

## Basic performance data - WAMAK TBW 100 EVI HeavyDuty 2L1

Heating - EN 14511		
Heating capacity [kW]	B0 / W35 (max)	96.1 ( 48.1 / 96.1 )
	B0 / W35 (min)	48.1 ( 48.1 / 96.1 )
	B0 / W34	96.0 ( 48.0 / 96.0 )
Electrical power input [kW]	B0 / W35 (max)	21.7 ( 10.7 / 21.7 )
	B0 / W35 (min)	10.7 ( 10.7 / 21.7 )
	B0 / W34	21.2 ( 10.5 / 21.2 )
Heating efficiency faktor [COP]	B0 / W35 (max)	4.43
	B0 / W35 (min)	4.49
	B0 / W34	4.52
Seasonal space heating energy efficiency - SCOP EN 14825		
Average Climate / Low Temperature [35 °C]	SCOP	5.01
	$\eta$ [ % ]	200.3
	Label	A+++
	Qhe [ kWh ]	39612.5
	Pdesignh [ kW ]	96.1
	Tbivalent [ °C ]	-10
Cooling		
Cooling capacity - [kW]	A35 / W23-18	96.9
	A25 / W23-18	101.8
	A35 / W12-7	96.9
	A25 / W12-7	96.9
Seasonal space cooling energy efficiency - SEER EN 14825		
[ W 23 / 18 °C ]	SEER	5.14
	Qce [ kWh ]	10682.5
	$\eta_c$ [ % ]	205.7
Sound EN 12102		
Acoustic power - Lw	dB(A)	65.9
Acoustic pressure - Lp	1 m dB(A)	57.9
	5 m dB(A)	43.9
	10 m dB(A)	37.9
Mechanical and operational information		
Compressor type (3~ 400/50)	SCROLL / 2 /	On/Off
Refrigerant	R410A (GWP - 2088)	11.5 kg
Operating limit temperatures heating - (min / max ) [°C]		25 / 65
Operating limit temperatures source - (min / max ) [°C]		-10 (7) / 30
Weight		620 kg

## Main technical data - WAMAK TBW 100 EVI HeavyDuty 2L1

Enclosure type		HD2L1		Heat energy rejection side data		
Basic dimensions	Height [mm]	2000		Operating limit temperatures heating	MAX [°C]	65
	Width [mm]	820			MIN [°C]	25
	Length [mm]	1200		for more see operating limits diagram		
Weight [kg]	620		Condenser	Port size	VIC 2.1/2 "	
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	2		Maximal operating pressure - Water [bar]		6
	On/Off			Testing pressure [bar]		70
	Power factor Cosφ	0.64		Heat transfer medium		Water
	Winding resistance	0.76 Ohm		Volume flow @ dT 5K (nom) - Water [m3/h]		8.32 ~ 16.63
Refrigerant		R410A		Internal pressure drop - Water [kPa]		20
	Volme	11.5 kg		Temperature difference	@ 35°C (nom)	5 K
	GWP	2088			@ 55°C	8 K
	Safety class	A1			@ 65°C	10 K
Refrigeration oil type	POE RL32-3MAF		Renewable energy extraction side data			
	Oil volume	2 x 3.38 L		Operating limit temperatures source	MIN [°C]	-10 (7)
Maximal pressure - refrigerant [bar]	50		for more see operating limits diagram			
	PED class	2		Evaporator	MAX [°C]	30
EVI - vapour injection with economizer			Port size		VIC 2.1/2 "	
Electrical connection data			Type		BPHE	
Line voltage [#~ V/Hz]	3~ 400/50		Count	1		
Current	nominal [A]	46.70		Material	AISI 316	
	maximal [A]	74.80		Maximal operating pressure - refrigerant [bar]		29
	starting [A]	63.04		Heat transfer medium		Ethylenglykol
Softstart	-		Brine proportion [%]		29	
Main safety	C80		Antifreeze to [°C]		-15	
Control System			Maximal operating pressure - Ethylenglykol [bar]		6	
Main controller	SIEMENS	RVS 61	Volume flow - Ethylenglykol [m3/h]		8.48 ~ 16.96	
Extension module	AVS75.3xx	AVS75.3xx	Internal pressure drop - Ethylenglykol [kPa]		20	
Bus Clip-In		LPB OCI346	Temperature difference - Ethylenglykol		4 K	
Online connection		Modbus OCI352				
Superheat controller		ToSyMo				
		SEC61				

\*\*\* with accessory

# WAMAK TBW 100 EVI HeavyDuty 2L1

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

Model	TBW 100 EVI HeavyDuty 2L1
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	96.1	kW	Seasonal space heating energy efficiency	$\eta_s$	200.3	%
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	96.0	kW	Tj = -7 °C	COPd	4.52	-
Tj = +2 °C	Pdh	95.5	kW	Tj = +2 °C	COPd	4.9	-
Tj = +7 °C	Pdh	95.0	kW	Tj = +7 °C	COPd	5.3	-
Tj = +12 °C	Pdh	94.5	kW	Tj = +12 °C	COPd	5.7	-
Tj = bivalent temperature	Pdh	96.1	kW	Tj = bivalent temperature	COPd	4.4	-
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	18.5	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:			
Other items				Rated air flow rate, outdoors	-	---	m <sup>3</sup> /h
Capacity control	multi-stage			For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Sound power level							
indoors	Lwa	66	dB				
outdoors	Lwa	---	dB				
Annual energy consumption	Q <sub>HE</sub>	39612.5	kWh				

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

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

Model	TBW 100 EVI HeavyDuty 2L1
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	98.3	kW	Seasonal space heating energy efficiency	$\eta_s$	160.5	%
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	98.9	kW	Tj = -7 °C	COPd	3.29	-
Tj = +2 °C	Pdh	98.9	kW	Tj = +2 °C	COPd	4.1	-
Tj = +7 °C	Pdh	97.2	kW	Tj = +7 °C	COPd	4.6	-
Tj = +12 °C	Pdh	96.7	kW	Tj = +12 °C	COPd	5.0	-
Tj = bivalent temperature	Pdh	98.3	kW	Tj = bivalent temperature	COPd	2.9	-
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	18.5	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 <sup>3</sup> /h
Capacity control	multi-stage			For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	8.48 ~ 16.96	m <sup>3</sup> /h
Sound power level							
indoors	Lwa	66	dB				
outdoors	Lwa	---	dB				
Annual energy consumption	Q <sub>HE</sub>	50568.0	kWh				

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TBW 100 EVI  
 HeavyDuty 2L1



55 °C

35 °C



A+++

A+++

66 dB

--- dB

■ 104	■ 99
■ 99	■ 97
■ 97	■ 92
kW	kW

2019

811/2013

TBW 100 EVI  
 HeavyDuty 2L1

**ErP Data**

	55 °C	35 °C
Energy class	A+++	A+++
$\eta$ [%]	160.5	200.3
$P_{rated}$ [kW]	99	97
$Q_{HE}$ [kWh/y]	50568	39613
SCOP [-]	4.01	5.01
$T_{bivalent}$ [°C]	-10	-10

CONTROLLER



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

Heating performance data

Version: v2024.010-BW-WW

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

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Operating conditions	Qh	P	COP
1 B0 / W30-35	96.1	21.7	4.43
2 B0 / W30-35 ( MIN )	48.1	10.7	4.49
A B0 / Wxx-34	96.0	21.2	4.52
B B0 / Wxx-30	95.5	19.4	4.92
C B0 / Wxx-27	47.5	8.9	5.32
D B0 / Wxx-24	47.3	8.3	5.68
E B0 / Wxx-35	96.1	21.7	4.43
F B0 / Wxx-35	96.1	21.7	4.43

SCOP DATA EN 14825:2018	
Source - Brine [0°C] / Low Temperature [35°C]	
SCOPon	5.01
SCOPnet	5.01
SCOP	5.01
η [ % ]	200.25
Label	A+++
Qh [ kWh ]	39613
Pdesignh [ kW ]	96.1
Tbivalent [ °C ]	-10

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

Operating conditions	Qh	P	COP
1 B0 / W47-55	98.3	34.0	2.89
2 B0 / W47-55 ( MIN )	49.1	16.5	2.93
A B0 / Wxx-52	98.9	31.0	3.29
B B0 / Wxx-42	98.9	24.2	4.13
C B0 / Wxx-36	48.6	10.6	4.59
D B0 / Wxx-30	48.3	9.6	5.05
E B0 / Wxx-55	98.3	34.0	2.89
F B0 / Wxx-54	99.0	31.8	3.12

SCOP DATA EN 14825:2018	
Source - Brine [0°C] / Medium Temperature [55°C]	
SCOPon	4.02
SCOPnet	4.02
SCOP	4.01
η [ % ]	160.49
Label	A+++
Qh [ kWh ]	50568
Pdesignh [ kW ]	98.3
Tbivalent [ °C ]	-10

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

Operating conditions	Qh	P	COP
1 W10 / W30-35	121.2	21.7	5.58
2 W10 / W30-35 ( MIN )	60.6	10.7	5.66
A W10 / Wxx-34	121.2	21.2	5.70
B W10 / Wxx-30	121.3	19.5	6.21
C W10 / Wxx-27	121.3	18.3	6.72
D W10 / Wxx-24	121.3	17.2	7.16
E W10 / Wxx-35	121.2	21.7	5.58
F W10 / Wxx-35	121.2	21.7	5.58

SCOP DATA EN 14825:2018	
Source - Water [10°C] / Low Temperature [35°C]	
SCOPon	6.33
SCOPnet	6.33
SCOP	6.32
η [ % ]	252.96
Label	A+++
Qh [ kWh ]	39550
Pdesignh [ kW ]	121.2
Tbivalent [ °C ]	-10.00

## WAMAK TBW 100 EVI HeavyDuty 2L1

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

Operating conditions	Qh	P	COP
1 W10 / W47-55	120.9	34.0	3.55
2 W10 / W47-55 ( MIN )	60.5	16.8	3.60
A W10 / Wxx-52	122.1	31.0	3.94
B W10 / Wxx-42	122.4	24.2	5.06
C W10 / Wxx-36	122.6	21.5	5.79
D W10 / Wxx-30	122.7	19.5	6.37
E W10 / Wxx-55	120.9	34.0	3.55
F W10 / Wxx-55	120.9	34.0	3.55

SCOP DATA EN 14825:2018	
Source - Water [10°C] / Medium Temperature [55°C]	
SCOPon	4.91
SCOPnet	4.91
SCOP	4.91
η [ % ]	196.37
Label	A+++
Qh [ kWh ]	50831
Pdesignh [ kW ]	120.9
Tbivalent [ °C ]	-10.00

### Low temperature cooling W 12 / 7°C

Operating conditions	Qc	P	EER
A W30-35 / W12-7	74.8	23.2	3.22
B W26-xx / W12-7	76.2	21.2	3.59
C W22-xx / W12-7	77.3	19.4	3.98
D W18-xx / W12-7	77.9	18.6	4.20

SEER DATA EN 14825:2018 [ W 12 / 7°C ]	
SEERon	3.86
SEER	3.86
Qc [ kWh ]	43680
η [ % ]	154.44

### Radiant cooling W 23 / 18°C

Operating conditions	Qc	P	EER
A W50-xx / W23-18	86.9	36.5	2.38
B W40-xx / W23-18	93.9	29.0	3.24
C W30-35 / W23-18	99.5	23.2	4.29
D W26-xx / W23-18	101.4	21.2	4.77

