



WAMAK

Heat pump



AW 70 EVI *HD Modul*

WAMAK AW 70 EVI HD Modul

Product description

Industrial high-efficiency heat pump with split design with indoor and outdoor unit. Robust Scroll compressors (2 to 6 units) are located in the indoor unit and in turn the heat exchangers and fans are located outside the building. The split design allows installation even in more challenging conditions during renovations where the energy source is located further away from the utility room. Wide range of applications from heating and cooling of office or multifunctional buildings to industrial applications in cascade connection.

Use for demanding industrial applications. By combining the most suitable performance and application variants of heat pump modules, it is possible to tailor-make the complete system required. Each module is refrigeration, hydraulically and electrically isolated with a separate controller. The connection of the modules is cascaded, whereby each single controller can take over the function of the cascade master.

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
- Asymetric plate heat exchanger
- Multi-stage capacity control
- Reversible defrosting
- Speed - controlled EC fan
- Compressor soft starter
- High pressure switch
- Low pressure sensor - analogue
- Flow sensor consumer - analogue - (with accessory)
- Outdoor temperature sensor
- Buffer temperature sensor
- Modbus connection
- Two level frame
- Sylomer pads under compressor unit
- Electronic expansion valve
- Large air heat exchanger with APS system
- Active cooling
- Enhanced defrosting with APS system
- Heated drip tray - (with accessory)
- Phase and rotation control
- High pressure sensor - analogue
- Flow switch consumer - on/off - (with accessory)
- Plate exchanger protection HG-BYPASS
- DHW temperature sensor
- Cascade control
- Solid frame structure

Basic performance data - WAMAK AW 70 EVI HD Modul

Heating - EN 14511		
Heating capacity [kW]	A7 / W35	76.3 (38.2 / 76.3)
	A2 / W35	64.6 (32.3 / 64.6)
	A-7 / W34	53.7 (26.8 / 53.7)
Electrical power input [kW]	A7 / W35	17.6 (8.5 / 17.6)
	A2 / W35	17.6 (8.5 / 17.6)
	A-7 / W34	17.2 (8.3 / 17.2)
Heating efficiency faktor [COP]	A7 / W35	4.33
	A2 / W35	3.67
	A-7 / W34	3.13
Seasonal space heating energy efficiency - SCOP EN 14825		
Average Climate / Low Temperature [35°C]	SCOP	4.20
	η [%]	167.9
	Label	A+++
	Qhe [kWh]	125612.8
	Pdesignh [kW]	60.8
	Tbivalent [°C]	-7
Cooling		
Cooling capacity - [kW]	A35 / W23-18	74.8
	A25 / W23-18	78.1
	A35 / W12-7	55.7
	A25 / W12-7	55.7
Seasonal space cooling energy efficiency - SEER EN 14825		
[W 23 / 18°C]	SEER	4.46
	Qce [kWh]	33420.0
	η_c [%]	178.3
Sound EN 12102		
Acoustic power - Lw	dB(A)	63
Acoustic pressure - Lp	1 m dB(A)	55
	5 m dB(A)	41
	10 m dB(A)	35
Mechanical and operational information		
Compressor type (3~ 400/50)	SCROLL / 2 /	On/Off
Refrigerant	R410A (GWP - 2088)	2 x 12.5 kg
Operating limit temperatures heating - (min / max) [°C]		25 / 65
Operating limit temperatures source - (min / max) [°C]		-22 / 40
Weight		535 kg

Main technical data - WAMAK AW 70 EVI HD Modul

Enclosure type			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]		535	Condenser	Port size	2 "	
Colour		Gray		Type	BPHE	
Enclosure IP Class		IP20		Count	2	
Refrigeration cycle				Material	AISI 316	
Compressor	Type	Scroll	Maximal operating pressure - refrigerant [bar]			50
	Number of stages	2	Maximal operating pressure - Water [bar]			3
	On/Off		Testing pressure [bar]			70
	Power factor Cosφ	0.55	Heat transfer medium			Water
	Winding resistance	0.83 Ohm	Volume flow - Water [m3/h]			6.60 ~ 13.20
Refrigerant		R410A	Internal pressure drop - Water [kPa]			12
	Volme	2 x 12.5 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]	-22	
Maximal pressure - refrigerant [bar]		50		MAX [°C]	40	
	PED class	2	for more see operating limits diagram			
EVI - vapour injection with economizer			Evaporator	Port size	2 x (5/8" - 1.1/8") "	
APS System of liquid subcooling				Type	Cu-coil /Al-fin	
Reversible operation (cooling)				Count	2	
Reverse defrosting with hot gas				Material	Cu/Al	
Plate exchanger protection HG-BYPASS			Maximal operating pressure - refrigerant [bar]			29
Electrical connection data			Heat transfer medium			Air
Line voltage [#~ V/Hz]		3~ 400/50	Volume flow - Air [m3/h]			11730 ~ 23460
Current	nominal [A]	42.46	Internal pressure drop - Air [kPa]			0.027
	maximal [A]	65.00	Temperature difference - Air			7 K
	starting [A]	49.7	Possible outdoor units	1 x VOV900X2-FRAME		
Softstart	2 x MCI 25	2 x VOII-1200-2LOW				
Main safety	C80	2 x VOII-1200-2HIGH				
		2 x VOII-1200-2LOW-DUCT				
		2 x VOII-1200-2HIGH-DUCT				
Control System			Split System (compressor indoors)			
Main controller	SIEMENS	RVS 21 AVS 55.199	Liquid line dimension (up to 8 meters IU/OU)			2 x 5/8"
Extension module	AVS75.3xx	AVS75.3xx	Suction line dimension (up to 8 meters IU/OU)			2 x 1.1/8"
Bus Clip-In		LPB OCI346	Surcharge of refrigerant over 8 meter distance IU/OU			2 x 0.19 kg/m
Online connection		Web server OZW672	air - water SPLIT heat pumps indoor units are delivered without full refrigerant charge only with residual overpressure from testing			
Superheat controller		SEC61				
*** with accessory						

WAMAK AW 70 EVI HD Modul

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

Model	AW 70 EVI HD Modul
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 T _{designh}	Prated	60.8	kW	Seasonal space heating energy efficiency	η _s	167.9	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	P _{dh}	53.7	kW	T _j = -7 °C	COP _d	3.13	-
T _j = +2 °C	P _{dh}	63.9	kW	T _j = +2 °C	COP _d	4.0	-
T _j = +7 °C	P _{dh}	75.0	kW	T _j = +7 °C	COP _d	5.1	-
T _j = +12 °C	P _{dh}	87.5	kW	T _j = +12 °C	COP _d	6.8	-
T _j = bivalent temperature	P _{dh}	52.5	kW	T _j = bivalent temperature	COP _d	3.0	-
T _j = operation limit temperature	P _{dh}	37.7	kW	T _j = operation limit temperature	COP _d	2.1	-
Bivalent temperature	T _{biv}	-7	°C	T _j = operation limit temperature	TOL	-22	°C
Power consumption in modes other than active mode				Heating water operating limit temperature	WTOL	65	°C
Off mode	P _{off}	0.040	kW	Supplementary heater			
Thermostat-off mode	P _{to}	0.010	kW	Rated heat output	P _{sup}	27.4	kW
Standby mode	P _{sb}	0.010	kW	Type of energy input		electricity	
Crankcase heater mode	P _{ck}	0.050	kW				
Other items							
Capacity control		multi-stage		For air-to-water heat pumps: Rated air flow rate, outdoors	-	11730 ~ 23460	m ³ /h
Sound power level				For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	---	m ³ /h
indoors	L _{wa}	63	dB				
outdoors	L _{wa}	64	dB				
Annual energy consumption	Q _{HE}	125612.8	kWh				

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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	64.7	kW	Seasonal space heating energy efficiency	ηs	131.6	%
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	56.5	kW	Tj = -7 °C	COPd	2.20	-
Tj = +2 °C	Pdh	65.6	kW	Tj = +2 °C	COPd	3.2	-
Tj = +7 °C	Pdh	76.4	kW	Tj = +7 °C	COPd	4.2	-
Tj = +12 °C	Pdh	88.7	kW	Tj = +12 °C	COPd	5.8	-
Tj = bivalent temperature	Pdh	56.0	kW	Tj = bivalent temperature	COPd	2.0	-
Tj = operation limit temperature	Pdh	41.7	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	27.4	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	-	11730 ~ 23460	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	63	dB				
outdoors	Lwa	64	dB				
Annual energy consumption	QHE	133670.2	kWh				

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ENERG

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WAMAK

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55 °C

35 °C

A+++

A++

A+

A

B

C

D

A++

A+++



63 dB



64 dB

68
65
64
kW

63
61
58
kW



2019

811/2013

AW 70 EVI HD Modul

ErP Data

	55 °C	35 °C
Energy class	A++	A+++
η [%]	131.6	167.9
P_{rated} [kW]	65	61
Q_{HE} [kWh/y]	133671	125613
SCOP [-]	3.29	4.20
$T_{bivalent}$ [°C]	-7	-7

CONTROLLER



+ QAA55/75

class VII

3.5% ↓

- QAA55/75

class III

1.5% ↓

Heating performance data

Version: v202223.006-AW

Average Climate / Low Temperature [35°C]

ZHI35K1P-TFD_R410A_2_AW

Operating conditions		Q _h	P	COP
1	A7 / W30-35	76.3	17.6	4.33
2	A2 / W35	64.6	17.6	3.67
3	A-22 / W35	37.7	17.6	2.13
A	A-7 / W34	53.7	17.2	3.13
B	A2 / W30	63.9	15.8	4.04
C	A7 / W27	75.0	14.6	5.14
D	A12 / W24	87.5	12.9	6.76
E	A-10 / W35	52.5	17.5	3.00
F	A-7 / W34	53.7	17.2	3.13

SCOP DATA EN 14825:2018	
Average Climate / Low Temperature [35°C]	
SCOP _{on}	4.25
SCOP _{net}	4.29
SCOP	4.20
η [%]	167.94
Label	A+++
Q _h [kWh]	125612.80
P _{designh} [kW]	60.8
T _{bivalent} [°C]	-7.00

Average Climate / Medium Temperature [55°C]

Operating conditions		Q _h	P	COP
1	A7 / W47-55	78.8	28.4	2.78
2	A2 / W55	67.7	28.0	2.42
3	A-22 / W55	41.7	26.1	1.48
A	A-7 / W52	56.5	25.7	2.20
B	A2 / W42	65.6	20.5	3.19
C	A7 / W36	76.4	18.0	4.24
D	A12 / W30	88.7	15.3	5.79
E	A-10 / W55	56.0	27.7	2.02
F	A-7 / W55	57.2	27.7	2.06

SCOP DATA EN 14825:2018	
Average Climate / Medium Temperature [55°C]	
SCOP _{on}	3.32
SCOP _{net}	3.34
SCOP	3.29
η [%]	131.60
Label	A++
Q _h [kWh]	133670.20
P _{designh} [kW]	64.7
T _{bivalent} [°C]	-7.00

Cooling performance data

Low temperature cooling W 12 / 7°C

Operating conditions		Q _c	P	EER
A	A35 / W12-7	55.7	21.2	2.63
B	A30 / W12-7	57.1	18.9	3.03
C	A25 / W12-7	58.3	16.8	3.46
D	A20 / W12-7	59.1	15.0	3.93

