

Hoval Thermalia® dual

Brine/water-water/water heat pump

- Compact unit with high energy efficiency
- Extremely quiet running thanks to 3-bearing construction
- Stable steel frame structure, a ground plate including vibration-free machine adjustable feet
- Removable, powder-coated sheet steel side panels and front doors with quick-release fasteners
- All casing parts are sound-insulated and thermally insulated
- Colour of side panels, ceiling and rear side: brown red (RAL 3011)
- Colour of doors: flame red (RAL 3000)
- 2 spiral (scroll) compressors
- With plate heat exchanger (condenser and evaporator) made of stainless steel (1.4401), soldered
- Two separate refrigeration circuits with electronic expansion valves, filter dryer with sight glass, liquid receivers and high-pressure and low-pressure sensors
- Electronic initial current limiter with rotating field and phase monitoring
- Integrated brine pressure monitoring
- Two output levels
- Refrigerants
Thermalia® dual, dual R (55-140) with 410A
Thermalia® dual H (35-90) with R134a
- Heat pump wired and ready to connect
- Operating side on front with integrated TopTronic® E controller

Electrical connections

- Connection at rear

Delivery

- Heat pump pre-assembled and packed

TopTronic® E controller

Control panel

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

TopTronic® E control module

- Simple, intuitive operating concept
- Display of the most important operating statuses
- 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)



Model range

Thermalia® dual type	Water/water		Brine/water		Refrigerant	Flow		Heat output		Cooling capacity	
	35 °C	55 °C	35 °C	55 °C		min. °C	max. °C	B0W35 kW	W10W35 kW	B17W9 kW	B25W18 kW
(55)	A+++	A+++	A+++	A++	2 x R410A	-	62	57.9	76.9	-	-
(70)			A+++	A++	2 x R410A	-	62	73.2	97.2	-	-
(85)					2 x R410A	-	62	84.8	112.8	-	-
(110)					2 x R410A	-	62	113.4	149.1	-	-
(140)					2 x R410A	-	62	137.8	181.1	-	-
H (35)	A+++	A+++	A+++	A++	2 x R134a	-	70	34.9	49.3	-	-
H (50)	A+++	A+++	A+++	A++	2 x R134a	-	70	52.5	71.8	-	-
H (70)			A+++	A++	2 x R134a	-	70	70.9	97.1	-	-
H (90)					2 x R134a	-	70	87.3	119.5	-	-
R (55)	A+++	A+++	A+++	A++	2 x R410A	7	62	57.9	76.7	64.7	81.1
R (70)			A+++	A++	2 x R410A	7	62	73.2	97.2	86.2	108.3
R (85)					2 x R410A	7	62	84.8	112.8	107.0	127.7
R (110)					2 x R410A	7	62	113.4	149.1	138.1	165.0
R (140)					2 x R410A	7	62	137.8	181.1	156.9	183.9

Energy efficiency class of the compound system with control

TopTronic® E basic module

heat generator TTE-WEZ

- Control functions integrated 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
 - module expansion Universal
 - module expansion heat balancing
- Can be networked with a total of up to 16 controller modules:
 - heating circuit/hot water module
 - solar module
 - buffer module
 - measuring module

Number of modules that can be additionally 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.

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

Brine/water or water/water heat pump



Hoval Thermalia® dual
Refrigerant R410A, 2 circuits.
Max. flow temperature 62 °C

Thermalia® dual type	Heat output	
	for B0W35 kW	for W10W35 kW
(55)	57.9	76.9
(70)	73.2	97.2
(85)	84.8	112.8
(110)	113.4	149.1
(140)	137.8	181.1

7018 997
7018 998
7018 999
7014 294
7014 295



Hoval Thermalia® dual H
Refrigerant R134a, 2 circuits.
Max. flow temperature 70 °C

Thermalia® dual H type	Heat output	
	for B0W35 kW	for W10W35 kW
H (35)	34.9	49.3
H (50)	52.5	71.8
H (70)	70.9	97.1
H (90)	87.3	119.5

7019 003
7019 004
7019 005
7014 299



Hoval Thermalia® dual R
Refrigerant R410A, 2 circuits.
Max. flow temperature 62 °C

Thermalia® dual R type	Cooling capacity ¹⁾	
	for B17W9 kW	for B25W18 kW
R (55)	64.7	81.1
R (70)	86.2	108.3
R (85)	107.0	127.7
R (110)	138.1	165.0
R (140)	156.9	183.9

7019 000
7019 001
7019 002
7016 553
7016 554

¹⁾ Heat output: see Hoval Thermalia® dual

Notice
Suitable heat source and charging pumps:

Hoval system pump set SPS-I
with interface for pump control
Type 0-10 V or PWM1

Premium pump Stratos
with IF module Stratos Ext. Off (0-10 V)

See "Circulating pumps"

Energy efficiency class
see Description

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

Further information
see "Description"

Seal of approval FWS
**The Thermalia® dual R series does NOT
have an ehpa certificate.**

Accessories



Hose set SPCH50-50-10-4
for Thermalia® dual (55-85),
dual H (35-70), dual R (55-85)
Consisting of:
- 4 reinforced hoses PN 10 DN 50 2" IT
insulated for brine and heating side
flat-sealing with union nut
- Length: 1.0 m
- Seals

Part No.

6058 825



Set of sound attenuation feet 65/75
for Thermalia® dual (55,70),
dual H (35,50), dual R (55,70)
for reducing the transmission of
solid-borne noise
Set consisting of 4 vibration-damping
adjustable feet, threaded rod
and locknut
Elastomer part material: NR, black
Housing material: galvanised steel,
chromated

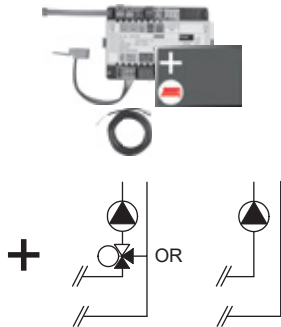
6045 228



Set of sound attenuation feet 45/55
for Thermalia® dual (85-140),
dual H (70,90), dual R (85-140)
for reducing the transmission of
solid-borne noise
Set consisting of 4 vibration-damping
adjustable feet, threaded rod and locknut
Elastomer part material: NR, black
Housing material: galvanised steel,
chromated

6045 229

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:

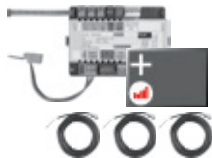
- 1 heating/cooling circuit w/o mixer or
- 1 heating/cooling circuit with mixer

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

Further information

see "Controls" - "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



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



Flange compensator set DN 80 PN 6
for Thermalia® dual (110-140),
dual H (90), dual R (110-140)
for reducing the transmission of
solid-borne and fluid-borne noise
Set consisting of 4 flange compensators
DN 80 PN 6 without fittings
Structural length: 130 mm



System water protection filter FF050-200
Cast-iron casing with opposite
connection flanges at same height
for filtration of heating
and cooling water, with high
filtration capacity for
corrosion particles and
dirt without significant
pressure loss.
Consisting of:
Casing and cover made of
cast iron GGG-50
Cover with clip lock
- Filter strainer insert
made of stainless steel
- Cover seal made of NBR
- 2 magnetic inserts (nickel-neodymium)
- 2 pressure gauges
- Very large Filter surface
made of stainless steel
- Filter fineness 200 µm
- With filling and drain valve
- Connections flange DN 50
- Nominal pressure: 10 bar
Max. flow rate: ($\Delta p < 0.1$ bar): 18 m³/h
Weight: 15 kg
Water temperature max. 80 °C

Strainers
see "Various system components"

Part No.

6040 025

2076 376

Part No.

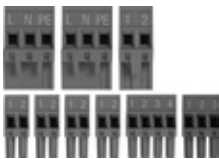


Float body flow meter
Bistable Reed contact as NC contact
Nominal pressure: 10 bar
Installation length: 335 mm

Area of application l/h	°C	Connection
1500-15000	0-80	Rp 2"
3000-30000	0-80	DN 65
8000-60000	0-80	DN 65

2040 709
2064 164
2064 165

For active cooling, the installation of a flow controller is mandatory!



Expansion connector set
for the automatic heat pump device ECR461
Use for additional function:
- Flow monitor
- Crankcase bottom heating
(included in the scope of delivery
for Belaria® twin A, twin AR, dual AR)
- Condensation drain heating
- Heat quantity metering
Plugs:
- 1 230 V digital input
- 2 230 V outputs
- 4 low-voltage inputs
- 1 ratio. Input
- 1 4-pin low-voltage input

6032 509



Frost protection temperature switch
270XT-95068
to heat source ground water
Type of protection: IP 40
Area of application: -24/18 °C

