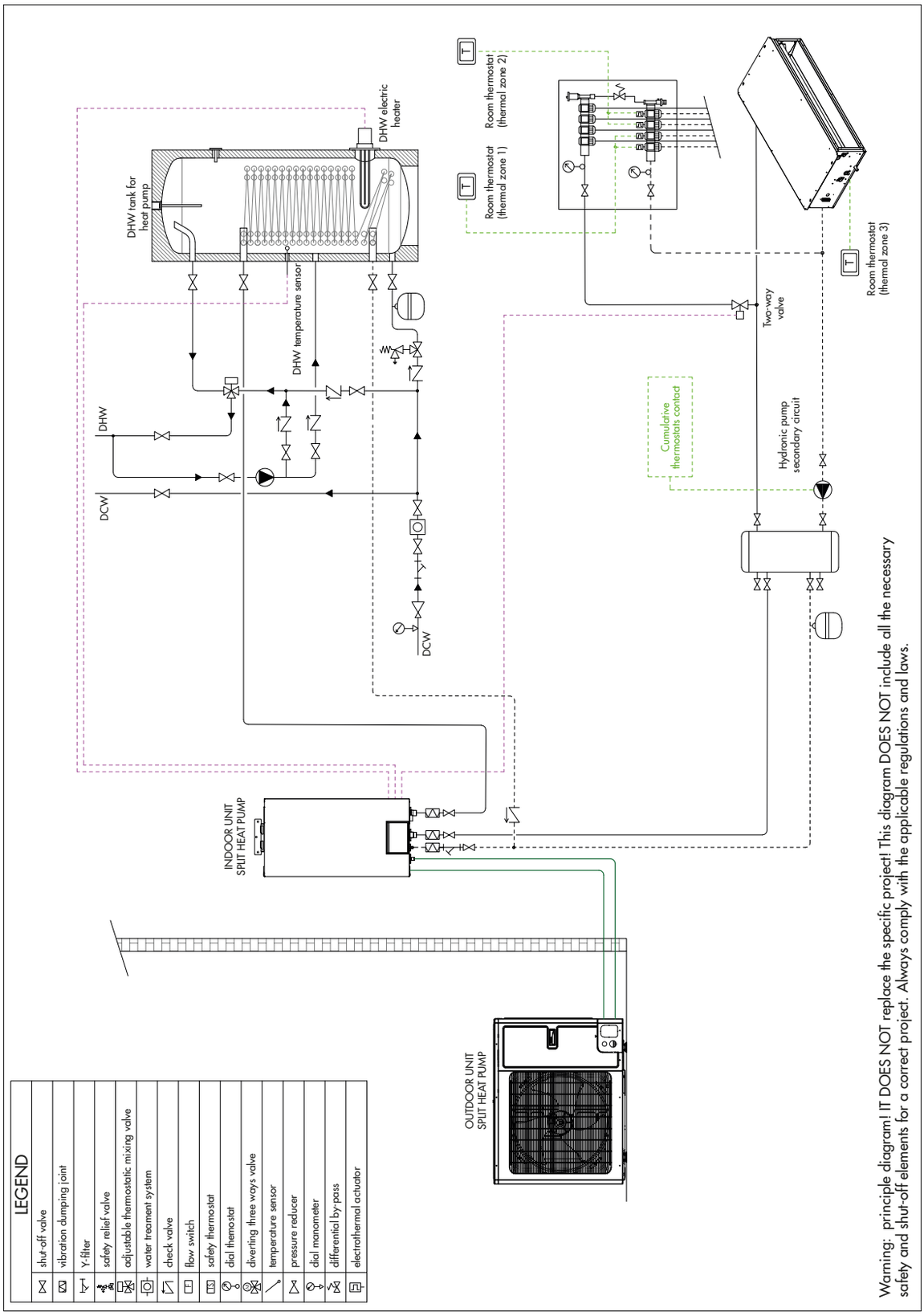
Radiant heating and DHW with three-way valve and tank




Warning: principle diagram! IT DOES NOT replace the specific project! This diagram DOES NOT include all the necessary safety and shut-off elements for a correct project. Always comply with the applicable regulations and laws.

## EXAMPLE 2

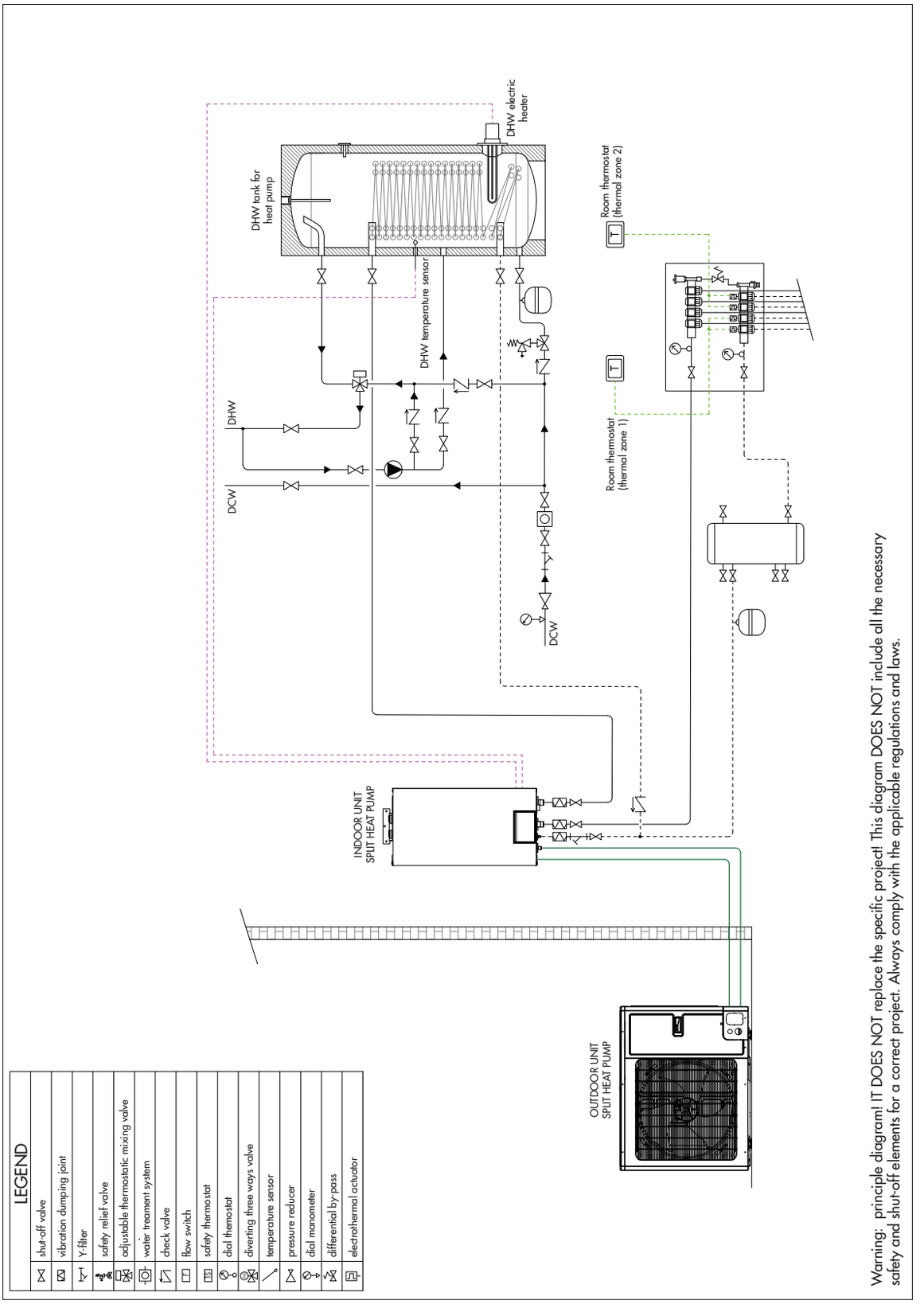
### Heating (cooling) with fan coil units and DHW with three-way valve and tank



# INSTALLATION EXAMPLES

## EXAMPLE 3

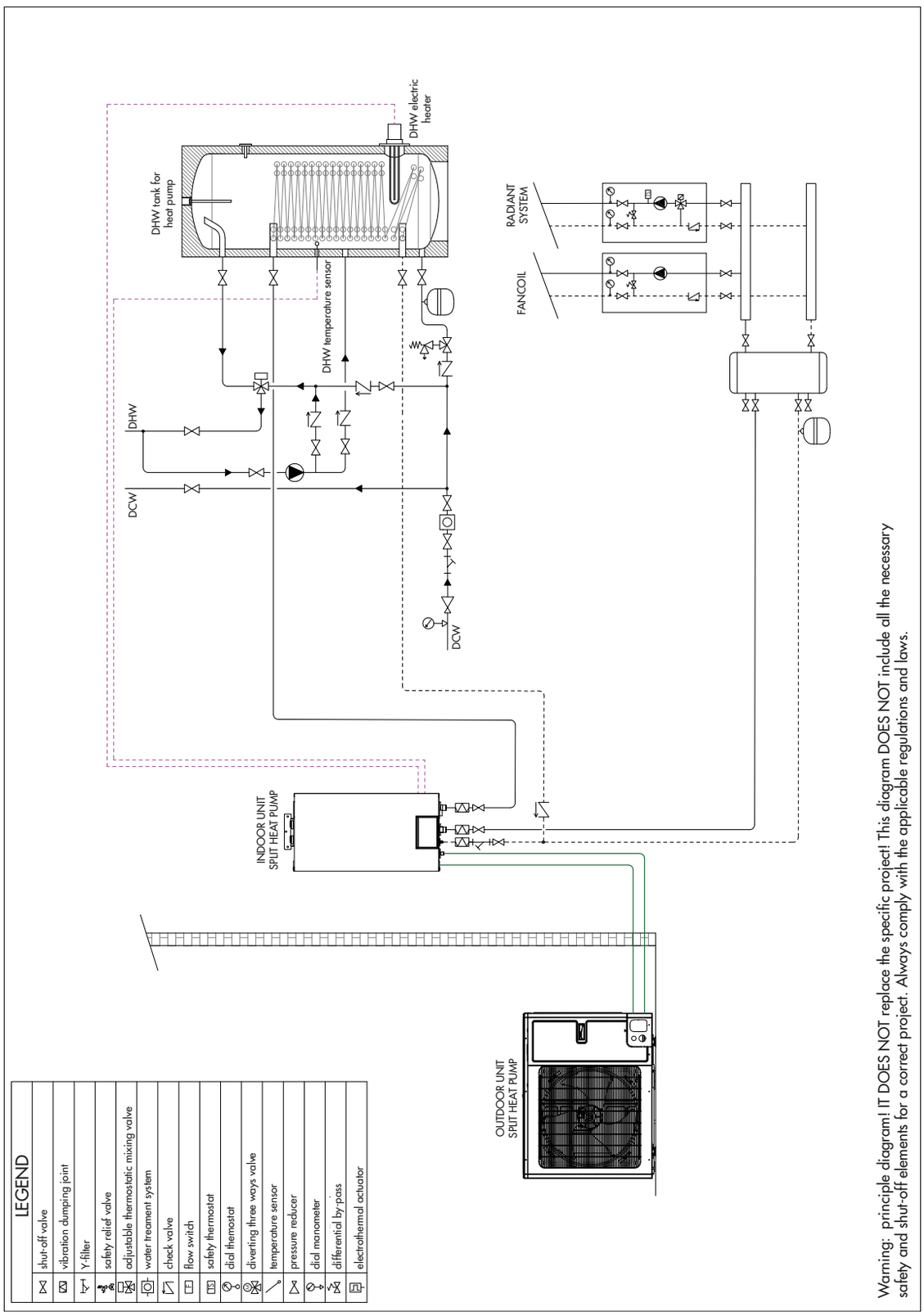
Radiant heating, single thermal zone and DHW with three-way valve and tank



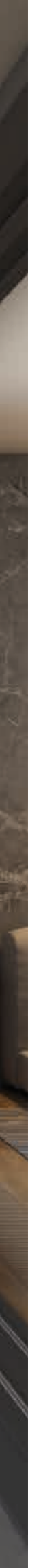

Warning: principle diagram! IT DOES NOT replace the specific project! This diagram DOES NOT include all the necessary safety and shut-off elements for a correct project. Always comply with the applicable regulations and laws.

## EXAMPLE 4

Radiant heating and integration with boiler and DHW produced with the boiler




Warning: principle diagram! IT DOES NOT replace the specific project! This diagram DOES NOT include all the necessary safety and shut-off elements for a correct project. Always comply with the applicable regulations and laws.





# BUILT-IN SOLUTION

For SPLIT heat pumps

# BUILT-IN SOLUTION
## FOR SPLIT HEAT PUMPS

### MAIN FEATURES

With the cabinet, the hydronic indoor unit of the X3 ARGO split heat pump can be installed built-in. This specific solution allows for reducing and optimising the installation spaces.
The production of DHW occurs by means of a three-way valve, installed directly on the unit. The cabinet, which is made of galvanised sheet steel, contains all the elements for setting up a space heating and/or cooling system and for producing DHW:

- Stainless steel DHW storage tank, equipped with a spiral corrugated fixed heat exchanger for increasing the heat exchange surface;
- Kit for connection to the indoor unit, with adequately configured and insulated pipes and an inertial storage tank. It is possible to directly use the pump supplied with the unit or a second pump in the primary/secondary circuit configuration;
- Safety and control device on the DHW and system sides.

### BUILT-IN SOLUTION COMPONENTS (to be added to the indoor hydronic unit)

| Code | Description |
|---|---|
| 387030626 | Built-in cabinet 2242 mm (H) x 998 mm (W) x 415 mm (D) |
| 387030637 | 200 litres DHW storage tank with heat exchanger |
| 387030638 | X3 connection kit |

### ACCESSORIES

| Code | Description |
|---|---|
| 387030630 | DHW inlet filter 3/4" |
| 387030631 | Pair of DHW shut-off valves 3/4" |
| 387030632 | Electrical resistance 1.5 kW for DHW tank |
| 387030633 | System output filter 3/4" |
| 387030634 | Pair of system shut-off valves 1" |

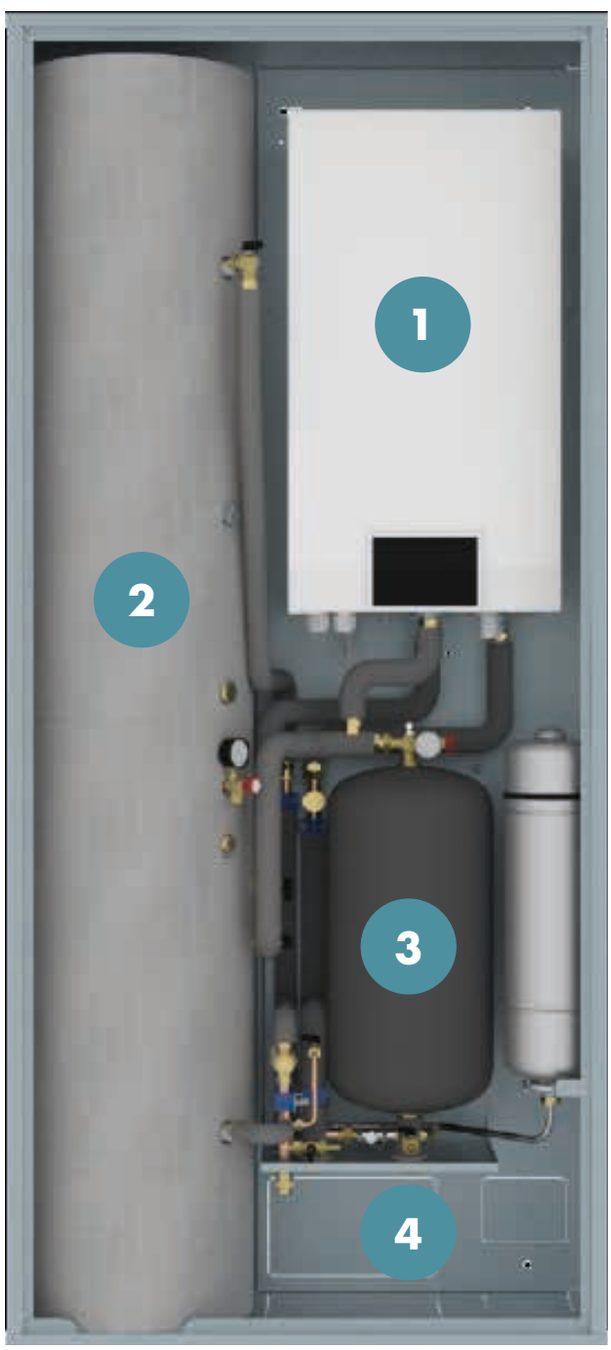
## MAIN COMPONENTS

**1** X3 ARGO split hydronic indoor unit

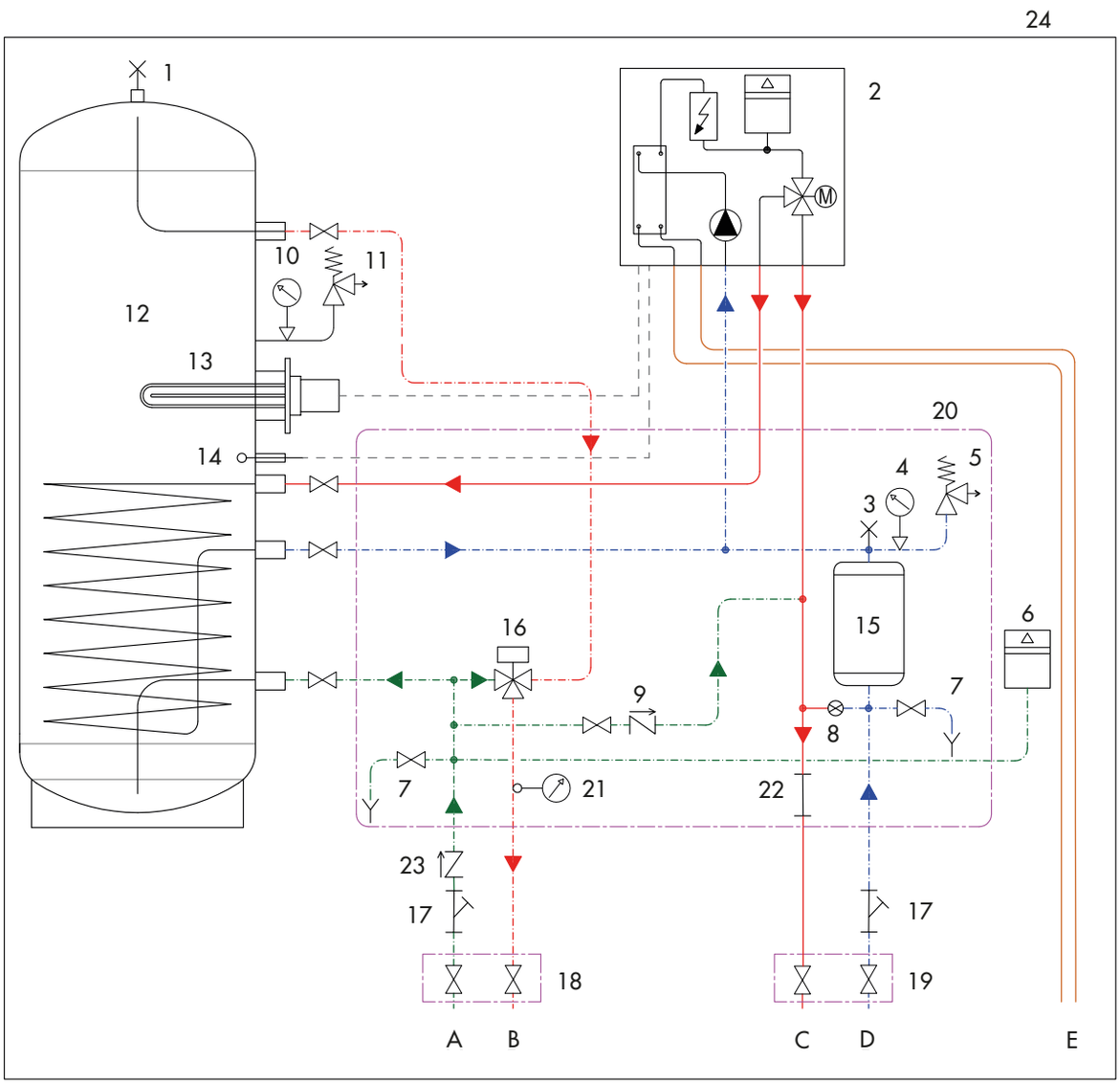
**2** DHW tank with the following characteristics:
- volume: 200 litres;
- grade AISI 316 L stainless steel structure;
- grade AISI 316 L stainless steel fixed heat exchanger;
- EPS insulation with graphite, thickness 25 mm.

**3** Hydraulic kit for connection to the indoor unit, the main components of which include:
- grade AISI 316 L stainless steel 25 litres inertial tank;
- thermostatic mixer 25-50 °C;
- DHW-side expansion vessel, 6 bar, 12 litres;
- 6 bar safety valve on DHW side and 3 bar safety valve on system side;
- insulated connecting pipes.

**4** Built-in metal cabinet, made of galvanised sheet steel



# REFERENCE HYDRAULIC DIAGRAM



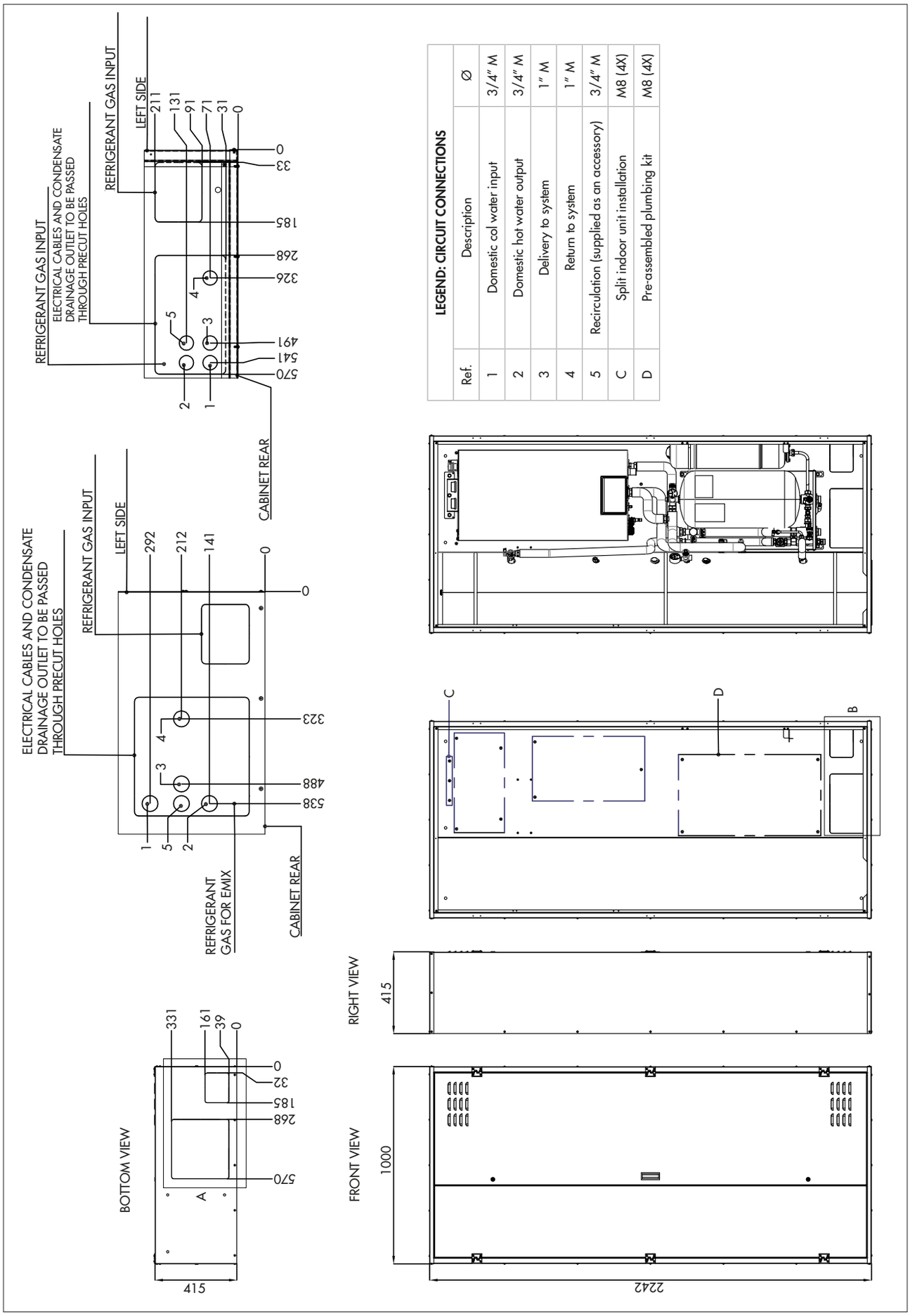

## Key to components

1. DHW tank manual air relief valve
2. X3 ARGO split indoor unit
3. system manual air relief valve
4. 0–4 bar system pressure gauge
5. safety valve for system, 3 bar
6. DHW expansion vessel, 6 bar - 12 litres
7. discharge valve Ø 1/2"
8. shut-off valve
9. system filling non-return valve
10. 0–6 bar pressure gauge
11. safety valve for DHW, 6 bar
12. grade AISI 316 L stainless steel 200 litres DHW storage tank - pmax 8 bar
13. heating element 1.5 kW (optional)
14. thermowell Ø 6 mm x 130 mm
15. grade AISI 316 L stainless steel system technical storage tank - 25 litres
16. thermostatic mixing valve 25 °C - 50 °C Kv=2.3
17. system and DHW filters
18. 3/4" shut-off valve (optional)
19. 1" M shut-off valve (optional)
20. pre-assembled hydronic module limits
21. contact thermometer
22. stub for secondary circuit hydronic pump configuration (not managed by the unit)
23. DHW non-return valve
24. metal cabinet limit

## Key to fittings

A. 3/4" M domestic cold water inlet
B. 3/4" M domestic hot water outlet
C. 1" M system supply
D. 1" M system return
E. connection for indoor unit refrigerant pipes

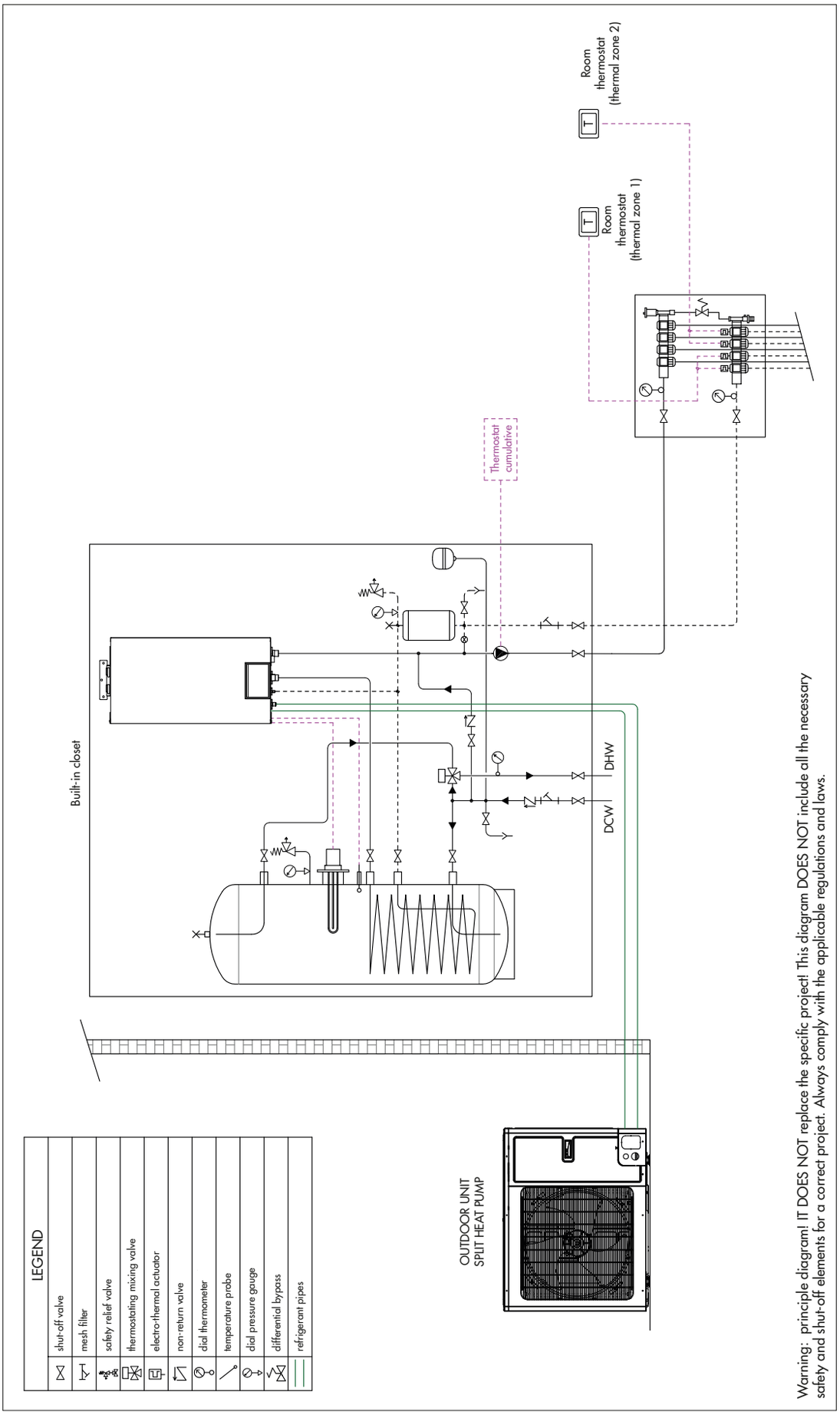
# DIMENSIONAL DRAWINGS




**LEGEND: CIRCUIT CONNECTIONS**

| Ref. | Description | Ø |
|---|---|---|
| 1 | Domestic col water input | 3/4" M |
| 2 | Domestic hot water output | 3/4" M |
| 3 | Delivery to system | 1" M |
| 4 | Return to system | 1" M |
| 5 | Recirculation (supplied as an accessory) | 3/4" M |
| C | Split indoor unit installation | M8 (4X) |
| D | Pre-assembled plumbing kit | M8 (4X) |

# INSTALLATION EXAMPLE




Warning: principle diagram! IT DOES NOT replace the specific project! This diagram DOES NOT include all the necessary safety and shut-off elements for a correct project. Always comply with the applicable regulations and laws.

# NOTES

# ALL IN ONE

Single-phase 6-10 kW range

# ALL-IN-ONE HEAT PUMPS

## MAIN FEATURES

(Standard)

Touch-screen control panel installed on the indoor unit

- All in one Air/Water heat pump with integrated tank for the production of domestic hot water.
- New-generation DC Inverter technology.
- Equipped with the heating, cooling and domestic hot water production functions.
- Single-phase version with 6-8-10 kW heating capacity.
- Achieves very high efficiency levels in heating mode, up to 5 COP.
- It uses R32, a refrigerant with low impact on global warming and ozone layer, characterised by high energy efficiency and a 30% lower charge compared to R410A.
- The vapour-injection compressor, thanks to its special technology, guarantees exceptional performances within a wide operating range.
- The leaving water temperature range is 20 °C-60 °C: this means that the heat pump can be used with radiant floor systems, fan coil units and also medium-temperature radiators.
- The DC brushless axial fans are designed to ensure aerodynamic optimisation: they guarantee low noise levels coupled with high efficiency and a high air flow rate.
- It is equipped with a heating element on the base to prevent ice build-up during winter operation.
- The outdoor unit is equipped with an electronic expansion valve, while the indoor unit contains – besides the tank – all the hydraulic components: inverter pump, plate heat exchanger, expansion vessel, safety valve, flow switch and water filter supplied (installation mandatory).

Internal copper groove | Quiet mode | Weekly timer | Heating down to low temperatures | Door control | Full protection | Timer | Child lock | Wide operating range | Wide voltage range | Auto diagnosis | Low-voltage start-up

Auto restart memory | Intelligent defrosting | °C / °F switching | Long-distance monitoring | Exch. condenser gold fin treatment | -25 °C Min. outdoor temp. heating | +35 °C Max. outdoor temp. heating | +10 °C Min. outdoor temp. cooling | +48 °C Max. outdoor temp. cooling | -25 °C Min. outdoor temp. DHW | +45 °C Max. outdoor temp. DHW | 60 °C Max. output temp. DHW

**A+++** Heating mode 35 °C **A++** Heating mode 55 °C **A** DHW

# THE RANGE

| | | Model | Code | 1PH | Rated capacity according to EN14511 (kW) | | | | Integrated DHW tank capacity (l) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Heating (1) | Heating (3) | Cooling (2) | Cooling (4) | |
| OUTDOOR UNIT - 1PH |  | AGHPSA061SH | 398600012 | ● | 6.0 | 5.9 | 4.1 | 5.8 | |
| | | AGHPSA081SH | 398600013 | ● | 8.0 | 8.0 | 5.3 | 7.0 | |
| | | AGHPSA101SH | 398600014 | ● | 9.5 | 9.5 | 6.5 | 8.5 | |
| HYDRONIC INDOOR UNIT |  | AGHPA061F | 398600028 | ● | 6.0 | 5.9 | 4.1 | 5.8 | 185 |
| | | AGHPA081F | 398600029 | ● | 8.0 | 8.0 | 5.3 | 7.0 | 185 |
| | | AGHPA101F | 398600030 | ● | 9.5 | 9.5 | 6.5 | 8.5 | 185 |

(1) Water temperature 30 °C/35 °C, outdoor air temperature 7 °C DB/6 °C WB
(2) Water temperature 12 °C/7 °C, outdoor air temperature 35 °C
(3) Water temperature 40 °C/45 °C, outdoor air temperature 7 °C DB/6 °C WB
(4) Water temperature 23 °C/18 °C, outdoor air temperature 35 °C
(5) AVERAGE weather conditions

## INCLUDED ACCESSORIES

| |
|---|
| Ambient air temperature sensor |
| Y-shaped filter |
| Control panel integrated into the indoor unit |

# TECHNICAL DATA FOR 6 kW

| MODEL | | | | | AGHPSA061 | |
|---|---|---|---|---|---|---|
| Outdoor unit model | | | | | AGHPSA061SH | |
| Hydronic indoor unit model | | | | | AGHPA061F | |
| Matchable units for domestic hot water production (DHW) | | | | | Tank integrated into the indoor unit 185 litres - diverting valve included in the indoor unit | |
| | | | | | Cooling | Heating |
| COMFORT IN ENVIRONMENT | Performance according to EN 14511 | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 5.80 | 6.00 |
| | | | Rated electrical power input | $kW_{el}$ | 1.32 | 1.20 |
| | | | EER/COP | | 4.39 | 5.00 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 4.09 | 5.90 |
| | | | Rated electrical power input | $kW_{el}$ | 1.28 | 1.51 |
| | | | EER/COP | | 3.20 | 3.91 |
| | Performance according to Ecodesign (ERP) EN 14825 | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 6.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 179 | |
| | | | Energy efficiency class | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 5.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 127 | |
| | | | Energy efficiency class | | A++ | |
| DHW | DHW performance according to EN 16147 | AVERAGE climate | Load profile | | L | |
| | | | Energy efficiency class | | A | |
| | | | Water heating efficiency - ERP $\eta_{wh}$ | % | 101 | |
| Indoor unit | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 1.03 |
| | | | | | at 45 °C | 1.02 |
| | | | | | at 7 °C | 0.70 |
| | | | | | at 18 °C | 1.00 |
| | | | Minimum efficient water volume of the system | litres | 40 | |
| | | | Maximum delivery water temperature | °C | Up to 60 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 220-240/1/50 | |
| | | | Electrical power input | kW | 3.10 | |
| | | | Heating element | nxkW | 2x1.5 | |
| | | | Expansion vessel | litres | 10 | |
| | | | Maximum circulator pump head | kPa | see H/Q graph | |
| | | | Hydraulic connections | inches | G1" female | |
| | | | Safety valve | bar | 3 | |
| | | | Indoor unit sound pressure | dB(A) | 29 | 29 |
| | | | Net weight | kg | 210 | |
| | | | Dimensions (H/W/D) | mm | 1756/600/600 | |
| | | | DHW integrated capacity tank | litres | 185 | |
| Outdoor unit | | | Outdoor temperature range (heating) | °C | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | +10/+48 | |
| | | | Electrical power supply | V/Ph/Hz | 220-240~/1/50 | |
| | | | Maximum power input (cooling) | kW | 2.30 | |
| | | | Maximum power input (heating) | kW | 2.30 | |
| | | | Maximum current draw (cooling) | A | 10 | |
| | | | Maximum current draw (heating) | A | 10 | |
| | | | Liquid cooling pipe diameter | mm (inches) | 6.35 (1/4) | |
| | | | Gas cooling pipe diameter | mm (inches) | 12.7 (1/2) | |
| | | | Outdoor unit sound pressure | dB(A) | 52 | 52 |
| | | | Fan air flow rate | $m^3/h$ | 3200 | |
| | | | Net weight | kg | 55 | |
| | | | Dimensions (H/W/D) | mm | 702/975/396 | |
| | | | Compressor type | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$ eq. | |
| | | | Quantity | | 1 kg/0.675 tons $CO_2$ eq. | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2013 STANDARD

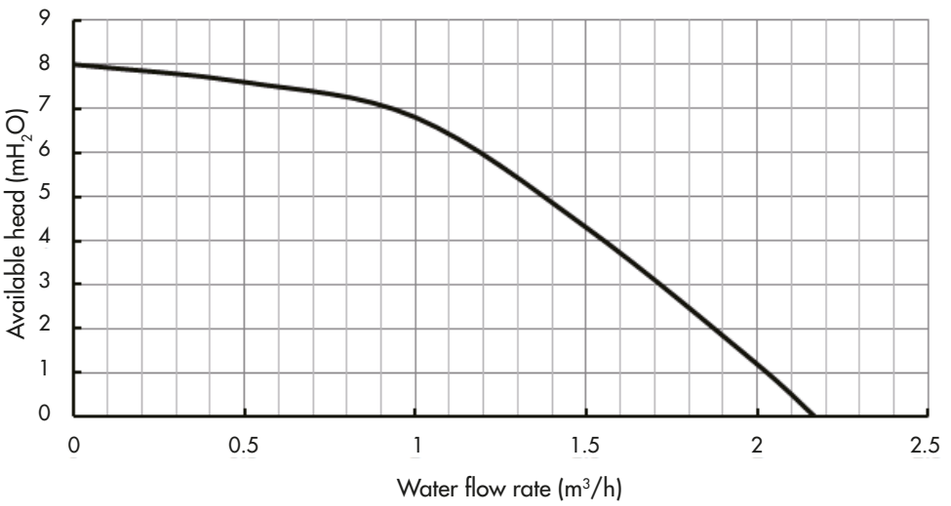
| | **COOLING - Dry bulb outdoor air temperature in °C - (AGHPSA061)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 3.35 | 4.35 | 3.72 | 4.19 | 3.93 | 4.06 | 4.17 | 3.87 | 4.25 | 3.55 | 4.09 | 3.20 | 3.72 | 2.65 | 2.90 | 1.95 | 2.45 | 1.57 |
| 8 | 3.48 | 4.47 | 3.89 | 4.31 | 4.09 | 4.19 | 4.34 | 3.99 | 4.42 | 3.64 | 4.25 | 3.29 | 3.89 | 2.75 | 3.03 | 2.01 | 2.54 | 1.63 |
| 9 | 3.64 | 4.67 | 4.01 | 4.47 | 4.21 | 4.35 | 4.46 | 4.12 | 4.54 | 3.80 | 4.38 | 3.42 | 4.01 | 2.84 | 3.15 | 2.08 | 2.66 | 1.66 |
| 10 | 3.72 | 4.79 | 4.13 | 4.60 | 4.38 | 4.47 | 4.62 | 4.25 | 4.70 | 3.90 | 4.54 | 3.51 | 4.13 | 2.91 | 3.23 | 2.17 | 2.74 | 1.73 |
| 11 | 3.84 | 4.92 | 4.29 | 4.76 | 4.50 | 4.60 | 4.79 | 4.41 | 4.91 | 4.06 | 4.70 | 3.64 | 4.29 | 3.00 | 3.31 | 2.20 | 2.82 | 1.76 |
| 12 | 3.97 | 5.08 | 4.42 | 4.92 | 4.66 | 4.76 | 4.95 | 4.54 | 5.07 | 4.15 | 4.87 | 3.74 | 4.42 | 3.10 | 3.44 | 2.30 | 2.90 | 1.85 |
| 13 | 4.13 | 5.24 | 4.58 | 5.05 | 4.79 | 4.89 | 5.11 | 4.67 | 5.19 | 4.28 | 4.99 | 3.87 | 4.58 | 3.20 | 3.56 | 2.33 | 2.99 | 1.89 |
| 14 | 4.25 | 5.40 | 4.66 | 5.21 | 4.95 | 5.05 | 5.28 | 4.79 | 5.36 | 4.41 | 5.15 | 3.96 | 4.66 | 3.29 | 3.68 | 2.43 | 3.07 | 1.95 |
| 15 | 4.34 | 5.53 | 4.83 | 5.34 | 5.11 | 5.18 | 5.44 | 4.92 | 5.52 | 4.51 | 5.32 | 4.09 | 4.83 | 3.39 | 3.76 | 2.49 | 3.19 | 1.98 |
| 18 | 4.74 | 5.98 | 5.24 | 5.75 | 5.52 | 5.59 | 5.89 | 5.34 | 6.01 | 4.89 | 5.77 | 4.41 | 5.24 | 3.64 | 4.09 | 2.68 | 3.48 | 2.17 |
| 20 | 4.95 | 6.29 | 5.52 | 6.07 | 5.85 | 5.88 | 6.18 | 5.59 | 6.30 | 5.14 | 6.05 | 4.63 | 5.52 | 3.83 | 4.34 | 2.84 | 3.64 | 2.27 |
| 23 | 5.36 | 6.74 | 5.93 | 6.49 | 6.26 | 6.33 | 6.67 | 6.01 | 6.79 | 5.50 | 6.54 | 4.95 | 5.93 | 4.12 | 4.62 | 3.00 | 3.93 | 2.43 |
| 25 | 5.60 | 7.03 | 6.22 | 6.77 | 6.54 | 6.58 | 6.95 | 6.29 | 7.12 | 5.75 | 6.83 | 5.18 | 6.22 | 4.31 | 4.87 | 3.16 | 4.09 | 2.56 |

| | **HEATING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 2.94 | 4.34 | 3.12 | 4.57 | 3.72 | 4.88 | 4.26 | 5.08 | 5.16 | 5.39 | 5.76 | 5.63 | 6.36 | 5.86 | 6.24 | 6.10 | 6.42 | 6.37 | 6.78 | 6.95 | 6.72 | 7.38 | 6.12 | 7.31 | 5.34 | 7.97 | 4.20 | 8.44 |
| 30 | 2.70 | 3.52 | 3.06 | 3.79 | 3.60 | 4.06 | 4.14 | 4.30 | 4.74 | 4.53 | 5.22 | 4.77 | 5.82 | 5.00 | 6.18 | 5.55 | 6.36 | 5.90 | 6.72 | 6.29 | 6.66 | 6.72 | 6.06 | 6.72 | 5.34 | 7.27 | 4.14 | 7.78 |
| 35 | 2.52 | 2.97 | 2.88 | 3.13 | 3.36 | 3.32 | 3.90 | 3.59 | 4.26 | 3.83 | 4.80 | 4.06 | 5.22 | 4.18 | 6.00 | 5.00 | 6.30 | 5.27 | 6.66 | 5.74 | 6.60 | 5.98 | 6.00 | 5.98 | 5.28 | 6.64 | 4.08 | 7.03 |
| 40 | 2.46 | 2.54 | 2.88 | 2.81 | 3.36 | 3.05 | 3.90 | 3.24 | 4.26 | 3.40 | 4.74 | 3.67 | 5.16 | 3.91 | 6.00 | 4.45 | 6.24 | 4.69 | 6.60 | 5.08 | 6.54 | 5.35 | 5.94 | 5.31 | 5.22 | 5.86 | 4.08 | 6.25 |
| 45 | | | 2.88 | 2.46 | 3.36 | 2.70 | 3.90 | 2.93 | 4.20 | 3.05 | 4.68 | 3.24 | 5.10 | 3.44 | 6.00 | 3.91 | 6.18 | 4.10 | 6.54 | 4.45 | 6.48 | 4.69 | 5.88 | 4.92 | 5.16 | 5.16 | 4.02 | 5.47 |
| 50 | | | | | 3.24 | 2.27 | 3.78 | 2.46 | 4.14 | 2.58 | 4.62 | 2.77 | 5.04 | 2.85 | 5.94 | 3.36 | 6.12 | 3.52 | 6.48 | 3.87 | 6.42 | 4.02 | 5.82 | 4.22 | 5.10 | 4.42 | 3.96 | 4.73 |
| 55 | | | | | | | 3.60 | 2.03 | 4.14 | 2.11 | 4.56 | 2.31 | 4.98 | 2.42 | 5.88 | 2.81 | 6.06 | 2.97 | 6.42 | 3.20 | 6.36 | 3.40 | 5.76 | 3.52 | 5.04 | 3.71 | 3.96 | 3.99 |
| 60 | | | | | | | | | 4.08 | 1.72 | 4.56 | 1.80 | 4.92 | 1.91 | 5.82 | 2.27 | 6.00 | 2.34 | 6.36 | 2.50 | 6.30 | 2.62 | 5.70 | 2.77 | 4.98 | 2.89 | 3.90 | 3.09 |

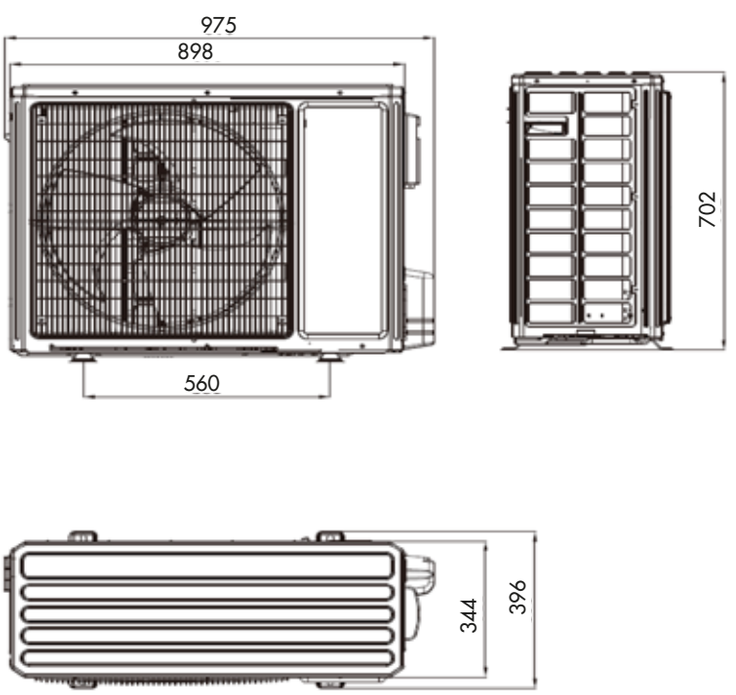
LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

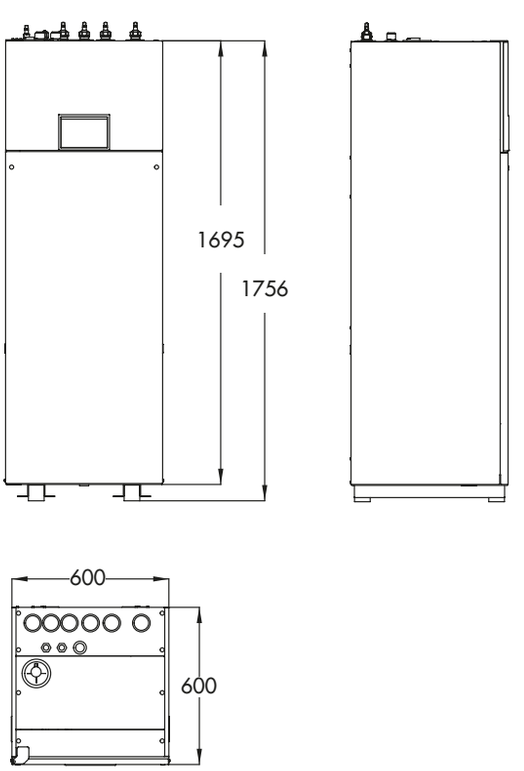
# FLOW RATE CURVES 6 kW




# DIMENSIONAL DRAWINGS 6 kW




OUTDOOR UNIT 6 kW




INDOOR UNIT 6 kW

# TECHNICAL DATA FOR 8-10 kW

| MODEL | | | | | AGHPSA081 | |
|---|---|---|---|---|---|---|
| Outdoor unit model | | | | | AGHPSA081SH | |
| Hydronic indoor unit model | | | | | AGHPA081F | |
| Matchable units for domestic hot water production (DHW) | | | | | Tank integrated into the indoor unit 185 litres - diverting valve included in the indoor unit | |
| | | | | | Cooling | Heating |
| COMFORT IN ENVIRONMENT | Performance according to EN 14511 | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 7.00 | 8.00 |
| | | | Rated electrical power input | kWel | 1.75 | 1.70 |
| | | | EER/COP | | 4.00 | 4.71 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 5.30 | 8.00 |
| | | | Rated electrical power input | kWel | 1.73 | 2.14 |
| | | | EER/COP | | 3.06 | 3.74 |
| | Performance according to Ecodesign (ERP) EN 14825 | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 7.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 181 | |
| | | | Energy efficiency class | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 7.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 129 | |
| | | | Energy efficiency class | | A++ | |
| DHW | DHW performance according to EN 16147 | AVERAGE climate | Load profile | | L | |
| | | | Energy efficiency class | | A | |
| | | | Water heating efficiency - ERP $\eta_{wh}$ | % | 89 | |
| Indoor unit | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 1.38 |
| | | | | | at 45 °C | 1.38 |
| | | | | | at 7 °C | 0.91 |
| | | | | | at 18 °C | 1.20 |
| | | | Minimum efficient water volume of the system | litres | 40 | |
| | | | Maximum delivery water temperature | °C | Up to 60 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 220-240/1/50 | |
| | | | Electrical power input | kW | 3.10 | |
| | | | Heating element | nxkW | 2x3 | |
| | | | Expansion vessel | litres | 10 | |
| | | | Maximum circulator pump head | kPa | see H/Q graph | |
| | | | Hydraulic connections | inches | G1" female | |
| | | | Safety valve | bar | 3 | |
| | | | Indoor unit sound pressure | dB(A) | 29 | 29 |
| | | | Net weight | kg | 210 | |
| | | | Dimensions (H/W/D) | mm | 1756/600/600 | |
| | | | DHW integrated capacity tank | litres | 185 | |
| Outdoor unit | | | Outdoor temperature range (heating) | °C | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | +10/+48 | |
| | | | Electrical power supply | V/Ph/Hz | 220-240~/1/50 | |
| | | | Maximum power input (cooling) | kW | 4.32 | |
| | | | Maximum power input (heating) | kW | 3.00 | |
| | | | Maximum current draw (cooling) | A | 19 | |
| | | | Maximum current draw (heating) | A | 13 | |
| | | | Liquid cooling pipe diameter | mm (inches) | 6.35 (1/4) | |
| | | | Gas cooling pipe diameter | mm (inches) | 12.7 (1/2) | |
| | | | Outdoor unit sound pressure | dB(A) | 55 | 55 |
| | | | Fan air flow rate | $m^3/h$ | 3300 | |
| | | | Net weight | kg | 82 | |
| | | | Dimensions (H/W/D) | mm | 787/982/427 | |
| | | | Compressor type | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$ eq. | |
| | | | Quantity | | 1.6 kg/1.08 tons $CO_2$ eq. | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# TECHNICAL DATA FOR 8-10 kW

| MODEL | | | | | AGHPSA101 | |
|---|---|---|---|---|---|---|
| Outdoor unit model | | | | | AGHPSA101SH | |
| Hydronic indoor unit model | | | | | AGHPA101F | |
| Matchable units for domestic hot water production (DHW) | | | | | Tank integrated into the indoor unit 185 litres - diverting valve included in the indoor unit | |
| | | | | | Cooling | Heating |
| COMFORT IN ENVIRONMENT | Performance according to EN 14511 | Air +35 °C - Water 23/18 °C<br>Air +7 °C - Water 30/35 °C | Rated capacity | kW | 8.50 | 9.50 |
| | | | Rated electrical power input | kWel | 2.24 | 2.07 |
| | | | EER/COP | | 3.79 | 4.59 |
| | | Air +35 °C - Water 12/7 °C<br>Air +7 °C - Water 40/45 °C | Rated capacity | kW | 6.50 | 9.50 |
| | | | Rated electrical power input | kWel | 2.27 | 2.64 |
| | | | EER/COP | | 2.86 | 3.60 |
| | Performance according to Ecodesign (ERP) EN 14825 | LOW TEMPERATURE (35 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 9.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 181 | |
| | | | Energy efficiency class | | A+++ | |
| | | MEDIUM TEMPERATURE (55 °C) AVERAGE climate | Design thermal load ($Pdesign_h$) | kW | 8.00 | |
| | | | Seasonal energy efficiency $\eta_s$ | % | 127 | |
| | | | Energy efficiency class | | A++ | |
| DHW | DHW performance according to EN 16147 | AVERAGE climate | Load profile | | L | |
| | | | Energy efficiency class | | A | |
| | | | Water heating efficiency - ERP $\eta_{wh}$ | % | 89 | |
| Indoor unit | | | Nominal water flow rate | $m^3/h$ | at 35 °C | 1.63 |
| | | | | | at 45 °C | 1.63 |
| | | | | | at 7 °C | 1.12 |
| | | | | | at 18 °C | 1.46 |
| | | | Minimum efficient water volume of the system | litres | 80 | |
| | | | Maximum delivery water temperature | °C | Up to 60 | |
| | | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 220-240/1/50 | |
| | | | Electrical power input | kW | 3.10 | |
| | | | Heating element | nxkW | 2x3 | |
| | | | Expansion vessel | litres | 10 | |
| | | | Maximum circulator pump head | kPa | see H/Q graph | |
| | | | Hydraulic connections | inches | G1" female | |
| | | | Safety valve | bar | 3 | |
| | | | Indoor unit sound pressure | dB(A) | 29 | 29 |
| | | | Net weight | kg | 210 | |
| | | | Dimensions (H/W/D) | mm | 1756/600/600 | |
| | | | DHW integrated capacity tank | litres | 185 | |
| Outdoor unit | | | Outdoor temperature range (heating) | °C | -25/+35 | |
| | | | Outdoor temperature range (cooling) | °C | +10/+48 | |
| | | | Electrical power supply | V/Ph/Hz | 220-240~/1/50 | |
| | | | Maximum power input (cooling) | kW | 5.06 | |
| | | | Maximum power input (heating) | kW | 3.40 | |
| | | | Maximum current draw (cooling) | A | 22 | |
| | | | Maximum current draw (heating) | A | 15 | |
| | | | Liquid cooling pipe diameter | mm (inches) | 6.35 (1/4) | |
| | | | Gas cooling pipe diameter | mm (inches) | 12.7 (1/2) | |
| | | | Outdoor unit sound pressure | dB(A) | 55 | 55 |
| | | | Fan air flow rate | $m^3/h$ | 3300 | |
| | | | Net weight | kg | 82 | |
| | | | Dimensions (H/W/D) | mm | 787/982/427 | |
| | | | Compressor type | | Twin Rotary with vapour injection | |
| Refrigerant | | | Type and GWP | | R32/675 kg $CO_2$ eq. | |
| | | | Quantity | | 1.6 kg/1.08 tons $CO_2$ eq. | |

The equipments described in this catalogue contain HFC R32-type fluorinated greenhouse gases.
These products must be fitted by qualified staff pursuant to European regulations 303/2008 and 517/2014.

Data declared in accordance with REGULATION (EU) No. 811/2013 of 18 February 2013 with regard to the energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and packages of combination heater, temperature control and solar devices, packages of combination heater, temperature control and solar devices, and with COMMISSION REGULATION (EU) No. 813/2013 of 2 August 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for space heaters and combination heaters.

# CAPACITY AND EFFICIENCY DATA IN RELATION TO THE OUTDOOR TEMPERATURE ACCORDING TO THE EN14511-3:2013 STANDARD

| | **COOLING - Dry bulb outdoor air temperature in °C - (AGHPSA081)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 4.35 | 4.17 | 4.82 | 4.01 | 5.09 | 3.89 | 5.41 | 3.71 | 5.51 | 3.40 | 5.30 | 3.06 | 4.82 | 2.54 | 3.76 | 1.87 | 3.18 | 1.50 |
| 8 | 4.51 | 4.26 | 4.98 | 4.11 | 5.25 | 4.01 | 5.57 | 3.80 | 6.04 | 3.49 | 5.46 | 3.16 | 4.98 | 2.60 | 3.87 | 1.90 | 3.29 | 1.53 |
| 9 | 4.56 | 4.41 | 5.09 | 4.23 | 5.35 | 4.11 | 5.72 | 3.92 | 6.20 | 3.58 | 5.62 | 3.25 | 5.09 | 2.70 | 3.98 | 1.96 | 3.34 | 1.56 |
| 10 | 4.72 | 4.50 | 5.25 | 4.35 | 5.51 | 4.23 | 5.88 | 4.01 | 6.36 | 3.68 | 5.78 | 3.31 | 5.25 | 2.76 | 4.08 | 1.99 | 3.45 | 1.62 |
| 11 | 4.88 | 4.63 | 5.41 | 4.47 | 5.72 | 4.35 | 6.04 | 4.14 | 6.57 | 3.80 | 5.94 | 3.40 | 5.41 | 2.85 | 4.19 | 2.08 | 3.55 | 1.68 |
| 12 | 4.98 | 4.75 | 5.57 | 4.56 | 5.88 | 4.44 | 6.25 | 4.20 | 6.73 | 3.89 | 6.10 | 3.49 | 5.57 | 2.91 | 4.35 | 2.14 | 3.66 | 1.72 |
| 13 | 5.09 | 4.87 | 5.67 | 4.72 | 5.99 | 4.56 | 6.31 | 4.35 | 6.89 | 3.98 | 6.20 | 3.58 | 5.67 | 3.00 | 4.40 | 2.18 | 3.71 | 1.75 |
| 14 | 5.25 | 4.99 | 5.83 | 4.81 | 6.10 | 4.66 | 6.47 | 4.44 | 7.05 | 4.07 | 6.36 | 3.68 | 5.83 | 3.06 | 4.51 | 2.24 | 3.82 | 1.78 |
| 15 | 5.35 | 5.15 | 5.99 | 4.93 | 6.25 | 4.78 | 6.68 | 4.53 | 7.21 | 4.17 | 6.52 | 3.77 | 5.99 | 3.12 | 4.66 | 2.30 | 3.92 | 1.84 |
| 18 | 5.78 | 5.45 | 6.36 | 5.27 | 6.73 | 5.12 | 7.16 | 4.84 | 7.69 | 4.44 | 7.00 | 4.01 | 6.36 | 3.31 | 4.98 | 2.45 | 4.24 | 1.96 |
| 20 | 5.99 | 5.70 | 6.63 | 5.48 | 7.00 | 5.33 | 7.42 | 5.09 | 8.06 | 4.66 | 7.31 | 4.20 | 6.63 | 3.46 | 5.14 | 2.54 | 4.40 | 2.05 |
| 23 | 6.41 | 6.04 | 7.10 | 5.79 | 7.47 | 5.64 | 7.90 | 5.39 | 8.53 | 4.93 | 7.79 | 4.44 | 7.10 | 3.68 | 5.51 | 2.73 | 4.66 | 2.18 |
| 25 | 6.63 | 6.28 | 7.37 | 6.07 | 7.79 | 5.85 | 8.22 | 5.58 | 8.85 | 5.12 | 8.06 | 4.63 | 7.37 | 3.83 | 5.72 | 2.82 | 4.82 | 2.27 |

| | **HEATING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 3.44 | 4.04 | 4.16 | 4.26 | 4.96 | 4.56 | 5.68 | 4.75 | 6.08 | 5.05 | 6.80 | 5.27 | 7.52 | 5.46 | 7.36 | 5.72 | 7.60 | 5.94 | 8.00 | 6.50 | 7.92 | 6.88 | 7.20 | 6.84 | 6.32 | 7.44 | 4.96 | 7.89 |
| 30 | 3.36 | 3.29 | 4.08 | 3.59 | 4.80 | 3.81 | 5.52 | 4.04 | 5.92 | 4.26 | 6.56 | 4.49 | 7.28 | 4.71 | 7.76 | 5.23 | 8.00 | 5.53 | 8.48 | 5.94 | 8.40 | 6.32 | 7.60 | 6.32 | 6.64 | 6.84 | 5.20 | 7.29 |
| 35 | 3.28 | 2.77 | 3.84 | 2.92 | 4.48 | 3.10 | 5.20 | 3.40 | 5.60 | 3.59 | 6.24 | 3.81 | 6.80 | 3.93 | 8.00 | 4.71 | 8.24 | 4.97 | 8.72 | 5.38 | 8.64 | 5.61 | 7.84 | 5.61 | 6.88 | 6.24 | 5.36 | 6.62 |
| 40 | 3.28 | 2.39 | 3.84 | 2.65 | 4.48 | 2.92 | 5.20 | 3.10 | 5.60 | 3.25 | 6.24 | 3.51 | 6.80 | 3.70 | 8.00 | 4.22 | 8.24 | 4.45 | 8.72 | 4.86 | 8.64 | 5.08 | 7.84 | 5.05 | 6.88 | 5.57 | 5.36 | 5.94 |
| 45 | | | 3.84 | 2.36 | 4.48 | 2.58 | 5.20 | 2.80 | 5.60 | 2.92 | 6.24 | 3.10 | 6.80 | 3.29 | 8.00 | 3.74 | 8.24 | 3.93 | 8.72 | 4.26 | 8.64 | 4.49 | 7.84 | 4.71 | 6.88 | 4.93 | 5.36 | 5.23 |
| 50 | | | | | 4.32 | 2.21 | 5.04 | 2.39 | 5.44 | 2.50 | 6.08 | 2.69 | 6.56 | 2.77 | 7.76 | 3.25 | 8.00 | 3.40 | 8.48 | 3.74 | 8.40 | 3.93 | 7.60 | 4.11 | 6.64 | 4.30 | 5.20 | 4.60 |
| 55 | | | | | | | 4.80 | 1.98 | 5.12 | 2.09 | 5.76 | 2.28 | 6.24 | 2.39 | 7.36 | 2.77 | 7.60 | 2.92 | 8.00 | 3.18 | 7.92 | 3.33 | 7.20 | 3.48 | 6.32 | 3.66 | 4.96 | 3.93 |
| 60 | | | | | | | | | 4.88 | 1.72 | 5.44 | 1.79 | 5.92 | 1.91 | 6.96 | 2.28 | 7.20 | 2.32 | 7.60 | 2.50 | 7.52 | 2.62 | 6.80 | 2.77 | 6.00 | 2.88 | 4.64 | 3.10 |

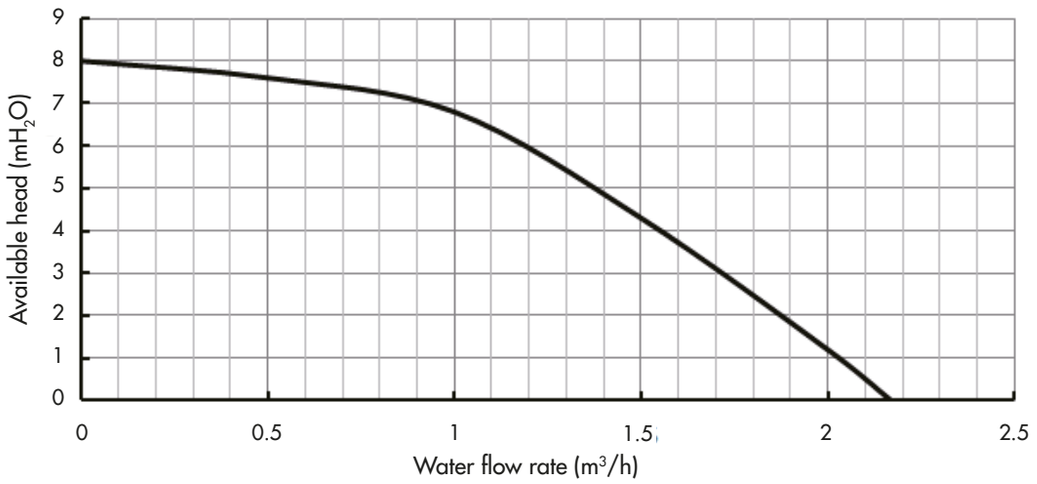
| | **COOLING - Dry bulb outdoor air temperature in °C - (AGHPSA101)** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | | 40 | | 45 | | 48 | |
| LWT [°C] | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER | Qc [kW] | EER |
| 7 | 5.33 | 3.89 | 5.92 | 3.75 | 6.24 | 3.64 | 6.63 | 3.46 | 6.76 | 3.18 | 6.50 | 2.86 | 5.92 | 2.38 | 4.62 | 1.75 | 3.90 | 1.40 |
| 8 | 5.46 | 4.01 | 6.11 | 3.87 | 6.44 | 3.75 | 6.83 | 3.58 | 6.96 | 3.26 | 6.70 | 2.95 | 6.11 | 2.43 | 4.75 | 1.78 | 4.03 | 1.46 |
| 9 | 5.66 | 4.15 | 6.24 | 4.01 | 6.57 | 3.87 | 7.02 | 3.69 | 7.15 | 3.38 | 6.89 | 3.04 | 6.24 | 2.52 | 4.94 | 1.86 | 4.10 | 1.52 |
| 10 | 5.79 | 4.24 | 6.37 | 4.09 | 6.70 | 3.95 | 7.22 | 3.81 | 7.35 | 3.46 | 7.02 | 3.12 | 6.37 | 2.58 | 5.01 | 1.92 | 4.23 | 1.52 |
| 11 | 5.92 | 4.35 | 6.57 | 4.21 | 6.96 | 4.07 | 7.35 | 3.87 | 7.54 | 3.58 | 7.22 | 3.21 | 6.57 | 2.66 | 5.07 | 1.95 | 4.36 | 1.57 |
| 12 | 6.11 | 4.47 | 6.70 | 4.30 | 7.15 | 4.18 | 7.54 | 3.98 | 7.67 | 3.67 | 7.41 | 3.29 | 6.70 | 2.72 | 5.27 | 2.00 | 4.49 | 1.60 |
| 13 | 6.24 | 4.61 | 6.89 | 4.44 | 7.35 | 4.30 | 7.74 | 4.09 | 7.87 | 3.78 | 7.61 | 3.38 | 6.89 | 2.83 | 5.40 | 2.09 | 4.55 | 1.66 |
| 14 | 6.44 | 4.70 | 7.15 | 4.52 | 7.48 | 4.41 | 7.93 | 4.21 | 8.13 | 3.84 | 7.80 | 3.46 | 7.15 | 2.89 | 5.53 | 2.12 | 4.68 | 1.72 |
| 15 | 6.57 | 4.84 | 7.28 | 4.64 | 7.67 | 4.50 | 8.19 | 4.30 | 8.32 | 3.92 | 8.00 | 3.55 | 7.28 | 2.95 | 5.72 | 2.15 | 4.81 | 1.75 |
| 18 | 7.02 | 5.18 | 7.74 | 5.01 | 8.13 | 4.84 | 8.65 | 4.61 | 8.91 | 4.24 | 8.52 | 3.81 | 7.74 | 3.15 | 6.05 | 2.32 | 5.14 | 1.86 |
| 20 | 7.35 | 5.44 | 8.13 | 5.21 | 8.58 | 5.10 | 9.10 | 4.84 | 9.30 | 4.44 | 8.91 | 3.98 | 8.13 | 3.32 | 6.31 | 2.43 | 5.33 | 1.98 |
| 23 | 7.74 | 5.76 | 8.58 | 5.53 | 9.04 | 5.38 | 9.62 | 5.13 | 9.82 | 4.70 | 9.43 | 4.24 | 8.58 | 3.49 | 6.63 | 2.58 | 5.66 | 2.06 |
| 25 | 8.00 | 5.98 | 8.91 | 5.78 | 9.36 | 5.58 | 10.01 | 5.33 | 10.21 | 4.90 | 9.82 | 4.41 | 8.91 | 3.67 | 6.96 | 2.69 | 0.00 | 2.18 |

LWT: Leaving water temperature
Qh: Heating capacity
COP: Coefficient of performance

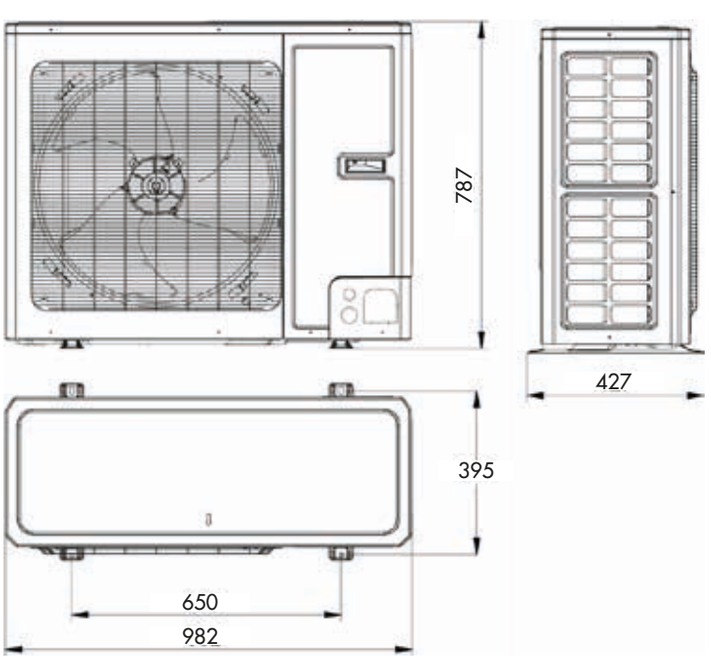
LWT: Leaving water temperature
Qc: Cooling capacity
EER: Energy efficiency ratio

| | **HEATING - Dry bulb outdoor air temperature in °C** | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -25 | | -20 | | -15 | | -10 | | -7 | | -2 | | 2 | | 7 | | 10 | | 15 | | 20 | | 25 | | 30 | | 35 | |
| LWT [°C] | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP | Qh [kW] | COP |
| 25 | 4.09 | 3.99 | 4.94 | 4.21 | 5.89 | 4.50 | 6.75 | 4.68 | 7.22 | 4.97 | 8.08 | 5.18 | 8.93 | 5.40 | 8.74 | 5.61 | 9.03 | 5.87 | 9.50 | 6.41 | 9.41 | 6.80 | 8.55 | 6.73 | 7.51 | 7.34 | 5.89 | 7.77 |
| 30 | 3.99 | 3.24 | 4.85 | 3.49 | 5.70 | 3.74 | 6.56 | 3.96 | 7.03 | 4.17 | 7.79 | 4.39 | 8.65 | 4.61 | 9.22 | 5.11 | 9.50 | 5.43 | 10.07 | 5.79 | 9.98 | 6.19 | 9.03 | 6.19 | 7.89 | 6.69 | 6.18 | 7.16 |
| 35 | 3.90 | 2.73 | 4.56 | 2.88 | 5.32 | 3.06 | 6.18 | 3.31 | 6.65 | 3.53 | 7.41 | 3.74 | 8.08 | 3.85 | 9.50 | 4.61 | 9.79 | 4.86 | 10.36 | 5.29 | 10.26 | 5.51 | 9.31 | 5.51 | 8.17 | 6.12 | 6.37 | 6.48 |
| 40 | 3.90 | 2.34 | 4.56 | 2.59 | 5.32 | 2.81 | 6.18 | 2.99 | 6.65 | 3.13 | 7.41 | 3.38 | 8.08 | 3.60 | 9.50 | 4.10 | 9.79 | 4.32 | 10.36 | 4.68 | 10.26 | 4.93 | 9.31 | 4.89 | 8.17 | 5.40 | 6.37 | 5.76 |
| 45 | | | 4.56 | 2.27 | 5.32 | 2.48 | 6.18 | 2.70 | 6.65 | 2.81 | 7.41 | 2.99 | 8.08 | 3.17 | 9.50 | 3.60 | 9.79 | 3.78 | 10.36 | 4.10 | 10.26 | 4.32 | 9.31 | 4.53 | 8.17 | 4.75 | 6.37 | 5.04 |
| 50 | | | | | 5.13 | 2.09 | 5.99 | 2.27 | 6.46 | 2.38 | 7.22 | 2.55 | 7.79 | 2.63 | 9.22 | 3.09 | 9.50 | 3.24 | 10.07 | 3.56 | 9.98 | 3.71 | 9.03 | 3.89 | 7.89 | 4.07 | 6.18 | 4.35 |
| 55 | | | | | | | 5.70 | 1.87 | 6.08 | 1.94 | 6.84 | 2.12 | 7.41 | 2.23 | 8.74 | 2.59 | 9.03 | 2.73 | 9.50 | 2.95 | 9.41 | 3.13 | 8.55 | 3.24 | 7.51 | 3.42 | 5.89 | 3.67 |
| 60 | | | | | | | | | 5.80 | 1.58 | 6.46 | 1.66 | 7.03 | 1.76 | 8.27 | 2.09 | 8.55 | 2.16 | 9.03 | 2.30 | 8.93 | 2.41 | 8.08 | 2.55 | 7.13 | 2.66 | 5.51 | 2.84 |

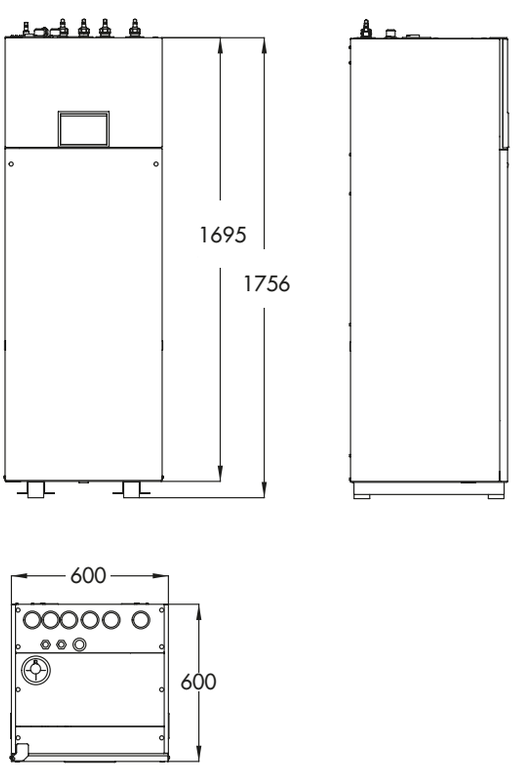
# FLOW RATE CURVES 8-10 kW




# DIMENSIONAL DRAWINGS 8-10 kW

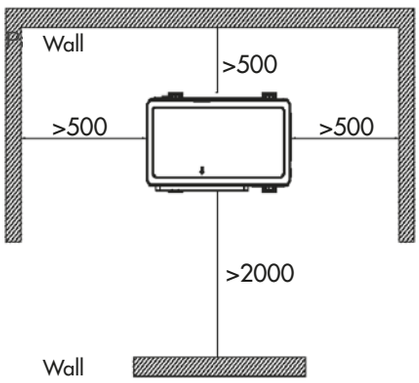


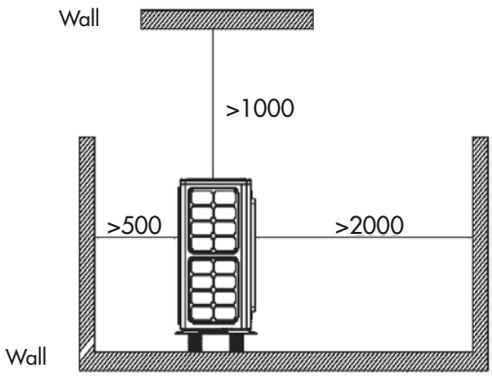

OUTDOOR UNIT 8-10 kW



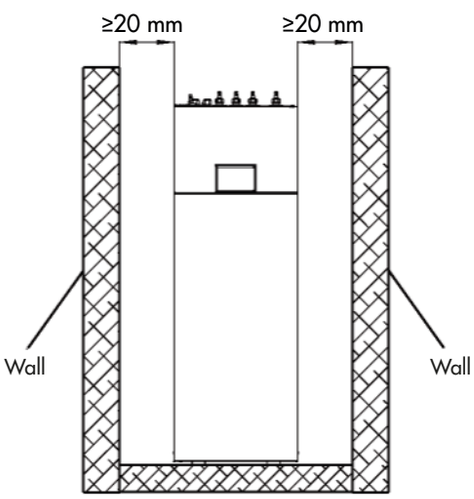

INDOOR UNIT 8-10 kW

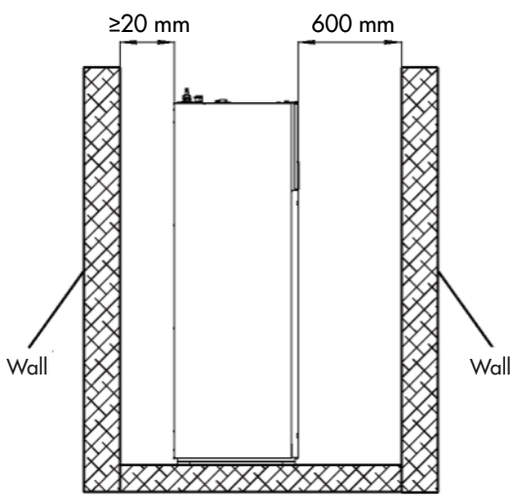
# SPACE REQUIRED FOR OUTDOOR UNIT INSTALLATION 6-8-10 kW




# SPACE REQUIRED FOR INDOOR UNIT INSTALLATION 6-8-10 kW

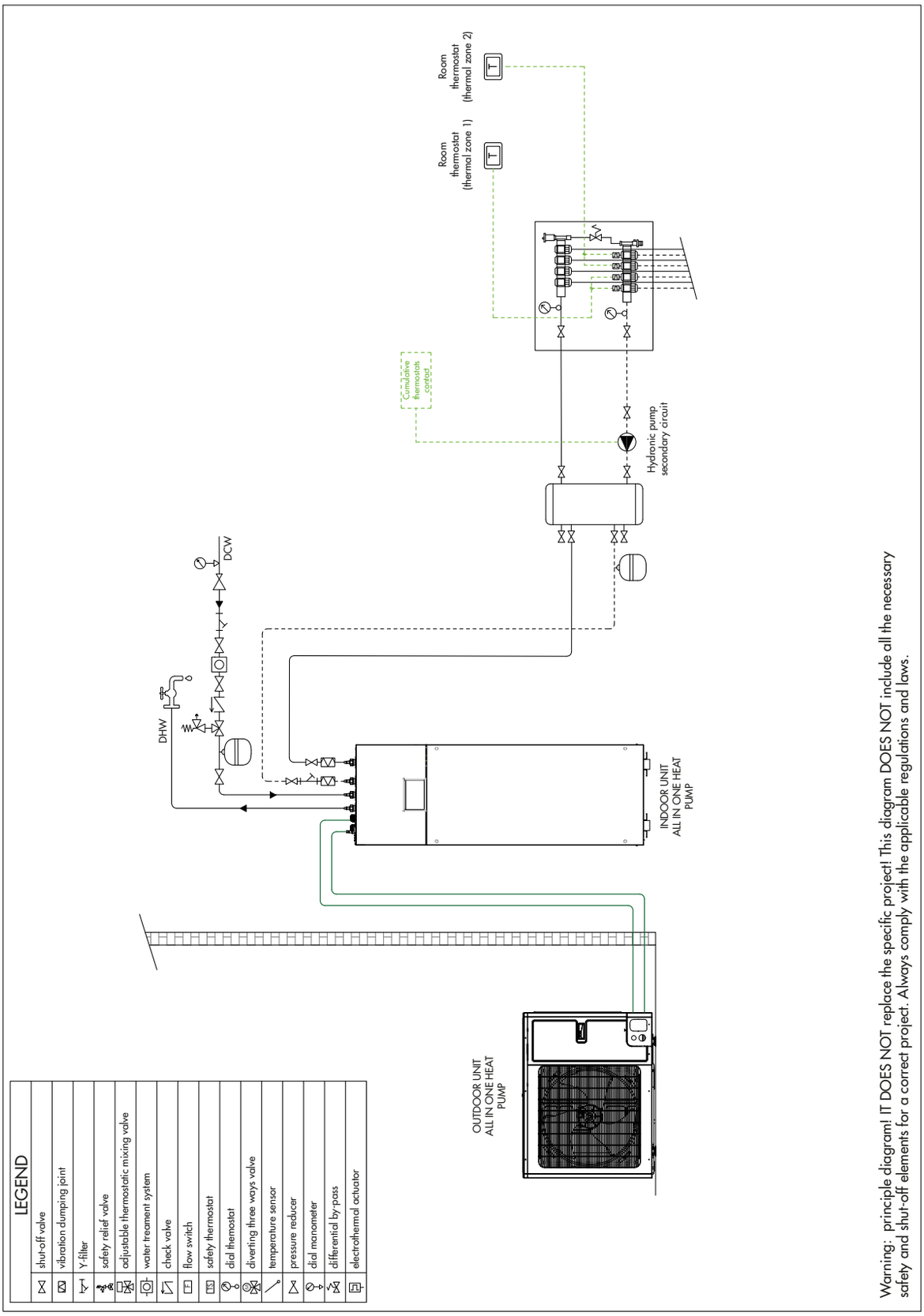


# INSTALLATION EXAMPLES

## EXAMPLE 1

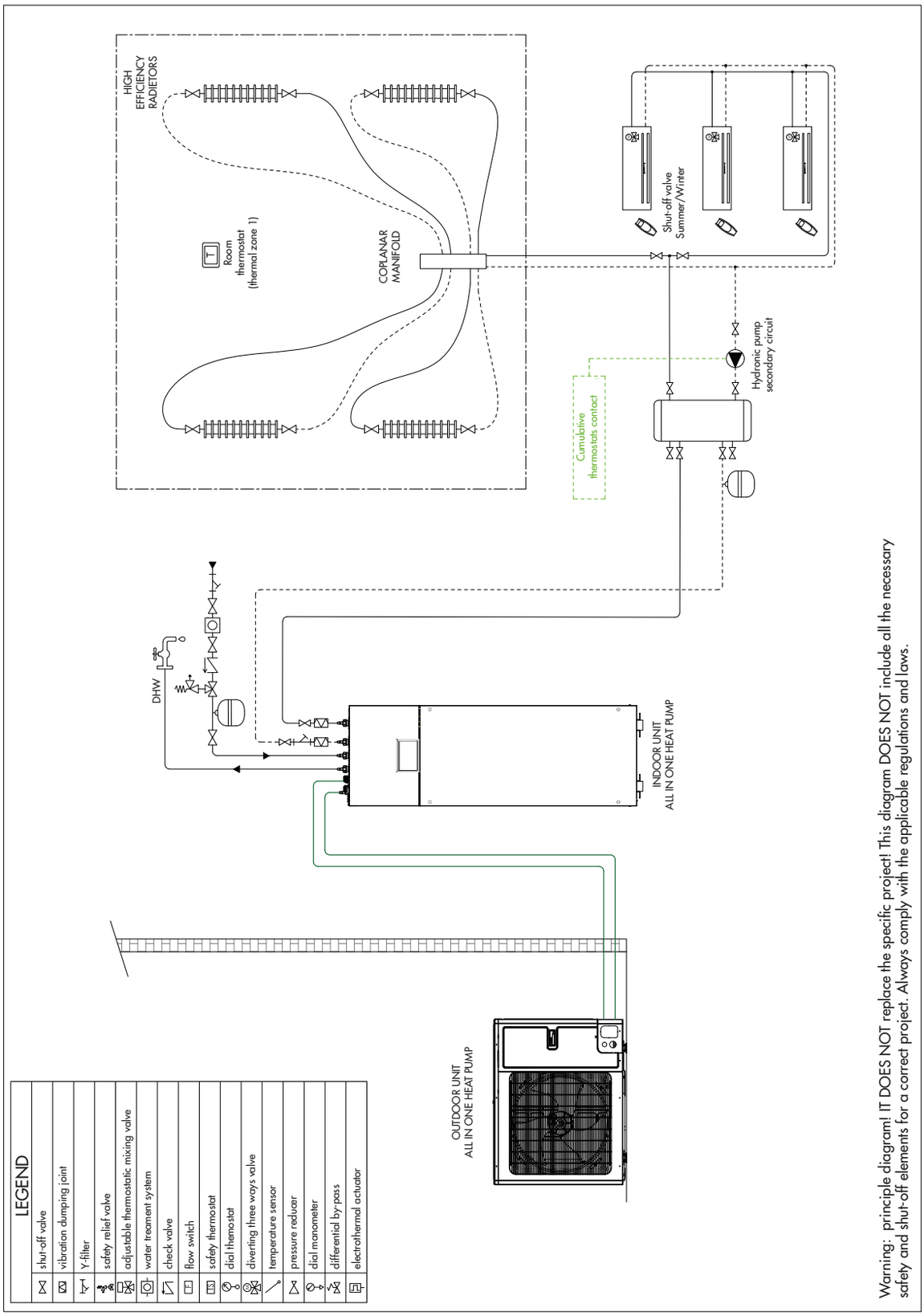
Radiant heating and DHW with integrated three-way valve and tank




Warning: principle diagram! IT DOES NOT replace the specific project! This diagram DOES NOT include all the necessary safety and shut-off elements for a correct project. Always comply with the applicable regulations and laws.