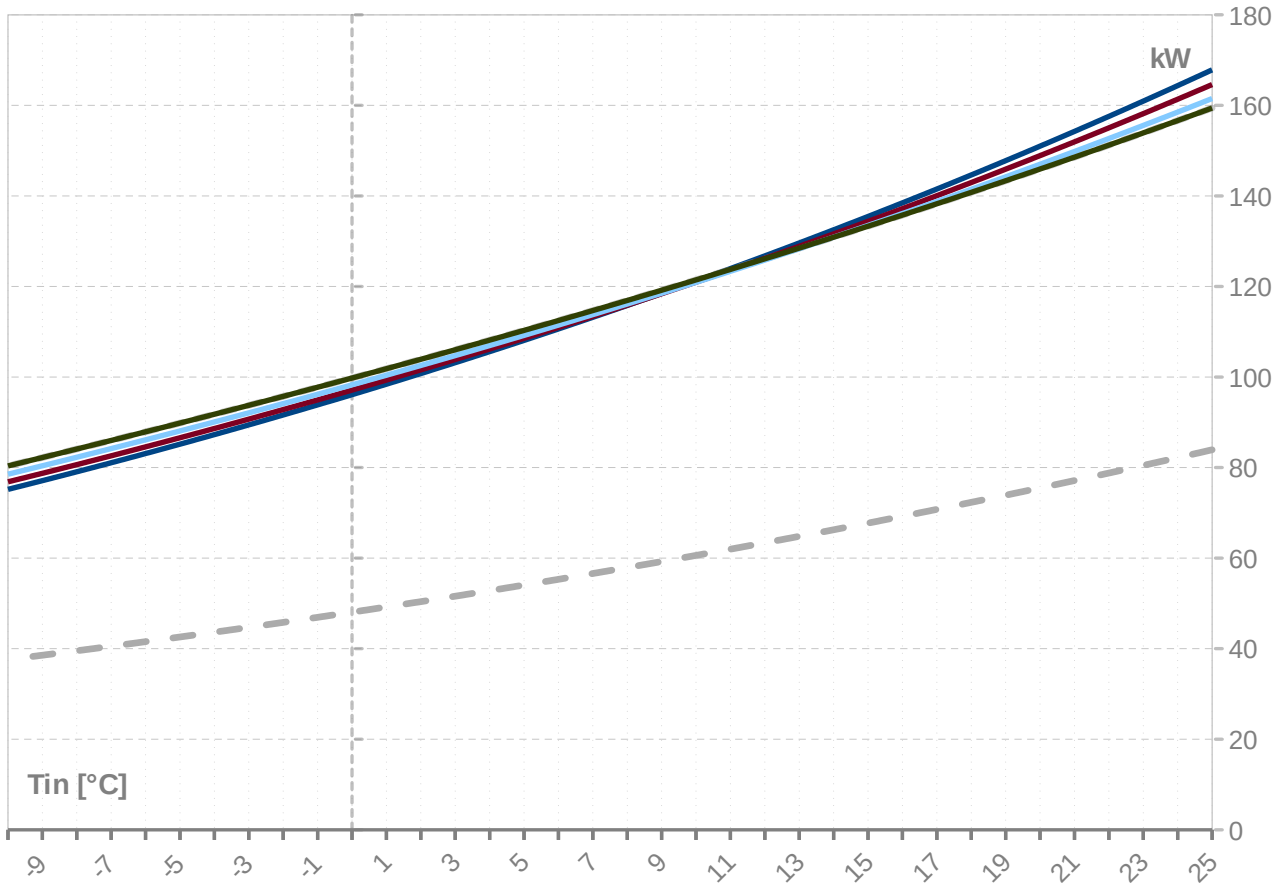
SEER DATA EN 14825:2018 [ W 23 / 18°C ]	
SEERon	5.15
SEER	5.14
Qc [ kWh ]	43680
η [ % ]	205.69

# WAMAK TBW 100 EVI HeavyDuty 2L1

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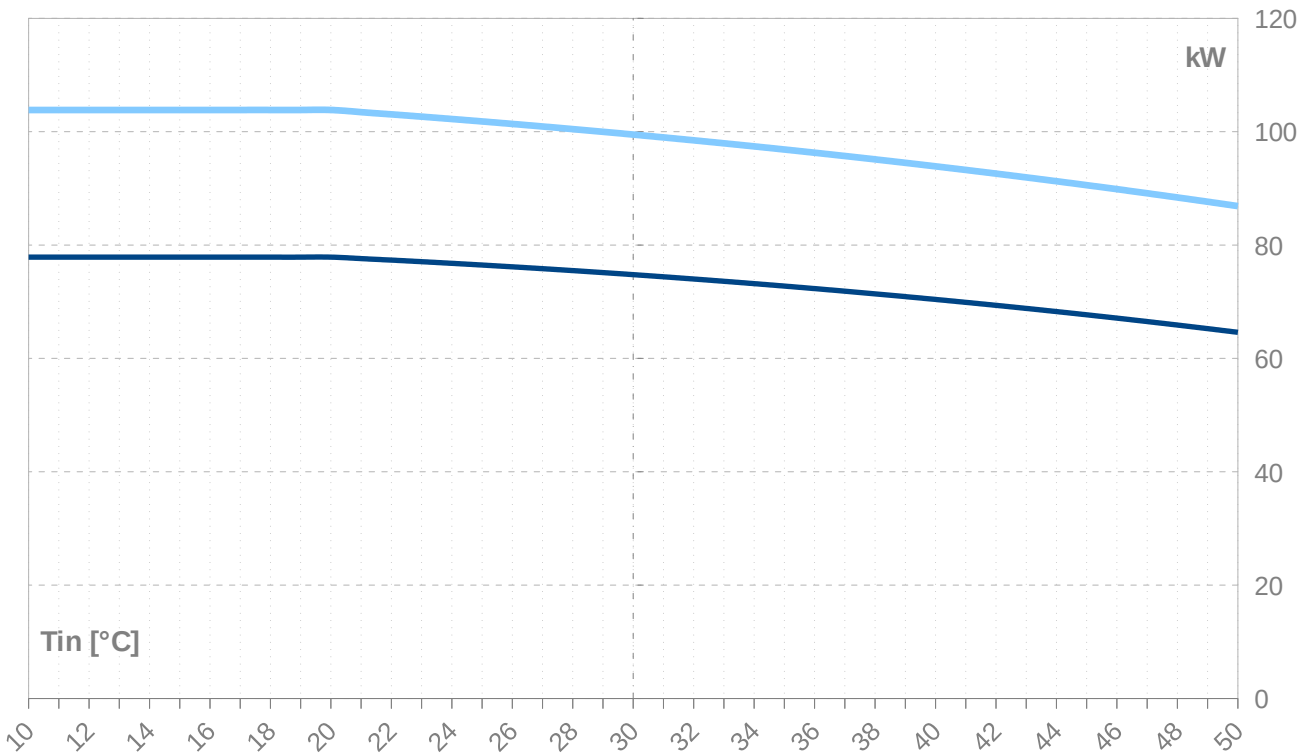
## Performance lines - heating

- Qh-nom-35    - - - Qh-min-35    - - - - Qh-max-65    — Qh-nom-45    — Qh-nom-55
- Qh-nom-65



## Performance lines - cooling

- Qc-nom-12-7    — Qc-nom-23-18





# WAMAK TBW 100 EVI HeavyDuty 2L1

Th -OU	35										
Ts -IN [°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	<b>167.8</b>	83.9	167.8	<b>22.1</b>	10.9	22.1	<b>7.59</b>	147.2	73.6	147.2	46.8
24	<b>164.4</b>	82.2	164.4	<b>22.1</b>	10.9	22.1	<b>7.45</b>	143.8	71.9	143.8	46.7
23	<b>160.9</b>	80.5	160.9	<b>22.0</b>	10.9	22.0	<b>7.31</b>	140.4	70.2	140.4	46.6
22	<b>157.6</b>	78.8	157.6	<b>22.0</b>	10.8	22.0	<b>7.18</b>	137.1	68.5	137.1	46.6
21	<b>154.3</b>	77.1	154.3	<b>21.9</b>	10.8	21.9	<b>7.04</b>	133.8	66.9	133.8	46.5
20	<b>151.0</b>	75.5	151.0	<b>21.9</b>	10.8	21.9	<b>6.90</b>	130.6	65.3	130.6	46.5
19	<b>147.8</b>	73.9	147.8	<b>21.8</b>	10.8	21.8	<b>6.76</b>	127.4	63.7	127.4	46.5
18	<b>144.6</b>	72.3	144.6	<b>21.8</b>	10.8	21.8	<b>6.63</b>	124.3	62.1	124.3	46.5
17	<b>141.5</b>	70.8	141.5	<b>21.8</b>	10.7	21.8	<b>6.49</b>	121.2	60.6	121.2	46.5
16	<b>138.5</b>	69.2	138.5	<b>21.8</b>	10.7	21.8	<b>6.36</b>	118.1	59.1	118.1	46.5
15	<b>135.5</b>	67.7	135.5	<b>21.8</b>	10.7	21.8	<b>6.23</b>	115.1	57.6	115.1	46.5
14	<b>132.5</b>	66.3	132.5	<b>21.7</b>	10.7	21.7	<b>6.10</b>	112.2	56.1	112.2	46.5
13	<b>129.6</b>	64.8	129.6	<b>21.7</b>	10.7	21.7	<b>5.96</b>	109.3	54.7	109.3	46.5
12	<b>126.8</b>	63.4	126.8	<b>21.7</b>	10.7	21.7	<b>5.84</b>	106.5	53.2	106.5	46.6
11	<b>123.9</b>	62.0	123.9	<b>21.7</b>	10.7	21.7	<b>5.71</b>	103.7	51.8	103.7	46.6
10	<b>121.2</b>	60.6	121.2	<b>21.7</b>	10.7	21.7	<b>5.58</b>	100.9	50.5	100.9	46.6
9	<b>118.5</b>	59.2	118.5	<b>21.7</b>	10.7	21.7	<b>5.46</b>	98.2	49.1	98.2	46.7
8	<b>115.8</b>	57.9	115.8	<b>21.7</b>	10.7	21.7	<b>5.34</b>	95.5	47.8	95.5	46.7
7	<b>113.2</b>	56.6	113.2	<b>21.7</b>	10.7	21.7	<b>5.22</b>	92.9	46.5	92.9	46.8
6	<b>110.6</b>	55.3	110.6	<b>21.7</b>	10.7	21.7	<b>5.10</b>	90.4	45.2	90.4	46.9
5	<b>108.1</b>	54.0	108.1	<b>21.7</b>	10.7	21.7	<b>4.98</b>	87.8	43.9	87.8	46.9
4	<b>105.6</b>	52.8	105.6	<b>21.7</b>	10.7	21.7	<b>4.87</b>	85.3	42.7	85.3	47.0
3	<b>103.2</b>	51.6	103.2	<b>21.7</b>	10.7	21.7	<b>4.75</b>	82.9	41.4	82.9	47.0
2	<b>100.8</b>	50.4	100.8	<b>21.7</b>	10.7	21.7	<b>4.64</b>	80.5	40.3	80.5	47.1
1	<b>98.4</b>	49.2	98.4	<b>21.7</b>	10.7	21.7	<b>4.53</b>	78.1	39.1	78.1	47.1
0	<b>96.1</b>	48.1	96.1	<b>21.7</b>	10.7	21.7	<b>4.43</b>	75.8	37.9	75.8	47.2
-1	<b>93.8</b>	46.9	93.8	<b>21.7</b>	10.7	21.7	<b>4.32</b>	73.6	36.8	73.6	47.3
-2	<b>91.6</b>	45.8	91.6	<b>21.7</b>	10.7	21.7	<b>4.22</b>	71.3	35.7	71.3	47.3
-3	<b>89.4</b>	44.7	89.4	<b>21.7</b>	10.7	21.7	<b>4.12</b>	69.2	34.6	69.2	47.3
-4	<b>87.3</b>	43.6	87.3	<b>21.7</b>	10.7	21.7	<b>4.02</b>	67.0	33.5	67.0	47.4
-5	<b>85.2</b>	42.6	85.2	<b>21.7</b>	10.7	21.7	<b>3.93</b>	64.9	32.5	64.9	47.4
-6	<b>83.1</b>	41.5	83.1	<b>21.7</b>	10.7	21.7	<b>3.83</b>	62.8	31.4	62.8	47.5
-7	<b>81.1</b>	40.5	81.1	<b>21.7</b>	10.7	21.7	<b>3.74</b>	60.8	30.4	60.8	47.5
-8	<b>79.1</b>	39.5	79.1	<b>21.7</b>	10.7	21.7	<b>3.65</b>	58.8	29.4	58.8	47.5
-9	<b>77.1</b>	38.6	77.1	<b>21.6</b>	10.7	21.6	<b>3.56</b>	56.9	28.4	56.9	47.5
-10	<b>75.2</b>	37.6	75.2	<b>21.6</b>	10.7	21.6	<b>3.48</b>	55.0	27.5	55.0	47.5
-11	<b>73.3</b>	36.6	73.3	<b>21.6</b>	10.6	21.6	<b>3.39</b>	53.1	26.6	53.1	47.5
-12	<b>71.4</b>	35.7	71.4	<b>21.6</b>	10.6	21.6	<b>3.31</b>	51.3	25.7	51.3	47.5
-13	<b>69.6</b>	34.8	69.6	<b>21.5</b>	10.6	21.5	<b>3.23</b>	49.5	24.8	49.5	47.4
-14	<b>67.8</b>	33.9	67.8	<b>21.5</b>	10.6	21.5	<b>3.16</b>	47.8	23.9	47.8	47.4
-15	<b>66.1</b>	33.0	66.1	<b>21.4</b>	10.6	21.4	<b>3.08</b>	46.1	23.0	46.1	47.3