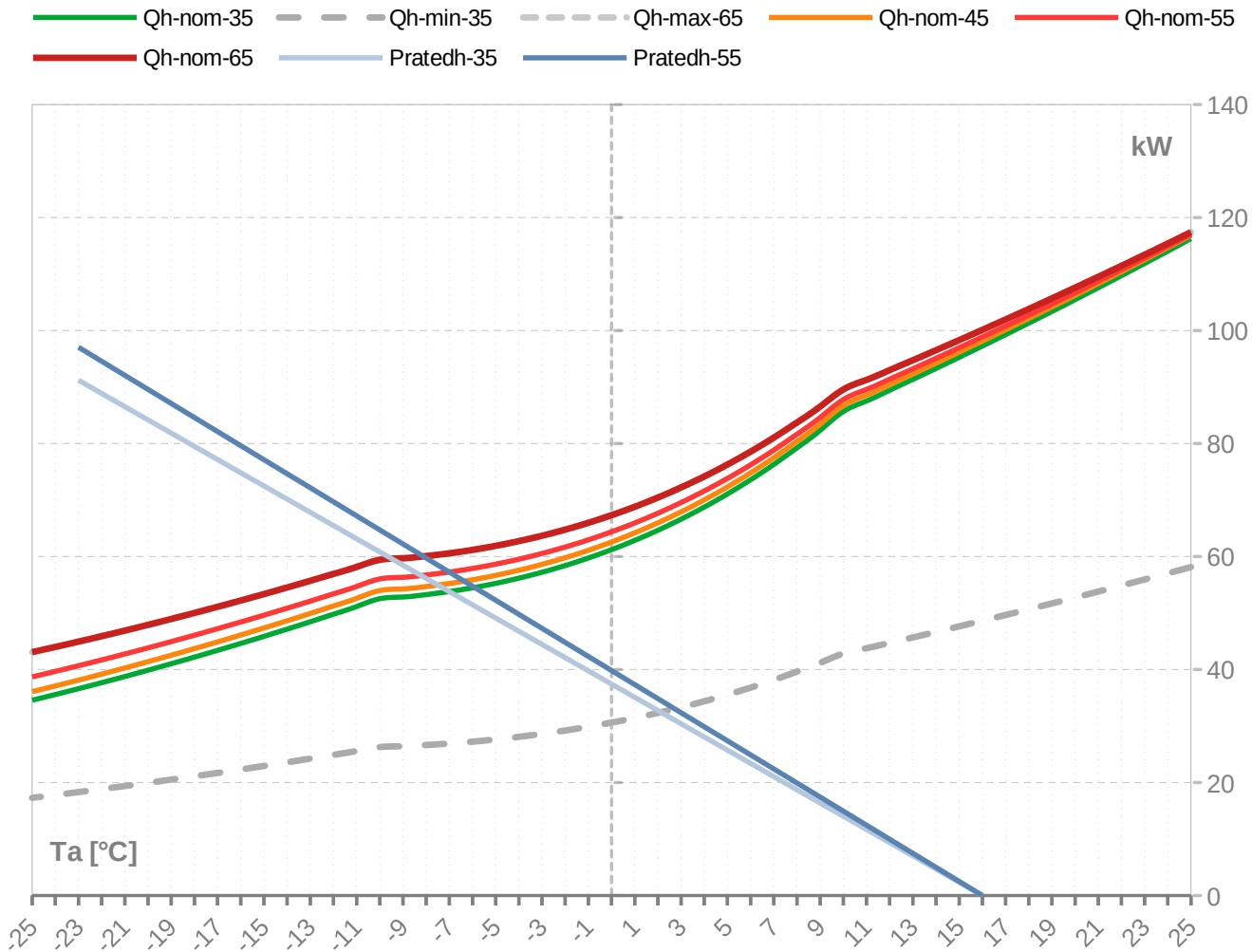
SEER DATA EN 14825:2018 [W 12 / 7°C]	
SEER _{on}	3.38
SEER	3.34
Q _c [kWh]	33420.00
η [%]	133.55

Radiant cooling W 23 / 18°C

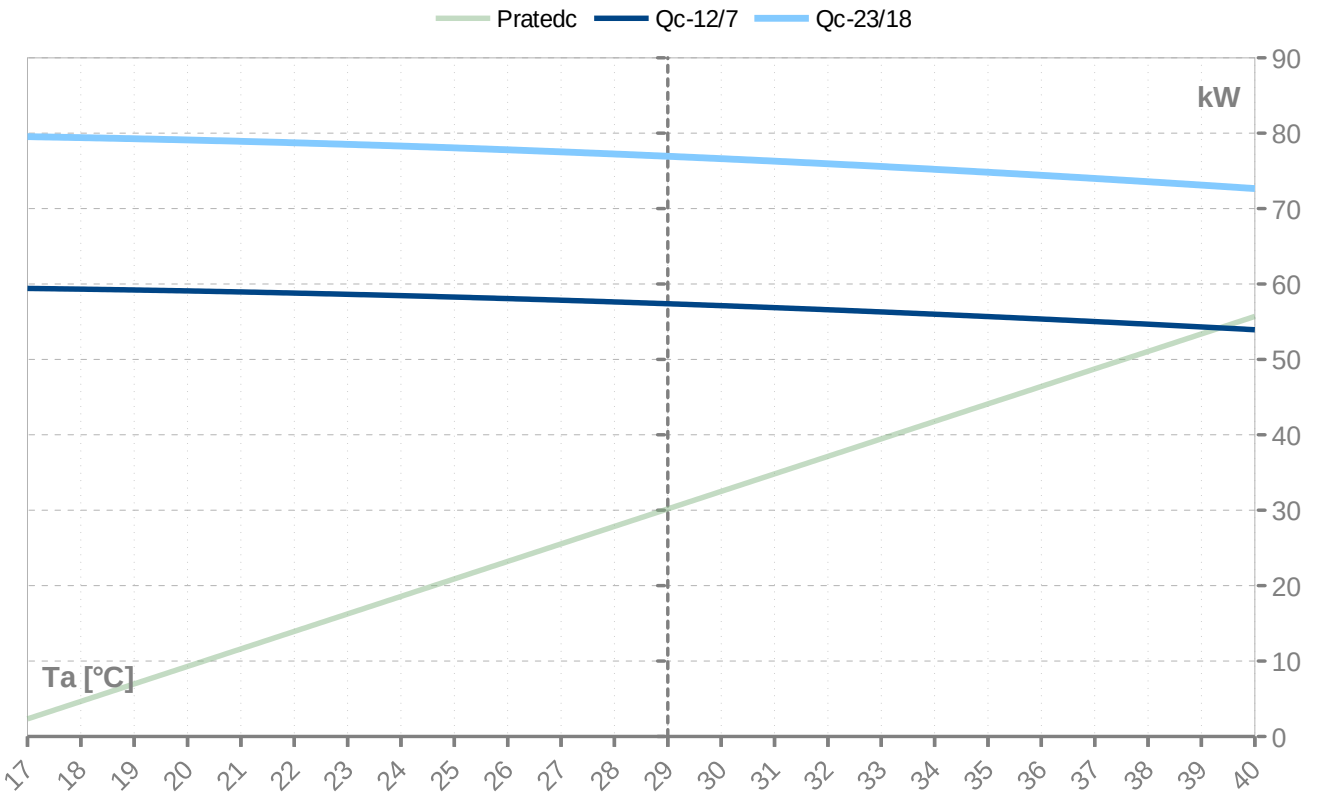
Operating conditions		Q _c	P	EER
A	A35 / W23-18	74.8	21.2	3.54
B	A30 / W23-18	76.6	17.4	4.06
C	A25 / W23-18	78.1	15.3	4.63
D	A20 / W23-18	79.1	13.3	5.27

SEER DATA EN 14825:2018 [W 23 / 18°C]	
SEER _{on}	4.52
SEER	4.46
Q _c [kWh]	33420.00
η [%]	178.31

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	99.3	49.6		17.1	8.3		5.80	41.8	20.9	
24	99.3	49.6		17.1	8.3		5.80	41.8	20.9	
23	99.3	49.6		17.1	8.3		5.80	41.8	20.9	
22	99.3	49.6		17.1	8.3		5.80	41.8	20.9	
21	99.3	49.6		17.1	8.3		5.80	41.8	20.9	
20	99.3	49.6		17.1	8.3		5.80	41.8	20.9	
19	99.3	49.6		17.1	8.3		5.80	41.8	20.9	
18	99.3	49.6		17.1	8.3		5.80	41.8	20.9	
17	99.3	49.6		17.1	8.3		5.80	41.8	20.9	
16	97.3	48.6	97.3	17.2	8.3	17.2	5.66	41.9	20.9	41.9
15	95.3	47.6	95.3	17.3	8.3	17.3	5.52	41.9	21.0	41.9
14	93.3	46.6	93.3	17.3	8.4	17.3	5.38	42.0	21.0	42.0
13	91.4	45.7	91.4	17.4	8.4	17.4	5.25	42.1	21.0	42.1
12	89.4	44.7	89.4	17.4	8.4	17.4	5.13	42.1	21.1	42.1
11	87.5	43.8	87.5	17.5	8.4	17.5	5.01	42.2	21.1	42.2
10	85.7	42.8	85.7	17.5	8.4	17.5	4.89	42.2	21.1	42.2
9	82.3	41.2	82.3	17.6	8.5	17.6	4.69	42.3	21.1	42.3
8	79.2	39.6	79.2	17.6	8.5	17.6	4.50	42.4	21.2	42.4
7	76.3	38.2	76.3	17.6	8.5	17.6	4.33	42.4	21.2	42.4
6	73.6	36.8	73.6	17.6	8.5	17.6	4.17	42.4	21.2	42.4
5	71.1	35.5	71.1	17.6	8.5	17.6	4.03	42.4	21.2	42.4
4	68.7	34.4	68.7	17.6	8.5	17.6	3.90	42.4	21.2	42.4
3	66.6	33.3	66.6	17.6	8.5	17.6	3.78	42.5	21.2	42.5
2	64.6	32.3	64.6	17.6	8.5	17.6	3.67	42.4	21.2	42.4
1	62.8	31.4	62.8	17.6	8.5	17.6	3.57	42.4	21.2	42.4
0	61.2	30.6	61.2	17.6	8.5	17.6	3.48	42.4	21.2	42.4
-1	59.7	29.9	59.7	17.6	8.5	17.6	3.40	42.4	21.2	42.4
-2	58.4	29.2	58.4	17.6	8.5	17.6	3.32	42.4	21.2	42.4
-3	57.2	28.6	57.2	17.6	8.5	17.6	3.26	42.4	21.2	42.4
-4	56.2	28.1	56.2	17.5	8.5	17.5	3.20	42.4	21.2	42.4
-5	55.2	27.6	55.2	17.5	8.5	17.5	3.15	42.4	21.2	42.4
-6	54.5	27.2	54.5	17.5	8.5	17.5	3.11	42.4	21.2	42.4
-7	53.8	26.9	53.8	17.5	8.4	17.5	3.07	42.4	21.2	42.4
-8	53.3	26.6	53.3	17.5	8.4	17.5	3.04	42.3	21.2	42.3
-9	52.8	26.4	52.8	17.5	8.4	17.5	3.01	42.3	21.2	42.3
-10	52.5	26.3	52.5	17.5	8.4	17.5	3.00	42.3	21.2	42.3
-11	51.1	25.6	51.1	17.5	8.4	17.5	2.92	42.3	21.2	42.3
-12	49.8	24.9	49.8	17.5	8.4	17.5	2.84	42.3	21.1	42.3
-13	48.4	24.2	48.4	17.5	8.4	17.5	2.77	42.3	21.1	42.3
-14	47.1	23.6	47.1	17.5	8.4	17.5	2.69	42.2	21.1	42.2
-15	45.9	22.9	45.9	17.5	8.4	17.5	2.62	42.2	21.1	42.2
-16	44.6	22.3	44.6	17.5	8.4	17.5	2.55	42.2	21.1	42.2
-17	43.4	21.7	43.4	17.5	8.4	17.5	2.48	42.2	21.1	42.2
-18	42.2	21.1	42.2	17.5	8.5	17.5	2.41	42.1	21.1	42.1
-19	41.0	20.5	41.0	17.6	8.5	17.6	2.34	42.1	21.1	42.1
-20	39.9	19.9	39.9	17.6	8.5	17.6	2.27	42.1	21.0	42.1
-21	38.8	19.4	38.8	17.6	8.5	17.6	2.20	42.1	21.0	42.1
-22	37.7	18.8	37.7	17.6	8.5	17.6	2.13	42.0	21.0	42.0
-23	36.6	18.3	36.6	17.7	8.5	17.7	2.07	42.0	21.0	42.0
-24	35.6	17.8	35.6	17.7	8.5	17.7	2.01	42.0	21.0	42.0
-25	34.6	17.3	34.6	17.8	8.6	17.8	1.94	42.0	21.0	42.0