2007 313

Service



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® dual (55-140) with R410A

Type		(55)	(70)	(85)	(110)	(140)
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 η _S ^{1), 2)}	%	195	193	194	194	193
• Room heating energy efficiency "moderate climate" 55 °C η _S ^{1), 2)}	%	138	140	142	141	141
Water/water application W10W35						
• Energy efficiency class of the compound system with control	35 °C/55 °C	A+++/A+++	-	-	-	-
• Room heating energy efficiency "moderate climate" 35 °C η _S ^{1), 2)}	%	257	249	250	242	245
• Room heating energy efficiency "moderate climate" 55 °C η _S ^{1), 2)}	%	185	180	181	177	178
• Seasonal coefficient of performance moderate climate (brine) 35 °C/55 °C	SCOP	5.1/3.7	5.0/3.7	5.1/3.7	5.1/3.7	5.0/3.7
Max. performance data heating in acc. with EN 14511						
• Heat output B0W35	kW ³⁾	57.9	73.2	84.8	113.4	137.8
• Coefficient of performance B0W35	COP	4.6	4.6	4.6	4.6	4.6
• Heat output W10W35	kW	76.9	97.2	112.8	149.1	181.1
• Coefficient of performance W10W35	COP	6.1	5.9	5.9	5.7	5.8
Sound data according to EN 12102						
• Sound power level	dB(A)	57.2	55.7	57.2	64.2	64.2
Hydraulic data brine/water B0W35						
• Maximum flow temperature	°C	62	62	62	62	62
• Maximum operating pressure	bar	16	16	16	6	6
• Heating water spread	K	5	5	5	5	5
• Required volume flow	m ³ /h	9.9	12.6	14.6	19.5	23.7
• Pressure drop, condenser	kPa	5.7	6.2	5.4	7.6	8.1
• Condenser connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6	DN 80/PN 6
• Brine spread	K	3	3	3	3	3
• Required volume flow	m ³ /h	13.7	17.3	20.1	26.7	32.6
• Pressure drop, evaporator	kPa	15.8	10.0	11.2	12.8	11.3
• Evaporator connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6	DN 80/PN 6
Hydraulic data water/water W10/W35 (intermediate circuit)						
• Maximum flow temperature	°C	62	62	62	62	62
• Maximum operating pressure	bar	16	16	16	6	6
• Heating water spread	K	5	5	5	5	5
• Required volume flow	m ³ /h	13.2	16.7	19.4	25.6	31.1
• Pressure drop, condenser	kPa	9.8	10.6	9.3	12.6	13.4
• Condenser connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6	DN 80/PN 6
• Brine spread in intermediate circuit ⁴⁾	K	3	4	4	4	5
• Required volume flow GW	m ³ /h	20.9	19.7	22.9	30.1	29.3
• Pressure drop, evaporator	kPa	28.3	17.2	19.8	22.8	18.6
• Evaporator connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6	DN 80/PN 6
Refrigerating data						
• Refrigerant		R410A	R410A	R410A	R410A	R410A
• Refrigerant filling quantity	kg	2 x 6.0	2 x 7.4	2 x 8.2	2 x 10.0	2 x 10.7
• Compressor oil filling quantity	l	2 x 2.46	2 x 3.30	2 x 3.60	2 x 6.70	2 x 6.70
- Type of compressor oil: DAPHNE HERMETIC OIL FVC32D for dual (55), EMKARATE® RL 32HB - 160SZ - 160Z for dual (70-140)						
Electrical data						
• Power supply	V	3+N~400 V/50 Hz				
• Max. power consumption (without pumps)	kW	24.8	30.4	34.6	46.6	56.6
• Max. operating current (without pumps)	A	45.6	51.0	58.2	75.6	93.2
• Max. starting current	A	85.3	100.5	114.1	160.3	186.6
• Main current fuse (on site)	A	C63	C63	C80	C100	C125
• Control current fuse (on site)	A	16	16	16	16	16
Dimensions/weight						
• Dimensions (H x W x D)	mm	1907 x 1066 x 774			1907 x 1316 x 774	
• Minimum size of the installation room (without ventilation)	m ³	16	17	19	26	31
• Weight	kg	560	620	700	770	820

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.

Thermalia® dual H (35-90) with R134a

Type		H (35)	H (50)	H (70)	H (90)
Brine/water application B0W35					
• Energy efficiency class of the compound system with control	35 °C/55 °C	A+++/A++	A+++/A++	A+++/A++	-
• Room heating energy efficiency "moderate climate" 35 °C ηS ^{1), 2)}	%	177	182	182	178
• Room heating energy efficiency "moderate climate" 55 °C ηS ^{1), 2)}	%	130	135	132	131
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)}	%	254	246	245	240
• Room heating energy efficiency "moderate climate" 55 °C ηS ^{1), 2)}	%	179	179	177	174
• Seasonal coefficient of performance moderate climate (brine) 35 °C/55 °C	SCOP	4.6/3.5	4.8/3.6	4.8/3.5	4.7/3.5
Max. performance data heating in acc. with EN 14511					
• Heat output B0W35	kW ³⁾	34.9	52.5	70.9	87.3
• Coefficient of performance B0W35	COP	4.3	4.4	4.4	4.3
• Heat output W10W35	kW	49.3	71.8	97.1	119.5
• Coefficient of performance W10W35	COP	6.0	5.8	5.8	5.7
Sound data according to EN 12102					
• Sound power level	dB(A)	55.2	60.2	63.2	63.2
Hydraulic data brine/water B0W35					
• Maximum flow temperature	°C	70	70	70	70
• Maximum operating pressure	bar	16	16	16	6
• Heating water spread	K	5	5	5	5
• Required volume flow	m ³ /h	6.0	9.0	12.2	15.0
• Pressure drop, condenser	kPa	4.2	3.3	3.9	4.7
• Condenser connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6
• Brine spread	K	3	3	3	3
• Required volume flow	m ³ /h	8.1	12.2	16.5	20.2
• Pressure drop, evaporator	kPa	8.9	9.1	8.3	8.8
• Evaporator connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6
Hydraulic data water/water W10/W35 (intermediate circuit)					
• Maximum flow temperature	°C	70	70	70	70
• Maximum operating pressure	bar	16	16	16	6
• Heating water spread	K	5	5	5	5
• Required volume flow	m ³ /h	8.5	12.3	16.7	20.5
• Pressure drop, condenser	kPa	7.8	6.0	7.0	8.4
• Condenser connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6
• Brine spread in intermediate circuit ⁴⁾	K	3	3	4	4
• Required volume flow GW	m ³ /h	13.4	19.4	19.6	24.1
• Pressure drop, evaporator	kPa	18.2	16.8	15.2	15.9
• Evaporator connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6
Refrigerating data					
• Refrigerant		R134a	R134a	R134a	R134a
• Refrigerant filling quantity	kg	2 x 5.4	2 x 8.0	2 x 8.2	2 x 9.0
• Compressor oil filling quantity	l	2 x 3.3	2 x 6.2	2 x 8.0	2 x 8.0
- Type of compressor oil: DAPHNE HERMETIC OIL FVC32D for dual H (35), EMKARATE(TM) RL 32HB - 160SZ - 160Z for dual H (50-90)					
Electrical data					
• Power supply	V		3+N~400 V/50 Hz		
• Max. power consumption (without pumps)	kW	17.4	25.6	34.8	44.2
• Max. operating current (without pumps)	A	32.0	45.6	58.6	75.8
• Max. starting current	A	76.0	107.8	151.8	182.9
• Main current fuse (on site)	A	C50	C63	C80	C100
• Control current fuse (on site)	A	16	16	16	16
Dimensions/weight					
• Dimensions (H x W x D)	mm	1907 x 1066 x 774		1907 x 1316 x 774	
• Minimum size of the installation room (without ventilation)	m ³	22	24	27	36
• Weight	kg	670	700	770	800

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.

Thermalia® dual R (55-140) with R410A

Type		R (55)	R (70)	R (85)	R (110)	R (140)
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 η _S ^{1), 2)}	%	195	193	194	194	193
• Room heating energy efficiency "moderate climate" 55 °C η _S ^{1), 2)}	%	138	140	142	141	141
Water/water application W10W35						
• Energy efficiency class of the compound system with control	35 °C/55 °C	A+++/A+++	-	-	-	-
• Room heating energy efficiency "moderate climate" 35 °C η _S ^{1), 2)}	%	257	249	250	242	245
• Room heating energy efficiency "moderate climate" 55 °C η _S ^{1), 2)}	%	185	180	181	177	178
• Seasonal coefficient of performance moderate climate (brine) 35 °C/55 °C	SCOP	5.1/3.7	5.0/3.7	5.1/3.7	5.1/3.7	5.0/3.7
Max. performance data heating and cooling in acc. with EN 14511						
• Heat output B0W35	kW ³⁾	57.9	73.2	84.8	113.4	137.8
• Coefficient of performance B0W35	COP	4.63	4.6	4.63	4.62	4.61
• Heat output W10W35	kW	76.9	97.2	112.8	149.1	181.1
• Coefficient of performance W10W35	COP	6.07	5.87	5.91	5.73	5.79
• Cooling capacity B17W9	kW	64.7	86.2	107	138.1	156.9
• Energy efficiency ratio B17W9	EER	6.12	6.6	7.21	6.51	6.05
• Cooling capacity B25W18	kW	81.1	108.3	127.7	165	183.9
• Energy efficiency ratio B25W18	EER	6.44	6.71	6.95	6.31	6.04
Sound data according to EN 12102						
• Sound power level	dB(A)	57.2	55.7	57.2	64.2	64.2
Hydraulic data brine/water B0W35						
• Maximum flow temperature	°C	62	62	62	62	62
• Maximum operating pressure	bar	16	16	16	6	6
• Heating water spread	K	5	5	5	5	5
• Required volume flow	m ³ /h	9.9	12.6	14.6	19.5	23.7
• Pressure drop, condenser	kPa	5.7	6.2	5.4	7.6	8.1
• Condenser connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6	DN 80/PN 6
• Brine spread	K	3	4	4	4	5
• Required volume flow	m ³ /h	14.8	14.0	16.3	20.9	21.1
• Pressure drop, evaporator	kPa	15.8	10.0	11.2	12.8	11.3
• Evaporator connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6	DN 80/PN 6
Hydraulic data water/water W10/W35 (intermediate circuit)						
• Maximum flow temperature	°C	62	62	62	62	62
• Maximum operating pressure	bar	16	16	16	6	6
• Heating water spread	K	5	5	5	5	5
• Required volume flow	m ³ /h	13.2	16.7	19.4	25.6	31.1
• Pressure drop, condenser	kPa	9.8	10.6	9.3	12.6	13.4
• Condenser connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6	DN 80/PN 6
• Brine spread in intermediate circuit ⁴⁾	K	3	4	4	4	5
• Required volume flow GW	m ³ /h	20.9	19.7	22.9	30.1	29.3
• Pressure drop, evaporator	kPa	28.3	17.2	19.8	22.8	18.6
• Evaporator connections	R (ext. thread)	2"	2"	2"	DN 80/PN 6	DN 80/PN 6
Refrigerating data						
• Refrigerant		R410A	R410A	R410A	R410A	R410A
• Refrigerant filling quantity	kg	2 x 6.0	2 x 7.4	2 x 8.2	2 x 10.0	2 x 10.7
• Compressor oil filling quantity	l	2 x 2.46	2 x 3.3	2 x 3.6	2 x 6.7	2 x 6.7
- Type of compressor oil: DAPHNE HERMETIC OIL FVC32D for dual R (55), EMKARATE(TM) RL 32HB - 160SZ - 160Z for dual R (70-140)						
Electrical data						
• Power supply	V	3+N~400 V/50 Hz				
• Max. power consumption (without pumps)	kW	24.8	30.4	34.6	46.6	56.6
• Max. operating current (without pumps)	A	45.6	51	58.2	75.6	93.2
• Max. starting current	A	85.3	100.5	114.1	160.3	186.6
• Main current fuse (on site)	A	C63	C63	C80	C100	C125
• Control current fuse (on site)	A	16	16	16	16	16
Dimensions/weight						
• Dimensions (H x W x D)	mm	1907 x 1066 x 774			1907 x 1316 x 774	
• Minimum size of the installation room (without ventilation)	m ³	27.2	33.6	37.3	45.5	48.6
• Weight	kg	560	620	700	770	820

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.

