



## Heat pump



# AW 47 EVI

# WAMAK AW 47 EVI

## Product description

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

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

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

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

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

Split system (compressor indoors)

## Product features

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- Scroll compressor
- EVI technology
- Asymmetric plate heat exchanger
- 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
- Mixed heating/cooling circuit control
- DHW switching control
- Outdoor temperature sensor
- Buffer temperature sensor
- Modbus connection - (with accessory)
- Sylomer pads under compressor unit
- Electronic expansion valve
- Large air heat exchanger with APS system
- Reversible defrosting
- Speed - controlled EC fan
- Compressor soft starter
- High pressure switch
- Low pressure sensor - analogue
- Flow sensor consumer - analogue - (with accessory)
- ECM speed circulator - condenser
- Direct heating/cooling circuit control
- DHW circulation control
- DHW temperature sensor
- Cascade control - (with accessory)
- Solid frame structure

## Basic performance data - WAMAK AW 47 EVI

| Heating - EN 14511   |                    |          |
|--|--------------------|----------|
| Heating capacity [kW]                                      | A7 / W35           | 48.8     |
|  | A2 / W35           | 41.6     |
|  | A-7 / W34          | 35.2     |
| Electrical power input [kW]                                | A7 / W35           | 11.4     |
|  | A2 / W35           | 11.4     |
|  | A-7 / W34          | 11.0     |
| Heating efficiency faktor [COP]                            | A7 / W35           | 4.29     |
|  | A2 / W35           | 3.66     |
|  | A-7 / W34          | 3.18     |
| Seasonal space heating energy efficiency - SCOP EN 14825   |                    |          |
| Average Climate / Low Temperature [35 °C]                  | SCOP               | 4.17     |
|  | $\eta$ [%]         | 166.7    |
|  | Label              | A+++     |
|  | Qhe [ kWh ]        | 82433.4  |
|  | Pdesignh [ kW ]    | 39.9     |
|  | Tbivalent [ °C ]   | -7       |
| Cooling  |                    |          |
| Cooling capacity - [kW]                                    | A35 / W23-18       | 48.4     |
|  | A25 / W23-18       | 50.9     |
|  | A35 / W12-7        | 36.4     |
|  | A25 / W12-7        | 36.4     |
| Seasonal space cooling energy efficiency - SEER EN 14825   |                    |          |
| [ W 23 / 18 °C ]   | SEER               | 4.46     |
|  | Qce [ kWh ]        | 21840.0  |
|  | $\eta_c$ [%]       | 178.6    |
| Sound EN 12102   |                    |          |
| Acoustic power - Lw  | dB(A)              | 62       |
| Acoustic pressure - Lp                                     | 1 m dB(A)          | 54       |
|  | 5 m dB(A)          | 40       |
|  | 10 m dB(A)         | 34       |
| Mechanical and operational information                     |                    |          |
| Compressor type (3~ 400/50)                                | SCROLL / 1 /       | On/Off   |
| Refrigerant  | R410A (GWP - 2088) | 8.9 kg   |
| Operating limit temperatures heating - (min / max ) [ °C ] |                    | 25 / 65  |
| Operating limit temperatures source - (min / max ) [ °C ]  |                    | -22 / 40 |
| Weight   |                    | 280 kg   |

## Main technical data - WAMAK AW 47 EVI

| Enclosure type                         |                    | VN800H            |                          | Heat energy rejection side data  |                          |                 |  |
|--|--------------------|-------------------|--------------------------|--|--------------------------|-----------------|--|
| Basic dimensions                       | Height [mm]        | 1270              |                          | Operating limit temperatures heating   | MAX [°C]                 | 65              |  |
|  | Width [mm]         | 850               |                          |  | MIN [°C]                 | 25              |  |
|  | Length [mm]        | 750               |                          | for more see operating limits diagram  |                          |                 |  |
| Weight [kg]                            | 280                |                   | Condenser                | Port size  | 2 "                      |                 |  |
| Colour                                 | Gray               |                   |                          | Type   | BPHE                     |                 |  |
| Enclosure IP Class                     | IP20               |                   |                          | Count  | 1                        |                 |  |
|  |                    |                   |                          | Material   | AISI 316                 |                 |  |
| Refrigeration cycle                    |                    |                   |                          | Maximal operating pressure - refrigerant [bar]   | 50                       |                 |  |
| Compressor                             | Type               | Scroll            |                          | Maximal operating pressure - Water [bar]   | 3                        |                 |  |
|  | Number of stages   | 1                 |                          | Testing pressure [bar]   | 70                       |                 |  |
|  | On/Off             |                   |                          | Heat transfer medium   | Water                    |                 |  |
|  | Power factor Cosφ  | 0.64              |                          | Volume flow - Water [m3/h]   | 8.45                     |                 |  |
|  | Winding resistance | 0.76 Ohm          |                          | Internal pressure drop - Water [kPa]   | 14                       |                 |  |
| Refrigerant                            |                    | R410A             |                          | ECM speed circulator - condenser   | MAGNA 1 32-120           |                 |  |
|  | Volme              | 8.9 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         | 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                | 7/8" - 1.3/8" " |  |
| APS System of liquid subcooling        |                    |                   |                          |  | Type                     | Cu-coil /Al-fin |  |
| Reversible operation (cooling)         |                    |                   |                          |  | Count                    | 1               |  |
| 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] | 14980  |                          |                 |  |
| Current                                | nominal [A]        | 23.53             |                          | Internal pressure drop - Air [kPa]   | 0.032                    |                 |  |
|  | maximal [A]        | 37.40             |                          | Temperature difference - Air   | 7 K                      |                 |  |
|  | starting [A]       | 57.2              |                          | Possible outdoor units   | 1 x VOV-900              |                 |  |
| Softstart                              | MCD201             |                   |                          | 1 x VOII-1200-2LOW   |                          |                 |  |
| Main safety                            | C40                |                   |                          | 1 x VOII-1200-2HIGH  |                          |                 |  |
| Control System                         |                    |                   |                          |  | 1 x VOII-1200-2LOW-DUCT  |                 |  |
| Main controller                        | SIEMENS            | RVS 21            | AVS 55.199               |  | 1 x VOII-1200-2HIGH-DUCT |                 |  |
| Extension module                       | AVS75.3xx          | AVS75.3xx         | AVS75.372                | Split System (compressor indoors)  |                          |                 |  |
|  |                    |                   |                          | Liquid line dimension (up to 8 meters IU/OU)   | 7/8"                     |                 |  |
| Bus Clip-In                            |                    | LPB OCI346        | Modbus OCI352            | Suction line dimension (up to 8 meters IU/OU)  | 1.3/8"                   |                 |  |
| Online connection                      |                    | Web server OZW672 | ToSyMo                   | Surcharge of refrigerant over 8 meter distance IU/OU   | 0.35 kg/m                |                 |  |
| Superheat controller                   | SEC61              |                   |                          | air - water SPLIT heat pumps indoor units are delivered without full refrigerant charge only with residual overpressure from testing |                          |                 |  |
| *** with accessory                     |                    |                   |                          |  |                          |                 |  |

## WAMAK AW 47 EVI

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

| Model                                | AW 47 EVI         |
|--------------------------------------|-------------------|
| Air-to-water heat pump               | yes               |
| Brine-to-water heat pump             | no                |
| Water-to-water heat pump             | no                |
| Low-temperature heat pump            | no                |
| Equipped with a supplementary heater | no                |
| Heat pump combination heater         | no                |
| Temperature application              | low (35°C - 30°C) |
| Climate conditions                   | average           |

| Item   | Symbol          | Value   | Unit | Item   | Symbol      | Value | Unit              |
|--|-----------------|---------|------|--|-------------|-------|-------------------|
| Rated heat output at Tdesignh  | Prated          | 39.9    | kW   | Seasonal space heating energy efficiency   | $\eta_s$    | 166.7 | %                 |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj |                 |         |      | Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj |             |       |                   |
| Tj = -7 °C   | Pdh             | 35.2    | kW   | Tj = -7 °C   | COPd        | 3.18  | -                 |
| Tj = +2 °C   | Pdh             | 41.2    | kW   | Tj = +2 °C   | COPd        | 4.1   | -                 |
| Tj = +7 °C   | Pdh             | 48.3    | kW   | Tj = +7 °C   | COPd        | 5.1   | -                 |
| Tj = +12 °C  | Pdh             | 56.9    | kW   | Tj = +12 °C  | COPd        | 6.4   | -                 |
| Tj = bivalent temperature  | Pdh             | 34.7    | kW   | Tj = bivalent temperature  | COPd        | 3.1   | -                 |
| Tj = operation limit temperature   | Pdh             | 25.6    | kW   | Tj = operation limit temperature   | COPd        | 2.4   | -                 |
| 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        | 17.5  | kW                |
| Standby mode   | Psb             | 0.010   | kW   | Type of energy input   | electricity |       |                   |
| Crankcase heater mode  | Pck             | 0.050   | kW   |  |             |       |                   |
| Other items  |                 |         |      | For air-to-water heat pumps:<br>Rated air flow rate, outdoors  | -           | 14980 | m <sup>3</sup> /h |
| Capacity control   | fixed           |         |      | For water- or brine-to-water heat pumps:<br>Rated brine or water flow rate, outdoor heat exchanger                               | -           | ---   | m <sup>3</sup> /h |
| Sound power level  |                 |         |      |  |             |       |                   |
| indoors  | Lwa             | 62      | dB   |  |             |       |                   |
| outdoors   | Lwa             | 69      | dB   |  |             |       |                   |
| Annual energy consumption  | Q <sub>HE</sub> | 82433.4 | kWh  |  |             |       |                   |

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

## WAMAK AW 47 EVI

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

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

| Item   | Symbol          | Value   | Unit | Item   | Symbol      | Value | Unit              |
|--|-----------------|---------|------|--|-------------|-------|-------------------|
| Rated heat output at Tdesignh  | Prated          | 41.8    | kW   | Seasonal space heating energy efficiency   | $\eta_s$    | 130.8 | %                 |
| 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             | 36.8    | kW   | Tj = -7 °C   | COPd        | 2.25  | -                 |
| Tj = +2 °C   | Pdh             | 42.2    | kW   | Tj = +2 °C   | COPd        | 3.2   | -                 |
| Tj = +7 °C   | Pdh             | 48.9    | kW   | Tj = +7 °C   | COPd        | 4.2   | -                 |
| Tj = +12 °C  | Pdh             | 57.1    | kW   | Tj = +12 °C  | COPd        | 5.6   | -                 |
| Tj = bivalent temperature  | Pdh             | 36.4    | kW   | Tj = bivalent temperature  | COPd        | 2.1   | -                 |
| Tj = operation limit temperature   | Pdh             | 27.0    | kW   | Tj = operation limit temperature   | COPd        | 1.6   | -                 |
| 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        | 17.5  | kW                |
| Standby mode   | Psb             | 0.010   | kW   | Type of energy input   | electricity |       |                   |
| Crankcase heater mode  | Pck             | 0.050   | kW   | For air-to-water heat pumps:<br>Rated air flow rate, outdoors  |             |       |                   |
| Other items  |                 |         |      | For water- or brine-to-water heat pumps:<br>Rated brine or water flow rate, outdoor heat exchanger                               |             |       |                   |
| Capacity control   |                 | fixed   |      |  |             | 14980 | m <sup>3</sup> /h |
| Sound power level  |                 |         |      |  |             | ---   | m <sup>3</sup> /h |
| indoors  | Lwa             | 62      | dB   |  |             |       |                   |
| outdoors   | Lwa             | 69      | dB   |  |             |       |                   |
| Annual energy consumption  | Q <sub>HE</sub> | 86358.8 | kWh  |  |             |       |                   |

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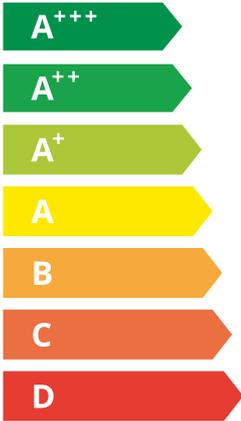
**WAMAK**

AW 47 EVI



55 °C

35 °C



62 dB

69 dB

|      |      |
|------|------|
| ■ 44 | ■ 41 |
| ■ 42 | ■ 40 |
| ■ 41 | ■ 38 |
| kW   | kW   |

2019

811/2013

AW 47 EVI

ErP Data

|                     | 55 °C      | 35 °C       |
|---------------------|------------|-------------|
| Energy class        | <b>A++</b> | <b>A+++</b> |
| $\eta$ [%]          | 130.8      | 166.7       |
| $P_{rated}$ [kW]    | 42         | 40          |
| $Q_{HE}$ [kWh/y]    | 86359      | 82434       |
| SCOP [-]            | 3.27       | 4.17        |
| $T_{bivalent}$ [°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]

ZHI46K1P-TWD\_R410A\_1\_AW

| Operating conditions |             | Qh   | P    | COP  |
|----------------------|-------------|------|------|------|
| 1                    | A7 / W30-35 | 48.8 | 11.4 | 4.29 |
| 2                    | A2 / W35    | 41.6 | 11.4 | 3.66 |
| 3                    | A-22 / W35  | 25.6 | 10.9 | 2.35 |
| A                    | A-7 / W34   | 35.2 | 11.0 | 3.18 |
| B                    | A2 / W30    | 41.2 | 10.2 | 4.05 |
| C                    | A7 / W27    | 48.3 | 9.5  | 5.08 |
| D                    | A12 / W24   | 56.9 | 9.0  | 6.36 |
| E                    | A-10 / W35  | 34.7 | 11.3 | 3.07 |
| F                    | A-7 / W34   | 35.2 | 11.0 | 3.18 |

| SCOP DATA EN 14825:2018                         |          |
|---|----------|
| <b>Average Climate / Low Temperature [35°C]</b> |          |
| SCOPon  | 4.24     |
| SCOPnet   | 4.28     |
| SCOP  | 4.17     |
| η [%]   | 166.67   |
| Label   | A+++     |
| Qh [ kWh ]                                      | 82433.40 |
| Pdesignh [ kW ]                                 | 39.9     |
| Tbivalent [ °C ]                                | -7.00    |

