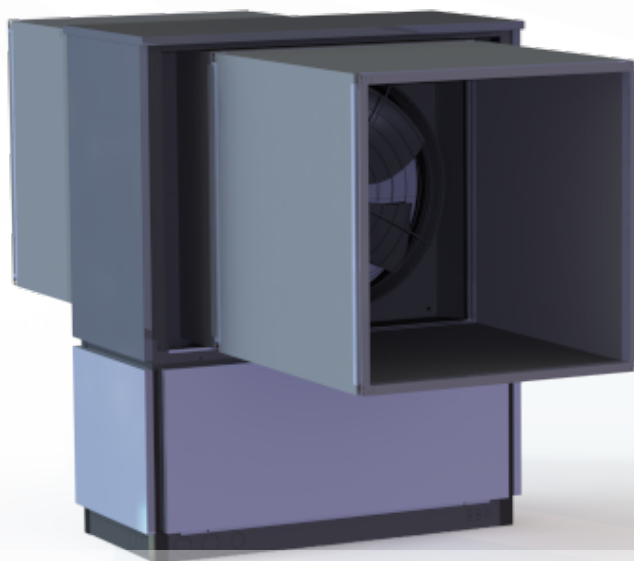




WAMAK

Heat pump



AiWa 27 EVI
H-Twin In

WAMAK AiWa 27 EVI H-Twin In

Product description

Compact air-to-water heat pump for heating, cooling and domestic hot water with the possibility of installation either in the utility room or outdoors. A short closed refrigerant circuit with a silent scroll compressor at the bottom under the fan simplifies installation and helps for long-term stable operation.

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.

The twin compressors give the system robustness and the ability to distribute the heat output according to the actual load.

Indoor monoblock

Product features

- Scroll compressor
- EVI technology
- Asymetric plate heat exchanger
- Two-stage capacity control
- Active cooling
- Enhanced defrosting with APS system
- Heated drip tray
- High pressure switch
- Low pressure sensor - analogue
- Flow sensor consumer - analogue
- ECM speed circulator - condenser
- Direct heating/cooling circuit control - (with accessory)
- DHW circulation control - (with accessory)
- 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
- Multi-stage capacity control
- 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 - (with accessory)
- DHW switching control - (with accessory)
- Outdoor temperature sensor - (with accessory)
- Buffer temperature sensor - (with accessory)
- Modbus connection - (with accessory)

Basic performance data - WAMAK AiWa 27 EVI H-Twin In

Heating - EN 14511		
Heating capacity [kW]	A7 / W35	30.2 (15.1 / 30.2)
	A2 / W35	25.8 (12.9 / 25.8)
	A-7 / W34	21.4 (10.7 / 21.4)
Electrical power input [kW]	A7 / W35	6.5 (3.1 / 6.5)
	A2 / W35	6.6 (3.2 / 6.6)
	A-7 / W34	6.4 (3.1 / 6.4)
Heating efficiency faktor [COP]	A7 / W35	4.63
	A2 / W35	3.90
	A-7 / W34	3.33
Seasonal space heating energy efficiency - SCOP EN 14825		
Average Climate / Low Temperature [35°C]	SCOP	4.52
	η [%]	180.8
	Label	A+++
	Qhe [kWh]	50203.8
	Pdesignh [kW]	24.3
	Tbivalent [°C]	-7
Cooling		
Cooling capacity - [kW]	A35 / W23-18	29.7
	A25 / W23-18	31.5
	A35 / W12-7	22.0
	A25 / W12-7	22.0
Seasonal space cooling energy efficiency - SEER EN 14825		
[W 23 / 18°C]	SEER	4.73
	Qce [kWh]	13200.0
	η_c [%]	189.0
Sound EN 12102		
Acoustic power - Lw	dB(A)	68.6
Acoustic pressure - Lp	1 m dB(A)	60.6
	5 m dB(A)	46.6
	10 m dB(A)	40.6
Mechanical and operational information		
Compressor type (3~ 400/50)	SCROLL / 2 /	On/Off
Refrigerant	R410A (GWP - 2088)	9.2 kg
Operating limit temperatures heating - (min / max) [°C]	25 / 65	
Operating limit temperatures source - (min / max) [°C]	-22 / 40	
Weight	378 kg	

Main technical data - WAMAK AiWa 27 EVI H-Twin In

Enclosure type			Heat energy rejection side data			
Basic dimensions	Height [mm]	1760	Operating limit temperatures heating	MAX [°C]	65	
	Width [mm]	1420		MIN [°C]	25	
	Length [mm]	660	for more see operating limits diagram			
Weight [kg]		378	Condenser	Port size	1.1/2 "	
Colour		Gray		Type	BPHE	
Enclosure IP Class		IP44		Count	1	
				Material	AISI 316	
Refrigeration cycle			Maximal operating pressure - refrigerant [bar]			45
Compressor	Type	Scroll	Maximal operating pressure - Water [bar]			6
	Number of stages	2	Testing pressure [bar]			70
	On/Off		Heat transfer medium			Water
	Power factor Cosφ	0.77	Volume flow @ dT 5K (nom) - Water [m3/h]			2.61 ~ 5.21
	Winding resistance	2.33 Ohm	Internal pressure drop - Water [kPa]			16
Refrigerant		R410A	ECM speed circulator - condenser			UPMXL GEO 32-125
	Volme	9.2 kg	Flow sensor consumer - analogue			0..10V
	GWP	2088	Temperature difference @ 35 °C (nom)			5 K
	Safety class	A1	@ 55 °C			8 K
Refrigeration oil type	POE RL32-3MAF		@ 65 °C			10 K
	Oil volume	2 x 1.24 L				
Maximal pressure - refrigerant [bar]		45	Renewable energy extraction side data			
	PED class	1	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	1200mm x 1200mm "	
Reverse defrosting with hot gas				Type	Cu-coil /Al-fin	
Plate exchanger protection HG-BYPASS				Count	1	
				Material	Cu/Al	
Electrical connection data			Maximal operating pressure - refrigerant [bar]			28
Line voltage [#~ V/Hz]		3~ 400/50	Heat transfer medium			Air
	nominal [A]	12.40	Volume flow - Air [m3/h]			4730 ~ 9460
	maximal [A]	21.30	Internal pressure drop - Air [kPa]			0.035
	starting [A]	12.4	Temperature difference - Air			7 K
Softstart		-	Number of fans			1
Main safety		C32	Fan diameter [mm]			800
Control System						
Main controller	SIEMENS	RVS 61				
Extension module	AVS75.3xx	AVS75.3xx				
Bus Clip-In		Modbus OCI352				
Online connection		Web server OZW672				
Superheat controller		1 - EEV H/C				
*** with accessory						

