

EVEREST R290 PAE Kp

- Emicon
- Air/water monoblock
- Outdoor unit
- R290



Modular air/water heat pumps extra heating/cooling type EVEREST R290 PAE Kp

The **EVEREST²⁹⁰ PAE Kp** is a modular air/water heat pump with 2 pipes that is suitable for heating and cooling. **Compared to the air/water heat pump PAE 881 WA Kp, this version has a plate exchanger and air-side battery that have been optimized for heating. The heating capacity of this unit is slightly higher than the "WA" version, but its greatest asset is the outgoing water temperature of up to 70°C.** Up to 10 of these modules can be placed in a cascade system. The monoblock unit is filled with the natural refrigerant propane (R290).

The EVEREST290 is an appliance for heating and cooling that uses 2 scroll compressors with the same capacity. This ensures 2 power stages and low power consumption. Due to the specific construction, the appliance will switch to defrost mode less quickly and the defrost cycle is completed as efficiently as possible. The unit maintains its high COP values even at negative outside temperatures.

Brand

- Emicon

Application

- Production of domestic hot water (up to 70°C)
- Heating or cooling in commercial applications
- Heating or cooling in industrial applications

Characteristics

Per module:

- **PAE 881 Kp:** Cooling capacity: 66,3 kW / **Heating capacity: 88,9 kW**
- In heating mode:
 - Outgoing water temperature of 70°C at 0°C outdoor temperature
 - Outgoing water temperature of 58°C at -20°C outdoor temperature
- In cooling mode with glycol:
 - Outgoing water temperature down to 0°C at -20°C outdoor temperature

Composition

- Modules of 2-pipe monoblock heat pumps that can be used stand-alone or in a cascade of maximum 10 units
- Reliable operation
- Maintenance-free propane leak detector
- Strong, compact, steel structure with powder coating RAL 7035
- Movable with hand pallet truck
- 2 EC fans
- 2 Scroll compressors in tandem with crankcase heating in a soundproof casing

- Electronic expansion valve
- Insulated stainless steel plate exchanger with flow switch
- Copper/aluminium batteries mounted in V with innovative mini-channel technology and hydrophilic coating
- Winter regulation down to -20°C
- Phase monitor
- Plug-and-play hydraulic and electrical connections

Options

- Rubber anti-vibration mounts. **Type PA-Kp (PAE GPE)**
- Anti-vibration mounts with springs. **Type PM-Kp (PAE GPE)**
- Soundproofing jacket on compressors. **Type CI-Kp (PAE GPE)**
- Ampere and voltmeter used to measure the electrical current absorbed and the electrical supply voltage of the unit. **Type A+V-Kp (PAE GPE)**
- Tablet interface kit in combination with KGR5/10 or KGH/10 kit in modular use. **Type KTA-Kp (PAE GPE)**
- Remote display. **Type PQ-Kp (PAE GPE)**
- Water collector kit without insulation (1 per unit). **Type KCA-Kp (PAE)**
- Insulation for water collector. **Type KCC-Kp (PAE)**
- Gateway framework kit for 2 to 5 units in modular use (1 in case of multiple units). **Type KG5-Kp (PAE GPE)**
- Gateway framework kit for 6 to 10 units in modular use (1 in case of multiple units). **Type KG10-Kp (PAE GPE)**
- Gateway kit for stand-alone unit with Hi-web and Wi-Fi router. **Type KGH1-Kp (PAE GPE)**
- Gateway board kit for 2 to 5 units in modular use with Hi-web and Wi-Fi router (1 case of multiple units). **Type KGH5-Kp (PAE GPE)**
- Gateway board kit for 6 to 10 units in modular use with Hi-web and Wi-Fi router (1 in case of multiple units). **Type KGH10-Kp (PAE GPE)**
- Gateway kit for stand-alone unit with Wi-Fi router. **Type KGR1-Kp (PAE GPE)**
- Gateway board kit for 2 to 5 units in modular use with Wi-Fi router (1 in case of multiple units). **Type KGR5-Kp (PAE GPE)**
- Gateway board kit for 6 to 10 units in modular use with Wi-Fi router (1 in case of multiple units). **Type KGR10-Kp (PAE GPE)**
- Display interface kit for monitoring leak detector. **Type KLD-Kp (PAE GPE)**
- Electrical switch and connection board for a kit up to 5 modules (connect main power here in case of cascade). **Type KP5-Kp (PAE GPE)**
- Electrical switch and connection board for a kit up to 10 modules (connect main power here in case of cascade). **Type KP10-Kp (PAE GPE)**
- Victaulic cap + socket kit/welded. **Type KTT-Kp (PAE GPE)**
- Lifting brackets securely attached to the frame to lift the unit with hooks and cables. **Type MG-Kp (PAE GPE)**
- Manometers in front panel. **Type MT-Kp (PAE GPE)**
- Anti-freeze tracing around the evaporator. **Type RA-Kp (PAE)**
- Double insulation around the evaporator. **Type VB-Kp (PAE)**
- Anti-freeze tracing around the internal hydraulic pipes. **Type VH-Kp (PAE)**

