



WAMAK

Heat pump



AW 27 EVI

WAMAK AW 27 EVI

Product description

Split heat pump for heating, cooling and domestic hot water in split design with outdoor and indoor unit. The silent Scroll compressor is located in the indoor unit and, in contrast, the heat exchanger and fan are located outside the building. The split design will allow installation in more challenging conditions during renovations where the energy source is located further away from the utility room.

Use for multi-family dwellings, suburban mixed-use buildings or commercial operations. The Urban range is based on a robust construction quality steel for all parts. High quality, long proven heat pump circuit components extend the life of the heat pump.

The primary source is the heat energy from the ambient air, which is blown by a silent fan in the shape of an owl's wing through a heat exchanger made of copper and aluminium.

The EVI (Enhanced Vapour Injection) technology allows the heat pump to achieve higher header flow temperatures even at lower source temperatures. EVI also has a positive impact on the compressor lifespan and overall system stability because the discharge gas temperature from the compressor is lower.

The APS (Active Process Subcooling) system simultaneously increases the stability and efficiency of operation by additional utilisation of the liquid refrigerant temperature after it has condensed.

Split system (compressor indoors)

Product features

- Scroll compressor
- EVI technology
- Asymmetric plate heat exchanger
- Active cooling
- Enhanced defrosting with APS system
- Heated drip tray - (with accessory)
- High pressure switch
- Low pressure sensor - analogue
- Flow sensor consumer - analogue
- ECM speed circulator - condenser
- Direct heating/cooling circuit control
- DHW circulation control
- DHW temperature sensor - (with accessory)
- Cascade control - (with accessory)
- Solid frame structure
- Sylomer pads under compressor unit
- Electronic expansion valve
- Large air heat exchanger with APS system
- Reversible defrosting
- Speed - controlled EC fan
- Phase and rotation control
- High pressure sensor - analogue
- Flow switch consumer - on/off - (with accessory)
- Plate exchanger protection HG-BYPASS
- Mixed heating/cooling circuit control
- DHW switching control
- Outdoor temperature sensor - (with accessory)
- Buffer temperature sensor - (with accessory)
- Modbus connection - (with accessory)

Basic performance data - WAMAK AW 27 EVI

Heating - EN 14511		
Heating capacity [kW]	A7 / W35	29.0
	A2 / W35	24.7
	A-7 / W34	20.3
Electrical power input [kW]	A7 / W35	6.4
	A2 / W35	6.4
	A-7 / W34	6.3
Heating efficiency faktor [COP]	A7 / W35	4.56
	A2 / W35	3.83
	A-7 / W34	3.23
Seasonal space heating energy efficiency - SCOP EN 14825		
Average Climate / Low Temperature [35°C]	SCOP	4.37
	η [%]	174.7
	Label	A+++
	Qhe [kWh]	47518.0
	Pdesignh [kW]	23.0
	Tbivalent [°C]	-7
Cooling		
Cooling capacity - [kW]	A35 / W23-18	28.4
	A25 / W23-18	30.0
	A35 / W12-7	20.9
	A25 / W12-7	20.9
Seasonal space cooling energy efficiency - SEER EN 14825		
[W 23 / 18°C]	SEER	4.61
	Qce [kWh]	12540.0
	ηc [%]	184.3
Sound EN 12102		
Acoustic power - Lw	dB(A)	62.1
Acoustic pressure - Lp	1 m dB(A)	54.1
	5 m dB(A)	40.1
	10 m dB(A)	34.1
Mechanical and operational information		
Compressor type (3~ 400/50)	SCROLL / 1 /	On/Off
Refrigerant	R410A (GWP - 2088)	7.9 kg
Operating limit temperatures heating - (min / max) [°C]	25 / 65	
Operating limit temperatures source - (min / max) [°C]	-22 / 40	
Weight	225 kg	

Main technical data - WAMAK AW 27 EVI

Enclosure type			VN800	Heat energy rejection side data			
Basic dimensions	Height [mm]	1270	Operating limit temperatures heating	MAX [°C]	65		
	Width [mm]	850		MIN [°C]	25		
	Length [mm]	630	for more see operating limits diagram				
Weight [kg]	225	Condenser	Port size	1.1/2 "			
Colour	Gray		Type	BPHE			
Enclosure IP Class	IP20		Count	1			
Refrigeration cycle			Material	AISI 316			
Compressor	Type	Scroll	Maximal operating pressure - refrigerant [bar]	50			
	Number of stages	1	Maximal operating pressure - Water [bar]	6			
	On/Off		Testing pressure [bar]	70			
	Power factor Cosφ	0.69	Heat transfer medium	Water			
	Winding resistance	1.24 Ohm	Volume flow @ dT 5K (nom) - Water [m³/h]	5.00			
Refrigerant		R410A	Internal pressure drop - Water [kPa]	12			
	Volme	7.9 kg	ECM speed circulator - condenser	UPMXL GEO 32-125			
	GWP	2088	Flow sensor consumer - analogue	0..10V			
	Safety class	A1	Temperature difference	@ 35°C (nom)	5 K		
Refrigeration oil type	POE RL32-3MAF			@ 55°C	8 K		
	Oil volume	3.38 L		@ 65°C	10 K		
Maximal pressure - refrigerant [bar]	50	Renewable energy extraction side data					
PED class	2	Operating limit temperatures source	MIN [°C]	-22			
EVI - vapour injection with economizer			MAX [°C]	40			
APS System of liquid subcooling			for more see operating limits diagram				
Reversible operation (cooling)			Evaporator	Port size	5/8" - 7/8" "		
Reverse defrosting with hot gas				Type	Cu-coil /Al-fin		
Plate exchanger protection HG-BYPASS				Count	1		
Electrical connection data				Material	Cu/Al		
Line voltage [#~ V/Hz]		3~ 400/50	Maximal operating pressure - refrigerant [bar]	29			
Current	nominal [A]	12.30	Heat transfer medium	Air			
	maximal [A]	21.00	Volume flow - Air [m³/h]	9060			
	starting [A]	32.12	Internal pressure drop - Air [kPa]	0.023			
Softstart	-		Temperature difference - Air	7 K			
Main safety	C32	Possible outdoor units			1 x AiWa-VO-1200		
Control System				1 x AiWa-VO-1200-DUCT			
Main controller	SIEMENS	RVS 21 AVS 55.199	Split System (compressor indoors)				
Extension module	AVS75.3xx	AVS75.3xx	Liquid line dimension (up to 8 meters IU/OU)	5/8"			
Bus Clip-In	LPB OCI346	Modbus OCI352	Suction line dimension (up to 8 meters IU/OU)	7/8"			
Online connection	Web server OZW672	ToSyMo	Surcharge of refrigerant over 8 meter distance IU/OU	0.18 kg/m			
Superheat controller		SEC61	air - water SPLIT heat pumps indoor units are delivered without full refrigerant charge only with residual overpressure from testing				
*** with accessory							

WAMAK AW 27 EVI

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

Model	AW 27 EVI
Air-to-water heat pump	yes
Brine-to-water heat pump	no
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	23.0	kW	Seasonal space heating energy efficiency	ηs	174.7	%
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	20.3	kW	Tj = -7 °C	COPd	3.23	-
Tj = +2 °C	Pdh	24.6	kW	Tj = +2 °C	COPd	4.3	-
Tj = +7 °C	Pdh	28.9	kW	Tj = +7 °C	COPd	5.5	-
Tj = +12 °C	Pdh	33.7	kW	Tj = +12 °C	COPd	7.4	-
Tj = bivalent temperature	Pdh	19.7	kW	Tj = bivalent temperature	COPd	3.1	-
Tj = operation limit temperature	Pdh	14.0	kW	Tj = operation limit temperature	COPd	2.2	-
Bivalent temperature	Tbiv	-7	°C	Tj = operation limit temperature	TOL	-22	°C
Power consumption in modes other than active mode				Heating water operating limit temperature	WTOL	65	°C
Off mode	Poff	0.040	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	10.5	kW
Standby mode	Psb	0.010	kW	Type of energy input			
Crankcase heater mode	Pck	0.050	kW	For air-to-water heat pumps: Rated air flow rate, outdoors	-	9060	m3/h
Other items				For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	---	m3/h
Capacity control		fixed		Annual energy consumption	QHE	47518.0	kWh
Sound power level							
indoors	Lwa	62	dB				
outdoors	Lwa	60	dB				

Contact details: WAMAK, s.r.o., Orovnicova 252, 96652, Orovnicova, Slovakia, info@wamak.sk

