

Hoval Thermalia® comfort
Heat pump system for heating in the living area.

- Compact floor-standing brine/water or water/water heat pumps
- Stable casing made of powder-coated sheet steel with removable and sound-insulated side walls
Colour brown red (RAL 3011)
- Front made of powder-coated sheet steel, removable and sound-insulated
Colour flame red (RAL 3000)
- Acoustically insulated casing with triple mounting of the compressor
- Sound-insulated floor mat
- Spiral (scroll) compressor
- Evaporator and plate-type condenser made of stainless steel/copper
- Electronic expansion valve
- Electronic starting current limiter with rotating field and phase monitoring
- Speed-controlled, highly efficient heating and brine pump
- 3-way switching ball valve for heating/domestic hot water with drive
- Integrated brine pressure monitoring
- Hydraulic connections at rear:
Thermalia® comfort (8-17): 1"
Thermalia® comfort H (7,10): 1"
- TopTronic® E control installed
- Sensor set consisting of outdoor sensor, flow sensor and domestic hot water sensor included in the scope of delivery.
- Heat pump delivered pre-wired and ready for connection
- Electrical connections at rear
- Refrigerant:
Thermalia® comfort (8-17): R410A
Thermalia® comfort H (7,10): R134a
- Brine connections at rear:
Thermalia® comfort (8-17): 1"
Thermalia® comfort H (7,10): 1"



Model range

Thermalia®
comfort
type

	Water/water		Brine/water		Refrigerant	Max. flow °C	Heat output	
	35 °C	55 °C	35 °C	55 °C			B0W35 kW	W10W35 kW
(8)	A+++	A+++	A+++	A++	R410A	62	7.6	9.6
(10)	A+++	A+++	A+++	A++	R410A	62	10.6	12.7
(13)	A+++	A+++	A+++	A++	R410A	62	13.4	17.5
(17)	A+++	A+++	A+++	A++	R410A	62	17.2	22.3
H (7)	A+++	A+++	A+++	A++	R134a	67	6.5	9.1
H (10)	A+++	A+++	A+++	A++	R134a	67	9.1	12.8

Energy efficiency class of the compound system with control

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 online HovalConnect)
- Adaptation of the heating strategy based on the weather forecast (with online HovalConnect)

**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

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

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

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 free 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

- One-piece design. Compact unit wired-up internally ready for connection, supplied fully packaged
- Sensor set supplied loose

Options

- Connection set heating
- Connection set domestic hot water

Brine/water-water/water heat pump



Hoval Thermalia® comfort
Refrigerant R410A
Flow temperature max. 62 °C

Thermalia® comfort type	Heat output	
	with B0W35 kW	with W10W35 kW
(8)	7.6	9.6
(10)	10.6	12.7
(13)	13.4	17.5
(17)	17.2	22.3

7018 562
7018 563
7018 564
7018 565



Hoval Thermalia® comfort H
Refrigerant R410A
Flow temperature max. 67 °C

Thermalia® comfort type	Heat output	
	with B0W35 kW	with W10W35 kW
(7)	6.5	9.1
(10)	9.1	12.8

7018 566
7018 567

Energy efficiency class
see Description

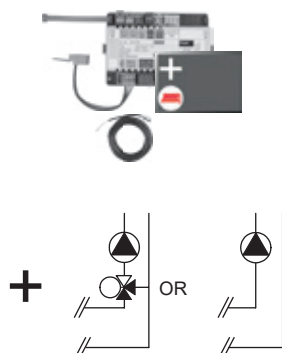
Electric heating elements
see “Calorifiers” - chapter “Electric heating
elements”

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

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

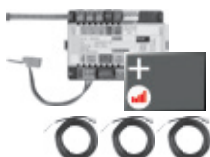
- 1 contact sensor

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

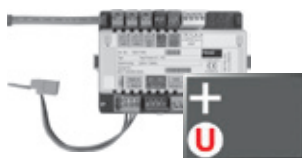
- 3 contact sensors

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

- Plug set FE module

Notice

Suitable flow rate sensors (pulse sensors) must be provided on site.



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

Notice

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

Further information

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

Part No.

6034 576

6037 062

6034 575

Part No.



Flow rate sensor sets

Plastic housing

Size	Connection inches	Flow rate l/min
DN 8	G 3/4"	0.9-15
DN 10	G 3/4"	1.8-32
DN 15	G 1"	3.5-50
DN 20	G 1 1/4"	5-85
DN 25	G 1 1/2"	9-150

6038 526
6038 507
6038 508
6038 509
6038 510



Brass housing

Size	Connection inches	Flow rate l/min
DN 10	G 1"	2-40
DN 32	G 1 1/2"	14-240
DN 40	G 2 "	22-400

6042 949
6042 950
6055 092

Notice:

With the flow sensors, heat balancing is possible via TopTronic® E module expansion.



Flow rate sensor sets

Plastic housing

Size	Connection inches	Flow rate l/min
DN 20	G 1 1/4"	5-85

6060 598

Notice:

With the flow sensors, heat balancing is possible via the automatic heat pump device.

Notice:

The flow rate sensor set must be installed without fail. Freezing can be prevented with the help of flow rate sensors and further technical measures. In order to protect the heat pump from frost in the event of a power failure or for example in bivalence mode, a system separation or other technical measures must be provided on site.

Accessories for TopTronic® E



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"

Accessories



Hose set SCH25-25-12-4
for Thermalia® comfort (8-13) and
Thermalia® comfort H (7,10)
Consisting of:
- 4 reinforced hoses PN 10 DN 25 1" IT
insulated for brine and heating side
flat-sealing with union nut
- Length: 1.2 m
- 4 brackets DN 25
- Seals

Part No.

6055 133



Hose set SCH25-32-12-4
for Thermalia® comfort (17)
Consisting of:
- 4 reinforced hoses PN 10 DN 32 1¼" IT
insulated for brine and heating side
flat-sealing with union nut
- Length: 1.2 m
- 4 brackets DN 32
- Seals

6055 134

Accessories for water heating



Domestic hot water set SW25-25-12-1
for Thermalia® comfort (8-17) and
Thermalia® comfort H (7,10)
Consisting of:
- 1 reinforced hose PN 10 DN 25 1" IT
insulated for domestic hot water side
flat-sealing with union nut
- Length: 1.2 m
- 2 brackets DN 25
- Seals

6055 122



**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

6058 256

Notice
Fulfills the function of sludge separator and
strainer

Further strainers
see "Various system components"

Accessories



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

Part No.

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

**Circulating pumps, actuators, buffer stor-
age tanks etc.,**
see separate brochures

Necessary at boiler room temperatures < 10 °C



Crankcase heater
for Belaria® twin I/IR (20-30),
Thermalia® comfort (8-17),
Thermalia® comfort H (7,10),
Thermalia® twin (20-42),
Thermalia® twin H (13-22)
Necessary for heating
room temperatures < 10 °C
for protecting the compressor
For Belaria® twin I/IR
2 pieces are necessary

6019 718



Instantaneous water heater kit DN 50
consisting of electrical box ready
for connection for electrical
protection incl. assembly fittings.
for combination with all
screw-in electric heating elements EP.
Screw-in electric heating element
must be ordered separately.

6044 070

Part No.