* attention: operating limits not reflected in performance table

ZHI35K1P-TFD_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	116.8	58.4	116.8	22.0	10.6	22.0	5.31	45.5	22.8	45.5
24	114.7	57.3	114.7	22.1	10.6	22.1	5.20	45.6	22.8	45.6
23	112.5	56.3	112.5	22.1	10.7	22.1	5.09	45.6	22.8	45.6
22	110.4	55.2	110.4	22.2	10.7	22.2	4.98	45.7	22.8	45.7
21	108.3	54.2	108.3	22.2	10.7	22.2	4.87	45.7	22.9	45.7
20	106.2	53.1	106.2	22.3	10.7	22.3	4.77	45.8	22.9	45.8
19	104.2	52.1	104.2	22.3	10.7	22.3	4.67	45.8	22.9	45.8
18	102.1	51.1	102.1	22.3	10.8	22.3	4.58	45.8	22.9	45.8
17	100.1	50.1	100.1	22.3	10.8	22.3	4.48	45.8	22.9	45.8
16	98.1	49.1	98.1	22.4	10.8	22.4	4.39	45.8	22.9	45.8
15	96.2	48.1	96.2	22.4	10.8	22.4	4.30	45.8	22.9	45.8
14	94.2	47.1	94.2	22.4	10.8	22.4	4.21	45.8	22.9	45.8
13	92.3	46.2	92.3	22.4	10.8	22.4	4.13	45.8	22.9	45.8
12	90.4	45.2	90.4	22.4	10.8	22.4	4.04	45.8	22.9	45.8
11	88.6	44.3	88.6	22.4	10.8	22.4	3.96	45.8	22.9	45.8
10	86.7	43.4	86.7	22.3	10.8	22.3	3.88	45.8	22.9	45.8
9	83.4	41.7	83.4	22.3	10.8	22.3	3.74	45.8	22.9	45.8
8	80.4	40.2	80.4	22.3	10.7	22.3	3.61	45.7	22.9	45.7
7	77.5	38.7	77.5	22.2	10.7	22.2	3.49	45.7	22.8	45.7
6	74.8	37.4	74.8	22.2	10.7	22.2	3.37	45.6	22.8	45.6
5	72.3	36.2	72.3	22.1	10.7	22.1	3.27	45.6	22.8	45.6
4	70.0	35.0	70.0	22.1	10.6	22.1	3.17	45.5	22.8	45.5
3	67.9	34.0	67.9	22.0	10.6	22.0	3.08	45.5	22.7	45.5
2	66.0	33.0	66.0	22.0	10.6	22.0	3.00	45.4	22.7	45.4
1	64.2	32.1	64.2	22.0	10.6	22.0	2.92	45.4	22.7	45.4
0	62.6	31.3	62.6	21.9	10.6	21.9	2.85	45.3	22.7	45.3
-1	61.1	30.6	61.1	21.9	10.6	21.9	2.79	45.3	22.6	45.3
-2	59.8	29.9	59.8	21.9	10.5	21.9	2.73	45.2	22.6	45.2
-3	58.6	29.3	58.6	21.9	10.5	21.9	2.68	45.2	22.6	45.2
-4	57.6	28.8	57.6	21.8	10.5	21.8	2.64	45.2	22.6	45.2
-5	56.7	28.3	56.7	21.8	10.5	21.8	2.60	45.1	22.6	45.1
-6	55.9	27.9	55.9	21.8	10.5	21.8	2.56	45.1	22.5	45.1
-7	55.2	27.6	55.2	21.8	10.5	21.8	2.53	45.1	22.5	45.1
-8	54.7	27.3	54.7	21.8	10.5	21.8	2.51	45.1	22.5	45.1
-9	54.3	27.1	54.3	21.8	10.5	21.8	2.49	45.0	22.5	45.0
-10	54.0	27.0	54.0	21.8	10.5	21.8	2.48	45.0	22.5	45.0
-11	52.6	26.3	52.6	21.8	10.5	21.8	2.41	45.0	22.5	45.0
-12	51.2	25.6	51.2	21.8	10.5	21.8	2.35	44.9	22.5	44.9
-13	49.9	25.0	49.9	21.8	10.5	21.8	2.29	44.9	22.4	44.9
-14	48.6	24.3	48.6	21.8	10.5	21.8	2.23	44.8	22.4	44.8
-15	47.3	23.7	47.3	21.8	10.5	21.8	2.17	44.8	22.4	44.8
-16	46.1	23.1	46.1	21.8	10.5	21.8	2.12	44.8	22.4	44.8
-17	44.9	22.4	44.9	21.8	10.5	21.8	2.06	44.7	22.4	44.7
-18	43.7	21.8	43.7	21.8	10.5	21.8	2.00	44.7	22.3	44.7
-19	42.5	21.3	42.5	21.9	10.5	21.9	1.94	44.6	22.3	44.6
-20	41.4	20.7	41.4	21.9	10.6	21.9	1.89	44.6	22.3	44.6
-21	40.3	20.1	40.3	22.0	10.6	22.0	1.83	44.6	22.3	44.6
-22	39.2	19.6	39.2	22.0	10.6	22.0	1.78	44.5	22.3	44.5
-23	38.1	19.1	38.1	22.1	10.6	22.1	1.73	44.5	22.3	44.5
-24	37.1	18.5	37.1	22.1	10.7	22.1	1.67	44.5	22.2	44.5
-25	36.1	18.0	36.1	22.2	10.7	22.2	1.62	44.5	22.2	44.5

* attention: operating limits not reflected in performance table

WAMAK AW 70 EVI HD Modul

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	117.0	58.5	117.0	29.2	14.1	29.2	4.01	52.0	26.0	52.0
24	114.9	57.4	114.9	29.2	14.1	29.2	3.94	52.0	26.0	52.0
23	112.8	56.4	112.8	29.2	14.1	29.2	3.87	52.0	26.0	52.0
22	110.8	55.4	110.8	29.2	14.1	29.2	3.80	52.0	26.0	52.0
21	108.7	54.4	108.7	29.1	14.0	29.1	3.73	51.9	26.0	51.9
20	106.7	53.4	106.7	29.1	14.0	29.1	3.66	51.9	26.0	51.9
19	104.7	52.4	104.7	29.1	14.0	29.1	3.60	51.9	25.9	51.9
18	102.7	51.4	102.7	29.1	14.0	29.1	3.54	51.8	25.9	51.8
17	100.8	50.4	100.8	29.0	14.0	29.0	3.47	51.8	25.9	51.8
16	98.9	49.4	98.9	29.0	14.0	29.0	3.41	51.8	25.9	51.8
15	97.0	48.5	97.0	28.9	13.9	28.9	3.35	51.7	25.9	51.7
14	95.1	47.5	95.1	28.9	13.9	28.9	3.29	51.7	25.8	51.7
13	93.2	46.6	93.2	28.8	13.9	28.8	3.23	51.6	25.8	51.6
12	91.4	45.7	91.4	28.8	13.9	28.8	3.17	51.6	25.8	51.6
11	89.6	44.8	89.6	28.7	13.9	28.7	3.12	51.5	25.7	51.5
10	87.8	43.9	87.8	28.7	13.8	28.7	3.06	51.4	25.7	51.4
9	84.6	42.3	84.6	28.6	13.8	28.6	2.96	51.3	25.7	51.3
8	81.6	40.8	81.6	28.5	13.7	28.5	2.87	51.2	25.6	51.2
7	78.8	39.4	78.8	28.4	13.7	28.4	2.78	51.1	25.6	51.1
6	76.2	38.1	76.2	28.3	13.6	28.3	2.70	51.0	25.5	51.0
5	73.8	36.9	73.8	28.2	13.6	28.2	2.62	50.9	25.5	50.9
4	71.6	35.8	71.6	28.1	13.6	28.1	2.55	50.8	25.4	50.8
3	69.5	34.8	69.5	28.1	13.5	28.1	2.48	50.7	25.4	50.7
2	67.7	33.8	67.7	28.0	13.5	28.0	2.42	50.6	25.3	50.6
1	65.9	33.0	65.9	27.9	13.5	27.9	2.36	50.6	25.3	50.6
0	64.4	32.2	64.4	27.9	13.4	27.9	2.31	50.5	25.2	50.5
-1	63.0	31.5	63.0	27.9	13.4	27.9	2.26	50.4	25.2	50.4
-2	61.7	30.8	61.7	27.8	13.4	27.8	2.22	50.4	25.2	50.4
-3	60.5	30.3	60.5	27.8	13.4	27.8	2.18	50.3	25.2	50.3
-4	59.5	29.8	59.5	27.8	13.4	27.8	2.14	50.3	25.1	50.3
-5	58.6	29.3	58.6	27.8	13.4	27.8	2.11	50.2	25.1	50.2
-6	57.9	28.9	57.9	27.8	13.4	27.8	2.09	50.2	25.1	50.2
-7	57.2	28.6	57.2	27.7	13.4	27.7	2.06	50.2	25.1	50.2
-8	56.7	28.4	56.7	27.7	13.4	27.7	2.05	50.1	25.1	50.1
-9	56.3	28.2	56.3	27.7	13.4	27.7	2.03	50.1	25.1	50.1
-10	56.0	28.0	56.0	27.7	13.4	27.7	2.02	50.1	25.1	50.1
-11	54.7	27.3	54.7	27.7	13.4	27.7	1.97	50.1	25.0	50.1
-12	53.4	26.7	53.4	27.7	13.4	27.7	1.93	50.0	25.0	50.0
-13	52.1	26.1	52.1	27.7	13.4	27.7	1.88	50.0	25.0	50.0
-14	50.8	25.4	50.8	27.7	13.4	27.7	1.83	49.9	25.0	49.9
-15	49.6	24.8	49.6	27.8	13.4	27.8	1.79	49.9	24.9	49.9
-16	48.4	24.2	48.4	27.8	13.4	27.8	1.74	49.8	24.9	49.8
-17	47.2	23.6	47.2	27.8	13.4	27.8	1.70	49.8	24.9	49.8
-18	46.1	23.0	46.1	27.9	13.4	27.9	1.65	49.7	24.9	49.7
-19	44.9	22.5	44.9	27.9	13.5	27.9	1.61	49.7	24.9	49.7
-20	43.8	21.9	43.8	28.0	13.5	28.0	1.57	49.7	24.8	49.7
-21	42.7	21.4	42.7	28.0	13.5	28.0	1.52	49.7	24.8	49.7
-22	41.7	20.8	41.7	28.1	13.6	28.1	1.48	49.6	24.8	49.6
-23	40.7	20.3	40.7	28.2	13.6	28.2	1.44	49.6	24.8	49.6
-24	39.7	19.8	39.7	28.3	13.7	28.3	1.40	49.6	24.8	49.6
-25	38.7	19.3	38.7	28.4	13.7	28.4	1.36	49.6	24.8	49.6