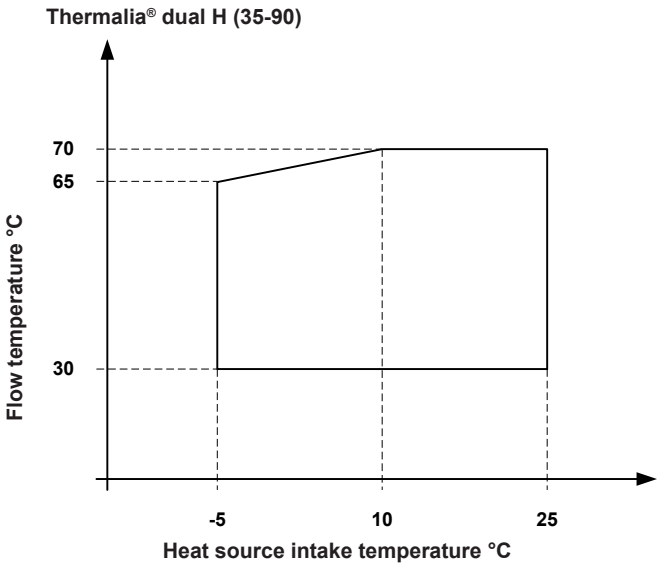
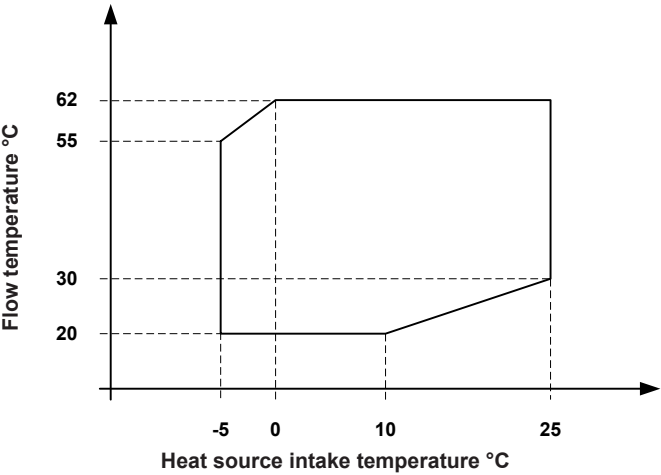
³⁾ kW = standard values according to EN 14511; values for B0W35 with 25 % monopolypropylene

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.

Diagrams of areas of application

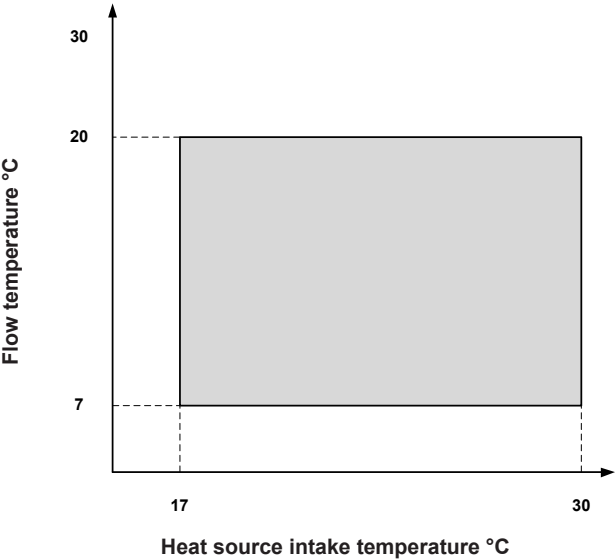
Heating and hot water

Thermalia® dual (55-140), dual R (55-140)



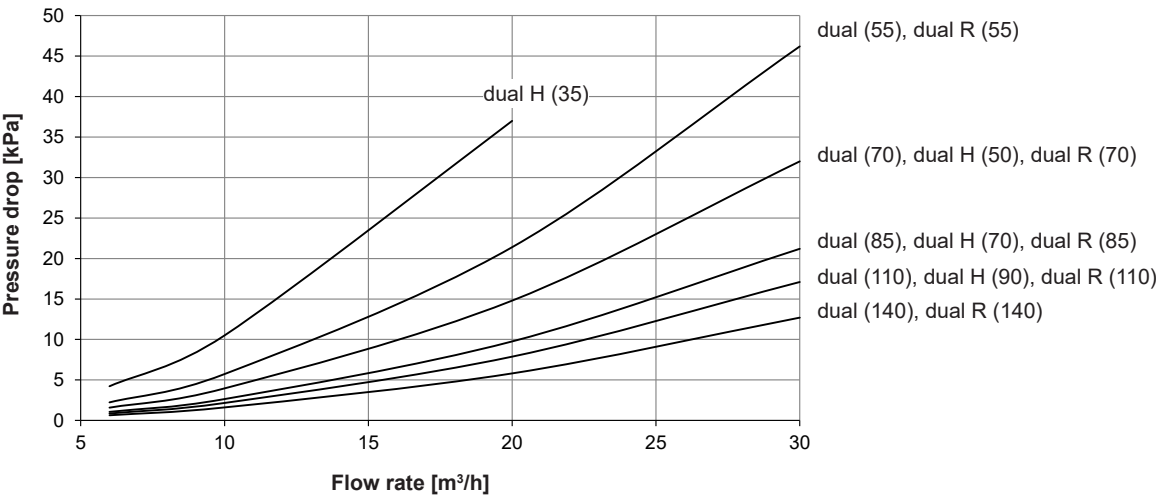
Cooling

Thermalia® dual R (55-140)



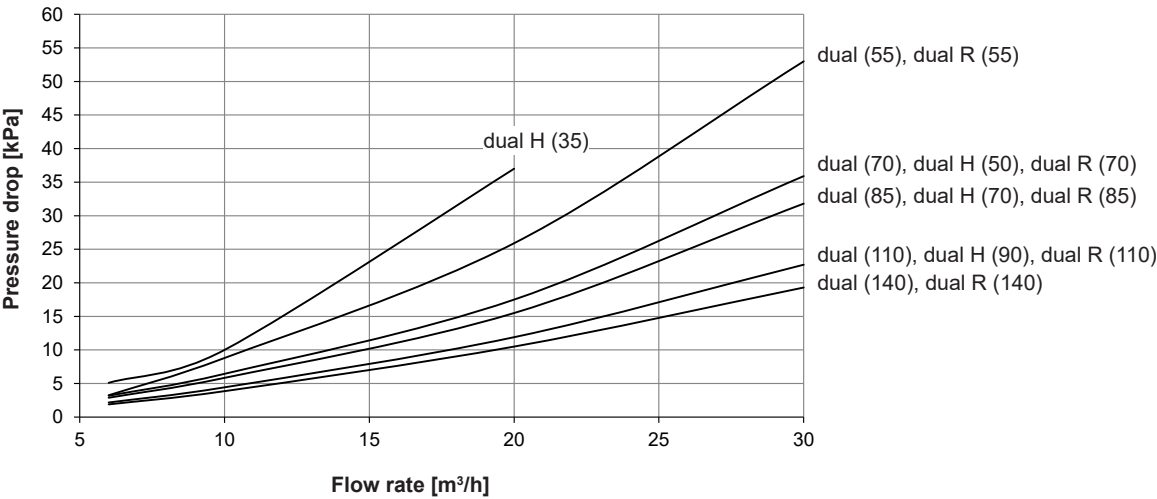
Heating

Pressure drop condenser
with water



Heat source

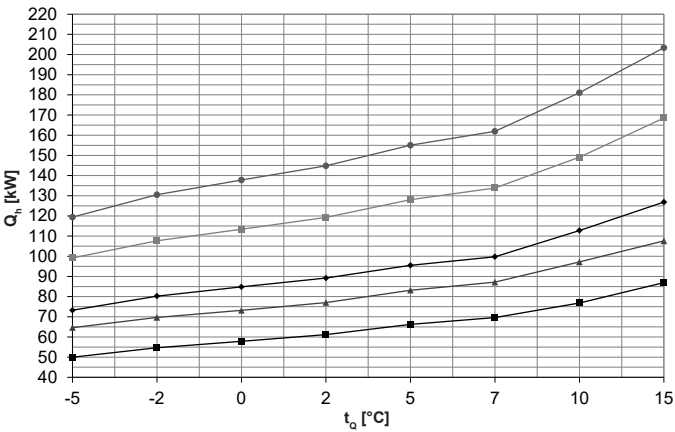
Pressure drop evaporator
with ethylene glycol 25 %
(antifrogen N)



