

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) and (11/200) additionally with integrated calorifier (200 litres) in the indoor unit.

Indoor unit UltraSource® B comfort C

- Compact floor-mounted air/water heat pump
- UltraSource® B comfort C (8) with modulating rotary compressor
UltraSource® B comfort C (11,17) with modulating scroll compressor
- Casing made from painted, galvanised sheet steel. Colour flame red/brown red (RAL 3000/RAL 3011)
- Plate-type condenser made of stainless steel/copper
- Integrated components:
 - Speed-regulated high-efficiency pump
 - Flow sensor/heat meter
 - Electric heating element 1 to 6 kW
 - 3-way switching ball valve 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
- Refrigerant connection 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 modulating rotary compressor
UltraSource® B compact C (11/200) with modulating scroll enclosed compressor
- Casing made from painted, galvanised sheet steel. Colour flame red/brown red (RAL 3000/RAL 3011)
- Plate-type condenser made of stainless steel/copper
- Integrated calorifier 200 litres (can be divided for easier transport into the building; dimensions 1294 x 770 x 602 mm)
- 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
 - Electric 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)
- Diaphragm pressure expansion tanks see "Various system components"



Model range

UltraSource® B comfort C type	Heat output ¹⁾		Cooling capacity ¹⁾		
	35 °C	55 °C	A-7W35 kW	A2W35 kW	
(8)			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
(17)			6.0-14.8	6.0-17.4	6.2-17.7

UltraSource® B compact C type	Heat output ¹⁾		Cooling capacity ¹⁾		
	35 °C	55 °C	A-7W35 kW	A2W35 kW	A35W18 kW
(8/200)			2.0-6.0	2.1-7.6	2.9-8.9
(11/200)			2.8-10.0	2.8-10.2	3.5-11.0

Energy efficiency class of the compound system with control

¹⁾ Modulation range

- 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 3/4" top
- Refrigerant connection 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 (DB 703)
- 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
- Refrigerant 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)

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 hot water charging circuit
 - bivalent and cascade management
- Outdoor sensor
- Immersion sensor (calorifier sensor)
- Contact sensor (flow temperature sensor)
- RAST 5 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"

EnergyManager PV smart

Feature to increase self-generated power consumption in use with HovalConnect.

If a HovalConnect gateway is used together with the heat pump, the EnergyManager PV smart feature is available. This allows the heat pump to be operated preferentially at times of higher solar radiation. The feature uses online weather data on the current solar radiation for this purpose and can be adjusted by means of an associated threshold value. The self-consumption of electricity from an existing photovoltaic plant is thus increased and the purchase of grid electricity is reduced. This results in a lasting and significant cost-saving potential without further investment costs for the customer.

Delivery

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

On site

- Masonry penetrations for refrigerant connection line
- Electrical connection line outdoor/indoor unit

Air/water heat pump



Hoval UltraSource® B comfort C

UltraSource® B comfort C Type	Heat output ¹⁾		Cooling capacity ¹⁾
	A-7W35 kW	A2W35 kW	A35W18 kW
(8)	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
(17)	6.0-14.8	6.0-17.4	6.2-17.7

¹⁾ Modulation range

Part No.

7016 659
7016 662
7016 665



Hose set SPCH25-25-10-2

for UltraSource® B cf C (8-17) and
Belaria® comfort ICM (8)

Consisting of:

- 2 reinforced hoses PN 10 DN 25 1" IT insulated for heating side flat-sealing with union nut
- Length: 1.0 m
- 2 brackets DN 25
- Seals

6058 817



Hoval UltraSource® B compact C
with integrated 200 litre calorifier

UltraSource® B compact C Type	Heat output ¹⁾		Cooling capacity ¹⁾
	A-7W35 kW	A2W35 kW	A35W18 kW
(8/200)	2.0-6.0	2.1-7.6	2.9-8.9
(11/200)	2.8-10.0	2.8-10.2	3.5-11.0

¹⁾ Modulation range

7016 660
7016 663

Energy efficiency class
see "Description"

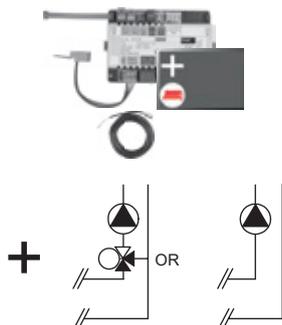
No hose set necessary

EnergyManager PV smart
Free feature to increase self-generated power consumption in use with HovalConnect.

Electric heating elements
see "Calorifiers" -
chapter "Electric heating elements"

Further information
see "Description"

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



TopTronic® E module expansion heating circuit TTE-FE HK

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

- 1 heating/cooling circuit w/o mixer or
- 1 heating/cooling circuit with mixer

Consisting of:

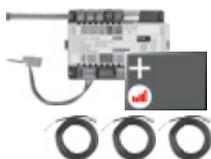
- Fitting accessories
- 1 contact sensor

ALF/2P/4/T, L = 4.0 m

- Basic plug set FE module

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

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

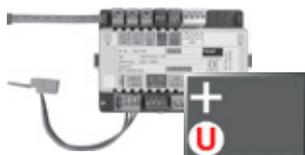
- 1 heating/cooling circuit w/o mixer or
- 1 heating/cooling circuit with mixer incl. energy balancing in each case

Consisting of:

- Fitting accessories
- 3 contact sensors

ALF/2P/4/T, L = 4.0 m

- Plug set FE module



TopTronic® E module expansion Universal TTE-FE UNI

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

Consisting of:

- Fitting accessories
- Plug set FE module

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.

6034 576

6037 062

6034 575

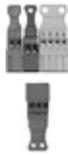
Accessories for TopTronic® E

Part No.



TopTronic® E controller modules

TTE-HK/WW	TopTronic® E heating circuit/ hot water module	6034 571
TTE-SOL	TopTronic® E solar module	6037 058
TTE-PS	TopTronic® E buffer module	6037 057
TTE-MWA	TopTronic® E measuring module	6034 574



Supplementary plug set

	for basic module heat generator TTE-WEZ	6034 499
	for controller modules and module expansion	6034 503
	TTE-FE HK	



TopTronic® E room control modules

TTE-RBM	TopTronic® E room control modules	
	easy white	6037 071
	comfort white	6037 069
	comfort black	6037 070



Enhanced language package TopTronic® E

	one SD card required per control module	6039 253
	Consisting of the following languages:	
	HU, CS, SL, RO, PL, TR, ES, HR,	
	SR, JA, DA	



HovalConnect

	HovalConnect LAN	6049 496
	HovalConnect WLAN	6049 498
	HovalConnect Modbus	6049 501
	HovalConnect KNX	6049 593

TopTronic® E interface modules

	GLT module 0-10 V	6034 578
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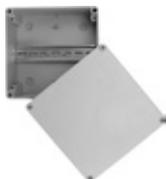
TopTronic® E sensors

AF/2P/K	Outdoor sensor	2055 889
	H x W x D = 80 x 50 x 28 mm	
TF/2P/5/6T	Immersion sensor, L = 5.0 m	2055 888
ALF/2P/4/T	Contact sensor, L = 4.0 m	2056 775
TF/1.1P/2.5S/6T	Collector sensor, L = 2.5 m	2056 776



Bivalent switch

	for various release or switching functions	
	Bivalent switch 1-piece	2056 858
	Bivalent switch 2-piece	2061 826



System housing

	System housing 182 mm	6038 551
	System housing 254 mm	6038 552



TopTronic® E wall casing

WG-190	Wall casing small	6052 983
WG-360	Wall casing medium	6052 984
WG-360 BM	Wall casing medium with control module cut-out	6052 985
WG-510	Wall casing large	6052 986
WG-510 BM	Wall casing large with control module cut-out	6052 987

Further information
 see "Controls"

Heating/cooling accessories

Part No.

Diaphragm 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 autom.
 aspirator with shut-off valve.
 Connection: DN 15, 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 diaphragm pressure expansion tank
 on the side on connection set
 installation option
 for an overflow valve
 incl. non-return valve

6039 793



Differential pressure relief valve DN 20
 for free installation
 with flexible centre distance
 Connections at both ends 1" external
 thread
 Operating pressure: max. 10 bar
 Operating temperature: max. 120 °C
 Setting range: 0.05-0.5 bar
 Length: 93 mm
 Casing made of brass with setting handle
 made of plastic

240 554



Differential pressure relief valve DN 32
 for installation in a HA group DN 32
 both ends 1 1/4" external thread
 Self-sealing with O-ring
 and screw connections
 Operating pressure: max. 10 bar
 Operating temperature: max. 110 °C
 Setting range: 0.1-0.6 bar
 Connections: 1 1/4" internal thread/
 1 1/4" external thread
 Centre distance: 125 mm
 Casing and spring hood made of brass
 Spring made of stainless steel
 Seals made of EPDM
 Setting handle made of plastic with
 hexagon socket fastening screw

6014 849

Strainers
 see "Various system components"



**System water protection filter
 FGM025-200**

For horizontal installation in return
 For filtration of heating and cooling water,
 with high filtration capacity for corrosion
 particles and dirt without significant
 pressure drop

Consisting of:

- Filter head and bowl in brass
- Magnetic insert (nickel-neodymium)
- 2 pressure gauges
- Very large filter surface
 in stainless steel
- Filter fineness 200 µm
- With drain valve

- Connections Rp 1" internal thread
 with integrated shut-off valves and
 union connection (outlet)

Max. flow rate ($\Delta p < 0.1$ bar): 5.5 m³/h

Weight: 6.8 kg

Water temperature: max. 90 °C

- incl. steam diffusion-tight insulating shells

Part No.

6058 256

Notice

Fulfills the function of sludge separator and
 strainer

Additional sludge separators

see "Various system components"



Dew point switch FAS

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

2070 911



Vibration decoupler

for reducing structure-borne noise
 from heat pumps in the indoor area

Consisting of:

- 1 vibration decoupler
 insulated for heating side
- flat-sealing with union nut
- 2 flat seals

Nominal pressure: PN 10

Dimension	Connection inches	Nominal length mm
DN 25	1"	300
DN 25	1"	500
DN 25	1"	1000
DN 32	1¼"	300
DN 32	1¼"	500
DN 32	1¼"	1000
DN 40	1½"	500
DN 40	1½"	1000
DN 50	2"	500
DN 50	2"	1000

2082 222
 2082 223
 2080 794
 2082 224
 2082 225
 2080 796
 2082 226
 2080 798
 2082 227
 2080 800

Domestic hot water accessories



Domestic hot water set SPW25-25-10-1MD

for UltraSource® B comfort C (8-17),
Belaria® comfort ICM (8) and
UltraSource® T comfort (8-17)
Consisting of:
- 1 actuator for installed
3-way switching ball valve for heating/
domestic hot water
- 1 reinforced hose PN 10 DN 25 1" IT
insulated for domestic hot water side
flat-sealing with union nut
- Length: 1.0 m
- Seals

Part No.

6058 815



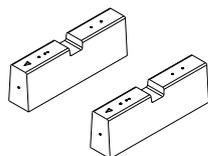
Correx® impressed current anode

for UltraSource® B compact C,
UltraSource® T compact
for long-term corrosion protection for
installation in the enamelled calorifier

6046 662

In every case, either a Correx® impressed current anode or a magnesium anode may be used.