WAMAK AiWa 27 EVI H-Twin In

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

Model	AiWa 27 EVI H-Twin In
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	24.3	kW	Seasonal space heating energy efficiency	ηs	180.8	%
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	21.4	kW	Tj = -7 °C	COPd	3.33	-
Tj = +2 °C	Pdh	25.5	kW	Tj = +2 °C	COPd	4.4	-
Tj = +7 °C	Pdh	30.0	kW	Tj = +7 °C	COPd	5.7	-
Tj = +12 °C	Pdh	35.4	kW	Tj = +12 °C	COPd	7.5	-
Tj = bivalent temperature	Pdh	20.9	kW	Tj = bivalent temperature	COPd	3.2	-
Tj = operation limit temperature	Pdh	15.2	kW	Tj = operation limit temperature	COPd	2.5	-
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	0.010	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	10.9	kW
Standby mode	Psb	0.010	kW	Type of energy input		electricity	
Crankcase heater mode	Pck	0.050	kW				
Other items							
Capacity control		multi-stage		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4730 ~ 9460	m3/h
Sound power level				For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	---	m3/h
indoors	Lwa	69	dB				
outdoors	Lwa	---	dB				
Annual energy consumption	QHE	50203.8	kWh				

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WAMAK AiWa 27 EVI H-Twin In

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

Model	AiWa 27 EVI H-Twin In
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	26.0	kW	Seasonal space heating energy efficiency	ηs	139.3	%
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	22.7	kW	Tj = -7 °C	COPd	2.32	-
Tj = +2 °C	Pdh	26.1	kW	Tj = +2 °C	COPd	3.3	-
Tj = +7 °C	Pdh	30.2	kW	Tj = +7 °C	COPd	4.5	-
Tj = +12 °C	Pdh	35.4	kW	Tj = +12 °C	COPd	6.3	-
Tj = bivalent temperature	Pdh	22.4	kW	Tj = bivalent temperature	COPd	2.1	-
Tj = operation limit temperature	Pdh	16.7	kW	Tj = operation limit temperature	COPd	1.8	-
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	0.010	kW	Supplementary heater			
Thermostat-off mode	Pto	0.010	kW	Rated heat output	Psup	10.9	kW
Standby mode	Psb	0.010	kW	Type of energy input		electricity	
Crankcase heater mode	Pck	0.050	kW				
Other items							
Capacity control		multi-stage		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4730 ~ 9460	m3/h
Sound power level				For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	---	m3/h
indoors	Lwa	69	dB				
outdoors	Lwa	---	dB				
Annual energy consumption	QHE	53716.0	kWh				

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ENERG

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WAMAK

AiWa 27 EVI H-Twin In



55 °C

35 °C

A+++

A++

A+

A

B

C

D

A++

A+++



69 dB



--- dB

■ 28
■ 26
■ 26
kW

■ 25
■ 25
■ 24
kW



2019

811/2013

AiWa 27 EVI H-Twin In

ErP Data

	55 °C	35 °C
Energy class	A++	A+++
η [%]	139.3	180.8
P_{rated} [kW]	26	25
Q_{HE} [kWh/y]	53716	50204
SCOP [-]	3.48	4.52
$T_{bivalent}$ [°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]

ZHI14K1P-TFM_R410A_2_AW

Operating conditions		Qh	P	COP
1	A7 / W30-35	30.2	6.5	4.63
2	A2 / W35	25.8	6.6	3.90
3	A-22 / W35	15.2	6.2	2.45
A	A-7 / W34	21.4	6.4	3.33
B	A2 / W30	25.5	5.8	4.39
C	A7 / W27	30.0	5.3	5.67
D	A12 / W24	35.4	4.7	7.47
E	A-10 / W35	20.9	6.6	3.18
F	A-7 / W34	21.4	6.4	3.33

SCOP DATA EN 14825:2018	
Average Climate / Low Temperature [35°C]	
SCOPon	4.62
SCOPnet	4.66
SCOP	4.52
η [%]	180.77
Label	A+++
Qh [kWh]	50203.80
Pdesignh [kW]	24.3
Tbivalent [°C]	-7.00

Average Climate / Medium Temperature [55°C]

Operating conditions		Qh	P	COP
1	A7 / W47-55	30.9	10.8	2.85
2	A2 / W55	26.9	10.8	2.50
3	A-22 / W55	16.7	8.8	1.75
A	A-7 / W52	22.7	9.8	2.32
B	A2 / W42	26.1	7.8	3.33
C	A7 / W36	30.2	6.7	4.51
D	A12 / W30	35.4	5.6	6.34
E	A-10 / W55	22.4	10.4	2.15
F	A-7 / W55	23.0	10.5	2.19

SCOP DATA EN 14825:2018	
Average Climate / Medium Temperature [55°C]	
SCOPon	3.54
SCOPnet	3.57
SCOP	3.48
η [%]	139.33
Label	A++
Qh [kWh]	53716.00
Pdesignh [kW]	26.0
Tbivalent [°C]	-7.00

Cooling performance data

Low temperature cooling W 12 / 7°C

Operating conditions		Qc	P	EER
A	A35 / W12-7	22.0	8.0	2.74
B	A30 / W12-7	22.7	7.1	3.21
C	A25 / W12-7	23.3	6.2	3.74
D	A20 / W12-7	23.8	5.5	4.36

SEER DATA EN 14825:2018 [W 12 / 7°C]	
SEERon	3.64
SEER	3.53
Qc [kWh]	13200.00
η [%]	141.35

