



# HELIO THERM HEAT PUMPS

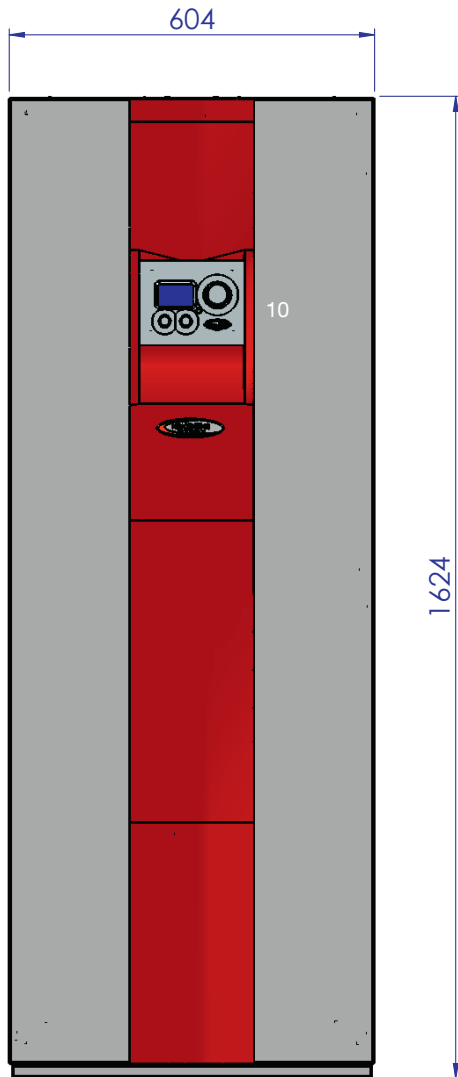
## TECHNICAL DATA SHEETS

**Ground Source Heat Pump with Surface Collector  
Basic Comfort Series**

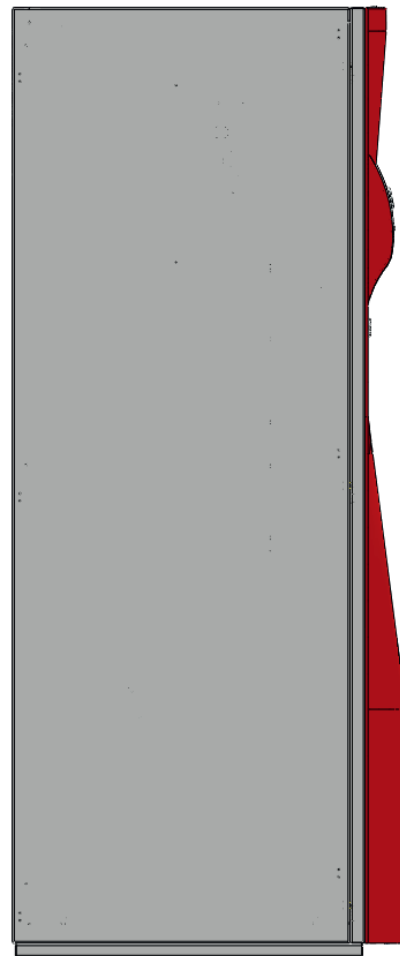


# DIMENSIONS

Ground source heat pump with surface collector | Basic Comfort Series



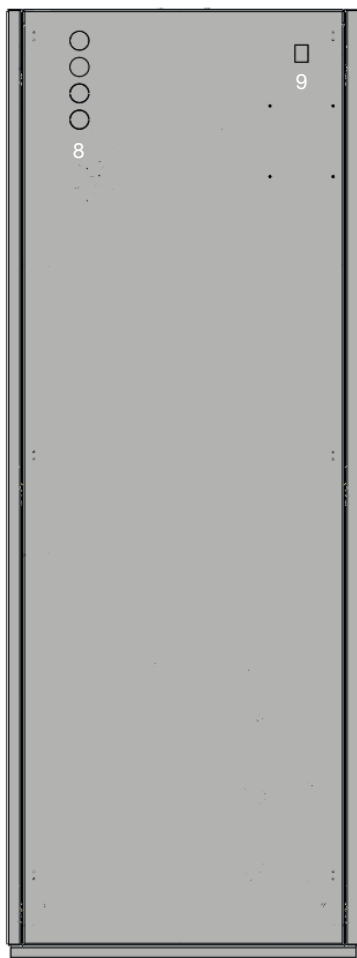
Front view



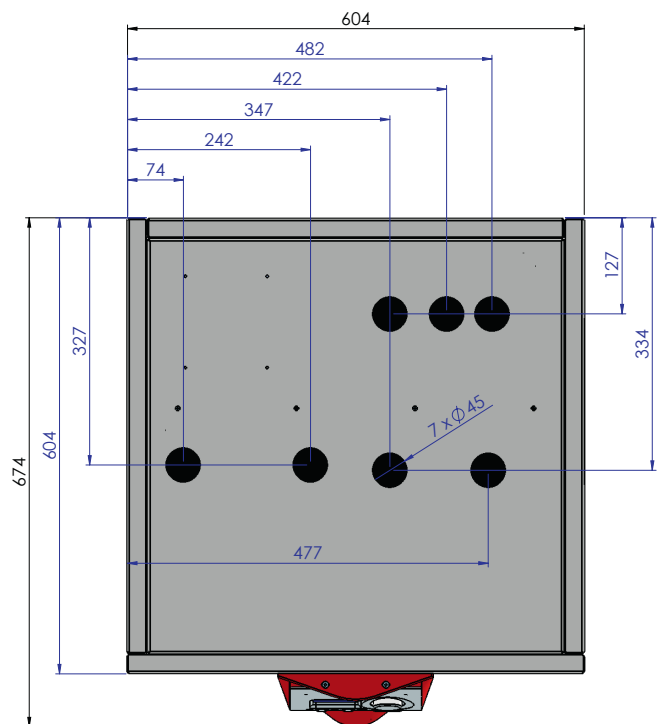
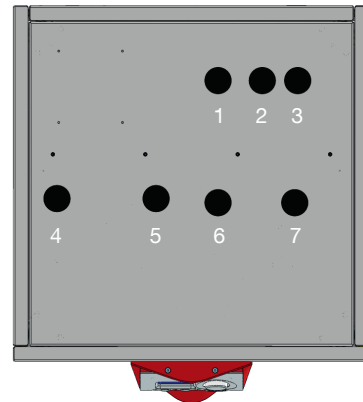
Side view

# DIMENSIONS

Ground source heat pump with surface collector | Basic Comfort Series



Rear view



## Dimensions (mm)

- 1 Inlet DHW - 1" ET
- 2 Suction line - 18 mm
- 3 Pressure line - 12 mm
- 4 Outlet heating - 1" ET
- 5 Outlet DHW - 1" ET
- 6 Inlet heating - 1" ET
- 7 -
- 8 Cable feedthrough
- 9 On/Off switch
- 10 Control unit

# TECHNICAL DATA SHEET HP06E-K-BC

Ground source heat pump with surface collector | Basic Comfort Series

Performance data <sup>1)</sup> $\Delta$ 10 K		
	E4W35	E4W50
Heating capacity	7,96 kW	7,24 kW
Cooling capacity	6,49 kW	5,25 kW
Input	1,47 kW	1,99 kW
COP	5,41	3,64

Performance data <sup>1)</sup> EN15879-1 $\Delta$ 5 K		
	E4W35	E4W50
Heating capacity	7,78 kW	7,12 kW
Cooling capacity	6,26 kW	5,07 kW