**Ground water immersion sensor
TF/1.1P/5S/5T/H-WP L = 5 m silicone**
Ground water sensor for heat pumps,
Cable length: 5 m (silicone)
without plug
Sensor sleeve diameter: 5 x 60 mm
Unaffected by condensation
Sensor characteristic: PT1000
Circuit board construction
Double-curved contact-pressure spring
Operating temperature: -50...200 °C
Protection class: IP65

6048 378



**Immersion sensor TF/1.1P/2.5/6T,
L = 2.5 m FW**
for TopTronic® E basic module district
heating/fresh water, basic module
district heating com
Sensor for district heating
applications (PT1000)
Cable length: 2.5 m without plug
(plug supplied with controller module/
module expansion)
Sensor sleeve diameter: 6 x 50 mm
Dewpoint-proof
Sensor may already be included in scope
of supply of heat generator/controller
module/module expansion
Operating temperature: -50...105 °C
Protection class: IP67

2056 777

Accessories water/water



**Frost protection concentrate
PowerCool DC 924-PXL**
on basis propylene glycol
completely mixable with water
with corrosion protection
Frost protection: -20 °C with
40 % mixture ratio
Content plastic container: 10 kg

2009 987



**Brine filling station in compact
design DN 25**
with shut-off valves,
filter and EPS insulation.
Application temperatures: -20 °C to +60 °C
Frost protection: max. 50 %
Connections: DN 25 G 1"
Kvs: 12.5 m³/h
Max. operating pressure: 1.0 MPa (10 bar)
Dirt screen integrated

6037 537



**Brine filling station in compact
design DN 32**
with shut-off valves,
filter and EPS insulation.
Application temperatures: -20 °C to +60 °C
Frost protection: max. 50 %
Connections: DN 32 G 1½"
Kvs: 22 m³/h
Max. operating pressure: 1.0 MPa (10 bar)
Dirt screen integrated

6033 364

Notice

For ground water applications, the ground
water pump (submersible pump) can not be
directly connected to the heat pump.
Corresponding on-site connections must be
provided here.

		Part No.
	Float body flow meter Bistable Reed contact as NC contact Area of application 300-3000 l/h Temperature range 0-80 °C Nominal pressure: 10 bar Connection: Rp 1½" Pressure drop: 25 mbar Installation length: 335 mm Max. voltage: 230 V Max. continuous current: 0.2 A	2040 707
	Float body flow meter Bistable Reed contact as NC contact Area of application 600-6000 l/h Temperature range 0-80 °C Nominal pressure: 10 bar Connection: Rp 1½" Pressure drop: 25 mbar Installation length: 335 mm Max. voltage: 230 V Max. continuous current: 0.2 A	2040 708
	Differential pressure relief valve DN 32 for installation in a HA group DN 32 both ends 1¼" 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: 1¼" internal thread/ 1¼" 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
Services		
		
Commissioning Commissioning by works service or Hoval trained authorised serviceman/company is condition for warranty.		
For commissioning and other services please contact your Hoval sales office.		

Thermalia® comfort (8-17) with R410A

Type		(8)	(10)	(13)	(17)
Brine/water application B0W35					
• Energy efficiency class of the compound system with control	35 °C/55 °C	A+++/A++	A+++/A++	A+++/A++	A+++/A++
• Room heating energy efficiency "moderate climate" 35 °C ηS ^{1), 2)}	%	176	191	192	190
• Room heating energy efficiency "moderate climate" 55 °C ηS ^{1), 2)}	%	125	133	139	140
Water/water application W10W35					
• Energy efficiency class of the compound system with control	35 °C/55 °C	A+++/A+++	A+++/A+++	A+++/A+++	A+++/A+++
• Room heating energy efficiency "moderate climate" 35 °C ηS ^{1), 2)}	%	231	245	255	240
• Room heating energy efficiency "moderate climate" 55 °C ηS ^{1), 2)}	%	161	170	181	173
• Seasonal coefficient of performance moderate climate (brine) 35 °C/55 °C	SCOP	4.6/3.3	5.0/3.5	5.0/3.7	5.0/3.7
Max. performance data heating in acc. with EN 14511					
• Heat output B0W35	kW ³⁾	7.6	10.6	13.4	17.2
• Coefficient of performance B0W35	COP	4.6	4.8	4.8	4.7
• Heat output W10W35	kW	9.6	12.7	17.5	22.3
• Coefficient of performance W10W35	COP	5.9	6.1	6.3	5.9
Nominal volume flow rate and pressure drop brine/water					
Heating (ΔT = 5 K)	m ³ /h	1.0	1.4	1.8	2.3
• ΔP Pressure drop condenser	kPa	7	8	9	10
• Residual overpressure	kPa	63	49	56	41
Heat source (ΔT = 3 K)	m ³ /h	1.8	2.5	3.2	4.1
• ΔP Pressure drop evaporator (glycol)	kPa	16	19	21	19
• Residual overpressure	kPa	59	67	91	93
Nominal volume flow rate and pressure drop water/water					
Heating (ΔT = 5 K)	m ³ /h	1.7	2.2	3.0	3.9
• ΔP Pressure drop condenser	kPa	11	12	16	14
• Residual overpressure	kPa	49	36	34	21
Heat source (ΔT = 5 K) ⁴⁾	m ³ /h	1.4	1.8	2.5	3.2
• ΔP Pressure drop evaporator	kPa	9	10	15	12
• Residual overpressure	kPa	81	98	101	105
Operating limit values					
• Heating		see diagrams of areas of application			
• Hot water		see diagrams of areas of application			
• Operating pressure max. water side	bar	6	6	6	6
• Operating pressure max. brine side	bar	6	6	6	6
• Installation place operation ⁵⁾	°C (min./max.)	5/35	5/35	5/35	5/35
• Storage	°C (min./max.)	-15/46	-15/46	-15/46	-15/46
• Compressor, type		1 x spiral (scroll), hermetic			
• Refrigerant filling quantity (R410A)	kg	1.6	1.9	2.1	2.4
- Type of compressor oil: EMKARATE RL 32-3MAF					
• Condenser/evaporator		Plate heat exchanger			
• Material		Stainless steel V4A, AISI 316, 1.4401			
• Pipe connections at rear	G	1"	1"	1"	1"

Type		(8)	(10)	(13)	(17)
Electrical data ⁶⁾					
• Voltage	V	3~400	3~400	3~400	3~400
• Frequency	Hz	50	50	50	50
• Voltage range	V	380-420	380-420	380-420	380-420
• Max. compressor operating current	A	6.2	7.4	9.7	13
• Starting current with starting current limiter ⁷⁾	A	12.4	14.8	19.4	26
• Principal current (external protection) with brine systems	A	13	13	13	16
- Type		C,D,K	C,D,K	C,D,K	C,D,K
• Principal current (external protection) with ground water systems	A	13	13	13	16
- Type		C,D,K	C,D,K	C,D,K	C,D,K
• Control current (external protection)	A	13	13	13	13
- Type		B,C,D,K,Z	B,C,D,K,Z	B,C,D,K,Z	B,C,D,K,Z
Weight					
• Operating weight approx.	kg	155	160	165	170

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⁾ kW = standard values according to EN 14511; values for B0W35 with 25 % monopolypropylene

⁴⁾ ΔT in accordance with regional regulations. The temperature difference is adjustable from 3 to 6 kelvin.
The pump regulates the volumetric current to the set temperature difference.