Radiant cooling W 23 / 18°C

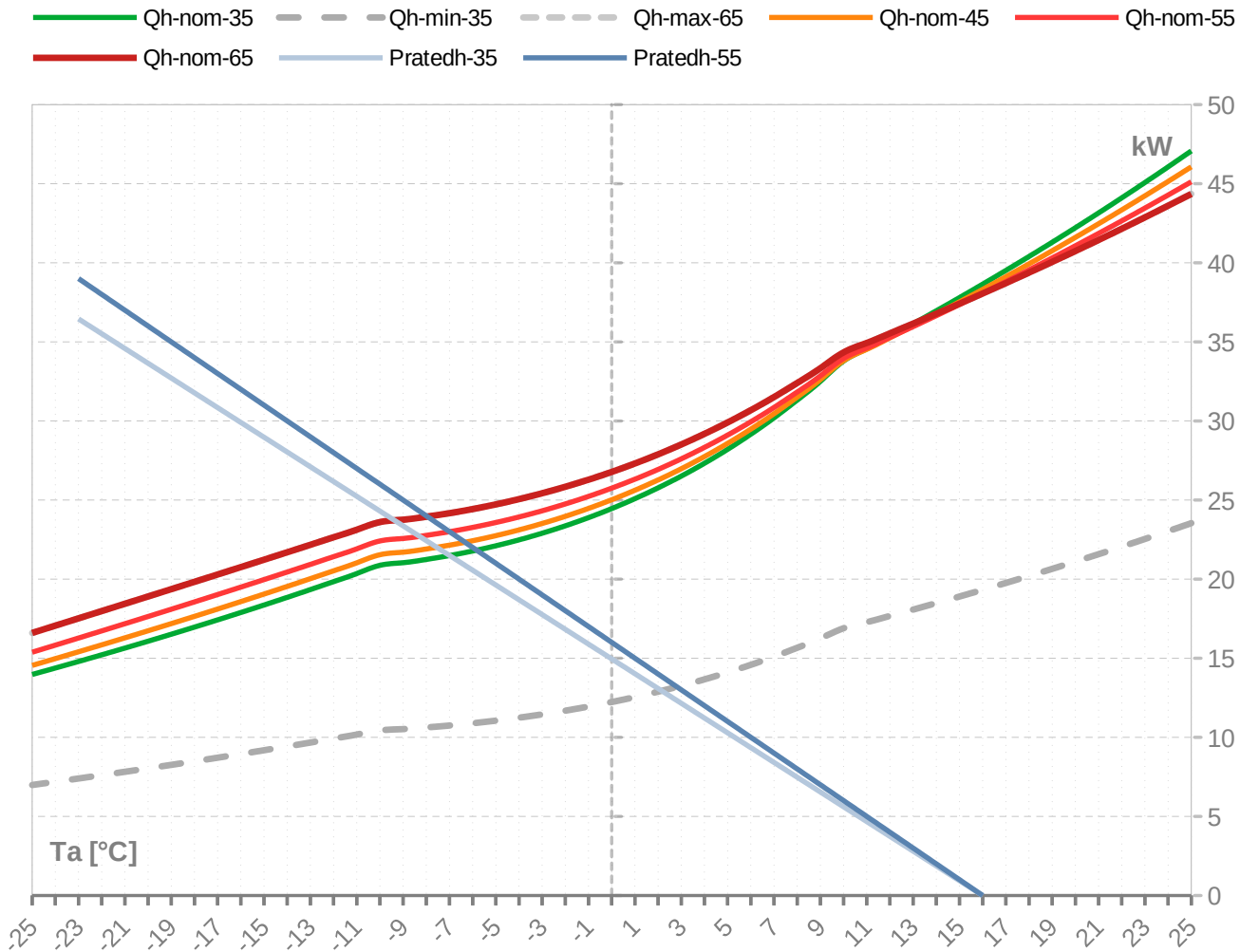
Operating conditions		Qc	P	EER
A	A35 / W23-18	29.7	8.0	3.69
B	A30 / W23-18	30.6	6.4	4.33
C	A25 / W23-18	31.5	5.6	5.06
D	A20 / W23-18	32.3	4.9	5.90

SEER DATA EN 14825:2018 [W 23 / 18°C]	
SEERon	4.92
SEER	4.73
Qc [kWh]	13200.00
η [%]	189.02