Input	1,52 kW	2,05 kW
COP	5,13	3,47

Compressor	
Type	Scroll
Speed RPM	2900 min <sup>-1</sup>
Max. input power	3,0 kW
Stall current	32 A
Oil amount	1,3 l

Evaporator (surface collector) / Energy source	
Type	Tube evaporator
Material	Cu with PE coating
Amount at 10 mm x 70 m	6
Total length	420 m
Tested pressure	45 bar

Condenser & subcooler / Heating	
Type	Plate heat exchanger
Material	Stainless steel / Cu soldered
Flow amount	1,2 m <sup>3</sup> /h
Pressure loss	0,9 mWs
Temperature difference	5 K
Operating pressure*	0,51 bar
Tested pressure	45 bar

Refrigerant cycle	
Working fluid	R410a
Fill amount with 10 m split line	6,4 kg

Electric	
Voltage	400 V
Frequency	50 Hz
Time lag fuse	3 x 10 A
Max. compressor operating current	5,5 A
Starting current	32 A
Starting current with soft starter	21,3 A

Acoustic pressure level	
1 m distance	45 dB(A)

Connections, dimensions		
Heating outlet and inlet	1"	ET
Pressure line / Suction line	12/18	mm
Height x Width x Depth	1.625x604x674	mm
Weight	165	kg

Operating limit values		
Max. operating water pressure	10	bar
Max. operating refrigerant pressure	40	bar
Max. heat outlet temperature	62	°C

<sup>1)</sup> Performance specifications:

E = Ground temperature in °C

W = Heating water temperature in °C

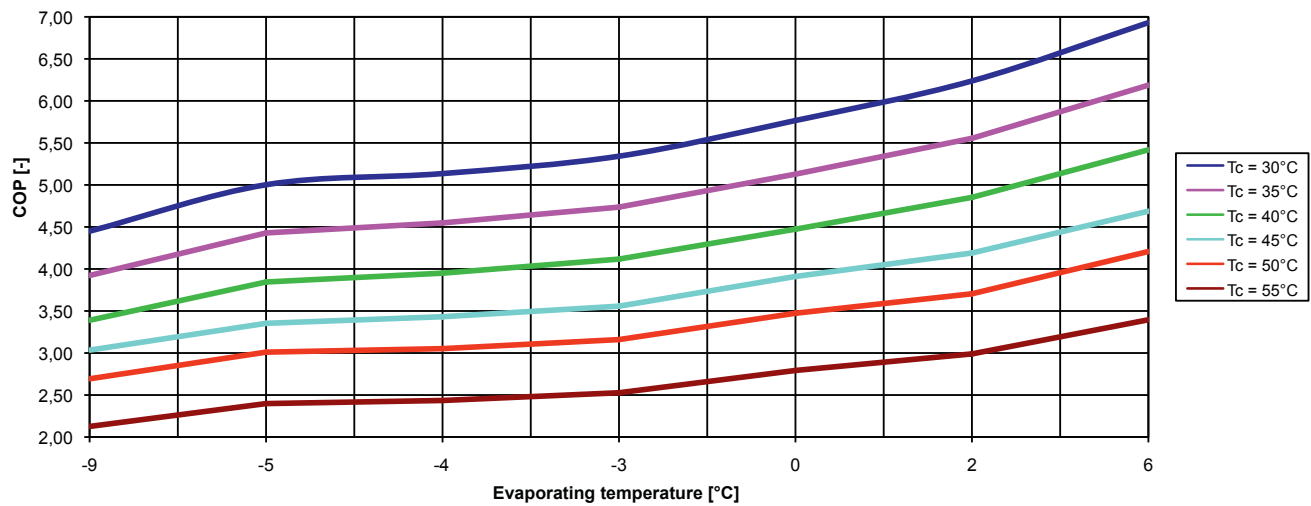
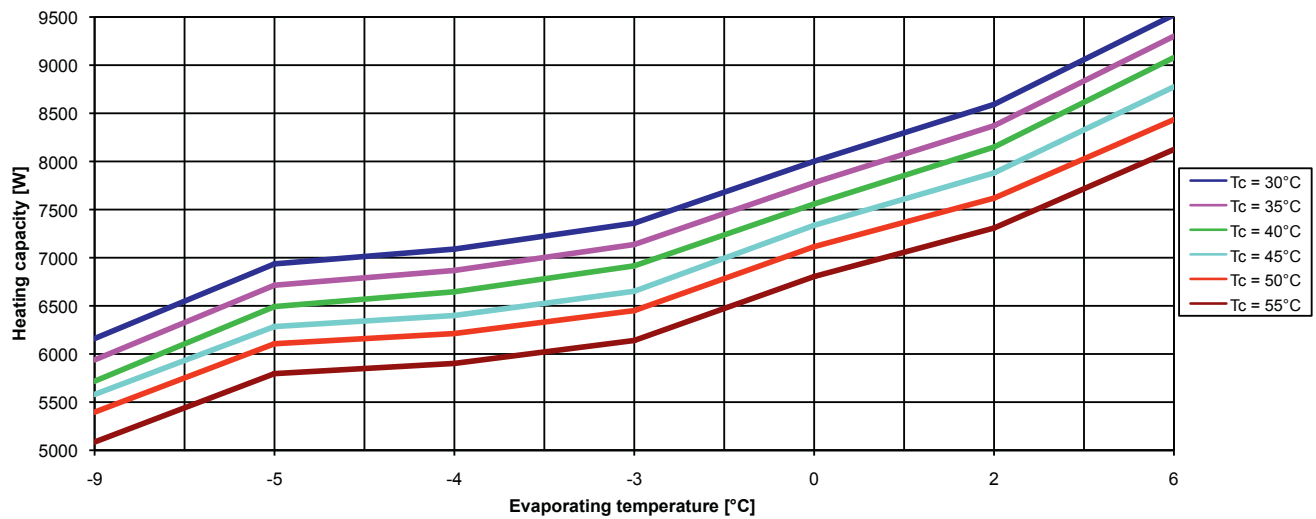
\* in conjunction with a Heliotherm hydraulic block.

0,25 kW/person are to be calculated to the heating load for DHW preparation.

Tolerance results of EN12900 are valid for the above mentioned performance data.

# TECHNICAL DATA SHEET HP06E-K-BC

Ground source heat pump with surface collector | Basic Comfort Series



EN12900 tolerance results are valid for the above mentioned performance data.  
All performance data is according to EN15879-1.

# TECHNICAL DATA SHEET HP08E-K-BC

Ground source heat pump with surface collector | Basic Comfort Series

Performance data <sup>1)</sup> Δ 10 K		
	E4W35	E4W50
Heating capacity	9,36 kW	8,54 kW
Cooling capacity	7,65 kW	6,20 kW
Input	1,71 kW	2,34 kW
COP	5,48	3,65

Performance data <sup>1)</sup> EN15879-1 Δ 5 K		
	E4W35	E4W50
Heating capacity	9,14 kW	8,39 kW
Cooling capacity	7,38 kW	5,98 kW
Input	1,76 kW	2,41 kW
COP	5,20	3,48

Compressor	
Type	Scroll
Speed RPM	2900 min <sup>-1</sup>
Max. input power	3,7 kW
Stall current	35 A
Oil amount	1,3 l

Evaporator (surface collector) / Energy source	
Type	Tube evaporator
Material	Cu with PE coating
Amount at 10 mm x 70 m	7
Total length	490 m
Tested pressure	45 bar

Condenser & subcooler / Heating	
Type	Plate heat exchanger
Material	Stainless steel / Cu soldered
Flow amount	1,6 m <sup>3</sup> /h
Pressure loss	1,5 mWs
Temperature difference	5 K
Operating pressure*	0,38 bar
Tested pressure	45 bar

Refrigerant cycle	
Working fluid	R410a
Fill amount with 10 m split line	7,9 kg

Electric	
Voltage	400 V
Frequency	50 Hz
Time lag fuse	3 x 16 A
Max. compressor operating current	6 A
Starting current	35 A
Starting current with soft starter	23,3 A