⁵⁾ < 10 °C: Crankcase heater is necessary

⁶⁾ Values for electrical data apply for supply voltage of 3~400 V

⁷⁾ Effective value

Thermalia® comfort H (7,10) with R134a

Type		H (7)	H (10)
Brine/water application B0W35			
• Energy efficiency class of the compound system with control	35 °C/55 °C	A+++/A++	A+++/A++
• Room heating energy efficiency "moderate climate" 35 °C ηS ^{1), 2)}	%	179	188
• Room heating energy efficiency "moderate climate" 55 °C ηS ^{1), 2)}	%	134	140
Water/water application W10W35			
• Energy efficiency class of the compound system with control	35 °C/55 °C	A+++/A+++	A+++/A+++
• Room heating energy efficiency "moderate climate" 35 °C ηS ^{1), 2)}	%	238	249
• Room heating energy efficiency "moderate climate" 55 °C ηS ^{1), 2)}	%	177	185
• Seasonal coefficient of performance moderate climate (brine) 35 °C/55 °C	SCOP	4.7/3.5	4.9/3.7
Max. performance data heating in acc. with EN 14511			
• Heat output B0W35	kW ³⁾	6.5	9.1
• Coefficient of performance B0W35	COP	4.5	4.6
• Heat output W10W35	kW	9.1	12.8
• Coefficient of performance W10W35	COP	5.9	6.0
Nominal volume flow rate and pressure drop brine/water			
Heating (ΔT = 5 K)	m ³ /h	1.1	1.6
• ΔP Pressure drop condenser	kPa	6.0	7.0
• Residual overpressure	kPa	70	55
Heat source (ΔT = 3 K)	m ³ /h	1.5	2.1
• ΔP Pressure drop evaporator (glycol)	kPa	4.0	4.0
• Residual overpressure	kPa	76	91
Nominal volume flow rate and pressure drop water/water			
Heating (ΔT = 5 K)	m ³ /h	1.6	2.3
• ΔP Pressure drop condenser	kPa	13	14
• Residual overpressure	kPa	49	33
Heat source (ΔT = 5 K) ⁴⁾	m ³ /h	1.3	1.9
• ΔP Pressure drop evaporator	kPa	4	4
• Residual overpressure	kPa	86	104
Operating limit values			
• Heating		see diagrams of areas of application	
• Hot water		see diagrams of areas of application	
• Operating pressure max. water side	bar	6	6
• Operating pressure max. brine side	bar	6	6
• Installation place operation ⁵⁾	°C (min./max.)	5/35	5/35
• Storage	°C (min./max.)	-15/46	-15/46
• Compressor, type		1 x spiral (scroll), hermetic	
• Refrigerant filling quantity (R134a)	kg	2.8	3.2
- Type of compressor oil: EMKARATE RL 32-3MAF			
• Condenser/evaporator		Plate heat exchanger	
• Material		Stainless steel V4A, AISI 316, 1.4401	
• Pipe connections at rear	G	1"	1"

Type		H (7)	H (10)
Electrical data ⁶⁾			
• Voltage	V	3~400	3~400
• Frequency	Hz	50	50
• Voltage range	V	380-420	380-420
• Max. compressor operating current	A	6.8	10.1
• Starting current with starting current limiter ⁷⁾	A	13.6	20.2
• Principal current (external protection) with brine systems	A	13	13
- Type		C,D,K	C,D,K
• Principal current (external protection) with ground water systems	A	13	13
- Type		C,D,K	C,D,K
• Control current (external protection)	A	13	13
- Type		B,C,D,K,Z	B,C,D,K,Z
Weight			
• Operating weight approx.	kg	160	170

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⁾ kW = standard values according to EN 14511; values for B0W35 with 25 % monopolypropylene

⁴⁾ ΔT in accordance with regional regulations. The temperature difference is adjustable from 3 to 6 kelvin.
The pump regulates the volumetric current to the set temperature difference.

⁵⁾ < 10 °C: Crankcase heater is necessary

⁶⁾ Values for electrical data apply for supply voltage of 3~400 V

⁷⁾ Effective value

Thermalia® comfort (8-17), comfort H (7,10)

Sound emission

The effective sound pressure level in the installation room depends on various factors such as room size, absorption capacity, reflection, free sound propagation, etc.

Therefore it is important that the installation room lies, if possible, outside the noise-sensitive range and is supplied with sound-absorbing doors.

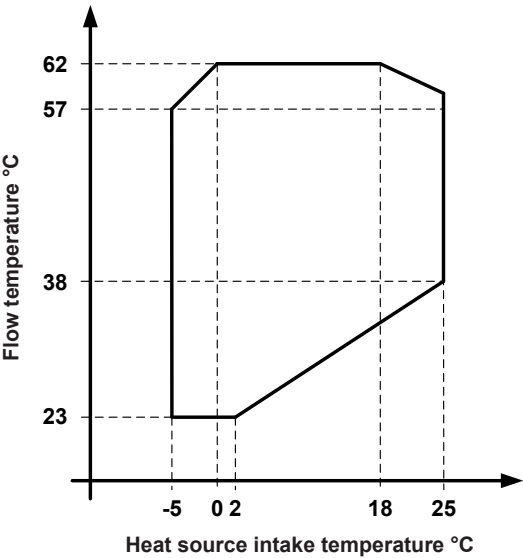
Ducts and pipes must be fixed to walls and ceiling in a way that no structure-borne sound is being transmitted to the system.

Thermalia® comfort (8-17)	(8)	(10)	(13)	(17)
Thermalia® comfort H (7,10)		(7)		(10)
Sound power level dB(A)	44	45	45	46

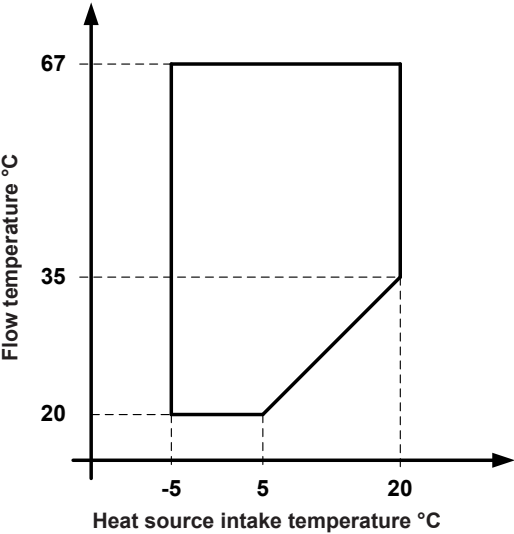
Diagrams of areas of application

Heating and hot water

Thermalia® comfort (8-17)



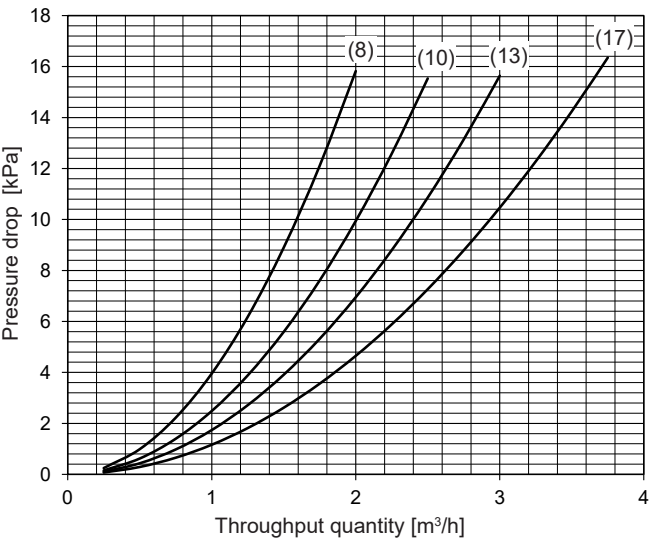
Thermalia® comfort H (7,10)



Thermalia® comfort (8-17)

