



Heat pump



BW 08

WAMAK BW 08

Product description

Compact heat pump for heating and domestic hot water with passive cooling control. Short closed refrigerant circuit with silent scroll compressor contributes to long-term stable operation.

Use for single-family houses and smaller buildings with a heat output requirement of up to 20 kW. The COMFORT range includes robust heat pump internal refrigerant circuit parts as well as all the measuring, distribution and control elements required by today's modern climate technology in single-family houses.

As a primary source, the thermal energy of the sun accumulated in the ground through a horizontal collector or geothermal energy through a deep borehole is used. In the collector or borehole, an antifreeze flows which takes the energy of the earth at a low temperature and the heat pump raises this temperature to a temperature usable for heating or hot water.

Product features

- Scroll compressor
- Electronic expansion valve
- Compressor soft starter
- High pressure switch
- Low pressure sensor - analogue
- Flow sensor consumer - analogue
- ECM speed circulator - condenser
- Mixed heating/cooling circuit control
- DHW switching control
- Outdoor temperature sensor
- Buffer temperature sensor
- Modbus connection - (with accessory)
- Sylomer pads under compressor unit
- Asymmetric plate heat exchanger
- Phase and rotation control
- High pressure sensor - analogue
- Flow switch consumer - on/off - (with accessory)
- Flow switch source - on/off - (with accessory)
- ECM speed circulator - evaporator
- Direct heating/cooling circuit control
- DHW circulation control
- DHW temperature sensor
- Cascade control - (with accessory)
- Solid frame structure

Basic performance data - WAMAK BW 08

Heating - EN 14511		
Heating capacity [kW]	B0 / W35 (max)	7.4
	B0 / W35 (min)	7.4
	B0 / W34	7.5
Electrical power input [kW]	B0 / W35 (max)	1.8
	B0 / W35 (min)	1.8
	B0 / W34	1.7
Heating efficiency faktor [COP]	B0 / W35 (max)	4.22
	B0 / W35 (min)	4.22
	B0 / W34	4.35
Seasonal space heating energy efficiency - SCOP EN 14825		
Average Climate / Low Temperature [35 °C]	SCOP	4.97
	η [%]	198.7
	Label	A+++
	Qhe [kWh]	15288.4
	Pdesignh [kW]	7.4
	Tbivalent [°C]	-10
Cooling		
Cooling capacity - [kW]	A35 / W23-18	7.6
	A25 / W23-18	8.7
	A35 / W12-7	7.6
	A25 / W12-7	7.6
Seasonal space cooling energy efficiency - SEER EN 14825		
[W 23 / 18 °C]	SEER	5.48
	Qce [kWh]	3120.0
	η_c [%]	219.2
Sound EN 12102		
Acoustic power - Lw	dB(A)	44
Acoustic pressure - Lp	1 m dB(A)	36
	5 m dB(A)	22
	10 m dB(A)	16
Mechanical and operational information		
Compressor type (3~ 400/50)	SCROLL / 1 /	On/Off
Refrigerant	R410A (GWP - 2088)	0.9 kg
Operating limit temperatures heating - (min / max) [°C]		25 / 65
Operating limit temperatures source - (min / max) [°C]		-10 (7) / 30
Weight		110 kg

Main technical data - WAMAK BW 08

Enclosure type			SK600			Heat energy rejection side data			
Basic dimensions	Height [mm]	730	Operating limit temperatures heating	MAX [°C]	65	for more see operating limits diagram	Condenser	Port size	1 "
	Width [mm]	650		MIN [°C]	25			Type	BPHE
	Length [mm]	630		Count	1			Material	AISI 316
Weight [kg]	110		Maximal operating pressure - refrigerant [bar]	45		Volume flow - Water [m3/h]	1.29		
Colour	Gray		Maximal operating pressure - Water [bar]	3			Internal pressure drop - Water [kPa]	12	
Enclosure IP Class	IP20		Testing pressure [bar]	70			ECM speed circulator - condenser	UPM3 25-75	
Refrigeration cycle			Compressor			Heat transfer medium	Water		
Refrigerant	Type	Scroll	Number of stages	1			Volume flow - Water [m3/h]	1.29	
	On/Off		Power factor Cosφ	0.68				Internal pressure drop - Water [kPa]	12
	Winding resistance	3.50 Ohm	Volme	0.9 kg		ECM speed circulator - condenser		UPM3 25-75	
			GWP	2088		Flow sensor consumer - analogue	0..10V		
			Safety class	A1		Temperature difference @ 35°C (nom)	5 K		
Refrigeration oil type	POE RL32-3MAF		Oil volume	0.8 L		@ 55°C	8 K		
Maximal pressure - refrigerant [bar]	45		PED class	1		@ 65°C	10 K		
						Renewable energy extraction side data			
EVI - vapour injection with economizer						Operating limit temperatures source	MIN [°C]	-10 (7)	
Electrical connection data							MAX [°C]	30	
Line voltage [#~ V/Hz]	3~ 400/50					for more see operating limits diagram			
Current	nominal [A]	3.26	Evaporator			Port size	1 "		
	maximal [A]	6.20				Type	BPHE		
	starting [A]	8.8				Count	1		
Softstart	MCI 12					Material	AISI 316		
Main safety	C16					Maximal operating pressure - refrigerant [bar]	28		
Control System						Heat transfer medium	Ethylenglykol		
Main controller	SIEMENS	RVS 21 AVS 55.199				Brine proportion [%]	29		
Extension module	AVS75.391	AVS75.391	AVS75.3xx			Antifreeze to [°C]	-15		
						Maximal operating pressure - Ethylenglykol [bar]	3		
Bus Clip-In		LPB OCI346	Modbus OCI352			Volume flow - Ethylenglykol [m3/h]	1.72		
Online connection		Web server OZW672	ToSyMo			Internal pressure drop - Ethylenglykol [kPa]	12		
						Temperature difference - Ethylenglykol	3 K		
						ECM speed circulator - evaporator	UPM3 25-75		

*** with accessory

WAMAK BW 08

ErP (EU) No 811/2013: Technical parameters for heat pump space heaters

Model	BW 08
Air-to-water heat pump	no
Brine-to-water heat pump	yes
Water-to-water heat pump	no
Low-temperature heat pump	no
Equipped with a supplementary heater	no
Heat pump combination heater	no
Temperature application	low (35°C - 30°C)
Climate conditions	average

