

Description

Hoval UltraSource B comfort C
Hoval UltraSource B compact C
Modulating heat pump system for heating and cooling in the living area.
UltraSource B compact C (8/200), (11/200)
version additionally with domestic hot water storage tank.
 Split system comprising indoor unit and outdoor unit.

Indoor unit UltraSource B comfort C

- Compact floor-mounted air/water heat pump
- UltraSource B comfort C (8) with rotary compressor controlled by inverter
- UltraSource B comfort C (11,17) with scroll capsule compressor controlled by inverter
- Casing made from painted, galvanised sheet steel. Colour flame red/brown red (RAL 3000/RAL 3011)
- Plate-type condenser made of stainless steel/CU
- Integrated components:
 - Speed-regulated high-efficiency pump
 - Flow sensor/flow meter or heat meter
 - E-heating element 1 to 6 kW
 - 3-way changeover ball cock for heating/ domestic hot water (see accessories for domestic hot water set)
- With cooling function with corresponding hydraulics
- Safety set consisting of safety valve, automatic air vent and pressure gauge (see accessories)
- Diaphragm pressure expansion tanks see "Various system components"
- Sensor set consisting of outdoor sensor, flow sensor and domestic hot water sensor included in the scope of delivery
- TopTronic® E controller installed
- Hydraulic connections
 - Heating connections 1" left or right side. See accessories for connecting hoses
- Working medium lines can be connected at rear
- Electrical connections at rear

Indoor unit UltraSource B compact C

- Compact floor-mounted air/water heat pump
- UltraSource B compact C (8/200) with rotary compressor controlled by inverter
- UltraSource B compact C (11/200) with scroll capsule compressor controlled by inverter
- Casing made from painted, galvanised sheet steel. Colour flame red/brown red (RAL 3000/RAL 3011)
- Plate-type condenser made of stainless steel/CU
- Integrated calorifier 200 litres (can be divided for easier transport into the building; weight 1294 x 770 x 602)
- Enamel painted calorifier with PU hard-foam insulation energy efficiency class A, load profile XL. Maintenance flange and magnesium protection anode built in
- Integrated components:
 - Speed-regulated high-efficiency pump
 - Flow sensor/flow meter or heat meter
 - E-heating element 1 to 6 kW
- With cooling function with corresponding hydraulics
- Safety set consisting of safety valve, automatic air vent and pressure gauge (see accessories)



Indoor unit













UltraSource B comfort C (8-17) UltraSource B compact C (8,11/200)



Outdoor unit (8,11)

Outdoor unit (17)

Hoval UltraSource B comfort C Hoval UltraSource B compact C

| Hoval UltraSource B compact C | | | Heat output ¹⁾ | | Cooling capacity ¹⁾ |
|---|---|--|---------------------------|-------------|--------------------------------|
| 35 °C | 55 °C | Type | A-7W35 kW | A2W35 kW | A35W18 kW |
|  |  | (8) | 2.0-6.0 | 2.1-7.6 | 2.9-8.9 |
|  |  |  (8/200) | 2.0-6.0 | 2.1-7.6 | 2.9-8.9 |
|  |  | (11) | 2.8-10.0 | 2.8-10.2 | 3.5-11.0 |
|  |  |  (11/200) | 2.8-10.0 | 2.8-10.2 | 3.5-11.0 |
|  |  | (17) | 6.0-14.8 | 6.0-17.4 | 6.2-17.7 |

Energy efficiency class of the compound system with control

¹⁾ Modulation range

The built-in high-efficiency pumps fulfil the Eco-design requirements of 2015 with an EEL of ≤ 0.23.

Seal of approval FWS

The UltraSource B series is certified by the CH certification commission.



- Diaphragm pressure expansion tanks see "System components"
- Sensor set consisting of outdoor sensor, flow sensor and domestic hot water sensor included in the scope of delivery
- TopTronic® E controller installed
- Internally decoupled against solid-borne noise and can be connected directly
- Hydraulic connections
 - Heating connections 1" top
 - Hot and cold water connections ¾" top
- Working medium lines can be connected at right or left side
- Electrical connections at top

Outdoor unit

- Elegant and extremely quiet outdoor unit
- Compact unit for outdoor installation
- Housing with sheet metal enclosure, powder-coated, anthracite colour (DB703)
- U-shaped louvre-type evaporator
- Speed-controlled axial fan with FlowGrid (inlet grille)
- Condensate tray incl. tray heating for channelling all the condensate in the outdoor unit, fixed installation, connection 1" accessible from below
- Working medium line connections can be connected underneath
 - Suction gas line 16 mm
 - Liquid line 12 mm

- Electrical connections on left side, lead-in from underneath
 - 230 V control current, supplied from the indoor unit
 - Data cable - bus connection to the indoor unit

TopTronic® E controller

Control panel

- 4.3-inch colour touchscreen
- Heat generator blocking switch for interrupting operation
- Fault signalling lamp

TopTronic® E control module

- Simple, intuitive operating concept
- Display of the most important operating states
- Configurable start screen
- Operating mode selection
- Configurable day and week programmes
- Operation of all connected Hoval CAN bus modules
- Commissioning wizard
- Service and maintenance function
- Fault message management
- Analysis function
- Weather display (with HovalConnect option)
- Adaptation of the heating strategy based on the weather forecast (with HovalConnect option)

■ Description

TopTronic® E basic module heat generator (TTE-WEZ)

- Integrated control functions for
 - 1 heating/cooling circuit with mixer
 - 1 heating/cooling circuit without mixer
 - 1 DHW charging circuit
 - Bivalent and cascade management
- Outdoor sensor
- Immersion sensor (calorifier sensor)
- Contact sensor (flow temperature sensor)
- Rast5 basic plug set

Options for TopTronic® E controller

- Can be expanded by max.
1 module expansion:
 - Module expansion heating circuit or
 - Universal module expansion or
 - Heat balancing module expansion
- Can be networked with up to
16 controller modules in total:
 - Heating circuit/DHW module
 - Solar module
 - Buffer module
 - Measuring module

Number of additional modules that can be installed in the heat generator:

- 1 module expansion and 1 controller module
or
- 2 controller modules

The supplementary plug set
must be ordered in order to use
expanded controller functions.

For further information about the TopTronic® E, see "Controls"

Delivery

- Indoor and outdoor unit delivered
- packaged separately
- Sensor set in the indoor unit supplied loose

On site

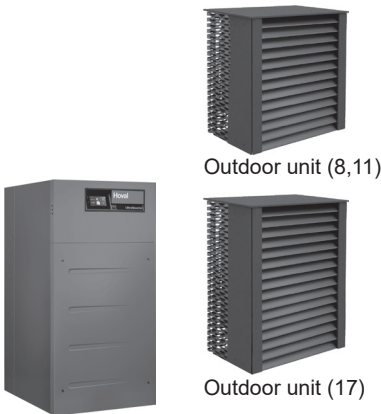
- Masonry penetrations for working
medium connection line
- Electrical connecting line outdoor/indoor unit

■ Part No.

Air/water heat pump
Hoval UltraSource B comfort C
Hoval UltraSource B compact C

Part No.

UltraSource B comfort C (8,17)
UltraSource B compact C (8/200)
available starting July 2019



7016 659
7016 662
7016 665



Hose set
for UltraSource B comfort (8-17)
Consisting of:
flexible connection hoses for
heating side insulated 1"
L = 1.0 m, can be shortened on one side

6046 173



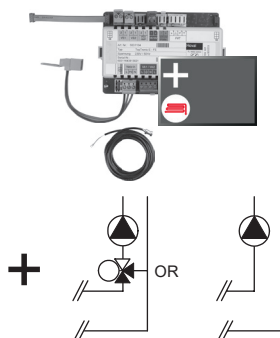
Hoval UltraSource B compact C
with integrated 200 litre calorifier.

7016 660
7016 663

No hose set necessary

Energy efficiency class
see "Description"

■ Part No.



TopTronic® E module expansions
for TopTronic® E basic module heat generator

Part No.

TopTronic® E module expansion heating circuit TTE-FE HK

6034 576

Expansion to the inputs and outputs of the basic module heat generator or the heating circuit/hot water module for implementing the following functions:

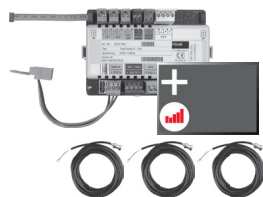
- 1 heating/cooling circuit without mixer or
- 1 heating/cooling circuit with mixer

incl. assembly material
1x contact sensor ALF/2P/4/T, L = 4.0 m

Can be installed in:
Boiler control, wall housing, control panel

Notice

The supplementary plug set may have to be ordered to implement functions differing from the standard!



TopTronic® E module expansion heating circuit incl. energy balancing TTE-FE HK-EBZ

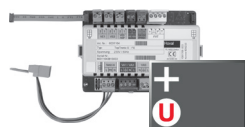
6037 062

Expansion to the inputs and outputs of the basic module heat generator or the heating circuit/hot water module for implementing the following functions:

- 1 heating/cooling circuit without mixer or
 - 1 heating/cooling circuit with mixer
- each incl. energy balancing

incl. assembly material
3x contact sensor ALF/2P/4/T, L = 4.0 m

Can be installed in:
Boiler control, wall housing, control panel



TopTronic® E module expansion universal TTE-FE UNI

6034 575

Expansion to the inputs and outputs of a controller module (basic module heat generator, heating circuit/domestic hot water module, solar module, buffer module) for implementing various functions

incl. assembly material

Can be installed in:
Boiler control, wall housing, control panel

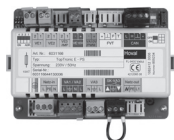
Further information

see "Controls" section - "Hoval TopTronic® E module expansions" chapter

Notice

Refer to the Hoval System Technology to find which functions and hydraulic arrangements can be implemented.

■ Part No.



HovalConnect available from summer 2019

Up to that point, TopTronic® E online is delivered.



Accessories for TopTronic® E

Part No.

Supplementary plug set

for basic module heat generator (TTE-WEZ)
for controller modules and module expansion
TTE-FE HK

6034 499
6034 503

TopTronic® E controller modules

TTE-HK/WW TopTronic® E heating circuit/
hot water module
TTE-SOL TopTronic® E solar module
TTE-PS TopTronic® E buffer module
TTE-MWA TopTronic® E measuring module

6034 571
6037 058
6037 057
6034 574

TopTronic® E room control modules

TTE-RBM TopTronic® E room control modules
easy white
comfort white
comfort black

6037 071
6037 069
6037 070

Enhanced language package TopTronic® E

one SD card required per control module
Consisting of the following languages:
HU, CS, SL, RO, PL, TR, ES, HR, SR, JA, DA

6039 253

HovalConnect

HovalConnect domestic starter LAN
HovalConnect domestic starter WLAN
HovalConnect commercial starter LAN
HovalConnect commercial starter WLAN
SMS remote control unit
System component SMS remote control unit

6049 496
6049 498
6049 495
6049 497
6018 867
6022 797

TopTronic® E interface modules

GLT module 0-10 V
HovalConnect domestic starter Modbus
HovalConnect domestic starter KNX
HovalConnect commercial starter Modbus
HovalConnect commercial starter KNX

6034 578
6049 501
6049 593
6049 500
6049 502

TopTronic® E wall casing

WG-190 Wall casing small
WG-360 Wall casing medium
WG-360 BM Wall casing medium with
control module cut-out
WG-510 Wall casing large
WG-510 BM Wall casing large with
control module cut-out

6035 563
6035 564
6035 565
6035 566
6038 533

TopTronic® E sensors

AF/2P/K Outdoor sensor
TF/2P/5/6T Immersion sensor, L = 5.0 m
ALF/2P/4/T Contact sensor, L = 4.0 m
TF/1.1P/2.5S/6T Collector sensor, L = 2.5 m

2055 889
2055 888
2056 775
2056 776

System housing

System housing 182 mm
System housing 254 mm

6038 551
6038 552

Bivalent switch

2061 826

Further information
see "Controls"

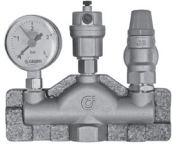
Outdoor sensor, immersion sensor and
contact sensor supplied with the heat pump.

■ Part No.

Heating/cooling accessories

Part No.

Pressure expansion tanks
see "Various system components"



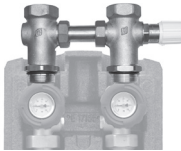
Safety set SG15-1"
Suitable up to max. 50 kW
complete with safety valve (3 bar)
Pressure gauge and automatic air vent
with cut off valve
Connection: 1" internal thread

641 184



Connection set AS32-2/ H
for compact mounting
of all required fittings
of a direct circuit
consisting of:
2 thermometer ball valves
Wall bracket included separately
Connection T-piece DN 32
in the return flow for connecting the
sludge separator CS 32 bottom and
the expansion tank on the side
on connection set
installation option
for an overflow valve
incl. non-return valve

6039 793



Bypass valve DN 32 (1 1/4")
for the installation in a HA group DN 32
Setting range 0.6-1.5 bar
Max. flow rate: 1.5 m³/h
with self-sealing screw connection for
mounting between flow and return
ball valve

6014 849

Strainers
see "Various system components"



Sludge separator CS 25-1" with magnet
for flow rates of 1.0 - 2.0 m³/h
for flow speed of 1.0 m/s
Housing made of plastic PPA with
diffuser and partial flow removal
with 4 extra-strong Neodymium magnets
Magnets removable for draining
EPP insulation 20 mm
Connections made of brass G 1"
Drain made of brass: hose connection
Any inst. orientation -360° rotating
Temperature range -10 to 120 °C
Operating pressure max.: 10 bar
Glycol proportion max.: 50 %
Weight: 1.21 kg

2063 735

■ Part No.

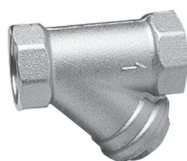


Sludge separator CS 32-1 1/4" with magnet

for flow rates of 2.0 - 3.0 m³/h
for flow speed of 1.0 m/s
Housing made of plastic PPA with
diffuser and partial flow removal
with 4 extra-strong Neodymium magnets
Magnets removable for draining
EPP insulation 20 mm
Connections made of brass G 1 1/4"
Drain made of brass: hose connection
Any inst. orientation -360° rotating
Temperature range -10 to 120 °C
Operating pressure max.: 10 bar
Glycol proportion max.: 50 %
Weight: 1.37 kg

Part No.

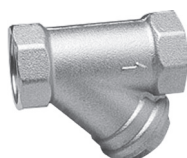
2063 736



Strainer PN 16 B50-25-1"

Casing brass, PN 16
Connections Rp 1"
Operating temperature max.: 110 °C
Sieve made of stainless steel
Mesh size 0.5 mm

2046 978



Strainer PN 16 B50-32-1 1/4"

Casing brass, PN 16
Connections Rp 1 1/4"
Operation temperature max.: 110 °C
Sieve made of stainless steel
Mesh size 0.5 mm

2046 980



Dew point switch FAS

mechanical dew point switch
for monitoring the
formation of condensation using
adjustable switching value

2070 911

Domestic hot water accessories



Warm water set

for UltraSource B comfort C,
UltraSource T comfort
Consisting of:
Motor drive for installed
changeover valve
Includes distance wave and flexible
connection hose insulated 1"
L = 1.0 m

6046 181



Titanium impressed current anode

for UltraSource B compact C,
UltraSource T compact
as cathodic protection for
enamelled calorifier

6046 662

In every case, either a Correx electrical anode
or a magnesium anode may be used.

Screw-in electric immersion heater

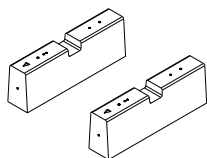
for plants with buffer storage tank
as emergency heating.



| Type | Heat output [kW] | Install. length [mm] |
|--------|---------------------|-------------------------|
| EP 2.5 | 2.35 | 390 |
| EP 3.5 | 3.6 | 500 |
| EP 5 | 4.9 | 620 |
| EP 7.5 | 7.5 | 850 |

6049 557
6049 558
6049 559
6049 560

■ Part No.



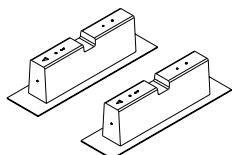
Outdoor unit accessories

Part No.

