

## PRODUCT SELECTION DATA



Comfort module with two-zone kit



Single-zone comfort module

- Compact comfort module
- DHW management possibility
- Multi zone option control
  - Easy installation

# Comfort Module Range for Monobloc Heat Pumps

## 80HMA

# 80HMA

**Nominal heating capacity 4-20 kW**

**Nominal cooling capacity 4-20 kW**

The new comfort module range for monobloc inverter heat pumps offers a complete heating system that is easy to design and install.

System controls ensure optimised energy efficiency, using auto-adaptative weather compensation control that constantly monitors the indoor and outdoor climate to optimise the heat pump energy efficiency and deliver perfect indoor climate.

With its improved aesthetics and compactness, combined with new features and options, the new comfort module sets new standards in energy savings and comfort. Using the two-zone kit, two different terminal unit types or two independent comfort zones can be closely monitored. Domestic hot water production is made easy and can be interfaced with thermal solar panels.

## Features

- Reversible operation.
- Electric booster heater or boiler back-up.
- Auto-adaptative weather compensation control.
- Dual comfort zone with independent control of two terminal unit types.
- Domestic hot water production control with possible interfacing with thermal solar panels.
- Easy-to-read user interface with weekly scheduling and quick-access settings: comfort, eco and night mode.
- Swimming pool heating control (optional)
- Heat exchanger to create primary and secondary water loop when using frost protection (optional field installation in comfort module)
- Variable speed circulator with high head pressure (optional)

## New user interface

- The comfort module has an easy-to-use user interface with easy-to-read LCD screen. It provides enhanced control capability for maximised performance, reliability and indoor comfort and has extended programming features such as weekly scheduling. The sleek contemporary design blends in with any room decor.



## Two-zone kit

- The new design facilitates the installation process and makes two independent comfort zones easy to control. This kit includes a hydronic disconnection collector, the necessary variable speed circulators and modulating valve. Installed together with the domestic hot water tank, the two-zone kit can integrate all accessories, such as the diverting valve and T-connection.



## Domestic hot water tank

- With or without connection to a thermal solar panel, 200 or 300-litre tank. Built-in electric heater back-up and anti-legionella protection, controlled by the comfort module, make domestic hot water readily available, safe and energy-efficient.



## Swimming pool heating control kit

- This control box, fitted with all necessary sensors and for wall-mounting next to the comfort module, controls swimming pool heating, using the heat pump. Hot water from the heat pump is sent from the space heating system to the swimming pool by controlling a diverting valve similar to the one used for domestic hot water (field supply). Swimming pool heating can be in accordance with a time schedule that defines priorities between space heating/cooling, domestic hot-water production and swimming pool heating. An field-supplied intermediate heat exchanger, fitted with the necessary circulating pumps, is mandatory to ensure that water from the swimming pool is not used for the space heating system.

## Intermediate heat exchanger

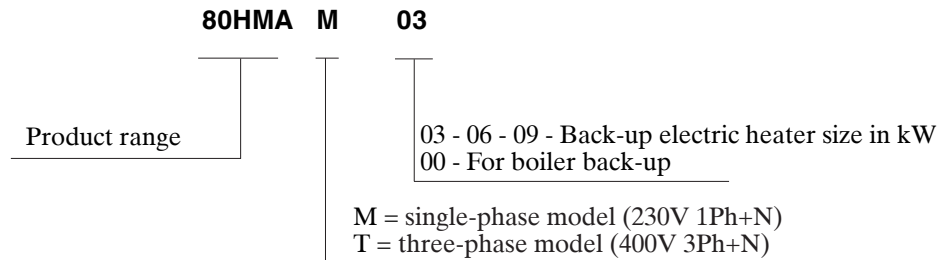
- When adding antifreeze to the water loop, this option allows limiting the use of antifreeze between heat pump and comfort module by creating a primary and secondary water loop.

## Heat pump compatibility

- All 30AW---H-- sizes are compatible with the 80HMA comfort module range. Comfort module controls can also manage up to eight 30AWH units. A parallel hydronic coupling of the unit to a tank is necessary (field supply).

## Type key

### Indoor unit (comfort module)



## Unit description

| Part number      |                                                                    |
|------------------|--------------------------------------------------------------------|
| <b>80HMA-M00</b> | Indoor unit, reversible, 1 zone, for boiler back-up                |
| <b>80HMA-M03</b> | Indoor unit, reversible, 1 zone, 3 kW 1-ph electric heater back up |
| <b>80HMA-M06</b> | Indoor unit, reversible, 1 zone, 6 kW 1-ph electric heater back up |
| <b>80HMA-T06</b> | Indoor unit, reversible, 1 zone, 6 kW 3-ph electric heater back up |
| <b>80HMA-T09</b> | Indoor unit, reversible, 1 zone, 9 kW 3-ph electric heater back up |

## Combination table, indoor and outdoor units

| Outdoor unit (heat pump) |                        | Indoor unit (comfort module) |                                                                                                |
|--------------------------|------------------------|------------------------------|------------------------------------------------------------------------------------------------|
| <b>30AWH04HC</b>         | Nominal capacity 4 kW  | <b>80HMA-M00</b>             | Reversible, 1 zone, maximum heating capacity 20 kW for boiler back-up application              |
| <b>30AWH06HC</b>         | Nominal capacity 6 kW  | <b>80HMA-M03</b>             | Reversible, 1 zone, maximum heating capacity 20 kW with 3 kW 1-phase electrical heater booster |
| <b>30AWH08HC</b>         | Nominal capacity 8 kW  | <b>80HMA-M06</b>             | Reversible, 1 zone, maximum heating capacity 20 kW with 6 kW 1-phase electrical heater booster |
| <b>30AWH12HC</b>         | Nominal capacity 12 kW | <b>80HMA-T06</b>             | Reversible, 1 zone, maximum heating capacity 20 kW with 6 kW 3-phase electrical heater booster |
| <b>30AWH15HC</b>         | Nominal capacity 15 kW | <b>80HMA-T09</b>             | Reversible, 1 zone, maximum heating capacity 20 kW with 9 kW 3-phase electrical heater booster |

**NOTE:** All 30AWH sizes are compatible with the 80HMA comfort module range. Comfort module controls can also manage up to eight 30AWH units. A parallel hydronic coupling of the unit to a tank is necessary (field supply).