Average Climate / Medium Temperature [55°C]

| Operating conditions |             | Qh   | P    | COP  |
|----------------------|-------------|------|------|------|
| 1                    | A7 / W47-55 | 49.9 | 17.8 | 2.79 |
| 2                    | A2 / W55    | 43.2 | 17.7 | 2.43 |
| 3                    | A-22 / W55  | 27.0 | 15.2 | 1.64 |
| A                    | A-7 / W52   | 36.8 | 16.3 | 2.25 |
| B                    | A2 / W42    | 42.2 | 13.3 | 3.18 |
| C                    | A7 / W36    | 48.9 | 11.6 | 4.20 |
| D                    | A12 / W30   | 57.1 | 10.2 | 5.59 |
| E                    | A-10 / W55  | 36.4 | 17.4 | 2.09 |
| F                    | A-7 / W55   | 37.0 | 17.4 | 2.12 |

| SCOP DATA EN 14825:2018                            |          |
|--|----------|
| <b>Average Climate / Medium Temperature [55°C]</b> |          |
| SCOPon   | 3.31     |
| SCOPnet  | 3.34     |
| SCOP   | 3.27     |
| η [%]  | 130.78   |
| Label  | A++      |
| Qh [ kWh ]   | 86358.80 |
| Pdesignh [ kW ]                                    | 41.8     |
| Tbivalent [ °C ]                                   | -7.00    |

Cooling performance data

Low temperature cooling W 12 / 7°C

| Operating conditions |             | Qc   | P    | EER  |
|----------------------|-------------|------|------|------|
| A                    | A35 / W12-7 | 36.4 | 13.6 | 2.68 |
| B                    | A30 / W12-7 | 37.4 | 12.2 | 3.07 |
| C                    | A25 / W12-7 | 38.2 | 10.9 | 3.51 |
| D                    | A20 / W12-7 | 38.9 | 9.7  | 4.00 |

| SEER DATA EN 14825:2018 [ W 12 / 7°C ] |          |
|--|----------|
| SEERon                                 | 3.43     |
| SEER                                   | 3.37     |
| Qc [ kWh ]                             | 21840.00 |
| η [%]                                  | 134.85   |

Radiant cooling W 23 / 18°C

| Operating conditions |              | Qc   | P    | EER  |
|----------------------|--------------|------|------|------|
| A                    | A35 / W23-18 | 48.4 | 13.6 | 3.56 |
| B                    | A30 / W23-18 | 49.7 | 11.3 | 4.09 |
| C                    | A25 / W23-18 | 50.9 | 10.1 | 4.67 |
| D                    | A20 / W23-18 | 51.9 | 9.1  | 5.34 |

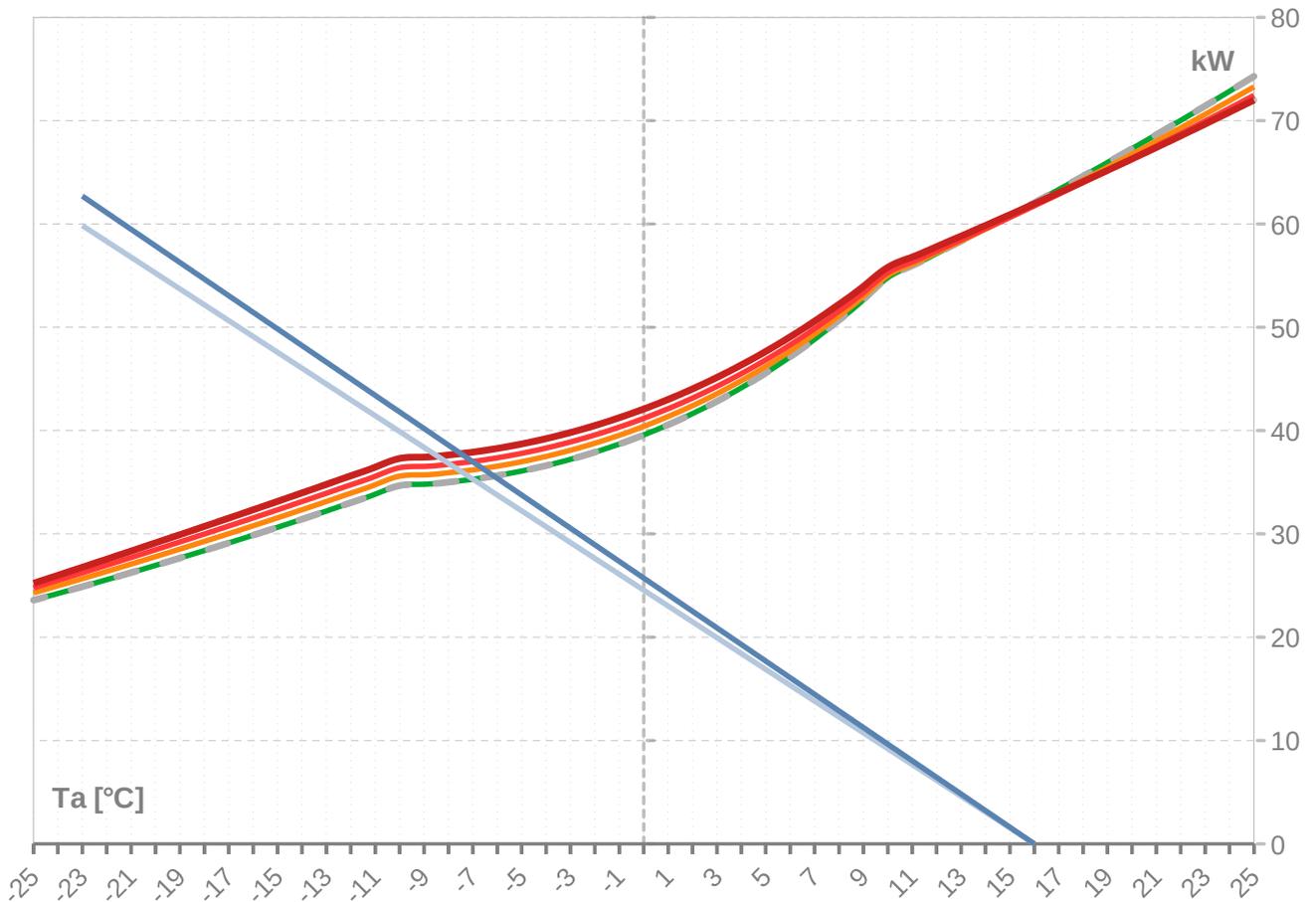
| SEER DATA EN 14825:2018 [ W 23 / 18°C ] |          |
|---|----------|
| SEERon                                  | 4.57     |
| SEER                                    | 4.46     |
| Qc [ kWh ]                              | 21840.00 |
| η [%]                                   | 178.56   |

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ZHI46K1P-TWD\_R410A\_1\_AW

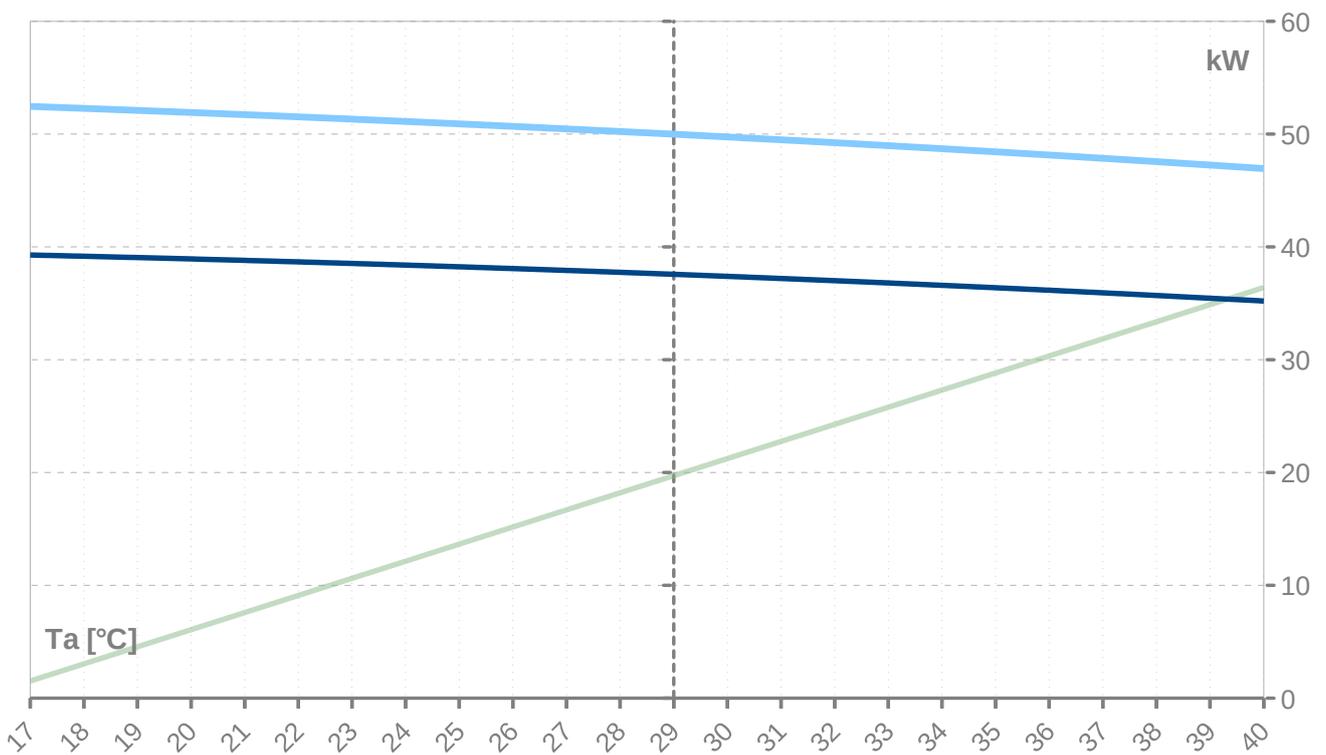
## Performance lines - heating

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



## Performance lines - cooling

- Pratedc   
 — Qc-12/7   
 — Qc-23/18



| 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      | <b>63.3</b> | 63.3        |             | <b>11.4</b>  | 11.4         |              | <b>5.56</b> | 23.3      | 23.3      |           |
| 24      | <b>63.3</b> | 63.3        |             | <b>11.4</b>  | 11.4         |              | <b>5.56</b> | 23.3      | 23.3      |           |
| 23      | <b>63.3</b> | 63.3        |             | <b>11.4</b>  | 11.4         |              | <b>5.56</b> | 23.3      | 23.3      |           |
| 22      | <b>63.3</b> | 63.3        |             | <b>11.4</b>  | 11.4         |              | <b>5.56</b> | 23.3      | 23.3      |           |
| 21      | <b>63.3</b> | 63.3        |             | <b>11.4</b>  | 11.4         |              | <b>5.56</b> | 23.3      | 23.3      |           |
| 20      | <b>63.3</b> | 63.3        |             | <b>11.4</b>  | 11.4         |              | <b>5.56</b> | 23.3      | 23.3      |           |
| 19      | <b>63.3</b> | 63.3        |             | <b>11.4</b>  | 11.4         |              | <b>5.56</b> | 23.3      | 23.3      |           |
| 18      | <b>63.3</b> | 63.3        |             | <b>11.4</b>  | 11.4         |              | <b>5.56</b> | 23.3      | 23.3      |           |
| 17      | <b>63.3</b> | 63.3        |             | <b>11.4</b>  | 11.4         |              | <b>5.56</b> | 23.3      | 23.3      |           |
| 16      | <b>62.1</b> | 62.1        | 62.1        | <b>11.4</b>  | 11.4         | 11.4         | <b>5.45</b> | 23.3      | 23.3      | 23.3      |
| 15      | <b>60.8</b> | 60.8        | 60.8        | <b>11.4</b>  | 11.4         | 11.4         | <b>5.34</b> | 23.3      | 23.3      | 23.3      |
| 14      | <b>59.6</b> | 59.6        | 59.6        | <b>11.4</b>  | 11.4         | 11.4         | <b>5.23</b> | 23.3      | 23.3      | 23.3      |
| 13      | <b>58.3</b> | 58.3        | 58.3        | <b>11.4</b>  | 11.4         | 11.4         | <b>5.13</b> | 23.4      | 23.4      | 23.4      |
| 12      | <b>57.1</b> | 57.1        | 57.1        | <b>11.4</b>  | 11.4         | 11.4         | <b>5.02</b> | 23.4      | 23.4      | 23.4      |
| 11      | <b>56.0</b> | 56.0        | 56.0        | <b>11.4</b>  | 11.4         | 11.4         | <b>4.92</b> | 23.4      | 23.4      | 23.4      |
| 10      | <b>54.8</b> | 54.8        | 54.8        | <b>11.4</b>  | 11.4         | 11.4         | <b>4.82</b> | 23.4      | 23.4      | 23.4      |
| 9       | <b>52.7</b> | 52.7        | 52.7        | <b>11.4</b>  | 11.4         | 11.4         | <b>4.63</b> | 23.5      | 23.5      | 23.5      |
| 8       | <b>50.7</b> | 50.7        | 50.7        | <b>11.4</b>  | 11.4         | 11.4         | <b>4.45</b> | 23.5      | 23.5      | 23.5      |
| 7       | <b>48.8</b> | 48.8        | 48.8        | <b>11.4</b>  | 11.4         | 11.4         | <b>4.29</b> | 23.6      | 23.6      | 23.6      |
| 6       | <b>47.1</b> | 47.1        | 47.1        | <b>11.4</b>  | 11.4         | 11.4         | <b>4.14</b> | 23.6      | 23.6      | 23.6      |
| 5       | <b>45.6</b> | 45.6        | 45.6        | <b>11.4</b>  | 11.4         | 11.4         | <b>4.00</b> | 23.7      | 23.7      | 23.7      |
| 4       | <b>44.1</b> | 44.1        | 44.1        | <b>11.4</b>  | 11.4         | 11.4         | <b>3.88</b> | 23.7      | 23.7      | 23.7      |
| 3       | <b>42.8</b> | 42.8        | 42.8        | <b>11.4</b>  | 11.4         | 11.4         | <b>3.77</b> | 23.7      | 23.7      | 23.7      |
| 2       | <b>41.6</b> | 41.6        | 41.6        | <b>11.4</b>  | 11.4         | 11.4         | <b>3.66</b> | 23.7      | 23.7      | 23.7      |
| 1       | <b>40.6</b> | 40.6        | 40.6        | <b>11.4</b>  | 11.4         | 11.4         | <b>3.57</b> | 23.7      | 23.7      | 23.7      |
| 0       | <b>39.6</b> | 39.6        | 39.6        | <b>11.4</b>  | 11.4         | 11.4         | <b>3.49</b> | 23.7      | 23.7      | 23.7      |
| -1      | <b>38.7</b> | 38.7        | 38.7        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.41</b> | 23.7      | 23.7      | 23.7      |
| -2      | <b>37.9</b> | 37.9        | 37.9        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.34</b> | 23.7      | 23.7      | 23.7      |
| -3      | <b>37.2</b> | 37.2        | 37.2        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.28</b> | 23.7      | 23.7      | 23.7      |
| -4      | <b>36.6</b> | 36.6        | 36.6        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.23</b> | 23.7      | 23.7      | 23.7      |
| -5      | <b>36.1</b> | 36.1        | 36.1        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.19</b> | 23.7      | 23.7      | 23.7      |
| -6      | <b>35.6</b> | 35.6        | 35.6        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.15</b> | 23.7      | 23.7      | 23.7      |
| -7      | <b>35.3</b> | 35.3        | 35.3        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.12</b> | 23.7      | 23.7      | 23.7      |
| -8      | <b>35.0</b> | 35.0        | 35.0        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.10</b> | 23.7      | 23.7      | 23.7      |
| -9      | <b>34.8</b> | 34.8        | 34.8        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.08</b> | 23.7      | 23.7      | 23.7      |
| -10     | <b>34.7</b> | 34.7        | 34.7        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.07</b> | 23.7      | 23.7      | 23.7      |
| -11     | <b>33.8</b> | 33.8        | 33.8        | <b>11.3</b>  | 11.3         | 11.3         | <b>3.00</b> | 23.7      | 23.7      | 23.7      |
| -12     | <b>33.0</b> | 33.0        | 33.0        | <b>11.2</b>  | 11.2         | 11.2         | <b>2.94</b> | 23.7      | 23.7      | 23.7      |
| -13     | <b>32.2</b> | 32.2        | 32.2        | <b>11.2</b>  | 11.2         | 11.2         | <b>2.87</b> | 23.6      | 23.6      | 23.6      |
| -14     | <b>31.4</b> | 31.4        | 31.4        | <b>11.2</b>  | 11.2         | 11.2         | <b>2.81</b> | 23.6      | 23.6      | 23.6      |
| -15     | <b>30.6</b> | 30.6        | 30.6        | <b>11.2</b>  | 11.2         | 11.2         | <b>2.74</b> | 23.6      | 23.6      | 23.6      |
| -16     | <b>29.9</b> | 29.9        | 29.9        | <b>11.1</b>  | 11.1         | 11.1         | <b>2.68</b> | 23.5      | 23.5      | 23.5      |
| -17     | <b>29.1</b> | 29.1        | 29.1        | <b>11.1</b>  | 11.1         | 11.1         | <b>2.62</b> | 23.4      | 23.4      | 23.4      |
| -18     | <b>28.4</b> | 28.4        | 28.4        | <b>11.1</b>  | 11.1         | 11.1         | <b>2.57</b> | 23.4      | 23.4      | 23.4      |
| -19     | <b>27.7</b> | 27.7        | 27.7        | <b>11.0</b>  | 11.0         | 11.0         | <b>2.51</b> | 23.3      | 23.3      | 23.3      |
| -20     | <b>27.0</b> | 27.0        | 27.0        | <b>11.0</b>  | 11.0         | 11.0         | <b>2.46</b> | 23.2      | 23.2      | 23.2      |
| -21     | <b>26.3</b> | 26.3        | 26.3        | <b>10.9</b>  | 10.9         | 10.9         | <b>2.40</b> | 23.2      | 23.2      | 23.2      |
| -22     | <b>25.6</b> | 25.6        | 25.6        | <b>10.9</b>  | 10.9         | 10.9         | <b>2.35</b> | 23.1      | 23.1      | 23.1      |
| -23     | <b>24.9</b> | 24.9        | 24.9        | <b>10.8</b>  | 10.8         | 10.8         | <b>2.30</b> | 23.0      | 23.0      | 23.0      |
| -24     | <b>24.2</b> | 24.2        | 24.2        | <b>10.8</b>  | 10.8         | 10.8         | <b>2.25</b> | 22.8      | 22.8      | 22.8      |
| -25     | <b>23.6</b> | 23.6        | 23.6        | <b>10.7</b>  | 10.7         | 10.7         | <b>2.20</b> | 22.7      | 22.7      | 22.7      |