## EXAMPLE 2

Heating (cooling) by means of fan coil units and DHW with integrated three-way valve and tank




Warning: principle diagram! IT DOES NOT replace the specific project! This diagram DOES NOT include all the necessary safety and shut-off elements for a correct project. Always comply with the applicable regulations and laws.

# ACCESSORIES

# ACCESSORIES

| VARIUS | | | | | |
|---|---|---|---|---|---|
| | **Code** | **Description** | **iSERIES** | **iM** | **X3 air to water heat pumps** |
|  | 387030211 | Control panel for management of DHW production | | ● | |
|  | 387030210 | Bidirectional servomotor for diverting valve, 230 Vac, three points | ● | ● | MONOBLOC |
|  | 387030209 | 3-way diverting valve, 1″ | ● | ● | MONOBLOC |
|  | 387030701 | 200 litres DHW Tank - 1 heat exchanger for heat pump | ● | ● | MONOBLOC; SPLIT |
| | 387030702 | 300 litres DHW Tank - 1 heat exchanger for heat pump | ● | ● | MONOBLOC; SPLIT |
|  | 387030700 | 300 litres DHW Tank - 2 heat exchangers for heat pump and solar power system | ● | ● | MONOBLOC; SPLIT |
|  | 387030208 | 3 kW electric heater for DHW tank | ● | ● | MONOBLOC; SPLIT |
|  | 387030727 | Additional electric heating element for internal installation 3 kW 1ph | ● | ● | MONOBLOC |
| | 387030728 | Additional electric heating element for internal installation 3 kW 3ph | ● | ● | MONOBLOC |

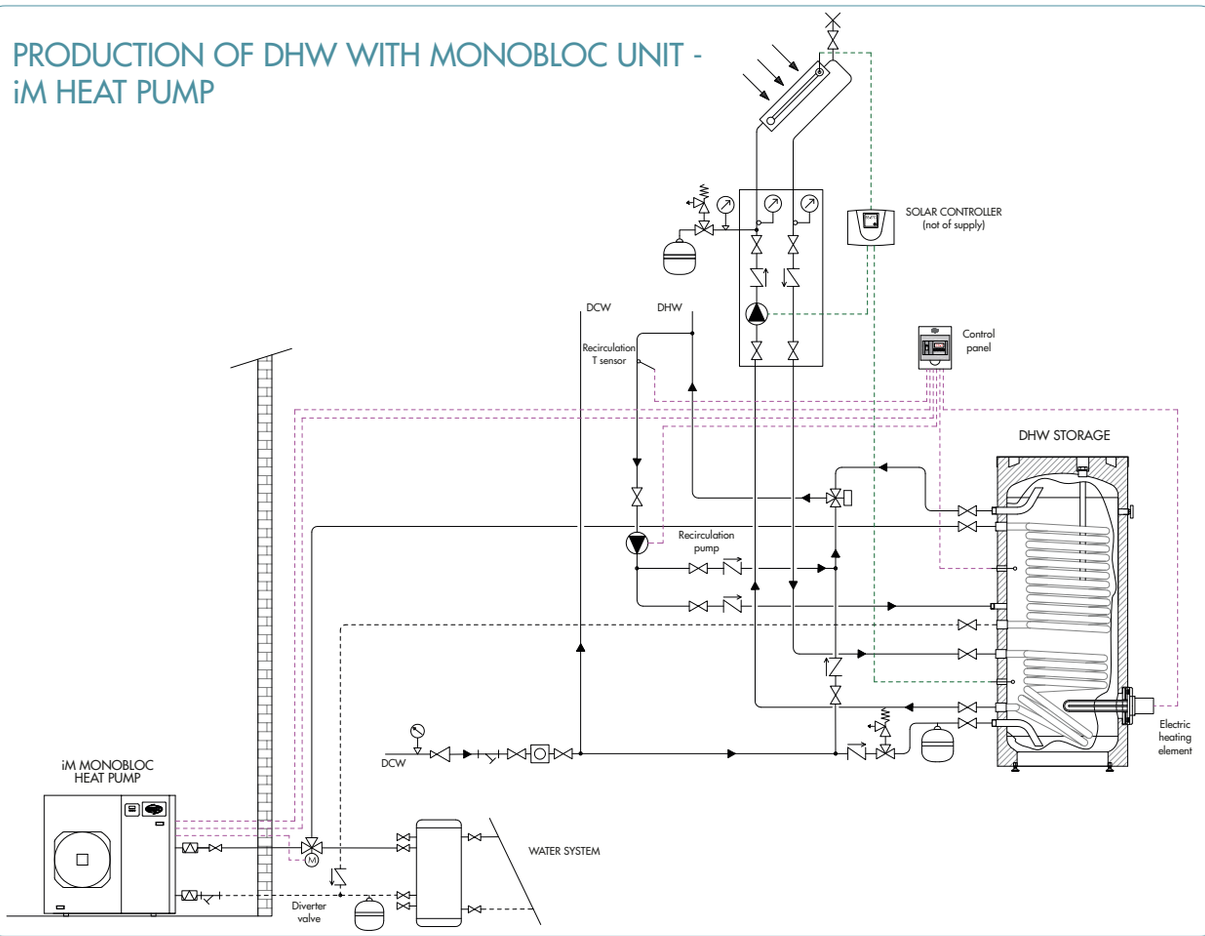
| VARIUS | | | | | |
|---|---|---|---|---|---|
| | **Code** | **Description** | **iSERIES** | **iM** | **X3 air to water heat pumps** |
|  | 387030705 | 45 litres tank/isolated separator, 6 connections | ● | ● | MONOBLOC; SPLIT; ALL IN ONE |
|  | 387030706 | 85 litres tank/isolated separator, 6 connections | ● | ● | MONOBLOC; SPLIT; ALL IN ONE |
|  | 387030206 | 2 kW electric heater for a 45-85 litres tank/separator | ● | ● | MONOBLOC; SPLIT; ALL IN ONE |
|  | 387030215 | Gateway modbus | | ● | |
|  | 387030214 | Remote panel for iM | | ● | |
|  | 387030220 | Wired control for iSERIES indoor units - **Mandatory accessory** | ● | | |

# ACCESSORIES

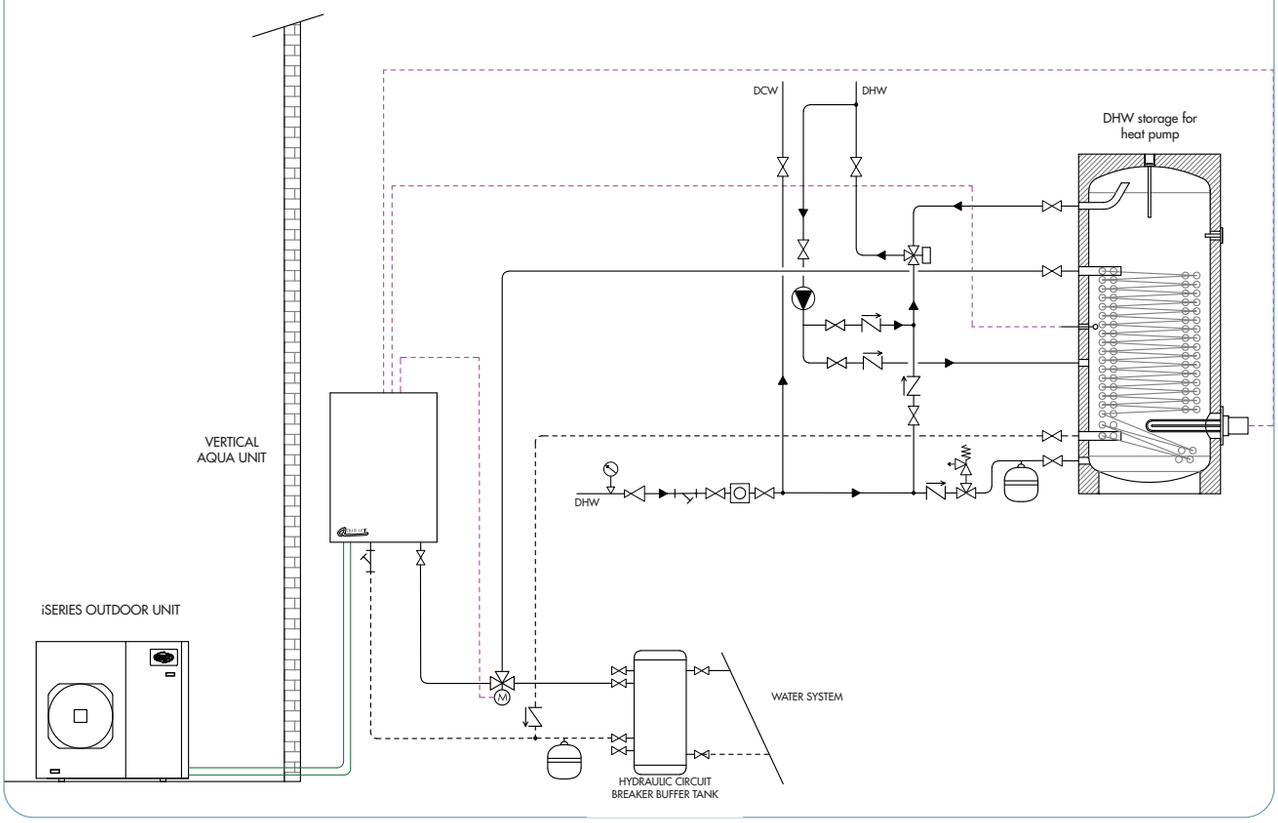
## THE PRODUCTION OF DHW

It is possibile to produce domestic hot water using iM unit and AQUA UNIT (as an alternative to EMIX/EMIX TANK) managing the switching of the heat supply from the heating system to a specific storage tank.
The DHW system, therefore, consists of a domestic hot water tank (with internal exchanger suitable for heat exchange with a heat pump), an electric heating element, a control panel with temperature probe and a diverting valve. Moreover, it features auxiliary functions such as the anti-legionella cycle management, a backup, if provided, and the domestic water recirculation function.

### PRODUCTION OF DHW WITH MONOBLOC UNIT - iM HEAT PUMP



# PRODUCTION OF DHW WITH iSERIES SPLIT UNIT - VERICAL AQUA UNIT



# ACCESSORIES

## CONTROL PANEL

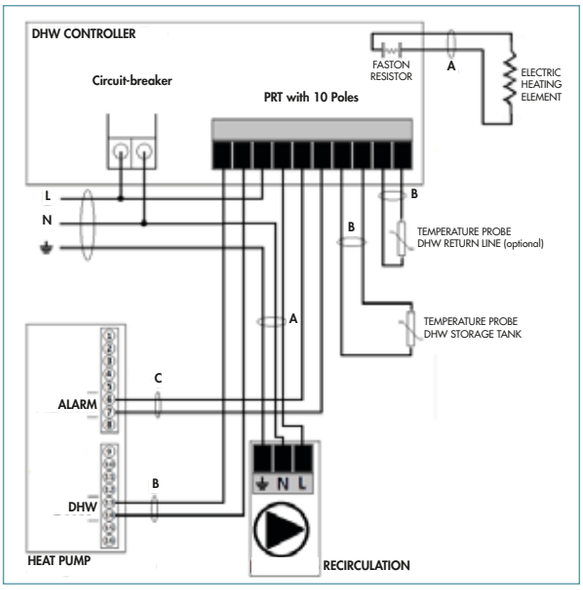
The control panel of the DHW KIT is an electronic device installed in a special electric panel for the control and management of the domestic hot water production in the iM/iSERIES systems. The unit is capable of controlling a heat pump and a heating element (up to 4 kW) using them to activate the multiple functions and optimising energy consumption.

What the system can do:

- produce domestic hot water in a storage tank using a heat pump and/or a heating element;
- control the recirculation pump of the domestic water circuit;
- control the anti-legionella cycle;
- anti-freeze protection;
- manage any alarm/unavailability of the heat pump.

| Code | Description |
|---|---|
| 387030211 | Control panel for management of DHW production |

### REFERENCE WIRING DIAGRAM

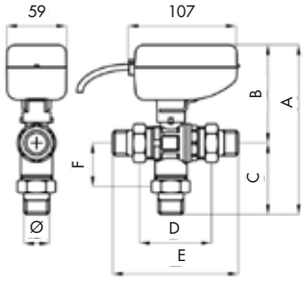



### CONTROL PANEL TECHNICAL DATA

| ELECTRICAL SPECIFICATIONS | |
|---|---|
| Voltage | 230 Vac |
| Power consumption | 7 VA |
| Total breaking capacity | 460 VA (relay outputs 1+153) |
| Breaking capacity for relay | 460 VA per R1/185 W |
| Internal fuse | 5 A delayed |
| Protection category | IP40 |
| Protection calss | II |
| Measuring range | -40 °C up to 110 °C |
| **PERMITTED CLIMATIC CONDITIONS** | |
| Room temperature for a correct operation | 0 °C/40 °C |
| Ambient temperature for transportation/storage | 0 °C/40 °C |
| Room humidity for a correct operation | 85% UR with DBS 25 °C |
| Ambient humidity for transportation/storage | 85% UR with DBS 25 °C |
| **OTHER SPECIFICATIONS** | |
| Casing | Plastic ABS |
| Type of installation | Wall-mounting |
| Total dimension | 200x147x95 (mm) |
| Display | LED display 7 seg. 3 digits |
| | 4 LED (red, yellowe, green and white) |
| Programming | 4 buttons |

# DIVERTING VALVE

The diverting valve consists of 2 elements: the valve body and the servomotor, supplied separately.




## DIMENSIONS (mm)

| ND | Ø OUTLETS | Ø VALVE BODY | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|
| 20 | 3/4" | 1" | 170 | 100 | 70 | 67 | 128 | 40 |

# SERVOMOTOR

| Code | Description |
|---|---|
| 387030210 | Bidirectional servomotor for diverting valve, 230 Vac, three points |

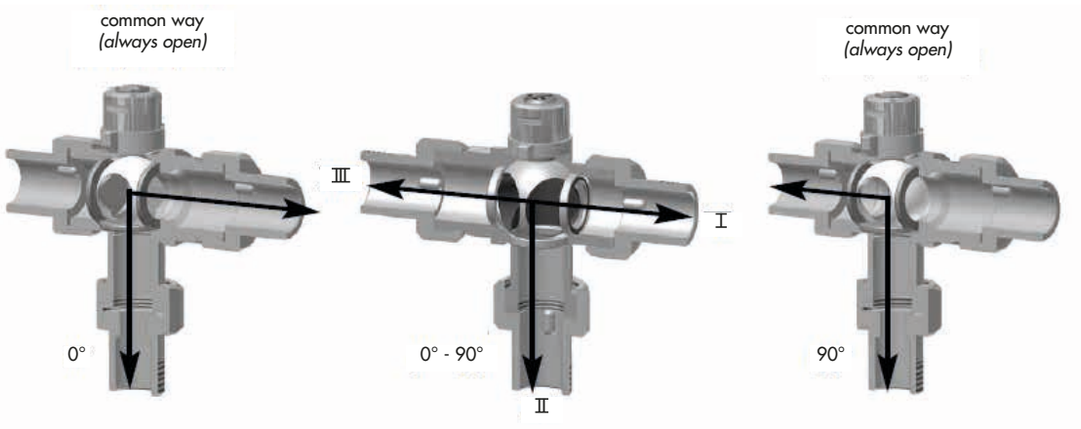
## TECHNICAL DATA

| TECHNICAL SPECIFICATIONS | |
|---|---|
| Electric control | 3 points |
| Valve body connection | quick fitting |
| Operating mode | ON/OFF |
| Rotation | 90° clockwise and anticlockwise |
| Internal fuse | 5 A delayed |
| Position indicator | rotating arrow wich indicates the position of the sphere |
| Motor | bidirectional |
| Electrical power supply | 230 Vac - 50/60 Hz |
| Power cable lenght | 80 cm |
| Diverting time and related starting torque | 15 seconds - 5 Nm |
| Power usage | 3.9 VA |
| Phase electric capacity in output to grey wire | 1 A resistive |
| Electric capacity of the supplementary micro-switch | 1 A resistive - 250 V |
| Indoor operating temperature | +5 °C ÷ +50 °C |
| Protection degree | IP 54 |
| Insulation class | II - double insulation |
| External casing material | polyamide PA 6, 30% glass fibre |
| Certification | CE |

# VALVE BODY

| Code | Description |
|---|---|
| 387030209 | 3-way diverting valve, 1" |

The main characteristic of the valve body is the presence of a 3-hole sphere, which has a hole directed to the common way (always open) and two other orthogonal holes to the first and between them.
When one of the last two holes is positioned on one of the two inlet ways, the second way is closed. The sphere turns 90° and the second hole is directed onto the second inlet way, thus closing the first. The 3-way valve body includes a condition in which the 3 ways are simultaneously communicating with one another while the sphere is rotating to switch from one position to the other. When the rotation completes, the valve goes completely back to its diverter function.




## VALVE BODY TECHNICAL DATA

| TECHNICAL DATA | |
|---|---|
| Type | 3-way vertical, diverting |
| Body dimension | 1" total flow |
| Valve body material | brass CW617N UNI EN 12165 |
| Sleeve material | brass CW617N UNI EN 12165 |
| Sphere material | brass CW617N UNI EN 12165 |
| Seal material | P.T.F.E. |
| $Kv_s$ | 18.3 $m^3/h$ |
| Nominal operating pressure | 30 bar |
| Maximum pressure differential | 16 bar |
| Minimum fluid temperature | +5 °C |
| Maximum fluid temperature | +160 °C |
| Suitable fluid | water and fluids compatible with EPDM and P.T.F.E. |

# ENAMELED STEEL TANKS FOR HEAT PUMPS

DHW tank
200-300 L
1 heat exchanger

DHW tank
300 L
2 heat exchangers

Enameled steel for the production and storage of domestic hot water (DHW). They are fitted with one or two fixed internal heat exchangers that can be powered by a heat pump and by a solar power system. The heat exchangers have a large surface area which means that the power supplied by the source can be transmitted faster and more effectively, thus reducing the number of start-up and shutdown cycles of the heat pump that will benefit the duration and reliability of the system. They are also designed and ready to allow the installation of an additional electric heating element

Accessories:
Electric heating element kit for DHW tank

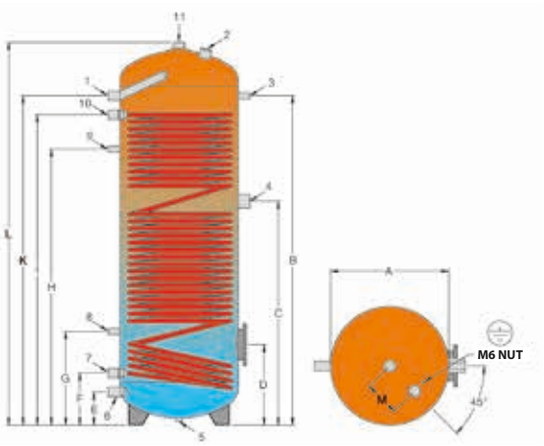
| Model | Code | Description |
|---|---|---|
| ACS 200 LT - 1S | 387030701 | 200 litres DHW Tank - 1 heat exchanger for heat pump |
| ACS 300 LT - 1S | 387030702 | 300 litres DHW Tank - 1 heat exchanger for heat pump |
| ACS 300 LT - 2S | 387030700 | 300 litres DHW Tank - 2 heat exchangers for heat pump and solar power system |

## TECHNICAL DATA

| DOMESTIC WATER STORAGE TANK | |
|---|---|
| Material | Glazed, ceramic-coated S 235 Jr carbon steel |
| Internal protective treatment | Inorganic enamelling (DIN 4753-3) |
| Use limits (P max./T max.) | 10 bar/95 °C |
| Cathodic protection | Magnesium anode |
| **HEAT EXCHANGER** | |
| Material | Glazed, ceramic-coated S 235 Jr carbon steel |
| Internal protective treatment | Untreated |
| External protective treatment | Inorganic enamelling (DIN 4753-3) |
| Type | Fixed coiled heat exchanger |
| Use limits (P max./T max.) | 10 bar/95 °C |
| **GENERAL SPECIFICATIONS** | |
| Capacity | 200-300 litres |
| Warranty | 2 years |
| Thermal insulation | Rigid polyurethane + PVC: Fire resistance class B3 (DIN 4102) |
| Reference legislation | Directive 2014/68/EU (PED) Art. 4 par. 3 (pressure equipment) |
| | Ministerial Decree No. 174 of 6 April 2004 (suitability of materials in contact with DHW) |
| | Directive 2009/125/EC (Energy related Products) |

# 200-300 L DHW TANK - 1 HEAT EXCHANGER

| Model | Total diameter | Total height | Diagonal height | Insulation thickness | ErP class | Dispersion | Real capacity | Weight - no-load |
|---|---|---|---|---|---|---|---|---|
| | mm | mm | mm | mm | | W | L | kg |
| ACS 200 LT - 1S | 640 | 1215 | 1375 | 70 | B | 51 | 190 | 90 |
| ACS 300 LT - 1S | 640 | 1615 | 1735 | 70 | B | 63 | 263 | 124 |



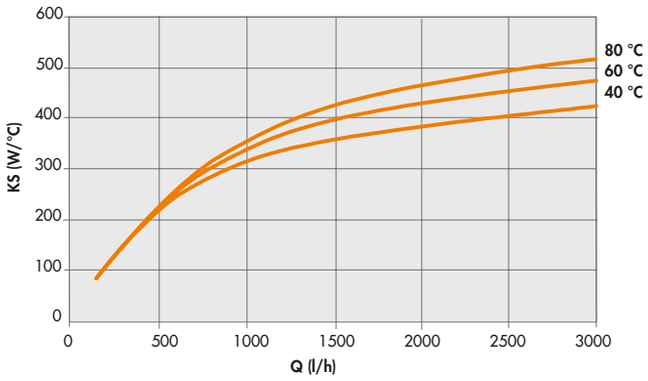

| No. | TYPE OF CONNECTION | 200-300 |
|---|---|---|
| 1 | Hot water supply | 1″ |
| 2 | Anode | 1″ 1/4 |
| 3 | Thermometer - Probe | 1/2" |
| 4 | Electric heater connection | 1″ 1/2 |
| 5 | Blind connection for fasting | 1/2" |
| 6 | Cold water intake | 1″ |
| 7 | Return heat exchanger | 1″ |
| 8 | Probe | 1/2" |
| 9 | Recirculation | 1/2" |
| 10 | Supply heat exchanger | 1″ |
| 11 | Hot water supply | 1″ 1/4 |

| Model | A | B | C | D | E | F | G | H | I | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm |
| ACS 200 LT - 1S | 500 | 995 | 735 | 320 | 140 | 220 | 370 | 835 | 990 | 1070 | 1215 | 150 |
| ACS 300 LT - 1S | 500 | 1390 | 945 | 340 | 140 | 220 | 395 | 1165 | 1310 | 1390 | 1615 | 150 |

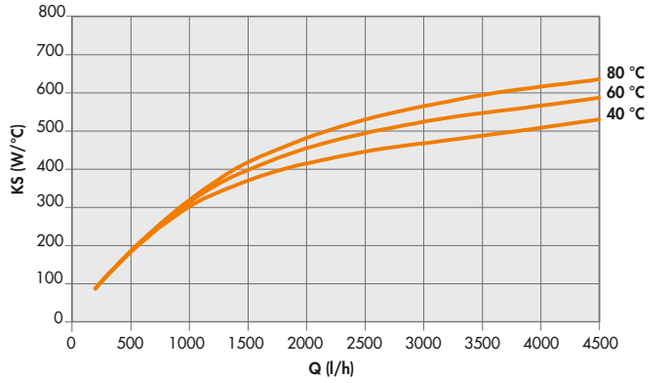
| Model | Heat exchanger surface | Heat exchanger water content | Heating water | Power output | DHW production |
|---|---|---|---|---|---|
| | | | 60 °C/50 °C | 60 °C/50 °C | 10 °C/45 °C |
| | $m^2$ | L | $m^3/h$ | kW | $m^3/h$ |
| ACS 200 LT - 1S | 3 | 17.2 | 1.2 | 14 | 0.3 |
| ACS 300 LT - 1S | 4 | 23 | 1.6 | 19 | 0.5 |

## SPECIFIC PERFORMANCE DIAGRAMS BASED ON HEAT EXCHANGER INLET TEMPERATURE

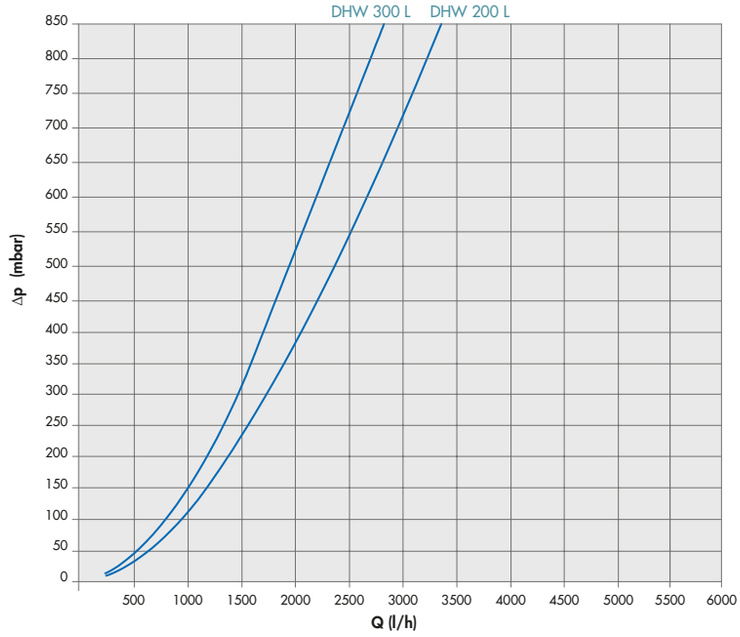
### DHW 200 L




### DHW 300 L



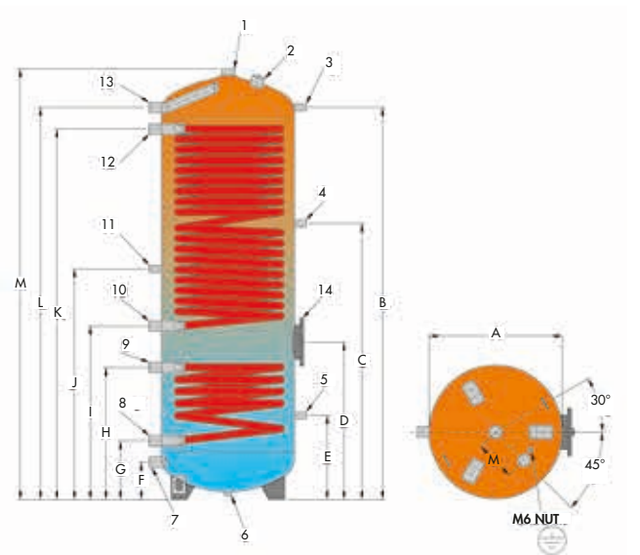

## LOAD LOSSES HEAT EXCHANGERS



# DHW TANK 300 L - DOUBLE HEAT EXCHANGER

| Model | ErP class | Dispersion | Total diameter | Total height | Diagonal height | Insulation thickness |
|---|---|---|---|---|---|---|
| | | W | mm | mm | mm | mm |
| ACS 300 LT - 2S | B | 63 | 640 | 1615 | 1735 | 70 |

| Model | Real capacity | Weight - no-load | Top heat exchanger | | Bottom heat exchanger | |
|---|---|---|---|---|---|---|
| | | | Surface | Water content | Surface | Water content |
| | L | kg | $m^2$ | L | $m^2$ | L |
| ACS 300 LT - 2S | 260 | 131 | 3.7 | 18 | 1.2 | 8 |




| No. | TYPE OF CONNECTION | 300 |
|---|---|---|
| 1 | Hot water supply | 1″ 1/4 |
| 2 | Anode | 1″ 1/4 |
| 3 | Thermometer - Probe | 1/2" |
| 4 | Thermostat | 1/2" |
| 5 | Thermostat | 1/2" |
| 6 | Blind connection for fasting | 1/2" |
| 7 | Cold water intake | 1″ |
| 8 | Return bottom heat exchanger | 1″ |
| 9 | Supply bottom heat exchanger | 1″ |
| 10 | Return top heat exchanger | 1″ |
| 11 | Recirculation | 1/2" |
| 12 | Supply top heat exchanger | 1″ |
| 13 | Hot water supply | 1″ |
| 14 | Flange with electric heater connection | 1″ 1/2 |

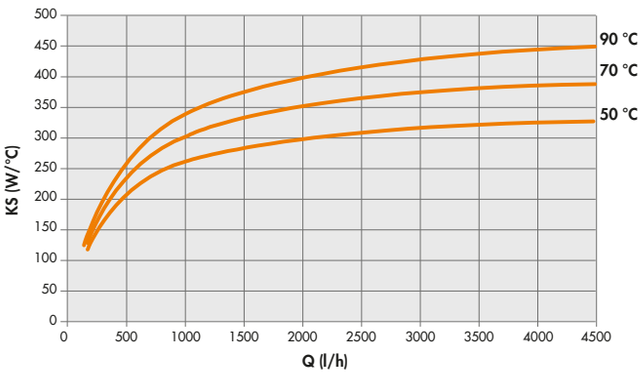
| Model | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm |
| ACS 300 LT - 2S | 500 | 1470 | 1035 | 590 | 315 | 140 | 220 | 495 | 650 | 865 | 1390 | 1470 | 1615 | 150 |

## PERFORMANCE

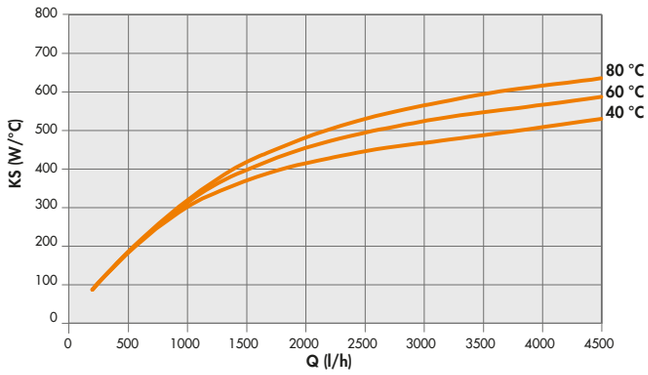
| Model | Performance | | | |
|---|---|---|---|---|
| ACS 300 LT - 2S | Top heat exchanger | | | |
| | Heating water | Power output | DHW production | Load losses |
| | 60 °C/50 °C | 60 °C/50 °C | 10 °C/45 °C | 60 °C/50 °C |
| | $m^3/h$ | kW | $m^3/h$ | mbar |
| | 1.59 | 18.5 | 0.45 | 31 |
| | Bottom heat exchanger | | | |
| | Heating water | Power output | DHW production | Load losses |
| | 80 °C/60 °C | 80 °C/60 °C | 10 °C/45 °C | 80 °C/60 °C |
| | $m^3/h$ | kW | $m^3/h$ | mbar |
| | 1.25 | 29 | 0.71 | 17 |

## SPECIFIC PERFORMANCE DIAGRAMS BASED ON HEAT EXCHANGER INLET TEMPERATURE

### Bottom heat exchanger

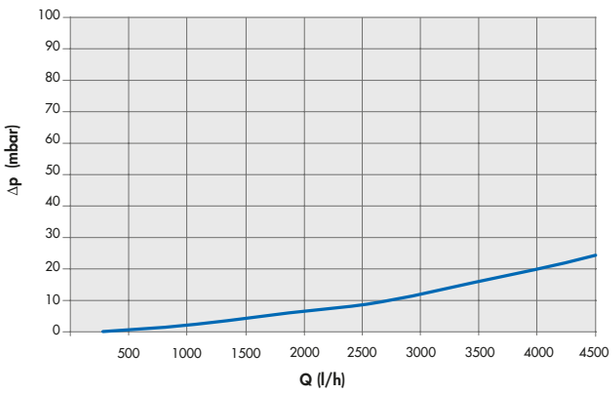



### Top heat exchanger

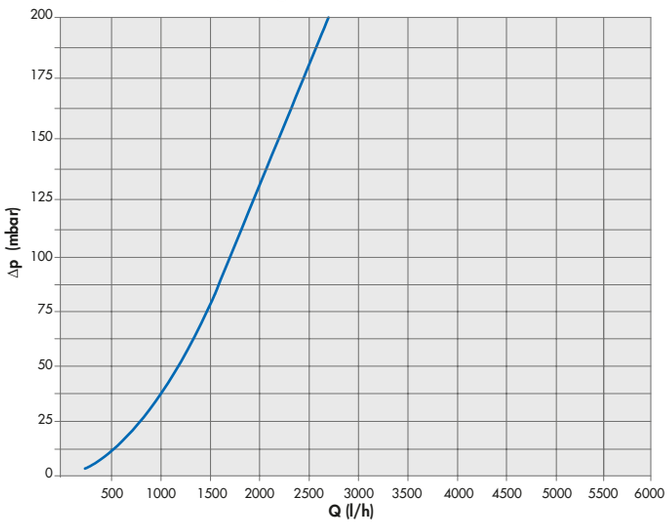



## LOAD LOSSES HEAT EXCHANGERS

### Bottom heat exchanger



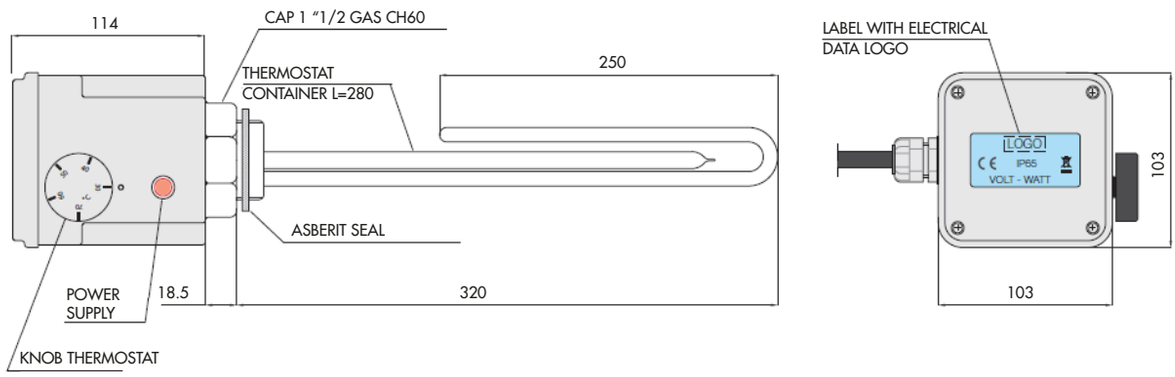

### Top heat exchanger



# ELECTRIC HEATER FOR DHW TANK

| Code | Decription |
|---|---|
| 387030208 | 3 kW electric heater for DHW tank |

The 3 kW electric heater is used in the domestic hot water storage tank as an integrative element and as a backup if needed.




## ELECTRIC HEATER FOR DHW TANK TECHNICAL DATA

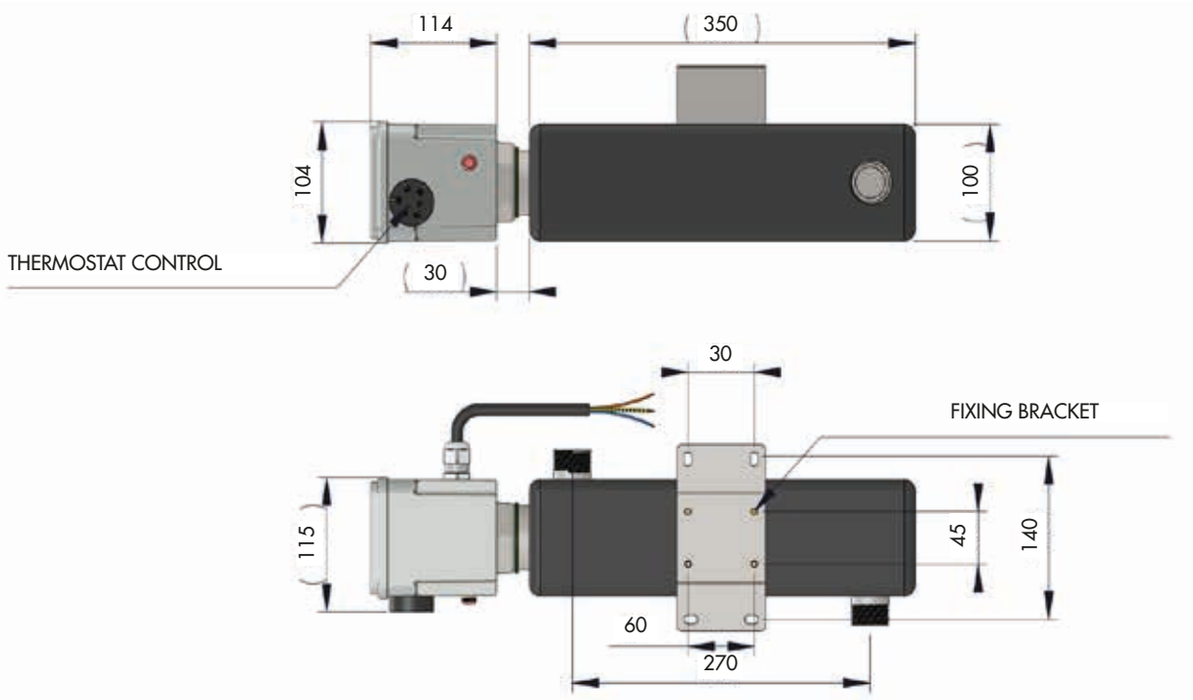
| TECHNICAL DATA | |
|---|---|
| Nominal output | 3 kW |
| Version | MgO |
| Class | I |
| Outdoor diameter | 8.5 mm |
| Power supply voltage | 230 V |
| Maximum specific load | 13 W/cm$^2$ |
| Seal material | AISI 316L |
| Threaded cup | 1"1/2 gas in AISI 304 |
| Protection cover | PP V0 IP 65 |
| Temperature regulation | thermostat 30 ÷ 70 °C |
| Safaty | thermostat 90 °C |
| Wiring | cable in PVC 3x1.5 mm$^2$ |
| Approvals | CE |
| Tests | EN 60335-1, EN 50106 |

# ADDITIONAL ELECTRIC HEATER FOR HEATING SYSTEM - INTERNAL INSTALLATION

| Code | Description |
|---|---|
| 387030727 | Additional electric heating element for internal installation 3 kW 1ph |
| 387030728 | Additional electric heating element for internal installation 3 kW 3ph |

This accessory is an electric heat exchanger supporting heat pumps which is activated, when necessary, for providing the heat required by the thermal demand. The component must be installed inside.

## DIMENSIONAL DRAWING




| TECHNICAL DATA | | |
|---|---|---|
| | **387030727** | **387030728** |
| Nominal output | 3 kW | 3 kW |
| Power supply voltage - phases | 230 V - 1 PH | 400 V - 3 PH |
| Class | I | I |
| Electrical connection | PVC cable 3x1,5 mm$^2$ | PVC cable 4x1,5 mm$^2$ |
| Length of power cord | 2 m | 2 m |
| Maximum specific load | 13,5 W/cm$^2$ | 13,1 W/cm$^2$ |
| Heating elements material | INCOLOY 800 | INCOLOY 800 |
| Seal material | AISI 304 | AISI 304 |
| Protection cover | UL94V0 | UL94V0 |
| Temperature regulation | thermostat 30 ÷ 70 °C | thermostat 30 ÷ 70 °C |
| Safaty | thermostat 90 °C | thermostat 90 °C |
| Hydraulic connections | 1″ | 1″ |
| Approvals | CE | CE |
| Tests | EN 60335-1/EN50106 | EN 60335-1/EN50106 |

# BUFFER TANKS/HYDRAULIC DISJUNCTORS

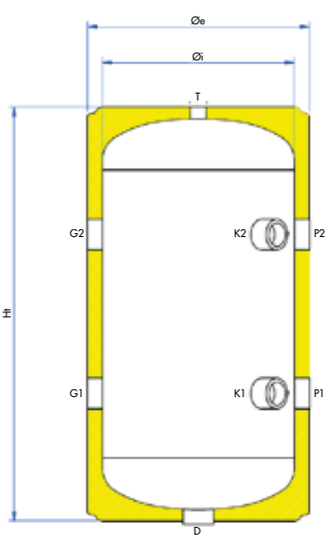
45 litres 85 litres

| Code | Description |
|---|---|
| 387030705 | 45 litres tank/isolated separator, 6 connections |
| 387030706 | 85 litres tank/isolated separator, 6 connections |
| 387030206 | 2 kW electric heater for a 45-85 litres tank/separator |

Indoor buffer tanks for air conditioning and heating systems, available in two different capacities, 45 litres and 85 litres. They are particularly suitable to be combined with reversible heat pumps acting as hydraulic circuit breaker (by making the various circuits of the system independent) and as thermal flywheel (minimising the start-ups and ensuring the minimum water supply for the correct operation of the heat pump). The tanks are provided with additional connections for the integration of an additional auxiliary source.

Key of connections:

D: drain
G2/G1: plant oulet/inlet
K1/K2: auxiliary
P2/P1: energy source oulet/inlet
T: vent




Connections:

| Model | D | G1 | G2 | K1 | K2 | P1 | P2 | T |
|---|---|---|---|---|---|---|---|---|
| | (inch) | | | | | | | |
| 45 L | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/4 | 1/2" |
| 85 L | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/4 | 1"1/4 | 1/2" |

Dimensions:

| Model | Øi | Øe | Ht | R* | G1 | G2 | K1 | K2 | P1 | P2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | (mm) | | | | | | | | | |
| 45 L | 320 | 370 | 700 | 770 | 220 | 485 | 220 | 485 | 220 | 485 |
| 85 L | 400 | 460 | 780 | 905 | 185 | 535 | 185 | 535 | 185 | 535 |

| TECHNICAL DATA | |
|---|---|
| Volume | 45 and 85 litres |
| Material | Carbon steel |
| Covering | White galvanised sheet metal |
| Thermal insulation | High-density polyurethane foam |
| Minimum operating temperature | -10 °C |
| Maximum operating temperature | 90 °C |
| Maximum operating pressure | 6 bar |
| Energy class | B |

# GATEWAY MODBUS - iMODBUS


| Code | Description |
|---|---|
| 387030215 | Gateway modbus |

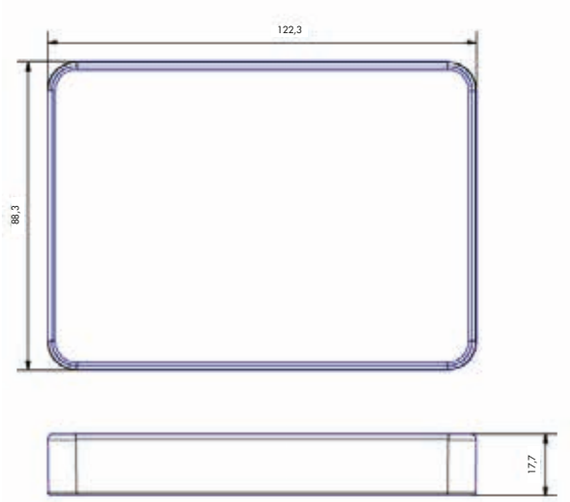
iMODBUS is an communication device between the iM heating, cooling and DHW units and remote control systems using the MODBUS protocol.
iMODBUS uses the industrial MODBUS protocol for a simple and reliable connection to external monitoring systems.
The device is fitted with two types of MODBUS ports (RS232 and RS485) and has the size of two DIN modules.
The gateway provides several reading, and reading and writing parameters in order to ensure an efficient and accurate management of the iM units. Detailed specifications can be found in the installation manual provided with the device.

# REMOTE PANEL FOR iM

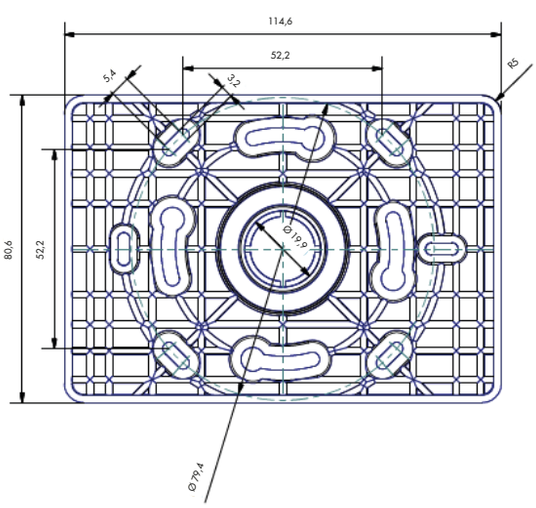

| Code | Description |
|---|---|
| 387030214 | Remote panel for iM |

The remote control panel can be installed on the units in combination with the existing one and provides for the same functions (it is NOT a room temperature probe). The panel requires a separate 12 VDC power supply (by external feeder).

## DIMENSIONS (mm)




## INSTALLATION




- Directly in the hole on the wall
- On electrical box mod. 503
- On circular electrical box

# WIRED CONTROL UNIT FOR iSERIES INDOOR UNITS

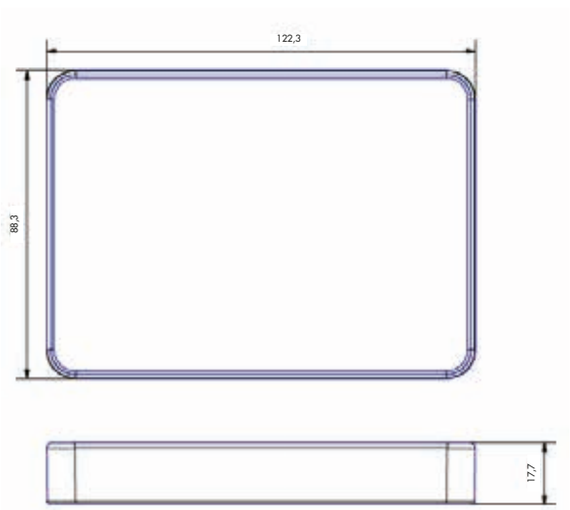

| Code | Description |
|---|---|
| 387030220 | Wired control for iSERIES indoor units - **Mandatory accessory** |

The flush control for internal units can be set during installation for the management of internal units with direct expansion or for Aqua Unit. Equipped with touch buttons and graphic display is intuitive to use by the end user. In addition, it can be easily installed both on a recessed box or directly on the wall.

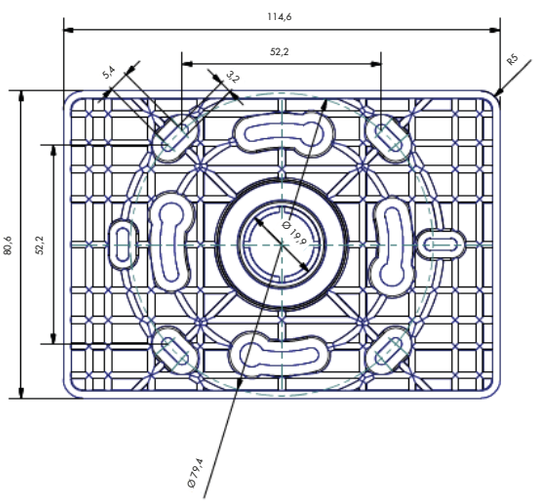
- When set up for the management of direct expansion units, it allows you to manage one or more units (centralized control), substantially duplicating the functions of the IR command.
- When set to manage hydronic units can be paired with the latest versions of Aqua Unit.

The control is equipped with an integrated wifi module that allows the management of the units remotely through the dedicated App (available from XXXX). The control can be interfaced with third-party BMS systems (via Modbus protocol). The wire control is a mandatory accessory for the operation of the internal units with direct expansion ductable and for the latest versions Aqua Unit, which no longer include the panel on the machine.

## DIMENSIONS (mm)




## INSTALLATION




- Directly in the hole on the wall
- On electrical box mod. 503
- On circular electrical box

# NOTE


argo
argo
argo

# X3 MODULAR HEAT PUMPS

Commercial applications - R32 DC Inverter

# X3 MODULAR HEAT PUMPS

## MAIN FEATURES

| Code | Model | Heating capacity [kW] (1) | Cooling capacity [kW] (2) |
|---|---|---|---|
| 398600050 | AGCH353PH | 32 | 35 |
| 398600051 | AGCH603PH | 60 | 65 |

(1) Water temperature 12 °C/7 °C, outdoor air temperature 35 °C
(2) Water temperature 40 °C/45 °C, outdoor air temperature 7 °C DB/6 °C WB

| Code | Model | Description | Applicability |
|---|---|---|---|
| 398610050 | MOD. CH | Wired control* | All |

*Mandatory accessory, one for each modular system

The AGCH series is made up of reversible, modular, full inverter heat pumps for cooling and heating of predominantly commercial environments that use environment-friendly R32 refrigerant. Available in two sizes, they can be used to create single configurations or configurations with up to 16 units, connected by a single central control unit. The versatility and simplicity of the configuration or installation allow these units to easily adapt to the various types of systems.
The series is also equipped with external hydronic modules, with or without inertial tank, with single or double circulator pump, so as to fulfil the various needs of the systems they serve.

Internal copper groove
Quiet mode
Weekly timer
Heating down to low temperatures
Door control
Full protection
Timer on/off
Save energy
Easy maintenance
High efficiency
Auto restart memory

Intelligent defrosting
Central control
Wide operating range
Low-voltage start-up
Wide voltage range
Auto diagnosis
-20 °C Min. outdoor temp. heating
+40 °C Max. outdoor temp. heating
-15 °C Min. outdoor temp. cooling
+52 °C Max. outdoor temp. cooling

# PLUS

## SILENT OPERATION

- Active noise reduction: broad plastic blades of the fans
- Passive noise reduction: special design of the fan zone
- Passive noise reduction: "QUIET MODE" function
- Passive noise reduction: acoustic insulation of the compressor

At partial loads, the noise generated by the running unit can drop down to 52 dB(A)

## HIGH EFFICIENCY

The units are equipped with a heat exchanger featuring a "DUAL FLOW" design of the tube bundle, for increasing the unit's efficiency and capacity. The special design of the plate and of the relative bottlenecks at the entry to the heat exchanger ensure a regular and uniform refrigerant flow in order to improve the heat exchange efficiency. The U-shaped thread inside the copper pipes improves the laminar flow of the fluid and facilitates the heat exchange.

The unit is able to estimate the building's thermal load on the basis of the outdoor air temperature, thus modifying the delivery water temperature set-point so as to reduce energy consumption.

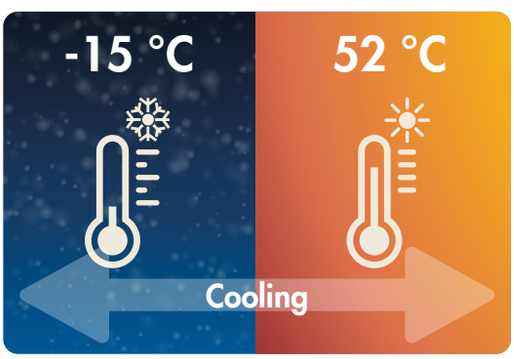
## RELIABILITY

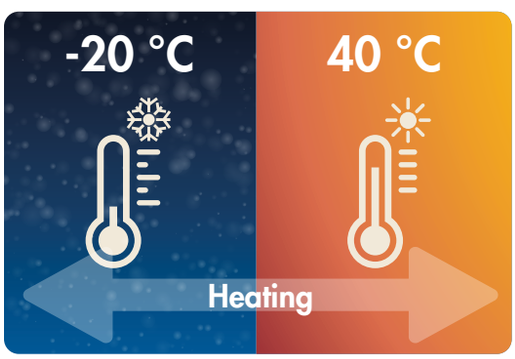
With the central control unit, it is possible to balance the work time of the compressors so as to avoid excess work only for some of them, as well as improve the system's efficiency and service life.
Only **one-third of the outdoor units** are simultaneously allowed to perform defrosting, thus reducing fluctuations of the leaving water temperature and, consequently, improving the environmental comfort.

- Each unit can be a MASTER unit;
- Timely communication between the units of the same system;
- A problem on one unit does not hinder the normal operation of the others.

**The anti-freeze protection** is automatically activated by the unit when the outdoor temperature drops to below 5 °C, regardless of whether it is operating in heating or cooling mode.

## WIDE OPERATING RANGE



# TOUCH-SCREEN CONTROL PANEL

The control panel, supplied separatly as a mandatory accessory, allows the management and set-up of one or more units (up to 16).


In particular it is possible to:

- Define the operating mode of the heat pump and its priorities (heating, cooling)
- Set all the main operating parameters (set point, hysteresis, etc.)
- Activate external (or internal) systems to integrate or replace the heating production unit
- Manage the commissioning of the unit
- Display the status of the operating parameters of the main components of the heat pump
- Manage the unit remotely via MODBUS gateway or Wi-Fi module directly integrated into the panel.

Specific auxiliary functions are also available in the control panel, including:

- Automatic management of the flow temperature of the fluid according to the external temperature (climate curve)
- Programming of weekly and hourly operation
- Activation of "silent" operation
- Emergency management in case of unit failure
- Programmable activation of the anti-legionella cycle
- Automatic activation of the antifreeze protection.

# TECHNICAL DATA

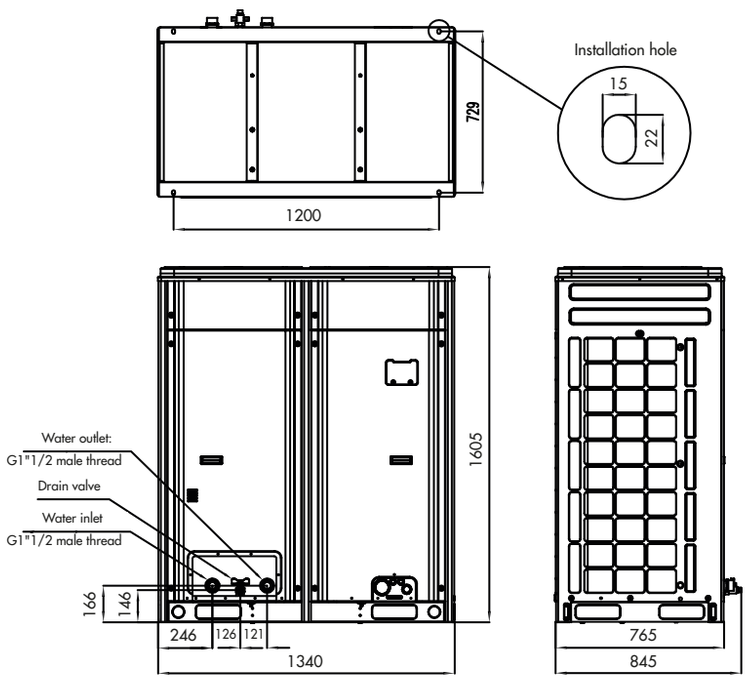
| MODEL | | | | AGCH353PH | |
|---|---|---|---|---|---|
| **Characteristics** | | | | **Cooling** | **Heating** |
| **Performances according to EN 14511** | Air +35 °C - Water +12/7 °C<br>Air +7 °C - Water +40/45 °C | Rated capacity | kW | 32.00 | 35.00 |
| | | EER/COP | | 2.74 | 3.3 |
| | Air +35 °C - Water +23 °C/18 °C<br>Air +7 °C - Water +30 °C/35 °C | Rated capacity | kW | 41.38 | 36.00 |
| | | EER/COP | | 3.70 | 4.09 |
| | | Maximum electrical power input | kW | 13.40 | |
| | | Capacity correction range | % | 31% ~ 100% | |
| **Performances according to Ecodesign (ERP) EN 14825** | LOW TEMPERATURE (35 °C) AVERAGE climate | Nominal heat output | kW | 24.00 | |
| | | Seasonal energy efficiency $\eta_s$ | % | 153 | |
| | | Annual energy consumption | kWh | 12504 | |
| | | SEER/SCOP | | 4.4 | 3.9 |
| | | Energy efficiency class | | A++ | |
| | LOW TEMPERATURE (35 °C) WARMER climate | Nominal heat output | kW | 26.00 | |
| | | Seasonal energy efficiency $\eta_s$ | % | 138.9 | |
| | | Annual energy consumption | kWh | 18068 | |
| | LOW TEMPERATURE (35 °C) COOLER climate | Nominal heat output | kW | 20.00 | |
| | | Seasonal energy efficiency $\eta_s$ | % | 218 | |
| | | Annual energy consumption | kWh | 4834 | |
| **Unit operation data** | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 380-415~/3N/50 | |
| | | Sound power level | dB(A) | 78 | |
| | | Sound pressure level (distance 1 m) | dB(A) | 62 | |
| | Refrigerant | Compressor type/no. | | Inverter Rotary/1 | |
| | | Type and GWP | | R32/675 kg $CO_2$ eq. | |
| | | Quantity | | 5.5 kg/3.71 tons $CO_2$ eq. | |
| | Fan | Type | | Axial | |
| | | Number | No. | 2 | |
| | | Air flow rate | $m^3/h$ | 2x6300 | |
| | Water side heat exchanger | Water flow rate | $m^3/h$ | 5.5 | |
| | | Head loss | kPa | 80.0 | |
| | | Hydraulic connections (IN and OUT) | inches (") | 1"1/2 | |
| **Water side operating limits** | | Leaving water temperature | °C | 5~20 | 35~50 |
| | | Water input/output temperature difference | °C | 2.5~6 | |
| **Air side operating limits** | | | °C | -15~52 | -20~40 |
| **Components and dimensions** | | Net weight /Weight during operation | kg | 405/445 | |
| | | Dimensions (H/W/D) | mm | 1605/1340/920 | |

# TECHNICAL DATA

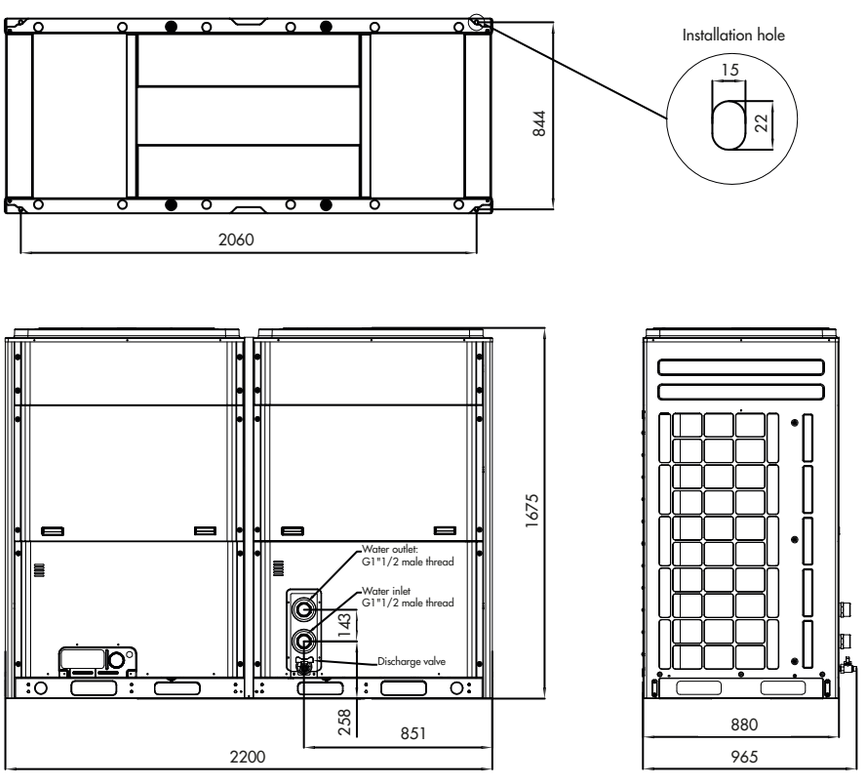
| MODEL | | | | AGCH603PH | |
|---|---|---|---|---|---|
| **Characteristics** | | | | **Cooling** | **Heating** |
| **Performances according to EN 14511** | Air +35 °C - Water +12/7 °C<br>Air +7 °C - Water +40/45 °C | Rated capacity | kW | 60.00 | 65.00 |
| | | EER/COP | | 2.88 | 3.27 |
| | Air +35 °C - Water +23 °C/18 °C<br>Air +7 °C - Water +30 °C/35 °C | Rated capacity | kW | 72.18 | 62.60 |
| | | EER/COP | | 3.88 | 4.15 |
| | | Maximum electrical power input | kW | 28.80 | |
| | | Capacity correction range | % | 15% ~ 100% | |
| **Performances according to Ecodesign (ERP) EN 14825** | LOW TEMPERATURE (35 °C) AVERAGE climate | Nominal heat output | kW | 51.00 | |
| | | Seasonal energy efficiency $\eta_s$ | % | 153 | |
| | | Annual energy consumption | kWh | 25964 | |
| | | SEER/SCOP | | 4.6 | 3.9 |
| | | Energy efficiency class | | A++ | |
| | LOW TEMPERATURE (35 °C) WARMER climate | Nominal heat output | kW | 39.00 | |
| | | Seasonal energy efficiency $\eta_s$ | % | 238.8 | |
| | | Annual energy consumption | kWh | 8620 | |
| | LOW TEMPERATURE (35 °C) COOLER climate | Nominal heat output | kW | 48.00 | |
| | | Seasonal energy efficiency $\eta_s$ | % | 135.1 | |
| | | Annual energy consumption | kWh | 34271 | |
| **Unit operation data** | | Power supply (Voltage/Phases/Frequency) | V/Ph/Hz | 380-415~/3N/50 | |
| | | Sound power level | dB(A) | 86 | |
| | | Sound pressure level (distance 1 m) | dB(A) | 68 | |
| | Refrigerant | Compressor type/no. | | Inverter Rotary/1 | |
| | | Type and GWP | | R32/675 kg $CO_2$ eq. | |
| | | Quantity | | 5.5x2 kg/3.71x2 tons $CO_2$ eq. | |
| | Fan | Type | | Axial | |
| | | Number | No. | 2 | |
| | | Air flow rate | $m^3/h$ | 2x12000 | |
| | Water side heat exchanger | Water flow rate | $m^3/h$ | 10.3 | |
| | | Head loss | kPa | 55.0 | |
| | | Hydraulic connections (IN and OUT) | inches (") | 2" | |
| **Water side operating limits** | | Leaving water temperature | °C | 5~20 | 35~50 |
| | | Water input/output temperature difference | °C | 2.5~6 | |
| **Air side operating limits** | | | °C | -15~52 | -20~40 |
| **Components and dimensions** | | Net weight/Weight during operation | kg | 686/755 | |
| | | Dimensions (H/W/D) | mm | 1675/2200/965 | |

# DIMENSIONAL DRAWINGS

## Model AGCH353PH




## Model AGCH603PH



# HYDRONIC UNITS

They are used to distribute the heat transfer fluid, in heating and cooling mode. Easy to install, they can be positioned outdoors and are equipped with one or two circulator pumps and, sometimes, an buffer tank.

## HYDRONIC KITS

| Code | Model | Tank | No. of pumps | Applicability |
|---|---|---|---|---|
| 387030644 | MOD-HYDRO 1P 30 | - | 1 | 30 kW |
| 387030645 | MOD-HYDRO 2P 30 | | 2 | |
| 387030646 | MOD-HYDRO 1P 60 | | 1 | 60 kW |
| 387030647 | MOD-HYDRO 2P 60 | | 2 | |
| 387030648 | MOD-HYDRO 1P 90 | | 1 | 90 kW and 120 kW |
| 387030649 | MOD-HYDRO 2P 90 | | 2 | |
| 387030650 | MOD-HYDRO V T100 1P 30 | 100 | 1 | 30 kW |
| 387030651 | MOD-HYDRO V T100 2P 30 | | 2 | |
| 387030652 | MOD-HYDRO V T200 1P 60 | 200 | 1 | 60 kW |
| 387030653 | MOD-HYDRO V T200 2P 60 | | 2 | |
| 387030654 | MOD-HYDRO V T300 1P 90 | 300 | 1 | 90 kW and 120 kW |
| 387030655 | MOD-HYDRO V T300 2P 90 | | 2 | |

## HYDRONIC KIT ACCESSORIES

| Code | Description | Applicability |
|---|---|---|
| 387030660 | Vibration dampers | MOD-HYDRO V T |
| 387030661 | Vibration dampers | MOD-HYDRO |
| 387030656 | Fitting kit 1"1/2* | MOD-HYDRO...30 |
| 387030657 | Fitting kit 2"1/2* | MOD-HYDRO...60-90 |

*Mandatory accessory for adatting from Victaulic to threaded connections

## MOD-HYDRO KIT

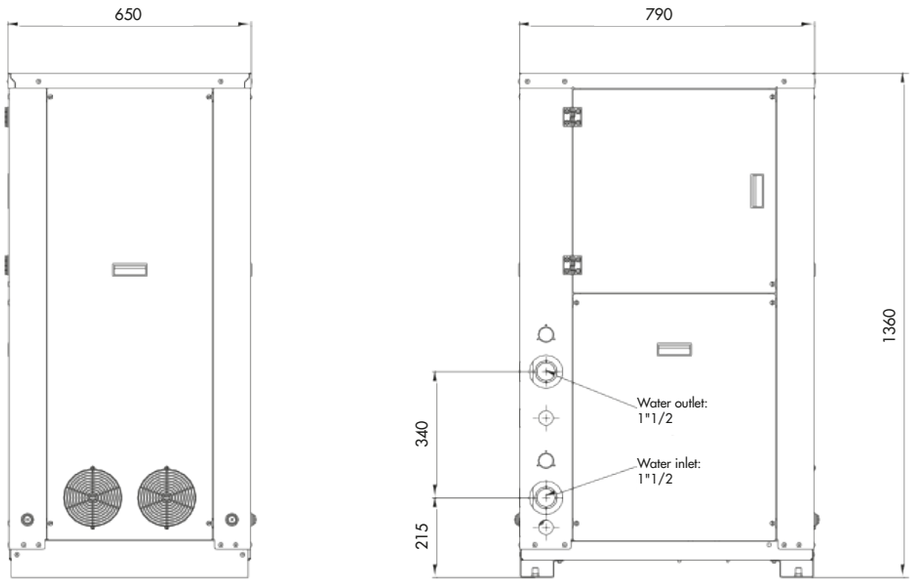
It can be combined with any type of modular chiller with single or multiple configuration (up to 120 kW) of the proposed range.

The unit includes:

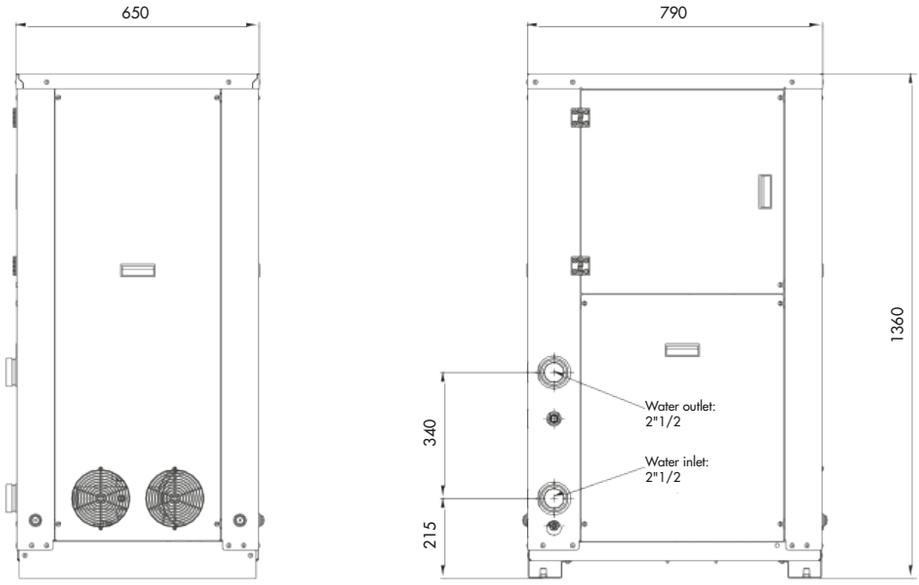
- pipes insulated with anti-condensate elastomer;
- single or double centrifugal pump with shut-off valve;
- power electrical panel with device for pump alternation at every start-up (version with 2 pumps), reserve pump start-up in case of pump malfunction (version with 2 pumps), residual-current devices, contacts for remote signalling of running pumps, IP55 protection rating;
- safety valve;
- deaerator;
- pressure gauge;
- filling/discharge valve;
- base and panel made of galvanised and coated sheet metal, suitable for outdoor installations;
- easily and quickly removable panels.

# DIMENSIONAL DRAWINGS

## MOD-HYDRO 1P 30 - MOD-HYDRO 2P 30




## MOD-HYDRO 1P 60 - MOD-HYDRO 2P 60
## MOD-HYDRO 1P 90 - MOD-HYDRO 2P 90



# HYDRONIC UNITS

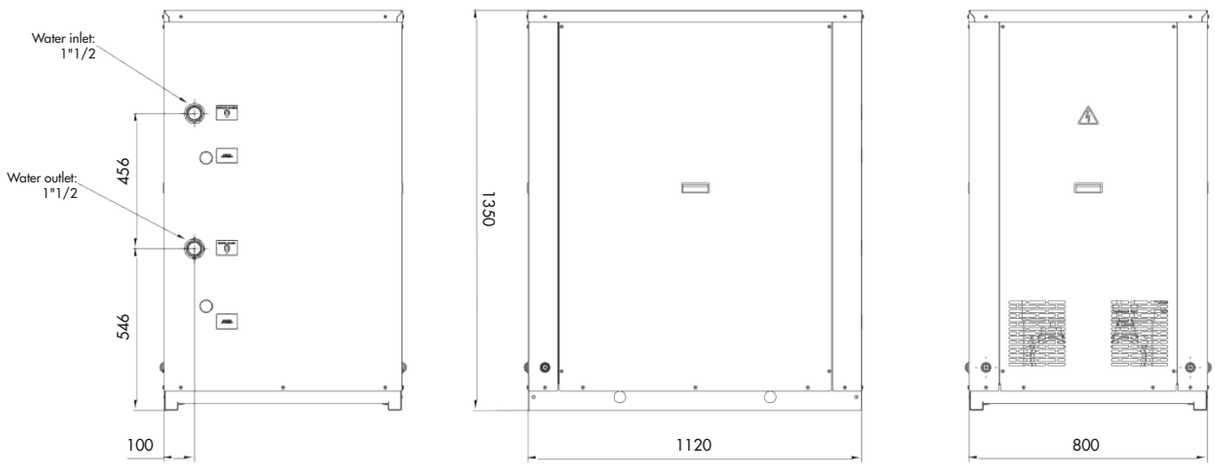
It can be combined with any type of modular chiller with single or multiple configuration (up to 120 kW) of the proposed range.

The unit includes:

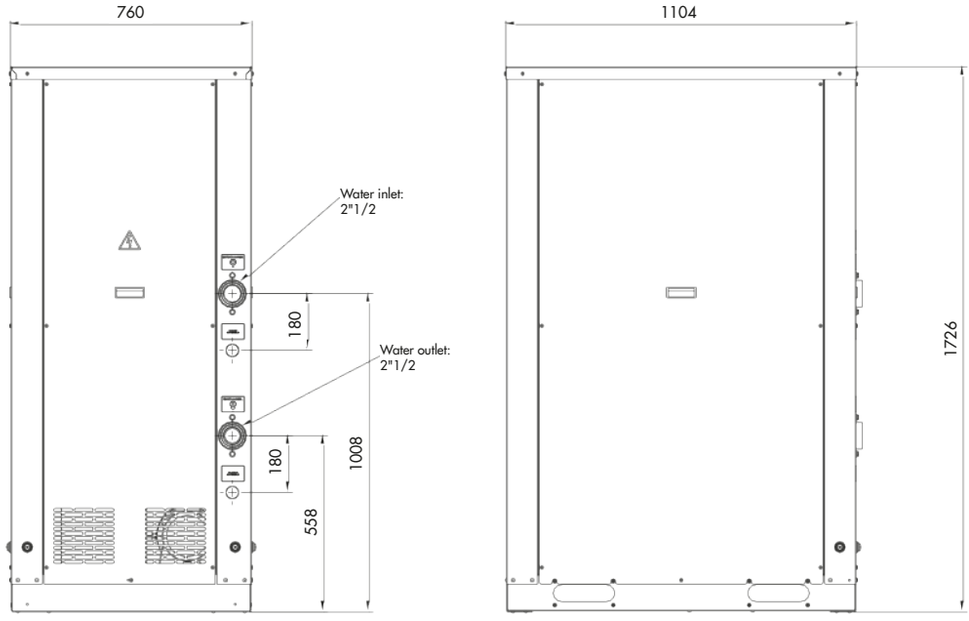
- carbon steel tanks and pipes insulated with anti-condensate elastomer (100, 200 and 300 litres);
- single or double centrifugal pump with shut-off valves;
- power electrical panel with device for pump alternation at every start-up (version with 2 pumps), reserve pump start-up in case of pump malfunction (version with 2 pumps), residual-current devices, dry contacts for remote signalling of running pumps, IP55 protection rating;
- expansion vessel;
- safety valve;
- deaerator;
- pressure gauge;
- filling/discharge valves;
- base and panel made of galvanised and coated sheet metal, suitable for outdoor installations.