Outdoor unit accessories



Concrete base set BSW02-FU

for Belaria® pro (8-15) and UltraSource® B (8,11)

for safe installation of an outdoor unit on a firm base

Consisting of:

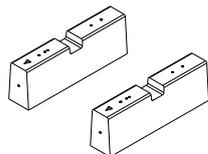
2 concrete bases with cast-in fastening sleeves M8 and M10

Dimensions (H x W x D):

250 x 750 x 150 mm

Weight: 2 pieces of 57 kg

6054 856



Concrete base set BSW01-FU

for UltraSource® B comfort C (17) and Daikin Altherma 3 H HT W (14,18)

for safe installation of an outdoor unit on a firm base

Consisting of:

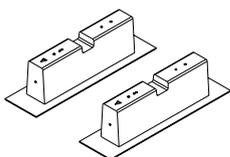
2 concrete bases with cast-in fastening sleeves, screw set

Dimensions (H x W x D):

250 x 750 x 150 mm

Weight: 2 pieces of 58 kg

6046 157



Concrete base set BSW02-FD

for Belaria® pro (8-15) and UltraSource® B (8,11)

for safe installation of an outdoor unit on the flat roof.

Consisting of:

2 concrete bases with cast-in fastening sleeves M8 and M10

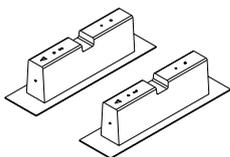
Protective mats with aluminium lining

Dimensions (H x W x D):

250 x 750 x 150 mm

Weight: 2 pieces of 57 kg

6054 857



Concrete base set BSW01-FD

for UltraSource® B comfort C (17) and Daikin Altherma 3 H HT W (14,18)

for safe installation of an outdoor unit on the flat roof

Consisting of:

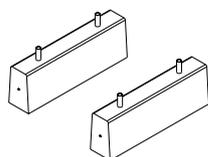
2 concrete bases with cast-in fastening sleeves, protective mats with aluminium lining, screw set

Dimensions (H x W x D):

250 x 750 x 150 mm

Weight: 2 pieces of 58 kg

6046 158



Concrete base set BSW01-ZS

for safe installation of an outdoor unit in drainage bed for gardens and meadows.

Additional base height 250 mm for plug combination with concrete base set BSW01-FU and BSW02-FU

Consisting of:

2 additional concrete bases, screw set

Dimensions (H x W x D):

250 x 750 x 150 mm

Weight: 2 pieces of 58 kg

6046 159

Notice

In a flat roof installation, all standards concerning statics, wind load and access to roofs must be complied with.

For further information

see "Engineering" chapter



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

Part No.

6043 779

Composite anchor cartridge HVU2 M10 x 90
for anchor rod HAS-U M10x190 GV
for heavy load anchoring in concrete
Pack of 20 incl. screw adapter

2077 465

Composite anchor cartridge HVU2 M12 x 110
for anchor rod HAS-U M12 x 220 GV
for heavy load anchoring in concrete
Pack of 20 incl. screw adapter

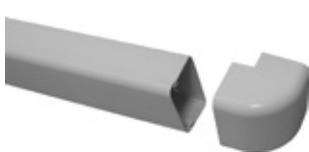
2077 466

Anchor rod HAS-U M10 x 190 GV
for use with composite anchor cartridge
for fastening in concrete and masonry
Galvanised steel, pack of 20

2077 467

Anchor rod HAS-U M12 x 220 GV
for use with composite anchor cartridge
for fastening in concrete and masonry
Galvanised steel, pack of 20

2077 468

		Part No.
	Cable duct, PVC, RAL 9010 pure white 125 x 75 mm, length 2 m	2075 314
	Holding clip adjustable for cable duct 125 x 75 mm	2075 315
	Connector, PVC, RAL 9010 pure white for cable duct 125 x 75 mm	2075 316
	End piece, PVC, RAL 9010 pure white for cable duct 125 x 75 mm	2075 317
	Straight end, PVC, RAL 9010 pure white for cable duct 125 x 75 mm	2075 318
	Angled end, PVC, RAL 9010 pure white for cable duct 125 x 75 mm	2075 319
	Inner angle, PVC, RAL 9010 pure white for cable duct 125 x 75 mm	2075 320
	Outer angle, PVC, RAL 9010 pure white for cable duct 125 x 75 mm	2075 321
	Flat arch, PVC, RAL 9010 pure white for cable duct 125 x 75 mm	2075 322

UltraSource® B comfort C (8-17)

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

Type		(8) (8/200)	(11) (11/200)	(17)
• Energy efficiency class of the compound system with control	35 °C/55 °C	A+++/A++	A+++/A++	A+++/A+++
• Energy efficiency class load profile XL UltraSource® B compact C	Hot water	A	A	-
• Room heating energy efficiency "moderate climate" 35 °C η_S ^{1), 2)}	%	202	176	206
• Room heating energy efficiency "moderate climate" 55 °C η_S ^{1), 2)}	%	146	135	152
• Water heating energy efficiency consumption profile/ η_{wh} 35 °C/55 °C	-/%	XL/96	XL/100	-/-
• Seasonal coefficient of performance moderate climate 35 °C/55 °C	SCOP	5.1/3.7	4.5/3.4	5.2/3.9
Max./min. performance data heating and cooling in acc. with EN 14511				
• Max. heat output A2W35	kW	7.6	10.2	17.4
• Max. heat output A-7W35	kW	6.0	10.0	14.8
• Max. heat output A15W35	kW	2.6	4.0	6.1
• Max. cooling capacity A35W18	kW	8.9	11.0	17.7
• Max. cooling capacity A35W7	kW	6.3	8.6	14.2
• Max. cooling capacity A35W18	kW	2.9	3.5	6.2
Nominal performance data heating in acc. with EN 14511				
• Nominal heat output A2W35	kW	3.9	5.9	11.3
• Coefficient of performance A2W35	COP	4.4	4.4	4.5
• Nominal heat output A7W35	kW	4.5	6.8	12.8
• Coefficient of performance A7W35	COP	5.2	5.1	5.1
• Nominal heat output A-7W35	kW	3.0	4.4	8.7
• Coefficient of performance A-7W35	COP	3.4	3.3	3.3
Performance data (cooling) in acc. with EN 14511				
• Nominal heat output A35W18	kW	5.0	7.8	12.0
• Energy efficiency ratio A35W18	EER	4.8	4.3	4.4
• Nominal heat output A35W7	kW	3.8	5.4	8.5
• Energy efficiency ratio A35W7	EER	3.7	3.1	3.4
Sound data				
• Max. sound power level outdoor unit, night operation	dB(A)	42	46	53
• Sound power level EN 12102 indoor unit	dB(A)	42	46	45
• Sound power level EN 12102 outdoor unit ³⁾	dB(A)	46	50	57
• Max. sound power level outdoor unit	dB(A)	49	53	62
• Sound pressure level 5 m ^{3), 4)}	dB(A)	27	31	38
• Sound pressure level 10 m ^{3), 4)}	dB(A)	21	25	32
Hydraulic data				
• Max. flow temperature (without/with screw-in electrical heating inset)	°C	62/65	62/65	62/65
• Max. heating water quantity heating ΔT 5 K (A7W35)	m ³ /h	1.5	2.2	3.7
• Nominal heating water quantity heating ΔT 5 K (A7W35)	m ³ /h	0.8	1.2	2.2
• Pressure drop with nominal heating water quantity ΔT 5 K (A7W35)	kPa	9	9	38
• Residual overpressure of heating pump at max. pump speed and nominal heating water quantity	kPa	65	66	37
• Max. operating pressure on the heating side	bar	3	3	3
• Max. operating pressure domestic hot water side	bar	10	10	-
UltraSource® B compact C				
• Flow/return connection heating	R	1"	1"	1"
• Cold/hot water connection UltraSource® B compact C	R	¾"	¾"	-
• Nominal air volume outdoor unit (A7W35 and nominal rotation speed)	m ³ /h	2500	3600	5000

Type		(8) (8/200)	(11) (11/200)	(17)
Cooling technical data				
• Refrigerant		R410A	R410A	R410A
• Compressor/stages		Inverter/1	Inverter/1	Inverter/1
• Refrigerant filling quantity	kg	3.2	4.1 (up to 6 m)	4.8
• Compressor oil filling quantity	l	0.35/FV50S	0.99/FV50S	1/FVC68D
• Refrigerant line connections suction gas side	mm	12 x 1	16 x 1	18 x 1
• Refrigerant line connections suction gas side	inches	½"	⅝"	¾"
• Refrigerant line connections liquid side	mm	10 x 1	12 x 1	12 x 1
• Refrigerant line connections liquid side	inches	⅜"	½"	½"
• Max. refrigerant connection line length (metric)	m	16	16	16
• Max. refrigerant connection line length (inch)	m	20	20	20
• Max. difference in height ⁵⁾	m	10	10	10
Electrical data				
• Electrical connection compressor	V/Hz	1~230/50	3~400/50	3~400/50
• Electrical connection electric heating element	V/Hz	1~230/50 3~400/50	3~400/50	3~400/50
• Control electrical connection	V/Hz	1~230/50	1~230/50	1~230/50
• Max. compressor operating current	A	15.8	9	14.8
• Max. compressor starting current	A	15.8	9	14.8
• Max. fan operating current	A	0.21	0.5	0.5
• Max. fan power consumption	W	48	113	113
• Max. electric heating element operating current	A	13	13	13
• Max. output for electric heating element	kW	6	6	6
• Output factor		0.94	0.97	0.95
• Main current fuse	A	16	13	16
- Type		C,K	C,K	C,K
• Control current fuse	A	13	13	13
- Type		B,Z	B,Z	B,Z
• Fuse electric heating element	A	13	13	13
- Type		B,Z	B,Z	B,Z
Dimensions/weight of outdoor unit				
• Dimensions (H x W x D)	mm	1200x1090x745		1546x1090x745
• Weight	kg	144	144	177
Dimensions/weight of indoor unit				
• Dimensions (H x W x D)	mm	see Dimensions		
• Tilting measure UltraSource® B compact C	mm	2097	2097	-
• Weight UltraSource® B comfort C	kg	185	209	211
• Weight UltraSource® B compact C	kg	282	305	-
• Minimum sizes of installation room ⁶⁾	m ³	7.3	9.3	10.9
Hot water storage tank UltraSource® B compact C				
• Storage capacity	l	210	210	-
• Heating surface of heating coil ⁷⁾	m ²	2.4	2.4	-
• Heating water of heating coil ⁷⁾	dm ³	19	19	-
• Maximum storage tank temperature	°C	55	55	-
• Maximum storage tank temperature with electric heating element	°C	75	75	-
• Output capacity at 46 °C and storage tank temperature at 58 °C ⁸⁾	l	260	260	-
• Output capacity at 40 °C and storage tank temperature at 58 °C ⁸⁾	l	315	315	-

¹⁾ 2 % can be added for class II heat pump incl. control.

²⁾ 4 % can be added for class IV heat pump incl. control and room thermostat.

³⁾ The sound values apply with a clean evaporator. These values are temporarily exceeded before defrosting.

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

⁶⁾ If the installation room is smaller than the required minimum size, it must be designed as a machine room in accordance with EN 378.

⁷⁾ Storage capacity incl. heating coil

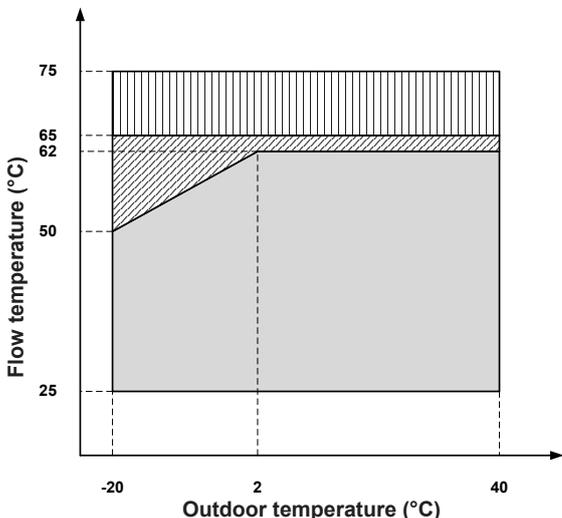
⁸⁾ 12 °C cold water temperature/60 °C lower storage tank temperature (heat pump)

Using a fault-current circuit breaker RCCB type B, IΔn ≥ 300 mA is recommended. Country-specific regulations must be observed.