-- attention: operating limits not reflected in performance table

ZHI46K1P-TWD\_R410A\_2\_BWW

**WAMAK TBW 100 EVI HeavyDuty 2L1**

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	<b>164.6</b>	82.3	164.6	<b>26.6</b>	13.1	26.6	<b>6.18</b>	139.7	69.9	139.7	52.9
24	<b>161.4</b>	80.7	161.4	<b>26.6</b>	13.1	26.6	<b>6.06</b>	136.5	68.2	136.5	52.8
23	<b>158.2</b>	79.1	158.2	<b>26.6</b>	13.1	26.6	<b>5.94</b>	133.3	66.7	133.3	52.8
22	<b>155.0</b>	77.5	155.0	<b>26.6</b>	13.1	26.6	<b>5.82</b>	130.2	65.1	130.2	52.7
21	<b>151.9</b>	76.0	151.9	<b>26.6</b>	13.1	26.6	<b>5.71</b>	127.1	63.5	127.1	52.7
20	<b>148.9</b>	74.4	148.9	<b>26.6</b>	13.1	26.6	<b>5.59</b>	124.0	62.0	124.0	52.7
19	<b>145.9</b>	73.0	145.9	<b>26.6</b>	13.1	26.6	<b>5.48</b>	121.0	60.5	121.0	52.7
18	<b>143.0</b>	71.5	143.0	<b>26.6</b>	13.1	26.6	<b>5.37</b>	118.1	59.0	118.1	52.7
17	<b>140.0</b>	70.0	140.0	<b>26.6</b>	13.1	26.6	<b>5.26</b>	115.2	57.6	115.2	52.7
16	<b>137.2</b>	68.6	137.2	<b>26.6</b>	13.1	26.6	<b>5.15</b>	112.3	56.2	112.3	52.7
15	<b>134.4</b>	67.2	134.4	<b>26.7</b>	13.1	26.7	<b>5.04</b>	109.5	54.7	109.5	52.7
14	<b>131.6</b>	65.8	131.6	<b>26.7</b>	13.2	26.7	<b>4.94</b>	106.7	53.4	106.7	52.7
13	<b>128.9</b>	64.4	128.9	<b>26.7</b>	13.2	26.7	<b>4.83</b>	104.0	52.0	104.0	52.7
12	<b>126.2</b>	63.1	126.2	<b>26.7</b>	13.2	26.7	<b>4.73</b>	101.3	50.6	101.3	52.8
11	<b>123.6</b>	61.8	123.6	<b>26.7</b>	13.2	26.7	<b>4.63</b>	98.6	49.3	98.6	52.8
10	<b>121.0</b>	60.5	121.0	<b>26.7</b>	13.2	26.7	<b>4.53</b>	96.0	48.0	96.0	52.8
9	<b>118.4</b>	59.2	118.4	<b>26.7</b>	13.2	26.7	<b>4.43</b>	93.4	46.7	93.4	52.8
8	<b>115.9</b>	57.9	115.9	<b>26.7</b>	13.2	26.7	<b>4.33</b>	90.9	45.4	90.9	52.8
7	<b>113.4</b>	56.7	113.4	<b>26.8</b>	13.2	26.8	<b>4.24</b>	88.4	44.2	88.4	52.9
6	<b>111.0</b>	55.5	111.0	<b>26.8</b>	13.2	26.8	<b>4.14</b>	86.0	43.0	86.0	52.9
5	<b>108.6</b>	54.3	108.6	<b>26.8</b>	13.2	26.8	<b>4.05</b>	83.5	41.8	83.5	52.9
4	<b>106.2</b>	53.1	106.2	<b>26.8</b>	13.2	26.8	<b>3.96</b>	81.2	40.6	81.2	52.9
3	<b>103.9</b>	51.9	103.9	<b>26.8</b>	13.2	26.8	<b>3.88</b>	78.8	39.4	78.8	52.9
2	<b>101.6</b>	50.8	101.6	<b>26.8</b>	13.2	26.8	<b>3.79</b>	76.6	38.3	76.6	53.0
1	<b>99.3</b>	49.7	99.3	<b>26.8</b>	13.2	26.8	<b>3.71</b>	74.3	37.2	74.3	53.0
0	<b>97.1</b>	48.6	97.1	<b>26.8</b>	13.2	26.8	<b>3.62</b>	72.1	36.0	72.1	53.0
-1	<b>94.9</b>	47.5	94.9	<b>26.8</b>	13.2	26.8	<b>3.54</b>	69.9	35.0	69.9	53.0
-2	<b>92.8</b>	46.4	92.8	<b>26.8</b>	13.2	26.8	<b>3.46</b>	67.8	33.9	67.8	52.9
-3	<b>90.7</b>	45.3	90.7	<b>26.8</b>	13.2	26.8	<b>3.39</b>	65.7	32.8	65.7	52.9
-4	<b>88.6</b>	44.3	88.6	<b>26.8</b>	13.2	26.8	<b>3.31</b>	63.6	31.8	63.6	52.9
-5	<b>86.6</b>	43.3	86.6	<b>26.8</b>	13.2	26.8	<b>3.24</b>	61.6	30.8	61.6	52.9
-6	<b>84.6</b>	42.3	84.6	<b>26.7</b>	13.2	26.7	<b>3.16</b>	59.6	29.8	59.6	52.8
-7	<b>82.6</b>	41.3	82.6	<b>26.7</b>	13.2	26.7	<b>3.09</b>	57.6	28.8	57.6	52.8
-8	<b>80.6</b>	40.3	80.6	<b>26.7</b>	13.2	26.7	<b>3.02</b>	55.7	27.9	55.7	52.7
-9	<b>78.7</b>	39.4	78.7	<b>26.6</b>	13.1	26.6	<b>2.96</b>	53.8	26.9	53.8	52.6
-10	<b>76.8</b>	38.4	76.8	<b>26.6</b>	13.1	26.6	<b>2.89</b>	52.0	26.0	52.0	52.5
-11	<b>75.0</b>	37.5	75.0	<b>26.5</b>	13.1	26.5	<b>2.82</b>	50.2	25.1	50.2	52.4
-12	<b>73.2</b>	36.6	73.2	<b>26.5</b>	13.1	26.5	<b>2.76</b>	48.4	24.2	48.4	52.3
-13	<b>71.4</b>	35.7	71.4	<b>26.4</b>	13.0	26.4	<b>2.70</b>	46.7	23.3	46.7	52.2
-14	<b>69.6</b>	34.8	69.6	<b>26.4</b>	13.0	26.4	<b>2.64</b>	45.0	22.5	45.0	52.0
-15	<b>67.9</b>	33.9	67.9	<b>26.3</b>	13.0	26.3	<b>2.58</b>	43.3	21.6	43.3	51.9

-- attention: operating limits not reflected in performance table

# WAMAK TBW 100 EVI HeavyDuty 2L1

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	161.5	80.8	161.5	33.7	16.6	33.7	4.79	130.0	65.0	130.0	61.3
24	158.5	79.3	158.5	33.7	16.6	33.7	4.70	127.0	63.5	127.0	61.3
23	155.6	77.8	155.6	33.7	16.6	33.7	4.61	124.1	62.0	124.1	61.3
22	152.7	76.3	152.7	33.8	16.6	33.8	4.52	121.2	60.6	121.2	61.3
21	149.8	74.9	149.8	33.8	16.7	33.8	4.44	118.3	59.1	118.3	61.3
20	147.0	73.5	147.0	33.8	16.7	33.8	4.35	115.4	57.7	115.4	61.3
19	144.2	72.1	144.2	33.8	16.7	33.8	4.26	112.6	56.3	112.6	61.3
18	141.5	70.7	141.5	33.9	16.7	33.9	4.18	109.9	54.9	109.9	61.3
17	138.8	69.4	138.8	33.9	16.7	33.9	4.10	107.1	53.6	107.1	61.4
16	136.1	68.1	136.1	33.9	16.7	33.9	4.01	104.4	52.2	104.4	61.4
15	133.5	66.7	133.5	33.9	16.7	33.9	3.93	101.8	50.9	101.8	61.4
14	130.9	65.4	130.9	34.0	16.7	34.0	3.86	99.2	49.6	99.2	61.4
13	128.3	64.2	128.3	34.0	16.8	34.0	3.78	96.6	48.3	96.6	61.5
12	125.8	62.9	125.8	34.0	16.8	34.0	3.70	94.1	47.0	94.1	61.5
11	123.4	61.7	123.4	34.0	16.8	34.0	3.63	91.6	45.8	91.6	61.5
10	120.9	60.5	120.9	34.0	16.8	34.0	3.55	89.1	44.6	89.1	61.5
9	118.5	59.3	118.5	34.0	16.8	34.0	3.48	86.7	43.4	86.7	61.5
8	116.1	58.1	116.1	34.1	16.8	34.1	3.41	84.3	42.2	84.3	61.5
7	113.8	56.9	113.8	34.1	16.8	34.1	3.34	82.0	41.0	82.0	61.5
6	111.5	55.7	111.5	34.1	16.8	34.1	3.27	79.7	39.8	79.7	61.5
5	109.2	54.6	109.2	34.1	16.8	34.1	3.20	77.4	38.7	77.4	61.5
4	107.0	53.5	107.0	34.1	16.8	34.1	3.14	75.1	37.6	75.1	61.5
3	104.7	52.4	104.7	34.1	16.8	34.1	3.07	72.9	36.5	72.9	61.5
2	102.6	51.3	102.6	34.1	16.8	34.1	3.01	70.8	35.4	70.8	61.5
1	100.4	50.2	100.4	34.0	16.8	34.0	2.95	68.6	34.3	68.6	61.4
0	98.3	49.1	98.3	34.0	16.8	34.0	2.89	66.5	33.3	66.5	61.4
-1	96.2	48.1	96.2	34.0	16.8	34.0	2.83	64.4	32.2	64.4	61.3
-2	94.1	47.1	94.1	34.0	16.8	34.0	2.77	62.4	31.2	62.4	61.3
-3	92.1	46.0	92.1	33.9	16.7	33.9	2.71	60.4	30.2	60.4	61.2
-4	90.1	45.0	90.1	33.9	16.7	33.9	2.66	58.4	29.2	58.4	61.1
-5	88.1	44.0	88.1	33.9	16.7	33.9	2.60	56.5	28.2	56.5	61.0
-6	86.1	43.1	86.1	33.8	16.7	33.8	2.55	54.6	27.3	54.6	60.9
-7	84.2	42.1	84.2	33.7	16.6	33.7	2.50	52.7	26.3	52.7	60.8
-8	82.3	41.1	82.3	33.7	16.6	33.7	2.44	50.8	25.4	50.8	60.6
-9	80.4	40.2	80.4	33.6	16.6	33.6	2.39	49.0	24.5	49.0	60.5
-10	78.5	39.3	78.5	33.5	16.5	33.5	2.34	47.2	23.6	47.2	60.3
-11	76.7	38.3	76.7	33.4	16.5	33.4	2.29	45.5	22.7	45.5	60.1
-12	74.9	37.4	74.9	33.3	16.4	33.3	2.25	43.7	21.9	43.7	59.9
-13	73.1	36.5	73.1	33.2	16.4	33.2	2.20	42.1	21.0	42.1	59.7
-14	71.3	35.7	71.3	33.1	16.3	33.1	2.15	40.4	20.2	40.4	59.4
-15	69.6	34.8	69.6	33.0	16.3	33.0	2.11	38.7	19.4	38.7	59.2