# Accessories

| Part No.    | Description                                                                            | Advantages                                                                                                        | Use                           |
|-------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------|
| 33AW-CB02   | Communication kit                                                                      | To be installed in 30AWH                                                                                          | 30AW---H--                    |
| 33AW-CS3    | Additional user interface                                                              | Monitors two independent comfort zones or used together with comfort module interface                             | 80HMA, 80HMA-9001, 80HMA-9002 |
| 33AW-RAS02  | Remote outdoor sensor                                                                  | Positioned in the right place, the OAT sensor maximises comfort compared to using the condensing unit OAT sensor. | 80HMA                         |
| 60STS020E03 | Domestic hot water tank, 1 coil - 200 l                                                | Storage, 200 l of domestic hot water                                                                              | 80HMA                         |
| 60STS030E03 | Domestic hot water tank, 1 coil - 300 l                                                | Storage, 300 l of domestic hot water                                                                              | 80HMA                         |
| 60STD020E03 | Domestic hot water tank, 2 coils - 200 l                                               | Storage, 200 l of domestic hot water with thermal solar panel connection                                          | 80HMA                         |
| 60STD030E03 | Domestic hot water tank, 2 coils - 300 l                                               | Storage, 300 l of domestic hot water with thermal solar panel connection                                          | 80HMA                         |
| 80AW9023    | Domestic hot-water three-way valve and actuator                                        | Necessary to connect domestic hot water tank.                                                                     | 80HMA, 60ST, 80HMA-9002       |
| 80AW9024    | Thermal cut-out, floor heating                                                         | Stops circulating pump when supply temperature is too high                                                        | 80HMA, 80HMA-9001, 80HMA-9002 |
| 80AW9026    | Piping kit to install domestic hot-water valve and actuator (80AW9023) inside the unit | Specific DHW piping kit for the installation, used together with 80HMA-9001                                       | 30HMA-9001                    |
| 80AW9027    | Cover panel to install two-zone kit (80HMA-9001) detached from comfort module          | Hides piping and connections, if two-zone kit is installed remotely from the main comfort module.                 | 80HMA-9001                    |
| 80AW9028    | Kit to add three-way valve and actuator in second zone                                 | Necessary to include domestic hot-water three-way valve in second zone kit                                        | 80HMA-9001                    |
| 80HMA-9001  | Two-zone kit                                                                           | Allows independent control of two comfort zones                                                                   | 80HMA                         |
| 80HMA-9002  | Pool kit                                                                               | Control box with all necessary sensors required to control three-way valve to divert flow                         | 80HMA                         |
| 80HMA-9003  | Pump kit                                                                               | Necessary when available heat pump pressure is too low for the installation                                       | 80HMA                         |
| 80HMA-9004  | BPHE kit (for heat pumps up to 8 kW)                                                   | Separate heat pump loop (with glycol) from indoor loop; includes BPHE and Variable speed circulator               | 80HMA                         |
| 80HMA-9005  | BPHE kit (for heat pumps up to 16 kW)                                                  | Separate heat pump loop (with glycol) from indoor loop; includes BPHE and Variable speed circulator               | 80HMA                         |

# Physical data

| Indoor unit (comfort module)      |         | 80HMA-M00           | 80HMA-M03       | 80HMA-M06       | 80HMA-T06       | 80HMA-T09       |
|-----------------------------------|---------|---------------------|-----------------|-----------------|-----------------|-----------------|
| Number of comfort zones           |         | 1                   | 1               | 1               | 1               | 1               |
| Electric booster element          | kW      | 0                   | 3               | 6               | 6               | 9               |
| Number of auxiliary heating steps |         | 1 (external boiler) | 1               | 3               | 3               | 3               |
| Connection of back-up boiler      |         | Yes                 | No              | No              | No              | No              |
| Dimensions, H x L x D             | mm      | 800 x 450 x 320     | 800 x 450 x 320 | 800 x 450 x 320 | 800 x 450 x 320 | 800 x 450 x 320 |
| Operating weight                  | kg      | 34                  | 35              | 35              | 35              | 35              |
| Power supply                      | V-ph-Hz | 230-1-50            | 230-1-50        | 230-1-50        | 400-3-50        | 400-3-50        |
| Recommended circuit breaker size  |         | C6                  | C20             | C32             | C16             | C20             |

# Electrical data

| Comfort module 80HMA                                          |                 | M00       | M03       | M06       | T06       | T09       |
|---------------------------------------------------------------|-----------------|-----------|-----------|-----------|-----------|-----------|
| Power supply                                                  | V-ph-Hz         | 230-1N-50 | 230-1N-50 | 230-1N-50 | 400-3N-50 | 400-3N-50 |
| Voltage range                                                 | V               | 207-253   | 207-253   | 207-253   | 360-440   | 360-440   |
| Max. power consumption, board and auxiliary devices           | kW              | 1.15      | 1.15      | 1.15      | 1.15      | 1.15      |
| Board and auxiliary circuit breaker protection (not included) |                 | C6        | C6        | C6        | C6        | C6        |
| Electric heater power consumption                             | kW              | 0         | 3         | 6         | 6         | 9         |
| Electric heater circuit breaker protection (not included)     |                 | C6        | C20       | C32       | C16       | C20       |
| Max. operating current                                        | A               | 5         | 18        | 31        | 14        | 18        |
| Main power cable size                                         | mm <sup>2</sup> | 3G x 2.5  | 3G x 4    | 3G x 6    | 5G x 2.5  | 5G x 4    |
| Communication cable (FROH2R)                                  | mm <sup>2</sup> | 2 x 0.75  | 2 x 0.75  | 2 x 0.75  | 2 x 0.75  | 2 x 0.75  |
| User interface (additional or remote) cable (FROH2R)          | mm <sup>2</sup> | 4 x 0.75  | 4 x 0.75  | 4 x 0.75  | 4 x 0.75  | 4 x 0.75  |
| Booster heater power supply cable (H05VV-F)                   | mm <sup>2</sup> | 3G x 2.5  | 3G x 2.5  | 3G x 2.5  | 3G x 2.5  | 3G x 2.5  |
| Booster heater activation cable (FROH2R)                      | mm <sup>2</sup> | 2 x 1     | 2 x 1     | 2 x 1     | 2 x 1     | 2 x 1     |
| Domestic hot water sensor cable (FROH2R)                      | mm <sup>2</sup> | 2 x 0.5   | 2 x 0.5   | 2 x 0.5   | 2 x 0.5   | 2 x 0.5   |
| Remote outdoor sensor cable (FROH2R)                          | mm <sup>2</sup> | 2 x 0.5   | 2 x 0.5   | 2 x 0.5   | 2 x 0.5   | 2 x 0.5   |