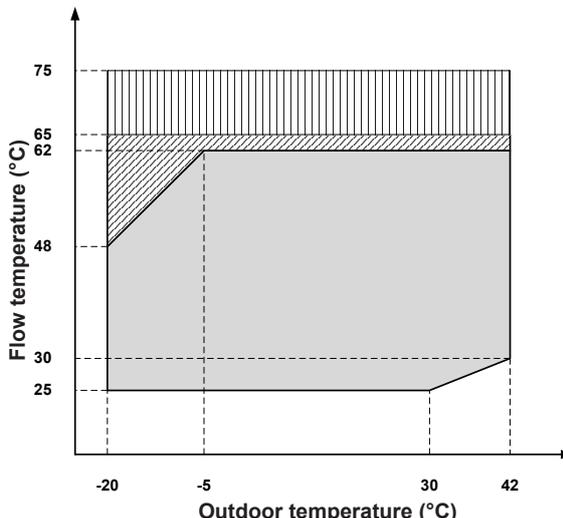
Diagrams of areas of application

Heating and hot water

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



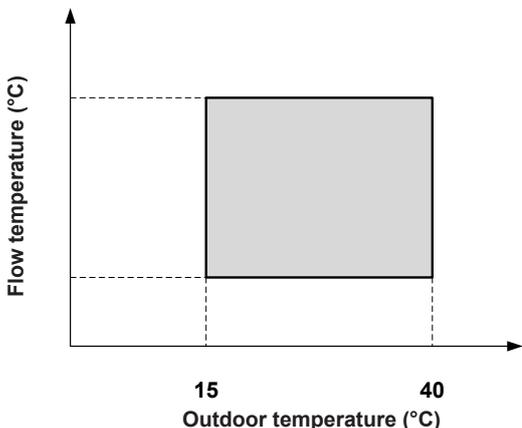
UltraSource® B comfort C (11)
 UltraSource® B compact C (11/200)
 UltraSource® B comfort C (17)



- Area of application of the heat pump for heating/domestic hot water (UltraSource® B comfort C and compact C)
- Extended area of application of the heat pump for heating/domestic hot water including electric heating element (UltraSource® B comfort C and compact C)
- Extended area of application of the heat pump for domestic hot water including electric heating element (UltraSource® B comfort C and 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)



- Area of application of the heat pump for cooling (UltraSource® B comfort C and compact C)

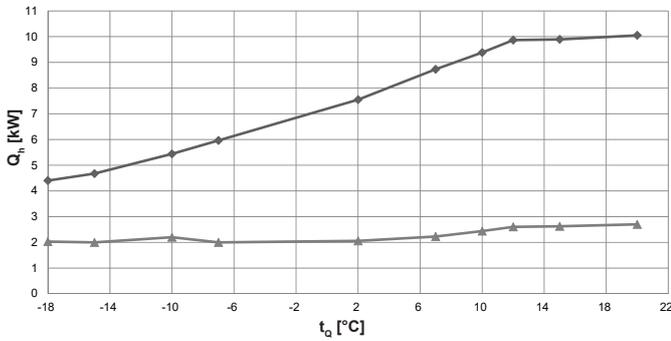
Performance data – heating

Maximum heat output allowing for defrosting losses

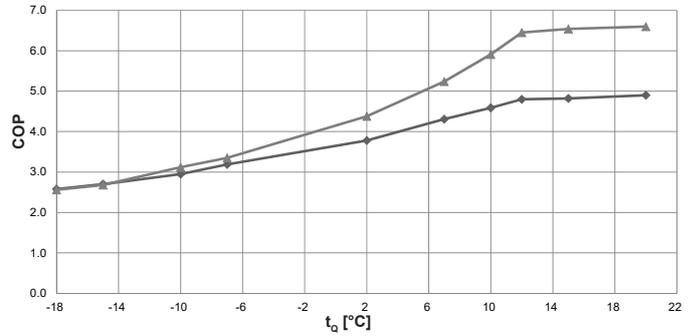
UltraSource® B comfort C (8), compact C (8/200)

Data according to EN 14511

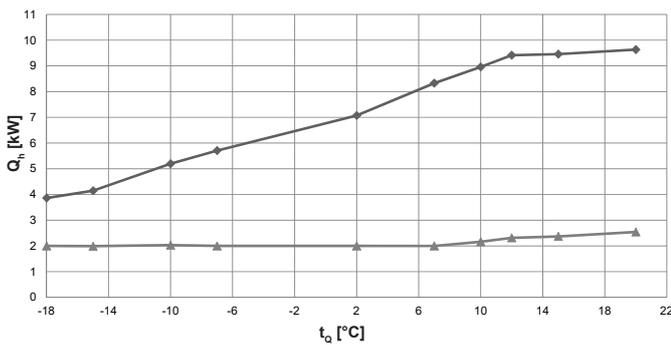
Heat output - t_{VL} 35 °C



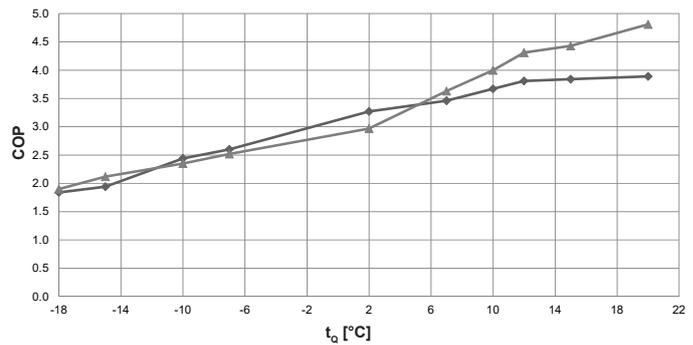
Coefficient of performance - t_{VL} 35 °C



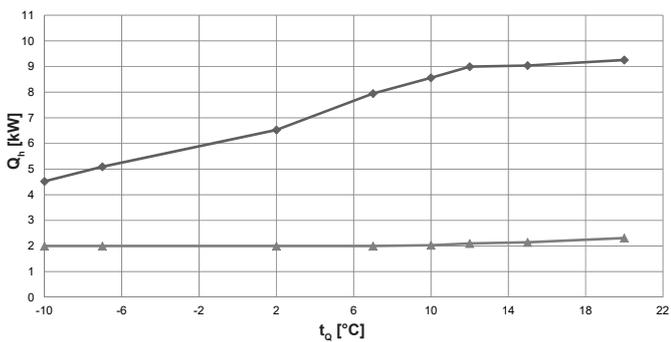
Heat output - t_{VL} 45 °C



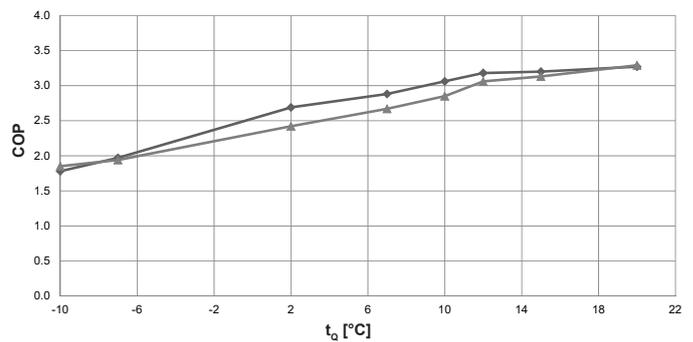
Coefficient of performance - t_{VL} 45 °C



Heat output - t_{VL} 55 °C



Coefficient of performance - t_{VL} 55 °C



t_{VL} = heating flow temperature (°C)

t_0 = source temperature (°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
▲ Minimum output

Performance data – heating

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

Data according to EN 14511

t_{VL} °C	t_G °C	Maximum output			Minimum output		
		Q_h kW	P kW	COP	Q_h kW	P kW	COP
35	-18	4.4	1.7	2.6	2.0	0.8	2.6
	-15	4.7	1.7	2.7	2.0	0.8	2.7
	-10	5.4	1.8	3.0	2.2	0.7	3.1
	-7	6.0	1.9	3.2	2.0	0.6	3.4
	2	7.6	2.0	3.8	2.1	0.5	4.4
	7	8.7	2.0	4.3	2.2	0.4	5.2
	10	9.4	2.0	4.6	2.4	0.4	5.9
	12	9.9	2.1	4.8	2.6	0.4	6.5
	15	9.9	2.1	4.8	2.6	0.4	6.5
	20	10.1	2.1	4.9	2.7	0.4	6.6
45	-18	3.9	2.1	1.8	2.0	1.1	1.9
	-15	4.2	2.1	1.9	2.0	0.9	2.1
	-10	5.2	2.1	2.4	2.0	0.9	2.4
	-7	5.7	2.2	2.6	2.0	0.8	2.5
	2	7.1	2.2	3.3	2.0	0.7	3.0
	7	8.3	2.4	3.5	2.0	0.6	3.6
	10	9.0	2.4	3.7	2.2	0.5	4.0
	12	9.4	2.5	3.8	2.3	0.5	4.3
	15	9.5	2.5	3.8	2.4	0.5	4.4
	20	9.6	2.5	3.9	2.5	0.5	4.8
50	-18	2.9	2.3	1.3	2.0	1.3	1.6
	-15	3.4	2.3	1.5	2.0	1.2	1.7
	-10	4.7	2.3	2.0	2.1	1.0	2.1
	-7	5.3	2.4	2.2	2.0	0.9	2.2
	2	6.8	2.3	2.9	2.0	0.7	2.8
	7	8.2	2.6	3.1	2.1	0.7	2.9
	10	8.8	2.6	3.4	2.1	0.6	3.4
	12	9.2	2.6	3.5	2.2	0.6	3.6
	15	9.2	2.6	3.5	2.3	0.6	3.7
	20	9.5	2.6	3.6	2.4	0.6	3.8
55	-18	-	-	-	-	-	-
	-15	-	-	-	-	-	-
	-10	4.5	2.5	1.8	2.0	1.1	1.9
	-7	5.1	2.6	2.0	2.0	1.0	1.9
	2	6.5	2.4	2.7	2.0	0.8	2.4
	7	8.0	2.8	2.9	2.0	0.8	2.7
	10	8.6	2.8	3.1	2.0	0.7	2.9
	12	9.0	2.8	3.2	2.1	0.7	3.1
	15	9.0	2.8	3.2	2.2	0.7	3.1
	20	9.3	2.8	3.3	2.3	0.7	3.3
60 (92 %)	-18	-	-	-	-	-	-
	-15	-	-	-	-	-	-
	-10	-	-	-	-	-	-
	-7	-	-	-	-	-	-
	2	6.1	2.4	2.5	1.9	0.8	2.3
	7	7.8	3.0	2.6	2.0	0.9	2.3
	10	8.4	3.0	2.8	2.0	0.8	2.6
	12	8.6	3.0	2.9	2.0	0.8	2.7
	15	8.6	3.0	2.9	2.1	0.8	2.8
	20	9.1	3.0	3.0	2.3	0.8	3.0

t_{VL} = heating flow temperature (°C)

t_G = source temperature (°C)

Q_h = 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 heat pumps general"