* 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	117.4	58.7	117.4	38.4	18.5	38.4	3.05	62.9	31.5	62.9
24	115.4	57.7	115.4	38.4	18.5	38.4	3.01	62.9	31.4	62.9
23	113.4	56.7	113.4	38.3	18.5	38.3	2.96	62.8	31.4	62.8
22	111.5	55.7	111.5	38.2	18.4	38.2	2.91	62.7	31.4	62.7
21	109.5	54.8	109.5	38.2	18.4	38.2	2.87	62.7	31.3	62.7
20	107.6	53.8	107.6	38.1	18.4	38.1	2.82	62.6	31.3	62.6
19	105.7	52.8	105.7	38.0	18.3	38.0	2.78	62.5	31.3	62.5
18	103.8	51.9	103.8	37.9	18.3	37.9	2.74	62.4	31.2	62.4
17	102.0	51.0	102.0	37.8	18.2	37.8	2.69	62.4	31.2	62.4
16	100.1	50.1	100.1	37.7	18.2	37.7	2.65	62.3	31.1	62.3
15	98.3	49.2	98.3	37.7	18.1	37.7	2.61	62.2	31.1	62.2
14	96.5	48.3	96.5	37.6	18.1	37.6	2.57	62.1	31.1	62.1
13	94.7	47.4	94.7	37.5	18.1	37.5	2.53	62.0	31.0	62.0
12	93.0	46.5	93.0	37.4	18.0	37.4	2.49	61.9	31.0	61.9
11	91.3	45.6	91.3	37.3	18.0	37.3	2.45	61.9	30.9	61.9
10	89.6	44.8	89.6	37.2	17.9	37.2	2.41	61.8	30.9	61.8
9	86.5	43.3	86.5	37.0	17.9	37.0	2.34	61.6	30.8	61.6
8	83.7	41.9	83.7	36.9	17.8	36.9	2.27	61.5	30.7	61.5
7	81.1	40.5	81.1	36.8	17.7	36.8	2.21	61.3	30.7	61.3
6	78.6	39.3	78.6	36.6	17.7	36.6	2.15	61.2	30.6	61.2
5	76.3	38.1	76.3	36.5	17.6	36.5	2.09	61.1	30.5	61.1
4	74.2	37.1	74.2	36.4	17.5	36.4	2.04	61.0	30.5	61.0
3	72.2	36.1	72.2	36.3	17.5	36.3	1.99	60.9	30.4	60.9
2	70.4	35.2	70.4	36.3	17.5	36.3	1.94	60.8	30.4	60.8
1	68.8	34.4	68.8	36.2	17.4	36.2	1.90	60.7	30.3	60.7
0	67.3	33.7	67.3	36.1	17.4	36.1	1.86	60.6	30.3	60.6
-1	66.0	33.0	66.0	36.1	17.4	36.1	1.83	60.5	30.3	60.5
-2	64.8	32.4	64.8	36.1	17.4	36.1	1.79	60.5	30.2	60.5
-3	63.7	31.8	63.7	36.1	17.4	36.1	1.77	60.4	30.2	60.4
-4	62.7	31.4	62.7	36.0	17.4	36.0	1.74	60.4	30.2	60.4
-5	61.9	30.9	61.9	36.0	17.4	36.0	1.72	60.4	30.2	60.4
-6	61.2	30.6	61.2	36.0	17.4	36.0	1.70	60.3	30.2	60.3
-7	60.6	30.3	60.6	36.0	17.4	36.0	1.68	60.3	30.2	60.3
-8	60.1	30.0	60.1	36.0	17.4	36.0	1.67	60.3	30.1	60.3
-9	59.7	29.8	59.7	36.0	17.4	36.0	1.66	60.3	30.1	60.3
-10	59.4	29.7	59.4	36.0	17.4	36.0	1.65	60.3	30.1	60.3
-11	58.2	29.1	58.2	36.0	17.4	36.0	1.62	60.2	30.1	60.2
-12	56.9	28.5	56.9	36.0	17.4	36.0	1.58	60.2	30.1	60.2
-13	55.7	27.9	55.7	36.0	17.4	36.0	1.55	60.1	30.1	60.1
-14	54.5	27.3	54.5	36.1	17.4	36.1	1.51	60.1	30.0	60.1
-15	53.3	26.7	53.3	36.1	17.4	36.1	1.48	60.1	30.0	60.1
-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	53.9	53.9	53.9	23.8	23.0	23.8	2.26	46.9	46.9	46.9
39	54.3	54.3	54.3	23.3	22.4	23.3	2.34	46.4	46.4	46.4
38	54.7	54.7	54.7	22.7	21.9	22.7	2.41	46.0	46.0	46.0
37	55.0	55.0	55.0	22.2	21.4	22.2	2.48	45.6	45.6	45.6
36	55.4	55.4	55.4	21.7	20.9	21.7	2.56	45.3	45.3	45.3
35	55.7	55.7	55.7	21.2	20.4	21.2	2.63	44.9	44.9	44.9
34	56.0	56.0	56.0	20.7	19.9	20.7	2.71	44.6	44.6	44.6
33	56.3	56.3	56.3	20.2	19.5	20.2	2.79	44.2	44.2	44.2
32	56.6	56.6	56.6	19.7	19.0	19.7	2.87	43.9	43.9	43.9
31	56.9	56.9	56.9	19.3	18.6	19.3	2.95	43.6	43.6	43.6
30	57.1	57.1	57.1	18.9	18.2	18.9	3.03	43.3	43.3	43.3
29	57.4	57.4	57.4	18.4	17.8	18.4	3.11	43.0	43.0	43.0
28	57.6	57.6	57.6	18.0	17.4	18.0	3.20	42.7	42.7	42.7
27	57.9	57.9	57.9	17.6	17.0	17.6	3.28	42.4	42.4	42.4
26	58.1	58.1	58.1	17.2	16.6	17.2	3.37	42.1	42.1	42.1
25	58.3	58.3	58.3	16.8	16.2	16.8	3.46	41.8	41.8	41.8
24	58.5	58.5	58.5	16.5	15.9	16.5	3.55	41.5	41.5	41.5
23	58.6	58.6	58.6	16.1	15.5	16.1	3.64	41.2	41.2	41.2
22	58.8	58.8	58.8	15.7	15.2	15.7	3.74	40.8	40.8	40.8
21	58.9	58.9	58.9	15.4	14.8	15.4	3.83	40.4	40.4	40.4
20	59.1	59.1	59.1	15.0	14.5	15.0	3.93	40.0	40.0	40.0
19	59.2	59.2	59.2	14.7	14.1	14.7	4.04	39.6	39.6	39.6
18	59.3	59.3	59.3	14.3	13.8	14.3	4.14	39.2	39.2	39.2
17	59.4	59.4	59.4	14.0	13.5	14.0	4.25	38.7	38.7	38.7

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	72.7	72.7	72.7	23.8	23.0	23.8	3.05	47.3	47.3	47.3
39	73.1	73.1	73.1	23.3	22.4	23.3	3.14	46.8	46.8	46.8
38	73.6	73.6	73.6	22.7	21.9	22.7	3.24	46.3	46.3	46.3
37	74.0	74.0	74.0	22.2	21.4	22.2	3.34	45.8	45.8	45.8
36	74.4	74.4	74.4	21.7	20.9	21.7	3.44	45.4	45.4	45.4
35	74.8	74.8	74.8	21.2	20.4	21.2	3.54	45.0	45.0	45.0
34	75.2	75.2	75.2	20.7	19.9	20.7	3.64	44.6	44.6	44.6
33	75.6	75.6	75.6	20.2	19.5	20.2	3.74	44.2	44.2	44.2
32	75.9	75.9	75.9	19.7	19.0	19.7	3.85	43.8	43.8	43.8
31	76.3	76.3	76.3	19.3	18.6	19.3	3.95	43.5	43.5	43.5
30	76.6	76.6	76.6	18.9	18.2	18.9	4.06	43.1	43.1	43.1
29	76.9	76.9	76.9	18.4	17.8	18.4	4.17	42.7	42.7	42.7
28	77.2	77.2	77.2	18.0	17.4	18.0	4.28	42.4	42.4	42.4
27	77.5	77.5	77.5	17.6	17.0	17.6	4.40	42.0	42.0	42.0
26	77.8	77.8	77.8	17.2	16.6	17.2	4.51	41.6	41.6	41.6
25	78.1	78.1	78.1	16.8	16.2	16.8	4.63	41.2	41.2	41.2
24	78.3	78.3	78.3	16.5	15.9	16.5	4.75	40.9	40.9	40.9
23	78.5	78.5	78.5	16.1	15.5	16.1	4.88	40.4	40.4	40.4
22	78.7	78.7	78.7	15.7	15.2	15.7	5.00	40.0	40.0	40.0
21	78.9	78.9	78.9	15.4	14.8	15.4	5.13	39.6	39.6	39.6
20	79.1	79.1	79.1	15.0	14.5	15.0	5.27	39.1	39.1	39.1
19	79.3	79.3	79.3	14.7	14.1	14.7	5.40	38.6	38.6	38.6
18	79.4	79.4	79.4	14.3	13.8	14.3	5.55	38.1	38.1	38.1
17	79.5	79.5	79.5	14.0	13.5	14.0	5.69	37.5	37.5	37.5

* 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

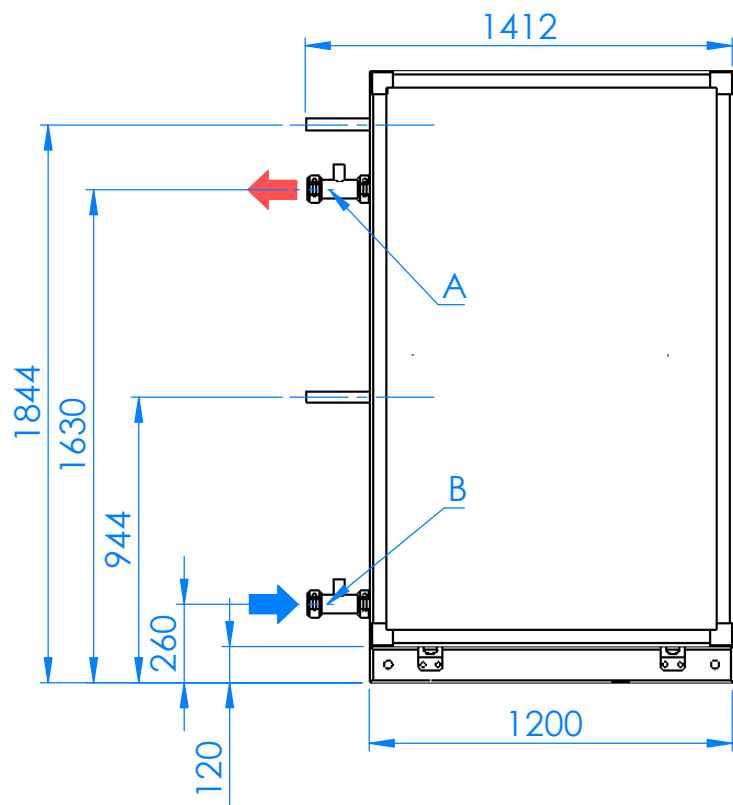
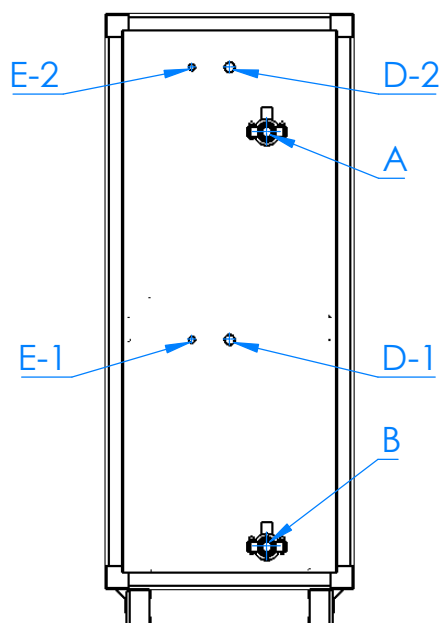
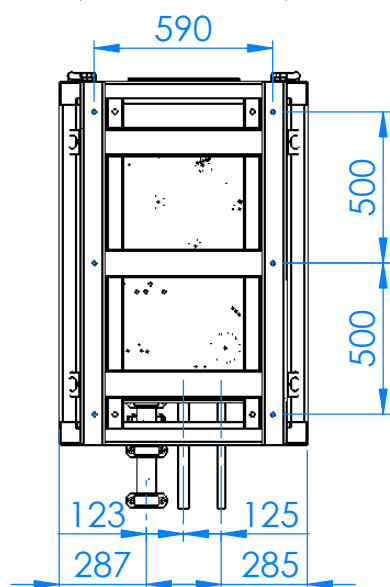
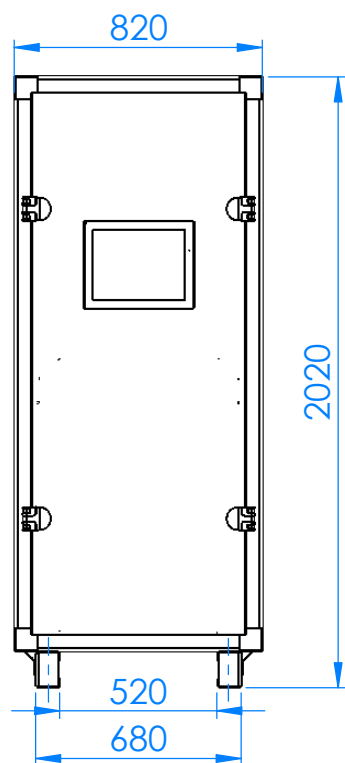
Qc nom: cooling / heat extraction capacity at nominal heating capacity

Qc min: cooling / heat extraction at minimal heating capacity

Qc max: cooling / heat extraction at maximal heating capacity

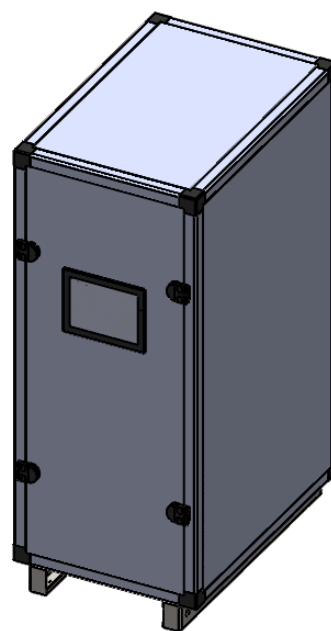
I nom: Current at nominal heating capacity