\* attention: operating limits not reflected in performance table

| 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      | <b>73.3</b> | 73.3        | 73.3        | <b>14.1</b>  | 14.1         | 14.1         | <b>5.19</b> | 26.5      | 26.5      | 26.5      |
| 24      | <b>71.9</b> | 71.9        | 71.9        | <b>14.1</b>  | 14.1         | 14.1         | <b>5.10</b> | 26.5      | 26.5      | 26.5      |
| 23      | <b>70.6</b> | 70.6        | 70.6        | <b>14.1</b>  | 14.1         | 14.1         | <b>5.00</b> | 26.5      | 26.5      | 26.5      |
| 22      | <b>69.3</b> | 69.3        | 69.3        | <b>14.1</b>  | 14.1         | 14.1         | <b>4.91</b> | 26.5      | 26.5      | 26.5      |
| 21      | <b>68.0</b> | 68.0        | 68.0        | <b>14.1</b>  | 14.1         | 14.1         | <b>4.81</b> | 26.5      | 26.5      | 26.5      |
| 20      | <b>66.7</b> | 66.7        | 66.7        | <b>14.1</b>  | 14.1         | 14.1         | <b>4.72</b> | 26.5      | 26.5      | 26.5      |
| 19      | <b>65.5</b> | 65.5        | 65.5        | <b>14.1</b>  | 14.1         | 14.1         | <b>4.63</b> | 26.5      | 26.5      | 26.5      |
| 18      | <b>64.3</b> | 64.3        | 64.3        | <b>14.1</b>  | 14.1         | 14.1         | <b>4.54</b> | 26.5      | 26.5      | 26.5      |
| 17      | <b>63.0</b> | 63.0        | 63.0        | <b>14.2</b>  | 14.2         | 14.2         | <b>4.45</b> | 26.6      | 26.6      | 26.6      |
| 16      | <b>61.8</b> | 61.8        | 61.8        | <b>14.2</b>  | 14.2         | 14.2         | <b>4.37</b> | 26.6      | 26.6      | 26.6      |
| 15      | <b>60.7</b> | 60.7        | 60.7        | <b>14.2</b>  | 14.2         | 14.2         | <b>4.28</b> | 26.6      | 26.6      | 26.6      |
| 14      | <b>59.5</b> | 59.5        | 59.5        | <b>14.2</b>  | 14.2         | 14.2         | <b>4.20</b> | 26.6      | 26.6      | 26.6      |
| 13      | <b>58.4</b> | 58.4        | 58.4        | <b>14.2</b>  | 14.2         | 14.2         | <b>4.11</b> | 26.6      | 26.6      | 26.6      |
| 12      | <b>57.2</b> | 57.2        | 57.2        | <b>14.2</b>  | 14.2         | 14.2         | <b>4.03</b> | 26.6      | 26.6      | 26.6      |
| 11      | <b>56.1</b> | 56.1        | 56.1        | <b>14.2</b>  | 14.2         | 14.2         | <b>3.95</b> | 26.6      | 26.6      | 26.6      |
| 10      | <b>55.0</b> | 55.0        | 55.0        | <b>14.2</b>  | 14.2         | 14.2         | <b>3.87</b> | 26.6      | 26.6      | 26.6      |
| 9       | <b>53.0</b> | 53.0        | 53.0        | <b>14.2</b>  | 14.2         | 14.2         | <b>3.73</b> | 26.6      | 26.6      | 26.6      |
| 8       | <b>51.1</b> | 51.1        | 51.1        | <b>14.2</b>  | 14.2         | 14.2         | <b>3.60</b> | 26.7      | 26.7      | 26.7      |
| 7       | <b>49.3</b> | 49.3        | 49.3        | <b>14.2</b>  | 14.2         | 14.2         | <b>3.47</b> | 26.7      | 26.7      | 26.7      |
| 6       | <b>47.7</b> | 47.7        | 47.7        | <b>14.2</b>  | 14.2         | 14.2         | <b>3.36</b> | 26.7      | 26.7      | 26.7      |
| 5       | <b>46.2</b> | 46.2        | 46.2        | <b>14.2</b>  | 14.2         | 14.2         | <b>3.25</b> | 26.6      | 26.6      | 26.6      |
| 4       | <b>44.8</b> | 44.8        | 44.8        | <b>14.2</b>  | 14.2         | 14.2         | <b>3.16</b> | 26.6      | 26.6      | 26.6      |
| 3       | <b>43.6</b> | 43.6        | 43.6        | <b>14.2</b>  | 14.2         | 14.2         | <b>3.07</b> | 26.6      | 26.6      | 26.6      |
| 2       | <b>42.4</b> | 42.4        | 42.4        | <b>14.2</b>  | 14.2         | 14.2         | <b>2.99</b> | 26.6      | 26.6      | 26.6      |
| 1       | <b>41.4</b> | 41.4        | 41.4        | <b>14.2</b>  | 14.2         | 14.2         | <b>2.92</b> | 26.5      | 26.5      | 26.5      |
| 0       | <b>40.4</b> | 40.4        | 40.4        | <b>14.1</b>  | 14.1         | 14.1         | <b>2.86</b> | 26.5      | 26.5      | 26.5      |
| -1      | <b>39.5</b> | 39.5        | 39.5        | <b>14.1</b>  | 14.1         | 14.1         | <b>2.80</b> | 26.5      | 26.5      | 26.5      |
| -2      | <b>38.8</b> | 38.8        | 38.8        | <b>14.1</b>  | 14.1         | 14.1         | <b>2.75</b> | 26.4      | 26.4      | 26.4      |
| -3      | <b>38.1</b> | 38.1        | 38.1        | <b>14.1</b>  | 14.1         | 14.1         | <b>2.70</b> | 26.4      | 26.4      | 26.4      |
| -4      | <b>37.5</b> | 37.5        | 37.5        | <b>14.1</b>  | 14.1         | 14.1         | <b>2.66</b> | 26.4      | 26.4      | 26.4      |
| -5      | <b>37.0</b> | 37.0        | 37.0        | <b>14.1</b>  | 14.1         | 14.1         | <b>2.63</b> | 26.3      | 26.3      | 26.3      |
| -6      | <b>36.5</b> | 36.5        | 36.5        | <b>14.0</b>  | 14.0         | 14.0         | <b>2.60</b> | 26.3      | 26.3      | 26.3      |
| -7      | <b>36.2</b> | 36.2        | 36.2        | <b>14.0</b>  | 14.0         | 14.0         | <b>2.58</b> | 26.3      | 26.3      | 26.3      |
| -8      | <b>35.9</b> | 35.9        | 35.9        | <b>14.0</b>  | 14.0         | 14.0         | <b>2.56</b> | 26.2      | 26.2      | 26.2      |
| -9      | <b>35.7</b> | 35.7        | 35.7        | <b>14.0</b>  | 14.0         | 14.0         | <b>2.55</b> | 26.2      | 26.2      | 26.2      |
| -10     | <b>35.6</b> | 35.6        | 35.6        | <b>14.0</b>  | 14.0         | 14.0         | <b>2.54</b> | 26.2      | 26.2      | 26.2      |
| -11     | <b>34.8</b> | 34.8        | 34.8        | <b>14.0</b>  | 14.0         | 14.0         | <b>2.49</b> | 26.1      | 26.1      | 26.1      |
| -12     | <b>33.9</b> | 33.9        | 33.9        | <b>13.9</b>  | 13.9         | 13.9         | <b>2.44</b> | 26.1      | 26.1      | 26.1      |
| -13     | <b>33.1</b> | 33.1        | 33.1        | <b>13.9</b>  | 13.9         | 13.9         | <b>2.38</b> | 26.0      | 26.0      | 26.0      |
| -14     | <b>32.3</b> | 32.3        | 32.3        | <b>13.9</b>  | 13.9         | 13.9         | <b>2.33</b> | 25.9      | 25.9      | 25.9      |
| -15     | <b>31.6</b> | 31.6        | 31.6        | <b>13.8</b>  | 13.8         | 13.8         | <b>2.29</b> | 25.8      | 25.8      | 25.8      |
| -16     | <b>30.8</b> | 30.8        | 30.8        | <b>13.8</b>  | 13.8         | 13.8         | <b>2.24</b> | 25.7      | 25.7      | 25.7      |
| -17     | <b>30.0</b> | 30.0        | 30.0        | <b>13.7</b>  | 13.7         | 13.7         | <b>2.19</b> | 25.6      | 25.6      | 25.6      |
| -18     | <b>29.3</b> | 29.3        | 29.3        | <b>13.6</b>  | 13.6         | 13.6         | <b>2.15</b> | 25.4      | 25.4      | 25.4      |
| -19     | <b>28.5</b> | 28.5        | 28.5        | <b>13.6</b>  | 13.6         | 13.6         | <b>2.10</b> | 25.3      | 25.3      | 25.3      |
| -20     | <b>27.8</b> | 27.8        | 27.8        | <b>13.5</b>  | 13.5         | 13.5         | <b>2.06</b> | 25.2      | 25.2      | 25.2      |
| -21     | <b>27.1</b> | 27.1        | 27.1        | <b>13.4</b>  | 13.4         | 13.4         | <b>2.02</b> | 25.0      | 25.0      | 25.0      |
| -22     | <b>26.4</b> | 26.4        | 26.4        | <b>13.4</b>  | 13.4         | 13.4         | <b>1.97</b> | 24.8      | 24.8      | 24.8      |
| -23     | <b>25.7</b> | 25.7        | 25.7        | <b>13.3</b>  | 13.3         | 13.3         | <b>1.93</b> | 24.7      | 24.7      | 24.7      |
| -24     | <b>25.0</b> | 25.0        | 25.0        | <b>13.2</b>  | 13.2         | 13.2         | <b>1.89</b> | 24.5      | 24.5      | 24.5      |
| -25     | <b>24.3</b> | 24.3        | 24.3        | <b>13.1</b>  | 13.1         | 13.1         | <b>1.85</b> | 24.3      | 24.3      | 24.3      |