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

Model	AW 27 EVI
Air-to-water heat pump	yes
Brine-to-water heat pump	no
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	24.0	kW	Seasonal space heating energy efficiency	ηs	133.6	%
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	21.0	kW	Tj = -7 °C	COPd	2.17	-
Tj = +2 °C	Pdh	24.8	kW	Tj = +2 °C	COPd	3.3	-
Tj = +7 °C	Pdh	29.0	kW	Tj = +7 °C	COPd	4.5	-
Tj = +12 °C	Pdh	33.8	kW	Tj = +12 °C	COPd	6.3	-
Tj = bivalent temperature	Pdh	20.7	kW	Tj = bivalent temperature	COPd	2.0	-
Tj = operation limit temperature	Pdh	15.5	kW	Tj = operation limit temperature	COPd	1.5	-
Bivalent temperature	Tbiv	-7	°C	Tj = operation limit temperature	TOL	-22	°C
Power consumption in modes other than active mode				Heating water operating limit temperature	WTOL	65	°C
Off mode	Poff	0.040	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	10.5	kW
Standby mode	Psb	0.010	kW	Type of energy input			
Crankcase heater mode	Pck	0.050	kW	For air-to-water heat pumps: Rated air flow rate, outdoors	-	9060	m3/h
Other items				For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	---	m3/h
Capacity control		fixed		Annual energy consumption	QHE	49584.0	kWh
Sound power level							
indoors	Lwa	62	dB				
outdoors	Lwa	60	dB				

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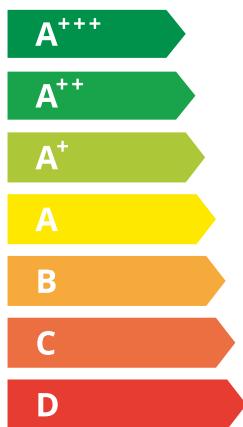
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AW 27 EVI

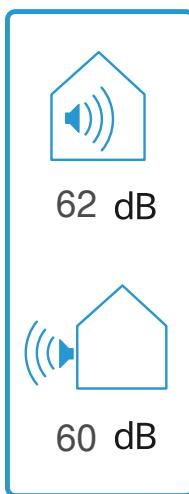


55 °C

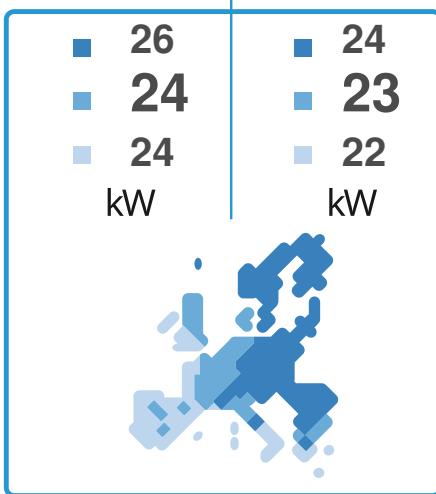
35 °C



A++



2019



811/2013

AW 27 EVI

ErP Data

	55 °C	35 °C
Energy class	A++	A+++
η [%]	133.6	174.7
P _{rated} [kW]	24	23
Q _{HE} [kWh/y]	49584	47518
SCOP [-]	3.34	4.37
T _{bivalent} [°C]	-7	-7

CONTROLLER



+ QAA55/75

class **VII**

3.5% ↓

- QAA55/75

class **III**

1.5% ↓

Heating performance data

Version: v2024.004-AW

Average Climate / Low Temperature [35°C]

ZHI27K1P-TFD_R410A_1_AW

Operating conditions		Qh	P	COP
1	A7 / W30-35	29.0	6.4	4.56
2	A2 / W35	24.7	6.4	3.83
3	A-22 / W35	14.0	6.4	2.20
A	A-7 / W34	20.3	6.3	3.23
B	A2 / W30	24.6	5.7	4.29
C	A7 / W27	28.9	5.2	5.54
D	A12 / W24	33.7	4.5	7.45
E	A-10 / W35	19.7	6.4	3.06
F	A-7 / W34	20.3	6.3	3.23

SCOP DATA EN 14825:2018	
Average Climate / Low Temperature [35°C]	
SCOPon	4.51
SCOPnet	4.55
SCOP	4.37
η [%]	174.66
Label	A+++
Qh [kWh]	47518.00
Pdesignh [kW]	23.0
Tbivalent [°C]	-7.00

Average Climate / Medium Temperature [55°C]

Operating conditions		Qh	P	COP
1	A7 / W47-55	29.3	10.5	2.80
2	A2 / W55	25.2	10.5	2.41
3	A-22 / W55	15.5	9.8	1.47
A	A-7 / W52	21.0	9.7	2.17
B	A2 / W42	24.8	7.6	3.27
C	A7 / W36	29.0	6.5	4.45
D	A12 / W30	33.8	5.4	6.27
E	A-10 / W55	20.7	10.5	1.97
F	A-7 / W55	21.2	10.5	2.03

SCOP DATA EN 14825:2018	
Average Climate / Medium Temperature [55°C]	
SCOPon	3.42
SCOPnet	3.45
SCOP	3.34
η [%]	133.57
Label	A++
Qh [kWh]	49584.00
Pdesignh [kW]	24.0
Tbivalent [°C]	-7.00

Cooling performance data**Low temperature cooling W 12 / 7°C**

Operating conditions		Qc	P	EER
A	A35 / W12-7	20.9	7.7	2.70
B	A30 / W12-7	21.7	6.9	3.16
C	A25 / W12-7	22.3	6.1	3.67
D	A20 / W12-7	22.9	5.4	4.24

SEER DATA EN 14825:2018 [W 12 / 7°C]	
SEERon	3.56
SEER	3.46
Qc [kWh]	12540.00
η [%]	138.31

Radiant cooling W 23 / 18°C

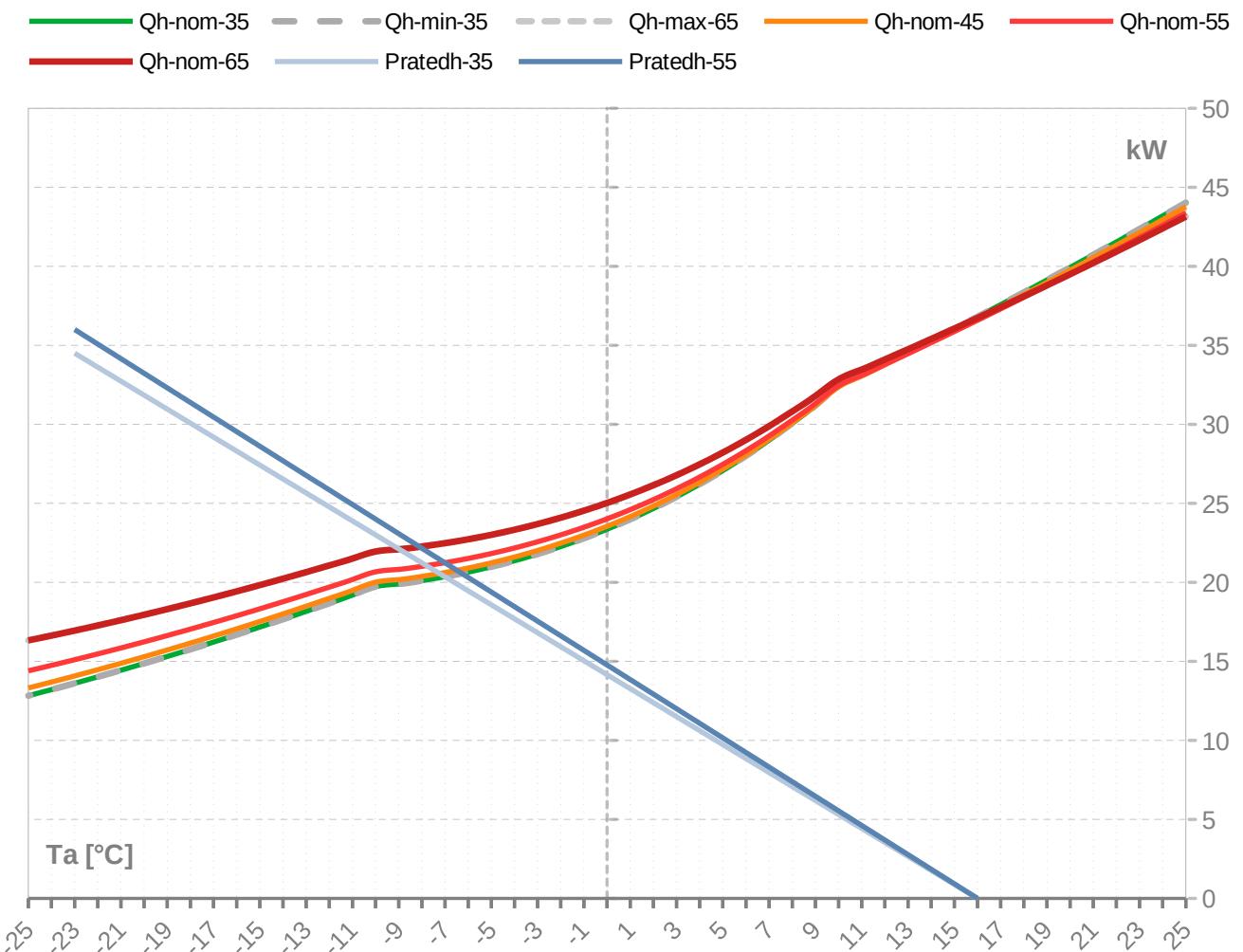
Operating conditions		Qc	P	EER
A	A35 / W23-18	28.4	7.7	3.67
B	A30 / W23-18	29.3	6.1	4.26
C	A25 / W23-18	30.0	5.4	4.93
D	A20 / W23-18	30.7	4.6	5.68