Concrete base set BSW01-FU
to securely erect an outdoor unit
on solid ground.
Consisting of:
2 concrete bases with molded
fastening sleeves, screw set
Weight: 2 pieces of 58 kg

6046 157

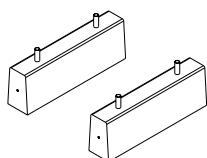
Also order M10 vibration damper set



Concrete base set BSW01-FD
to securely erect an outdoor unit
on flat roof.
Consisting of:
2 concrete bases with molded
fastening sleeves, protective mats
with aluminium facing, screw set
Weight: 2 pieces of 58 kg

6046 158

Also order M10 vibration damper set



Concrete base set BSW01-ZS
to securely erect an
outdoor unit in drainage bed
for gardens and meadows.
Additional base height 250 mm for
plug combination with set BSW01-FU
Consisting of:
2 additional concrete bases,
screw set
Weight: 2 pieces of 58 kg

6046 159



Vibration damper set M10
for installing the unit on
a concrete base.

6043 779

■ Technical data

Hoval UltraSource B comfort C (11)
Hoval UltraSource B compact C (11/200)

| Type | | (8) | (11) | (17) | (8/200) | (11/200) |
|--|---------------|----------------------|-----------------|------------|----------------------|-----------------|
| • Energy efficiency class of the compound system with control | 35 °C / 55 °C | A+++/A++ | A+++/A++ | A+++/A+++ | A+++/A++ | A+++/A++ |
| • Energy efficiency class load profile XL | Hot water | - | - | - | A | A |
| • Seasonal coefficient of performance moderate climate 35 °C/55 °C | SCOP | 5.1/3.7 | 4.5/3.4 | 5.2/3.9 | 5.1/3.7 | 4.5/3.4 |
| Performance data (heating) in acc. with EN 14511 | | | | | | |
| • Heat output A2W35 | kW | 3.9 | 5.9 | 11.3 | 3.9 | 5.9 |
| • Power consumption A2W35 | kW | 0.9 | 1.3 | 2.5 | 0.9 | 1.3 |
| • Coefficient of performance A2W35 | COP | 4.4 | 4.4 | 4.5 | 4.4 | 4.4 |
| • Heat output A7W35 | kW | 4.5 | 6.8 | 12.8 | 4.5 | 6.8 |
| • Power consumption A7W35 | kW | 0.9 | 1.3 | 2.5 | 0.9 | 1.3 |
| • Coefficient of performance A7W35 | COP | 5.2 | 5.1 | 5.1 | 5.2 | 5.1 |
| • Heat output A-7W35 | kW | 3 | 4.4 | 8.7 | 3 | 4.4 |
| • Power consumption A-7W35 | kW | 0.9 | 1.3 | 2.6 | 0.9 | 1.3 |
| • Coefficient of performance A-7W35 | COP | 3.4 | 3.3 | 3.3 | 3.4 | 3.3 |
| Performance data (cooling) in acc. with EN 14511 | | | | | | |
| • Cooling capacity A35W18 | kW | 5 | 7.8 | 12 | 5 | 7.8 |
| • Power consumption A35W18 | kW | 1 | 1.8 | 2.7 | 1 | 1.8 |
| • Coefficient of performance A35W18 | EER | 4.8 | 4.3 | 4.4 | 4.8 | 4.3 |
| • Cooling capacity A35W7 | kW | 3.8 | 5.4 | 8.5 | 3.8 | 5.4 |
| • Power consumption A35W7 | kW | 1 | 1.7 | 2.5 | 1 | 1.7 |
| • Coefficient of performance A35W7 | EER | 3.7 | 3.1 | 3.4 | 3.7 | 3.1 |
| Sound data | | | | | | |
| • Sound power level EN 12102 outdoor unit ^{5) 6)} | dB (A) | 46 | 49.8 | 57 | 46 | 49.8 |
| • Sound pressure level 5 m ^{4) 5)} | dB (A) | 27 | 30.8 | 38 | 27 | 30.8 |
| • Sound pressure level 10 m ^{4) 5)} | dB (A) | 21 | 24.8 | 32 | 21 | 24.8 |
| • Sound power level EN 12102 indoor unit | dB (A) | 42 | 45.3 | 45 | 42 | 45.3 |
| Hydraulic data | | | | | | |
| • Max. flow temperature (without/with screw-in electrical heating inset) | °C | 62/65 | 63/65 | 62/65 | 62/65 | 63/65 |
| • Max. flow heating water with A7/W35, 5K ΔT | m³/h | 1.5 | 2.2 | 3.7 | 1.5 | 2.2 |
| • Nominal flow rate heating water 5K ΔT | m³/h | 0.8 | 1.2 | 2.2 | 0.8 | 1.2 |
| • Residual overpressure of heating pump (at max. pump speed) | kPa | 65 | 57 | 37 | 65 | 57 |
| • Max. operating pressure on the heating side | bar | 3 | 3 | 3 | 3 | 3 |
| • Max. operating pressure process water side | bar | - | - | - | 10 | 10 |
| • Flow/return connection heating | R | 1" | 1" | 1" | 1" | 1" |
| • Cold/hot water connection | R | - | - | - | ¾" | ¾" |
| • Nominal air volume outdoor unit (A7W35 and nominal rotation speed) | m³/h | 2500 | 3600 | 5000 | 2500 | 3600 |
| Cooling technical data | | | | | | |
| • Refrigerant | | R410A | R410A | R410A | R410A | R410A |
| • Compressor/stages | | Inverter/1 | Inverter/1 | Inverter/1 | Inverter/1 | Inverter/1 |
| • Refrigerant fill volume | kg | 3.2 | 4.1 (up to 6 m) | 4.8 | 3.2 | 4.1 (up to 6 m) |
| • Compressor oil fill volume | l | 0.35/FV50S | 0.99/FV50S | 1/FVC68D | 0.35/FV50S | 0.99/FV50S |
| • Refrigerant line connections suction gas side | mm | 12 x 1 | 16 x 1 | 18 x 1 | 12 x 1 | 16 x 1 |
| • Refrigerant line connections liquid side | mm | 10 x 1 | 12 x 1 | 12 x 1 | 10 x 1 | 12 x 1 |
| • Max. cable length | m | 20 | 20 | 20 | 20 | 20 |
| • Max. difference in height ³⁾ | m | 10 | 10 | 10 | 10 | 10 |
| Electrical data | | | | | | |
| • Electrical connection compressor | V / Hz | 1~230/50 | 3~400/50 | 3~400/50 | 1~230/50 | 3~400/50 |
| • Electrical connection electric immersion heater | V / Hz | 1~230/50 3~400/50 | 3~400/50 | 3~400/50 | 1~230/50 3~400/50 | 3~400/50 |
| • Control electrical connection | V / Hz | 1~230/50 | 1~230/50 | 1~230/50 | 1~230/50 | 1~230/50 |
| • Max. compressor operating current | A | 15.8 | 9 | 14.8 | 15.8 | 9 |
| • Max. fan operating current | A | 0.21 | 0.5 | 0.5 | 0.21 | 0.5 |
| • Max. fan power consumption | W | 48 | 113 | 113 | 48 | 113 |
| • Max. electric immersion heater operating current | A | 13 | 13 | 13 | 13 | 13 |
| • Output factor | | 0.94 | 0.97 | 0.95 | 0.94 | 0.97 |
| • Main current fuse | A | 16 | 13 | 16 | 16 | 13 |
| • Control current fuse | A | 13 | 13 | 13 | 13 | 13 |
| • Fuse electric immersion heater | A | 13 | 13 | 13 | 13 | 13 |

Using a residual current circuit breaker RCCB type B, I_{Δn} ≥ 300 mA is recommended. Country-specific regulations must be observed.

■ Technical data

Dimensions / weight of indoor unit

| | | | | | | |
|--|----------------|--------------|--------------|--------------|--------------|--------------|
| • Dimensions (H x W x D) | mm | 1243/620/760 | 1243/620/760 | 1243/620/760 | 1950/602/770 | 1950/602/770 |
| • Tilting measure | mm | - | - | - | 2150 | 2150 |
| • Weight | kg | 149 | 165 | 168 | 251 | 270 |
| • Minimum sizes of installation room ¹⁾ | m ³ | 7.3 | 9.3 | 10.9 | 7.3 | 9.3 |

Dimensions / weight of outdoor unit

| | | | | |
|--------------------------|----|-------------------|---------------|-------------------|
| • Dimensions (H x W x D) | mm | 1200 x 1090 x 745 | 1546/1090/745 | 1200 x 1090 x 745 |
| • Weight | kg | 110 | 150 | 110 |

Warm water storage unit

| | | | | | | |
|---|----|---|---|---|-----|-----|
| • Storage capacity | l | - | - | - | 192 | 192 |
| • Maximum storage tank temperature | °C | - | - | - | 55 | 55 |
| • Maximum storage tank temperature with electric immersion heater | °C | - | - | - | 75 | 75 |
| • Output capacity at 46 °C draw-off temperature - heat pump ²⁾ | l | - | - | - | 260 | 260 |
| • Output capacity at 40 °C draw-off temperature - heat pump ²⁾ | l | - | - | - | 315 | 315 |

¹⁾ If the installation room is smaller than the required minimum size, it must be designed as a machine room in accordance with EN 378.

²⁾ 12 °C cold water temperature/58 °C storage tank temperature

³⁾ Oil lifting bends must be installed according to specifications (see engineering notices)

⁴⁾ The sound pressure levels indicated apply if the outdoor unit is placed at a building façade. These values are reduced by 3 dB if the outdoor unit is free-standing. With installation in a corner, the sound pressure level increases by 3 dB.

⁵⁾ The sound values apply with a clean evaporator. These values are temporarily exceeded before defrosting.

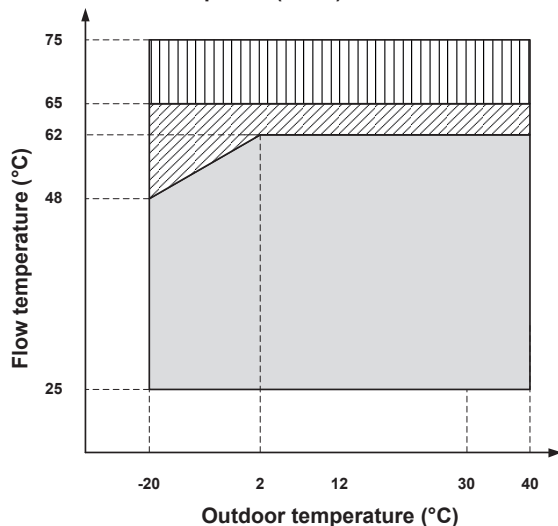
⁶⁾ The sound power level is reduced by 4 dB(A) in whisper mode.

■ Technical data

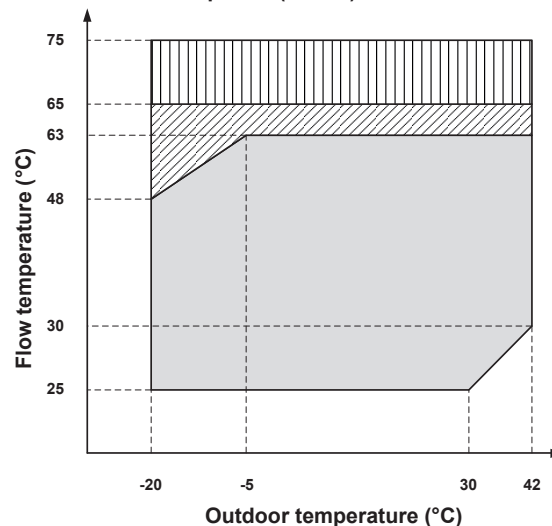
Diagrams of application areas

Heating and hot water

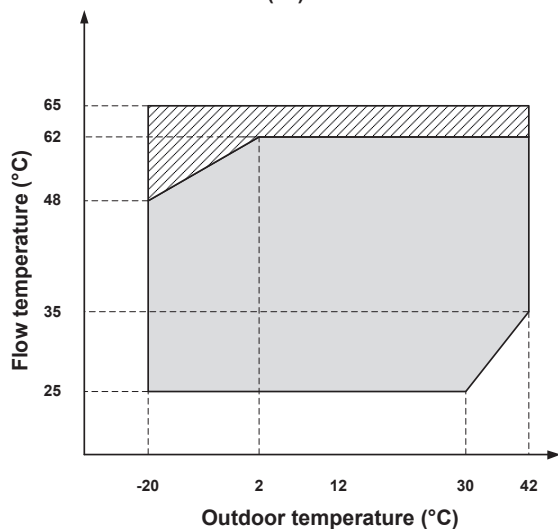
UltraSource B comfort C (8)
UltraSource B compact C (8/200)






UltraSource B comfort C (11)
UltraSource B compact C (11/200)



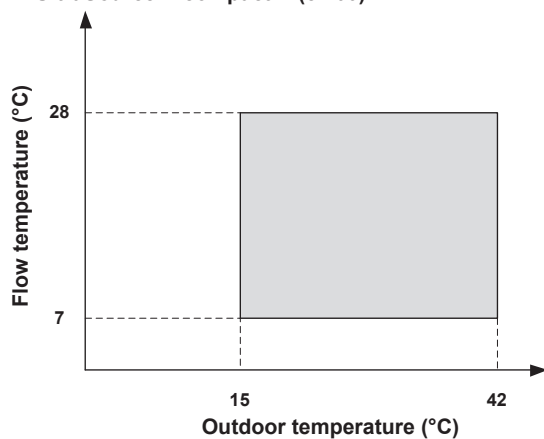
UltraSource B comfort C (17)



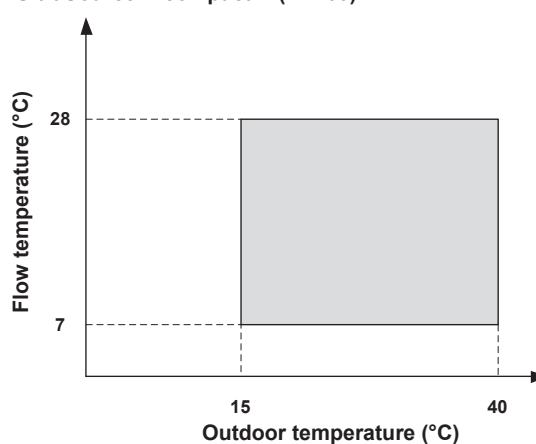
-  Application area heating/domestic hot water heat pump (UltraSource B comfort C and compact C)
-  Extended application area heating/domestic hot water heat pump including electric immersion heater (UltraSource B comfort C and compact C)
-  Extended application area domestic hot water heat pump including electric immersion heater (only UltraSource B compact C)


Cooling

UltraSource B comfort C (8)
UltraSource B compact C (8/200)



UltraSource B comfort C (11,17)
UltraSource B compact C (11/200)



-  Application area cooling heat pump (UltraSource B comfort C and compact C)

■ Technical data

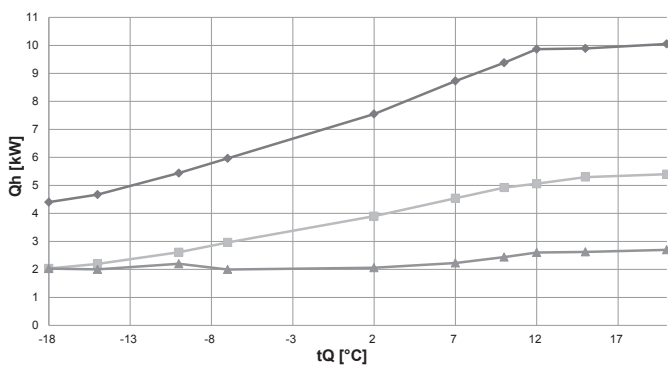
Performance data – heating

Maximum heat output allowing for defrosting losses

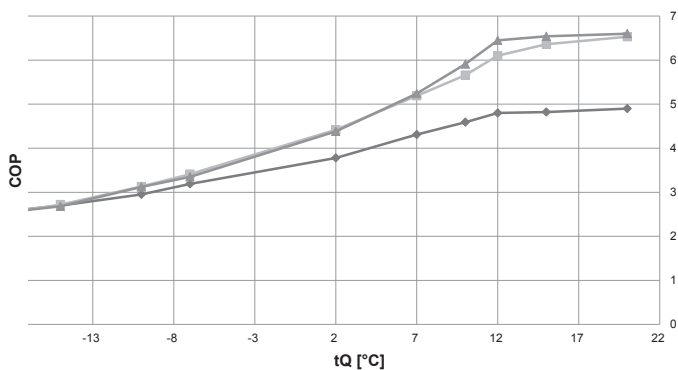
Hoval UltraSource B comfort C (8), compact C (8/200)

