50Hz R134a

# WSH

## Reversible water-cooled heat pump, gas side

**Cooling capacity 165,8 ÷ 269,7 kW**
**Heating capacity 189,8 ÷ 310,9 kW**

- **Refrigerant reversing valve**
- **Optional electronic expansion valve which allows:**
  **Cooling down to -6 °C**
  **Modulating capacity control 25-100%**

EUROVENT LCP

Manufactured with refrigerant R134a
Versions for cooling only - heat pump with refrigerant reversing valve
Partial heat recovery option

— **Standard Version (°):** leaving water temperature up to 55 °C in heat pump mode
— **Version X:** leaving liquid temperature down to -6 °C
— **Version L:** low noise

— High efficiency, low noise screw compressors with modulating capacity control from 40 to 100% with standard thermostatic expansion valve. (25 to 100% with electronic expansion valve option)
— Compressor discharge and liquid line isolating valves
— Current transformer as standard for each compressor
— Dual refrigerant circuit plate heat exchanger optimised for R134a on dual compressor units
— Modulating capacity control microprocessor system
— Independent control for individual circuits
— Electrical panel with all cables numbered
— Modulating capacity control with dynamic display of refrigeration capacity
— "Always Working" function. In the case of critical conditions the unit will not stop but automatically adjusts operation
— Automatic set point compensation using analogue inputs 4-20 mA or 0–10 V or an external air sensor
— Auto-adaptive differential to ensure correct compressor operating timers
— PDC (Pull Down Control) system which prevents capacity loading when the water temperature quickly approaches the set point
— DL (Demand Limit) system permits current limiting of the unit during times of insufficient electrical power (load peaks or generator operation)
— Compact dimensions
— Multilingual display panel
— Metal control panel with anti-corrosion polyester paint

### ACCESSORIES

**AER485P1:** RS-485 interface for supervision systems with MODBUS protocol.
**AERNET:** The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 unit); also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.
**MULTICHILLER_EVO:** Control system for multiple parallel installed constant flow chillers providing individual chiller on/off and control capability.
**PRV3:** Remote control of the chiller operating functions.
**AKW: ACOUSTIC KIT:** Allows further unit sound reduction using an optimised enclosure made from a high density ecological material.
**AVX:** Spring anti-vibration mounts.
**RIF:** Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current. Must be requested at time of order and is available factory fitted only.
**SAP:** A series of remote buffer tanks and pumps are available. Refer to the technical manual.

## ACCESSORIES COMPATIBILITY

*Accessories*

| Model | Vers | 0701 | 0801 | 0901 | 1101 |
|---|---|---|---|---|---|
| AER485P1 | | • | • | • | • |
| AERNET | | • | • | • | • |
| MULTICHILLER_EVO | | • | • | • | • |
| PRV3 | | • | • | • | • |
| AKW | L | • | • | • | • |

*AVX: Antivibration*

| Ver | 0701 | 0801 | 0901 | 1101 |
|---|---|---|---|---|
| °/L | AVX665 | AVX665 | AVX 665 | AVX 666 |

*RIF: Power factor correction*

| Ver | 0701 | 0801 | 0901 | 1101 |
|---|---|---|---|---|
| °/L | RIF161 | RIF161 | RIF201 | RIF241 |

A grey background indicates the accessories assembled in the factory

## CONFIGURATOR

| Field | | Description |
|---|---|---|
| **1,2,3** | | **WSH** |
| **4,5,6,7** | | **Size**<br>0701-0801-0901-1101 |
| **8** | | **Expansion device** |
| | ° | Standard, minimum leaving water temperature down to +4 °C |
| | X | With electronic expansion valve that allows: Leaving liquid temperature down to -6 °C<br>For different temperature please contact the factory. |
| **9** | | **Model** |
| | ° | Standard |
| **10** | | **Heat recovery** |
| | ° | Without heat recovery |
| | D | With desuperheaters (partial heat recovery) |
| **11** | | **Version** |
| | ° | Standard |
| | L | Low noise |
| | | **Condenser** |
| | ° | PED regulation |
| **12** | | **Power supply** |
| | ° | 400V 3~ 50Hz |
| | 8 | 400V 3~ 50Hz with circuit breakers |
| | 2 | 230V 3~ 50Hz with fuses |
| | 4 | 230V 3~ 50Hz with circuit breakers |
| | 5 | 500V 3~ 50Hz with fuses |
| | 9 | 500V 3~ 50Hz with circuit breakers |

## PERFORMANCE SPECIFICATIONS

| Size | | | 0701 | 0801 | 0901 | 1101 |
|---|---|---|---|---|---|---|
| **Cooling performance 12 °C / 7 °C (1)** | | | | | | |
| Cooling capacity | (1) | kW | 165,8 | 195,7 | 216,7 | 269,7 |
| Total input power | (1) | kW | 37,1 | 42,3 | 48,3 | 58,8 |
| Cooling total input current | (1) | A | 65 | 73 | 81 | 100 |
| EER | (1) | W/W | 4,47 | 4,63 | 4,48 | 4,59 |
| Water flow rate system side | (1) | l/h | 28520 | 33675 | 37283 | 46389 |
| Pressure drops | (1) | kPa | 23 | 24 | 22 | 27 |
| Water flow rate source side | (1) | l/h | 34668 | 40686 | 45310 | 56133 |
| Pressure drops | (1) | kPa | 30 | 31 | 30 | 36 |
| Power supply | | | 400V/3/50Hz | 400V/3/50Hz | 400V/3/50Hz | 400V/3/50Hz |
| **Heating performance 40 °C / 45 °C (2)** | | | | | | |
| Heating capacity | (2) | kW | 189,8 | 217,7 | 245,7 | 310,9 |
| Total input power | (2) | kW | 45,9 | 52,1 | 59,3 | 75,3 |
| Heating total input current | (2) | A | 82 | 92 | 102 | 132 |
| COP | (2) | W/W | 4,13 | 4,18 | 4,14 | 4,13 |
| Water flow rate system side | (2) | l/h | 32925 | 37783 | 42641 | 53976 |
| Pressure drops | (2) | kPa | 26 | 25 | 25 | 31 |
| Water flow rate source side | (2) | l/h | 42166 | 48522 | 54604 | 69160 |
| Pressure drops | (2) | kPa | 46 | 46 | 43 | 55 |
| Power supply | | | 400V/3/50Hz | 400V/3/50Hz | 400V/3/50Hz | 400V/3/50Hz |