Note: The heat pump data depends on the heat pump used.

# Sound levels, indoor units

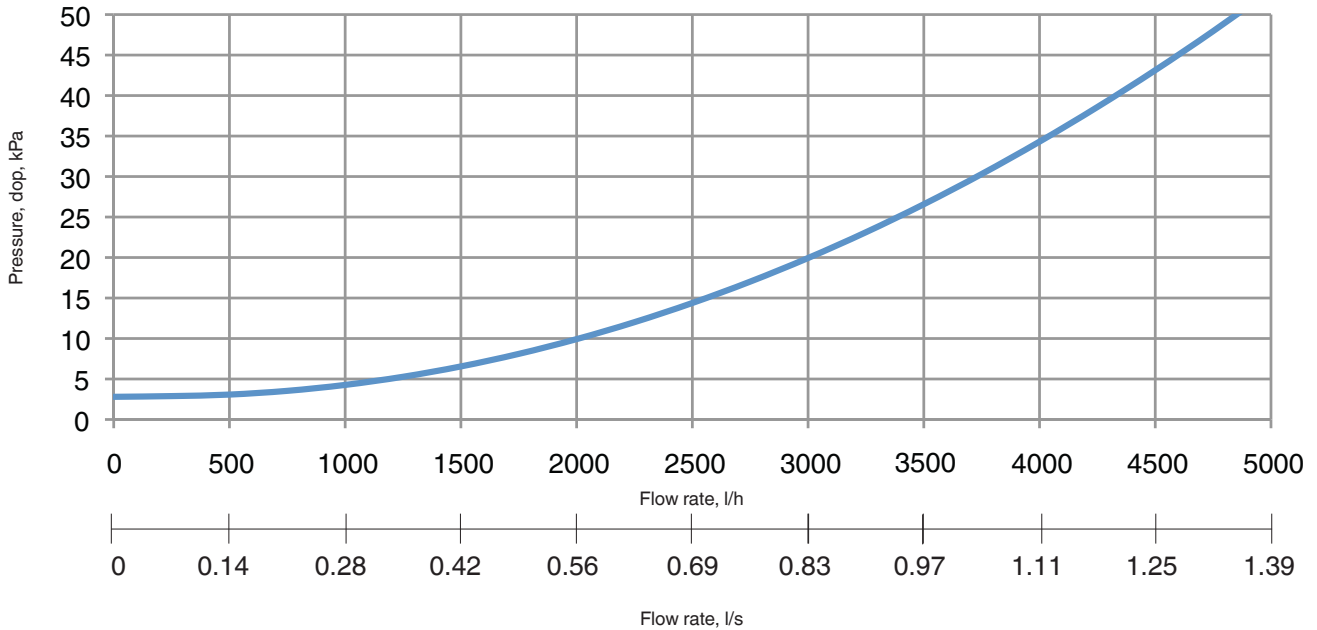
|                      |       |   |
|----------------------|-------|---|
| Sound power level    | dB(A) | 0 |
| Sound pressure level | dB(A) | 0 |

\* The comfort module has no running parts.

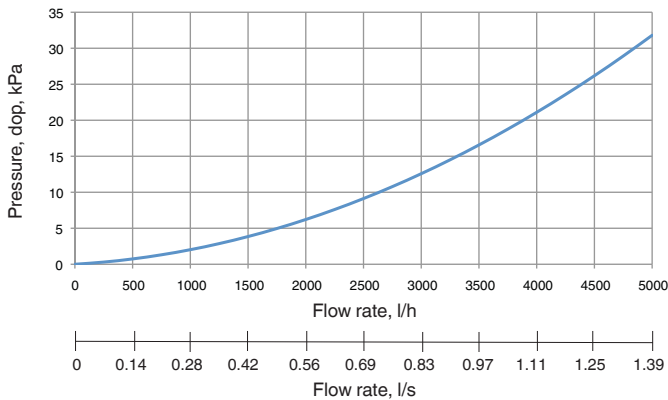
# Operating limits

| Heat pump limits           | Depends on the heat pump selected |
|----------------------------|-----------------------------------|
| Comfort module limits      |                                   |
| Indoor temperature         | 5-30°C                            |
| Water temperature, cooling | 4-18°C                            |
| Water temperature, heating | 20-80°C                           |