SEER DATA EN 14825:2018 [W 23 / 18°C]	
SEERon	4.80
SEER	4.61
Qc [kWh]	12540.00
η [%]	184.29

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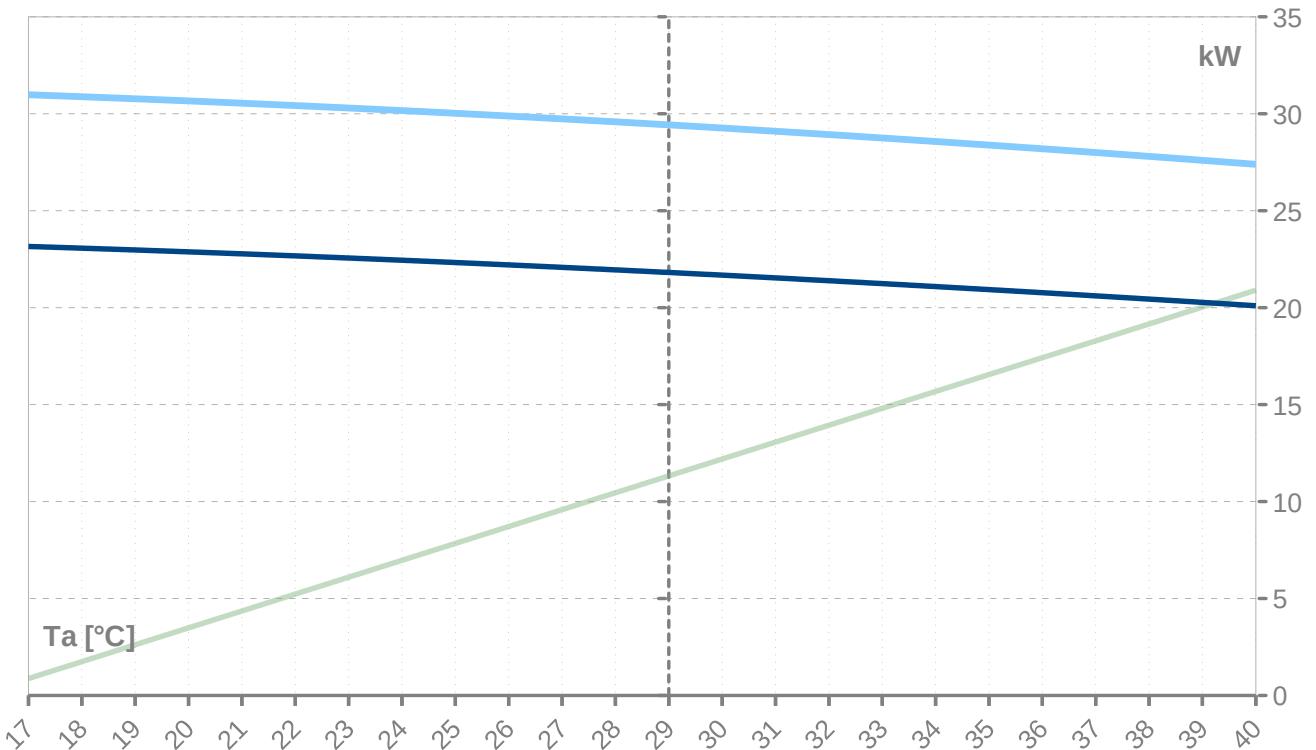
Performance lines - heating

ZHI27K1P-TFD_R410A_1_AW



Performance lines - cooling

Pratedc Qc-12/7 Qc-23/18



Ta [°C]	35 °C									
	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin-min [kW]	Pin-max [kW]	COP kW / kW	I nom [A]	I min [A]	I max [A]
25	37.6	37.6		6.0	6.0		6.30	11.9	11.9	
24	37.6	37.6		6.0	6.0		6.30	11.9	11.9	
23	37.6	37.6		6.0	6.0		6.30	11.9	11.9	
22	37.6	37.6		6.0	6.0		6.30	11.9	11.9	
21	37.6	37.6		6.0	6.0		6.30	11.9	11.9	
20	37.6	37.6		6.0	6.0		6.30	11.9	11.9	
19	37.6	37.6		6.0	6.0		6.30	11.9	11.9	
18	37.6	37.6		6.0	6.0		6.30	11.9	11.9	
17	37.6	37.6		6.0	6.0		6.30	11.9	11.9	
16	36.8	36.8	36.8	6.0	6.0	6.0	6.12	12.0	12.0	12.0
15	36.0	36.0	36.0	6.1	6.1	6.1	5.95	12.0	12.0	12.0
14	35.3	35.3	35.3	6.1	6.1	6.1	5.79	12.0	12.0	12.0
13	34.6	34.6	34.6	6.1	6.1	6.1	5.63	12.1	12.1	12.1
12	33.8	33.8	33.8	6.2	6.2	6.2	5.48	12.1	12.1	12.1
11	33.1	33.1	33.1	6.2	6.2	6.2	5.33	12.2	12.2	12.2
10	32.4	32.4	32.4	6.2	6.2	6.2	5.19	12.2	12.2	12.2
9	31.2	31.2	31.2	6.3	6.3	6.3	4.96	12.2	12.2	12.2
8	30.1	30.1	30.1	6.3	6.3	6.3	4.75	12.3	12.3	12.3
7	29.0	29.0	29.0	6.4	6.4	6.4	4.56	12.3	12.3	12.3
6	28.0	28.0	28.0	6.4	6.4	6.4	4.39	12.3	12.3	12.3
5	27.1	27.1	27.1	6.4	6.4	6.4	4.23	12.4	12.4	12.4
4	26.2	26.2	26.2	6.4	6.4	6.4	4.08	12.4	12.4	12.4
3	25.4	25.4	25.4	6.4	6.4	6.4	3.95	12.4	12.4	12.4
2	24.7	24.7	24.7	6.4	6.4	6.4	3.83	12.4	12.4	12.4
1	24.0	24.0	24.0	6.4	6.4	6.4	3.72	12.4	12.4	12.4
0	23.4	23.4	23.4	6.4	6.4	6.4	3.62	12.4	12.4	12.4
-1	22.8	22.8	22.8	6.4	6.4	6.4	3.53	12.5	12.5	12.5
-2	22.3	22.3	22.3	6.4	6.4	6.4	3.45	12.5	12.5	12.5
-3	21.8	21.8	21.8	6.4	6.4	6.4	3.38	12.5	12.5	12.5
-4	21.4	21.4	21.4	6.4	6.4	6.4	3.31	12.5	12.5	12.5
-5	21.0	21.0	21.0	6.4	6.4	6.4	3.26	12.5	12.5	12.5
-6	20.6	20.6	20.6	6.4	6.4	6.4	3.20	12.5	12.5	12.5
-7	20.4	20.4	20.4	6.4	6.4	6.4	3.16	12.5	12.5	12.5
-8	20.1	20.1	20.1	6.4	6.4	6.4	3.12	12.5	12.5	12.5
-9	19.9	19.9	19.9	6.4	6.4	6.4	3.09	12.5	12.5	12.5
-10	19.7	19.7	19.7	6.4	6.4	6.4	3.06	12.5	12.5	12.5
-11	19.2	19.2	19.2	6.4	6.4	6.4	2.98	12.5	12.5	12.5
-12	18.7	18.7	18.7	6.4	6.4	6.4	2.91	12.5	12.5	12.5
-13	18.2	18.2	18.2	6.4	6.4	6.4	2.83	12.5	12.5	12.5
-14	17.7	17.7	17.7	6.4	6.4	6.4	2.75	12.5	12.5	12.5
-15	17.2	17.2	17.2	6.4	6.4	6.4	2.68	12.4	12.4	12.4
-16	16.7	16.7	16.7	6.4	6.4	6.4	2.61	12.4	12.4	12.4
-17	16.2	16.2	16.2	6.4	6.4	6.4	2.54	12.4	12.4	12.4
-18	15.8	15.8	15.8	6.4	6.4	6.4	2.47	12.4	12.4	12.4
-19	15.3	15.3	15.3	6.4	6.4	6.4	2.40	12.4	12.4	12.4
-20	14.9	14.9	14.9	6.4	6.4	6.4	2.33	12.4	12.4	12.4
-21	14.4	14.4	14.4	6.4	6.4	6.4	2.27	12.4	12.4	12.4
-22	14.0	14.0	14.0	6.4	6.4	6.4	2.20	12.3	12.3	12.3
-23	13.6	13.6	13.6	6.4	6.4	6.4	2.14	12.3	12.3	12.3
-24	13.2	13.2	13.2	6.3	6.3	6.3	2.08	12.3	12.3	12.3
-25	12.8	12.8	12.8	6.3	6.3	6.3	2.02	12.3	12.3	12.3