-- attention: operating limits not reflected in performance table

# WAMAK TBW 100 EVI HeavyDuty 2L1

Th -OU	[°C]	65 (T-max)									
		Ts -IN [°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]
25	<b>159.4</b>	79.7	159.4	<b>42.9</b>	21.2	42.9	<b>3.71</b>	119.3	59.7	119.3	72.0
24	<b>156.6</b>	78.3	156.6	<b>43.0</b>	21.2	43.0	<b>3.65</b>	116.5	58.3	116.5	72.0
23	<b>153.9</b>	77.0	153.9	<b>43.0</b>	21.2	43.0	<b>3.58</b>	113.8	56.9	113.8	72.1
22	<b>151.2</b>	75.6	151.2	<b>43.0</b>	21.2	43.0	<b>3.51</b>	111.0	55.5	111.0	72.2
21	<b>148.6</b>	74.3	148.6	<b>43.1</b>	21.2	43.1	<b>3.45</b>	108.3	54.2	108.3	72.2
20	<b>145.9</b>	73.0	145.9	<b>43.1</b>	21.3	43.1	<b>3.39</b>	105.7	52.8	105.7	72.3
19	<b>143.3</b>	71.7	143.3	<b>43.1</b>	21.3	43.1	<b>3.32</b>	103.1	51.5	103.1	72.3
18	<b>140.8</b>	70.4	140.8	<b>43.2</b>	21.3	43.2	<b>3.26</b>	100.5	50.2	100.5	72.4
17	<b>138.3</b>	69.1	138.3	<b>43.2</b>	21.3	43.2	<b>3.20</b>	97.9	49.0	97.9	72.4
16	<b>135.8</b>	67.9	135.8	<b>43.2</b>	21.3	43.2	<b>3.14</b>	95.4	47.7	95.4	72.5
15	<b>133.3</b>	66.7	133.3	<b>43.2</b>	21.3	43.2	<b>3.08</b>	92.9	46.5	92.9	72.6
14	<b>130.9</b>	65.4	130.9	<b>43.2</b>	21.3	43.2	<b>3.03</b>	90.5	45.3	90.5	72.6
13	<b>128.5</b>	64.2	128.5	<b>43.3</b>	21.3	43.3	<b>2.97</b>	88.1	44.0	88.1	72.6
12	<b>126.1</b>	63.1	126.1	<b>43.3</b>	21.3	43.3	<b>2.92</b>	85.7	42.9	85.7	72.7
11	<b>123.8</b>	61.9	123.8	<b>43.3</b>	21.3	43.3	<b>2.86</b>	83.4	41.7	83.4	72.7
10	<b>121.5</b>	60.7	121.5	<b>43.3</b>	21.3	43.3	<b>2.81</b>	81.0	40.5	81.0	72.7
9	<b>119.2</b>	59.6	119.2	<b>43.3</b>	21.3	43.3	<b>2.75</b>	78.8	39.4	78.8	72.8
8	<b>116.9</b>	58.5	116.9	<b>43.3</b>	21.3	43.3	<b>2.70</b>	76.5	38.3	76.5	72.8
7	<b>114.7</b>	57.3	114.7	<b>43.2</b>	21.3	43.2	<b>2.65</b>	74.3	37.1	74.3	72.8
6	<b>112.5</b>	56.2	112.5	<b>43.2</b>	21.3	43.2	<b>2.60</b>	72.1	36.1	72.1	72.8
5	<b>110.3</b>	55.2	110.3	<b>43.2</b>	21.3	43.2	<b>2.55</b>	70.0	35.0	70.0	72.8
4	<b>108.1</b>	54.1	108.1	<b>43.2</b>	21.3	43.2	<b>2.50</b>	67.8	33.9	67.8	72.7
3	<b>106.0</b>	53.0	106.0	<b>43.1</b>	21.3	43.1	<b>2.46</b>	65.7	32.9	65.7	72.7
2	<b>103.9</b>	52.0	103.9	<b>43.1</b>	21.3	43.1	<b>2.41</b>	63.7	31.8	63.7	72.6
1	<b>101.8</b>	50.9	101.8	<b>43.1</b>	21.2	43.1	<b>2.37</b>	61.6	30.8	61.6	72.6
0	<b>99.8</b>	49.9	99.8	<b>43.0</b>	21.2	43.0	<b>2.32</b>	59.6	29.8	59.6	72.5
-1	<b>97.7</b>	48.9	97.7	<b>42.9</b>	21.2	42.9	<b>2.28</b>	57.6	28.8	57.6	72.4
-2	<b>95.7</b>	47.9	95.7	<b>42.9</b>	21.1	42.9	<b>2.23</b>	55.7	27.8	55.7	72.3
-3	<b>93.7</b>	46.9	93.7	<b>42.8</b>	21.1	42.8	<b>2.19</b>	53.8	26.9	53.8	72.2
-4	<b>91.8</b>	45.9	91.8	<b>42.7</b>	21.1	42.7	<b>2.15</b>	51.9	25.9	51.9	72.1
-5	<b>89.8</b>	44.9	89.8	<b>42.6</b>	21.0	42.6	<b>2.11</b>	50.0	25.0	50.0	71.9
-6	<b>87.9</b>	43.9	87.9	<b>42.5</b>	21.0	42.5	<b>2.07</b>	48.2	24.1	48.2	71.8
-7	<b>86.0</b>	43.0	86.0	<b>42.4</b>	20.9	42.4	<b>2.03</b>	46.4	23.2	46.4	71.6
-8	<b>84.1</b>	42.0	84.1	<b>42.3</b>	20.9	42.3	<b>1.99</b>	44.6	22.3	44.6	71.4
-9	<b>82.2</b>	41.1	82.2	<b>42.2</b>	20.8	42.2	<b>1.95</b>	42.8	21.4	42.8	71.2
-10	<b>80.4</b>	40.2	80.4	<b>42.0</b>	20.7	42.0	<b>1.91</b>	41.1	20.5	41.1	70.9
-11	<b>78.5</b>	39.3	78.5	<b>41.9</b>	20.7	41.9	<b>1.87</b>	39.4	19.7	39.4	70.6
-12	<b>76.7</b>	38.3	76.7	<b>41.7</b>	20.6	41.7	<b>1.84</b>	37.7	18.9	37.7	70.4
-13	<b>74.9</b>	37.4	74.9	<b>41.6</b>	20.5	41.6	<b>1.80</b>	36.1	18.0	36.1	70.1
-14	<b>73.1</b>	36.5	73.1	<b>41.4</b>	20.4	41.4	<b>1.77</b>	34.4	17.2	34.4	69.7
-15	<b>71.3</b>	35.6	71.3	<b>41.2</b>	20.3	41.2	<b>1.73</b>	32.8	16.4	32.8	69.4

-- attention: operating limits not reflected in performance table

# WAMAK TBW 100 EVI HeavyDuty 2L1

Tc -OU		W 12 / 7 °C									
Ts -IN	Qc nom	Qc min	Qc max	Pin nom	Pin min	Pin max	EER	Qh nom	Qh min	Qh max	I nom
[°C]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	kW / kW	[kW]	[kW]	[kW]	[A]
40	<b>70.4</b>	35.2	70.4	<b>29.0</b>	14.3	29.0	<b>2.43</b>	97.5	48.7	97.5	55.5
39	<b>70.9</b>	35.5	70.9	<b>28.4</b>	14.0	28.4	<b>2.50</b>	97.4	48.7	97.4	54.7
38	<b>71.4</b>	35.7	71.4	<b>27.7</b>	13.7	27.7	<b>2.58</b>	97.3	48.6	97.3	54.0
37	<b>71.9</b>	35.9	71.9	<b>27.1</b>	13.4	27.1	<b>2.65</b>	97.2	48.6	97.2	53.3
36	<b>72.3</b>	36.2	72.3	<b>26.5</b>	13.1	26.5	<b>2.73</b>	97.1	48.5	97.1	52.6
35	<b>72.8</b>	36.4	72.8	<b>25.9</b>	12.8	25.9	<b>2.81</b>	97.0	48.5	97.0	52.0
34	<b>73.2</b>	36.6	73.2	<b>25.4</b>	12.5	25.4	<b>2.89</b>	96.9	48.4	96.9	51.3
33	<b>73.6</b>	36.8	73.6	<b>24.8</b>	12.2	24.8	<b>2.97</b>	96.8	48.4	96.8	50.7
32	<b>74.0</b>	37.0	74.0	<b>24.3</b>	12.0	24.3	<b>3.05</b>	96.7	48.3	96.7	50.1
31	<b>74.4</b>	37.2	74.4	<b>23.7</b>	11.7	23.7	<b>3.14</b>	96.6	48.3	96.6	49.5
30	<b>74.8</b>	37.4	74.8	<b>23.2</b>	11.4	23.2	<b>3.22</b>	96.4	48.2	96.4	48.9
29	<b>75.1</b>	37.6	75.1	<b>22.7</b>	11.2	22.7	<b>3.31</b>	96.3	48.2	96.3	48.3
28	<b>75.5</b>	37.7	75.5	<b>22.2</b>	10.9	22.2	<b>3.40</b>	96.2	48.1	96.2	47.7
27	<b>75.8</b>	37.9	75.8	<b>21.7</b>	10.7	21.7	<b>3.49</b>	96.1	48.1	96.1	47.2
26	<b>76.2</b>	38.1	76.2	<b>21.2</b>	10.5	21.2	<b>3.59</b>	96.0	48.0	96.0	46.7
25	<b>76.5</b>	38.2	76.5	<b>20.8</b>	10.2	20.8	<b>3.68</b>	95.9	47.9	95.9	46.1
24	<b>76.8</b>	38.4	76.8	<b>20.3</b>	10.0	20.3	<b>3.78</b>	95.7	47.9	95.7	45.6
23	<b>77.1</b>	38.5	77.1	<b>19.9</b>	9.8	19.9	<b>3.88</b>	95.6	47.8	95.6	45.1
22	<b>77.3</b>	38.7	77.3	<b>19.4</b>	9.6	19.4	<b>3.98</b>	95.5	47.7	95.5	44.6
21	<b>77.6</b>	38.8	77.6	<b>19.0</b>	9.4	19.0	<b>4.09</b>	95.3	47.7	95.3	44.1
20	<b>77.9</b>	38.9	77.9	<b>18.6</b>	9.1	18.6	<b>4.20</b>	95.2	47.6	95.2	43.6