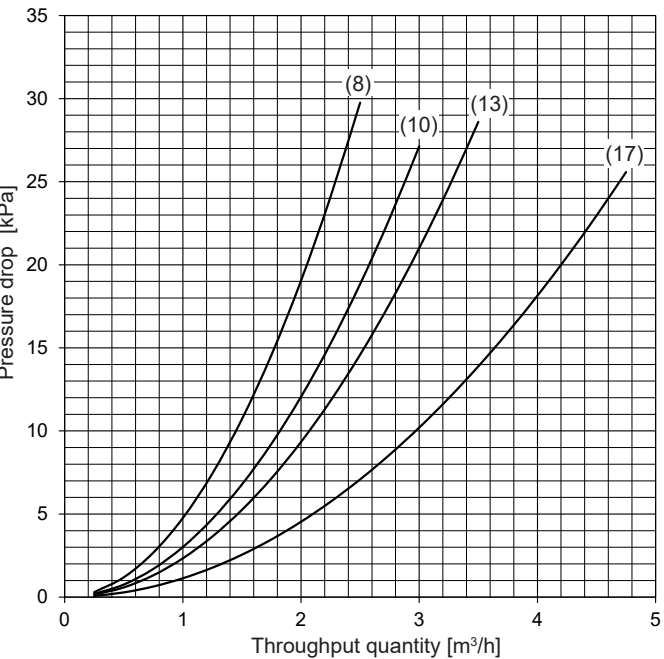
Heating

Pressure drop condenser with water



Heat source

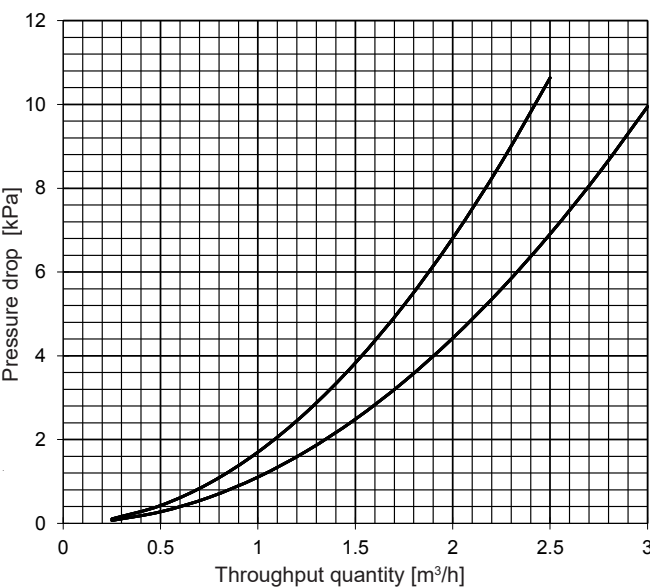
Pressure drop evaporator with ethylene glycol 25 % (Antifrogen N)



Thermalia® comfort H (7,10)

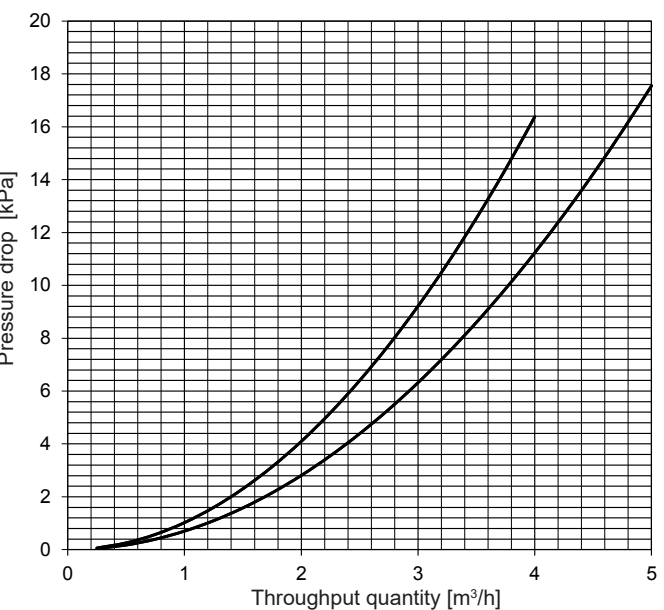
Heating

Pressure drop condenser with water



Heat source

Pressure drop evaporator with ethylene glycol 25 % (Antifrogen N)

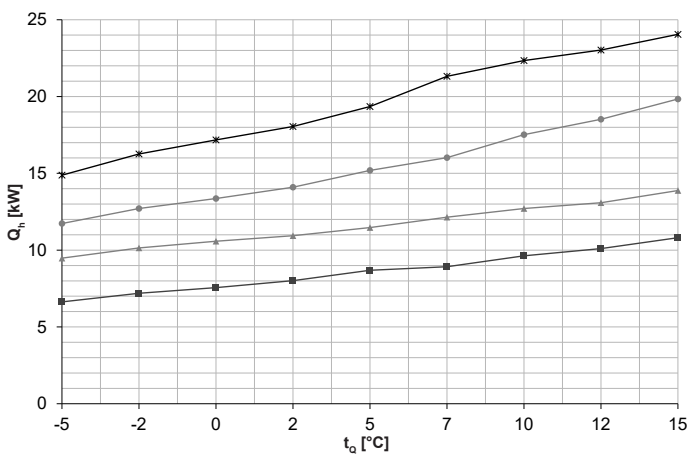


Performance data - heating

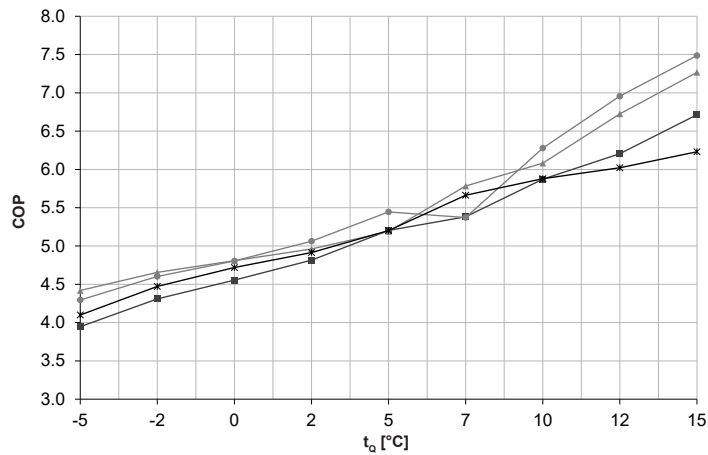
Maximum heat output

Thermalia® comfort (8-17)

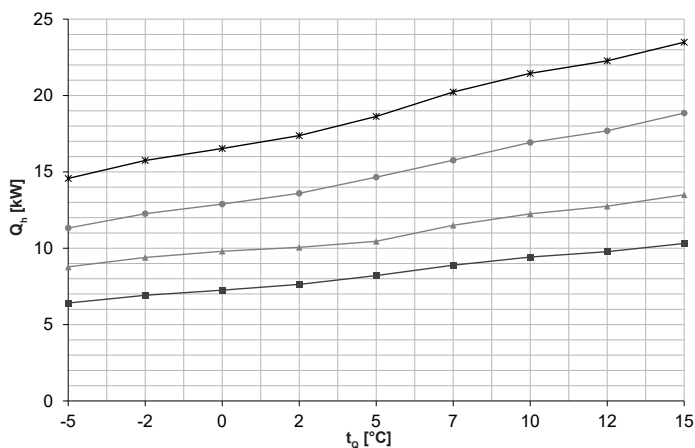
Heat output - t_{VL} 35 °C



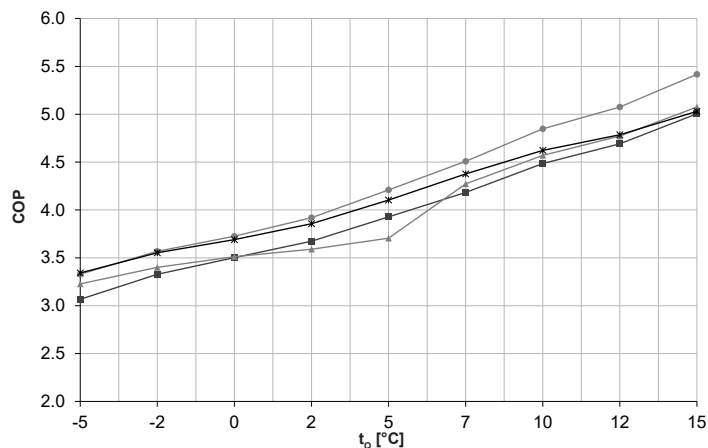
Coefficient of performance - t_{VL} 35 °C



