

SPHERA-i

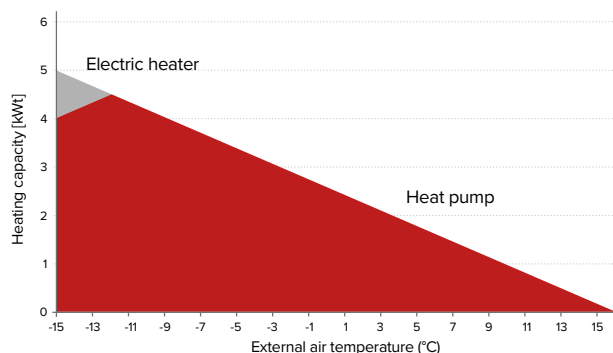
Uncased heat pump
with integrated hot domestic storage

SPHERA-i is a configurable system with several modules which allow maximum flexibility of installation choices and the integration of different energy sources: solar, heat pump, fuel.

Through the composition of the different modules it is possible to create the following BASIC versions of the product:

SPHERA-i Comfort

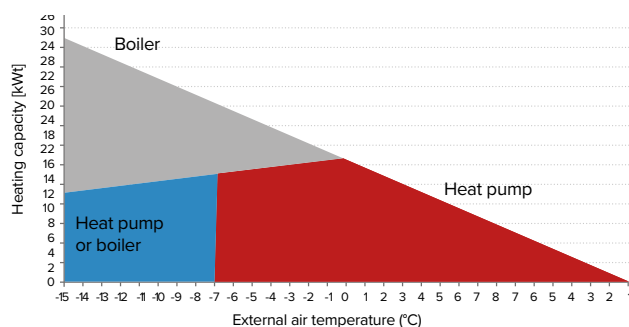
Heat pump with integrated hot domestic storage



Heat pump can satisfy completely the plant load. It is possible to use an optional electric heater in integration that allows a better sizing and operation of the heat pump without compromising the seasonal efficiency.

SPHERA-i Hybrid

Heat pump with condensing boiler for integration with integrated hot domestic storage

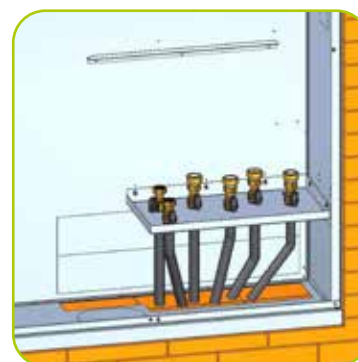


The control allows to manage the integrated boiler in SPHERA-i either as a integration or a replacement of the heat pump, according to system type, heating requirements and energy costs. The integrated condensing boiler is modulating.