Tc [°C]		W 23 / 18 °C									
0	Qc nom	Qc min	Qc max	Pin nom	Pin min	Pin max	EER	Qh nom	Qh min	Qh max	I nom
[°C]	[kW]	[kW]	[kW]	[kW]	[kW]	[kW]	kW / kW	[kW]	[kW]	[kW]	[A]
40	<b>93.9</b>	46.9	93.9	<b>29.0</b>	14.3	29.0	<b>3.24</b>	120.9	60.4	121.0	55.4
39	<b>94.5</b>	47.3	94.5	<b>28.4</b>	14.0	28.4	<b>3.33</b>	120.9	60.5	121.0	54.7
38	<b>95.1</b>	47.6	95.1	<b>27.7</b>	13.7	27.7	<b>3.43</b>	120.9	60.5	120.9	53.9
37	<b>95.7</b>	47.9	95.7	<b>27.1</b>	13.4	27.1	<b>3.53</b>	120.9	60.5	120.9	53.2
36	<b>96.3</b>	48.1	96.3	<b>26.5</b>	13.1	26.5	<b>3.63</b>	121.0	60.5	120.9	52.4
35	<b>96.9</b>	48.4	96.9	<b>25.9</b>	12.8	25.9	<b>3.74</b>	121.0	60.5	120.9	51.7
34	<b>97.4</b>	48.7	97.4	<b>25.4</b>	12.5	25.4	<b>3.84</b>	121.0	60.5	120.9	51.1
33	<b>97.9</b>	49.0	97.9	<b>24.8</b>	12.2	24.8	<b>3.95</b>	121.0	60.5	120.9	50.4
32	<b>98.5</b>	49.2	98.5	<b>24.3</b>	12.0	24.3	<b>4.06</b>	121.1	60.5	120.9	49.7
31	<b>99.0</b>	49.5	99.0	<b>23.7</b>	11.7	23.7	<b>4.17</b>	121.1	60.5	120.9	49.1
30	<b>99.5</b>	49.7	99.5	<b>23.2</b>	11.4	23.2	<b>4.29</b>	121.1	60.6	120.9	48.5
29	<b>100.0</b>	50.0	100.0	<b>22.7</b>	11.2	22.7	<b>4.41</b>	121.1	60.6	120.9	47.9
28	<b>100.5</b>	50.2	100.5	<b>22.2</b>	10.9	22.2	<b>4.53</b>	121.2	60.6	120.9	47.2
27	<b>100.9</b>	50.5	100.9	<b>21.7</b>	10.7	21.7	<b>4.65</b>	121.2	60.6	120.9	46.6
26	<b>101.4</b>	50.7	101.4	<b>21.2</b>	10.5	21.2	<b>4.77</b>	121.2	60.6	121.0	46.1
25	<b>101.8</b>	50.9	101.8	<b>20.8</b>	10.2	20.8	<b>4.90</b>	121.2	60.6	121.0	45.5
24	<b>102.2</b>	51.1	102.2	<b>20.3</b>	10.0	20.3	<b>5.03</b>	121.3	60.6	121.0	44.9
23	<b>102.7</b>	51.3	102.7	<b>19.9</b>	9.8	19.9	<b>5.17</b>	121.3	60.6	121.0	44.3
22	<b>103.1</b>	51.5	103.1	<b>19.4</b>	9.6	19.4	<b>5.31</b>	121.3	60.6	121.1	43.8
21	<b>103.4</b>	51.7	103.4	<b>19.0</b>	9.4	19.0	<b>5.45</b>	121.3	60.6	121.1	43.2
20	<b>103.8</b>	51.9	103.8	<b>18.6</b>	9.1	18.6	<b>5.60</b>	121.3	60.6	121.1	42.6

-- 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

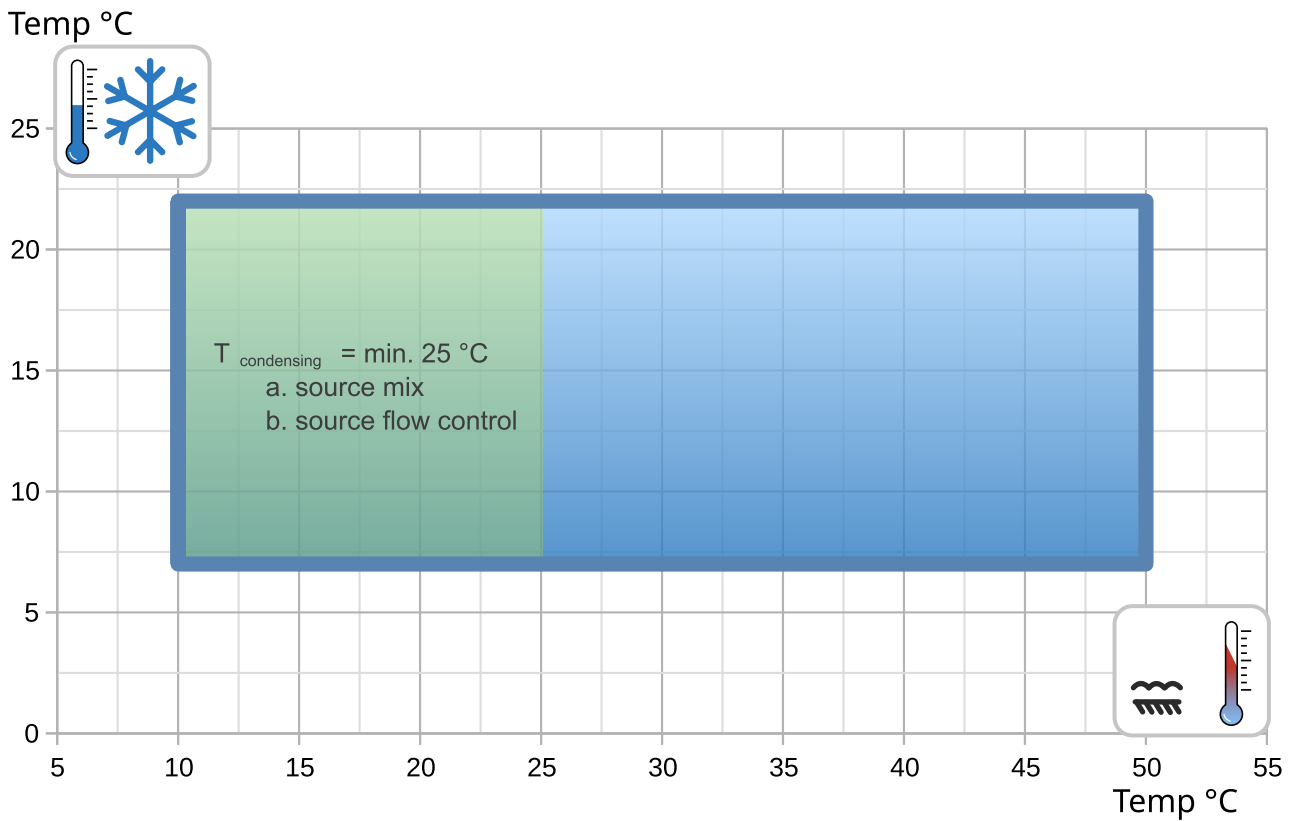
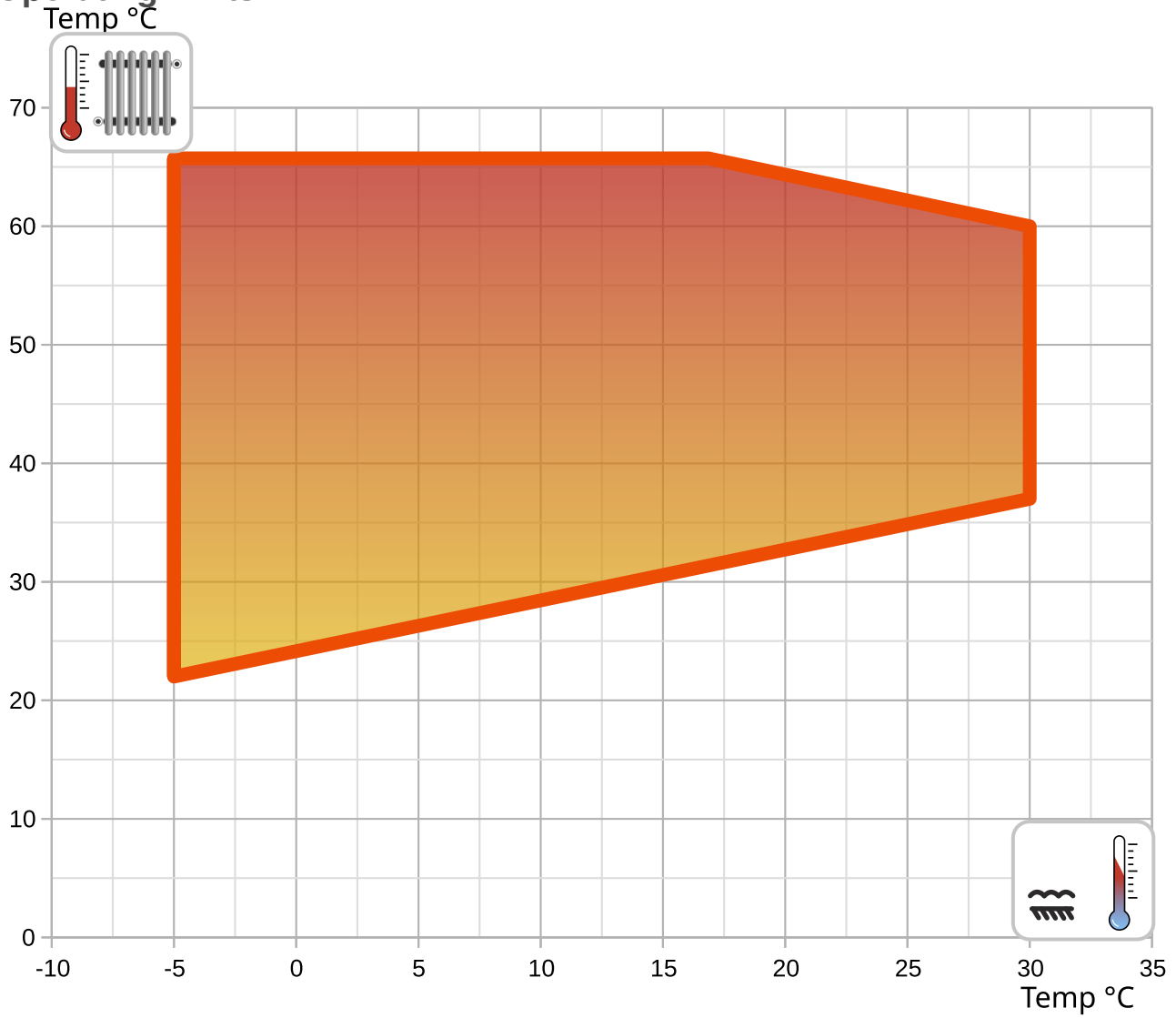
Qc min: cooling / heat extraction at minimal heating capacity

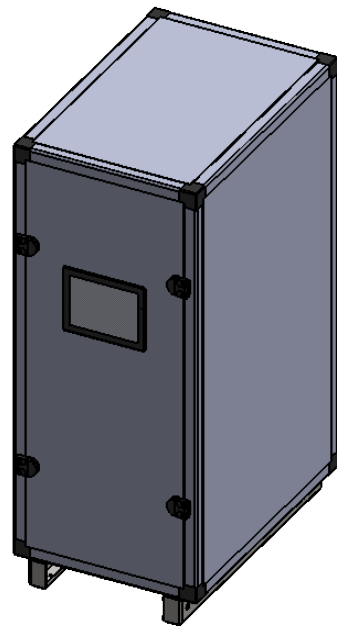
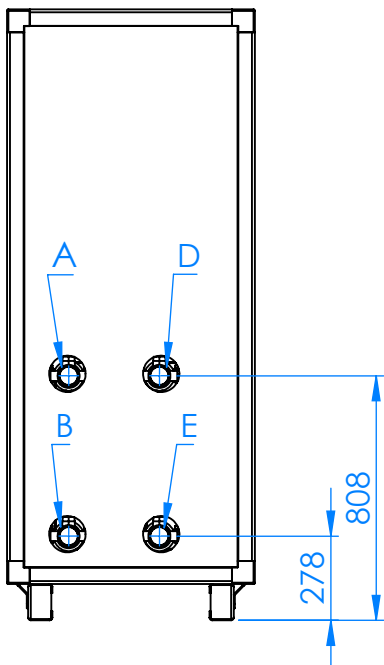
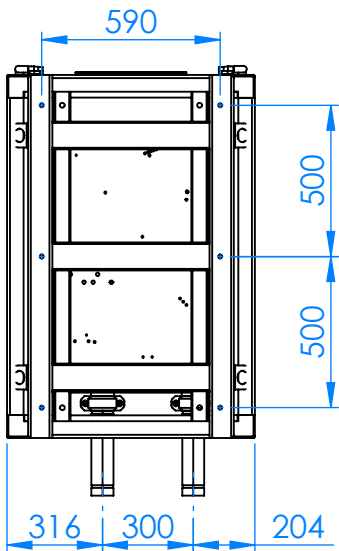
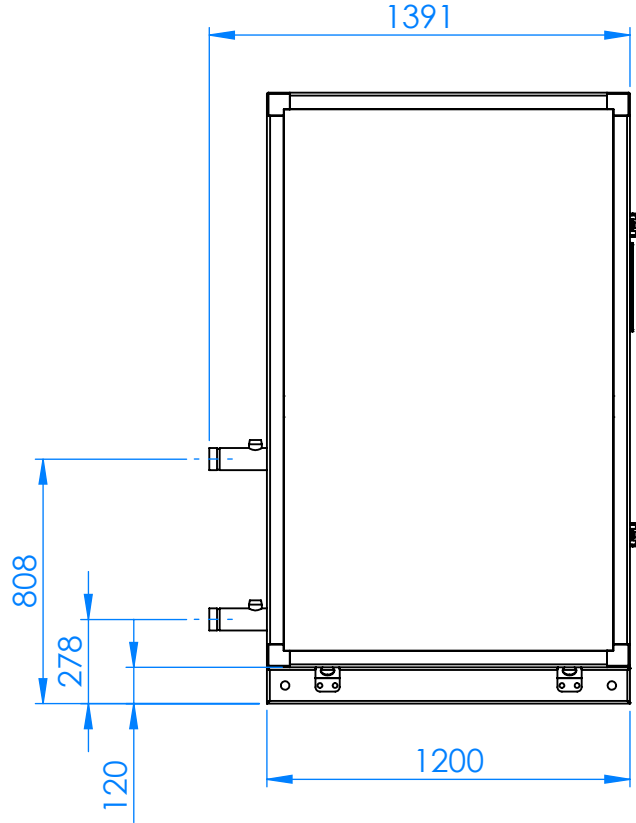
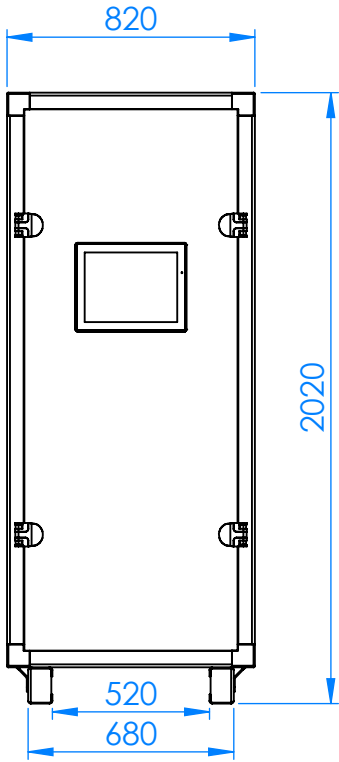
Qc max: cooling / heat extraction at maximal heating capacity