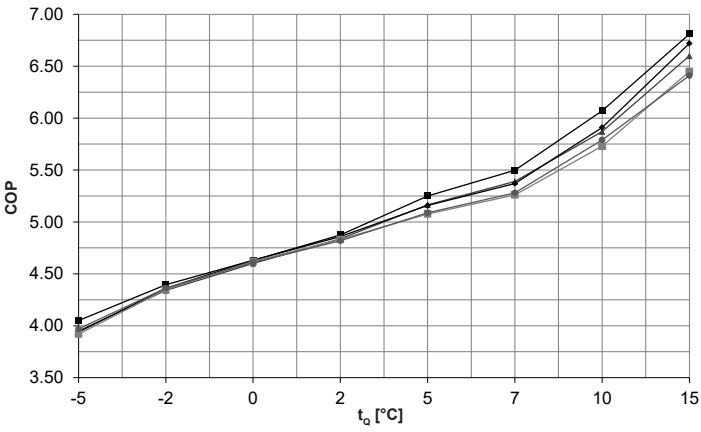
Performance data - heating
Maximum heat output

Thermalia® dual (55-140), dual R (55-140) with R410A

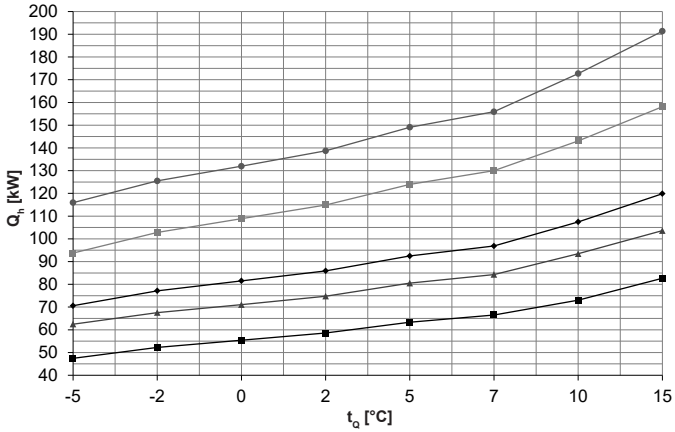
Heat output - t_{VL} 35 °C



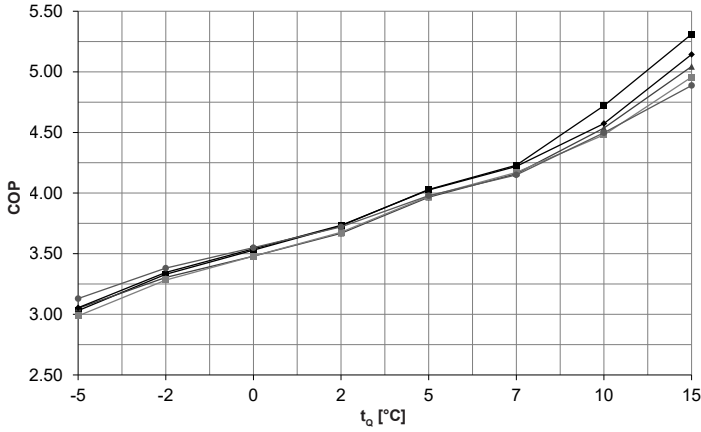
Coefficient of performance - t_{VL} 35 °C



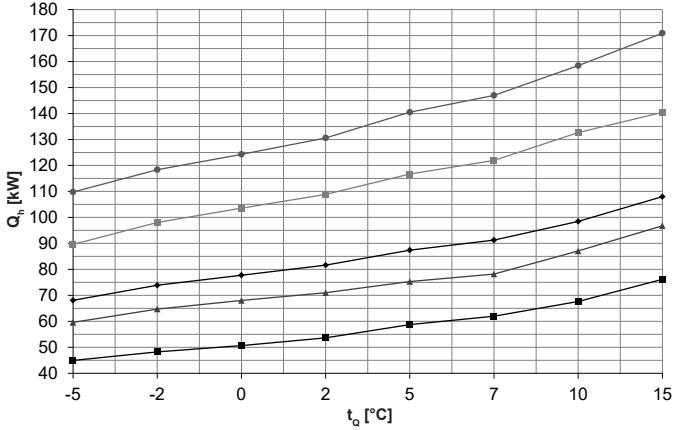
Heat output - t_{VL} 45 °C



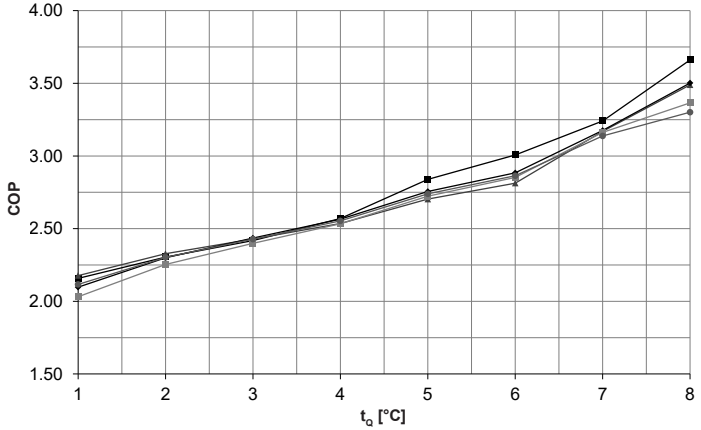
Coefficient of performance - t_{VL} 45 °C



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® dual, dual R (55)
- Thermalia® dual, dual R (70)
- Thermalia® dual, dual R (85)
- Thermalia® dual, dual R (110)
- Thermalia® dual, dual R (140)

Performance data - heating

Thermalia® dual (55-140), dual R (55-140)