SEQUENCE OF INSTALLATION



Positioning of the recessed cabinet in the wall



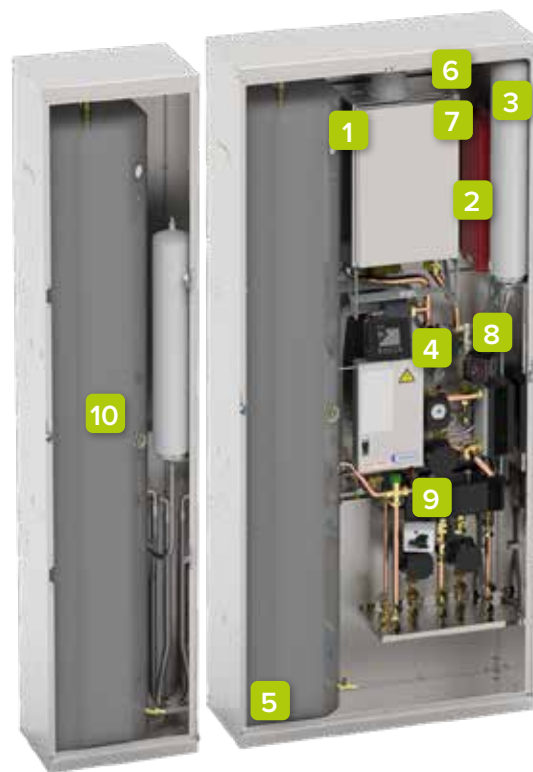
Connection of the plant to the attacks



Installation and connection of the selected modules according to the choices

MODULARITY

- 1 **150-L DHW STORAGE TANK**
- 2 **SYSTEM EXPANSION TANK**
- 3 **DHW EXPANSION TANK**
- 4 **HYDRONIC MODULE WITH ELECTRICAL PANEL**
- 5 **UNCASED CABINET WITH JIGS FOR FITTINGS AND CONDENSATE COLLECTION TRAY**
- 6 **CCGIX (*)** (Optional)
Integration condensing boiler
- 7 **KCVEX (*)** (Optional)
Solar circulation kit
- 8 **EH246X (*)** (Optional)
2-4 kW system integration electric heater as an alternative to the boiler (CCGIX)
- 9 **KIR2HX** (Optional)
Circuit breaker with 2 zones, both at high temperature
- 9 **KIR2HLX** (Optional)
Circuit breaker with 2 zones: high temperature and low temperature (mixed)
- 10 **ADI150X+ACS150X+KC150X** (Optional)
150-litre recessed storage unit with additional storage tank



(*) Use CCGIX as an alternative to EH246X.
Use CCGIX as an alternative to KCVEX.

SPHERA-i enables the realization of a system with the full integration of the hydraulic components inside the uncase unit built in just 35cm depth. The different modules are pre-assembled and tested. They can be installed in different moments according to the building realization timing. Each module is designed to simplify and speed up installation time.

SIMPLIFIED CONTROL

Room humidity and temperature

Ambient temperature

Delivered capacity level

DHW production activation

On/Off scheduling menu
Weekly scheduling

Operating status



Touch-screen display

System hour

Integration generator status
(if present)

Integration electric heater status
(if present)

Setting

DHW set point

Signalling/Alarms



SPHERA-i

SRHM-IC + MDAN-XMi 2.1÷4.1

technical data

| Size – SRHM-IC + MDAN-XMi | | 2.1 | 3.1 | 4.1 |
|--|---------|----------|-------------|----------|
| Unit for radiant panels | | | | |
| A7/W35 | | | | |
| ▶ Heating capacity | kW | 4,23 | 6,33 | 8,09 |
| Total power input | kW | 0,81 | 1,31 | 1,77 |
| COP (EN 14511:2018) | - | 5,21 | 4,83 | 4,57 |
| A2/W35 | | | | |
| ▶ Heating capacity | kW | 4,02 | 5,44 | 6,35 |
| Total power input | kW | 1,16 | 1,45 | 1,74 |
| COP (EN 14511:2018) | - | 3,46 | 3,75 | 3,65 |
| A-7/W35 | | | | |
| ▶ Heating capacity | kW | 4,78 | 5,68 | 6,09 |
| Total power input | kW | 1,56 | 1,95 | 2,18 |
| COP (EN 14511:2018) | - | 3,06 | 2,91 | 2,79 |
| A35/W18 | | | | |
| ▶ Cooling capacity | kW | 4,47 | 6,19 | 8,01 |
| Total power input | kW | 0,80 | 1,29 | 1,81 |
| EER (EN 14511:2018) | - | 5,58 | 4,80 | 4,43 |
| Terminal units | | | | |
| A7/W45 | | | | |
| ▶ Heating capacity | kW | 1,10 | 1,65 | 2,15 |
| Total power input | kW | 3,69 | 3,64 | 3,39 |
| COP (EN 14511:2018) | - | - | - | - |
| A2/W45 | | | | |
| ▶ Heating capacity | kW | 1,32 | 1,83 | 2,39 |
| Total power input | kW | 3,07 | 3,02 | 2,82 |
| COP (EN 14511:2018) | - | - | - | - |
| A-7/W45 | | | | |
| ▶ Heating capacity | kW | 1,69 | 2,08 | 2,51 |
| Total power input | kW | 2,36 | 2,38 | 2,20 |
| COP (EN 14511:2018) | - | - | - | - |
| A35/W7 | | | | |
| ▶ Cooling capacity | kW | 1,27 | 2,05 | 2,73 |
| Total power input | kW | 3,42 | 3,05 | 2,77 |
| EER (EN 14511:2018) | - | 4,82 | 4,58 | 3,85 |
| ESEER | - | - | - | - |
| Radiators | | | | |
| A7/W55 | | | | |
| ▶ Heating capacity | kW | 3,96 | 5,43 | 6,66 |
| Total power input | kW | 1,34 | 1,82 | 2,45 |
| COP (EN 14511:2018) | - | 2,94 | 2,99 | 2,72 |
| A2/W55 | | | | |
| ▶ Heating capacity | kW | 3,52 | 4,97 | 6,40 |
| Total power input | kW | 1,43 | 1,99 | 2,72 |
| COP (EN 14511:2018) | - | 2,46 | 2,50 | 2,35 |
| A-7/W55 | | | | |
| ▶ Heating capacity | kW | 3,15 | 4,49 | 5,09 |
| Total power input | kW | 1,80 | 2,39 | 2,85 |
| COP (EN 14511:2018) | - | 1,75 | 1,88 | 1,79 |
| Type of gas | (1) | - | G20-G30-G31 | - |
| Nominal heat flow-rate | kW | - | 24 | - |
| Minimal heat flow-rate | kW | - | 2,9 | - |
| Water flow-rate (User Side) | (2) l/s | 0,20 | 0,30 | 0,39 |
| Useful pump discharge head | (2) kPa | 50 | 50 | 47 |
| Domestic hot water storage | l | 150 | 150 | 150 |
| Standard power supply | V | 230/1/50 | 230/1/50 | 230/1/50 |
| Sound pressure level (1m) outdoor unit | dB(A) | 46 | 48 | 50 |
| Min inlet air temperature (W.B.) | °C | -20 | -20 | -20 |
| Max. leaving water temperature | °C | 60 | 60 | 60 |