\* attention: operating limits not reflected in performance table

| Th [°C] |             | 55 °C       |             |              |              |              |             |           |           |           |
|---------|-------------|-------------|-------------|--------------|--------------|--------------|-------------|-----------|-----------|-----------|
| Ta [°C] | Qh nom [kW] | Qh min [kW] | Qh max [kW] | Pin nom [kW] | Pin-min [kW] | Pin-max [kW] | COP kW / kW | I nom [A] | I min [A] | I max [A] |
| 25      | <b>72.5</b> | 72.5        | 72.5        | <b>17.7</b>  | 17.7         | 17.7         | <b>4.09</b> | 30.7      | 30.7      | 30.7      |
| 24      | <b>71.2</b> | 71.2        | 71.2        | <b>17.7</b>  | 17.7         | 17.7         | <b>4.01</b> | 30.7      | 30.7      | 30.7      |
| 23      | <b>70.0</b> | 70.0        | 70.0        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.94</b> | 30.7      | 30.7      | 30.7      |
| 22      | <b>68.7</b> | 68.7        | 68.7        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.87</b> | 30.7      | 30.7      | 30.7      |
| 21      | <b>67.5</b> | 67.5        | 67.5        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.80</b> | 30.7      | 30.7      | 30.7      |
| 20      | <b>66.4</b> | 66.4        | 66.4        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.73</b> | 30.7      | 30.7      | 30.7      |
| 19      | <b>65.2</b> | 65.2        | 65.2        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.66</b> | 30.7      | 30.7      | 30.7      |
| 18      | <b>64.0</b> | 64.0        | 64.0        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.59</b> | 30.7      | 30.7      | 30.7      |
| 17      | <b>62.9</b> | 62.9        | 62.9        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.53</b> | 30.7      | 30.7      | 30.7      |
| 16      | <b>61.8</b> | 61.8        | 61.8        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.46</b> | 30.7      | 30.7      | 30.7      |
| 15      | <b>60.6</b> | 60.6        | 60.6        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.40</b> | 30.8      | 30.8      | 30.8      |
| 14      | <b>59.5</b> | 59.5        | 59.5        | <b>17.8</b>  | 17.8         | 17.8         | <b>3.34</b> | 30.8      | 30.8      | 30.8      |
| 13      | <b>58.5</b> | 58.5        | 58.5        | <b>17.9</b>  | 17.9         | 17.9         | <b>3.27</b> | 30.8      | 30.8      | 30.8      |
| 12      | <b>57.4</b> | 57.4        | 57.4        | <b>17.9</b>  | 17.9         | 17.9         | <b>3.21</b> | 30.8      | 30.8      | 30.8      |
| 11      | <b>56.3</b> | 56.3        | 56.3        | <b>17.9</b>  | 17.9         | 17.9         | <b>3.15</b> | 30.8      | 30.8      | 30.8      |
| 10      | <b>55.3</b> | 55.3        | 55.3        | <b>17.9</b>  | 17.9         | 17.9         | <b>3.09</b> | 30.8      | 30.8      | 30.8      |
| 9       | <b>53.4</b> | 53.4        | 53.4        | <b>17.9</b>  | 17.9         | 17.9         | <b>2.99</b> | 30.8      | 30.8      | 30.8      |
| 8       | <b>51.6</b> | 51.6        | 51.6        | <b>17.9</b>  | 17.9         | 17.9         | <b>2.89</b> | 30.7      | 30.7      | 30.7      |
| 7       | <b>49.9</b> | 49.9        | 49.9        | <b>17.8</b>  | 17.8         | 17.8         | <b>2.79</b> | 30.7      | 30.7      | 30.7      |
| 6       | <b>48.3</b> | 48.3        | 48.3        | <b>17.8</b>  | 17.8         | 17.8         | <b>2.71</b> | 30.7      | 30.7      | 30.7      |
| 5       | <b>46.8</b> | 46.8        | 46.8        | <b>17.8</b>  | 17.8         | 17.8         | <b>2.63</b> | 30.6      | 30.6      | 30.6      |
| 4       | <b>45.5</b> | 45.5        | 45.5        | <b>17.8</b>  | 17.8         | 17.8         | <b>2.56</b> | 30.6      | 30.6      | 30.6      |
| 3       | <b>44.3</b> | 44.3        | 44.3        | <b>17.8</b>  | 17.8         | 17.8         | <b>2.49</b> | 30.5      | 30.5      | 30.5      |
| 2       | <b>43.2</b> | 43.2        | 43.2        | <b>17.7</b>  | 17.7         | 17.7         | <b>2.43</b> | 30.5      | 30.5      | 30.5      |
| 1       | <b>42.1</b> | 42.1        | 42.1        | <b>17.7</b>  | 17.7         | 17.7         | <b>2.38</b> | 30.4      | 30.4      | 30.4      |
| 0       | <b>41.2</b> | 41.2        | 41.2        | <b>17.7</b>  | 17.7         | 17.7         | <b>2.33</b> | 30.3      | 30.3      | 30.3      |
| -1      | <b>40.3</b> | 40.3        | 40.3        | <b>17.6</b>  | 17.6         | 17.6         | <b>2.29</b> | 30.2      | 30.2      | 30.2      |
| -2      | <b>39.6</b> | 39.6        | 39.6        | <b>17.6</b>  | 17.6         | 17.6         | <b>2.25</b> | 30.2      | 30.2      | 30.2      |
| -3      | <b>38.9</b> | 38.9        | 38.9        | <b>17.6</b>  | 17.6         | 17.6         | <b>2.22</b> | 30.1      | 30.1      | 30.1      |
| -4      | <b>38.3</b> | 38.3        | 38.3        | <b>17.5</b>  | 17.5         | 17.5         | <b>2.19</b> | 30.0      | 30.0      | 30.0      |
| -5      | <b>37.8</b> | 37.8        | 37.8        | <b>17.5</b>  | 17.5         | 17.5         | <b>2.16</b> | 30.0      | 30.0      | 30.0      |
| -6      | <b>37.4</b> | 37.4        | 37.4        | <b>17.5</b>  | 17.5         | 17.5         | <b>2.14</b> | 29.9      | 29.9      | 29.9      |
| -7      | <b>37.0</b> | 37.0        | 37.0        | <b>17.4</b>  | 17.4         | 17.4         | <b>2.12</b> | 29.9      | 29.9      | 29.9      |
| -8      | <b>36.7</b> | 36.7        | 36.7        | <b>17.4</b>  | 17.4         | 17.4         | <b>2.11</b> | 29.9      | 29.9      | 29.9      |
| -9      | <b>36.5</b> | 36.5        | 36.5        | <b>17.4</b>  | 17.4         | 17.4         | <b>2.10</b> | 29.8      | 29.8      | 29.8      |
| -10     | <b>36.4</b> | 36.4        | 36.4        | <b>17.4</b>  | 17.4         | 17.4         | <b>2.09</b> | 29.8      | 29.8      | 29.8      |
| -11     | <b>35.6</b> | 35.6        | 35.6        | <b>17.4</b>  | 17.4         | 17.4         | <b>2.05</b> | 29.7      | 29.7      | 29.7      |
| -12     | <b>34.7</b> | 34.7        | 34.7        | <b>17.3</b>  | 17.3         | 17.3         | <b>2.01</b> | 29.6      | 29.6      | 29.6      |
| -13     | <b>33.9</b> | 33.9        | 33.9        | <b>17.2</b>  | 17.2         | 17.2         | <b>1.97</b> | 29.4      | 29.4      | 29.4      |
| -14     | <b>33.1</b> | 33.1        | 33.1        | <b>17.2</b>  | 17.2         | 17.2         | <b>1.93</b> | 29.3      | 29.3      | 29.3      |
| -15     | <b>32.3</b> | 32.3        | 32.3        | <b>17.1</b>  | 17.1         | 17.1         | <b>1.89</b> | 29.1      | 29.1      | 29.1      |
| -16     | <b>31.5</b> | 31.5        | 31.5        | <b>17.0</b>  | 17.0         | 17.0         | <b>1.85</b> | 29.0      | 29.0      | 29.0      |
| -17     | <b>30.8</b> | 30.8        | 30.8        | <b>16.9</b>  | 16.9         | 16.9         | <b>1.82</b> | 28.8      | 28.8      | 28.8      |
| -18     | <b>30.0</b> | 30.0        | 30.0        | <b>16.8</b>  | 16.8         | 16.8         | <b>1.78</b> | 28.6      | 28.6      | 28.6      |
| -19     | <b>29.2</b> | 29.2        | 29.2        | <b>16.7</b>  | 16.7         | 16.7         | <b>1.75</b> | 28.4      | 28.4      | 28.4      |
| -20     | <b>28.5</b> | 28.5        | 28.5        | <b>16.6</b>  | 16.6         | 16.6         | <b>1.71</b> | 28.2      | 28.2      | 28.2      |
| -21     | <b>27.7</b> | 27.7        | 27.7        | <b>16.5</b>  | 16.5         | 16.5         | <b>1.68</b> | 28.0      | 28.0      | 28.0      |
| -22     | <b>27.0</b> | 27.0        | 27.0        | <b>16.4</b>  | 16.4         | 16.4         | <b>1.64</b> | 27.8      | 27.8      | 27.8      |
| -23     | <b>26.2</b> | 26.2        | 26.2        | <b>16.3</b>  | 16.3         | 16.3         | <b>1.61</b> | 27.6      | 27.6      | 27.6      |
| -24     | <b>25.5</b> | 25.5        | 25.5        | <b>16.2</b>  | 16.2         | 16.2         | <b>1.57</b> | 27.3      | 27.3      | 27.3      |
| -25     | <b>24.8</b> | 24.8        | 24.8        | <b>16.1</b>  | 16.1         | 16.1         | <b>1.54</b> | 27.0      | 27.0      | 27.0      |