Versions

- **PAE 881 Kp**
- PAE 881 WA Kp

Order example

- **PAE 881 Kp**

Explanation

88

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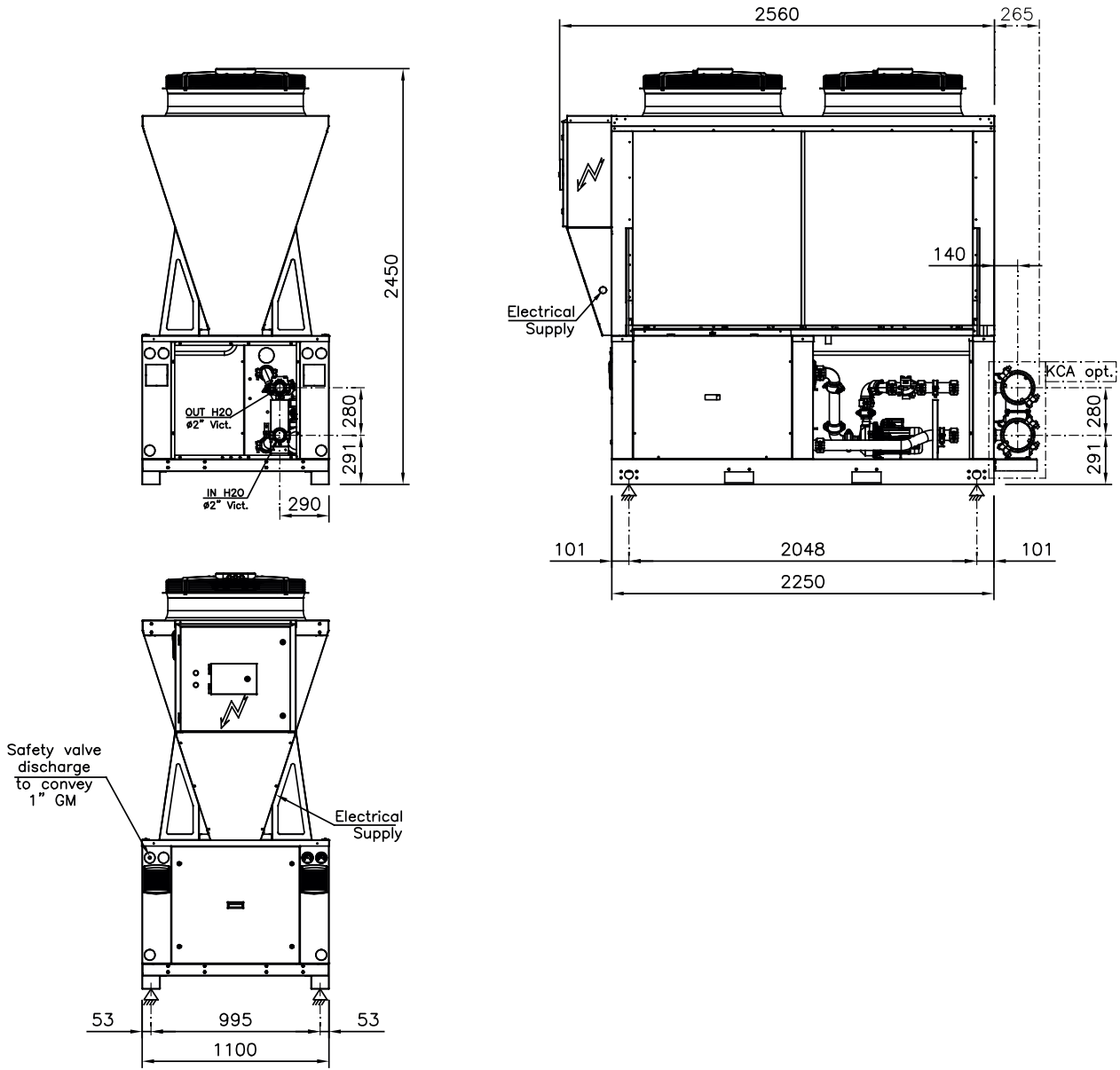
Nominal heating capacity (kW)