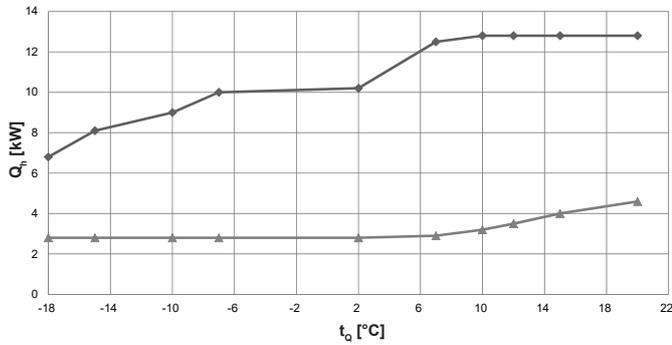
Performance data – heating

Maximum heat output allowing for defrosting losses

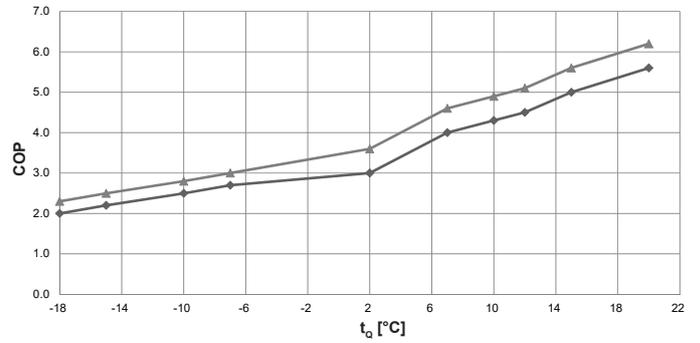
UltraSource® B comfort C (11), compact C (11/200)

Data according to EN 14511

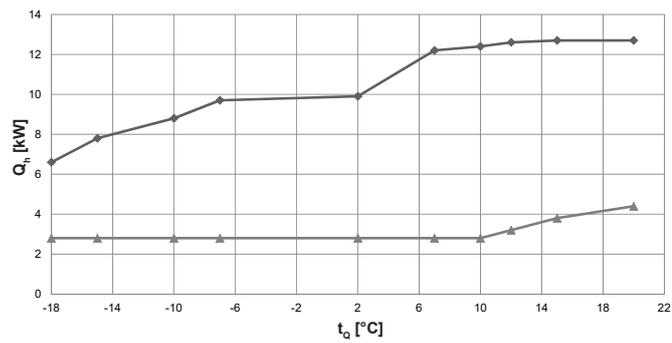
Heat output - t_{VL} 35 °C



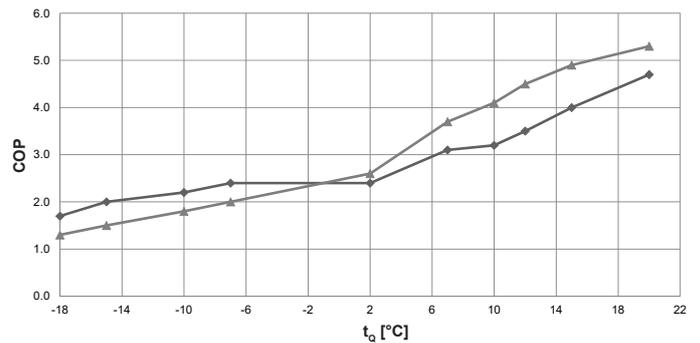
Coefficient of performance - t_{VL} 35 °C



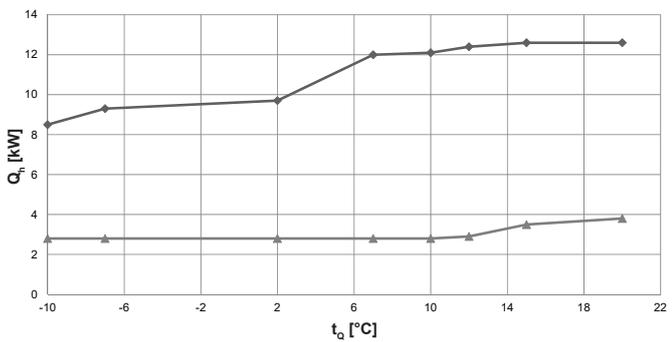
Heat output - t_{VL} 45 °C



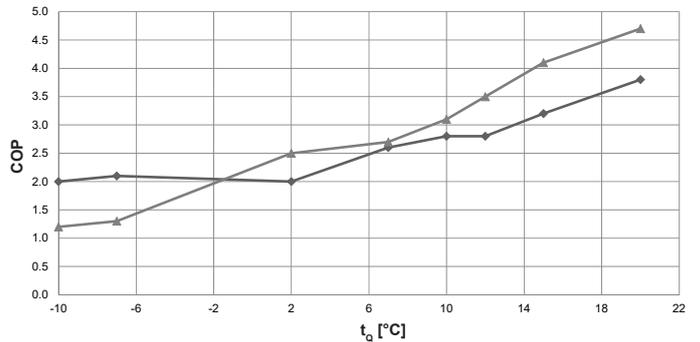
Coefficient of performance - t_{VL} 45 °C



Heat output - t_{VL} 55 °C



Coefficient of performance - t_{VL} 55 °C



t_{VL} = heating flow temperature (°C)

t_{D0} = source temperature (°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

▲ Minimum output

Performance data – heating

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

Data according to EN 14511

t_{VL} °C	t_C °C	Maximum output			Minimum output		
		Q_h kW	P kW	COP	Q_h kW	P kW	COP
35	-18	6.8	3.4	2.0	2.8	1.2	2.3
	-15	8.1	3.6	2.2	2.8	1.1	2.5
	-10	9.0	3.6	2.5	2.8	1.0	2.8
	-7	10.0	3.7	2.7	2.8	0.9	3.0
	2	10.2	3.4	3.0	2.8	0.8	3.6
	7	12.5	3.2	4.0	2.9	0.6	4.6
	10	12.8	3.0	4.3	3.2	0.7	4.9
	12	12.8	2.9	4.5	3.5	0.7	5.1
	15	12.8	2.6	5.0	4.0	0.7	5.6
20	12.8	2.3	5.6	4.6	0.7	6.2	
45	-18	6.6	4.0	1.7	2.8	2.2	1.3
	-15	7.8	3.9	2.0	2.8	1.9	1.5
	-10	8.8	4.0	2.2	2.8	1.6	1.8
	-7	9.7	4.1	2.4	2.8	1.4	2.0
	2	9.9	4.1	2.4	2.8	1.1	2.6
	7	12.2	4.0	3.1	2.8	0.8	3.7
	10	12.4	3.8	3.2	2.8	0.7	4.1
	12	12.6	3.6	3.5	3.2	0.7	4.5
	15	12.7	3.2	4.0	3.8	0.8	4.9
20	12.7	2.7	4.7	4.4	0.8	5.3	
50	-18	6.4	4.2	1.5	2.7	2.4	1.1
	-15	7.4	4.2	1.8	2.6	2.0	1.3
	-10	8.6	4.1	2.1	2.8	1.9	1.5
	-7	9.5	4.3	2.2	2.8	1.8	1.6
	2	9.8	4.5	2.2	2.8	1.1	2.6
	7	12.1	4.3	2.8	2.8	0.9	3.1
	10	12.3	4.1	3.0	2.8	0.8	3.5
	12	12.5	4.0	3.1	3.1	0.8	4.0
	15	12.7	3.6	3.5	3.7	0.8	4.5
20	12.7	3.0	4.2	4.1	0.8	5.0	
55	-18	-	-	-	-	-	-
	-15	-	-	-	-	-	-
	-10	8.5	4.2	2.0	2.8	2.3	1.2
	-7	9.3	4.4	2.1	2.8	2.2	1.3
	2	9.7	4.8	2.0	2.8	1.1	2.5
	7	12.0	4.6	2.6	2.8	1.1	2.7
	10	12.1	4.4	2.8	2.8	0.9	3.1
	12	12.4	4.4	2.8	2.9	0.8	3.5
	15	12.6	4.0	3.2	3.5	0.9	4.1
20	12.6	3.3	3.8	3.8	0.8	4.7	
62	-18	-	-	-	-	-	-
	-15	-	-	-	-	-	-
	-10	-	-	-	-	-	-
	-7	-	-	-	-	-	-
	2	9.1	5.8	1.6	2.6	1.3	2.0
	7	11.2	5.6	2.0	2.6	1.3	2.1
	10	11.7	5.4	2.2	2.7	1.1	2.5
	12	11.9	5.4	2.2	2.8	1.0	2.8
	15	12.1	4.7	2.6	3.4	1.0	3.4
20	12.2	3.9	3.2	3.7	0.9	4.0	

t_{VL} = heating flow temperature (°C)

t_C = source temperature (°C)

Q_h = 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 heat pumps general"

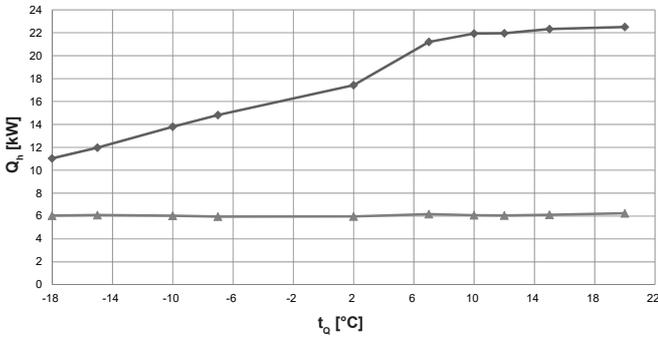
Performance data – heating

Maximum heat output allowing for defrosting losses

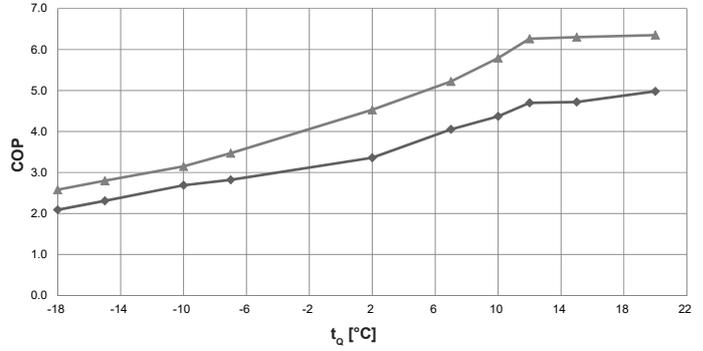
UltraSource® B comfort C (17)

Data according to EN 14511

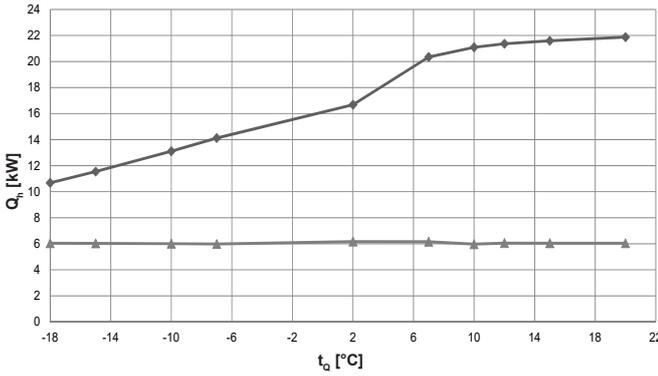
Heat output - t_{VL} 35 °C



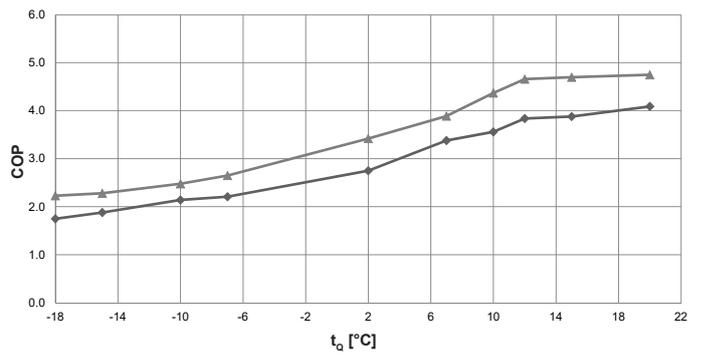
Coefficient of performance - t_{VL} 35 °C