# DIMENSIONAL DRAWINGS

## MOD-HYDRO V T100 1P 30
## MOD-HYDRO V T100 2P 30

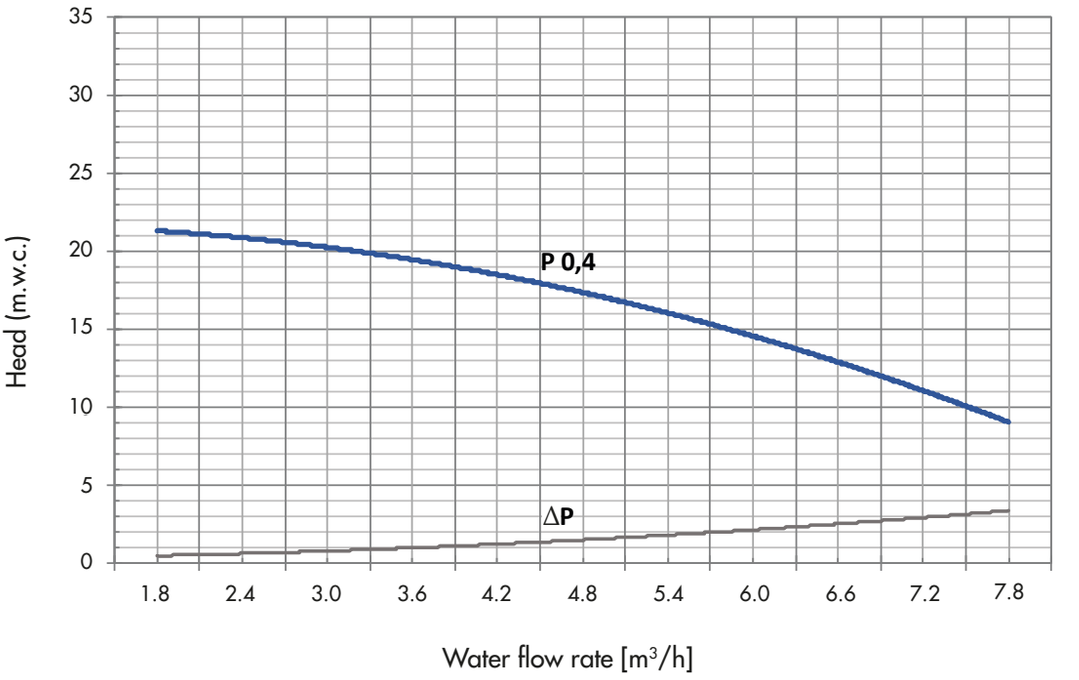



## MOD-HYDRO V T200 1P 60 - MOD-HYDRO V T200 2P 60
## MOD-HYDRO V T300 1P 90 - MOD-HYDRO V T300 2P 90

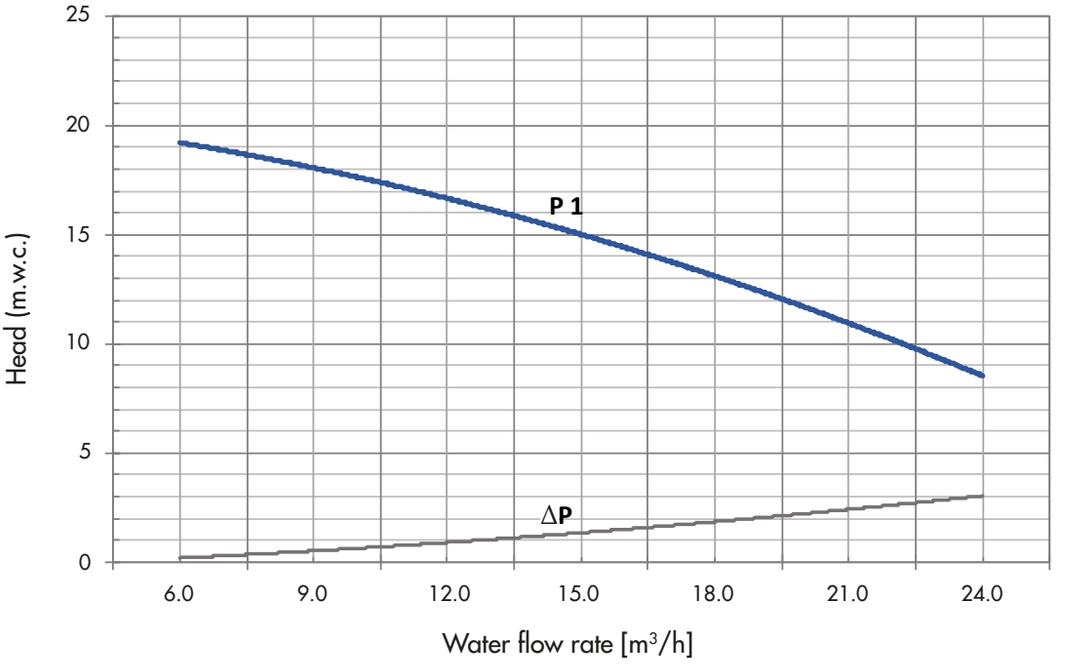


# DIAGRAMS OF THE CIRCULATOR PUMPS FLOW/HEAD

## MOD-HYDRO 1P 30 - MOD-HYDRO V T100 1P 30
## MOD-HYDRO 2P 30 - MOD-HYDRO V T100 2P 30

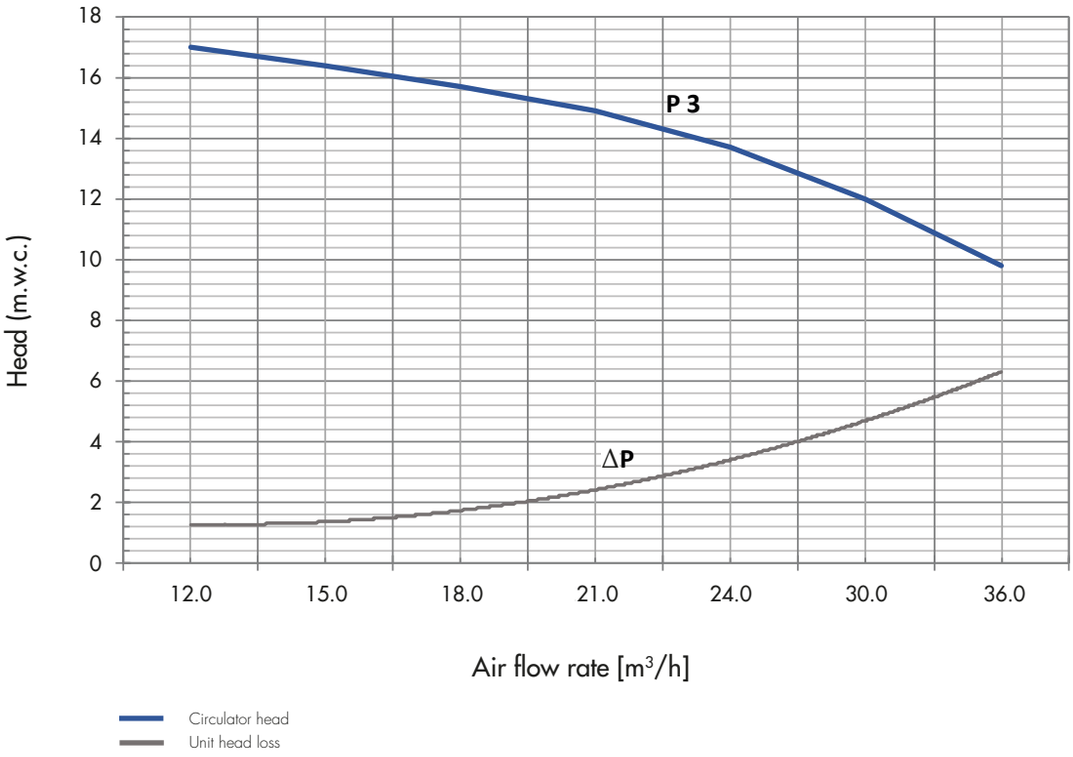



## MOD-HYDRO 1P 60 - MOD-HYDRO V T200 1P 60
## MOD-HYDRO 2P 60 - MOD-HYDRO V T200 2P 60



# DIAGRAMS OF THE CIRCULATOR PUMPS FLOW/HEAD

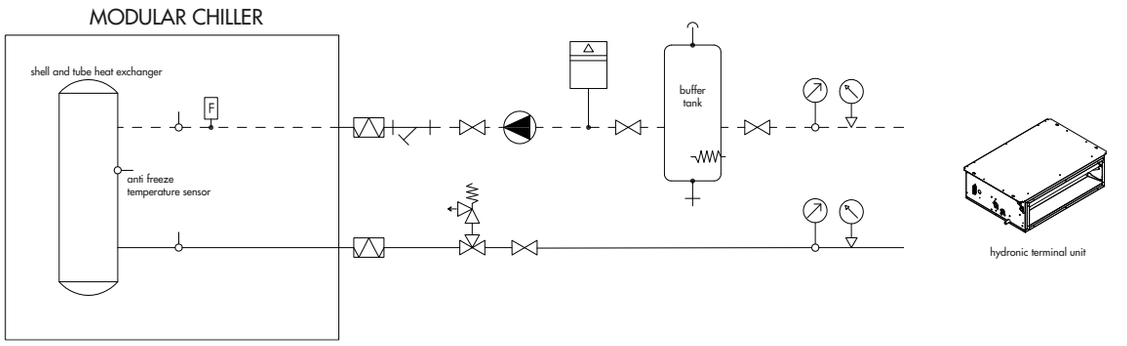
## MOD-HYDRO 1P 90 - MOD-HYDRO V T300 1P 90
## MOD-HYDRO 2P 90 - MOD-HYDRO V T300 2P 90



# HYDRONIC UNITS INSTALLATION EXAMPLES

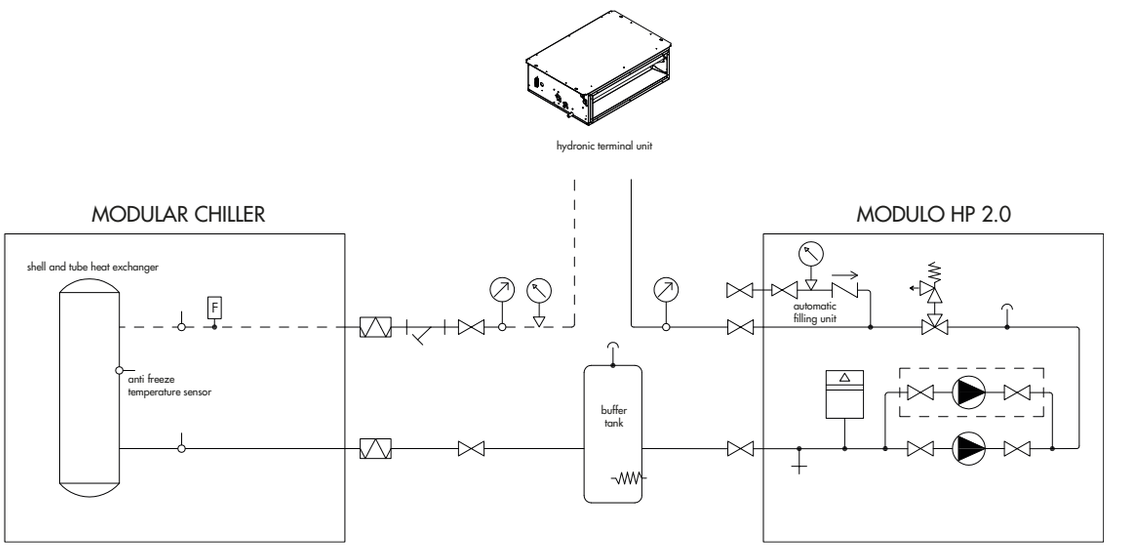
## SOLUTION ONLY UNIT

| LEGEND | |
|---|---|
| | shut-off valve |
| | vibration dumping joint |
| | Y-filter |
| | safety relief valve |
| | flow switch |
| | dial thermostat |
| | check valve |
| | dial manometer |
| | temperature sensor |
| | drain valve |
| | air reliet valve |
| | electrical heater |



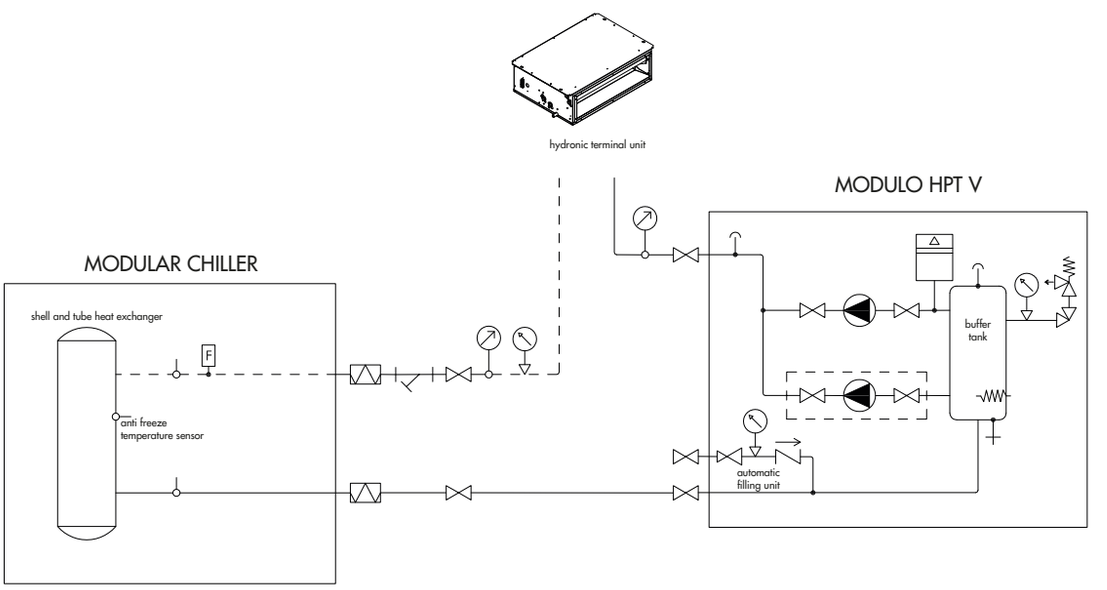

## SOLUTION UNIT AND PUMP GROUP

| LEGEND | |
|---|---|
| | shut-off valve |
| | vibration dumping joint |
| | Y-filter |
| | safety relief valve |
| | flow switch |
| | dial thermostat |
| | check valve |
| | dial manometer |
| | temperature sensor |
| | drain valve |
| | air reliet valve |
| | electrical heater |




## SOLUTION UNIT AND PUMP GROUP WITH BUFFER TANK

| LEGEND | |
|---|---|
| | shut-off valve |
| | vibration dumping joint |
| | Y-filter |
| | safety relief valve |
| | flow switch |
| | dial thermostat |
| | check valve |
| | dial manometer |
| | temperature sensor |
| | drain valve |
| | air reliet valve |
| | electrical heater |



# NOTE

# HEAT PUMPS FOR DOMESTIC HOT WATER

# X3 DHW HEAT PUMPS

## MAIN FEATURES

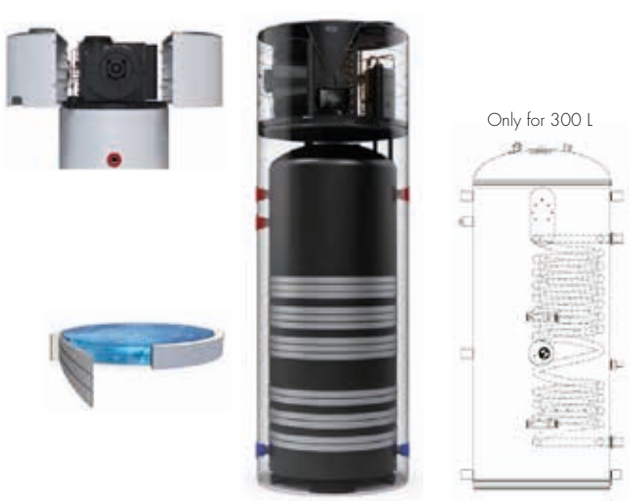
| Code | Model | Description |
|---|---|---|
| 398600080 | APHPDHW200 | DHW Heat pump - 200 L |
| 398600081 | APHPDHW300S | DHW Heat pump with solar coil - 300 L |

ARGO introduces the latest generation of heat pump water heater, using ecologic R290 refrigerant. A performing solution, in A+ class, with a modern and pleasant appearance, distinguished for its low noise operation, the noise pressure at 1 m distance is 43 dB(A). The handy touch display easily allows controlling all operating conditions and optimizing the parameters for the best comfort and saving. Two models are available, the size 200 liters is equipped with an integrative electrical resistance, while the size 300 liters has also in addition an internal heat exchanger for solar integration. Thanks to the use of R290 refrigerant and of inverter motor these products stand out for their high performances. With a high COP, above 3, heating time and relevant consumption are greatly reduced.

Material: carbon steel.Internal protective treatment: Food-grade inorganic glass-coating complying with DIN 4753-3.

## OUTHER FEATURES

- Micro-channel heat exchanger (heat pump)
- Spiroidal internal heat exchanger (solar, only for model APHPDHW300S)
- Simplified accessibility
- Installation flexibility
- PV contact




# INSTALLATION

The unit must be installed indoors, preferably in spaces where the temperature is always > 5 °C (e.g. laundry, garage, technical room, ...). Both the air intake and exhaust, or none, may be ducted to the outside. A 600 mm clearance must be left all around the unit for maintenance. The room must have a minimum surface of 7 $m^2$.

# TECHNICAL DATA

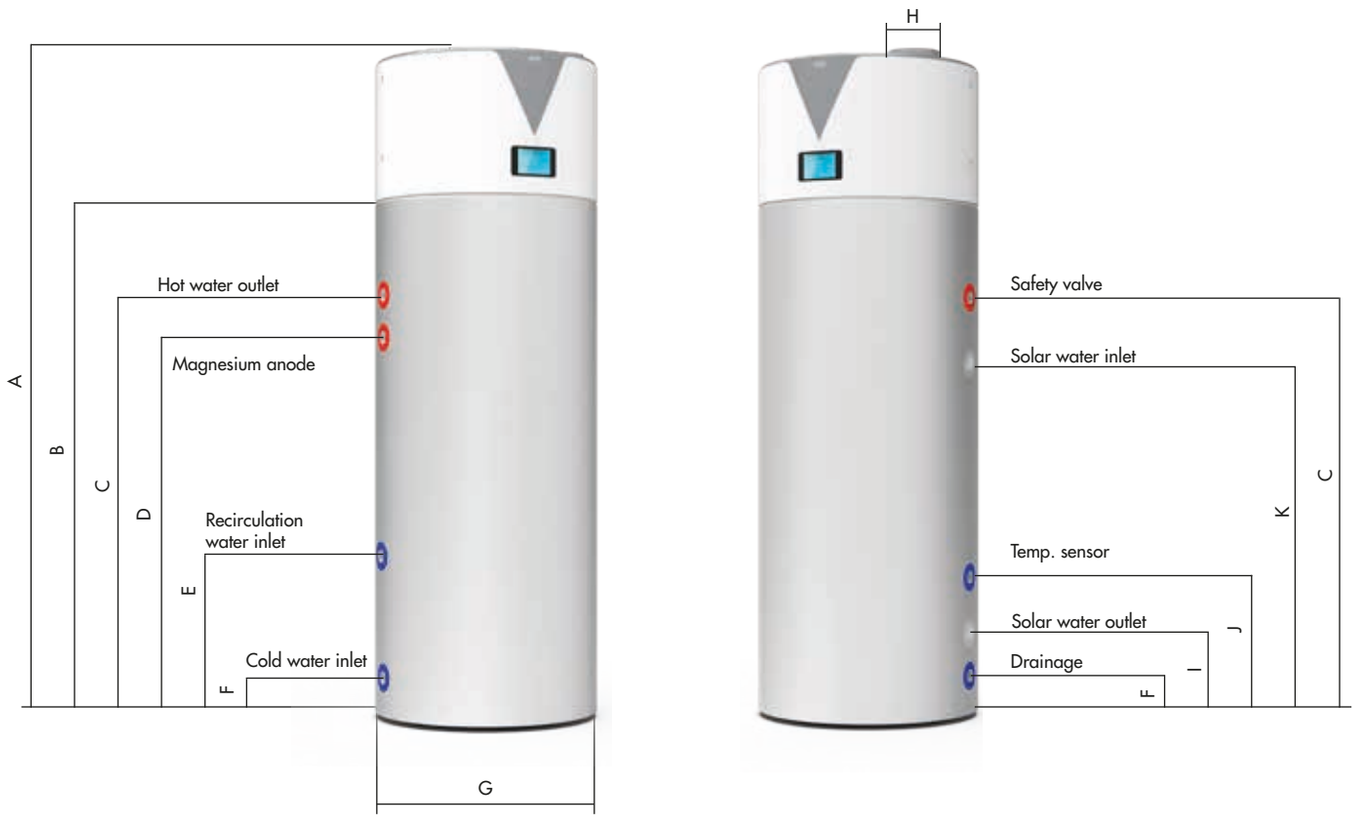
| Model | | APHPDHW300S | APHPDHW200 |
|---|---|---|---|
| Power supply | / | 230 V~/50 Hz | 230 V~/50 Hz |
| Water-Dust Resistance | IPX | IPX1 | IPX1 |
| Electrical Shockproof | I | I | I |
| Heating capacity | kW | 1.5 | 1.5 |
| Heating Power Input | kW | 0.41 | 0.41 |
| Heating Current Input | A | 1.8 | 1.8 |
| COP* | | 3.51 | 3.53 |
| COP** | | 3.02 | 3.08 |
| Heating time (Heat pump only)*** | h | 8.25 | 5.45 |
| Auxiliary E-heater | kW | 1.5 | 1.5 |
| Max. Power Input | kW | 2.2 | 2.2 |
| Max. Current Input | A | 9.3 | 9.3 |
| Refrigerant/Quantity | g | R290/150 g | R290/150 g |
| Unit dimensions (H./L./W.) | mm | Ø 640x1905 | Ø 640x1600 |
| Net weight | kg | 112 | 96 |
| Rated Outlet Water Temperature | °C | 55 | 55 |
| Air Volume | $m^3/h$ | 350 | 350 |
| Air Pressure | Pa | 40 | 40 |
| Air Duct Diameter | mm | 150 | 150 |
| Water Inlet-Outlet Size | inch | 3/4" | 3/4" |
| Compressor | | Rotary | Rotary |
| Solar coil heat exchange surface | $m^2$ | 1.1 | / |
| Solar coil pressure drop | mbar | see chart | / |
| Solar coil max. pressure | MPa | 1.6 | / |
| Solar coil max. temperature | °C | 90 | / |

Measurement conditions:
* Ambient temperature 14 °C/13 °C, water inlet 15 °C, water outlet 55 °C (EN16147).
** Ambient temperature 7 °C/6 °C, water inlet 15 °C, water outlet 55 °C (EN16147).
*** Ambient temperature 15 °C, water inlet 15 °C, water outlet 55 °C.

Work range:
(1) Ambient temperature is -5 °C~43 °C (Heat Pump).
(2) The max temperature of water tank is 60 °C.

Operating parameters:
The range of the operating water temperatures: 10~60 °C.
The range of the operating water pressures: 0.15~0.7 MPa.

# DIMENSIONS AND FITTINGS




| | | A | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APHPDHW300S | [mm] | 1905 | 1467 | 1208 | 1088 | 576 | 128 | Ø 640 | Ø 150 | 226 | 531 | 1026 |
| APHPDHW200 | [mm] | 1600 | 1162 | 903 | 783 | - | 128 | Ø 640 | Ø 150 | - | - | - |
| CONNECTIONS | [inch] | - | - | G3/4" | G3/4" | G3/4" | G3/4" | - | - | G3/4" | G3/4" | G3/4" |

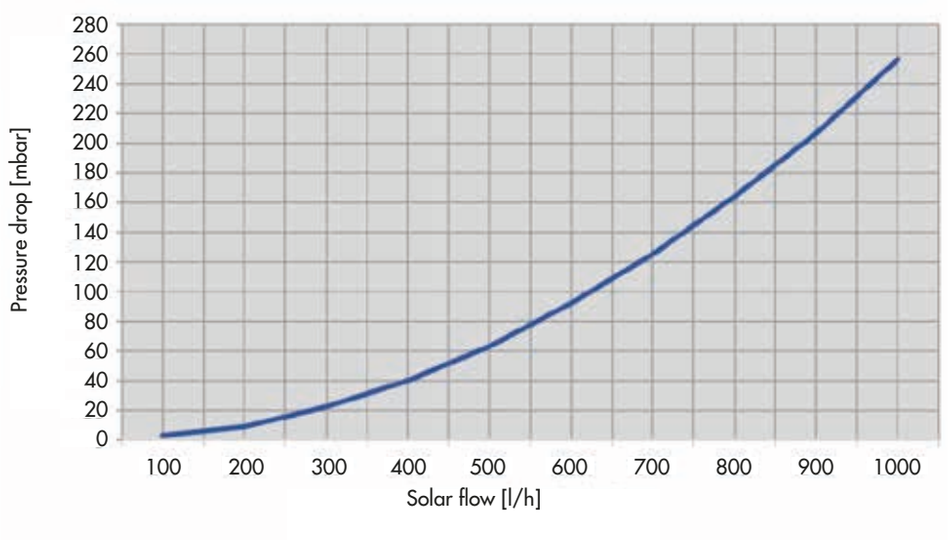
# OPERATION MODES

Five different operating modes can be selected. In Standard mode the heat pump starts according to the actual temperature and target temperature. The electric heater will not start immediately, but only after a set time, if the target temperature has not been reached. In Eco mode only the heat pump is activated, the electric heater is always off. In High Requirement mode, besides the heat pump also the electric heater is turned on immediately.

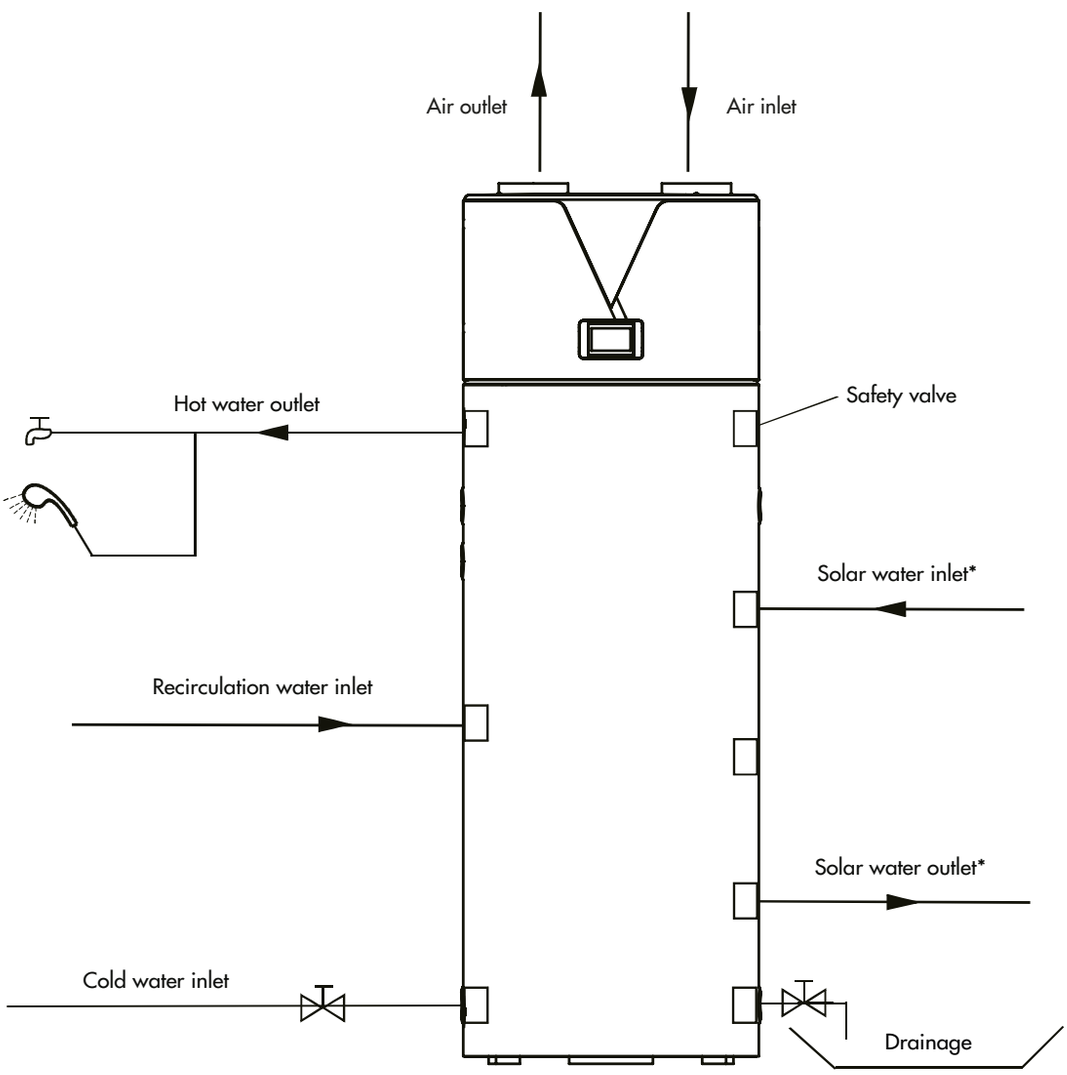
In Intelligent mode, the operation changes automatically depending on the ambient temperature. Above a 'high'threshold the unit operates in Eco mode, below a 'low' threshold the unit operates in High Requirement mode, while in the intermediate condition the Standard mode is adopted.

It is also available a Vacation mode, for which a vacation 'end' can be set so that the unit re-starts automatically on the desired date. The disinfection cycle can be activated, so that the unit automatically carries out the periodic high temperature process.

# SOLAR HEAT EXCHANGER PRESSURE DROPS




# EXAMPLE SCHEME




*Only APHPDHW300S


argo

# FAN COIL

Floor/ceiling slim

AC floor/ceiling-mounted

EC Brushless floor/ceiling-mounted

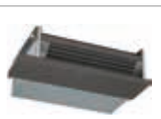
Cassette

Ductable

Accessori per integrazioni con sistemi BMS e sanificazione

Wall-mounted

# UNIT RANGE

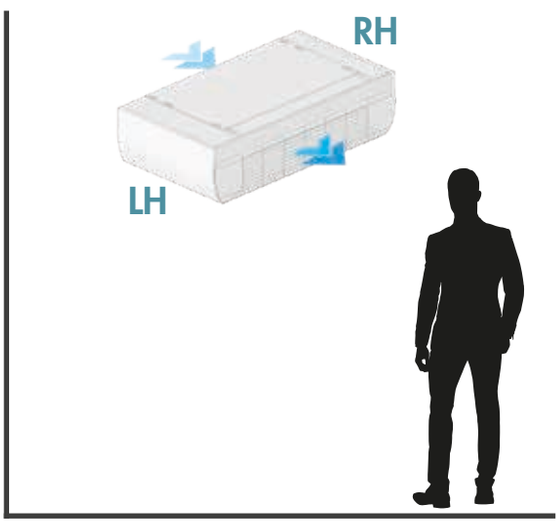
| | Model | 2 pipes | 4 pipes | 3-speed | Brushless | Cooling capacity range W (1) | Heating capacity range W (2) |
|---|---|---|---|---|---|---|---|
|  | **FCTS** | ● | | ● | ● | 830 - 3.800 | 1.090 - 8.300 |
|  | **FCT-CV** | ● | | ● | | 1.500 - 6.420 | 3.740 - 13.300 |
| | **FCTE-CV** | ● | | | ● | | |
|  | **FCT-CA** | ● | | ● | | | |
| | **FCTE-CA** | ● | | | ● | | |
|  | **FCT-CH** | ● | | ● | | | |
| | **FCTE-CH** | ● | | | ● | | |
|  | **FCT-NV** | ● | | ● | | | |
| | **FCTE-NV** | ● | | | ● | | |
|  | **FCT-NH** | ● | | ● | | | |
| | **FCTE-NH** | ● | | | ● | | |
|  | **FCC** | ● | | ● | | 2.950 - 10.530 | 7.010 - 23.870 |
| | **FCCE** | ● | | | ● | 5.020 - 15.190 | 12.350 - 30.680 |
|  | **FCCX** | | ● | ● | | 3.070 - 8.540 | 4.590 - 13.100 |
|  | **DT-NH** | ● | | ● | | 6.820 - 17.800 | 15.200 - 37.200 |
|  | **DTE-NH** | ● | | | ● | 6.976 - 17.993 | 15.569 - 37.629 |
|  | **FCW** | ● | | ● | | 2.100 - 4.200 | 4.264 - 8.642 |

(1) **Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C
(2) **Heating:** air temp. 20 °C - input/output water temp. 70/60 °C

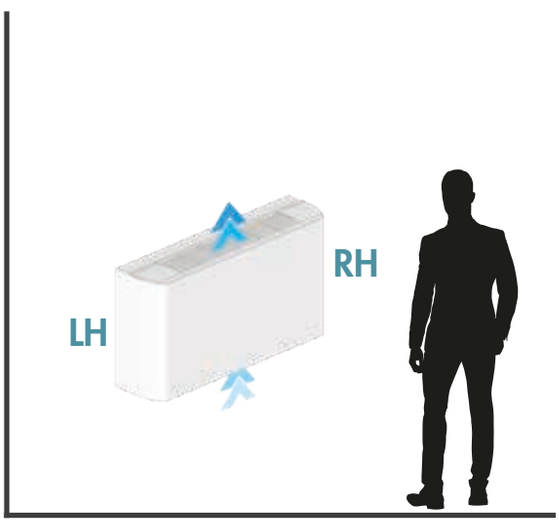
# FITTING CONVENTIONS

## Battery fitting conventions for floot/ceiling-mounted fan coil units (FCT/FCTE)

Horizontal units

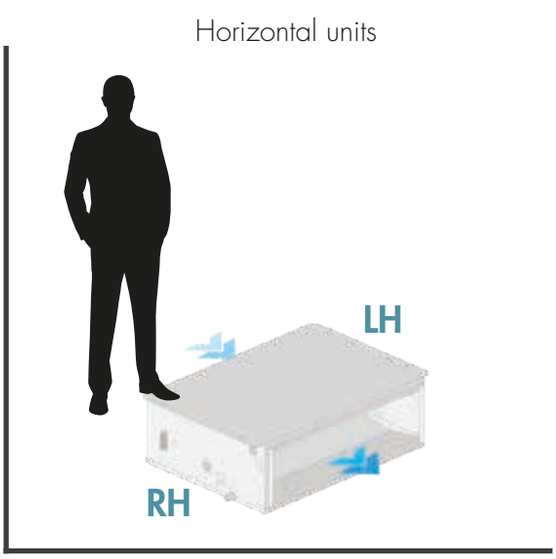



Vertical units

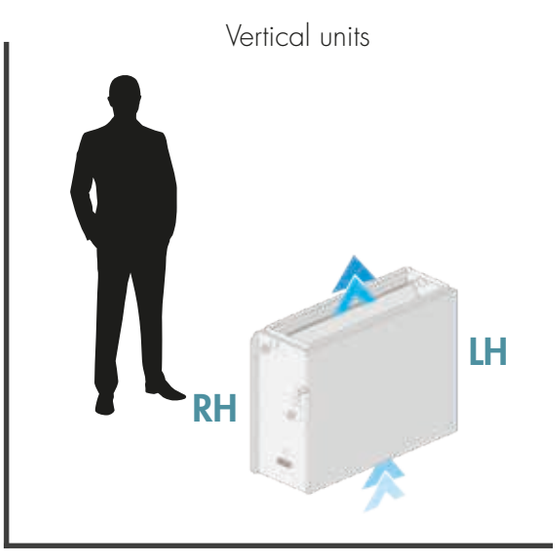



## Battery fitting conventions for ductable fan coil units (DT/DTE)

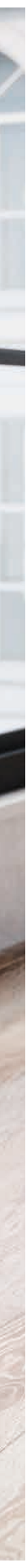
Horizontal units




Vertical units




Our fan coil units have the fittings mounted on the left-hand side as a standard feature (unless expressly specified).



# FLOOR | CEILING

## Slim - Model: FCTS

# FLOOR/CEILING SLIM FAN COILS

## MAIN FEATURES FCTS RANGE

The slim fan coils can be installed on the floor or ceiling in any room thanks to its particularly small size and elegant design. They quickly reache the selected temperature and keep it constant in maximum silence, thanks to the fan in continuous modulation.
The exchange coil in copper-aluminum is suitable for operation with:

- high temperature water (boiler)
- low temperature water (condensing boiler, heat pump, etc.)
- water supplemented with glycol

### RANGE

A range of 5 different capacities (with 2-pipe) is available to always find the perfect product for every need, in white RAL 9003 color.

### THIN AND SILENT

With only 129 mm thikness, these fan coils can be installed in any ambient. Moreover, with the fan in continuous modulation that progressively reduces the speed as the room temperature approaches the set one, they guarantee maximum silence. When heating, the limits develop an effective natural convection motion, similar to that of a radiator. This greatly reduces the need for ventilation.

### MODULATED AIRFLOW AND LOW CONSUMPTION

The fan is tangential with asymmetrical blades and the exchanger has a large frontal surface. In this way, efficient, silent and imperceptible air flows are obtained with low pressure drops. Moreover, the efficiency is very high with low energy consumption thanks to DC inverter technology.

### CONTROLS

FCTS fan coils can be combined with a full range of electronic controls, PI modulating type and more traditional type with three or four fan speeds.
Both on-board controllers, recommended for vertical installations, and remote wired-controllers, recommended for ceiling-mounted installations, are available. It is always necessary to match one of the options to each unit.

### VALVES

Both a 2-way valve assembly with electrothermal actuator and a 3-way diverting valve assembly with electrothermal actuator are available.

### OTHER ACCESSORIES

To complete the installation, several accessories are available: aesthetic feet to hide the hydraulic connection pipes coming from the floor, aesthetic feet for floor fixing, condensate collection trays for horizontal ceiling installation and aesthetic back panels for installations with the rear part of the unit in sight.

# FLOOR/CEILING SLIM FAN COILS

## MODELS

### FAN COIL SLIM MOD. FCTS

Vertical (floor) or horizontal (ceiling) installation.

| Code | Model | Cooling capacity (W)* (1) | Heating capacity (W)* (2) |
|---|---|---|---|
| 387030666 | FCTS-CA 01 L | 830 | 1890 |
| 387030710 | FCTS-CA 01 R | | |
| 387030667 | FCTS-CA 02 L | 1760 | 3990 |
| 387030711 | FCTS-CA 02 R | | |
| 387030668 | FCTS-CA 03 L | 2650 | 5470 |
| 387030712 | FCTS-CA 03 R | | |
| 387030669 | FCTS-CA 04 L | 3340 | 6980 |
| 387030713 | FCTS-CA 04 R | | |
| 387030670 | FCTS-CA 05 L | 3800 | 8300 |
| 387030714 | FCTS-CA 05 R | | |

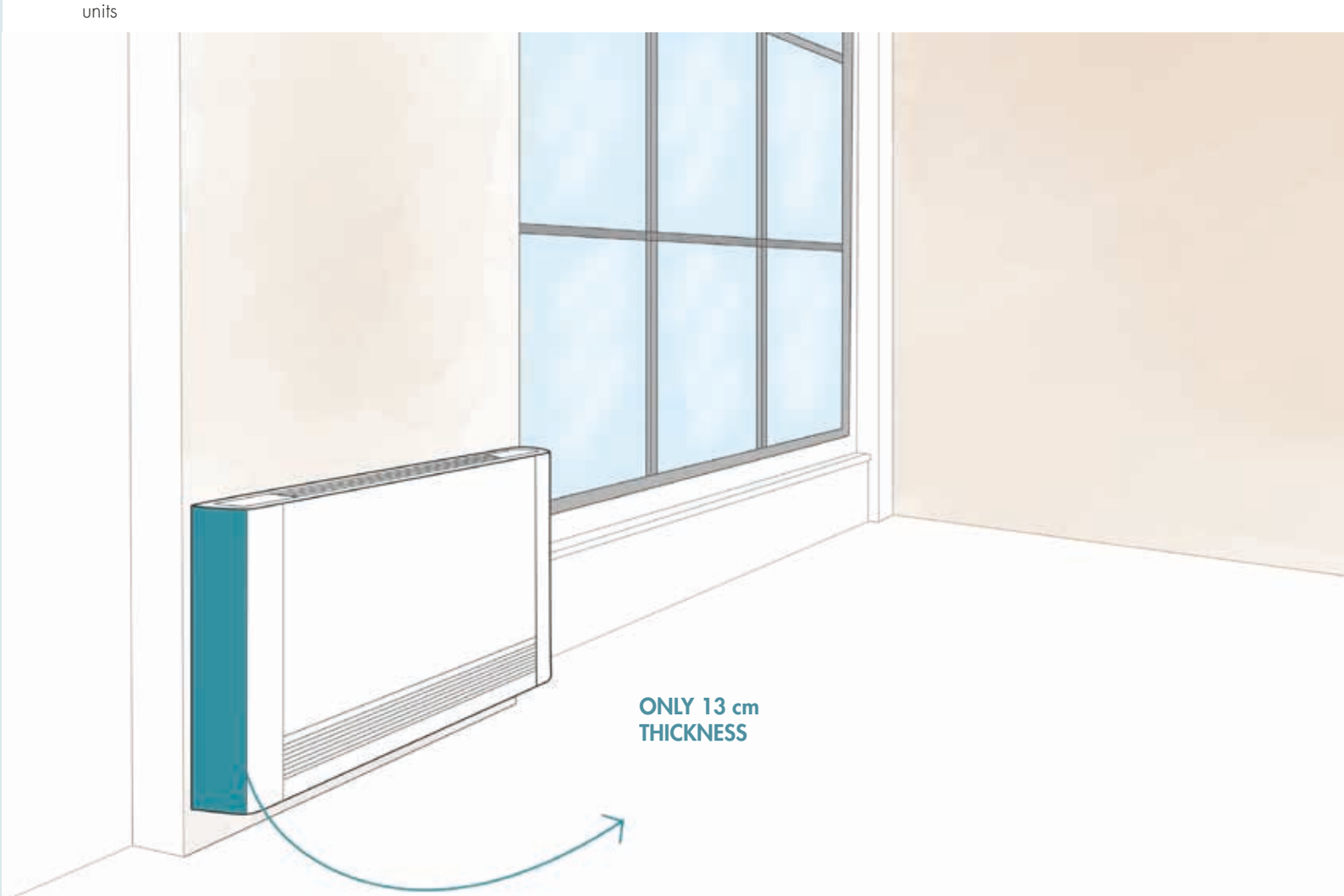
*maximum fan speed

**(1) Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - temp. - input/output water temp. 7/12 °C
**(2) Heating:** air temp. 20 °C dry bulb - input/output water temp. 50/45 °C

| FCTS-CA | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCTS-CA = fan coil model
(1) Capacity = 01
(2) L = left coil connection/R = right coil connection

NB: Units are supplied without controllers it's always necessary to select a controller among the available options to be matched with the units



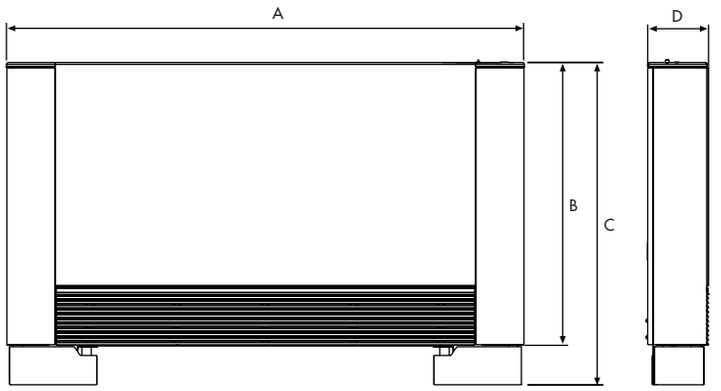
# RATED TECHNICAL DATA

## TWO-PIPE UNIT - ONE COIL

| Model | | | 01 | 02 | 03 | 04 | 05 |
|---|---|---|---|---|---|---|---|
| Total cooling capacity (1) | | W | 830 | 1760 | 2650 | 3340 | 3800 |
| Sensible cooling capacity (1) | | W | 620 | 1270 | 1960 | 2650 | 3010 |
| Heating capacity (2a) | | W | 1090 | 2350 | 3190 | 4100 | 4860 |
| Heating capacity (2b) | | W | 1890 | 3990 | 5470 | 6980 | 8300 |
| Rated air flow | | $m^3/h$ | 162 | 320 | 461 | 576 | 648 |
| Coil water content | | l | 0.47 | 0.8 | 1.13 | 1.46 | 1.8 |
| Water flow rate (4) | Cooling | l/h | 143 | 303 | 456 | 574 | 654 |
| | Heating (2a) | l/h | 143 | 303 | 456 | 574 | 654 |
| | Heating (2b) | l/h | 162 | 343 | 471 | 600 | 714 |
| Pressure drops (5) | Cooling | kPa | 7.2 | 8.4 | 22.5 | 18.6 | 24.9 |
| | Heating (2a) | kPa | 5.7 | 6.6 | 16.3 | 14 | 18.3 |
| | Heating (2b) | kPa | 6.7 | 7.6 | 16.1 | 14 | 19.8 |
| Sound pressure (ls.-ms.-hs.) (3) | | dB(A) | 24.2-33.2-39.4 | 25.3-34.1-40.2 | 25.6-34.4-42.2 | 26.3-35.0-42.5 | 27.6-37.6-43.9 |
| Motors/Fans | | N/N | 1/1 | | | | |
| Rated power imput | | W | 11.9 | 17.6 | 19.8 | 26.5 | 29.7 |
| | | A | 0.11 | 0.16 | 0.18 | 0.26 | 0.28 |
| Electrical power supply | | V/Hz | 230/50 | | | | |
| Cold/hot coil rows | | N | 2 | | | | |
| Hydraulic fittings | | DN | Eurokonus 3/4" | | | | |
| Condensate drainage outlet | | mm | 16 | | | | |
| Net weight | | kg | 17 | 20 | 23 | 26 | 29 |

**(1)** Water temperature at coil inlet 7 °C, water temperature at coil outlet 12 °C, ambient air temperature 27 °C d.b. and 19 °C w.b. (UNI EN 1397 standard)
**(2a)** Coil inlet water temperature 50 °C, water flow rate as in cooling mode, ambient air temperature 20 °C (UNI EN 1397 standard)
**(2b)** Water temperature at coil inlet 70 °C, water temperature at coil outlet 60 °C, ambient air temperature 20 °C
**(3)** Sound pressure measured in a semi-anechoic chamber according to ISO 7779 standard

## DIMENSIONAL DRAWINGS




| MODEL FCTS | | 01 | 02 | 03 | 04 | 05 |
|---|---|---|---|---|---|---|
| A | mm | 735 | 935 | 1135 | 1335 | 1535 |
| B | mm | 579 | 579 | 579 | 579 | 579 |
| C | mm | 659 | 659 | 659 | 659 | 659 |
| D | mm | 129 | 129 | 129 | 129 | 129 |

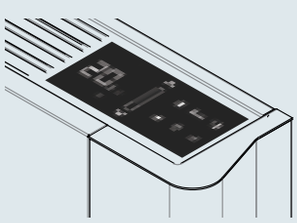
# MATCHABLE CONTROLLERS
## OPTIONAL OR ACCESSORIES TO BE ORDERED SEPARATELY

### ONLY PCB

**PCB**

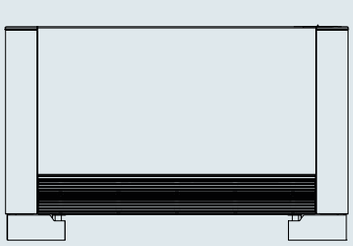
- EIX03 — for third-party 3-speed electromechanical wall thermostats
- EIX04 — for control from third party 0-10V analog output systems

### ON-BOARD CONTROLLERS



- OBC28 — PCB included
- OBC30 — PCB included

### REMOTE WIRED CONTROLLERS



**PCB**
EIX02

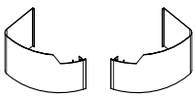
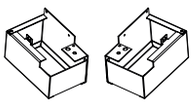
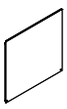
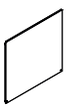
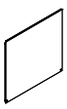
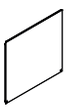
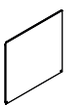
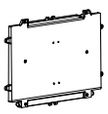
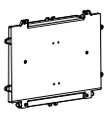
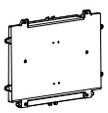
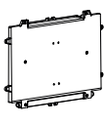
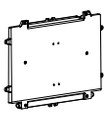
**CONTROLLERS**

- SWC31
- SWC33

# ACCESSORIES

| CONTROLS | | | | | |
|---|---|---|---|---|---|
| | | **Code** | **Model** | **Description** | **Applicability** |
| ON BOARD CONTROLLERS |  | 387030671 | OBC28 | Electronic controller SMART TOUCH LCD with continuous modulation thermostat | All |
| |  | 387030673 | OBC30 | Electronic controller SMART TOUCH LCD e with 4 fixed speeds and thermostat | All |
| REMOTE WIRED CONTROLLERS | | 387030675 | EIX02 | PCB on the unit with continuous modulation for connection to wall controller SWC31 - SWC33 | All, to be matched with a wall control |
| |  | 387030676 | SWC31 | SMART TOUCH electronic wall controller panel with thermostat and ambient probe (to be coupled from 1 to max 30 EIX02), white color | All, to be matched with PCB EIX02 |
| |  | 387030678 | SWC33 | Wall electronic controller panel TOUCH LCD with thermostat and temperature probe, relative humidity and air quality in the room. White color | All, to be matched with PCB EIX02 |
| | | 387030680 | EMZS | MZS, Single Zone Module | All |
| ONLY PCB | | 387030681 | EIX03 | Electronic board on the unit or connection to 3-speed electromechanical wall thermostats (third party) | All |
| | | 387030682 | EIX04 | Electronic board on the unit for control from systems with 0-10V analog output (third party) | All |

| VALVES | | | |
|---|---|---|---|
| **Code** | **Model** | **Description** | **Applicability** |
| 387030684 | 2WV08 | 2-way valve group (inlet valve and lockshield) with thermoelectric motor | All |
| 387030685 | 3WV08 | 3-way diverting valve unit with thermoelectric motor (complete with 3-way inlet valve and lockshield) | All |

| VARIOUS | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030686 | FE02 | Feet for floor pipes hiding in white color | All |
|  | 387030687 | FE03 | Feet to anchor the unit to the floor, white color | All |
|  | 387030688 | CPBS 01 | Back cover in white color - Mod. 01 | 01 |
|  | 387030689 | CPBS 02 | Back cover in white color - Mod. 02 | 02 |
|  | 387030690 | CPBS 03 | Back cover in white color - Mod. 03 | 03 |
|  | 387030691 | CPBS 04 | Back cover in white color - Mod. 04 | 04 |
|  | 387030692 | CPBS 05 | Back cover in white color - Mod. 05 | 05 |
|  | 387030694 | HB03 | Condensate collection tray for horizontal ceiling installation - Mod. 01 | 01 |
|  | 387030695 | HB04 | Condensate collection tray for horizontal ceiling installation - Mod. 02 | 02 |
|  | 387030696 | HB05 | Condensate collection tray for horizontal ceiling installation - Mod. 03 | 03 |
|  | 387030697 | HB06 | Condensate for horizontal ceiling installation - Mod. 04 | 04 |
|  | 387030798 | HB07 | Condensate for horizontal ceiling installation - Mod. 05 | 05 |

# FLOOR | CEILING

AC - Model: FCT

# AC FLOOR/CEILING
## MAIN FEATURES MOD. FCT

### CONVERING CABINET

(only for the CV – CA – CH versions)
Standard white finish (RAL 9010). Made of high-thickness galvanised plate pre-coated with a polyvinyl chloride film, it can withstand rust, corrosion, chemicals, solvents, aliphatic compounds and alcohols. Internal thermo-acoustic insulation (Class M1). Compact dimensions: a mere 220 mm thickness. Air supply grid made of white ABS (RAL 9002), with openable side panels for accessing the control panel (accessory).
The double row of manual flaps, each adjustable, allows for directing the air flow in any direction. The flaps can be adjusted in opposite directions to enhance the induction effect. The flow can be directed to graze the ceiling/wall to exploit the Coanda effect.

### LOAD-BEARING STRUCTURE

Load-bearing structure made of high-thickness galvanised plate with holes (slots) for wall/ceiling mounting, made directly on the structure.

### DRAIN PAN

Drain pan equipped with a drainage outlet and thermal insulation. A condensation drain funnel with Ø 20 mm fitting, made of plastic, is mounted only on vertical versions (standard on the same side of the water connections).

### HEAT EXCHANGER

High-efficiency heat exchange coil with copper pipe and aluminium flaps locked by means of mechanical expansion. Coil fittings equipped with anti-torsion system, manual air relief valves and manual water drainage valves. Fittings on the left as a standard feature; on request they can be mounted on the right and are easily reversible on-site. 1 coil for 2-pipe system; 2 coils for 4-pipe system.
Coils tested at 30 bar operating pressure, suitable for working with water up to a maximum pressure of 15 bar.
The coils are suitable for operating with:

- high-temperature water (boiler);
- low-temperature water (condensing boiler, heat pump, etc.);
- cold water (chiller and/or industrial processes)
- water supplemented with glycol.

### VENTILATION UNIT

Ventilation unit consisting of 1, 2 or 3 double-intake centrifugal fans directly coupled with the electric motor with a useful static pressure of up to 75 Pa. Mounted on elastic and elastic supports and shock absorbers. Statically and dynamically balanced fan. Asynchronous electric motor equipped with thermal protection device (Klixon), run capacitor always engaged, IP42, Class B, power cables protected with double insulation. Built according to international standards, 230 VAC–1 Ph–50 Hz.
Standard unit with single-speed motor + 6-output auto-transformer ensuring up to 6 speeds (with performances ranging from max=100% to min=40-50%). Standard electrical pre-wiring in the factory of the 3 intermediate speeds nos. 2-3-5.

### AIR FILTER

Easily removable air filter, built with a metal frame containing the filtration septum. Can be regenerated by washing it with water, blowing, vacuuming. Standard: filtering medium made of polyester acrylic fabric, high-efficiency, resin-coated and needle-punched. Recommended against dust and pollen. Class M1, filtration grade EU3 (EUROVENT 4/5).

# AC FLOOR/CEILING
## MODELS

### AC FLOOR FAN COIL MOD. FCT-CV

Visible wall-mounted vertical installation, covering cabinet with vertical air outflow and intake from the bottom part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030239 | FCT-CV 01 L | 1.500 | 3.740 |
| 387030240 | FCT-CV 01 R | | |
| 387030241 | FCT-CV 02 L | 2.000 | 4.910 |
| 387030242 | FCT-CV 02 R | | |
| 387030243 | FCT-CV 03 L | 2.530 | 5.980 |
| 387030244 | FCT-CV 03 R | | |
| 387030245 | FCT-CV 04 L | 3.020 | 6.710 |
| 387030246 | FCT-CV 04 R | | |
| 387030247 | FCT-CV 05 L | 3.750 | 8.160 |
| 387030248 | FCT-CV 05 R | | |
| 387030249 | FCT-CV 06 L | 4.250 | 9.440 |
| 387030250 | FCT-CV 06 R | | |
| 387030251 | FCT-CV 07 L | 5.520 | 12.000 |
| 387030252 | FCT-CV 07 R | | |
| 387030253 | FCT-CV 08 L | 6.420 | 13.300 |
| 387030254 | FCT-CV 08 R | | |
| 387030255 | FCT-CV 09 L | 7.530 | 15.500 |
| 387030256 | FCT-CV 09 R | | |

| FCT-CV | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCT-CV = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

### AC FLOOR FAN COIL MOD. FCT-CA

Visible wall-mounted vertical installation, covering cabinet with vertical air outflow and intake from the front part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030257 | FCT-CA 01 L | 1.500 | 3.740 |
| 387030258 | FCT-CA 01 R | | |
| 387030259 | FCT-CA 02 L | 2.000 | 4.910 |
| 387030260 | FCT-CA 02 R | | |
| 387030261 | FCT-CA 03 L | 2.530 | 5.980 |
| 387030262 | FCT-CA 03 R | | |
| 387030263 | FCT-CA 04 L | 3.020 | 6.710 |
| 387030264 | FCT-CA 04 R | | |
| 387030265 | FCT-CA 05 L | 3.750 | 8.160 |
| 387030266 | FCT-CA 05 R | | |
| 387030267 | FCT-CA 06 L | 4.250 | 9.440 |
| 387030268 | FCT-CA 06 R | | |
| 387030269 | FCT-CA 07 L | 5.520 | 12.000 |
| 387030270 | FCT-CA 07 R | | |
| 387030271 | FCT-CA 08 L | 6.420 | 13.300 |
| 387030272 | FCT-CA 08 R | | |
| 387030273 | FCT-CA 09 L | 7.530 | 15.500 |
| 387030274 | FCT-CA 09 R | | |

| FCT-CA | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCT-CA = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

**(1) Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - temp. - input/output water temp. 7/12 °C
**(2) Heating:** air temp. 20 °C - input/output water temp. 70/60 °C

# AC FLOOR/CEILING
## MODELS

### AC CEILING FAN COIL MOD. FCT-CH

Visible ceiling-mounted horizontal installation, covering cabinet with air outflow from the front and intake from the bottom.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030275 | FCT-CH 01 L | 1.500 | 3.740 |
| 387030276 | FCT-CH 01 R | | |
| 387030277 | FCT-CH 02 L | 2.000 | 4.910 |
| 387030278 | FCT-CH 02 R | | |
| 387030279 | FCT-CH 03 L | 2.530 | 5.980 |
| 387030280 | FCT-CH 03 R | | |
| 387030281 | FCT-CH 04 L | 3.020 | 6.710 |
| 387030282 | FCT-CH 04 R | | |
| 387030283 | FCT-CH 05 L | 3.750 | 8.160 |
| 387030284 | FCT-CH 05 R | | |
| 387030285 | FCT-CH 06 L | 4.250 | 9.440 |
| 387030286 | FCT-CH 06 R | | |
| 387030287 | FCT-CH 07 L | 5.520 | 12.000 |
| 387030288 | FCT-CH 07 R | | |
| 387030289 | FCT-CH 08 L | 6.420 | 13.300 |
| 387030290 | FCT-CH 08 R | | |
| 387030291 | FCT-CH 09 L | 7.530 | 15.500 |
| 387030292 | FCT-CH 09 R | | |

| FCT-CH | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCT-CH = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

### AC VERTICAL CONCEALED FAN COIL MOD. FCT-NV

Concealed vertical installation, with vertical air outflow and intake from the front part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030293 | FCT-NV 01 L | 1.500 | 3.740 |
| 387030294 | FCT-NV 01 R | | |
| 387030295 | FCT-NV 02 L | 2.000 | 4.910 |
| 387030296 | FCT-NV 02 R | | |
| 387030297 | FCT-NV 03 L | 2.530 | 5.980 |
| 387030298 | FCT-NV 03 R | | |
| 387030299 | FCT-NV 04 L | 3.020 | 6.710 |
| 387030300 | FCT-NV 04 R | | |
| 387030301 | FCT-NV 05 L | 3.750 | 8.160 |
| 387030302 | FCT-NV 05 R | | |
| 387030303 | FCT-NV 06 L | 4.250 | 9.440 |
| 387030304 | FCT-NV 06 R | | |
| 387030305 | FCT-NV 07 L | 5.520 | 12.000 |
| 387030306 | FCT-NV 07 R | | |
| 387030307 | FCT-NV 08 L | 6.420 | 13.300 |
| 387030308 | FCT-NV 08 R | | |
| 387030309 | FCT-NV 09 L | 7.530 | 15.500 |
| 387030310 | FCT-NV 09 R | | |

| FCT-NV | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCT-NV = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

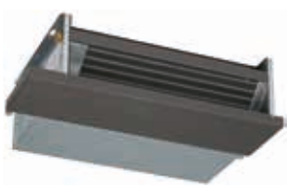
**(1) Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - temp. - input/output water temp. 7/12 °C
**(2) Heating:** air temp. 20 °C - input/output water temp. 70/60 °C

## AC HORIZONTAL CONCEALED FAN COIL MOD. FCT-NH

Concealed horizontal installation, with horizontal air outflow and intake from the rear part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030311 | FCT-NH 01 L | 1.500 | 3.740 |
| 387030312 | FCT-NH 01 R | | |
| 387030313 | FCT-NH 02 L | 2.000 | 4.910 |
| 387030314 | FCT-NH 02 R | | |
| 387030315 | FCT-NH 03 L | 2.530 | 5.980 |
| 387030316 | FCT-NH 03 R | | |
| 387030317 | FCT-NH 04 L | 3.020 | 6.710 |
| 387030318 | FCT-NH 04 R | | |
| 387030319 | FCT-NH 05 L | 3.750 | 8.160 |
| 387030320 | FCT-NH 05 R | | |
| 387030321 | FCT-NH 06 L | 4.250 | 9.440 |
| 387030322 | FCT-NH 06 R | | |
| 387030323 | FCT-NH 07 L | 5.520 | 12.000 |
| 387030324 | FCT-NH 07 R | | |
| 387030325 | FCT-NH 08 L | 6.420 | 13.300 |
| 387030326 | FCT-NH 08 R | | |
| 387030327 | FCT-NH 09 L | 7.530 | 15.500 |
| 387030328 | FCT-NH 09 R | | |

**(1) Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - temp. - input/output water temp. 7/12 °C
**(2) Heating:** air temp. 20 °C - input/output water temp. 70/60 °C



| FCT-NH | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCT-NH = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

# RATED TECHNICAL DATA

## TWO-PIPE UNIT - ONE COIL

| Models | | | 01 | 02 | 03 | 04 |
|---|---|---|---|---|---|---|
| Total cooling capacity (1) | | W | 1.500 | 2.000 | 2.530 | 3.020 |
| Sensible cooling capacity (1) | | W | 1.290 | 1.620 | 2.070 | 2.310 |
| Heating capacity (2a) | | W | 3.740 | 4.910 | 5.980 | 6.710 |
| Heating capacity (2b) | | W | 1.870 | 2.455 | 2.990 | 3.355 |
| Rated air flow (3) | | $m^3/h$ | 370 | 400 | 500 | 550 |
| Water flow rate (4) | Cooling | l/h | 258 | 344 | 436 | 520 |
| | Heating | l/h | 322 | 423 | 515 | 578 |
| Water head losses (5) | Cooling | kPa | 13.1 | 16.3 | 18.5 | 20.8 |
| | Heating | kPa | 15.9 | 19.2 | 20.1 | 20 |
| Sound pressure (ls.-ms.-hs.) (6) | | dB(A) | 24-31-38 | 25-31-38 | 30-38-44 | 31-38-45 |
| Motors/Fans | | N/N | 1/1 | | 1/1 | |
| Rated power absorption (7) | | W | 55 | | 85 | |
| | | A | 0.25 | | 0.40 | |
| Electrical power supply | | | 230 Vac - 1 Ph - 50 Hz | | | |
| Cold/hot coil rows | | N | 3R | | 3R | |
| Hydraulic fittings | | DN | 1/2" F | | 1/2" F | |
| Condensate drainage outlet | | mm | 20 | | 20 | |

| Models | | | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|
| Total cooling capacity (1) | | W | 3.750 | 4.250 | 5.520 | 6.420 | 7.530 |
| Sensible cooling capacity (1) | | W | 2.870 | 3.230 | 4.330 | 4.800 | 5.670 |
| Heating capacity (2a) | | W | 8.160 | 9.440 | 12.000 | 13.300 | 15.500 |
| Heating capacity (2b) | | | 4.080 | 4.720 | 6.000 | 6.650 | 7.750 |
| Rated air flow (3) | | $m^3/h$ | 670 | 720 | 1.000 | 1.050 | 1.280 |
| Water flow rate (4) | Cooling | l/h | 645 | 731 | 950 | 1.105 | 1.296 |
| | Heating | l/h | 702 | 812 | 1.032 | 1.144 | 1.333 |
| Water head losses (5) | Cooling | kPa | 22.6 | 24.1 | 24.5 | 27.1 | 28.8 |
| | Heating | kPa | 20.9 | 23.2 | 22.6 | 22.7 | 23.8 |
| Sound pressure (ls.-ms.-hs.) (6) | | dB(A) | 26-33-37 | 27-34-37 | 34-41-43 | 35-41-45 | 39-46-48 |
| Motors/Fans | | N/N | 1/2 | | 1/2 | | 1/2 |
| Rated power absorption (7) | | W | 75 | | 145 | | 175 |
| | | A | 0.35 | | 0.65 | | 0.77 |
| Electrical power supply | | | 230 Vac - 1 Ph - 50 Hz | | | | |
| Cold/hot coil rows | | N | 3R | | 3R | | 3R |
| Hydraulic fittings | | DN | 1/2" F | | 1/2" F | | 1/2" F |
| Condensate drainage outlet | | mm | 20 | | 20 | | 20 |

Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19°C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(3) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

## REDUCTION OF THE COOLING/HEATING CAPACITY (IN RELATION TO THE AIR FLOW REDUCTION)

| Air flow rate | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 | 0.75 | 0.70 | 0.65 | 0.60 |
|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 1.00 | 0.97 | 0.95 | 0.92 | 0.89 | 0.87 | 0.84 | 0.81 | 0.77 |
| Sensible cooling capacity | 1.00 | 0.97 | 0.93 | 0.90 | 0.86 | 0.83 | 0.79 | 0.76 | 0.72 |
| Heating capacity | 1.00 | 0.97 | 0.94 | 0.91 | 0.87 | 0.84 | 0.81 | 0.77 | 0.74 |

| Air flow rate | 0.55 | 0.50 | 0.45 | 0.40 | 0.35 | 0.30 | 0.25 | 0.20 | 0.15 |
|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 0.74 | 0.71 | 0.67 | 0.63 | 0.59 | 0.55 | 0.50 | 0.45 | 0.39 |
| Sensible cooling capacity | 0.68 | 0.64 | 0.60 | 0.55 | 0.51 | 0.46 | 0.41 | 0.35 | 0.29 |
| Heating capacity | 0.70 | 0.66 | 0.62 | 0.58 | 0.53 | 0.49 | 0.44 | 0.38 | 0.32 |

## TABLE OF NET WEIGHTS MOD. FCT (TWO-PIPE UNIT - ONE COIL) IN KG

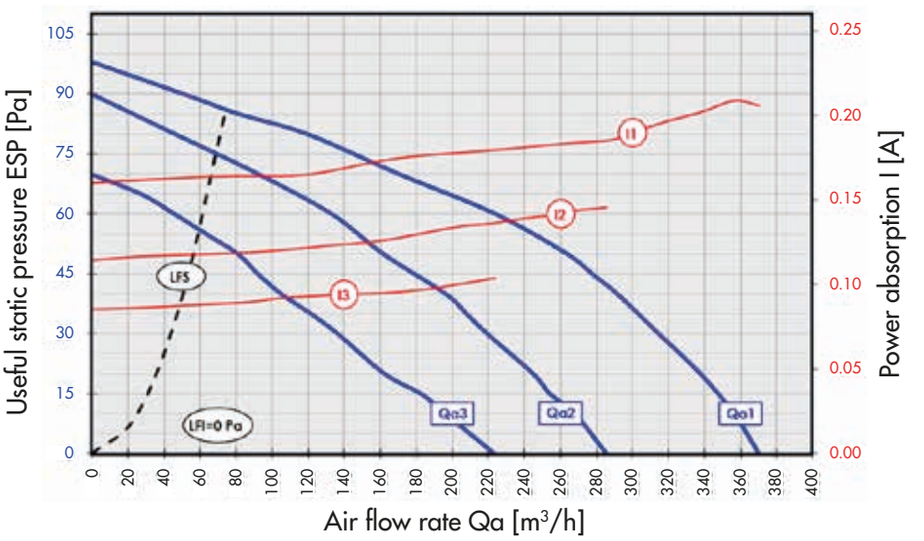
| Products/Models | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| **FCT-CV** | 13.5 | 14.0 | 16.4 | 17.2 | 22.5 | 23.5 | 26.5 | 27.5 | 30.0 |
| **FCT-CA** | 13.8 | 14.3 | 16.9 | 17.7 | 23.2 | 24.2 | 26.9 | 28.4 | 31.1 |
| **FCT-CH** | 15.0 | 15.5 | 18.5 | 19.3 | 25.2 | 26.2 | 29.3 | 30.8 | 33.9 |
| **FCT-NV** | 10.6 | 11.1 | 13.4 | 14.2 | 19.4 | 20.4 | 22.7 | 24.2 | 26.6 |
| **FCT-NH** | 11.2 | 11.7 | 14.0 | 14.8 | 20.0 | 21.0 | 23.4 | 24.9 | 27.3 |

# USEFUL STATIC PRESSURE/ WATER FLOW RATE DIAGRAMS

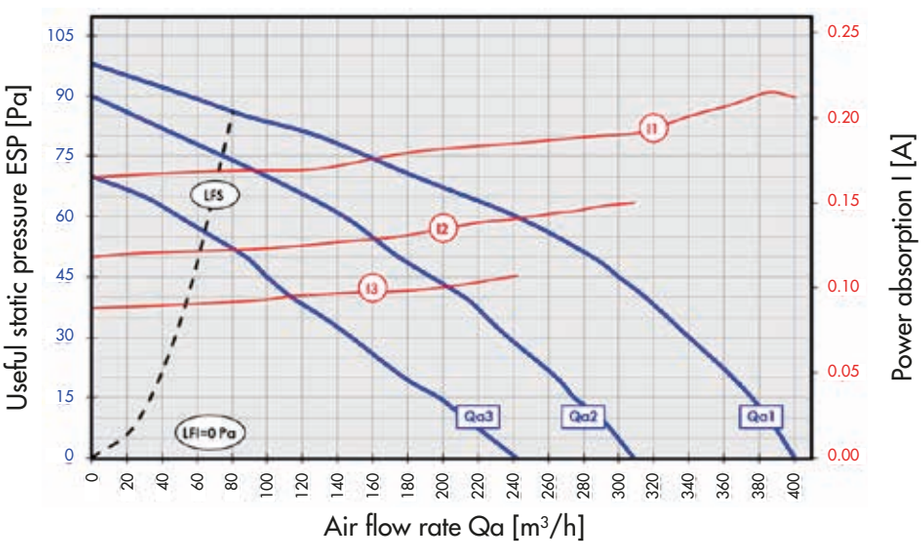
Key

| | |
|---|---|
| LFS | Upper operating limit |
| LFI | Lower operating limit |
| Qa1 | ESP/Qa curve at the maximum speed |
| Qa2 | ESP/Qa curve at the average speed |
| Qa3 | ESP/Qa curve at the minimum speed |
| I1 | I/Qa curve at the maximum speed |
| I2 | I/Qa curve at the average speed |
| I3 | I/Qa curve at the minimum speed |

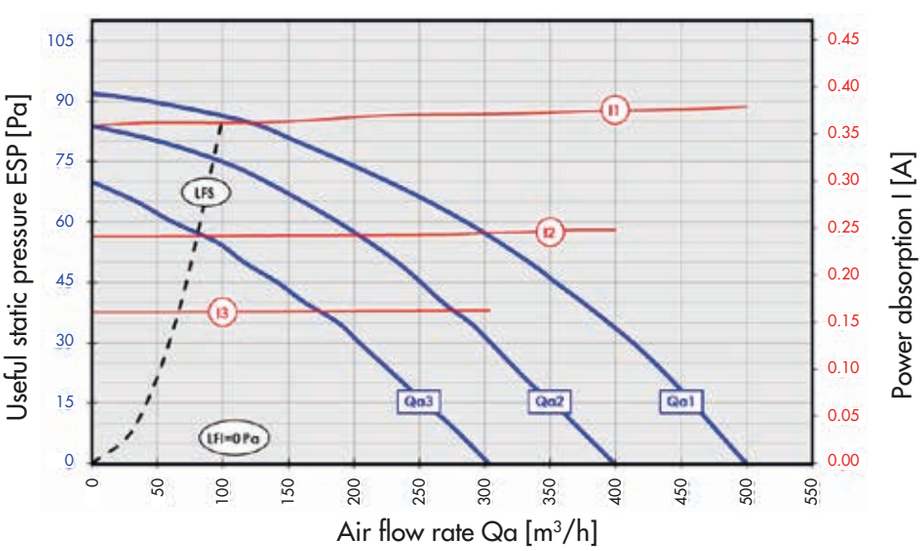
## Model FCT 01




## Model FCT 02



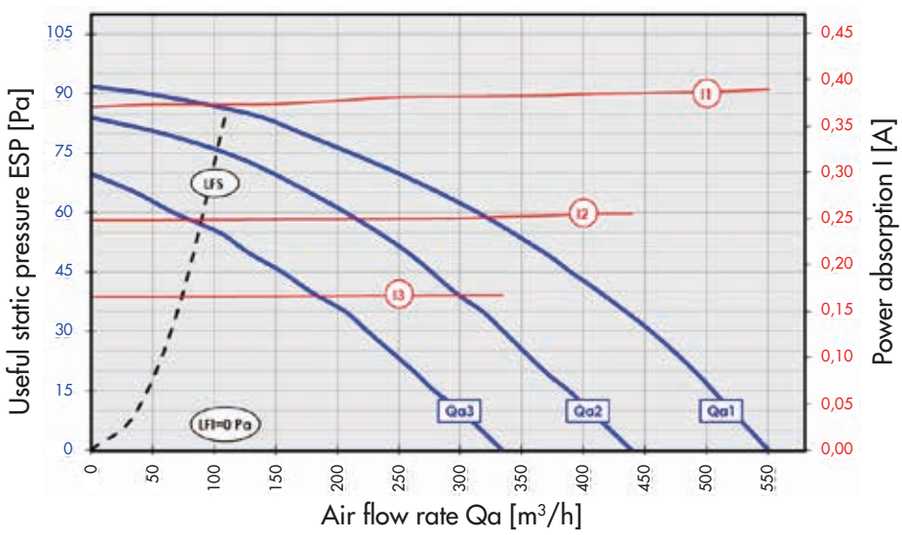

## Model FCT 03



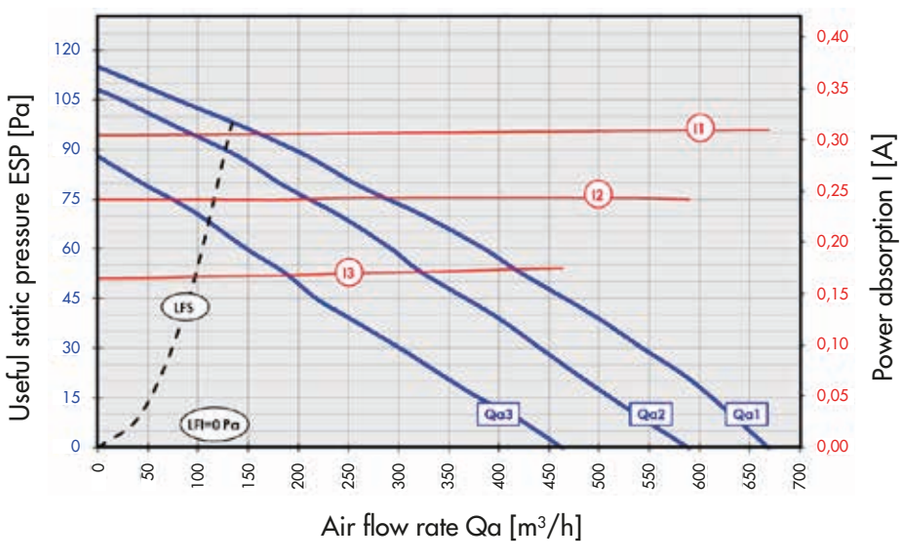
Key

| | |
|---|---|
| LFS | Upper operating limit |
| LFI | Lower operating limit |
| Qa1 | ESP/Qa curve at the maximum speed |
| Qa2 | ESP/Qa curve at the average speed |
| Qa3 | ESP/Qa curve at the minimum speed |
| I1 | I/Qa curve at the maximum speed |
| I2 | I/Qa curve at the average speed |
| I3 | I/Qa curve at the minimum speed |

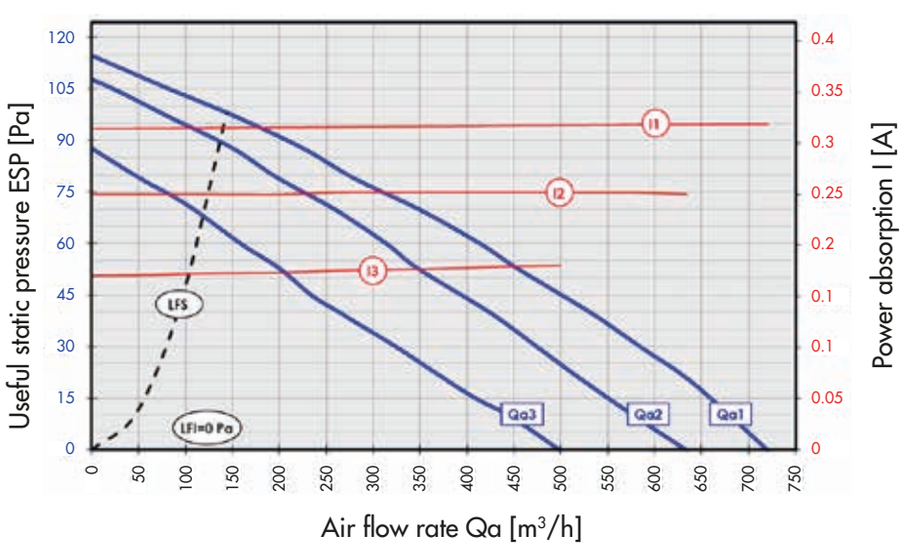
## Model FCT 04




## Model FCT 05




## Model FCT 06

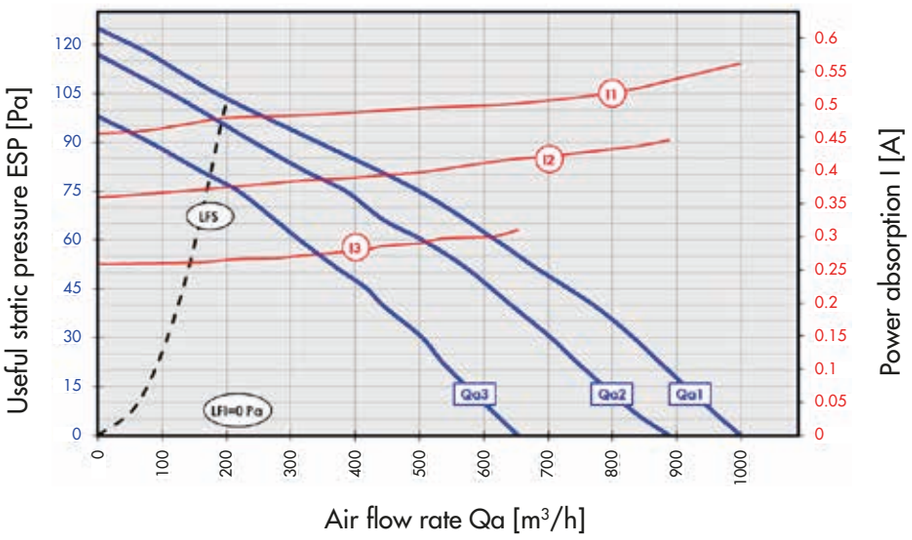


# USEFUL STATIC PRESSURE/ WATER FLOW RATE DIAGRAMS

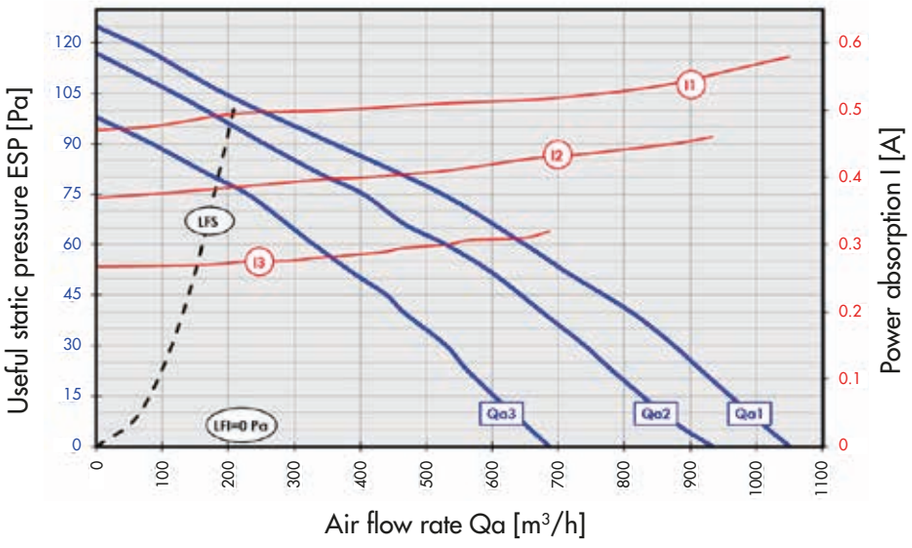
Key

| | |
|---|---|
| LFS | Upper operating limit |
| LFI | Lower operating limit |
| Qa1 | ESP/Qa curve at the maximum speed |
| Qa2 | ESP/Qa curve at the average speed |
| Qa3 | ESP/Qa curve at the minimum speed |
| I1 | I/Qa curve at the maximum speed |
| I2 | I/Qa curve at the average speed |
| I3 | I/Qa curve at the minimum speed |

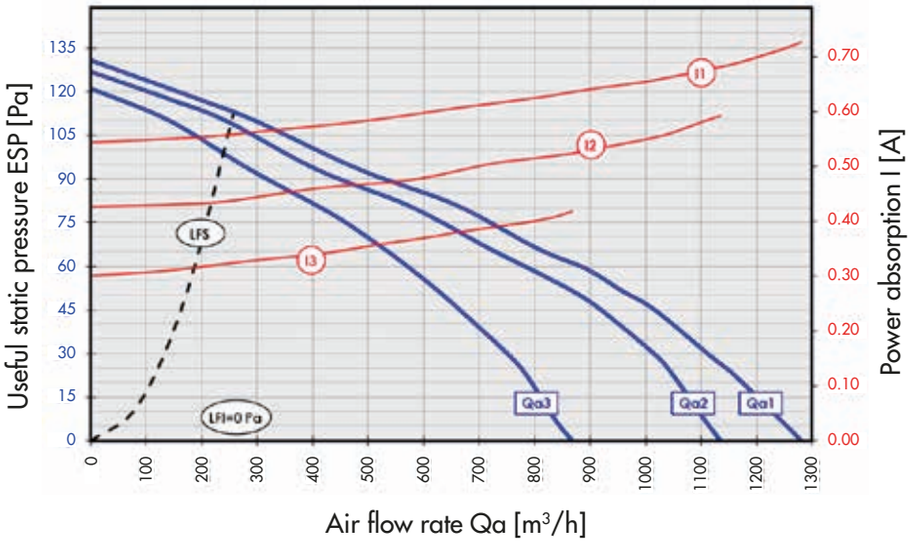
## Model FCT 07




## Model FCT 08

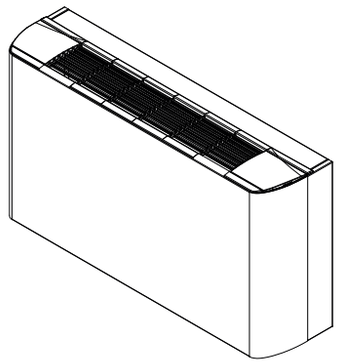


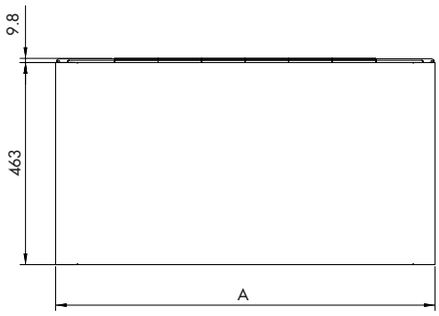

## Model FCT 09

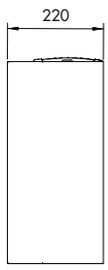


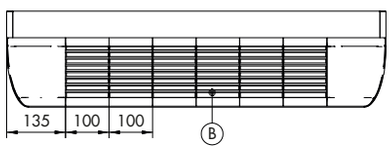
# DIMENSIONAL DRAWINGS

## Model FCT-CV



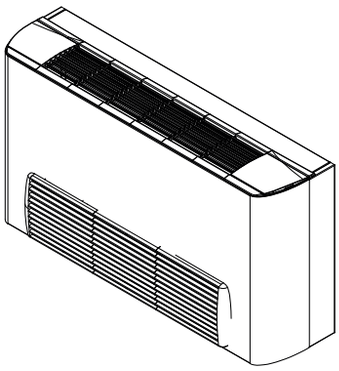


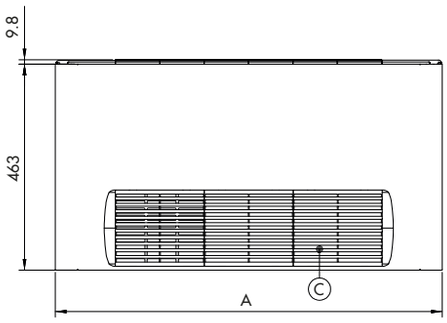



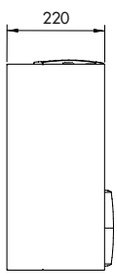



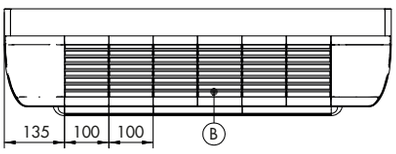

| MODEL FCT-CV | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| A | 670 | 670 | 870 | 870 | 1070 | 1070 | 1270 | 1270 | 1470 |
| B = N° of grids | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 |

## Model FCT-CA/FCT-CH





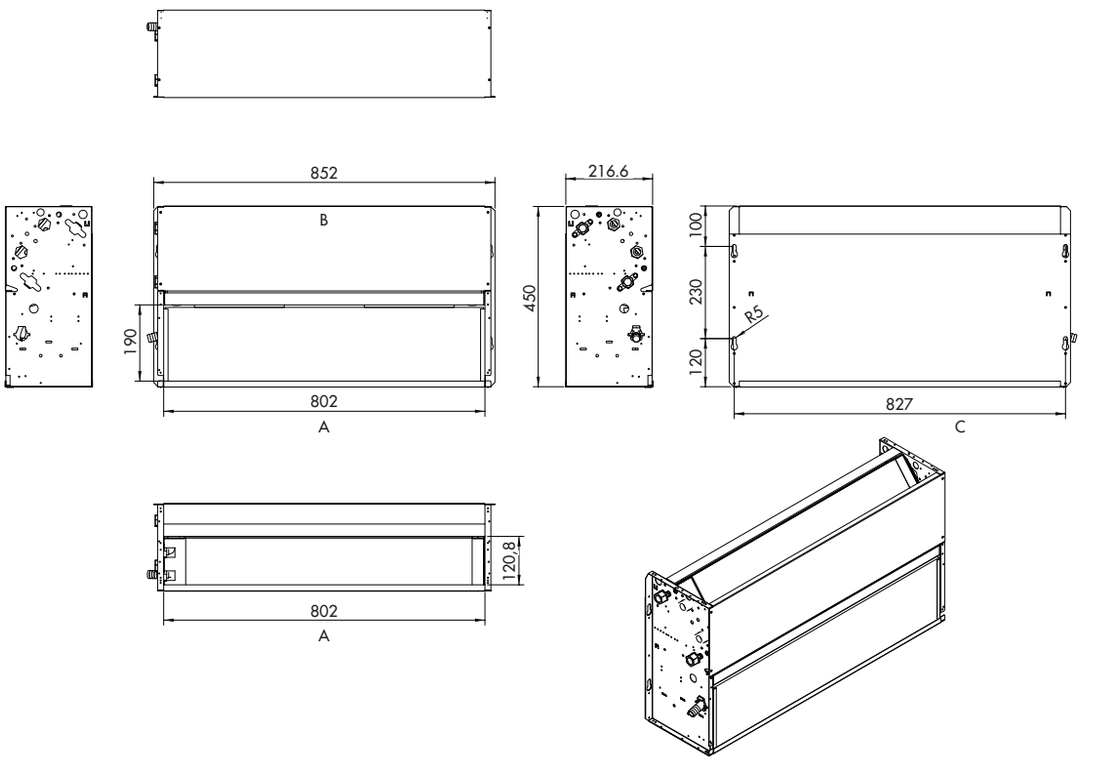




| MODEL FCT-CA/FCT-CH | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| A | 670 | 670 | 870 | 870 | 1070 | 1070 | 1270 | 1270 | 1470 |
| B = N° of grids | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 |
| C = N° of grids | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 |