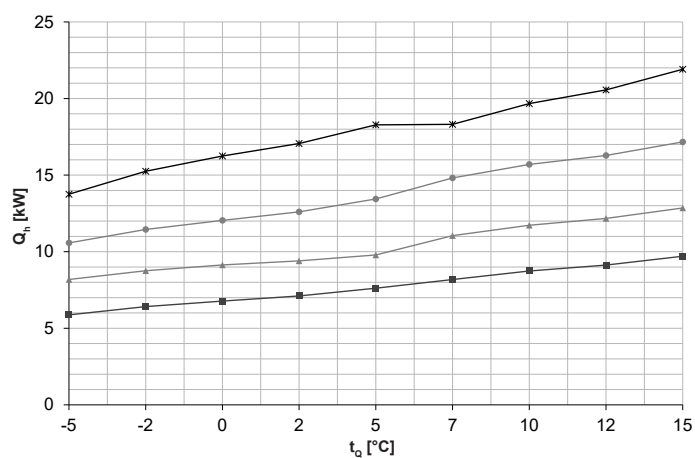
Heat output - t_{VL} 45 °C



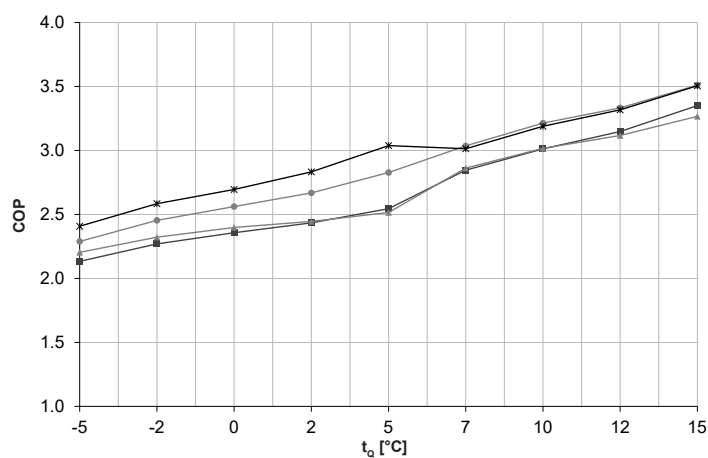
Coefficient of performance - t_{VL} 45 °C



Heat output - t_{VL} 62 °C



Coefficient of performance - t_{VL} 62 °C



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

t_o = source temperature (°C)

Q_h = heat output at full load (kW), measured in accordance with standard EN 14511

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

- Thermalia® comfort (8)
- ▲ Thermalia® comfort (10)
- Thermalia® comfort (13)
- ✕ Thermalia® comfort (17)

Performance data - heating

Thermalia® comfort (8-17)

Indications acc. to EN 14511

Type	t_{VL} °C	t_G °C	Q_h kW	(8) P kW	COP	Q_h kW	(10) P kW	COP	Q_h kW	(13) P kW	COP	Q_h kW	(17) P kW	COP
30	Brine	-5	6.7	1.5	4.3	9.7	2.0	5.0	11.9	2.5	4.7	15.0	3.4	4.4
		-2	7.3	1.5	4.8	10.4	2.0	5.2	12.9	2.5	5.1	16.4	3.4	4.9
		0	7.7	1.5	5.0	10.8	2.0	5.4	13.5	2.6	5.3	17.4	3.4	5.2
		2	8.1	1.5	5.3	11.2	2.0	5.6	14.3	2.6	5.6	18.3	3.4	5.4
		5	8.9	1.5	5.8	11.8	2.0	5.9	15.4	2.6	6.0	19.6	3.4	5.7
	Water	7	8.9	1.5	6.0	12.4	1.9	6.5	16.1	2.7	6.0	21.7	3.5	6.2
		10	9.7	1.5	6.5	12.9	1.9	6.8	17.7	2.6	6.9	22.6	3.5	6.4
		12	10.2	1.5	6.9	13.2	1.7	7.8	18.8	2.4	7.9	23.3	3.5	6.6
		15	11.0	1.5	7.5	14.0	1.7	8.4	20.2	2.4	8.5	24.2	3.6	6.8
35	Brine	-5	6.6	1.7	4.0	9.5	2.1	4.4	11.7	2.7	4.3	14.9	3.6	4.1
		-2	7.2	1.7	4.3	10.1	2.2	4.7	12.7	2.8	4.6	16.3	3.6	4.5
		0	7.6	1.7	4.6	10.6	2.2	4.8	13.4	2.8	4.8	17.2	3.6	4.7
		2	8.0	1.7	4.8	10.9	2.2	5.0	14.1	2.8	5.1	18.0	3.7	4.9
		5	8.7	1.7	5.2	11.5	2.2	5.2	15.2	2.8	5.4	19.4	3.7	5.2
	Water	7	8.9	1.7	5.4	12.1	2.1	5.8	16.0	3.0	5.4	21.3	3.8	5.7
		10	9.6	1.6	5.9	12.7	2.1	6.1	17.5	2.8	6.3	22.3	3.8	5.9
		12	10.1	1.6	6.2	13.1	1.9	6.7	18.5	2.7	7.0	23.0	3.8	6.0
		15	10.8	1.6	6.7	13.9	1.9	7.3	19.8	2.7	7.5	24.1	3.9	6.2
40	Brine	-5	6.5	1.9	3.5	9.1	2.4	3.8	11.5	3.1	3.8	14.7	4.0	3.7
		-2	7.1	1.9	3.8	9.8	2.5	4.0	12.5	3.1	4.0	16.0	4.0	4.0
		0	7.4	1.9	4.0	10.2	2.5	4.1	13.1	3.1	4.2	16.9	4.1	4.2
		2	7.8	1.9	4.2	10.5	2.5	4.2	13.8	3.1	4.4	17.7	4.1	4.3
		5	8.5	1.9	4.5	11.0	2.5	4.4	14.9	3.1	4.8	19.0	4.1	4.6
	Water	7	8.9	1.9	4.7	11.8	2.4	4.9	15.9	3.2	4.9	20.8	4.2	5.0
		10	9.5	1.9	5.1	12.5	2.4	5.2	17.2	3.1	5.5	21.9	4.2	5.2
		12	9.9	1.9	5.4	12.9	2.3	5.6	18.1	3.1	5.9	22.6	4.2	5.3
		15	10.6	1.8	5.8	13.7	2.3	6.0	19.3	3.1	6.3	23.8	4.3	5.6
45	Brine	-5	6.4	2.1	3.1	8.8	2.7	3.2	11.3	3.4	3.3	14.6	4.4	3.3
		-2	6.9	2.1	3.3	9.4	2.8	3.4	12.3	3.4	3.6	15.7	4.4	3.6
		0	7.3	2.1	3.5	9.8	2.8	3.5	12.9	3.5	3.7	16.5	4.5	3.7
		2	7.6	2.1	3.7	10.1	2.8	3.6	13.6	3.5	3.9	17.4	4.5	3.9
		5	8.2	2.1	3.9	10.5	2.8	3.7	14.7	3.5	4.2	18.6	4.5	4.1
	Water	7	8.9	2.1	4.2	11.5	2.7	4.3	15.8	3.5	4.5	20.2	4.6	4.4
		10	9.4	2.1	4.5	12.3	2.7	4.6	16.9	3.5	4.9	21.5	4.6	4.6
		12	9.8	2.1	4.7	12.8	2.7	4.8	17.7	3.5	5.1	22.3	4.7	4.8
		15	10.3	2.1	5.0	13.5	2.7	5.1	18.9	3.5	5.4	23.5	4.7	5.0
50	Brine	-5	6.2	2.3	2.7	8.6	3.0	2.9	11.1	3.8	3.0	14.3	4.8	3.0
		-2	6.7	2.3	2.9	9.2	3.1	3.0	12.0	3.8	3.2	15.6	4.9	3.2
		0	7.1	2.3	3.1	9.6	3.1	3.1	12.6	3.8	3.3	16.4	5.0	3.3
		2	7.4	2.3	3.2	9.9	3.1	3.2	13.3	3.8	3.5	17.3	5.0	3.5
		5	8.0	2.3	3.4	10.3	3.1	3.3	14.3	3.9	3.7	18.6	5.0	3.7
	Water	7	8.6	2.4	3.6	11.4	3.0	3.7	15.5	3.9	4.0	19.6	5.1	3.8
		10	9.2	2.4	3.9	12.1	3.0	4.0	16.6	3.9	4.3	20.9	5.1	4.1
		12	9.5	2.4	4.1	12.6	3.0	4.2	17.3	3.9	4.4	21.7	5.2	4.2
		15	10.1	2.3	4.3	13.3	3.0	4.4	18.4	3.9	4.7	23.0	5.2	4.4
55	Brine	-5	5.9	2.5	2.4	8.4	3.3	2.6	10.9	4.1	2.6	14.0	5.3	2.7
		-2	6.5	2.5	2.6	9.0	3.4	2.7	11.8	4.2	2.8	15.4	5.4	2.9
		0	6.9	2.5	2.7	9.4	3.4	2.8	12.4	4.2	3.0	16.3	5.4	3.0
		2	7.2	2.6	2.8	9.7	3.4	2.8	13.0	4.2	3.1	17.2	5.5	3.2
		5	7.8	2.6	3.0	10.1	3.5	2.9	13.9	4.2	3.3	18.5	5.5	3.4
	Water	7	8.4	2.6	3.2	11.2	3.4	3.3	15.2	4.3	3.5	19.0	5.6	3.4
		10	8.9	2.6	3.4	11.9	3.4	3.5	16.2	4.3	3.8	20.3	5.7	3.6
		12	9.3	2.6	3.5	12.4	3.4	3.7	16.9	4.3	3.9	21.1	5.7	3.7
		15	9.9	2.6	3.8	13.1	3.4	3.9	17.9	4.3	4.1	22.4	5.7	3.9
62	Brine	-5	5.9	2.8	2.1	8.2	3.7	2.2	10.6	4.6	2.3	13.8	5.7	2.4
		-2	6.4	2.8	2.3	8.8	3.8	2.3	11.5	4.7	2.5	15.3	5.9	2.6
		0	6.8	2.9	2.4	9.1	3.8	2.4	12.0	4.7	2.6	16.3	6.0	2.7
		2	7.1	2.9	2.4	9.4	3.8	2.5	12.6	4.7	2.7	17.1	6.0	2.8
		5	7.6	3.0	2.5	9.8	3.9	2.5	13.4	4.8	2.8	18.3	6.0	3.0
	Water	7	8.2	2.9	2.9	11.0	3.9	2.9	14.8	4.9	3.0	18.3	6.1	3.0
		10	8.7	2.9	3.0	11.7	3.9	3.0	15.7	4.9	3.2	19.7	6.2	3.2
		12	9.1	2.9	3.2	12.2	3.9	3.1	16.3	4.9	3.3	20.6	6.2	3.3
		15	9.7	2.9	3.4	12.9	3.9	3.3	17.2	4.9	3.5	21.9	6.2	3.5