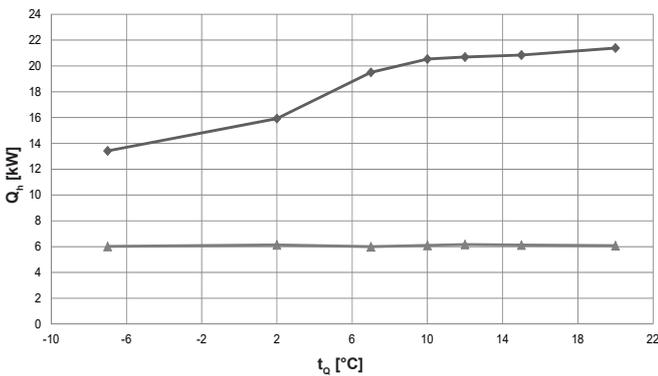
Heat output - t_{VL} 45 °C



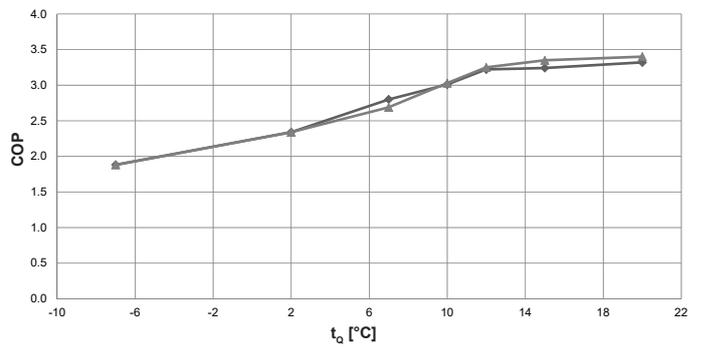
Coefficient of performance - t_{VL} 45 °C



Heat output - t_{VL} 55 °C



Coefficient of performance - t_{VL} 55 °C



t_{VL} = heating flow temperature (°C)

t_o = source temperature (°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
 ▲ Minimum output

Performance data – heating

UltraSource® B comfort C (17)

Data according to EN 14511

t_{VL} °C	t_G °C	Maximum output			Minimum output		
		Q_h kW	P kW	COP	Q_h kW	P kW	COP
35	-18	11.0	5.3	2.1	6.0	2.3	2.6
	-15	12.0	5.2	2.3	6.1	2.2	2.8
	-10	13.8	5.1	2.7	6.0	2.0	3.0
	-7	14.8	5.3	2.8	6.0	1.7	3.5
	2	17.4	5.2	3.4	6.0	1.3	4.5
	7	21.2	5.2	4.1	6.2	1.2	5.2
	10	21.9	5.0	4.4	6.1	1.0	5.8
	12	22.0	4.7	4.7	6.1	1.0	6.3
	15	22.3	4.7	4.7	6.1	1.0	6.3
45	20	22.5	4.5	5.0	6.3	1.0	6.4
	-18	10.7	6.1	1.8	6.0	2.7	2.2
	-15	11.5	6.1	1.9	6.0	2.6	2.3
	-10	13.1	6.1	2.1	6.0	2.4	2.5
	-7	14.1	6.4	2.2	6.0	2.3	2.7
	2	16.7	6.1	2.8	6.2	1.8	3.4
	7	20.4	6.0	3.4	6.2	1.6	3.9
	10	21.1	5.9	3.6	6.0	1.4	4.4
	12	21.4	5.6	3.8	6.1	1.3	4.7
50	15	21.6	5.6	3.8	6.0	1.3	4.7
	20	21.9	5.4	4.1	6.0	1.3	4.8
	-18	10.5	6.7	1.6	6.0	3.3	1.8
	-15	11.3	6.6	1.7	6.1	3.2	1.9
	-10	12.8	6.5	2.0	6.1	3.0	2.0
	-7	13.8	6.7	2.1	6.0	2.8	2.1
	2	16.3	6.4	2.5	6.1	2.3	2.7
	7	19.9	6.6	3.0	6.0	2.0	3.1
	10	20.9	6.4	3.3	6.1	1.8	3.4
55	12	21.0	6.0	3.5	6.1	1.7	3.7
	15	21.3	6.0	3.6	6.1	1.6	3.8
	20	21.7	5.9	3.7	6.1	1.6	3.9
	-18	-	-	-	-	-	-
	-15	-	-	-	-	-	-
	-10	-	-	-	-	-	-
	-7	13.4	7.1	1.9	6.0	3.0	1.9
	2	15.9	6.8	2.3	6.1	2.6	2.3
	7	19.5	7.0	2.8	6.0	2.0	2.7
62 (92 %)	10	20.5	6.8	3.0	6.0	2.0	3.0
	12	20.7	6.4	3.2	6.2	2.0	3.3
	15	20.9	6.4	3.2	6.1	1.8	3.4
	20	21.4	6.4	3.3	6.1	1.8	3.4
	-18	-	-	-	-	-	-
	-15	-	-	-	-	-	-
	-10	-	-	-	-	-	-
	-7	-	-	-	-	-	-
	2	14.9	7.4	2.0	5.8	2.9	2.0
7	18.7	7.6	2.4	5.8	2.4	2.4	
10	19.8	7.3	2.7	5.9	2.2	2.7	
12	20.0	6.9	2.9	6.0	2.0	3.0	
15	19.9	6.9	2.9	5.8	2.0	2.9	
20	20.4	6.9	2.9	5.8	1.9	2.9	

t_{VL} = heating flow temperature (°C)

t_G = source temperature (°C)

Q_h = 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

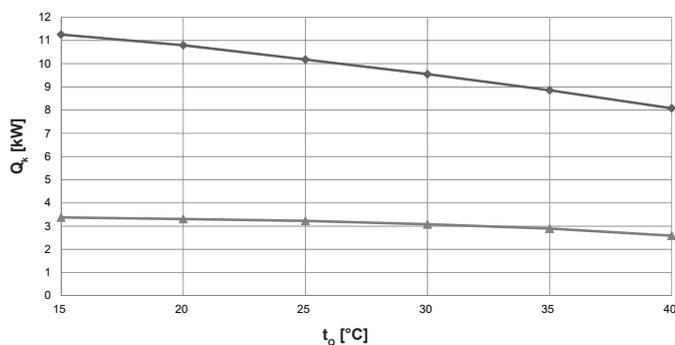
Observe daily power interruptions!
see "Engineering heat pumps general"

Performance data – cooling

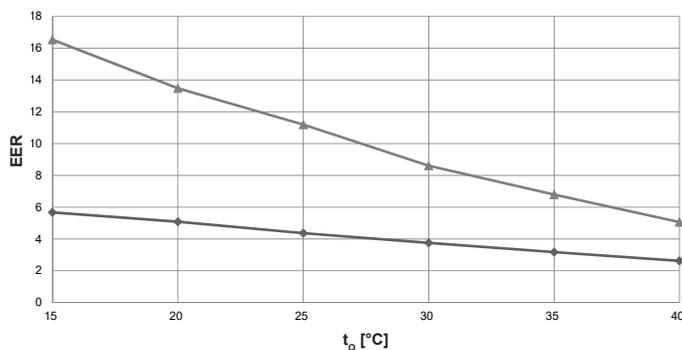
Maximum cooling capacity

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

Cooling capacity - $t_{VL} 18\text{ °C}$



Energy efficiency ratio - $t_{VL} 18\text{ °C}$



◆ Maximum output
▲ Minimum output

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

Data according to EN 14511

t_{VL} °C	t_q °C	Maximum output			Minimum output		
		Q_k kW	P kW	EER	Q_k kW	P kW	EER
7	15	8.1	1.7	4.8	2.4	0.2	10.1
	20	7.7	1.9	4.1	2.2	0.3	7.5
	25	7.3	2.1	3.5	2.1	0.4	5.9
	30	6.8	2.3	3.0	2.1	0.5	4.4
	35	6.3	2.4	2.6	2.0	0.5	3.8
	40	5.8	2.7	2.2	2.0	0.7	3.1
12	15	9.7	1.8	5.3	2.8	0.2	13.6
	20	9.2	2.0	4.6	2.8	0.3	10.6
	25	8.7	2.2	4.0	2.6	0.3	8.1
	30	8.0	2.4	3.4	2.5	0.4	6.4
	35	7.5	2.6	2.9	2.3	0.5	5.1
	40	6.8	2.8	2.4	2.2	0.6	3.9
18	15	11.3	2.0	5.7	3.4	0.2	16.5
	20	10.8	2.1	5.1	3.3	0.3	13.5
	25	10.2	2.3	4.4	3.2	0.3	11.2
	30	9.6	2.6	3.8	3.1	0.4	8.1
	35	8.9	2.8	3.2	2.9	0.4	6.8
	40	8.1	3.1	2.6	2.6	0.5	5.1

t_{VL} = cooling water flow temperature (°C)
 t_q = source temperature (°C)
 Q_k = cooling capacity (kW), measured in accordance with standard EN 14511
P = power consumption, overall unit (kW)
EER = Energy Efficiency Ratio for the overall unit in accordance with standard EN 14511

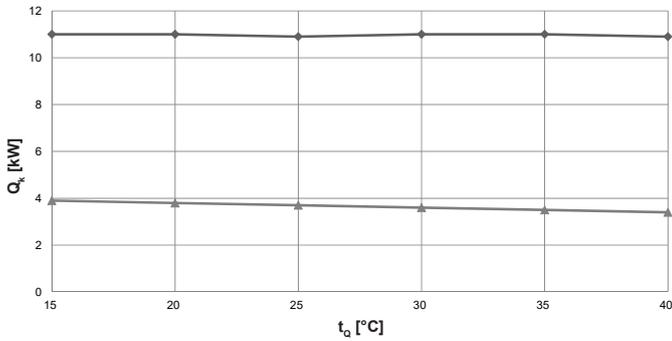
Observe daily power interruptions!
see "Engineering heat pumps general"

Performance data – cooling

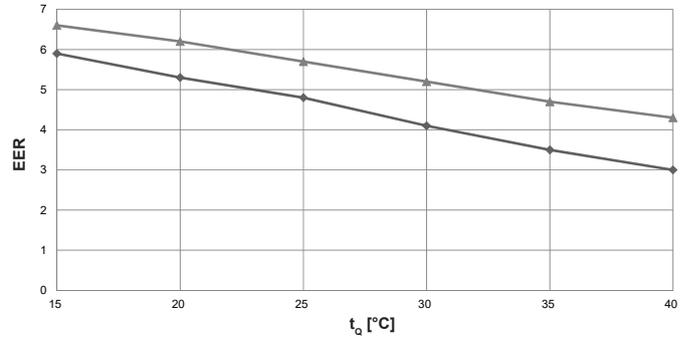
Maximum cooling capacity

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

Cooling capacity - $t_{VL} 18\text{ °C}$



Energy efficiency ratio - $t_{VL} 18\text{ °C}$



◆ Maximum output
 ▲ Minimum output

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

Data according to EN 14511

t_{VL} °C	t_q °C	Maximum output			Minimum output		
		Q_k kW	P kW	EER	Q_k kW	P kW	EER
7	15	11.2	2.4	4.7	2.9	0.6	4.5
	20	10.5	2.5	4.3	2.9	0.7	4.1
	25	9.9	2.6	3.8	3.0	0.8	3.6
	30	9.3	2.8	3.3	3.0	0.9	3.2
	35	8.6	3.0	2.8	2.9	1.1	2.8
	40	8.0	3.4	2.6	2.9	1.2	2.3
12	15	10.8	2.1	5.2	3.1	0.6	5.4
	20	10.9	2.3	4.6	3.0	0.6	5.0
	25	10.8	2.7	4.0	2.9	0.7	4.5
	30	10.8	3.2	3.4	2.8	0.7	4.0
	35	10.1	3.4	3.0	2.9	0.8	3.6
	40	9.5	3.8	2.5	2.9	0.9	3.1
18	15	11.0	1.9	5.9	3.9	0.6	6.6
	20	11.0	2.1	5.3	3.8	0.6	6.2
	25	10.9	2.3	4.8	3.7	0.7	5.7
	30	11.0	2.7	4.1	3.6	0.7	5.2
	35	11.0	3.2	3.5	3.5	0.7	4.7
	40	10.9	3.6	3.0	3.4	0.8	4.3

t_{VL} = cooling water flow temperature (°C)
 t_q = source temperature (°C)
 Q_k = cooling capacity (kW), measured in accordance with standard EN 14511
 P = power consumption, overall unit (kW)
 EER = Energy Efficiency Ratio for the overall unit in accordance with standard EN 14511