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output at Tdesignh	Prated	7.4	kW	Seasonal space heating energy efficiency	η_s	198.7	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	7.5	kW	Tj = -7 °C	COPd	4.35	-
Tj = +2 °C	Pdh	7.6	kW	Tj = +2 °C	COPd	4.9	-
Tj = +7 °C	Pdh	7.7	kW	Tj = +7 °C	COPd	5.4	-
Tj = +12 °C	Pdh	7.8	kW	Tj = +12 °C	COPd	6.1	-
Tj = bivalent temperature	Pdh	7.4	kW	Tj = bivalent temperature	COPd	4.2	-
Tj = operation limit temperature	Pdh	---	kW	Tj = operation limit temperature	COPd	---	-
Bivalent temperature	Tbiv	-10	°C	Tj = operation limit temperature	TOL	---	°C
Power consumption in modes other than active mode				Heating water operating limit temperature	WTOL	65	°C
Off mode	Poff	0.010	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	1.4	kW
Standby mode	Psb	0.010	kW	Type of energy input	electricity		
Crankcase heater mode	Pck	0.000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control		fixed					
Sound power level							
indoors	Lwa	44	dB				
outdoors	Lwa	---	dB				
Annual energy consumption	Q _{HE}	15288.4	kWh				

Contact details: WAMAK, s.r.o., Orovnica 252, 96652, Orovnica, Slovensko, info@wamak.sk

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ErP (EU) No 811/2013: Technical parameters for heat pump space heaters

Model	BW 08
Air-to-water heat pump	no
Brine-to-water heat pump	yes
Water-to-water heat pump	no
Low-temperature heat pump	no
Equipped with a supplementary heater	no
Heat pump combination heater	no
Temperature application	middle (55°C - 47°C)
Climate conditions	average

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output at Tdesignh	Prated	6.8	kW	Seasonal space heating energy efficiency	η_s	149.7	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	7.0	kW	Tj = -7 °C	COPd	2.92	-
Tj = +2 °C	Pdh	7.5	kW	Tj = +2 °C	COPd	3.8	-
Tj = +7 °C	Pdh	7.6	kW	Tj = +7 °C	COPd	4.4	-
Tj = +12 °C	Pdh	7.7	kW	Tj = +12 °C	COPd	5.0	-
Tj = bivalent temperature	Pdh	6.8	kW	Tj = bivalent temperature	COPd	2.5	-
Tj = operation limit temperature	Pdh	---	kW	Tj = operation limit temperature	COPd	---	-
Bivalent temperature	Tbiv	-10	°C	Tj = operation limit temperature	TOL	---	°C
Power consumption in modes other than active mode				Heating water operating limit temperature	WTOL	65	°C
Off mode	Poff	0.010	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	1.4	kW
Standby mode	Psb	0.010	kW	Type of energy input	electricity		
Crankcase heater mode	Pck	0.000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors	-	---	m ³ /h
Capacity control	fixed			For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1.72	m ³ /h
Sound power level							
indoors	Lwa	44	dB				
outdoors	Lwa	---	dB				
Annual energy consumption	Q _{HE}	14048.8	kWh				

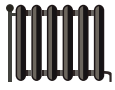
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WAMAK

BW 08



55 °C

35 °C



44 dB

--- dB

8 8
 7 8
 7 8
 kW kW

2019

811/2013

BW 08

ErP Data

	55 °C	35 °C
Energy class	A++	A+++
η [%]	149.7	198.7
P_{rated} [kW]	7	8
Q_{HE} [kWh/y]	14049	15289
SCOP [-]	3.74	4.97
$T_{bivalent}$ [°C]	-10	-10

CONTROLLER



+ QAA55/75 class VII 3.5% ↓
 - QAA55/75 class III 1.5% ↓

Heating performance data

Version: v202223.006-BW-WW

Source - Brine [0°C] / Low Temperature [35°C]

ZH06K1P-TFM_R410A_1_BWW

Operating conditions		Qh	P	COP
1	B0 / W30-35	7.4	1.8	4.22
2	B0 / W30-35 (MIN)	7.4	1.8	4.22
A	B0 / Wxx-34	7.5	1.7	4.35
B	B0 / Wxx-30	7.6	1.5	4.91
C	B0 / Wxx-27	7.7	1.4	5.43
D	B0 / Wxx-24	7.8	1.3	6.07
E	B0 / Wxx-35	7.4	1.8	4.22
F	B0 / Wxx-35	7.4	1.8	4.22

SCOP DATA EN 14825:2018	
Source - Brine [0°C] / Low Temperature [35°C]	
SCOPon	5.03
SCOPnet	5.03
SCOP	4.97
η [%]	198.70
Label	A+++
Qh [kWh]	15288
Pdesignh [kW]	7.4
Tbivalent [°C]	-10

Source - Brine [0°C] / Medium Temperature [55°C]

Operating conditions		Qh	P	COP
1	B0 / W47-55	6.8	2.7	2.50
2	B0 / W47-55 (MIN)	6.8	2.7	2.50
A	B0 / Wxx-52	7.0	2.5	2.92
B	B0 / Wxx-42	7.5	2.0	3.85
C	B0 / Wxx-36	7.6	1.7	4.35
D	B0 / Wxx-30	7.7	1.5	4.99
E	B0 / Wxx-55	6.8	2.7	2.50
F	B0 / Wxx-54	7.0	2.6	2.74

SCOP DATA EN 14825:2018	
Source - Brine [0°C] / Medium Temperature [55°C]	
SCOPon	3.78
SCOPnet	3.78
SCOP	3.74
η [%]	149.69
Label	A++
Qh [kWh]	14049
Pdesignh [kW]	6.8
Tbivalent [°C]	-10

Source - Water [10°C] / Low Temperature [35°C]

Operating conditions		Qh	P	COP
1	W10 / W30-35	10.1	1.7	5.84
2	W10 / W30-35 (MIN)	10.1	1.7	5.84
A	W10 / Wxx-34	10.1	1.7	6.03
B	W10 / Wxx-30	10.3	1.5	6.93
C	W10 / Wxx-27	10.5	1.4	7.77
D	W10 / Wxx-24	10.7	1.2	8.84
E	W10 / Wxx-35	10.1	1.7	5.84
F	W10 / Wxx-35	10.1	1.7	5.84

SCOP DATA EN 14825:2018	
Source - Water [10°C] / Low Temperature [35°C]	
SCOPon	7.12
SCOPnet	7.12
SCOP	7.03
η [%]	281.03
Label	A+++
Qh [kWh]	20867
Pdesignh [kW]	10.1
Tbivalent [°C]	-10.00

Source - Water [10°C] / Medium Temperature [55°C]

Operating conditions		Qh	P	COP
1	W10 / W47-55	8.9	2.7	3.23
2	W10 / W47-55 (MIN)	8.9	2.7	3.23
A	W10 / Wxx-52	9.2	2.5	3.68
B	W10 / Wxx-42	9.9	2.0	5.07
C	W10 / Wxx-36	10.2	1.7	6.03
D	W10 / Wxx-30	10.5	1.5	7.05
E	W10 / Wxx-55	8.9	2.7	3.23
F	W10 / Wxx-55	8.9	2.7	3.23

SCOP DATA EN 14825:2018	
Source - Water [10°C] / Medium Temperature [55°C]	
SCOPon	4.99
SCOPnet	4.99
SCOP	4.94
η [%]	197.68
Label	A+++
Qh [kWh]	18387
Pdesignh [kW]	8.9
Tbivalent [°C]	-10.00