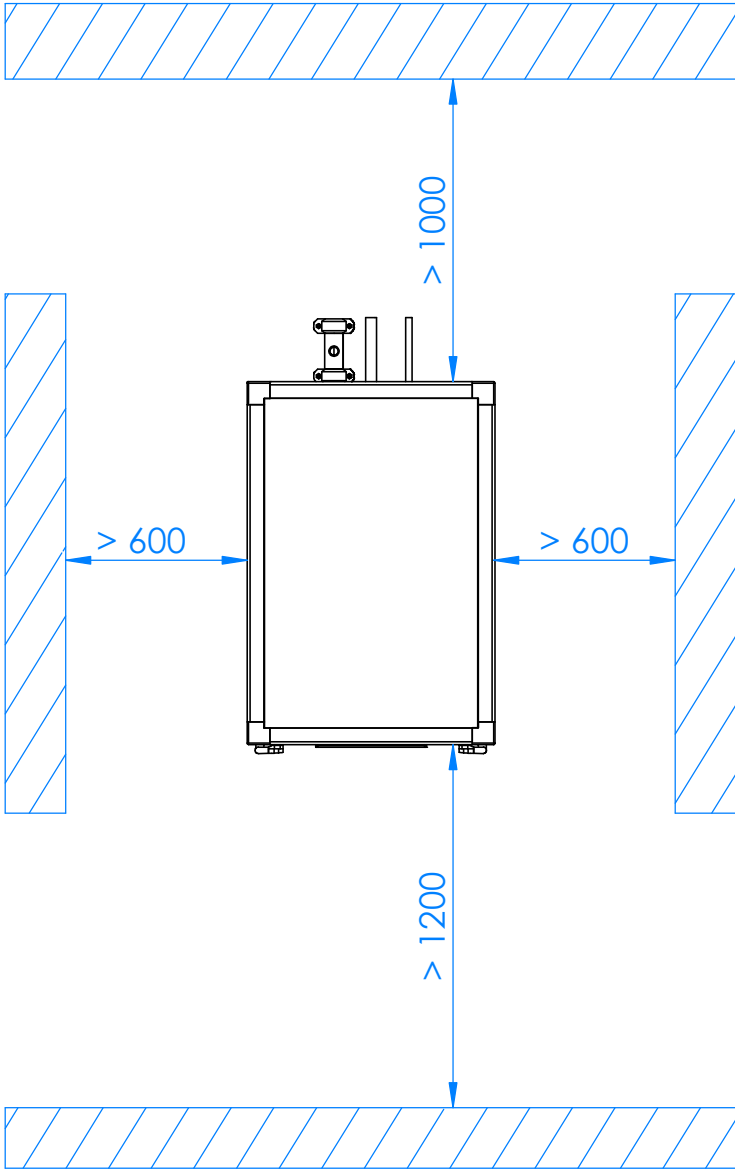
EER: energy efficiency ratio at nominal cooling capacity

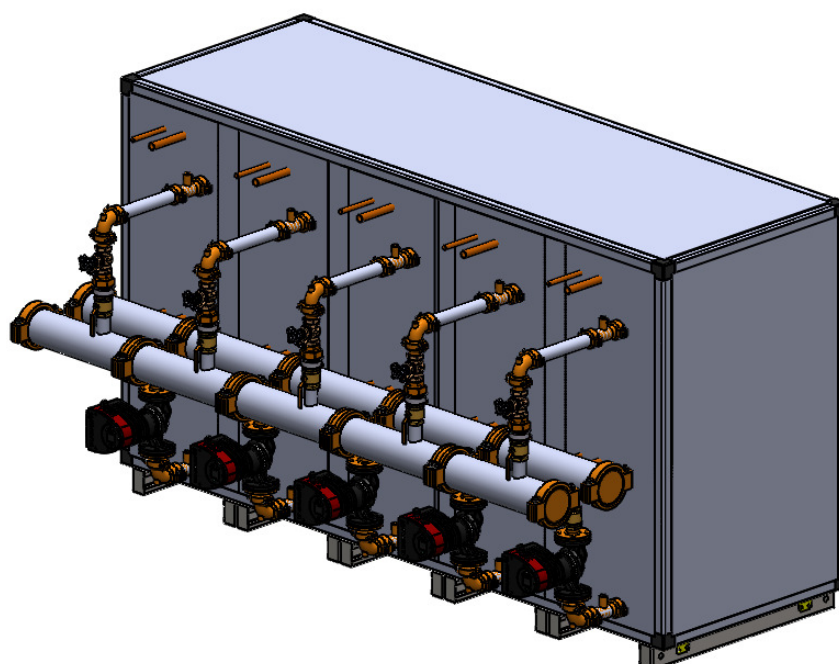
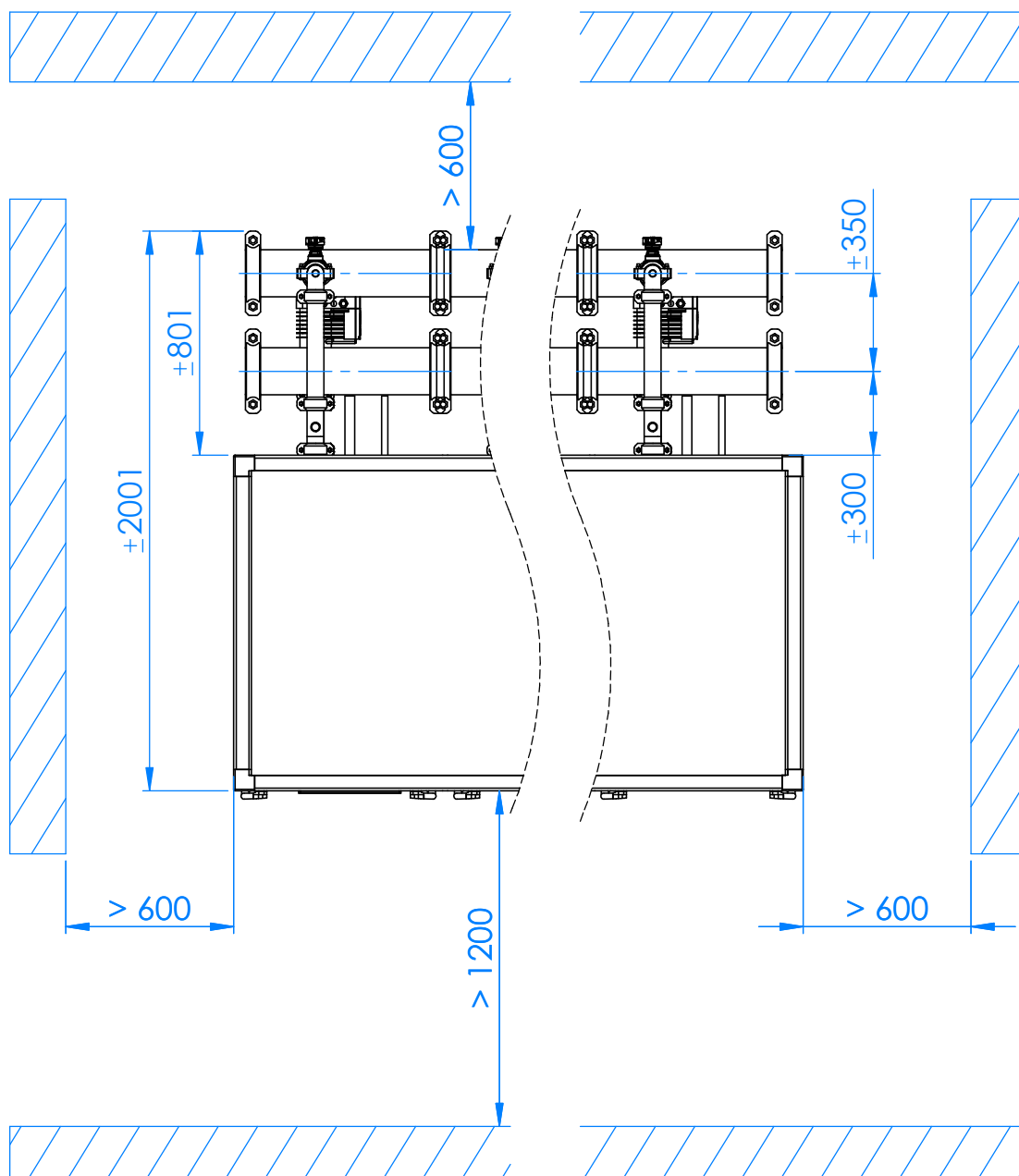


D (1,2) - SPLIT - FRIGO GAS (Modul 1 - 2)

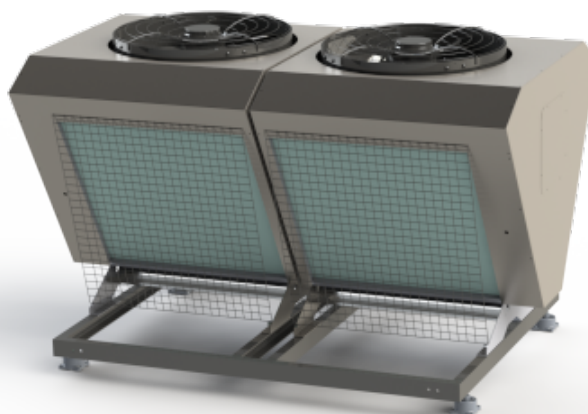
E (1,2) - SPLIT - FRIGO LIQUID (Modul 1-2)







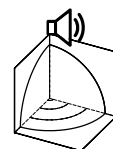
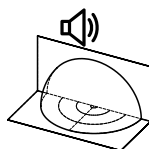
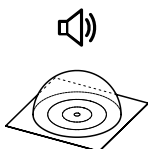
WAMAK AW 70 EVI HD Modul - Split unit variant: VOV900X2-FRAME



Enclosure type: VOV900X2-FRAME			Evaporator	
Article	WAVV2X90		Type	Cu-coil /Al-fin "
Basic dimensions	Height [mm]	1400	Port size	2 x (5/8" - 1.1/8") "
	Width [mm]	1500	Heat transfer medium	Air
	Length [mm]	2300	Volume flow - Air [m3/h]	11730 ~ 23460
Weight [kg]	430		Internal pressure drop - Air [kPa]	0.027
Colour	Inox		Temperature difference - Air	7 K
Enclosure IP Class	IP44		Expansion valve	EEV
Fan	800 mm			
Number of fans	2		Fan mounting position	Vertical 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

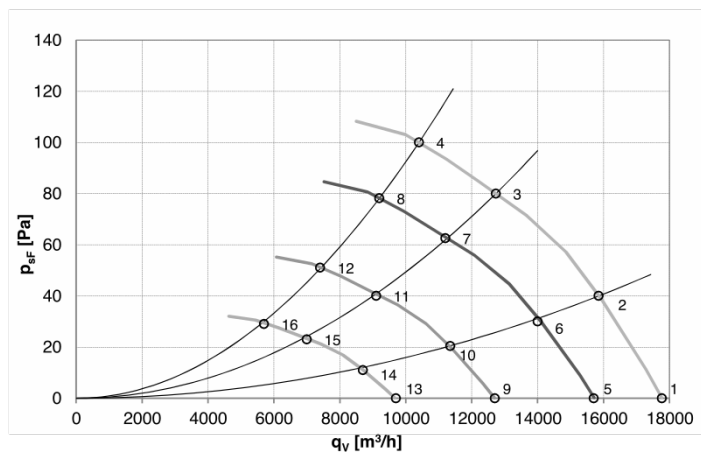
Acoustic power Lw

64.1 dB(A)

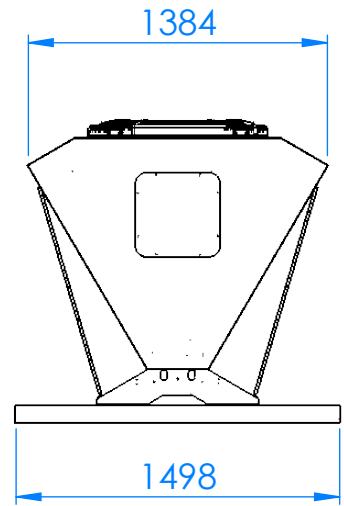
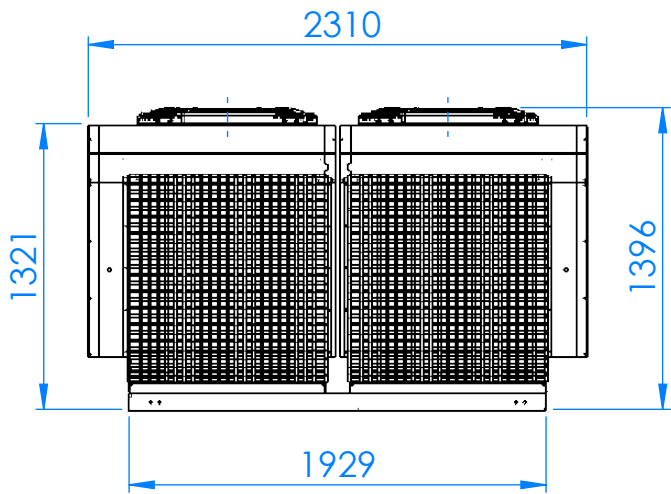