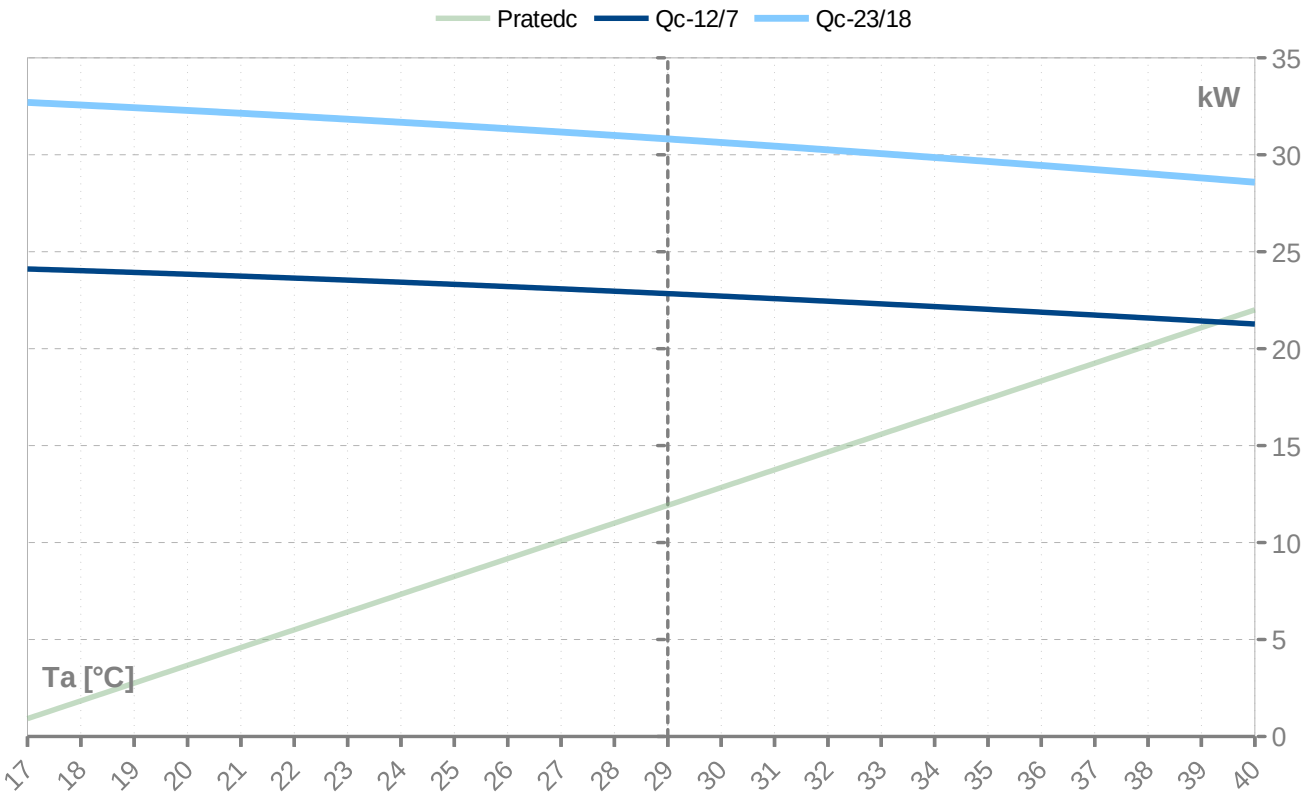
WAMAK AiWa 27 EVI H-Twin In

ZHI14K1P-TFM_R410A_2_AW

Performance lines - heating



Performance lines - cooling



Th [°C]		35 °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	39.5	19.8		6.3	3.0		6.31	11.0	5.5	
24	39.5	19.8		6.3	3.0		6.31	11.0	5.5	
23	39.5	19.8		6.3	3.0		6.31	11.0	5.5	
22	39.5	19.8		6.3	3.0		6.31	11.0	5.5	
21	39.5	19.8		6.3	3.0		6.31	11.0	5.5	
20	39.5	19.8		6.3	3.0		6.31	11.0	5.5	
19	39.5	19.8		6.3	3.0		6.31	11.0	5.5	
18	39.5	19.8		6.3	3.0		6.31	11.0	5.5	
17	39.5	19.8		6.3	3.0		6.31	11.0	5.5	
16	38.6	19.3	38.6	6.3	3.0	6.3	6.14	11.0	5.5	11.0
15	37.8	18.9	37.8	6.3	3.0	6.3	5.98	11.0	5.5	11.0
14	37.0	18.5	37.0	6.3	3.1	6.3	5.83	11.1	5.5	11.1
13	36.1	18.1	36.1	6.4	3.1	6.4	5.68	11.1	5.5	11.1
12	35.3	17.7	35.3	6.4	3.1	6.4	5.53	11.1	5.6	11.1
11	34.6	17.3	34.6	6.4	3.1	6.4	5.39	11.2	5.6	11.2
10	33.8	16.9	33.8	6.4	3.1	6.4	5.25	11.2	5.6	11.2
9	32.5	16.3	32.5	6.5	3.1	6.5	5.02	11.2	5.6	11.2
8	31.3	15.7	31.3	6.5	3.1	6.5	4.82	11.3	5.6	11.3
7	30.2	15.1	30.2	6.5	3.1	6.5	4.63	11.3	5.6	11.3
6	29.2	14.6	29.2	6.5	3.2	6.5	4.45	11.3	5.7	11.3
5	28.2	14.1	28.2	6.6	3.2	6.6	4.29	11.3	5.7	11.3
4	27.3	13.7	27.3	6.6	3.2	6.6	4.15	11.4	5.7	11.4
3	26.5	13.3	26.5	6.6	3.2	6.6	4.02	11.4	5.7	11.4
2	25.8	12.9	25.8	6.6	3.2	6.6	3.90	11.4	5.7	11.4
1	25.1	12.5	25.1	6.6	3.2	6.6	3.80	11.4	5.7	11.4
0	24.5	12.2	24.5	6.6	3.2	6.6	3.70	11.4	5.7	11.4
-1	23.9	11.9	23.9	6.6	3.2	6.6	3.62	11.4	5.7	11.4
-2	23.4	11.7	23.4	6.6	3.2	6.6	3.54	11.4	5.7	11.4
-3	22.9	11.4	22.9	6.6	3.2	6.6	3.47	11.4	5.7	11.4
-4	22.5	11.2	22.5	6.6	3.2	6.6	3.41	11.4	5.7	11.4
-5	22.1	11.1	22.1	6.6	3.2	6.6	3.35	11.4	5.7	11.4
-6	21.8	10.9	21.8	6.6	3.2	6.6	3.31	11.4	5.7	11.4
-7	21.5	10.7	21.5	6.6	3.2	6.6	3.27	11.4	5.7	11.4
-8	21.2	10.6	21.2	6.6	3.2	6.6	3.23	11.4	5.7	11.4
-9	21.0	10.5	21.0	6.6	3.2	6.6	3.20	11.3	5.7	11.3
-10	20.9	10.4	20.9	6.6	3.2	6.6	3.18	11.3	5.7	11.3
-11	20.3	10.2	20.3	6.6	3.2	6.6	3.11	11.3	5.7	11.3
-12	19.8	9.9	19.8	6.5	3.1	6.5	3.04	11.3	5.7	11.3
-13	19.3	9.7	19.3	6.5	3.1	6.5	2.97	11.3	5.6	11.3
-14	18.8	9.4	18.8	6.5	3.1	6.5	2.90	11.3	5.6	11.3
-15	18.4	9.2	18.4	6.5	3.1	6.5	2.84	11.2	5.6	11.2
-16	17.9	8.9	17.9	6.4	3.1	6.4	2.78	11.2	5.6	11.2
-17	17.4	8.7	17.4	6.4	3.1	6.4	2.72	11.2	5.6	11.2
-18	17.0	8.5	17.0	6.4	3.1	6.4	2.66	11.1	5.6	11.1
-19	16.5	8.3	16.5	6.3	3.1	6.3	2.61	11.1	5.5	11.1
-20	16.1	8.0	16.1	6.3	3.0	6.3	2.56	11.0	5.5	11.0
-21	15.6	7.8	15.6	6.2	3.0	6.2	2.50	11.0	5.5	11.0
-22	15.2	7.6	15.2	6.2	3.0	6.2	2.45	10.9	5.5	10.9
-23	14.8	7.4	14.8	6.1	3.0	6.1	2.41	10.9	5.4	10.9
-24	14.4	7.2	14.4	6.1	2.9	6.1	2.36	10.8	5.4	10.8
-25	14.0	7.0	14.0	6.0	2.9	6.0	2.32	10.7	5.4	10.7