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

## ENERGY DATA

| Size | | 0701 | 0801 | 0901 | 1101 |
|---|---|---|---|---|---|
| **Cooling capacity with low leaving water temp** | | | | | **(UE n° 2016/2281)** |
| SEER | W/W | 5,04 | 5,47 | 5,29 | 5,22 |
| ηsc | % | 193,5 | 210,7 | 203,4 | 200,7 |
| **Performance under average climatic conditions (Average) Efficiency Energy Class in according to regulation n°813/2013 Pdesignh ≤ 400kW for average temperature Applications (55°C)** | | | | | |
| Pdesignh | kW | 249 | 285 | 322 | / |
| SCOP | | 4,20 | 4,25 | 4,23 | / |
| ηsh | % | 160 | 162 | 161 | / |

## ELECTRICAL DATA

| Size | | 0701 | 0801 | 0901 | 1101 |
|---|---|---|---|---|---|
| **Electrical data** | | | | | |
| Maximum current (FLA) | A | 124 | 144 | 162 | 182 |
| Peak current (LRA) | A | 163 | 192 | 229 | 300 |

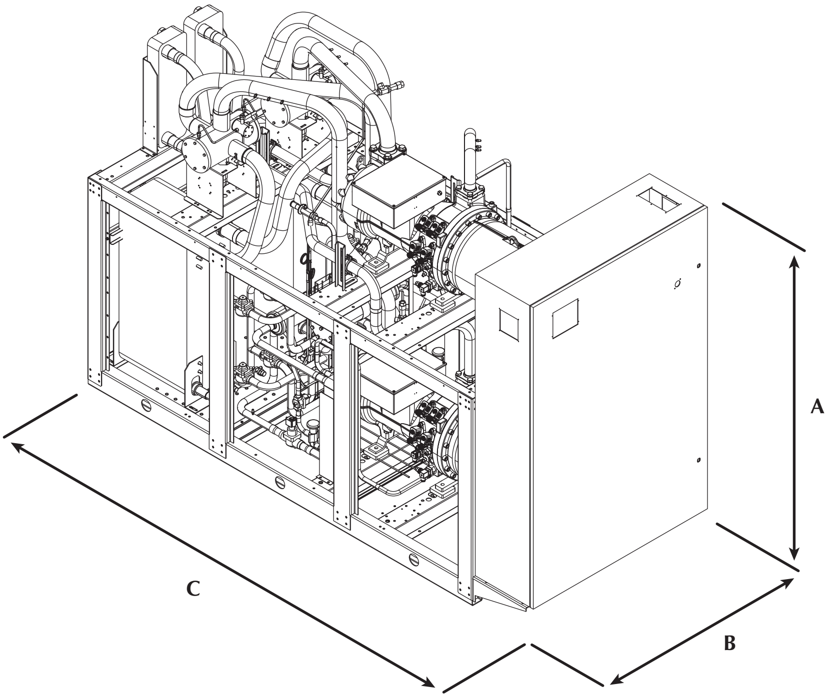
## GENERAL TECHNICAL DATA

| Size | | 0701 | 0801 | 0901 | 1101 |
|---|---|---|---|---|---|
| **Compressor** | | | | | |
| Compressor | type | Twin-Screw | Twin-Screw | Twin-Screw | Twin-Screw |
| Compressors / Circuit | n°/n° | 1/1 | 1/1 | 1/1 | 1/1 |
| Refrigerant | type | R134a | | | |
| **Heat exchanger system side** | | | | | |
| Exchanger | type/n° | Plates/1 | | | |
| Hydraulic connections (in/out) | type/Ø | 3" | 3″ | 3″ | 3″ |
| **Heat exchanger source side** | | | | | |
| Exchanger | type/n° | Plates/1 | | | |
| Hydraulic connections (in/out) | type/Ø | 3" | 3″ | 3″ | 3″ |
| **Sound data (cooling mode) (1)** | | | | | |
| Sound power level | dB(A) | 86 | 86 | 86 | 92 |
| Sound pressure level | dB(A) | 54 | 54 | 54 | 60 |

(1) Sound power Aermec determines sound power values on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure Sound pressure in free field, at 10 m distance from the external surface of the unit (in accordance with UNI EN ISO 3744).

*Note: For more information, refer to the selection program or the technical documentation available on the website www.aermec.com*

## DIMENSIONS




| Size | Version | | | 0701 | 0801 | 0901 | 1101 |
|---|---|---|---|---|---|---|---|
| **Dimensions and weights** | | | | | | | |
| A | ° | | mm | 1980 | 1980 | 1980 | 2060 |
| | L | | mm | 2120 | 2120 | 2120 | 2120 |
| B | | | mm | 810 | 810 | 810 | 810 |
| C | | | mm | 2960 | 2960 | 2960 | 3360 |
| Empty weight | | ° | kg | 1391 | 1443 | 1506 | 1946 |
| | | D | kg | 1622 | 1674 | 1737 | 2200 |



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