Acoustic pressure level	
1 m distance	45 dB(A)

Connections, dimensions		
Heating outlet and inlet	1"	ET
Pressure line / Suction line	12/18	mm
Height x Width x Depth	1.625x604x674	mm
Weight	170	kg

Operating limit values		
Max. operating water pressure	10	bar
Max. operating refrigerant pressure	40	bar
Max. heat outlet temperature	62	°C

<sup>1)</sup> Performance specifications:

E = Ground temperature in °C

W = Heating water temperature in °C

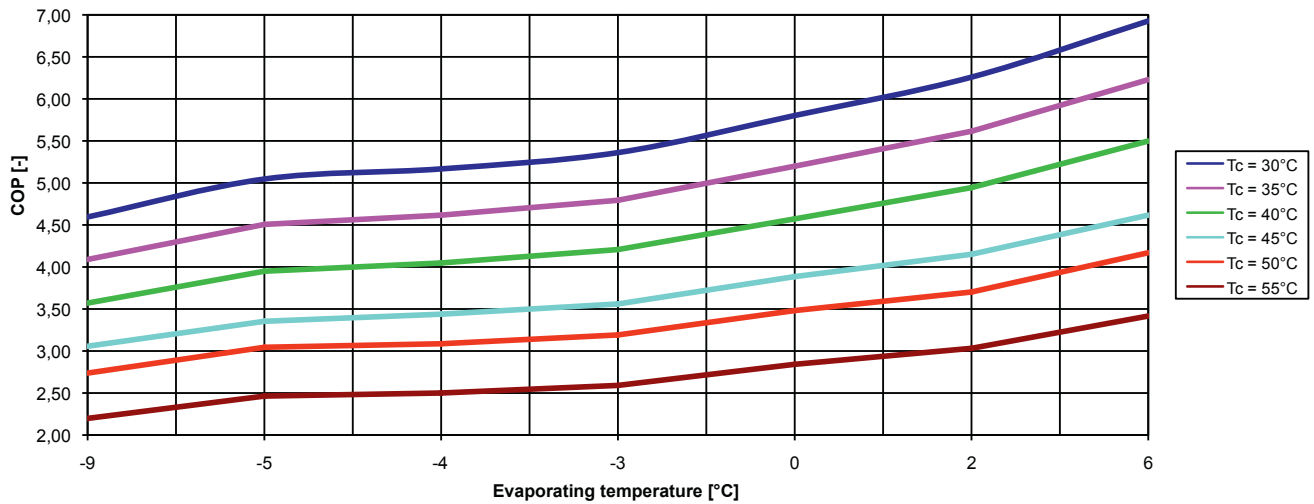
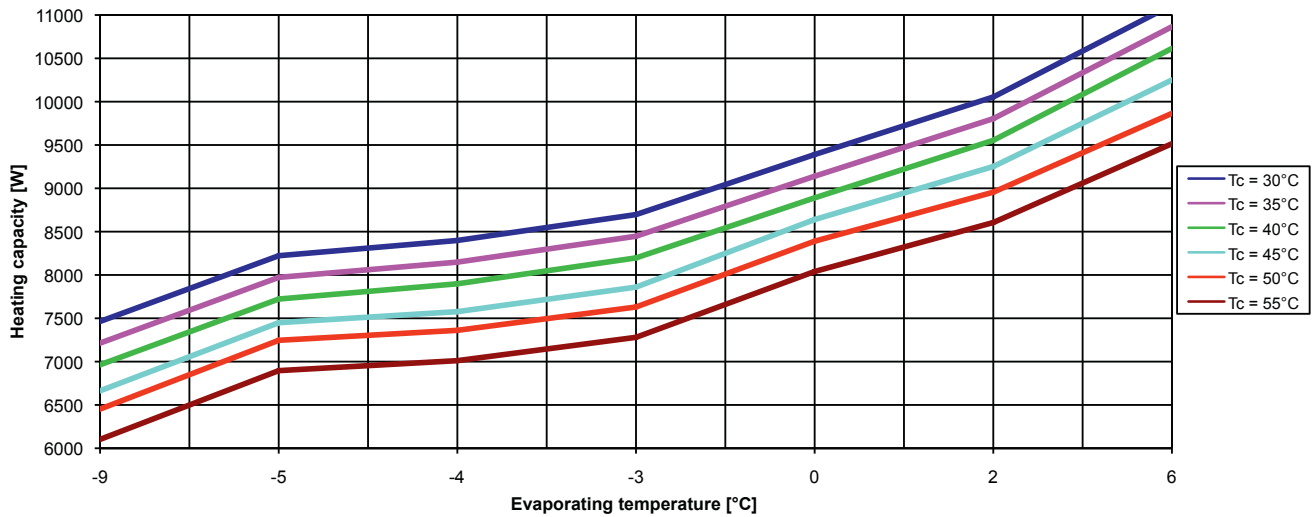
\* in conjunction with a Heliotherm hydraulic block.

0,25 kW/person are to be calculated to the heating load for DHW preparation.

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# TECHNICAL DATA SHEET HP08E-K-BC

Ground source heat pump with surface collector | Basic Comfort Series



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All performance data is according to EN15879-1.