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

 t_G = source temperature (°C)

 Q_h = heat output at full load (kW), measured in accordance with standard EN 14511

P = power consumption of the overall unit (kW)

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

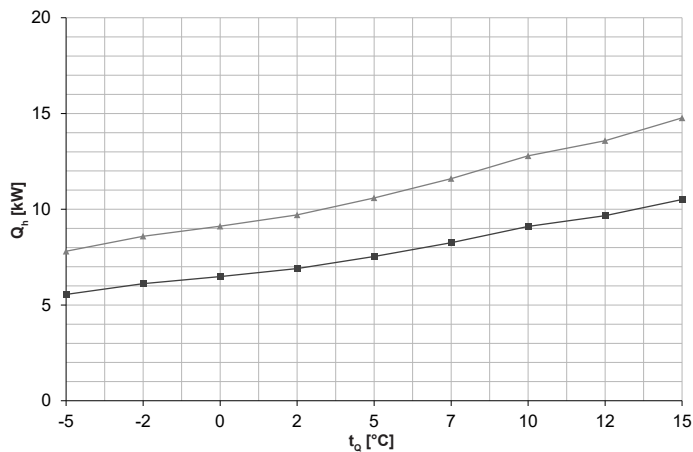
Observe daily power interruptions!
see "Engineering heat pumps general"

Performance data - heating

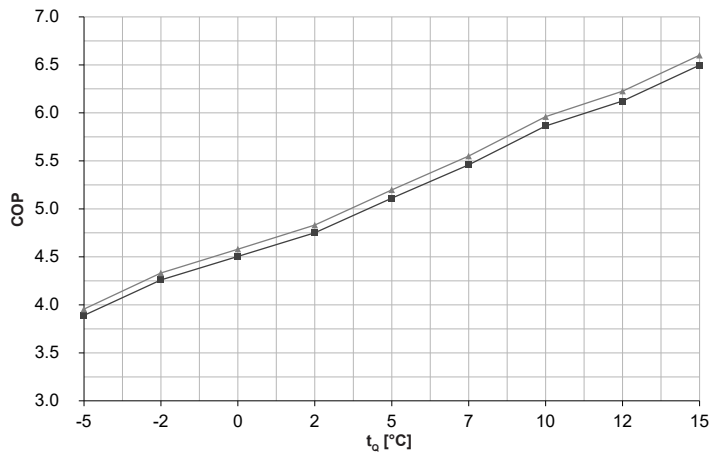
Maximum heat output

Thermalia® comfort H (7,10)

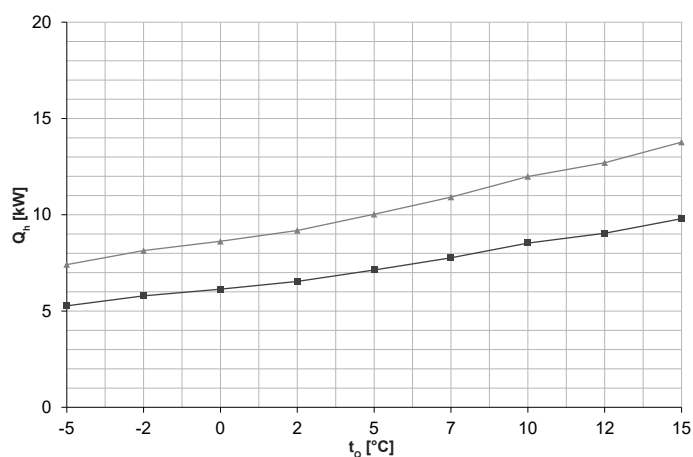
Heat output - t_{VL} 35 °C



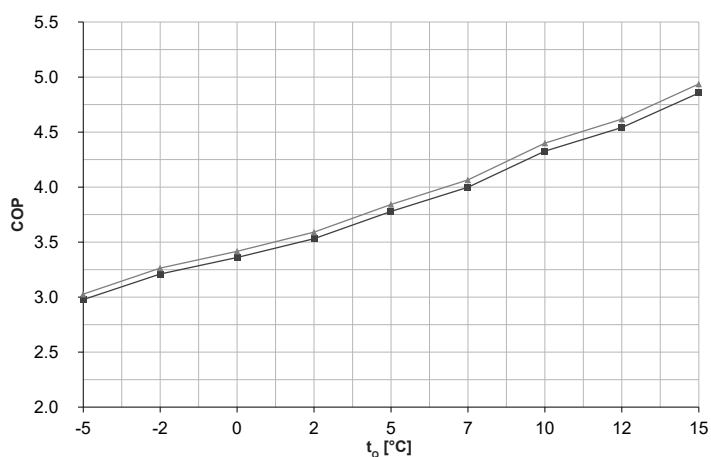
Coefficient of performance - t_{VL} 35 °C