Indications acc. to EN 14511

Type		t _q °C	(55), R (55)			(70), R (70)			(85), R (85)			(110), R (110)			(140), R (140)		
t _{VL} °C		t _q °C	Q _h kW	P kW	COP	Q _h kW	P kW	COP	Q _h kW	P kW	COP	Q _h kW	P kW	COP	Q _h kW	P kW	COP
30	Brine	-5	50.6	10.9	4.7	65.6	14.3	4.6	74.0	15.6	4.7	100.1	21.2	4.7	121.5	25.4	4.8
		-2	55.9	10.9	5.1	70.6	13.8	5.1	81.2	15.5	5.2	109.0	20.9	5.2	132.6	25.3	5.2
		0	59.3	11.0	5.4	74.1	13.6	5.5	86.0	15.5	5.6	115.0	20.8	5.5	139.9	25.4	5.5
		2	62.6	11.0	5.7	78.2	13.5	5.8	90.5	15.5	5.8	121.1	20.9	5.8	147.0	25.5	5.8
		5	67.6	11.2	6.1	84.9	13.7	6.2	97.1	15.7	6.2	130.3	21.5	6.1	157.5	26.0	6.1
	7	70.9	11.2	6.3	89.2	13.8	6.5	101.5	15.8	6.4	136.5	21.7	6.3	164.5	26.2	6.3	
	Water	10	78.4	11.0	7.1	99.1	14.5	6.8	115.4	16.9	6.8	152.2	23.1	6.6	185.3	27.7	6.7
		15	88.8	11.2	7.9	109.6	14.2	7.7	130.3	16.7	7.8	173.7	23.2	7.5	209.4	28.0	7.5
35	Brine	-5	50.0	12.3	4.1	64.6	16.4	4.0	73.2	18.6	3.9	99.1	25.3	3.9	119.4	30.1	4.0
		-2	54.7	12.4	4.4	69.7	16.1	4.3	80.2	18.4	4.4	107.7	24.8	4.4	130.5	29.9	4.4
		0	57.9	12.5	4.6	73.2	15.9	4.6	84.8	18.3	4.6	113.4	24.6	4.6	137.8	29.9	4.6
		2	61.2	12.6	4.9	77.0	15.9	4.8	89.2	18.4	4.9	119.2	24.7	4.8	144.8	30.0	4.8
		5	66.3	12.6	5.3	83.2	16.1	5.2	95.5	18.5	5.2	128.0	25.2	5.1	155.0	30.5	5.1
	7	69.6	12.7	5.5	87.2	16.2	5.4	99.8	18.6	5.4	133.9	25.4	5.3	161.9	30.7	5.3	
	Water	10	76.9	12.7	6.1	97.2	16.6	5.9	112.8	19.1	5.9	149.1	26.0	5.7	181.1	31.3	5.8
		15	86.9	12.8	6.8	107.6	16.3	6.6	126.8	18.9	6.7	168.5	26.1	6.5	203.4	31.7	6.4
40	Brine	-5	48.9	14.0	3.5	63.7	18.4	3.5	72.2	20.9	3.5	96.8	28.4	3.4	117.8	33.6	3.5
		-2	53.5	14.0	3.8	68.8	18.2	3.8	78.9	20.7	3.8	105.6	28.0	3.8	128.1	33.5	3.8
		0	56.6	14.1	4.0	72.2	18.1	4.0	83.4	20.6	4.1	111.4	27.8	4.0	135.0	33.4	4.0
		2	59.8	14.1	4.2	76.0	18.1	4.2	87.7	20.6	4.3	117.3	27.8	4.2	141.9	33.6	4.2
		5	64.8	14.1	4.6	81.9	18.1	4.5	94.1	20.7	4.5	126.1	28.2	4.5	152.2	33.9	4.5
	7	68.1	14.2	4.8	85.7	18.2	4.7	98.3	20.7	4.7	131.9	28.3	4.7	159.0	34.1	4.7	
	Water	10	75.0	14.1	5.3	95.3	18.6	5.1	110.1	21.3	5.2	146.1	29.0	5.0	176.9	34.8	5.1
		15	84.8	14.2	6.0	105.6	18.4	5.7	123.4	21.1	5.9	163.3	29.0	5.6	197.4	35.4	5.6
45	Brine	-5	47.5	15.7	3.0	62.5	20.5	3.1	70.6	23.1	3.1	93.7	31.4	3.0	115.9	37.0	3.1
		-2	52.2	15.7	3.3	67.6	20.4	3.3	77.2	23.1	3.4	102.8	31.3	3.3	125.5	37.1	3.4
		0	55.4	15.7	3.5	71.1	20.4	3.5	81.5	23.0	3.5	108.9	31.3	3.5	132.0	37.2	3.6
		2	58.6	15.7	3.7	74.8	20.4	3.7	85.9	23.0	3.7	114.9	31.2	3.7	138.7	37.3	3.7
		5	63.3	15.7	4.0	80.5	20.3	4.0	92.5	23.0	4.0	124.0	31.2	4.0	149.1	37.5	4.0
	7	66.5	15.7	4.2	84.3	20.3	4.2	96.8	22.9	4.2	130.0	31.2	4.2	155.9	37.6	4.2	
	Water	10	73.1	15.5	4.7	93.5	20.6	4.5	107.5	23.5	4.6	143.0	31.9	4.5	172.7	38.4	4.5
		15	82.7	15.6	5.3	103.6	20.5	5.0	119.9	23.3	5.1	158.1	31.9	5.0	191.3	39.2	4.9
50	Brine	-5	47.1	17.1	2.8	61.8	22.5	2.8	70.3	26.1	2.7	93.5	35.5	2.6	114.2	41.9	2.7
		-2	51.1	17.2	3.0	66.9	22.5	3.0	76.6	25.9	3.0	102.2	35.0	2.9	123.7	41.6	3.0
		0	53.9	17.2	3.1	70.3	22.6	3.1	80.8	25.8	3.1	107.9	34.8	3.1	130.1	41.5	3.1
		2	57.0	17.2	3.3	73.7	22.6	3.3	84.9	25.7	3.3	113.5	34.7	3.3	136.8	41.6	3.3
		5	62.1	17.1	3.6	78.9	22.6	3.5	91.0	25.7	3.5	121.8	34.8	3.5	146.9	41.8	3.5
	7	65.3	17.1	3.8	82.3	22.5	3.7	95.1	25.7	3.7	127.4	34.9	3.7	153.6	41.9	3.7	
	Water	10	71.7	17.2	4.2	91.6	22.6	4.1	104.8	25.7	4.1	140.0	34.9	4.0	168.5	42.0	4.0
		15	80.9	17.2	4.7	101.6	22.7	4.5	116.4	25.5	4.6	152.9	34.8	4.4	185.3	42.9	4.3
55	Brine	-5	46.5	18.6	2.5	62.1	24.2	2.6	70.5	28.3	2.5	92.8	38.5	2.4	113.7	45.5	2.5
		-2	49.9	18.7	2.7	66.8	24.2	2.8	76.6	27.7	2.8	101.7	37.4	2.7	122.0	44.4	2.8
		0	52.5	18.7	2.8	70.0	24.1	2.9	80.6	27.4	2.9	107.4	36.8	2.9	127.8	43.9	2.9
		2	55.5	18.7	3.0	73.2	24.1	3.0	84.4	27.3	3.1	112.8	36.7	3.1	134.2	43.9	3.1
		5	60.7	18.6	3.3	77.9	24.1	3.2	90.1	27.3	3.3	120.5	37.0	3.3	144.5	44.3	3.3
	7	64.0	18.5	3.5	81.1	24.1	3.4	93.9	27.3	3.4	125.7	37.1	3.4	151.2	44.5	3.4	
	Water	10	70.2	18.8	3.7	89.7	24.6	3.6	102.2	27.9	3.7	136.9	37.8	3.6	164.3	45.5	3.6
		15	79.0	18.8	4.2	99.6	24.8	4.0	112.9	27.7	4.1	147.7	37.7	3.9	179.3	46.6	3.9
62	Brine	-5	45.0	20.8	2.2	59.6	27.4	2.2	68.1	32.5	2.1	89.6	44.1	2.0	109.8	51.9	2.1
		-2	48.2	20.9	2.3	64.7	27.8	2.3	73.9	32.1	2.3	98.0	43.5	2.3	118.4	51.4	2.3
		0	50.7	20.9	2.4	68.0	28.0	2.4	77.8	31.9	2.4	103.6	43.2	2.4	124.3	51.2	2.4
		2	53.7	20.9	2.6	71.0	28.0	2.5	81.6	31.8	2.6	108.9	43.0	2.5	130.6	51.2	2.6
		5	58.7	20.7	2.8	75.3	27.9	2.7	87.4	31.7	2.8	116.7	42.8	2.7	140.5	51.3	2.7
	7	62.0	20.6	3.0	78.2	27.8	2.8	91.3	31.6	2.9	121.9	42.7	2.9	147.0	51.3	2.9	
	Water	10	67.6	20.9	3.2	87.1	27.5	3.2	98.5	31.0	3.2	132.7	42.0	3.2	158.4	50.5	3.1
		15	76.2	20.8	3.7	96.8	27.7	3.5	108.0	30.8	3.5	140.4	41.7	3.4	170.9	51.8	3.3

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

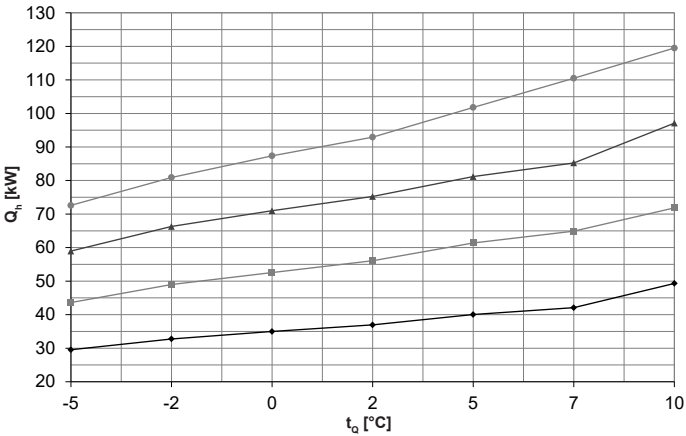
Observe daily power interruptions!
see "Engineering heat pumps general"

Performance data - heating

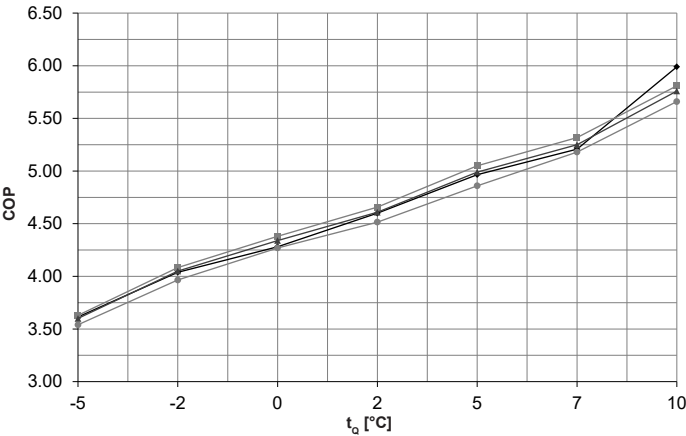
Maximum heat output

Thermalia® dual H (35-90) with R134a

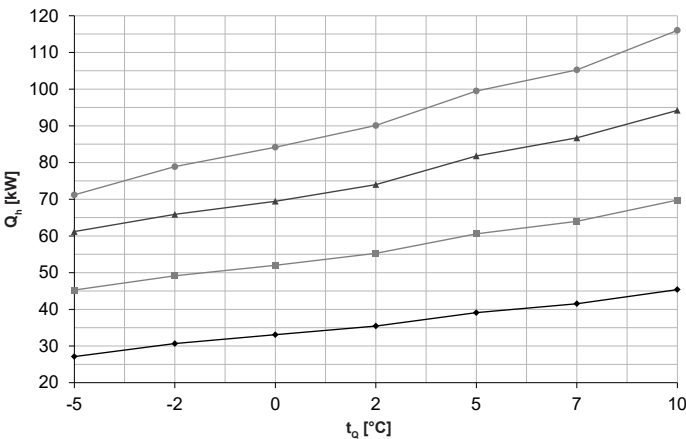
Heat output - t_{VL} 35 °C



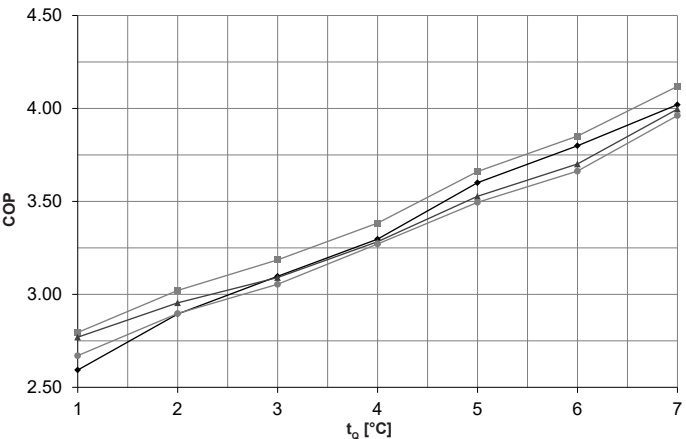
Coefficient of performance - t_{VL} 35 °C