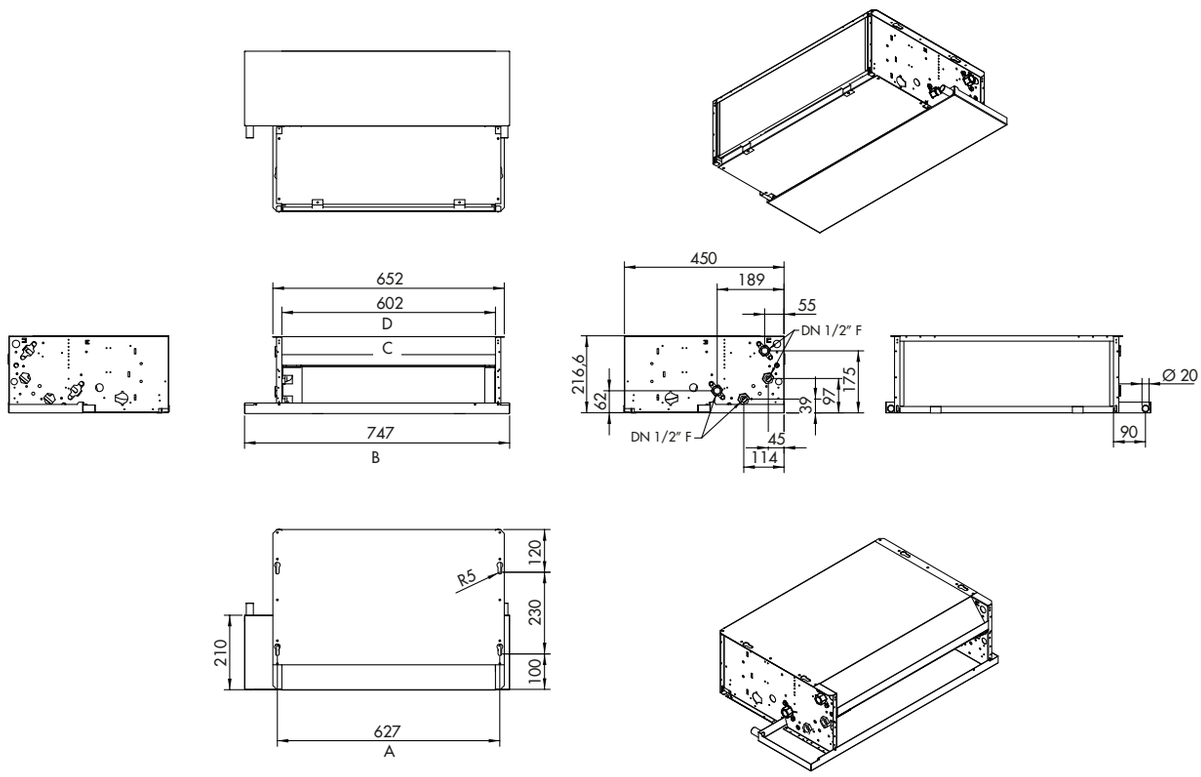
# DIMENSIONAL DRAWINGS

## Model FCT-NV




| MODEL FCT-NV | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| A | 402 | 402 | 602 | 602 | 802 | 802 | 1002 | 1002 | 1202 |
| B | 452 | 452 | 652 | 652 | 852 | 852 | 1052 | 1052 | 1252 |
| C | 427 | 427 | 627 | 627 | 827 | 827 | 1027 | 1027 | 1227 |

## Model FCT-NH




| MODEL FCT-NH | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| A | 427 | 427 | 627 | 627 | 827 | 827 | 1027 | 1027 | 1227 |
| B | 547 | 547 | 747 | 747 | 947 | 947 | 1147 | 1147 | 1347 |
| C | 402 | 402 | 602 | 602 | 802 | 802 | 1002 | 1002 | 1202 |
| D | 452 | 452 | 652 | 652 | 852 | 852 | 1052 | 1052 | 1252 |

# ACCESSORIES

| CONTROL UNITS INSTALLED | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030464 | OBC22 | Control unit mounted on the machine for units with 2/4 pipes, with ATS4 air sensor | FCT-CV<br>FCT-CA |
|  | 387030465 | OBC25 | Control unit mounted on the machine for units with 2/4 pipes, with display and ATS4 air sensor | FCT-CV<br>FCT-CA |
|  | 387030466 | MTT32 | Minimum hot water temperature thermostat (calibrated to 32° C) | All |
|  | 387030467 | WTS4 | Water temperature sensor (type NTC 4,700 ohm @25 °C with cable L=1 m) | For OBC25 control unit as an alternative to MTT32 |

| WIRED CONTROL UNITS AND REMOTE CONTROLS | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030468 | CL01 | IP20 terminal block (mandatory when installing wired control unit) | All |
|  | 387030469 | SWC22 | Simplified thermostat for 2/4-pipe fan coil units | All |
|  | 387030470 | SWC25 | Simplified thermostat for 2/4-pipe fan coil units with display and with advanced functions | All |
|  | 387030471 | EIX01 | Electronic interface for fan coil unit thermostats: enables a single thermostat to control up to 4 fan coil units. Housed in a 6-module container for DIN rail | All |
|  | 387030472 | IRC01 | IR remote control. Kit inclusive of motherboard, air sensor, water sensor and IR receiver | All |

| KIT CONTAINING VALVES, PANS, CONDENSATE DISCHARGE PUMPS AND FEET | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030473 | 3WV01 | 3/4" M three-way valve with PWM-ON/OFF actuator, 230 V (2 pipes) | All |
|  | 387030474 | 3WV02 | Three-way valve with PWM-ON/OFF actuator, 230 V, 1/2" ball valve and 1/2" retainer (2 pipes) | All |
|  | 387030475 | 2WV01 | 3/4" M two-way valve with PWM-ON/OFF actuator, 230 V (2 pipes) | All |
|  | 387030476 | 2WV02 | Two-way valve with PWM-ON/OFF actuator, 230 V, 1/2" ball valve and 1/2" retainer (2 pipes) | All |
|  | 387030477 | VB01 | Auxiliary drain pan made of plastic, for two-way or three-way valves | FCT-CV<br>FCT-CA<br>FCT-NV |
|  | 387030478 | HB01 | Auxiliary drain pan with thermal insulation, for two-way or three-way valves | FCT-CH<br>FCT-NH |
|  | 387030479 | CP01 | Condensate discharge pump equipped with alarm contact | FCT-CV<br>FCT-CA<br>FCT-NV |
|  | 387030480 | CP02 | Condensate discharge pump equipped with alarm contact | FCT-CH<br>FCT-NH |
|  | 387030481 | FE01 | Pair of pre-coated feet H=90 mm | FCT-CV |

# ACCESSORIES

| PANELS | | | | |
|---|---|---|---|---|
| **Code** | | **Model** | **Description** | **Applicability** |
| 387030482 | 01/02 | CPB 01-02 | Lower rear closing panel made of pre-painted plate | FCT-CV<br>FCT-CA |
| 387030483 | 03/04 | CPB 03-04 | | |
| 387030484 | 05/06 | CPB 05-06 | | |
| 387030485 | 01/02 | CPC 01-02 | Lower closing panel without grid made of pre-painted plate | FCT-CA<br>FCT-CH |
| 387030486 | 03/04 | CPC 03-04 | | |
| 387030487 | 05/06 | CPC 05-06 | | |
| 387030488 | 01/02 | CPD 01-02 | Lower closing panel made of pre-painted plate with removable ABS grid and flat air filter with grade EU3 filtration (EUROVENT 4/5) | FCT-CV |
| 387030489 | 03/04 | CPD 03-04 | | |
| 387030490 | 05/06 | CPD 05-06 | | |
| 387030491 | 01/02 | RF 01-02 | Frame for concealed wall-mounted installation | FCT-NV |
| 387030492 | 03/04 | RF 03-04 | | |
| 387030493 | 05/06 | RF 05-06 | | |
| 387030494 | 01/02 | FP 01-02 | Front panel made of pre-painted plate equipped with air return and supply grid, for fan coil units with remote control | FCT-NV |
| 387030495 | 03/04 | FP 03-04 | | |
| 387030496 | 05/06 | FP 05-06 | | |

| PANELS | | | | |
|---|---|---|---|---|
| **Code** | | **Model** | **Description** | **Applicability** |
| 387030497 | 07/08 | CPB 07-08 | Lower rear closing panel made of pre-painted plate | FCT-CV<br>FCT-CA |
| 387030498 | 09 | CPB 09 | | |
| 387030499 | 07/08 | CPC 07-08 | Lower closing panel without grid made of pre-painted plate | FCT-CA<br>FCT-CH |
| 387030500 | 09 | CPC 09 | | |
| 387030501 | 07/08 | CPD 07-08 | Lower closing panel made of pre-painted plate with removable ABS grid and flat air filter with grade EU3 filtration (EUROVENT 4/5) | FCT-CV |
| 387030502 | 09 | CPD 09 | | |
| 387030503 | 07/08 | RF 07-08 | Frame for concealed wall-mounted installation | FCT-NV |
| 387030504 | 09 | RF 09 | | |
| 387030505 | 07/08 | FP 07-08 | Front panel made of pre-painted plate equipped with air return and supply grid, for fan coil units with remote control | FCT-NV |
| 387030506 | 09 | FP 09 | | |

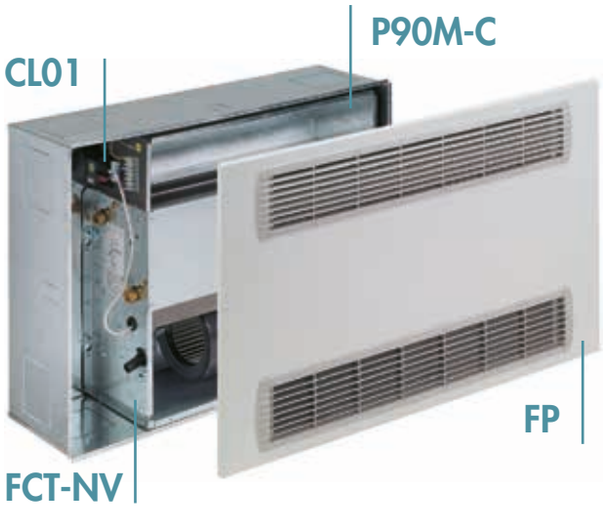

CPC


CPD


CPB


CPB


RF

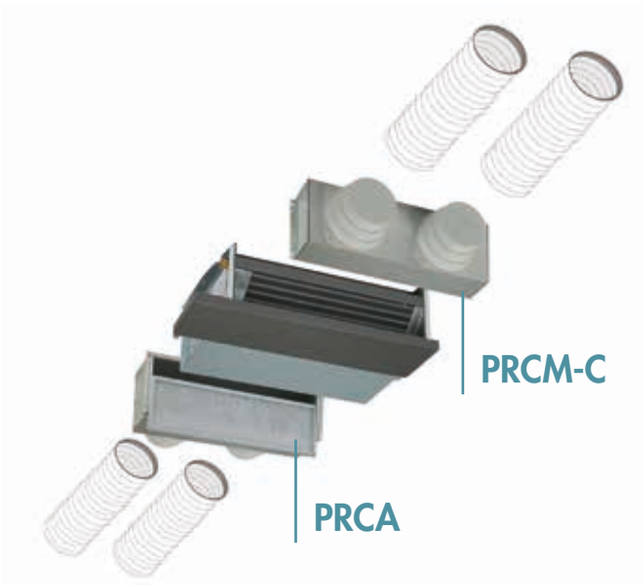

P90M-C
CL01
FP
FCT-NV

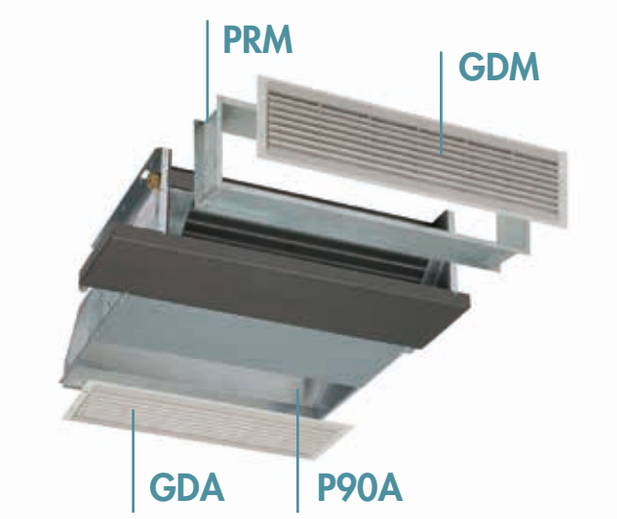
# ACCESSORIES

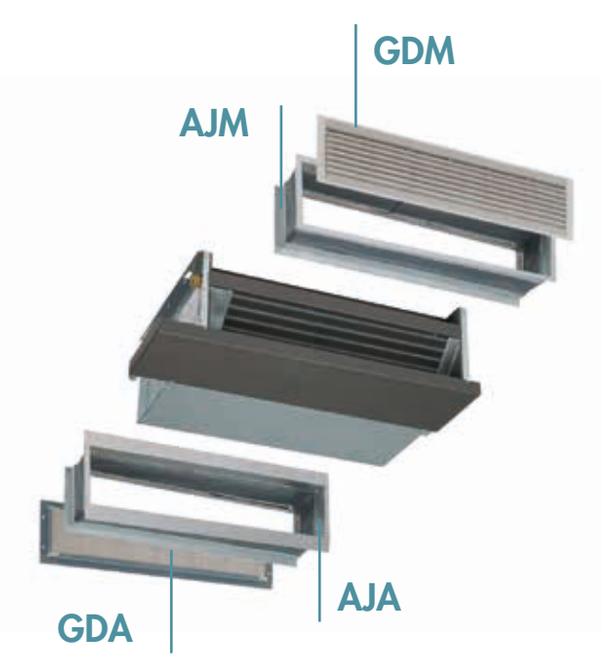
| PLENUM | | | | |
|---|---|---|---|---|
| **Code** | | **Model** | **Description** | **Applicability** |
| 387030507 | 01/02 | AJA 01-02 | Vibration-damping joint with fan coil unit attachment flange and channel attachment flange, L=150 mm - Intake side | FCT-NH |
| 387030508 | 03/04 | AJA 03-04 | | |
| 387030509 | 05/06 | AJA 05-06 | | |
| 387030510 | 01/02 | AJM 01-02 | Vibration-damping joint with fan coil unit attachment flange and channel attachment flange, L=150 mm - Supply side | FCT-NH |
| 387030511 | 03/04 | AJM 03-04 | | |
| 387030512 | 05/06 | AJM 05-06 | | |
| 387030513 | 01/02 | GDA 01-02 | Air grid with simple row or fixed ABS flaps, suitable for connection on the TP, AJA, P90A plenum - Intake side | FCT-NH |
| 387030514 | 03/04 | GDA 03-04 | | |
| 387030515 | 05/06 | GDA 05-06 | | |
| 387030516 | 01/02 | GDM 01-02 | Air grid with simple row or fixed ABS flaps, suitable for connection on the TP, AJM plenum - Supply side | FCT-NH |
| 387030517 | 03/04 | GDM 03-04 | | |
| 387030518 | 05/06 | GDM 05-06 | | |
| 387030519 | 01/02 | P90A 01-02 | 90° plenum - Intake side | FCT-NH |
| 387030520 | 03/04 | P90A 03-04 | | |
| 387030521 | 05/06 | P90A 05-06 | | |
| 387030522 | 01/02 | P90M-C 01-02 | 90° plenum - Supply side | FCT-NV |
| 387030523 | 03/04 | P90M-C 03-04 | | |
| 387030524 | 05/06 | P90M-C 05-06 | | |
| 387030525 | 01/02 | PRM 01-02 | Straight plenum L=100 mm - Supply side | FCT-NH |
| 387030526 | 03/04 | PRM 03-04 | | |
| 387030527 | 05/06 | PRM 05-06 | | |
| 387030528 | 01/02 | PRA 01-02 | Straight plenum L=100 mm - Intake side | FCT-NH |
| 387030529 | 03/04 | PRA 03-04 | | |
| 387030530 | 05/06 | PRA 05-06 | | |
| 387030531 | 01/02 | TP 01-02 | Telescopic extension L=0–100 mm, suitable for connection with PRA, PRM, P290A plenum | FCT-NH |
| 387030532 | 03/04 | TP 03-04 | | |
| 387030533 | 05/06 | TP 05-06 | | |
| 387030534 | 01/02 | PRCA 01-02 | Air intake plenum with round fittings and filter | FCT-NH |
| 387030535 | 03/04 | PRCA 03-04 | | |
| 387030536 | 05/06 | PRCA 05-06 | | |
| 387030537 | 01/02 | PRCM 01-02 | Air supply plenum with round fittings, insulated | FCT-NH |
| 387030538 | 03/04 | PRCM 03-04 | | |
| 387030539 | 05/06 | PRCM 05-06 | | |

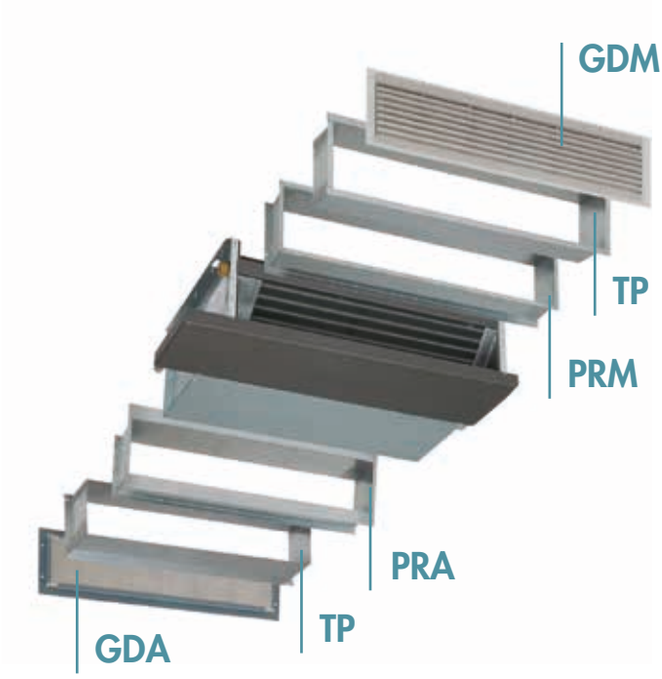
| PLENUM | | | | |
|---|---|---|---|---|
| **Code** | | **Model** | **Description** | **Applicability** |
| 387030540 | 07/08 | AJA 07-08 | Vibration-damping joint with fan coil unit attachment flange and channel attachment flange, L=150 mm - Intake side | FCT-NH |
| 387030541 | 09 | AJA 09 | | |
| 387030542 | 07/08 | AJM 07-08 | Vibration-damping joint with fan coil unit attachment flange and channel attachment flange, L=150 mm - Supply side | FCT-NH |
| 387030543 | 09 | AJM 09 | | |
| 387030544 | 07/08 | GDA 07-08 | Air grid with simple row or fixed ABS flaps, suitable for connection on the TP, AJA, P90A plenum - Intake side | FCT-NH |
| 387030545 | 09 | GDA 09 | | |
| 387030546 | 07/08 | GDM 07-08 | Air grid with simple row or fixed ABS flaps, suitable for connection on the TP, AJM plenum - Supply side | FCT-NH |
| 387030547 | 09 | GDM 09 | | |
| 387030548 | 07/08 | P90A 07-08 | 90° plenum - Intake side | FCT-NH |
| 387030549 | 09 | P90A 09 | | |
| 387030550 | 07/08 | P90M-C 07-08 | 90° plenum - Supply side | FCT-NV |
| 387030551 | 09 | P90M-C 09 | | |
| 387030552 | 07/08 | PRM 07-08 | Straight plenum L=100 mm - Supply side | FCT-NH |
| 387030553 | 09 | PRM 09 | | |
| 387030554 | 07/08 | PRA 07-08 | Straight plenum L=100 mm - Intake side | FCT-NH |
| 387030555 | 09 | PRA 09 | | |
| 387030556 | 07/08 | TP 07-08 | Telescopic extension L=0–100 mm, suitable for connection with PRA, PRM, P290A plenum | FCT-NH |
| 387030557 | 09 | TP 09 | | |
| 387030558 | 07/08 | PRCA 07-08 | Air intake plenum with round fittings and filter | FCT-NH |
| 387030559 | 09 | PRCA 09 | | |
| 387030560 | 07/08 | PRCM-C 07-08 | Air supply plenum with round fittings, insulated | FCT-NH |
| 387030561 | 09 | PRCM-C 09 | | |

# ACCESSORIES



# FLOOR | CEILING

EC Brushless - Model: FCTE

# EC BRUSHLESS FLOOR/CEILING

## MAIN FEATURES MOD. FCTE

### COVERING CABINET

(only for the CV – CA – CH versions)

Standard white finish (RAL 9010). Made of high-thickness galvanised plate pre-lined with a polyvinyl chloride film, it can withstand rust, corrosion, chemicals, solvents, aliphatic compounds and alcohols. Internal thermo-acoustic insulation (Class M1). Compact dimensions: a mere 220 mm thickness.

Air supply grid made of white ABS (RAL 9002), with openable side panels for accessing the control panel (accessory).

The double row of manual flaps, each adjustable, allows for directing the air flow in any direction. The flaps can be adjusted in opposite directions to enhance the induction effect. The flow can be directed to graze the ceiling/wall to exploit the Coanda effect.

### LOAD-BEARING STRUCTURE

Load-bearing structure made of high-thickness galvanised plate with holes (slots) for wall/ceiling mounting, made directly on the structure.

### DRAIN PAN

Drain pan equipped with a drainage outlet and thermal insulation. A condensation drain funnel with Ø 20 mm fitting, made of plastic, is mounted only on vertical versions (standard on the same side of the water connections).

### HEAT EXCHANGER

High-efficiency heat exchange coil with copper pipe and aluminium flaps locked by means of mechanical expansion. Coil fittings equipped with anti-torsion system, manual air relief valves and manual water drainage valves. Fittings on the left as a standard feature; on request they can be mounted on the right and are easily reversible on-site. 1 coil for 2-pipe system; 2 coils for 4-pipe system.

Coils tested at 30 bar operating pressure, suitable for working with water up to a maximum pressure of 15 bar.

The coils are suitable for operating with:

- high-temperature water (boiler)
- low-temperature water (condensing boiler, heat pump, etc.)
- cold water (chiller and/or industrial processes)
- water supplemented with glycol.

### VENTILATION UNIT

Ventilation unit consisting of 1 or 2 double-intake centrifugal fans directly coupled with the electric motor with a useful static pressure of up to 75 Pa. Mounted on elastic and elastic supports and shock absorbers. Statically and dynamically balanced fan. Large-diameter fans (high air volume and high static pressure) with low number of revolutions (low noise).

Latest generation EC brushless motor with permanent magnets, direct current, equipped with control electronics (inverter). IP 40, Class B, power cables protected with double insulation.

Built according to international standards, 230 VAC–1 Ph–50/60 Hz. Continuous adjustment 0–100% of the number of revolutions (and hence of the air volume and consequently the cooling/heating capacity) by means of a 0... 10 VDC modulating control signal.

Inverter with dip-switches for setting the various types of motor control software programmes + dip-switches for redistributing the work range on a new more limited range (from 0...10 VDC up to 0...6.5 VDC).

### AIR FILTER

Easily removable air filter, built with a metal frame containing the filtration septum. Can be regenerated by washing it with water, blowing, vacuuming. Standard: filtering medium made of polyester acrylic fabric, high-efficiency, resin-coated and needle-punched. Recommended against dust and pollen. Class M1, filtration grade EU3 (EUROVENT 4/5).

# EC BRUSHLESS FLOOR/CEILING

## MODELS

### EC BRUSHLESS FLOOR FAN COIL MOD. FCTE-CV

Visible wall-mounted vertical installation, covering cabinet with vertical air outflow and intake from the bottom part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030329 | FCTE-CV 01 L | 1.500 | 3.740 |
| 387030330 | FCTE-CV 01 R | | |
| 387030331 | FCTE-CV 02 L | 2.000 | 4.910 |
| 387030332 | FCTE-CV 02 R | | |
| 387030333 | FCTE-CV 03 L | 2.530 | 5.980 |
| 387030334 | FCTE-CV 03 R | | |
| 387030335 | FCTE-CV 04 L | 3.020 | 6.710 |
| 387030336 | FCTE-CV 04 R | | |
| 387030337 | FCTE-CV 05 L | 3.750 | 8.160 |
| 387030338 | FCTE-CV 05 R | | |
| 387030339 | FCTE-CV 06 L | 4.250 | 9.440 |
| 387030340 | FCTE-CV 06 R | | |
| 387030341 | FCTE-CV 07 L | 5.520 | 12.000 |
| 387030342 | FCTE-CV 07 R | | |
| 387030343 | FCTE-CV 08 L | 6.420 | 13.300 |
| 387030344 | FCTE-CV 08 R | | |
| 387030345 | FCTE-CV 09 L | 7.530 | 15.500 |
| 387030346 | FCTE-CV 09 R | | |

| FCTE-CV | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCTE-CV = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

### EC BRUSHLESS FLOOR FAN COIL MOD. FCTE-CA

Visible wall-mounted vertical installation, covering cabinet with vertical air outflow and intake from the front part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030347 | FCTE-CA 01 L | 1.500 | 3.740 |
| 387030348 | FCTE-CA 01 R | | |
| 387030349 | FCTE-CA 02 L | 2.000 | 4.910 |
| 387030350 | FCTE-CA 02 R | | |
| 387030351 | FCTE-CA 03 L | 2.530 | 5.980 |
| 387030352 | FCTE-CA 03 R | | |
| 387030353 | FCTE-CA 04 L | 3.020 | 6.710 |
| 387030354 | FCTE-CA 04 R | | |
| 387030355 | FCTE-CA 05 L | 3.750 | 8.160 |
| 387030356 | FCTE-CA 05 R | | |
| 387030357 | FCTE-CA 06 L | 4.250 | 9.440 |
| 387030358 | FCTE-CA 06 R | | |
| 387030359 | FCTE-CA 07 L | 5.520 | 12.000 |
| 387030360 | FCTE-CA 07 R | | |
| 387030361 | FCTE-CA 08 L | 6.420 | 13.300 |
| 387030362 | FCTE-CA 08 R | | |
| 387030363 | FCTE-CA 09 L | 7.530 | 15.500 |
| 387030364 | FCTE-CA 09 R | | |

| FCTE-CA | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCTE-CA = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

**(1) Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - temp. - input/output water temp. 7/12 °C
**(2) Heating:** air temp. 20 °C - input/output water temp. 70/60 °C

# EC BRUSHLESS FLOOR/CEILING
## MODELS

### EC BRUSHLESS CEILING FAN COIL MOD. FCTE-CH

Visible ceiling-mounted horizontal installation, covering cabinet with air outflow from the front and intake from the bottom.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030365 | FCTE-CH 01 L | 1.500 | 3.740 |
| 387030366 | FCTE-CH 01 R | | |
| 387030367 | FCTE-CH 02 L | 2.000 | 4.910 |
| 387030368 | FCTE-CH 02 R | | |
| 387030369 | FCTE-CH 03 L | 2.530 | 5.980 |
| 387030370 | FCTE-CH 03 R | | |
| 387030371 | FCTE-CH 04 L | 3.020 | 6.710 |
| 387030372 | FCTE-CH 04 R | | |
| 387030373 | FCTE-CH 05 L | 3.750 | 8.160 |
| 387030374 | FCTE-CH 05 R | | |
| 387030375 | FCTE-CH 06 L | 4.250 | 9.440 |
| 387030376 | FCTE-CH 06 R | | |
| 387030377 | FCTE-CH 07 L | 5.520 | 12.000 |
| 387030378 | FCTE-CH 07 R | | |
| 387030379 | FCTE-CH 08 L | 6.420 | 13.300 |
| 387030380 | FCTE-CH 08 R | | |
| 387030381 | FCTE-CH 09 L | 7.530 | 15.500 |
| 387030382 | FCTE-CH 09 R | | |

| FCTE-CH | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCTE-CH = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

### EC BRUSHLESS VERTICAL CONCEALED FAN COIL MOD. FCTE-NV

Concealed vertical installation, with vertical air outflow and intake from the front part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030383 | FCTE-NV 01 L | 1.500 | 3.740 |
| 387030384 | FCTE-NV 01 R | | |
| 387030385 | FCTE-NV 02 L | 2.000 | 4.910 |
| 387030386 | FCTE-NV 02 R | | |
| 387030387 | FCTE-NV 03 L | 2.530 | 5.980 |
| 387030388 | FCTE-NV 03 R | | |
| 387030389 | FCTE-NV 04 L | 3.020 | 6.710 |
| 387030390 | FCTE-NV 04 R | | |
| 387030391 | FCTE-NV 05 L | 3.750 | 8.160 |
| 387030392 | FCTE-NV 05 R | | |
| 387030393 | FCTE-NV 06 L | 4.250 | 9.440 |
| 387030394 | FCTE-NV 06 R | | |
| 387030395 | FCTE-NV 07 L | 5.520 | 12.000 |
| 387030396 | FCTE-NV 07 R | | |
| 387030397 | FCTE-NV 08 L | 6.420 | 13.300 |
| 387030398 | FCTE-NV 08 R | | |
| 387030399 | FCTE-NV 09 L | 7.530 | 15.500 |
| 387030400 | FCTE-NV 09 R | | |

| FCTE-NV | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCTE-NV = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

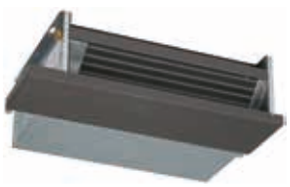
**(1) Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - temp. - input/output water temp. 7/12 °C
**(2) Heating:** air temp. 20 °C - input/output water temp. 70/60 °C

# EC BRUSHLESS HORIZONTAL CONCEALED FAN COIL MOD. FCTE-NH

Concealed horizontal installation, with horizontal air outflow and intake from the rear part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030401 | FCTE-NH 01 L | 1.500 | 3.740 |
| 387030402 | FCTE-NH 01 R | | |
| 387030403 | FCTE-NH 02 L | 2.000 | 4.910 |
| 387030404 | FCTE-NH 02 R | | |
| 387030405 | FCTE-NH 03 L | 2.530 | 5.980 |
| 387030406 | FCTE-NH 03 R | | |
| 387030407 | FCTE-NH 04 L | 3.020 | 6.710 |
| 387030408 | FCTE-NH 04 R | | |
| 387030409 | FCTE-NH 05 L | 3.750 | 8.160 |
| 387030410 | FCTE-NH 05 R | | |
| 387030411 | FCTE-NH 06 L | 4.250 | 9.440 |
| 387030412 | FCTE-NH 06 R | | |
| 387030413 | FCTE-NH 07 L | 5.520 | 12.000 |
| 387030414 | FCTE-NH 07 R | | |
| 387030415 | FCTE-NH 08 L | 6.420 | 13.300 |
| 387030416 | FCTE-NH 08 R | | |
| 387030417 | FCTE-NH 09 L | 7.530 | 15.500 |
| 387030418 | FCTE-NH 09 R | | |

(1) Cooling: air temp. 27 °C dry bulb, 19 °C wet bulb - temp. - input/output water temp. 7/12 °C
(2) Heating: air temp. 20 °C - input/output water temp. 70/60 °C



| FCTE-NH | 01 | L |
|---|---|---|
| - | (1) | (2) |

FCTE-NH = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08, 09
(2) L = left coil connection/R = right coil connection

# RATED TECHNICAL DATA

## TWO-PIPE UNIT - ONE COIL

| MODELS | | | 01 | 02 | 03 | 04 |
|---|---|---|---|---|---|---|
| **RATED** | | | Rated performances (ref. Modulation signal guaranteeing "FCTE Brushless air flow rate = corresponding FCT air flow rate") | | | |
| Total cooling capacity (1) | | W | 1.500 | 2.000 | 2.530 | 3.020 |
| Sensible cooling capacity (1) | | W | 1.290 | 1.620 | 2.070 | 2.310 |
| Heating capacity (2a) | | W | 3.740 | 4.910 | 5.980 | 6.710 |
| Heating capacity (2b) | | W | 1.936 | 2.535 | 3.068 | 3.435 |
| Rated air flow (3) | | $m^3/h$ | 370 | 400 | 500 | 550 |
| Water flow rate (4) | Cooling | l/h | 258 | 344 | 436 | 520 |
| | Heating | l/h | 322 | 423 | 515 | 578 |
| Water head losses (5) | Cooling | kPa | 13.1 | 16.3 | 18.5 | 20.8 |
| | Heating | kPa | 15.9 | 19.2 | 20.1 | 20 |
| Sound pressure (6) | | dB(A) | 36 | 39 | 41 | 43 |
| Rated power absorption (7) | | W | 19 | 25 | 27 | 34 |
| | | A | 0.15 | 0.19 | 0.20 | 0.25 |
| Reference control signal | | Vdc | 5.80 | 6.80 | 7.10 | 8.00 |
| Electrical power supply | | | 230 Vac - 1 Ph - 50 Hz / Segnale 0...10 Vdc | | | |
| **ECO (3 vdc)** | | | Expected operating performances ("Unit performances=requested performances" balance) | | | |
| Air flow rate | | $m^3/h$ | 240 | | 285 | |
| Sound pressure | | dB(A) | 23 | | 26 | |
| Rated power absorption | | W | 9 | | 9 | |
| | | A | 0.09 | | 0.10 | |
| **RANGE 10-1 vdc** | | | MAX performances ref. 10 VDC signal; MIN ref. 1 VDC (for signals < 1 VDC the unit remains off) | | | |
| Total cooling capacity range | | W | 1.810-880 | 2.320-1.130 | 2.830-1.400 | 3.220-1.600 |
| Heating capacity range | | W | 4.680-1.970 | 5.860-2.470 | 6.840-2.940 | 7.250-3.120 |
| Air flow rate range | | $m^3/h$ | 537-127 | | 625-153 | |
| Sound pressure range | | dB(A) | 45-10 | | 47-10 | |
| Rated power absorption | | W | 48-6 | | 54-6 | |
| | | A | 0.32-0.07 | | 0.36-0.07 | |
| Cold/hot coil rows | | N | 3R | | 3R | |
| Hydraulic fittings | | DN | 1/2" F | | 1/2" F | |
| Condensate drainage outlet | | mm | 20 | | 20 | |
| Motors/Fans | | N/N | 1/1 | | 1/1 | |
| Rated power absorption (7) | | W | 70 | | 70 | |
| | | A | 0.50 | | 0.50 | |

Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(3) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

| MODELS | | | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|
| **RATED** | | | Rated performances (ref. Modulation signal guaranteeing "FCTE Brushless air flow rate = corresponding FCT air flow rate") | | | | |
| Total cooling capacity (1) | | W | 3.750 | 4.250 | 5.520 | 6.420 | 7.440 |
| Sensible cooling capacity (1) | | W | 2.870 | 3.230 | 4.330 | 4.800 | 5.600 |
| Heating capacity (2a) | | W | 8.160 | 9.440 | 12.000 | 13.300 | 15.300 |
| Heating capacity (2b) | | W | 4.376 | 5.059 | 6.196 | 6.857 | 7.909 |
| Rated air flow (3) | | $m^3/h$ | 670 | 720 | 1.000 | 1.050 | 1.255 |
| Water flow rate (4) | Cooling | l/h | 645 | 731 | 950 | 1.105 | 1.260 |
| | Heating | l/h | 702 | 812 | 1.032 | 1.144 | 1.316 |
| Water head losses (5) | Cooling | kPa | 22.6 | 24.1 | 24.5 | 27.1 | 28.1 |
| | Heating | kPa | 20.9 | 23.2 | 22.6 | 22.7 | 23.2 |
| Sound pressure (6) | | dB(A) | 24 | 36 | 42 | 43 | 46 |
| Rated power absorption (7) | | W | 23 | 26 | 46 | 53 | 73 |
| | | A | 0.16 | 0.20 | 0.31 | 0.35 | 0.48 |
| Reference control signal | | Vdc | 5.70 | 6.20 | 8.00 | 8.50 | 10.00 |
| Electrical power supply | | | 230 Vac - 1 Ph - 50 Hz / Segnale 0...10 Vdc | | | | |
| **ECO (3 vdc)** | | | Expected operating performances ("Unit performances=requested performances" balance) | | | | |
| Air flow rate | | $m^3/h$ | 424 | | 515 | | 536 |
| Sound pressure | | dB(A) | 22 | | 24 | | 25 |
| Rated power absorption | | W | 10 | | 11 | | 11 |
| | | A | 0.09 | | 0.10 | | 0.09 |
| **RANGE 10-1 vdc** | | | MAX performances ref. 10 VDC signal; MIN ref. 1 VDC (for signals < 1 VDC the unit remains off) | | | | |
| Total cooling capacity range | | W | 4.630-2.130 | 5.070-2.330 | 6.010-3.060 | 6.820-3.470 | 7.440-3.780 |
| Heating capacity range | | W | 10.510-4.130 | 11.650-4.580 | 13.280-5.900 | 14.300-6.350 | 15.300-6.780 |
| Air flow rate range | | $m^3/h$ | 1.021-215 | | 1.184-306 | | 1.255-323 |
| Sound pressure range | | dB(A) | 45-12 | | 46-9 | | 46-11 |
| Rated power absorption | | W | 65-6 | | 74-6 | | 73-6 |
| | | A | 0.44-0.07 | | 0.49-0.08 | | 0.48-0.07 |
| Cold/hot coil rows | | N | 3R | | | | |
| Hydraulic fittings | | DN | 1/2" F | | | | |
| Condensate drainage outlet | | mm | 20 | | | | |
| Motors/Fans | | N/N | 1/2 | | | | |
| Rated power absorption (7) | | W | 75 | | | | |
| | | A | 0.60 | | | | |

Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(3) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

# TECHNICAL DATA

## REDUCTION OF THE COOLING/HEATING CAPACITY (in relation to the air flow reduction)

| Air flow rate | 1.50 | 1.40 | 1.30 | 1.20 | 1.10 | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 | 0.75 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 1.22 | 1.18 | 1.14 | 1.10 | 1.05 | 1.00 | 0.97 | 0.95 | 0.92 | 0.89 | 0.87 |
| Sensible cooling capacity | 1.30 | 1.24 | 1.19 | 1.13 | 1.06 | 1.00 | 0.97 | 0.93 | 0.90 | 0.86 | 0.83 |
| Heat capacity | 1.28 | 1.22 | 1.17 | 1.12 | 1.06 | 1.00 | 0.97 | 0.94 | 0.91 | 0.87 | 0.84 |

| Air flow rate | 0.70 | 0.65 | 0.60 | 0.55 | 0.50 | 0.45 | 0.40 | 0.35 | 0.30 | 0.25 | 0.20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 0.84 | 0.81 | 0.77 | 0.74 | 0.71 | 0.67 | 0.63 | 0.59 | 0.55 | 0.50 | 0.45 |
| Sensible cooling capacity | 0.79 | 0.76 | 0.72 | 0.68 | 0.64 | 0.60 | 0.55 | 0.51 | 0.46 | 0.41 | 0.35 |
| Heat capacity | 0.81 | 0.77 | 0.74 | 0.70 | 0.66 | 0.62 | 0.58 | 0.53 | 0.49 | 0.44 | 0.38 |

## TABLE OF NET WEIGHTS MOD. FCTE (TWO-PIPE UNIT - ONE COIL) IN KG

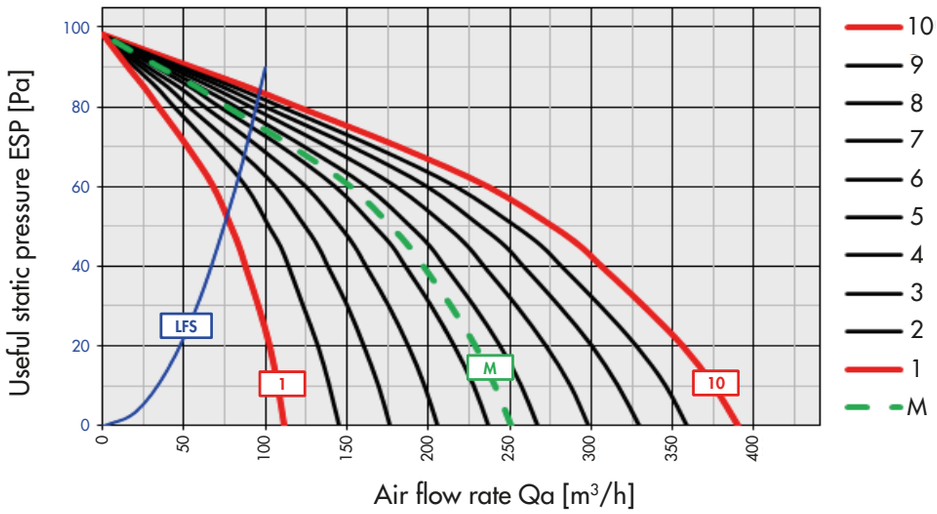
| Products/Models | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| **FCTE-CV** | 14.7 | 15.2 | 17.7 | 18.5 | 23.9 | 24.9 | 27.5 | 29.0 | 31.6 |
| **FCTE-CA** | 15.0 | 15.5 | 18.2 | 19.0 | 24.6 | 25.6 | 28.4 | 29.9 | 32.7 |
| **FCTE-CH** | 16.2 | 16.7 | 19.8 | 20.6 | 26.6 | 27.6 | 30.8 | 32.3 | 35.5 |
| **FCTE-NV** | 11.8 | 12.3 | 14.7 | 15.5 | 20.8 | 21.8 | 24.2 | 25.7 | 28.2 |
| **FCTE-NH** | 12.4 | 12.9 | 15.3 | 16.1 | 21.4 | 22.4 | 24.9 | 26.4 | 28.9 |

# USEFUL STATIC PRESSURE/ WATER FLOW RATE DIAGRAMS

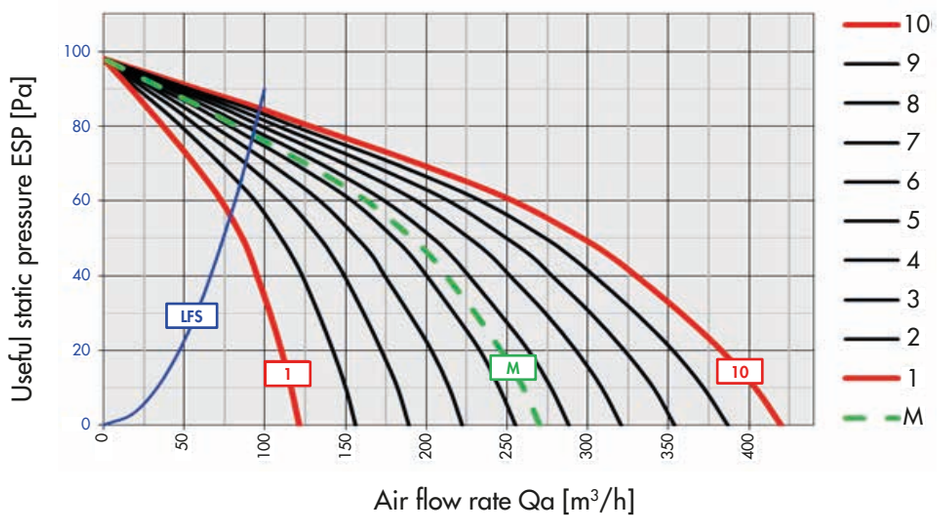
KEY

LFS: Upper operating limit
10: EC unit curve with 10 VDC signal (maximum of the working range)
1: Minimum curve of the EC unit's working range (1 VDC @0 Pa)
M: Average curve of the EC unit's working range

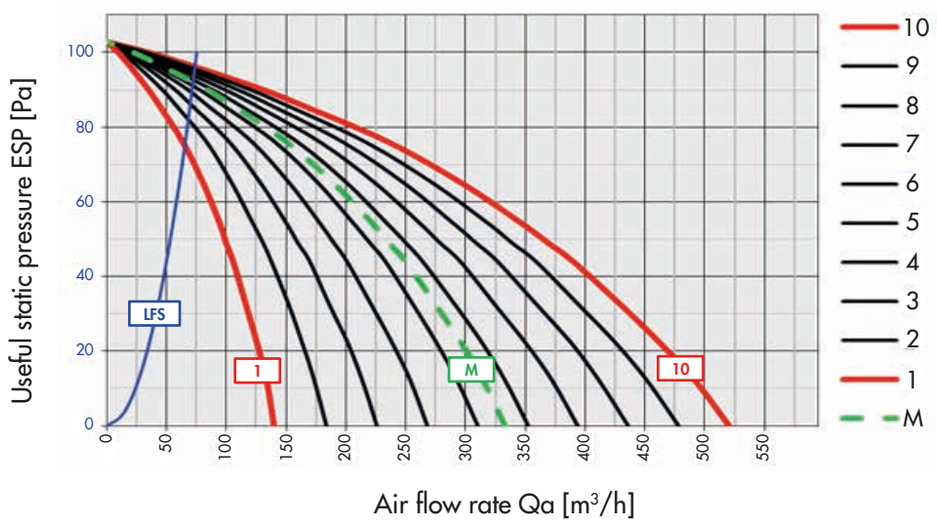
## Model FCTE 01




## Model FCTE 02




## Model FCTE 03

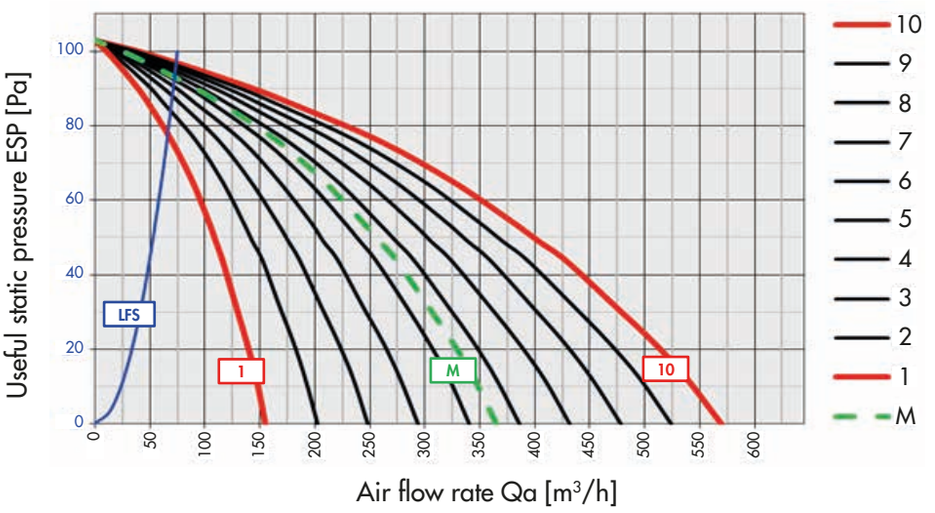


# USEFUL STATIC PRESSURE/ WATER FLOW RATE DIAGRAMS

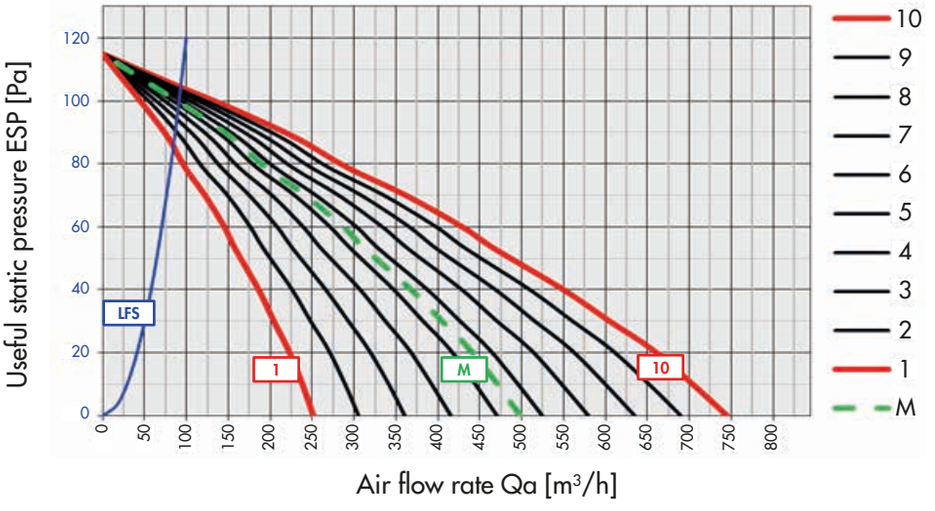
KEY

LFS: Upper operating limit
10: EC unit curve with 10 VDC signal (maximum of the working range)
1: Minimum curve of the EC unit's working range (1 VDC @0 Pa)
M: Average curve of the EC unit's working range

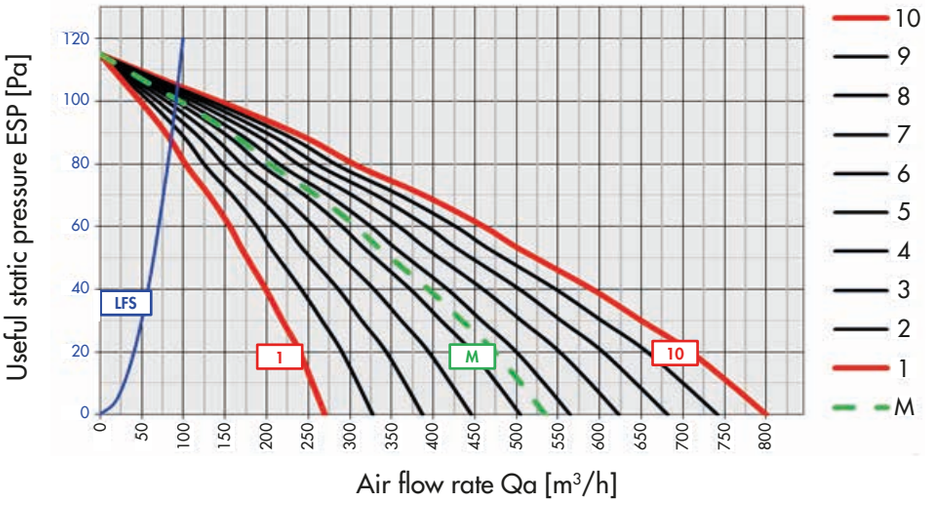
## Model FCTE 04



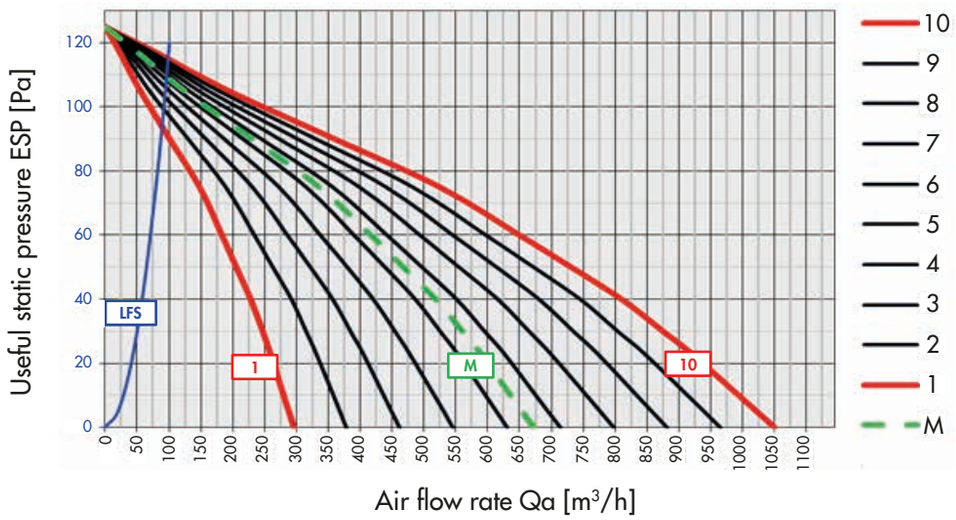

## Model FCTE 05



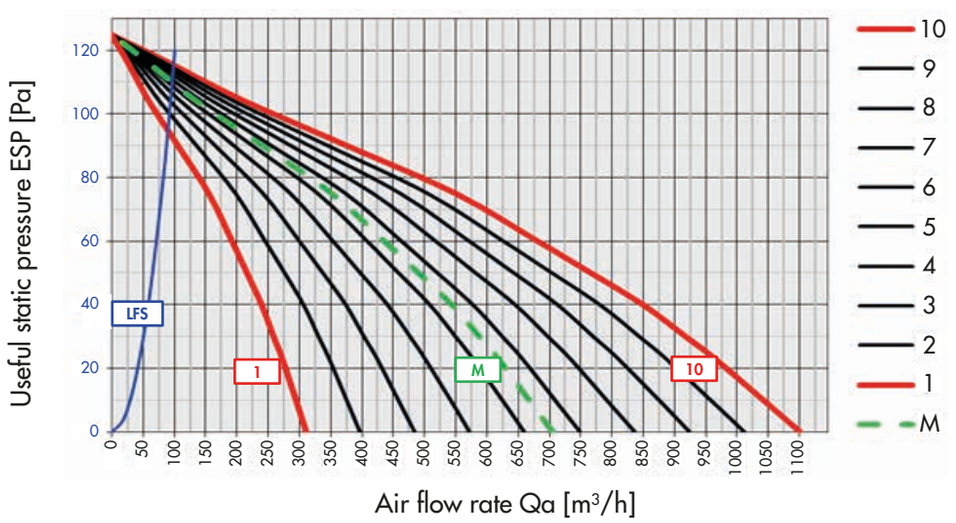

## Model FCTE 06



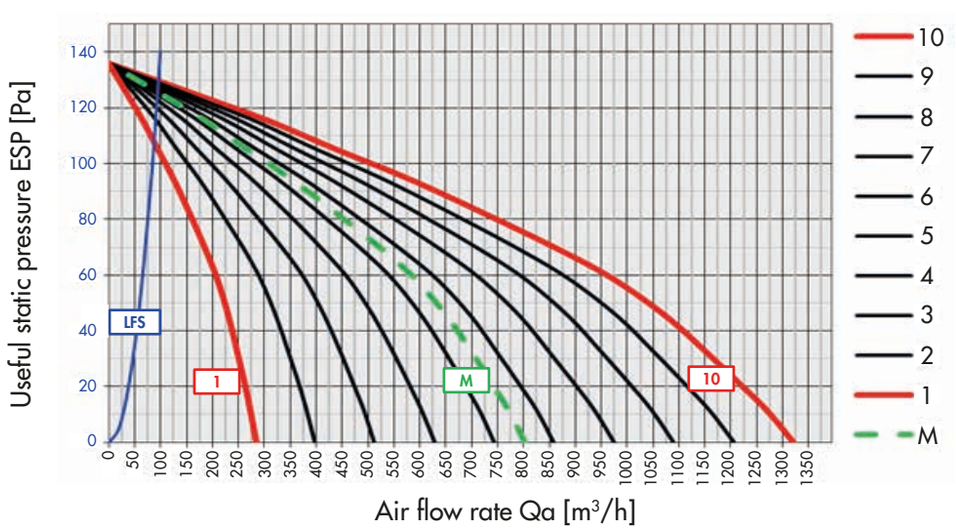
## Model FCTE 07




## Model FCTE 08

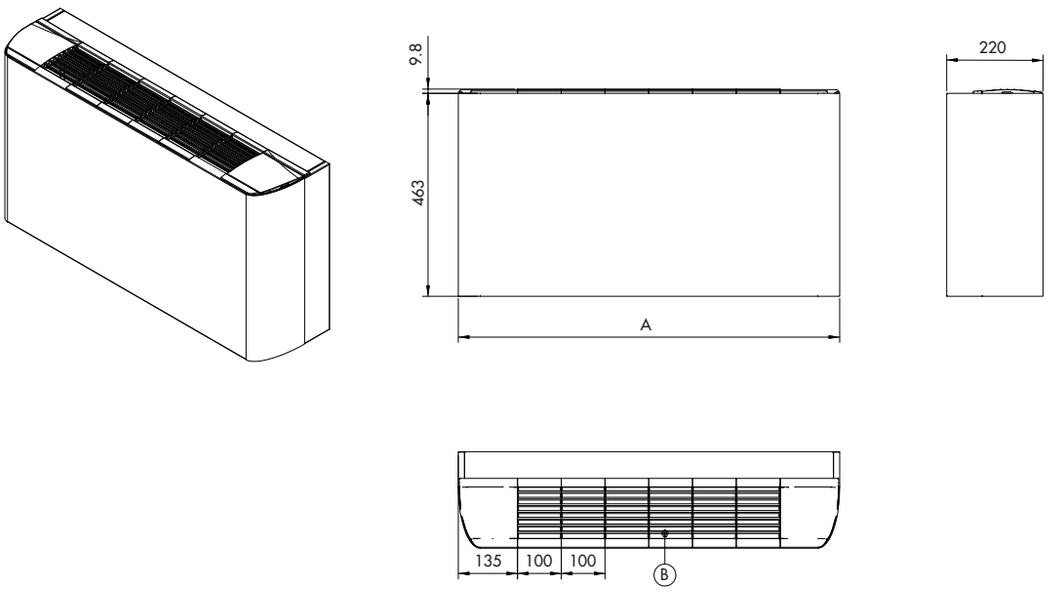



## Model FCTE 09



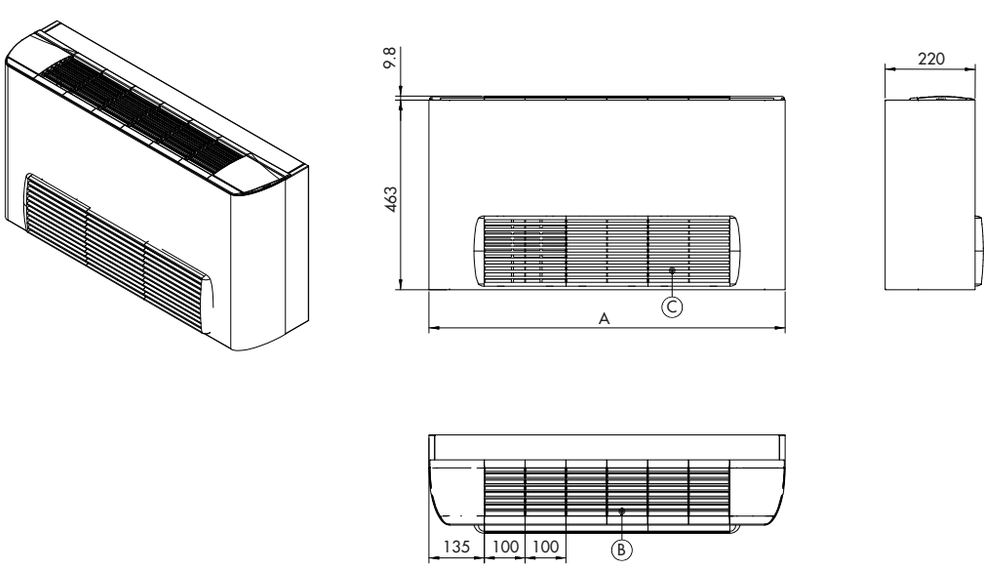
# DIMENSIONAL DRAWING

## Model FCTE-CV



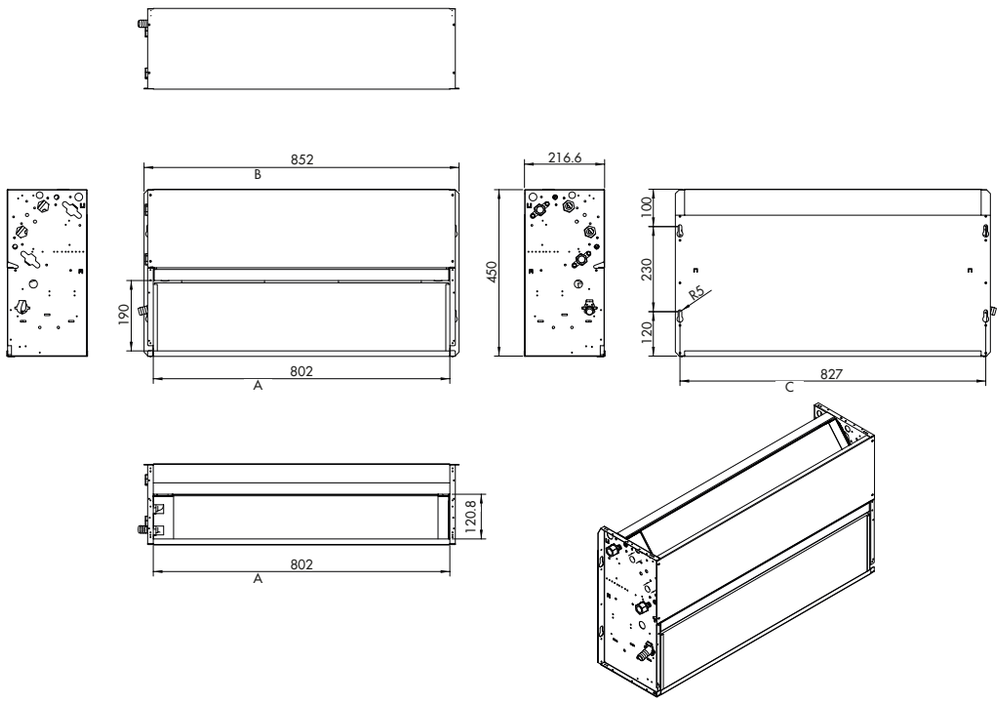

| MODEL FCTE-CV | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| A | 670 | 670 | 870 | 870 | 1070 | 1070 | 1270 | 1270 | 1470 |
| B = N° grids | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 |

## Model FCTE-CA/FCTE-CH



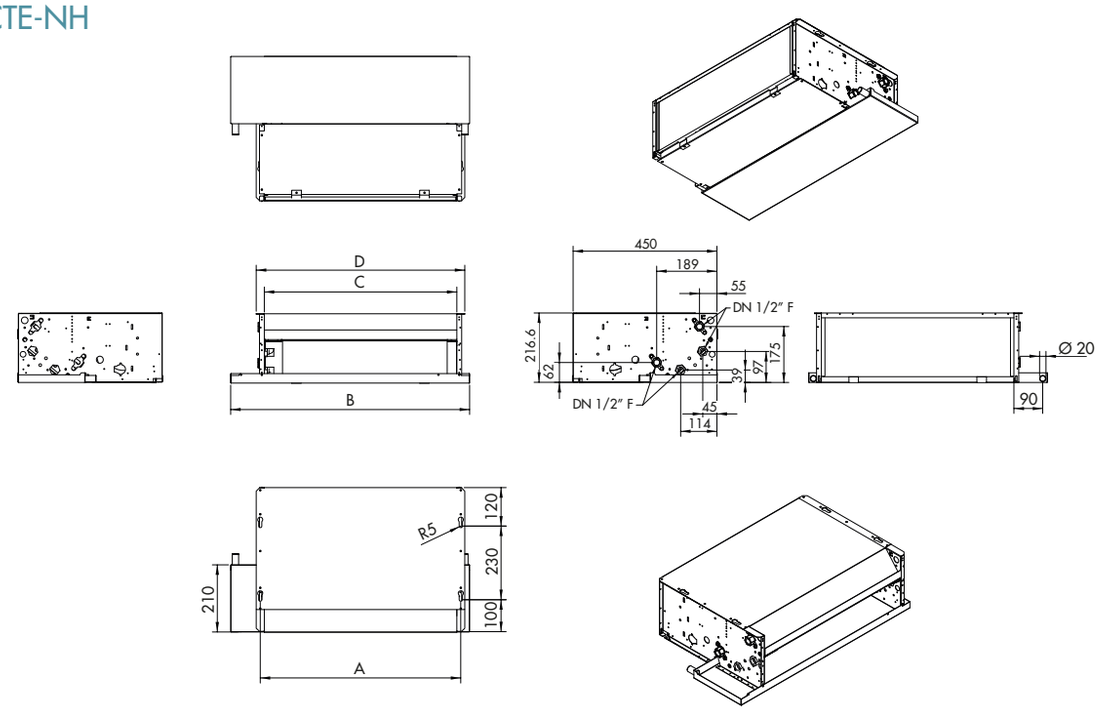

| MODEL FCTE-CA/FCTE-CH | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| A | 670 | 670 | 870 | 870 | 1070 | 1070 | 1270 | 1270 | 1470 |
| B = N° grids | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 |
| C = N° grids | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 |

## Model FCTE-NV




| MODEL FCTE-NV | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| A | 402 | 402 | 602 | 602 | 802 | 802 | 1002 | 1002 | 1202 |
| B | 452 | 452 | 652 | 652 | 852 | 852 | 1052 | 1052 | 1252 |
| C | 427 | 427 | 627 | 627 | 827 | 827 | 1027 | 1027 | 1227 |

## Model FCTE-NH




| MODEL FCTE-NH | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
|---|---|---|---|---|---|---|---|---|---|
| A | 427 | 427 | 627 | 627 | 827 | 827 | 1027 | 1027 | 1227 |
| B | 547 | 547 | 747 | 747 | 947 | 947 | 1147 | 1147 | 1347 |
| C | 402 | 402 | 602 | 602 | 802 | 802 | 1002 | 1002 | 1202 |
| D | 452 | 452 | 652 | 652 | 852 | 852 | 1052 | 1052 | 1252 |

# ACCESSORIES

| CONTROL UNITS INSTALLED | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030562 | OBC27 | Control unit mounted on the machine for units with 2/4 pipes, simplified and with ATS4 air sensor | FCTE-CV<br>FCTE-CA |
|  | 387030563 | OBC26 | Control unit mounted on the machine for units with 2/4 pipes, with display and ATS4 air sensor | FCTE-CV<br>FCTE-CA |
|  | 387030466 | MTT32 | Termostato di minima temperatura acqua calda (taratura 32 °C) | All |
|  | 387030467 | WTS4 | Water temperature sensor (type NTC 4,700 ohm @25 °C ±2 with cable L=1 m) | For OBC26 control unit as an alternative to MTT32 |

| WIRED CONTROL UNITS | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030468 | CL01 | IP20 terminal block (only if a wired control unit is necessary) | All |
|  | 387030564 | SWC26 | Thermostat for 2/4-pipe fan coil units, programmable, with display and 0...10 VDC or three-speed output | All |

| KIT CONTAINING VALVES, PANS, CONDENSATE DISCHARGE PUMPS AND FEET | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030473 | 3WV01 | 3/4" M three-way valve with PWM-ON/OFF actuator, 230 V (2 pipes) | All |
|  | 387030474 | 3WV02 | Three-way valve with PWM-ON/OFF actuator, 230 V, 1/2" ball valve and 1/2" retainer (2 pipes) | All |
|  | 387030475 | 2WV01 | 3/4" M two-way valve with PWM-ON/OFF actuator, 230 V (2 pipes) | All |
|  | 387030476 | 2WV02 | Two-way valve with PWM-ON/OFF actuator, 230 V, 1/2" ball valve and 1/2" retainer (2 pipes) | All |
|  | 387030477 | VB01 | Auxiliary drain pan made of plastic, for two-way orthree-way valves | FCTE-CV<br>FCTE-CA<br>FCTE-NV |
|  | 387030478 | HB01 | Auxiliary drain pan with thermal insulation, for two-way or three-way valves | FCTE-CH<br>FCTE-NH |
|  | 387030479 | CP01 | Condensate discharge pump equipped with alarm contact | FCTE-CV<br>FCTE-CA<br>FCTE-NV |
|  | 387030480 | CP02 | Condensate discharge pump equipped with alarm contact | FCTE-CH<br>FCTE-NH |
|  | 387030481 | FE01 | Pair of pre-coated feet H=90 mm | FCTE-CV |

# ACCESSORIES

| PANELS | | | | |
|---|---|---|---|---|
| **Code** | | **Model** | **Description** | **Applicability** |
| 387030482 | 01/02 | CPB 01-02 | Lower rear closing panel made of pre-painted plate | FCTE-CV<br>FCTE-CA |
| 387030483 | 03/04 | CPB 03-04 | | |
| 387030484 | 05/06 | CPB 05-06 | | |
| 387030485 | 01/02 | CPC 01-02 | Lower closing panel without grid made of pre-painted plate | FCTE-CA<br>FCTE-CH |
| 387030486 | 03/04 | CPC 03-04 | | |
| 387030487 | 05/06 | CPC 05-06 | | |
| 387030488 | 01/02 | CPD 01-02 | Lower closing panel made of pre-painted plate with removable ABS grid and flat air filter with grade EU3 filtration (EUROVENT 4/5) | FCTE-CV |
| 387030489 | 03/04 | CPD 03-04 | | |
| 387030490 | 05/06 | CPD 05-06 | | |
| 387030491 | 01/02 | RF 01-02 | Frame for concealed wall-mounted installation | FCTE-NV |
| 387030492 | 03/04 | RF 03-04 | | |
| 387030493 | 05/06 | RF 05-06 | | |
| 387030494 | 01/02 | FP 01-02 | Front panel made of pre-painted plate equipped with air return and supply grid, for fan coil units with remote control | FCTE-NV |
| 387030495 | 03/04 | FP 03-04 | | |
| 387030496 | 05/06 | FP 05-06 | | |

| PANELS | | | | |
|---|---|---|---|---|
| **Code** | | **Model** | **Description** | **Applicability** |
| 387030497 | 07/08 | CPB 07-08 | Lower rear closing panel made of pre-painted plate | FCTE-CV<br>FCTE-CA |
| 387030498 | 09 | CPB 09 | | |
| 387030499 | 07/08 | CPC 07-08 | Lower closing panel without grid made of pre-painted plate | FCTE-CA<br>FCTE-CH |
| 387030500 | 09 | CPC 09 | | |
| 387030501 | 07/08 | CPD 07-08 | Lower closing panel made of pre-painted plate with removable ABS grid and flat air filter with grade EU3 filtration (EUROVENT 4/5) | FCTE-CV |
| 387030502 | 09 | CPD 09 | | |
| 387030503 | 07/08 | RF 07-08 | Frame for concealed wall-mounted installation | FCTE-NV |
| 387030504 | 09 | RF 09 | | |
| 387030505 | 07/08 | FP 07-08 | Front panel made of pre-painted plate equipped with air return and supply grid, for fan coil units with remote control | FCTE-NV |
| 387030506 | 09 | FP 09 | | |

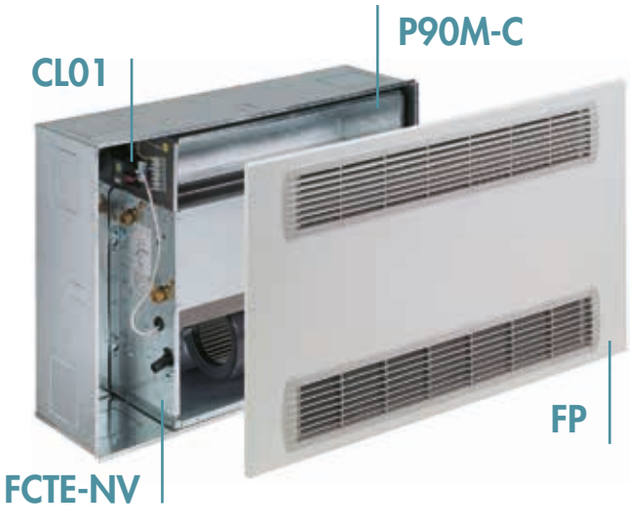

CPC


CPD


CPB


CPB


RF

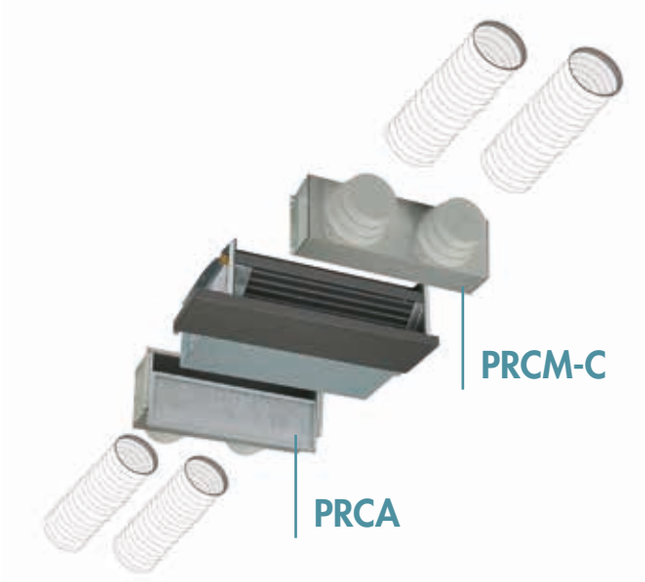

P90M-C
CL01
FP
FCTE-NV

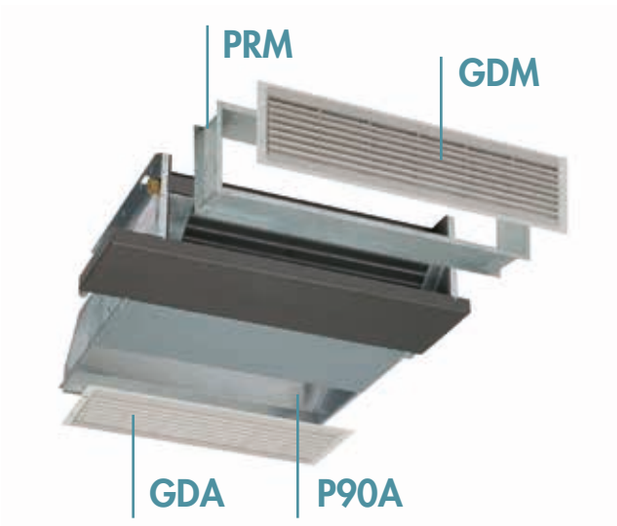
# ACCESSORIES

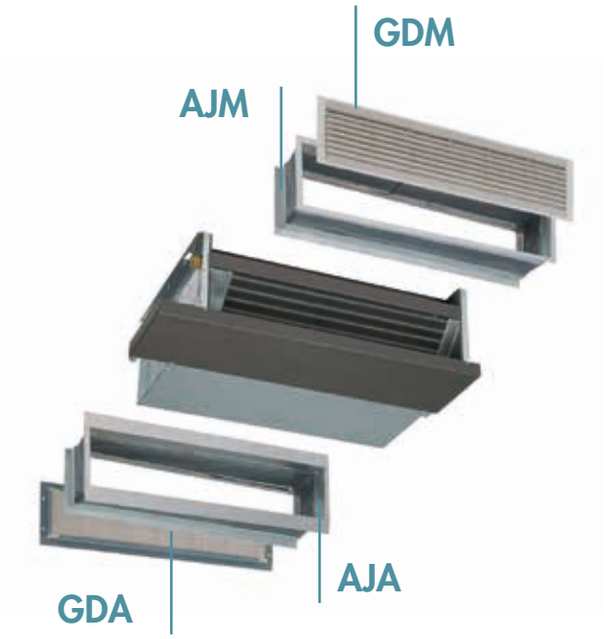
| PLENUM | | | | |
|---|---|---|---|---|
| **Code** | | **Model** | **Description** | **Applicability** |
| 387030507 | 01/02 | AJA 01-02 | Vibration-damping joint with fan coil unit attachment flange and channel attachment flange, L=150 mm - Intake side | FCTE-NH |
| 387030508 | 03/04 | AJA 03-04 | | |
| 387030509 | 05/06 | AJA 05-06 | | |
| 387030510 | 01/02 | AJM 01-02 | Vibration-damping joint with fan coil unit attachment flange and channel attachment flange, L=150 mm - Supply side | FCTE-NH |
| 387030511 | 03/04 | AJM 03-04 | | |
| 387030512 | 05/06 | AJM 05-06 | | |
| 387030513 | 01/02 | GDA 01-02 | Air grid with simple row or fixed ABS flaps, suitable for connection on the TP, AJA, P90A plenum - Intake side | FCTE-NH |
| 387030514 | 03/04 | GDA 03-04 | | |
| 387030515 | 05/06 | GDA 05-06 | | |
| 387030516 | 01/02 | GDM 01-02 | Air grid with simple row or fixed ABS flaps, suitable for connection on the TP, AJM plenum - Supply side | FCTE-NH |
| 387030517 | 03/04 | GDM 03-04 | | |
| 387030518 | 05/06 | GDM 05-06 | | |
| 387030519 | 01/02 | P90A 01-02 | 90° plenum - Intake side | FCTE-NH |
| 387030520 | 03/04 | P90A 03-04 | | |
| 387030521 | 05/06 | P90A 05-06 | | |
| 387030522 | 01/02 | P90M-C 01-02 | 90° plenum - Supply side | FCTE-NV |
| 387030523 | 03/04 | P90M-C 03-04 | | |
| 387030524 | 05/06 | P90M-C 05-06 | | |
| 387030525 | 01/02 | PRM 01-02 | Straight plenum L=100 mm - Supply side | FCTE-NH |
| 387030526 | 03/04 | PRM 03-04 | | |
| 387030527 | 05/06 | PRM 05-06 | | |
| 387030528 | 01/02 | PRA 01-02 | Straight plenum L=100 mm - Intake side | FCTE-NH |
| 387030529 | 03/04 | PRA 03-04 | | |
| 387030530 | 05/06 | PRA 05-06 | | |
| 387030531 | 01/02 | TP 01-02 | Telescopic extension L=0–100 mm, suitable for connection with PRA, PRM, P290A plenum | FCTE-NH |
| 387030532 | 03/04 | TP 03-04 | | |
| 387030533 | 05/06 | TP 05-06 | | |
| 387030534 | 01/02 | PRCA 01-02 | Air intake plenum with round fittings and filter | FCTE-NH |
| 387030535 | 03/04 | PRCA 03-04 | | |
| 387030536 | 05/06 | PRCA 05-06 | | |
| 387030537 | 01/02 | PRCM 01-02 | Air supply plenum with round fittings, insulated | FCTE-NH |
| 387030538 | 03/04 | PRCM 03-04 | | |
| 387030539 | 05/06 | PRCM 05-06 | | |

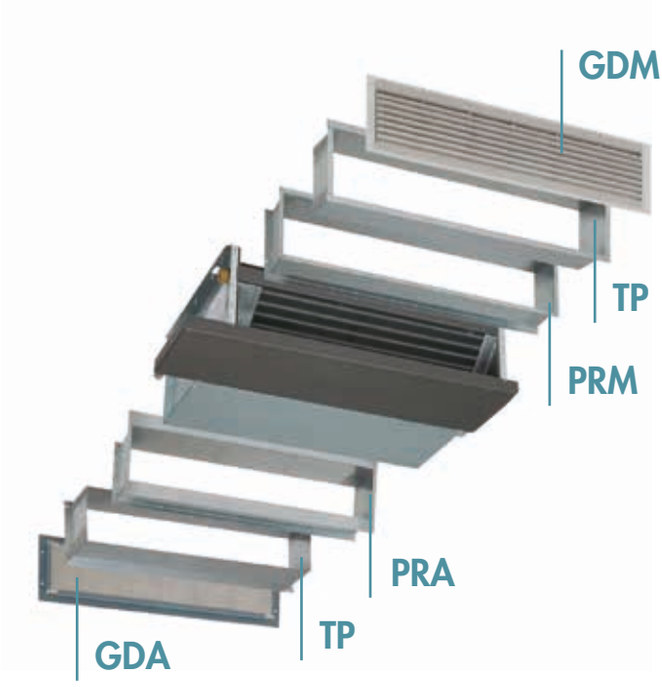
| PLENUM | | | | |
|---|---|---|---|---|
| **Code** | | **Model** | **Description** | **Applicability** |
| 387030540 | 07/08 | AJA 07-08 | Vibration-damping joint with fan coil unit attachment flange and channel attachment flange, L=150 mm - Intake side | FCTE-NH |
| 387030541 | 09 | AJA 09 | | |
| 387030542 | 07/08 | AJM 07-08 | Vibration-damping joint with fan coil unit attachment flange and channel attachment flange, L=150 mm - Supply side | FCTE-NH |
| 387030543 | 09 | AJM 09 | | |
| 387030544 | 07/08 | GDA 07-08 | Air grid with simple row or fixed ABS flaps, suitable for connection on the TP, AJA, P90A plenum - Intake side | FCTE-NH |
| 387030545 | 09 | GDA 09 | | |
| 387030546 | 07/08 | GDM 07-08 | Air grid with simple row or fixed ABS flaps, suitable for connection on the TP, AJM plenum - Supply side | FCTE-NH |
| 387030547 | 09 | GDM 09 | | |
| 387030548 | 07/08 | P90A 07-08 | 90° plenum - Intake side | FCTE-NH |
| 387030549 | 09 | P90A 09 | | |
| 387030550 | 07/08 | P90M-C 07-08 | 90° plenum - Supply side | FCTE-NV |
| 387030551 | 09 | P90M-C 09 | | |
| 387030552 | 07/08 | PRM 07-08 | Straight plenum L=100 mm - Supply side | FCTE-NH |
| 387030553 | 09 | PRM 09 | | |
| 387030554 | 07/08 | PRA 07-08 | Straight plenum L=100 mm - Intake side | FCTE-NH |
| 387030555 | 09 | PRA 09 | | |
| 387030556 | 07/08 | TP 07-08 | Telescopic extension L=0–100 mm, suitable for connection with PRA, PRM, P290A plenum | FCTE-NH |
| 387030557 | 09 | TP 09 | | |
| 387030558 | 07/08 | PRCA 07-08 | Air intake plenum with round fittings and filter | FCTE-NH |
| 387030559 | 09 | PRCA 09 | | |
| 387030560 | 07/08 | PRCM-C 07-08 | Air supply plenum with round fittings, insulated | FCTE-NH |
| 387030561 | 09 | PRCM-C 09 | | |

# ACCESSORIES




13 16

# CASSETTE

Models: FCC/FCCX/FCCE

# CASSETTE

## MAIN FEATURES MOD. FCC/FCCX/FCCE

### COVERING PANEL WITH AIR RETURN GRID AND AIR SUPPLY DEFLECTORS (ABS)

Innovative design. Built with injected ABS, it can withstand rust, corrosion and atmospheric agents. White finish RAL 9003. The "Hook & Fix" attachment system facilitates installation, removal and maintenance operations, by eliminating positioning-related inconveniences typically associated with these systems (suspended units/components difficult to handle). The central intake grid and 4 manually adjustable side supply flaps guarantee optimal air diffusion in all 4 directions. Friction-snap flaps for stable and uniform positioning.

### LOAD-BEARING STRUCTURE SUITABLE FOR USE ON 600x600 MM SUSPENDED CEILINGS

High-thickness galvanised plate load-bearing structure with Class M1 internal thermo-acoustic insulation, reinforced thickness for improved acoustic and thermal performances. Outer brackets on the 4 corners for easy fastening to the ceiling. A mere 250 mm height. Includes 1 hole with Ø 72 mm for possible external air intake through round conduit and 1 hole with Ø 155 mm for possible ducting of treated air supply to adjacent rooms.

- Models FCC 01…06, FCCX 01…06, FCCE 01…03: overall dimensions 570 x 570 mm, ideal for installation on 1 module size 600 x 600 mm in suspended ceilings.
- Models FCC 07…08, FCCX 07…08, FCCE 04…05: overall dimensions 570 x 1.160 mm, ideal for installation on 2 modules size 600 x 600 mm in suspended ceilings.