# TECHNICAL DATA SHEET HP10E-K-BC

Ground source heat pump with surface collector | Basic Comfort Series

Performance data <sup>1)</sup> Δ 10 K		
	E4W35	E4W50
Heating capacity	12,07 kW	10,99 kW
Cooling capacity	9,87 kW	8,02 kW
Input	2,20 kW	2,97 kW
COP	5,49	3,69

Performance data <sup>1)</sup> EN15879-1 Δ 5 K		
	E4W35	E4W50
Heating capacity	11,79 kW	10,80 kW
Cooling capacity	9,53 kW	7,74 kW
Input	2,27 kW	3,06 kW
COP	5,21	3,52

Compressor	
Type	Scroll
Speed RPM	2900 min <sup>-1</sup>
Max. input power	4,1 kW
Stall current	48 A
Oil amount	1,3 l

Evaporator (surface collector) / Energy source	
Type	Tube evaporator
Material	Cu with PE coating
Amount at 10 mm x 70 m	8
Total length	560 m
Tested pressure	45 bar

Condenser & subcooler / Heating	
Type	Plate heat exchanger
Material	Stainless steel / Cu soldered
Flow amount	2,1 m <sup>3</sup> /h
Pressure loss	1,6 mWs
Temperature difference	5 K
Operating pressure*	0,31 bar
Tested pressure	45 bar

Refrigerant cycle	
Working fluid	R410a
Fill amount with 10 m split line	8,4 kg

Electric	
Voltage	400 V
Frequency	50 Hz
Time lag fuse	3 x 16 A
Max. compressor operating current	8 A
Starting current	48 A
Starting current with soft starter	32 A

Acoustic pressure level	
1 m distance	45 dB(A)

Connections, dimensions		
Heating outlet and inlet	1"	ET
Pressure line / Suction line	12/18	mm
Height x Width x Depth	1.625x604x674	mm
Weight	170	kg

Operating limit values		
Max. operating water pressure	10	bar
Max. operating refrigerant pressure	40	bar
Max. heat outlet temperature	62	°C

<sup>1)</sup> Performance specifications:

E = Ground temperature in °C

W = Heating water temperature in °C

\* in conjunction with a Heliotherm hydraulic block.

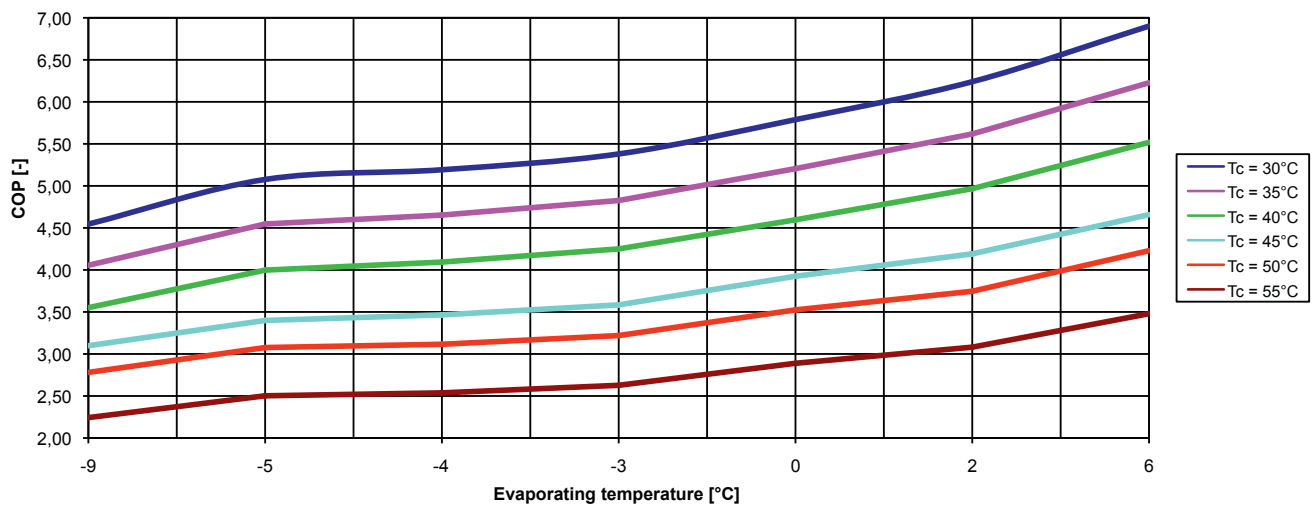
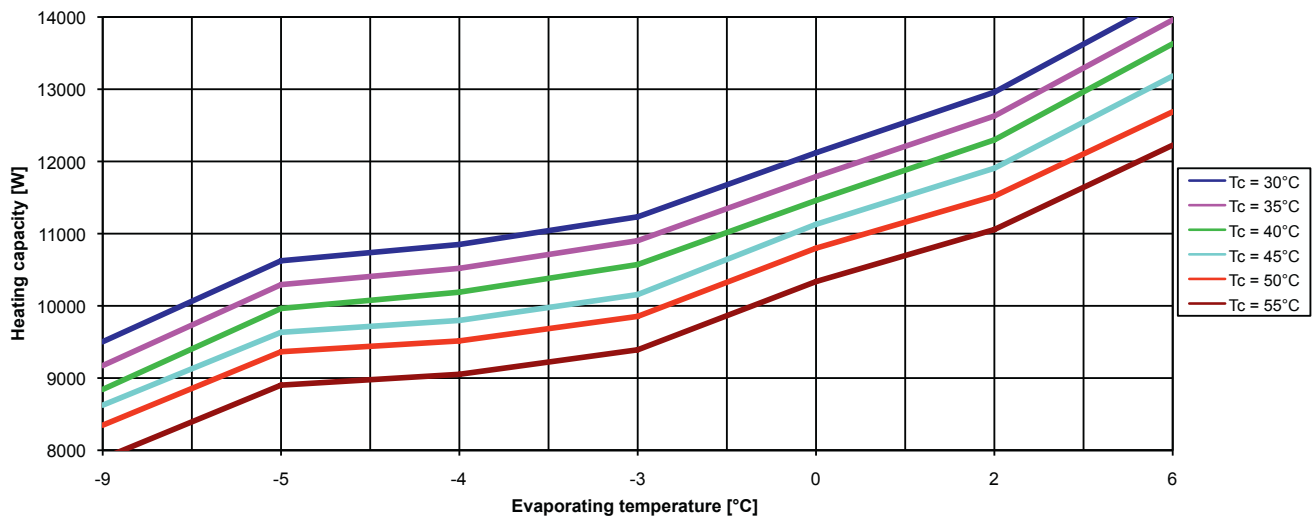
0,25 kW/person are to be calculated to the heating load for DHW preparation.