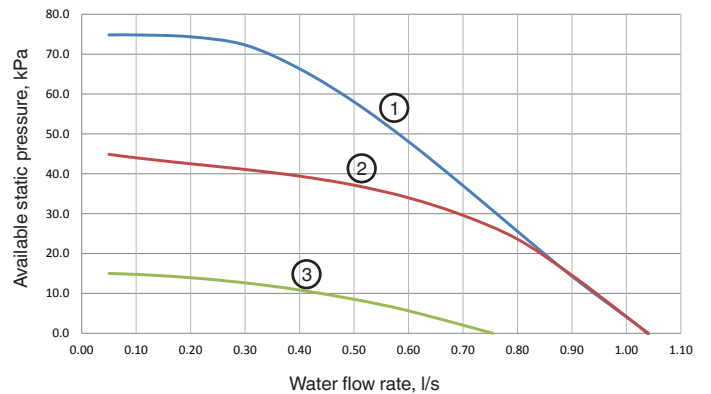
## Pressure drop, comfort module



## Pressure drop, comfort module plus pump kit



## Head pressure, comfort module plus pump kit

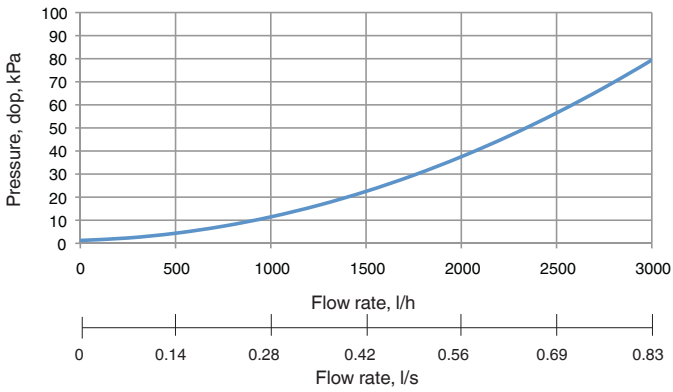


The pump kit is required when the available heat pump pressure is too low to cover the system pressure drop. The variable speed circulator in the heat pump will then be used to irrigate the comfort module buffer tank and the additional comfort module circulating pump is used to distribute the heat from the comfort module buffer tank to the terminal units.

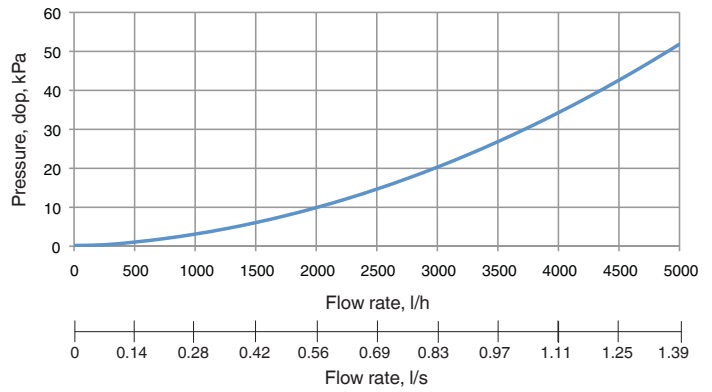
- 1 High speed ( $\Delta P-c 8$ )
- 2 Medium speed ( $\Delta P-c 4$ )
- 3 Low speed ( $\Delta P-c 1$ )

# Pressure drop, comfort module plus BPHE kit

With 8 kW BPHE kit

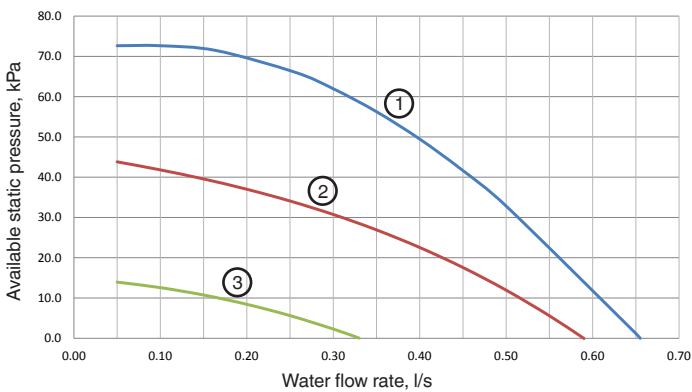


With 16 kW BPHE kit



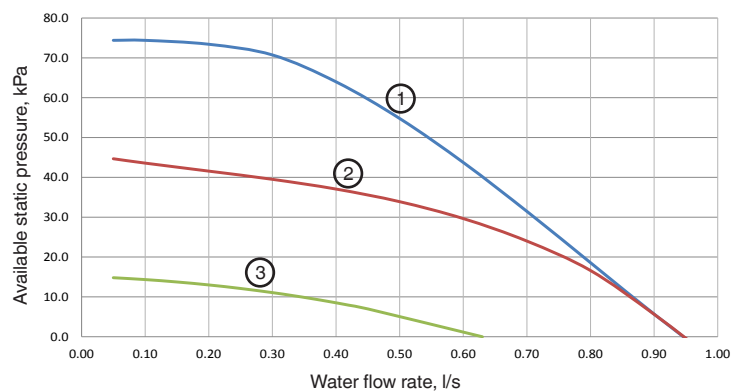
# Head pressure, comfort module plus BPHE kit

With 8 kW BPHE kit



- 1 High speed ( $\Delta P-c 8$ )
- 2 Medium speed ( $\Delta P-c 4$ )
- 3 Low speed ( $\Delta P-c 1$ )

