



## Reversible heatpumps air/water on propane type PAS Kp

Reversible heatpump Air/Water on propane for the production of chilled/hot water. The units are equipped with semi-hermetic reciprocating compressors. Axial 6-pole fans. Suitable for outdoor installation. Refrigerant R290 (GWP 3) (propane) These units are specially designed for cooling medium to large projects. Tandem technology offers multiple capacity stages and increases efficiency at part load. This also improves performance. Leak detector and ATEX certified fan in compartment with cooling circuit included as standard. **Only sell to certified air-conditioning installers. Mandatory commissioning by CAIROX.**

### Brand

- Emicon

### Application

- Outdoor air/water reversible heatpumps suitable for comfort and process cooling and heating applications

### Characteristics

- Cooling capacity: 36 to 295 kW
- Heating capacity: 44 to 344 kW

### Composition

- Refrigerant gas R290 with a GWP of 3
- Semi-hermetic reciprocating compressors
- Power supply 400/3/50
- Microprocessor controller
- Leak detector included as standard
- ATEX certified fan in compartment with cooling circuit
- Copper/Aluminium battery with Bluefin coating

### Options

- PW Softstart compressors by part winding
- RM Prepainted protective coating on the fins on the air coil
- PM Vibration Dampers with Springs
- PA Rubber Vibration Dampers
- BF Operation up to outdoor temperatures of -20°C
- MF Phase Sequence Relay

- PQ Remote Control
- RA Anti-frost resistance with thermostat on the evaporator
- VSC inverter control on the compressors
- TE Electronic expansion valve(s)
- CFU Sound-Absorbing Enclosure Around the Compressors
- RF Correction on the cos phi by capacitor(s)
- GP Protective grid on the battery
- IH RS 485, IH BACNET, SNMP, TCP/IP, MODBUS...
- I1 Insulation Shells for Placement Around Victaulic Joints