Tolerance results of EN12900 are valid for the above mentioned performance data.



# TECHNICAL DATA SHEET HP10E-K-BC

Ground source heat pump with surface collector | Basic Comfort Series



EN12900 tolerance results are valid for the above mentioned performance data.  
All performance data is according to EN15879-1.

# TECHNICAL DATA SHEET HP12E-K-BC

Ground source heat pump with surface collector | Basic Comfort Series

Performance data <sup>1)</sup> Δ 10 K		
	E4W35	E4W50
Heating capacity	15,28 kW	13,91 kW
Cooling capacity	12,50 kW	10,13 kW
Input	2,78 kW	3,78 kW
COP	5,49	3,68

Performance data <sup>1)</sup> EN15879-1 Δ 5 K		
	E4W35	E4W50
Heating capacity	14,93 kW	13,67 kW
Cooling capacity	12,06 kW	9,78 kW
Input	2,87 kW	3,89 kW
COP	5,21	3,51

Compressor	
Type	Scroll
Speed RPM	2900 min <sup>-1</sup>
Max. input power	4,8 kW
Stall current	64 A
Oil amount	1,7 l

Evaporator (surface collector) / Energy source	
Type	Tube evaporator
Material	Cu with PE coating
Amount at 10 mm x 70 m	10
Total length	700 m
Tested pressure	45 bar

Condenser & subcooler / Heating	
Type	Plate heat exchanger
Material	Stainless steel / Cu soldered
Flow amount	2,4 m <sup>3</sup> /h
Pressure loss	2,1 mWs
Temperature difference	5 K
Operating pressure*	0,46 bar
Tested pressure	45 bar

Refrigerant cycle	
Working fluid	R410a
Fill amount with 10 m split line	9,4 kg

Electric	
Voltage	400 V
Frequency	50 Hz
Time lag fuse	3 x 16 A
Max. compressor operating current	10 A
Starting current	64 A
Starting current with soft starter	42,6 A

Accoustic pressure level	
1 m distance	45 dB(A)

Connections, dimensions		
Heating outlet and inlet	1"	ET
Pressure line / Suction line	12/18	mm
Height x Width x Depth	1.625x604x674	mm
Weight	175	kg

Operating limit values		
Max. operating water pressure	10	bar
Max. operating refrigerant pressure	40	bar
Max. heat outlet temperature	62	°C

<sup>1)</sup> Performance specifications:

E = Ground temperature in °C

W = Heating water temperature in °C

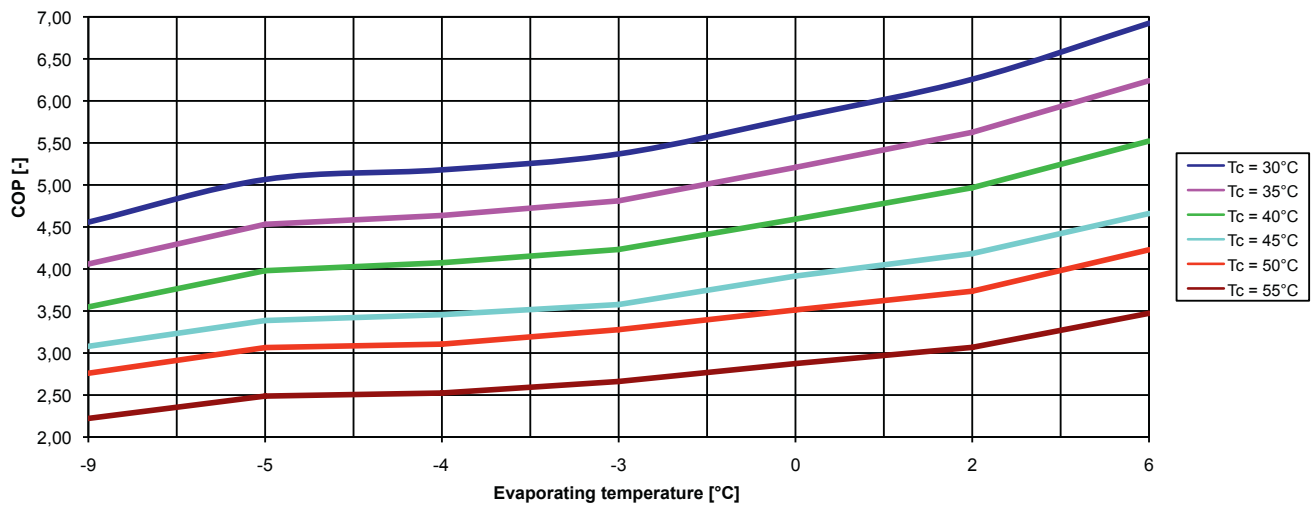
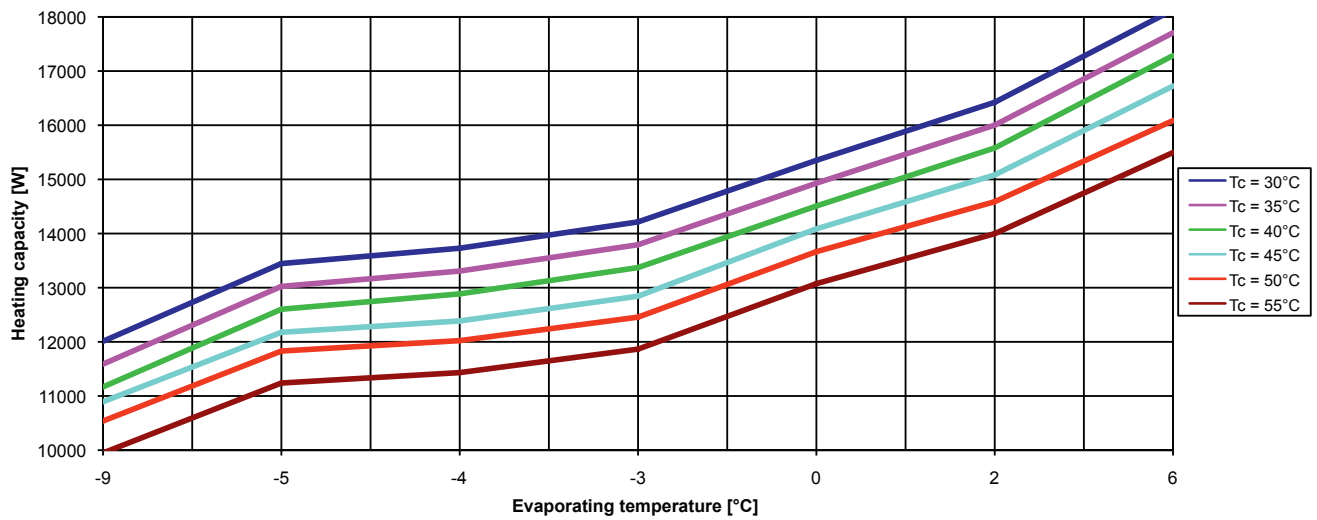
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0,25 kW/person are to be calculated to the heating load for DHW preparation.

Tolerance results of EN12900 are valid for the above mentioned performance data.

# TECHNICAL DATA SHEET HP12E-K-BC

Ground source heat pump with surface collector | Basic Comfort Series



EN12900 tolerance results are valid for the above mentioned performance data.  
All performance data is according to EN15879-1.

# TECHNICAL DATA SHEET HPP14E-K-BC

Ground source heat pump with surface collector | Basic Comfort Series

Performance data <sup>1)</sup> Δ 10 K		
	E4W35	E4W50
Heating capacity	19,10 kW	16,89 kW
Cooling capacity	15,62 kW	12,25 kW
Input	3,49 kW	4,64 kW
COP	5,48	3,64

Performance data <sup>1)</sup> EN15879-1 Δ 5 K		
	E4W35	E4W50
Heating capacity	18,66 kW	16,60 kW
Cooling capacity	15,07 kW	11,82 kW
Input	3,59 kW	4,78 kW
COP	5,20	3,47

Compressor	
Type	Scroll
Speed RPM	2900 min <sup>-1</sup>
Max. input power	5,9 kW
Stall current	74 A
Oil amount	1,7 l

Evaporator (surface collector) / Energy source	
Type	Tube evaporator
Material	Cu with PE coating
Amount at 10 mm x 70 m	12
Total length	840 m
Tested pressure	45 bar

Condenser & subcooler / Heating	
Type	Plate heat exchanger
Material	Stainless steel / Cu soldered
Flow amount	3,2 m <sup>3</sup> /h
Pressure loss	2,6 mWs
Temperature difference	5 K
Operating pressure*	0,38 bar
Tested pressure	45 bar