With 16 kW BPHE kit

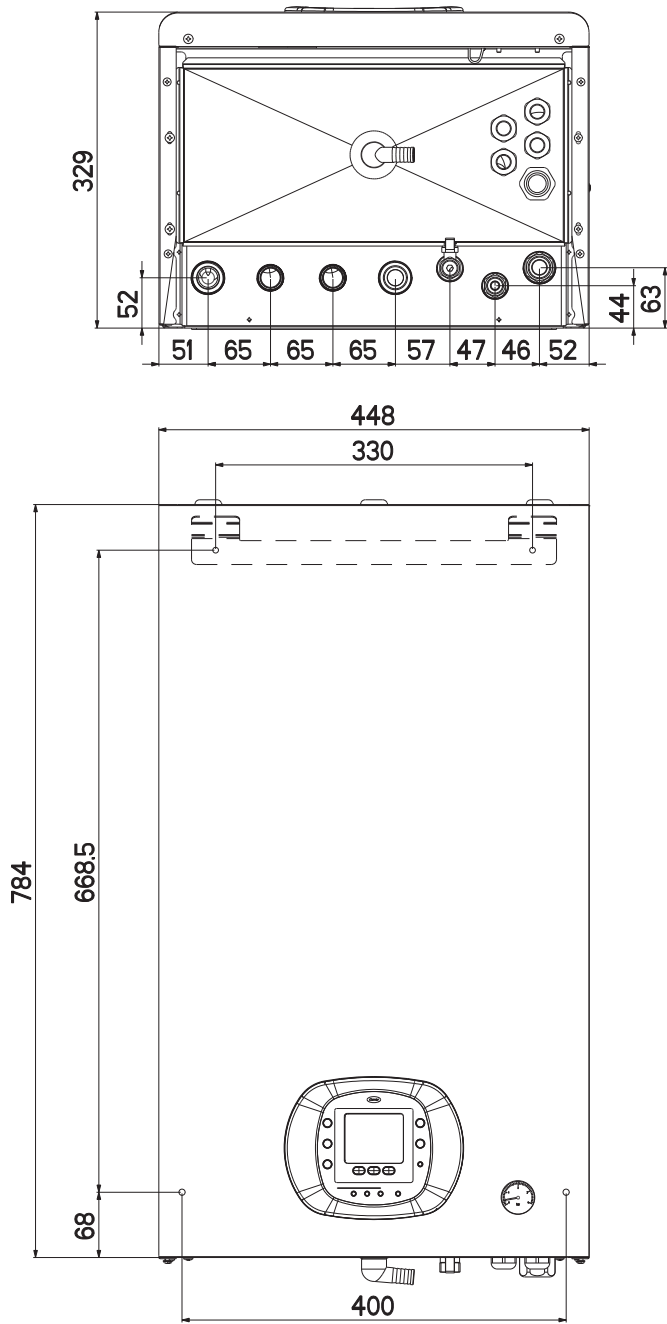


- 1 High speed ( $\Delta P-c 8$ )
- 2 Medium speed ( $\Delta P-c 4$ )
- 3 Low speed ( $\Delta P-c 1$ )

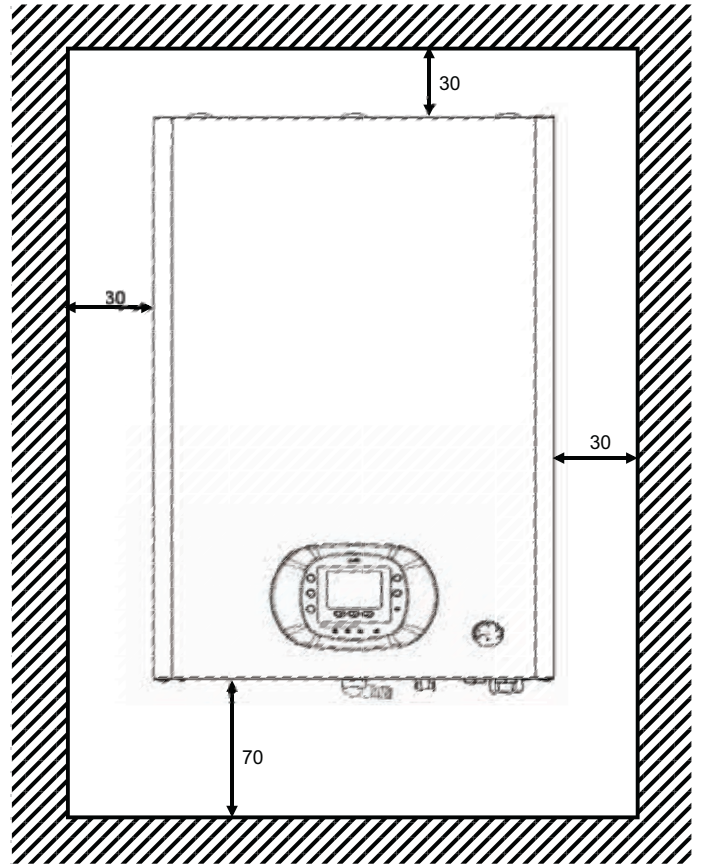
The comfort module BPHE kit includes a heat exchanger and a variable speed circulator. It creates two independent water loops, one between heat pump and comfort module buffer tank and the other between the comfort module and the terminal units. If the heat pump is used for heating only applications, this option allows limiting the use of antifreeze protection between heat pump and comfort module.

# Dimensions, comfort module

# Clearances, comfort module



Note: All dimensions are in millimetres.



# Physical data, two-zone kit

|                                                         |           |                                                                                              |
|---------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------|
| <b>Dimensions</b>                                       |           |                                                                                              |
| Unit H x L x D                                          | mm        | 485 x 450 x 330                                                                              |
| Packaging H x L x D                                     | mm        | 565 x 530 x 410                                                                              |
| <b>Unit weight</b>                                      |           |                                                                                              |
| Gross weight                                            | kg        | 22                                                                                           |
|                                                         | kg        | 27                                                                                           |
| <b>Hydronic data</b>                                    |           |                                                                                              |
| Water connections                                       | in        | 1" male                                                                                      |
| Operating water pressure                                | kPa (bar) | 100 (1)                                                                                      |
| Maximum pressure                                        | kPa (bar) | 300 (3)                                                                                      |
| <b>Hydronic components</b>                              |           |                                                                                              |
| Pump                                                    |           | Two variable speed circulators, 75 kPa static pressure                                       |
| Three-way valve                                         |           | One modulating valve, 6.3 Kv, switching time (90°) 240 seconds, 230-V, 3-point SPDT actuator |
| Collector volume                                        | l         | 1                                                                                            |
| Draining valve                                          |           | √                                                                                            |
| <b>Outside air operating range, heating and cooling</b> |           | See Comfort module                                                                           |