Data according to EN 14511

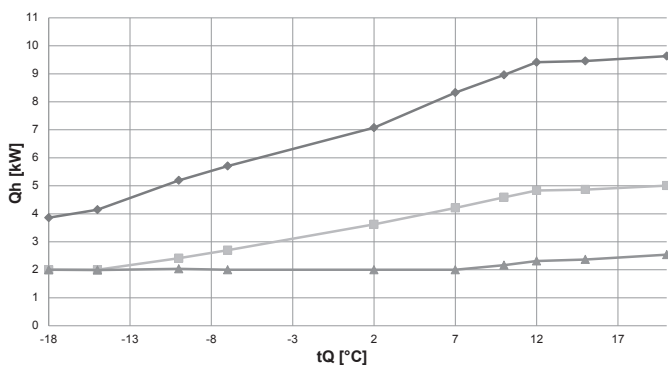
Heat output - $t_{FL} 35^{\circ}\text{C}$



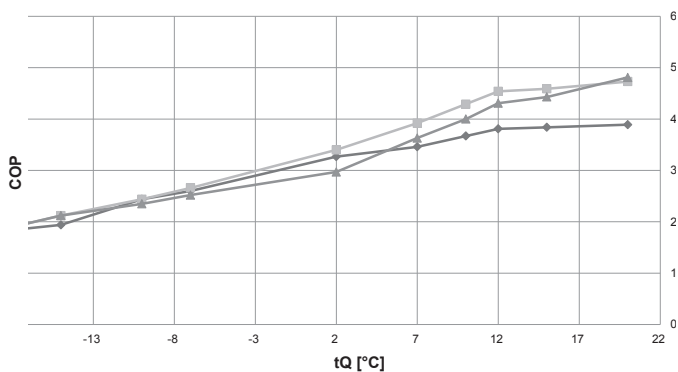
Coefficient of performance - $t_{FL} 35^{\circ}\text{C}$



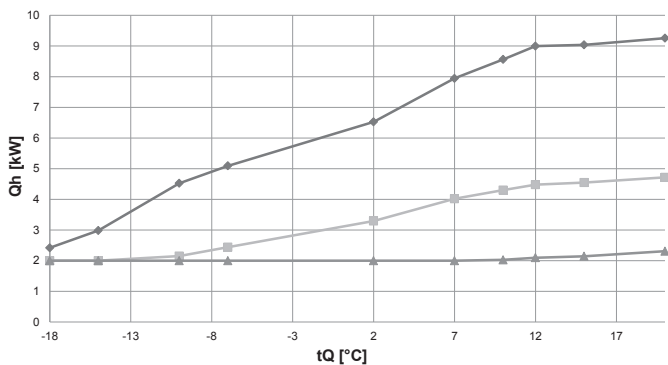
Heat output - $t_{FL} 45^{\circ}\text{C}$



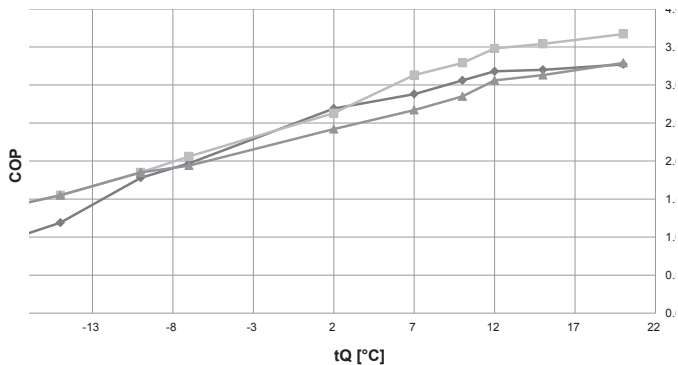
Coefficient of performance - $t_{FL} 45^{\circ}\text{C}$



Heat output - $t_{FL} 55^{\circ}\text{C}$



Coefficient of performance - $t_{FL} 55^{\circ}\text{C}$



Observe daily power interruptions!
see engineering

t_{FL} = Heating flow temperature ($^{\circ}\text{C}$)

t_Q = Source temperature ($^{\circ}\text{C}$)

Q_h = Heat output (kW), measured in accordance with standard EN 14511

COP = Coefficient of performance for the overall unit in accordance with standard EN 14511

◆ Maximum output
■ Nominal output
▲ Minimum output

■ Technical data

Performance data – heating

Hoval UltraSource B comfort C (8), compact C (8/200)

Data according to EN 14511

| tFL °C | tQ °C | Maximum output | | | Nominal output | | | Minimum output | | |
|--------------|----------|----------------|---------|-----|----------------|---------|-----|----------------|---------|-----|
| | | Qh kW | P kW | COP | Qh kW | P kW | COP | Qh kW | P kW | COP |
| 35 | -18 | 4.4 | 1.7 | 2.6 | 2 | 0.8 | 2.6 | 2 | 0.8 | 2.6 |
| | -15 | 4.7 | 1.7 | 2.7 | 2.2 | 0.8 | 2.7 | 2 | 0.8 | 2.7 |
| | -10 | 5.4 | 1.8 | 3 | 2.6 | 0.8 | 3.1 | 2.2 | 0.7 | 3.1 |
| | -7 | 6 | 1.9 | 3.2 | 2.7 | 0.9 | 3.4 | 2 | 0.6 | 3.4 |
| | 2 | 7.6 | 2 | 3.8 | 3.9 | 0.9 | 4.4 | 2.1 | 0.5 | 4.4 |
| | 7 | 8.7 | 2 | 4.3 | 4.5 | 0.9 | 5.2 | 2.2 | 0.4 | 5.2 |
| | 10 | 9.4 | 2 | 4.6 | 4.9 | 0.9 | 5.7 | 2.4 | 0.4 | 5.9 |
| | 12 | 9.9 | 2.1 | 4.8 | 5.1 | 0.8 | 6.1 | 2.6 | 0.4 | 6.5 |
| | 15 | 9.9 | 2.1 | 4.8 | 5.3 | 0.8 | 6.4 | 2.6 | 0.4 | 6.5 |
| | 20 | 10.1 | 2.1 | 4.9 | 5.4 | 0.8 | 6.5 | 2.7 | 0.4 | 6.6 |
| 45 | -18 | 3.9 | 2.1 | 1.8 | 2 | 1.1 | 1.9 | 2 | 1.1 | 1.9 |
| | -15 | 4.2 | 2.1 | 1.9 | 2 | 0.9 | 2.1 | 2 | 0.9 | 2.1 |
| | -10 | 5.2 | 2.1 | 2.4 | 2.4 | 1 | 2.4 | 2 | 0.9 | 2.4 |
| | -7 | 5.7 | 2.2 | 2.6 | 2.7 | 1 | 2.7 | 2 | 0.8 | 2.5 |
| | 2 | 7.1 | 2.2 | 3.3 | 3.6 | 1.1 | 3.4 | 2 | 0.7 | 3 |
| | 7 | 8.3 | 2.4 | 3.5 | 4.2 | 1.1 | 3.9 | 2 | 0.6 | 3.6 |
| | 10 | 9 | 2.4 | 3.7 | 4.6 | 1.1 | 4.3 | 2.2 | 0.5 | 4 |
| | 12 | 9.4 | 2.5 | 3.8 | 4.8 | 1.1 | 4.5 | 2.3 | 0.5 | 4.3 |
| | 15 | 9.5 | 2.5 | 3.8 | 4.9 | 1.1 | 4.6 | 2.4 | 0.5 | 4.4 |
| | 20 | 9.6 | 2.5 | 3.9 | 5 | 1.1 | 4.7 | 2.5 | 0.5 | 4.8 |
| 50 | -18 | 2.9 | 2.3 | 1.3 | 2 | 1.3 | 1.5 | 2.0 | 1.3 | 1.6 |
| | -15 | 3.4 | 2.3 | 1.5 | 2 | 1.2 | 1.7 | 2.0 | 1.2 | 1.7 |
| | -10 | 4.7 | 2.3 | 2.0 | 2.3 | 1.1 | 2 | 2.1 | 1.0 | 2.1 |
| | -7 | 5.3 | 2.4 | 2.2 | 2.6 | 1.2 | 2.2 | 2.0 | 0.9 | 2.2 |
| | 2 | 6.8 | 2.3 | 2.9 | 3.5 | 1.2 | 2.9 | 2.0 | 0.7 | 2.8 |
| | 7 | 8.2 | 2.6 | 3.1 | 4.1 | 1.2 | 3.4 | 2.1 | 0.7 | 2.9 |
| | 10 | 8.8 | 2.6 | 3.4 | 4.5 | 1.2 | 3.7 | 2.1 | 0.6 | 3.4 |
| | 12 | 9.2 | 2.6 | 3.5 | 4.7 | 1.2 | 3.9 | 2.2 | 0.6 | 3.6 |
| | 15 | 9.2 | 2.6 | 3.5 | 4.7 | 1.2 | 3.9 | 2.3 | 0.6 | 3.7 |
| | 20 | 9.5 | 2.6 | 3.6 | 4.9 | 1.2 | 4.1 | 2.4 | 0.6 | 3.8 |
| 55 | -18 | 2.4 | 2.5 | 1 | 2 | 1.4 | 1.4 | 2 | 1.4 | 1.4 |
| | -15 | 3 | 2.5 | 1.2 | 2 | 1.3 | 1.6 | 2 | 1.3 | 1.6 |
| | -10 | 4.5 | 2.5 | 1.8 | 2.2 | 1.2 | 1.9 | 2 | 1.1 | 1.9 |
| | -7 | 5.1 | 2.6 | 2 | 2.4 | 1.2 | 2.1 | 2 | 1 | 1.9 |
| | 2 | 6.5 | 2.4 | 2.7 | 3.3 | 1.3 | 2.6 | 2 | 0.8 | 2.4 |
| | 7 | 8 | 2.8 | 2.9 | 4 | 1.3 | 3.1 | 2 | 0.8 | 2.7 |
| | 10 | 8.6 | 2.8 | 3.1 | 4.3 | 1.3 | 3.3 | 2 | 0.7 | 2.9 |
| | 12 | 9 | 2.8 | 3.2 | 4.5 | 1.3 | 3.5 | 2.1 | 0.7 | 3.1 |
| | 15 | 9 | 2.8 | 3.2 | 4.6 | 1.3 | 3.5 | 2.2 | 0.7 | 3.1 |
| | 20 | 9.3 | 2.8 | 3.3 | 4.7 | 1.3 | 3.7 | 2.3 | 0.7 | 3.3 |
| 60 (92 %) | -18 | - | - | - | - | - | - | - | - | - |
| | -15 | - | - | - | - | - | - | - | - | - |
| | -10 | - | - | - | - | - | - | - | - | - |
| | -7 | 4.9 | 2.6 | 1.9 | 2.3 | 1.2 | 1.9 | 1.9 | 1.0 | 1.9 |
| | 2 | 6.1 | 2.4 | 2.5 | 3.1 | 1.3 | 2.4 | 1.9 | 0.8 | 2.3 |
| | 7 | 7.8 | 3.0 | 2.6 | 3.9 | 1.4 | 2.9 | 2.0 | 0.9 | 2.3 |
| | 10 | 8.4 | 3.0 | 2.8 | 4.2 | 1.4 | 2.9 | 2.0 | 0.8 | 2.6 |
| | 12 | 8.6 | 3.0 | 2.9 | 4.3 | 1.4 | 3.1 | 2.0 | 0.8 | 2.7 |
| | 15 | 8.6 | 3.0 | 2.9 | 4.4 | 1.4 | 3.1 | 2.1 | 0.8 | 2.8 |
| | 20 | 9.1 | 3.0 | 3.0 | 4.6 | 1.4 | 3.3 | 2.3 | 0.8 | 3.0 |

tFL = Heating flow temperature (°C)

tQ = Source temperature (°C)

Qh = Heat output (kW), measured in accordance with standard EN 14511

P = Power consumption, overall unit (kW)

COP = Coefficient of performance for the overall unit in accordance with standard EN 14511

Observe daily power interruptions!
see engineering

■ Technical data

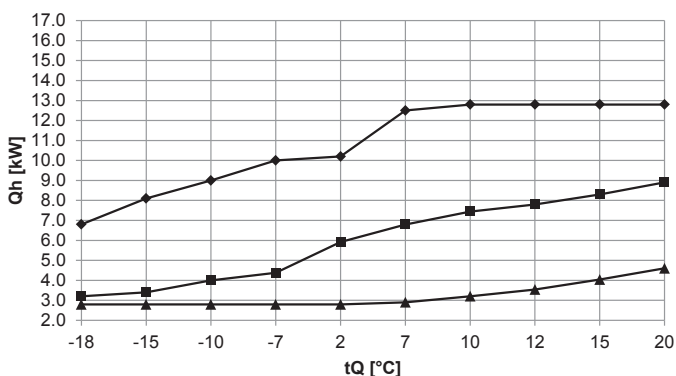
Performance data – heating

Maximum heat output allowing for defrosting losses

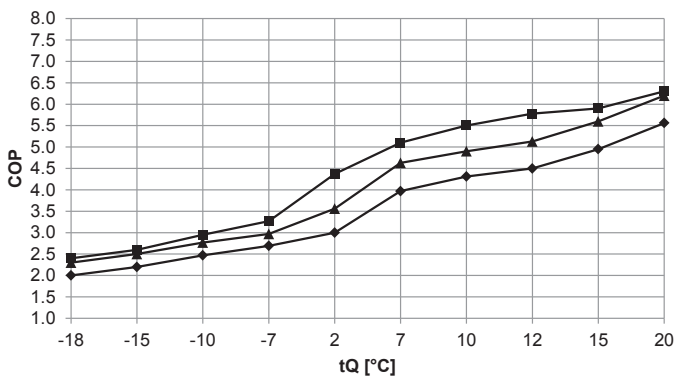
Hoval UltraSource B comfort C (11), compact C (11/200)

Data according to EN 14511

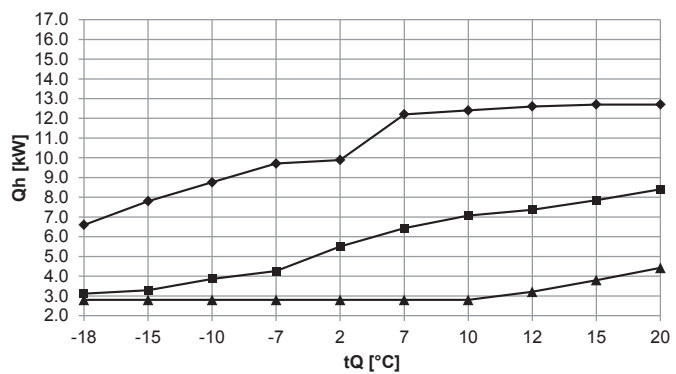
Heat output - $t_{FL} 35^{\circ}\text{C}$



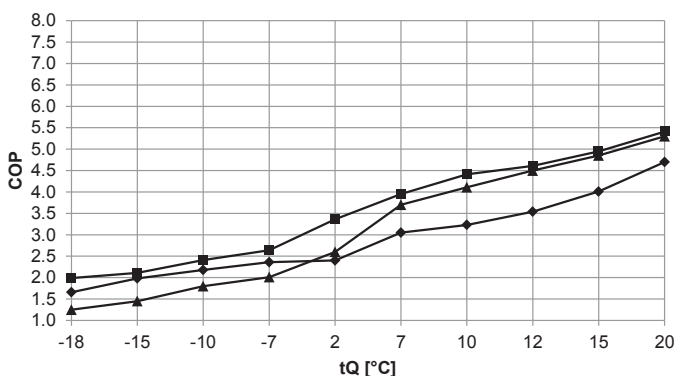
Coefficient of performance - $t_{FL} 35^{\circ}\text{C}$



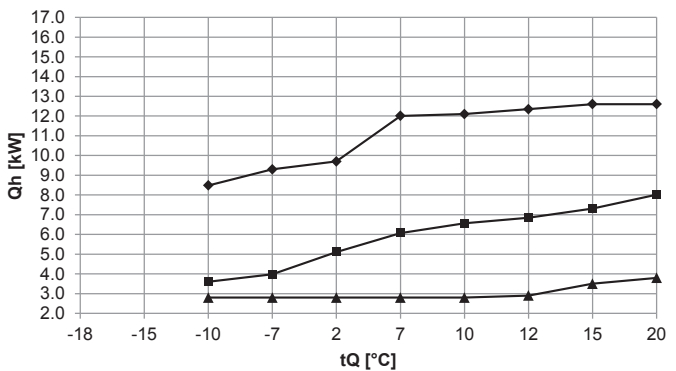
Heat output - $t_{FL} 45^{\circ}\text{C}$