Low temperature cooling W 12 / 7°C

Operating conditions		Qc	P	EER
A	W30-35 / W12-7	5.6	1.9	2.95
B	W26-xx / W12-7	5.9	1.7	3.41
C	W22-xx / W12-7	6.2	1.5	3.98
D	W18-xx / W12-7	6.3	1.5	4.31

SEER DATA EN 14825:2018 [W 12 / 7°C]	
SEERon	3.81
SEER	3.78
Qc [kWh]	3120
η [%]	151.07

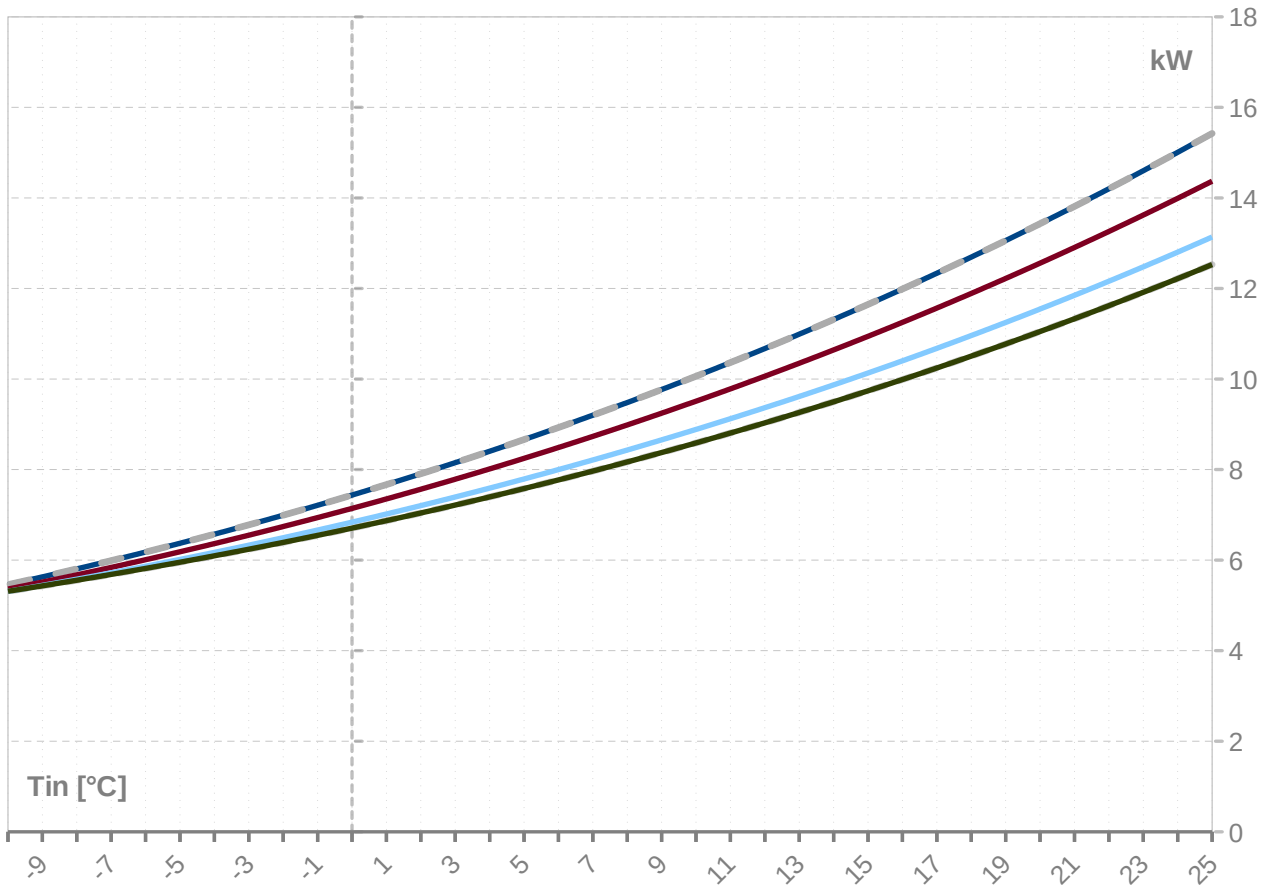
Radiant cooling W 23 / 18°C

Operating conditions		Qc	P	EER
A	W50-xx / W23-18	6.0	2.9	2.05
B	W40-xx / W23-18	7.1	2.4	3.02
C	W30-35 / W23-18	8.2	1.9	4.31
D	W26-xx / W23-18	8.6	1.7	4.98

SEER DATA EN 14825:2018 [W 23 / 18°C]	
SEERon	5.54
SEER	5.48
Qc [kWh]	3120
η [%]	219.18