* attention: operating limits not reflected in performance table

ZHI27K1P-TFD_R410A_1_AW

Th [°C]		45 °C									
Ta [°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin-min [kW]	Pin-max [kW]	COP kW / kW	I nom [A]	I min [A]	I max [A]	
25	43.8	43.8	43.8	7.5	7.5	7.5	5.84	13.5	13.5	13.5	
24	42.9	42.9	42.9	7.5	7.5	7.5	5.69	13.5	13.5	13.5	
23	42.1	42.1	42.1	7.6	7.6	7.6	5.54	13.6	13.6	13.6	
22	41.3	41.3	41.3	7.7	7.7	7.7	5.40	13.7	13.7	13.7	
21	40.5	40.5	40.5	7.7	7.7	7.7	5.26	13.7	13.7	13.7	
20	39.8	39.8	39.8	7.7	7.7	7.7	5.13	13.8	13.8	13.8	
19	39.0	39.0	39.0	7.8	7.8	7.8	5.00	13.8	13.8	13.8	
18	38.2	38.2	38.2	7.8	7.8	7.8	4.88	13.8	13.8	13.8	
17	37.4	37.4	37.4	7.9	7.9	7.9	4.76	13.9	13.9	13.9	
16	36.7	36.7	36.7	7.9	7.9	7.9	4.64	13.9	13.9	13.9	
15	35.9	35.9	35.9	7.9	7.9	7.9	4.53	14.0	14.0	14.0	
14	35.2	35.2	35.2	8.0	8.0	8.0	4.42	14.0	14.0	14.0	
13	34.5	34.5	34.5	8.0	8.0	8.0	4.32	14.0	14.0	14.0	
12	33.8	33.8	33.8	8.0	8.0	8.0	4.22	14.1	14.1	14.1	
11	33.1	33.1	33.1	8.0	8.0	8.0	4.12	14.1	14.1	14.1	
10	32.4	32.4	32.4	8.1	8.1	8.1	4.02	14.1	14.1	14.1	
9	31.2	31.2	31.2	8.1	8.1	8.1	3.86	14.2	14.2	14.2	
8	30.1	30.1	30.1	8.1	8.1	8.1	3.72	14.2	14.2	14.2	
7	29.1	29.1	29.1	8.1	8.1	8.1	3.58	14.2	14.2	14.2	
6	28.1	28.1	28.1	8.1	8.1	8.1	3.45	14.3	14.3	14.3	
5	27.2	27.2	27.2	8.1	8.1	8.1	3.34	14.3	14.3	14.3	
4	26.3	26.3	26.3	8.1	8.1	8.1	3.23	14.3	14.3	14.3	
3	25.5	25.5	25.5	8.1	8.1	8.1	3.14	14.3	14.3	14.3	
2	24.8	24.8	24.8	8.1	8.1	8.1	3.05	14.3	14.3	14.3	
1	24.2	24.2	24.2	8.1	8.1	8.1	2.96	14.3	14.3	14.3	
0	23.5	23.5	23.5	8.1	8.1	8.1	2.89	14.3	14.3	14.3	
-1	23.0	23.0	23.0	8.1	8.1	8.1	2.82	14.3	14.3	14.3	
-2	22.5	22.5	22.5	8.1	8.1	8.1	2.76	14.3	14.3	14.3	
-3	22.0	22.0	22.0	8.1	8.1	8.1	2.70	14.3	14.3	14.3	
-4	21.6	21.6	21.6	8.1	8.1	8.1	2.65	14.3	14.3	14.3	
-5	21.2	21.2	21.2	8.1	8.1	8.1	2.61	14.3	14.3	14.3	
-6	20.9	20.9	20.9	8.1	8.1	8.1	2.57	14.3	14.3	14.3	
-7	20.6	20.6	20.6	8.1	8.1	8.1	2.54	14.3	14.3	14.3	
-8	20.4	20.4	20.4	8.1	8.1	8.1	2.51	14.3	14.3	14.3	
-9	20.2	20.2	20.2	8.1	8.1	8.1	2.48	14.3	14.3	14.3	
-10	20.0	20.0	20.0	8.1	8.1	8.1	2.46	14.3	14.3	14.3	
-11	19.5	19.5	19.5	8.1	8.1	8.1	2.40	14.3	14.3	14.3	
-12	19.0	19.0	19.0	8.1	8.1	8.1	2.34	14.3	14.3	14.3	
-13	18.5	18.5	18.5	8.1	8.1	8.1	2.28	14.3	14.3	14.3	
-14	18.0	18.0	18.0	8.1	8.1	8.1	2.22	14.2	14.2	14.2	
-15	17.5	17.5	17.5	8.1	8.1	8.1	2.16	14.2	14.2	14.2	
-16	17.1	17.1	17.1	8.1	8.1	8.1	2.11	14.2	14.2	14.2	
-17	16.6	16.6	16.6	8.1	8.1	8.1	2.05	14.2	14.2	14.2	
-18	16.2	16.2	16.2	8.1	8.1	8.1	2.00	14.1	14.1	14.1	
-19	15.7	15.7	15.7	8.1	8.1	8.1	1.94	14.1	14.1	14.1	
-20	15.3	15.3	15.3	8.1	8.1	8.1	1.89	14.1	14.1	14.1	
-21	14.9	14.9	14.9	8.1	8.1	8.1	1.84	14.1	14.1	14.1	
-22	14.5	14.5	14.5	8.1	8.1	8.1	1.79	14.0	14.0	14.0	
-23	14.1	14.1	14.1	8.1	8.1	8.1	1.74	14.0	14.0	14.0	
-24	13.7	13.7	13.7	8.1	8.1	8.1	1.69	14.0	14.0	14.0	
-25	13.3	13.3	13.3	8.1	8.1	8.1	1.64	13.9	13.9	13.9	