\* 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      | 72.0        | 72.0          | 72.0        | 22.6         | 22.6         | 22.6         | 3.18        | 36.2      | 36.2      | 36.2      |
| 24      | 70.8        | 70.8          | 70.8        | 22.6         | 22.6         | 22.6         | 3.13        | 36.2      | 36.2      | 36.2      |
| 23      | 69.7        | 69.7          | 69.7        | 22.6         | 22.6         | 22.6         | 3.08        | 36.2      | 36.2      | 36.2      |
| 22      | 68.5        | 68.5          | 68.5        | 22.6         | 22.6         | 22.6         | 3.03        | 36.2      | 36.2      | 36.2      |
| 21      | 67.4        | 67.4          | 67.4        | 22.7         | 22.7         | 22.7         | 2.98        | 36.3      | 36.3      | 36.3      |
| 20      | 66.3        | 66.3          | 66.3        | 22.7         | 22.7         | 22.7         | 2.92        | 36.3      | 36.3      | 36.3      |
| 19      | 65.2        | 65.2          | 65.2        | 22.7         | 22.7         | 22.7         | 2.88        | 36.3      | 36.3      | 36.3      |
| 18      | 64.1        | 64.1          | 64.1        | 22.7         | 22.7         | 22.7         | 2.83        | 36.3      | 36.3      | 36.3      |
| 17      | 63.0        | 63.0          | 63.0        | 22.7         | 22.7         | 22.7         | 2.78        | 36.3      | 36.3      | 36.3      |
| 16      | 62.0        | 62.0          | 62.0        | 22.7         | 22.7         | 22.7         | 2.73        | 36.4      | 36.4      | 36.4      |
| 15      | 60.9        | 60.9          | 60.9        | 22.7         | 22.7         | 22.7         | 2.68        | 36.4      | 36.4      | 36.4      |
| 14      | 59.9        | 59.9          | 59.9        | 22.7         | 22.7         | 22.7         | 2.64        | 36.4      | 36.4      | 36.4      |
| 13      | 58.8        | 58.8          | 58.8        | 22.7         | 22.7         | 22.7         | 2.59        | 36.4      | 36.4      | 36.4      |
| 12      | 57.8        | 57.8          | 57.8        | 22.7         | 22.7         | 22.7         | 2.55        | 36.4      | 36.4      | 36.4      |
| 11      | 56.8        | 56.8          | 56.8        | 22.7         | 22.7         | 22.7         | 2.51        | 36.4      | 36.4      | 36.4      |
| 10      | 55.8        | 55.8          | 55.8        | 22.7         | 22.7         | 22.7         | 2.46        | 36.4      | 36.4      | 36.4      |
| 9       | 54.0        | 54.0          | 54.0        | 22.6         | 22.6         | 22.6         | 2.38        | 36.4      | 36.4      | 36.4      |
| 8       | 52.2        | 52.2          | 52.2        | 22.6         | 22.6         | 22.6         | 2.31        | 36.3      | 36.3      | 36.3      |
| 7       | 50.6        | 50.6          | 50.6        | 22.6         | 22.6         | 22.6         | 2.24        | 36.3      | 36.3      | 36.3      |
| 6       | 49.1        | 49.1          | 49.1        | 22.5         | 22.5         | 22.5         | 2.18        | 36.2      | 36.2      | 36.2      |
| 5       | 47.7        | 47.7          | 47.7        | 22.5         | 22.5         | 22.5         | 2.12        | 36.1      | 36.1      | 36.1      |
| 4       | 46.4        | 46.4          | 46.4        | 22.4         | 22.4         | 22.4         | 2.07        | 36.1      | 36.1      | 36.1      |
| 3       | 45.1        | 45.1          | 45.1        | 22.4         | 22.4         | 22.4         | 2.02        | 36.0      | 36.0      | 36.0      |
| 2       | 44.0        | 44.0          | 44.0        | 22.3         | 22.3         | 22.3         | 1.97        | 35.9      | 35.9      | 35.9      |
| 1       | 43.0        | 43.0          | 43.0        | 22.2         | 22.2         | 22.2         | 1.93        | 35.8      | 35.8      | 35.8      |
| 0       | 42.1        | 42.1          | 42.1        | 22.2         | 22.2         | 22.2         | 1.90        | 35.7      | 35.7      | 35.7      |
| -1      | 41.2        | 41.2          | 41.2        | 22.1         | 22.1         | 22.1         | 1.86        | 35.6      | 35.6      | 35.6      |
| -2      | 40.5        | 40.5          | 40.5        | 22.1         | 22.1         | 22.1         | 1.83        | 35.5      | 35.5      | 35.5      |
| -3      | 39.8        | 39.8          | 39.8        | 22.0         | 22.0         | 22.0         | 1.81        | 35.4      | 35.4      | 35.4      |
| -4      | 39.2        | 39.2          | 39.2        | 22.0         | 22.0         | 22.0         | 1.79        | 35.3      | 35.3      | 35.3      |
| -5      | 38.7        | 38.7          | 38.7        | 21.9         | 21.9         | 21.9         | 1.77        | 35.2      | 35.2      | 35.2      |
| -6      | 38.3        | 38.3          | 38.3        | 21.9         | 21.9         | 21.9         | 1.75        | 35.2      | 35.2      | 35.2      |
| -7      | 37.9        | 37.9          | 37.9        | 21.8         | 21.8         | 21.8         | 1.74        | 35.1      | 35.1      | 35.1      |
| -8      | 37.6        | 37.6          | 37.6        | 21.8         | 21.8         | 21.8         | 1.73        | 35.1      | 35.1      | 35.1      |
| -9      | 37.4        | 37.4          | 37.4        | 21.8         | 21.8         | 21.8         | 1.72        | 35.0      | 35.0      | 35.0      |
| -10     | 37.3        | 37.3          | 37.3        | 21.8         | 21.8         | 21.8         | 1.71        | 35.0      | 35.0      | 35.0      |
| -11     | 36.5        | 36.5          | 36.5        | 21.7         | 21.7         | 21.7         | 1.68        | 34.9      | 34.9      | 34.9      |
| -12     | 35.6        | 35.6          | 35.6        | 21.6         | 21.6         | 21.6         | 1.65        | 34.7      | 34.7      | 34.7      |
| -13     | 34.8        | 34.8          | 34.8        | 21.5         | 21.5         | 21.5         | 1.62        | 34.5      | 34.5      | 34.5      |
| -14     | 34.0        | 34.0          | 34.0        | 21.4         | 21.4         | 21.4         | 1.59        | 34.3      | 34.3      | 34.3      |
| -15     | 33.1        | 33.1          | 33.1        | 21.3         | 21.3         | 21.3         | 1.56        | 34.1      | 34.1      | 34.1      |
| -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      | 35.2        | 35.2        | 35.2        | 15.2     | 15.2         | 15.2         | 2.32        | 27.7      | 27.7      | 27.7      |
| 39      | 35.5        | 35.5        | 35.5        | 14.9     | 14.9         | 14.9         | 2.38        | 27.4      | 27.4      | 27.4      |
| 38      | 35.7        | 35.7        | 35.7        | 14.5     | 14.5         | 14.5         | 2.46        | 27.0      | 27.0      | 27.0      |
| 37      | 35.9        | 35.9        | 35.9        | 14.2     | 14.2         | 14.2         | 2.53        | 26.7      | 26.7      | 26.7      |
| 36      | 36.2        | 36.2        | 36.2        | 13.9     | 13.9         | 13.9         | 2.60        | 26.3      | 26.3      | 26.3      |
| 35      | 36.4        | 36.4        | 36.4        | 13.6     | 13.6         | 13.6         | 2.68        | 26.0      | 26.0      | 26.0      |
| 34      | 36.6        | 36.6        | 36.6        | 13.3     | 13.3         | 13.3         | 2.75        | 25.7      | 25.7      | 25.7      |
| 33      | 36.8        | 36.8        | 36.8        | 13.0     | 13.0         | 13.0         | 2.83        | 25.3      | 25.3      | 25.3      |
| 32      | 37.0        | 37.0        | 37.0        | 12.7     | 12.7         | 12.7         | 2.91        | 25.0      | 25.0      | 25.0      |
| 31      | 37.2        | 37.2        | 37.2        | 12.4     | 12.4         | 12.4         | 2.99        | 24.7      | 24.7      | 24.7      |
| 30      | 37.4        | 37.4        | 37.4        | 12.2     | 12.2         | 12.2         | 3.07        | 24.4      | 24.4      | 24.4      |
| 29      | 37.6        | 37.6        | 37.6        | 11.9     | 11.9         | 11.9         | 3.16        | 24.2      | 24.2      | 24.2      |
| 28      | 37.7        | 37.7        | 37.7        | 11.6     | 11.6         | 11.6         | 3.24        | 23.9      | 23.9      | 23.9      |
| 27      | 37.9        | 37.9        | 37.9        | 11.4     | 11.4         | 11.4         | 3.33        | 23.6      | 23.6      | 23.6      |
| 26      | 38.1        | 38.1        | 38.1        | 11.1     | 11.1         | 11.1         | 3.42        | 23.3      | 23.3      | 23.3      |
| 25      | 38.2        | 38.2        | 38.2        | 10.9     | 10.9         | 10.9         | 3.51        | 23.1      | 23.1      | 23.1      |
| 24      | 38.4        | 38.4        | 38.4        | 10.6     | 10.6         | 10.6         | 3.60        | 22.8      | 22.8      | 22.8      |
| 23      | 38.5        | 38.5        | 38.5        | 10.4     | 10.4         | 10.4         | 3.70        | 22.5      | 22.5      | 22.5      |
| 22      | 38.7        | 38.7        | 38.7        | 10.2     | 10.2         | 10.2         | 3.80        | 22.3      | 22.3      | 22.3      |
| 21      | 38.8        | 38.8        | 38.8        | 10.0     | 10.0         | 10.0         | 3.90        | 22.0      | 22.0      | 22.0      |
| 20      | 38.9        | 38.9        | 38.9        | 9.7      | 9.7          | 9.7          | 4.00        | 21.8      | 21.8      | 21.8      |
| 19      | 39.1        | 39.1        | 39.1        | 9.5      | 9.5          | 9.5          | 4.11        | 21.5      | 21.5      | 21.5      |
| 18      | 39.2        | 39.2        | 39.2        | 9.3      | 9.3          | 9.3          | 4.22        | 21.3      | 21.3      | 21.3      |
| 17      | 39.3        | 39.3        | 39.3        | 9.1      | 9.1          | 9.1          | 4.33        | 21.0      | 21.0      | 21.0      |

| 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      | 46.9    | 46.9         | 46.9        | 15.2     | 15.2         | 15.2         | 3.09        | 27.7  | 27.7      | 27.7      |
| 39      | 47.3    | 47.3         | 47.3        | 14.9     | 14.9         | 14.9         | 3.18        | 27.3  | 27.3      | 27.3      |
| 38      | 47.6    | 47.6         | 47.6        | 14.5     | 14.5         | 14.5         | 3.27        | 26.9  | 26.9      | 26.9      |
| 37      | 47.9    | 47.9         | 47.9        | 14.2     | 14.2         | 14.2         | 3.37        | 26.6  | 26.6      | 26.6      |
| 36      | 48.1    | 48.1         | 48.1        | 13.9     | 13.9         | 13.9         | 3.46        | 26.2  | 26.2      | 26.2      |
| 35      | 48.4    | 48.4         | 48.4        | 13.6     | 13.6         | 13.6         | 3.56        | 25.9  | 25.9      | 25.9      |
| 34      | 48.7    | 48.7         | 48.7        | 13.3     | 13.3         | 13.3         | 3.66        | 25.5  | 25.5      | 25.5      |
| 33      | 49.0    | 49.0         | 49.0        | 13.0     | 13.0         | 13.0         | 3.77        | 25.2  | 25.2      | 25.2      |
| 32      | 49.2    | 49.2         | 49.2        | 12.7     | 12.7         | 12.7         | 3.87        | 24.9  | 24.9      | 24.9      |
| 31      | 49.5    | 49.5         | 49.5        | 12.4     | 12.4         | 12.4         | 3.98        | 24.5  | 24.5      | 24.5      |
| 30      | 49.7    | 49.7         | 49.7        | 12.2     | 12.2         | 12.2         | 4.09        | 24.2  | 24.2      | 24.2      |
| 29      | 50.0    | 50.0         | 50.0        | 11.9     | 11.9         | 11.9         | 4.20        | 23.9  | 23.9      | 23.9      |
| 28      | 50.2    | 50.2         | 50.2        | 11.6     | 11.6         | 11.6         | 4.32        | 23.6  | 23.6      | 23.6      |
| 27      | 50.5    | 50.5         | 50.5        | 11.4     | 11.4         | 11.4         | 4.43        | 23.3  | 23.3      | 23.3      |
| 26      | 50.7    | 50.7         | 50.7        | 11.1     | 11.1         | 11.1         | 4.55        | 23.0  | 23.0      | 23.0      |
| 25      | 50.9    | 50.9         | 50.9        | 10.9     | 10.9         | 10.9         | 4.67        | 22.7  | 22.7      | 22.7      |
| 24      | 51.1    | 51.1         | 51.1        | 10.6     | 10.6         | 10.6         | 4.80        | 22.4  | 22.4      | 22.4      |
| 23      | 51.3    | 51.3         | 51.3        | 10.4     | 10.4         | 10.4         | 4.93        | 22.2  | 22.2      | 22.2      |
| 22      | 51.5    | 51.5         | 51.5        | 10.2     | 10.2         | 10.2         | 5.06        | 21.9  | 21.9      | 21.9      |
| 21      | 51.7    | 51.7         | 51.7        | 10.0     | 10.0         | 10.0         | 5.20        | 21.6  | 21.6      | 21.6      |
| 20      | 51.9    | 51.9         | 51.9        | 9.7      | 9.7          | 9.7          | 5.34        | 21.3  | 21.3      | 21.3      |
| 19      | 52.1    | 52.1         | 52.1        | 9.5      | 9.5          | 9.5          | 5.48        | 21.0  | 21.0      | 21.0      |
| 18      | 52.3    | 52.3         | 52.3        | 9.3      | 9.3          | 9.3          | 5.63        | 20.8  | 20.8      | 20.8      |
| 17      | 52.5    | 52.5         | 52.5        | 9.1      | 9.1          | 9.1          | 5.78        | 20.5  | 20.5      | 20.5      |

\* 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

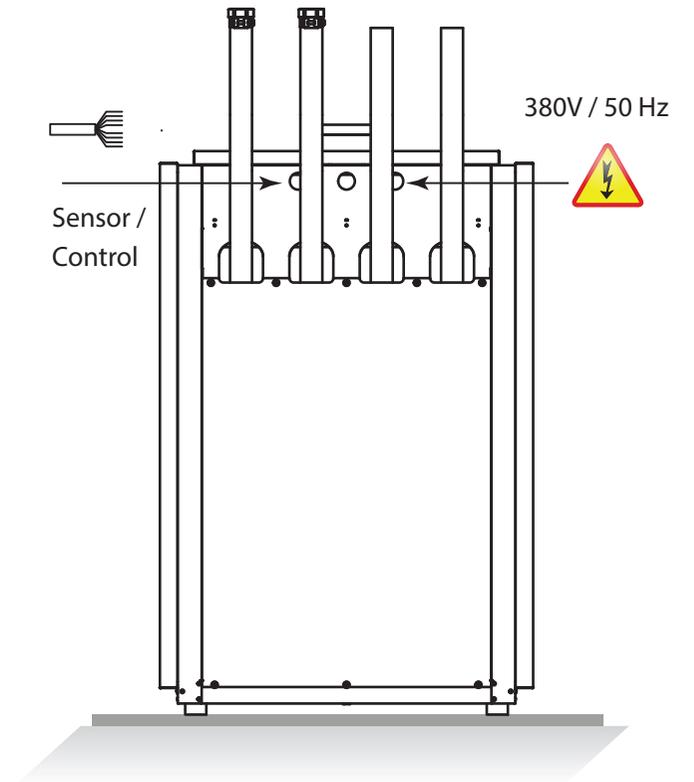
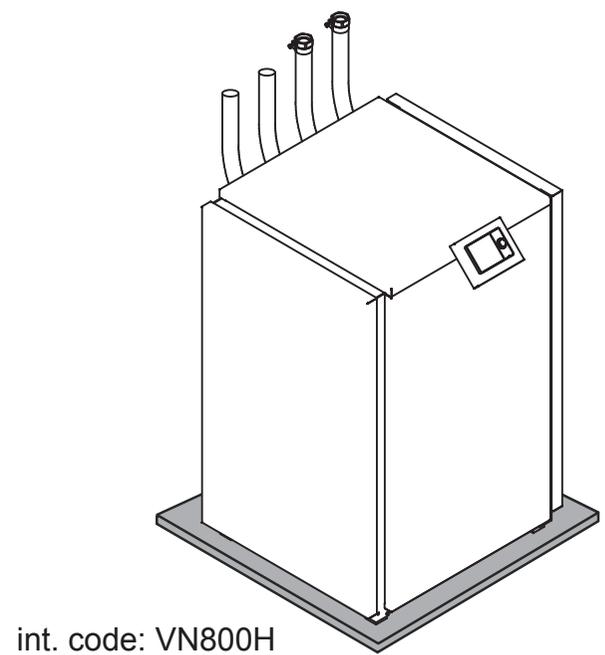
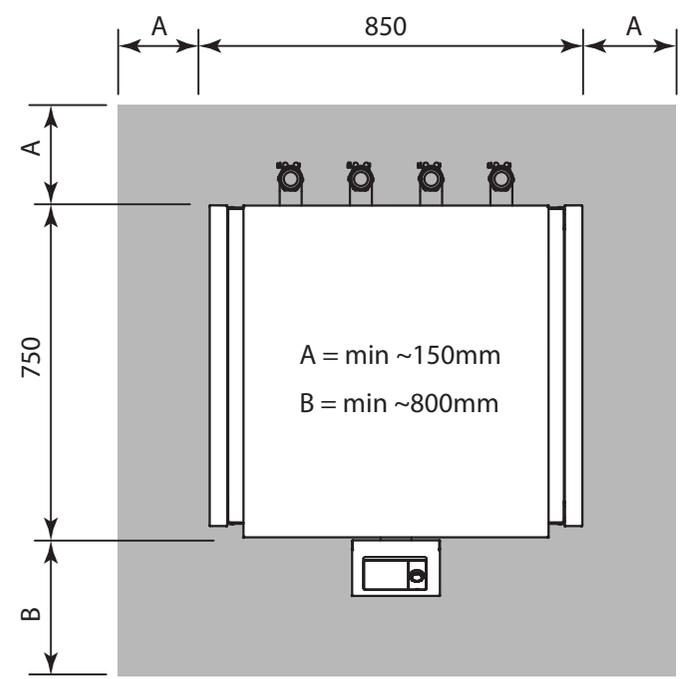
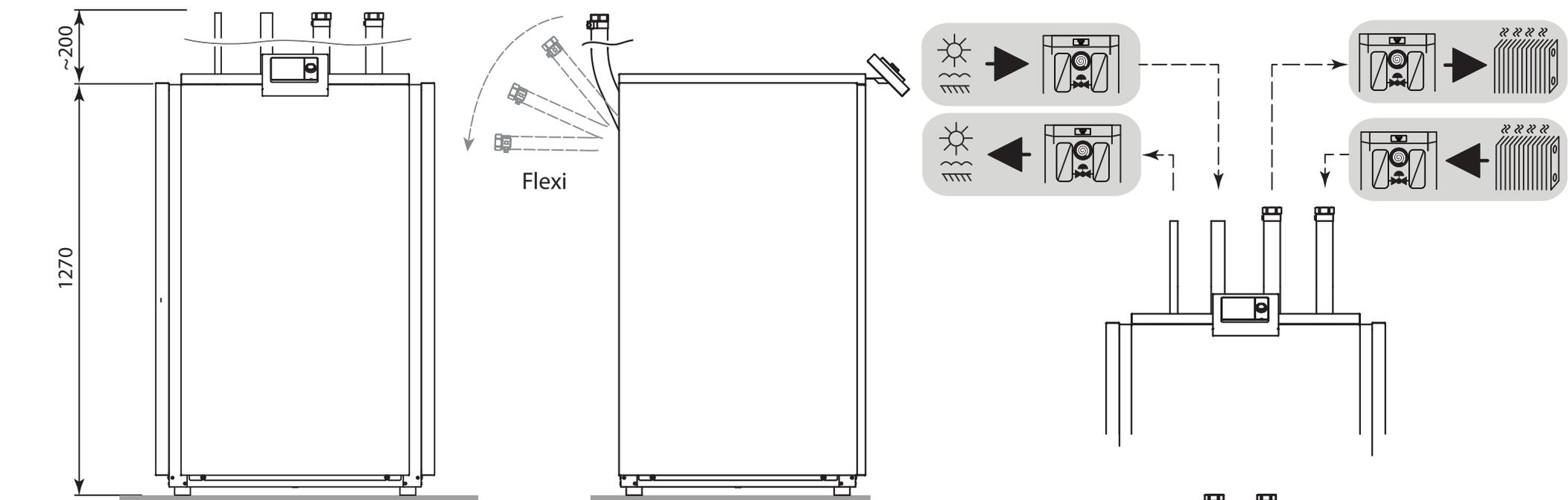
Qc nom: cooling / heat extraction capacity at nominal heating capacity