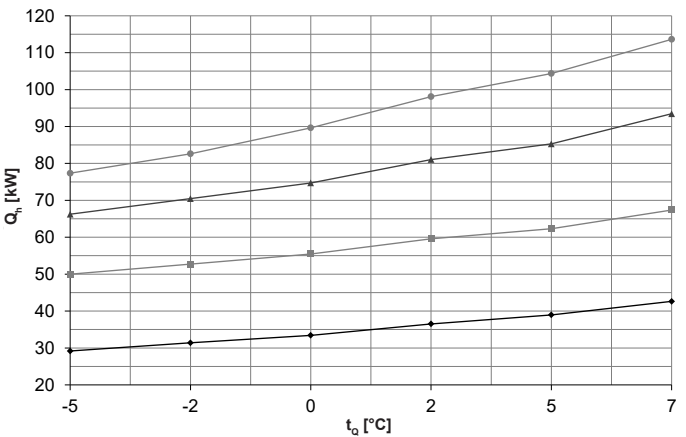
Heat output - t_{VL} 50 °C



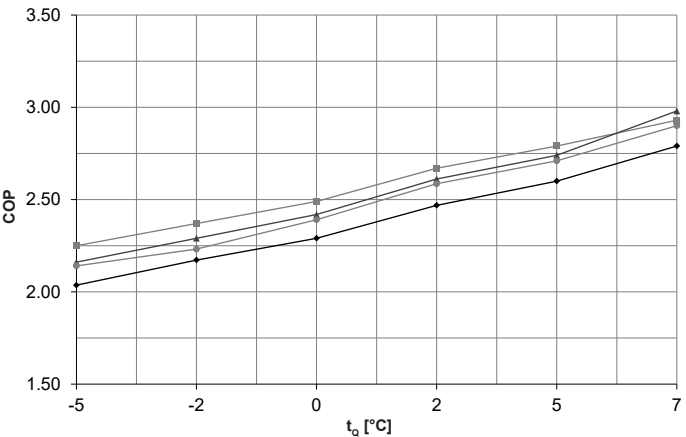
Coefficient of performance - t_{VL} 50 °C



Heat output - t_{VL} 65 °C



Coefficient of performance - t_{VL} 65 °C



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

t_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® dual H (35)
- Thermalia® dual H (50)
- ▲ Thermalia® dual H (70)
- Thermalia® dual H (90)

Performance data - heating

Thermalia® dual H (35-90)

Indications acc. to EN 14511

Type	t_{VL} °C	t_Q °C	Q_h kW	H (35) P kW	COP	Q_h kW	H (50) P kW	COP	Q_h kW	H (70) P kW	COP	Q_h kW	H (90) P kW	COP
35	Brine	-5	29.5	8.2	3.6	43.6	12.0	3.6	59.0	16.4	3.6	72.6	20.5	3.5
		-2	32.8	8.1	4.0	49.0	12.0	4.1	66.3	16.4	4.1	80.9	20.4	4.0
		0	35.0	8.1	4.3	52.5	12.0	4.4	71.0	16.4	4.3	87.4	20.3	4.3
		2	37.0	8.0	4.6	56.1	12.0	4.7	75.2	16.3	4.6	92.9	20.6	4.5
		5	40.0	8.1	5.0	61.4	12.2	5.1	81.2	16.3	5.0	101.8	20.9	4.9
		7	42.1	8.1	5.2	64.9	12.2	5.3	85.2	16.2	5.3	110.5	21.3	5.2
		Water	10	49.3	8.2	6.0	71.8	12.4	97.1	16.9	5.8	119.5	21.1	5.7
40	Brine	-5	28.7	9.0	3.2	44.4	13.2	3.4	60.0	18.0	3.3	71.9	22.4	3.2
		-2	32.1	9.1	3.5	49.1	13.2	3.7	66.1	18.0	3.7	80.2	22.4	3.6
		0	34.5	9.1	3.8	52.4	13.3	4.0	70.2	18.1	3.9	86.1	22.5	3.8
		2	36.7	9.0	4.1	55.8	13.3	4.2	74.6	18.1	4.1	91.7	22.4	4.1
		5	40.1	9.0	4.4	61.0	13.5	4.5	81.4	18.5	4.4	100.4	23.3	4.3
		7	42.4	9.1	4.7	64.5	13.5	4.8	85.9	18.6	4.6	107.2	23.6	4.5
		Water	10	47.5	9.2	5.2	71.2	13.7	95.8	19.0	5.0	118.1	23.7	5.0
45	Brine	-5	27.8	9.7	2.9	45.1	14.6	3.1	61.0	19.9	3.1	71.4	24.4	2.9
		-2	31.5	9.8	3.2	49.7	14.7	3.4	66.0	19.9	3.3	79.5	24.7	3.2
		0	33.9	9.9	3.4	52.8	14.7	3.6	69.7	19.9	3.5	85.0	24.9	3.4
		2	36.4	9.9	3.7	55.8	14.8	3.8	74.0	20.2	3.7	90.8	25.3	3.6
		5	40.1	10.2	3.9	60.3	14.9	4.0	81.2	20.9	3.9	99.6	25.8	3.9
		7	42.6	10.3	4.1	63.3	15.0	4.2	85.8	21.2	4.0	105.5	26.1	4.0
		Water	10	46.6	10.2	4.6	70.4	15.3	94.6	21.4	4.4	116.9	26.4	4.4
50	Brine	-5	27.1	10.5	2.6	45.3	16.2	2.8	61.2	22.1	2.8	71.2	26.7	2.7
		-2	30.7	10.6	2.9	49.1	16.3	3.0	65.9	22.3	3.0	78.9	27.2	2.9
		0	33.1	10.7	3.1	52.0	16.3	3.2	69.5	22.5	3.1	84.2	27.6	3.1
		2	35.5	10.8	3.3	55.2	16.3	3.4	74.0	22.5	3.3	90.1	27.5	3.3
		5	39.1	10.9	3.6	60.6	16.5	3.7	81.8	23.2	3.5	99.5	28.5	3.5
		7	41.5	10.9	3.8	64.0	16.6	3.9	86.7	23.4	3.7	105.3	28.7	3.7
		Water	10	45.4	11.3	4.0	69.8	16.9	94.2	23.6	4.0	116.0	29.3	4.0
55	Brine	-5	26.4	11.5	2.3	45.1	18.0	2.5	61.0	24.5	2.5	71.2	29.1	2.5
		-2	29.9	11.7	2.6	48.6	18.0	2.7	65.8	25.0	2.6	78.3	30.0	2.6
		0	32.2	11.8	2.7	51.3	18.1	2.8	69.5	25.3	2.8	83.5	30.5	2.7
		2	34.5	11.9	2.9	54.8	18.2	3.0	74.2	25.5	2.9	89.7	30.9	2.9
		5	38.1	12.0	3.2	60.8	18.3	3.3	82.2	25.6	3.2	99.9	31.3	3.2
		7	40.4	12.1	3.4	64.6	18.4	3.5	87.3	25.7	3.4	106.5	31.5	3.4
		Water	10	44.8	12.5	3.6	69.0	18.8	94.1	25.9	3.6	115.4	32.2	3.6
65	Brine	-5	-	-	-	-	-	-	-	-	-	-	-	-
		-2	29.2	14.3	2.0	50.0	22.2	2.3	66.2	30.6	2.2	77.3	36.1	2.1
		0	31.4	14.5	2.2	52.7	22.2	2.4	70.5	30.8	2.3	82.6	37.0	2.2
		2	33.4	14.6	2.3	55.5	22.3	2.5	74.7	30.9	2.4	89.6	37.5	2.4
		5	36.5	14.8	2.5	59.6	22.3	2.7	81.0	31.0	2.6	98.1	37.9	2.6
		7	39.0	15.0	2.6	62.3	22.3	2.8	85.3	31.1	2.7	104.4	38.5	2.7
		Water	10	42.6	15.3	2.8	67.4	23.0	93.5	31.4	3.0	113.6	39.2	2.9
67	Water	13	46.3	15.0	3.1	73.2	22.5	3.2	100.5	31.3	3.2	122.9	38.5	3.2
		15	48.4	4.9	3.2	76.5	22.4	3.4	105.0	31.2	3.4	128.9	38.5	3.3

 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)

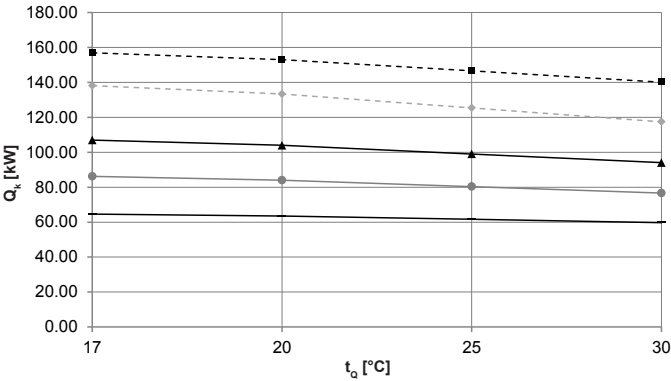
COP = Coefficient of Performance for the overall unit in accordance with standard EN 14511

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

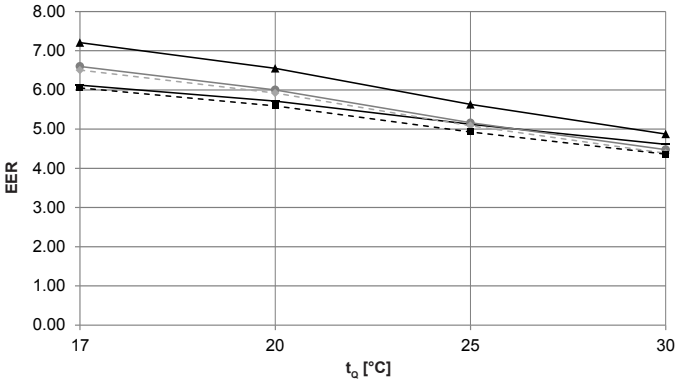
Performance data – cooling
Maximum cooling capacity