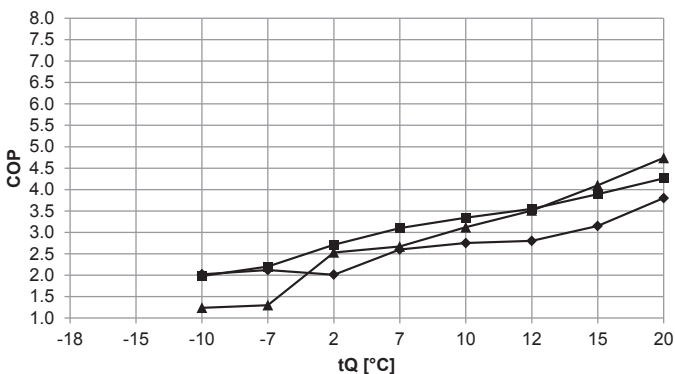
Coefficient of performance - $t_{FL} 45^{\circ}\text{C}$



Heat output - $t_{FL} 55^{\circ}\text{C}$



Coefficient of performance - $t_{FL} 55^{\circ}\text{C}$



Observe daily power interruptions!
see engineering

t_{FL} = Heating flow temperature ($^{\circ}\text{C}$)

t_Q = Source temperature ($^{\circ}\text{C}$)

Q_h = Heat output (kW), measured in accordance with standard EN 14511

COP = Coefficient of performance for the overall unit in accordance with standard EN 14511

◆ Maximum output
■ Nominal output
▲ Minimum output

■ Technical data

Performance data – heating

Hoval UltraSource B comfort C (11), compact C (11/200)

Data according to EN 14511

| tFL °C | tQ °C | Maximum output | | | Nominal output | | | Minimum output | | |
|-----------|----------|----------------|---------|-----|----------------|---------|-----|----------------|---------|-----|
| | | Qh kW | P kW | COP | Qh kW | P kW | COP | Qh kW | P kW | COP |
| 35 | -18 | 6.8 | 3.4 | 2.0 | 3.2 | 1.3 | 2.4 | 2.8 | 1.2 | 2.3 |
| | -15 | 8.1 | 3.6 | 2.2 | 3.4 | 1.3 | 2.6 | 2.8 | 1.1 | 2.5 |
| | -10 | 9.0 | 3.6 | 2.5 | 4.0 | 1.4 | 3.0 | 2.8 | 1.0 | 2.8 |
| | -7 | 10.0 | 3.7 | 2.7 | 4.4 | 1.3 | 3.3 | 2.8 | 0.9 | 3.0 |
| | 2 | 10.2 | 3.4 | 3.0 | 5.9 | 1.4 | 4.4 | 2.8 | 0.8 | 3.6 |
| | 7 | 12.5 | 3.2 | 4.0 | 6.8 | 1.3 | 5.1 | 2.9 | 0.6 | 4.6 |
| | 10 | 12.8 | 3.0 | 4.3 | 7.4 | 1.4 | 5.5 | 3.2 | 0.7 | 4.9 |
| | 12 | 12.8 | 2.9 | 4.5 | 7.8 | 1.4 | 5.8 | 3.5 | 0.7 | 5.1 |
| | 15 | 12.8 | 2.6 | 5.0 | 8.3 | 1.4 | 5.9 | 4.0 | 0.7 | 5.6 |
| | 20 | 12.8 | 2.3 | 5.6 | 8.9 | 1.4 | 6.3 | 4.6 | 0.7 | 6.2 |
| 45 | -18 | 6.6 | 4.0 | 1.7 | 3.1 | 1.6 | 2.0 | 2.8 | 2.2 | 1.3 |
| | -15 | 7.8 | 3.9 | 2.0 | 3.3 | 1.6 | 2.1 | 2.8 | 1.9 | 1.5 |
| | -10 | 8.8 | 4.0 | 2.2 | 3.9 | 1.6 | 2.4 | 2.8 | 1.6 | 1.8 |
| | -7 | 9.7 | 4.1 | 2.4 | 4.3 | 1.6 | 2.6 | 2.8 | 1.4 | 2.0 |
| | 2 | 9.9 | 4.1 | 2.4 | 5.5 | 1.6 | 3.4 | 2.8 | 1.1 | 2.6 |
| | 7 | 12.2 | 4.0 | 3.1 | 6.4 | 1.6 | 4.0 | 2.8 | 0.8 | 3.7 |
| | 10 | 12.4 | 3.8 | 3.2 | 7.1 | 1.6 | 4.4 | 2.8 | 0.7 | 4.1 |
| | 12 | 12.6 | 3.6 | 3.5 | 7.4 | 1.6 | 4.6 | 3.2 | 0.7 | 4.5 |
| | 15 | 12.7 | 3.2 | 4.0 | 7.9 | 1.6 | 5.0 | 3.8 | 0.8 | 4.9 |
| | 20 | 12.7 | 2.7 | 4.7 | 8.4 | 1.6 | 5.4 | 4.4 | 0.8 | 5.3 |
| 50 | -18 | 6.4 | 4.2 | 1.5 | 3.0 | 1.7 | 1.8 | 2.7 | 2.4 | 1.1 |
| | -15 | 7.4 | 4.2 | 1.8 | 3.1 | 1.7 | 1.9 | 2.6 | 2.0 | 1.3 |
| | -10 | 8.6 | 4.1 | 2.1 | 3.7 | 1.7 | 2.2 | 2.8 | 1.9 | 1.5 |
| | -7 | 9.5 | 4.3 | 2.2 | 4.1 | 1.7 | 2.4 | 2.8 | 1.8 | 1.6 |
| | 2 | 9.8 | 4.5 | 2.2 | 5.3 | 1.8 | 3.0 | 2.8 | 1.1 | 2.6 |
| | 7 | 12.1 | 4.3 | 2.8 | 6.3 | 1.8 | 3.5 | 2.8 | 0.9 | 3.1 |
| | 10 | 12.3 | 4.1 | 3.0 | 6.8 | 1.8 | 3.9 | 2.8 | 0.8 | 3.5 |
| | 12 | 12.5 | 4.0 | 3.1 | 7.1 | 1.7 | 4.1 | 3.1 | 0.8 | 4.0 |
| | 15 | 12.7 | 3.6 | 3.5 | 7.6 | 1.7 | 4.4 | 3.7 | 0.8 | 4.5 |
| | 20 | 12.7 | 3.0 | 4.2 | 8.2 | 1.7 | 4.8 | 4.1 | 0.8 | 5.0 |
| 55 | -18 | - | - | - | - | - | - | - | - | - |
| | -15 | - | - | - | - | - | - | - | - | - |
| | -10 | 8.5 | 4.2 | 2.0 | 3.6 | 1.8 | 2.0 | 2.8 | 2.3 | 1.2 |
| | -7 | 9.3 | 4.4 | 2.1 | 4.0 | 1.8 | 2.2 | 2.8 | 2.2 | 1.3 |
| | 2 | 9.7 | 4.8 | 2.0 | 5.1 | 1.9 | 2.7 | 2.8 | 1.1 | 2.5 |
| | 7 | 12.0 | 4.6 | 2.6 | 6.1 | 2.0 | 3.1 | 2.8 | 1.1 | 2.7 |
| | 10 | 12.1 | 4.4 | 2.8 | 6.6 | 2.0 | 3.3 | 2.8 | 0.9 | 3.1 |
| | 12 | 12.4 | 4.4 | 2.8 | 6.9 | 1.9 | 3.6 | 2.9 | 0.8 | 3.5 |
| | 15 | 12.6 | 4.0 | 3.2 | 7.3 | 1.9 | 3.9 | 3.5 | 0.9 | 4.1 |
| | 20 | 12.6 | 3.3 | 3.8 | 8.0 | 1.9 | 4.3 | 3.8 | 0.8 | 4.7 |
| 62 | -18 | - | - | - | - | - | - | - | - | - |
| | -15 | - | - | - | - | - | - | - | - | - |
| | -10 | - | - | - | - | - | - | - | - | - |
| | -7 | - | - | - | - | - | - | - | - | - |
| | 2 | 8.3 | 5.7 | 1.5 | 4.8 | 2.3 | 2.1 | - | - | - |
| | 7 | 10.4 | 5.6 | 1.9 | 5.7 | 2.4 | 2.4 | - | - | - |
| | 10 | 10.9 | 5.3 | 2.1 | 6.3 | 2.4 | 2.6 | - | - | - |
| | 12 | 10.9 | 5.0 | 2.2 | 6.6 | 2.4 | 2.8 | - | - | - |
| | 15 | 10.9 | 4.1 | 2.7 | 7.0 | 2.2 | 3.2 | - | - | - |
| | 20 | 11.2 | 3.7 | 3.1 | 7.8 | 2.2 | 3.6 | - | - | - |

tFL = Heating flow temperature (°C)

tQ = Source temperature (°C)

Qh = Heat output (kW), measured in accordance with standard EN 14511

P = Power consumption, overall unit (kW)

COP = Coefficient of performance for the overall unit in accordance with standard EN 14511

Observe daily power interruptions!
see engineering

■ Technical data

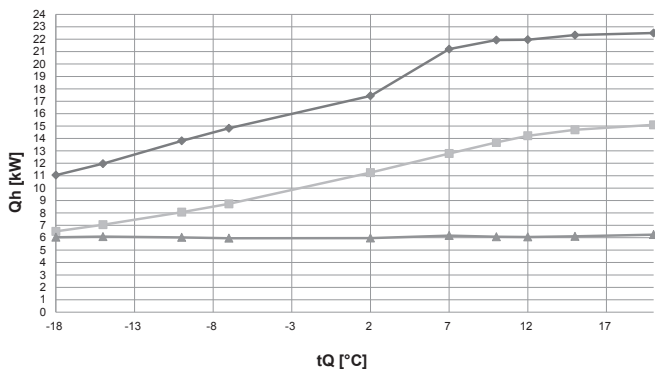
Performance data – heating

Maximum heat output allowing for defrosting losses

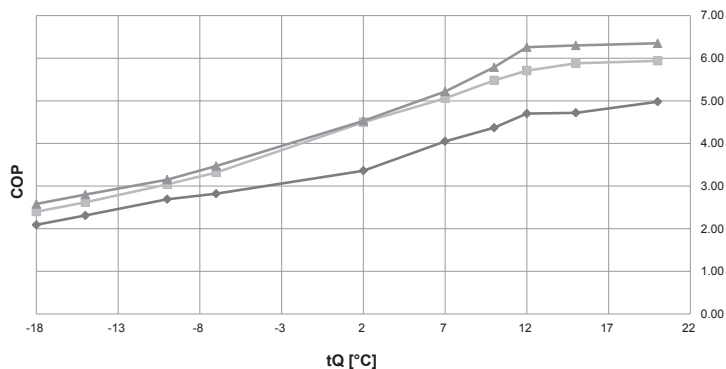
Hoval UltraSource B comfort C (17)

Data according to EN 14511

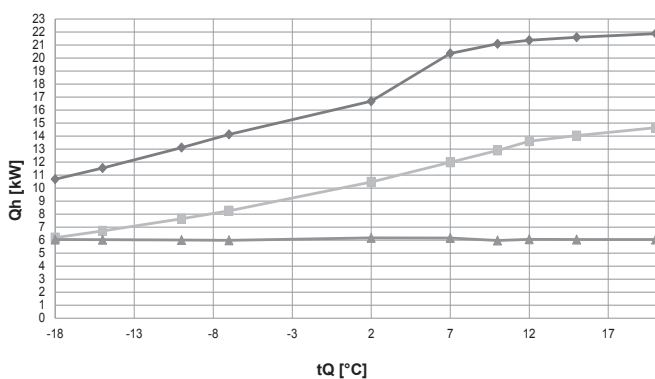
Heat output - $t_{FL} 35^{\circ}\text{C}$



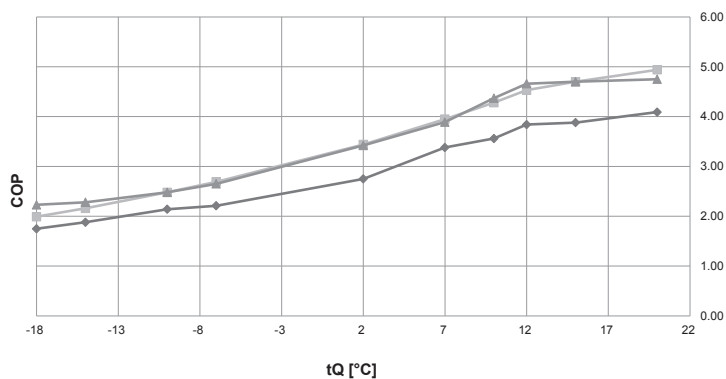
Coefficient of performance - $t_{FL} 35^{\circ}\text{C}$



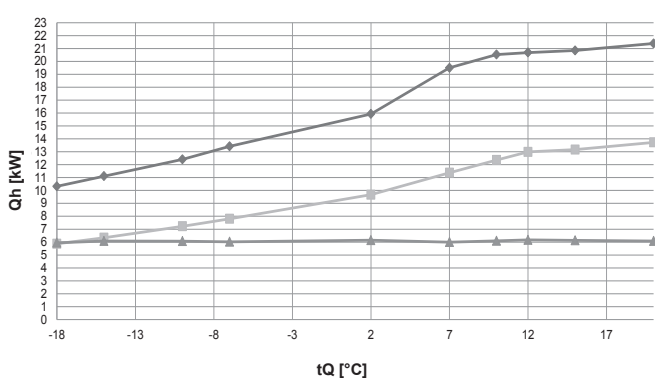
Heat output - $t_{FL} 45^{\circ}\text{C}$



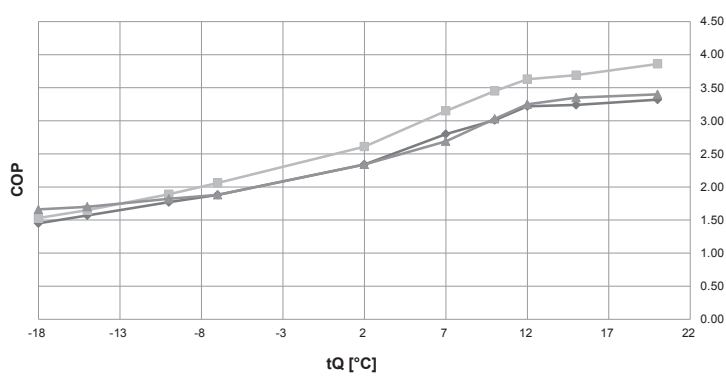
Coefficient of performance - $t_{FL} 45^{\circ}\text{C}$



Heat output - $t_{FL} 55^{\circ}\text{C}$



Coefficient of performance - $t_{FL} 55^{\circ}\text{C}$



Observe daily power interruptions!
see engineering

t_{FL} = Heating flow temperature ($^{\circ}\text{C}$)

t_Q = Source temperature ($^{\circ}\text{C}$)

Q_h = Heat output (kW), measured in accordance with standard EN 14511

COP = Coefficient of performance for the overall unit in accordance with standard EN 14511

◆ Maximum output
■ Nominal output
▲ Minimum output

■ Technical data

Performance data – heating

Hoval UltraSource B comfort C (17)