(1) G20: Methane gas 100%, standard; G30 / G31: LPG gas, a separate accessory is supplied for converting the boiler to LPG

(2) A7/W35 internal exchanger water 30/35°C; external air temperature 7°C D.B./ 6°C W.B.

Performances according to EN 14511:2018

A7/W35 internal exchanger water 30/35°C; external air temperature 7°C D.B./ 6°C W.B.

A2/W35 internal exchanger water 30/35°C; external air temperature 2°C D.B./ 1°C W.B.

A-7/W35 internal exchanger water 30/35°C; external air temperature -7°C D.B./ -8°C W.B.

A7/W45 internal exchanger water 40/45°C; external air temperature 7°C D.B./ 6°C W.B.

A2/W45 internal exchanger water 40/45°C; external air temperature 2°C D.B./ 1°C W.B.

A7/W45 internal exchanger water 40/45°C; external air temperature -7°C D.B./ -8°C W.B.

A7/W55 internal exchanger water 50/55°C; external air temperature 7°C D.B./ 6°C W.B.

A2/W55 internal exchanger water 50/55°C; external air temperature 2°C D.B./ 1°C W.B.

A-7/W55 internal exchanger water 50/55°C; external air temperature -7°C D.B./ -8°C W.B.

A35/W18 internal exchanger water 23/18°C; external air temperature 35°C

A35/W7 internal exchanger water 12/7°C; external air temperature 35°C

Refrig. R-410A



ELFOControl³EVO



Full Inverter DC



Two-section air-water reversible heat pump with integration boiler

ErP

Size – SRHM-IC + MDAN-XMi

| | | 2.1 | 3.1 | 4.1 |
|--|-----|-----|-----|-----|
| ErP System Energy Class - AVERAGE Climate - W55 | (1) | A++ | A++ | A++ |
| ErP Space Heating Energy Class - AVERAGE Climate - W55 | (2) | A++ | A++ | A++ |
| ErP Domestic Hot Water Energy Class | (3) | A | A | A |
| ErP Domestic Hot Water Profile | (4) | L | L | L |

The Product is compliant with the ErP (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤ 70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤ 400 kW at specified reference conditions)