### AIR CONVEYOR AND DRAIN PAN

Air conveyor and pan made of ABS through injection. High-thickness material for sturdiness and long-lasting operation. RoHS & REACH compliant. Conveyor with optimised profiles that faithfully replicate the aerodynamic profiles of the air flow. Drain pan obtained from a single piece equipped with an outlet and plug.

### CONDENSATE DISCHARGE PUMP

Centrifugal condensate discharge pump, complete with non-return valve on the supply side to avoid continuous switching on/off, Ø 16 mm drainage fitting.
Float with 2 levels: the first for controlling the condensate level and the second for activating the alarm.
Head = 1.00 m from the unit's lower edge; 230 VAC–1 Ph–50/60 Hz.

### HEAT EXCHANGE COIL

Heat exchange coil with copper pipe and aluminium flaps locked by means of mechanical expansion.
Square-shaped coil with rounded corners for guaranteeing a broader exchange surface, thus enhanced performances compared to traditional round coils. Hydrophilic aluminium flaps for improved condensate discharge, resulting in improved air conditioning performances. Coil fittings equipped with manual air relief valve.
For units with 2 pipes: 1 coil with 2 water connections (1 inlet + 1 outlet)
For units with 4 pipes: 1 coil with 4 water connections (2 inlets + 2 outlets)
Mixed circulation on a single coil guarantees improved performances for both heating and air conditioning. Coils tested at 30 bar operating pressure, suitable for working with water up to a maximum pressure of 15 bar.
The coils are suitable for operating with:

- high-temperature water (boiler)
- low-temperature water (condensing boiler, solar panels, heat pump, etc.)
- cold water (chiller and/or industrial processes)
- water supplemented with glycol.

Min/max incoming water temperature limits: 3…75 °C.

## AIR FILTER

Easily removable air filter, built with a metal frame containing the filtration septum. Can be regenerated by washing it with water, blowing, vacuuming. Made of NAN honeycomb polypropylene mesh, high efficiency. Recommended against dust and pollen. Class M1; grade EU3 filtration (EUROVENT 4/5), Group ISO COARSE ePM1=4%, ePM2.5=13%, ePM10=49% (EN ISO 16890:2016).

## ELECTRICAL EQUIPMENT

Terminal block for connection to the remote control (the remote control is an accessory) installed in a corner of the galvanised plate structure.

## VENTILATION UNIT

Radial fan with aerofoil blades and incorporated electric motor. Built according to international standards, mounted on elastic supports and shock absorbers. Statically and dynamically balanced fan. Ventilating unit removable with extreme ease (fastened with 4 screws only).
Several different motors available:

- Models FCC and FCCX: AC electric motor, asynchronous single-phase squirrel-cage version with 3 speeds, equipped with TH thermal protection device, run capacitor always engaged, 4 poles, IP44, Class B double insulation, 230 VAC–1 Ph–50/60 Hz.
- Models FCCE: motor with BLAC (Brushless Alternating Current) technology and permanent magnets, sensorless, 2 thermal protection devices (TP-thermal/Klixon + EP-electronic/SW), IP54, Class B double insulation, 230 VAC–1 Ph–50/60 Hz.

Modulating regulation with 0...10 VDC signal through our control units or independent regulation systems. The 0–100% modulation of the air flow (and hence of the heating and cooling capacities) allows for adapting the performances to the actual needs of the room to be climatised.

# CASSETTE
## MODELS

### CASSETTE FAN COIL MOD. FCC

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030419 | FCC 01 | 2.950 | 7.010 |
| 387030420 | FCC 02 | 3.570 | 8.590 |
| 387030421 | FCC 03 | 4.980 | 11.220 |
| 387030422 | FCC 04 | 5.540 | 12.560 |
| 387030423 | FCC 05 | 6.220 | 12.380 |
| 387030424 | FCC 06 | 6.930 | 13.870 |
| 387030425 | FCC 07 | 9.460 | 21.300 |
| 387030426 | FCC 08 | 10.530 | 23.870 |

| FCC | 01 |
|---|---|
| - | (1) |

FCC = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08

### CASSETTE FAN COIL MOD. FCCX

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030427 | FCCX 01 | 3.070 | 4.590 |
| 387030428 | FCCX 02 | 3.720 | 5.640 |
| 387030429 | FCCX 03 | 4.040 | 6.160 |
| 387030430 | FCCX 04 | 4.490 | 6.890 |
| 387030431 | FCCX 05 | 5.150 | 6.100 |
| 387030432 | FCCX 06 | 5.740 | 6.840 |
| 387030433 | FCCX 07 | 7.670 | 11.690 |
| 387030434 | FCCX 08 | 8.540 | 13.100 |

| FCCX | 01 |
|---|---|
| - | (1) |

FCCX = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08

### CASSETTE FAN COIL MOD. FCCE

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030435 | FCCE 01 | 5.020 | 12.350 |
| 387030436 | FCCE 02 | 6.460 | 14.780 |
| 387030437 | FCCE 03 | 8.010 | 16.170 |
| 387030438 | FCCE 04 | 12.260 | 28.060 |
| 387030439 | FCCE 05 | 15.190 | 30.680 |

| FCCE | 01 |
|---|---|
| - | (1) |

FCCE = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06, 07, 08

**(1) Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - temp. - input/output water temp. 7/12 °C
**(2) Heating:** air temp. 20 °C - input/output water temp. 70/60 °C

# RATED TECHNICAL DATA MOD. FCC

## TWO-PIPE UNIT - ONE COIL - THREE SPEEDS

| MODELS | | | 01 | 02 | 03 | 04 |
|---|---|---|---|---|---|---|
| **Dimension** | | **mm** | **600x600** | | | |
| Total cooling capacity (1) | | W | 2.950 | 3.570 | 4.980 | 5.540 |
| Sensible cooling capacity (1) | | W | 2.390 | 2.980 | 3.800 | 4.300 |
| Heating capacity (2a) | | W | 7.010 | 8.590 | 11.220 | 12.560 |
| Heating capacity (2b) | | W | 3.505 | 4.295 | 5.610 | 6.280 |
| Rated air flow (3) | | $m^3/h$ | 530 | 720 | 810 | 960 |
| Water flow rate (4) | Cooling | l/h | 507 | 614 | 857 | 953 |
| | Heating | l/h | 603 | 739 | 965 | 1.080 |
| Water head losses (5) | Cooling | kPa | 7,0 | 10,2 | 12,4 | 15,3 |
| | Heating | kPa | 7,7 | 11,5 | 12,2 | 15,3 |
| Sound pressure (ls.-ms.-hs.) (6) | | dB(A) | 12-17-25 | 16-24-34 | 22-32-36 | 25-36-38 |
| Ref. Fan-deck | | | 1x R282x146-3 V 50 W-C1 [P=N1-2-3] | 1x R282x146-3 V 50 W-C1,5 [P=N1-2-3] | 1x R282x146-3 V 88 W-C2,5 [P=N1-2-3] | 1x R282x146-3 V 88 W-C3 [P=N1-2-3] |
| Motors/Fans | | N/N | 1/1 | | 1/1 | |
| Rated power absorption (7) | | W | 1x 50 W | | 1x 88 W | |
| | | A | 1x 0.22 A | | 1x 0.39 A | |
| Electrical power supply | | | 230 Vac - 1 Ph - 50/60 Hz | | | |
| Cold/hot coil | Water content | l | 0.95 | | 1.5 | |
| | Rows | N | 2R | | 3R | |
| | Hydraulic fittings | DN | 3/4"F | | 3/4"F | |
| | Condensate drainage outlet | mm | 16 | | 16 | |
| Air flow reduction (8) | **0 Pa** | MAX | 1.00 | 1.00 | 1.00 | 1.00 |
| | | MED | 0.7 | 0.71 | 0.84 | 0.84 |
| | | MIN | 0.49 | 0.49 | 0.56 | 0.55 |

## REDUCTION OF THE COOLING/HEATING CAPACITY (in relation to the air flow reduction)

| Air flow rate | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 | 0.75 | 0.70 | 0.65 | 0.60 | 0.55 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 1.00 | 0.97 | 0.95 | 0.92 | 0.89 | 0.87 | 0.84 | 0.81 | 0.77 | 0.74 |
| Cooling capacity | 1.00 | 0.97 | 0.93 | 0.90 | 0.86 | 0.83 | 0.79 | 0.76 | 0.72 | 0.68 |
| Heat capacity | 1.00 | 0.97 | 0.94 | 0.91 | 0.87 | 0.84 | 0.81 | 0.77 | 0.74 | 0.70 |

| Air flow rate | 0.50 | 0.45 | 0.40 | 0.35 | 0.30 | 0.25 | 0.20 | 0.15 | 0.10 |
|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 0.71 | 0.67 | 0.63 | 0.59 | 0.55 | 0.50 | 0.45 | 0.39 | 0.32 |
| Cooling capacity | 0.64 | 0.60 | 0.55 | 0.51 | 0.46 | 0.41 | 0.35 | 0.29 | 0.22 |
| Heat capacity | 0.66 | 0.62 | 0.58 | 0.53 | 0.49 | 0.44 | 0.38 | 0.32 | 0.25 |

| MODELS | | | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|
| **Dimension** | | mm | 600x600 | | 600x1.200 | |
| Total cooling capacity (1) | | W | 6.220 | 6.930 | 9.460 | 10.530 |
| Sensible cooling capacity (1) | | W | 4.400 | 4.980 | 7.220 | 8.170 |
| Heating capacity (2a) | | W | 12.380 | 13.870 | 21.300 | 23.870 |
| Heating capacity (2b) | | W | 6.190 | 6.935 | 10.650 | 11.935 |
| Rated air flow (3) | | $m^3/h$ | 800 | 950 | 1.540 | 1.830 |
| Water flow rate (4) | Cooling | l/h | 1.070 | 1.192 | 1.627 | 1.811 |
| | Heating | l/h | 1.065 | 1.193 | 1.832 | 2.053 |
| Water head losses (5) | Cooling | kPa | 16.1 | 20.0 | 16.2 | 18.8 |
| | Heating | kPa | 12.4 | 15.6 | 16.0 | 18.9 |
| Sound pressure (ls.-ms.-hs.) (6) | | dB(A) | 22-32-36 | 25-36-38 | 25-35-39 | 28-39-41 |
| Ref. Fan-deck | | | 1x R282x146-3 V 88 W-C2,5 [P=N1-2-3] | 1x R282x146-3 V 88 W-C3 [P=N1-2-3] | 2x R282x146-3 V 88 W-C2,5 [P=N1-2-3] | 2x R282x146-3 V 88 W-C3 [P=N1-2-3] |
| Motors/Fans | | N/N | 1/1 | | 2/2 | |
| Rated power absorption (7) | | W | 1x 88 W | | 2x 88 W | |
| | | A | 1x 0.39 A | | 2x 0.39 A | |
| Electrical power supply | | | 230 Vac - 1 Ph - 50/60 Hz | | 230 Vac - 1 Ph - 50/60 Hz | |
| Cold/hot coil | Water content | l | 2.1 | | 3.1 | |
| | Rows | N | 4R | | 3R | |
| | Hydraulic fittings | DN | 3/4"F | | 3/4"F | |
| | Condensate drainage outlet | mm | 16 | | 16 | |
| Air flow reduction (8) | **0 Pa** | MAX | 1 | 1 | 1 | 1 |
| | | MED | 0.84 | 0.84 | 0.84 | 0.84 |
| | | MIN | 0.55 | 0.56 | 0.55 | 0.55 |

Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(3) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

## TABLE OF NET WEIGHTS MOD. FCC IN KG

| Products/Models | | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|---|
| **FCC** | Unit | 17.2 | 17.2 | 18.0 | 18.0 | 18.9 | 18.9 | 35.0 | 35.0 |
| | Grid | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 4.1 | 4.1 |

# RATED TECHNICAL DATA MOD. FCCX

## FOUR-PIPE UNIT - TWO COILS - THREE SPEEDS

| MODELS | | | 01 | 02 | 03 | 04 |
|---|---|---|---|---|---|---|
| **Dimension** | | **mm** | **600x600** | | | |
| Total cooling capacity (1) | | W | 3.070 | 3.720 | 4.040 | 4.490 |
| Sensible cooling capacity (1) | | W | 2.350 | 2.940 | 3.230 | 3.650 |
| Heating capacity (2a) | | W | 4.590 | 5.640 | 6.160 | 6.890 |
| Heating capacity (2b) | | W | 2.295 | 2.820 | 3.080 | 3.445 |
| Rated air flow (3) | | $m^3/h$ | 520 | 710 | 810 | 960 |
| Water flow rate (4) | Cooling | l/h | 528 | 640 | 695 | 772 |
| | Heating | l/h | 395 | 485 | 530 | 593 |
| Water head losses (5) | Cooling | kPa | 7.5 | 11.1 | 13.1 | 16.1 |
| | Heating | kPa | 12.2 | 18.5 | 22.1 | 27.6 |
| Sound pressure (ls.-ms.-hs.) (6) | | dB(A) | 12-17-25 | 16-24-34 | 22-32-36 | 25-36-38 |
| Ref. Fan-deck | | | 1x R282x146-3 V 50 W-C1 [P=N1-2-3] | 1x R282x146-3 V 50 W-C1,5 [P=N1-2-3] | 1x R282x146-3 V 88 W-C2,5 [P=N1-2-3] | 1x R282x146-3 V 88 W-C3 [P=N1-2-3] |
| Motors/Fans | | N/N | 1/1 | | 1/1 | |
| Rated power absorption (7) | | W | 1x 50 W | | 1x 88 W | |
| | | A | 1x 0.22 A | | 1x 0.39 A | |
| Electrical power supply | | | 230 Vac - 1 Ph - 50/60 Hz | | | |
| Cold/hot coil | Water content | l | 0.95 | | 0.95 | |
| | Rows | N | 2R | | 2R | |
| | Hydraulic fittings | DN | 3/4"F | | 3/4"F | |
| | Condensate drainage outlet | mm | 16 | | 16 | |
| Hot coil | Water content | l | 0.60 | | 0.60 | |
| | Rows | N | 1R | | 1R | |
| | Hydraulic fittings | DN | 3/4"F | | 3/4"F | |
| | Condensate drainage outlet | mm | 16 | | 16 | |
| Air flow reduction (8) | **0 Pa** | MAX | 1.00 | 1.00 | 1.00 | 1.00 |
| | | MED | 0.71 | 0.70 | 0.84 | 0.84 |
| | | MIN | 0.50 | 0.49 | 0.56 | 0.55 |

## REDUCTION OF THE COOLING/HEATING CAPACITY (in relation to the air flow reduction)

| Air flow rate | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 | 0.75 | 0.70 | 0.65 | 0.60 | 0.55 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 1.00 | 0.97 | 0.95 | 0.92 | 0.89 | 0.87 | 0.84 | 0.81 | 0.77 | 0.74 |
| Cooling capacity | 1.00 | 0.97 | 0.93 | 0.90 | 0.86 | 0.83 | 0.79 | 0.76 | 0.72 | 0.68 |
| Heat capacity | 1.00 | 0.97 | 0.94 | 0.91 | 0.87 | 0.84 | 0.81 | 0.77 | 0.74 | 0.70 |

| Air flow rate | 0.50 | 0.45 | 0.40 | 0.35 | 0.30 | 0.25 | 0.20 | 0.15 | 0.10 |
|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 0.71 | 0.67 | 0.63 | 0.59 | 0.55 | 0.50 | 0.45 | 0.39 | 0.32 |
| Cooling capacity | 0.64 | 0.60 | 0.55 | 0.51 | 0.46 | 0.41 | 0.35 | 0.29 | 0.22 |
| Heat capacity | 0.66 | 0.62 | 0.58 | 0.53 | 0.49 | 0.44 | 0.38 | 0.32 | 0.25 |

| MODELS | | | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|
| **Dimension** | | **mm** | **600x600** | | **600x1.200** | |
| Total cooling capacity (1) | | W | 5.150 | 5.740 | 7.670 | 8.540 |
| Sensible cooling capacity (1) | | W | 3.930 | 4.450 | 6.130 | 6.940 |
| Heating capacity (2a) | | W | 6.100 | 6.840 | 11.690 | 13.100 |
| Heating capacity (2b) | | W | 3.050 | 3.420 | 5.845 | 6.550 |
| Rated air flow (3) | | $m^3/h$ | 800 | 950 | 1.540 | 1.830 |
| Water flow rate (4) | Cooling | l/h | 886 | 987 | 1.319 | 1.469 |
| | Heating | l/h | 525 | 588 | 1.005 | 1.127 |
| Water head losses (5) | Cooling | kPa | 13.2 | 16.4 | 16.8 | 19.6 |
| | Heating | kPa | 12.3 | 15.5 | 24.9 | 29.9 |
| Sound pressure (ls.-ms.-hs.) (6) | | dB(A) | 22-32-36 | 25-36-38 | 25-35-39 | 28-39-41 |
| Ref. Fan-deck | | | 1x R282x146-3 V 88 W-C2,5 [P=N1-2-3] | 1x R282x146-3 V 88 W-C3 [P=N1-2-3] | 2x R282x146-3 V 88 W-C2,5 [P=N1-2-3] | 2x R282x146-3 V 88 W-C3 [P=N1-2-3] |
| Motors/Fans | | N/N | 1/1 | | 2/2 | |
| Rated power absorption (7) | | W | 1x 88 W | | 2x 88 W | |
| | | A | 1x 0.39 A | | 2x 0.39 A | |
| Electrical power supply | | | 230 Vac - 1 Ph - 50/60 Hz | | 230 Vac - 1 Ph - 50/60 Hz | |
| Cold/hot coil | Water content | l | 1.50 | | 2.00 | |
| | Rows | N | 3R | | 2R | |
| | Hydraulic fittings | DN | 3/4"F | | 3/4"F | |
| | Condensate drainage outlet | mm | 16 | | 16 | |
| Hot coil | Water content | l | 0.65 | | 1.30 | |
| | Rows | N | 1R | | 1R | |
| | Hydraulic fittings | DN | 3/4"F | | 3/4"F | |
| | Condensate drainage outlet | mm | 16 | | 16 | |
| Air flow reduction (8) | **0 Pa** | MAX | 1.00 | 1.00 | 1.00 | 1.00 |
| | | MED | 0.84 | 0.84 | 0.84 | 0.84 |
| | | MIN | 0.55 | 0.56 | 0.55 | 0.55 |

Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(3) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

## TABLE OF NET WEIGHTS MOD. FCCX IN KG

| Products/Models | | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
|---|---|---|---|---|---|---|---|---|---|
| **FCCX** | Unit | 18.3 | 18.3 | 18.4 | 18.4 | 19.3 | 19.3 | 36.0 | 36.0 |
| | Grid | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 4.1 | 4.1 |

# RATED TECHNICAL DATA MOD. FCCE

## TWO-PIPE UNIT - ONE COIL - EC BRUSHLESS

| MODELS | | | 01 | 02 | 03 |
|---|---|---|---|---|---|
| **Dimension** | | **mm** | | **600x600** | |
| Total cooling capacity (1) | | W | 5.020 | 6.460 | 8.010 |
| Sensible cooling capacity (1) | | W | 4.420 | 5.130 | 5.880 |
| Heating capacity (2a) | | W | 12.350 | 14.780 | 16.170 |
| Heating capacity (2b) | | W | 6.178 | 7.394 | 8.089 |
| Rated air flow (3) | | $m^3/h$ | 1.250 | 1.230 | 1.200 |
| Water flow rate (4) | Cooling | l/h | 863 | 1.111 | 1.378 |
| | Heating | l/h | 1.062 | 1.271 | 1.391 |
| Water head losses (5) | Cooling | kPa | 20.2 | 20.8 | 26.7 |
| | Heating | kPa | 23.8 | 21.2 | 21.2 |
| Sound pressure (1 V-M-10 V) (6) | | dB(A) | <10-32-43 | <10-32-43 | <10-31-42 |
| Ref. Fan-deck | | | 1x R282x146, 74 V [SWP=N/ FIX.1/10] | 1x R282x146, 74 V [SWP=N/ FIX.1/10] | 1x R282x146, 74 V [SWP=N/ FIX.1/10] |
| Motors/Fans | | N/N | 1/1 | 1/1 | 1/1 |
| Rated power absorption (7) | | W | 1x 74 W | 1x 74 W | 1x 74 W |
| | | A | 1x 0.64 A | 1x 0.64 A | 1x 0.64 A |
| Electrical power supply | | | 230 Vac - 1 Ph - 50/60 Hz | | |
| Cold/hot coil | Water content | l | 0.95 | 1.50 | 2.10 |
| | Rows | N | 2R | 3R | 4R |
| | Hydraulic fittings | DN | 3/4"F | 3/4"F | 3/4"F |
| | Condensate drainage outlet | mm | 16 | 16 | 16 |
| Air flow reduction (8) | **0 Pa** | 10V (MAX) | 1.00 | 1.00 | 1.00 |
| | | 5.5 V (MED) | 0.55 | 0.55 | 0.55 |
| | | 1 V (MIN) | 0.10 | 0.10 | 0.10 |

## REDUCTION OF THE COOLING/HEATING CAPACITY (in relation to the air flow reduction)

| Air flow rate | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 | 0.75 | 0.70 | 0.65 | 0.60 | 0.55 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 1.00 | 0.97 | 0.95 | 0.92 | 0.89 | 0.87 | 0.84 | 0.81 | 0.77 | 0.74 |
| Cooling capacity | 1.00 | 0.97 | 0.93 | 0.90 | 0.86 | 0.83 | 0.79 | 0.76 | 0.72 | 0.68 |
| Heat capacity | 1.00 | 0.97 | 0.94 | 0.91 | 0.87 | 0.84 | 0.81 | 0.77 | 0.74 | 0.70 |

| Air flow rate | 0.50 | 0.45 | 0.40 | 0.35 | 0.30 | 0.25 | 0.20 | 0.15 | 0.10 |
|---|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 0.71 | 0.67 | 0.63 | 0.59 | 0.55 | 0.50 | 0.45 | 0.39 | 0.32 |
| Cooling capacity | 0.64 | 0.60 | 0.55 | 0.51 | 0.46 | 0.41 | 0.35 | 0.29 | 0.22 |
| Heat capacity | 0.66 | 0.62 | 0.58 | 0.53 | 0.49 | 0.44 | 0.38 | 0.32 | 0.25 |

| MODELS | | | 04 | 05 |
|---|---|---|---|---|
| **Dimension** | | **mm** | **600x1.200** | |
| Total cooling capacity (1) | | W | 12.260 | 15.190 |
| Sensible cooling capacity (1) | | W | 9.740 | 11.170 |
| Heating capacity (2a) | | W | 28.060 | 30.680 |
| Heating capacity (2b) | | W | 14.034 | 15.346 |
| Rated air flow (3) | | $m^3/h$ | 2.340 | 2.280 |
| Water flow rate (4) | Cooling | l/h | 2.109 | 2.613 |
| | Heating | l/h | 2.413 | 2.639 |
| Water head losses (5) | Cooling | kPa | 25.5 | 30.7 |
| | Heating | kPa | 26.1 | 24.4 |
| Sound pressure (1 V-M-10 V) (6) | | dB(A) | <10-35-46 | <10-34-45 |
| Ref. Fan-deck | | | 1x R282x146, 74 V [SWP=N/ FIX.1/10] | 1x R282x146, 74 V [SWP=N/ FIX.1/10] |
| Motors/Fans | | N/N | 2/2 | 2/2 |
| Rated power absorption (7) | | W | 2x 74 W | 2x 74 W |
| | | A | 2x 0.64 A | 2x 0.64 A |
| Electrical power supply | | | 230 Vac - 1 Ph - 50/60 Hz | |
| Cold/hot coil | Water content | l | 3.10 | 4.30 |
| | Rows | N | 3R | 4R |
| | Hydraulic fittings | DN | 3/4"F | 3/4"F |
| | Condensate drainage outlet | mm | 16 | 16 |
| Air flow reduction (8) | **0 Pa** | 10V (MAX) | 1.00 | 1.00 |
| | | 5.5 V (MED) | 0.55 | 0.55 |
| | | 1 V (MIN) | 0.10 | 0.10 |

Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

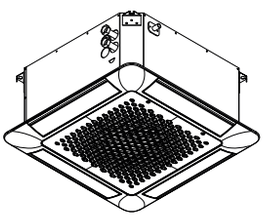
(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(3) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

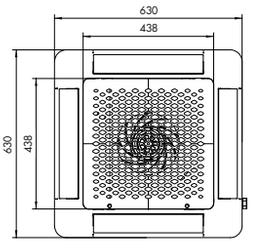
## TABLE OF NET WEIGHTS MOD. FCCE IN KG

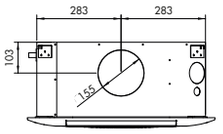
| Products/Models | | 01 | 02 | 03 | 04 | 05 |
|---|---|---|---|---|---|---|
| **FCCE** | Unti | 17.3 | 18.1 | 19.0 | 35.2 | 37.0 |
| | Grid | 2.1 | 2.1 | 2.1 | 4.1 | 4.1 |

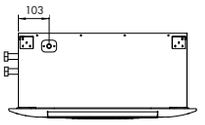
# DIMENSIONAL DRAWINGS

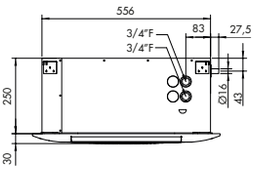
## Model FCC e FCCE single-cassette configuration

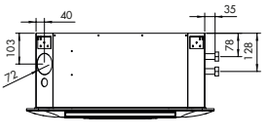


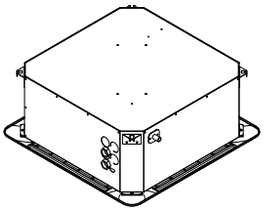


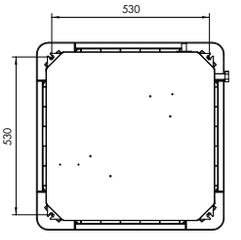



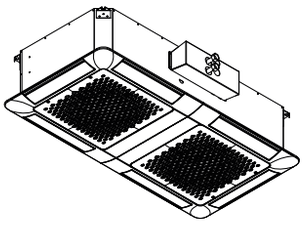



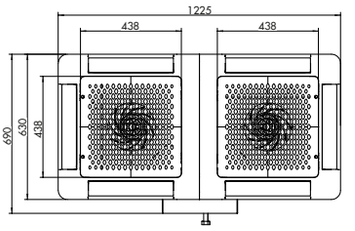



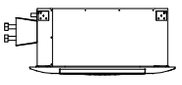



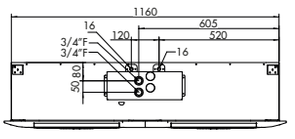


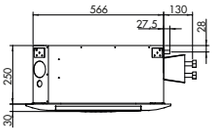

## Model FCC e FCCE duble-cassette configuration

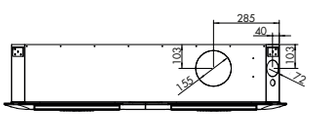


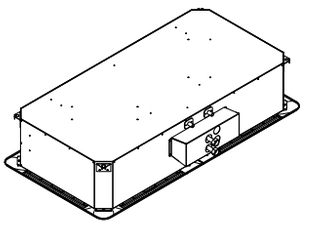


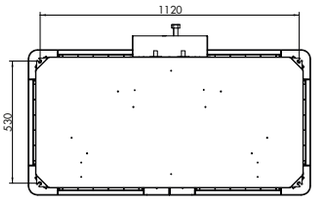





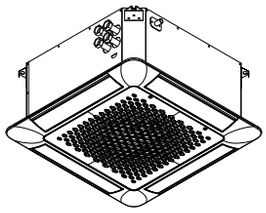



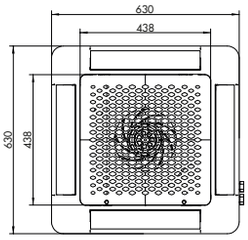



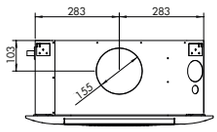



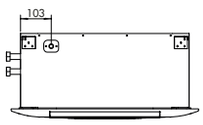


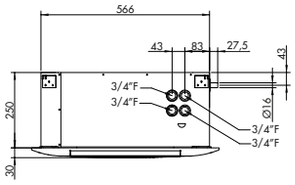
## Model FCCX single-cassette configuration

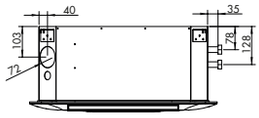


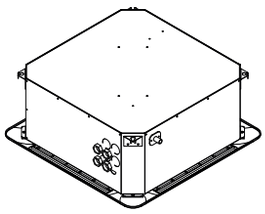


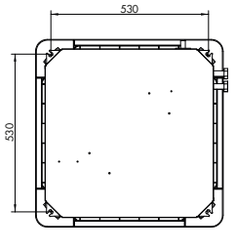



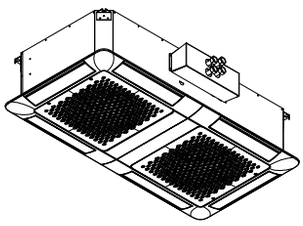



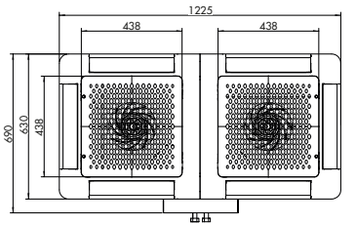



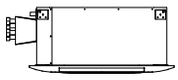



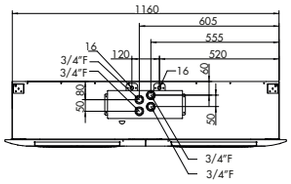


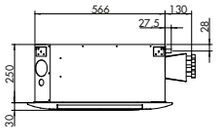

## Model FCCX duble-cassette configuration

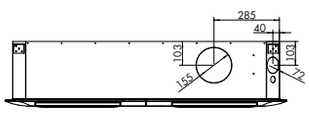


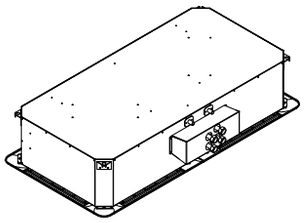


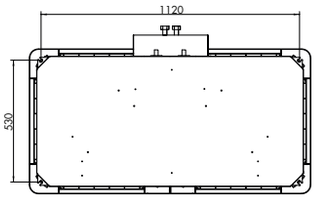







# ACCESSORIES

| CONTROLS UNITS INSTALLED | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Descriprion** | **Applicability** |
|  | 387030468 | CL01 | IP20 terminal block (only if a wired control unit is necessary) - INCLUDED | All |
|  | 387030469 | SWC22 | Simplified thermostat for 2/4-pipe fan coil units | FCC<br>FCCX |
|  | 387030470 | SWC25 | Programmable thermostat for 2/4-pipe fan coil units with display and with advanced functions | FCC<br>FCCX |
|  | 387030564 | SWC26 | Thermostat for 2/4-pipe fan coil units, programmable, with display and 0...10 VDC output | FCCE |
|  | 387030602 | IRC02 | IR remote control. Kit inclusive of motherboard, air sensor, water sensor and IR receiver | FCC<br>FCCX |
|  | 387030471 | EIX01 | Electronic interface for fan coil unit thermostats: enables a single thermostat to control up to 4 fan coil units. Housed in a 6-module container for DIN rail | FCC<br>FCCX |
|  | 387030466 | MTT32 | Minimum hot water temperature thermostat (calibrated to 32°C) | SWC22 |
|  | 387030467 | WTS4 | Water temperature sensor (type NTC 4,700 ohm @25°C ±2 with cable L=1 m) | SWC25<br>SWC26 |

| VARIOUS | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Descriprion** | **Applicability** |
|  | 387030565 | CC63 | Covering panel with air return grid and air supply deflectors, air filter. Dimensions 630 x 630 mm | Single boxes |
|  | 387030566 | CC64 | Covering panel with air return grid and air supply deflectors, air filter. Dimensions 630 x 1225 mm | Double boxes |
|  | 387030567 | VB63 | Auxiliary drain pan made of plastic, for two-way or three-way valves | Single boxes |
|  | 387030568 | VB64 | Auxiliary drain pan made of plastic, for two-way or three-way valves | Double boxes |
|  | 387030569 | REA01 | Galvanised plate ring for outdoor air intake Ø=72 mm L=100 mm | All |
|  | 387030570 | RIA01 | Galvanised plate ring for air entry into adjacent room Ø=155 mm L=100 mm | All |

| VALVE KIT | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Descriprion** | **Applicability** |
|  | 387030571 | 3WV03 | 3/4" M three-way valve with PWM-ON/OFF actuator, 230 V (2 pipes) | FCC, FCCE |
|  | 387030572 | 2WV03 | 3/4" M two-way valve with PWM-ON/OFF actuator, 230 V (2 pipes) | FCC, FCCE |
|  | 387030573 | 3WV03-C | 2 x 3/4" M three-way valves with PWM-ON/OFF actuator, 230 V (4 pipes) | FCCX |
|  | 387030574 | 2WV03-C | 2 x 3/4" M two-way valves with PWM-ON/OFF actuator, 230 V (4 pipes) | FCCX |

# DUCTABLE

Model: DT/DTE

# DUCTABLE

## MAIN FEATURES MOD. DT/DTE

### COVERING BOX

Covering box (load-bearing structure) made of high-thickness plate resistant to rust, corrosion, chemicals, solvents, aliphatic compounds, alcohols. Pre-cut pieces and holes for configuring the unit as requested, for installing the relevant accessories, for the left-hand or right-hand arrangement of the water connection outlets, for the unit's reversibility on the installation site. Assembled using self-tapping screws for quick, thorough and easy inspection/maintenance. Compact dimensions, optimised overall dimensions. Covering boxes with galvanised plate panel and internal thermo-acoustic insulation (Class M1) of the parts in contact with the coil.

### DRAIN PAN (WITH DOUBLE INCLINATION)

Drain pan with double inclination for optimal condensate discharge, equipped with outlet (standard on the same side of the water connections) + outer thermal insulation.

### HEAT EXCHANGER

High-efficiency heat exchange coil with copper pipe and aluminium flaps locked by means of mechanical expansion.
Coil fittings equipped with anti-torsion system, manual air relief valves and manual water drainage valves. Fittings on the left as a standard feature; on request they can be mounted on the right and are easily reversible on-site. 1 coil for 2-pipe system; 2 coils for 4-pipe system. Coils tested at 30 bar operating pressure, suitable for working with water up to a maximum pressure of 15 bar.
The coils are suitable for operating with:

- high-temperature water (boiler)
- low-temperature water (condensing boiler, heat pump, etc.)
- cold water (chiller and/or industrial processes)
- water supplemented with glycol

Sizes with 3-row (3R) coil, normally used for cooling with treatment of all the internal recirculation air.
Sizes with 4-row (4R) coil, normally used for cooling with treatment of all (or part) of the outdoor renewal air, whenever a high dehumidification action is required.

### VENTILATION UNIT (3-SPEED CENTRIFUGAL FAN) - DT

Ventilation unit consisting of 1, 2 or 3 double-intake centrifugal fans with aluminium fans (with forward-curved blades) directly coupled with the electric motor with a useful static pressure of up to 150 Pa.
Mounted on elastic and elastic supports and shock absorbers. Statically and dynamically balanced fan. Large-diameter fans (with high air volume and high static pressure) with low number of revolutions (= low noise). Electric motor with at least 3 speeds, equipped with thermal protection device (Klixon), run capacitor always engaged, IP42, Class B, power cables protected with double insulation.

### VENTILATION UNIT (BRUSHLESS CENTRIFUGAL FAN) - DTE

Motor technology BLAC (Brushless Alternating Current) permanent magnets, brushless, sensor less, 2 protectors (TP-thermal/Klixon + EP-electronic/SW), IP20, Class B, double insulation, Inverter with dry contact alarm, 230vac-1ph-50/60hz.
High Energy Efficiency motor (HEE) with high energy savings (over 50%) and consequential CO2 reduction (environmentally friendly).
Modulating regulation with 0...10 Vdc signal through our controls or through independent (customer's) control systems: modulation of 0-100% of the air flow (and consequently of the thermal and cooling power), allows to adjust the performance, instant by instant, to the actual needs of the room, ensuring total comfort and noise reduction.

## ELECTRICAL EQUIPMENT (TERMINAL BLOCK WITH MINIMUM 7 PINS)

"Mammut"-type terminal block IP20 (minimum 7 pins: 1 earth + 3 speeds + 1 common + 2 with jumper) mounted outside of the unit (for horizontal units, on the same side of the water connections; for vertical units, on the opposite side).

## AIR FILTER

The standard unit is supplied without air filter. In this way the customer can choose whether to use an air filter section among those available as accessories, or adopt an air recovery grid with air filter, or insert an air filter along the intake ducting.

## AIR INTAKES AND SUPPLY OUTLETS

All standard versions are supplied with free air intake and supply outlets, without any grid/protection.
WARNING: it is forbidden to start the machine unless both the unit's intake and outlet have been ducted or protected with grids or a safety mesh (the following items are available as accessories on request: grids, panels, plenums, etc.).

# DUCTABLE
## MODELS

### DUCTABLE FAN COIL MOD. DT-NH

Concealed horizontal installation, with horizontal air outflow and intake from the rear part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030440 | DT-NH 01 L | 6.820 | 15.200 |
| 387030441 | DT-NH 01 R | | |
| 387030442 | DT-NH 02 L | 8.650 | 18.900 |
| 387030443 | DT-NH 02 R | | |
| 387030444 | DT-NH 03 L | 10.100 | 20.000 |
| 387030445 | DT-NH 03 R | | |
| 387030446 | DT-NH 04 L | 12.000 | 28.400 |
| 387030447 | DT-NH 04 R | | |
| 387030448 | DT-NH 05 L | 15.200 | 35.200 |
| 387030449 | DT-NH 05 R | | |
| 387030450 | DT-NH 06 L | 17.800 | 37.200 |
| 387030451 | DT-NH 06 R | | |

| DT-NH | 01 | L |
|---|---|---|
| - | (1) | (2) |

DT-NH = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06
(2) L = left coil connection/R = right coil connection

### DUCTABLE FAN COIL MOD. DTE-NH

Concealed vertical installation, with vertical air outflow and intake from the front part.

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030715 | DTE-NH 01 L | 6.976 | 15.569 |
| 387030716 | DTE-NH 01 R | | |
| 387030717 | DTE-NH 02 L | 8.828 | 19.313 |
| 387030718 | DTE-NH 02 R | | |
| 387030719 | DTE-NH 03 L | 10.315 | 20.452 |
| 387030720 | DTE-NH 03 R | | |
| 387030721 | DTE-NH 04 L | 12.135 | 28.739 |
| 387030722 | DTE-NH 04 R | | |
| 387030723 | DTE-NH 05 L | 15.357 | 35.586 |
| 387030724 | DTE-NH 05 R | | |
| 387030725 | DTE-NH 06 L | 17.993 | 37.629 |
| 387030726 | DTE-NH 06 R | | |

| DTE-NH | 01 | L |
|---|---|---|
| - | (1) | (2) |

DTE-NH = fan coil model
(1) Capacity = 01, 02, 03, 04, 05, 06
(2) L = left coil connection/R = right coil connection

**(1) Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - temp. - input/output water temp. 7/12 °C
**(2) Heating:** air temp. 20 °C - input/output water temp. 70/60 °C

# RATED TECHNICAL DATA - DT

## TWO-PIPE UNIT - ONE COIL

| MODELS | | | 01 | 02 | 03 |
|---|---|---|---|---|---|
| Total cooling capacity (1) | | W | 6.820 | 8.650 | 10.100 |
| Sensible cooling capacity (1) | | W | 5.300 | 6.580 | 7.380 |
| Heating capacity (2a) | | W | 15.200 | 18.900 | 20.000 |
| Heating capacity (2b) | | W | 7.600 | 9.450 | 10.000 |
| Rated air flow (3) | | $m^3/h$ | 1.350 | 1.500 | 1.450 |
| Water flow rate (4) | Cooling | l/h | 1.173 | 1.488 | 1.737 |
| | Heating | l/h | 1.307 | 1.625 | 1.720 |
| Water head losses (5) | Cooling | kPa | 35,7 | 39,4 | 38,4 |
| | Heating | kPa | 34,6 | 36,6 | 29,4 |
| Sound pressure (ls.-ms.-hs.) (6) | | dB(A) | 34-43-49 | 35-44-50 | 35-44-50 |
| Motors/Fans | | N/N | 1/1 | | |
| Rated power absorption (7) | | W | 290 | | |
| | | A | 1,3 | | |
| Electrical power supply | | | 230 Vac – 1 Ph – 50 Hz | | |
| Cold/hot coil rows | | N | 3R | | 4R |
| Hydraulic fittings | | DN | 3/4" F | | 3/4" F |
| Condensate drainage outlet | | mm | 20 | | 20 |

| MODELS | | | 04 | 05 | 06 |
|---|---|---|---|---|---|
| Total cooling capacity (1) | | W | 12.000 | 15.200 | 17.800 |
| Sensible cooling capacity (1) | | W | 9.780 | 12.100 | 13.500 |
| Heating capacity (2a) | | W | 28.400 | 35.200 | 37.200 |
| Heating capacity (2b) | | W | 14.200 | 17.600 | 18.600 |
| Rated air flow (3) | | $m^3/h$ | 2.750 | 3.000 | 2.850 |
| Water flow rate (4) | Cooling | l/h | 2.064 | 2.614 | 3.062 |
| | Heating | l/h | 2.442 | 3.027 | 3.199 |
| Water head losses (5) | Cooling | kPa | 28,0 | 38,3 | 30,6 |
| | Heating | kPa | 30,6 | 40,0 | 26,1 |
| Sound pressure (ls.-ms.-hs.) (6) | | dB(A) | 37-48-51 | 38-49-52 | 38-49-52 |
| Motors/Fans | | N/N | 1/2 | | |
| Rated power absorption (7) | | W | 560 | | |
| | | A | 2,6 | | |
| Electrical power supply | | | 230 Vac – 1 Ph – 50 Hz | | |
| Cold/hot coil rows | | N | 3R | 3R | 4R |
| Hydraulic fittings | | DN | 3/4" F | | |
| Condensate drainage outlet | | mm | 20 | | |

Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(3) (8) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

# RATED TECHNICAL DATA - DTE

## TWO-PIPE UNIT - ONE COIL

| MODELS | | | | 01 | 02 | 03 |
|---|---|---|---|---|---|---|
| Total cooling capacity (1) | | | W | 6.976 | 8.828 | 10.315 |
| Sensible cooling capacity (1) | | | W | 5.440 | 6.736 | 7.561 |
| Heating capacity (2a) | | | W | 15.569 | 19.313 | 20.452 |
| Heating capacity (2b) | | | W | 7.784 | 9.656 | 10.226 |
| Rated air flow (3) | | | $m^3/h$ | 1.400 | 1.550 | 1.500 |
| Water flow rate (4) | Cooling | | l/h | 1.200 | 1.518 | 1.774 |
| | Heating | | l/h | 1.339 | 1.661 | 1.759 |
| Water head losses (5) | Cooling | | kPa | 37.4 | 41.1 | 40.1 |
| | Heating | | kPa | 36.3 | 38.3 | 30.7 |
| Sound pressure (ls.-ms.-hs.) (6) | | | dB(A) | 16-37-51 | 17-39-51 | 17-39-51 |
| Engine reference | | | Ref | 1x D180x240, SAM [SWP/FIX.1/10], [SWN/FIX.1/10] 8P, IP42, Cl.B, EP+TP, BR, INV180W/Cl.1 | | |
| Motors/Fans | | | N/N | 1/1 | | |
| Rated power absorption (7) | | | W | 180 | | |
| | | | A | 1.40 | | |
| Electrical power supply | | | | 230 Vac – 1 Ph – 50 Hz/Signal 0...10 Vdc | | |
| Cold/hot coil rows | | | N | 3R | | 4R |
| Hydraulic fittings | | | DN | 3/4" F | | |
| Water content | | | L | 1.95 | 1.96 | 2.60 |
| Condensate drainage outlet | | | mm | 20 | 20 | 20 |
| Lower operating limit | ESP = 0 Pa | | MAX | 1.00 | 1.00 | 1.00 |
| | | | MED | 0.63 | 0.63 | 0.63 |
| | | | MIN | 0.26 | 0.26 | 0.26 |
| **REDUCED AIR FLOW RATE** Multiplicative coefficients for the definition of "Air Flow/Static Pressure" curves (at 3 speeds MAX-MED-MIN with MAX=10 V, MIN= 1 V) (8) | Ref. Nominal air flow (3) | 25 Pa | MAX | 0.97 | 0.97 | 0.97 |
| | | | MED | 0.61 | 0.61 | 0.61 |
| | | | MIN | 0.26 | 0.26 | 0.26 |
| | | 50 Pa | MAX | 0.94 | 0.93 | 0.94 |
| | | | MED | 0.59 | 0.59 | 0.59 |
| | | | MIN | 0.25 | 0.25 | 0.25 |
| | | 75 Pa | MAX | 0.90 | 0.90 | 0.90 |
| | | | MED | 0.57 | 0.57 | 0.57 |
| | | | MIN | 0.24 | 0.24 | 0.24 |
| | | 100 Pa | MAX | 0.86 | 0.85 | 0.86 |
| | | | MED | 0.54 | 0.54 | 0.54 |
| | | | MIN | 0.23 | 0.23 | 0.23 |
| | | 125 Pa | MAX | 0.81 | 0.81 | 0.81 |
| | | | MED | 0.51 | 0.51 | 0.51 |
| | | | MIN | 0.22 | 0.21 | 0.21 |
| | | 150 Pa | MAX | 0.76 | 0.76 | 0.76 |
| | | | MED | 0.48 | 0.48 | 0.48 |
| | | | MIN | 0.20 | 0.20 | 0.20 |
| Upper operating limit | ESP (Pa) | | MAX | 288 | 288 | 288 |
| | Qa (x $m^3/h$) | | | x0.15 | x0.15 | x0.15 |
| | ESP (Pa) | | MED | 268 | 268 | 268 |
| | Qa (x $m^3/h$) | | | x0.14 | x0.14 | x0.14 |
| | ESP (Pa) | | MIN | 219 | 219 | 219 |
| | Qa (x $m^3/h$) | | | x0.13 | x0.13 | x0.13 |

Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(1) (2) (9) **Cooling and Heating capacity:** Data calculated by SW and measurements made in calorimetric room ref. UNI 7940 part 1°-2° , UNI-EN 1397/2001 standards.
(3) (8) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

# RATED TECHNICAL DATA - DTE

## TWO-PIPE UNIT - ONE COIL

| MODELS | | | | | 04 | 05 | 06 |
|---|---|---|---|---|---|---|---|
| Total cooling capacity (1) | | | | W | 12.135 | 15.357 | 17.993 |
| Sensible cooling capacity (1) | | | | W | 9.907 | 12.244 | 13.669 |
| Heating capacity (2a) | | | | W | 28.739 | 35.586 | 37.629 |
| Heating capacity (2b) | | | | W | 14.370 | 17.793 | 18.814 |
| Rated air flow (3) | | | | $m^3/h$ | 2.800 | 3.050 | 2.900 |
| Water flow rate (4) | Cooling | | | l/h | 2.087 | 2.641 | 3.095 |
| | Heating | | | l/h | 2.472 | 3.060 | 3.236 |
| Water head losses (5) | Cooling | | | kPa | 28.7 | 39.2 | 31.3 |
| | Heating | | | kPa | 31.3 | 40.9 | 26.7 |
| Sound pressure (ls.-ms.-hs.) (6) | | | | dB(A) | 18-41-52 | 19-42-53 | 19-42-53 |
| Engine reference | | | | Ref | 2x D180x240, CYP75% [SWP/FIX.1/10], [SWN/FIX.1/10] 8P, IP20, Cl.B, EP+TP, BR, INV550W/Cl.1 | | |
| Motors/Fans | | | | N/N | 1/2 | | |
| Rated power absorption (7) | | | | W | 400 | | |
| | | | | A | 1.80 | | |
| Electrical power supply | | | | | 230 Vac – 1 Ph – 50 Hz/Segnale 0...10 Vdc | | |
| Cold/hot coil rows | | | | N | 3R | | 4R |
| Hydraulic fittings | | | | DN | 3/4" F | | |
| Water content | | | | L | 2.86 | 2.87 | 3.82 |
| Condensate drainage outlet | | | | mm | 20 | | 20 |
| Lower operating limit | ESP = 0 Pa | | | MAX | 1.00 | 1.00 | 1.00 |
| | | | | MED | 0.62 | 0.62 | 0.62 |
| | | | | MIN | 0.23 | 0.23 | 0.23 |
| **REDUCED AIR FLOW RATE** Multiplicative coefficients for the definition of "Air Flow/Static Pressure" curves (at 3 speeds MAX-MED-MIN with MAX=10 V, MIN= 1 V) (8) | Ref. Nominal air flow (3) | 25 Pa | | MAX | 0.95 | 0.95 | 0.95 |
| | | | | MED | 0.59 | 0.59 | 0.59 |
| | | | | MIN | 0.22 | 0.22 | 0.22 |
| | | 50 Pa | | MAX | 0.91 | 0.91 | 0.91 |
| | | | | MED | 0.56 | 0.56 | 0.56 |
| | | | | MIN | 0.21 | 0.21 | 0.21 |
| | | 75 Pa | | MAX | 0.86 | 0.86 | 0.86 |
| | | | | MED | 0.53 | 0.53 | 0.53 |
| | | | | MIN | 0.20 | 0.20 | 0.20 |
| | | 100 Pa | | MAX | 0.81 | 0.81 | 0.81 |
| | | | | MED | 0.50 | 0.50 | 0.50 |
| | | | | MIN | 0.19 | 0.19 | 0.19 |
| | | 125 Pa | | MAX | 0.75 | 0.75 | 0.75 |
| | | | | MED | 0.46 | 0.46 | 0.46 |
| | | | | MIN | 0.18 | 0.18 | 0.18 |
| | | 150 Pa | | MAX | 0.68 | 0.68 | 0.68 |
| | | | | MED | 0.42 | 0.42 | 0.42 |
| | | | | MIN | 0.16 | 0.16 | 0.16 |
| Upper operating limit | ESP (Pa) | | | MAX | 221 | 221 | 221 |
| | Qa (x $m^3/h$) | | | | x0.13 | x0.13 | x0.13 |
| | ESP (Pa) | | | MED | 206 | 206 | 206 |
| | Qa (x $m^3/h$) | | | | x0.13 | x0.13 | x0.13 |
| | ESP (Pa) | | | MIN | 181 | 181 | 181 |
| | Qa (x $m^3/h$) | | | | x0.12 | x0.12 | x0.12 |

Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(1) (2) (9) **Cooling and Heating capacity:** Data calculated by SW and measurements made in calorimetric room ref. UNI 7940 part 1°-2° , UNI-EN 1397/2001 standards.
(3) (8) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

## REDUCTION OF THE COOLING/HEATING CAPACITY (in relation to the air flow reduction)

| Air flow rate | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 | 0.75 | 0.70 | 0.65 |
|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 1.00 | 0.97 | 0.95 | 0.92 | 0.89 | 0.87 | 0.84 | 0.81 |
| Sensible cooling capacity | 1.00 | 0.97 | 0.93 | 0.90 | 0.86 | 0.83 | 0.79 | 0.76 |
| Heat capacity | 1.00 | 0.97 | 0.94 | 0.91 | 0.87 | 0.84 | 0.81 | 0.77 |

| Air flow rate | 0.60 | 0.55 | 0.50 | 0.45 | 0.40 | 0.35 | 0.30 | 0.25 |
|---|---|---|---|---|---|---|---|---|
| Total cooling capacity | 0.77 | 0.74 | 0.71 | 0.67 | 0.63 | 0.59 | 0.55 | 0.50 |
| Sensible cooling capacity | 0.72 | 0.68 | 0.64 | 0.60 | 0.55 | 0.51 | 0.46 | 0.41 |
| Heat capacity | 0.74 | 0.70 | 0.66 | 0.62 | 0.58 | 0.53 | 0.49 | 0.44 |

## TABLE OF NET WEIGHTS MOD. DT (TWO-PIPE UNIT - ONE COIL) IN KG

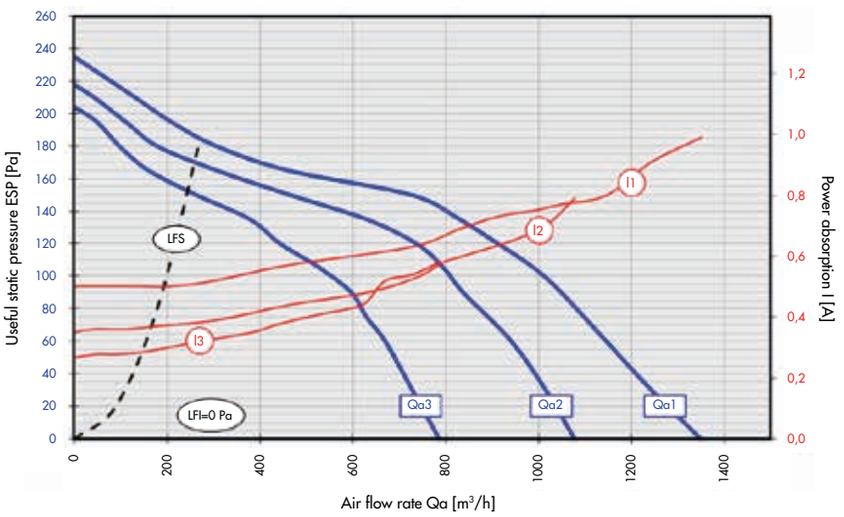
| Products/Models | 01 | 02 | 03 | 04 | 05 | 06 |
|---|---|---|---|---|---|---|
| **DT-NH** | 37.0 | 38.0 | 40.0 | 52.0 | 54.0 | 57.0 |
| **DTE-NH** | 37.0 | 38.0 | 40.0 | 52.0 | 54.0 | 57.0 |

# USEFUL STATIC PRESSURE/ WATER FLOW RATE DIAGRAMS

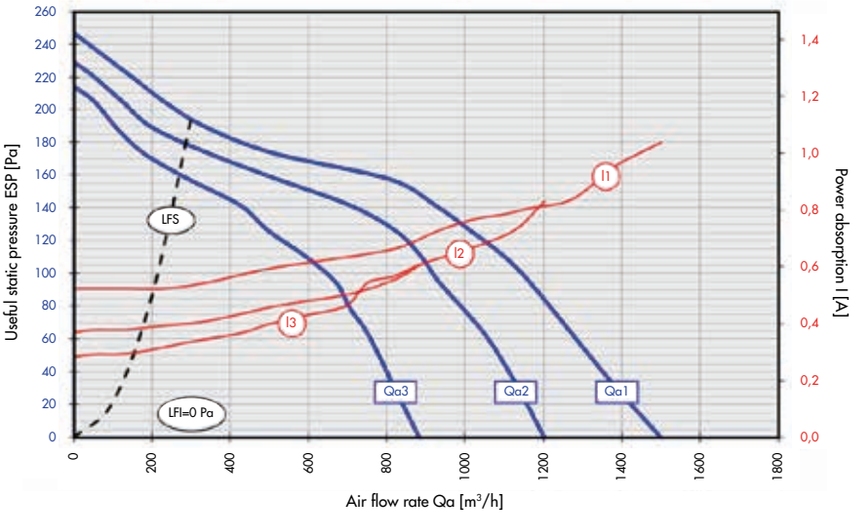
Key

| | |
|---|---|
| LFS | Upper operating limit |
| LFI | Lower operating limit |
| Qa1 | ESP/Qa curve at the maximum speed |
| Qa2 | ESP/Qa curve at the average speed |
| Qa3 | ESP/Qa curve at the minimum speed |
| I1 | I/Qa curve at the maximum speed |
| I2 | I/Qa curve at the average speed |
| I3 | I/Qa curve at the minimum speed |

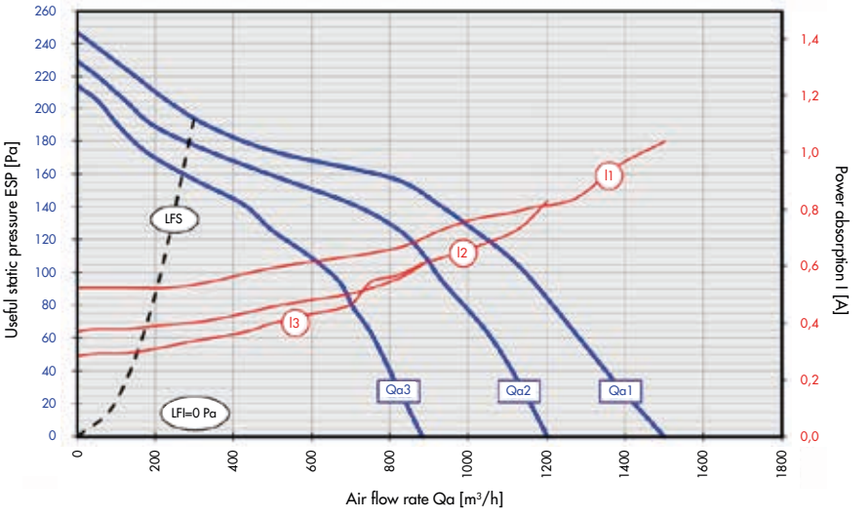
## Model DT 01



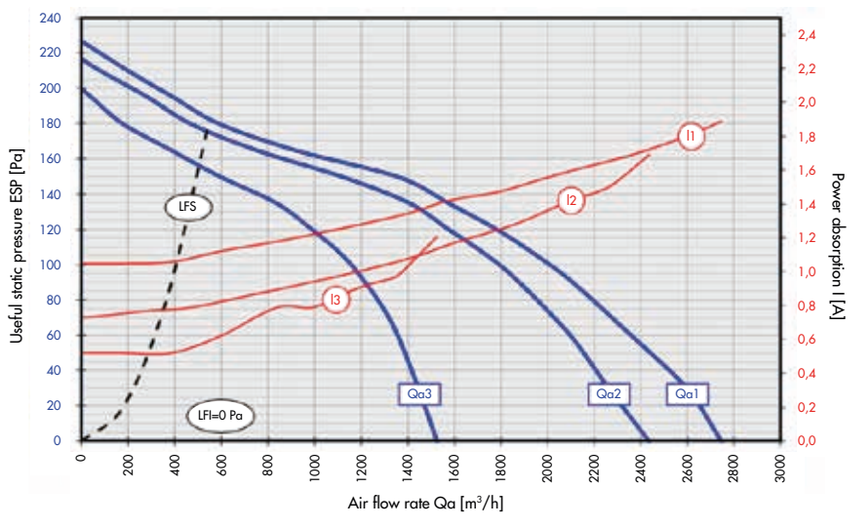

## Model DT 02



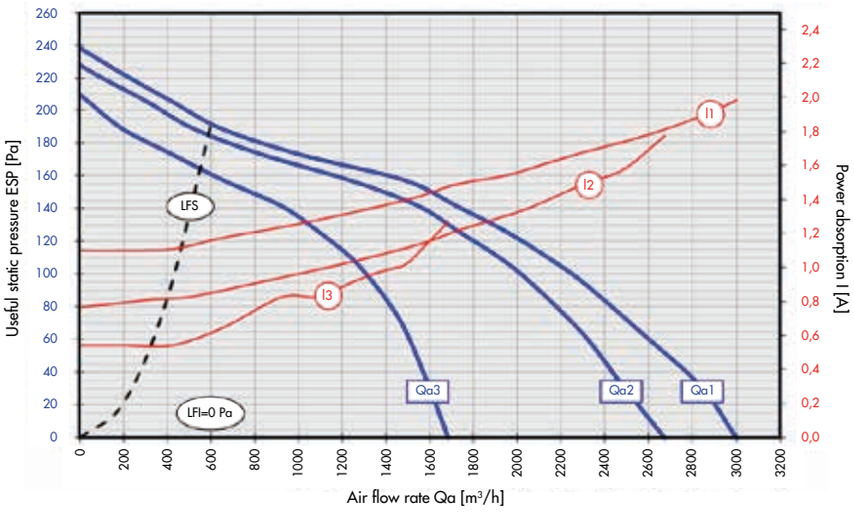

## Model DT 03



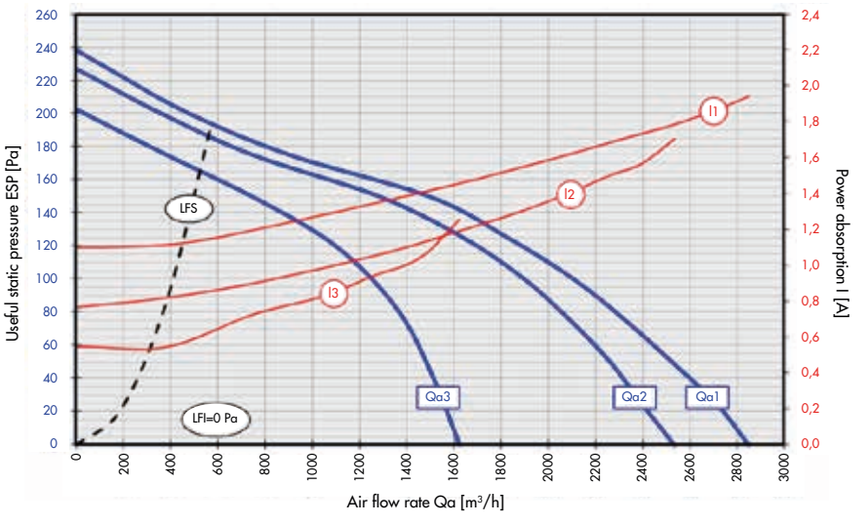
## Model DT 04




## Model DT 05




## Model DT 06

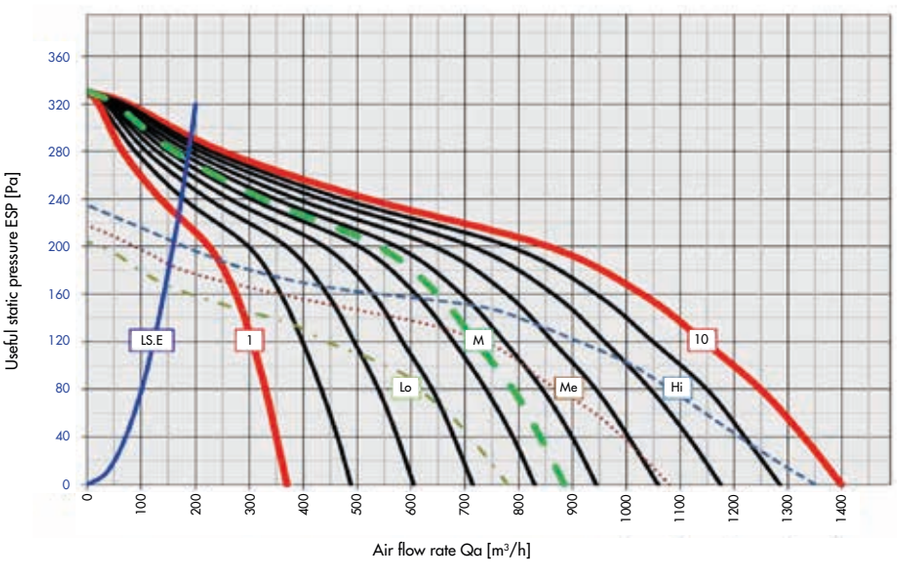


# USEFUL STATIC PRESSURE/ WATER FLOW RATE DIAGRAMS

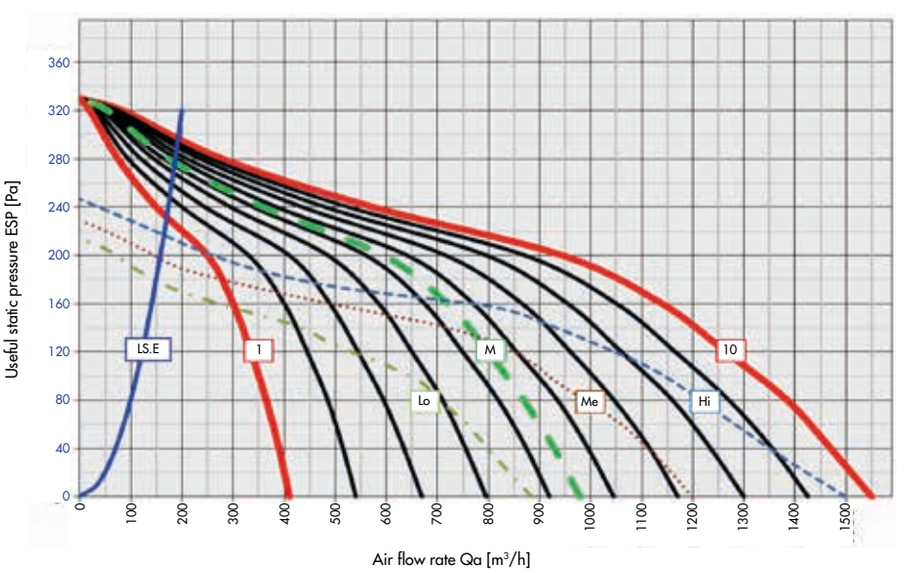
KEY

| | |
|---|---|
| LS.E | Upper operating limit |
| Hi | AC unit curve at maximum speed |
| Me | AC unit curve at average speed |
| Lo | AC unit curve at minimum speed |
| 10 | EC unit curve with 10 Vdc signal (maximum speed) |
| 1 | EC unit curve with 1 Vdc signal (maximum speed) |
| M | EC unit curve at average speed |

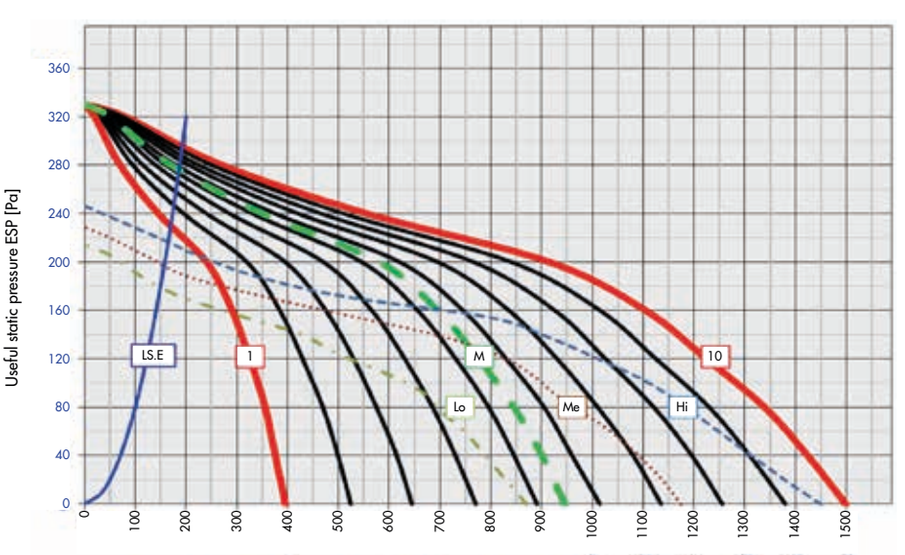
## Model DTE 01




## Model DTE 02



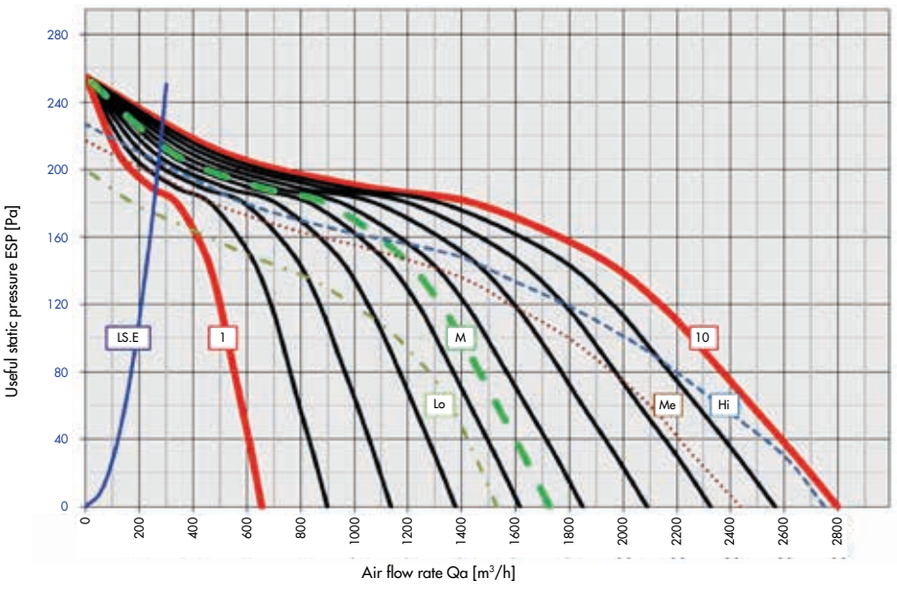

## Model DTE 03



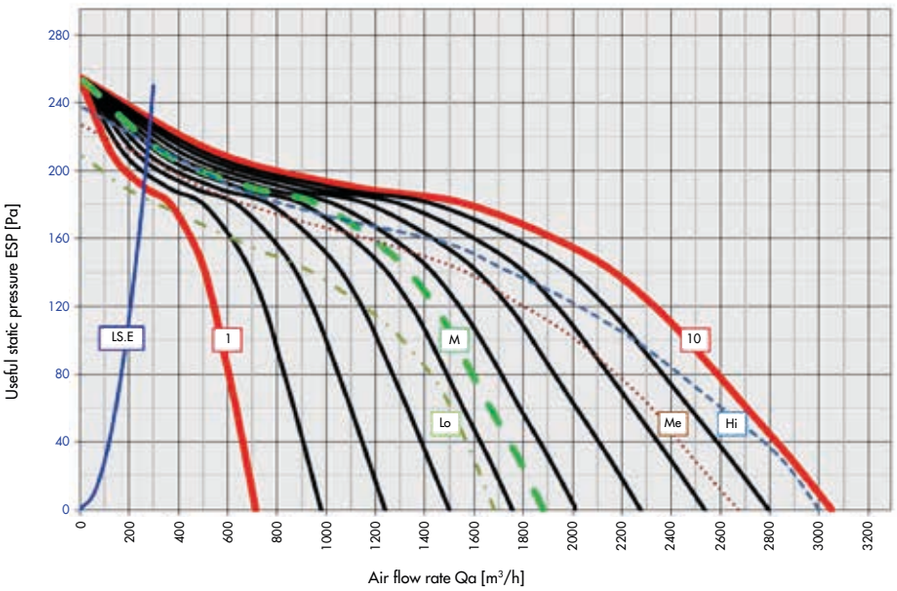
KEY

| | |
|---|---|
| LS.E | Upper operating limit |
| Hi | AC unit curve at maximum speed |
| Me | AC unit curve at average speed |
| Lo | AC unit curve at minimum speed |
| 10 | EC unit curve with 10 Vdc signal (maximum speed) |
| 1 | EC unit curve with 1 Vdc signal (maximum speed) |
| M | EC unit curve at average speed |

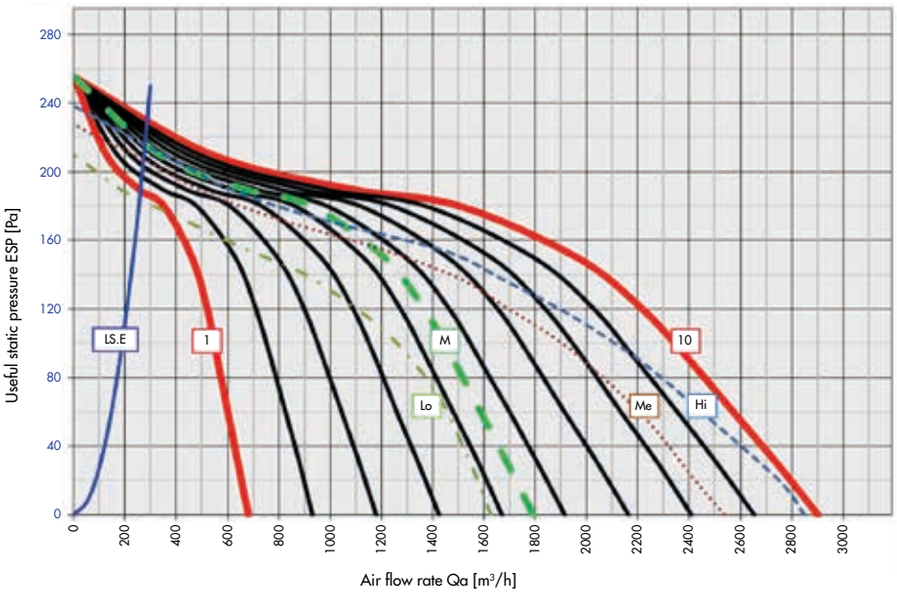
## Model DTE 04




## Model DTE 05

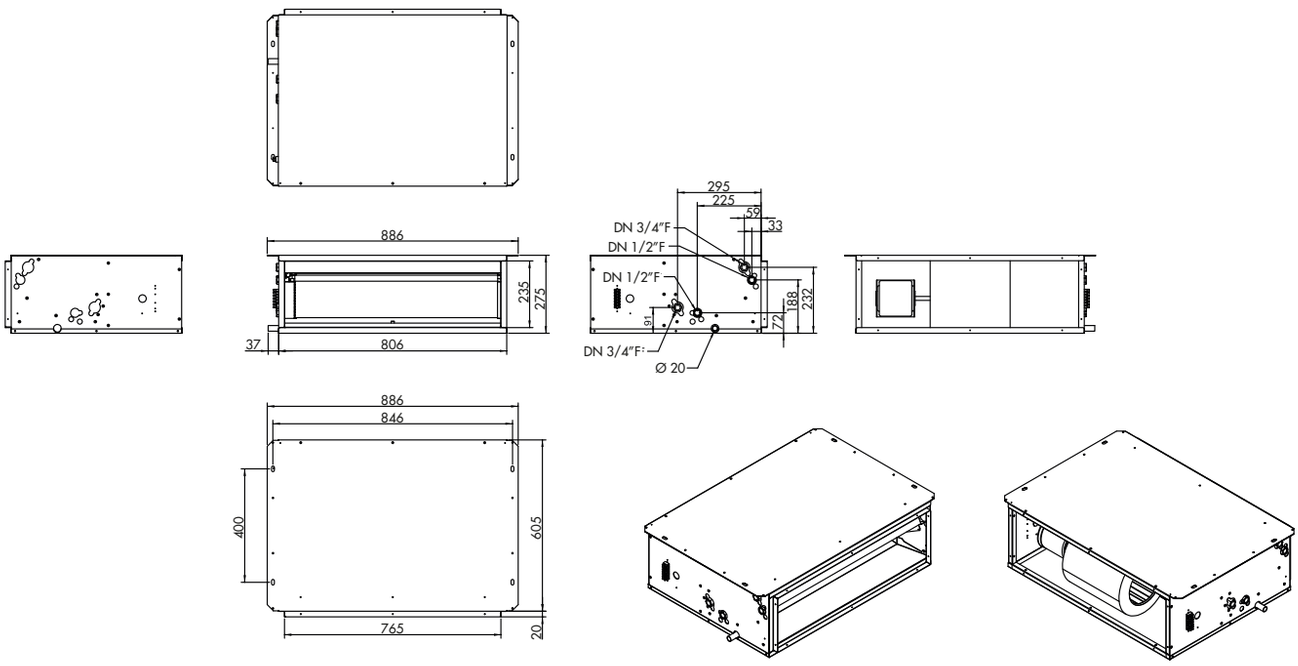



## Model DTE 06

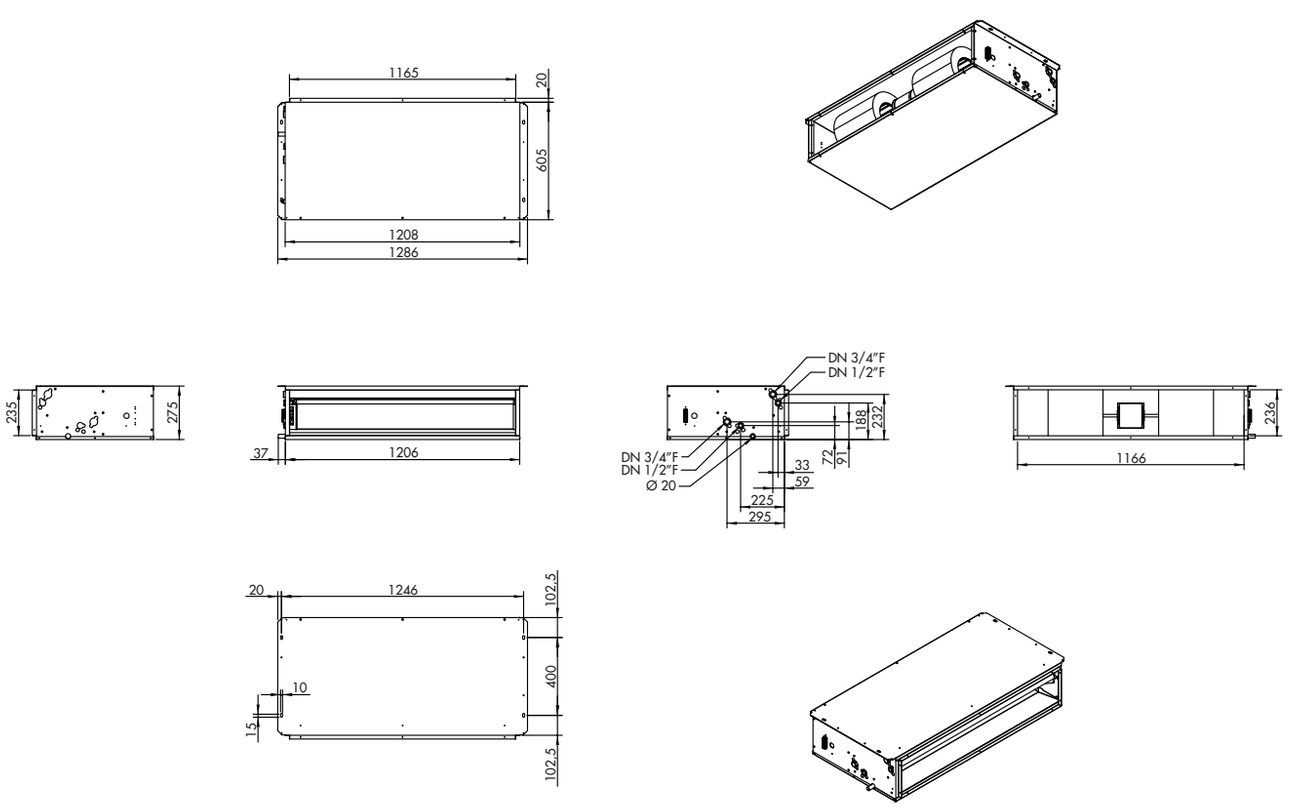


# DIMENSIONAL DRAWING

## Models DT-NH 01...03/DTE-NH 01...03



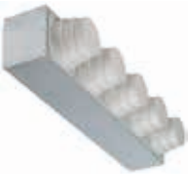

## Models DT-NH 04...06/DTE-NH 04...06



# ACCESSORIES

| WIRED CONTROL UNITS AND REMOTE CONTROLS | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030468 | CL01 | IP20 terminal block (only if a wired control unit is necessary) - INCLUDED | All |
|  | 387030469 | SWC22 | Simplified thermostat for 2/4-pipe fan coil units | DT |
|  | 387030470 | SWC25 | Programmable thermostat for 2/4-pipe fan coil units with display and with advanced functions | DT |
|  | 387030564 | SWC26 | Thermostat for 2/4-pipe fan coil units, programmable, with display and 0...10 VDC output | All |
|  | 387030471 | EIX01 | Electronic interface for fan coil unit thermostats: enables a single thermostat to control up to 4 fan coil units. Housed in a 6-module container for DIN rail | DT |
|  | 387030472 | IRC01 | IR remote control. Kit inclusive of motherboard, air sensor, water sensor and IR receiver | DT |
|  | 387030466 | MTT32 | Minimum hot water temperature thermostat (calibrated to 32°C) | All |
|  | 387030467 | WTS4 | Water temperature sensor (type NTC 4,700 ohm @25°C ±2 with cable L=1 m) | SWC25<br>SWC26 |

# ACCESSORIES

| ADDITIONAL SECTIONS | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030575 | FSC-Z1 | Ductable air filter section with flat air filter and frame in 4 parts, removable from all directions – grade EU3 filtration (Eurovent) | DT-NH 01...03<br>DTE-NH 01...03 |
| | 387030576 | FSC-Z2 | | DT-NH 04...06<br>DTE-NH 04...06 |
|  | 387030577 | FSD-Z1 | Ductable air filter section with high-efficiency undulated air filter and frame in 4 parts, removable from all directions – grade EU5 filtration (Eurovent) | DT-NH 01...03<br>DTE-NH 01...03 |
| | 387030578 | FSD-Z2 | | DT-NH 04...06<br>DTE-NH 04...06 |
|  | 387030579 | FSM-Z1 | Outdoor/indoor air mixing section (outdoor air 0–33% - indoor air 100–67% or inversely). Shutters paired with manual controls and configured for being operated with a motor | DT-NH 01...03<br>DTE-NH 01...03 |
| | 387030580 | FSM-Z2 | | DT-NH 04...06<br>DTE-NH 04...06 |
|  | 387030581 | SM01 | ON/OFF 230 V servo motor for shutter | All |
|  | 387030582 | JS-Z1-M | Vibration damping joint, without flanges | DT-NH 01...03<br>DTE-NH 01...03 |
| | 387030583 | JS-Z2-M | | DT-NH 04...06<br>DTE-NH 04...06 |
|  | 387030584 | FSM-Z1-M | Plenum with round conduits 3x200/180/160 mm | DT-NH 01...03<br>DTE-NH 01...03 |
| | 387030585 | FSM-Z2-M | Plenum with round conduits 5x200/180/160 mm | DT-NH 04...06<br>DTE-NH 04...06 |

| VARIOUS | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030586 | 3WV05 | 3/4″ M three-way valve with PWM-ON/OFF actuator, 230 V (2 pipes) | DT-NH 01...03<br>DTE-NH 01...03 |
| | 387030587 | 3WV06 | | DT-NH 04...06<br>DTE-NH 04...06 |
|  | 387030588 | KCP-05 | Kit with 90° copper pipes, 3/4″ F ball valve and 3/4″ F retainer, solution for three-way valves | All |
|  | 387030589 | 2WV05 | 3/4″ M two-way valve with PWM-ON/OFF actuator, 230 V (2 pipes) | DT-NH 01...03<br>DTE-NH 01...03 |
| | 387030590 | 2WV06 | | DT-NH 04...06<br>DTE-NH 04...06 |
|  | 387030591 | KCP-08 | Kit with 90° copper pipes, 3/4″ F ball valve and 3/4″ F retainer, solution for two-way valves | All |
|  | 387030592 | HB02 | Auxiliary drain pan with thermal insulation, made of galvanised plate | All |
|  | 387030594 | CP05 | Condensate discharge pump with alarm contact | All |

# ACCESSORIES FOR INTEGRATION WITH BMS SYSTEMS E SANITISATION DEVICE

| Components for BMS | | | |
|---|---|---|---|
| | **Code** | **Model** | **Description** |
|  | 387030596 | PCB-U1.V | Universal circuit board for AC units (asincrona 230 Vasynchronus - 3 speeds) or ECMs (electronic/ brushless 230 VAC 0-10 VDC signal).<br>MODBUS+TCP-IP/WEB/03 communication protocol.<br>Without air temperature sensor |
|  | 387030597 | ATS2 | Air temperature sensor (mandatory) |
|  | 387030598 | WTS2 | Water temperature sensor for SUMMER/WINTER changeover<br>(only for two-pipw units) |
|  | 387030599 | WTS3 | Water temperature sensor for measuring minimum hot water temperature |
|  | 387030600 | SWC06 | Simplified wall-mounted digital control unit for exteriors |

Accessories for BMS system should not be used with FCW models where the Modbus communication port is already positioned inside the optional wired control.

| BIOXIGEN® SANITISATION DEVICE | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030601 | KSB | Bioxigen® kit equipped with plastic box, power cable, external electrode, 3 self-tapping screws 3.9 x 13.3 “Mammut” terminals with 2 self-tapping screws 3.5 x 19 + L/N/PE label. Supplied installed on the unit. | All |

# NOTES

# WALL-MOUNTED

## Model FCW

# WALL-MOUNTED
## MAIN FEATURES MOD. FCW

**IRC03**
Infrared remote control supplied with the unit

### COVERING BOX

Covering boxes with new and visually appealing design, equipped with LCD. Automatic distribution of the air diversified into cooling and heating for the utmost comfort. The shape of the fan ensures a highly efficient, low-noise air flow.