Data according to EN 14511

| tFL °C | tQ °C | Maximum output | | | Nominal output | | | Minimum output | | |
|-----------|----------|----------------|---------|-----|----------------|---------|-----|----------------|---------|-----|
| | | Qh kW | P kW | COP | Qh kW | P kW | COP | Qh kW | P kW | COP |
| 35 | -18 | 11 | 5.3 | 2.1 | 6.5 | 2.7 | 2.4 | 6 | 2.3 | 2.6 |
| | -15 | 12 | 5.2 | 2.3 | 7.1 | 2.7 | 2.6 | 6.1 | 2.2 | 2.8 |
| | -10 | 13.8 | 5.1 | 2.7 | 8.1 | 2.7 | 3 | 6 | 2 | 3 |
| | -7 | 14.8 | 5.3 | 2.8 | 8.7 | 2.6 | 3.3 | 6 | 1.7 | 3.5 |
| | 2 | 17.4 | 5.2 | 3.4 | 11.3 | 2.5 | 4.5 | 6.0 | 1.3 | 4.5 |
| | 7 | 21.2 | 5.2 | 4.1 | 12.8 | 2.5 | 5.1 | 6.2 | 1.2 | 5.2 |
| | 10 | 21.9 | 5 | 4.4 | 13.7 | 2.5 | 5.5 | 6.1 | 1 | 5.8 |
| | 12 | 22 | 4.7 | 4.7 | 14.2 | 2.5 | 5.7 | 6.1 | 1 | 6.3 |
| | 15 | 22.3 | 4.7 | 4.7 | 14.7 | 2.5 | 5.9 | 6.1 | 1 | 6.3 |
| | 20 | 22.5 | 4.5 | 5 | 15.1 | 2.5 | 5.9 | 6.3 | 1 | 6.4 |
| 45 | -18 | 10.7 | 6.1 | 1.8 | 6.2 | 3.1 | 2 | 6 | 2.7 | 2.2 |
| | -15 | 11.5 | 6.1 | 1.9 | 6.7 | 3.1 | 2.2 | 6 | 2.6 | 2.3 |
| | -10 | 13.1 | 6.1 | 2.1 | 7.6 | 3.1 | 2.5 | 6 | 2.4 | 2.5 |
| | -7 | 14.1 | 6.4 | 2.2 | 8.3 | 3.1 | 2.7 | 6 | 2.3 | 2.7 |
| | 2 | 16.7 | 6.1 | 2.8 | 10.5 | 3 | 3.4 | 6.2 | 1.8 | 3.4 |
| | 7 | 20.4 | 6 | 3.4 | 12 | 3 | 4 | 6.2 | 1.6 | 3.9 |
| | 10 | 21.1 | 5.9 | 3.6 | 12.9 | 3 | 4.3 | 6 | 1.4 | 4.4 |
| | 12 | 21.4 | 5.6 | 3.8 | 13.6 | 3 | 4.5 | 6.1 | 1.3 | 4.7 |
| | 15 | 21.6 | 5.6 | 3.8 | 14 | 3 | 4.7 | 6 | 1.3 | 4.7 |
| | 20 | 21.9 | 5.4 | 4.1 | 14.7 | 3 | 4.9 | 6 | 1.3 | 4.8 |
| 50 | -18 | 10.5 | 6.7 | 1.6 | 6 | 3.7 | 1.6 | 6.0 | 3.3 | 1.8 |
| | -15 | 11.3 | 6.6 | 1.7 | 6.5 | 3.7 | 1.8 | 6.1 | 3.2 | 1.9 |
| | -10 | 12.8 | 6.5 | 2.0 | 7.4 | 3.6 | 2.1 | 6.1 | 3.0 | 2.0 |
| | -7 | 13.8 | 6.7 | 2.1 | 8 | 3.6 | 2.3 | 6.0 | 2.8 | 2.1 |
| | 2 | 16.3 | 6.4 | 2.5 | 10.1 | 3.5 | 2.9 | 6.1 | 2.3 | 2.7 |
| | 7 | 19.9 | 6.6 | 3.0 | 11.7 | 3.4 | 3.4 | 6.0 | 2.0 | 3.1 |
| | 10 | 20.9 | 6.4 | 3.3 | 12.6 | 3.4 | 3.7 | 6.1 | 1.8 | 3.4 |
| | 12 | 21.0 | 6.0 | 3.5 | 13.3 | 3.4 | 4 | 6.1 | 1.7 | 3.7 |
| | 15 | 21.3 | 6.0 | 3.6 | 13.6 | 3.3 | 4.1 | 6.1 | 1.6 | 3.8 |
| | 20 | 21.7 | 5.9 | 3.7 | 14.2 | 3.3 | 4.3 | 6.1 | 1.6 | 3.9 |
| 55 | -18 | 10.3 | 7.1 | 1.5 | 5.9 | 3.8 | 1.5 | 6 | 3.6 | 1.7 |
| | -15 | 11.1 | 7.1 | 1.6 | 6.3 | 3.8 | 1.7 | 6.1 | 3.6 | 1.7 |
| | -10 | 12.4 | 7 | 1.8 | 7.2 | 3.8 | 1.9 | 6.1 | 3.3 | 1.8 |
| | -7 | 13.4 | 7.1 | 1.9 | 7.8 | 3.8 | 2.1 | 6 | 3 | 1.9 |
| | 2 | 15.9 | 6.8 | 2.3 | 9.7 | 3.7 | 2.6 | 6.1 | 2.6 | 2.3 |
| | 7 | 19.5 | 7 | 2.8 | 11.4 | 3.6 | 3.2 | 6 | 2 | 2.7 |
| | 10 | 20.5 | 6.8 | 3 | 12.4 | 3.6 | 3.5 | 6 | 2 | 3 |
| | 12 | 20.7 | 6.4 | 3.2 | 13 | 3.6 | 3.6 | 6.2 | 2 | 3.3 |
| | 15 | 20.9 | 6.4 | 3.2 | 13.2 | 3.6 | 3.7 | 6.1 | 1.8 | 3.4 |
| | 20 | 21.4 | 6.4 | 3.3 | 13.7 | 3.6 | 3.9 | 6.1 | 1.8 | 3.4 |
| 62 | -18 | - | - | - | - | - | - | - | - | - |
| | -15 | - | - | - | - | - | - | - | - | - |
| | -10 | 12.1 | 7.6 | 1.6 | 7 | 4.1 | 1.7 | 5.9 | 3.6 | 1.6 |
| | -7 | 13.1 | 7.7 | 1.7 | 7.6 | 4.1 | 1.9 | 5.9 | 3.5 | 1.7 |
| | 2 | 15.2 | 7.4 | 2.1 | 9.3 | 4 | 2.3 | 5.9 | 2.8 | 2.1 |
| | 7 | 19.0 | 7.6 | 2.5 | 11.1 | 3.9 | 2.9 | 5.8 | 2.4 | 2.4 |
| | 10 | 20.0 | 7.2 | 2.8 | 12.1 | 3.8 | 3.2 | 6.0 | 2.1 | 2.8 |
| | 12 | 20.2 | 6.8 | 3.0 | 12.7 | 3.8 | 3.3 | 6.0 | 2.0 | 3.0 |
| | 15 | 20.1 | 6.9 | 2.9 | 12.7 | 3.9 | 3.3 | 5.9 | 2.0 | 3.0 |
| | 20 | 20.8 | 6.9 | 3.0 | 13.3 | 3.9 | 3.5 | 5.9 | 1.9 | 3.0 |

tFL = Heating flow temperature (°C)

tQ = Source temperature (°C)

Qh = Heat output (kW), measured in accordance with standard EN 14511

P = Power consumption, overall unit (kW)

COP = Coefficient of performance for the overall unit in accordance with standard EN 14511

Observe daily power interruptions!
see engineering

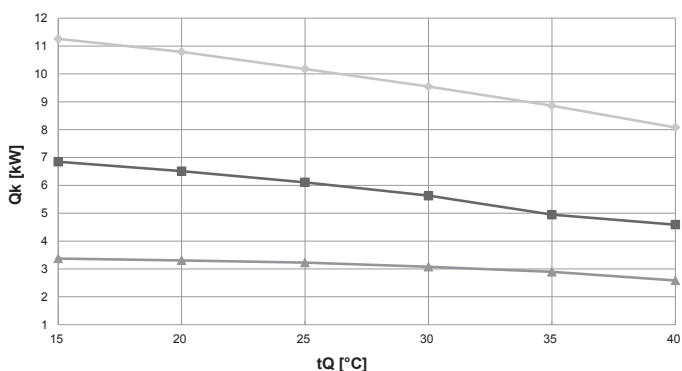
■ Technical data

Performance data – cooling

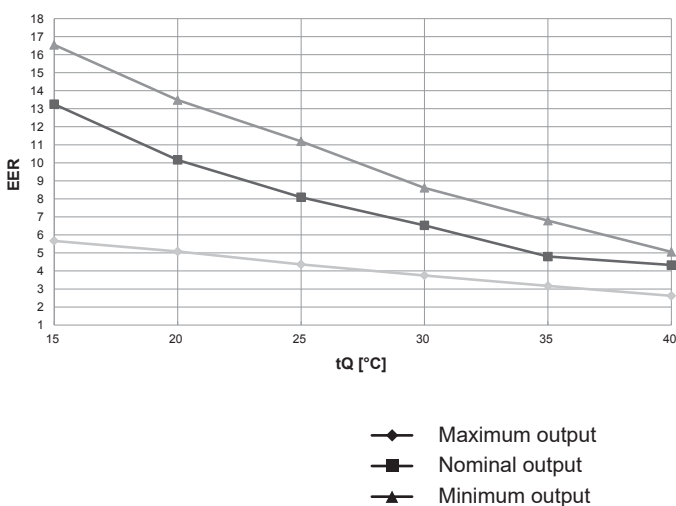
Maximum cooling capacity

Hoval UltraSource B comfort C (8), compact C (8/200)

Cooling capacity - t_{FL} 18 °C



Coefficient of performance - t_{FL} 18 °C



Hoval UltraSource B comfort C (8), compact C (8/200)

Data according to EN 14511

| tFL °C | tQ °C | Maximum output | | | Nominal output | | | Minimum output | | |
|-----------|----------|----------------|---------|-----|----------------|---------|------|----------------|---------|------|
| | | Qk kW | P kW | EER | Qk kW | P kW | EER | Qk kW | P kW | EER |
| 7 | 15 | 8.1 | 1.7 | 4.8 | 4.7 | 0.6 | 7.8 | 2.4 | 0.2 | 10.1 |
| | 20 | 7.7 | 1.9 | 4.1 | 4.5 | 0.7 | 6.4 | 2.2 | 0.3 | 7.5 |
| | 25 | 7.3 | 2.1 | 3.5 | 4.3 | 0.8 | 5.3 | 2.1 | 0.4 | 5.9 |
| | 30 | 6.8 | 2.3 | 3 | 4 | 0.9 | 4.4 | 2.1 | 0.5 | 4.4 |
| | 35 | 6.3 | 2.4 | 2.6 | 3.8 | 1 | 3.7 | 2 | 0.5 | 3.8 |
| | 40 | 5.8 | 2.7 | 2.2 | 3.4 | 1.1 | 3 | 2 | 0.7 | 3.1 |
| 12 | 15 | 9.7 | 1.8 | 5.3 | 5.7 | 0.6 | 10.1 | 2.8 | 0.2 | 13.6 |
| | 20 | 9.2 | 2 | 4.6 | 5.3 | 0.7 | 7.8 | 2.8 | 0.3 | 10.6 |
| | 25 | 8.7 | 2.2 | 4 | 5.1 | 0.8 | 6.4 | 2.6 | 0.3 | 8.1 |
| | 30 | 8 | 2.4 | 3.4 | 4.8 | 0.9 | 5.3 | 2.5 | 0.4 | 6.4 |
| | 35 | 7.5 | 2.6 | 2.9 | 4.3 | 1 | 4.2 | 2.3 | 0.5 | 5.1 |
| | 40 | 6.8 | 2.8 | 2.4 | 4 | 1.1 | 3.6 | 2.2 | 0.6 | 3.9 |
| 18 | 15 | 11.3 | 2 | 5.7 | 6.9 | 0.5 | 13.3 | 3.4 | 0.2 | 16.5 |
| | 20 | 10.8 | 2.1 | 5.1 | 6.5 | 0.6 | 10.2 | 3.3 | 0.3 | 13.5 |
| | 25 | 10.2 | 2.3 | 4.4 | 6.1 | 0.8 | 8.1 | 3.2 | 0.3 | 11.2 |
| | 30 | 9.6 | 2.6 | 3.8 | 5.6 | 0.9 | 6.5 | 3.1 | 0.4 | 8.1 |
| | 35 | 8.9 | 2.8 | 3.2 | 5 | 1 | 4.8 | 2.9 | 0.4 | 6.8 |
| | 40 | 8.1 | 3.1 | 2.6 | 4.6 | 1.1 | 4.3 | 2.6 | 0.5 | 5.1 |

tFL = Cooling water flow temperature (°C)

tQ = Source temperature (°C)

Qk = Cooling capacity (kW), measured in accordance with standard EN 14511

P = Power consumption, overall unit (kW)

EER = Coefficient of performance for the overall unit in accordance with standard EN 14511

Observe daily power interruptions!
see engineering

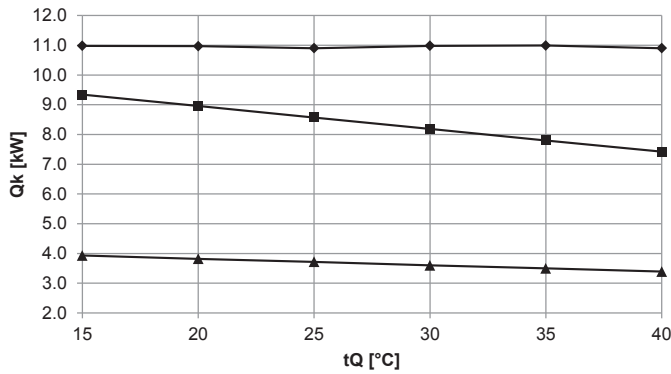
■ Technical data

Performance data – cooling

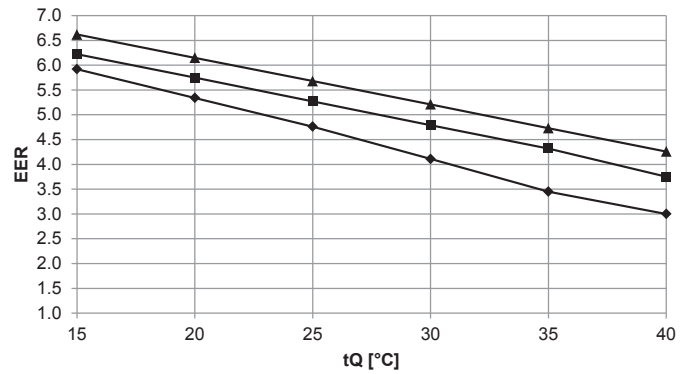
Maximum cooling capacity

Hoval UltraSource B comfort C (11), compact C (11/200)

Cooling capacity - t_{FL} 18 °C



Coefficient of performance - t_{FL} 18 °C



◆ Maximum output
■ Nominal output
▲ Minimum output

Hoval UltraSource B comfort C (11), compact C (11/200)

Data according to EN 14511

| tFL °C | tQ °C | Maximum output | | | Nominal output | | | Minimum output | | |
|-----------|----------|----------------|---------|-----|----------------|---------|-----|----------------|---------|-----|
| | | Qk kW | P kW | EER | Qk kW | P kW | EER | Qk kW | P kW | EER |
| 7 | 15 | 11.2 | 2.4 | 4.7 | 6.9 | 1.4 | 5.0 | 2.9 | 0.6 | 4.5 |
| | 20 | 10.5 | 2.5 | 4.3 | 6.6 | 1.5 | 4.5 | 2.9 | 0.7 | 4.1 |
| | 25 | 9.9 | 2.6 | 3.8 | 6.2 | 1.5 | 4.1 | 3.0 | 0.8 | 3.6 |
| | 30 | 9.3 | 2.8 | 3.3 | 5.8 | 1.6 | 3.6 | 3.0 | 0.9 | 3.2 |
| | 35 | 8.6 | 3.0 | 2.8 | 5.4 | 1.7 | 3.1 | 2.9 | 1.1 | 2.8 |
| | 40 | 8.0 | 3.4 | 2.6 | 5.0 | 1.9 | 2.6 | 2.9 | 1.2 | 2.3 |
| 12 | 15 | 10.8 | 2.1 | 5.2 | 8.0 | 1.4 | 5.6 | 3.1 | 0.6 | 5.4 |
| | 20 | 10.9 | 2.3 | 4.6 | 7.7 | 1.5 | 5.1 | 3.0 | 0.6 | 5.0 |
| | 25 | 10.8 | 2.7 | 4.0 | 7.3 | 1.6 | 4.6 | 2.9 | 0.7 | 4.5 |
| | 30 | 10.8 | 3.2 | 3.4 | 6.9 | 1.7 | 4.1 | 2.8 | 0.7 | 4.0 |
| | 35 | 10.1 | 3.4 | 3.0 | 6.5 | 1.8 | 3.7 | 2.9 | 0.8 | 3.6 |
| | 40 | 9.5 | 3.8 | 2.5 | 6.1 | 1.9 | 3.2 | 2.9 | 0.9 | 3.1 |
| 18 | 15 | 11.0 | 1.9 | 5.9 | 9.3 | 1.5 | 6.2 | 3.9 | 0.6 | 6.6 |
| | 20 | 11.0 | 2.1 | 5.3 | 9.0 | 1.6 | 5.8 | 3.8 | 0.6 | 6.2 |
| | 25 | 10.9 | 2.3 | 4.8 | 8.6 | 1.6 | 5.3 | 3.7 | 0.7 | 5.7 |
| | 30 | 11.0 | 2.7 | 4.1 | 8.2 | 1.7 | 4.8 | 3.6 | 0.7 | 5.2 |
| | 35 | 11.0 | 3.2 | 3.5 | 7.8 | 1.8 | 4.3 | 3.5 | 0.7 | 4.7 |
| | 40 | 10.9 | 3.6 | 3.0 | 7.4 | 2.0 | 3.8 | 3.4 | 0.8 | 4.3 |

tFL = Cooling water flow temperature (°C)

tQ = Source temperature (°C)