I nom: Current at nominal heating capacity

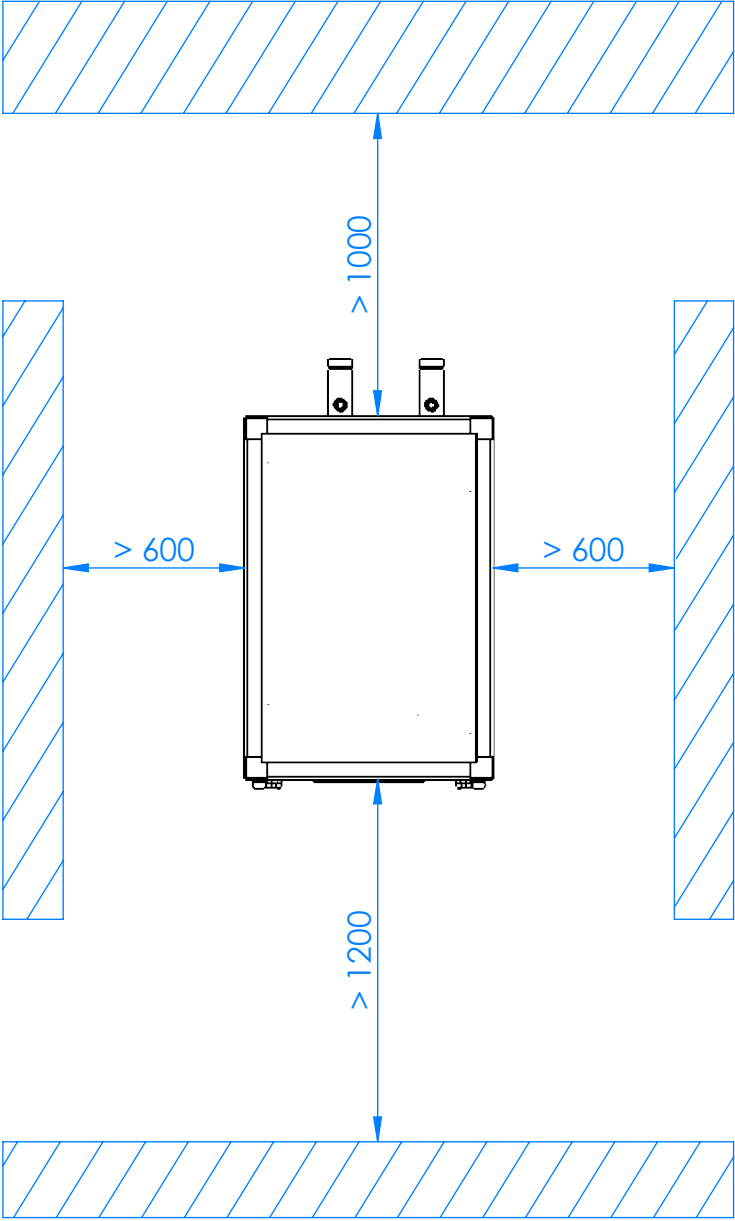
EER: energy efficiency ratio at nominal cooling capacity

### Operating limits

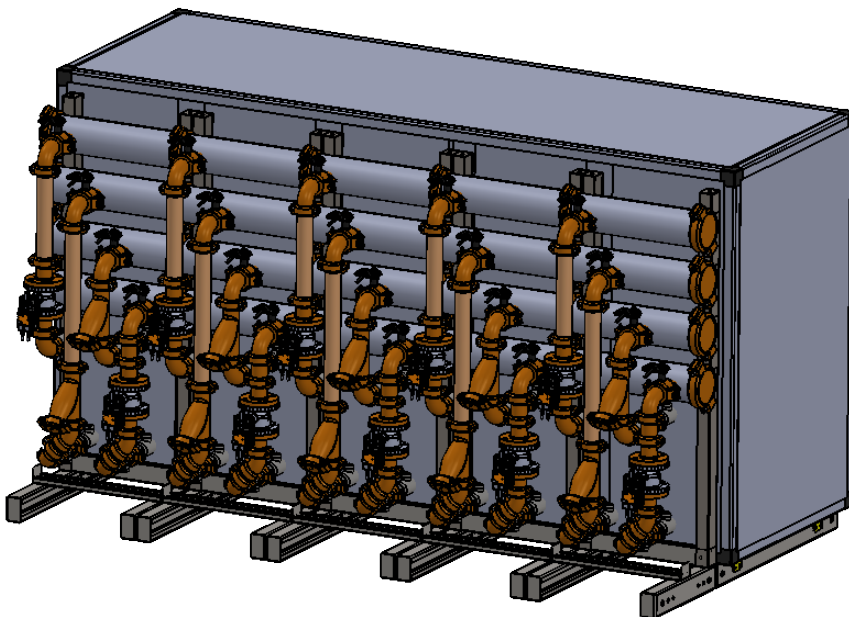
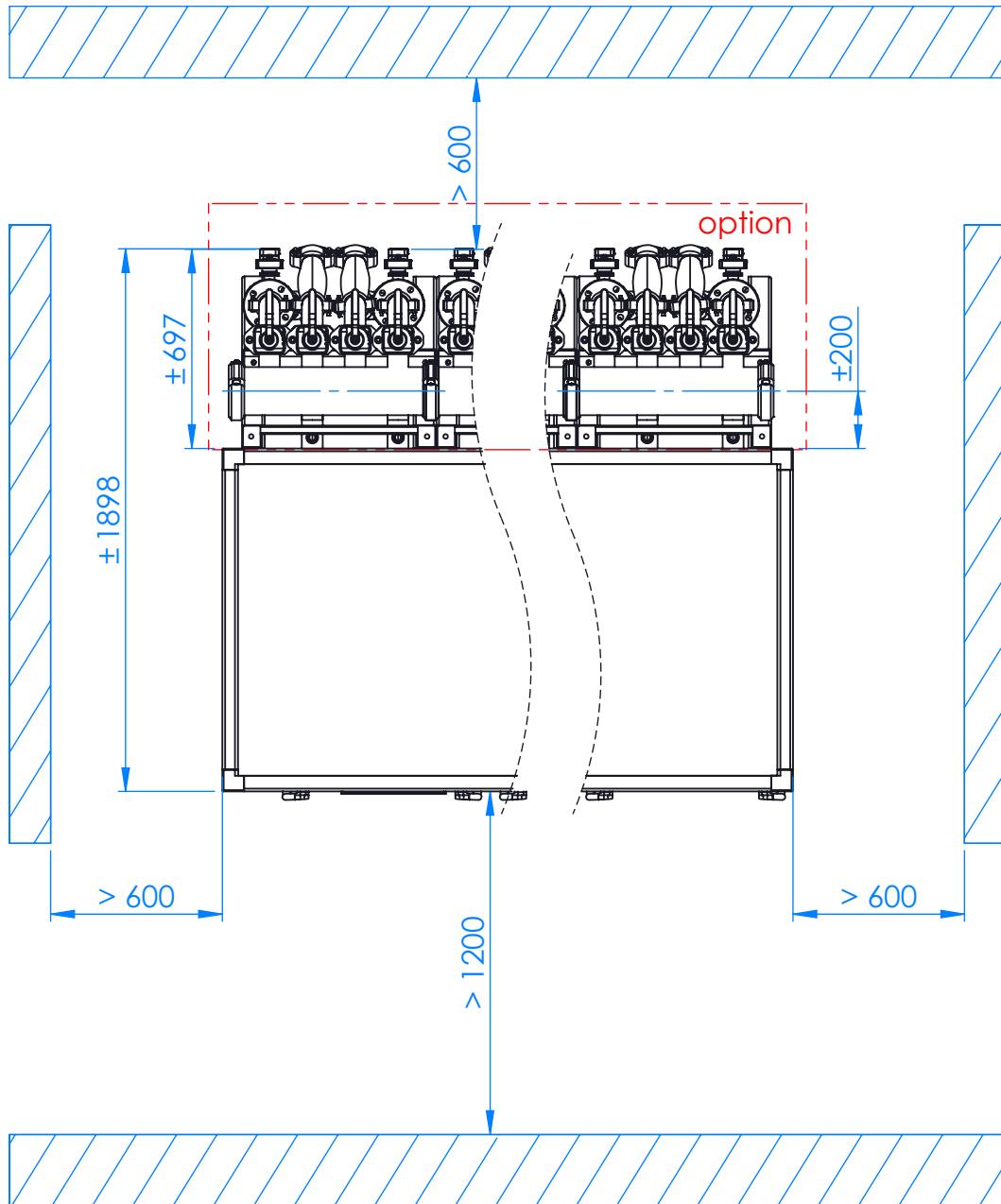