* attention: operating limits not reflected in performance table

ZHI14K1P-TFM_R410A_2_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	46.1	23.0	46.1	8.0	3.8	8.0	5.77	13.0	6.5	13.0
24	45.1	22.6	45.1	8.0	3.9	8.0	5.63	13.0	6.5	13.0
23	44.2	22.1	44.2	8.0	3.9	8.0	5.49	13.0	6.5	13.0
22	43.3	21.7	43.3	8.1	3.9	8.1	5.36	13.1	6.5	13.1
21	42.5	21.2	42.5	8.1	3.9	8.1	5.24	13.1	6.6	13.1
20	41.6	20.8	41.6	8.1	3.9	8.1	5.11	13.1	6.6	13.1
19	40.8	20.4	40.8	8.2	3.9	8.2	4.99	13.2	6.6	13.2
18	39.9	20.0	39.9	8.2	4.0	8.2	4.87	13.2	6.6	13.2
17	39.1	19.6	39.1	8.2	4.0	8.2	4.76	13.2	6.6	13.2
16	38.3	19.2	38.3	8.2	4.0	8.2	4.64	13.3	6.6	13.3
15	37.5	18.8	37.5	8.3	4.0	8.3	4.54	13.3	6.7	13.3
14	36.8	18.4	36.8	8.3	4.0	8.3	4.43	13.3	6.7	13.3
13	36.0	18.0	36.0	8.3	4.0	8.3	4.33	13.4	6.7	13.4
12	35.3	17.6	35.3	8.3	4.0	8.3	4.23	13.4	6.7	13.4
11	34.5	17.3	34.5	8.4	4.0	8.4	4.13	13.4	6.7	13.4
10	33.8	16.9	33.8	8.4	4.0	8.4	4.04	13.4	6.7	13.4
9	32.6	16.3	32.6	8.4	4.0	8.4	3.88	13.5	6.7	13.5
8	31.5	15.8	31.5	8.4	4.1	8.4	3.74	13.5	6.7	13.5
7	30.5	15.2	30.5	8.4	4.1	8.4	3.61	13.5	6.8	13.5
6	29.5	14.7	29.5	8.4	4.1	8.4	3.49	13.5	6.8	13.5
5	28.6	14.3	28.6	8.5	4.1	8.5	3.38	13.5	6.8	13.5
4	27.7	13.9	27.7	8.5	4.1	8.5	3.28	13.5	6.8	13.5
3	27.0	13.5	27.0	8.4	4.1	8.4	3.19	13.5	6.8	13.5
2	26.3	13.1	26.3	8.4	4.1	8.4	3.11	13.5	6.8	13.5
1	25.6	12.8	25.6	8.4	4.1	8.4	3.04	13.5	6.8	13.5
0	25.0	12.5	25.0	8.4	4.1	8.4	2.97	13.5	6.8	13.5
-1	24.5	12.2	24.5	8.4	4.1	8.4	2.91	13.5	6.7	13.5
-2	24.0	12.0	24.0	8.4	4.0	8.4	2.85	13.5	6.7	13.5
-3	23.5	11.8	23.5	8.4	4.0	8.4	2.81	13.5	6.7	13.5
-4	23.1	11.6	23.1	8.4	4.0	8.4	2.76	13.4	6.7	13.4
-5	22.7	11.4	22.7	8.4	4.0	8.4	2.72	13.4	6.7	13.4
-6	22.4	11.2	22.4	8.3	4.0	8.3	2.69	13.4	6.7	13.4
-7	22.1	11.1	22.1	8.3	4.0	8.3	2.66	13.4	6.7	13.4
-8	21.9	11.0	21.9	8.3	4.0	8.3	2.64	13.4	6.7	13.4
-9	21.7	10.9	21.7	8.3	4.0	8.3	2.62	13.4	6.7	13.4
-10	21.5	10.8	21.5	8.3	4.0	8.3	2.60	13.3	6.7	13.3
-11	21.0	10.5	21.0	8.3	4.0	8.3	2.55	13.3	6.7	13.3
-12	20.5	10.3	20.5	8.2	4.0	8.2	2.50	13.3	6.6	13.3
-13	20.0	10.0	20.0	8.2	3.9	8.2	2.45	13.2	6.6	13.2
-14	19.5	9.8	19.5	8.1	3.9	8.1	2.40	13.2	6.6	13.2
-15	19.1	9.5	19.1	8.1	3.9	8.1	2.35	13.1	6.6	13.1
-16	18.6	9.3	18.6	8.0	3.9	8.0	2.31	13.0	6.5	13.0
-17	18.1	9.1	18.1	8.0	3.9	8.0	2.27	13.0	6.5	13.0
-18	17.6	8.8	17.6	7.9	3.8	7.9	2.22	12.9	6.5	12.9
-19	17.2	8.6	17.2	7.9	3.8	7.9	2.18	12.8	6.4	12.8
-20	16.7	8.4	16.7	7.8	3.8	7.8	2.14	12.8	6.4	12.8
-21	16.3	8.1	16.3	7.7	3.7	7.7	2.10	12.7	6.3	12.7
-22	15.8	7.9	15.8	7.7	3.7	7.7	2.06	12.6	6.3	12.6
-23	15.4	7.7	15.4	7.6	3.7	7.6	2.03	12.5	6.2	12.5
-24	15.0	7.5	15.0	7.5	3.6	7.5	1.99	12.4	6.2	12.4
-25	14.5	7.3	14.5	7.4	3.6	7.4	1.96	12.3	6.1	12.3