Distance [m]	1	5	10	15	1	5	10	15	1	5	10	15
Acoustic pressure Lp [dB(A)]	59.1	45.1	39.1	35.6	62.1	48.1	42.1	38.6	56.1	42.1	36.1	32.6

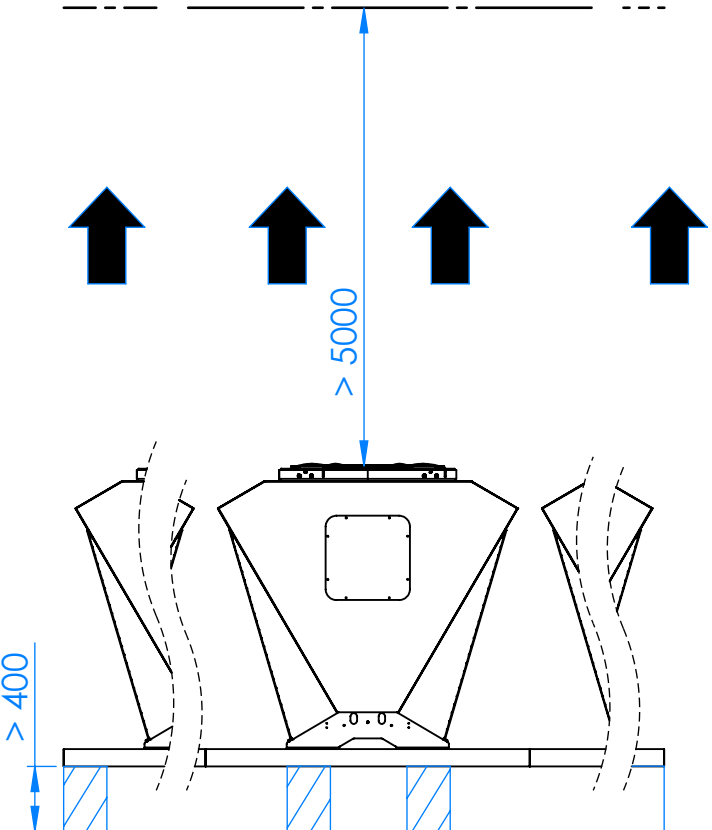
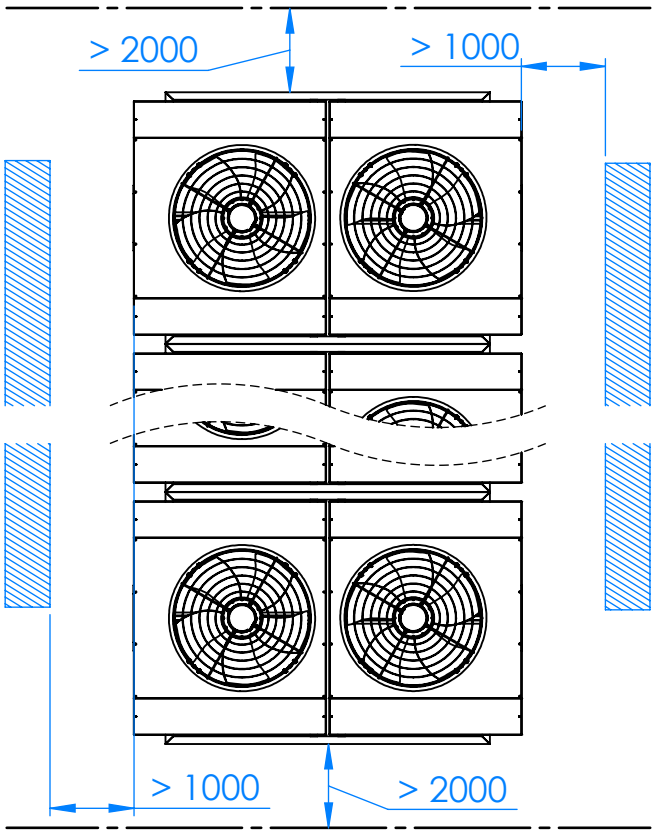
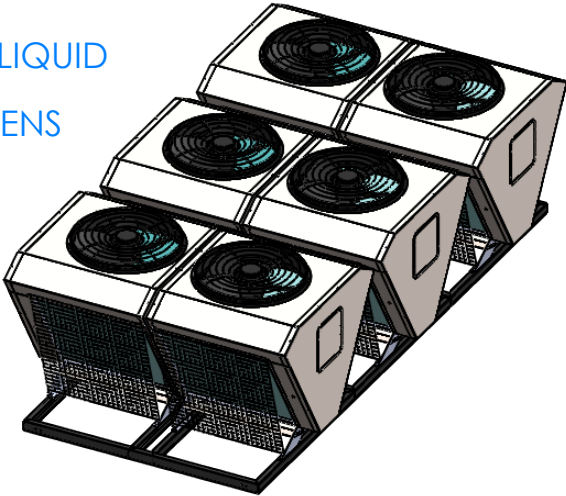
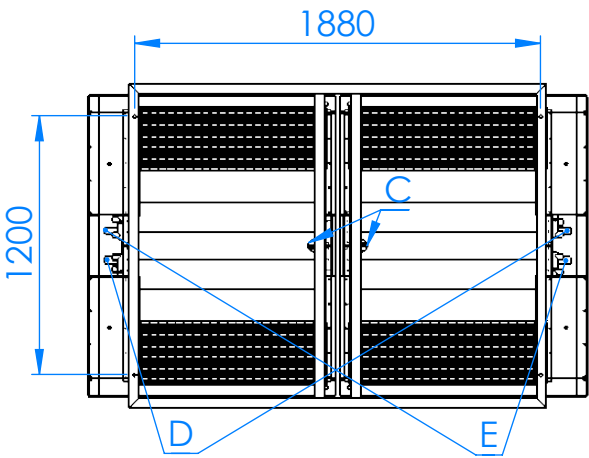
EC Fan 800mm



	U	f	n	qv	Pst	Pe	I	LwA out	Ta max
	[V]	[Hz]	[RPM]	[m³/h]	[Pa]	[W]	[A]	[dB (A)]	[°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



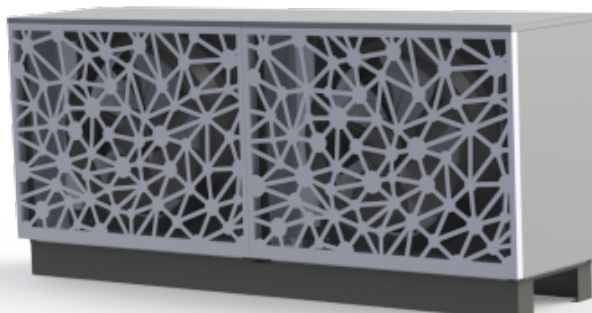
D - FRIGO GAS
E - FRIGO LIQUID
C - CONDENS



WAMAK AW 70 EVI HD Modul - Split unit variant: VOII-1200-2LOW

Number of units needed

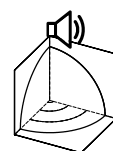
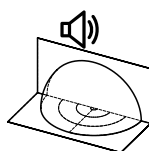
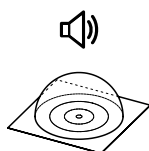
2



Enclosure type: VOII-1200-2LOW			Evaporator	
Article	WAVII12L		Type	Cu-coil /Al-fin "
Basic dimensions	Height [mm]	1240	Port size	2 x (5/8" - 1.1/8") "
	Width [mm]	2850	Heat transfer medium	Air
	Length [mm]	710	Volume flow - Air [m3/h]	11730 ~ 23460
Weight [kg]	300		Internal pressure drop - Air [kPa]	0.027
Colour	Gray		Temperature difference - Air	7 K
Enclosure IP Class	IP44		Expansion valve	EEV
Fan	800 mm			
Number of fans	2		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

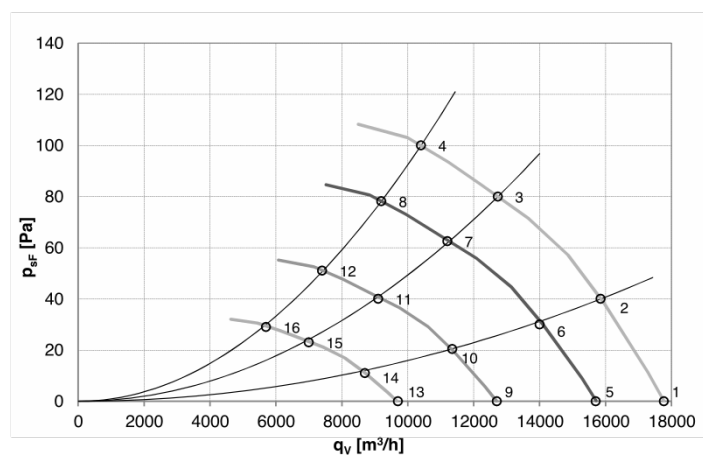
Acoustic power Lw

62.7 dB(A)

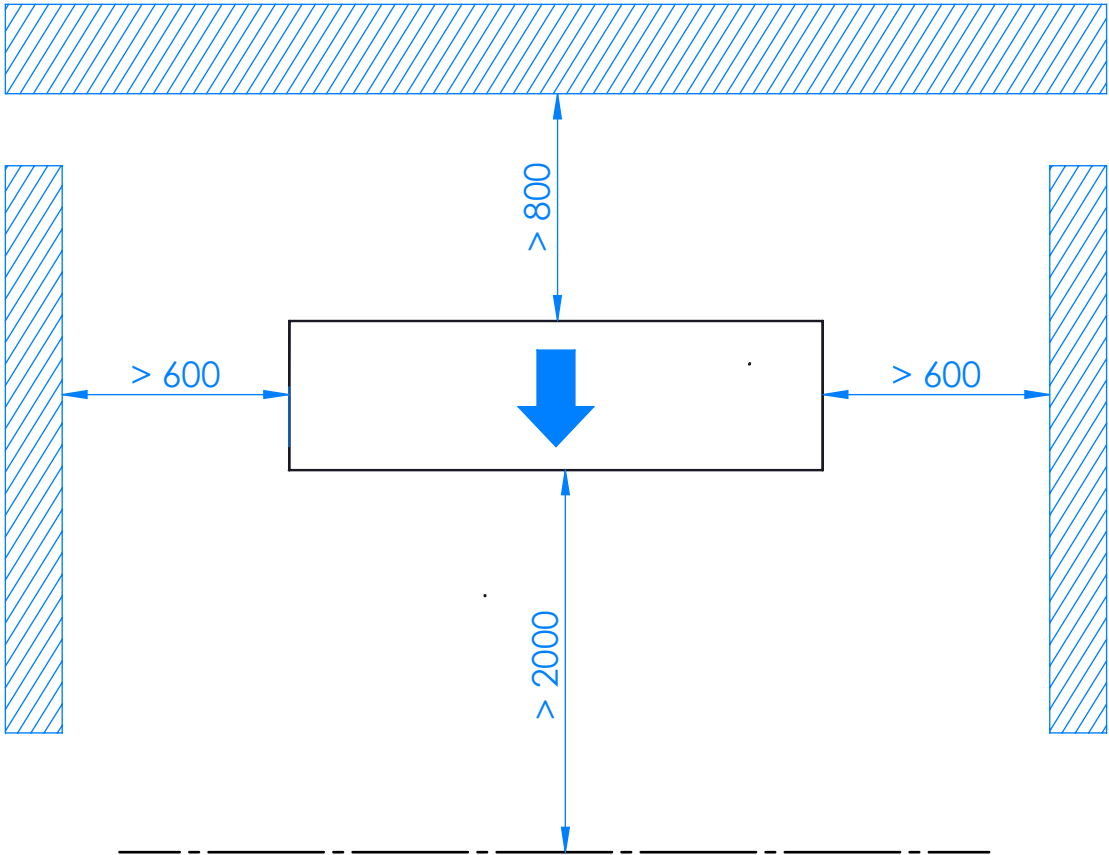
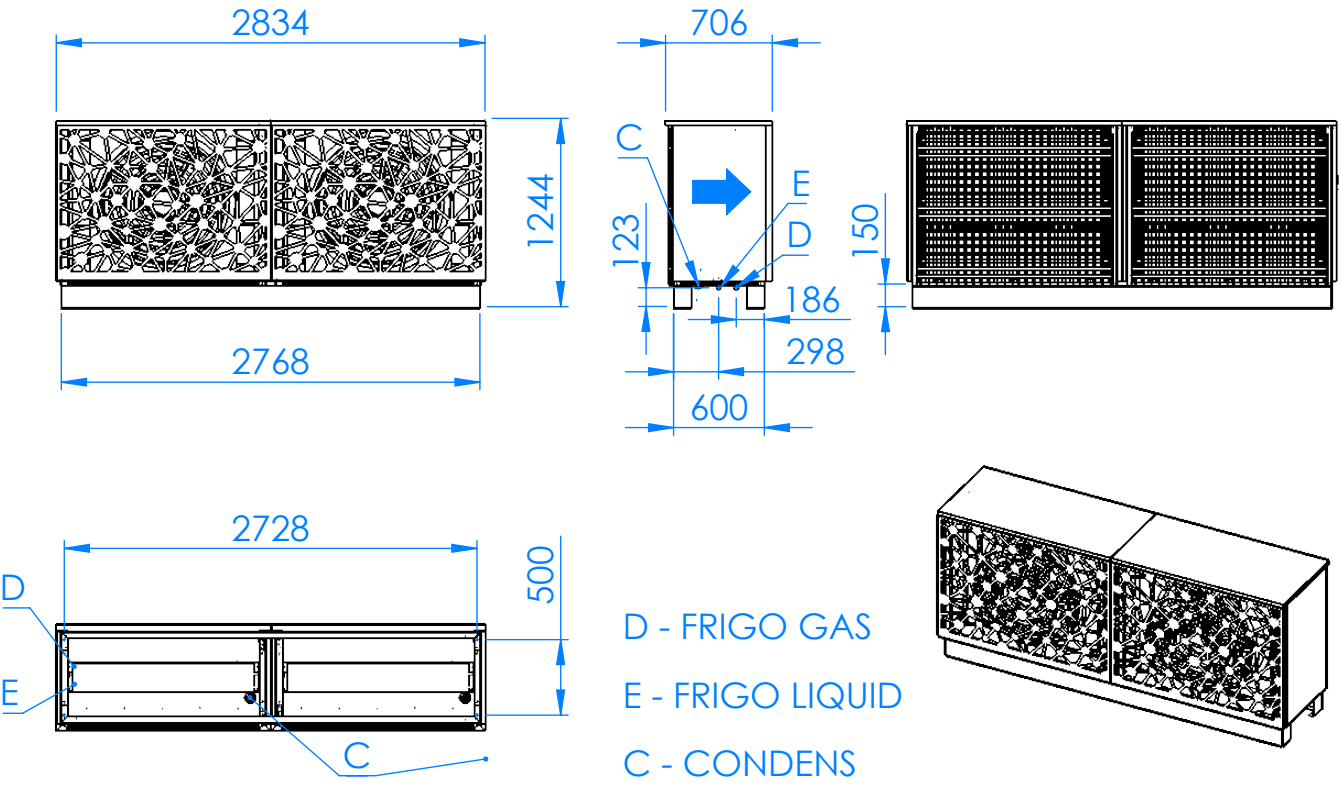