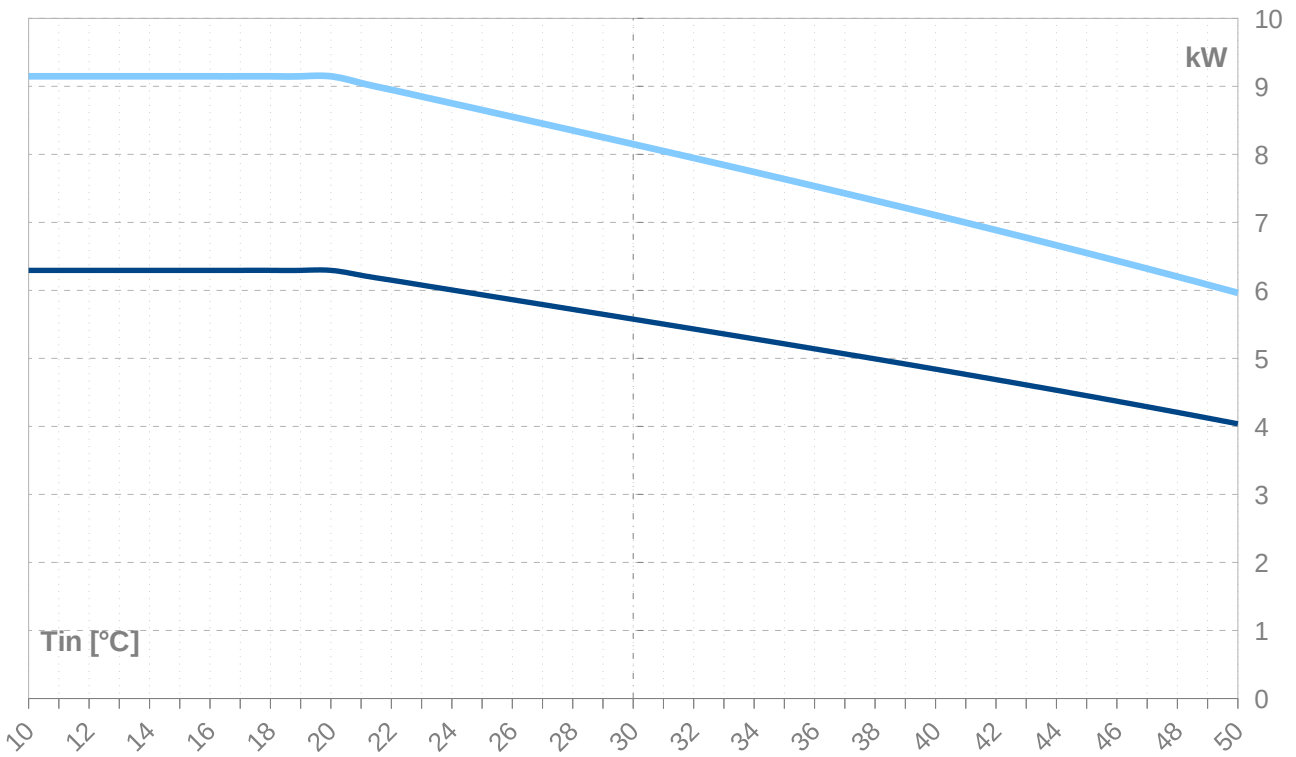
Performance lines - heating

— Qh-nom-35
 - - - Qh-min-35
 - - - - - Qh-max-60
 — Qh-nom-45
 — Qh-nom-55
— Qh-nom-60



Performance lines - cooling

— Qc-nom-12-7
 — Qc-nom-23-18



Th -OU	35										
[°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin min [kW]	Pin max [kW]	COP nom kW / kW	Qc nom [kW]	Qc min [kW]	Qc max [kW]	I nom [A]
25	15.4	15.4	15.4	1.6	1.6	1.6	9.94	14.0	14.0	14.0	3.0
24	15.0	15.0	15.0	1.6	1.6	1.6	9.57	13.5	13.5	13.5	3.0
23	14.6	14.6	14.6	1.6	1.6	1.6	9.22	13.1	13.1	13.1	3.1
22	14.2	14.2	14.2	1.6	1.6	1.6	8.88	12.7	12.7	12.7	3.1
21	13.8	13.8	13.8	1.6	1.6	1.6	8.56	12.3	12.3	12.3	3.1
20	13.4	13.4	13.4	1.6	1.6	1.6	8.25	11.9	11.9	11.9	3.1
19	13.1	13.1	13.1	1.6	1.6	1.6	7.96	11.5	11.5	11.5	3.2
18	12.7	12.7	12.7	1.7	1.7	1.7	7.68	11.2	11.2	11.2	3.2
17	12.3	12.3	12.3	1.7	1.7	1.7	7.42	10.8	10.8	10.8	3.2
16	12.0	12.0	12.0	1.7	1.7	1.7	7.16	10.4	10.4	10.4	3.2
15	11.6	11.6	11.6	1.7	1.7	1.7	6.92	10.1	10.1	10.1	3.2
14	11.3	11.3	11.3	1.7	1.7	1.7	6.68	9.7	9.7	9.7	3.2
13	11.0	11.0	11.0	1.7	1.7	1.7	6.46	9.4	9.4	9.4	3.3
12	10.7	10.7	10.7	1.7	1.7	1.7	6.24	9.1	9.1	9.1	3.3
11	10.4	10.4	10.4	1.7	1.7	1.7	6.03	8.8	8.8	8.8	3.3
10	10.1	10.1	10.1	1.7	1.7	1.7	5.84	8.5	8.5	8.5	3.3
9	9.8	9.8	9.8	1.7	1.7	1.7	5.64	8.2	8.2	8.2	3.3
8	9.5	9.5	9.5	1.7	1.7	1.7	5.46	7.9	7.9	7.9	3.3
7	9.2	9.2	9.2	1.7	1.7	1.7	5.29	7.6	7.6	7.6	3.3
6	8.9	8.9	8.9	1.7	1.7	1.7	5.12	7.3	7.3	7.3	3.3
5	8.7	8.7	8.7	1.7	1.7	1.7	4.95	7.0	7.0	7.0	3.3
4	8.4	8.4	8.4	1.8	1.8	1.8	4.80	6.8	6.8	6.8	3.3
3	8.2	8.2	8.2	1.8	1.8	1.8	4.64	6.5	6.5	6.5	3.3
2	7.9	7.9	7.9	1.8	1.8	1.8	4.50	6.3	6.3	6.3	3.3
1	7.7	7.7	7.7	1.8	1.8	1.8	4.36	6.0	6.0	6.0	3.3
0	7.4	7.4	7.4	1.8	1.8	1.8	4.22	5.8	5.8	5.8	3.3
-1	7.2	7.2	7.2	1.8	1.8	1.8	4.09	5.6	5.6	5.6	3.3
-2	7.0	7.0	7.0	1.8	1.8	1.8	3.97	5.3	5.3	5.3	3.3
-3	6.8	6.8	6.8	1.8	1.8	1.8	3.85	5.1	5.1	5.1	3.3
-4	6.6	6.6	6.6	1.8	1.8	1.8	3.73	4.9	4.9	4.9	3.3
-5	6.4	6.4	6.4	1.8	1.8	1.8	3.62	4.7	4.7	4.7	3.3
-6	6.2	6.2	6.2	1.8	1.8	1.8	3.51	4.5	4.5	4.5	3.3
-7	6.0	6.0	6.0	1.8	1.8	1.8	3.41	4.3	4.3	4.3	3.3
-8	5.8	5.8	5.8	1.8	1.8	1.8	3.31	4.2	4.2	4.2	3.3
-9	5.6	5.6	5.6	1.8	1.8	1.8	3.21	4.0	4.0	4.0	3.3
-10	5.5	5.5	5.5	1.7	1.7	1.7	3.12	3.8	3.8	3.8	3.3
-11	5.3	5.3	5.3	1.7	1.7	1.7	3.03	3.7	3.7	3.7	3.3
-12	5.1	5.1	5.1	1.7	1.7	1.7	2.94	3.5	3.5	3.5	3.3
-13	5.0	5.0	5.0	1.7	1.7	1.7	2.86	3.4	3.4	3.4	3.3
-14	4.8	4.8	4.8	1.7	1.7	1.7	2.78	3.2	3.2	3.2	3.2
-15	4.7	4.7	4.7	1.7	1.7	1.7	2.70	3.1	3.1	3.1	3.2