* attention: operating limits not reflected in performance table

Th [°C]		55 °C								
Ta [°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin-min [kW]	Pin-max [kW]	COP kW / kW	I nom [A]	I min [A]	I max [A]
25	43.4	43.4	43.4	10.0	10.0	10.0	4.33	16.3	16.3	16.3
24	42.6	42.6	42.6	10.1	10.1	10.1	4.23	16.4	16.4	16.4
23	41.8	41.8	41.8	10.1	10.1	10.1	4.14	16.4	16.4	16.4
22	41.0	41.0	41.0	10.1	10.1	10.1	4.05	16.5	16.5	16.5
21	40.3	40.3	40.3	10.2	10.2	10.2	3.96	16.5	16.5	16.5
20	39.5	39.5	39.5	10.2	10.2	10.2	3.87	16.6	16.6	16.6
19	38.8	38.8	38.8	10.2	10.2	10.2	3.79	16.6	16.6	16.6
18	38.0	38.0	38.0	10.3	10.3	10.3	3.71	16.7	16.7	16.7
17	37.3	37.3	37.3	10.3	10.3	10.3	3.63	16.7	16.7	16.7
16	36.6	36.6	36.6	10.3	10.3	10.3	3.55	16.8	16.8	16.8
15	35.9	35.9	35.9	10.3	10.3	10.3	3.47	16.8	16.8	16.8
14	35.2	35.2	35.2	10.4	10.4	10.4	3.40	16.8	16.8	16.8
13	34.5	34.5	34.5	10.4	10.4	10.4	3.32	16.9	16.9	16.9
12	33.8	33.8	33.8	10.4	10.4	10.4	3.25	16.9	16.9	16.9
11	33.1	33.1	33.1	10.4	10.4	10.4	3.18	16.9	16.9	16.9
10	32.4	32.4	32.4	10.4	10.4	10.4	3.12	16.9	16.9	16.9
9	31.3	31.3	31.3	10.4	10.4	10.4	3.00	17.0	17.0	17.0
8	30.3	30.3	30.3	10.4	10.4	10.4	2.90	17.0	17.0	17.0
7	29.3	29.3	29.3	10.5	10.5	10.5	2.80	17.0	17.0	17.0
6	28.3	28.3	28.3	10.5	10.5	10.5	2.71	17.0	17.0	17.0
5	27.5	27.5	27.5	10.5	10.5	10.5	2.62	17.0	17.0	17.0
4	26.7	26.7	26.7	10.5	10.5	10.5	2.55	17.0	17.0	17.0
3	25.9	25.9	25.9	10.5	10.5	10.5	2.48	17.0	17.0	17.0
2	25.2	25.2	25.2	10.5	10.5	10.5	2.41	17.0	17.0	17.0
1	24.6	24.6	24.6	10.5	10.5	10.5	2.35	17.0	17.0	17.0
0	24.0	24.0	24.0	10.5	10.5	10.5	2.29	17.0	17.0	17.0
-1	23.5	23.5	23.5	10.5	10.5	10.5	2.24	17.0	17.0	17.0
-2	23.0	23.0	23.0	10.5	10.5	10.5	2.20	17.0	17.0	17.0
-3	22.6	22.6	22.6	10.5	10.5	10.5	2.15	17.0	17.0	17.0
-4	22.2	22.2	22.2	10.5	10.5	10.5	2.12	17.0	17.0	17.0
-5	21.8	21.8	21.8	10.5	10.5	10.5	2.08	17.0	17.0	17.0
-6	21.5	21.5	21.5	10.5	10.5	10.5	2.05	17.0	17.0	17.0
-7	21.2	21.2	21.2	10.5	10.5	10.5	2.03	17.0	17.0	17.0
-8	21.0	21.0	21.0	10.5	10.5	10.5	2.01	16.9	16.9	16.9
-9	20.8	20.8	20.8	10.5	10.5	10.5	1.99	16.9	16.9	16.9
-10	20.7	20.7	20.7	10.5	10.5	10.5	1.97	16.9	16.9	16.9
-11	20.2	20.2	20.2	10.5	10.5	10.5	1.93	16.9	16.9	16.9
-12	19.7	19.7	19.7	10.5	10.5	10.5	1.88	16.9	16.9	16.9
-13	19.2	19.2	19.2	10.5	10.5	10.5	1.84	16.9	16.9	16.9
-14	18.8	18.8	18.8	10.5	10.5	10.5	1.79	16.8	16.8	16.8
-15	18.3	18.3	18.3	10.5	10.5	10.5	1.75	16.8	16.8	16.8
-16	17.9	17.9	17.9	10.5	10.5	10.5	1.71	16.8	16.8	16.8
-17	17.5	17.5	17.5	10.5	10.5	10.5	1.66	16.7	16.7	16.7
-18	17.0	17.0	17.0	10.5	10.5	10.5	1.62	16.7	16.7	16.7
-19	16.6	16.6	16.6	10.5	10.5	10.5	1.58	16.6	16.6	16.6
-20	16.2	16.2	16.2	10.5	10.5	10.5	1.54	16.6	16.6	16.6
-21	15.8	15.8	15.8	10.5	10.5	10.5	1.51	16.6	16.6	16.6
-22	15.5	15.5	15.5	10.5	10.5	10.5	1.47	16.5	16.5	16.5
-23	15.1	15.1	15.1	10.6	10.6	10.6	1.43	16.5	16.5	16.5
-24	14.7	14.7	14.7	10.6	10.6	10.6	1.39	16.4	16.4	16.4
-25	14.4	14.4	14.4	10.6	10.6	10.6	1.36	16.4	16.4	16.4

* attention: operating limits not reflected in performance table

Th [°C]			T-Max @ 65 °C								
Ta [°C]	Qh nom [kW]	Qh min [kW]	Qh max [kW]	Pin nom [kW]	Pin-min [kW]	Pin-max [kW]	COP kW / kW	I nom [A]	I min [A]	I max [A]	
25	43.1	43.1	43.1	13.2	13.2	13.2	3.26	20.3	20.3	20.3	
24	42.4	42.4	42.4	13.3	13.3	13.3	3.19	20.3	20.3	20.3	
23	41.7	41.7	41.7	13.3	13.3	13.3	3.13	20.4	20.4	20.4	
22	40.9	40.9	40.9	13.3	13.3	13.3	3.07	20.4	20.4	20.4	
21	40.2	40.2	40.2	13.4	13.4	13.4	3.01	20.5	20.5	20.5	
20	39.5	39.5	39.5	13.4	13.4	13.4	2.95	20.5	20.5	20.5	
19	38.8	38.8	38.8	13.4	13.4	13.4	2.89	20.5	20.5	20.5	
18	38.1	38.1	38.1	13.4	13.4	13.4	2.84	20.6	20.6	20.6	
17	37.4	37.4	37.4	13.4	13.4	13.4	2.78	20.6	20.6	20.6	
16	36.7	36.7	36.7	13.5	13.5	13.5	2.73	20.6	20.6	20.6	
15	36.1	36.1	36.1	13.5	13.5	13.5	2.67	20.7	20.7	20.7	
14	35.4	35.4	35.4	13.5	13.5	13.5	2.62	20.7	20.7	20.7	
13	34.7	34.7	34.7	13.5	13.5	13.5	2.57	20.7	20.7	20.7	
12	34.1	34.1	34.1	13.5	13.5	13.5	2.52	20.7	20.7	20.7	
11	33.5	33.5	33.5	13.5	13.5	13.5	2.47	20.8	20.8	20.8	
10	32.8	32.8	32.8	13.5	13.5	13.5	2.42	20.8	20.8	20.8	
9	31.8	31.8	31.8	13.6	13.6	13.6	2.34	20.8	20.8	20.8	
8	30.8	30.8	30.8	13.6	13.6	13.6	2.27	20.8	20.8	20.8	
7	29.9	29.9	29.9	13.6	13.6	13.6	2.20	20.8	20.8	20.8	
6	29.0	29.0	29.0	13.6	13.6	13.6	2.13	20.8	20.8	20.8	
5	28.2	28.2	28.2	13.6	13.6	13.6	2.07	20.8	20.8	20.8	
4	27.5	27.5	27.5	13.6	13.6	13.6	2.02	20.8	20.8	20.8	
3	26.8	26.8	26.8	13.6	13.6	13.6	1.97	20.8	20.8	20.8	
2	26.1	26.1	26.1	13.6	13.6	13.6	1.92	20.8	20.8	20.8	
1	25.6	25.6	25.6	13.6	13.6	13.6	1.87	20.8	20.8	20.8	
0	25.0	25.0	25.0	13.6	13.6	13.6	1.83	20.7	20.7	20.7	
-1	24.5	24.5	24.5	13.7	13.7	13.7	1.80	20.7	20.7	20.7	
-2	24.1	24.1	24.1	13.7	13.7	13.7	1.76	20.7	20.7	20.7	
-3	23.7	23.7	23.7	13.7	13.7	13.7	1.73	20.7	20.7	20.7	
-4	23.3	23.3	23.3	13.7	13.7	13.7	1.71	20.7	20.7	20.7	
-5	23.0	23.0	23.0	13.7	13.7	13.7	1.68	20.6	20.6	20.6	
-6	22.7	22.7	22.7	13.7	13.7	13.7	1.66	20.6	20.6	20.6	
-7	22.5	22.5	22.5	13.7	13.7	13.7	1.64	20.6	20.6	20.6	
-8	22.3	22.3	22.3	13.7	13.7	13.7	1.63	20.6	20.6	20.6	
-9	22.1	22.1	22.1	13.7	13.7	13.7	1.61	20.6	20.6	20.6	
-10	21.9	21.9	21.9	13.7	13.7	13.7	1.60	20.6	20.6	20.6	
-11	21.5	21.5	21.5	13.7	13.7	13.7	1.57	20.5	20.5	20.5	
-12	21.1	21.1	21.1	13.7	13.7	13.7	1.53	20.5	20.5	20.5	
-13	20.6	20.6	20.6	13.7	13.7	13.7	1.50	20.4	20.4	20.4	
-14	20.2	20.2	20.2	13.8	13.8	13.8	1.47	20.4	20.4	20.4	
-15	19.8	19.8	19.8	13.8	13.8	13.8	1.44	20.4	20.4	20.4	
-16											
-17											
-18											
-19											
-20											
-21											
-22											
-23											
-24											
-25											