* attention: operating limits not reflected in performance table

WAMAK AiWa 27 EVI H-Twin In

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	45.1	22.6	45.1	10.5	5.1	10.5	4.29	16.1	8.0	16.1
24	44.3	22.1	44.3	10.5	5.1	10.5	4.20	16.1	8.1	16.1
23	43.5	21.7	43.5	10.6	5.1	10.6	4.11	16.2	8.1	16.2
22	42.6	21.3	42.6	10.6	5.1	10.6	4.02	16.2	8.1	16.2
21	41.9	20.9	41.9	10.6	5.1	10.6	3.94	16.3	8.1	16.3
20	41.1	20.5	41.1	10.7	5.1	10.7	3.85	16.3	8.1	16.3
19	40.3	20.2	40.3	10.7	5.1	10.7	3.77	16.3	8.2	16.3
18	39.5	19.8	39.5	10.7	5.2	10.7	3.69	16.4	8.2	16.4
17	38.8	19.4	38.8	10.7	5.2	10.7	3.62	16.4	8.2	16.4
16	38.1	19.0	38.1	10.7	5.2	10.7	3.54	16.4	8.2	16.4
15	37.4	18.7	37.4	10.8	5.2	10.8	3.47	16.4	8.2	16.4
14	36.7	18.3	36.7	10.8	5.2	10.8	3.40	16.5	8.2	16.5
13	36.0	18.0	36.0	10.8	5.2	10.8	3.33	16.5	8.2	16.5
12	35.3	17.6	35.3	10.8	5.2	10.8	3.26	16.5	8.2	16.5
11	34.6	17.3	34.6	10.8	5.2	10.8	3.20	16.5	8.3	16.5
10	34.0	17.0	34.0	10.8	5.2	10.8	3.13	16.5	8.3	16.5
9	32.9	16.4	32.9	10.8	5.2	10.8	3.03	16.5	8.3	16.5
8	31.8	15.9	31.8	10.8	5.2	10.8	2.94	16.5	8.3	16.5
7	30.9	15.4	30.9	10.8	5.2	10.8	2.85	16.5	8.3	16.5
6	29.9	15.0	29.9	10.8	5.2	10.8	2.76	16.5	8.3	16.5
5	29.1	14.6	29.1	10.8	5.2	10.8	2.69	16.5	8.3	16.5
4	28.3	14.2	28.3	10.8	5.2	10.8	2.62	16.5	8.2	16.5
3	27.6	13.8	27.6	10.8	5.2	10.8	2.56	16.5	8.2	16.5
2	26.9	13.5	26.9	10.8	5.2	10.8	2.50	16.4	8.2	16.4
1	26.3	13.2	26.3	10.7	5.2	10.7	2.45	16.4	8.2	16.4
0	25.7	12.9	25.7	10.7	5.2	10.7	2.41	16.4	8.2	16.4
-1	25.2	12.6	25.2	10.7	5.1	10.7	2.36	16.3	8.2	16.3
-2	24.8	12.4	24.8	10.6	5.1	10.6	2.33	16.3	8.1	16.3
-3	24.3	12.2	24.3	10.6	5.1	10.6	2.29	16.2	8.1	16.2
-4	23.9	12.0	23.9	10.6	5.1	10.6	2.26	16.2	8.1	16.2
-5	23.6	11.8	23.6	10.5	5.1	10.5	2.24	16.2	8.1	16.2
-6	23.3	11.6	23.3	10.5	5.1	10.5	2.21	16.1	8.1	16.1
-7	23.0	11.5	23.0	10.5	5.1	10.5	2.19	16.1	8.1	16.1
-8	22.8	11.4	22.8	10.5	5.0	10.5	2.17	16.1	8.0	16.1
-9	22.6	11.3	22.6	10.5	5.0	10.5	2.16	16.0	8.0	16.0
-10	22.4	11.2	22.4	10.4	5.0	10.4	2.15	16.0	8.0	16.0
-11	21.9	11.0	21.9	10.4	5.0	10.4	2.11	16.0	8.0	16.0
-12	21.4	10.7	21.4	10.3	5.0	10.3	2.07	15.9	7.9	15.9
-13	20.9	10.5	20.9	10.3	4.9	10.3	2.04	15.8	7.9	15.8
-14	20.4	10.2	20.4	10.2	4.9	10.2	2.00	15.7	7.9	15.7
-15	20.0	10.0	20.0	10.1	4.9	10.1	1.97	15.6	7.8	15.6
-16	19.5	9.7	19.5	10.1	4.8	10.1	1.94	15.5	7.8	15.5
-17	19.0	9.5	19.0	10.0	4.8	10.0	1.91	15.4	7.7	15.4
-18	18.6	9.3	18.6	9.9	4.8	9.9	1.87	15.3	7.7	15.3
-19	18.1	9.0	18.1	9.8	4.7	9.8	1.84	15.2	7.6	15.2
-20	17.6	8.8	17.6	9.7	4.7	9.7	1.81	15.1	7.6	15.1
-21	17.2	8.6	17.2	9.6	4.6	9.6	1.78	15.0	7.5	15.0
-22	16.7	8.4	16.7	9.5	4.6	9.5	1.75	14.9	7.4	14.9
-23	16.3	8.1	16.3	9.4	4.5	9.4	1.73	14.7	7.4	14.7
-24	15.8	7.9	15.8	9.3	4.5	9.3	1.70	14.6	7.3	14.6
-25	15.4	7.7	15.4	9.2	4.4	9.2	1.67	14.4	7.2	14.4

* 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	44.4	22.2	44.4	13.7	6.6	13.7	3.23	20.3	10.2	20.3
24	43.6	21.8	43.6	13.7	6.6	13.7	3.17	20.4	10.2	20.4
23	42.9	21.4	42.9	13.8	6.6	13.8	3.11	20.4	10.2	20.4
22	42.1	21.1	42.1	13.8	6.6	13.8	3.06	20.4	10.2	20.4
21	41.4	20.7	41.4	13.8	6.7	13.8	3.00	20.5	10.2	20.5
20	40.7	20.4	40.7	13.8	6.7	13.8	2.95	20.5	10.2	20.5
19	40.1	20.0	40.1	13.8	6.7	13.8	2.89	20.5	10.3	20.5
18	39.4	19.7	39.4	13.9	6.7	13.9	2.84	20.5	10.3	20.5
17	38.7	19.4	38.7	13.9	6.7	13.9	2.79	20.6	10.3	20.6
16	38.1	19.0	38.1	13.9	6.7	13.9	2.74	20.6	10.3	20.6
15	37.4	18.7	37.4	13.9	6.7	13.9	2.69	20.6	10.3	20.6
14	36.8	18.4	36.8	13.9	6.7	13.9	2.65	20.6	10.3	20.6
13	36.2	18.1	36.2	13.9	6.7	13.9	2.60	20.6	10.3	20.6
12	35.5	17.8	35.5	13.9	6.7	13.9	2.56	20.6	10.3	20.6
11	34.9	17.5	34.9	13.9	6.7	13.9	2.51	20.6	10.3	20.6
10	34.3	17.2	34.3	13.9	6.7	13.9	2.47	20.6	10.3	20.6
9	33.3	16.7	33.3	13.9	6.7	13.9	2.40	20.6	10.3	20.6
8	32.4	16.2	32.4	13.9	6.7	13.9	2.34	20.6	10.3	20.6
7	31.5	15.8	31.5	13.8	6.7	13.8	2.28	20.5	10.3	20.5
6	30.7	15.3	30.7	13.8	6.7	13.8	2.22	20.5	10.2	20.5
5	29.9	15.0	29.9	13.8	6.6	13.8	2.17	20.4	10.2	20.4
4	29.2	14.6	29.2	13.7	6.6	13.7	2.13	20.4	10.2	20.4
3	28.5	14.3	28.5	13.7	6.6	13.7	2.09	20.3	10.2	20.3
2	27.9	13.9	27.9	13.6	6.6	13.6	2.05	20.2	10.1	20.2
1	27.3	13.7	27.3	13.6	6.5	13.6	2.01	20.2	10.1	20.2
0	26.8	13.4	26.8	13.5	6.5	13.5	1.98	20.1	10.1	20.1
-1	26.3	13.1	26.3	13.5	6.5	13.5	1.95	20.0	10.0	20.0
-2	25.8	12.9	25.8	13.4	6.5	13.4	1.92	20.0	10.0	20.0
-3	25.4	12.7	25.4	13.4	6.4	13.4	1.90	19.9	10.0	19.9
-4	25.1	12.5	25.1	13.3	6.4	13.3	1.88	19.8	9.9	19.8
-5	24.7	12.4	24.7	13.3	6.4	13.3	1.86	19.8	9.9	19.8
-6	24.4	12.2	24.4	13.2	6.4	13.2	1.84	19.7	9.9	19.7
-7	24.2	12.1	24.2	13.2	6.4	13.2	1.83	19.7	9.8	19.7
-8	23.9	12.0	23.9	13.2	6.3	13.2	1.82	19.6	9.8	19.6
-9	23.8	11.9	23.8	13.1	6.3	13.1	1.81	19.6	9.8	19.6
-10	23.6	11.8	23.6	13.1	6.3	13.1	1.80	19.6	9.8	19.6
-11	23.1	11.6	23.1	13.0	6.3	13.0	1.77	19.5	9.7	19.5
-12	22.6	11.3	22.6	13.0	6.2	13.0	1.75	19.3	9.7	19.3
-13	22.2	11.1	22.2	12.9	6.2	12.9	1.72	19.2	9.6	19.2
-14	21.7	10.8	21.7	12.8	6.2	12.8	1.70	19.1	9.5	19.1
-15	21.2	10.6	21.2	12.7	6.1	12.7	1.67	19.0	9.5	19.0
-16										
-17										
-18										
-19										
-20										
-21										
-22										
-23										
-24										
-25										