-- attention: operating limits not reflected in performance table

ZH06K1P-TFM_R410A_1_BWW

Th -OU	45										
[°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin min [kW]	Pin max [kW]	COP nom kW / kW	Qc nom [kW]	Qc min [kW]	Qc max [kW]	I nom [A]
25	14.4	14.4	14.4	2.1	2.1	2.1	7.01	12.5	12.5	12.5	3.7
24	14.0	14.0	14.0	2.1	2.1	2.1	6.78	12.1	12.1	12.1	3.7
23	13.6	13.6	13.6	2.1	2.1	2.1	6.56	11.7	11.7	11.7	3.7
22	13.3	13.3	13.3	2.1	2.1	2.1	6.35	11.3	11.3	11.3	3.7
21	12.9	12.9	12.9	2.1	2.1	2.1	6.15	10.9	10.9	10.9	3.7
20	12.6	12.6	12.6	2.1	2.1	2.1	5.96	10.6	10.6	10.6	3.8
19	12.2	12.2	12.2	2.1	2.1	2.1	5.77	10.2	10.2	10.2	3.8
18	11.9	11.9	11.9	2.1	2.1	2.1	5.59	9.9	9.9	9.9	3.8
17	11.6	11.6	11.6	2.1	2.1	2.1	5.42	9.6	9.6	9.6	3.8
16	11.3	11.3	11.3	2.1	2.1	2.1	5.25	9.3	9.3	9.3	3.8
15	10.9	10.9	10.9	2.1	2.1	2.1	5.09	8.9	8.9	8.9	3.8
14	10.6	10.6	10.6	2.2	2.2	2.2	4.94	8.6	8.6	8.6	3.8
13	10.3	10.3	10.3	2.2	2.2	2.2	4.79	8.3	8.3	8.3	3.8
12	10.1	10.1	10.1	2.2	2.2	2.2	4.64	8.0	8.0	8.0	3.8
11	9.8	9.8	9.8	2.2	2.2	2.2	4.51	7.8	7.8	7.8	3.8
10	9.5	9.5	9.5	2.2	2.2	2.2	4.37	7.5	7.5	7.5	3.8
9	9.2	9.2	9.2	2.2	2.2	2.2	4.25	7.2	7.2	7.2	3.8
8	9.0	9.0	9.0	2.2	2.2	2.2	4.12	6.9	6.9	6.9	3.8
7	8.7	8.7	8.7	2.2	2.2	2.2	4.00	6.7	6.7	6.7	3.8
6	8.5	8.5	8.5	2.2	2.2	2.2	3.89	6.4	6.4	6.4	3.8
5	8.2	8.2	8.2	2.2	2.2	2.2	3.77	6.2	6.2	6.2	3.8
4	8.0	8.0	8.0	2.2	2.2	2.2	3.67	6.0	6.0	6.0	3.8
3	7.8	7.8	7.8	2.2	2.2	2.2	3.56	5.7	5.7	5.7	3.8
2	7.6	7.6	7.6	2.2	2.2	2.2	3.46	5.5	5.5	5.5	3.8
1	7.4	7.4	7.4	2.2	2.2	2.2	3.37	5.3	5.3	5.3	3.8
0	7.1	7.1	7.1	2.2	2.2	2.2	3.27	5.1	5.1	5.1	3.8
-1	6.9	6.9	6.9	2.2	2.2	2.2	3.18	4.9	4.9	4.9	3.8
-2	6.7	6.7	6.7	2.2	2.2	2.2	3.10	4.7	4.7	4.7	3.8
-3	6.5	6.5	6.5	2.2	2.2	2.2	3.01	4.5	4.5	4.5	3.8
-4	6.4	6.4	6.4	2.2	2.2	2.2	2.93	4.3	4.3	4.3	3.8
-5	6.2	6.2	6.2	2.2	2.2	2.2	2.85	4.2	4.2	4.2	3.8
-6	6.0	6.0	6.0	2.2	2.2	2.2	2.78	4.0	4.0	4.0	3.8
-7	5.8	5.8	5.8	2.2	2.2	2.2	2.70	3.8	3.8	3.8	3.8
-8	5.7	5.7	5.7	2.2	2.2	2.2	2.63	3.7	3.7	3.7	3.8
-9	5.5	5.5	5.5	2.2	2.2	2.2	2.56	3.5	3.5	3.5	3.8
-10	5.4	5.4	5.4	2.1	2.1	2.1	2.50	3.4	3.4	3.4	3.8
-11	5.2	5.2	5.2	2.1	2.1	2.1	2.43	3.2	3.2	3.2	3.8
-12	5.1	5.1	5.1	2.1	2.1	2.1	2.37	3.1	3.1	3.1	3.8
-13	4.9	4.9	4.9	2.1	2.1	2.1	2.31	2.9	2.9	2.9	3.8
-14	4.8	4.8	4.8	2.1	2.1	2.1	2.26	2.8	2.8	2.8	3.8
-15	4.7	4.7	4.7	2.1	2.1	2.1	2.20	2.7	2.7	2.7	3.8