* attention: operating limits not reflected in performance table

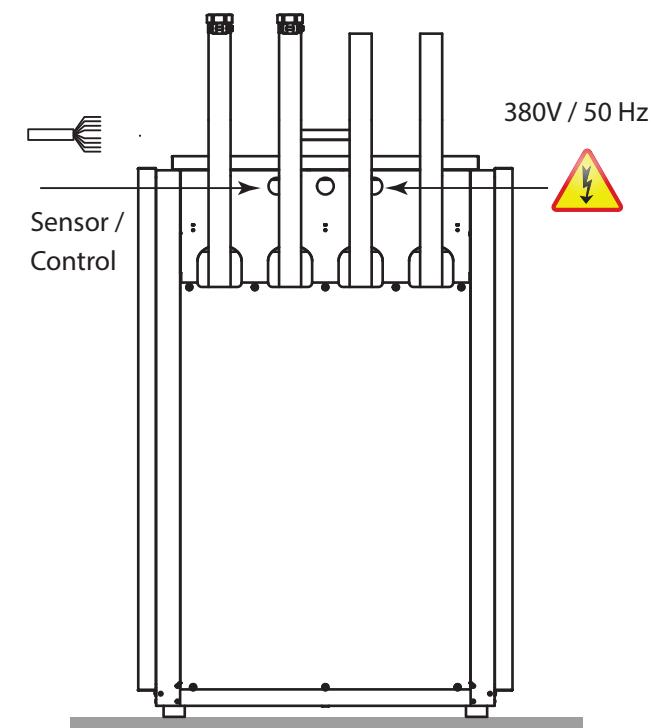
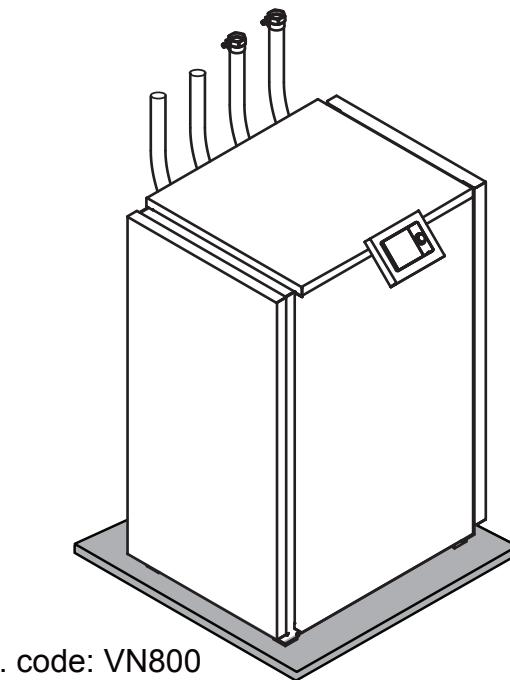
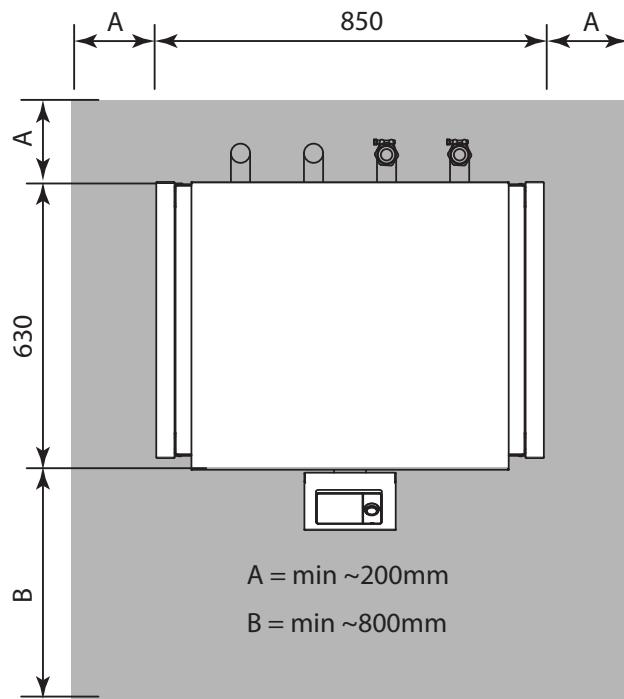
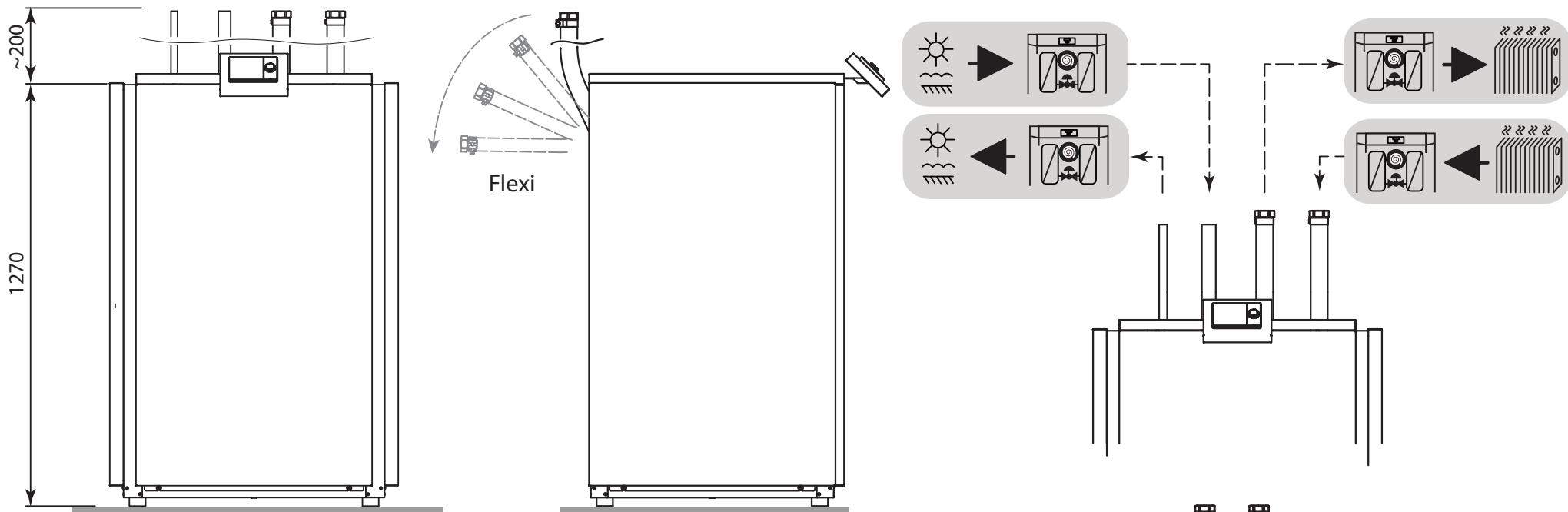
Tc [°C]			W 12 / 7 °C								
Ta [°C]	Qc nom [kW]	Qc min [kW]	Qc max [kW]	Pin [kW]	Pin min [kW]	Pin max [kW]	EER kW / kW	I nom [A]	I min [A]	I max [A]	
40	20.1	20.1	20.1	8.8	8.8	8.8	2.29	15.0	15.0	15.0	
39	20.3	20.3	20.3	8.5	8.5	8.5	2.37	14.7	14.7	14.7	
38	20.4	20.4	20.4	8.3	8.3	8.3	2.45	14.5	14.5	14.5	
37	20.6	20.6	20.6	8.1	8.1	8.1	2.53	14.3	14.3	14.3	
36	20.8	20.8	20.8	7.9	7.9	7.9	2.62	14.0	14.0	14.0	
35	20.9	20.9	20.9	7.7	7.7	7.7	2.70	13.8	13.8	13.8	
34	21.1	21.1	21.1	7.6	7.6	7.6	2.79	13.6	13.6	13.6	
33	21.2	21.2	21.2	7.4	7.4	7.4	2.88	13.4	13.4	13.4	
32	21.4	21.4	21.4	7.2	7.2	7.2	2.97	13.2	13.2	13.2	
31	21.5	21.5	21.5	7.0	7.0	7.0	3.06	13.0	13.0	13.0	
30	21.7	21.7	21.7	6.9	6.9	6.9	3.16	12.8	12.8	12.8	
29	21.8	21.8	21.8	6.7	6.7	6.7	3.26	12.7	12.7	12.7	
28	21.9	21.9	21.9	6.5	6.5	6.5	3.35	12.5	12.5	12.5	
27	22.1	22.1	22.1	6.4	6.4	6.4	3.46	12.4	12.4	12.4	
26	22.2	22.2	22.2	6.2	6.2	6.2	3.56	12.2	12.2	12.2	
25	22.3	22.3	22.3	6.1	6.1	6.1	3.67	12.1	12.1	12.1	
24	22.4	22.4	22.4	5.9	5.9	5.9	3.77	11.9	11.9	11.9	
23	22.6	22.6	22.6	5.8	5.8	5.8	3.89	11.8	11.8	11.8	
22	22.7	22.7	22.7	5.7	5.7	5.7	4.00	11.7	11.7	11.7	
21	22.8	22.8	22.8	5.5	5.5	5.5	4.12	11.5	11.5	11.5	
20	22.9	22.9	22.9	5.4	5.4	5.4	4.24	11.4	11.4	11.4	
19	23.0	23.0	23.0	5.3	5.3	5.3	4.36	11.3	11.3	11.3	
18	23.1	23.1	23.1	5.1	5.1	5.1	4.49	11.2	11.2	11.2	
17	23.2	23.2	23.2	5.0	5.0	5.0	4.62	11.1	11.1	11.1	