### HEAT EXCHANGER

High-efficiency heat exchange coil with copper pipe and aluminium flaps locked by means of mechanical expansion.
One coil for 2-pipe system. Coils tested at 30 bar operating pressure, suitable for working with water up to a maximum pressure of 15 bar.
The coils are suitable for operating with:

- high-temperature water (boiler)
- low-temperature water (condensing boiler, heat pump, etc.)
- cold water (chiller and/or industrial processes)
- water supplemented with glycol

Blue hydrophilic flaps and copper pipes equipped with special ridges that increase the fluid's turbulence and sensibly increase the heat exchange.

### CONTROL UNITS AND CONTROLS

Remote control supplied as a standard feature with the unit. Wired control unit available as an optional accessory and equipped with MODBUS protocol for communication with the BMS. Programming of the unit switching on and off. A single wired control unit can manage up to 10 fan coil units. Equipped with a sensor for pairing with a remote control.

### VALVES

Two-way or three-way valves are available as accessories, NOT for enclosed installation.

### WALL-MOUNTED FAN COIL MOD. FCW

| Code | Model | Cooling capacity (W) (1) | Heating capacity (W) (2) |
|---|---|---|---|
| 387030228 | FCW 01 | 2.100 | 4.264 |
| 387030229 | FCW 02 | 2.600 | 5.914 |
| 387030230 | FCW 03 | 3.500 | 7.807 |
| 387030231 | FCW 04 | 4.200 | 8.642 |

(1) **Cooling:** air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2) **Heating:** air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.

| FCW | 01 |
|---|---|
| - | (1) |

FCW = fan coil model
(1) Capacità = 01, 02, 03, 04

# RATED TECHNICAL DATA MOD. FCW

## TWO-PIPE UNIT - ONE COIL

| MODELS | | | 01 | 02 | 03 | 04 |
|---|---|---|---|---|---|---|
| Total cooling capacity (1) | | W | 2.100 | 2.600 | 3.500 | 4.200 |
| Sensible cooling capacity (1) | | W | 1.600 | 2.000 | 2.400 | 3.000 |
| Heating capacity (2a) | | W | 4.264 | 5.914 | 7.807 | 8.642 |
| Heating capacity (2b) | | W | 2.132 | 2.957 | 3.903 | 4.321 |
| Rated air flow (3) | | $m^3/h$ | 340 | 510 | 680 | 850 |
| Water flow rate (4) | Cooling | l/h | 360 | 432 | 612 | 720 |
| | Heating | l/h | 360 | 504 | 684 | 756 |
| Water head losses (5) | Cooling | kPa | 18.0 | 26.0 | 38.0 | 46.0 |
| | Heating | kPa | 5.0 | 9.0 | 16.0 | 13.0 |
| Sound pressure (ls.-ms.-hs.) (6) | | dB(A) | 21-22-27-31 | 21-28-35-36 | 26-34-42-43 | 30-39-46-48 |
| Motors/Fans | | N/N | 1/1 | 1/1 | 1/1 | 1/1 |
| Rated power absorption (7) | | W | 10 | 20 | 30 | 40 |
| | | A | 0.052 | 0.078 | 0.126 | 0.187 |
| Electrical power supply | | | 230 Vac – 1 Ph – 50 Hz | | | |
| Cold/hot coil rows | | N | 2 | 2 | 2 | 2 |
| Hydraulic fittings | | DN | 1/2″ | 1/2″ | 1/2″ | 1/2″ |
| Condensate drainage outlet | | mm | 15.6 | | | |

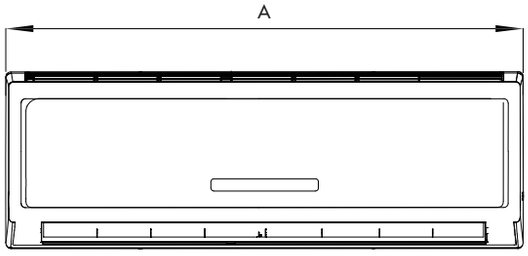
Technical data referred to the following conditions:
standard unit - atmospheric pressure 1013 mbar - electrical power supply 230 VAC/1 Ph/50 Hz.

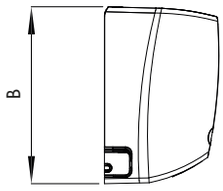
(1) (2) (3) (4) (5): Rated technical data, ref. air flow rate (3) at maximum speed and with unit with open mouth (external static pressure ESP=0 Pa).
(1) **Cooling**: air temp. 27 °C dry bulb, 19 °C wet bulb - input/output water temp. 7/12 °C - Maximum speed.
(2a) **Heating**: air temp. 20 °C - Input/output water temp. 70/60 °C - Maximum speed.
(2b) **Heating**: air temp. 20 °C - Input/output water temp. 45/40 °C - Maximum speed.
(3) (8) **Air flow rate and static pressure**: rated values measured with casing ref. AMCA210-74 standard Fig.12 and conduit + diaphragm ref. CNR-UNI10023 standard.
(6) **Sound pressure**: sound pressure in free field environment, distance 2 m. Values calculated from sound power measured in reverberation chamber ref. ISO 3741 - ISO 3742 standards.
(7) **Electrical data**: values measured with Jokogawa WT110 wattmeter (nominal value = reference value for the design of the electrical system).

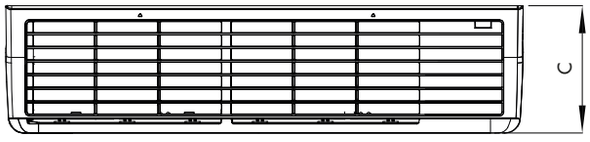
## TABLE OF NET WEIGHTS MOD. FCW (TWO-PIPE UNIT - ONE COIL) IN KG

| Products/Models | 01 | 02 | 03 | 04 |
|---|---|---|---|---|
| **FCW** | 10.5 | 10.5 | 10.5 | 12.5 |

## DIMENSIONAL DRAWING MOD. FCW 01-02-03 AND MOD. FCW 04




| MODEL FCW | 01 | 02 | 03 | 04 |
|---|---|---|---|---|
| A | 845 | | | 970 |
| B | 289 | | | 360 |
| C | 209 | | | 280 |

# ACCESSORIES

| WIRED CONTROL UNIT | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030232 | SWC17 | Wired control unit for wall-mounted fan coil units | All |

| VALVE KIT | | | | |
|---|---|---|---|---|
| | **Code** | **Model** | **Description** | **Applicability** |
|  | 387030233 | KIT VALV 4V:<br>VTX13+<br>MVX22R+<br>54304-04 | VTX13 = four-way valves 1/2" M, Kvs=1.6 (2 pipes)<br><br>MVX22R = electro-thermal ON/OFF actuator, 230 V, 140 N<br><br>54304-04 = casing for VTX13 | All |
|  | 387030234 | KIT VALV 2V:<br>VSX13+<br>MVX22R+<br>54304-01 | VSX13 = two-way valves 1/2" M, Kvs=1.6 (2 pipes)<br><br>MVX22R = electro-thermal ON/OFF actuator, 230 V, 140 N<br><br>54304-01 = casing for VSX13 | All |

# SELECTION SOFTWARE: FORMULA

The FORMULA software programme helps to select the most suitable hydronic terminal units for the various types of systems (residential, tertiary, etc.).


It enables subjects operating in the thermotechnical and plant engineering sector to verify the operating conditions of a specific model or search for the most functional units on the basis of personalised parameters.

The results can then be easily exported and shared.

Argoclima S.p.A.
Via Alfeno Varo, 35 - 25020 Alfianello (BS) - ITALY
Tel. +39 0331 755111 ; Fax +39 0331 755501

FORMULA
Formula 1.5
Linea Prodotti: Ventilconvettori
Products Line: Fan coils

Type: FCT — Centrifugal Fan-Coils — Circuit type: 2 Pipes

| Model | | FCT 01 | FCT 02 | FCT 03 | FCT 04 | FCT 05 | FCT 06 | FCT 07 | FCT 08 | FCT 09 |
|---|---|---|---|---|---|---|---|---|---|---|
| Fan Speed | | MAX | MAX | MAX | MAX | MAX | MAX | MAX | MAX | MAX |
| **Cooling** | | | | | | | | | | |
| Air temperature with D.B. | °C | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 |
| Air temperature with W.B. | °C | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| Relative humidity | % | 47.4 | 47.4 | 47.4 | 47.4 | 47.4 | 47.4 | 47.4 | 47.4 | 47.4 |
| Input Water Temp. | °C | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| Output Water Temp. | °C | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Water flow | l/h | 258 | 344 | 435 | 519 | 645 | 731 | 949 | 1.104 | 1.295 |
| Water pressure drop | kPa | 13.1 | 16.3 | 18.5 | 20.8 | 22.6 | 24.1 | 24.5 | 27.1 | 28.8 |
| Total cooling capacity | W | 1.500 | 2.000 | 2.530 | 3.020 | 3.750 | 4.250 | 5.520 | 6.420 | 7.530 |
| | Frig./h | 1.290 | 1.720 | 2.176 | 2.597 | 3.225 | 3.655 | 4.747 | 5.521 | 6.476 |
| Sensible cooling capacity | W | 1.290 | 1.620 | 2.070 | 2.310 | 2.870 | 3.230 | 4.330 | 4.800 | 5.670 |
| | Frig./h | 1.109 | 1.393 | 1.780 | 1.987 | 2.468 | 2.778 | 3.724 | 4.128 | 4.876 |
| **General characteristics** | | | | | | | | | | |
| Glycol in weight | % | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Altitude a.s.l. | m | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Air flow | m³/h | 370 | 400 | 500 | 550 | 670 | 720 | 1.000 | 1.050 | 1.280 |
| Air pressure drops | Pa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sound levels | dB(A) | 38 | 38 | 44 | 45 | 37 | 37 | 43 | 45 | 48 |
| | NC | 32 | 33 | 38 | 38 | 32 | 33 | 38 | 38 | 42 |
| | NR | 33 | 34 | 40 | 40 | 32 | 34 | 40 | 40 | 44 |
| Max input power | W | 55 | 55 | 80 | 80 | 80 | 80 | 145 | 145 | 180 |
| Max input current | A | 0.25 | 0.25 | 0.35 | 0.35 | 0.35 | 0.35 | 0.65 | 0.65 | 0.80 |
| **Version** | | General Report (versions / dimensions / weights not indicated) | | | | | | | | |
| Length | mm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Width | mm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Depth | mm | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Weight | Kg | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

The software programme is available in several languages to further facilitate its use.

# X3 AIR CONDITIONING

Residential single and multisplit air conditioners DC Inveter R32

Commercial single split air conditioners DC Inverter R32

- Cassette
- Ducted
- Floor/ceiling
- Control systems

Floor standing air conditioners

# HIGH WALL - single split air conditioners

## MAIN FEATURES

(Standard)
Infrared remote controller

(Optional)
Wired controller

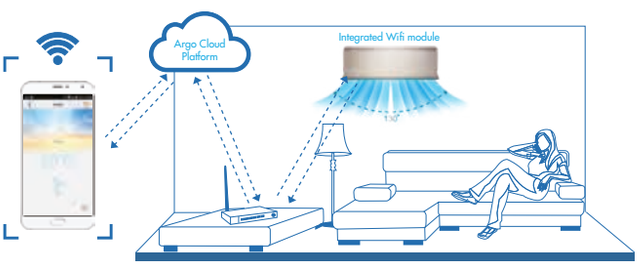
Sleep mode | 3D airflow | Cold air prevention | LED | Timer | Intelligent defrosting | X-fan | "Turbo" function | Auto diagnosis | Auto restart memory | Fan speeds

Mono&multi compatible | Min. temp. heating | Min. temp. cooling | 8 °C heating | iFeel | Save energy | Child lock | WiFi control | Cold plasma | Wired controller (optional) | Door control (optional)

A++ Cooling  A+ Heating (average season)  A+++ Heating (warmer season)

| Model | | Code | Cooling capacity (kW) | Heating capacity (kW) |
|---|---|---|---|---|
| Indoor unit model | X3I ECO PLUS 27 HL WF | 398000817 | 2.7 | 3.0 |
| Outdoor unit model | X3I ECO PLUS 27 SH | 398000818 | | |
| Indoor unit model | X3I ECO PLUS 35 HL WF | 398000819 | 3.15 | 3.81 |
| Outdoor unit model | X3I ECO PLUS 35 SH | 398000820 | | |
| Indoor unit model | X3I ECO PLUS 52 HL WF | 398000821 | 5.20 | 5.60 |
| Outdoor unit model | X3I ECO PLUS 52 SH | 398000822 | | |
| Indoor unit model | X3I ECO PLUS 70 HL WF | 398000823 | 7.10 | 7.80 |
| Outdoor unit model | X3I ECO PLUS 70 SH | 398000824 | | |

## LONG DISTANCE WIFI



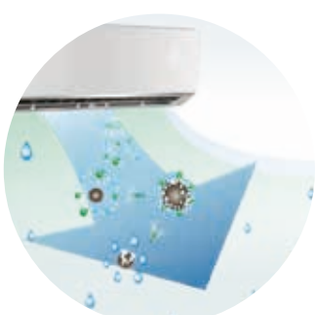

Thanks to the integrated remote WiFi module it is possible to control the units operation via the APP on your smartphone, switch on/off the unit, select the desired mode and temperature, to program your comfort at any time, even when you aren't at home.



## iFEEL FUNCTION

The sensor inside the remote controller perceives the temperature in the environment and transmits the signal to the indoor unit. Thus the indoor unit can adjust air flow volume and temperature to grant the comfort exactly where the remote control is placed.

## AIR PURIFICATION SYSTEM



It grants effective sterilization of air removing over 90% of bacteria. It removes odors. The air quality is improved thanks to the emission of many negative oxygen ions.

## INTELLIGENT AUTO RESTART

After power failure, the unit automatically restarts keeping last function settings. (Memory function)

## SOFT START

The startup energy consumption is reduced to lower not to interfere with the use of the other appliances.

# TECHNICAL DATA

| MODEL | | X3I ECO PLUS 27 | | X3I ECO PLUS 35 | |
|---|---|---|---|---|---|
| **Indoor unit model** | | **X3I ECO PLUS 27 HL WF** | | **X3I ECO PLUS 35 HL WF** | |
| **Outdoor unit model** | | **X3I ECO PLUS 27 SH** | | **X3I ECO PLUS 35 SH** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 2.7 (0.80-3.8) | 3.0 (0.90-4.25) | 3.15 (0.90-4.40) | 3.81 (0.90-4.70) |
| | BTU/h | 9200 | 10240 | 12000 | 1300 |
| EER/COP (EN14511) | | 3.88 | 4.29 | 3.65 | 4.00 |
| Design Load [(Pdesign c/Pdesign h) Average/Warmer/Colder)] (EN14825)* | kW | 2.7 | 2.7/3.0/4.0 | 3.5 | 3.2/3.3/4.5 |
| Seasonal efficiency ratio (SEER/SCOP (Average/Warmer/Colder) (EN14825)* | | 7.5 | 4.2/5.3/3.4 | 7.1 | 4.1/5.2/3.1 |
| Energy efficiency class* | | A++ | A+/A+++/A | A++ | A+/A+++/B |
| Annual energy consumption C/H (Average/Warmer/Colder)* | kWh/annum | 126 | 900/792/2471 | 173 | 1093/888/3048 |
| Air flowrate indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | $m^3/h$ | 610-570-540-470-440-420-390 | | 700-650-600-540-480-420-360 | |
| Dehumidification | l/h | 0.8 | | 1.4 | |
| Fan speeds (Indoor/Outdoor) | n° | 7/2 | | 7/2 | |
| Sound pressure Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 38-36-34-31-29-27-25 | | 42-38-35-32-29-26-25 | |
| Sound pressure Outdoor (h.) | dB(A) | 50 | | 52 | |
| Sound power Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 54-48-46-43-41-39-37 | | 57-50-47-44-41-38-37 | |
| Sound power Outdoor (h.) | dB(A) | 61 | | 63 | |
| Power supply | V/Ph/Hz | 220-240V~/1/50 | | 220-24V~/1/50 | |
| Power input nominal (min.-max) | kW | 0.695 (0.10-1.30) | 0.700 (0.15-1.40) | 0.962 (0.22-1.40) | 0.953 (0.22-1.55) |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type | | R32 | | R32 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.53/0.357 | | 0.57/0.384 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-5 | | 3-5 | |
| Max. pipe lenght | m | 15 | | 15 | |
| Additional refrigerant charge | g/m | 16 | | 16 | |
| Max. height between units (Outdoor on top) | m | 10 | | 10 | |
| Max. height between units (indoor on top) | m | 10 | | 10 | |
| Net dimension Indoor (H./W./D.) | mm | 289/845/209 | | 289/845/209 | |
| Net dimension Outdoor (H./W./D.) | mm | 555/732/330 | | 555/732/330 | |
| Net weight Indoor/Outdoor | kg | 10.5/24.5 | | 11/24.5 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +50 °C
Heating mode: from -15 °C to +30 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

| MODEL | | X3I ECO PLUS 52 | | X3I ECO PLUS 70 | |
|---|---|---|---|---|---|
| Indoor unit model | | X3I ECO PLUS 52 HL WF | | X3I ECO PLUS 70 HL WF | |
| Outdoor unit model | | X3I ECO PLUS 52 SH | | X3I ECO PLUS 70 SH | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 5.20 (1.00-6.10) | 5.60 (1.10-6.60) | 7.10 (2.00-8.85) | 7.80 (1.80-9.45) |
| | BTU/h | 17800 | 19100 | 24200 | 26600 |
| EER/COP (EN14511) | | 3.30 | 3.90 | 3.50 | 3.90 |
| Design Load [(Pdesign c/Pdesign h) Average/Warmer/Colder)] (EN14825)* | kW | 5.2 | 4.2/4.3/5.0 | 7.1 | 5.6/5.7/6.3 |
| Seasonal efficiency ratio (SEER/SCOP (Average/Warmer/Colder) (EN14825)* | | 7.1 | 4.2/5.7/3.4 | 7.0 | 4.2/5.4/3.4 |
| Energy efficiency class* | | A++ | A+/A+++/A | A++ | A+/A+++/A |
| Annual energy consumption C/H (Average/Warmer/Colder)* | kWh/annum | 256 | 1400/1056/3088 | 355 | 1867/1478/3891 |
| Air flowrate indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | $m^3/h$ | 850-750-680-610-570-520-460 | | 1250-1100-1000-950-900-850-800 | |
| Dehumidification | l/h | 1.9 | | 2.4 | |
| Fan speeds (Indoor/Outdoor) | n° | 7/2 | | 7/2 | |
| Sound pressure Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 44-43-41-38-36-34-30 | | 48-44-41-40-38-36-33 | |
| Sound pressure Outdoor (h.) | dB(A) | 56 | | 59 | |
| Sound power Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 60-56-54-51-49-47-43 | | 64-59-56-55-53-51-48 | |
| Sound power Outdoor (h.) | dB(A) | 65 | | 70 | |
| Power supply | V/Ph/Hz | 220-24V~0/1/50 | | 220-240V~/1/50 | |
| Power input nominal (min.-max) | kW | 1.576 (0.10-2.35) | 1.436 (0.18-2.40) | 2.030 (0.45-2.90) | 2.000 (0.35-3.00) |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.82/0.553 | | 1.5/1.0125 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 12.7 (1/2") | | 15.88 (5/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-5 | | 3-5 | |
| Max. pipe lenght | m | 25 | | 25 | |
| Additional refrigerant charge | g/m | 16 | | 40 | |
| Max. height between units (Outdoor on top) | m | 10 | | 10 | |
| Max. height between units (indoor on top) | m | 10 | | 10 | |
| Net dimension Indoor (H./W./D.) | mm | 300/970/224 | | 325/1078/246 | |
| Net dimension Outdoor (H./W./D.) | mm | 555/802/350 | | 660/958/402 | |
| Net weight Indoor/Outdoor | kg | 13/30.5 | | 16/41.5 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +50 °C
Heating mode: from -15 °C to +30 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

# HIGH WALL -25 °C - single split air conditioners

## MAIN FEATURES

(Standard)
Infrared remote controller

(Optional)
Wired controller

Sleep mode | 3D airflow | Cold air prevention | LED | Timer | Intelligent defrosting | X-fan | "Turbo" function | Auto diagnosis | Auto restart memory | Fan speeds

Auto clean | Min. temp. heating | Min. temp. cooling | 8 °C heating | iFeel | Save energy | Child lock | WiFi control | Cold plasma | Wired controller (optional) | Door control (optional)

**A++** Cooling **A+** Heating (average season) **A+++** Heating (warmer season)

| Model | | Code | Cooling capacity (W) | Heating capacity (W) |
|---|---|---|---|---|
| Indoor unit model | X3I ECO PLUS 27 HL WF LH | 398000852 | 2.7 | 3.0 |
| Outdoor unit model | X3I ECO PLUS 27 SH LH | 398000853 | | |
| Indoor unit model | X3I ECO PLUS 35 HL WF LH | 398000854 | 3.51 | 3.81 |
| Outdoor unit model | X3I ECO PLUS 35 SH LH | 398000855 | | |
| Indoor unit model | X3I ECO PLUS 52 HL WF LH | 398000864 | 5.20 | 5.60 |
| Outdoor unit model | X3I ECO PLUS 52 SH LH | 398000865 | | |
| Indoor unit model | X3I ECO PLUS 71 HL WF LH | 398000866 | 7.10 | 7.80 |
| Outdoor unit model | X3I ECO PLUS 71 SH LH | 398000867 | | |

## HEATING OPERATION DOWN TO VERY LOW OUTDOOR TEMPERATURES

This range can work in heating even with low outdoor temperatures, down to -25 °C, thanks to the heating element in the bottom of the outdoor unit. It is suitable for harsh climates.

| MODEL | | X3I ECO PLUS 27 LH | | X3I ECO PLUS 35 LH | |
|---|---|---|---|---|---|
| Indoor unit | | X3I ECO PLUS 27 HL WF LH | | X3I ECO PLUS 35 HL WF LH | |
| Outdoor unit | | X3I ECO PLUS 27 SH LH | | X3I ECO PLUS 35 SH LH | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 2.7 (0.80-3.8) | 3.0 (0.90-4.25) | 3.51 (0.90-4.40) | 3.81 (0.90-4.70) |
| | BTU/h | 9200 | 10240 | 12000 | 13000 |
| EER/COP (EN14511) | | 3.89 | 4.29 | 3.65 | 4.00 |
| Design Load (Pdesign c/Pdesign h) (Average/Warmer/Colder) (EN14825)* | kW | 2.7 | 2.7/3.0/4.0 | 3.5 | 3.2/3.3/4.5 |
| Seasonal efficiency ratio (SEER/SCOP (Average/Warmer/Colder) (EN14825)* | | 7.5 | 4.2/5.3/3.4 | 7.1 | 4.1/5.2/3.1 |
| Energy efficiency class* | | A++ | A+/A+++/A | A++ | A+/A+++/A |
| Annual energy consumption C/H (Average/Warmer/Colder)* | kWh/annum | 126 | 900/729/2471 | 173 | 1093/888/3048 |
| Air flowrate indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | $m^3/h$ | 610-570-540-470-440-420-390 | | 700-650-600-540-480-420-360 | |
| Dehumidification | l/h | 0.8 | | 1.4 | |
| Fan speeds (Indoor/Outdoor) | n° | 7/2 | | 7/2 | |
| Sound pressure Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 38-36-34-31-29-27-25 | | 42-38-35-32-29-27-25 | |
| Sound pressure Outdoor (h.) | dB(A) | 50 | | 52 | |
| Sound power Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 54-48-46-43-41-39-37 | | 57-50-47-44-41-39-37 | |
| Sound power Outdoor (h.) | dB(A) | 61 | | 63 | |
| Power supply | V/Ph/Hz | 220-240V~/1/50 | | 220-240V~/1/50 | |
| Power input nominal (min.-max) | kW | 0.695 (0.10-1.30) | 0.700 (0.15-1.40) | 0.962 (0.22-1.40) | 0.953 (0.22-1.55) |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32 | | R32 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.53/0.357 | | 0.57/0.384 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-5 | | 3-5 | |
| Max. pipe lenght | m | 15 | | 20 | |
| Additional refrigerant charge | g/m | 16 | | 16 | |
| Max. height between units (Outdoor on top) | m | 10 | | 10 | |
| Max. height between units (indoor on top) | m | 10 | | 10 | |
| Net dimension Indoor (H./W./D.) | mm | 289/845/209 | | 289/845/209 | |
| Net dimension Outdoor (H./W./D.) | mm | 555/732/330 | | 555/732/330 | |
| Net weight Indoor/Outdoor | kg | 10.5/24.5 | | 11/24.5 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +50 °C
Heating mode: from -25 °C to +30 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and fans, and EU Regulation no. 626/2011, concerning the energy labelling of energy consuption of air conditioners.

# TECHNICAL DATA

| MODEL | | X3I ECO PLUS 52 LH | | X3I ECO PLUS 71 LH | |
|---|---|---|---|---|---|
| **Indoor unit** | | X3I ECO PLUS 52 HL WF LH | | X3I ECO PLUS 71 HL WF LH | |
| **Outdoor unit** | | X3I ECO PLUS 52 SH LH | | X3I ECO PLUS 71 SH LH | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 5.20 (1.00-6.10) | 5.60 (1.10-6.60) | 7.10 (2.00-8.85) | 7.80 (1.80-9.45) |
| | BTU/h | 17800 | 19100 | 24200 | 25300 |
| EER/COP (EN14511) | | 3.30 | 3.90 | 3.50 | 3.90 |
| Design Load (Pdesign c/Pdesign h) (Average/Warmer/Colder) (EN14825)* | kW | 5.2 | 4.2/4.3/5.0 | 7.1 | 5.6/5.7/6.3 |
| Seasonal efficiency ratio (SEER/SCOP (Average/Warmer/Colder) (EN14825)* | | 7.1 | 4.2/5.7/3.4 | 7.0 | 4.2/5.4/3.4 |
| Energy efficiency class* | | A++ | A+/A+++/A | A++ | A+/A+++/A |
| Annual energy consumption C/H (Average/Warmer/Colder)* | kWh/annum | 256 | 1400/1056/3088 | 355 | 1867/1478/3891 |
| Air flowrate indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | $m^3/h$ | 850-750-680-610-570-520-460 | | 1250-1100-1000-950-900-850-800 | |
| Dehumidification | l/h | 1.9 | | 2.4 | |
| Fan speeds (Indoor/Outdoor) | n° | 7/2 | | 7/2 | |
| Sound pressure Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 44-43-41-38-36-34-30 | | 48-44-41-40-38-36-33 | |
| Sound pressure Outdoor (h.) | dB(A) | 56 | | 59 | |
| Sound power Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 60-56-54-51-49-47-43 | | 64-59-56-55-53-51-48 | |
| Sound power Outdoor (h.) | dB(A) | 65 | | 70 | |
| Power supply | V/Ph/Hz | 220-240V~/1/50 | | 220-240V~/1/50 | |
| Power input nominal (min.-max) | kW | 1.576 (0.10-2.35) | 1.436 (0.18-2.40) | 2.030 (0.45-2.90) | 2.00 (0.35-3.00) |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.82/0.553 | | 1.5/1.0125 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 12.7 (1/2") | | 15.88 (5/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-5 | | 3-5 | |
| Max. pipe lenght | m | 25 | | 25 | |
| Additional refrigerant charge | g/m | 16 | | 40 | |
| Max. height between units (Outdoor on top) | m | 10 | | 10 | |
| Max. height between units (indoor on top) | m | 10 | | 10 | |
| Net dimension Indoor (H./W./D.) | mm | 300/970/224 | | 352/1078/246 | |
| Net dimension Outdoor (H./W./D.) | mm | 555/802/350 | | 660/958/402 | |
| Net weight Indoor/Outdoor | kg | 13/33 | | 16/46 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +50 °C
Heating mode: from -25 °C to +30 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and fans, and EU Regulation no. 626/2011, concerning the energy labelling of energy consuption of air conditioners.

# NOTES

# CONSOLE -22 °C - single split air conditioners

## MAIN FEATURES

(Standard)
Infrared remote controller

(Optional)
Wired controller

Sleep mode | Cold air prevention | LED | Timer | Intelligent defrosting | X-fan | "Turbo" function | Auto diagnosis | Dehumidification | Auto restart memory | Fan speed

Min. temp. heating | Min. temp. cooling | 8 °C heating | Quiet mode | iFeel | Save energy | Cold plasma | WiFi control | Wired controller (optional)

A++ Cooling

A+ Heating (average season)

A+++ Heating (warmer season)

| Model | | Code | Cooling capacity (W) | Heating capacity (W) |
|---|---|---|---|---|
| Indoor unit model | X3I ECO PLUS AF27 HL | 398000739 | 2.7 | 2.9 |
| Outdoor unit model | X3I ECO PLUS 27 SH LHB | 398000740 | | |
| Indoor unit model | X3I ECO PLUS AF35 HL | 398000741 | 3.52 | 3.8 |
| Outdoor unit model | X3I ECO PLUS 35 SH LHB | 398000742 | | |
| Indoor unit model | X3I ECO PLUS AF52 HL | 398000743 | 5.2 | 5.33 |
| Outdoor unit model | X3I ECO PLUS 52 SH LHB | 398000744 | | |

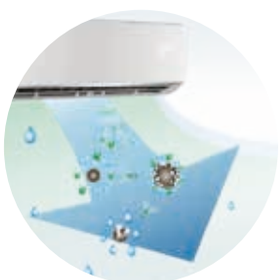
## LONG DISTANCE WIFI

Thanks to the integrated remote WiFi module it is possible to control the units operation via the APP on your smartphone, switch on/off the unit, select the desired mode and temperature, to program your comfort at any time, even when you aren't at home.

## iFEEL FUNCTION

The sensor incorporated into the remote control perceives the surrounding temperature and transmits the signal to the indoor unit. Thus, the indoor unit can adjust the volume and temperature of the air flow to ensure maximum comfort at the exact point where the remote control is located, not where the unit is located..

## AIR PURIFICATION SYSTEM



It releases ions able to neutralize bacteria, fungus, viruses, pollen, acarus and in general pollutants present in the air, making the environment healthy and the air light. It ensures effective air sterilization, reducing over 90% of bacteria.
It removes over 400 types of odors and improves the air quality, enriching it with negative ions.

## SLIM AND ELEGANT DESIGN

The console integrates perfectly with any type of furniture, thanks to its clean, slim and elegant design.

## HEATING OPERATION DOWN TO VERY LOW OUTDOOR TEMPERATURES


The console range can work in heating even in low outdoor temperatures, down to -22 °C, thus it is suitable for harsh climate conditions. This is possible thanks to assessmets that regulate and optimize the defrosting process and thanks to the heating element on the bottom of the outdoor unit.

# TECHNICAL DATA

| Indoor unit model | | X3I ECO PLUS AF27 HL | | X3I ECO PLUS AF35 HL | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **X3I ECO PLUS 27 SH LHB** | | **X3I ECO PLUS 35 SH LHB** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 2.7 (0.7-3.4) | 2.9 (0.6-3.5) | 3.52 (0.8-4.4) | 3.8 (1.1-4.4) |
| | BTU/h | 9200 | 10000 | 12000 | 13000 |
| EER/COP (EN14511) | | 3.75 | 3.97 | 3.52 | 3.96 |
| Design Load [(Pdesign c/Pdesign h) (Average/Warmer/Colder)] (EN14825)* | kW | 2.7 | 2.6/2.8/- | 3.5 | 3.20/3.30/- |
| Seasonal efficiency ratio (SEER/SCOP (Average/Warmer/Colder) (EN14825)* | | 7.20 | 4.0/5.3/- | 7.0 | 4.10/5.30/- |
| Energy efficiency class* | | A++ | A+/A+++/- | A++ | A+/A+++/- |
| Annual energy consumption C/H (Average/Warmer/Colder)* | kWh/annum | 131 | 910/740 | 175 | 1050/961/2953 |
| Air flowrate indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | $m^3/h$ | 500-430-410-370-330-280-250 | | 600-520-480-440-400-360-280 | |
| Dehumidification | l/h | 0.8 | | 1.2 | |
| Fan speeds (Indoor/Outdoor) | n° | 7/2 | | 7/2 | |
| Sound pressure Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 39-36-33-31-29-26-23 | | 44-40-38-36-33-29-25 | |
| Sound pressure Outdoor (h.) | dB(A) | 49 | | 52 | |
| Sound power Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 50-48-45-44-42-38-34 | | 54-50-48-46-43-39-35 | |
| Sound power Outdoor (h.) | dB(A) | 60 | | 62 | |
| Power supply | V/Ph/Hz | 220-240~/1/50 | | 220-240~/1/50 | |
| Power input nominal (min.-max) | kW | 0.72 (0.17-1.3) | 0.73 (0.13-1.35) | 1.00 (0.16-1.5) | 0.960 (0.165-1.5) |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.55/0.37 | | 0.75/0.51 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-5 | | 3-5 | |
| Max. pipe lenght with additional gas charge | m | 15 | | 20 | |
| Additional refrigerant charge | g/m | 16 | | 16 | |
| Max. height between units (Outdoor on top) | m | 10 | | 10 | |
| Max. height between units (indoor on top) | m | 10 | | 10 | |
| Net dimension Indoor (H./W./D.) | mm | 600/700/215 | | 600/700/215 | |
| Net dimension Outdoor (H./W./D.) | mm | 540/782/320 | | 596/848/320 | |
| Net weight Indoor/Outdoor | kg | 15.5/27.5 | | 15.5/30.5 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +43 °C
Heating mode: from -15 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

| Indoor unit model | | X3I ECO PLUS AF52 HL | |
|---|---|---|---|
| **Outdoor unit model** | | **X3I ECO PLUS 52 SH LHB** | |
| | Units | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 5.2 (1.26-6.6) | 5.33 (1.12-6.8) |
| | BTU/h | 17800 | 18000 |
| EER/COP (EN14511) | | 3.40 | 3.55 |
| Design Load [(Pdesign c/Pdesign h) (Average/Warmer/Colder)] (EN14825)* | kW | 5.2 | 5.0/5.2/- |
| Seasonal efficiency ratio (SEER/SCOP (Average/Warmer/Colder) (EN14825)* | | 6.6 | 4.1/5.1/- |
| Energy efficiency class* | | A++ | A+/A+++/- |
| Annual energy consumption C/H (Average/Warmer/Colder)* | kWh/annum | 260 | 1707/1427/- |
| Air flowrate indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | $m^3/h$ | 700-650-580-520-460-410-320 | |
| Dehumidification | l/h | 1.8 | |
| Fan speeds (Indoor/Outdoor) | n° | 7/2 | |
| Sound pressure Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 47-45-42-40-37-35-31 | |
| Sound pressure Outdoor (h.) | dB(A) | 57 | |
| Sound power Indoor (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 57-55-52-50-47-45-41 | |
| Sound power Outdoor (h.) | dB(A) | 65 | |
| Power supply | V/Ph/Hz | 220-240~/1/50 | |
| Power input nominal (min.-max) | kW | 1.55 (0.38-2.45) | 1.5 (0.35-2.5) |
| Compressor type | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.95/0.64 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 12.7 (1/2") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-5 | |
| Max. pipe lenght with additional gas charge | m | 25 | |
| Additional refrigerant charge | g/m | 20 | |
| Max. height between units (Outdoor on top) | m | 10 | |
| Max. height between units (indoor on top) | m | 10 | |
| Net dimension Indoor (H./W./D.) | mm | 600/700/215 | |
| Net dimension Outdoor (H./W./D.) | mm | 700/965/396 | |
| Net weight Indoor/Outdoor | kg | 15.5/46 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +43 °C
Heating mode: from -15 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

# MULTISPLIT AIR CONDITIONERS

## MAIN FEATURES

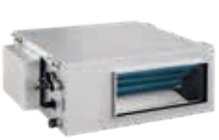
ARGO DUAL 14 DCI R32
ARGO DUAL 18 DCI R32
ARGO TRIAL 21 DCI R32
ARGO TRIAL 24 DCI R32
ARGO QUADRI 28 DCI R32

ARGO QUADRI 36 DCI R32
ARGO PENTA 42 DCI R32

Possibility of choice among different capacities and types of indoor units.


HIGH-WALL

CASSETTE



DUCTED

FLOOR/CEILING


CONSOLE

Compact design

Cold air prevention


Easy maintenance


Timer

Intelligent defrosting


"Turbo" function

Auto diagnosis

High efficiency

Auto restart memory

Child lock


Low voltage start-up

Full protection


Wide voltage range


Wide operating range

Central control

Long-distance monitoring

Wired controller (optional)

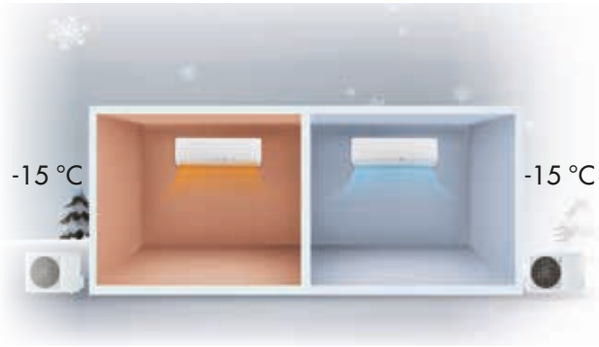
DC Inverter technology

A++ Cooling

A+ Heating

## LOW AMBIENT COOLING AND HEATING

The ability to work down to -15 °C of outdoor temperature, in both cooling and heating modes, ensures a high product reliability: when the outside temperature changes, the compressor frequency and fan speed adjust accordingly.






## OUTDOOR UNITS

| Model | Code | Cooling capacity (kW) | Heating capacity (kW) |
|---|---|---|---|
| ARGO DUAL 14 DCI R32 | 398000791 | 4.10 | 4.40 |
| ARGO DUAL 18 DCI R32 | 398000792 | 5.30 | 5.65 |
| ARGO TRIAL 21 DCI R32 | 398000793 | 6.10 | 6.50 |
| ARGO TRIAL 24 DCI R32 | 398000794 | 7.10 | 8.60 |
| ARGO QUADRI 28 DCI R32 | 398000795 | 8.0 | 9.50 |
| ARGO QUADRI 36 DCI R32 | 398000796 | 10.60 | 12.0 |
| ARGO PENTA 42 DCI R32 | 398000797 | 12.10 | 13.0 |

## INDOOR UNITS

| Model | | Code |
|---|---|---|
| HIGH-WALL | X3I ECO PLUS 27 HL WF | 398000817 |
| | X3I ECO PLUS 35 HL WF | 398000819 |
| | X3I ECO PLUS 52 HL WF | 398000821 |
| | X3I ECO PLUS 70 HL WF | 398000823 |
| 8-WAY CASSETTE | X3I ECO AS28 HL | 398000860 |
| | X3I ECO AS35 HL | 398000861 |
| | X3I ECO AS50 HL | 398000862 |
| | X3I ECO AS70 HL | 398000863 |
| SLIM DUCTED | X3I ECO SD 27 HL | 398000856 |
| | X3I ECO SD 35 HL | 398000857 |
| | X3I ECO SD 50 HL | 398000858 |
| | X3I ECO SD 70 HL | 398000859 |
| FLOOR/ CEILING | X3I ECO FC 26 HL | 398000666 |
| | X3I ECO FC 35 HL | 398000667 |
| | X3I ECO FC 45 HL | 398000668 |
| CONSOLE | X3I ECO PLUS AF 27 HL | 398000739 |
| | X3I ECO PLUS AF 35 HL | 398000741 |
| | X3I ECO PLUS AF 52 HL | 398000743 |

# OUTODOOR UNITS TECHNICAL DATA

| Outdoor unit model - DUAL SPLIT | | ARGO DUAL 14 DCI R32 | | ARGO DUAL 18 DCI R32 | |
|---|---|---|---|---|---|
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 4.10 (2.05-5.00) | 4.40 (2.49-5.40) | 5.30 (2.14-5.80) | 5.65 (2.58-6.50) |
| | BTU/h | 14000 | 15000 | 18000 | 19300 |
| EER/COP (EN14511) | | 3.72 | 4.54 | 3.58 | 4.53 |
| Design Load [(Pdesign c/Pdesign h) (Average/Warmer/Colder)] (EN14825)* | kW | 4.1 | 3.8 | 5.3 | 4.3 |
| Seasonal efficiency ratio (SEER/SCOP (Average/Warmer/Colder) (EN14825)* | | 6.5 | 4.0 | 6.6 | 4.0 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Annual energy consumption C/H (Average/Warmer/Colder)* | kWh/annum | 220 | 1330 | 281 | 1505 |
| Min.-max. number of connectable indoor units | | 2 | | 2 | |
| Air flowrate (h.) | $m^3/h$ | 2300 | | 2300 | |
| Fan speeds Outdoor | n° | 2 | | 2 | |
| Sound pressure Outdoor (h.) | dB(A) | 50 | 52 | 50 | 54 |
| Sound power Outdoor (h.) | dB(A) | 62 | | 64 | |
| Power supply | V/Ph/Hz | 220-240~/1/50 | | 220-240~/1/50 | |
| Power input nominal (min.-max) | kW | 1.10 (0.55-1.40) | 0.97 (0.60-1.78) | 1.48 (0.56-1.56) | 1.25 (0.78-1.78) |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.75/0.506 | | 0.90/0.608 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-10 | | 3-10 | |
| Max. pipe lenght with additional charge | m | 40 | | 40 | |
| Max. pipe lenght for unit | m | 20 | | 20 | |
| Additional refrigerant charge | g/m | 20 | | 20 | |
| Max. height between indoor units | m | 15 | | 15 | |
| Net dimension Outdoor (H./W./D.) | mm | 550/745/300 | | 550/745/300 | |
| Net weight Outdoor | kg | 30 | | 32 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +43 °C
Heating mode: from -15 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTAMENT: from 16 to 30 °C

*Data declared in compliance with EU Regulation no. 206/2012, as regards to ECO-design requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners and tested according to EN14825:2012.

| Outdoor unit model - TRIAL SPLIT | | ARGO TRIAL 21 DCI R32 | | ARGO TRIAL 24 DCI R32 | |
|---|---|---|---|---|---|
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 6.10 (2.20-8.30) | 6.50 (3.60-8.50) | 7.10 (2.30-9.20) | 8.60 (3.65-9.20) |
| | BTU/h | 20800 | 22200 | 24200 | 29300 |
| EER/COP (EN14511) | | 4.12 | 4.56 | 3.77 | 3.86 |
| Design Load [(Pdesign c/Pdesign h) (Average/Warmer/Colder)] (EN14825)* | kW | 6.1 | 6.1 | 7.1 | 6.1 |
| Seasonal efficiency ratio (SEER/SCOP (Average/Warmer/Colder) (EN14825)* | | 6.1 | 4.0 | 6.1 | 4.0 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Annual energy consumption C/H (Average/Warmer/Colder)* | kWh/annum | 350 | 2135 | 407 | 2189 |
| Min.-max. number of connectable indoor units | | 2-3 | | 2-3 | |
| Air flowrate (h.) | $m^3/h$ | 3800 | | 3800 | |
| Fan speeds Outdoor | n° | 2 | | 2 | |
| Sound pressure Outdoor (h.) | dB(A) | 57 | 58 | 57 | 58 |
| Sound power Outdoor (h.) | dB(A) | 68 | | 68 | |
| Power supply | V/Ph/Hz | 220-240~/1/50 | | 220-240~/1/50 | |
| Power input nominal (min.-max) | kW | 1.48 (0.95-2.39) | 1.43 (0.78-2.87) | 1.88 (1.10-2.87) | 2.23 (0.98-2.87) |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 1.6/1.080 | | 1.7/1.148 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-30 | | 3-30 | |
| Max. pipe lenght with additional charge | m | 60 | | 60 | |
| Max. pipe lenght for unit | m | 20 | | 20 | |
| Additional refrigerant charge | g/m | 20 | | 20 | |
| Max. height between indoor units | m | 15 | | 15 | |
| Net dimension Outdoor (H./W./D.) | mm | 654/889/340 | | 654/889/340 | |
| Net weight Outdoor | kg | 47.5 | | 47.5 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +43 °C
Heating mode: from -15 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTAMENT: from 16 to 30 °C

*Data declared in compliance with EU Regulation no. 206/2012, as regards to ECO-design requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners and tested according to EN14825:2012.

# OUTODOOR UNITS TECHNICAL DATA

| Outdoor unit model - QUADRI SPLIT | | ARGO QUADRI 28 DCI R32 | | ARGO QUADRI 36 DCI R32 | |
|---|---|---|---|---|---|
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 8.00 (2.30-11.0) | 9.50 (3.65-10.25) | 10.60 (2.60-12.00) | 12.00 (3.00-14.00) |
| | BTU/h | 28000 | 32400 | 36200 | 40900 |
| EER/COP (EN14511) | | 3.77 | 4.31 | 3.53 | 3.95 |
| Design Load [(Pdesign c/Pdesign h) (Average/Warmer/Colder)] (EN14825)* | kW | 8.0 | 7.2 | 10.6 | 10.5 |
| Seasonal efficiency ratio (SEER/SCOP (Average/Warmer/Colder) (EN14825)* | | 6.1 | 4.0 | 7.2 | 4.0 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Annual energy consumption C/H (Average/Warmer/Colder)* | kWh/annum | 459 | 2520 | 515 | 3675 |
| Min.-max. number of connectable indoor units | | 2-4 | | 2-4 | |
| Air flowrate (h.) | $m^3/h$ | 3800 | | 5800 | |
| Fan speeds Outdoor | n° | 2 | | 2 | |
| Sound pressure Outdoor (h.) | dB(A) | 58 | | 60 | |
| Sound power Outdoor (h.) | dB(A) | 68 | | 70 | |
| Power supply | V/Ph/Hz | 220-240~/1/50 | | 220-240~/1/50 | |
| Power input nominal (min.-max) | kW | 2.12 (1.30-3.58) | 2.20 (1.0-2.87) | 3.00 | 3.04 |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 1.8/1.215 | | 2.40/1.62 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-40 | | 3-40 | |
| Max. pipe lenght with additional charge | m | 70 | | 80 | |
| Max. pipe lenght for unit | m | 20 | | 25 | |
| Additional refrigerant charge | g/m | 20 | | 20 | |
| Max. height between indoor units | m | 15 | | 25 | |
| Net dimension Outdoor (H./W./D.) | mm | 654/889/340 | | 826/1020/427 | |
| Net weight Outdoor | kg | 51 | | 72 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +43 °C
Heating mode: from -15 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTAMENT: from 16 to 30 °C

*Data declared in compliance with EU Regulation no. 206/2012, as regards to ECO-design requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners and tested according to EN14825:2012.

| Outdoor unit mode - PENTA SPLIT | | ARGO PENTA 42 DCI R32 | |
|---|---|---|---|
| | Units | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 12.10 (2.6-15.2) | 13.00 (3.0-15.5) |
| | BTU/h | 41300 | 44400 |
| EER/COP (EN14511) | | 3.56 | 4.08 |
| Design Load [(Pdesign c/Pdesign h) (Average/Warmer/Colder)] (EN14825)* | kW | 12.10 | 13.00 |
| Annual energy consumption (ηs,c/ηs,h)** | % | 289.0 | 165.0 |
| Min.-max. number of connectable indoor units | | 2-5 | |
| Air flowrate (h.) | $m^3/h$ | 5800 | |
| Fan speeds Outdoor | n° | 2 | |
| Sound pressure Outdoor (h.) | dB(A) | 60 | |
| Sound power Outdoor (h.) | dB(A) | 72 | 74 |
| Power supply | V/Ph/Hz | 220-240~/1/50 | |
| Power input nominal (min.-max) | kW | 3.40 | 3.19 |
| Compressor type | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 2.40/1.62 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-50 | |
| Max. pipe lenght with additional charge | m | 100 | |
| Max. pipe lenght for unit | m | 25 | |
| Additional refrigerant charge | g/m | 20 | |
| Max. height between units (Outdoor on top) | m | 25 | |
| Max. height between units (Indoor on top) | m | 25 | |
| Net dimension Outdoor (H./W./D.) | mm | 826/1020/427 | |
| Net weight Outdoor | kg | 73 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +43 °C
Heating mode: from -15 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTAMENT: from 16 to 30 °C

**Data declared in accordance with COMMISSION REGULATION (EU) 2016/2281 of 30 November 2016 implementing Directive 2009/125/EC of the European Parliament and of the Council establishing A137a framework for the setting of ecodesign requirements for energy-related products, with regard to ecodesign requirements for air heating products, cooling products, high temperature process chillers and fan coil units.

# INDOOR UNITS MATCHINGS: COOLING MODE

| ARGO DUAL 14 DCI R32 | Nominal Cooling capacity (kW) | | | | | Total Cooling capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | EER (W/W) | SEER (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.05 | 2.05 | | | | 2.05 | 4.10 | 5.00 | 0.40 | 1.10 | 2.20 | 1.77 | 4.88 | 9.76 | 3.73 | 6.50 | A++ |
| 9k+12k | 1.76 | 2.34 | | | | 2.05 | 4.10 | 5.00 | 0.40 | 1.10 | 2.20 | 1.77 | 4.88 | 9.76 | 3.73 | 6.50 | A++ |

| ARGO DUAL 18 DCI R32 | Nominal Cooling capacity (kW) | | | | | Total Cooling capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | EER (W/W) | SEER (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.65 | 2.65 | | | | 2.15 | 5.30 | 5.80 | 0.40 | 1.48 | 2.50 | 1.77 | 6.57 | 11.09 | 3.58 | 6.60 | A++ |
| 9k+12k | 2.30 | 3.00 | | | | 2.15 | 5.30 | 5.80 | 0.50 | 1.48 | 2.50 | 2.22 | 6.57 | 11.09 | 3.58 | 6.60 | A++ |
| 12k+12k | 2.65 | 2.65 | | | | 2.15 | 5.30 | 5.80 | 0.50 | 1.48 | 2.50 | 2.22 | 6.57 | 11.09 | 3.58 | 6.60 | A++ |

| ARGO TRIAL 21 DCI R32 | Nominal Cooling capacity (kW) | | | | | Total Cooling capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | EER (W/W) | SEER (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.65 | 2.65 | | | | 2.20 | 5.30 | 6.00 | 0.40 | 1.20 | 2.60 | 1.77 | 5.32 | 11.54 | 4.42 | 6.10 | A++ |
| 9k+12k | 2.60 | 3.50 | | | | 2.20 | 6.10 | 7.20 | 0.50 | 1.48 | 2.90 | 2.22 | 6.57 | 12.87 | 4.12 | 6.10 | A++ |
| 9k+18k | 2.03 | 4.07 | | | | 2.20 | 6.10 | 8.30 | 0.60 | 1.48 | 2.90 | 2.66 | 6.57 | 12.87 | 4.12 | 6.10 | A++ |
| 12k+12k | 3.05 | 3.05 | | | | 2.20 | 6.10 | 8.30 | 0.60 | 1.48 | 2.90 | 2.66 | 6.57 | 12.87 | 4.12 | 6.10 | A++ |
| 12k+18k | 2.44 | 3.66 | | | | 2.20 | 6.10 | 8.30 | 0.60 | 1.48 | 2.90 | 2.66 | 6.57 | 12.87 | 4.12 | 6.10 | A++ |
| 9k+9k+9k | 2.03 | 2.03 | 2.03 | | | 2.20 | 6.10 | 8.30 | 0.60 | 1.48 | 2.90 | 2.66 | 6.57 | 12.87 | 4.12 | 6.50 | A++ |
| 9k+9k+12k | 1.83 | 1.83 | 2.44 | | | 2.20 | 6.10 | 8.30 | 0.60 | 1.48 | 2.90 | 2.66 | 6.57 | 12.87 | 4.12 | 6.50 | A++ |

| ARGO TRIAL 24 DCI R32 | Nominal Cooling capacity (kW) | | | | | Total Cooling capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | EER (W/W) | SEER (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.65 | 2.65 | | | | 2.30 | 5.30 | 6.30 | 0.80 | 1.40 | 3.00 | 3.55 | 6.21 | 13.31 | 3.79 | 6.10 | A++ |
| 9k+12k | 2.60 | 3.50 | | | | 2.30 | 6.10 | 7.30 | 1.00 | 1.65 | 3.20 | 4.44 | 7.30 | 14.20 | 3.71 | 6.10 | A++ |
| 9k+18k | 2.37 | 4.73 | | | | 2.30 | 7.10 | 8.50 | 1.10 | 1.88 | 3.40 | 4.88 | 8.34 | 15.08 | 3.78 | 6.10 | A++ |
| 12k+12k | 3.55 | 3.55 | | | | 2.30 | 7.10 | 9.20 | 1.10 | 1.88 | 3.40 | 4.88 | 8.34 | 15.08 | 3.78 | 6.10 | A++ |
| 12k+18k | 2.84 | 4.26 | | | | 2.30 | 7.10 | 9.20 | 1.10 | 1.88 | 3.40 | 4.88 | 8.34 | 15.08 | 3.78 | 6.10 | A++ |
| 18k+18k | 3.55 | 3.55 | | | | 2.30 | 7.10 | 9.20 | 1.10 | 1.88 | 3.40 | 4.88 | 8.34 | 15.08 | 3.78 | 6.10 | A++ |
| 9k+9k+9k | 2.37 | 2.37 | 2.37 | | | 2.30 | 7.10 | 9.20 | 1.10 | 1.88 | 3.40 | 4.88 | 8.34 | 15.08 | 3.78 | 6.50 | A++ |
| 9k+9k+12k | 2.13 | 2.13 | 2.84 | | | 2.30 | 7.10 | 9.20 | 1.10 | 1.88 | 3.40 | 4.88 | 8.34 | 15.08 | 3.78 | 6.50 | A++ |
| 9k+9k+18k | 1.78 | 1.78 | 3.55 | | | 2.30 | 7.10 | 9.20 | 1.10 | 1.88 | 3.40 | 4.88 | 8.34 | 15.08 | 3.78 | 6.50 | A++ |
| 9k+12k+12k | 1.94 | 2.58 | 2.58 | | | 2.30 | 7.10 | 9.20 | 1.10 | 1.88 | 3.40 | 4.88 | 8.34 | 15.08 | 3.78 | 6.50 | A++ |
| 12k+12k+12k | 2.37 | 2.37 | 2.37 | | | 2.30 | 7.10 | 9.20 | 1.10 | 1.88 | 3.40 | 4.88 | 8.34 | 15.08 | 3.78 | 6.50 | A++ |

| ARGO QUADRI 28 DCI R32 | Nominal Cooling capacity (kW) | | | | | Total Cooling capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | EER (W/W) | SEER (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.65 | 2.65 | | | | 2.30 | 5.30 | 6.30 | 0.80 | 1.40 | 2.60 | 3.55 | 6.21 | 11.54 | 3.79 | 6.10 | A++ |
| 9k+12k | 2.60 | 3.50 | | | | 2.30 | 6.10 | 7.30 | 0.80 | 1.60 | 2.80 | 3.55 | 7.10 | 12.42 | 3.81 | 6.10 | A++ |
| 9k+18k | 2.60 | 5.00 | | | | 2.30 | 7.60 | 8.50 | 1.20 | 2.00 | 2.80 | 5.32 | 8.87 | 12.42 | 3.80 | 6.10 | A++ |
| 12k+12k | 3.50 | 3.50 | | | | 2.30 | 7.00 | 9.20 | 1.20 | 1.80 | 2.80 | 5.32 | 7.99 | 12.42 | 3.89 | 6.10 | A++ |
| 12k+18k | 3.20 | 4.80 | | | | 2.30 | 8.00 | 10.00 | 1.20 | 2.12 | 3.40 | 5.32 | 9.41 | 15.08 | 3.77 | 6.10 | A++ |
| 18k+18k | 4.00 | 4.00 | | | | 2.30 | 8.00 | 11.00 | 1.20 | 2.12 | 3.60 | 5.32 | 9.41 | 15.97 | 3.77 | 6.10 | A++ |
| 9k+9k+9k | 2.67 | 2.67 | 2.67 | | | 2.30 | 8.00 | 10.00 | 1.30 | 2.00 | 3.40 | 5.77 | 8.87 | 15.08 | 4.00 | 6.30 | A++ |
| 9k+9k+12k | 2.40 | 2.40 | 3.20 | | | 2.30 | 8.00 | 11.00 | 1.30 | 2.12 | 3.60 | 5.77 | 9.41 | 15.97 | 3.77 | 6.30 | A++ |
| 9k+9k+18k | 2.00 | 2.00 | 4.00 | | | 2.30 | 8.00 | 11.00 | 1.30 | 2.12 | 3.60 | 5.77 | 9.41 | 15.97 | 3.77 | 6.30 | A++ |
| 9k+12k+12k | 2.18 | 2.91 | 2.91 | | | 2.30 | 8.00 | 11.00 | 1.30 | 2.12 | 3.60 | 5.77 | 9.41 | 15.97 | 3.77 | 6.30 | A++ |
| 9k+12k+18k | 1.85 | 2.46 | 3.69 | | | 2.30 | 8.00 | 11.00 | 1.30 | 2.12 | 3.60 | 5.77 | 9.41 | 15.97 | 3.77 | 6.30 | A++ |
| 12k+12k+12k | 2.67 | 2.67 | 2.67 | | | 2.30 | 8.00 | 11.00 | 1.30 | 2.12 | 3.60 | 5.77 | 9.41 | 15.97 | 3.77 | 6.30 | A++ |
| 12k+12k+18k | 2.29 | 2.29 | 3.43 | | | 2.30 | 8.00 | 11.00 | 1.30 | 2.12 | 3.60 | 5.77 | 9.41 | 15.97 | 3.77 | 6.30 | A++ |
| 9k+9k+9k+9k | 2.00 | 2.00 | 2.00 | 2.00 | | 2.30 | 8.00 | 11.00 | 1.30 | 2.12 | 3.60 | 5.77 | 9.41 | 15.97 | 3.77 | 6.60 | A++ |
| 9k+9k+9k+12k | 1.85 | 1.85 | 1.85 | 2.46 | | 2.30 | 8.00 | 11.00 | 1.30 | 2.12 | 3.60 | 5.77 | 9.41 | 15.97 | 3.77 | 6.60 | A++ |
| 9k+9k+12k+12k | 1.71 | 1.71 | 2.29 | 2.29 | | 2.30 | 8.00 | 11.00 | 1.30 | 2.12 | 3.60 | 5.77 | 9.41 | 15.97 | 3.77 | 6.60 | A++ |

| ARGO QUADRI 36 DCI R32 | Nominal Cooling capacity (kW) | | | | | Total Cooling capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | EER (W/W) | SEER (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.65 | 2.65 | | | | 2.60 | 5.30 | 6.50 | 1.60 | 1.90 | 3.50 | 7.10 | 10.64 | 15.52 | 2.79 | 6.10 | A++ |
| 9k+12k | 2.60 | 3.50 | | | | 2.60 | 6.10 | 7.50 | 1.60 | 2.30 | 3.50 | 7.10 | 10.64 | 15.52 | 2.65 | 6.10 | A++ |
| 9k+18k | 2.60 | 5.00 | | | | 2.60 | 7.60 | 9.00 | 1.60 | 2.40 | 3.50 | 7.10 | 10.60 | 15.50 | 3.17 | 6.10 | A++ |
| 9k+24k | 2.60 | 7.20 | | | | 2.60 | 9.80 | 11.00 | 1.60 | 2.60 | 3.60 | 7.10 | 11.50 | 16.00 | 3.77 | 6.10 | A++ |
| 12k+12k | 3.50 | 3.50 | | | | 2.60 | 7.00 | 9.20 | 1.60 | 2.40 | 3.50 | 7.10 | 10.64 | 15.52 | 2.92 | 6.10 | A++ |
| 12k+18k | 3.50 | 5.00 | | | | 2.60 | 8.50 | 10.00 | 1.60 | 2.40 | 3.50 | 7.10 | 10.64 | 15.52 | 3.54 | 6.10 | A++ |
| 12k+24k | 3.50 | 7.10 | | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 18k+18k | 5.30 | 5.30 | | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 18k+24k | 4.55 | 6.05 | | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 24k+24k | 5.30 | 5.30 | | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 9k+9k+9k | 2.67 | 2.67 | 2.67 | | | 2.60 | 8.00 | 10.00 | 1.60 | 2.40 | 3.50 | 7.10 | 10.64 | 15.52 | 3.33 | 6.10 | A++ |
| 9k+9k+12k | 2.60 | 2.60 | 4.20 | | | 2.60 | 9.40 | 11.00 | 1.60 | 2.60 | 3.60 | 7.10 | 11.53 | 15.97 | 3.62 | 6.10 | A++ |
| 9k+9k+18k | 2.65 | 2.65 | 5.30 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 9k+9k+24k | 2.27 | 2.27 | 6.06 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 9k+12k+12k | 2.60 | 3.50 | 3.50 | | | 2.60 | 9.60 | 11.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.20 | 6.10 | A++ |
| 9k+12k+18k | 2.45 | 3.26 | 4.89 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 9k+12k+24k | 2.12 | 2.83 | 5.65 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 9k+18k+18k | 2.12 | 4.24 | 4.24 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 9k+18k+24k | 1.87 | 3.74 | 4.99 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 12k+12k+12k | 3.53 | 3.53 | 3.53 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 12k+12k+18k | 3.03 | 3.03 | 4.54 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 12k+12k+24k | 2.65 | 2.65 | 5.30 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 12k+18k+18k | 2.65 | 3.98 | 3.98 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 12k+18k+24k | 2.36 | 3.53 | 4.71 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 18k+18k+18k | 3.53 | 3.53 | 3.53 | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 6.10 | A++ |
| 9k+9k+9k+9k | 2.65 | 2.65 | 2.65 | 2.65 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 9k+9k+9k+12k | 2.45 | 2.45 | 2.45 | 3.26 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 9k+9k+9k+18k | 2.12 | 2.12 | 2.12 | 4.24 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 9k+9k+9k+24k | 1.87 | 1.87 | 1.87 | 4.99 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 9k+9k+12k+12k | 2.27 | 2.27 | 3.03 | 3.03 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 9k+9k+12k+18k | 1.99 | 1.99 | 2.65 | 3.98 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 9k+9k+12k+24k | 1.77 | 1.77 | 2.36 | 4.71 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 9k+9k+18k+18k | 1.77 | 1.77 | 3.53 | 3.53 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 9k+12k+12k+12k | 2.12 | 2.83 | 2.83 | 2.83 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 9k+12k+12k+18k | 1.87 | 2.49 | 2.49 | 3.74 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 12k+12k+12k+12k | 2.65 | 2.65 | 2.65 | 2.65 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |
| 12k+12k+12k+18k | 2.36 | 2.36 | 2.36 | 3.53 | | 2.60 | 10.60 | 12.00 | 1.60 | 3.00 | 4.60 | 7.10 | 13.30 | 20.41 | 3.53 | 7.20 | A++ |

# INDOOR UNITS MATCHINGS: COOLING MODE

| ARGO PENTA 42 DCI R32 | Nominal Cooling capacity (kW) | | | | | Total Cooling capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | EER (W/W) | SEER (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+12k | 2.60 | 3.50 | | | | 2.60 | 6.10 | 7.50 | 1.60 | 2.30 | 4.60 | 11.54 | 15.08 | 20.41 | 2.65 | 6.10 | A++ |
| 9k+18k | 2.60 | 5.00 | | | | 2.60 | 7.60 | 9.00 | 1.60 | 2.60 | 4.60 | 11.54 | 15.08 | 20.41 | 2.92 | 6.10 | A++ |
| 9k+24k | 2.60 | 7.20 | | | | 2.60 | 9.80 | 11.00 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 2.88 | 6.10 | A++ |
| 12k+12k | 3.50 | 3.50 | | | | 2.60 | 7.00 | 9.20 | 1.60 | 2.40 | 4.60 | 11.54 | 15.08 | 20.41 | 2.92 | 6.10 | A++ |
| 12k+18k | 3.50 | 5.00 | | | | 2.60 | 8.50 | 10.00 | 1.60 | 3.00 | 4.60 | 11.54 | 15.08 | 20.41 | 2.83 | 6.10 | A++ |
| 12k+24k | 3.50 | 7.10 | | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.12 | 6.10 | A++ |
| 18k+18k | 5.30 | 5.30 | | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.12 | 6.10 | A++ |
| 18k+24k | 4.55 | 6.05 | | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.12 | 6.10 | A++ |
| 24k+24k | 5.30 | 5.30 | | | | 2.60 | 10.60 | 12.00 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.12 | 6.10 | A++ |
| 9k+9k+9k | 2.67 | 2.67 | 2.67 | | | 2.60 | 8.00 | 10.00 | 1.60 | 2.80 | 4.60 | 11.54 | 15.08 | 20.41 | 2.86 | 6.10 | A++ |
| 9k+9k+12k | 2.60 | 2.60 | 4.20 | | | 2.60 | 9.40 | 11.00 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 2.76 | 6.10 | A++ |
| 9k+9k+18k | 2.60 | 2.60 | 5.00 | | | 2.60 | 10.20 | 13.02 | 1.60 | 3.00 | 4.60 | 11.54 | 13.30 | 20.41 | 3.40 | 6.10 | A++ |
| 9k+9k+24k | 2.60 | 2.60 | 6.90 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+12k+12k | 2.60 | 3.50 | 3.50 | | | 2.60 | 9.60 | 11.94 | 1.60 | 3.00 | 4.60 | 11.54 | 13.30 | 20.41 | 3.20 | 6.10 | A++ |
| 9k+12k+18k | 2.60 | 3.50 | 5.00 | | | 2.60 | 11.10 | 14.11 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.26 | 6.10 | A++ |
| 9k+12k+24k | 2.40 | 3.20 | 6.50 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+18k+18k | 2.50 | 4.80 | 4.80 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+18k+24k | 2.10 | 4.30 | 5.70 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+24k+24k | 1.90 | 5.10 | 5.10 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+12k+12k | 3.50 | 3.50 | 3.50 | | | 2.60 | 10.50 | 13.02 | 1.60 | 3.00 | 4.60 | 11.54 | 13.30 | 20.41 | 3.50 | 6.10 | A++ |
| 12k+12k+18k | 3.50 | 3.50 | 5.10 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+12k+24k | 3.00 | 3.00 | 6.10 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+18k+18k | 3.10 | 4.50 | 4.50 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+18k+24k | 2.70 | 4.00 | 5.40 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+24k+24k | 2.50 | 4.80 | 4.80 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 18k+18k+18k | 4.03 | 4.03 | 4.03 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 18k+18k+24k | 3.60 | 3.60 | 4.90 | | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+9k | 2.60 | 2.60 | 2.60 | 2.60 | | 2.60 | 10.40 | 13.02 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.06 | 6.10 | A++ |
| 9k+9k+9k+12k | 2.60 | 2.60 | 2.60 | 3.50 | | 2.60 | 11.30 | 14.11 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.32 | 6.10 | A++ |
| 9k+9k+9k+18k | 2.42 | 2.42 | 2.42 | 4.84 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+24k | 2.14 | 2.14 | 2.14 | 5.69 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+12k+12k | 2.59 | 2.59 | 3.46 | 3.46 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+12k+18k | 2.27 | 2.27 | 3.03 | 4.54 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+12k+24k | 2.02 | 2.02 | 2.69 | 5.38 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+18k+18k | 2.02 | 2.02 | 4.03 | 4.03 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+18k+24k | 1.82 | 1.82 | 3.63 | 4.84 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+12k+12k+12k | 2.42 | 3.23 | 3.23 | 3.23 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+12k+12k+18k | 2.14 | 2.85 | 2.85 | 4.27 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+12k+12k+24k | 1.91 | 2.55 | 2.55 | 5.09 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+12k+18k+24k | 1.91 | 2.55 | 3.82 | 3.82 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+12k+18k+18k | 1.73 | 2.30 | 3.46 | 4.61 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+18k+18k+18k | 1.73 | 3.46 | 3.46 | 3.46 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+12k+12k+12k | 3.03 | 3.03 | 3.03 | 3.03 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+12k+12k+18k | 2.69 | 2.69 | 2.69 | 4.03 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+12k+12k+24k | 2.42 | 2.42 | 2.42 | 4.84 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+12k+18k+18k | 2.42 | 2.42 | 3.63 | 3.63 | | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+9k+9k | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+9k+12k | 2.27 | 2.27 | 2.27 | 2.27 | 3.03 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+9k+18k | 2.02 | 2.02 | 2.02 | 2.02 | 4.03 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+9k+24k | 1.82 | 1.82 | 1.82 | 1.82 | 4.84 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+12k+12k | 2.14 | 2.14 | 2.14 | 2.85 | 2.85 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+12k+18k | 1.91 | 1.91 | 1.91 | 2.55 | 3.82 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+12k+24k | 1.73 | 1.73 | 1.73 | 2.30 | 4.61 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+9k+18k+18k | 1.73 | 1.73 | 1.73 | 3.46 | 3.46 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+12k+12k+12k | 2.02 | 2.02 | 2.69 | 2.69 | 2.69 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+9k+12k+12k+18k | 1.82 | 1.82 | 2.42 | 2.42 | 3.63 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+12k+12k+12k+12k | 1.91 | 2.55 | 2.55 | 2.55 | 2.55 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 9k+12k+12k+12k+18k | 1.73 | 2.30 | 2.30 | 2.30 | 3.46 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |
| 12k+12k+12k+12k+12k | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 | 2.60 | 12.10 | 15.20 | 1.60 | 3.40 | 4.60 | 11.54 | 15.08 | 20.41 | 3.56 | 6.10 | A++ |

# INDOOR UNITS MATCHINGS: HEATING MODE

| ARGO DUAL 14 DCI R32 | Nominal Heating capacity (kW) | | | | | Total Heating capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | COP (W/W) | SCOP (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.20 | 2.20 | | | | 2.50 | 4.40 | 5.40 | 0.60 | 0.97 | 2.25 | 2.66 | 4.30 | 9.98 | 4.54 | 4.00 | A+ |
| 9k+12k | 1.89 | 2.51 | | | | 2.50 | 4.40 | 5.40 | 0.60 | 0.97 | 2.25 | 2.66 | 4.30 | 9.98 | 4.54 | 4.00 | A+ |

| ARGO DUAL 18 DCI R32 | Nominal Heating capacity (kW) | | | | | Total Heating capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | COP (W/W) | SCOP (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.83 | 2.83 | | | | 2.58 | 5.65 | 6.50 | 0.70 | 1.25 | 2.50 | 3.11 | 5.55 | 11.09 | 4.52 | 4.00 | A+ |
| 9k+12k | 2.42 | 3.23 | | | | 2.58 | 5.65 | 6.50 | 0.70 | 1.25 | 2.50 | 3.11 | 5.55 | 11.09 | 4.52 | 4.00 | A+ |
| 12k+12k | 2.83 | 2.83 | | | | 2.58 | 5.65 | 6.50 | 0.70 | 1.25 | 2.50 | 3.11 | 5.55 | 11.09 | 4.52 | 4.00 | A+ |

| ARGO TRIAL 21 DCI R32 | Nominal Heating capacity (kW) | | | | | Total Heating capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | COP (W/W) | SCOP (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.80 | 2.80 | | | | 2.70 | 5.60 | 8.50 | 0.60 | 1.23 | 2.50 | 2.66 | 5.44 | 11.09 | 4.57 | 4.00 | A+ |
| 9k+12k | 2.70 | 3.80 | | | | 2.70 | 6.50 | 8.50 | 0.80 | 1.43 | 2.90 | 3.55 | 6.34 | 12.87 | 4.55 | 4.00 | A+ |
| 9k+18k | 2.17 | 4.33 | | | | 2.70 | 6.50 | 8.50 | 0.80 | 1.43 | 2.90 | 3.55 | 6.34 | 12.87 | 4.55 | 4.00 | A+ |
| 12k+12k | 3.25 | 3.25 | | | | 2.70 | 6.50 | 8.50 | 0.80 | 1.43 | 2.90 | 3.55 | 6.34 | 12.87 | 4.55 | 4.00 | A+ |
| 12k+18k | 2.60 | 3.90 | | | | 2.70 | 6.50 | 8.50 | 0.80 | 1.43 | 2.90 | 3.55 | 6.34 | 12.87 | 4.55 | 4.00 | A+ |
| 9k+9k+9k | 2.17 | 2.17 | 2.17 | | | 2.70 | 6.50 | 8.50 | 0.80 | 1.43 | 2.90 | 3.55 | 6.34 | 12.87 | 4.55 | 3.80 | A |
| 9k+9k+12k | 1.95 | 1.95 | 2.60 | | | 2.70 | 6.50 | 8.50 | 0.80 | 1.43 | 2.90 | 3.55 | 6.34 | 12.87 | 4.55 | 3.80 | A |

| ARGO TRIAL 24 DCI R32 | Nominal Heating capacity (kW) | | | | | Total Heating capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | COP (W/W) | SCOP (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 3.20 | 3.20 | | | | 2.80 | 6.40 | 8.80 | 0.60 | 1.67 | 2.40 | 2.66 | 7.42 | 10.65 | 3.83 | 3.80 | A |
| 9k+12k | 3.20 | 4.30 | | | | 2.80 | 7.50 | 8.80 | 0.60 | 1.95 | 2.60 | 2.66 | 8.66 | 11.54 | 3.84 | 3.80 | A |
| 9k+18k | 2.87 | 5.73 | | | | 2.80 | 8.60 | 8.80 | 0.80 | 2.23 | 3.00 | 3.55 | 9.89 | 13.31 | 3.86 | 3.80 | A |
| 12k+12k | 4.30 | 4.30 | | | | 2.80 | 8.60 | 8.80 | 0.80 | 2.23 | 3.00 | 3.55 | 9.89 | 13.31 | 3.86 | 3.80 | A |
| 12k+18k | 3.44 | 5.16 | | | | 2.80 | 8.60 | 8.80 | 0.80 | 2.23 | 3.00 | 3.55 | 9.89 | 13.31 | 3.86 | 3.80 | A |
| 18k+18k | 4.30 | 4.30 | | | | 2.80 | 8.60 | 8.80 | 0.80 | 2.23 | 3.00 | 3.55 | 9.89 | 13.31 | 3.86 | 3.80 | A |
| 9k+9k+9k | 2.87 | 2.87 | 2.87 | | | 2.80 | 8.60 | 9.20 | 0.80 | 2.23 | 3.00 | 3.55 | 9.89 | 13.31 | 3.86 | 3.90 | A |
| 9k+9k+12k | 2.58 | 2.58 | 3.44 | | | 2.80 | 8.60 | 9.20 | 0.80 | 2.23 | 3.00 | 3.55 | 9.89 | 13.31 | 3.86 | 3.90 | A |
| 9k+9k+18k | 2.15 | 2.15 | 4.30 | | | 2.80 | 8.60 | 9.20 | 0.80 | 2.23 | 3.00 | 3.55 | 9.89 | 13.31 | 3.86 | 3.90 | A |
| 9k+12k+12k | 2.35 | 3.13 | 3.13 | | | 2.80 | 8.60 | 9.20 | 0.80 | 2.23 | 3.00 | 3.55 | 9.89 | 13.31 | 3.86 | 3.90 | A |
| 12k+12k+12k | 2.87 | 2.87 | 2.87 | | | 2.80 | 8.60 | 9.20 | 0.80 | 2.23 | 3.00 | 3.55 | 9.89 | 13.31 | 3.86 | 3.90 | A |

| ARGO QUADRI 28 DCI R32 | Nominal Heating capacity (kW) | | | | | Total Heating capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | COP (W/W) | SCOP (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.80 | 2.80 | | | | 2.80 | 5.60 | 10.00 | 0.70 | 1.41 | 2.50 | 3.11 | 6.27 | 11.09 | 3.96 | 4.00 | A+ |
| 9k+12k | 2.80 | 5.43 | | | | 2.80 | 8.23 | 10.25 | 0.70 | 1.65 | 2.60 | 3.11 | 7.32 | 11.54 | 4.99 | 4.00 | A+ |
| 9k+18k | 2.80 | 3.80 | | | | 2.80 | 6.60 | 10.25 | 1.00 | 2.12 | 3.40 | 4.44 | 9.41 | 15.08 | 3.11 | 4.00 | A+ |
| 12k+12k | 3.80 | 3.80 | | | | 2.80 | 7.60 | 10.25 | 0.90 | 1.89 | 2.80 | 3.99 | 8.37 | 12.42 | 4.03 | 4.00 | A+ |
| 12k+18k | 3.80 | 5.60 | | | | 2.80 | 9.40 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.27 | 4.00 | A+ |
| 18k+18k | 4.75 | 4.75 | | | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |
| 9k+9k+9k | 3.17 | 3.17 | 3.17 | | | 2.80 | 9.50 | 10.25 | 1.00 | 2.12 | 3.40 | 4.44 | 9.41 | 15.08 | 4.48 | 4.00 | A+ |
| 9k+9k+12k | 2.85 | 2.85 | 3.80 | | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |
| 9k+9k+18k | 2.38 | 2.38 | 4.75 | | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |
| 9k+12k+12k | 2.59 | 3.45 | 3.45 | | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |
| 9k+12k+18k | 2.19 | 2.92 | 4.38 | | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |
| 12k+12k+12k | 3.17 | 3.17 | 3.17 | | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |
| 12k+12k+18k | 2.71 | 2.71 | 4.07 | | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |
| 9k+9k+9k+9k | 2.38 | 2.38 | 2.38 | 2.38 | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |
| 9k+9k+9k+12k | 2.19 | 2.19 | 2.19 | 2.92 | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |
| 9k+9k+12k+12k | 2.04 | 2.04 | 2.71 | 2.71 | | 2.80 | 9.50 | 10.25 | 1.00 | 2.20 | 3.60 | 4.44 | 9.76 | 15.97 | 4.32 | 4.00 | A+ |