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



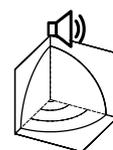
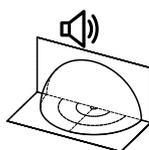
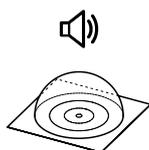
# WAMAK AW 47 EVI - Split unit variant: VOV-900



| Enclosure type: VOV-900        |             |      | Evaporator                         |                   |
|--------------------------------|-------------|------|------------------------------------|-------------------|
| Article                        | WAVV0900    |      | Type                               | Cu-coil /Al-fin " |
| <b>Basic dimensions</b>        | Height [mm] | 1320 | Port size                          | 7/8" - 1.3/8" "   |
|                                | Width [mm]  | 1390 | Heat transfer medium               | Air               |
|                                | Length [mm] | 1150 | Volume flow - Air [m3/h]           | 14980             |
| Weight [kg]                    | 210         |      | Internal pressure drop - Air [kPa] | 0.032             |
| Colour                         | Inox        |      | Temperature difference - Air       | 7 K               |
| Enclosure IP Class             | IP44        |      | Expansion valve                    | EEV               |
| <b>Fan</b>                     | 800 mm      |      |                                    |                   |
| Number of fans                 | 1           |      | 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               |

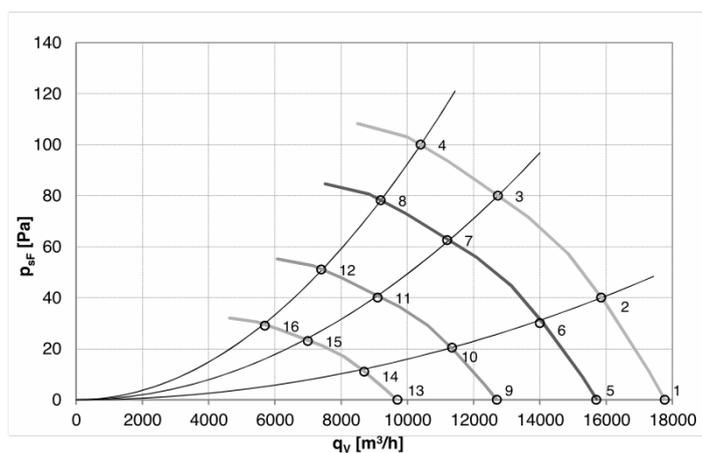
Acoustic power Lw

**69.2 dB(A)**

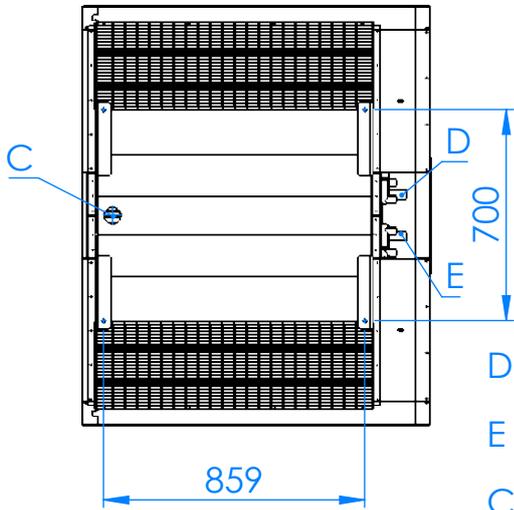
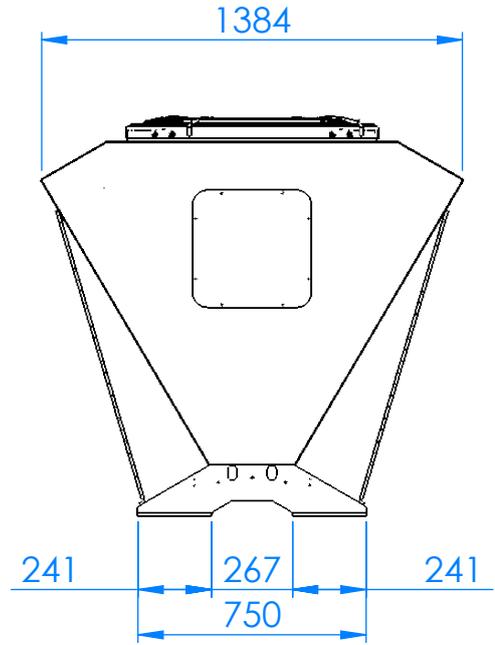
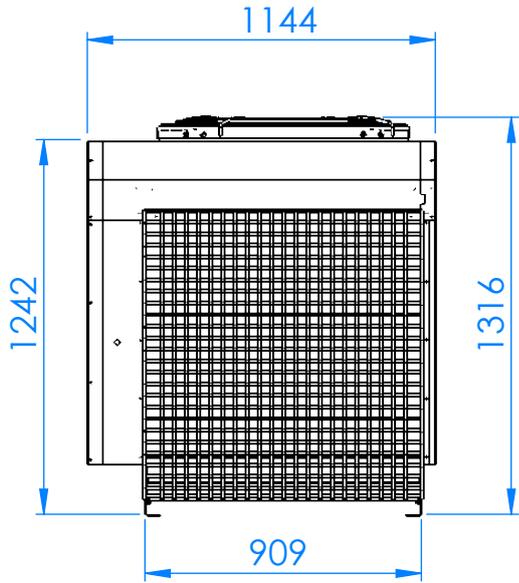


| Distance [m]                 | 1    |      |      |      | 5    |      |      |      | 10   |      |      |      | 15 |   |    |    |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|----|---|----|----|
|                              | 1    | 5    | 10   | 15   | 1    | 5    | 10   | 15   | 1    | 5    | 10   | 15   | 1  | 5 | 10 | 15 |
| Acoustic pressure Lp [dB(A)] | 64.2 | 50.2 | 44.2 | 40.7 | 67.2 | 53.2 | 47.2 | 43.7 | 61.2 | 47.2 | 41.2 | 37.7 |    |   |    |    |

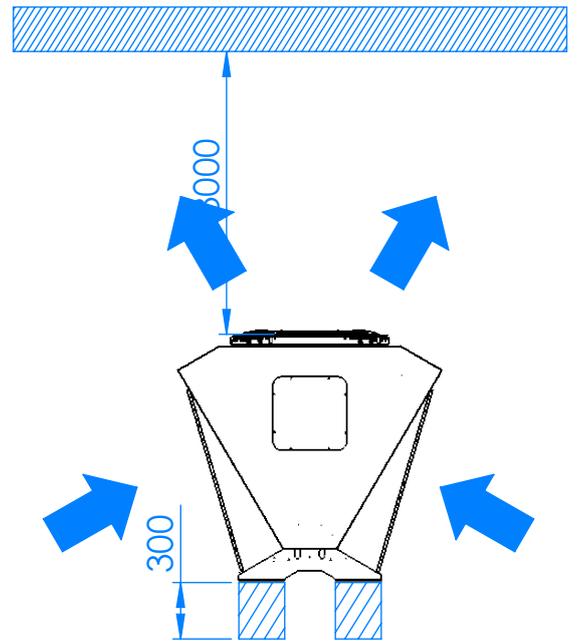
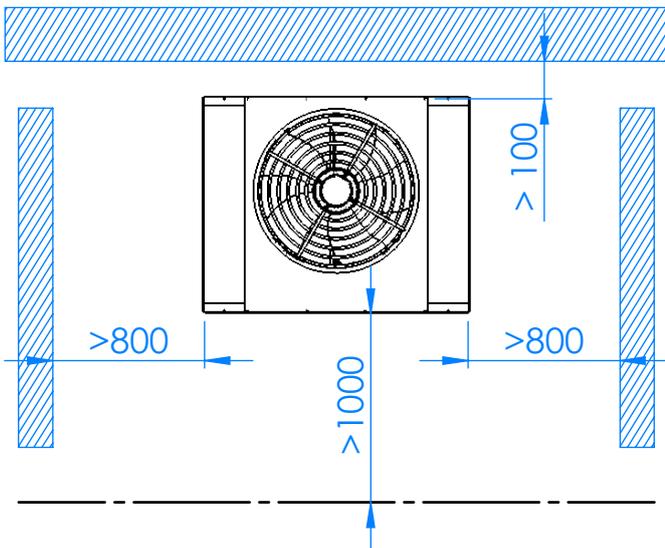
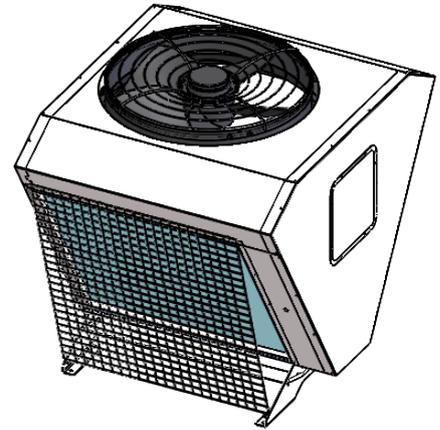
## EC Fan 800mm



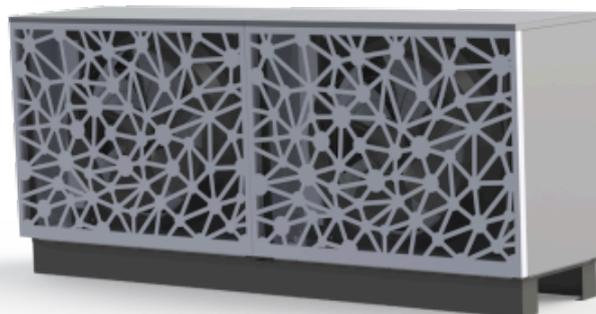
|    | U   | f    | n     | qv     | P <sub>sF</sub> | P <sub>e</sub> | I    | L <sub>wA out</sub> | T <sub>a max</sub> |
|----|-----|------|-------|--------|-----------------|----------------|------|---------------------|--------------------|
|    | [V] | [Hz] | [RPM] | [m³/h] | [Pa]            | [W]            | [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



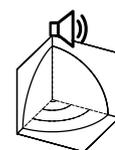
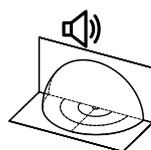
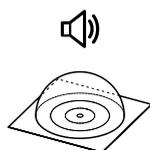
# WAMAK AW 47 EVI - Split unit variant: VOII-1200-2LOW



| Enclosure type: VOII-1200-2LOW |             |      | Evaporator                         |                   |
|--------------------------------|-------------|------|------------------------------------|-------------------|
| Article                        | WAVII12L    |      | Type                               | Cu-coil /Al-fin " |
| <b>Basic dimensions</b>        | Height [mm] | 1240 | Port size                          | 7/8" - 1.3/8" "   |
|                                | Width [mm]  | 2850 | Heat transfer medium               | Air               |
|                                | Length [mm] | 710  | Volume flow - Air [m3/h]           | 14980             |
| Weight [kg]                    | 300         |      | Internal pressure drop - Air [kPa] | 0.032             |
| Colour                         | Gray        |      | Temperature difference - Air       | 7 K               |
| Enclosure IP Class             | IP44        |      | Expansion valve                    | EEV               |
| <b>Fan</b>                     | 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

**64.9 dB(A)**



Distance [m]

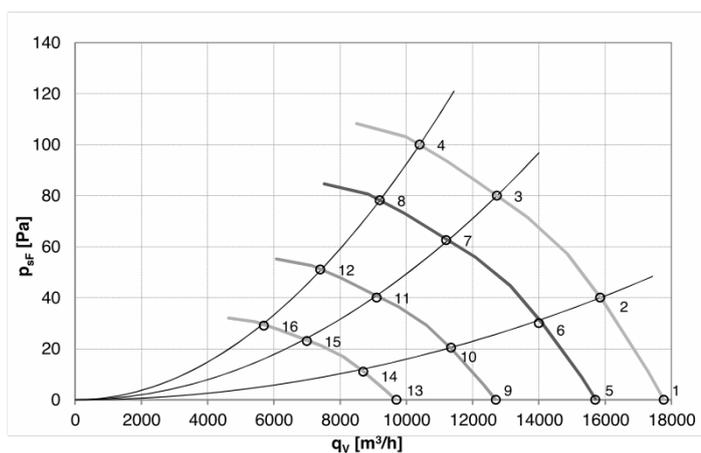
Acoustic pressure Lp [dB(A)]

|      |      |      |      |
|------|------|------|------|
| 1    | 5    | 10   | 15   |
| 59.9 | 45.9 | 39.9 | 36.4 |