# Electrical data, two-zone kit

|                      |         |          |
|----------------------|---------|----------|
| <b>Power supply</b>  | V-ph-Hz | 230-1-50 |
| <b>Voltage range</b> | V       | 207-253  |
| <b>Power input</b>   | W       | 260      |

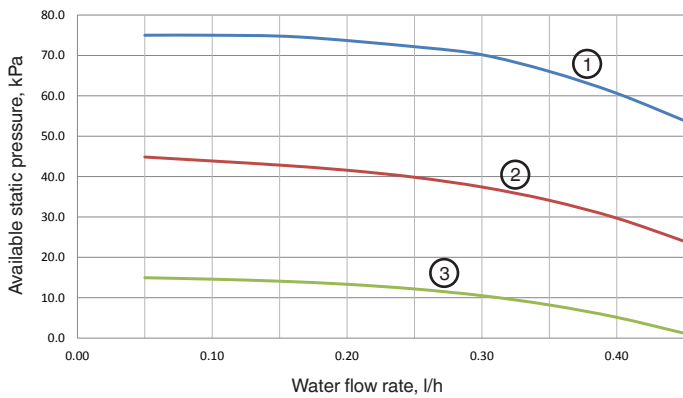
# Sound levels, two-zone kit

|                              | Without comfort module | With comfort module |
|------------------------------|------------------------|---------------------|
| <b>Sound power level</b>     | dB(A) 44               | 44                  |
| <b>Sound pressure level*</b> | dB(A) 30               | 30                  |

\* Measured at 2 m distance, in accordance with UNI EN ISO 3741.

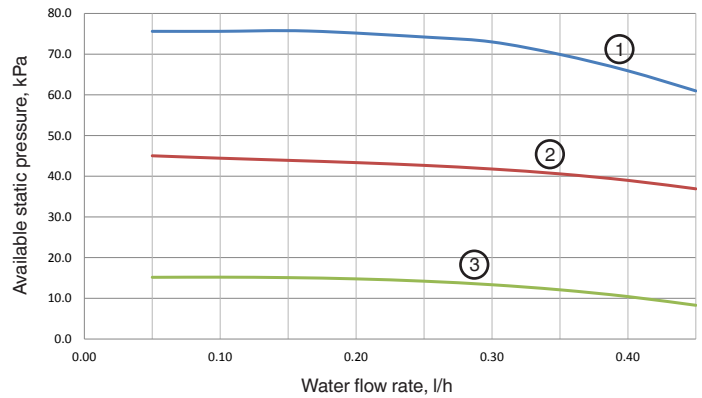
# Available static pressure, two-zone kit

## Zone with modulating valve



- 1 High speed ( $\Delta P$ -c 8)
- 2 Medium speed ( $\Delta P$ -c 4)
- 3 Low speed ( $\Delta P$ -c 1)

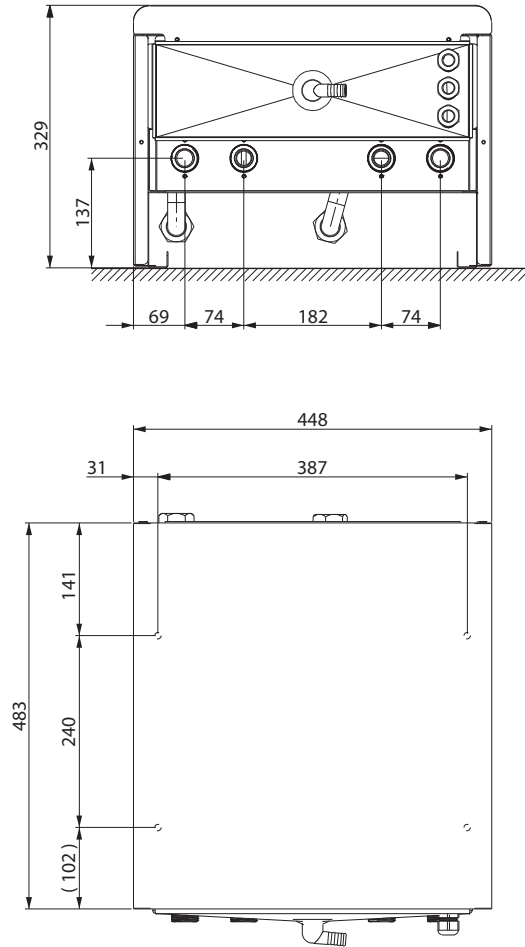
## Zone without modulating valve



- 1 High speed ( $\Delta P$ -c 8)
- 2 Medium speed ( $\Delta P$ -c 4)
- 3 Low speed ( $\Delta P$ -c 1)



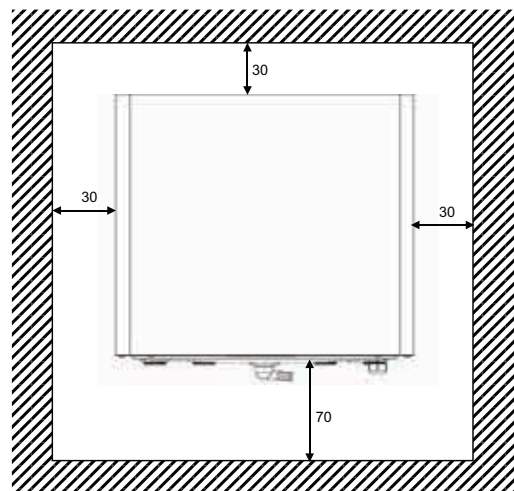
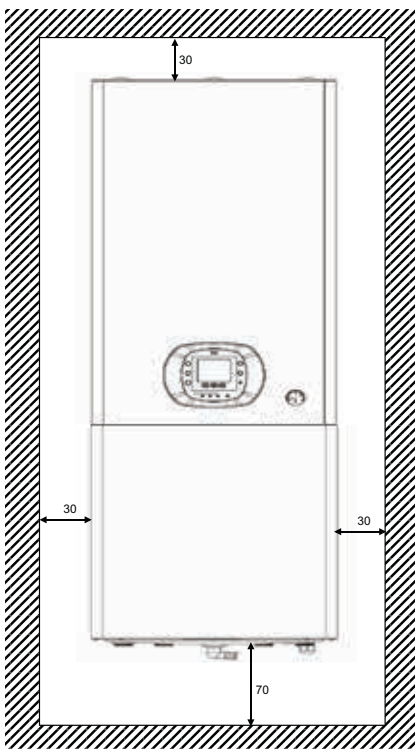
## Dimensions (mm), two-zone kit