-- attention: operating limits not reflected in performance table

Th -OU	55										
[°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin min [kW]	Pin max [kW]	COP nom kW / kW	Qc nom [kW]	Qc min [kW]	Qc max [kW]	I nom [A]
25	13.1	13.1	13.1	2.7	2.7	2.7	4.92	10.6	10.6	10.6	4.5
24	12.8	12.8	12.8	2.7	2.7	2.7	4.78	10.3	10.3	10.3	4.5
23	12.5	12.5	12.5	2.7	2.7	2.7	4.64	10.0	10.0	10.0	4.5
22	12.2	12.2	12.2	2.7	2.7	2.7	4.51	9.6	9.6	9.6	4.5
21	11.8	11.8	11.8	2.7	2.7	2.7	4.38	9.3	9.3	9.3	4.5
20	11.5	11.5	11.5	2.7	2.7	2.7	4.26	9.0	9.0	9.0	4.5
19	11.2	11.2	11.2	2.7	2.7	2.7	4.14	8.7	8.7	8.7	4.5
18	11.0	11.0	11.0	2.7	2.7	2.7	4.02	8.4	8.4	8.4	4.5
17	10.7	10.7	10.7	2.7	2.7	2.7	3.91	8.1	8.1	8.1	4.6
16	10.4	10.4	10.4	2.7	2.7	2.7	3.81	7.8	7.8	7.8	4.6
15	10.1	10.1	10.1	2.7	2.7	2.7	3.70	7.6	7.6	7.6	4.6
14	9.9	9.9	9.9	2.7	2.7	2.7	3.60	7.3	7.3	7.3	4.6
13	9.6	9.6	9.6	2.7	2.7	2.7	3.50	7.1	7.1	7.1	4.6
12	9.4	9.4	9.4	2.7	2.7	2.7	3.41	6.8	6.8	6.8	4.6
11	9.1	9.1	9.1	2.7	2.7	2.7	3.32	6.6	6.6	6.6	4.6
10	8.9	8.9	8.9	2.7	2.7	2.7	3.23	6.3	6.3	6.3	4.6
9	8.7	8.7	8.7	2.7	2.7	2.7	3.15	6.1	6.1	6.1	4.6
8	8.4	8.4	8.4	2.7	2.7	2.7	3.07	5.9	5.9	5.9	4.6
7	8.2	8.2	8.2	2.7	2.7	2.7	2.99	5.6	5.6	5.6	4.6
6	8.0	8.0	8.0	2.7	2.7	2.7	2.91	5.4	5.4	5.4	4.6
5	7.8	7.8	7.8	2.7	2.7	2.7	2.84	5.2	5.2	5.2	4.6
4	7.6	7.6	7.6	2.7	2.7	2.7	2.77	5.0	5.0	5.0	4.5
3	7.4	7.4	7.4	2.7	2.7	2.7	2.70	4.8	4.8	4.8	4.5
2	7.2	7.2	7.2	2.7	2.7	2.7	2.63	4.6	4.6	4.6	4.5
1	7.0	7.0	7.0	2.7	2.7	2.7	2.57	4.5	4.5	4.5	4.5
0	6.8	6.8	6.8	2.7	2.7	2.7	2.50	4.3	4.3	4.3	4.5
-1	6.7	6.7	6.7	2.7	2.7	2.7	2.44	4.1	4.1	4.1	4.5
-2	6.5	6.5	6.5	2.7	2.7	2.7	2.39	4.0	4.0	4.0	4.5
-3	6.3	6.3	6.3	2.7	2.7	2.7	2.33	3.8	3.8	3.8	4.5
-4	6.2	6.2	6.2	2.7	2.7	2.7	2.28	3.6	3.6	3.6	4.5
-5	6.0	6.0	6.0	2.7	2.7	2.7	2.22	3.5	3.5	3.5	4.5
-6	5.9	5.9	5.9	2.7	2.7	2.7	2.17	3.3	3.3	3.3	4.5
-7	5.7	5.7	5.7	2.7	2.7	2.7	2.12	3.2	3.2	3.2	4.5
-8	5.6	5.6	5.6	2.7	2.7	2.7	2.08	3.1	3.1	3.1	4.5
-9	5.4	5.4	5.4	2.7	2.7	2.7	2.03	2.9	2.9	2.9	4.5
-10	5.3	5.3	5.3	2.7	2.7	2.7	1.99	2.8	2.8	2.8	4.5
-11	5.2	5.2	5.2	2.7	2.7	2.7	1.94	2.7	2.7	2.7	4.5
-12	5.1	5.1	5.1	2.7	2.7	2.7	1.90	2.6	2.6	2.6	4.5
-13	4.9	4.9	4.9	2.6	2.6	2.6	1.86	2.5	2.5	2.5	4.5
-14	4.8	4.8	4.8	2.6	2.6	2.6	1.83	2.4	2.4	2.4	4.5
-15	4.7	4.7	4.7	2.6	2.6	2.6	1.79	2.3	2.3	2.3	4.5

-- attention: operating limits not reflected in performance table

Th -OU	60 (T-max)										
[°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin min [kW]	Pin max [kW]	COP nom kW / kW	Qc nom [kW]	Qc min [kW]	Qc max [kW]	I nom [A]
25	12.5	12.5	12.5	3.0	3.0	3.0	4.16	9.7	9.7	9.7	4.9
24	12.2	12.2	12.2	3.0	3.0	3.0	4.05	9.4	9.4	9.4	4.9
23	11.9	11.9	11.9	3.0	3.0	3.0	3.94	9.1	9.1	9.1	4.9
22	11.6	11.6	11.6	3.0	3.0	3.0	3.83	8.8	8.8	8.8	4.9
21	11.3	11.3	11.3	3.0	3.0	3.0	3.73	8.5	8.5	8.5	4.9
20	11.0	11.0	11.0	3.0	3.0	3.0	3.63	8.2	8.2	8.2	4.9
19	10.8	10.8	10.8	3.1	3.1	3.1	3.53	7.9	7.9	7.9	4.9
18	10.5	10.5	10.5	3.1	3.1	3.1	3.44	7.7	7.7	7.7	4.9
17	10.2	10.2	10.2	3.1	3.1	3.1	3.35	7.4	7.4	7.4	4.9
16	10.0	10.0	10.0	3.1	3.1	3.1	3.26	7.1	7.1	7.1	5.0
15	9.7	9.7	9.7	3.1	3.1	3.1	3.18	6.9	6.9	6.9	5.0
14	9.5	9.5	9.5	3.1	3.1	3.1	3.10	6.6	6.6	6.6	5.0
13	9.3	9.3	9.3	3.1	3.1	3.1	3.02	6.4	6.4	6.4	5.0
12	9.0	9.0	9.0	3.1	3.1	3.1	2.94	6.2	6.2	6.2	5.0
11	8.8	8.8	8.8	3.1	3.1	3.1	2.87	5.9	5.9	5.9	5.0
10	8.6	8.6	8.6	3.1	3.1	3.1	2.80	5.7	5.7	5.7	5.0
9	8.4	8.4	8.4	3.1	3.1	3.1	2.73	5.5	5.5	5.5	5.0
8	8.2	8.2	8.2	3.1	3.1	3.1	2.66	5.3	5.3	5.3	5.0
7	8.0	8.0	8.0	3.1	3.1	3.1	2.60	5.1	5.1	5.1	5.0
6	7.8	7.8	7.8	3.1	3.1	3.1	2.54	4.9	4.9	4.9	4.9
5	7.6	7.6	7.6	3.1	3.1	3.1	2.48	4.7	4.7	4.7	4.9
4	7.4	7.4	7.4	3.1	3.1	3.1	2.42	4.5	4.5	4.5	4.9
3	7.2	7.2	7.2	3.1	3.1	3.1	2.36	4.4	4.4	4.4	4.9
2	7.0	7.0	7.0	3.1	3.1	3.1	2.31	4.2	4.2	4.2	4.9
1	6.9	6.9	6.9	3.0	3.0	3.0	2.25	4.0	4.0	4.0	4.9
0	6.7	6.7	6.7	3.0	3.0	3.0	2.20	3.9	3.9	3.9	4.9
-1	6.5	6.5	6.5	3.0	3.0	3.0	2.16	3.7	3.7	3.7	4.9
-2	6.4	6.4	6.4	3.0	3.0	3.0	2.11	3.6	3.6	3.6	4.9
-3	6.2	6.2	6.2	3.0	3.0	3.0	2.06	3.4	3.4	3.4	4.9
-4	6.1	6.1	6.1	3.0	3.0	3.0	2.02	3.3	3.3	3.3	4.9
-5	6.0	6.0	6.0	3.0	3.0	3.0	1.98	3.1	3.1	3.1	4.9
-6	5.8	5.8	5.8	3.0	3.0	3.0	1.93	3.0	3.0	3.0	4.9
-7	5.7	5.7	5.7	3.0	3.0	3.0	1.90	2.9	2.9	2.9	4.9
-8	5.6	5.6	5.6	3.0	3.0	3.0	1.86	2.8	2.8	2.8	4.9
-9	5.4	5.4	5.4	3.0	3.0	3.0	1.82	2.6	2.6	2.6	4.9
-10	5.3	5.3	5.3	3.0	3.0	3.0	1.78	2.5	2.5	2.5	4.9
-11	5.2	5.2	5.2	3.0	3.0	3.0	1.75	2.4	2.4	2.4	4.9
-12	5.1	5.1	5.1	3.0	3.0	3.0	1.72	2.3	2.3	2.3	5.0
-13	5.0	5.0	5.0	3.0	3.0	3.0	1.69	2.2	2.2	2.2	5.0
-14	4.9	4.9	4.9	2.9	2.9	2.9	1.66	2.1	2.1	2.1	5.0
-15	4.8	4.8	4.8	2.9	2.9	2.9	1.63	2.0	2.0	2.0	5.0