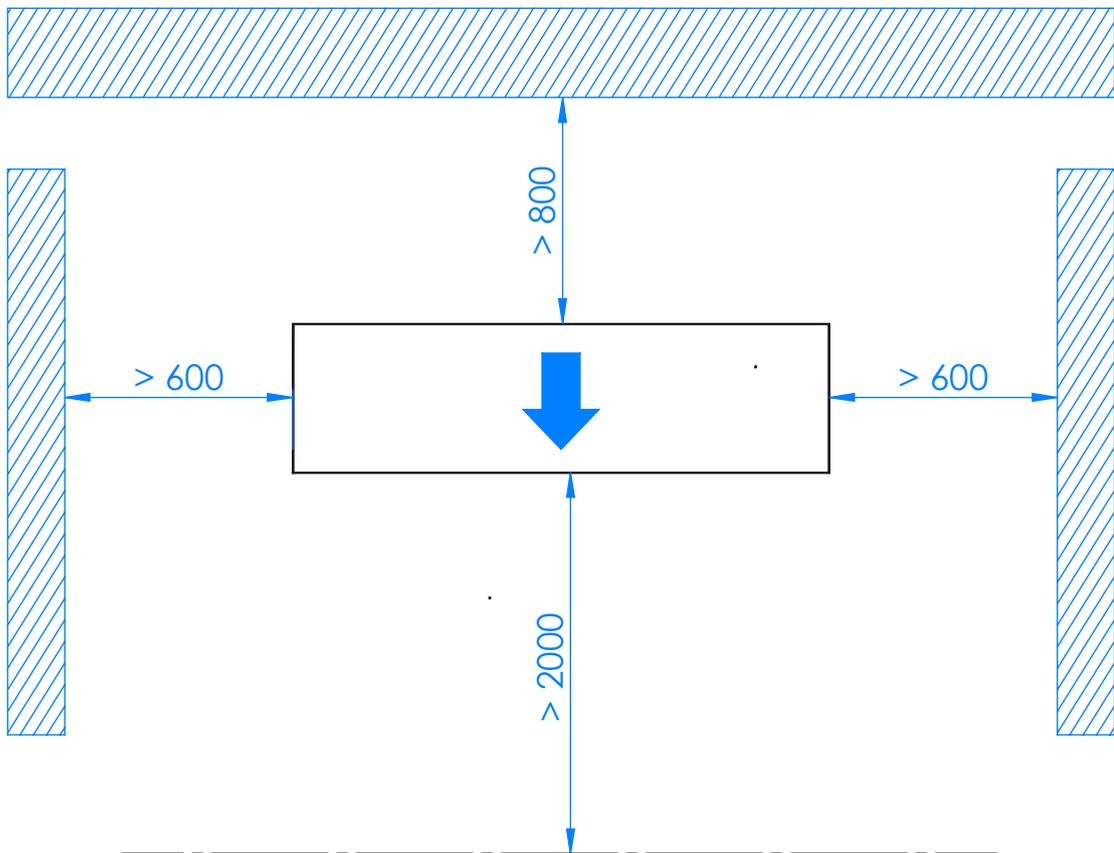
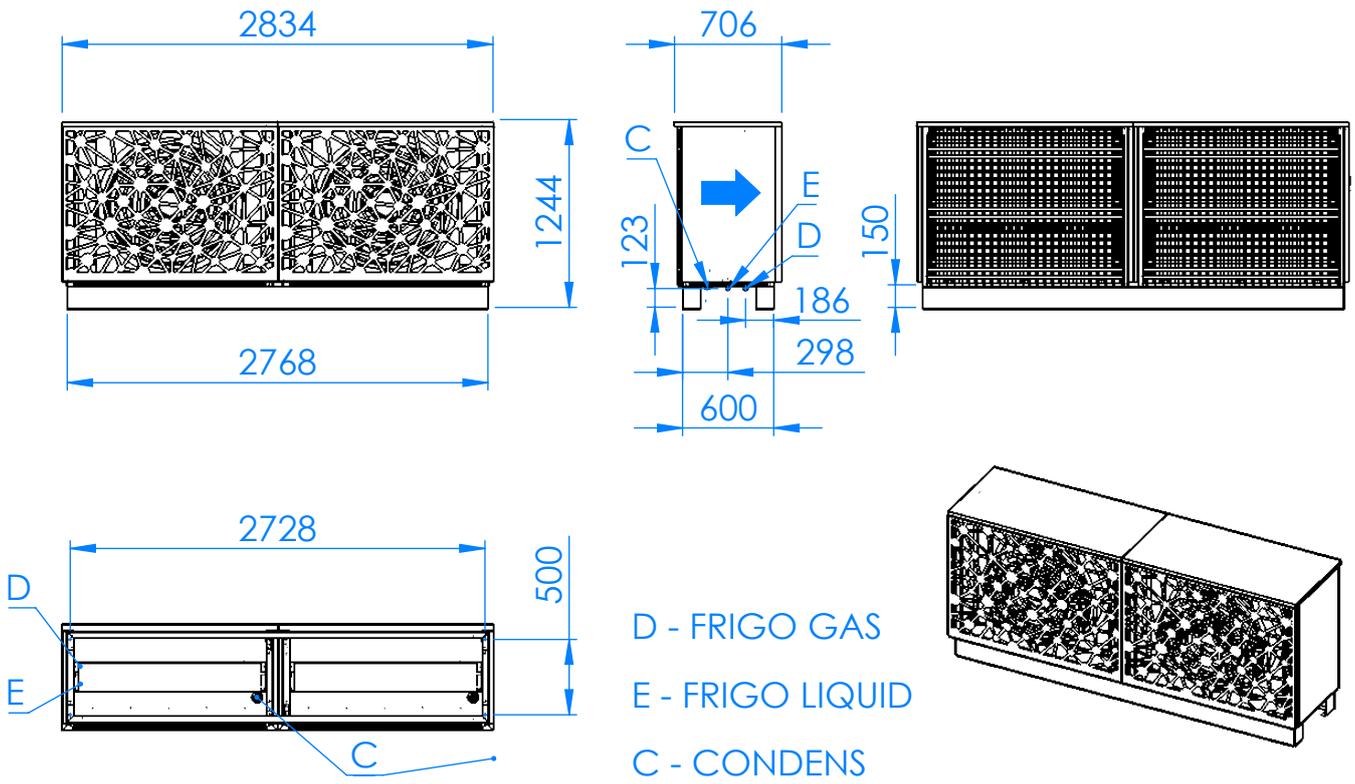
|      |      |      |      |
|------|------|------|------|
| 1    | 5    | 10   | 15   |
| 62.9 | 48.9 | 42.9 | 39.4 |

|      |      |      |      |
|------|------|------|------|
| 1    | 5    | 10   | 15   |
| 56.9 | 42.9 | 36.9 | 33.4 |

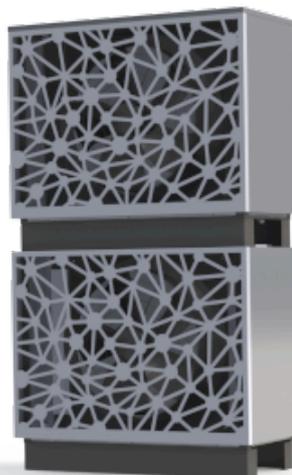
## EC Fan 800mm



|    | U   | f    | n     | qv     | P <sub>sF</sub> | P <sub>e</sub> | I    | L <sub>WA out</sub> | T <sub>a max</sub> |
|----|-----|------|-------|--------|-----------------|----------------|------|---------------------|--------------------|
|    | [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                 |



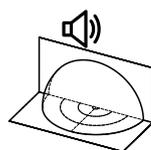
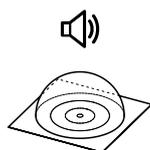
# WAMAK AW 47 EVI - Split unit variant: VOII-1200-2HIGH



| Enclosure type: VOII-1200-2HIGH |             |      | Evaporator                         |                   |
|---------------------------------|-------------|------|------------------------------------|-------------------|
| Article                         | WAVII12H    |      | Type                               | Cu-coil /Al-fin " |
| <b>Basic dimensions</b>         | Height [mm] | 2450 | Port size                          | 7/8" - 1.3/8" "   |
|                                 | Width [mm]  | 1420 | Heat transfer medium               | Air               |
|                                 | Length [mm] | 710  | Volume flow - Air [m3/h]           | 14980             |
| Weight [kg]                     | 300         |      | Internal pressure drop - Air [kPa] | 0.032             |
| Colour                          | Gray        |      | Temperature difference - Air       | 7 K               |
| Enclosure IP Class              | IP44        |      | Expansion valve                    | EEV               |
| <b>Fan</b>                      | 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               |

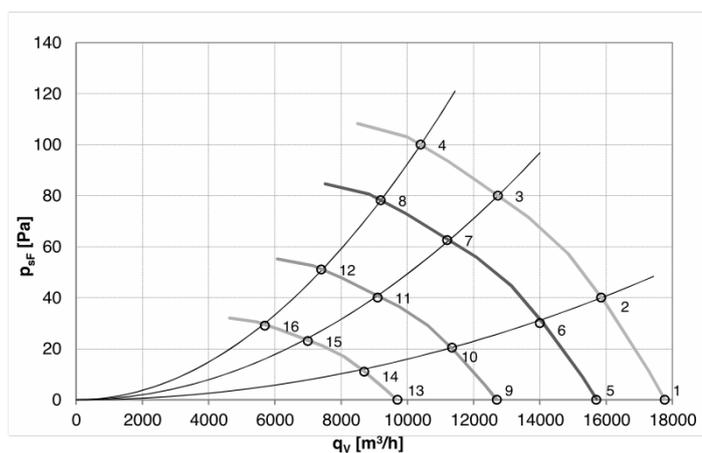
Acoustic power Lw

**64.9 dB(A)**

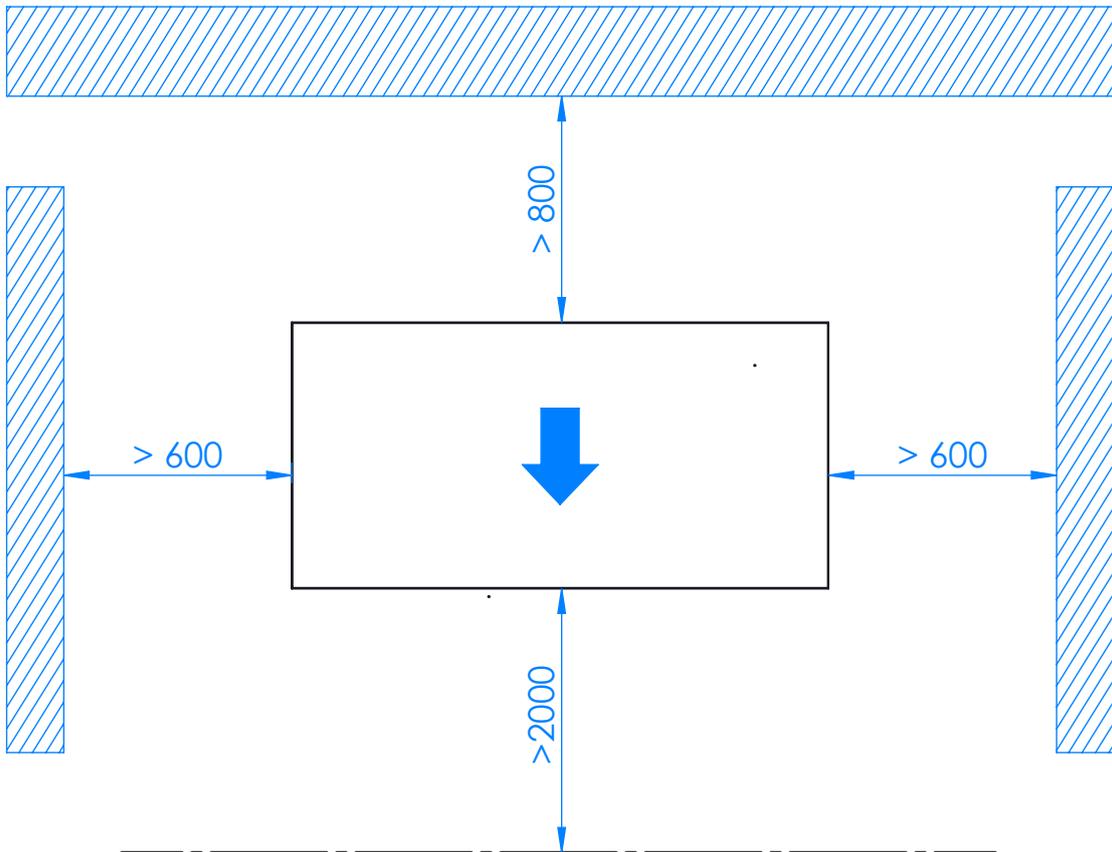
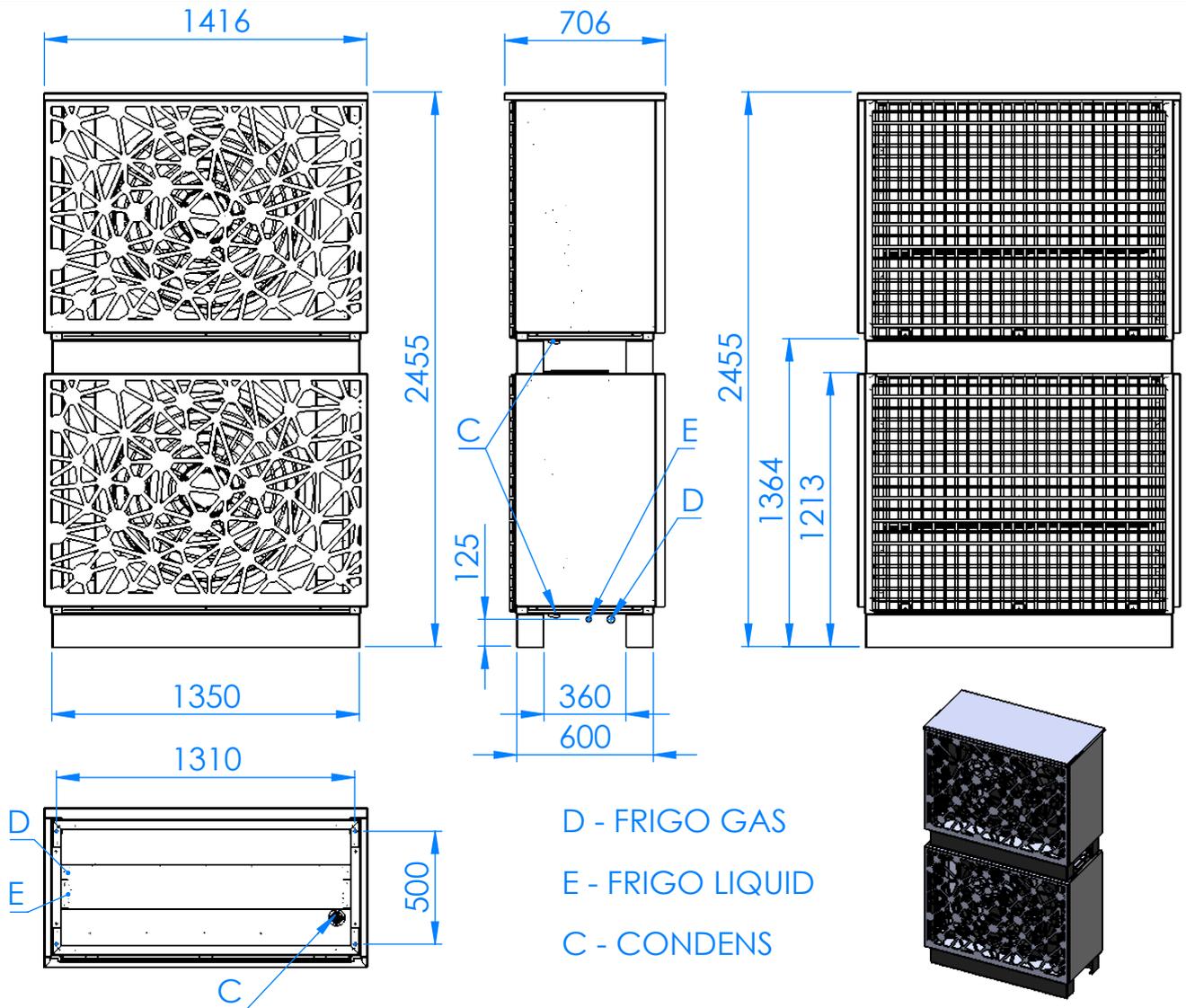