Tc [°C]			W 23 / 18 °C								
Ta [°C]	Qc [kW]	Qh-min [kW]	Qh-max [kW]	Pin [kW]	Pin-min [kW]	Pin-max [kW]	EER kW / kW	I [A]	I-min [A]	I-max [A]	
40	27.4	27.4	27.4	8.8	8.8	8.8	3.13	14.8	14.8	14.8	
39	27.6	27.6	27.6	8.5	8.5	8.5	3.23	14.5	14.5	14.5	
38	27.8	27.8	27.8	8.3	8.3	8.3	3.34	14.2	14.2	14.2	
37	28.0	28.0	28.0	8.1	8.1	8.1	3.44	14.0	14.0	14.0	
36	28.2	28.2	28.2	7.9	7.9	7.9	3.55	13.8	13.8	13.8	
35	28.4	28.4	28.4	7.7	7.7	7.7	3.67	13.6	13.6	13.6	
34	28.6	28.6	28.6	7.6	7.6	7.6	3.78	13.3	13.3	13.3	
33	28.7	28.7	28.7	7.4	7.4	7.4	3.90	13.1	13.1	13.1	
32	28.9	28.9	28.9	7.2	7.2	7.2	4.02	12.9	12.9	12.9	
31	29.1	29.1	29.1	7.0	7.0	7.0	4.14	12.7	12.7	12.7	
30	29.3	29.3	29.3	6.9	6.9	6.9	4.26	12.6	12.6	12.6	
29	29.4	29.4	29.4	6.7	6.7	6.7	4.39	12.4	12.4	12.4	
28	29.6	29.6	29.6	6.5	6.5	6.5	4.52	12.2	12.2	12.2	
27	29.7	29.7	29.7	6.4	6.4	6.4	4.65	12.1	12.1	12.1	
26	29.9	29.9	29.9	6.2	6.2	6.2	4.79	11.9	11.9	11.9	
25	30.0	30.0	30.0	6.1	6.1	6.1	4.93	11.7	11.7	11.7	
24	30.2	30.2	30.2	5.9	5.9	5.9	5.07	11.6	11.6	11.6	
23	30.3	30.3	30.3	5.8	5.8	5.8	5.22	11.5	11.5	11.5	
22	30.4	30.4	30.4	5.7	5.7	5.7	5.37	11.3	11.3	11.3	
21	30.5	30.5	30.5	5.5	5.5	5.5	5.52	11.2	11.2	11.2	
20	30.7	30.7	30.7	5.4	5.4	5.4	5.68	11.1	11.1	11.1	
19	30.8	30.8	30.8	5.3	5.3	5.3	5.84	11.0	11.0	11.0	
18	30.9	30.9	30.9	5.1	5.1	5.1	6.01	10.9	10.9	10.9	
17	31.0	31.0	31.0	5.0	5.0	5.0	6.18	10.8	10.8	10.8	

* attention: operating limits not reflected in performance table

LEGENDE:

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



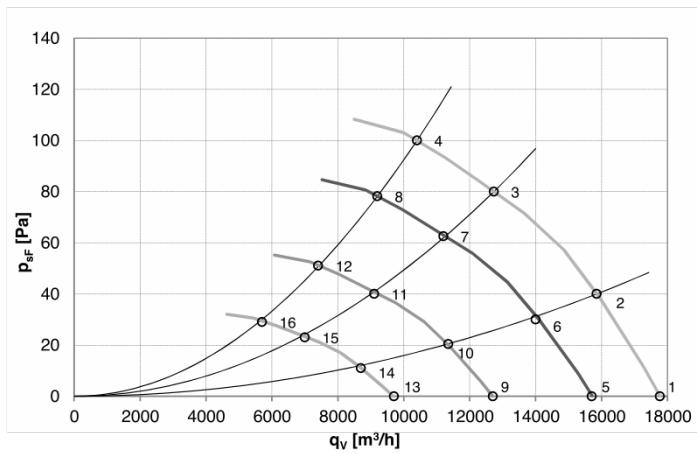
WAMAK AW 27 EVI - Split unit variant: AiWa-VO-1200

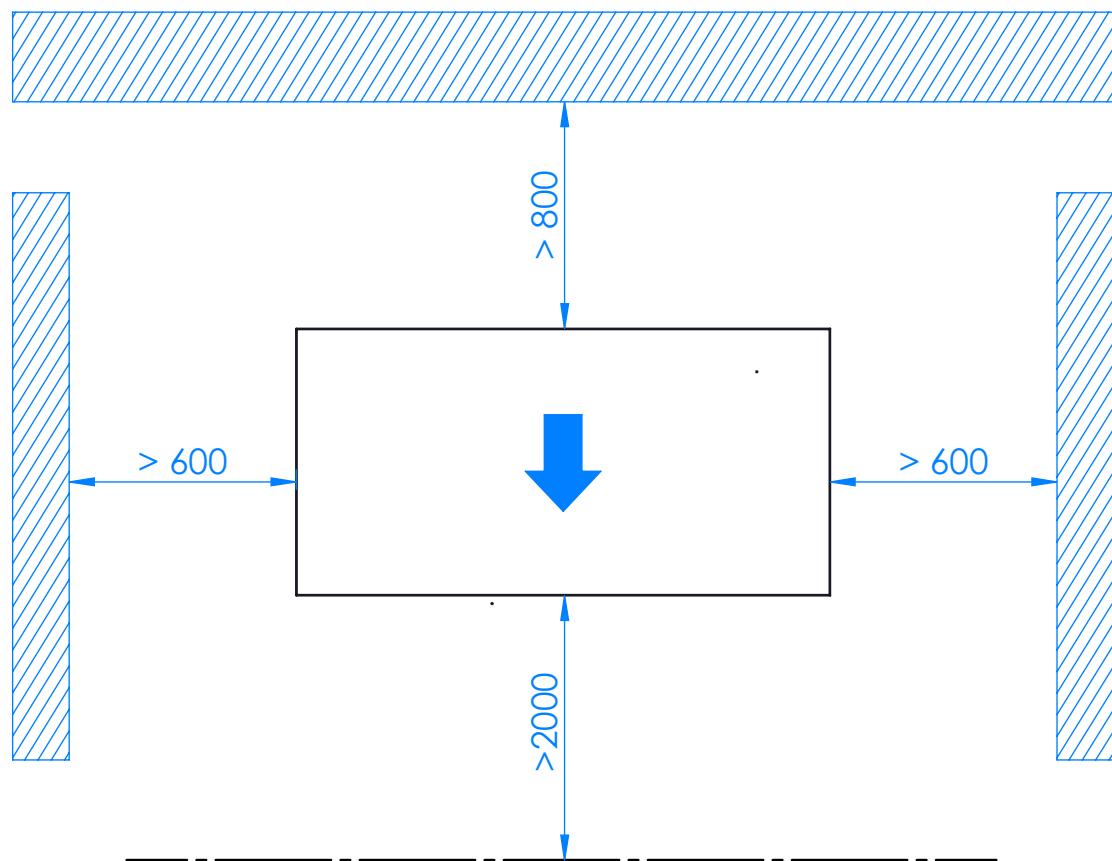
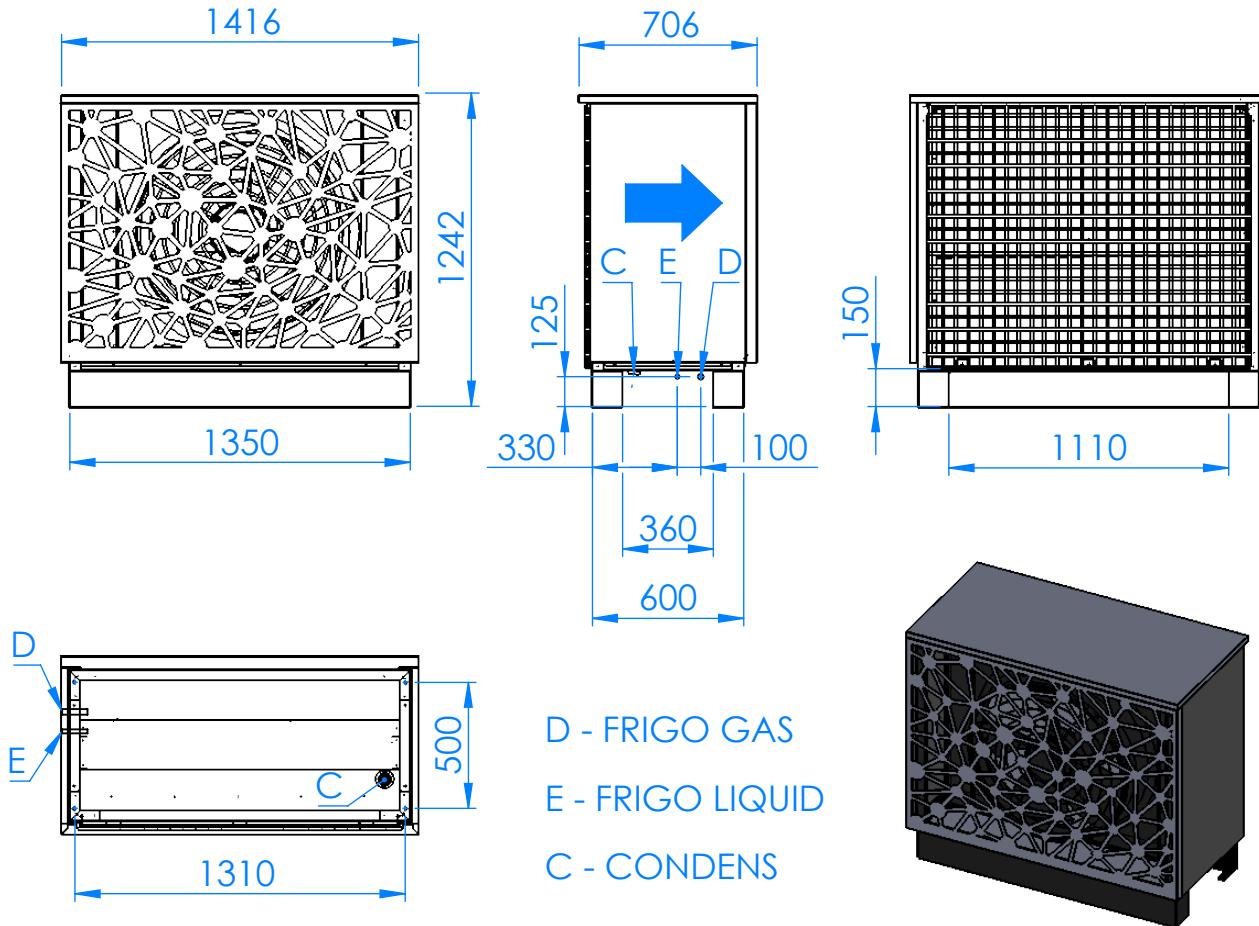