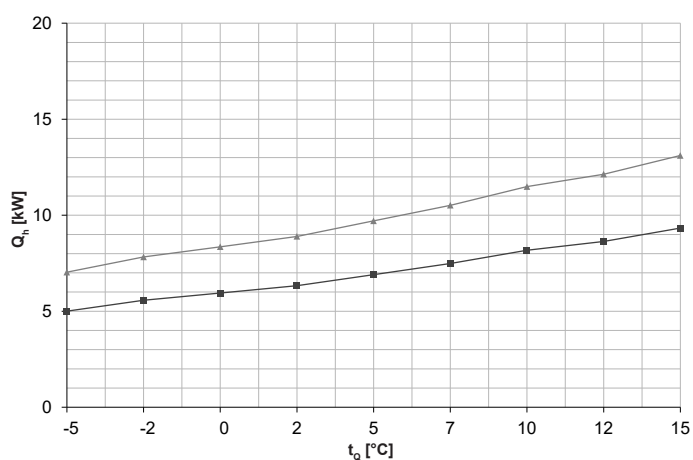
Heat output - t_{VL} 50 °C



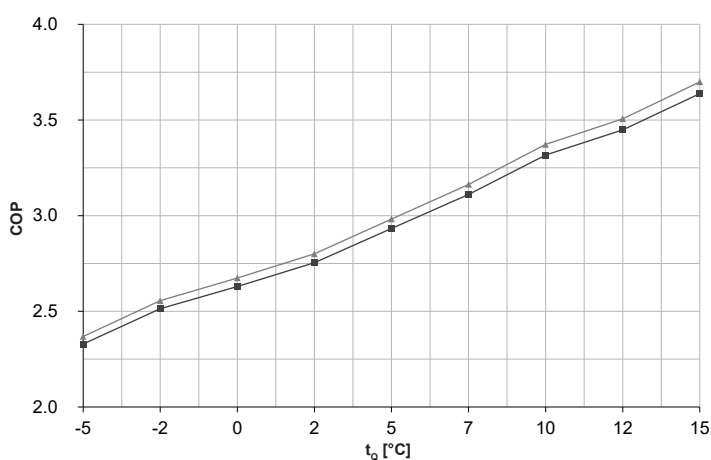
Coefficient of performance - t_{VL} 50 °C



Heat output - t_{VL} 65 °C



Coefficient of performance - t_{VL} 65 °C



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

t_q = source temperature (°C)

Q_h = heat output at full load (kW), measured in accordance with standard EN 14511

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

■ Thermalia® comfort H (7)
▲ Thermalia® comfort H (10)

Performance data - heating

Thermalia® comfort H (7,10)

Indications acc. to EN 14511

Type		t_{VL} °C	t_Q °C	Q_h kW	H (7) P kW	COP	Q_h kW	H (10) P kW	COP
30	Brine	-5	-5	5.6	1.4	4.2	7.9	1.9	4.2
		-2	-2	6.2	1.4	4.6	8.7	1.9	4.7
		0	0	6.6	1.4	4.9	9.2	1.9	4.9
		2	2	7.0	1.4	5.1	9.8	1.9	5.2
		5	5	7.6	1.4	5.5	10.7	1.9	5.6
	Water	7	7	8.4	1.4	5.9	11.8	2.0	6.0
		10	10	9.3	1.5	6.3	13.0	2.0	6.4
		12	12	9.8	1.5	6.6	13.8	2.1	6.7
		15	15	-	-	-	-	-	-
		25	25	-	-	-	-	-	-
35	Brine	-5	-5	5.6	1.4	3.9	7.8	2.0	4.0
		-2	-2	6.1	1.4	4.3	8.6	2.0	4.3
		0	0	6.5	1.4	4.5	9.1	2.0	4.6
		2	2	6.9	1.5	4.8	9.7	2.0	4.8
		5	5	7.5	1.5	5.1	10.6	2.0	5.2
	Water	7	7	8.3	1.5	5.5	11.6	2.1	5.6
		10	10	9.1	1.6	5.9	12.8	2.1	6.0
		12	12	9.7	1.6	6.1	13.6	2.2	6.2
		15	15	10.5	1.6	6.5	14.8	2.2	6.6
		25	25	-	-	-	-	-	-
40	Brine	-5	-5	5.5	1.5	3.5	7.7	2.1	3.6
		-2	-2	6.0	1.6	3.9	8.4	2.2	3.9
		0	0	6.3	1.6	4.1	8.9	2.2	4.1
		2	2	6.8	1.6	4.3	9.5	2.2	4.3
		5	5	7.4	1.6	4.6	10.4	2.2	4.7
	Water	7	7	8.1	1.7	4.9	11.3	2.3	4.9
		10	10	8.9	1.7	5.3	12.5	2.3	5.4
		12	12	9.4	1.7	5.5	13.2	2.4	5.6
		15	15	10.2	1.7	5.9	14.4	2.4	6.0
		25	25	-	-	-	-	-	-
45	Brine	-5	-5	5.4	1.7	3.2	7.5	2.3	3.4
		-2	-2	5.9	1.7	3.5	8.2	2.3	3.6
		0	0	6.2	1.7	3.7	8.7	2.3	3.7
		2	2	6.6	1.7	3.9	9.3	2.4	3.9
		5	5	7.2	1.7	4.1	10.1	2.4	4.2
	Water	7	7	7.9	1.8	4.4	11.1	2.5	4.4
		10	10	8.7	1.8	4.8	12.2	2.5	4.8
		12	12	9.2	1.8	5.0	12.9	2.5	5.1
		15	15	10.0	1.9	5.4	14.0	2.6	5.5
		25	25	-	-	-	-	-	-
50	Brine	-5	-5	5.3	1.8	3.0	7.4	2.4	3.0
		-2	-2	5.8	1.8	3.2	8.1	2.5	3.3
		0	0	6.1	1.8	3.4	8.6	2.5	3.4
		2	2	6.5	1.9	3.5	9.2	2.6	3.6
		5	5	7.1	1.9	3.8	10.0	2.6	3.8
	Water	7	7	7.8	1.9	4.0	10.9	2.7	4.1
		10	10	8.5	2.0	4.3	12.0	2.7	4.4
		12	12	9.0	2.0	4.5	12.7	2.8	4.6
		15	15	9.8	2.0	4.9	13.8	2.8	4.9
		25	25	-	-	-	-	-	-
55	Brine	-5	-5	5.2	1.9	2.8	7.3	2.6	2.8
		-2	-2	5.7	1.9	3.0	8.0	2.7	3.0
		0	0	6.1	2.0	3.1	8.5	2.7	3.2
		2	2	6.5	2.0	3.3	9.1	2.7	3.3
		5	5	7.1	2.0	3.5	9.9	2.8	3.5
	Water	7	7	7.7	2.1	3.7	10.8	2.9	3.8
		10	10	8.4	2.1	4.0	11.8	2.9	4.0
		12	12	8.9	2.1	4.2	12.5	3.0	4.2
		15	15	9.6	2.2	4.4	13.5	3.0	4.5
		25	25	-	-	-	-	-	-
62	Brine	-5	-5	5.1	2.1	2.4	7.1	2.9	2.5
		-2	-2	5.6	2.1	2.6	7.9	2.9	2.7
		0	0	6.0	2.2	2.8	8.4	3.0	2.8
		2	2	6.4	2.2	2.9	9.0	3.0	2.9
		5	5	7.0	2.3	3.1	9.8	3.1	3.1
	Water	7	7	7.5	2.3	3.3	10.6	3.2	3.3
		10	10	8.2	2.4	3.5	11.6	3.3	3.6
		12	12	8.7	2.4	3.6	12.2	3.3	3.7
		15	15	9.4	2.4	3.9	13.2	3.4	3.9
		25	25	-	-	-	-	-	-
65	Brine	-5	-5	5.0	2.1	2.3	7.0	3.0	2.4
		-2	-2	5.6	2.2	2.5	7.8	3.1	2.6
		0	0	5.9	2.3	2.6	8.4	3.1	2.7
		2	2	6.3	2.3	2.8	8.9	3.2	2.8
		5	5	6.9	2.4	2.9	9.7	3.3	3.0
	Water	7	7	7.5	2.4	3.1	10.5	3.3	3.2
		10	10	8.2	2.5	3.3	11.5	3.4	3.4
		12	12	8.6	2.5	3.5	12.1	3.5	3.5
		15	15	9.3	2.6	3.6	13.1	3.5	3.7
		25	25	-	-	-	-	-	-