Refrigerant cycle	
Working fluid	R410a
Fill amount with 10 m split line	10,4 kg

Electric	
Voltage	400 V
Frequency	50 Hz
Time lag fuse	3 x 16 A
Max. compressor operating current	12,2 A
Starting current	74 A
Starting current with soft starter	49,3 A

Acoustic pressure level	
1 m distance	46 dB(A)

Connections, dimensions		
Heating outlet and inlet	1"	ET
Pressure line / Suction line	12/18	mm
Height x Width x Depth	1.625x604x674	mm
Weight	175	kg

Operating limit values		
Max. operating water pressure	10	bar
Max. operating refrigerant pressure	40	bar
Max. heat outlet temperature	62	°C

<sup>1)</sup> Performance specifications:

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W = Heating water temperature in °C

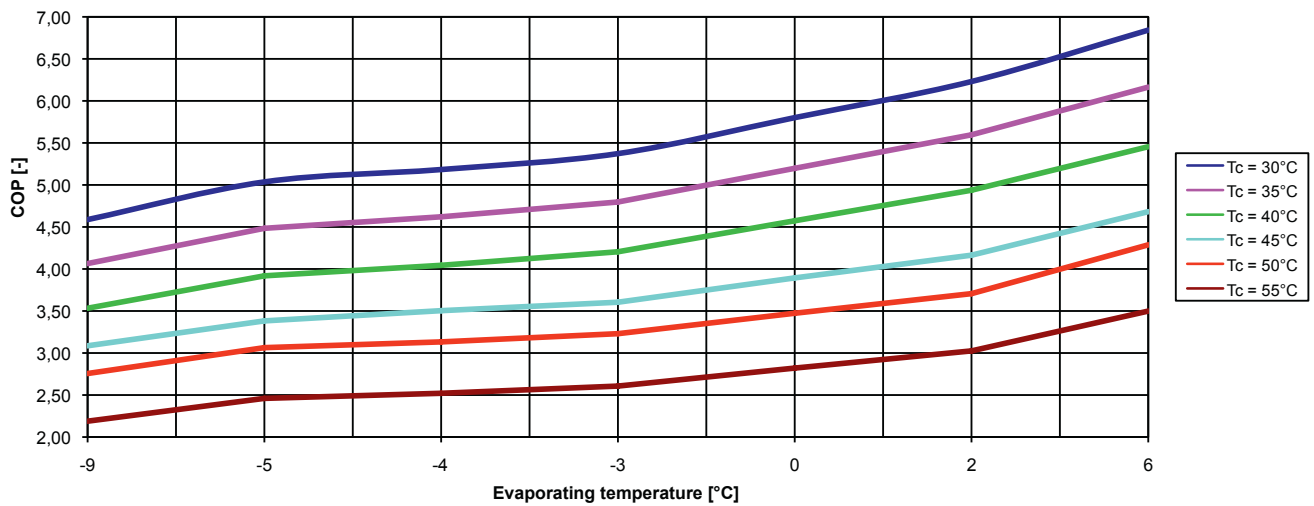
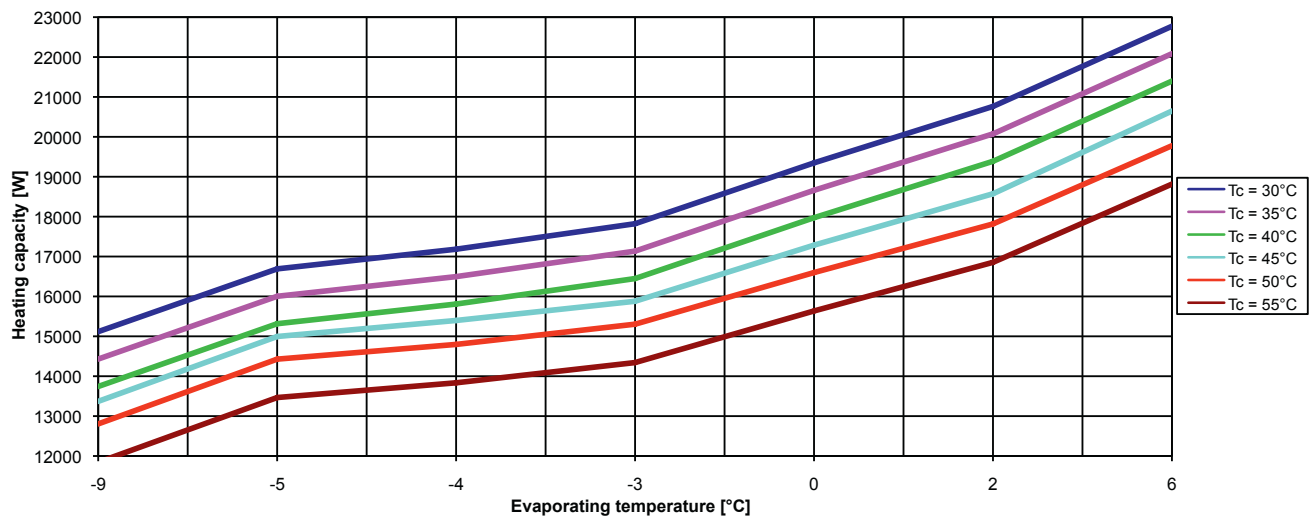
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# TECHNICAL DATA SHEET HPP14E-K-BC

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