# INDOOR UNITS MATCHINGS: HEATING MODE

| ARGO QUADRI 36 DCI R32 | Nominal Heating capacity (kW) | | | | | Total Heating capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | COP (W/W) | SCOP (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+9k | 2.80 | 2.80 | | | | 3.00 | 5.60 | 7.00 | 1.61 | 1.90 | 3.60 | 7.13 | 14.20 | 17.75 | 2.95 | 4.00 | A+ |
| 9k+12k | 2.80 | 3.80 | | | | 3.00 | 6.60 | 8.16 | 1.61 | 2.30 | 3.80 | 7.13 | 14.20 | 17.75 | 2.87 | 4.00 | A+ |
| 9k+18k | 2.80 | 5.60 | | | | 3.00 | 8.40 | 10.50 | 1.61 | 2.80 | 4.20 | 7.13 | 14.20 | 17.75 | 3.00 | 4.00 | A+ |
| 9k+24k | 2.80 | 8.50 | | | | 3.00 | 11.30 | 12.83 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.72 | 4.00 | A+ |
| 12k+12k | 3.80 | 3.80 | | | | 3.00 | 7.60 | 9.33 | 1.61 | 2.60 | 4.00 | 7.13 | 14.20 | 17.75 | 2.92 | 4.00 | A+ |
| 12k+18k | 3.80 | 5.60 | | | | 3.00 | 9.40 | 11.66 | 1.61 | 2.90 | 4.80 | 7.13 | 14.20 | 17.75 | 3.24 | 4.00 | A+ |
| 12k+24k | 3.80 | 8.20 | | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 18k+18k | 6.00 | 6.00 | | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 18k+24k | 5.14 | 6.86 | | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 24k+24k | 6.00 | 6.00 | | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+9k+9k | 2.80 | 2.80 | | | | 3.00 | 5.60 | 7.00 | 1.61 | 1.90 | 3.60 | 7.13 | 14.20 | 17.75 | 2.95 | 4.00 | A+ |
| 9k+9k+12k | 2.80 | 3.80 | | | | 3.00 | 6.60 | 8.16 | 1.61 | 2.30 | 3.80 | 7.13 | 14.20 | 17.75 | 2.87 | 4.00 | A+ |
| 9k+9k+18k | 2.80 | 5.60 | | | | 3.00 | 8.40 | 10.50 | 1.61 | 2.80 | 4.20 | 7.13 | 14.20 | 17.75 | 3.00 | 4.00 | A+ |
| 9k+9k+24k | 2.80 | 8.50 | | | | 3.00 | 11.30 | 12.83 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.72 | 4.00 | A+ |
| 9k+12k+12k | 3.80 | 3.80 | | | | 3.00 | 7.60 | 9.33 | 1.61 | 2.60 | 4.00 | 7.13 | 14.20 | 17.75 | 2.92 | 4.00 | A+ |
| 9k+12k+18k | 3.80 | 5.60 | | | | 3.00 | 9.40 | 11.66 | 1.61 | 2.90 | 4.80 | 7.13 | 14.20 | 17.75 | 3.24 | 4.00 | A+ |
| 9k+12k+24k | 3.80 | 8.20 | | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+18k+18k | 6.00 | 6.00 | | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+18k+24k | 5.14 | 6.86 | | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 12k+12k+12k | 6.00 | 6.00 | | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 12k+12k+18k | 3.43 | 3.43 | 5.14 | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 12k+12k+24k | 3.00 | 3.00 | 6.00 | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 12k+18k+18k | 3.00 | 4.50 | 4.50 | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 12k+18k+24k | 2.67 | 4.00 | 5.33 | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 18k+18k+18k | 4.00 | 4.00 | 4.00 | | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+9k+9k+9k | 3.00 | 3.00 | 3.00 | 3.00 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+9k+9k+12k | 2.77 | 2.77 | 2.77 | 3.69 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+9k+9k+18k | 2.40 | 2.40 | 2.40 | 4.80 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+9k+9k+24k | 2.12 | 2.12 | 2.12 | 5.65 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+9k+12k+12k | 2.57 | 2.57 | 3.43 | 3.43 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+9k+12k+18k | 2.25 | 2.25 | 3.00 | 4.50 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+9k+12k+24k | 2.00 | 2.00 | 2.67 | 5.33 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+9k+18k+18k | 2.00 | 2.00 | 4.00 | 4.00 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+12k+12k+12k | 2.40 | 3.20 | 3.20 | 3.20 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 9k+12k+12k+18k | 2.12 | 2.82 | 2.82 | 4.24 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 12k+12k+12k+12k | 3.00 | 3.00 | 3.00 | 3.00 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |
| 12k+12k+12k+18k | 2.67 | 2.67 | 2.67 | 4.00 | | 3.00 | 12.00 | 14.00 | 1.61 | 3.04 | 5.00 | 7.13 | 14.20 | 17.75 | 3.95 | 4.00 | A+ |

| ARGO PENTA 42 DCI R32 | Nominal Heating capacity (kW) | | | | | Total Heating capacity (kW) | | | Total power input (kW) | | | Total current consumption (A) 230V | | | COP (W/W) | SCOP (W/W) | Energy efficiency class |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Unit A | Unit B | Unit C | Unit D | Unit E | Min. | Nom. | Max. | Min. | Nom. | Max. | Min. | Nom. | Max. | X3 ECO PLUS INDOOR UNIT | | |
| 9k+12k | 2.80 | 3.80 | | | | 3,00 | 6,60 | 7,75 | 1.61 | 2.30 | 4.20 | 7.13 | 14.20 | 17.75 | 2.87 | 4.00 | A+ |
| 9k+18k | 2.80 | 5.60 | | | | 3,00 | 8,40 | 9,96 | 1.61 | 2.60 | 4.50 | 7.13 | 14.20 | 17.75 | 3.23 | 4.00 | A+ |
| 9k+24k | 2.80 | 8.50 | | | | 3,00 | 11,30 | 12,17 | 1.61 | 2.80 | 4.50 | 7.13 | 14.20 | 17.75 | 4.04 | 4.00 | A+ |
| 12k+12k | 3.80 | 3.80 | | | | 3,00 | 7,60 | 8,85 | 1.61 | 2.60 | 4.50 | 7.13 | 14.20 | 17.75 | 2.92 | 4.00 | A+ |
| 12k+18k | 3.80 | 5.60 | | | | 3,00 | 9,40 | 11,07 | 1.61 | 2.80 | 4.50 | 7.13 | 14.20 | 17.75 | 3.36 | 4.00 | A+ |
| 12k+24k | 3.80 | 8.50 | | | | 3,00 | 12,30 | 13,28 | 1.61 | 2.80 | 4.50 | 7.13 | 14.20 | 17.75 | 4.39 | 4.00 | A+ |
| 18k+18k | 5.60 | 5.60 | | | | 3,00 | 11,20 | 13,28 | 1.61 | 2.80 | 4.50 | 7.13 | 14.20 | 17.75 | 4.00 | 4.00 | A+ |
| 18k+24k | 5.57 | 7.43 | | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 24k+24k | 6.50 | 6.50 | | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k | 2.80 | 2.80 | 2.80 | | | 3,00 | 8,40 | 9,96 | 1.61 | 2.60 | 4.50 | 7.13 | 14.20 | 17.75 | 3.23 | 4.00 | A+ |
| 9k+9k+12k | 2.80 | 2.80 | 3.80 | | | 3,00 | 9,40 | 11,07 | 1.61 | 2.80 | 4.50 | 7.13 | 14.20 | 17.75 | 3.36 | 4.00 | A+ |
| 9k+9k+18k | 2.80 | 2.80 | 5.60 | | | 3,00 | 11,20 | 13,28 | 1.61 | 2.80 | 4.50 | 7.13 | 14.20 | 17.75 | 4.00 | 4.00 | A+ |
| 9k+9k+24k | 2.79 | 2.79 | 7.43 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+12k+12k | 2.80 | 3.80 | 3.80 | | | 3,00 | 10,40 | 12,17 | 1.61 | 2.80 | 4.50 | 7.13 | 14.20 | 17.75 | 3.71 | 4.00 | A+ |
| 9k+12k+18k | 2.80 | 3.80 | 5.60 | | | 3,00 | 12,20 | 14,39 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 3.82 | 4.00 | A+ |
| 9k+12k+24k | 2.60 | 3.47 | 6.93 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+18k+18k | 2.60 | 5.20 | 5.20 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+18k+24k | 2.29 | 4.59 | 6.12 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+24k+24k | 2.05 | 5.47 | 5.47 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+12k+12k | 4.33 | 4.33 | 4.33 | | | 3,00 | 13,00 | 13,28 | 1.61 | 2.80 | 4.50 | 7.13 | 14.20 | 17.75 | 4.64 | 4.00 | A+ |
| 12k+12k+18k | 3.71 | 3.71 | 5.57 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+12k+24k | 3.25 | 3.25 | 6.50 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+18k+18k | 3.25 | 4.88 | 4.88 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+18k+24k | 2.89 | 4.33 | 5.78 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+24k+24k | 2.60 | 5.20 | 5.20 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 18k+18k+18k | 4.33 | 4.33 | 4.33 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 18k+18k+24k | 3.90 | 3.90 | 5.20 | | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k+9k | 3.25 | 3.25 | 3.25 | 3.25 | | 3,00 | 13,00 | 14,00 | 1.61 | 3.00 | 4.80 | 7.13 | 14.20 | 17.75 | 4.33 | 4.00 | A+ |
| 9k+9k+9k+12k | 3.00 | 3.00 | 3.00 | 4.00 | | 3,00 | 13,00 | 14,39 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k+18k | 2.60 | 2.60 | 2.60 | 5.20 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k+24k | 2.29 | 2.29 | 2.29 | 6.12 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+12k+12k | 2.79 | 2.79 | 3.71 | 3.71 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+12k+18k | 2.44 | 2.44 | 3.25 | 4.88 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+12k+24k | 2.17 | 2.17 | 2.89 | 5.78 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+18k+18k | 2.17 | 2.17 | 4.33 | 4.33 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+18k+24k | 1.95 | 1.95 | 3.90 | 5.20 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+12k+12k+12k | 2.60 | 3.47 | 3.47 | 3.47 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+12k+12k+18k | 2.29 | 3.06 | 3.06 | 4.59 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+12k+12k+24k | 2.05 | 2.74 | 2.74 | 5.47 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+12k+18k+18k | 2.05 | 2.74 | 4.11 | 4.11 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+12k+18k+24k | 1.86 | 2.48 | 3.71 | 4.95 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+18k+18k+18k | 1.86 | 3.71 | 3.71 | 3.71 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+12k+12k+12k | 3.25 | 3.25 | 3.25 | 3.25 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+12k+12k+18k | 2.89 | 2.89 | 2.89 | 4.33 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+12k+12k+24k | 2.60 | 2.60 | 2.60 | 5.20 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+12k+18k+18k | 2.60 | 2.60 | 3.90 | 3.90 | | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k+9k+9k | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.20 | A+ |
| 9k+9k+9k+9k+12k | 2.44 | 2.44 | 2.44 | 2.44 | 3.25 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.20 | A+ |
| 9k+9k+9k+9k+18k | 2.17 | 2.17 | 2.17 | 2.17 | 4.33 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k+9k+24k | 1.95 | 1.95 | 1.95 | 1.95 | 5.20 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k+12k+12k | 2.29 | 2.29 | 2.29 | 3.06 | 3.06 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k+12k+18k | 2.05 | 2.05 | 2.05 | 2.74 | 4.11 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k+12k+24k | 1.86 | 1.86 | 1.86 | 2.48 | 4.95 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+9k+18k+18k | 1.86 | 1.86 | 1.86 | 3.71 | 3.71 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+9k+12k+12k+12k | 2.17 | 2.17 | 2.89 | 2.89 | 2.89 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+12k+12k+12k+18k | 1.95 | 1.95 | 2.60 | 2.60 | 3.90 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 9k+12k+12k+12k+12k | 2.05 | 2.74 | 2.74 | 2.74 | 2.74 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.20 | A+ |
| 9k+12k+12k+12k+18k | 1.86 | 2.48 | 2.48 | 2.48 | 3.71 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.00 | A+ |
| 12k+12k+12k+12k+12k | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 | 3,00 | 13,00 | 15,50 | 1.61 | 3.19 | 5.00 | 7.13 | 14.20 | 17.75 | 4.08 | 4.20 | A+ |

# HIGH-WALL

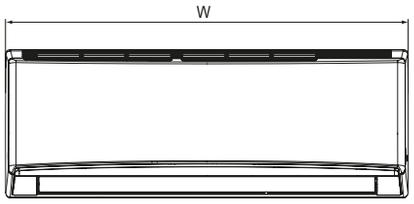
## MULTISPLIT INDOOR UNITS

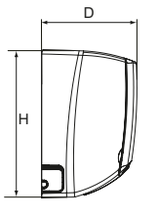

(Standard)
Infrared remote controller

(Optional)
Wired controller

Sleep mode | Cold air prevention | LED | Timer | Intelligent defrosting | X-fan | "Turbo" function | Auto diagnosis | Dehumidification | Auto restart memory | Fan speeds

3D airflow | Mono&multi compatible | Min. temp. heating | Min. temp. cooling | Quiet mode | iFeel | Save energy | Cold plasma | Wired controller (optional) | Door control (optional)




| High-wall indoor units | | X3I ECO PLUS 27 HL WF | | X3I ECO PLUS 35 HL WF | | X3I ECO PLUS 52 HL WF | | X3I ECO PLUS 70 HL WF | |
|---|---|---|---|---|---|---|---|---|---|
| | Units | Cooling | Heating | Cooling | Heating | Cooling | Heating | Cooling | Heating |
| Capacity | kW | 2.7 | 2.8 | 3.5 | 3.67 | 5.2 | 5.3 | 7.0 | 7.4 |
| Air flowrate (sh.-h.-mh.-m.-ml.-l.-sl.) | $m^3/h$ | 560-490-460-430-380-330-290 | | 680-620-560-490-450-420-390 | | 800-720-650-610-570-520-470 | | 1250-1100-1000-950-900-850-750 | |
| Dehumidification | l/h | 0.8 | | 1.4 | | 1.8 | | 2.4 | |
| Fan speeds | n° | 7 | | 7 | | 7 | | 7 | |
| Sound pressure (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 41-37-35-32-29-26-24 | | 42-38-36-34-32-29-26 | | 45-43-41-38-35-34-31 | | 48-45-42-39-37-36-33 | |
| Sound power (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 55-48-46-44-40-37-35 | | 57-50-48-46-44-41-38 | | 59-57-55-52-49-48-45 | | 63-60-57-54-52-51-48 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | | 12.7 (1/2") | | 15.88 (1/2") | |
| Net dimension (H/W/D) | mm | 275/790/200 | | 289/845/209 | | 300/970/224 | | 325/1078/246 | |
| Net weight Indoor/Outdoor | kg | 9 | | 10.5 | | 13.5 | | 16.5 | |

# 8-WAY CASSETTES

## NEW MULTISPLIT INDOOR UNITS

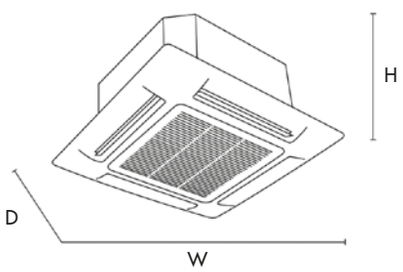

(Standard)
Infrared remote controller

(Optional)
Wired controller

(Optional)
Wired controller with weekly timer

Sleep mode | Timer | Intelligent defrosting | Child lock | "Turbo" function | Auto diagnosis | Dehumidification | Auto restart memory | Fan speeds | Save energy

Only multisplit | Min. temp. heating | Min. temp. cooling | 8 °C heating | iFeel | Drain condensate pump integrated | Filters easily removable for cleaning | Wired controller (optional) | Door control (optional)




| 8-WAY CASSETTES | | X3I ECO AS28HL | | X3I ECO AS35HL | | X3I ECO AS50HL | | X3I ECO AS70HL | |
|---|---|---|---|---|---|---|---|---|---|
| | Units | Cooling | Heating | Cooling | Heating | Cooling | Heating | Cooling | Heating |
| Nominal capacity | kW | 2.80 | 2.90 | 3.50 | 4.00 | 5.00 | 5.50 | 7.00 | 8.00 |
| Air flowrate (sh.-h.-mh.-m.-ml.-l.-sl.) | m³/h | 560-540-490-450-420-380-350 | | 560-540-490-450-420-380-350 | | 650-540-490-450-420-380-350 | | 1100-1050-950-910-870-830-800 | |
| Dehumidification | l/h | 1.4 | | 1.8 | | 1.8 | | 2.5 | |
| Fan speed | n° | 7+auto | | 7+auto | | 7+auto | | 7+auto | |
| Sound pressure (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 41-39-36-34-32-30-28 | | 41-39-36-34-32-30-28 | | 43-39-36-34-32-30-28 | | 46-45-44-43-42-41-39 | |
| Sound pover U.I. (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 57-55-52-50-48-46-44 | | 57-55-52-50-48-46-44 | | 59-55-52-50-48-46-44 | | 62-61-60-59-58-57-55 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | | 12.7 (1/2") | | 15.88 (5/8") | |
| Indoor net dimension without grid (H./W./D.) | mm | 265/570/570 | | 265/570/570 | | 265/570/570 | | 240/840/840 | |
| Indoor net dimension with grid (H./W./D.) | mm | 312.5/620/620 | | 312.5/620/620 | | 312.5/620/620 | | 292/950/950 | |
| Net dimension grid (H./W./D.) | mm | 47.5/620/620 | | 47.5/620/620 | | 47.5/620/620 | | 52/950/950 | |
| Indoor unit weight without grid | kg | 17 | | 17 | | 17 | | 29 | |
| Panel net weight | kg | 3 | | 3 | | 3 | | 6 | |

# SLIM DUCTED

## NEW MULTISPLIT INDOOR UNITS


(Standard)
Wired controller

(Optional)
Wired controller with weekly timer

Min. outdoor temp. heating

Min.outdoor temp. cooling

Timer

Intelligent defrosting

Only multisplit

Auto diagnosis

Dehumidification

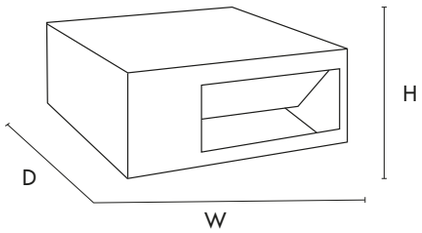
Auto restart memory

Fan speed

iFeel

Integrated water heat pump

Wired controller (optional)




| Ducted indoor units with adjustable esternal static pressure | | X3I ECO SD27HL | | X3I ECO SD35HL | | X3I ECO SD50HL | | X3I ECO SD70HL | |
|---|---|---|---|---|---|---|---|---|---|
| | Units | Cooling | Heating | Cooling | Heating | Cooling | Heating | Cooling | Heating |
| Capacity | kW | 2.65 | 2.80 | 3.5 | 3.85 | 5.0 | 5.5 | 7.0 | 8.0 |
| Air flowrate (sh.-h.-mh.-m.-ml.-l.-sl.) | m³/h | 650-560-520-480-450-410-380 | | 700-670-640-610-580-550-520 | | 880-840-810-790-770-750-730 | | 1500-1200-1200-1000-1000-900-900 | |
| Min.-max. esternal static pressure | Pa | 25-60 | | 25-60 | | 25-60 | | 25-125 | |
| Dehumitification | l/h | 0.8 | | 1.4 | | 1.8 | | 2.5 | |
| Fan speed | n° | 7 + auto | | 7 + auto | | 7 + auto | | 7 + auto | |
| Sound pressure (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 39-37-36-35-34-33-32 | | 41-39-38-37-36-35-34 | | 41-39-39-38-38-37-34 | | 45-40-40-38-38-36-36 | |
| Sound power (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 55-53-52-51-50-49-48 | | 57-55-54-53-52-51-50 | | 57-55-55-54-54-53-50 | | 62-57-57-55-55-53-53 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | | 12.7 (1/2") | | 15.88 (1/2") | |
| Net dimension (H./W./D.) | mm | 200/710/450 | | 200/710/450 | | 200/1010/450 | | 260/900/655 | |
| Net weight | kg | 18,5 | | 19 | | 25 | | 31 | |

# FLOOR/CEILING

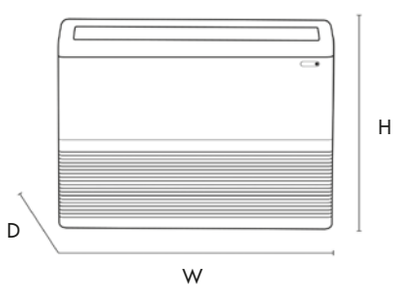
## MULTISPLIT INDOOR UNITS

(Standard)
Infrared remote controller

(Optional)
Wired controller

Sleep mode | 8°C heating | LED | Timer | Intelligent defrosting | Save energy | "Turbo" function | Auto diagnosis | Dehumidification | Auto restart memory | Fan speeds

iFeel | Only multisplit | Min. temp. heating | Min. temp. cooling | Wired controller (optional)




| Floor/ceiling indoor units | | X3I ECO FC26HL | | X3I ECO FC35HL | | X3I ECO FC45HL | |
|---|---|---|---|---|---|---|---|
| | Units | Cooling | Heating | Cooling | Heating | Cooling | Heating |
| Capacity | kW | 2.6 | 2.7 | 3.5 | 4.0 | 4.5 | 5.5 |
| Air flowrate (sh.-h.-m.-l.) | $m^3/h$ | 700-610-540-420 | | 700-610-540-420 | | 700-610-540-420 | |
| Dehumidification | l/h | 0.8 | | 1.4 | | 1.8 | |
| Fan speeds | n° | 7 | | 7 | | 7 | |
| Sound pressure (sh.-h.-m.-l.) | dB(A) | 38-35-30-26 | | 38-35-30-26 | | 38-35-30-26 | |
| Sound power (sh.-h.-m.-l.) | dB(A) | 52-49-44-40 | | 52-49-44-40 | | 52-49-44-40 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | | 12.7 (1/2")* | |
| Net dimension Outdoor (H/W/D) | mm | 665/870/235 | | 665/870/235 | | 665/870/235 | |
| Net weight Indoor/Outdoor | kg | 25 | | 25 | | 25,5 | |

* For matching with dual split the adaptor kit (optional) is required

# CONSOLE

## MULTISPLIT INDOOR UNITS

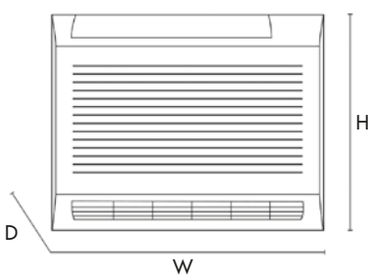
Wifi CONTROL

(Standard)
Infrared remote controller

(Optional)
Wired controller

Sleep mode | 8°C heating | LED | Timer | Intelligent defrosting | Save energy | "Turbo" function | Auto diagnosis | Dehumidification | Auto restart memory | Fan speeds

iFeel | Only multisplit | Min. temp. heating | Min. temp. cooling | Wired controller (optional)




| Console indoor units | | X3I ECO PLUS AF27HL | | X3I ECO PLUS AF35HL | | X3I ECO AF52HL | |
|---|---|---|---|---|---|---|---|
| | Units | Cooling | Heating | Cooling | Heating | Cooling | Heating |
| Capacity | kW | 2.7 | 2.9 | 3.52 | 3.80 | 5.2 | 5.33 |
| Air flowrate (sh.-h.-mh.-m.-ml.-l.-sl.) | $m^3/h$ | 500-430-410-370-330-280-250 | | 600-520-480-440-400-360-280 | | 650-620-550-500-450-410-320 | |
| Dehumidification | l/h | 0.8 | | 1.4 | | 1.8 | |
| Fan speeds | n° | 7 | | 7 | | 7 | |
| Sound pressure (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 39-36-33-31-29-26-23 | | 44-40-38-36-33-29-25 | | 47-45-42-40-37-35-31 | |
| Sound power (sh.-h.-mh.-m.-ml.-l.-sl.) | dB(A) | 50-48-45-44-42-38-34 | | 54-50-48-46-43-39-35 | | 57-55-52-50-47-45-41 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | | 12.7 (1/2") | |
| Net dimension Outdoor (H/W/D) | mm | 600/700/215 | | 600/700/215 | | 600/700/215 | |
| Net weight Indoor/Outdoor | kg | 15.5 | | 15.5 | | 15.5 | |

# CONTROLS

## SINGLE AND MULTISPLIT AIR CONDITIONERS



| | | High-wall | Cassette | Ducted | Floor/ ceiling | Console |
|---|---|---|---|---|---|---|
| WIRELESS |  | ● | | | | |
| |  | | ● | ● | ● | |
| |  | | | | | ● |
| WIRED |  | | | ● | | |
| |  398100674 | ● | ● | ● | ● | ● |
| DOOR CONTROL |  398100673 | ● | | | | |

● Standard controller supplied with the unit

● Optional controller

| Code | Description |
|---|---|
| 398100674 | Wired control |
| 398100673 | Door control |

# X3 PACKAGE

## Commercial single split air conditioners DC Inverter R32

- Cassette
- Ducted
- Floor/ceiling
- Control systems

# RANGE
## OUTDOOR UNITS

Energy efficiency class up to A++ in cooling mode and up to A+ in heating mode.

Intelligent adjustment of compressor frequency, accurate temperature control.

Reliable cooling and heating operation down to -20 °C outdoor temperature.

Maximum length of pipe connections 75 m; height difference between units up to 30 m.

Minimization of the sound level thanks to the axial fan.

Rapid achievement of comfort conditions: the unit allows rapid cooling and heating and is able to quickly reach the temperature set by the user.

Intelligent defrosting technology: the unit is able to correctly evaluate the presence of frost on the outdoor unit through a temperature sensor. The goal is to "defrost only when needed", optimizing the heating effect for high environmental comfort.

AEG ECO PLUS 35PIH

AEG ECO PLUS 50PIH
AEG ECO PLUS 71PIH
AEG ECO PLUS 85PIH

AEG ECO PLUS 100PIH
AEG ECO PLUS 100PIH3
AEG ECO PLUS 140PIH
AEG ECO PLUS 140PIH3

AEG ECO PLUS 160PIH3

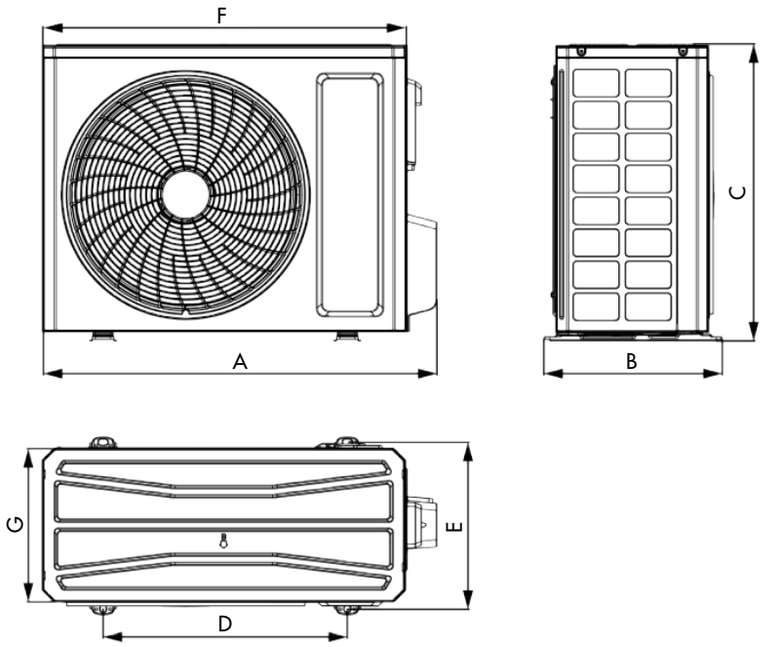
| Code | Model | Nominal heating capacity [kW] | Nominal cooling capacity [kW] |
|---|---|---|---|
| 398700009 | AEG ECO PLUS 35PIH | 3.50 | 4.00 |
| 398700010 | AEG ECO PLUS 50PIH | 5.0 | 5.5 |
| 398700011 | AEG ECO PLUS 71PIH | 7.0 | 8.0 |
| 398700012 | AEG ECO PLUS 85PIH | 8.5 | 8.8 |
| 398700013 | AEG ECO PLUS 100PIH | 10.00 | 12.00 |
| 398700014 | AEG ECO PLUS 100PIH3 | 10.00 | 12.00 |
| 398700015 | AEG ECO PLUS 140PIH | 13.40 | 15.50 |
| 398700016 | AEG ECO PLUS 140PIH3 | 13.40 | 15.50 |
| 398700017 | AEG ECO PLUS 160PIH3 | 14.50 | 17.00 |

A++ Cooling  A+ Heating

# RANGE
## INDOOR UNITS

| Code | Model | Features | |
|---|---|---|---|
| 398700025 | ASG ECO PLUS 35PH | - 8-way compact cassette with 360° air discharge<br>- Integrated condensate drain pump<br>- Ideal for installation in false ceiling |  |
| 398100688 | GRID CASSETTE COMPACT | Grid for compact cassette | |
| 398700026 | ASG ECO PLUS 50PH | - 8-way cassette with 360° air discharge<br>- Wide range of flap swinging<br>- Integrated condensate drain pump |  |
| 398700027 | ASG ECO PLUS 71PH | | |
| 398700028 | ASG ECO PLUS 85PH | | |
| 398700029 | ASG ECO PLUS 100PH | | |
| 398700030 | ASG ECO PLUS 140PH | | |
| 398700031 | ASG ECO PLUS 160PH | | |
| 398100677 | GRID BIG CASSETTE | Grid for big cassette | |
| 398700018 | ADG ECO PLUS 35PH | - Slim ducted low external static pressure<br>- Silence<br>- Integrated condensate drain pump |  |
| 398700019 | ADG ECO PLUS 50PH | | |
| 398700020 | ADG ECO PLUS 71PH | - High external static pressure ducted<br>- Silence<br>- Integrated condensate drain pump |  |
| 398700021 | ADG ECO PLUS 85PH | | |
| 398700022 | ADG ECO PLUS 100PH | | |
| 398700023 | ADG ECO PLUS 140PH | | |
| 398700024 | ADG ECO PLUS 160PH | | |
| 398700032 | ACG ECO PLUS 35PH | - Floor/ceiling<br>- Double flap<br>- 11 fan speeds<br>- Wide range of flap swinging |  |
| 398700033 | ACG ECO PLUS 50PH | | |
| 398700034 | ACG ECO PLUS 71PH | | |
| 398700035 | ACG ECO PLUS 85PH | | |
| 398700036 | ACG ECO PLUS 100PH | | |
| 398700037 | ACG ECO PLUS 140PH | | |
| 398700038 | ACG ECO PLUS 160PH | | |

# DIMENSIONAL DRAWING OUTDOOR UNITS




| MODEL | DIMENSIONS (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G |
| **AEG ECO PLUS 35PIH** | 732 | 330 | 553 | 455 | 310 | 675 | 285 |
| **AEG ECO PLUS 50PIH** | 802 | 350 | 555 | 512 | 331 | 745 | 300 |
| **AEG ECO PLUS 71PIH** | 958 | 402 | 660 | 570 | 371 | 889 | 340 |
| **AEG ECO PLUS 85PIH** | 958 | 402 | 660 | 570 | 371 | 889 | 340 |
| **AEG ECO PLUS 100PIH** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 100PIH3** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 140PIH** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 140PIH3** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 160PIH3** | 1020 | 427 | 960 | 755 | 396 | 990 | 370 |

# NOTES



# CASSETTE

Compact cassette with 360° air discharge

Cassette with 360° air discharge

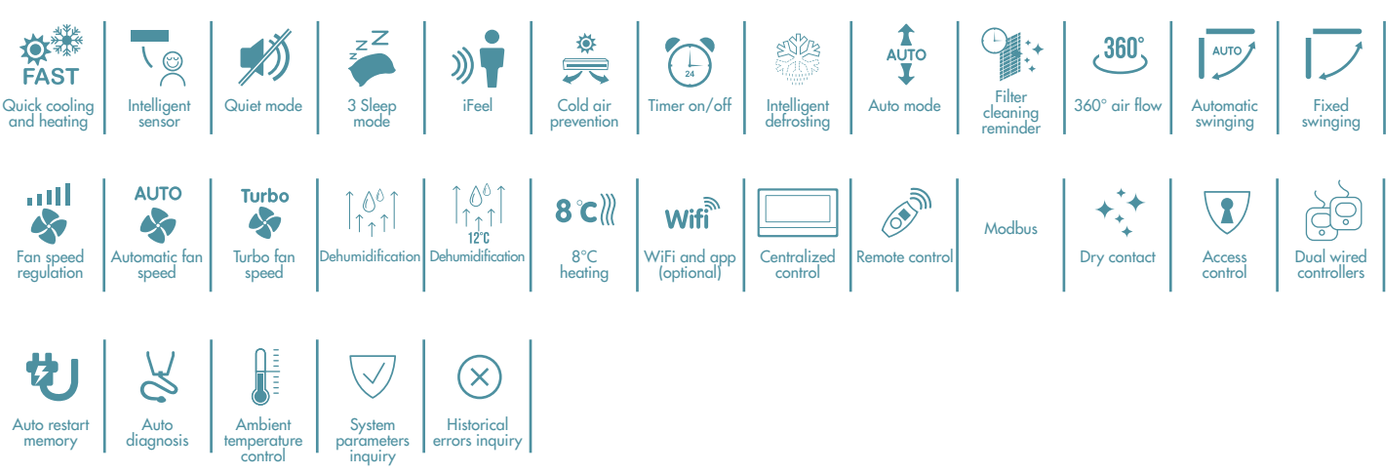
# COMPACT CASSETTE

## WITH 360° AIR DISCHARGE


(Standard)
Infrared remote controller

(Optional)
Wired controller with WiFi

- 8-way cassette units for light commercial/industrial applications.
- Suitable for shops, offices, meeting rooms, hotels, restaurants, clubs, gyms and open space areas.
- Compact and attractive design.
- 8-way, 360° air discharge, with range of flap oscillation between 45 and 80°, different according to the heating/cooling modes, for maximum comfort.
- The dimensions 570x570 mm are convenient for installation in false ceilings with standard modules 600x600 mm.
- Fan has optimized aerodynamic profiles for maximum silence.
- Condensate drain pump is integrated for a height difference up to 1000 mm.
- Double room temperature sensor for customizable comfort: possibility of selecting the return air temperature sensor on the unit or the temperature sensor on the wired control.
- High energy efficiency, at all the capacities, both in cooling and heating modes (seasonal efficiency).
- The special closing system of the refrigerant valve prevents and avoids the risk of refrigerant leaks from inappropriate maintenance.
- The electrical box has a special design and is made of fireproof material, for maximum protection of the electronic board from the risks of fire.
- Optional WiFi, with wired control, accessory can be ordered separately.




A++ Cooling  A+ Heating

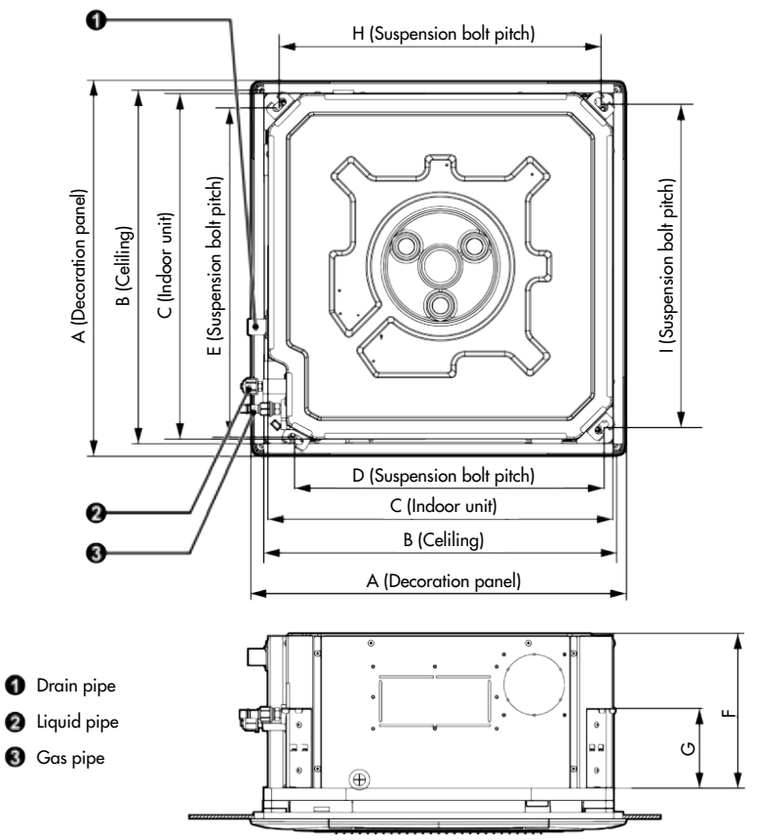
# TECHNICAL DATA MATCHING WITH COMPACT CASSETTE WITH 360° AIR DISCHARGE UNITS

| Indoor unit model | | ASG ECO PLUS 35PH | |
|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 35PIH** | |
| | Units | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 3.50 (0.90-4.00) | 4.00 (0.90-4.50) |
| | BTU/h | 12000 | 13600 |
| EER/COP (EN14511) | | 3.80 | 4.00 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 3.5 | 3.1 |
| Seasonal efficiency ratio (SEER/SCOP (Average) (EN14825)* | | 7.1 | 4.2 |
| Energy efficiency class* | | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 173 | 1034 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 600-550-500-400 | |
| Dehumidification | l/h | 1.0 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 36-35-33-29 | |
| Sound pressure Outdoor (h.) | dB(A) | 48 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 47-45-42-39 | |
| Sound power Outdoor (h.) | dB(A) | 56 | |
| Power supply | V/Ph/Hz | 220-240 ~/1/50/60 | |
| Power input | kW | 0.92 | 1.30 |
| Maximum electrical power input | kW/A | 1.30/6.00 | |
| Compressor type | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.57/0.39 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | |
| Pipe lenght with gas standard charge | m | 5 | |
| Max. pipe lenght with additional charge | m | 30 | |
| Additional refrigerant charge | g/m | 16 | |
| Max. height difference (Outdoor above) | m | 15 | |
| Max. height difference (Indoor above) | m | 15 | |
| Panel code to match | | 398100688 | |
| Indoor net dimension without panel (H./W./D.) | mm | 260/570/570 | |
| Net dimension panel (H./W./D.) | mm | 47.5/620/620 | |
| Indoor net dimension with panel (H./W./D.) | mm | 307.5/620/620 | |
| Outdoor net dimension (H./W./D.) | mm | 553/675/285 | |
| Indoor unit without panel/Outdoor unit net weight | kg | 16.5/24.5 | |
| Panel net weight | kg | 3 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

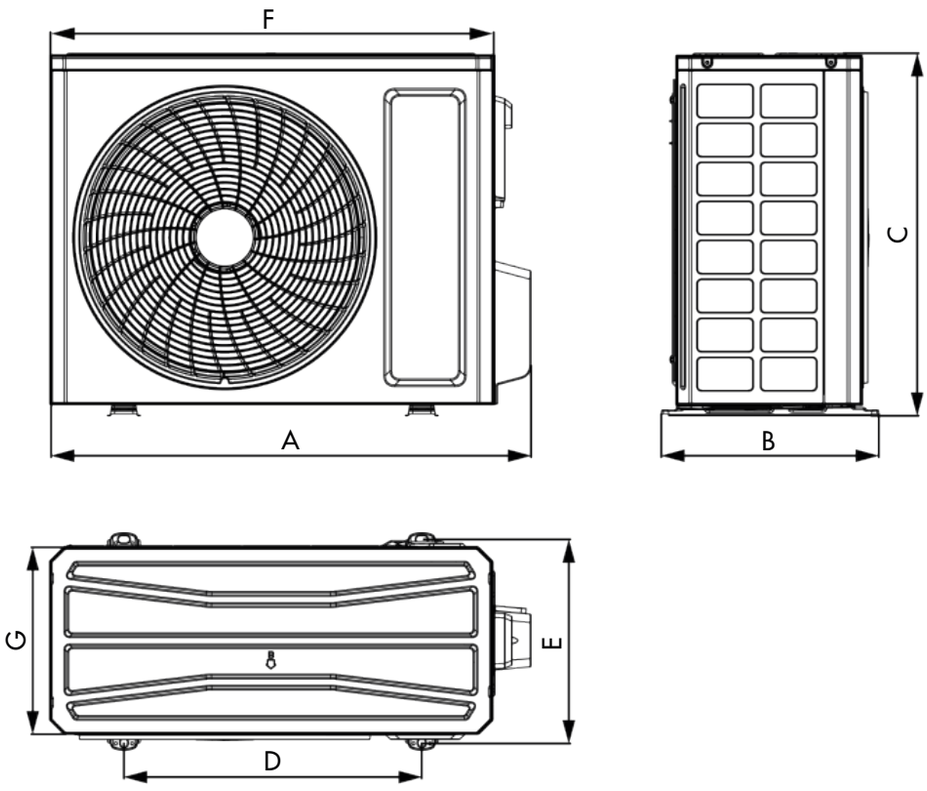
*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

# DIMENSIONAL DRAWING INDOOR UNITS




| MODEL | DIMENSIONS (mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I |
| **ASG ECO PLUS 35PH** | 620 | 580 | 570 | 505 | 550 | 260 | 140 | 530 | 530 |

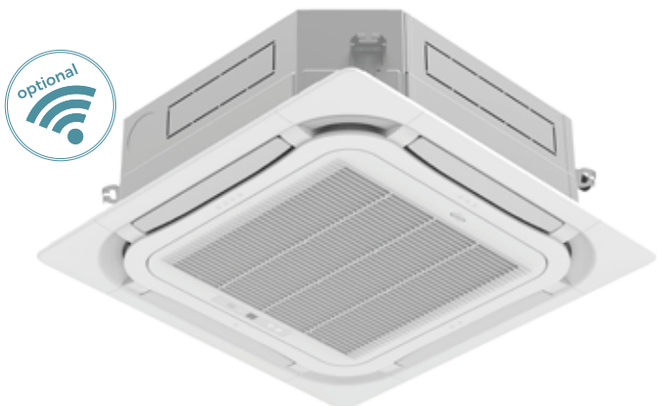
# DIMENSIONAL DRAWING OUTDOOR UNITS




| MODEL | DIMENSIONS (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G |
| **AEG ECO PLUS 35PIH** | 732 | 330 | 553 | 455 | 310 | 675 | 285 |

# CASSETTE

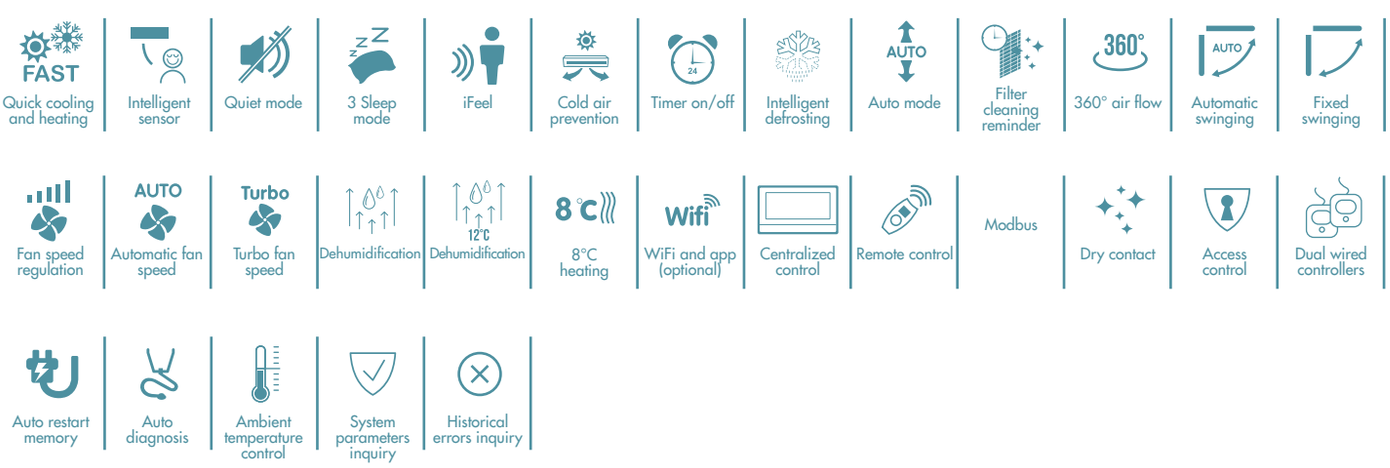
## WITH 360° AIR DISCHARGE




(Standard)
Infrared remote controller

(Optional)
Wired controller with WiFi

- 8-way cassette units for light commercial/industrial applications.
- Suitable for shops, offices, meeting rooms, hotels, restaurants, clubs, gyms and open space areas.
- Compact and attractive design.
- 8-way, 360° air discharge, with range of flap oscillation between 45 and 80°, different according to the heating/cooling modes, for maximum comfort.
- Fan has optimized aerodynamic profiles for maximum silence.
- Condensate drain pump is integrated for a height difference up to 1000 mm.
- Double room temperature sensor for customizable comfort: possibility of selecting the return air temperature sensor on the unit or the temperature sensor on the wired control.
- High energy efficiency, at all the capacities, both in cooling and heating modes (seasonal efficiency).
- The special closing system of the refrigerant valve prevents and avoids the risk of refrigerant leaks from inappropriate maintenance.
- The electrical box has a special design and is made of fireproof material, for maximum protection of the electronic board from the risks of fire.
- Optional WiFi, with wired control, accessory can be ordered separately.




A++ Cooling A+ Heating

# TECHNICAL DATA MATCHING WITH CASSETTE WITH 360° AIR DISCHARGE UNITS

| Indoor unit model | | ASG ECO PLUS 50PH | |
|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 50PIH** | |
| | Units | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 5.30 (1.60-5.80) | 5.80 (1.60-6.10) |
| | BTU/h | 17000 | 19790 |
| EER/COP (EN14511) | | 3.45 | 3.95 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 5.3 | 3.9 |
| Seasonal efficiency ratio (SEER/SCOP (Average) (EN14825)* | | 7.2 | 4.3 |
| Energy efficiency class* | | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 258 | 1270 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 900-800-700-600 | |
| Dehumidification | l/h | 1.8 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 36-35-33-31 | |
| Sound pressure Outdoor (h.) | dB(A) | 52 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 51-46-43-40 | |
| Sound power Outdoor (h.) | dB(A) | 65 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | |
| Power input | kW | 1.54 | 1.47 |
| Maximum electrical power input | kW/A | 1.90/9.50 | |
| Compressor type | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.85/0.57 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 12.70 (1/2") | |
| Pipe lenght with gas standard charge | m | 5 | |
| Max. pipe lenght with additional charge | m | 30 | |
| Additional refrigerant charge | g/m | 16 | |
| Max. height difference (Outdoor above) | m | 15 | |
| Max. height difference (Indoor above) | m | 15 | |
| Panel code to match | | 398100677 | |
| Indoor net dimension without panel (H./W./D.) | mm | 200/840/840 | |
| Net dimension panel (H./W./D.) | mm | 52/950/950 | |
| Indoor net dimension with panel (H./W./D.) | mm | 252/950/950 | |
| Outdoor net dimension (H./W./D.) | mm | 555/745/300 | |
| Indoor unit without panel/Outdoor unit net weight | kg | 21/30.5 | |
| Panel net weight | kg | 6 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

# TECHNICAL DATA

| Indoor unit model | | ASG ECO PLUS 71PH | | ASG ECO PLUS 85PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 71PIH** | | **AEG ECO PLUS 85PIH** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 7.10 (2.40-7.60) | 8.00 (2.20-8.60) | 8.50 (2.90-9.00) | 8.80 (2.50-9.50) |
| | BTU/h | 24200 | 27200 | 29000 | 30000 |
| EER/COP (EN14511) | | 3.70 | 4.00 | 3.40 | 3.90 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 7.1 | 5.0 | 8.5 | 6.0 |
| Seasonal efficiency ratio (SEER/SCOP (Average) (EN14825)* | | 6.7 | 4.3 | 6.9 | 4.3 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 371 | 1628 | 432 | 1954 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 1100-1000-900-800 | | 1400-1300-1200-1100 | |
| Dehumidification | l/h | 2.4 | | 2.8 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 39-38-36-34 | | 47-46-42-38 | |
| Sound pressure Outdoor (h.) | dB(A) | 58 | | 65 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 51-50-48-47 | | 59-51-48-46 | |
| Sound power Outdoor (h.) | dB(A) | 69 | | 70 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 220-240~/1/50/60 | |
| Power input | kW | 2.03 | 2.80 | 2.50 | 2.25 |
| Maximum electrical power input | kW/A | 2.80/14.00 | | 3.30/15.00 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 1.5/1.01 | | 1.5/1.01 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | | 15.88 (5/8") | |
| Pipe lenght with gas standard charge | m | 5 | | 5 | |
| Max. pipe lenght with additional charge | m | 30 | | 30 | |
| Additional refrigerant charge | g/m | 20 | | 20 | |
| Max. height difference (Outdoor above) | m | 20 | | 25 | |
| Max. height difference (Indoor above) | m | 20 | | 25 | |
| Panel code to match | | 398100677 | | 398100677 | |
| Indoor net dimension without panel (H./W./D.) | mm | 200/840/840 | | 200/840/840 | |
| Net dimension panel (H./W./D.) | mm | 52/950/950 | | 52/950/950 | |
| Indoor net dimension with panel (H./W./D.) | mm | 252/950/950 | | 252/950/950 | |
| Outdoor net dimension (H./W./D.) | mm | 660/889/340 | | 660/889/340 | |
| Indoor unit without panel/Outdoor unit net weight | kg | 21/41.5 | | 21/46 | |
| Panel net weight | kg | 6 | | 6 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

| Indoor unit model | | ASG ECO PLUS 100PH | | ASG ECO PLUS 100PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 100PIH** | | **AEG ECO PLUS 100PIH3** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 10.50 (3.20-11.00) | 11.50 (3.00-12.50) | 10.50 (3.20-11.00) | 11.50 (3.00-12.50) |
| | BTU/h | 35800 | 39200 | 35800 | 39200 |
| EER/COP (EN14511) | | 3.40 | 3.90 | 3.50 | 4.10 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 10.5 | 7.0 | 10.5 | 7.0 |
| Seasonal efficiency ratio (SEER/SCOP (Average) (EN14825)* | | 6.6 | 4.4 | 6.6 | 4.4 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 557 | 2227 | 557 | 2227 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 1500-1400-1200-1000 | | 1500-1400-1200-1000 | |
| Dehumidification | l/h | 3.3 | | 3.3 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 43-41-39-38 | | 43-41-39-38 | |
| Sound pressure Outdoor (h.) | dB(A) | 57 | | 57 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 56-54-52-48 | | 56-54-52-48 | |
| Sound power Outdoor (h.) | dB(A) | 70 | | 70 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 380-415~/3/50-60 | |
| Power input | kW | 3.10 | 2.95 | 3.10 | 3.95 |
| Maximum electrical power input | kW/A | 4.70/21.00 | | 4.40/7.00 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 2.1/1.42 | | 2.1/1.42 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | | 15.88 (5/8") | |
| Pipe lenght with gas standard charge | m | 5 | | 5 | |
| Max. pipe lenght with additional charge | m | 75 | | 75 | |
| Additional refrigerant charge | g/m | 20 | | 20 | |
| Max. height difference (Outdoor above) | m | 30 | | 30 | |
| Max. height difference (Indoor above) | m | 30 | | 30 | |
| Panel code to match | | 398100677 | | 398100677 | |
| Indoor net dimension without panel (H./W./D.) | mm | 240/840/840 | | 240/840/840 | |
| Net dimension panel (H./W./D.) | mm | 52/950/950 | | 52/950/950 | |
| Indoor net dimension with panel (H./W./D.) | mm | 292/950/950 | | 292/950/950 | |
| Outdoor net dimension (H./W./D.) | mm | 820/940/370 | | 820/940/370 | |
| Indoor unit without panel/Outdoor unit net weight | kg | 23/65 | | 23/75 | |
| Panel net weight | kg | 6 | | 6 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

# TECHNICAL DATA

| Indoor unit model | | ASG ECO PLUS 140PH | | ASG ECO PLUS 140PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 140PIH** | | **AEG ECO PLUS 140PIH3** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 13.40 (4.00-14.20) | 15.50 (3.90-16.00) | 13.40 (4.00-14.20) | 15.50 (3.90-16.00) |
| | BTU/h | 45700 | 52800 | 45700 | 52800 |
| EER/COP (EN14511) | | 2.91 | 3.30 | 2.91 | 3.30 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 13.40 | 15.50 | 13.40 | 15.50 |
| Seasonal energy efficiency in cooling/heating (Average) (ηs,h)** | % | 257.8 | 158.2 | 257.8 | 158.2 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 2000-1800-1600-1400 | | 2000-1800-1600-1400 | |
| Dehumidification | l/h | 3.9 | | 3.9 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 50-48-45-41 | | 50-48-45-41 | |
| Sound pressure Outdoor (h.) | dB(A) | 59 | | 59 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 64-63-60-57 | | 64-63-60-57 | |
| Sound power Outdoor (h.) | dB(A) | 75 | | 75 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 380-415~/3/50/60 | |
| Power input | kW | 4.60 | 4.70 | 4.60 | 4.70 |
| Maximum electrical power input | kW/A | 5.60/25.00 | | 5.60/11.00 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 2.80/1.89 | | 2.80/1.89 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | | 15.88 (5/8") | |
| Pipe lenght with gas standard charge | m | 7.5 | | 7.5 | |
| Max. pipe lenght with additional charge | m | 75 | | 75 | |
| Additional refrigerant charge | g/m | 35 | | 35 | |
| Max. height difference (Outdoor above) | m | 30 | | 30 | |
| Max. height difference (Indoor above) | m | 30 | | 30 | |
| Panel code to match | | 398100677 | | 398100677 | |
| Indoor net dimension without panel (H./W./D.) | mm | 290/840/840 | | 290/840/840 | |
| Net dimension panel (H./W./D.) | mm | 52/950/950 | | 52/950/950 | |
| Indoor net dimension with panel (H./W./D.) | mm | 342/950/950 | | 342/950/950 | |
| Outdoor net dimension (H./W./D.) | mm | 820/940/370 | | 820/940/370 | |
| Indoor unit without panel/Outdoor unit net weight | kg | 25/73 | | 25/81 | |
| Panel net weight | kg | 6 | | 6 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

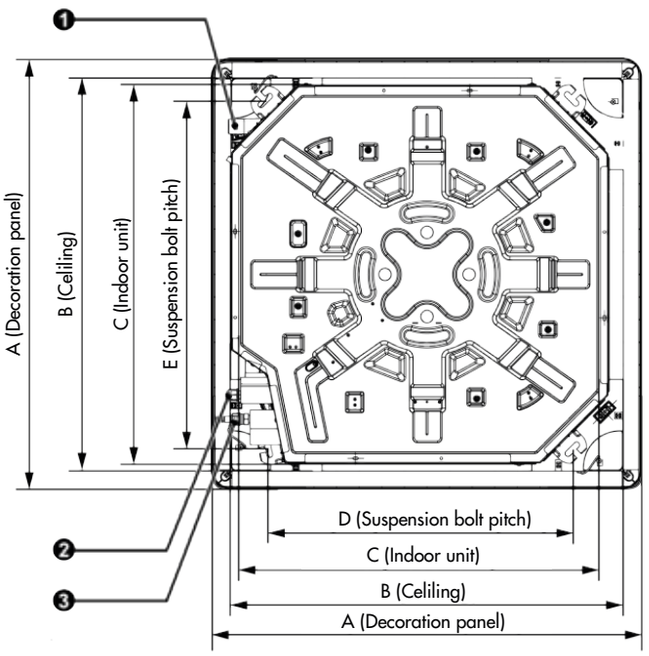
**Data declared in accordance with COMMISSION REGULATION (EU) 2016/2281 of 30 November 2016 implementing Directive 2009/125/EC of the European Parliament and of the Council establishing A137a framework for the setting of ecodesign requirements for energy-related products, with regard to ecodesign requirements for air heating products, cooling products, high temperature process chillers and fan coil units.

| Indoor unit model | | ASG ECO PLUS 160PH | |
|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 160PIH3** | |
| | Units | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 14.50 (4.80-15.00) | 17.00 (4.50-17.50) |
| | BTU/h | 49400 | 58000 |
| EER/COP (EN14511) | | 2.74 | 2.98 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 14.50 | 17.0 |
| Seasonal energy efficiency in cooling/heating (Average) (ηs,h)** | % | 239 | 151.6 |
| Seasonal energy consumption (Average)* | kWh/annum | 257.9 | 158.21 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 2300-2100-1900-1600 | |
| Dehumidification | l/h | 4.8 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 50-48-46-44 | |
| Sound pressure Outdoor (h.) | dB(A) | 60 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 65-63-61-60 | |
| Sound power Outdoor (h.) | dB(A) | 75 | |
| Power supply | V/Ph/Hz | 380-415~/3/50/60 | |
| Power input | kW | 5.30 | 5.70 |
| Maximum electrical power input | kW/A | 6.80/12.00 | |
| Compressor type | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 3.50/2.363 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | |
| Pipe lenght with gas standard charge | m | 7.5 | |
| Max. pipe lenght with additional charge | m | 75 | |
| Additional refrigerant charge | g/m | 35 | |
| Max. height difference (Outdoor above) | m | 30 | |
| Max. height difference (Indoor above) | m | 30 | |
| Panel code to match | | 398100677 | |
| Indoor net dimension without panel (H./W./D.) | mm | 290/840/840 | |
| Net dimension panel (H./W./D.) | mm | 52/950/950 | |
| Indoor net dimension with panel (H./W./D.) | mm | 342/950/950 | |
| Outdoor net dimension (H./W./D.) | mm | 960/990/370 | |
| Indoor unit without panel/Outdoor unit net weight | kg | 26/94 | |
| Panel net weight | kg | 9.5 | |

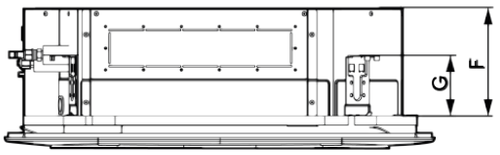
OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

**Data declared in accordance with COMMISSION REGULATION (EU) 2016/2281 of 30 November 2016 implementing Directive 2009/125/EC of the European Parliament and of the Council establishing A137a framework for the setting of ecodesign requirements for energy-related products, with regard to ecodesign requirements for air heating products, cooling products, high temperature process chillers and fan coil units.

# DIMENSIONAL DRAWING INDOOR UNITS

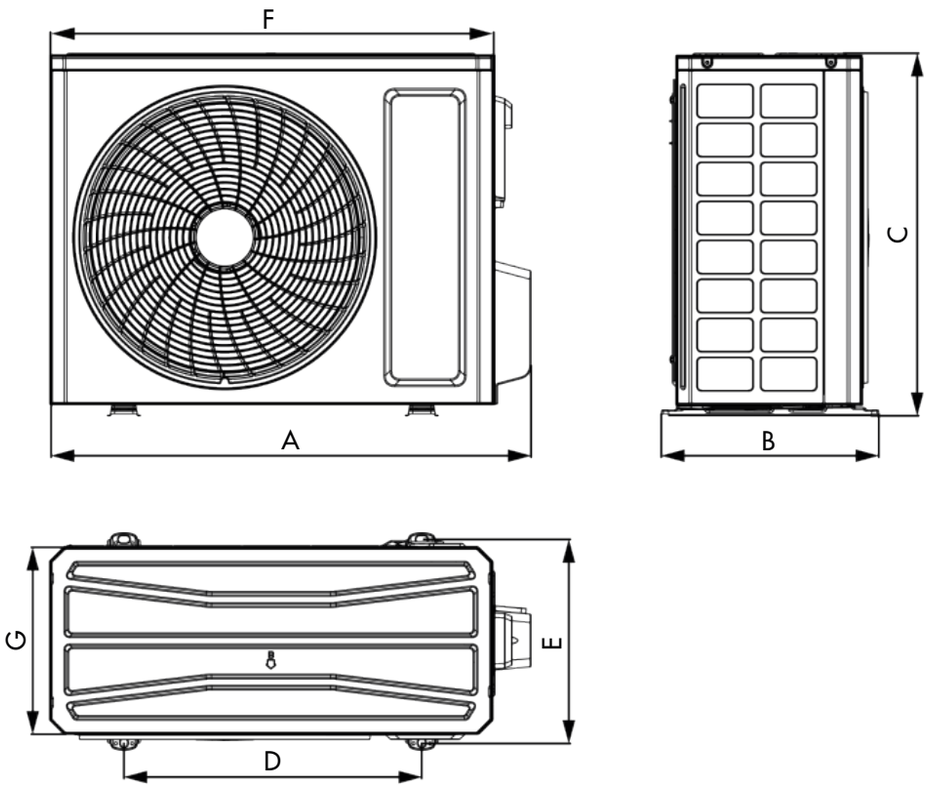



1 Drain pipe
2 Liquid pipe
3 Gas pipe




| MODEL | DIMENSIONS (mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I |
| **ASG ECO PLUS 50PH** | 950 | 890 | 840 | 680 | 780 | 200 | 135 | - | - |
| **ASG ECO PLUS 71PH** | 950 | 890 | 840 | 680 | 780 | 200 | 135 | - | - |
| **ASG ECO PLUS 85PH** | 950 | 890 | 840 | 680 | 780 | 200 | 135 | - | - |
| **ASG ECO PLUS 100PH** | 950 | 890 | 840 | 680 | 780 | 240 | 135 | - | - |
| **ASG ECO PLUS 140PH** | 950 | 890 | 840 | 680 | 780 | 290 | 135 | - | - |
| **ASG ECO PLUS 160PH** | 950 | 890 | 840 | 680 | 780 | 290 | 135 | - | - |

# DIMENSIONAL DRAWING OUTDOOR UNITS




| MODEL | DIMENSIONS (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G |
| **AEG ECO PLUS 50PIH** | 802 | 350 | 555 | 512 | 331 | 745 | 300 |
| **AEG ECO PLUS 71PIH** | 958 | 402 | 660 | 570 | 371 | 889 | 340 |
| **AEG ECO PLUS 85PIH** | 958 | 402 | 660 | 570 | 371 | 889 | 340 |
| **AEG ECO PLUS 100PIH** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 100PIH3** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 140PIH** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 140PIH3** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 160PIH3** | 1020 | 427 | 960 | 755 | 396 | 990 | 370 |



# DUCTED

Slim ducted

High static pressure ducted

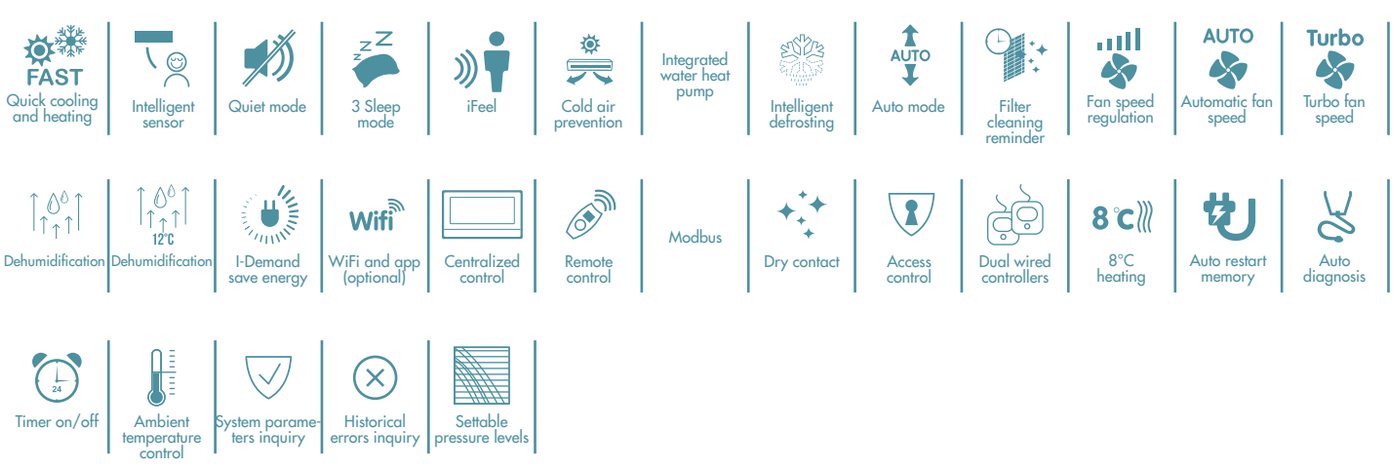
# SLIM DUCTED


(Standard)
Wired controller

(Optional)
Wired controller with WiFi

(Optional)
Infrared remote controller

- Slim ducted units for light commercial/industrial applications.
- Suitable for shops, offices, meeting rooms, hotels, restaurants, clubs, gyms and open space areas.
- Ultra-thin, these units are characterized by an air discharge design optimized to minimize the sound level and improve performance.
- The thickness is only 200 mm and the width 450 mm: these units are among the thinnest on the market.
- The special design of the evaporating coil (V-shape), covered by a patent, favors a more effective exchange of air.
- The centrifugal fan is also characterized by a patented design and allows higher air flow and greater silence.
- The external static pressure reaches 80 Pa, with 5 selectable levels, according to different needs, ensuring maximum adaptability to different types of installation.
- The combination with the wired control allows to optimize the external static pressure according to the different technical installation requirements.
- The condensate drain pump is integrated for a height difference of up to 1000 mm.
- You can choose between rear or bottom air intake.
- The DC motor ensures energy saving and high efficiency.
- Double room temperature sensor for a customizable comfort: possibility to select the sensor of return air temperature on the unit or of the sensor of temperature on the wired control.
- Connection to fresh air intake from outdoors is possible.
- High energy efficiency, at all capacities, both in cooling and heating modes, especially with a view to operating 365 days a year (seasonal efficiency).
- The special closing system of the refrigerant valve prevents and avoids the risk of refrigerant leaks from inappropriate maintenance.
- Optional WiFi, with wired control, accessory can be ordered separately.




A++ Cooling

A+ Heating

## TECHNICAL DATA MATCHING WITH SLIM DUCTED UNITS

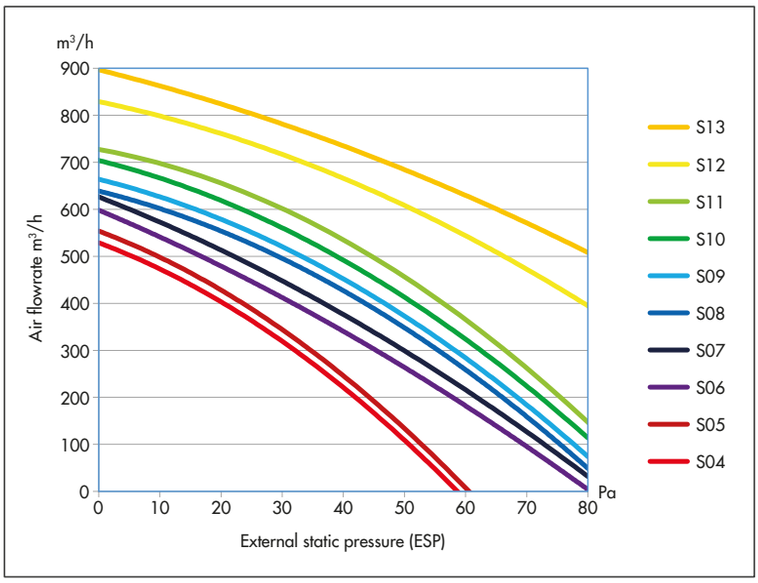
| **Indoor unit model** | | **ADG ECO PLUS 35PH** | | **ADG ECO PLUS 50PH** | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 35PIH** | | **AEG ECO PLUS 50PIH** | |
| | Unità di misura | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 3.50 (0.90-4.00) | 4.00 (0.90-4.50) | 5.30 (1.60-5.80) | 5.60 (1.60-6.10) |
| | BTU/h | 12000 | 13600 | 18000 | 19100 |
| EER/COP (EN14511) | | 3.40 | 4.00 | 3.50 | 3.95 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 3.5 | 3.0 | 5.3 | 3.9 |
| Seasonal efficiency ratio (SEER/SCOP (Average) (EN14825)* | | 6.5 | 4.0 | 6.3 | 4,0 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 189 | 1050 | 294 | 1365 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 600-550-500-400 | | 900-800-700-600 | |
| Dehumidification | l/h | 1.0 | | 1.7 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 35-33-32-30 | | 36-35-33-31 | |
| Sound pressure Outdoor (h.) | dB(A) | 56 | | 59 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 48-45-43-41 | | 52-51-48-45 | |
| Sound power Outdoor (h.) | dB(A) | 56 | | 65 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 220-240~/1/50/60 | |
| Nominal rated external static pressure | Pa | 25 | | 25 | |
| Rated external static pressure (range) | Pa | 0-80 | | 0-80 | |
| Power input | kW | 1.03 | 1.00 | 1.51 | 1.42 |
| Maximum electrical power input | kW/A | 1.30/6.00 | | 1.90/9.50 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.57/0.39 | | 0.85/0.57 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 12.70 (1/2") | |
| Pipe lenght with gas standard charge | m | 5 | | 5 | |
| Max. pipe lenght with additional charge | m | 30 | | 30 | |
| Additional refrigerant charge | g/m | 16 | | 16 | |
| Max. height difference (Outdoor above) | m | 15 | | 20 | |
| Max. height difference (Indoor above) | m | 15 | | 20 | |
| Indoor net dimension (H./W./D.) | mm | 200/700/450 | | 200/1000/450 | |
| Outdoor net dimension (H./W./D.) | mm | 553/675/285 | | 555/745/300 | |
| Net weight Indoor/Outdoor | kg | 18/24.5 | | 24/30.5 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

# STATIC PRESSURE CURVES

## ADG ECO PLUS 35PH - static pressure curves

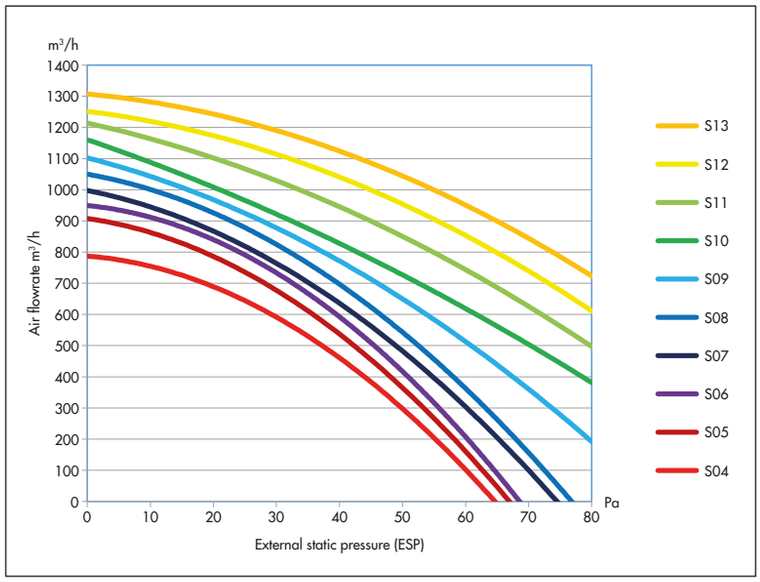



| External static pressure | Turbo speed | High | Medium | Low |
|---|---|---|---|---|
| P03 | S09 | S08 | S06 | S04 |
| P04 | S10 | S09 | S07 | S05 |
| **P05*** | **S11** | **S10** | **S08** | **S06** |
| P06 | S12 | S11 | S09 | S07 |
| P07 | S13 | S12 | S10 | S08 |

* Default static pressure level

The wired controller can be used to change the external static pressure (ESP) to turbo, high, medium and low fan speeds. 5 are the adjustable external static pressure levels.

## ADG ECO PLUS 50PH - static pressure curves

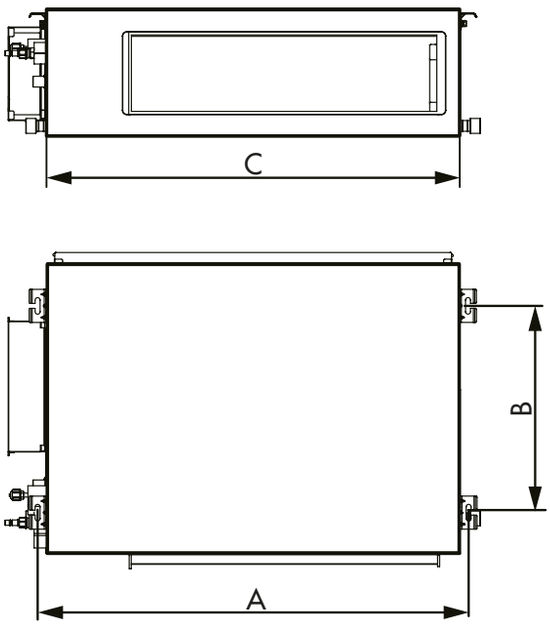


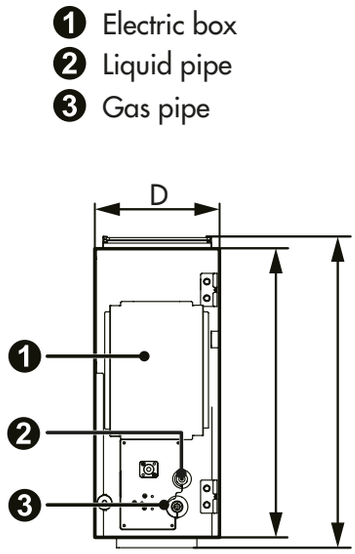

| External static pressure | Turbo speed | High | Medium | Low |
|---|---|---|---|---|
| P03 | S09 | S08 | S06 | S04 |
| P04 | S10 | S09 | S07 | S05 |
| **P05*** | **S11** | **S10** | **S08** | **S06** |
| P06 | S12 | S11 | S09 | S07 |
| P07 | S13 | S12 | S10 | S08 |

* Default static pressure level

The wired controller can be used to change the external static pressure (ESP) to turbo, high, medium and low fan speeds. 5 are the adjustable external static pressure levels.

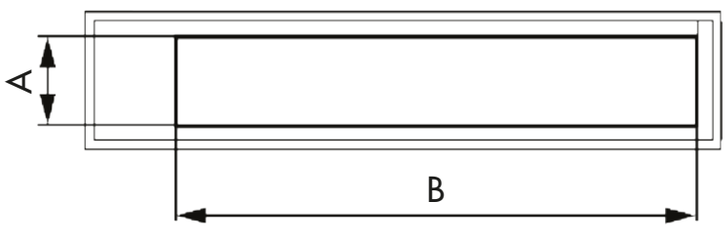
# DIMENSIONAL DRAWINGS INDOOR UNITS



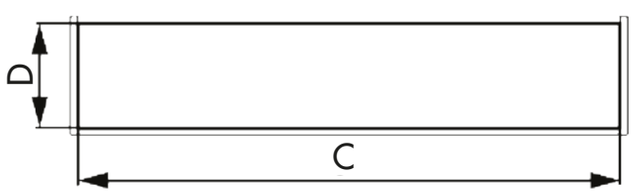




| MODEL | DIMENSIONS (mm) | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| **AEG ECO PLUS 35PIH** | 760 | 415 | 700 | 200 | 450 | 474 |
| **AEG ECO PLUS 50PIH** | 1060 | 415 | 1000 | 200 | 450 | 474 |

# DIMENSIONAL DRAWINGS SUPPLY AIR OUTLET/RETURN AIR INLET



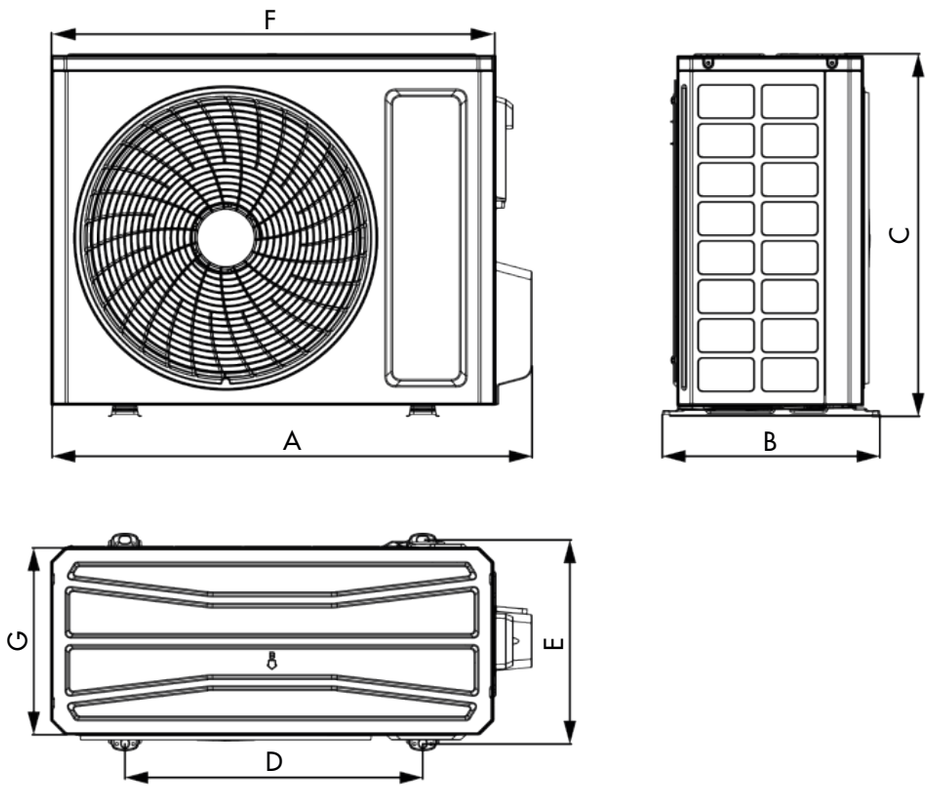

Supply air outlet




Return air inlet

| MODEL | SUPPLY AIR OUTLET | | RETURN AIR INLET | |
|---|---|---|---|---|
| | H | I | L | M |
| **ADG ECO PLUS 35PH** | 122 | 585 | 700 | 200 |
| **ADG ECO PLUS 50PH** | 122 | 885 | 1000 | 200 |

# DIMENSIONAL DRAWING OUTDOOR UNITS

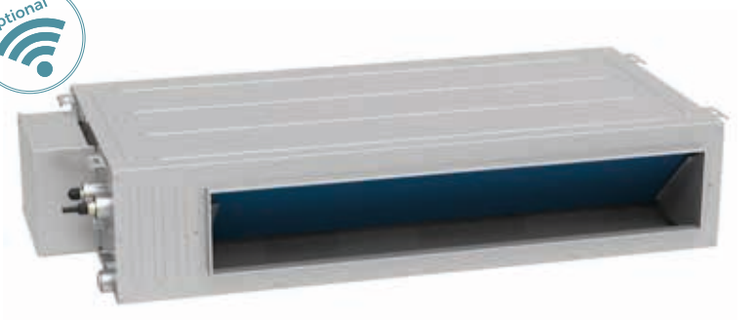



| MODEL | DIMENSIONS (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G |
| **AEG ECO PLUS 35PIH** | 732 | 330 | 553 | 455 | 310 | 675 | 285 |
| **AEG ECO PLUS 50PIH** | 802 | 350 | 555 | 512 | 331 | 745 | 300 |

# DUCTED

## HIGH STATIC PRESSURE

optional

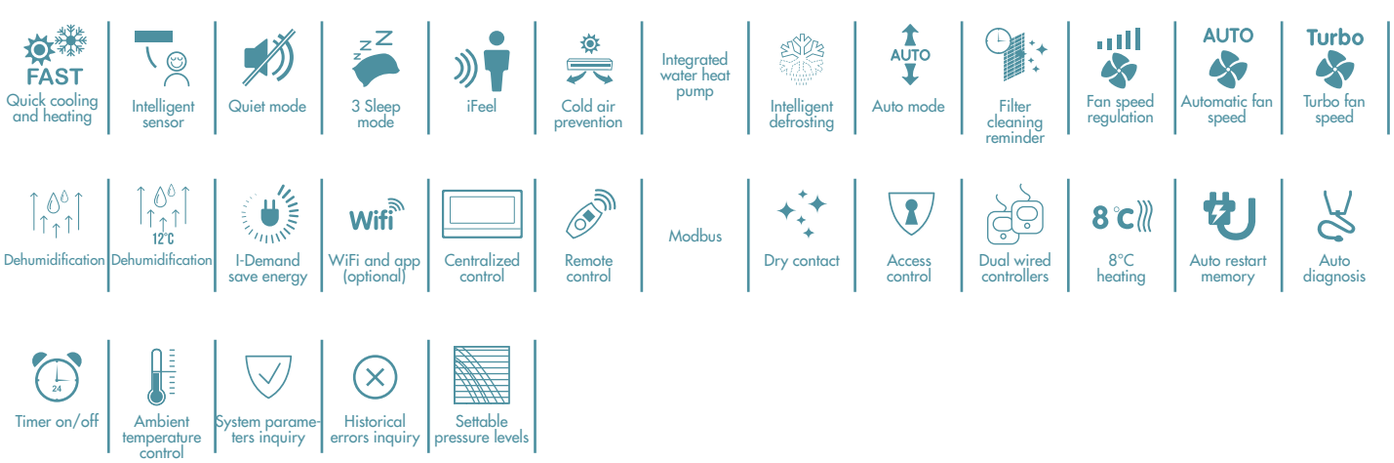


(Standard)
Wired controller

(Optional)
Wired controller with WiFi

(Optional)
Infrared remote controller

- High static pressure ducted units for light commercial/industrial applications.
- Suitable for shops, offices, meeting rooms, hotels, restaurants, clubs, gyms and open space areas.
- Compact in design, these units have depths of only 260 mm; the 71 and 85 models have a width of only 900 mm, which makes them easy to integrate even in buildings with small ceilings.
- The special design of the evaporating coil (V-shape), covered by a patent, favors a more effective exchange of air.
- The centrifugal fan is also characterized by a patented design and allows higher air flow and greater silence.
- The external static pressure reaches 200 Pa, with 9 selectable levels (models 140-160), according to different needs, ensuring maximum adaptability to different types of installation.
- The combination with the wired controller allows to optimize the external static pressure according to the different technical installation requirements.
- The condensate drain pump is integrated for a height difference of up to 1000 mm.
- You can choose between rear or bottom air intake.
- The DC motor ensures energy saving and high efficiency.
- Double room temperature sensor for a customizable comfort: possibility to select the sensor of return air temperature on the unit or of the sensor of temperature on the wired control.
- Connection to a fresh air intake from outdoors is possible.
- High energy efficiency, at all capacities, both in cooling and heating modes, especially with a view to operating 365 days a year (seasonal efficiency).
- The special closing system of the refrigerant valve prevents and excludes the risk of gas leaks due to inappropriate maintenance.
- Optional WiFi, with wired control, accessory can be ordered separately.