(1) Seasonal Space Heating Energy Efficiency Class of the package according to Commission delegated Regulation (EU) No 811/2013

(2) Seasonal Space Heating Energy Efficiency Class according to Commission delegated Regulation (EU) No 811/2013. W = Water outlet temperature (°C)

(3) Water Heating Energy Efficiency Class according to Commission delegated Regulation (EU) No 811/2013

(4) Considered Load profile for the definition of Domestic Hot Water Energy Class according to Commission delegated Regulation (EU) No 811/2013. Class of the package with ELFOControl³ EVO

accessories

SIZE – SRHM-IC + MDAN-XMi

| | 2.1 | 3.1 | 4.1 |
|--------------------------------|-----|-----|-----|
| Basic configuration (230/1/50) | std | std | std |

ADIX Recessed storage unit with jigs for fittings

ACS150X 150-litre domestic hot water storage tank

CCGIX Integration condensing boiler 3-24 kW

HIDTI5²BX Temperature and humidity thermostat / Remote control with touch screen display, for built-in installation (box 503) or for wall installation. White

HIDTI5²NX Temperature and humidity thermostat / Remote control with touch screen display, for built-in installation (box 503) or for wall installation. Black

AMRX Rubber antivibration mounts

KTCGPLX Conversion kit boiler from methane to LPG

AL12X Power supply unit for HIDTi52 thermostats and HID-UR sensor

AD1150X 150-litre recessed storage unit for additional storage tank

KC150X 150-litre DHS additional storage tank connection kit

KAS80X Suction and exhaust fittings 80 mm diameter

KSDFX Twin Pipe Flue System

EH246X 2-4 and 6 kW integration electric heater

KIR2HX 2 zones: both at high temperature

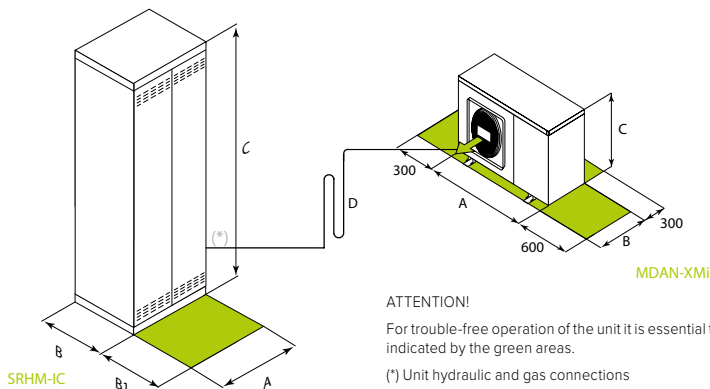
KIR2HLX 2 zones: high temperature + low temperature (mixed)

KCVEX Circulation kit : circulation group, control unit, expansion tank

DTX Auxiliary condensate collection tray

Accessories whose code ends with "X" are separately supplied.

dimensions



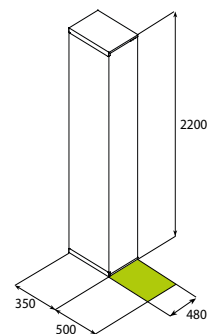
Size – SRHM-IC

| | | A |
|------------------|----|------|
| A - Length | mm | 950 |
| B - Width | mm | 350 |
| C - Height | mm | 2200 |
| B1 | mm | 500 |
| Operating weight | kg | 290 |

Size – MDAN-XMi

| | | 2.1 | 3.1 | 4.1 |
|-------------------------------------|----|-----|-----|------|
| A - Length | mm | 960 | 960 | 1075 |
| B - Width | mm | 380 | 380 | 395 |
| C - Height | mm | 860 | 860 | 965 |
| D - Max length of cooling lines | m | 20 | 20 | 30 |
| D - Max difference of cooling lines | m | 15 | 15 | 15 |
| Operating weight | kg | 60 | 60 | 76 |

OPTIONAL ACCESSORY



AUXILIARY DOMESTIC HOT WATER STORAGE

Optional accessory for installations with domestic hot water consumption
Capacity: 150-litres