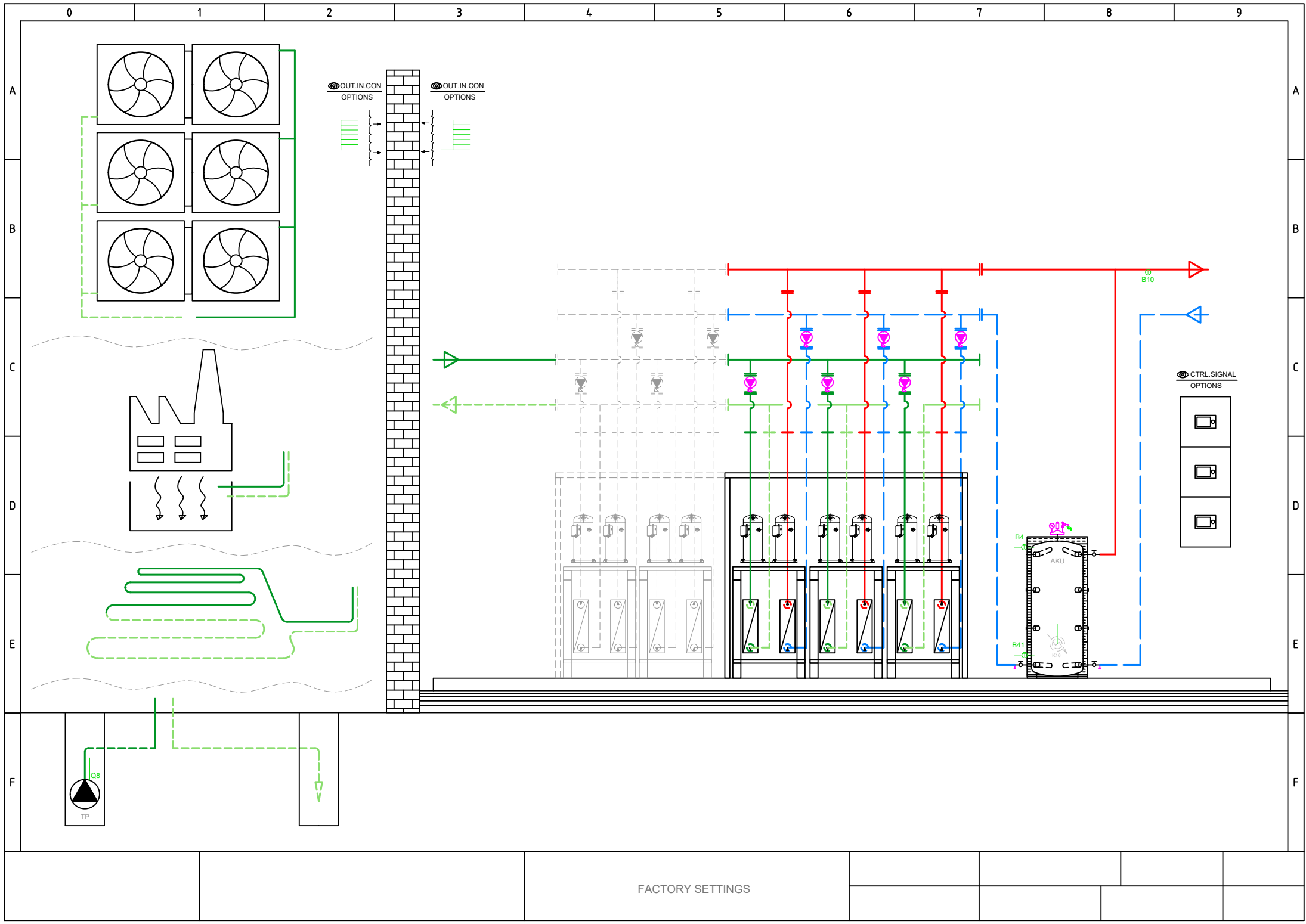






WAMAK TBW 100 EVI HeavyDuty 2L1





Total: max 6A  
1 x QX...: max 2A

Main power supply 230V / 50 Hz  
Ground  
Neutral conductor

- E9 Low-pressure switch E9
- E10 High-pressure switch E10
- E15 Flow switch source E15
- E24 Flow switch consumers E24
- E6 Electrical utility lock E6
- E12 Overload compressor 2 E12
- E21 Mains supervision E21
- E22 Mains supervision E22
- E23 Mains supervision E23
- E11 Overload compressor 1 E11
- K1 Compressor stage 1 K1

Q8 Source pump Q8

Q9 Condenser pump Q9

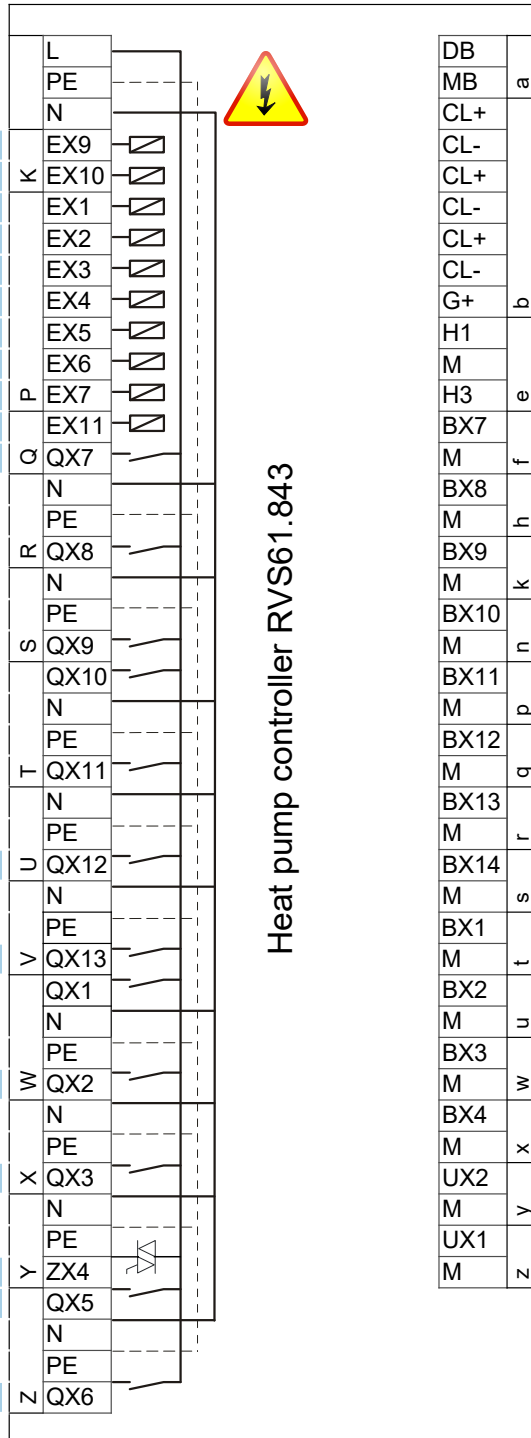
K10 Alarm output K10

K40 Crankcase heater K40

K81 Valve evaporator K81

K82 Valve EVI K82

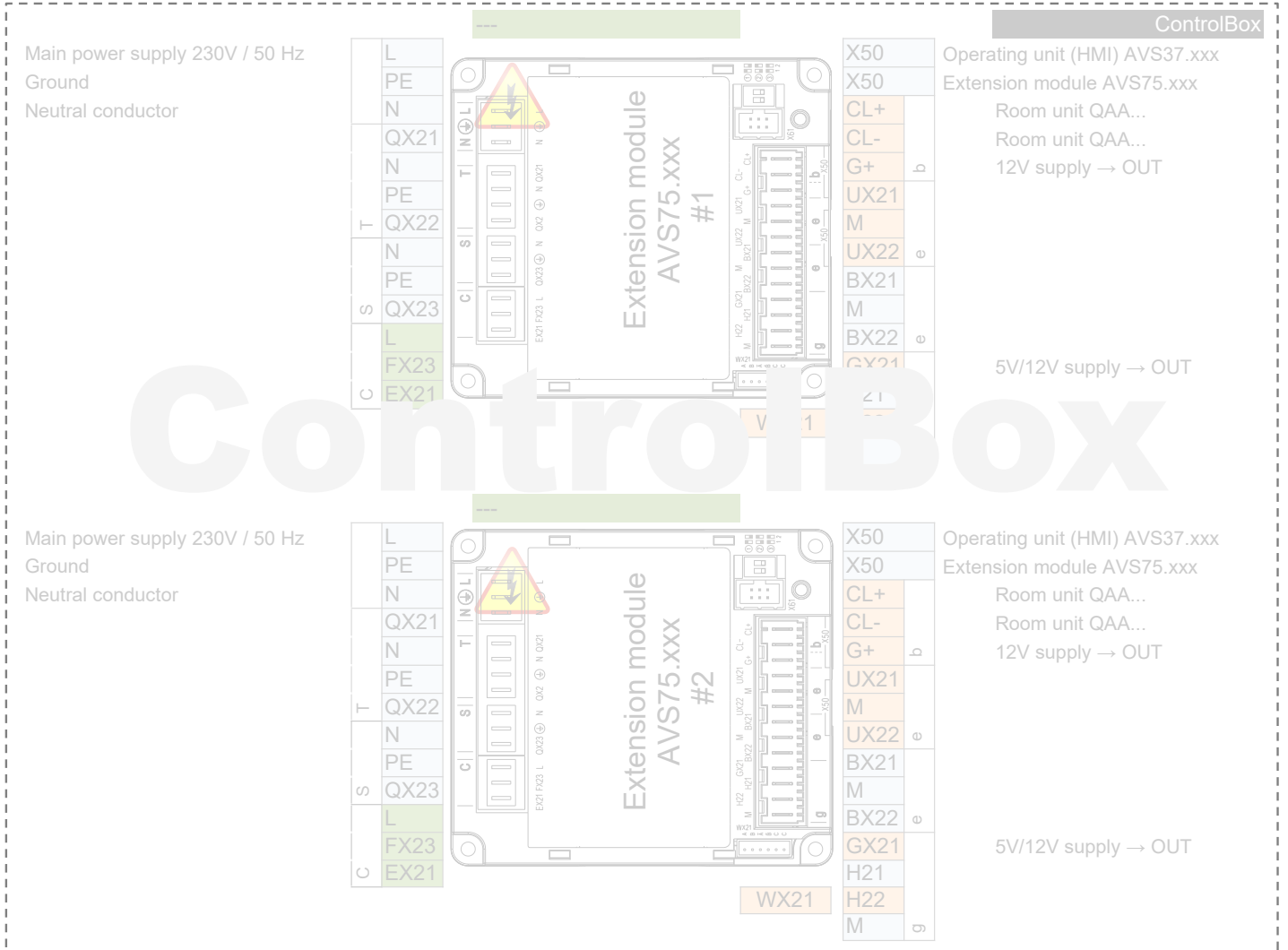
K2 Compressor stage 2 K2



- DB LPB Bus data
- MB LPB Bus GND
- CL+ Room unit QAA...
- CL- Room unit QAA...
- CL+ Room unit QAA... 2.
- CL- Room unit QAA... 2.
- CL+ Room unit QAA... 3.
- CL- Room unit QAA... 3.
- G+ 12V supply → OUT
- H1
- M
- H3 Consumer request VK1
- BX7 B81 Hot-gas sensor K1 B81
- M
- BX8
- M
- BX9
- M
- BX10 B21 HP flow sensor B21
- M
- BX11
- M
- BX12 B71 HP return sensor B71
- M
- BX13 B91 Source inlet sensor B91
- M
- BX14 B84 Source outl sens B92/B84
- M
- BX1
- M
- BX2
- M
- BX3 B83 Refrig sensor liquid B83
- M
- BX4 B82 Hot-gas sensor K2 B82
- M
- UX2 Condenser pump Q9
- M
- UX1 0..10 V Signal
- M
- Z 0..10 V Signal

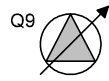
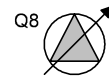


- AVS75.390
- AVS75.391
- AVS75.370

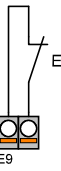
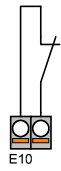
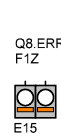
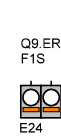
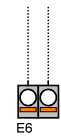
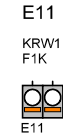
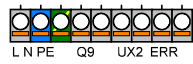
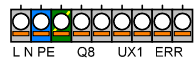
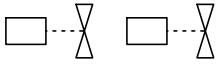