| Distance [m]                 | 1    |      |      |      | 5    |      |      |      | 10   |      |      |      | 15 |   |    |    |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|----|---|----|----|
|                              | 1    | 5    | 10   | 15   | 1    | 5    | 10   | 15   | 1    | 5    | 10   | 15   | 1  | 5 | 10 | 15 |
| Acoustic pressure Lp [dB(A)] | 59.9 | 45.9 | 39.9 | 36.4 | 62.9 | 48.9 | 42.9 | 39.4 | 56.9 | 42.9 | 36.9 | 33.4 |    |   |    |    |

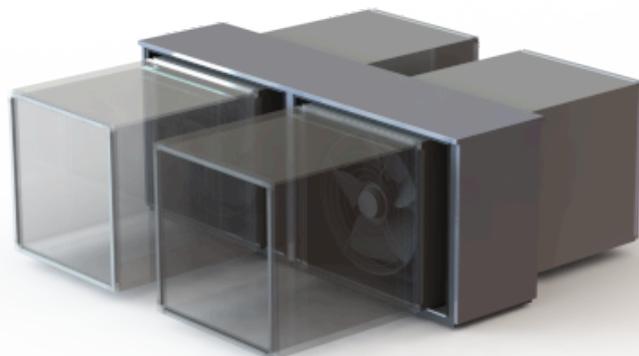
## EC Fan 800mm



|    | U   | f    | n     | qv     | PstF | 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     |



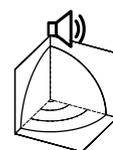
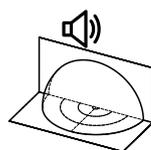
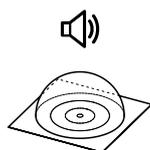
# WAMAK AW 47 EVI - Split unit variant: VOII-1200-2LOW-DUCT



| Enclosure type: VOII-1200-2LOW-DUCT |             |      | Evaporator                         |                   |
|-------------------------------------|-------------|------|------------------------------------|-------------------|
| Article                             | WAVID12L    |      | Type                               | Cu-coil /Al-fin " |
| <b>Basic dimensions</b>             | Height [mm] | 1240 | Port size                          | 7/8" - 1.3/8" "   |
|                                     | Width [mm]  | 2850 | Heat transfer medium               | Air               |
|                                     | Length [mm] | 710  | Volume flow - Air [m3/h]           | 14980             |
| Weight [kg]                         | 300         |      | Internal pressure drop - Air [kPa] | 0.032             |
| Colour                              | Gray        |      | Temperature difference - Air       | 7 K               |
| Enclosure IP Class                  | IP44        |      | Expansion valve                    | EEV               |
| <b>Fan</b>                          | 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               |

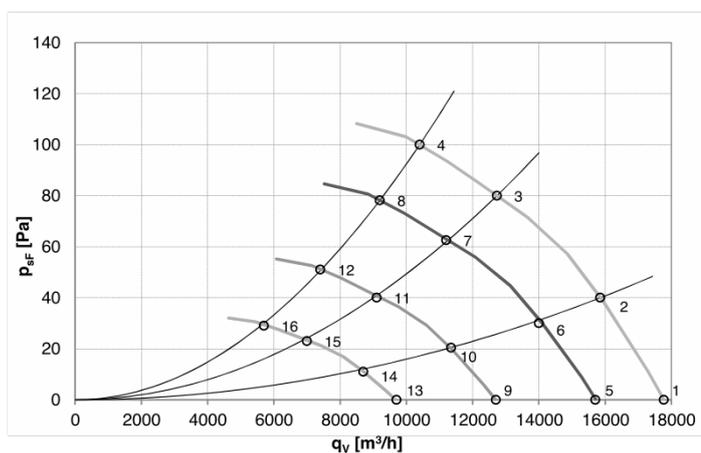
Acoustic power L<sub>w</sub>

**64.9 dB(A)**



| Distance [m]                             | 1    |      |      |      | 5    |      |      |      | 10   |      |      |      | 15 |   |    |    |
|--|------|------|------|------|------|------|------|------|------|------|------|------|----|---|----|----|
|  | 1    | 5    | 10   | 15   | 1    | 5    | 10   | 15   | 1    | 5    | 10   | 15   | 1  | 5 | 10 | 15 |
| Acoustic pressure L <sub>p</sub> [dB(A)] | 59.9 | 45.9 | 39.9 | 36.4 | 62.9 | 48.9 | 42.9 | 39.4 | 56.9 | 42.9 | 36.9 | 33.4 |    |   |    |    |

## EC Fan 800mm



|    | U   | f    | n     | q <sub>v</sub> | P <sub>sF</sub> | P <sub>e</sub> | I    | L <sub>WA out</sub> | T <sub>a max</sub> |
|----|-----|------|-------|----------------|-----------------|----------------|------|---------------------|--------------------|
|    | [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                 |

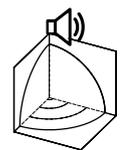
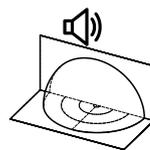
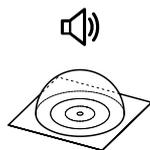
# WAMAK AW 47 EVI - Split unit variant: VOII-1200-2HIGH-DUCT



| Enclosure type: VOII-1200-2HIGH-DUCT |             |      | Evaporator                         |                   |
|--------------------------------------|-------------|------|------------------------------------|-------------------|
| Article                              | WAVID12H    |      | Type                               | Cu-coil /Al-fin " |
| <b>Basic dimensions</b>              | Height [mm] | 2450 | Port size                          | 7/8" - 1.3/8" "   |
|                                      | Width [mm]  | 1420 | Heat transfer medium               | Air               |
|                                      | Length [mm] | 710  | Volume flow - Air [m3/h]           | 14980             |
| Weight [kg]                          | 300         |      | Internal pressure drop - Air [kPa] | 0.032             |
| Colour                               | Gray        |      | Temperature difference - Air       | 7 K               |
| Enclosure IP Class                   | IP44        |      | Expansion valve                    | EEV               |
| <b>Fan</b>                           | 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               |

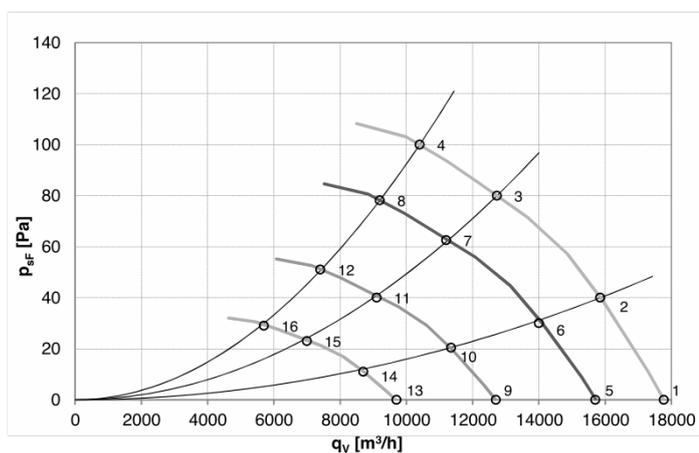
Acoustic power L<sub>w</sub>

**64.9 dB(A)**

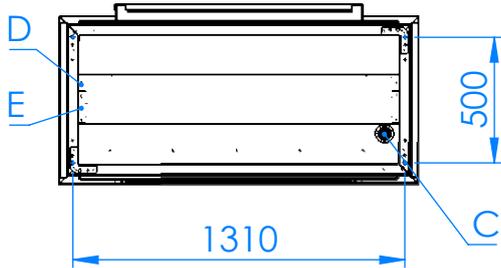
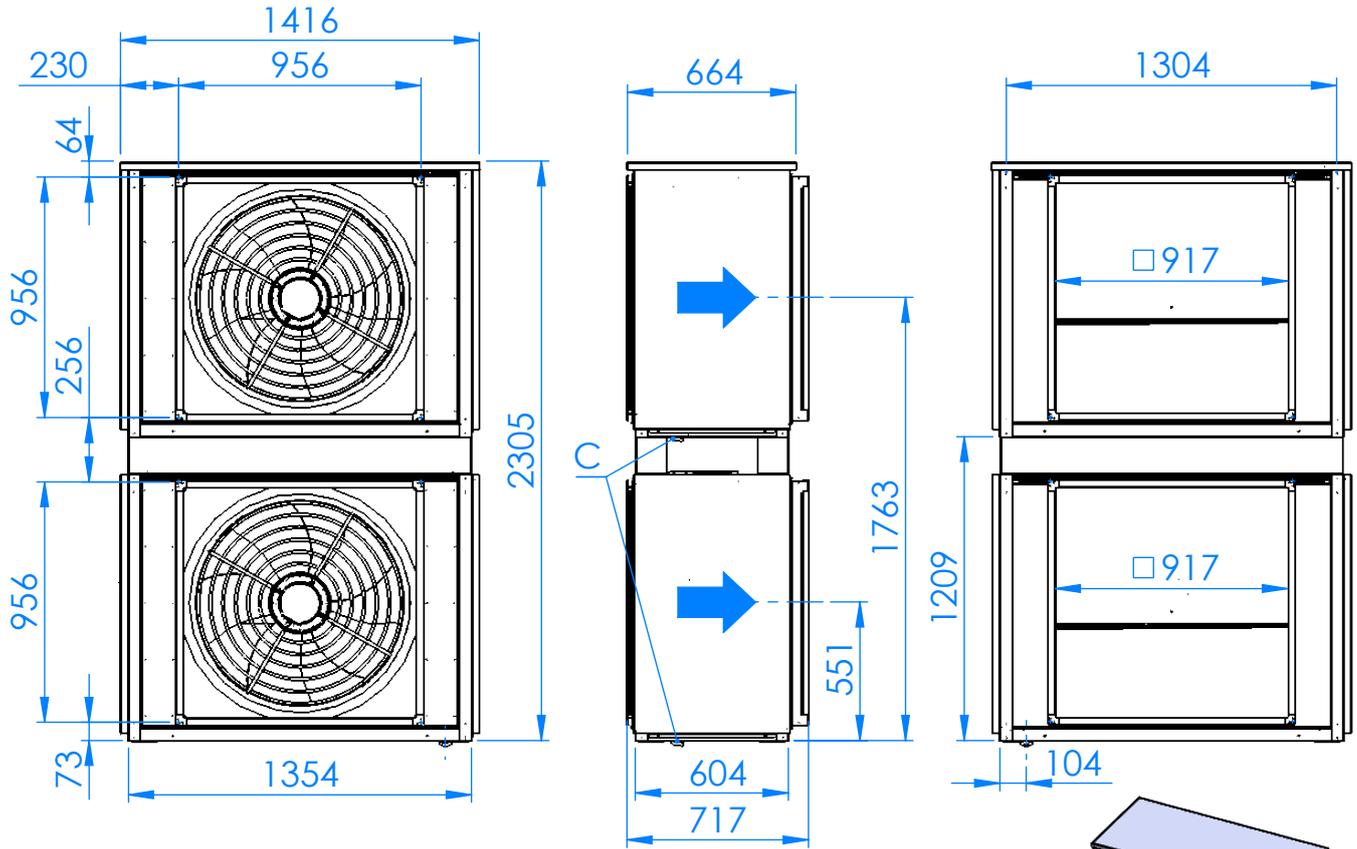


| Distance [m]                             | 1    |      |      |      | 5    |      |      |      | 10   |      |      |      | 15 |   |    |    |
|--|------|------|------|------|------|------|------|------|------|------|------|------|----|---|----|----|
|  | 1    | 5    | 10   | 15   | 1    | 5    | 10   | 15   | 1    | 5    | 10   | 15   | 1  | 5 | 10 | 15 |
| Acoustic pressure L <sub>p</sub> [dB(A)] | 59.9 | 45.9 | 39.9 | 36.4 | 62.9 | 48.9 | 42.9 | 39.4 | 56.9 | 42.9 | 36.9 | 33.4 |    |   |    |    |

## EC Fan 800mm



|    | U   | f    | n     | q <sub>v</sub> | P <sub>sF</sub> | P <sub>e</sub> | I    | L <sub>wA out</sub> | T <sub>a max</sub> |
|----|-----|------|-------|----------------|-----------------|----------------|------|---------------------|--------------------|
|    | [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