Enclosure type: AiWa-VO-1200		Evaporator	
Article	WAV01200	Type	Cu-coil /Al-fin "
Basic dimensions	Height [mm]	1240	Port size
	Width [mm]	1420	Air
	Length [mm]	710	Volume flow - Air [m ³ /h]
Weight [kg]	150	9060	Internal pressure drop - Air [kPa]
Colour	Gray	0.023	Temperature difference - Air
Enclosure IP Class	IP44	7 K	Expansion valve
Fan	800 mm	EEV	
Number of fans	1	Fan mounting position	Horizontal axis
Fan motor type	EC	Fan type	Axial
Fan nominal current [A]	1.35	Fan power supply [V/Hz]	3~ 400/50
Minimal fan power input [Watt]	81	Maximal fan power input [Watt]	802

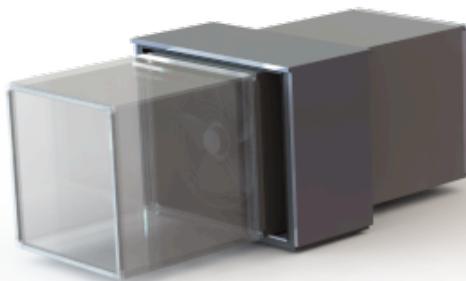
Acoustic power Lw													
		1	5	10	15	1	5	10	15	1	5	10	15
Distance [m]	59.8 dB(A)												
Distance [m]	54.8	40.8	34.8	31.3	57.8	43.8	37.8	34.3	51.8	37.8	31.8	28.3	
Acoustic pressure Lp [dB(A)]													

EC Fan 800mm





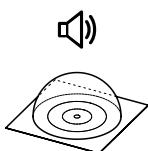
WAMAK AW 27 EVI - Split unit variant: AiWa-VO-1200-DUCT



Enclosure type: AiWa-VO-1200-DUCT		Evaporator	
Article	WAVID120	Type	Cu-coil /Al-fin "
Basic dimensions	Height [mm]	1240	Port size
	Width [mm]	1420	Air
	Length [mm]	710	Volume flow - Air [m ³ /h]
Weight [kg]	150	Internal pressure drop - Air [kPa]	0.023
Colour	Gray	Temperature difference - Air	7 K
Enclosure IP Class	IP44	Expansion valve	EEV
Fan	800 mm		
Number of fans	1	Fan mounting position	Horizontal axis
Fan motor type	EC	Fan type	Axial
Fan nominal current [A]	1.35	Fan power supply [V/Hz]	3~ 400/50
Minimal fan power input [Watt]	81	Maximal fan power input [Watt]	802

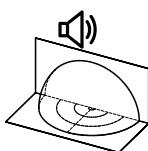
Acoustic power Lw

58.3 dB(A)

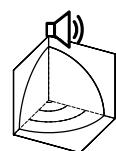


Distance [m]

1 5 10 15



1 5 10 15



1 5 10 15

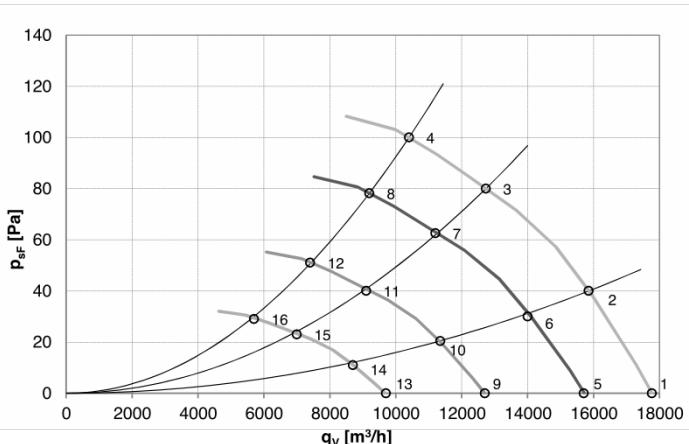
Acoustic pressure Lp [dB(A)]

53.3 39.3 33.3 29.8

56.3 42.3 36.3 32.8

50.3 36.3 30.3 26.8

EC Fan 800mm



	U [V]	f [Hz]	n [RPM]	q _v [m ³ /h]	P _{sF} [Pa]	P _e [W]	I [A]	L _{wA} out [dB (A)]	T _a max [°C]
1	400	50	735	17770	0	503	0,85	70	60
2	400	50	735	15850	40	612	1,02	66	60
3	400	50	735	12730	80	735	1,18	65	60
4	400	50	735	10400	100	802	1,36	68	60
5	400	50	650	15700	0	348	0,68	67	60
6	400	50	650	14000	30	421	0,80	63	60
7	400	50	650	11200	63	510	0,92	62	60
8	400	50	650	9200	78	554	0,93	65	60
9	400	50	525	12700	0	183	0,38	63	60
10	400	50	525	11350	20	225	0,35	59	60
11	400	50	525	9100	40	265	0,53	58	60
12	400	50	525	7400	51	292	0,57	61	60
13	400	50	400	9700	0	81	0,21	57	60
14	400	50	400	8700	11	97	0,24	53	60
15	400	50	400	7000	23	117	0,27	52	60
16	400	50	400	5700	29	128	0,28	55	60

WAMAK AW 27 EVI