* attention: operating limits not reflected in performance table

WAMAK AiWa 27 EVI H-Twin In

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	21.3	21.3	21.3	9.1	8.8	9.1	2.34	14.3	14.3	14.3
39	21.4	21.4	21.4	8.9	8.6	8.9	2.41	14.1	14.1	14.1
38	21.6	21.6	21.6	8.7	8.3	8.7	2.49	13.8	13.8	13.8
37	21.7	21.7	21.7	8.4	8.1	8.4	2.57	13.5	13.5	13.5
36	21.9	21.9	21.9	8.2	7.9	8.2	2.66	13.3	13.3	13.3
35	22.0	22.0	22.0	8.0	7.7	8.0	2.74	13.0	13.0	13.0
34	22.2	22.2	22.2	7.8	7.5	7.8	2.83	12.8	12.8	12.8
33	22.3	22.3	22.3	7.6	7.4	7.6	2.92	12.6	12.6	12.6
32	22.4	22.4	22.4	7.4	7.2	7.4	3.01	12.3	12.3	12.3
31	22.6	22.6	22.6	7.3	7.0	7.3	3.11	12.1	12.1	12.1
30	22.7	22.7	22.7	7.1	6.8	7.1	3.21	11.9	11.9	11.9
29	22.8	22.8	22.8	6.9	6.6	6.9	3.31	11.7	11.7	11.7
28	23.0	23.0	23.0	6.7	6.5	6.7	3.41	11.5	11.5	11.5
27	23.1	23.1	23.1	6.6	6.3	6.6	3.52	11.3	11.3	11.3
26	23.2	23.2	23.2	6.4	6.2	6.4	3.63	11.1	11.1	11.1
25	23.3	23.3	23.3	6.2	6.0	6.2	3.74	11.0	11.0	11.0
24	23.4	23.4	23.4	6.1	5.8	6.1	3.86	10.8	10.8	10.8
23	23.5	23.5	23.5	5.9	5.7	5.9	3.98	10.6	10.6	10.6
22	23.6	23.6	23.6	5.8	5.6	5.8	4.10	10.4	10.4	10.4
21	23.7	23.7	23.7	5.6	5.4	5.6	4.23	10.3	10.3	10.3
20	23.8	23.8	23.8	5.5	5.3	5.5	4.36	10.1	10.1	10.1
19	23.9	23.9	23.9	5.3	5.1	5.3	4.49	10.0	10.0	10.0
18	24.0	24.0	24.0	5.2	5.0	5.2	4.63	9.8	9.8	9.8
17	24.1	24.1	24.1	5.1	4.9	5.1	4.77	9.7	9.7	9.7

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	28.6	28.6	28.6	9.1	8.8	9.1	3.14	14.2	14.2	14.2
39	28.8	28.8	28.8	8.9	8.6	8.9	3.24	13.9	13.9	13.9
38	29.0	29.0	29.0	8.7	8.3	8.7	3.35	13.6	13.6	13.6
37	29.2	29.2	29.2	8.4	8.1	8.4	3.46	13.3	13.3	13.3
36	29.4	29.4	29.4	8.2	7.9	8.2	3.57	13.1	13.1	13.1
35	29.7	29.7	29.7	8.0	7.7	8.0	3.69	12.8	12.8	12.8
34	29.9	29.9	29.9	7.8	7.5	7.8	3.81	12.6	12.6	12.6
33	30.1	30.1	30.1	7.6	7.4	7.6	3.94	12.3	12.3	12.3
32	30.3	30.3	30.3	7.4	7.2	7.4	4.06	12.1	12.1	12.1
31	30.4	30.4	30.4	7.3	7.0	7.3	4.19	11.9	11.9	11.9
30	30.6	30.6	30.6	7.1	6.8	7.1	4.33	11.7	11.7	11.7
29	30.8	30.8	30.8	6.9	6.6	6.9	4.47	11.5	11.5	11.5
28	31.0	31.0	31.0	6.7	6.5	6.7	4.61	11.3	11.3	11.3
27	31.2	31.2	31.2	6.6	6.3	6.6	4.76	11.1	11.1	11.1
26	31.3	31.3	31.3	6.4	6.2	6.4	4.91	10.9	10.9	10.9
25	31.5	31.5	31.5	6.2	6.0	6.2	5.06	10.7	10.7	10.7
24	31.7	31.7	31.7	6.1	5.8	6.1	5.22	10.5	10.5	10.5
23	31.8	31.8	31.8	5.9	5.7	5.9	5.38	10.4	10.4	10.4
22	32.0	32.0	32.0	5.8	5.6	5.8	5.55	10.2	10.2	10.2
21	32.1	32.1	32.1	5.6	5.4	5.6	5.73	10.1	10.1	10.1
20	32.3	32.3	32.3	5.5	5.3	5.5	5.90	9.9	9.9	9.9
19	32.4	32.4	32.4	5.3	5.1	5.3	6.09	9.8	9.8	9.8
18	32.6	32.6	32.6	5.2	5.0	5.2	6.28	9.6	9.6	9.6
17	32.7	32.7	32.7	5.1	4.9	5.1	6.47	9.5	9.5	9.5