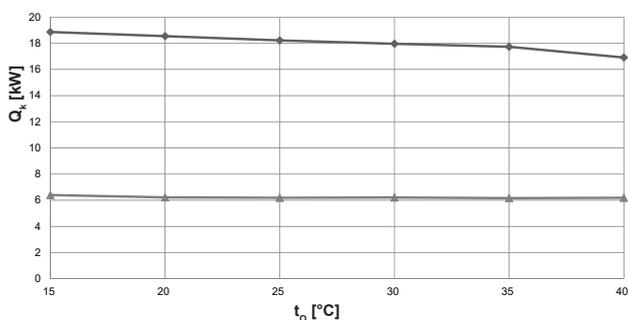
Observe daily power interruptions!
 see "Engineering heat pumps general"

Performance data – cooling

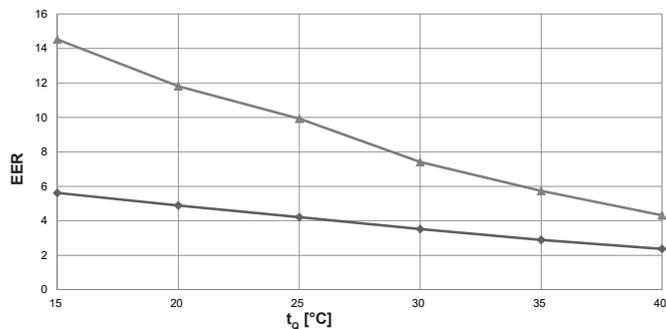
Maximum cooling capacity

UltraSource® B comfort C (17)

Cooling capacity - $t_{VL} 18\text{ °C}$



Energy efficiency ratio - $t_{VL} 18\text{ °C}$



◆ Maximum output
▲ Minimum output

UltraSource® B comfort C (17)

Data according to EN 14511

t_{VL} °C	t_Q °C	Maximum output			Minimum output		
		Q_k kW	P kW	EER	Q_k kW	P kW	EER
7	15	16.5	3.9	4.2	6.2	0.7	8.5
	20	16.2	4.6	3.5	6.2	0.9	7.0
	25	15.5	5.3	2.9	6.2	1.1	5.7
	30	14.9	6.2	2.4	6.1	1.3	4.7
	35	14.2	7.7	1.9	6.1	1.6	3.8
	40	13.5	9.0	1.5	6.0	1.9	3.1
12	15	18.2	3.7	5.0	6.3	0.5	11.7
	20	17.9	4.3	4.2	6.1	0.7	9.2
	25	17.2	5.0	3.5	6.1	0.8	7.3
	30	16.4	5.8	2.8	6.2	1.1	5.6
	35	15.5	7.1	2.2	6.1	1.4	4.4
	40	14.7	8.2	1.8	6.1	1.7	3.6
18	15	18.9	3.4	5.6	6.4	0.4	14.5
	20	18.5	3.8	4.9	6.2	0.5	11.8
	25	18.2	4.3	4.2	6.2	0.6	9.9
	30	18.0	5.1	3.5	6.2	0.8	7.4
	35	17.7	6.1	2.9	6.2	1.1	5.7
	40	16.9	7.1	2.4	6.2	1.4	4.3

t_{VL} = cooling water flow temperature (°C)

t_Q = source temperature (°C)

Q_k = cooling capacity (kW), measured in accordance with standard EN 14511

P = power consumption, overall unit (kW)

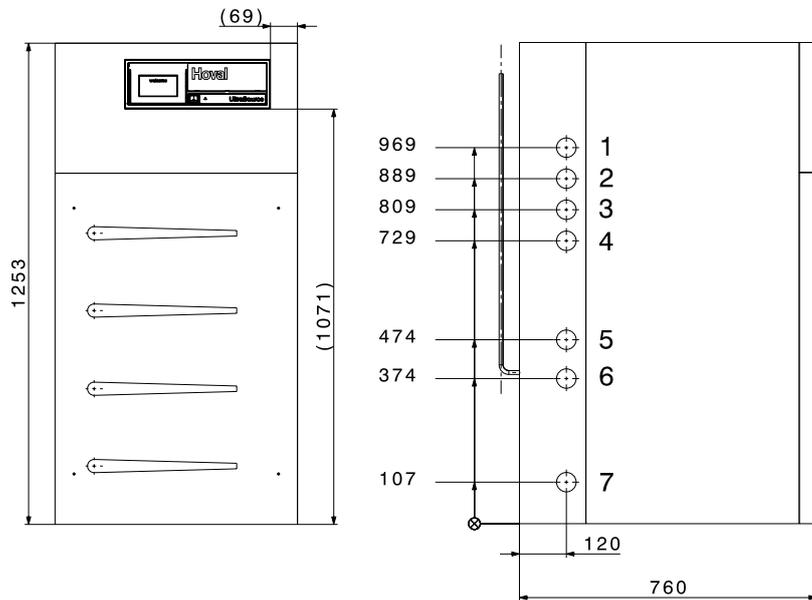
EER = Energy Efficiency Ratio for the overall unit in accordance with standard EN 14511

Observe daily power interruptions!
see "Engineering heat pumps general"

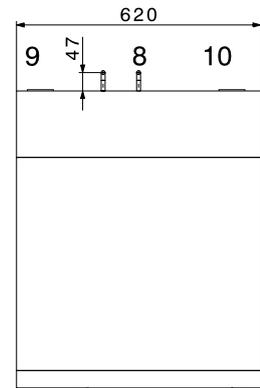
UltraSource® B comfort C (8-17)

Indoor unit

(Dimensions in mm)



View from above



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

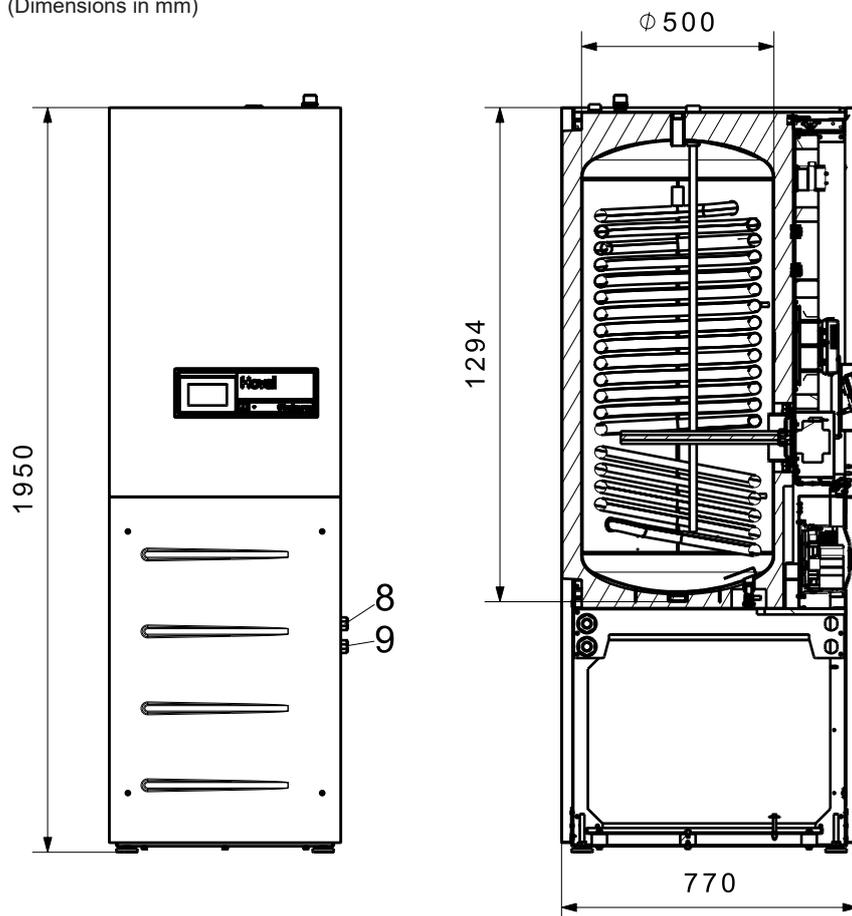
- 1 Free
- 2 Flow heating 1"
- 3 Flow hot water charging 1"
- 4 Free
- 5 Free
- 6 Free
- 7 Return heating 1"
- 8 Refrigerant connection lines
- 9 Cable feed-in main current
- 10 Cable feed-in sensors

The indoor unit must be accessible from above.

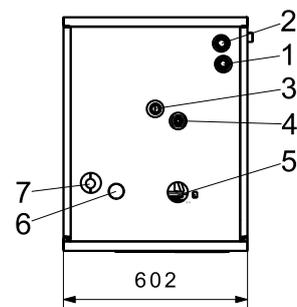
UltraSource® B compact C (8,11/200)

Indoor unit with calorifier

(Dimensions in mm)



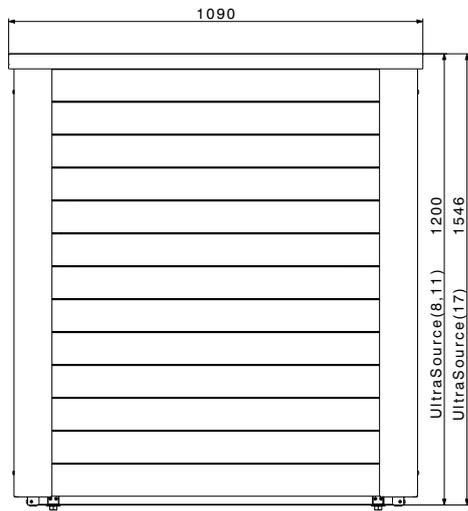
View from above



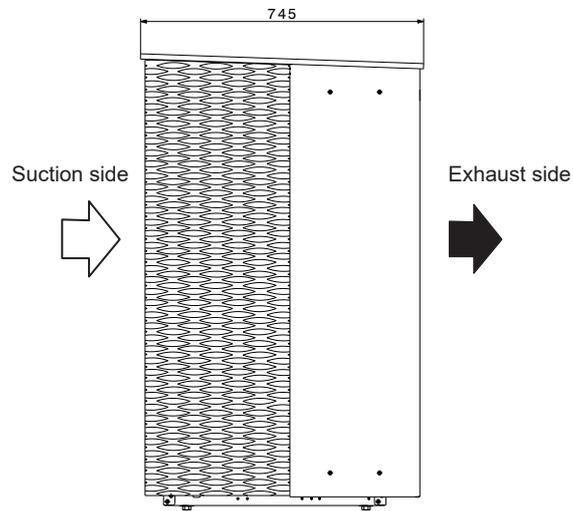
- 1 Flow heating 1"
- 2 Return heating 1"
- 3 Hot water connection 3/4"
- 4 Cold water connection 3/4"
- 5 Cable feed-in sensors
- 6 Circulation connection 3/4"
- 7 Cable feed-in main current
- 8 Refrigerant connection line
- 9 Refrigerant connection line