### Versions

- PAS. Kp
- Standard version with Blue Fin coating on coil

### Order example

#### PAS 451 Kp

Explanation

**45** = Nominal cooling capacity (KW)

**1** = Number of cooling circuits

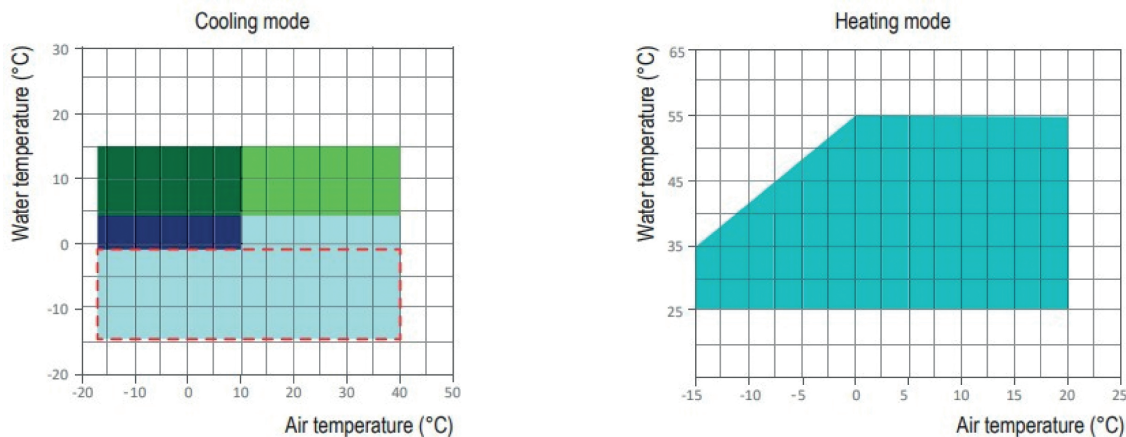
**Kp** = Propane Refrigerant

|  |              | Specifications |           |            |            |            |            |            |            |            |            |            |            |            |
|--|--------------|----------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| PAS Kp   |              | 451            | 521       | 651        | 731        | 881        | 1001       | 1201       | 1502       | 1702       | 2102       | 2502       | 2902       | 3402       |
| Cooling capacity   | kW           | 36.2           | 44.6      | 53.6       | 60.5       | 74.8       | 89.6       | 103        | 129        | 148        | 180        | 208        | 247        | 295        |
| Total power input Cooling  | kW           | 12.5           | 14.4      | 16.3       | 19.1       | 24         | 29.5       | 35.4       | 39.9       | 47.3       | 58.6       | 70.7       | 78.1       | 95.9       |
| Water flow   | m³/h         | 6.23           | 7.68      | 9.22       | 10.41      | 12.87      | 15.42      | 17.72      | 22.17      | 25.46      | 30.91      | 35.76      | 42.49      | 50.75      |
| Water pressure drop  | kPa          | 32.2           | 42.4      | 25.4       | 31.5       | 15         | 20.5       | 26.4       | 13.5       | 17.2       | 24.4       | 21.8       | 29.5       | 23.6       |
| Heating capacity   | kW           | 44.4           | 52.7      | 64.4       | 72         | 87.6       | 106        | 123        | 148        | 173        | 214        | 247        | 289        | 344        |
| Total power input Heating  | kW           | 11.5           | 13.7      | 14.8       | 16.9       | 21.5       | 25.6       | 30.1       | 34         | 41.2       | 51.7       | 58.3       | 67.2       | 84.3       |
| Refrigerant type (GWP)   |              | R290 (3.3)     |           |            |            |            |            |            |            |            |            |            |            |            |
| Precharged refrigerant charge  | kg(CO2eq-kg) | 7(0.0231)      | 9(0.0297) | 13(0.0429) | 13(0.0429) | 14(0.0462) | 17(0.0561) | 17(0.0561) | 19(0.0627) | 26(0.0858) | 33(0.1089) | 33(0.1089) | 41(0.1353) | 51(0.1683) |
| SCOP   |              | 3.28           | 3.27      | 3.56       | 3.47       | 3.37       | 3.45       | 3.35       | 3.3        | 3.26       | 3.28       | 3.29       | 3.38       | 3.27       |
| Water flow   | m³/h         | 7.66           | 9.09      | 11.12      | 12.43      | 15.14      | 18.36      | 21.3       | 25.5       | 29.91      | 37.04      | 42.69      | 50.18      | 59.42      |
| Water pressure drop  | kPa          | 37.7           | 51.7      | 34.7       | 42.3       | 18.5       | 26         | 33.9       | 16.9       | 22.6       | 33.4       | 28.7       | 38.4       | 30.7       |
| Sound pressure level   | dB(A)        | 52             | 53        | 53         | 57         | 59         | 61         | 61         | 61         | 61         | 63         | 63         | 63         | 63         |
| Cooling capacity: Outdoor temperature 35°C - chilled water temperature in/out 12/7°C |              |                |           |            |            |            |            |            |            |            |            |            |            |            |
| Heating capacity: Outdoor temperature 7°C - water temperature in/out 30/35°C         |              |                |           |            |            |            |            |            |            |            |            |            |            |            |
| Sound pressure level calculated according to ISO 3744 at 10 m distance from the unit |              |                |           |            |            |            |            |            |            |            |            |            |            |            |

|               |      | Dimensions |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------|------|------------|------|------|------|------|------|------|------|------|------|------|------|------|
| PAS Kp        |      | 451        | 521  | 651  | 731  | 881  | 1001 | 1201 | 1502 | 1702 | 2102 | 2502 | 2902 | 3402 |
| L             | [mm] | 1620       | 1620 | 2660 | 2660 | 2660 | 2660 | 2660 | 3700 | 3700 | 4850 | 4850 | 5890 | 5890 |
| W             | [mm] | 1370       | 1370 | 1370 | 1370 | 1370 | 1370 | 1370 | 1370 | 1370 | 1370 | 1370 | 1370 | 1370 |
| H             | [mm] | 2420       | 2420 | 2420 | 2420 | 2420 | 2420 | 2420 | 2420 | 2420 | 2420 | 2420 | 2420 | 2420 |
| Gewicht/Poids | [kg] | 882        | 946  | 1258 | 1280 | 1350 | 1416 | 1466 | 1798 | 1876 | 2246 | 2366 | 2918 | 3106 |

### Prices

Detailed selection / quotation available on request



- Standard unit, cooling mode with fan speed control
- Standard unit, cooling mode with glycol
- Standard unit, cooling mode
- Standard unit, cooling mode with glycol and fan speed control
- VB version, cooling mode

Operational limits