Distance [m]	1	5	10	15	1	5	10	15	1	5	10	15
Acoustic pressure Lp [dB(A)]	57.7	43.7	37.7	34.2	60.7	46.7	40.7	37.2	54.7	40.7	34.7	31.2

EC Fan 800mm



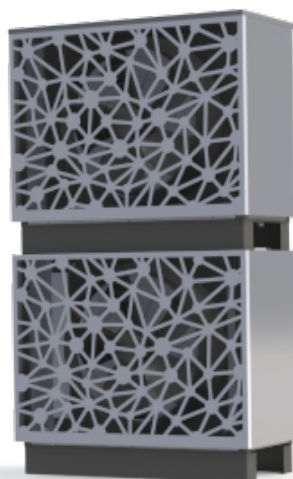
	U	f	n	qv	Pst	Pe	I	LwA out	Ta max
	[V]	[Hz]	[RPM]	[m³/h]	[Pa]	[W]	[A]	[dB (A)]	[°C]
1	400	50	735	17770	0	503	0,85	70	60
2	400	50	735	15850	40	612	1,02	66	60
3	400	50	735	12730	80	735	1,18	65	60
4	400	50	735	10400	100	802	1,36	68	60
5	400	50	650	15700	0	348	0,68	67	60
6	400	50	650	14000	30	421	0,80	63	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 70 EVI HD Modul - Split unit variant: VOII-1200-2HIGH

Number of units needed

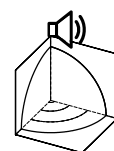
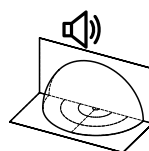
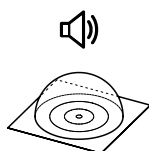
2



Enclosure type: VOII-1200-2HIGH			Evaporator	
Article	WAVII12H		Type	Cu-coil /Al-fin "
Basic dimensions	Height [mm]	2450	Port size	2 x (5/8" - 1.1/8") "
	Width [mm]	1420	Heat transfer medium	Air
	Length [mm]	710	Volume flow - Air [m3/h]	11730 ~ 23460
Weight [kg]	300		Internal pressure drop - Air [kPa]	0.027
Colour	Gray		Temperature difference - Air	7 K
Enclosure IP Class	IP44		Expansion valve	EEV
Fan	800 mm			
Number of fans	2		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

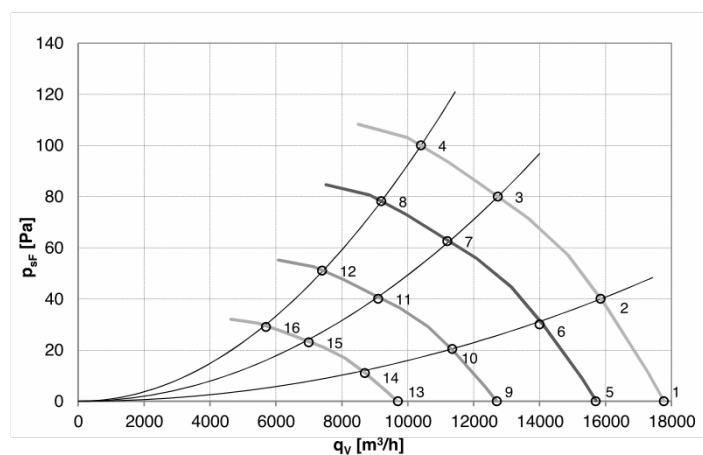
Acoustic power Lw

62.7 dB(A)

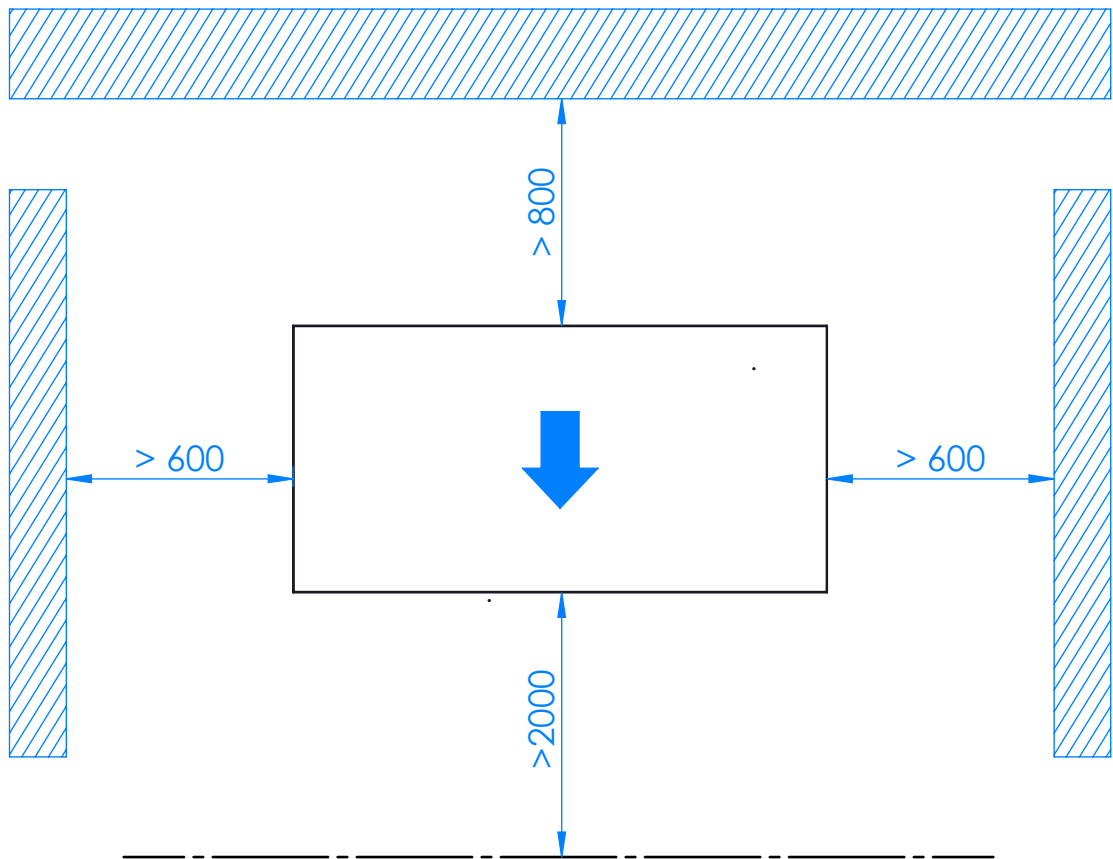
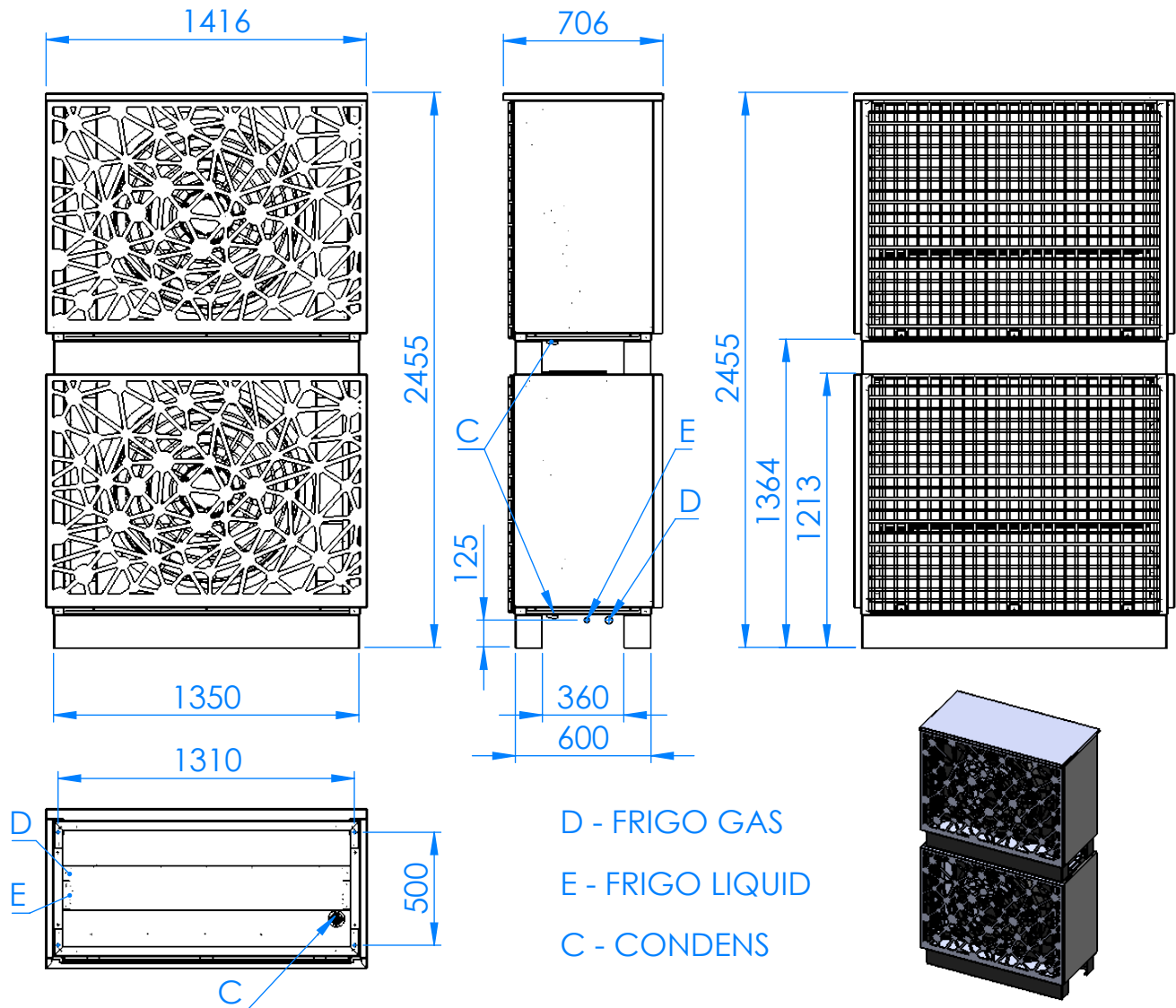