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

 t_Q = source temperature (°C)

 Q_h = heat output at full load (kW), measured in accordance with standard EN 14511

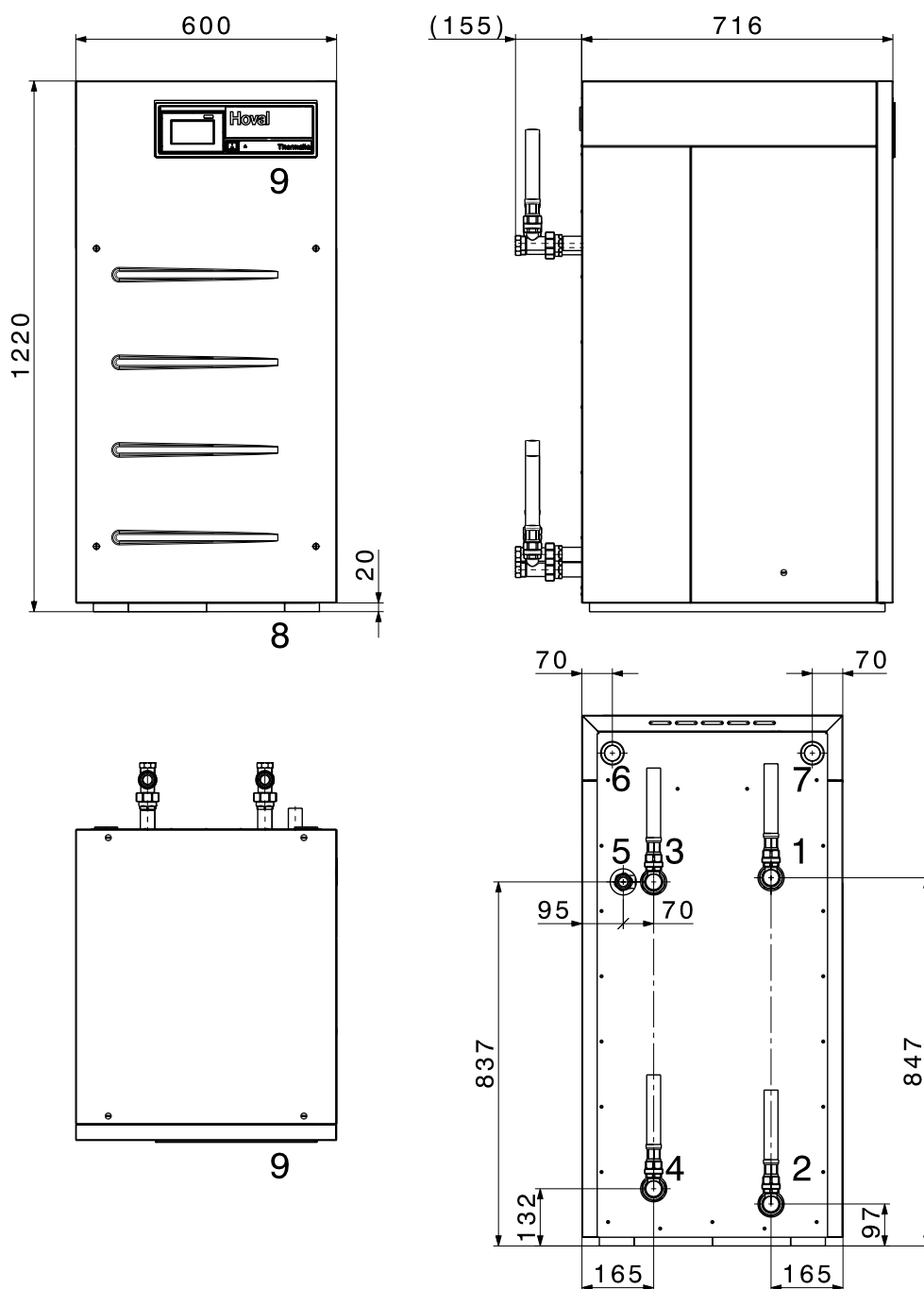
P = power consumption of the overall unit (kW)

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

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

Thermalia® comfort (8-17) and comfort H (7,10)

(Dimensions in mm)



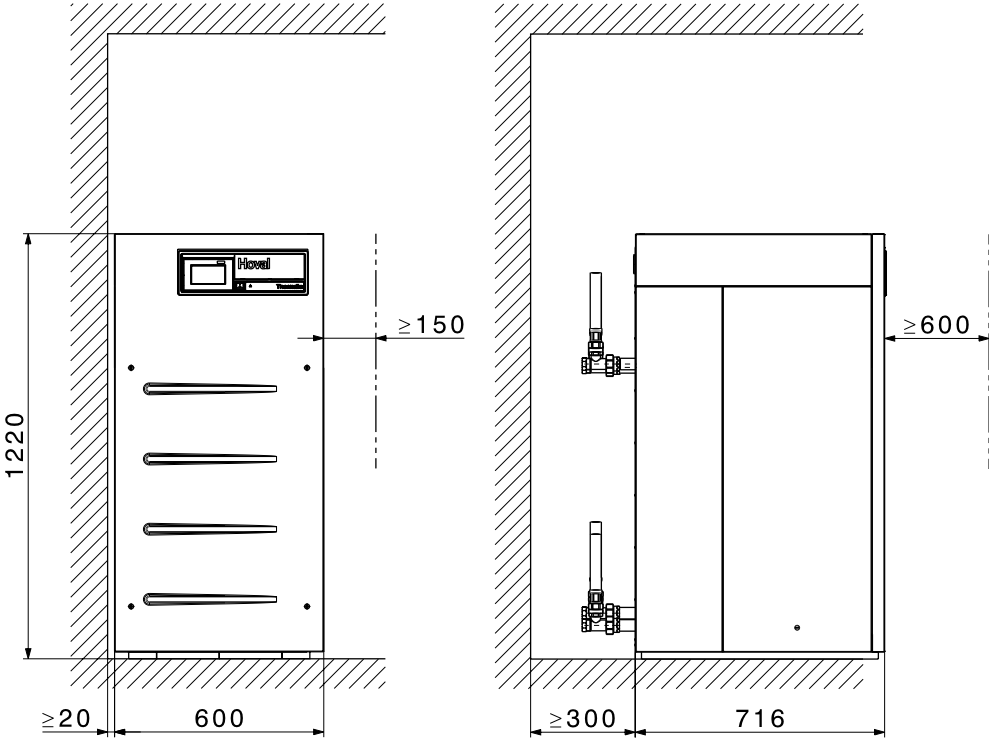
- 1 Heat source - inlet R 1"
- 2 Heat source - outlet R 1"
- 3 Heating flow R 1"
- 4 Heating return R 1"
- 5 Hot water R 1"
- 6 Cable feedthrough for main current
- 7 Cable feedthrough for sensors
- 8 Vibration damping
- 9 Control panel

The 4 flexible hoses 1" can be extracted from the heat pump by at least 300 mm.

Required space

Required wall distance in mm for operation and maintenance
(Dimensions in mm)

front	rear	right or left side
min. 600	min. 300	min. 150



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