A++ Cooling

A+ Heating

## TECHNICAL DATA MATCHING WITH SLIM DUCTED UNITS

| Indoor unit model | | ADG ECO PLUS 71PH | | ADG ECO PLUS 85PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 71PIH** | | **AEG ECO PLUS 85PIH** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 7.10 (2.40-7.60) | 8.00 (2.20-8.60) | 8.50 (2.90-9.00) | 8.80 (2.50-9.50) |
| | BTU/h | 24200 | 27200 | 29000 | 30000 |
| EER/COP (EN14511) | | 3.70 | 4.00 | 3.40 | 3.90 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 7.1 | 4.7 | 8.5 | 6.0 |
| Seasonal efficiency ratio (SEER/SCOP (Average) (EN14825)* | | 6.6 | 4.1 | 6.4 | 4.1 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 377 | 1605 | 465 | 2049 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 1100-1000-900-800 | | 1400-1300-1100-1000 | |
| Dehumidification | l/h | 2.4 | | 2.8 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 37-35-33-31 | | 43-41-39-37 | |
| Sound pressure Outdoor (h.) | dB(A) | 58 | | 65 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 55-54-53-52 | | 57-54-52-50 | |
| Sound power Outdoor (h.) | dB(A) | 69 | | 70 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 220-240~/1/50/60 | |
| Nominal rated external static pressure | Pa | 25 | | 37 | |
| Rated external static pressure (range) | Pa | 0-160 | | 0-160 | |
| Power input | kW | 1.92 | 2.00 | 2.50 | 2.25 |
| Maximum electrical power input | kW/A | 2.80/14.00 | | 3.30/15.00 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 1.5/1.01 | | 1.5/1.01 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | | 15.88 (5/8") | |
| Pipe lenght with gas standard charge | m | 5 | | 5 | |
| Max. pipe lenght with additional charge | m | 30 | | 30 | |
| Additional refrigerant charge | g/m | 20 | | 20 | |
| Max. height difference (Outdoor above) | m | 20 | | 25 | |
| Max. height difference (Indoor above) | m | 20 | | 25 | |
| Indoor net dimension (H./W./D.) | mm | 260/900/655 | | 260/900/655 | |
| Outdoor net dimension (H./W./D.) | mm | 660/889/340 | | 660/889/340 | |
| Net weight Indoor/Outdoor | kg | 29.5/41.5 | | 29.5/46 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

# TECHNICAL DATA

| Indoor unit model | | ADG ECO PLUS 100PH | | ADG ECO PLUS 100PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 100PIH** | | **AEG ECO PLUS 100PIH3** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 10.50 (3.20-11.00) | 11.50 (3.00-12.50) | 10.50 (3.20-11.00) | 11.50 (3.00-12.50) |
| | BTU/h | 35800 | 39200 | 35800 | 39200 |
| EER/COP (EN14511) | | 3.50 | 4.10 | 3.50 | 4.10 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 10.5 | 7.0 | 10.5 | 7.0 |
| Seasonal efficiency ratio (SEER/SCOP (Average) (EN14825)* | | 6.4 | 4.2 | 6.4 | 4.2 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 574 | 2333 | 574 | 2333 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 1700-1600-1400-1200 | | 1700-1600-1400-1200 | |
| Dehumidification | l/h | 3.3 | | 3.3 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 39-38-37-36 | | 39-38-37-36 | |
| Sound pressure Outdoor (h.) | dB(A) | 62 | | 62 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 57-55-53-49 | | 57-55-53-49 | |
| Sound power Outdoor (h.) | dB(A) | 70 | | 70 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 380-415~/3/50/60 | |
| Nominal rated external static pressure | Pa | 37 | | 37 | |
| Rated external static pressure (range) | Pa | 0-160 | | 0-160 | |
| Power input | kW | 3.00 | 2.80 | 3.00 | 2.80 |
| Maximum electrical power input | kW/A | 4.70/21.00 | | 4.40/7.00 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 2.1/1.42 | | 2.1/1.42 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | | 15.88 (5/8") | |
| Pipe lenght with gas standard charge | m | 5 | | 5 | |
| Max. pipe lenght with additional charge | m | 75 | | 75 | |
| Additional refrigerant charge | g/m | 20 | | 20 | |
| Max. height difference (Outdoor above) | m | 30 | | 30 | |
| Max. height difference (Indoor above) | m | 30 | | 30 | |
| Indoor net dimension (H./W./D.) | mm | 260/1340/655 | | 260/1340/655 | |
| Outdoor net dimension (H./W./D.) | mm | 820/940/370 | | 820/940/370 | |
| Net weight Indoor/Outdoor | kg | 43/65 | | 43/75 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

| Indoor unit model | | ADG ECO PLUS 140PH | | ADG ECO PLUS 140PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 140PIH** | | **AEG ECO PLUS 140PIH3** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 13.40 (4.00-14.20) | 15.50 (3.90-16.00) | 13.40 (4.00-14.20) | 15.50 (3.90-16.00) |
| | BTU/h | 45700 | 52800 | 45700 | 52800 |
| EER/COP (EN14511) | | 2.91 | 3.30 | 2.91 | 3.30 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 13.40 | 15.50 | 13.40 | 15.50 |
| Seasonal energy efficiency in cooling/heating (Average) (ηs,h) | | 250.4 | 158.8 | 250.4 | 158.8 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 2200-2000-1730-1490 | | 2200-2000-1730-1490 | |
| Dehumidification | l/h | 3.9 | | 3.9 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 43-42-40-38 | | 43-42-40-38 | |
| Sound pressure Outdoor (h.) | dB(A) | 67 | | 67 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 59-57-46-44 | | 59-57-46-44 | |
| Sound power Outdoor (h.) | dB(A) | 75 | | 75 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 380-415~/3/50/60 | |
| Nominal rated external static pressure | Pa | 50 | | 50 | |
| Rated external static pressure (range) | Pa | 0-160 | | 0-160 | |
| Power input | kW | 4.60 | 4.70 | 4.60 | 4.70 |
| Maximum electrical power input | kW/A | 5.60/25.00 | | 5.60/11.00 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 2.8/1.89 | | 2.8/1.89 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | | 15.88 (5/8") | |
| Pipe lenght with gas standard charge | m | 7.5 | | 7.5 | |
| Max. pipe lenght with additional charge | m | 75 | | 75 | |
| Additional refrigerant charge | g/m | 35 | | 35 | |
| Max. height difference (Outdoor above) | m | 30 | | 30 | |
| Max. height difference (Indoor above) | m | 30 | | 30 | |
| Indoor net dimension (H./W./D.) | mm | 300/1400/700 | | 300/1400/700 | |
| Outdoor net dimension (H./W./D.) | mm | 820/940/370 | | 820/940/370 | |
| Net weight Indoor/Outdoor | kg | 52/73 | | 52/81 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

**Data declared in accordance with COMMISSION REGULATION (EU) 2016/2281 of 30 November 2016 implementing Directive 2009/125/EC of the European Parliament and of the Council establishing A137a framework for the setting of ecodesign requirements for energy-related products, with regard to ecodesign requirements for air heating products, cooling products, high temperature process chillers and fan coil units.

# TECHNICAL DATA

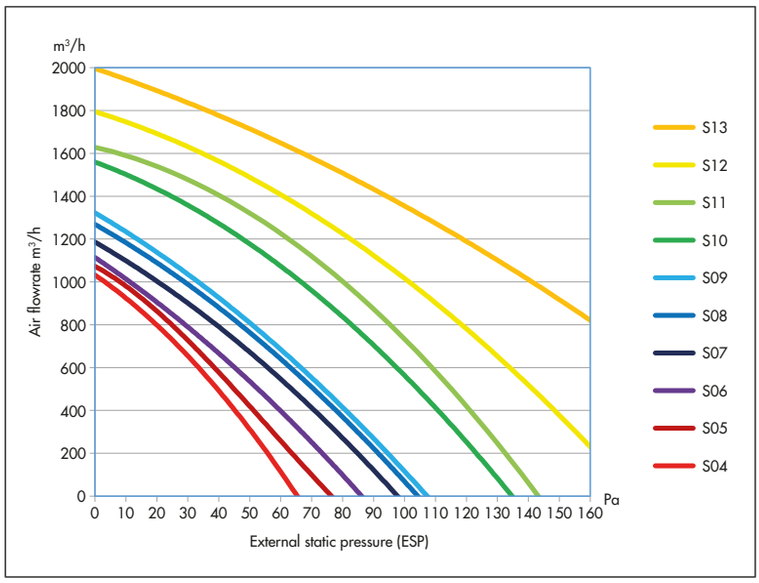
| Indoor unit model | | ADG ECO PLUS 160PH | |
|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 160PIH3** | |
| | Units | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 16.00 (4.80-17.00) | 17.00 (4.50-18.00) |
| | BTU/h | 54500 | 58000 |
| EER/COP (EN14511) | | 2.96 | 3.62 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 16.00 | 17.00 |
| Seasonal energy efficiency in cooling/heating (Average) (ηs,h) | | 234.4 | 151.0 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 2600-2300-2000-1700 | |
| Dehumidification | l/h | 4,6 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 44-42-41-40 | |
| Sound pressure Outdoor (h.) | dB(A) | 60 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 70-67-55-54 | |
| Sound power Outdoor (h.) | dB(A) | 75 | |
| Power supply | V/Ph/Hz | 380-415~/3/50/60 | |
| Nominal rated external static pressure | Pa | 50 | |
| Rated external static pressure (range) | Pa | 0-200 | |
| Power input | kW | 5.40 | 4.70 |
| Maximum electrical power input | kW/A | 6.80/12.00 | |
| Compressor type | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 3.5/2.363 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | |
| Pipe lenght with gas standard charge | m | 7.5 | |
| Max. pipe lenght with additional charge | m | 75 | |
| Additional refrigerant charge | g/m | 35 | |
| Max. height difference (Outdoor above) | m | 30 | |
| Max. height difference (Indoor above) | m | 30 | |
| Indoor net dimension (H./W./D.) | mm | 300/1400/700 | |
| Outdoor net dimension (H./W./D.) | mm | 960/990/370 | |
| Net weight Indoor/Outdoor | kg | 55/94 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

**Data declared in accordance with COMMISSION REGULATION (EU) 2016/2281 of 30 November 2016 implementing Directive 2009/125/EC of the European Parliament and of the Council establishing A137a framework for the setting of ecodesign requirements for energy-related products, with regard to ecodesign requirements for air heating products, cooling products, high temperature process chillers and fan coil units.

# STATIC PRESSURE CURVES

## ADG ECO PLUS 71PH - static pressure curves

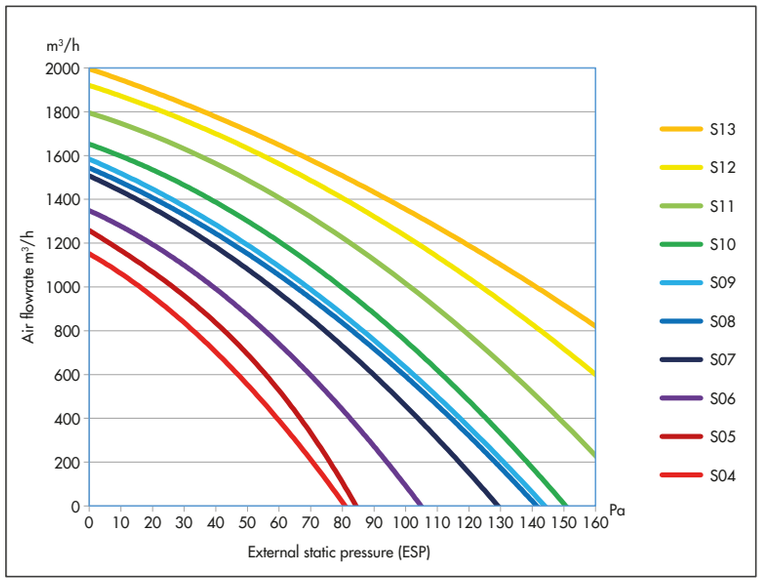



| External static pressure | Turbo speed | High | Medium | Low |
|---|---|---|---|---|
| P1 | S05 | S03 | S02 | S01 |
| P2 | S06 | S04 | S03 | S02 |
| P3 | S07 | S05 | S04 | S03 |
| P4 | S08 | S06 | S05 | S04 |
| **P5*** | **S09** | **S07** | **S06** | **S05** |
| P6 | S10 | S08 | S07 | S06 |
| P7 | S11 | S09 | S08 | S07 |
| P8 | S12 | S10 | S09 | S08 |
| P9 | S13 | S11 | S10 | S09 |

* Default static pressure level

The wired controller can be used to change the external static pressure (ESP) to turbo, high, medium and low fan speeds. 9 are the adjustable external static pressure levels.

## ADG ECO PLUS 85PH - static pressure curves



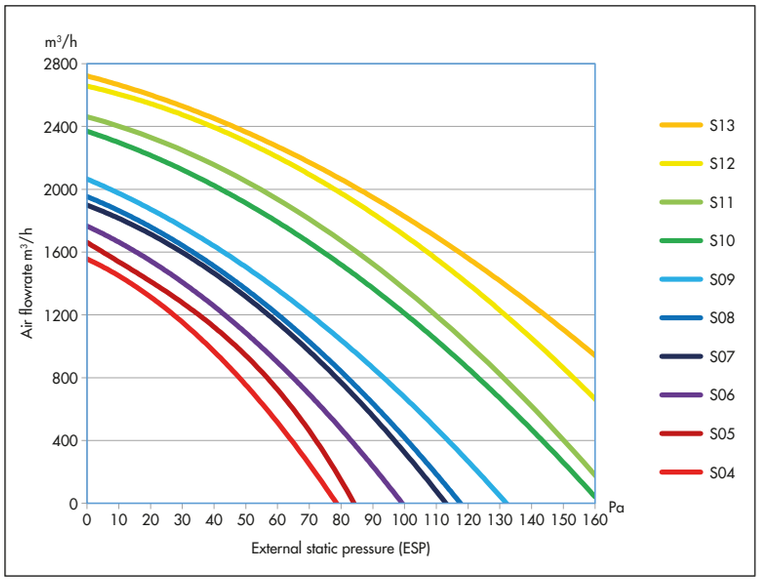

| External static pressure | Turbo speed | High | Medium | Low |
|---|---|---|---|---|
| P1 | S05 | S03 | S02 | S01 |
| P2 | S06 | S04 | S03 | S02 |
| P3 | S07 | S05 | S04 | S03 |
| P4 | S08 | S06 | S05 | S04 |
| **P5*** | **S09** | **S07** | **S06** | **S05** |
| P6 | S10 | S08 | S07 | S06 |
| P7 | S11 | S09 | S08 | S07 |
| P8 | S12 | S10 | S09 | S08 |
| P9 | S13 | S11 | S10 | S09 |

* Default static pressure level

The wired controller can be used to change the external static pressure (ESP) to turbo, high, medium and low fan speeds. 9 are the adjustable external static pressure levels.

# STATIC PRESSURE CURVES

## ADG ECO PLUS 100PH - static pressure curves

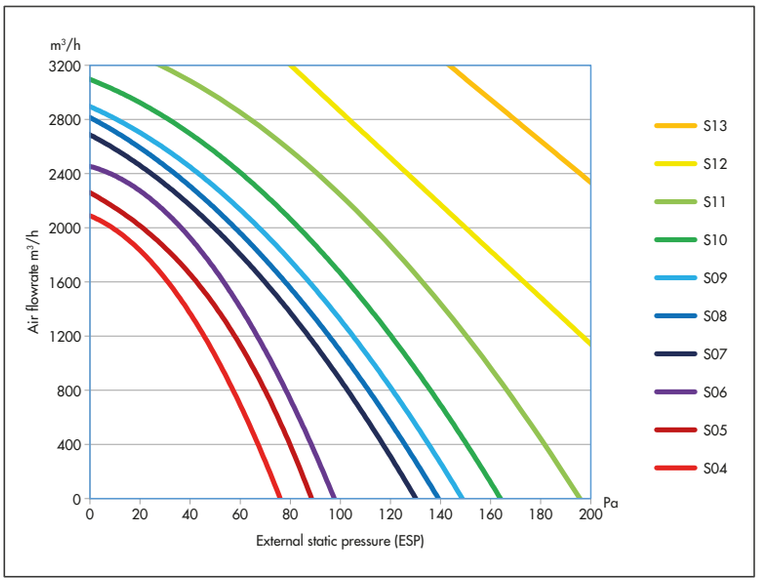



| External static pressure | Turbo speed | High | Medium | Low |
|---|---|---|---|---|
| P1 | S05 | S03 | S02 | S01 |
| P2 | S06 | S04 | S03 | S02 |
| P3 | S07 | S05 | S04 | S03 |
| P4 | S08 | S06 | S05 | S04 |
| **P5*** | **S09** | **S07** | **S06** | **S05** |
| P6 | S10 | S08 | S07 | S06 |
| P7 | S11 | S09 | S08 | S07 |
| P8 | S12 | S10 | S09 | S08 |
| P9 | S13 | S11 | S10 | S09 |

* Default static pressure level

The wired controller can be used to change the external static pressure (ESP) to turbo, high, medium and low fan speeds. 9 are the adjustable external static pressure levels.

## ADG ECO PLUS 140PH - static pressure curves

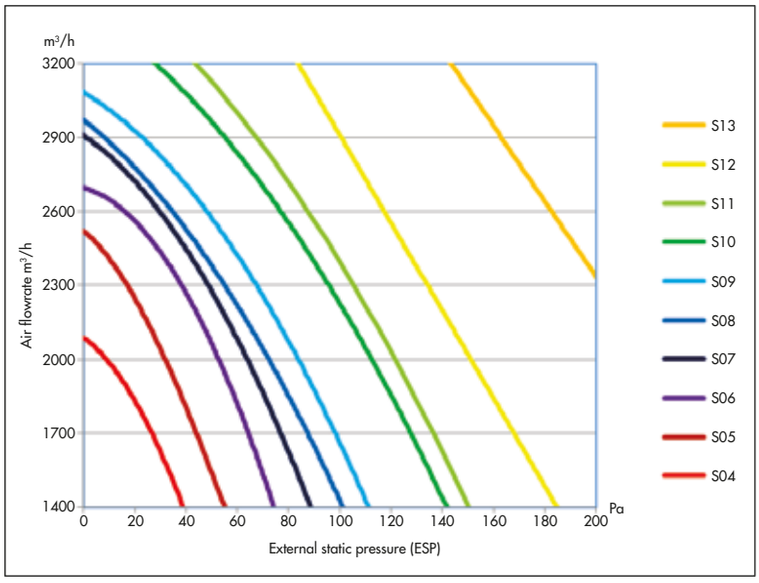



| External static pressure | Turbo speed | High | Medium | Low |
|---|---|---|---|---|
| P1 | S05 | S03 | S02 | S01 |
| P2 | S06 | S04 | S03 | S02 |
| P3 | S07 | S05 | S04 | S03 |
| P4 | S08 | S06 | S05 | S04 |
| **P5*** | **S09** | **S07** | **S06** | **S05** |
| P6 | S10 | S08 | S07 | S06 |
| P7 | S11 | S09 | S08 | S07 |
| P8 | S12 | S10 | S09 | S08 |
| P9 | S13 | S11 | S10 | S09 |

* Default static pressure level

The wired controller can be used to change the external static pressure (ESP) to turbo, high, medium and low fan speeds. 9 are the adjustable external static pressure levels.

## ADG ECO PLUS 160PH - static pressure curves

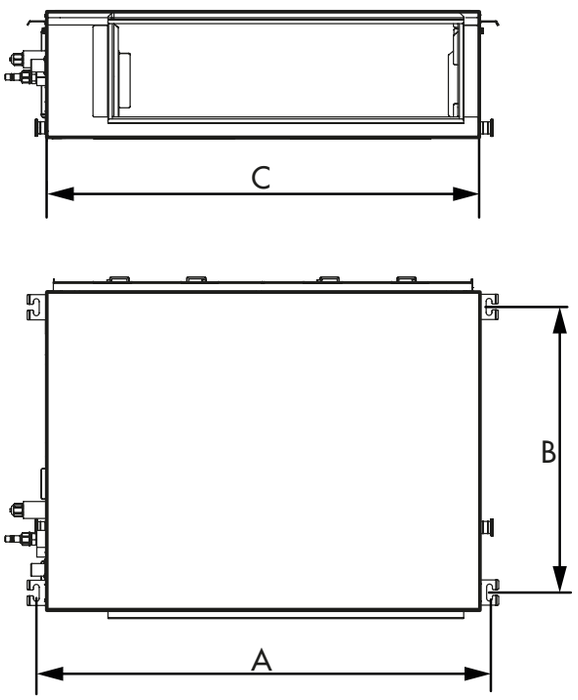


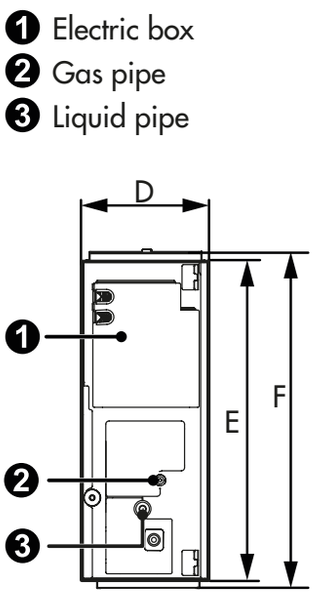

| External static pressure | Turbo speed | High | Medium | Low |
|---|---|---|---|---|
| P1 | S05 | S03 | S02 | S01 |
| P2 | S06 | S04 | S03 | S02 |
| P3 | S07 | S05 | S04 | S03 |
| P4 | S08 | S06 | S05 | S04 |
| **P5*** | **S09** | **S07** | **S06** | **S05** |
| P6 | S10 | S08 | S07 | S06 |
| P7 | S11 | S09 | S08 | S07 |
| P8 | S12 | S10 | S09 | S08 |
| P9 | S13 | S11 | S10 | S09 |

* Default static pressure level

The wired controller can be used to change the external static pressure (ESP) to turbo, high, medium and low fan speeds. 9 are the adjustable external static pressure levels.

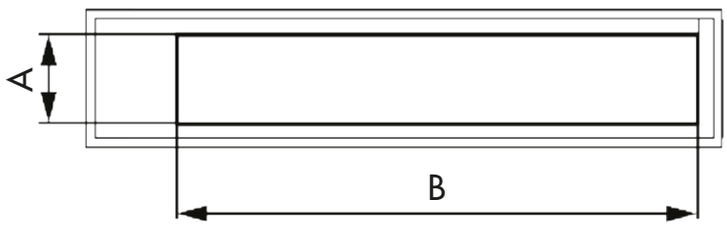
# DIMENSIONAL DRAWINGS INDOOR UNITS



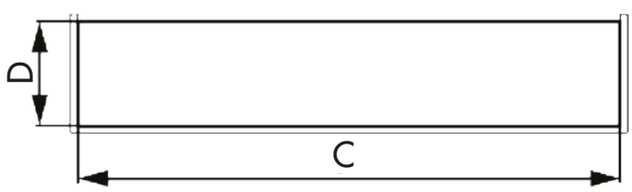




| MODEL | DIMENSIONS (mm) | | | | | |
|---|---|---|---|---|---|---|
| | A | B | C | D | E | F |
| ADG ECO PLUS 71PH | 942 | 590 | 900 | 260 | 655 | 692 |
| ADG ECO PLUS 85PH | | | | | | |
| ADG ECO PLUS 100PH | 1381 | 585 | 1340 | 260 | 655 | 697 |
| ADG ECO PLUS 140PH | 1440 | 500 | 1400 | 300 | 700 | 754 |
| ADG ECO PLUS 160PH | | | | | | |

# DIMENSIONAL DRAWINGS SUPPLY AIR OUTLET/RETURN AIR INLET



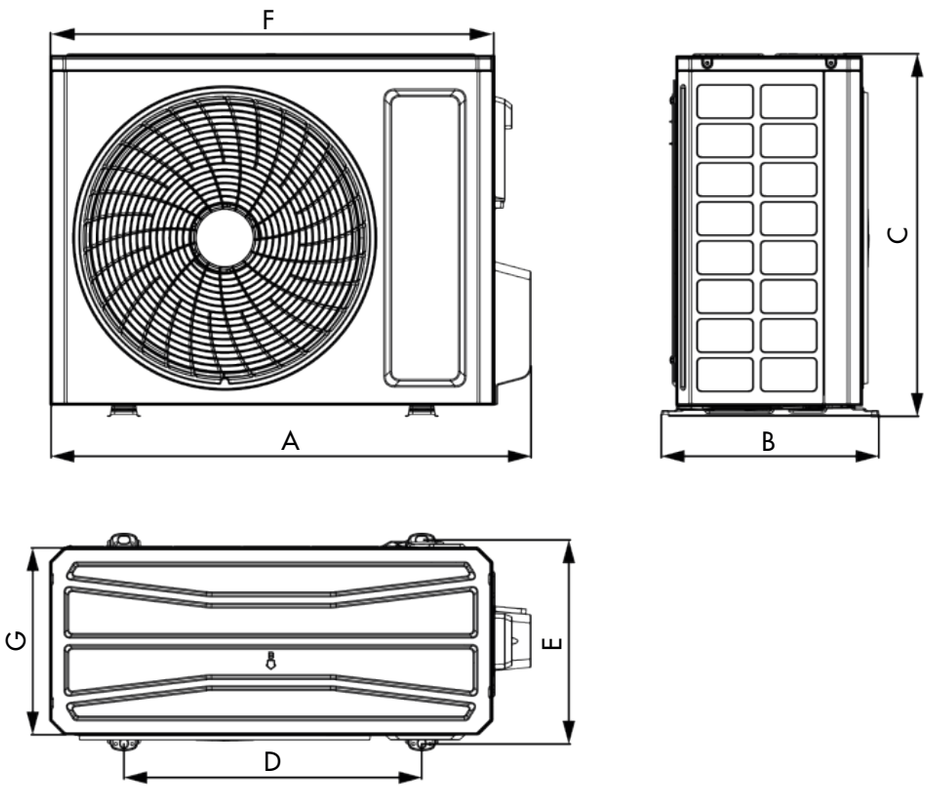

Supply air outlet




Return air inlet

| MODEL | SUPPLY AIR OUTLET | | RETURN AIR INLET | |
|---|---|---|---|---|
| | H | I | L | M |
| **ADG ECO PLUS 71PH** | 215 | 740 | 871 | 234 |
| **ADG ECO PLUS 85PH** | 215 | 740 | 871 | 234 |
| **ADG ECO PLUS 100PH** | 215 | 1153 | 1188 | 220 |
| **ADG ECO PLUS 140PH** | 197 | 1151 | 1362 | 264 |
| **ADG ECO PLUS 160PH** | 197 | 1151 | 1362 | 264 |

# DIMENSIONAL DRAWING OUTDOOR UNITS




| MODEL | DIMENSIONS (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G |
| **AEG ECO PLUS 71PIH** | 958 | 402 | 660 | 570 | 371 | 889 | 340 |
| **AEG ECO PLUS 85PIH** | 958 | 402 | 660 | 570 | 371 | 889 | 340 |
| **AEG ECO PLUS 100PIH** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 100PIH3** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 140PIH** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 140PIH3** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 160PIH3** | 1020 | 427 | 960 | 755 | 396 | 990 | 370 |

# NOTES

# FLOOR/CEILING

# FLOOR/CEILING

optional

(Standard)
Infrared remote controller

(Optional)
Wired controller with WiFi

- Floor or ceiling units for light commercial/industrial applications
- Suitable for shops, offices, meeting rooms, hotels, restaurants, clubs, gyms and open space areas
- Compact structure: only 235 mm of thickness
- Double flap: when the unit is turned off, the air supply can be completely closed in order to prevent the entry of dust
- The wide oscillation angle of the flap allows the flow of horizontal air delivery (ceiling application): this excludes direct air flows on people in the environment
- There are 3 exit options for the connecting pipes, to facilitate installation in any circumstances
- The design of the electrical box side does not affect the return of air and facilitates maintenance
- They are equipped with a double room temperature sensor for customizable comfort: possibility of selecting the return air temperature sensor on the unit or the temperature sensor on the wired control
- High energy efficiency, at all powers expressed, both in cold and in heat, especially with a view to operating 365 days a year (seasonal efficiency)
- The special closing system of the refrigerant valve prevents and excludes the risk of gas leaks due to inappropriate maintenance.
- Optional WiFi, with wired control, accessory can be ordered separately.

FAST Quick cooling and heating | Intelligent sensor | Quiet mode | 3 Sleep mode | iFeel | Cold air prevention | Double temperature sensors for air return | Intelligent defrosting | AUTO Auto mode | Filter cleaning reminder | Timer | AUTO Automatic swinging | Fixed swinging

Fan speed regulation | AUTO Automatic fan speed | Turbo Turbo fan speed | Dehumidification | 12°C Dehumidification | Save energy | Wifi WiFi and app (optional) | Centralized control | Remote control | Modbus | Dry contact | Access control | Dual wired controllers

Programmable wired controller | 8°C 8°C heating | Auto restart memory | Auto diagnosis | Ambient temperature control | System parameters inquiry | Historical errors inquiry

A++ Cooling  A+ Heating

## TECHNICAL DATA MATCHING WITH FLOOR CEILING UNITS

| Indoor unit model | | ACG ECO PLUS 35PH | | ACG ECO PLUS 50PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 35PIH** | | **AEG ECO PLUS 50PIH** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 3.50 (0.90-4.00) | 4.00 (0.90-4.50) | 5.30 (1.60-5.50) | 5.60 (1.60-6.10) |
| | BTU/h | 11900 | 13600 | 18000 | 19100 |
| EER/COP (EN14511) | | 3.80 | 4.30 | 3.40 | 3.90 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 3.80 | 4.30 | 5.3 | 3.9 |
| Seasonal efficiency ratio (SEER/SCOP (Average)) (EN14825)* | | 7.2 | 4.1 | 6.5 | 4.2 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 170 | 1059 | 285 | 1300 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 650-580-500-400 | | 900-800-700-600 | |
| Dehumidification | l/h | 1.1 | | 1.7 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 39-36-32-28 | | 41-40-38-36 | |
| Sound pressure Outdoor (h.) | dB(A) | 48 | | 59 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 49-46-42-38 | | 59-57-54-51 | |
| Sound power Outdoor (h.) | dB(A) | 56 | | 65 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 220-240~/1/50/60 | |
| Power input | kW | 0.92 | 0.93 | 1.56 | 1.44 |
| Maximum electrical power input | kW/A | 1.30/6.00 | | 1.90/9.50 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 0.57/0.39 | | 0.75/0.51 | |
| Liquid pipe diameter | mm (") | 6.35 (1/4") | | 6.35 (1/4") | |
| Gas pipe diameter | mm (") | 9.52 (3/8") | | 12.70 (1/2") | |
| Min.max. pipe lenght with gas standard charge | m | 3-5 | | 3-5 | |
| Max. pipe lenght with additional charge | m | 30 | | 30 | |
| Additional refrigerant charge | g/m | 16 | | 16 | |
| Max. height difference (Outdoor above) | m | 15 | | 20 | |
| Max. height difference (Indoor above) | m | 15 | | 20 | |
| Indoor net dimension (H./W./D.) | mm | 665/870/235 | | 665/870/235 | |
| Outdoor net dimension (H./W./D.) | mm | 553/675/285 | | 555/745/300 | |
| Net weight Indoor/Outdoor | kg | 24/24.5 | | 25/30.5 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

# TECHNICAL DATA

| Indoor unit model | | ACG ECO PLUS 71PH | | ACG ECO PLUS 85PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 71PIH** | | **AEG ECO PLUS 85PIH** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 7.10 (2.40-7.60) | 7.70 (2.20-8.40) | 8.50 (2.90-9.00) | 8.80 (2.50-9.50) |
| | BTU/h | 24200 | 26200 | 29000 | 30000 |
| EER/COP (EN14511) | | 3.70 | 4.00 | 3.40 | 3.90 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 7.1 | 4.7 | 8.5 | 6.0 |
| Seasonal efficiency ratio (SEER/SCOP (Average)) (EN14825)* | | 7.2 | 4.3 | 6.8 | 4.5 |
| Energy efficiency class* | | A++ | A | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 345 | 1530 | 438 | 1867 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 1250-1100-1000-900 | | 1400-1300-1200-1000 | |
| Dehumidification | l/h | 2.4 | | 2.8 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 41-39-37-35 | | 46-45-43-39 | |
| Sound pressure Outdoor (h.) | dB(A) | 55 | | 57 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 54-53-50-47 | | 62-60-56-52 | |
| Sound power Outdoor (h.) | dB(A) | 69 | | 70 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 220-240~/1/50/60 | |
| Power input | kW | 2.03 | 1.95 | 2.50 | 2.25 |
| Maximum electrical power input | kW/A | 2.80/14.00 | | 3.30/15.00 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 1.5/1.01 | | 1.5/1.01 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | | 15.88 (5/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-5 | | 3-5 | |
| Max. pipe lenght with additional charge | m | 30 | | 30 | |
| Additional refrigerant charge | g/m | 20 | | 20 | |
| Max. height difference (Outdoor above) | m | 20 | | 25 | |
| Max. height difference (Indoor above) | m | 20 | | 25 | |
| Indoor net dimension (H./W./D.) | mm | 665/1200/235 | | 665/1200/235 | |
| Outdoor net dimension (H./W./D.) | mm | 660/889/340 | | 660/889/340 | |
| Net weight Indoor/Outdoor | kg | 31/41.5 | | 32/46 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard E N14825.

| Indoor unit model | | ACG ECO PLUS 100PH | | ACG ECO PLUS 100PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 100PIH** | | **AEG ECO PLUS 100PIH3** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 10.00 (3.20-11.00) | 11.50 (3.00-12.50) | 10.00 (3.20-11.00) | 11.50 (3.00-12.50) |
| | BTU/h | 34100 | 39200 | 34100 | 39200 |
| EER/COP (EN14511) | | 3.40 | 3.90 | 3.40 | 3.90 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 10.0 | 7.0 | 10.0 | 7.0 |
| Seasonal efficiency ratio (SEER/SCOP (Average)) (EN14825)* | | 6.3 | 4.2 | 6.3 | 4.2 |
| Energy efficiency class* | | A++ | A+ | A++ | A+ |
| Seasonal energy consumption (Average)* | kWh/annum | 556 | 2333 | 556 | 2333 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 1600-1500-1400-1200 | | 1600-1500-1400-1200 | |
| Dehumidification | l/h | 3.3 | | 3.3 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 48-46-45-43 | | 48-46-45-43 | |
| Sound pressure Outdoor (h.) | dB(A) | 55 | | 55 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 65-63-61-59 | | 65-63-61-59 | |
| Sound power Outdoor (h.) | dB(A) | 70 | | 70 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 380-415~/3/50/60 | |
| Power input | kW | 2.94 | 2.95 | 2.94 | 2.95 |
| Maximum electrical power input | kW/A | 4.70/21.00 | | 4.40/7.00 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 2.10/1.42 | | 2.1/1.42 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | | 15.88 (5/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 5-7 | | 5-7 | |
| Max. pipe lenght with additional charge | m | 75 | | 75 | |
| Additional refrigerant charge | g/m | 20 | | 20 | |
| Max. height difference (Outdoor above) | m | 30 | | 30 | |
| Max. height difference (Indoor above) | m | 30 | | 30 | |
| Indoor net dimension (H./W./D.) | mm | 665/1200/235 | | 665/1200/235 | |
| Outdoor net dimension (H./W./D.) | mm | 820/940/370 | | 820/940/370 | |
| Net weight Indoor/Outdoor | kg | 32/65 | | 32/75 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

*Data declared in compliance with EU Regulation no. 206/2012, as regards to Ecodesign requirements for air conditioners and comfort fans, and EU Regulation no. 626/2011, concerning the energy labelling of air conditioners, and tested according to standard EN14825.

# TECHNICAL DATA

| Indoor unit model | | ACG ECO PLUS 140PH | | ACG ECO PLUS 140PH | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 140PIH** | | **AEG ECO PLUS 140PIH3** | |
| | Units | Cooling | Heating | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 13.40 (4.00-14.20) | 15.50 (3.90-16.00) | 13.40 (4.00-14.20) | 15.50 (3.90-16.00) |
| | BTU/h | 45700 | 52800 | 45700 | 52800 |
| EER/COP (EN14511) | | 3.12 | 3.69 | 3.12 | 3.52 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | | 13.40 | 15.50 | 13.40 | 15.50 |
| Seasonal efficiency ratio (SEER/SCOP (Average)) (EN14825)* | % | 254.7 | 163.3 | 253.0 | 158.2 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 2300-2100-1800-1500 | | 2300-2100-1800-1500 | |
| Dehumidification | l/h | 3.9 | | 3.9 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 51-48-45-43 | | 51-48-45-43 | |
| Sound pressure Outdoor (h.) | dB(A) | 59 | | 59 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 67-65-63-59 | | 67-65-63-59 | |
| Sound power Outdoor (h.) | dB(A) | 70 | | 70 | |
| Power supply | V/Ph/Hz | 220-240~/1/50/60 | | 380-415~/3/50/60 | |
| Power input | kW | 4.30 | 4.20 | 4.30 | 4.40 |
| Maximum electrical power input | kW/A | 5.60/25.00 | | 5.60/11.00 | |
| Compressor type | | Rotary DC Inverter | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 2.8/1.89 | | 2.8/1.89 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | | 15.88 (5/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 7.5-9.5 | | 7.5-9.5 | |
| Max. pipe lenght with additional charge | m | 75 | | 75 | |
| Additional refrigerant charge | g/m | 35 | | 35 | |
| Max. height difference (Outdoor above) | m | 30 | | 30 | |
| Max. height difference (Indoor above) | m | 30 | | 30 | |
| Indoor net dimension (H./W./D.) | mm | 665/1570/235 | | 665/1570/235 | |
| Outdoor net dimension (H./W./D.) | mm | 820/940/370 | | 820/940/370 | |
| Net weight Indoor/Outdoor | kg | 42/73 | | 42/95 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

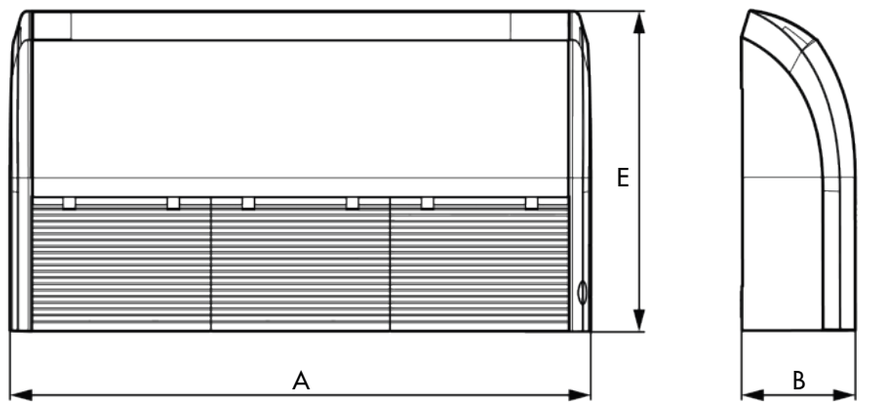
**Data declared in accordance with COMMISSION REGULATION (EU) 2016/2281 of 30 November 2016 implementing Directive 2009/125/EC of the European Parliament and of the Council establishing A137a framework for the setting of ecodesign requirements for energy-related products, with regard to ecodesign requirements for air heating products, cooling products, high temperature process chillers and fan coil units.

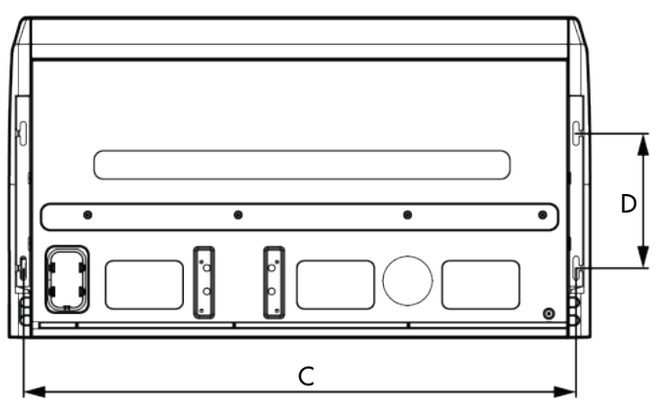
| Indoor unit model | | ACG ECO PLUS 160PH | |
|---|---|---|---|
| **Outdoor unit model** | | **AEG ECO PLUS 160PIH3** | |
| | Units | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 16.00 (4.80-17.00) | 17.00 (4.50-18.00) |
| | BTU/h | 54500 | 58000 |
| EER/COP (EN14511) | | 3.02 | 3.54 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | | 16.0 | 17.0 |
| Seasonal efficiency ratio (SEER/SCOP (Average)) (EN14825)* | % | 235.5 | 153.9 |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 2400-2200-1900-1600 | |
| Dehumidification | l/h | 4.8 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 54-49-48-44 | |
| Sound pressure Outdoor (h.) | dB(A) | 60 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 68-66-62-58 | |
| Sound power Outdoor (h.) | dB(A) | 75 | |
| Power supply | V/Ph/Hz | 380-415~/3/50/60 | |
| Power input | kW | 5.40 | 5.40 |
| Maximum electrical power input | kW/A | 6.80/12.00 | |
| Compressor type | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 3.5/2.363 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 7.5*9.5 | |
| Max. pipe lenght with additional charge | m | 75 | |
| Additional refrigerant charge | g/m | 35 | |
| Max. height difference (Outdoor above) | m | 30 | |
| Max. height difference (Indoor above) | m | 30 | |
| Indoor net dimension (H./W./D.) | mm | 665/1570/235 | |
| Outdoor net dimension (H./W./D.) | mm | 960/990/370 | |
| Net weight Indoor/Outdoor | kg | 42/94 | |

OPERATING RANGE: outdoor temperature
Cooling mode: from -20 °C to +52 °C
Heating mode: from -20 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 30 °C.

**Data declared in accordance with COMMISSION REGULATION (EU) 2016/2281 of 30 November 2016 implementing Directive 2009/125/EC of the European Parliament and of the Council establishing A137a framework for the setting of ecodesign requirements for energy-related products, with regard to ecodesign requirements for air heating products, cooling products, high temperature process chillers and fan coil units.

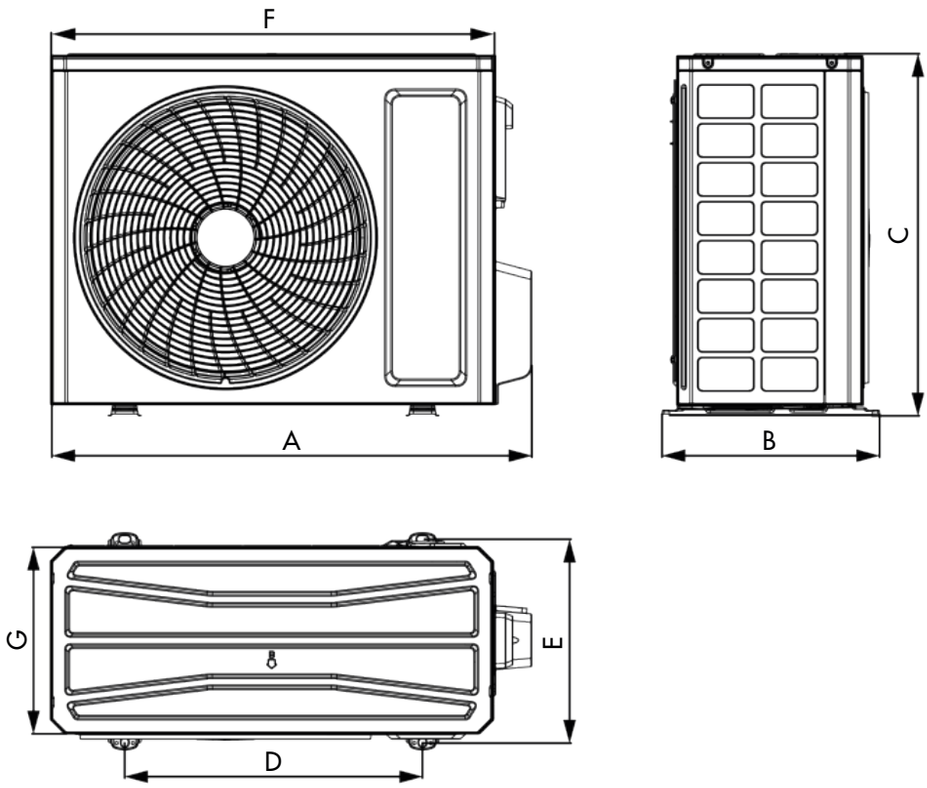
# DIMENSIONAL DRAWING INDOOR UNITS




| MODEL | DIMENSIONS (mm) | | | | |
|---|---|---|---|---|---|
| | A | B | C | D | H |
| **ACG ECO PLUS 35PH** | 870 | 235 | 812 | 280 | 665 |
| **ACG ECO PLUS 50PH** | 870 | 235 | 812 | 280 | 665 |
| **ACG ECO PLUS 71PH** | 1200 | 235 | 1142 | 280 | 665 |
| **ACG ECO PLUS 85PH** | 1200 | 235 | 1142 | 280 | 665 |
| **ACG ECO PLUS 100PH** | 1200 | 235 | 1142 | 280 | 665 |
| **ACG ECO PLUS 140PH** | 1570 | 235 | 1512 | 280 | 665 |
| **ACG ECO PLUS 160PH** | 1570 | 235 | 1512 | 280 | 665 |

# DIMENSIONAL DRAWING OUTDOOR UNITS




| MODEL | DIMENSIONS (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G |
| **AEG ECO PLUS 35PIH** | 732 | 330 | 553 | 455 | 310 | 675 | 285 |
| **AEG ECO PLUS 50PIH** | 802 | 350 | 555 | 512 | 331 | 745 | 300 |
| **AEG ECO PLUS 71PIH** | 958 | 402 | 660 | 570 | 371 | 889 | 340 |
| **AEG ECO PLUS 85PIH** | 958 | 402 | 660 | 570 | 371 | 889 | 340 |
| **AEG ECO PLUS 100PIH** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 100PIH3** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 140PIH** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 140PIH3** | 1020 | 427 | 820 | 635 | 396 | 940 | 370 |
| **AEG ECO PLUS 160PIH3** | 1020 | 427 | 960 | 755 | 396 | 990 | 370 |

# HIGH-CAPACITY DUCTED

Air conditioners with high external static pressure - R410A

# HIGH-CAPACITY DUCTED
## AIR CONDITIONERS WITH HIGH EXTERNAL STATIC PRESSURE

Wired controller

| Model | Code | Cooling capacity (kW) | Heating capacity (kW) |
|---|---|---|---|
| ABDGI 20 HW | 398700005 | 20 | 22 |
| ABDGI 20 SH3 | 398700006 | 20 | 22 |
| ABDGI 25 HW | 398700001 | 25 | 27.5 |
| ABDGI 25 SH3 | 398700002 | 25 | 27.5 |
| ABDGI 30 HW | 398700003 | 30 | 33 |
| ABDGI 30 SH3 | 398700004 | 30 | 33 |

- Ducted air conditioners with high external static pressure for the commercial/tertiary sector
- Suitable for shops, offices, meeting rooms, restaurants, clubs, gymnasiums and open-space areas
- High energy efficiency, in both cooling and heating mode, especially when used year-round (seasonal efficiency) thanks to the motors all of the DC inverter type, for maximum comfort and low consumption
- Advanced torque control technology: adopts the optimised control principle for generating the maximum torque delivered with minimum consumption and reducing the loss of the motor winding and the smart power module for improved energy efficiency
- High nominal external static pressure (120 Pa), adjustable to between 0 and 250 Pa, in manual or automatic mode: this is a very important feature for applications requiring a very long air launch
- 9 static pressure levels available, depending on the installation
- The combination with a wired controller allows for optimising the static pressure in relation to the various technical installation requirements
- 3 selectable fan speeds
- Equipped with a signalling system for filter cleaning: monitors changes in the motor's current draw along with the rotation speed to determine whether the filter needs servicing
- CAN Bus communication: the CAN communication protocol considerably improves the anti-interference capacity, controls the indoor unit precisely and improves the system's efficiency. The conventional communication wire can be used to increase the project's installation flexibility
- Considerable pipe length and large height difference between the units; the pipe connecting the indoor and outdoor units can be up to 70 m long and the height difference between the indoor and outdoor units can reach 30 m
- Broad operating range: the system can work constantly with outdoor temperatures between -7 °C~48 °C in cooling mode and between -15 °C~24 °C in heating mode

Auto restart memory | Intelligent defrosting | Auto diagnosis | Child lock | Low-voltage start-up | Full protection | Wide operating range | Compact design | Easy to maintenance | "Turbo" function | Sleep mode | Filter cleaning reminder

Auto X-FAN | Save energy

**REFRIGERANT GAS** R410A

# TECHNICAL DATA

| Indoor unit model | | ABDGI 20 HW (I) | | ABDGI 25 HW (I) | |
|---|---|---|---|---|---|
| **Outdoor unit model** | | **ABDGI 20 SH3 (O)** | | **ABDGI 25 SH3 (O)** | |
| | Unit | Cooling | Heating | Cooling | Heating |
| Nominal capacity* (EN14511) | kW | 20 | 22 | 25 | 27.5 |
| | BTU/h | 68200 | 75100 | 85300 | 93800 |
| EER/COP* (EN14511) | | 2.55 | 3.25 | 2.65 | 3.10 |
| Seasonal space cooling (m,s,c)/space heating (m,s,h) energy efficiency | % | 191.1 | 133.6 | 181.2 | 141.4 |
| I.U. air flowrate (H.) | $m^3/h$ | 3700 | | 4200 | |
| Dehumidification | l/h | 1.4 | | 1.8 | |
| Fan speed (I.U. / O.U.) | No. | 4/2 | | 4/2 | |
| Sound pressure I.U. (H.M.L.) | dB(A) | 52-51-50 | | 53-52-51 | |
| Sound pressure O.U. (H.) | dB(A) | 62 | | 63 | |
| Sound pressure I.U. (H.M.L.) | dB(A) | 62/61/60 | | 63-62-61 | |
| Sound pressure O.U. (H.) | dB(A) | 72 | | 73 | |
| Power supply | V/Ph/Hz | 380-415/3/50-60 | | 380-415/3/50-60 | |
| Factory external static pressure (ESP) | Pa | 120 | | 120 | |
| External static pressure (ESP) (adjustment range) | Pa | 0-250 | | 0-250 | |
| Electrical power input | kW | 7.8 | 7.0 | 9.4 | 8.9 |
| Compressor type | | Scroll Inverter | | Scroll Inverter | |
| Refrigerant type | | R410A | | R410A | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 6.4/13.36 | | 8.0/16.70 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 19.05 (3/4") | | 22 (7/8") | |
| Length of pipes with standard charge | m | 7.5 | | 7.5 | |
| Maximum length of pipes with additional charge | m | 70 | | 70 | |
| Additional charge | g/m | 60 | | 60 | |
| Maximum height difference (outdoor unit above) | m | 30 | | 30 | |
| Maximum height difference (indoor unit above) | m | 30 | | 30 | |
| Net dimensions I.U. (H./W./D.) | mm | 385/1315/760 | | 450/1520/840 | |
| Net dimensions O.U. (H./W./D.) | mm | 1430/940/320 | | 1615/940/460 | |
| Net weight I.U. / O.U. | kg | 82/120 | | 99/146 | |

OPERATING LIMITS (outdoor temperature)
Cooling: from -7 °C to +48 °C
Heating: from -15 °C to +24 °C
ROOM TEMPERATURE ADJUSTMENT RANGE: 16-30 °C.

* Nominal data tested according to EN14511 and certified by EUROVENT. Nominal cooling capacity test conditions: indoor unit 27 °C DB/19 °C WB, outdoor unit 35 °C DB; length of connecting pipe: 5 m, without height difference between the units - Nominal heat capacity test conditions: indoor unit 20 °C DB, outdoor unit 7 °C DB/6 °C WB; length of connecting pipe: 5 m, without height difference between the units - The sum of capacities of the indoor units connected must fall within the interval (50 %~135 %) of the capacity of the outdoor units. The pertinent parameters can be corrected by referring to correction table of the units' capacity. - The parameters shown above are tested on the basis of the standard length of the connecting pipe. In the actual project, the parameters must be corrected by referring to the correction of the capacities for the long connecting pipe of the units.

# DATI TECNICI

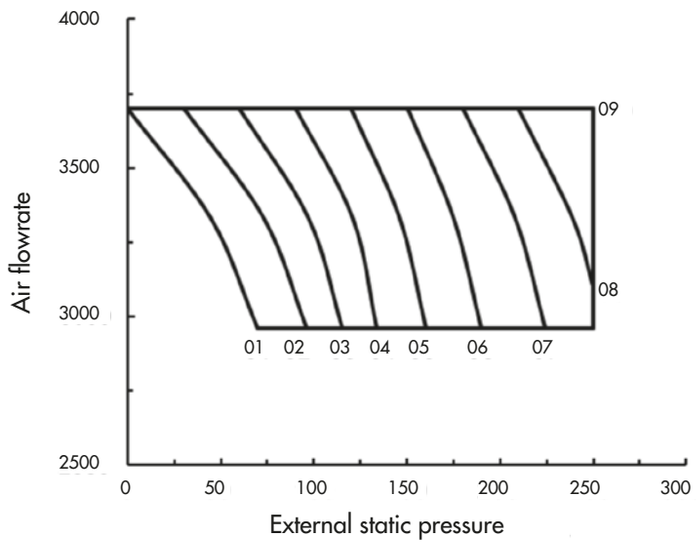
| Indoor unit model | | ABDGI 30 HW (I) | |
|---|---|---|---|
| **Outdoor unit model** | | **ABDGI 30 SH3 (O)** | |
| | Unit | Cooling | Heating |
| Nominal capacity* (EN14511) | kW | 30 | 33 |
| | BTU/h | 102400 | 112600 |
| EER/COP* (EN14511) | | 2.65 | 3.20 |
| Seasonal space cooling (m,s,c)/space heating (m,s,h) energy efficiency | % | 185.2 | 133.2 |
| I.U. air flowrate (H.) | $m^3/h$ | 5200 | |
| Dehumidification | l/h | 2.0 | |
| Fan speed (I.U. / O.U.) | No. | 4/2 | |
| Sound pressure I.U. (H.M.L.) | dB(A) | 55-54-53 | |
| Sound pressure O.U. (H.) | dB(A) | 65 | |
| Sound pressure I.U. (H.M.L.) | dB(A) | 65-64-63 | |
| Sound pressure O.U. (H.) | dB(A) | 75 | |
| Electrical power supply | V/Ph/Hz | 380–415/3/50–60 | |
| Factory external static pressure (ESP) | Pa | 120 | |
| External static pressure (ESP) (adjustment range) | Pa | 0–250 | |
| Electrical power input | kW | 11.3 | 10.3 |
| Compressor type | | Scroll Inverter | |
| Refrigerant type | | R410A | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 9.5/19.84 | |
| Liquid pipe diameter | mm (") | 12.7 (1/2") | |
| Gas pipe diameter | mm (") | 25.4 (1") | |
| Length of pipes with standard charge | m | 7.5 | |
| Maximum length of pipes with additional charge | m | 70 | |
| Additional charge | g/m | 120 | |
| Maximum height difference (outdoor unit above) | m | 30 | |
| Maximum height difference (indoor unit above) | m | 30 | |
| Net dimensions I.U. (H./W./D.) | mm | 450/1520/840 | |
| Net dimensions O.U. (H./W./D.) | mm | 1615/940/460 | |
| Net weight I.U. / O.U. | kg | 105/175 | |

OPERATING LIMITS (outdoor temperature)
Cooling: from -7 °C to +48 °C
Heating: from -15 °C to +24 °C
ROOM TEMPERATURE ADJUSTMENT RANGE: 16-30 °C.

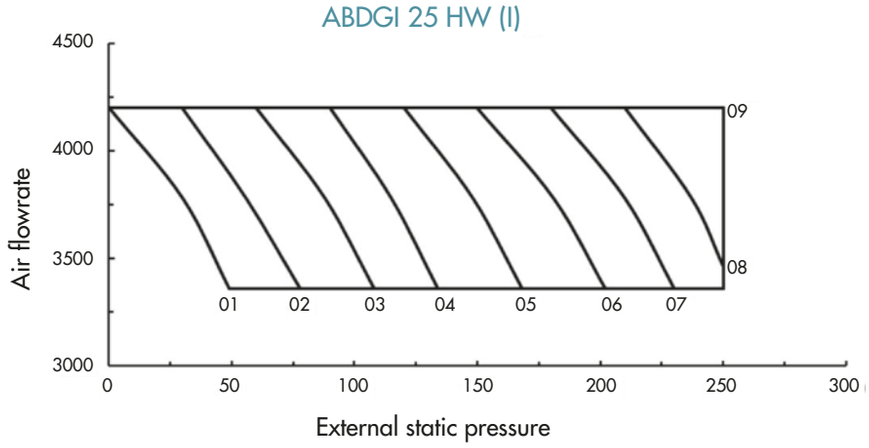
* Nominal data tested according to EN14511 and certified by EUROVENT. Nominal cooling capacity test conditions: indoor unit 27 °C DB/19 °C WB, outdoor unit 35 °C DB; length of connecting pipe: 5 m, without height difference between the units - Nominal heat capacity test conditions: indoor unit 20 °C DB, outdoor unit 7 °C DB/6 °C WB; length of connecting pipe: 5 m, without height difference between the units - The sum of capacities of the indoor units connected must fall within the interval (50 %~135 %) of the capacity of the outdoor units. The pertinent parameters can be corrected by referring to correction table of the units' capacity. - The parameters shown above are tested on the basis of the standard length of the connecting pipe. In the actual project, the parameters must be corrected by referring to the correction of the capacities for the long connecting pipe of the units.

# EXTERNAL STATIC PRESSURE CURVES

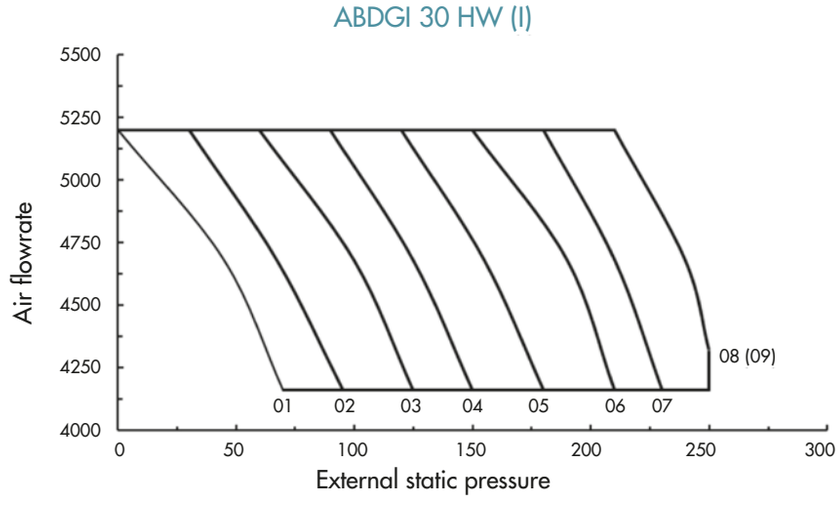
## ABDGI 20 HW (I)




## ABDGI 25 HW (I)




## ABDGI 30 HW (I)



# X3 FS

## Floor standing air conditioners

# FLOOR STANDING


(Standard)
Infrared remote controller

## MAXIMUM COMFORT IN EVERY SITUATION THANKS TO THESE FEATURES:

### 1. QUICK COOLING AND HEATING

Cooling/heating at maximum power and speed allows to reach optimal comfort in a very short time.

### 2. TURBO MODE

It allows to have maximum cold in a very short time.

### 3. ENERGY SAVING

A specific energy saving function allows to minimize consumption in cooling.

### 4. AUTOSWING

The automatic oscillation of both horizontal and vertical flaps guarantees maximum comfort for everyone in situations of conviviality.

### 5. AUTO FUNCTION

Automatically adjusts the operation of the unit based on the desired conditions.

| Code | Model |
|---|---|
| 398000773 | AFSI ECO 120 SH3 |
| 398000772 | AFSI ECO 120 HL |
| TBD | Kit WiFi opzionale |

FAST Quick cooling and heating | 3D airflow | AUTO Automatic swinging | Sleep mode | Cold air prevention | Intelligent defrosting | AUTO Auto mode | Child lock | Fan speed regulation | AUTO Automatic fan speed | Turbo Turbo fan speed

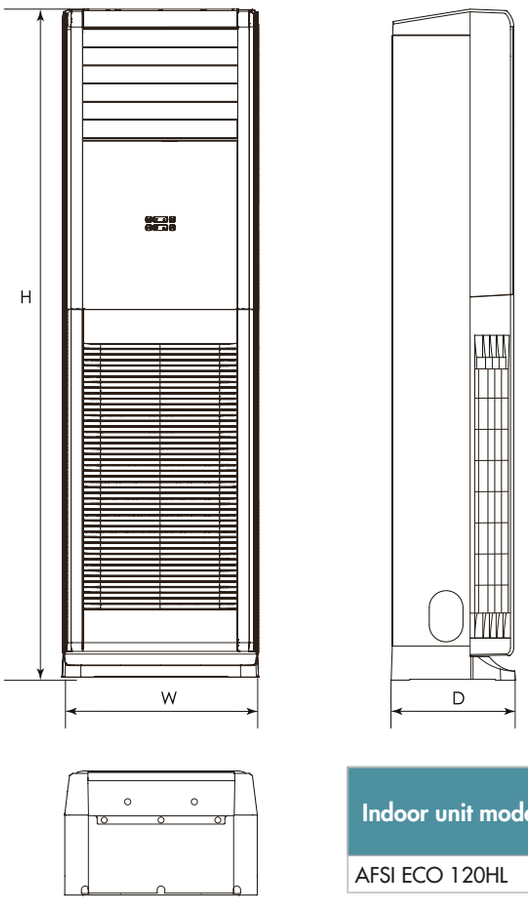
Dehumidification | Save energy | Remote control | 8°C 8°C heating | Auto restart memory | Auto diagnosis | Timer on/off | Ambient temperature control

| Indoor unit model | | AFSI ECO 120HL | |
|---|---|---|---|
| **Outdoor unit model** | | **AFSI ECO 120SH3** | |
| | Units | Cooling | Heating |
| Nominal capacity (min.-max.) (EN14511) | kW | 12.50 (3.60-13.50) | 13.50 (2.80-14.0) |
| | BTU/h | 42650 (12283-46062) | 46062 (9554-47768) |
| EER/COP (EN14511) | | 3.63 | 4.09 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825)* | kW | 12.50 | 9.20/11.5/- |
| Seasonal efficiency ratio (SEER/SCOP (Average) (EN14825)* | | 6.10 | 4.00/5.10/- |
| Air flowrate Indoor (sh.-h.-m.-l.) | $m^3/h$ | 2400-2200-2000-1800 | |
| Dehumidification | l/h | 5 | |
| Fan speeds (Indoor/Outdoor) | n° | 4/2 | |
| Sound pressure Indoor (sh.-h.-m.-l.) | dB(A) | 57-55-53-51 | |
| Sound pressure Outdoor (h.) | dB(A) | 69 | |
| Sound power Indoor (sh.-h.-m.-l.) | dB(A) | 68-66-64-62 | |
| Sound power Outdoor (h.) | dB(A) | 75 | |
| Power supply | V/Ph/Hz | 380-415/3/50 | |
| Power input | kW | 3.44 (0.40-6.60) | 3.30 (0.50-6.60) |
| Compressor type | | Rotary DC Inverter | |
| Refrigerant type/GWP | | R32/675 | |
| Refrigerant charge | kg/T.$CO_2$ eq. | 2.6/1.76 | |
| Liquid pipe diameter | mm (") | 9.52 (3/8") | |
| Gas pipe diameter | mm (") | 15.88 (5/8") | |
| Min.-max. pipe lenght with gas standard charge | m | 3-5 | |
| Max. pipe lenght with additional charge | m | 30 | |
| Additional refrigerant charge | g/m | 40 | |
| Max. height difference (Outdoor above) | m | 20 | |
| Max. height difference (Indoor above) | m | 20 | |
| Indoor net dimension (H./W./D.) | mm | 1882/587/394 | |
| Outdoor net dimension (H./W./D.) | mm | 822/1028/530 | |
| Net weight Indoor/Outdoor | kg | 57/94 | |

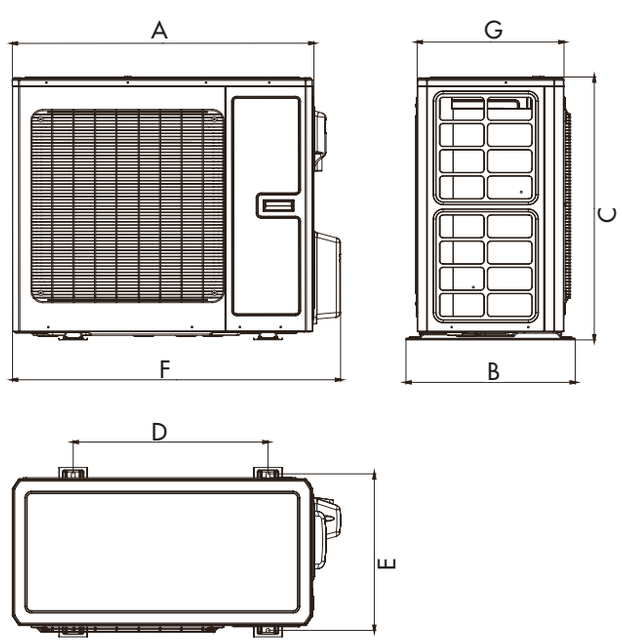
OPERATING RANGE: outdoor temperature
Cooling mode: from -15 °C to +43 °C
Heating mode: from -15 °C to +24 °C
RANGE OF INDOOR TEMPERATURE ADJUSTMENT: from 16 to 32 °C.

**Data declared in accordance with COMMISSION REGULATION (EU) 2016/2281 of 30 November 2016 implementing Directive 2009/125/EC of the European Parliament and of the Council establishing A137a framework for the setting of ecodesign requirements for energy-related products, with regard to ecodesign requirements for air heating products, cooling products, high temperature process chillers and fan coil units.

# DIMENSIONAL DRAWINGS




| Indoor unit model | DIMENSIONS (mm) | | |
|---|---|---|---|
| | W | H | D |
| AFSI ECO 120HL | 587 | 1882 | 394 |




| Outdoor unit model | DIMENSIONS (mm) | | | | | | |
|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G |
| AFSI ECO 120SH3 | 944 | 530 | 822 | 610 | 490 | 1028 | 460 |

# LOW AMBIENT

# LOW AMBIENT
## FOR TECHNICAL ROOMS WITH LOW INDOOR TEMPERATURE


- Range ideal for all applications where cooling is required even when the outdoor temperature is low (waste collection rooms, wine cellars, florist, computer rooms, ecc.).
- Full DC Inverter technology.
- Digital remote control with LCD display.
- Several air flow adjustments.
- "Turbo" function: it allows to reach the desidered temperature, in the shortest possible time.
- "Night/Eco" mode: comfort during sleep.
- "Memory" function: auto-restart after power failure.
- "iFeel" function: ensures the desired temperature in the exact place where the remote control is placed.
- "Cold Plasma" air purification system.

Cooling | Sleep mode | Timer | iFeel | "Turbo" function | Auto diagnosis | Auto restart memoty | Dehumidification | Fan speeds | Cold plasma | Full DC Inverter | Remote control | Min. temp. cooling

Double possibility of condensate drain connection

**A++** Cooling

| MODEL | | ARGO LOW AMBIENT | |
|---|---|---|---|
| Indoor unit model | | AWIBS9 | AWICS19 |
| Outdoor unit model | | AEI1G40LL | |
| | Units | Cooling | Cooling |
| Nominal capacity (EN14511) | kW | 2.6 | 3.6 |
| EER/COP (EN14511) | | 2.28 | 2.27 |
| Design Load (Pdesign c/Pdesign h) (Average) (EN14825) | kW | 3.7 | 4.6 |
| Seasonal efficiency ratio (SEER/SCOP (Average)) (EN14825) | | 6.1 | 6.1 |
| Energy efficiency class | | A++ | A++ |
| Annual energy consumption | kWh/annum | 209 | 263 |
| Air flowrate indoor unit (l.-m.-h.) | $m^3/h$ | 520/610/720 | 850/950/1100 |
| Air flowrate outdoor unit (l.-h.) | $m^3/h$ | 590/1900 | |
| Indoor unit sound pressure level (l.-m.-h.) at 2 m dist | dB(A) | 39/43/48 | 42/45/51 |
| Outdoor unit sound pressure level (h.) at 4 m dist. | dB(A) | 45 | |
| Indoor unit sound power level (h.) | dB(A) | 57 | 60 |
| Outdoor unit sound power level (h.) | dB(A) | 58 | |
| Power supply | V/Ph/Hz | 220-240~/1/50 V | |
| Max eletric input | (A) | 7.8 | |
| Max. tubing lenght with standard charge | m | 7.5 | |
| Max. tubing lenght with additional charge | m | 20 | |
| Refrigerant type/GWP/standard refrigerant charge | kg | R410A/2088/1 | |
| Additional refrigerant charge > 7.5 m | g/m | 15 | 20 |
| Max. height difference outdoor/indoor units | m | 10 | |
| Liquid gas pipe diameter (1) | Inches | 1/4"-3/8" | 1/4"-1/2" |
| Net dimension indoor unit (H./W./D.) | mm | 307/1013/221 | 329/1122/247 |
| Net dimension outdoor unit (H./W./D.) | mm | 630/895/345 | |
| Net weight Indoor/Outdoor unit | kg | 13.5/54 | 16.5/54 |
| Min./max. outdoor temperature | | -15 °C/+43 °C | |
| Min./max. indoor temperature | | 12 °C DB (9 °C WB)/32 °C DB (23 °C WB) | |

(1) Adaptors
(2) Electrical connection: see installation instructions. With the hygrothermostat: the refrigeration unit and the electric resistances can work at the same time. Installation instructions can be downloaded from our website.

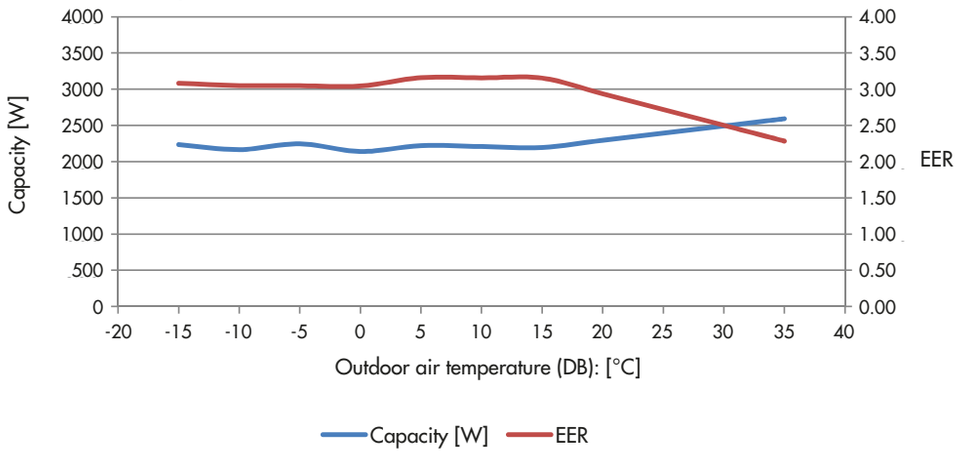
Nominal conditions:
Indoor air temperature 12 °C (DB)/9 °C (WB)
Outdoor air temperature 35 °C (DB)

Note:
DB = dry bulb
WB = wet bulb

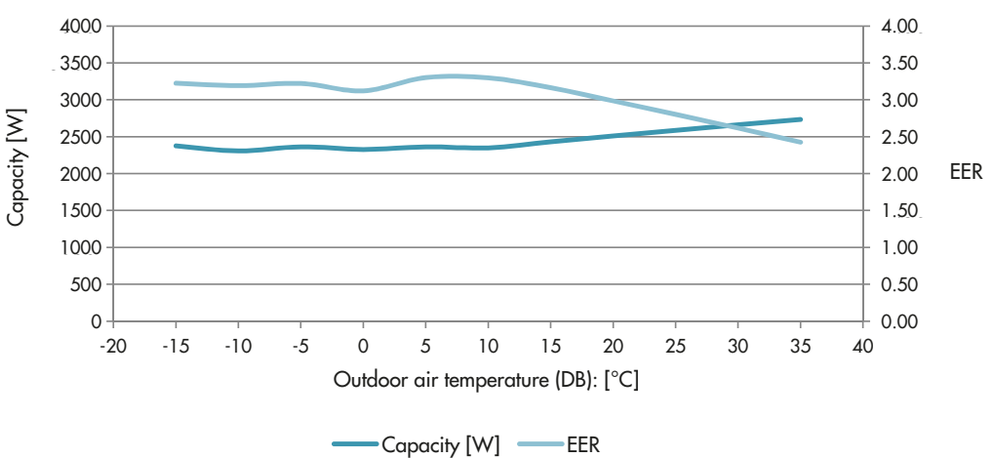
# PERFORMANCE CURVES

## AEI1G40LL/AWIBS19

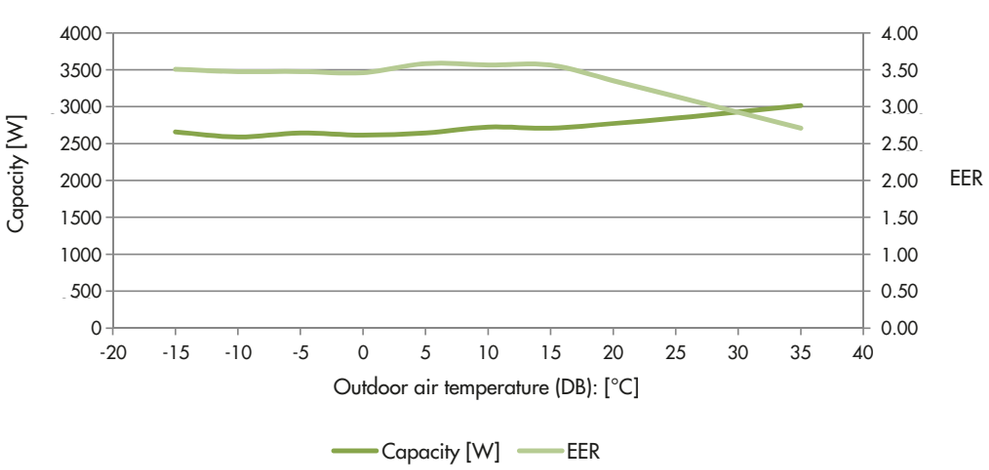
### Indoor air temperature (DB): 12 °C




### Indoor air temperature (DB): 14 °C



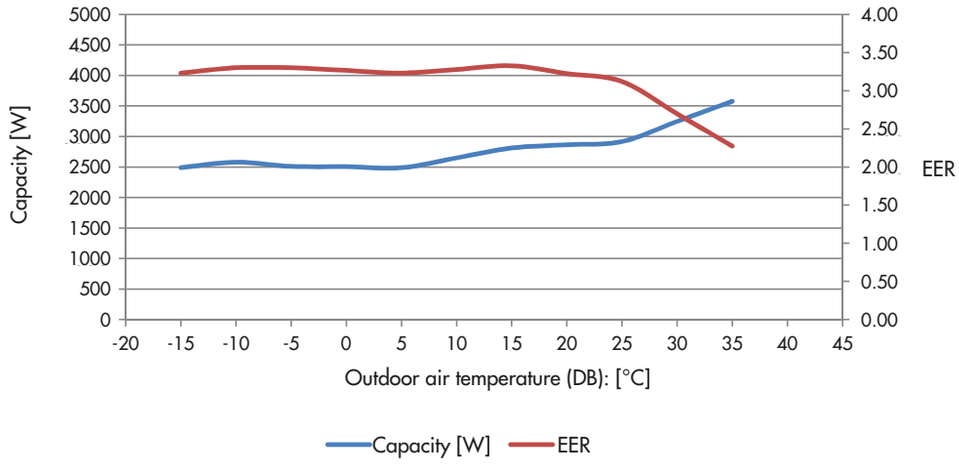

### Indoor air temperature (DB): 18 °C



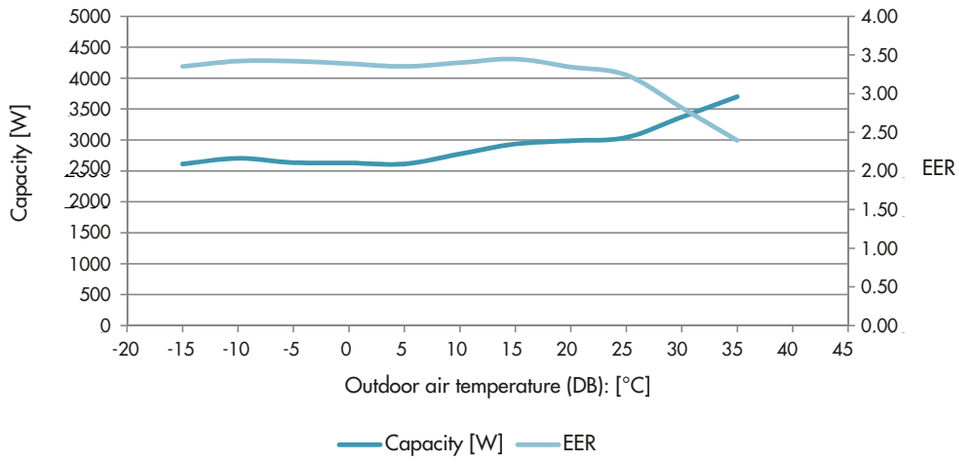
# PERFORMANCE CURVES

## AEI1G40LL/AWICS19

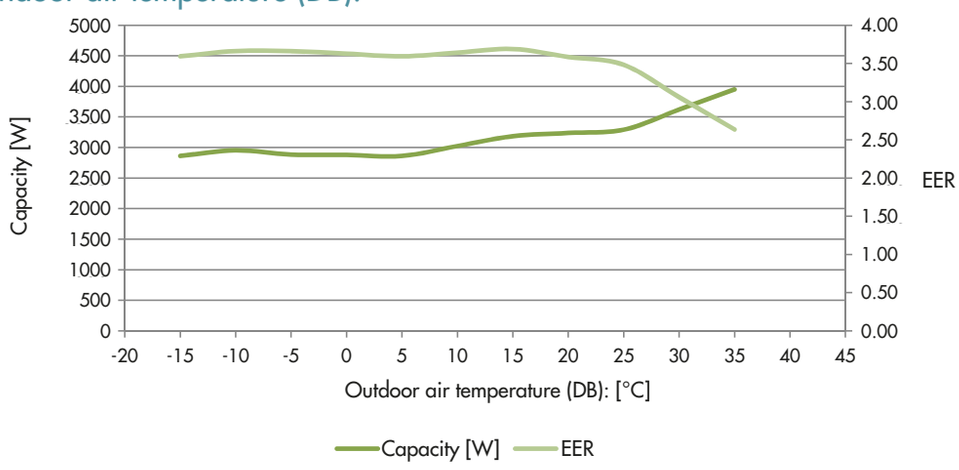
### Indoor air temperature (DB):




### Indoor air temperature (DB):




### Indoor air temperature (DB):



# WITHOUT OUTDOOR UNIT and ULISSE ECO

Argo Apollo

Argo DD

Argo Ulisse Eco

# APOLLO

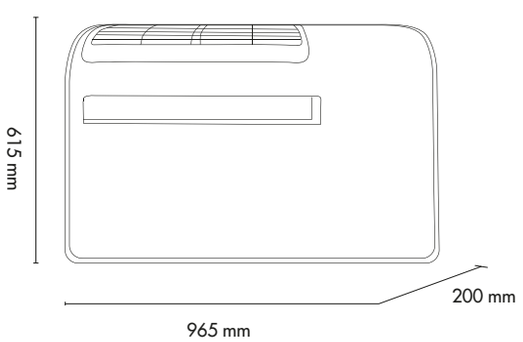
## AIR CONDITIONER WITHOUT OUTDOOR UNIT

### APOLLO 12HP and APOLLO 10SC

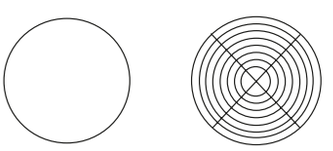
- Ideal for buildings with urban planning constraints.
- 4 in 1: cooling, heating, dehumidification, fan.
- R32, gas with a low impact on global warming.
- DC Inverter technology.
- Integrated WiFi for remote control of functions.

APOLLO 12HP


## DIMENSIONAL DATA




Digital remote control with LCD screen



Two holes in the perimeter wall, 200 mm diameter, minimal aesthetic impact

| Code | Model | *Cooling capacity [kW] | EER | *Heating capacity [kW] | COP |
|---|---|---|---|---|---|
| 398000761 | APOLLO12HP | 2.35 | 2.62 | 2.36 | 3.10 |
| 398000763 | APOLLO10SC | 2.04 | 2.61 | | - |

Performances related to (EN14511):
* Cooling capacity: Outdoor air temperature 35 °C, Indoor air temperature 27 °C
Heating capacity: Outdoor air temperature 7 °C, Indoor air temperature 20 °C

| Code | Accessorio modello |
|---|---|
| 398100689 | Installation kit for 160 mm hole installation |

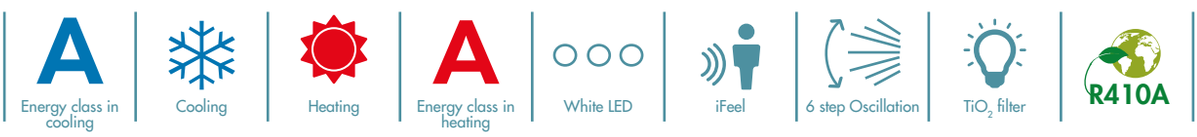
# DD

## AIR CONDITIONER WITHOUT OUTDOOR UNIT

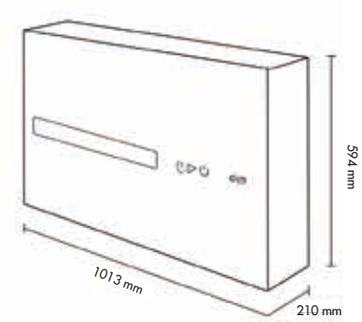
### DD ON/OFF and DD FULL DC INVERTER

- Refined design, high quality materials.
- 5 in 1: heat pump and air conditioner with dehumidification, purification and fan functions.
- Ideal for buildings with urban constraints.
- Flexible installation: low or high wall.
- Special titanium dioxide filter ($TiO_2$ filter).
- Version with methacrylate or aluminium painted panel.

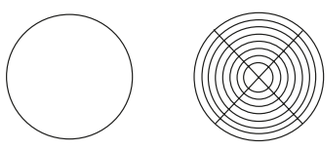





## DIMENSIONAL DATA




Soft touch remote controller, to be ordered separately



Two holes in the perimeter wall, 160 mm diameter, minimal aesthetic impact

| Code | Model | *Cooling capacity nom. (min.-max.) [kW] | EER | *Heating capacity [kW] | COP |
|---|---|---|---|---|---|
| 397002947 | DD ON/OFF | 2.30 | 2.70 | 2.30 | 3.10 |
| 397002948 | DD DCI Full DC Inverter | 2.3 (1.1 - 2.7) | 2.70 | 2.3 (1.1 - 2.7) | 3.10 |
| 397002953 | DD DCI ALUMINIUM Full DC Inverter | 2.3 (1.1 - 2.7) | 2.70 | 2.3 (1.1 - 2.7) | 3.10 |

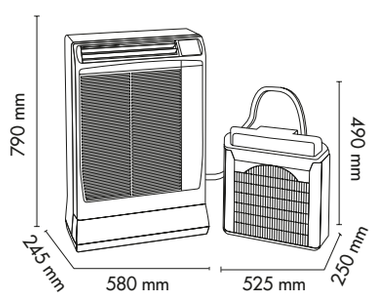
Performances related to (EN14511):
* Cooling capacity: Outdoor air temperature 35 °C, Indoor air temperature 27 °C
Heating capacity: Outdoor air temperature 7 °C, Indoor air temperature 20 °C

# ULISSE ECO

## CONSOLE SPLIT


- Just 24 cm depth, this special air conditioner is equipped with the Full DC Inverter technology of iSERIES.
- Thanks to the special Aeroquip quick connection certified for R32, it doesn't require the intervention of an installer for its installation or its transfer.
- The condensate is vaporized through the case positioned outside, so it is not necessary to drain the condensate.
- Equipped with an efficient Twin Rotary Inverter compressor, Ulisse Eco is particularly silent thanks to suitably selected components.
- The new soft-touch remote controller, with an innovative concept, adds important features to the unit.
- Also available with integrated WiFi and dedicated App.


## DIMENSIONAL DATA




Soft touch remote controller supplied with the unit

| Code | Model | *Max Cooling capacity [kW] | SEER |
|---|---|---|---|
| 397028967 | ULISSE ECO - FULL DC Inverter air conditioner using R32 - infrared remote controller with built-in temperature sensor - refrigeration pipe length 1.8 m | 4.00 | 5.2 |
| 397028973 | ULISSE ECO WiFi - FULL DC Inverter air conditioner using R32 - infrared remote controller with built-in temperature sensor - refrigeration pipe length 1.8 m - WiFi integrato | 4.00 | 5.2 |
| 387027191 | Ulisse Bracket kit | - | - |
| 397016929 | 2 meter pipe extension kit | - | - |
| 397016930 | 4 meter pipe extension kit | - | - |

* Performance related to cooling capacity: Outdoor air temperature 35 °C, Indoor air temperature 27 °C


ULISSE

702022001 - 04/2022

improve your life

www.tpiab.com



Argo is a brand of Argoclima S.p.A., a leading European company in climate control, heating and air treatment.