Distance [m]	1	5	10	15	1	5	10	15	1	5	10	15
Acoustic pressure Lp [dB(A)]	57.7	43.7	37.7	34.2	60.7	46.7	40.7	37.2	54.7	40.7	34.7	31.2

EC Fan 800mm



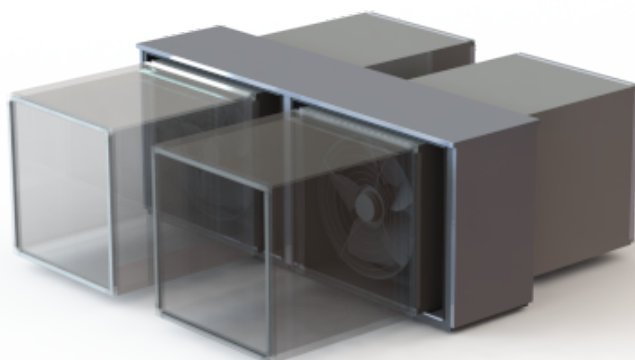
	U	f	n	qv	Pst	Pe	I	LwA out	Ta max
	[V]	[Hz]	[RPM]	[m³/h]	[Pa]	[W]	[A]	[dB (A)]	[°C]
1	400	50	735	17770	0	503	0,85	70	60
2	400	50	735	15850	40	612	1,02	66	60
3	400	50	735	12730	80	735	1,18	65	60
4	400	50	735	10400	100	802	1,36	68	60
5	400	50	650	15700	0	348	0,68	67	60
6	400	50	650	14000	30	421	0,80	63	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 70 EVI HD Modul - Split unit variant: VOII-1200-2LOW-DUCT

Number of units needed

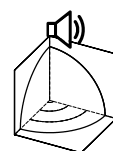
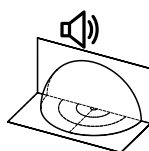
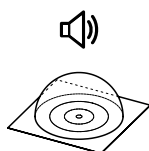
2



Enclosure type: VOII-1200-2LOW-DUCT			Evaporator	
Article	WAVID12L		Type	Cu-coil /Al-fin "
Basic dimensions	Height [mm]	1240	Port size	2 x (5/8" - 1.1/8") "
	Width [mm]	2850	Heat transfer medium	Air
	Length [mm]	710	Volume flow - Air [m3/h]	11730 ~ 23460
Weight [kg]	300		Internal pressure drop - Air [kPa]	0.027
Colour	Gray		Temperature difference - Air	7 K
Enclosure IP Class	IP44		Expansion valve	EEV
Fan	800 mm			
Number of fans	2		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

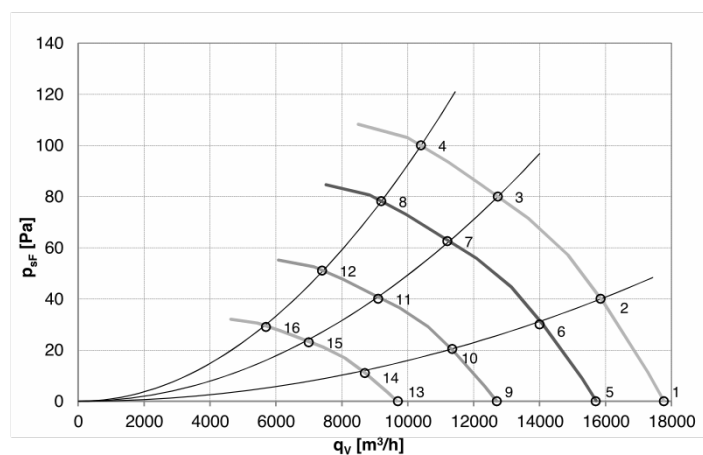
Acoustic power Lw

62.7 dB(A)



Distance [m]	1	5	10	15	1	5	10	15	1	5	10	15
Acoustic pressure Lp [dB(A)]	57.7	43.7	37.7	34.2	60.7	46.7	40.7	37.2	54.7	40.7	34.7	31.2

EC Fan 800mm

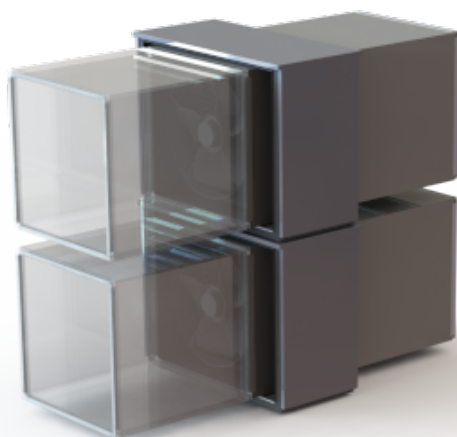


	U	f	n	qv	Pst	Pe	I	LwA out	Ta max
	[V]	[Hz]	[RPM]	[m³/h]	[Pa]	[W]	[A]	[dB (A)]	[°C]
1	400	50	735	17770	0	503	0,85	70	60
2	400	50	735	15850	40	612	1,02	66	60
3	400	50	735	12730	80	735	1,18	65	60
4	400	50	735	10400	100	802	1,36	68	60
5	400	50	650	15700	0	348	0,68	67	60
6	400	50	650	14000	30	421	0,80	63	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 70 EVI HD Modul - Split unit variant: VOII-1200-2HIGH-DUCT

Number of units needed

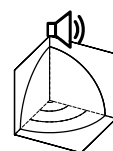
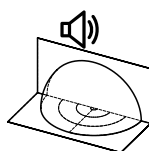
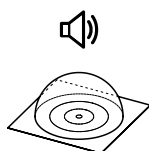
2



Enclosure type: VOII-1200-2HIGH-DUCT			Evaporator	
Article	WAVID12H		Type	Cu-coil /Al-fin "
Basic dimensions	Height [mm]	2450	Port size	2 x (5/8" - 1.1/8") "
	Width [mm]	1420	Heat transfer medium	Air
	Length [mm]	710	Volume flow - Air [m3/h]	11730 ~ 23460
Weight [kg]	300		Internal pressure drop - Air [kPa]	0.027
Colour	Gray		Temperature difference - Air	7 K
Enclosure IP Class	IP44		Expansion valve	EEV
Fan	800 mm			
Number of fans	2		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

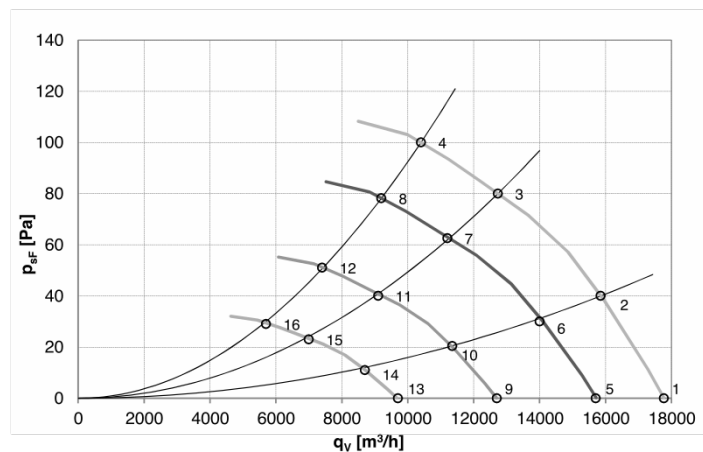
Acoustic power Lw

62.7 dB(A)

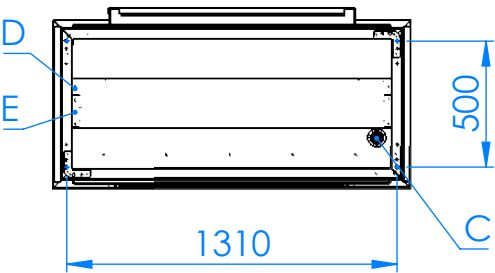
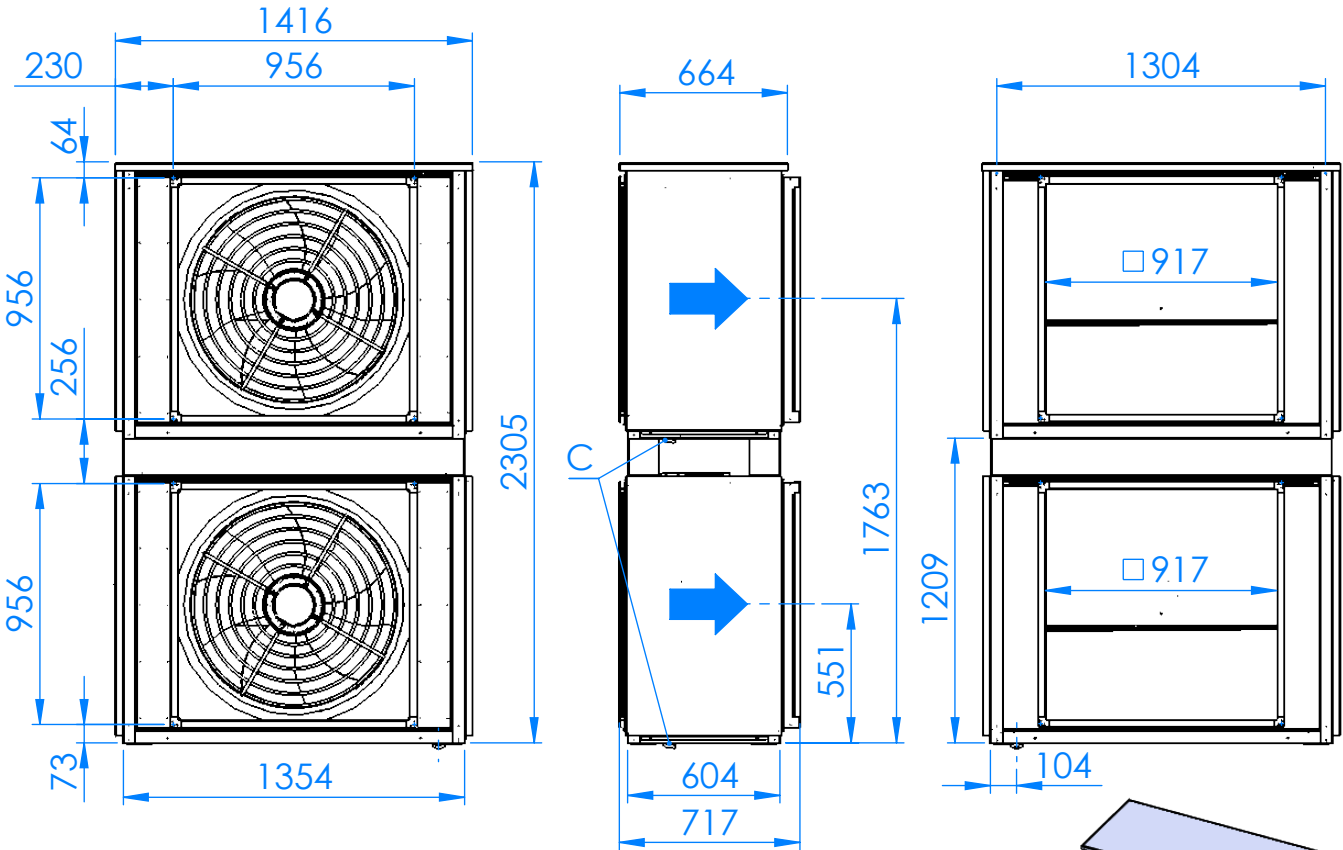


Distance [m]	1	5	10	15	1	5	10	15	1	5	10	15
Acoustic pressure Lp [dB(A)]	57.7	43.7	37.7	34.2	60.7	46.7	40.7	37.2	54.7	40.7	34.7	31.2

EC Fan 800mm



	U	f	n	qv	Pst	Pe	I	LwA out	Ta max
	[V]	[Hz]	[RPM]	[m³/h]	[Pa]	[W]	[A]	[dB (A)]	[°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



D - FRIGO GAS
E - FRIGO LIQUID
C - CONDENS