Qk = Cooling capacity (kW), measured in accordance with standard EN 14511

P = Power consumption, overall unit (kW)

EER = Coefficient of performance for the overall unit in accordance with standard EN 14511

Observe daily power interruptions!
see engineering

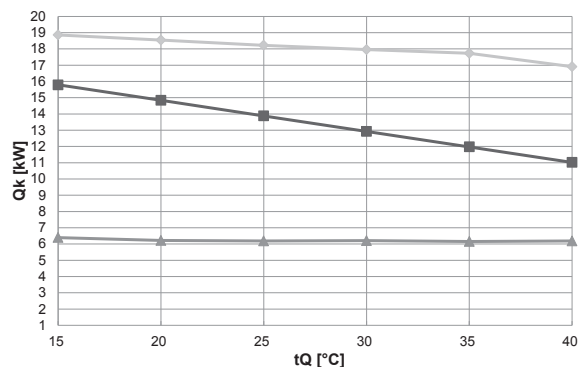
■ Technical data

Performance data – cooling

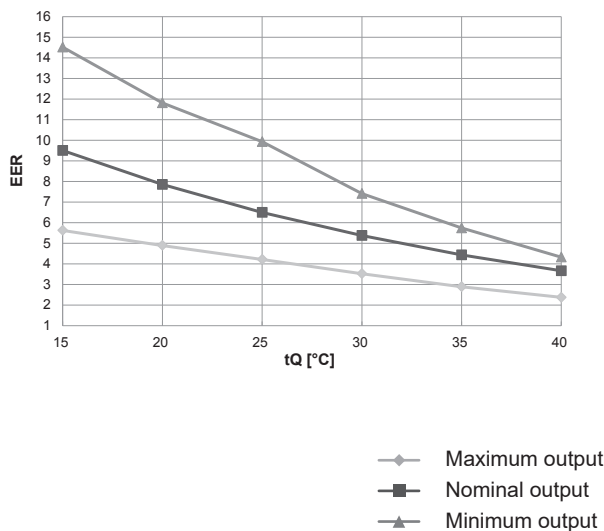
Maximum cooling capacity

Hoval UltraSource B comfort C (17)

Cooling capacity - t_{FL} 18 °C



Coefficient of performance - t_{FL} 18 °C



Hoval UltraSource B comfort C (17)

Data according to EN 14511

| tFL °C | tQ °C | Maximum output | | | Nominal output | | | Minimum output | | |
|-----------|----------|----------------|---------|-----|----------------|---------|-----|----------------|---------|------|
| | | Qk kW | P kW | EER | Qk kW | P kW | EER | Qk kW | P kW | EER |
| 7 | 15 | 16.5 | 3.9 | 4.2 | 11.2 | 1.7 | 6.5 | 6.2 | 0.7 | 8.5 |
| | 20 | 16.2 | 4.6 | 3.5 | 10.5 | 1.9 | 5.6 | 6.2 | 0.9 | 7 |
| | 25 | 15.5 | 5.3 | 2.9 | 9.8 | 2.1 | 4.7 | 6.2 | 1.1 | 5.7 |
| | 30 | 14.9 | 6.2 | 2.4 | 9.1 | 2.3 | 4 | 6.1 | 1.3 | 4.7 |
| | 35 | 14.2 | 7.7 | 1.9 | 8.5 | 2.5 | 3.4 | 6.1 | 1.6 | 3.8 |
| | 40 | 13.5 | 9 | 1.5 | 7.9 | 2.8 | 2.9 | 6 | 1.9 | 3.1 |
| 12 | 15 | 18.2 | 3.7 | 5 | 13.4 | 1.7 | 7.9 | 6.3 | 0.5 | 11.7 |
| | 20 | 17.9 | 4.3 | 4.2 | 12.6 | 1.9 | 6.6 | 6.1 | 0.7 | 9.2 |
| | 25 | 17.2 | 5 | 3.5 | 11.8 | 2.1 | 5.6 | 6.1 | 0.8 | 7.3 |
| | 30 | 16.4 | 5.8 | 2.8 | 10.9 | 2.4 | 4.6 | 6.2 | 1.1 | 5.6 |
| | 35 | 15.5 | 7.1 | 2.2 | 10 | 2.6 | 3.9 | 6.1 | 1.4 | 4.4 |
| | 40 | 14.7 | 8.2 | 1.8 | 9.2 | 2.9 | 3.2 | 6.1 | 1.7 | 3.6 |
| 18 | 15 | 18.9 | 3.4 | 5.6 | 15.8 | 1.7 | 9.5 | 6.4 | 0.4 | 14.5 |
| | 20 | 18.5 | 3.8 | 4.9 | 14.8 | 1.9 | 7.9 | 6.2 | 0.5 | 11.8 |
| | 25 | 18.2 | 4.3 | 4.2 | 13.9 | 2.1 | 6.5 | 6.2 | 0.6 | 9.9 |
| | 30 | 18 | 5.1 | 3.5 | 12.9 | 2.4 | 5.4 | 6.2 | 0.8 | 7.4 |
| | 35 | 17.7 | 6.1 | 2.9 | 12 | 2.7 | 4.4 | 6.2 | 1.1 | 5.7 |
| | 40 | 16.9 | 7.1 | 2.4 | 11 | 3 | 3.7 | 6.2 | 1.4 | 4.3 |

tFL = Cooling water flow temperature (°C)

tQ = Source temperature (°C)

Qk = Cooling capacity (kW), measured in accordance with standard EN 14511

P = Power consumption, overall unit (kW)

EER = Coefficient of performance for the overall unit in accordance with standard EN 14511

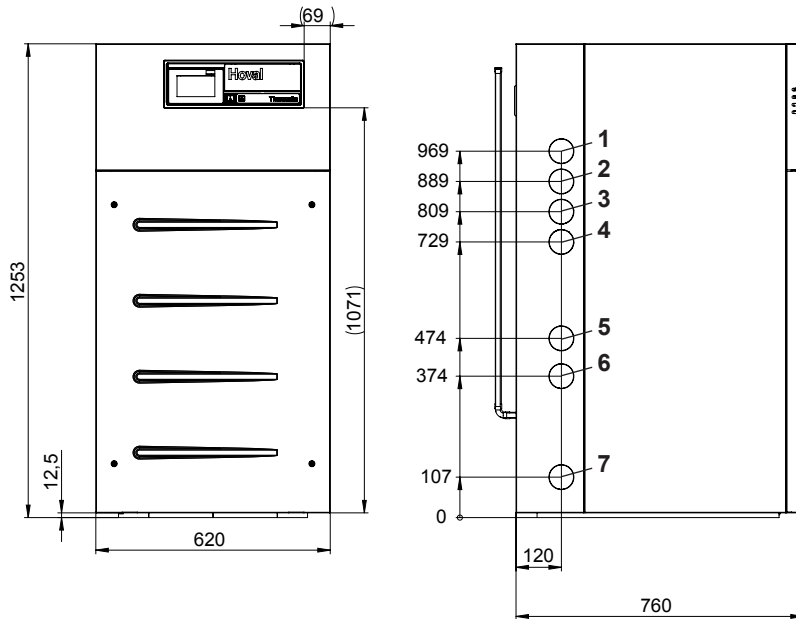
Observe daily power interruptions!
see engineering

■ Dimensions

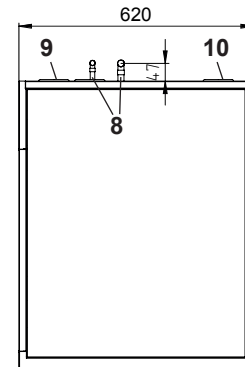
Hoval UltraSource B comfort C (8-17)

Indoor unit

(Dimensions in mm)



View from above



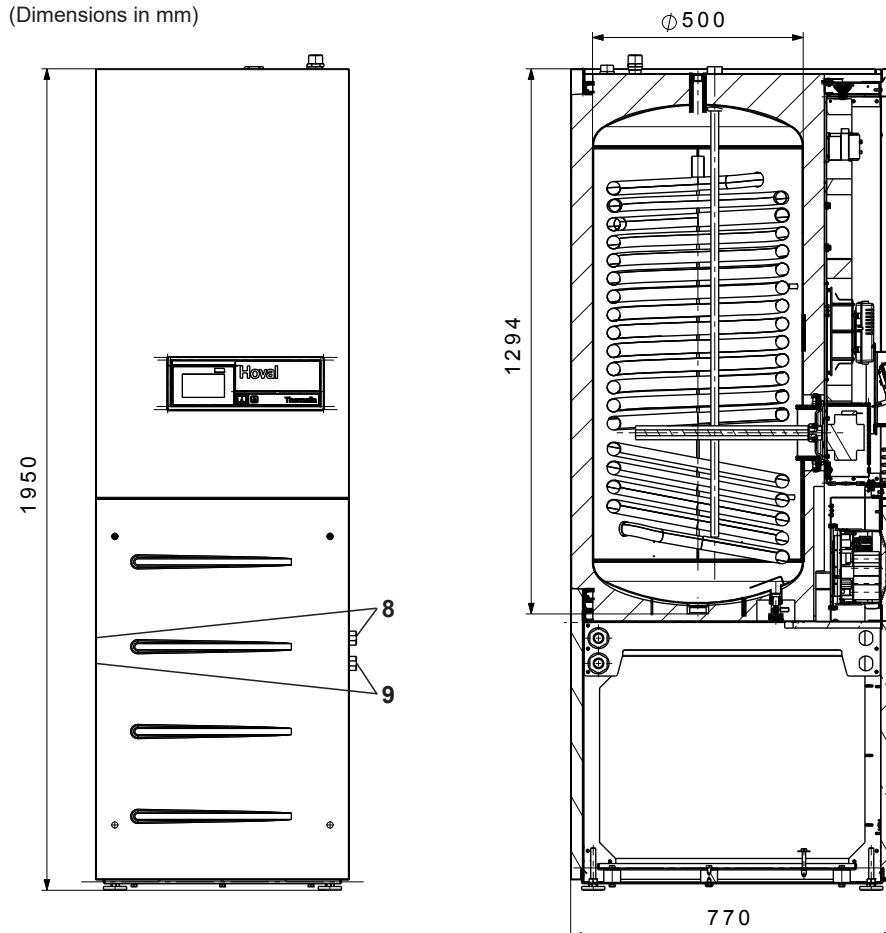
Connections (1-7) optionally on the left or right

- 1 Free
- 2 Flow heating 1"
- 3 Flow hot water charging 1"
- 4 Free
- 5 Free
- 6 Free
- 7 Return heating 1"
- 8 Working medium lines
- 9 Cable feed-in main current
- 10 Cable feed-in sensors

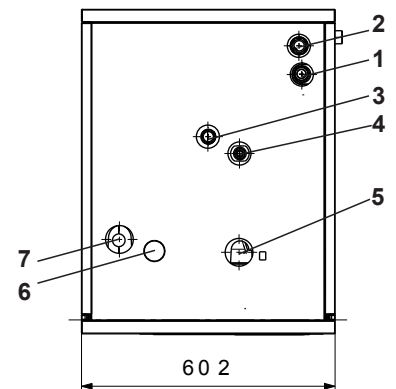
Hoval UltraSource B compact C (8,11/200)

Indoor unit with calorifier

(Dimensions in mm)



View from above



- 1 Flow heating 1"
- 2 Return heating 1"
- 3 Hot water connection 3/4"
- 4 Cold water connection 3/4"
- 5 Cable feed-in sensors
- 6 Circulation connection 3/4"
- 7 Cable feed-in main current
- 8 Working medium line
- 9 Working medium line

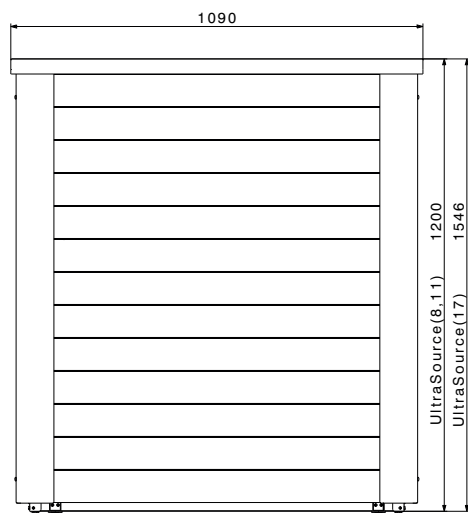
■ Dimensions

Hoval UltraSource B

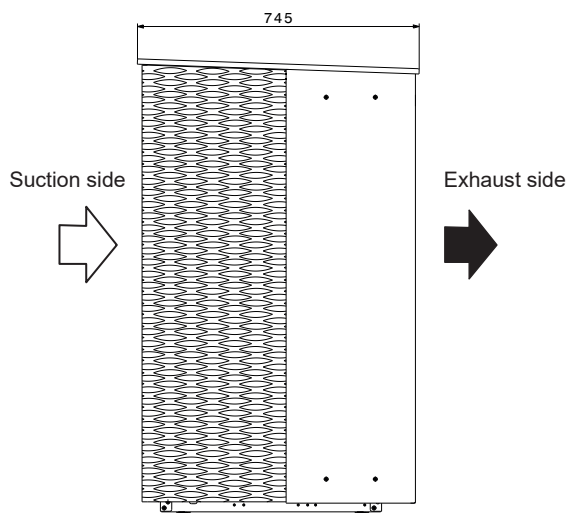
Outdoor unit

(Dimensions in mm)

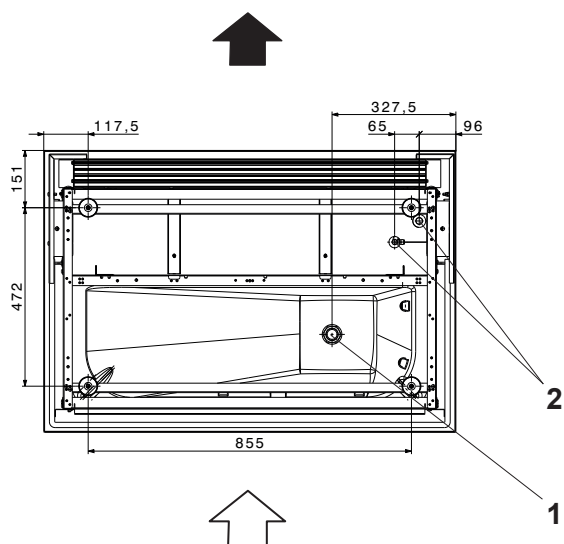
Front view



View from left



View from below



- 1 Condensate drain (Rp 1")
- 2 Connections for working medium lines Ø 10,12,16 or 18

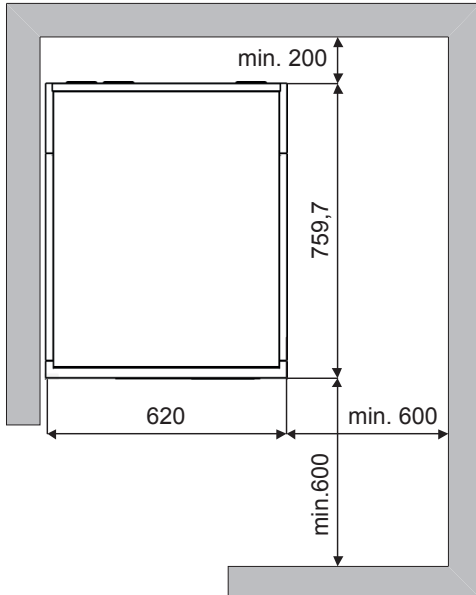
■ Dimensions

Space requirement

Hoval UltraSource B comfort C (8-17) left

Indoor unit

(Dimensions in mm)

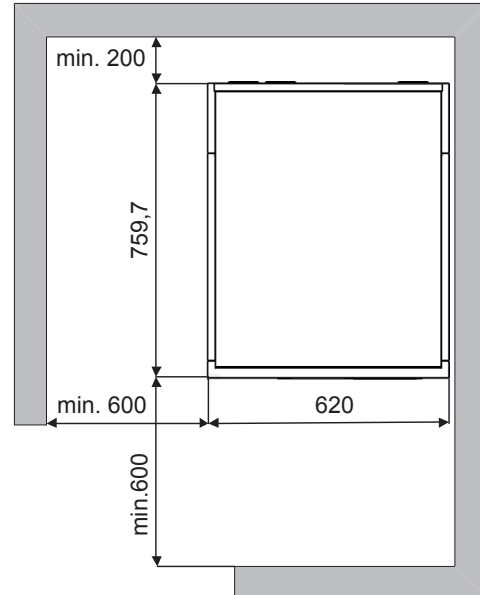


A gap of at least 200 mm must be guaranteed at the rear for the working medium as well as electrical connection.