Thermalia® dual R (55-140) with R410A

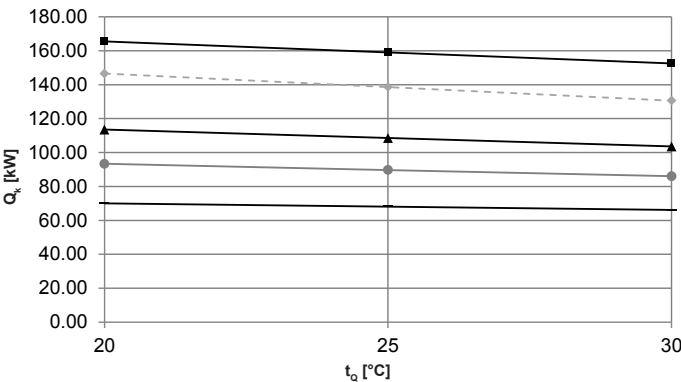
Cooling capacity - t_{VL} 9 °C



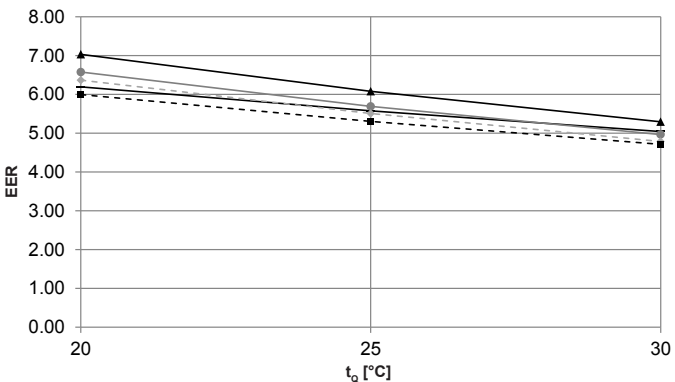
Energy efficiency ratio - t_{VL} 9 °C



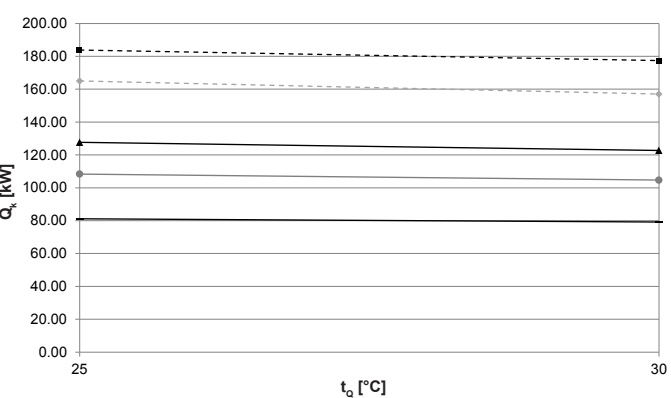
Cooling capacity - t_{VL} 12 °C



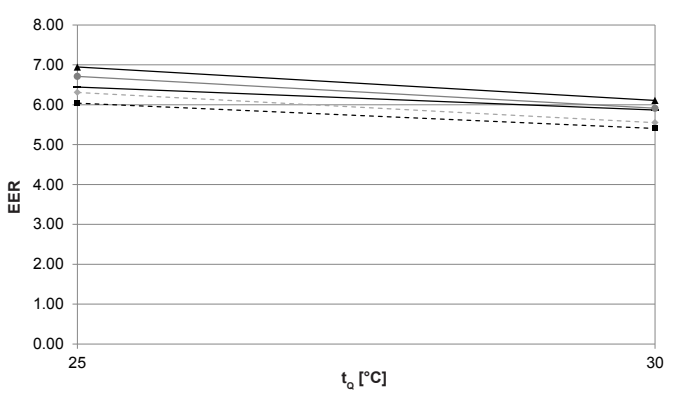
Energy efficiency ratio - t_{VL} 12 °C



Cooling capacity - t_{VL} 18 °C



Energy efficiency ratio - t_{VL} 18 °C



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

—■— Thermalia® dual R (55)
—●— Thermalia® dual R (70)
—▲— Thermalia® dual R (85)
—◆— Thermalia® dual R (110)
—■— Thermalia® dual R (140)

Performance data – cooling

Thermalia® dual R (55-140)

Data according to EN 14511

Type	Heat source		R (55)			R (70)			R (85)			R (110)			R (140)		
t_{VL}	Medium t_1	t_Q	Q_k	P	EER	Q_k	P	EER	Q_k	P	EER	Q_k	P	EER	Q_k	P	EER
°C		°C	kW	kW		kW	kW		kW	kW		kW	kW		kW	kW	
9	Brine (Sole)	17	64.7	10.6	6.1	86.2	13.1	6.6	107.0	14.8	7.2	138.1	21.2	6.5	156.9	25.9	6.1
		20	63.5	11.1	5.7	84.0	14.0	6.0	104.0	15.9	6.6	133.3	22.5	5.9	153.0	27.4	5.6
		25	61.6	12.0	5.1	80.3	15.6	5.2	99.0	17.6	5.6	125.4	24.7	5.1	146.6	29.7	4.9
		30	59.7	12.9	4.6	76.7	17.1	4.5	94.0	19.3	4.9	117.4	26.8	4.4	140.1	32.1	4.4
12	Brine (Sole)	20	70.0	11.3	6.2	93.3	14.2	6.6	113.6	16.1	7.0	146.5	23.0	6.4	165.5	27.6	6.0
		25	68.1	12.2	5.6	89.7	15.8	5.7	108.6	17.9	6.1	138.6	25.2	5.5	159.0	30.0	5.3
		30	66.2	13.1	5.0	86.0	17.3	5.0	103.6	19.6	5.3	130.6	27.3	4.8	152.5	32.4	4.7
15	Brine (Sole)	25	74.6	12.4	6.0	99.0	16.0	6.2	118.2	18.1	6.5	151.8	25.7	5.9	171.4	30.2	5.7
		30	72.7	13.3	5.5	95.3	17.5	5.4	113.2	19.8	5.7	143.8	27.8	5.2	165.0	32.6	5.1
18	Brine (Sole)	25	81.1	12.6	6.4	108.3	16.2	6.7	127.7	18.4	7.0	165.0	26.2	6.3	183.9	30.4	6.0
		30	79.2	13.5	5.9	104.7	17.7	5.9	122.7	20.1	6.1	157.0	28.3	5.6	177.4	32.8	5.4

 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 of the overall unit (kW) incl. high-efficiency pump, measured in accordance with EN 14511

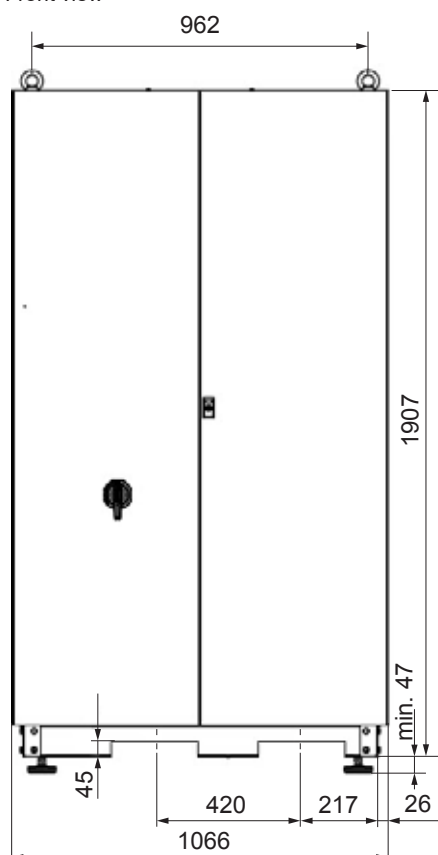
EER = Energy Efficiency Ratio for the overall unit in accordance with standard EN 14511

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

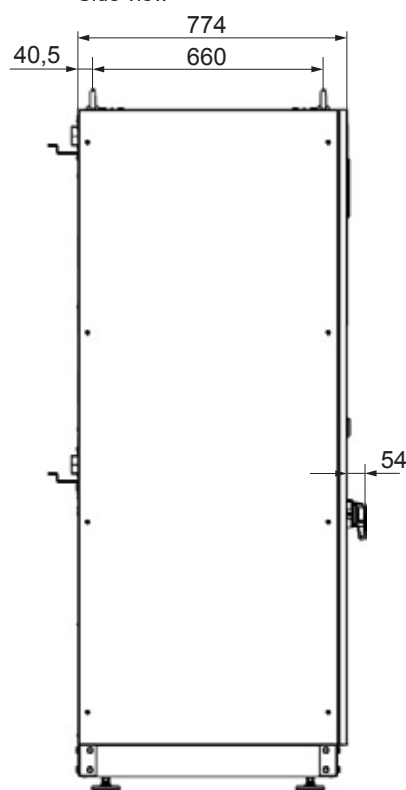
Thermalia® dual (55-85), dual H (35), dual R (55-85)

(Dimensions in mm)