UltraSource® B
Outdoor unit
 (Dimensions in mm)

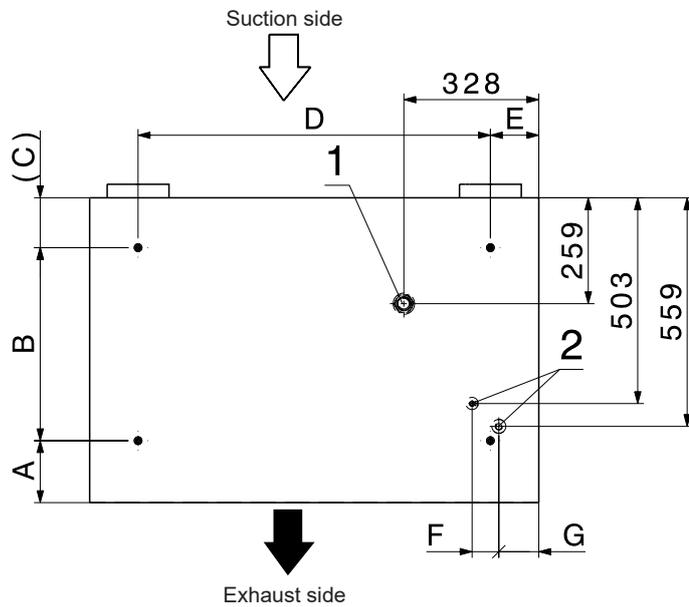
Front view



View from left



View from above

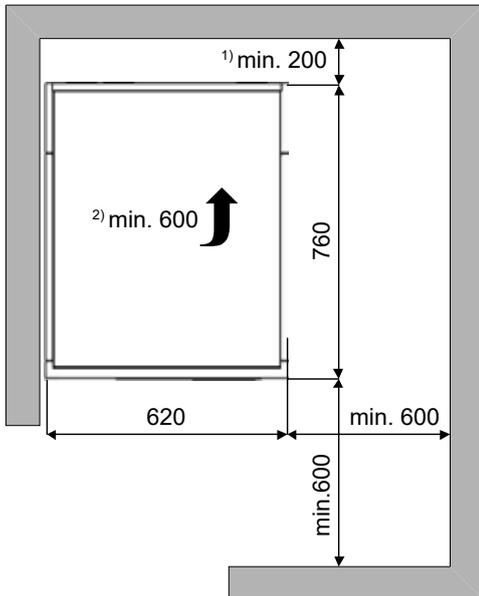


- 1 Condensate drain (Rp 1")
- 2 Refrigerant connection line connections
 Ø 10,12,16 or 18

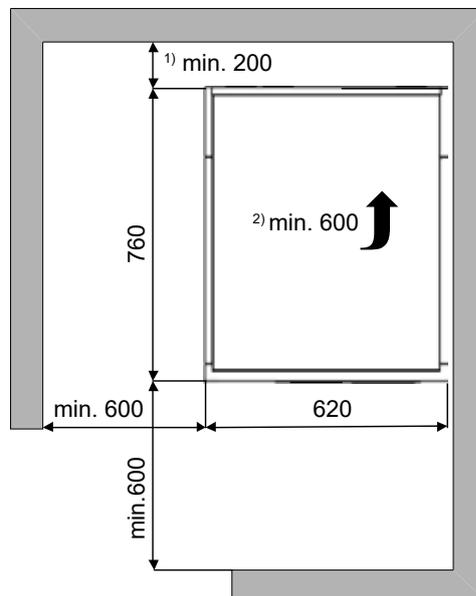
Type	A	B	C	D	E	F	G
(8)	160	460	125	960	65	44	196
(11)	160	460	125	960	65	44	196
(17)	151	472	122	855	118	65	97

Space requirement
 (Dimensions in mm)

**UltraSource® B comfort C (8-17) left
 Indoor unit**



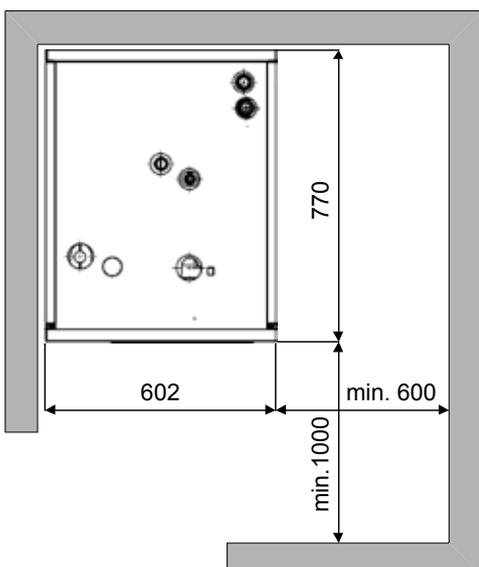
**UltraSource® B comfort C (8-17) right
 Indoor unit**



¹⁾ A gap of at least 200 mm must be guaranteed at the rear for the refrigerant as well as electrical connection.

²⁾ To ensure accessibility to the electrical connections, a clearance of at least 600 mm must be provided above the UltraSource® B comfort C (8-17)!

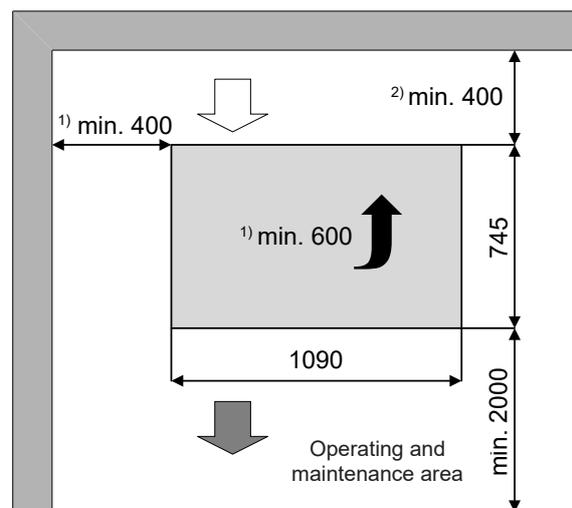
**UltraSource® B compact C (8,11/200)
 Indoor unit**



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

**UltraSource® B
 Outdoor unit**

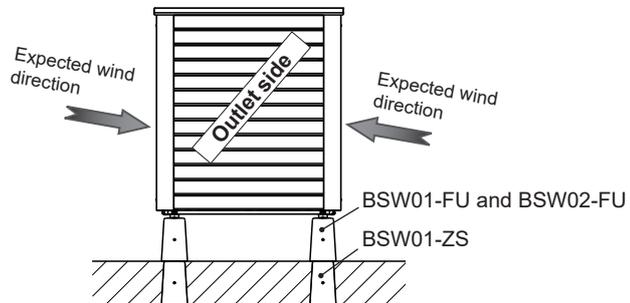
View from above



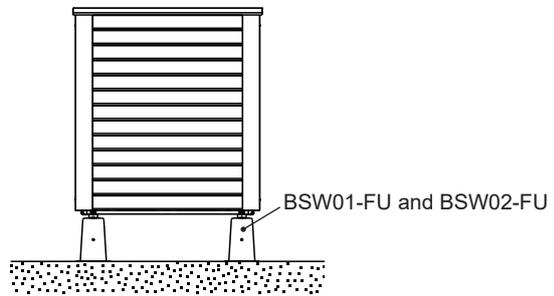
¹⁾ Due to the need for access during maintenance, a gap of 400 mm must be guaranteed on both sides and 600 mm above.
²⁾ If the air intake grille can not be lifted upwards, there must be a gap of min. 600 mm on the suction side.

Installation variants UltraSource® B outdoor unit
(Dimensions in mm)

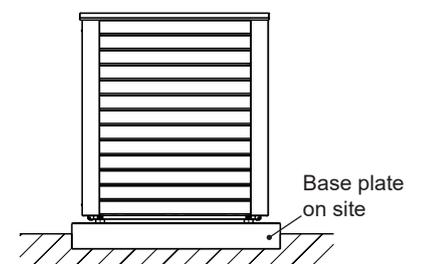
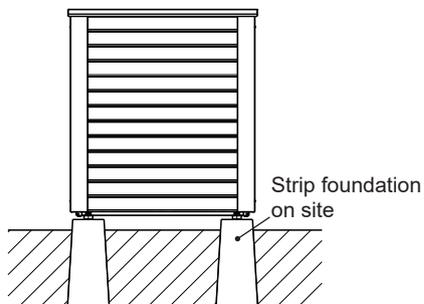
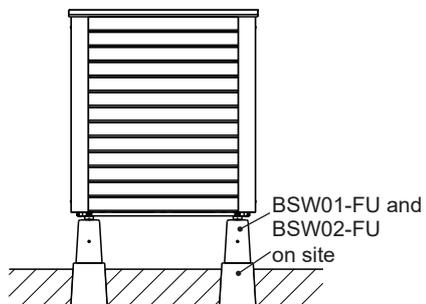
Firm base with Hoval concrete base set



Flat roof or existing firm base



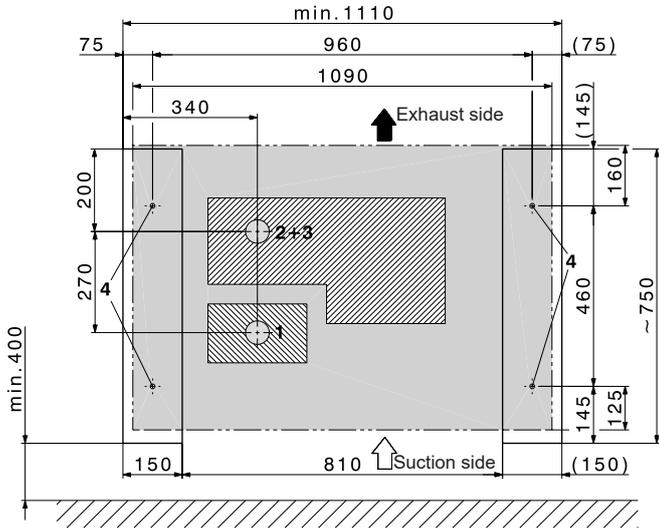
Firm base on site



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

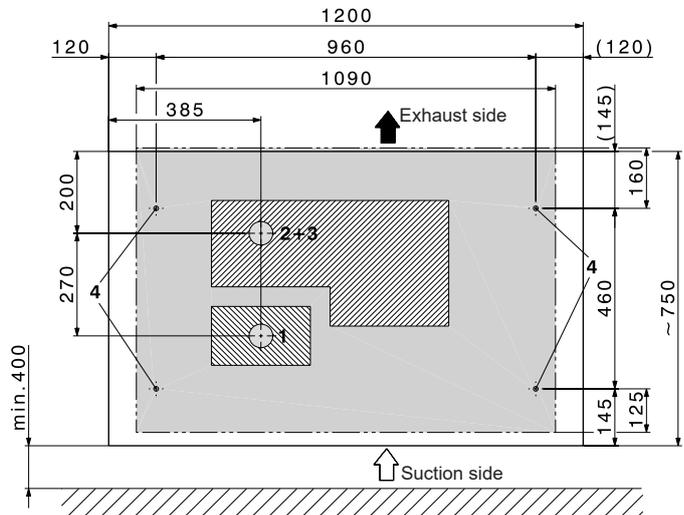
Strip foundation

Plan concrete base set
(view from top)