Hoval UltraSource B comfort C (8-17) right

Indoor unit

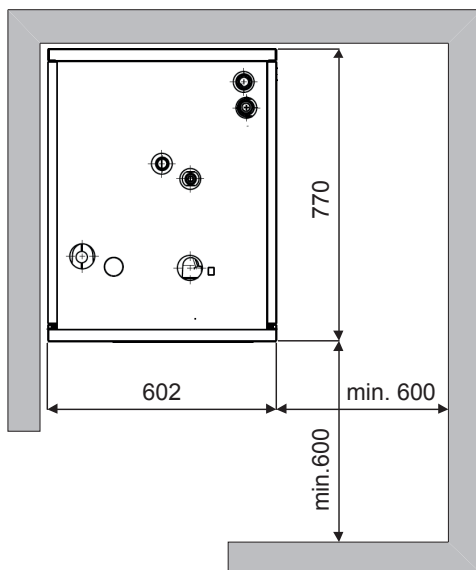
(Dimensions in mm)



Hoval UltraSource B compact C (8,11/200)

Indoor unit

(Dimensions in mm)



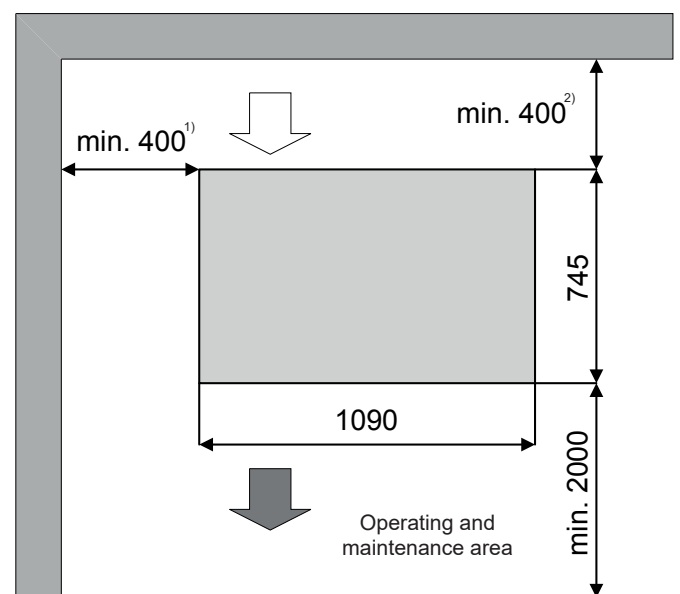
Due to the need for access to the 3-way changeover ball cock for heating and domestic hot water, a gap of at least 600 mm must be guaranteed on the right side.

Hoval UltraSource B

Outdoor unit

(Dimensions in mm)

View from above



¹⁾ Due to the need for access during maintenance, a gap of 400 mm must be guaranteed on both sides.

²⁾ If the air intake grille can not be lifted upwards, there must be a gap of min. 600 mm on the suction side.

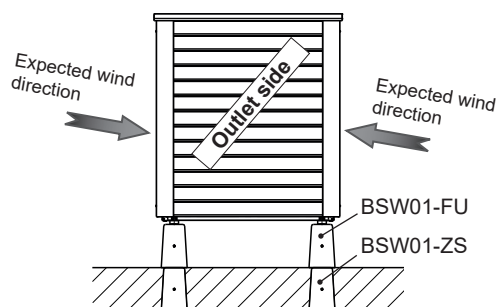
■ Dimensions

Space requirement

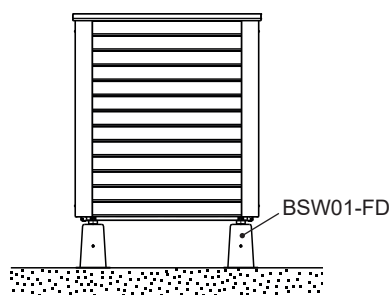
Installation variants for Hoval UltraSource B outdoor unit

(Dimensions in mm)

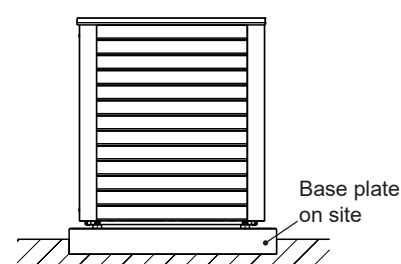
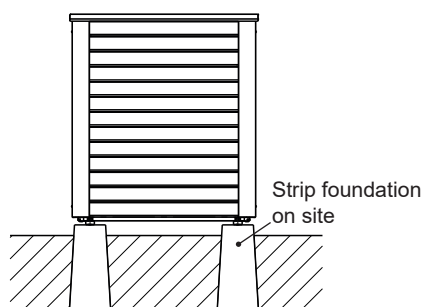
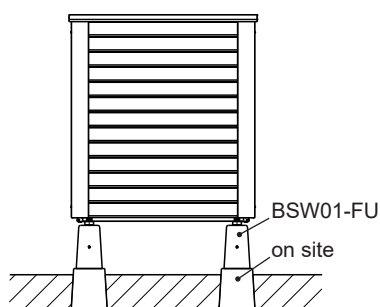
Firm base with Hoval concrete base set



Flat roof or existing firm base

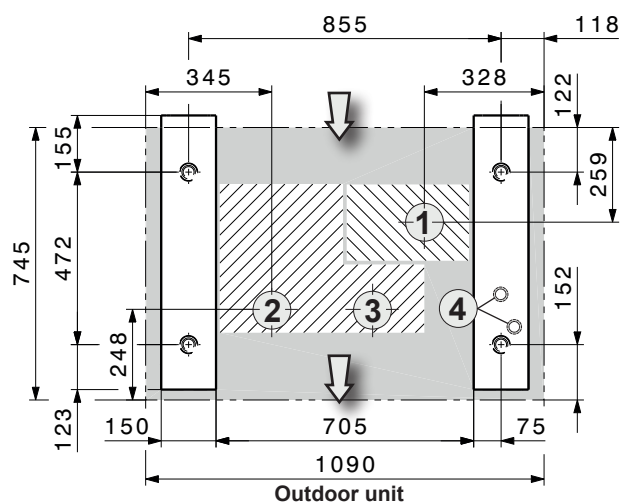


Firm base on site



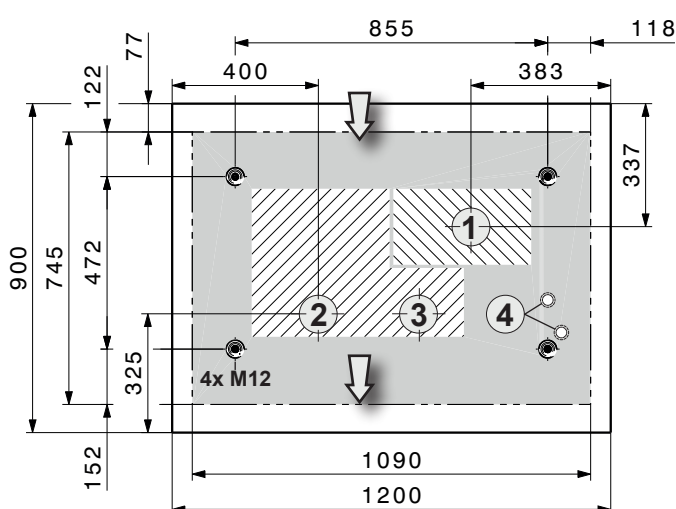
Strip foundation

Plan concrete base set
(view from top)



Floor plate

Floor plan
(view from top)

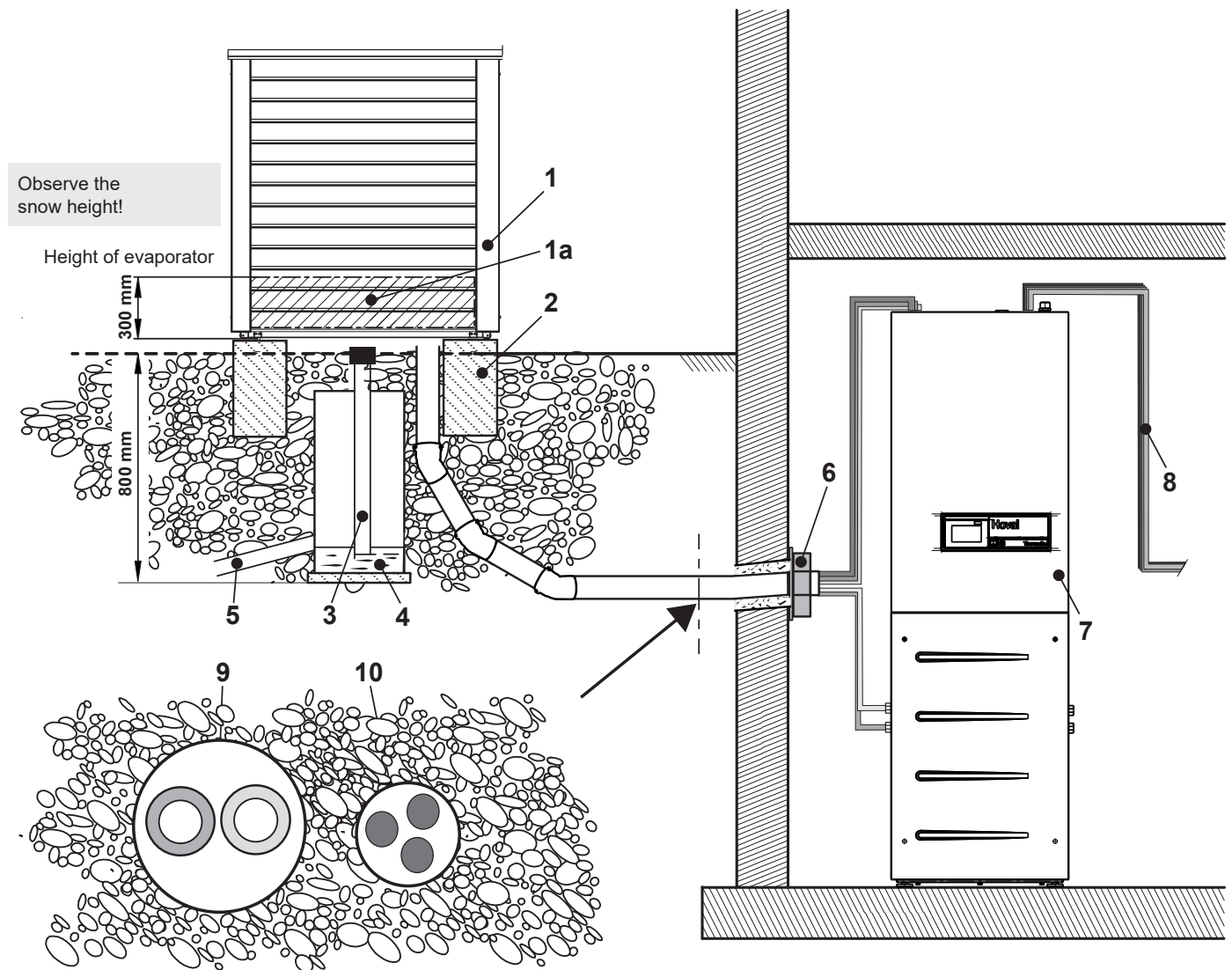


- 1 Optimum position for condensate drain DN 100
Upper edge of condensate drain 50 - 100 mm above floor level
Alternative: without drain. Infiltration of the condensate into the ground.
- 2 Optimum position of empty tube DN 150 for refrigerant connection lines
Upper edge of empty tube 50 - 100 mm above strip foundation level
- 3 Optimum position for empty tube for electrical cables
- 4 Connections for working medium lines

- Possible area for empty piping in the concrete base
- Possible area for condensate drain in the concrete base

■ Dimensions

Configuration and connection diagram for Hoval UltraSource B



- | | | | | |
|----|---|----------|------|------|
| 1 | UltraSource outdoor unit | | | |
| 1a | Space for connection of working medium lines, condensate drain etc. | | | |
| 2 | Concrete base | | | |
| 3 | Condensate drain (Rp 1") | | | |
| 4 | Possible variant with duct / gravel bed | | | |
| 5 | Discharge into the sewer system | | | |
| 6 | Wall lead-through (hydraulic and electrical connections) | | | |
| 7 | UltraSource indoor unit | | | |
| 8 | Main current | 400 V 3N | | |
| | Control current | 1x 230 V | | |
| | Main current immersion heater | 400 V 3N | | |
| | Network cables (optional) | | | |
| 9 | Empty pipe for working medium lines | (8) | (11) | (17) |
| | Suction gas line | 1/2" | 5/8" | 3/4" |
| | Liquid line | 3/8" | 1/2" | 1/2" |
| 10 | Empty tube for electrical connections for outdoor unit | | | |
| | Control current outdoor unit | 1x 230 V | | |
| | Trace heating tape | 1x 230 V | | |
| | Data bus RS485 | | | |

■ Engineering

Requirements and directives

The general requirements and directives listed in the Chapter Engineering apply.

Set-up

- The distance between the indoor and outdoor unit must be as short as possible. Only short and simple routing of refrigerant lines guarantees cost effectiveness.
- The maximum permissible length of the lines between the outdoor and indoor unit is 20 m and must not be exceeded.
- The maximum height difference between the outdoor and indoor unit is 10 m and must not be exceeded either.
- If the height difference between the indoor and outdoor unit is less than 5 m, an oil lifting bend must be installed in the suction gas line before the slope. If the height difference is greater, this measure must also be taken every 5 m (see assembly instructions). The oil lifting bends must be installed by a specialist refrigeration engineer. It does not matter whether the indoor or the outdoor unit is higher.
- Due to efficient water heating, the line length with the UltraSource B comfort C between the calorifier and the indoor unit is not allowed to be more than 10 m.

Indoor unit

- The installation location must be selected in accordance with the valid requirements and directives. In particular, EN 378 Parts 1 and 2 as well as BGR 500 must be complied with.
- The indoor unit must be installed in a room protected against frost, by an approved specialist company. Room temperature must be between 5 °C and 25 °C.
- If the installation room is smaller than the required minimum size, it must be designed as a machine room in accordance with the provisions of EN 378.
- Installation in wet rooms, dusty rooms or rooms with a potentially explosive atmosphere is not permitted.
- To minimise vibration and noise inside the building, heat pumps should be isolated as well as possible from the building structure. For example heat pumps should never be installed on lightweight ceilings/floor. In the case of floating screed, a recess should be cut in the screed and the impact sound insulation around the heat pump.
- The connections for the working medium lines in the UltraSource B comfort C are on the back and in the UltraSource B compact C are either on the right or left of the heat pump.
- The connections for the heating flow and return in the UltraSource B comfort C are on either the left or right and in the UltraSource B compact C they are on the top.
- The connections for hot and cold water as well as for the hot water circulation are also located on top in the UltraSource B compact C.
- A gap of at least 600 mm must be observed for maintenance work on the front and, depending on where the working agent connection lines are connected, on the right or left side, of the heat pump (see dimensions/space requirement).

- False flow rates as a result of incorrect dimensions of the pipework, incorrect fittings or improper pump operation can cause damage to the heat pump.

The installation of a magnetic sludge separator is mandatory.