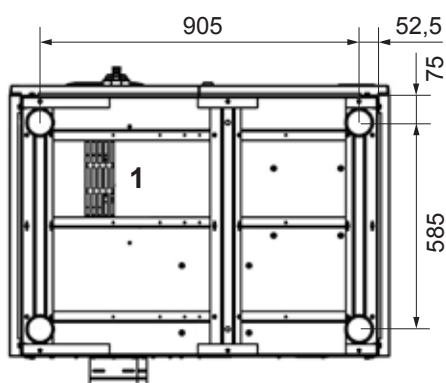
Front view



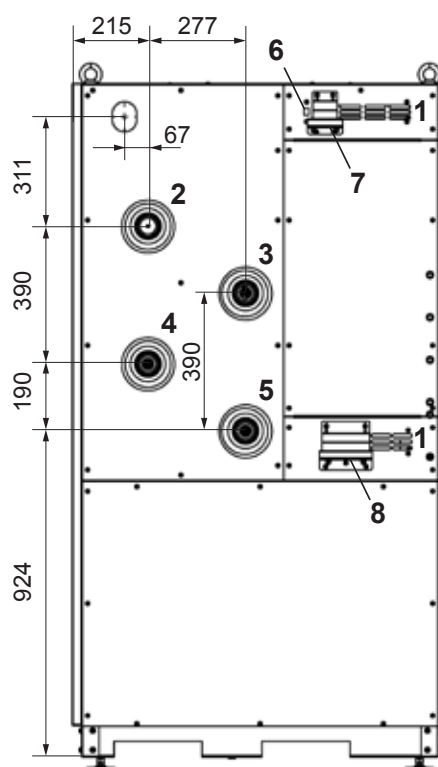
Side view



View from below



Rear view



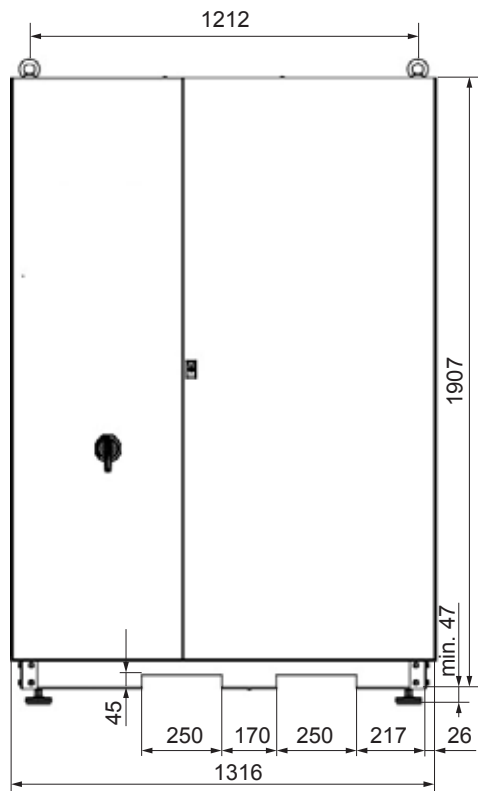
- 1 Vent opening
- 2 Flow heating or storage tank Rp 2"
- 3 Brine or ground water inlet Rp 2"
- 4 Return heating or storage tank Rp 2"
- 5 Brine or ground water outlet Rp 2"
- 6 LAN interface
- 7 Cable feedthrough for sensors and actuators
- 8 Cable feedthrough for the mains supply and connection to the main circuit

Adjustable feet with M12 thread

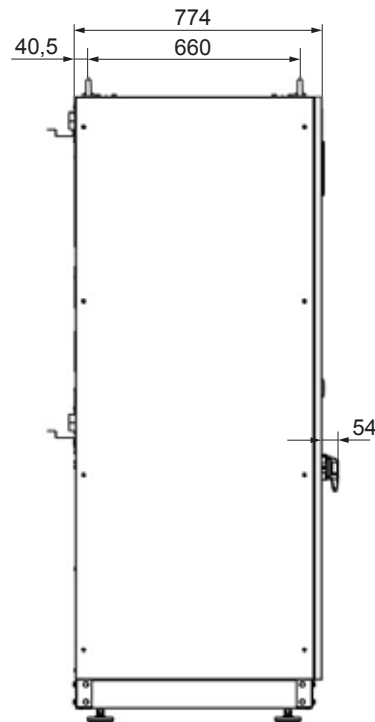
Thermalia® dual (110-140), dual H (50-90), dual R (110-140)

(Dimensions in mm)

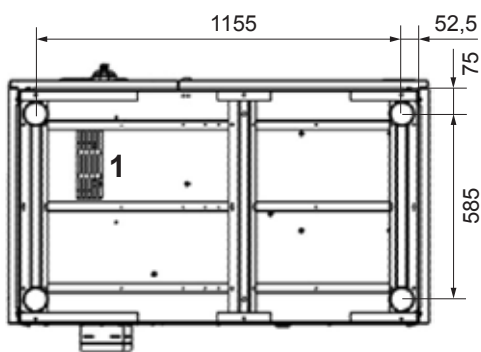
Front view



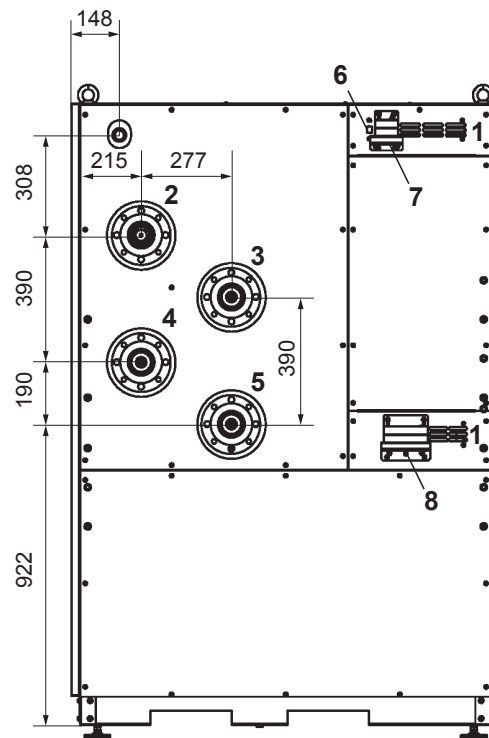
Side view



View from below



Rear view



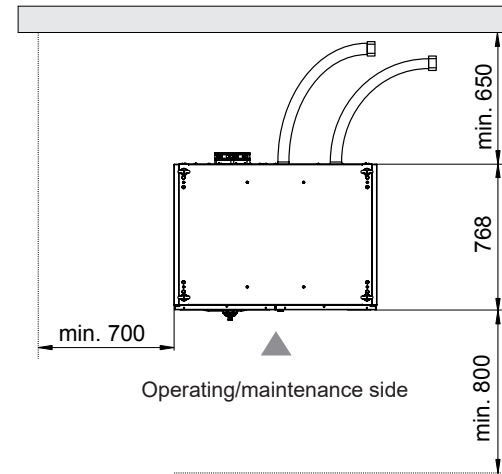
- 1 Vent opening
- 2 Flow heating or storage tank
Thermalia® dual H (50,70) Rp 2"
- Thermalia® dual, dual R (110,140), dual H (90) flange DN 80/PN 6
- 3 Brine or ground water inlet
Thermalia® dual H (50,70) Rp 2"
- Thermalia® dual, dual R (110,140), dual H (90) flange DN 80/PN 6
- 4 Return heating or storage tank
Thermalia® dual H (50,70) Rp 2"
- Thermalia® dual, dual R (110,140), dual H (90) flange DN 80/PN 6
- 5 Brine or ground water outlet
Thermalia® dual H (50,70) Rp 2"
- Thermalia® dual, dual R (110,140), dual H (90) flange DN 80/PN 6
- 6 LAN interface
- 7 Cable feedthrough for sensors and actuators
- 8 Cable feedthrough
for the mains supply and connection to the main circuit

Adjustable feet with M12 thread

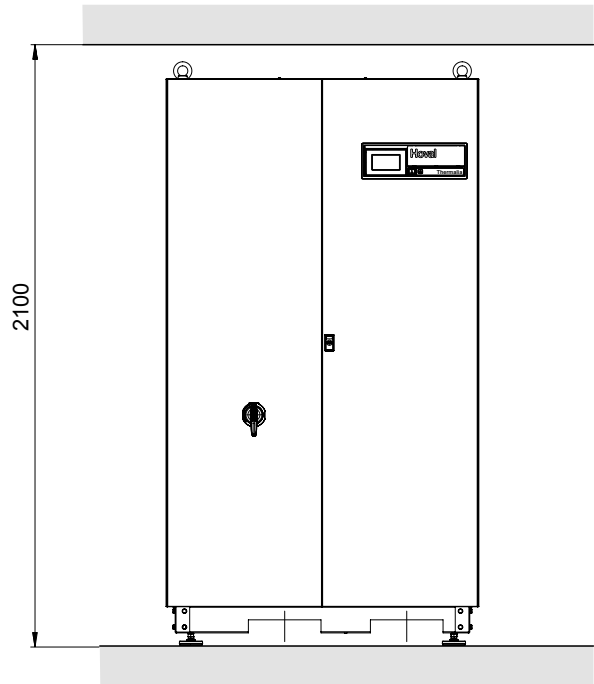
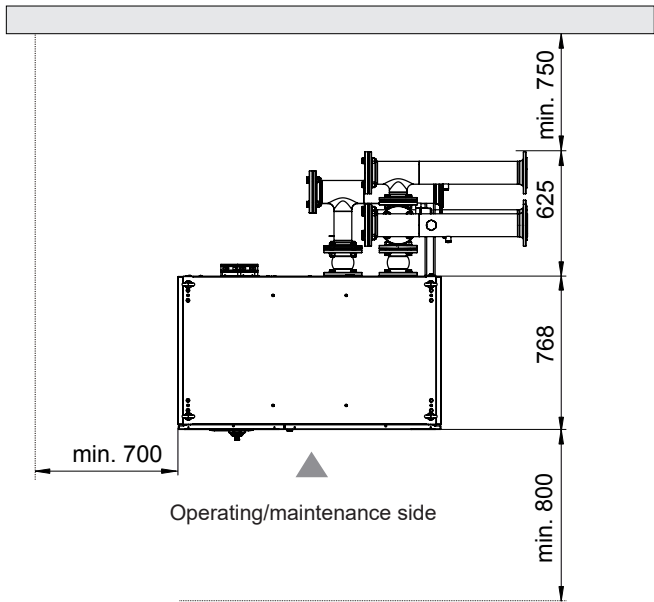
Space requirement

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

Thermalia® dual (55-85), dual H (35-70), dual R (55-85)



Thermalia® dual (110-140), dual H (90), dual R (110-140)



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