## Clearances (mm), two-zone kit

Connected to the comfort module

Detached from the comfort module



# Physical data, domestic hot water (DHW) module

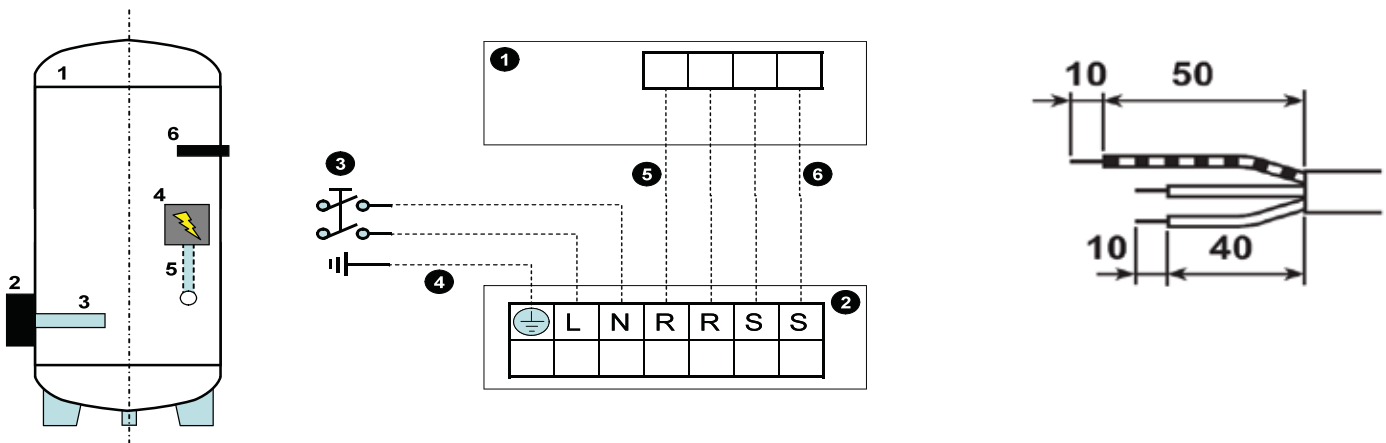
|                                            |                | 60STS 020E03      | 60STD 020E03      | 60STS 030E03      | 60STD 030E03      |
|--------------------------------------------|----------------|-------------------|-------------------|-------------------|-------------------|
| <b>Water tank size</b>                     | l              | 212               | 212               | 291               | 291               |
| <b>Number of coils</b>                     |                | 1                 | 2                 | 1                 | 2                 |
| <b>Electric heater back-up</b>             | kW             | 3.3, single-phase | 3.3, single-phase | 3.3, single-phase | 3.3, single-phase |
| <b>Voltage</b>                             | V              | 230 ± 10%         | 230 ± 10%         | 230 ± 10%         | 230 ± 10%         |
| <b>Operating temperature range</b>         | °C             | 5 to 95           | 5 to 95           | 5 to 95           | 5 to 95           |
| <b>Operating pressure DHW module</b>       | bar            | 0 to 10           | 0 to 10           | 0 to 10           | 0 to 10           |
| <b>Operating pressure heat exchangers</b>  | bar            | 0 to 6            | 0 to 6            | 0 to 6            | 0 to 6            |
| <b>Ambient operating temperature range</b> | °C             | 5 to 45°C         | 5 to 45°C         | 5 to 45°C         | 5 to 45°C         |
| <b>Storage temperature range</b>           | °C             | -20 to +75°C      | -20 to +75°C      | -20 to +75°C      | -20 to +75°C      |
| <b>Lower heat exchanger</b>                | m <sup>2</sup> | 1.2               | 1.2               | 1.5               | 1.5               |
| <b>Upper heat exchanger</b>                | m <sup>2</sup> |                   | 0.5               |                   | 1.1               |
| <b>Diameter</b>                            | mm             | 600               | 600               | 600               | 600               |
| <b>Height</b>                              | mm             | 1215              | 1215              | 1615              | 1615              |



# Electrical data, domestic hot water (DHW) module

| Model                            | 60ST-020/60ST-030 |          |
|----------------------------------|-------------------|----------|
| <b>Maximum operating current</b> | A                 | 15       |
| <b>Power supply</b>              | V-ph-Hz           | 230-1-50 |
| <b>Voltage range</b>             | V                 | 207-253  |