Outdoor unit

The outdoor unit is installed outdoors. The installation location must be selected carefully. It is essential that the following ancillary conditions are met:

- Maximum line length see set-up.
- Maximum height difference between the indoor and outdoor units see set-up.
- The installation location must be chosen in such a way that no noise pollution can occur (do not install near bedrooms, keep a distance from neighbours), hedges and bushes can have a sound-absorbing effect.
- A frost-proof connection of the condensate drain is required.
- Unobstructed air inflow and outflow must be possible.
- It is imperative that the minimum distances are observed (see dimensions/space requirement)
- The intake air must be free of impurities such as sand and aggressive substances such as ammonia, sulphur, chlorine etc.
- The outdoor unit must be installed on a load-bearing fixed structure.
- If the machine is installed at wind-prone locations (e.g. on the roof), the alignment of the machine must be selected in such a way that the expected wind direction is normal to the suction direction of the outdoor unit.
- If it is not possible to install in areas subject to strong winds, an additional wind shield in the form of a hedge, for example, should be installed.
- If the installation location is not protected against snowfall, it must be chosen in such a way that the evaporator remains free of snow in any case.
- The outdoor unit must always be installed on a solid surface in a horizontal position. This can be achieved by means of specially installed concrete bases.
- The load-bearing capability must be adequate. The unit must be fixed there four times with M10 screws.
- Air heat pumps generate condensation during operation. This can be up to 6 litres per defrost cycle within 2 minutes for the outdoor unit of the UltraSource.
- The condensate drain must be protected against frost.
- The condensate collection tank included in the outdoor unit is already equipped with a tank heater at the factory and thus prevents freezing.
- The condensate drain line is also secured with the preassembled heating tape.
- The air outlet has increased susceptibility to frost. Gutters, water pipes and water containers must not be situated right next to the outlet.

- If installed near the coast, the location must be at least 5 km from the coastline. If this safe distance is not complied with, increased corrosion can be expected. These cases are excluded from the warranty.
- To prevent damage caused by animals such as rodents or insects, all cable ducts must be properly sealed.

Electrical connections

- The electrical connection must be carried out by a qualified technician and registered with the responsible energy supply company. The relevant electrical installation company is responsible for ensuring that electrical connection is carried out in accordance with standards and that safeguard measures are put in place.
- The mains voltage at the connection terminals of the heat pump must be 400 V or 230 V +/- 10 %. The dimensions of the connection line must be checked by the electrical company carrying out the work.
- A fault-current circuit breaker is recommended. A "zeroing TN-S" can be used instead of the RCCB type B. Country-specific requirements must be complied with. If the "fault-current circuit breaker" safeguard measure is implemented nevertheless by the electrical company, a separate fault-current circuit breaker is recommended for the heat pumps.
- This residual-current circuit breaker must be of the all-current-sensitive type B ($\Delta I_N \geq 300 \text{ mA}$). The specified RCCB types apply to the heat pump regardless of externally connected components (refer to assembly instructions, data sheets).
- Owing to the starting currents that occur, circuit breakers with a type "C" or "K" tripping characteristic are to be used for the main circuit.
- For the control circuit and additional electric heating (if present), circuit breakers with a type "B" or "Z" tripping characteristic are sufficient.
- The electrical connecting and feeder lines must be copper cables.
- Please refer to the wiring diagram for electrical details.
- Wall lead-through, protective pipe for routing of the lines
- The wall feedthrough should slope down from the inside to the outside.
- To avoid damage, the opening should be padded on the inside or, for example, lined with a PVC pipe.
- After installation, the wall opening must be sealed with a suitable sealing compound on site, observing the fire protection regulations.

■ Engineering

Routing of the working medium line

- If the working medium connecting lines are laid in the ground, this must be done in a protective tube. For example, this can be a PVC pipe with a diameter of 150 mm. Only 15° and 30° bends are to be used for empty pipe installation (no 45° and 90° bends).
- The total change of direction of all bends must not exceed 150° (important for routing in the ground)
- Wall ducts slightly tilted to the outside or seal on site
- Empty tube without a change of direction: min. 100 mm
- Under no circumstances are the working medium lines allowed to be laid flush-mounted in the building.
- Routing in the screed (underlay) must be avoided. If there is no other possibility, especial care is important. The installer should route the refrigerant line in collaboration with Hoval customer service.
- After the working medium line has been laid, it must be checked for damage and reinsulated. In case of cooling, condensate can form on the pipes.
- The working medium lines are only allowed to be connected and working medium is only allowed to be handled by authorised personnel of Hoval or by trained specialist personnel.
- The flow of working medium in the connecting lines can cause flow noise. The working medium lines must be laid decoupled from the building and must never be laid flush-mounted.
- Care must be taken to ensure that neither working medium nor water pipes pass through the sleeping or living areas.
- The shut-off valves are not allowed to be opened until immediately before commissioning.

Room cooling

- Room cooling can be provided by fan convectors and is recommended. The connection lines for the fan convectors must have condensation-proof insulation. In addition, the condensate from the fan convectors must be drained off.
- We do not recommend the use of panel heating for room cooling. Various criteria such as temperatures below the dewpoint or the temperature profile must be allowed for and can lead to costly consequential damage in the case of inadequate planning or incorrect use. We recommend that you consult Hoval.

Connection on drinking water side

- The hydraulic connection is made according to the information in the corresponding diagrams from Hoval.
- According to the Drinking Water Regulation and DIN 50930-6, the domestic hot water storage tank is suitable for normal drinking water (pH value > 7.3).
- The connection piping can be made using galvanised pipes, stainless steel pipes, copper pipes or plastic pipes.
- The connections must be made pressure-tight.
- The safety devices tested for the components in accordance with DIN 1988 and DIN 4753 must be installed in the cold water pipe.
- The 10 bar operating pressure stated on the rating plate is not allowed to be exceeded. Install a pressure reducing valve if necessary.
- A suitable water filter must be installed in the cold water pipe.
- A water softener should be installed if the water is hard.

Installation on heating side

- All pertinent laws, regulations and standards for heating house pipework and for heat pump systems must be complied with.
- It is imperative that a strainer and sludge trap is installed in the heating return upstream from the heat pump.
- The safety and expansion devices for closed heating systems must be provided in accordance with EN 12828.
- Dimensioning of the pipework must be done according to the required flow rates.
- Ventilation possibilities must be provided at the highest point and drainage possibilities at the lowest points of the connecting lines.
- To prevent energy losses, the connecting lines must be insulated with suitable material.

Additional instructions
see "Engineering"

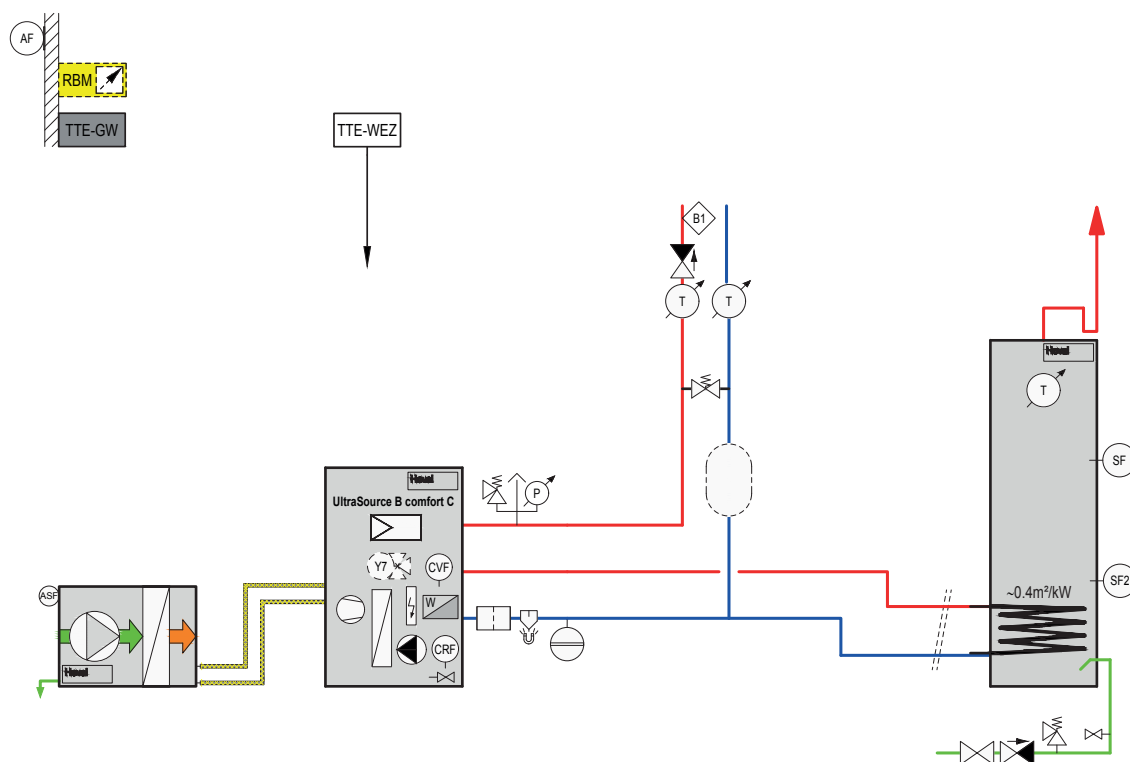
■ Examples

UltraSource B comfort C

Air/water heat pump with

- Calorifier
- 1 direct circuit

Hydraulic schematic BBAKE010



Important notices

- The example schematics merely show the basic principle and do not contain all information required for installation. Installation must be carried out according to the conditions on site, dimensioning and local regulations.
- With underfloor heating, a flow temperature monitor must be installed.
- Shut-off devices to the safety equipment (pressure expansion tank, safety valve, etc.) must be secured against unintentional closing!
- Install pockets to prevent single-pipe gravity circulation!

| | |
|-----------|--|
| TTE-H-Gen | TopTronic® E basic module heat generator (installed) |
| B1 | Flow temperature monitor (if required) |
| AF | Outdoor sensor |
| SF | Calorifier sensor |
| SF2 | Calorifier sensor 2 |
| Y7 | Switching valve |
| ASF | Intake sensor |

Option

| | |
|--------|----------------------------------|
| RBM | TopTronic® E room control module |
| TTE-GW | TopTronic® E Gateway |

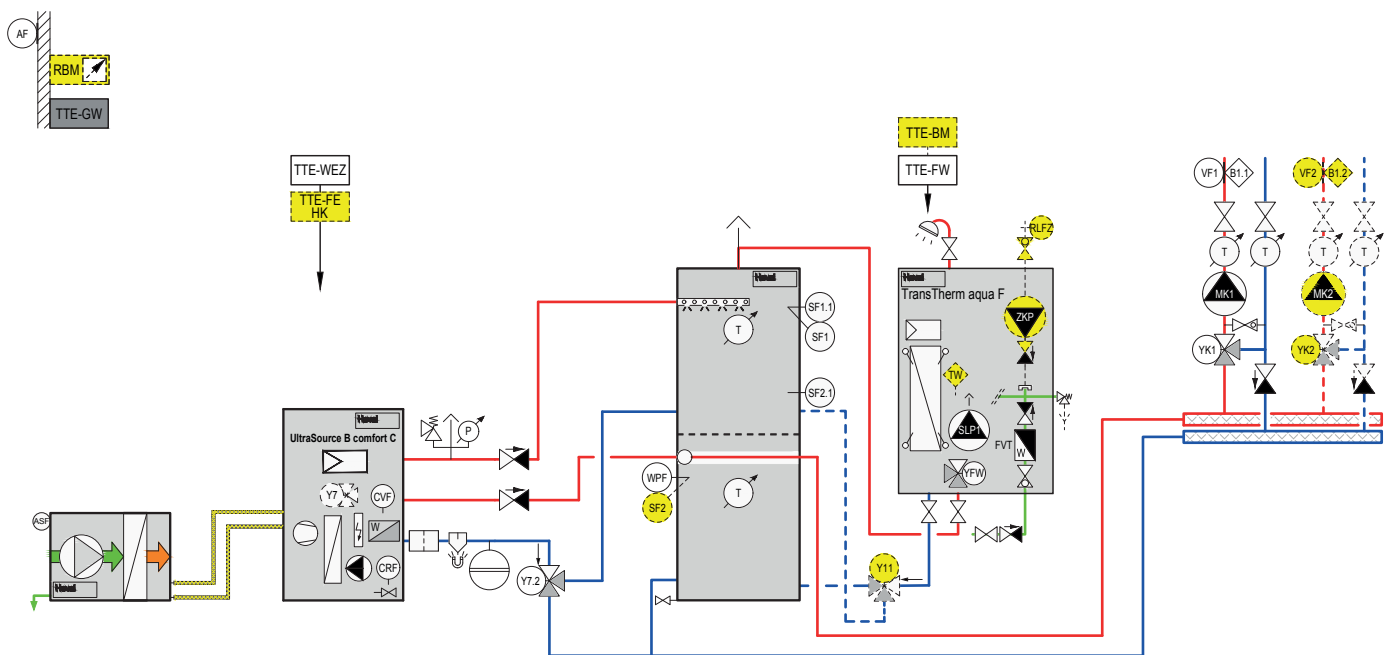
■ Examples

UltraSource B comfort C

Air/water heat pump with

- Energy buffer storage tank
- TransTherm aqua F fresh water module
- 1-... mixer circuit(s)

Hydraulic schematic BBAKE030



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- Install pockets to prevent single-pipe gravity circulation!

| | |
|---------------|--|
| TTE-H-Gen | TopTronic® E basic module heat generator (installed) |
| TTE-DH | TopTronic® E basic module district heating/fresh water |
| VF1 | Flow temperature sensor 1 |
| B1.1 | Flow temperature monitor (if required) |
| MK1 | Pump, mixer circuit 1 |
| YK1 | Actuator, mixer 1 |
| AF | Outdoor sensor |
| SF1 | Calorifier sensor 1 |
| SF1.1 | Calorifier sensor 1.1 |
| SF2.1 | Calorifier sensor 2.1 |
| WPF | Heat pump buffer sensor |
| Y7 | Switching valve |
| Y7.2 | Switching valve 2 |
| ASF | Intake sensor |
| SLP1 | Calorifier charging pump |
| <i>Option</i> | |
| TTE-BM | TopTronic® E control module |
| RBM | TopTronic® E room control module |
| TTE-GW | TopTronic® E Gateway |
| RLFZ | Circulation sensor |
| SF2 | Calorifier sensor 2 |
| Y11 | Return switch actuator |
| ZKP | Recirculation pump |
| TTE-FE HK | TopTronic® E module expansion heating circuit |
| VF2 | Flow temperature sensor 2 |
| B1.2 | Flow temperature monitor (if required) |
| MC2 | Pump, mixer circuit 2 |
| YK2 | Actuator, mixer 2 |

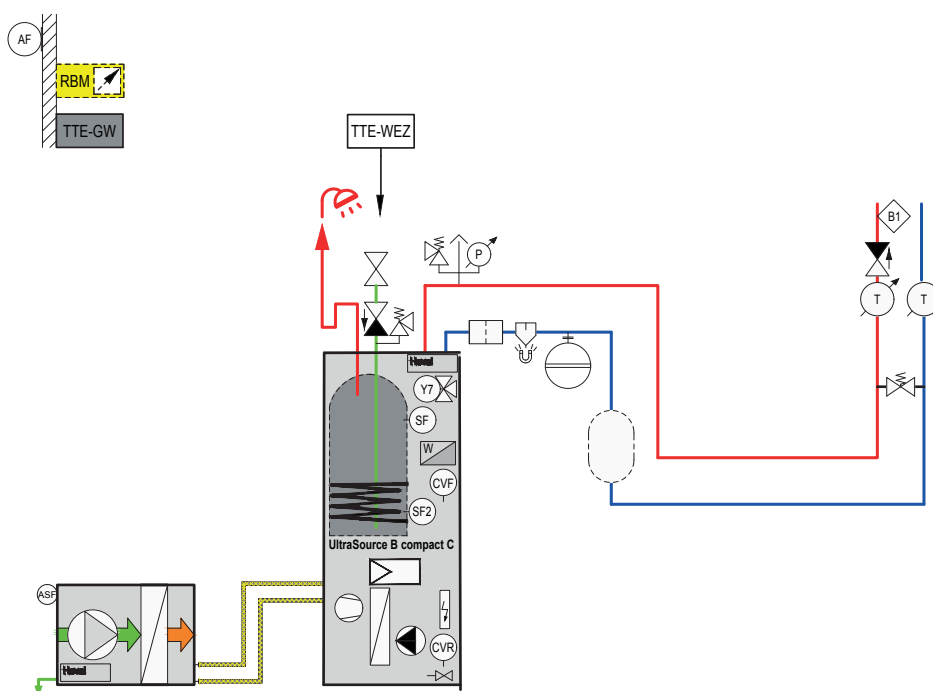
■ Examples

UltraSource B compact C

Air/water heat pump with

- Integrated calorifier
- 1 direct circuit

Hydraulic schematic BBAIE010



Important notices

- The example schematics merely show the basic principle and do not contain all information required for installation. Installation must be carried out according to the conditions on site, dimensioning and local regulations.
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| | |
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Option

| | |
|--------|----------------------------------|
| RBM | TopTronic® E room control module |
| TTE-GW | TopTronic® E Gateway |