Strip foundation

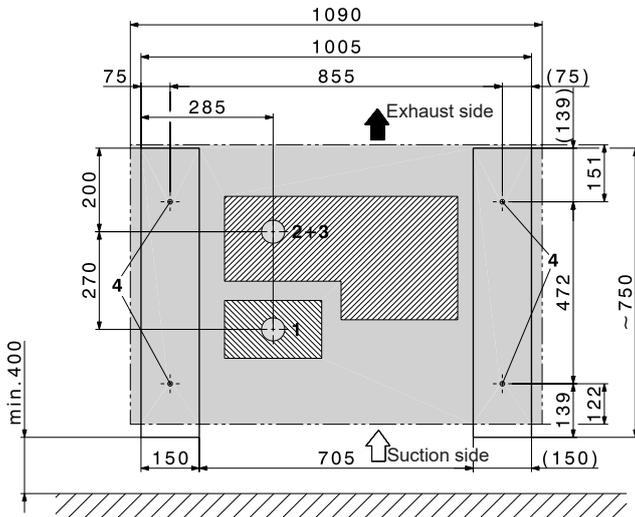
Plan concrete base set
(view from top)



UltraSource® B comfort C (17)

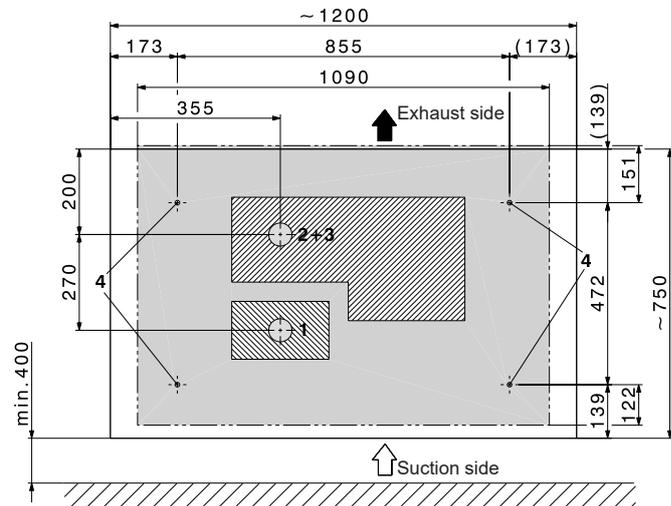
Strip foundation

Plan concrete base set
(view from top)



Strip foundation

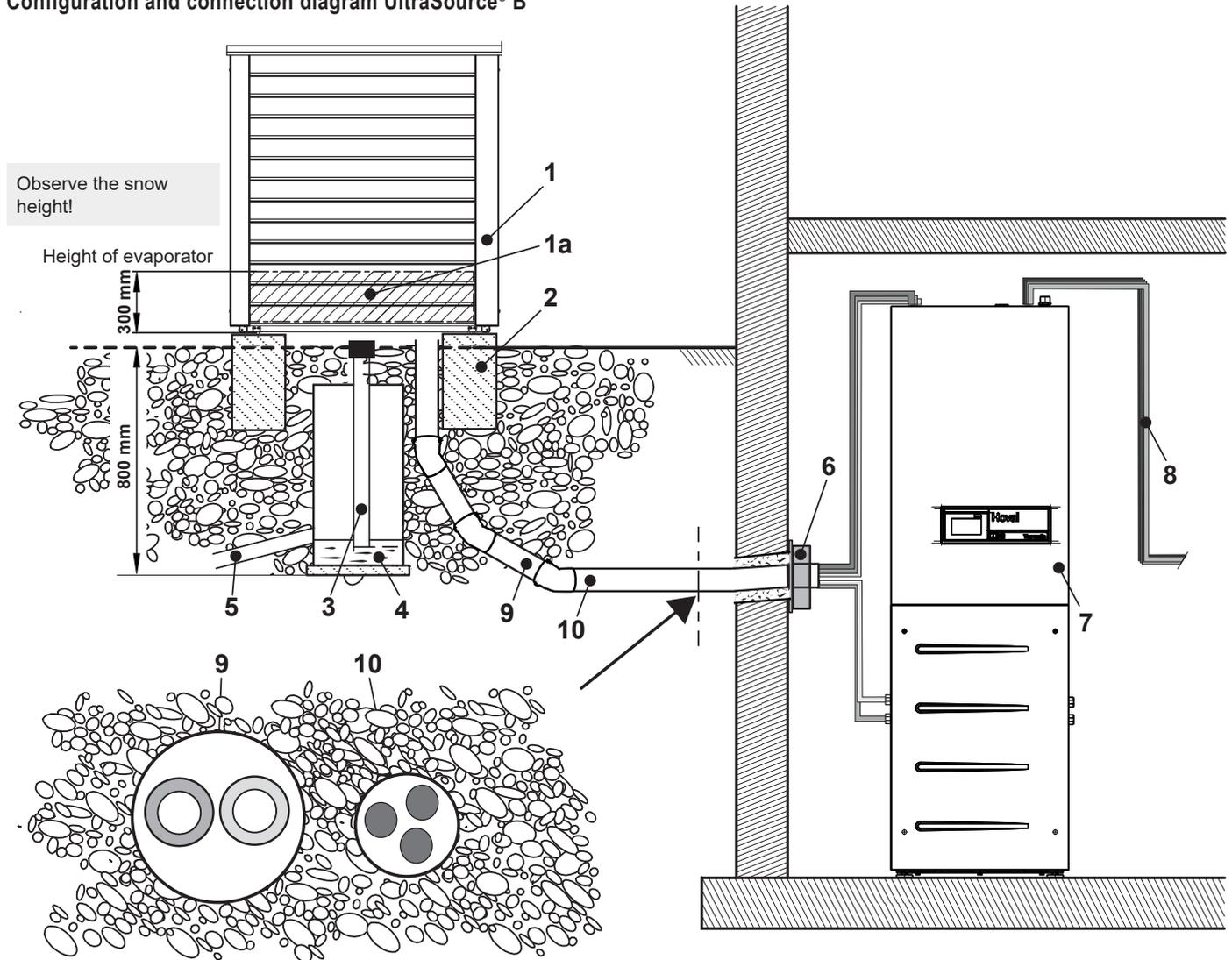
Plan concrete base set
(view from top)



- 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 Attachment points 4 x M12

-  Possible area for empty piping in the concrete base
-  Possible area for co ate drain in the concrete base

Configuration and connection diagram UltraSource® B



- 1 UltraSource® outdoor unit
- 1a Space for connection of refrigerant connection lines, condensate drain etc.
- 2 Concrete base
- 3 Condensate drain (Rp 1")
- 4 Possible variant with duct/gravel layer
- 5 Discharge into the sewer system
- 6 Wall lead-through (hydraulic and electrical connections)
- 7 UltraSource® indoor unit
- 8 Main current
 - for (8): 1 x 230 V/50 Hz
 - for (11,17): 3 x 400 V/50 Hz
 - Control current 1 x 230 V/50 Hz
 - Main current immersion heater
 - for (8): 1 x 230 V/50 Hz (3 kW) or 3 x 400 V/50 Hz (6 kW)
 - for (11,17): 3 x 400 V/50 Hz (6 kW)
- 9 Plain tube for refrigerant connection lines

	(8)	(11)	(17)
Suction gas line [mm]:	12 x 1	16 x 1	18 x 1
Suction gas line [inches]:	1/2"	5/8"	3/4"
Liquid line [mm]:	10 x 1	12 x 1	12 x 1
Liquid line [inches]:	3/8"	1/2"	1/2"
Max. refrigerant connection line length (metric) [m]:	16	16	16
Max. refrigerant connection line length (inches) [m]:	20	20	20
- 10 Empty tube for electrical connections for outdoor unit
 - Control current outdoor unit 1 x 230 V/50 Hz
 - Trace heating tape 1 x 230 V/50 Hz
 - Data bus RS485

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 connection lines guarantees cost effectiveness.
- The maximum permissible length of the lines between the outdoor and indoor unit is 16 m (metric) or 20 m (inches) 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 more 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.
- For efficiency reasons, 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 refrigerant 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 refrigerant connection lines are connected, on the right or left side of the heat pump (see dimensions/space required). On the front of the UltraSource® B compact C, the minimum distance to be maintained is 1000 mm.

- 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.

It is imperative that a system water protection filter is installed in the heating return upstream from the heat pump.

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 an alternative installation in areas subject to strong winds cannot be avoided, an additional wind shield in the form of a hedge, for example, should be installed, or additional fastening should be provided for the outdoor unit.
- 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 condensate during operation. This can be up to 6 litres per defrost cycle within 2 minutes for the outdoor unit of the UltraSource®.
- 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.

Flat roof installation

Flat roof installation of the UltraSource® B is possible under the following conditions:

- All standards concerning statics, wind load and access to roofs must be complied with. The outdoor unit must be firmly bolted onto the substructure (e.g. concrete base). The heat pump must be prevented from tilting.
- Minimum distance of the heat pump to the roof edge border: 1.5 m.
- Accessibility for maintenance and repair work must be ensured. For work on the heat pump, a measuring case and test equipment, refrigerant bottle, etc. must be transported to the site, amongst other things. In addition to the safety equipment (fall protection devices, anchoring devices, etc.), this must also be taken into account for skylights, stairs, railings, etc.
- The air intake and air outlet sides must not be narrowed or blocked. The air outlet side must be the side facing away from the building and unobstructed (> 2 m).

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 \pm 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. Country-specific requirements must be complied with. If the "fault-current circuit breaker" safeguard measure is implemented by the electrical company, a separate fault-current circuit breaker is recommended for the heat pumps.
- This fault-current circuit breaker must be of the all-current-sensitive type B ($I_{\Delta N} \geq 300$ 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.
- Earthing of the outdoor unit

Routing of refrigerant connection lines

- If the refrigerant connection 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° 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. 150 mm
- Routing in the screed (underlay) must be avoided. If there is no other possibility, especial care is important. The installer should route the refrigerant connection line in collaboration with Hoval customer service.
- After the refrigerant connection line has been laid, it must be checked for damage and reinsulated. Condensate can form on the pipes.
- The refrigerant connection lines are only allowed to be connected and refrigerant is only allowed to be handled by authorised personnel of Hoval or by trained specialist personnel.
- The flow of refrigerant in the connection pipes can cause flow noise. The refrigerant connection lines must be laid decoupled from the building and must never be laid flush-mounted.
- Care must be taken to ensure that neither refrigerant 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.

Additional instructions see "Engineering"

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.
- 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 connection lines.
- To prevent energy losses, the connection lines must be insulated with suitable material.

Transport and storage

- When removing the packaging, check the outdoor unit for damage. If the outdoor unit was damaged during transport or storage, contact Hoval customer service, a service partner or a licensed specialist immediately. They must carry out a leak test with a suitable leak detector. In the event of a leak, the outdoor unit must be repaired.
- Store the outdoor unit in a cool place without fire hazard and without direct exposure to heat sources. The ambient temperature must not exceed 43 °C.
- The same regulations apply for storage as for installation (no recesses, ventilation pipes, ignition sources in the storage area).
- During transport, ensure sufficient ventilation in the closed vehicle, also when parking and stopping.
- Storage in passageways, escape routes or in front of entrances or exits is not permitted.
- Ignition sources such as naked flames, switched-on gas appliances, electric heaters, etc. must be kept away from the unit.
- Transport and storage only in upright position. Protect from mechanical damage and from falling over or falling down (make sure the load is secure).

Looking for the appropriate hydraulic schematic?
Please contact your local Hoval partner.