-- attention: operating limits not reflected in performance table

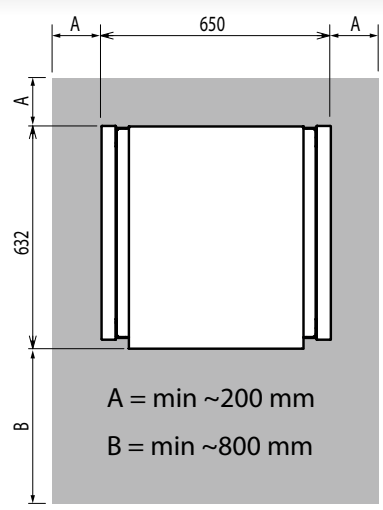
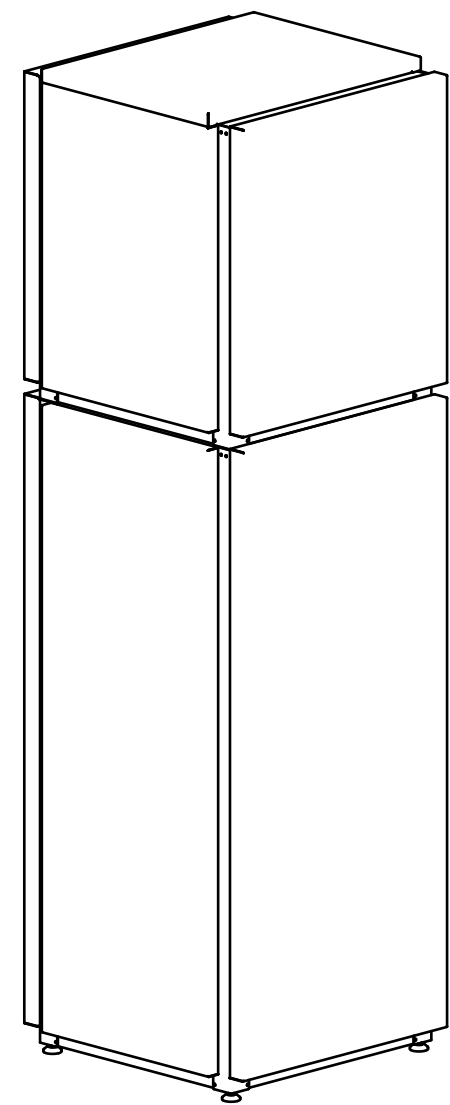
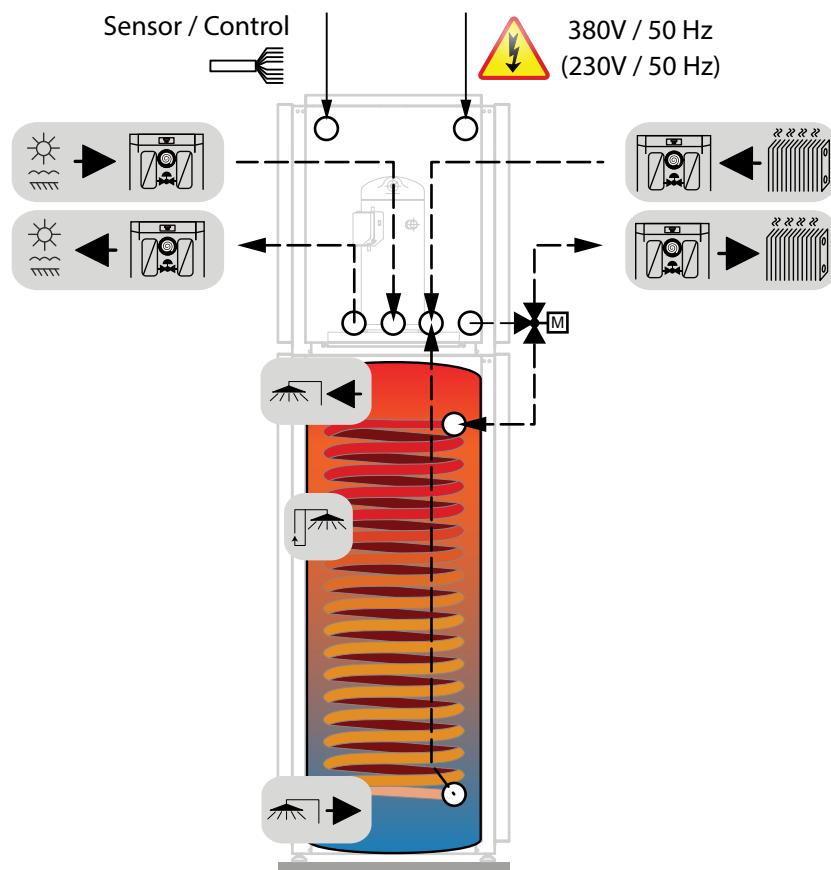
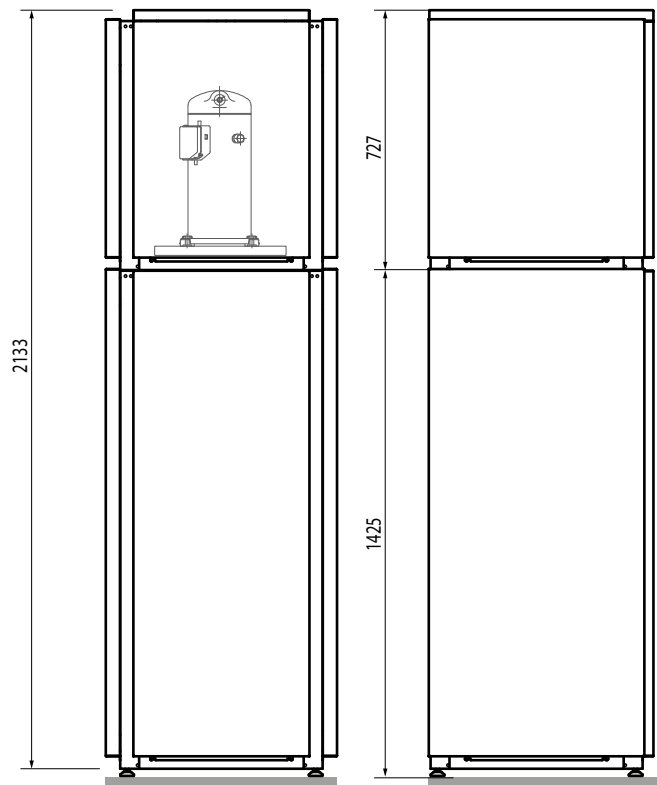
Tc -OU		W 12 / 7 °C										
[°C]	Qc nom [kW]	Qc min [kW]	Qc max [kW]	Pin nom [kW]	Pin min [kW]	Pin max [kW]	EER kW / kW	Qh nom [kW]	Qh min [kW]	Qh max [kW]	I nom [A]	
40	4.8	4.8	4.8	2.4	2.4	2.4	2.06	7.0	7.0	7.0	4.0	
39	4.9	4.9	4.9	2.3	2.3	2.3	2.14	7.1	7.1	7.1	4.0	
38	5.0	5.0	5.0	2.3	2.3	2.3	2.22	7.1	7.1	7.1	3.9	
37	5.1	5.1	5.1	2.2	2.2	2.2	2.30	7.1	7.1	7.1	3.8	
36	5.1	5.1	5.1	2.2	2.2	2.2	2.38	7.2	7.2	7.2	3.8	
35	5.2	5.2	5.2	2.1	2.1	2.1	2.47	7.2	7.2	7.2	3.7	
34	5.3	5.3	5.3	2.1	2.1	2.1	2.56	7.2	7.2	7.2	3.7	
33	5.4	5.4	5.4	2.0	2.0	2.0	2.65	7.2	7.2	7.2	3.6	
32	5.4	5.4	5.4	2.0	2.0	2.0	2.75	7.3	7.3	7.3	3.6	
31	5.5	5.5	5.5	1.9	1.9	1.9	2.85	7.3	7.3	7.3	3.5	
30	5.6	5.6	5.6	1.9	1.9	1.9	2.95	7.3	7.3	7.3	3.5	
29	5.6	5.6	5.6	1.8	1.8	1.8	3.06	7.4	7.4	7.4	3.4	
28	5.7	5.7	5.7	1.8	1.8	1.8	3.17	7.4	7.4	7.4	3.4	
27	5.8	5.8	5.8	1.8	1.8	1.8	3.29	7.4	7.4	7.4	3.3	
26	5.9	5.9	5.9	1.7	1.7	1.7	3.41	7.5	7.5	7.5	3.3	
25	5.9	5.9	5.9	1.7	1.7	1.7	3.54	7.5	7.5	7.5	3.2	
24	6.0	6.0	6.0	1.6	1.6	1.6	3.68	7.5	7.5	7.5	3.2	
23	6.1	6.1	6.1	1.6	1.6	1.6	3.83	7.6	7.6	7.6	3.1	
22	6.2	6.2	6.2	1.5	1.5	1.5	3.98	7.6	7.6	7.6	3.1	
21	6.2	6.2	6.2	1.5	1.5	1.5	4.14	7.6	7.6	7.6	3.0	
20	6.3	6.3	6.3	1.5	1.5	1.5	4.31	7.7	7.7	7.7	3.0	