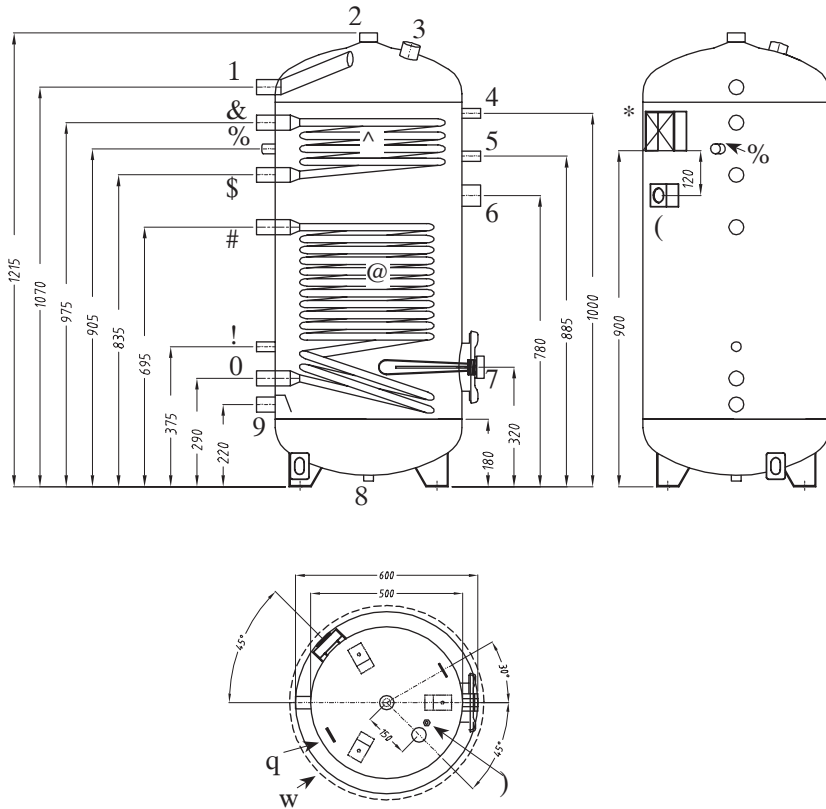
|                                  |                          |
|----------------------------------|--------------------------|
| Cable type and size (4): H05VV-F | 3G x 2.5 mm <sup>2</sup> |
| Cable type and size (5): FROH2R  | 2 x 1 mm <sup>2</sup>    |
| Cable type and size (6): FROH2R  | 2 x 0.5 mm <sup>2</sup>  |



1. Main unit
2. Domestic hot water tank control box
3. Circuit breaker
4. Mains supply connecting cable
5. Booster heater activation cable
6. Temperature sensor cable

- ⊥ Earth
- L Live power supply
- N Neutral power supply

# Dimensions (mm), domestic hot water (DHW) module

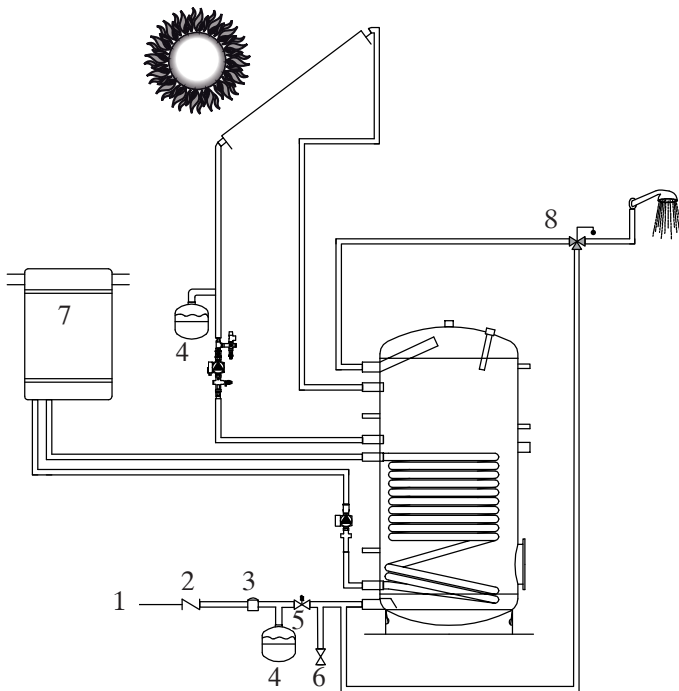


### Legend

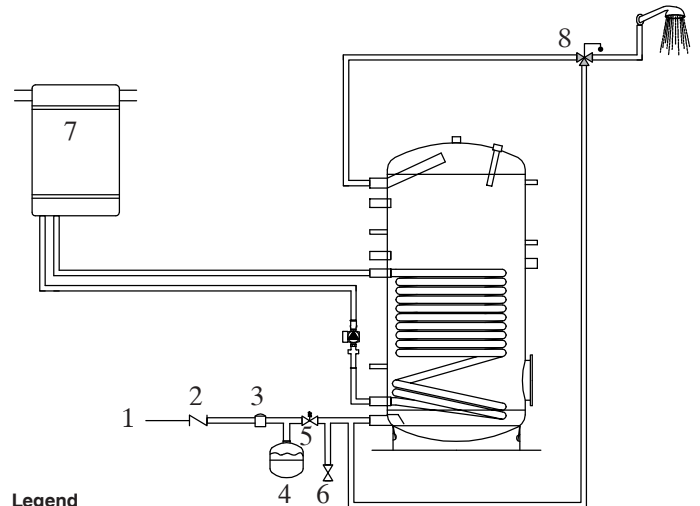
- 1 Water outlet (hot water)
- 2 Water outlet (hot water)
- 3 Anode connection
- 4 Connection for temperature sensor/pressure gauge
- 5 Connection for temperature sensor/pressure gauge
- 6 Connection
- 7 Electric heater (flange-mounted)
- 8 Fastening hole
- 9 Water inlet (cold water)
- 10 Lower coil outlet
- 11 Connection for temperature sensor/pressure gauge
- 12 Lower coil
- 13 Lower coil inlet
- 14 Upper coil outlet
- 15 Temperature sensor
- 16 Upper coil
- 17 Upper coil inlet
- 18 Control box
- 19 Cable holder
- 20 M6 nut earth
- 21 Insulation
- 22 Aesthetical cover

# Typical installation diagrams, domestic hot water (DHW) module

**System with solar panel and tanks**  
60STD 020E03 or 60STD 030E03



**System without solar panel and tanks**  
60STS 020E03 or 60STS 030E03



### Legend

- 1 Water circuit
- 2 Check valve
- 3 Pressure reduction device
- 4 Expansion tank
- 5 Safety valve
- 6 Drain valve
- 7 Boiler
- 8 Thermostatic valve



Order No.: 18405-20, 10.2015. Supersedes order No.: 18405-20, 04.2012.  
Manufacturer reserves the right to change any product specifications without notice.



Quality and Environment  
Management Systems  
Approval

Manufactured by: Carrier, Beroun, Czech Republic.  
Printed in the European Union.