* 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

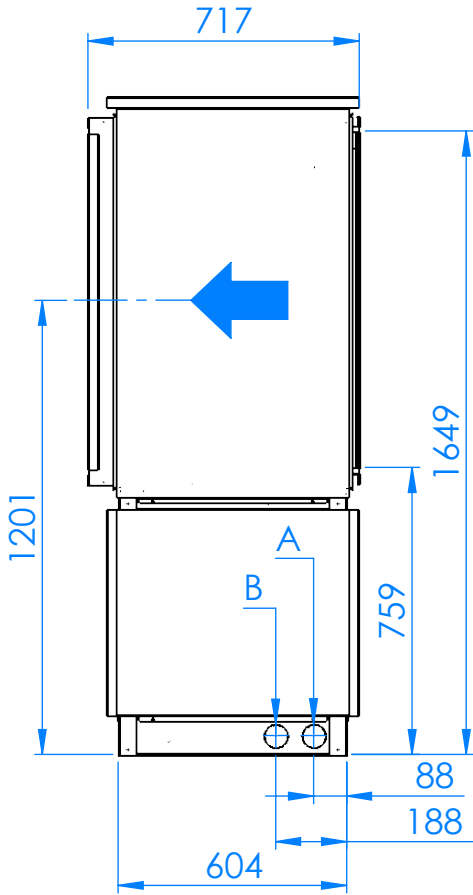
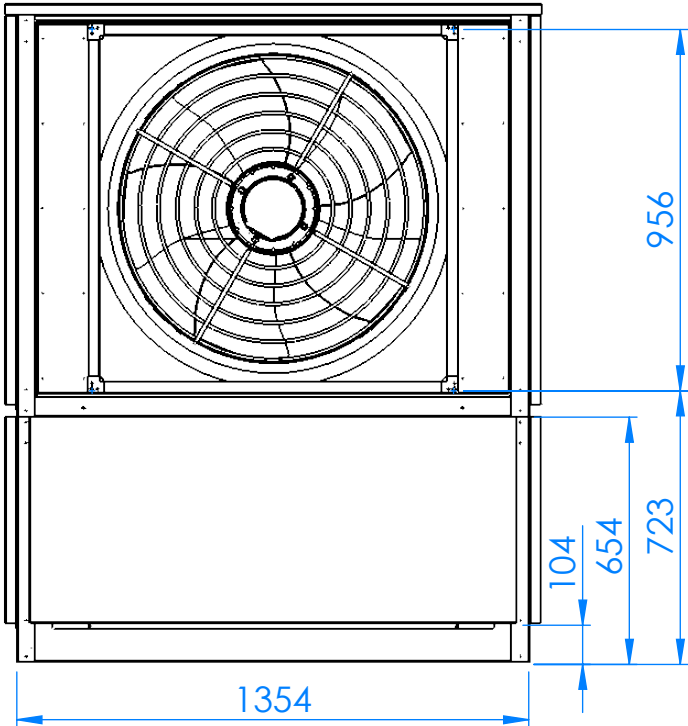
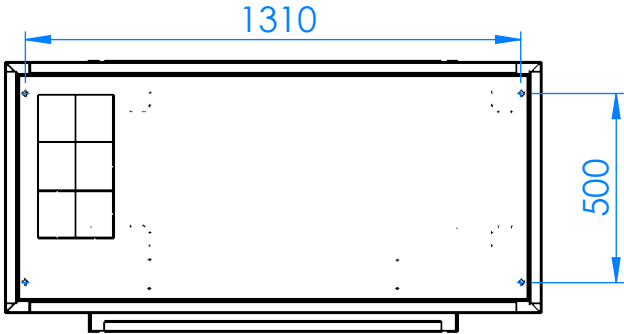
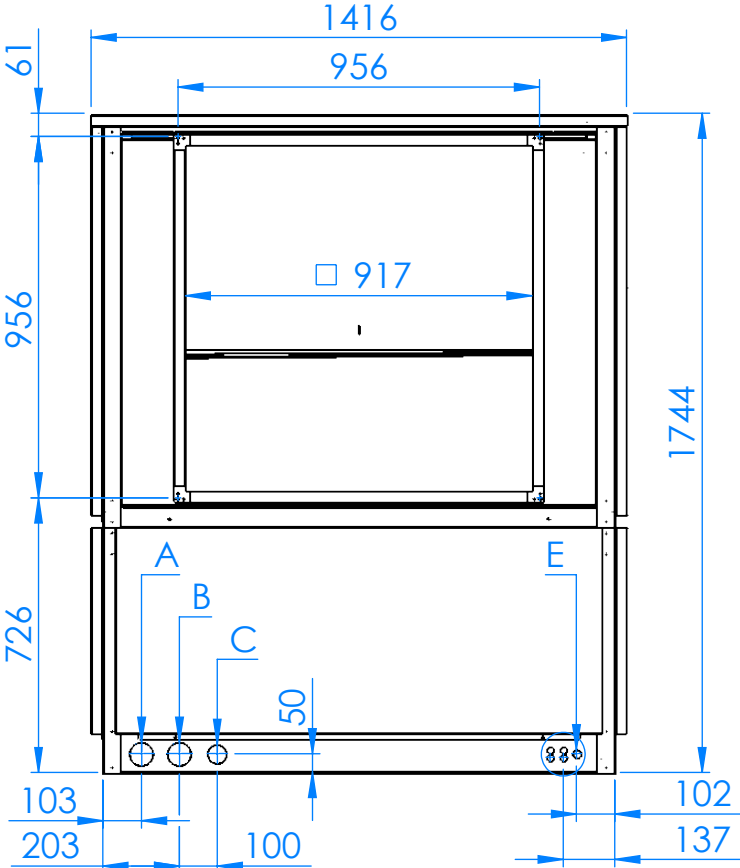
Qc nom: cooling / heat extraction capacity at nominal heating capacity

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



- A - 
- B - 
- C - condens
- E - electro