Tc [°C]		W 23 / 18 °C										
[°C]	Qc nom [kW]	Qc min [kW]	Qc max [kW]	Pin nom [kW]	Pin min [kW]	Pin max [kW]	EER kW / kW	Qh nom [kW]	Qh min [kW]	Qh max [kW]	I nom [A]	
0												
40	7.1	7.1	7.1	2.4	2.4	2.4	3.02	9.3	9.3	8.7	4.1	
39	7.2	7.2	7.2	2.3	2.3	2.3	3.13	9.4	9.4	8.8	4.0	
38	7.3	7.3	7.3	2.3	2.3	2.3	3.25	9.4	9.4	8.8	3.9	
37	7.4	7.4	7.4	2.2	2.2	2.2	3.37	9.5	9.5	8.9	3.9	
36	7.5	7.5	7.5	2.2	2.2	2.2	3.49	9.5	9.5	8.9	3.8	
35	7.6	7.6	7.6	2.1	2.1	2.1	3.62	9.6	9.6	9.0	3.7	
34	7.7	7.7	7.7	2.1	2.1	2.1	3.75	9.7	9.7	9.1	3.7	
33	7.8	7.8	7.8	2.0	2.0	2.0	3.88	9.7	9.7	9.1	3.6	
32	7.9	7.9	7.9	2.0	2.0	2.0	4.02	9.8	9.8	9.2	3.6	
31	8.0	8.0	8.0	1.9	1.9	1.9	4.16	9.8	9.8	9.2	3.5	
30	8.2	8.2	8.2	1.9	1.9	1.9	4.31	9.9	9.9	9.3	3.4	
29	8.3	8.3	8.3	1.8	1.8	1.8	4.47	9.9	9.9	9.4	3.4	
28	8.4	8.4	8.4	1.8	1.8	1.8	4.63	10.0	10.0	9.4	3.3	
27	8.5	8.5	8.5	1.8	1.8	1.8	4.80	10.1	10.1	9.5	3.3	
26	8.6	8.6	8.6	1.7	1.7	1.7	4.98	10.1	10.1	9.5	3.2	
25	8.7	8.7	8.7	1.7	1.7	1.7	5.17	10.2	10.2	9.6	3.2	
24	8.8	8.8	8.8	1.6	1.6	1.6	5.36	10.2	10.2	9.7	3.1	
23	8.9	8.9	8.9	1.6	1.6	1.6	5.57	10.3	10.3	9.7	3.1	
22	8.9	8.9	8.9	1.5	1.5	1.5	5.79	10.3	10.3	9.8	3.0	
21	9.0	9.0	9.0	1.5	1.5	1.5	6.02	10.4	10.4	9.8	3.0	
20	9.1	9.1	9.1	1.5	1.5	1.5	6.27	10.5	10.5	9.9	2.9	

-- attention: operating limits not reflected in performance table

LEGEND:

Ts-IN: Temperature renewable source - inlet [°C]
Th-OU: Temperature heating - outlet (flow) [°C]
Tc-OU: Temperature cooling - outlet (flow) [°C]
Qh nom: Heating capacity nominal
Qh min: Heating capacity minimal
Qh max: Heating capacity maximal
Pin nom: Power input at nominal heating capacity
Pin min: Power input at minimal heating capacity
Pin max: Power input at maximal heating capacity
COP nom: coefficient of performance at nominal heating capacity
Qc nom: cooling / heat extraction capacity at nominal heating capacity
Qc min: cooling / heat extraction at minimal heating capacity
Qc max: cooling / heat extraction at maximal heating capacity
I nom: Current at nominal heating capacity
EER: energy efficiency ratio at nominal cooling capacity



int. code: SK600 DuoBlock