HEAT PUMP

EXTERNAL  
INTERNAL



K1 K2 K82 K81 K40 K10 Q8 UX1 Q9 UX2



M-K1 MV-EVI-K1 Q1K

M-K1 MV-EVI-K2 Q2K

230V,50Hz max 6A

0...10V



DO

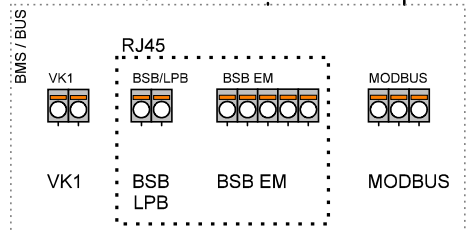
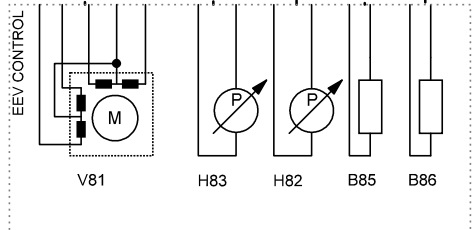
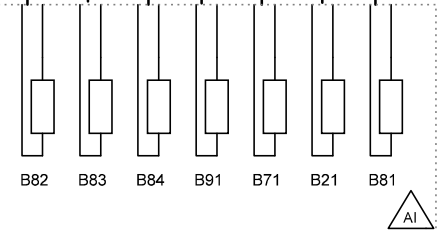
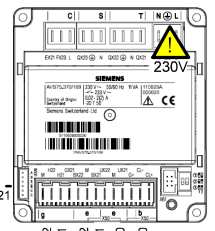
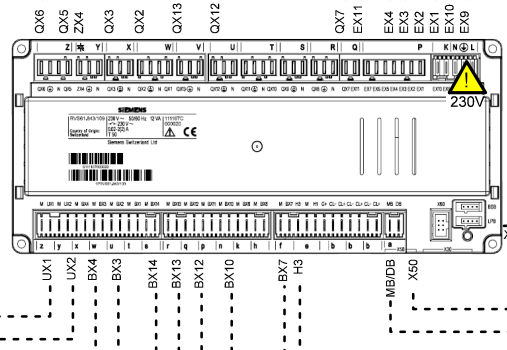
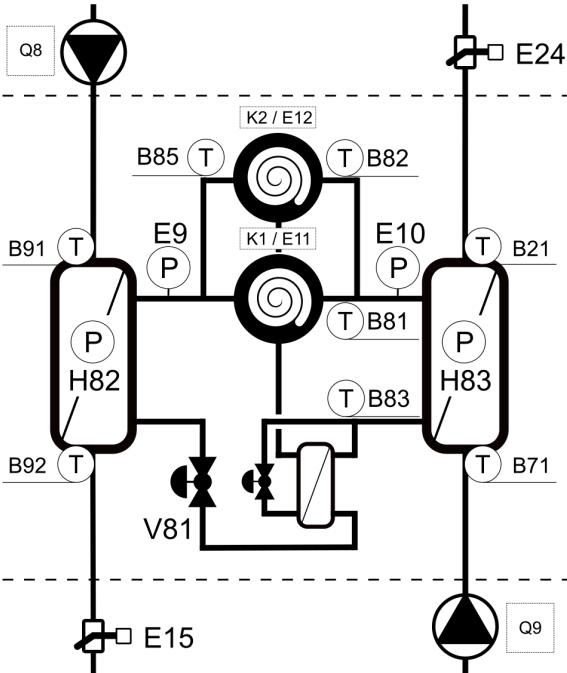


230V,50Hz max 6A

0...10V

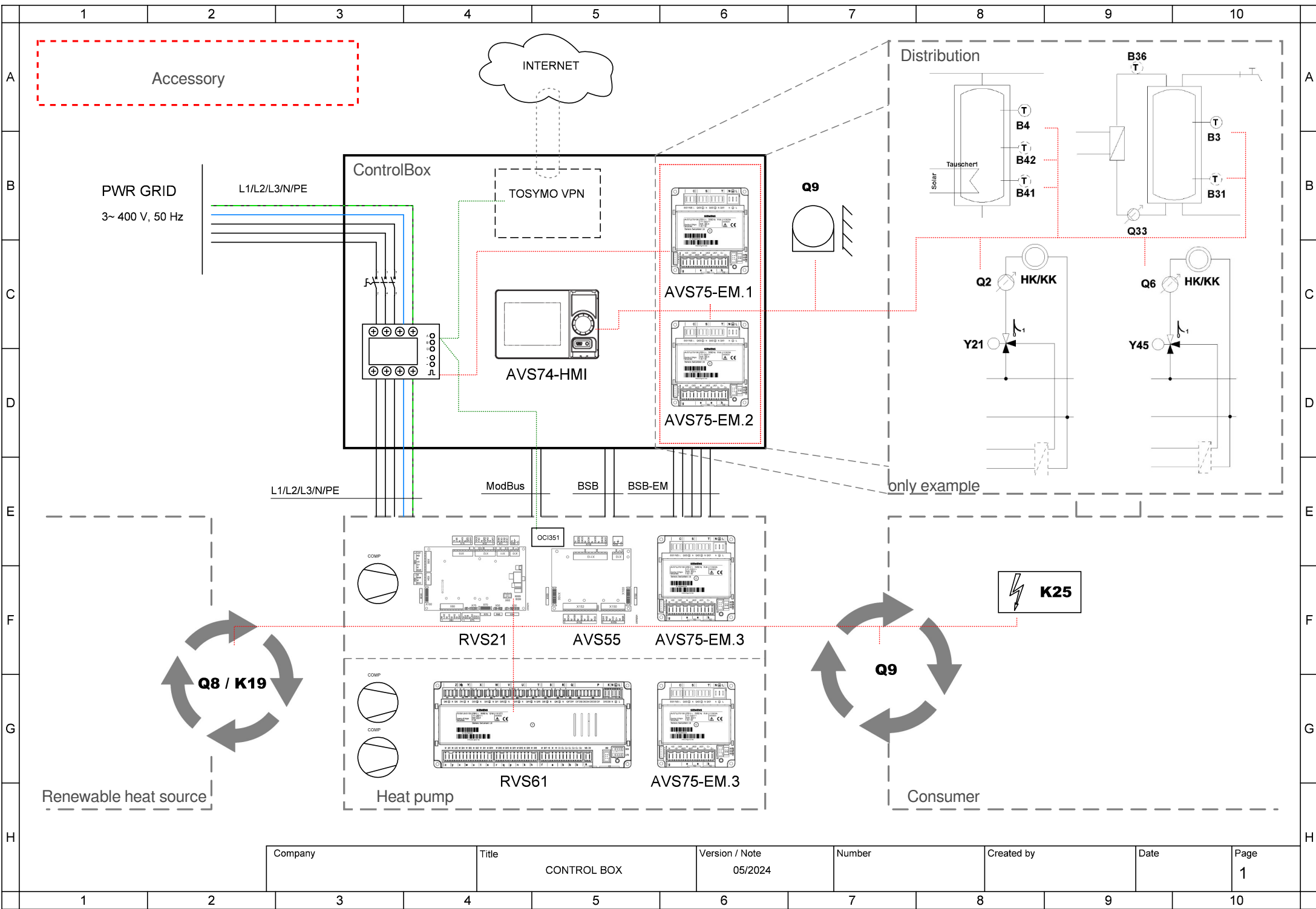


DO



PWR SPLY: ..... 3~ 400V, 50 Hz  
CTRL: ..... 1~ 230V, 50 HZ

Company	Title	Version / Note	Number	Created by	Date	Page
	TBW-TWW	05/2024				1



Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				1



Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				2





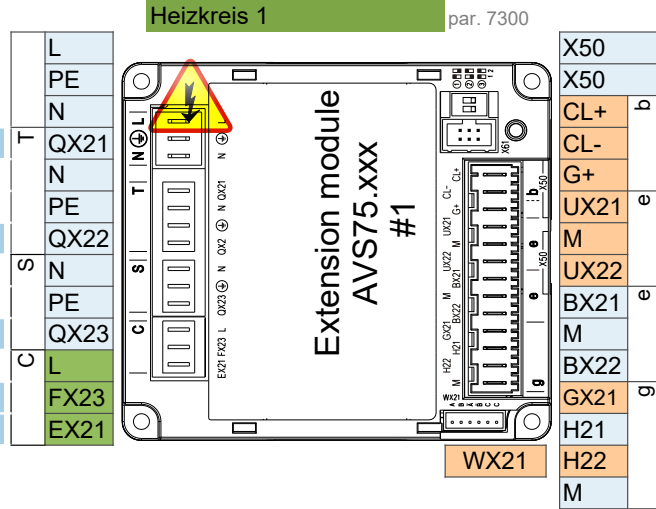
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	CONTROL BOX	05/2024				3



Company	Title	Version / Note	Number	Created by	Date	Page
	CONTROL BOX	05/2024				4

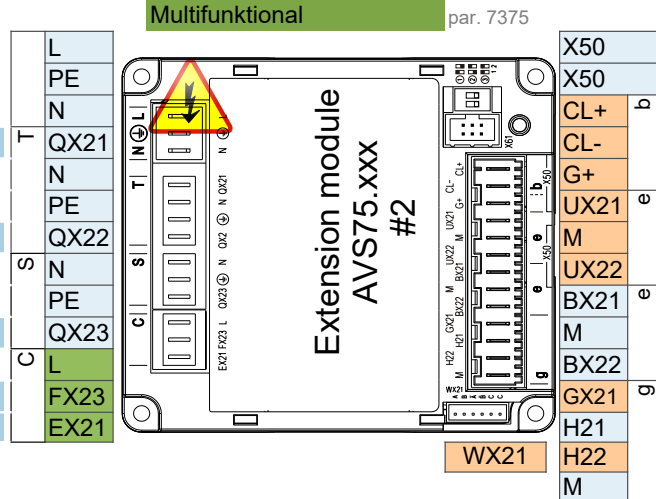
- AVS75.390
- AVS75.391
- AVS75.370

- AVS75.370**  
 Main power supply 230V / 50 Hz  
 Ground  
 Neutral conductor  
**Y1** Mixing valve Open  
  
**Y2** Mixing valve Close  
  
**Q2** Heat circuit pump HC1 Q2  
  
**L** Phase 230V  
**E61** Smart grid E61



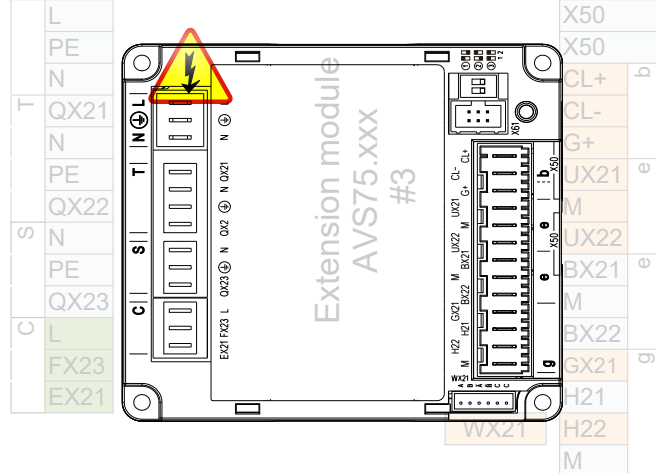
- Extension module AVS75.xxx  
 Room unit QAA...  
 Room unit QAA...  
  
**B1** Flow sensor 1  
  
 Pulse count

- AVS75.370**  
 Main power supply 230V / 50 Hz  
 Ground  
 Neutral conductor  
**Q3** DHW ctrl elem Q3  
  
**K6** El imm heater DHW K6  
  
**Q6** Heat circuit pump HC2 Q6  
  
**L** Phase 230V  
**E62** Smart grid E62



- Operating unit (HMI) AVS37.xxx  
 Extension module AVS75.xxx  
 Room unit QAA...  
 Room unit QAA...  
  
**B3** DHW sensor B3  
  
**B4** Buffer sensor B4

- Main power supply 230V / 50 Hz  
 Ground  
 Neutral conductor



- Operating unit (HMI) AVS37.xxx  
 Extension module AVS75.xxx  
 Room unit QAA...  
 Room unit QAA...

Attention: Extension module 3 is inside the heat pump

## Control connection options

### 1 ControlBox

---

ControlBox, with two built-in extension modules, enables numerous options for application control on the consumer side behind the heat pump. For more, see the ControlBox schematic and the application diagrams sheet.

### 2 Fix flow temperature setpoint - On / Off dry (potential free) contact

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2 wire shielded cable 2 x 0.5 mm<sup>2</sup> - Setpoint = 45°C (editable by param. 1859)

Connection terminal - see wiring diagram

### 3 Analog 0..10V flow temperature setpoint control

---

2 wire shielded cable 2 x 0.5 mm<sup>2</sup> - Setpoint: 0V = 16°C ~ 10V = 60°C ( editable in parameter set )

Connection terminal - see wiring diagram

### 4 ModBus RTU communication command

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3 wire shielded cable min. 3 x 0.25mm<sup>2</sup>

For ModBus mapping table contact technical support

### 5 MQTT IoT communication protocol

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For more information contact technical support