1 = Number of cooling circuits

Kp = Propane refrigerant

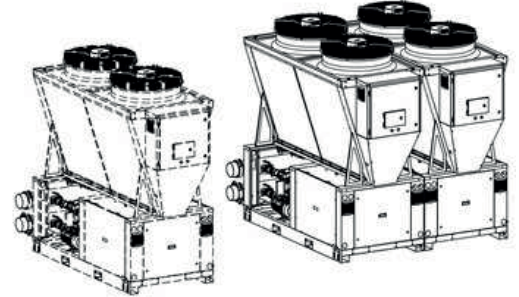
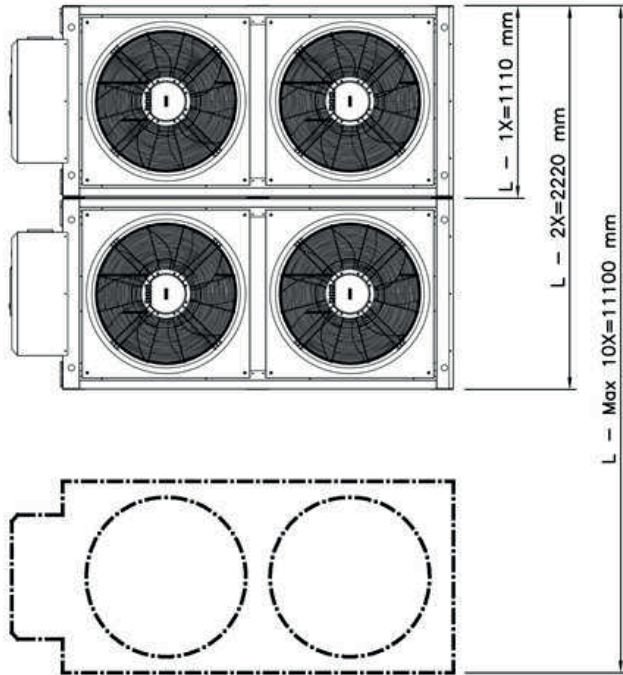
Specifications		
EVEREST		PAE 881 Kp
Nominal cooling capacity (EN14511) (1)	kW	66,3
Total input power in cooling (EN14511)	kW	26,4
Total nominal current per module in cooling	A	50,8
EER (EN14511)		2,51*
Number of refrigerant circuits		1
Number of compressors		2
Number of axial fans		2
Total air flow rate of axial fans (1)	m ³ /h	35.390
Total fan input power (1)	kW	1,8
Total fan input current (1)	A	3,3
Number of plate exchangers		1
Total water flow rate of plate exchanger	m ³ /h	11,3
Pressure drop	kPa	27,4*
Diameter of hydraulic connections	DN	2" Victaulic*
Total pump input power P1 (1)	kW	0,73
Pump input current P1 (1)	A	1,4
Total pump electrical input power P1 (1)	kW	0,2
Nominal heating capacity (EN14511) (2)	kW	88,9
Total input power in heating (EN14511)	kW	22,2
Total nominal current in heating	A	45,9
SCOP (3)		3,87*
COP (EN14511)		4,00*
Total air flow rate of axial fans (2)	m ³ /h	32.480
Total fan input power (2)	kW	1,6
Total fan input current (2)	A	3
Total water flow rate of plate exchanger (2)	m ³ /h	
Pressure drop	kPa	43,6*
Diameter of hydraulic connections	DN	2" Victaulic*
Total electric pump input power P1 (2)	kW	0,8
Pump input current P1 (1)	A	1,6
Total pump electrical input power P1 (2)	kW	0,3
Refrigerant charge R290	kg	6,1
Global warming potential (GWP)		3
Equivalent CO ₂ charge	kg	18,3
Transport weight	kg	835
Operating weight	kg	840
Length	mm	2.560*
Depth	mm	1100
Height	mm	2.450*
Sound power level (4)	dB(A)	87**
Sound pressure level (5)	dB(A)	55**
Power supply	V/Ph/Hz	400/3/50+PE
The specified values apply to the following conditions:		
(1) Fluid: water - In/Out temperature: 7/12°C - outside air 35°C		
(2) Fluid: water - In/Out temperature: 30/35°C - outside air 7°C RH 87%.		
(3) Calculated according to EU.813/2013.		
(4) Sound power level in accordance with ISO 3744.		
(5) Sound pressure level at 10 m from the unit in free field conditions in accordance with ISO 3744.		
Technical data relating to the unit. In case of a modular system with n units, multiply the data (except those marked with "**") by n to obtain the total values.		
** In case of modular system see paragraph with sound data.		

Specifications											
Sound data EVEREST 290											
Octave bands	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Lw	Lp1	Lp10
PAE 881 Kp	43 dB(A)	51 dB(A)	69 dB(A)	76 dB(A)	79 dB(A)	84 dB(A)	76 dB(A)	63 dB(A)	86,5 dB(A)	68,3 dB(A)	54,6 dB(A)
In the case of a modular system consisting of 1 to n modules, the total value of the sound level can be estimated by the following formula:											
$L_{eq, tot} = 10 \times \log_{10} [n \times (10^{LW/10})]$											



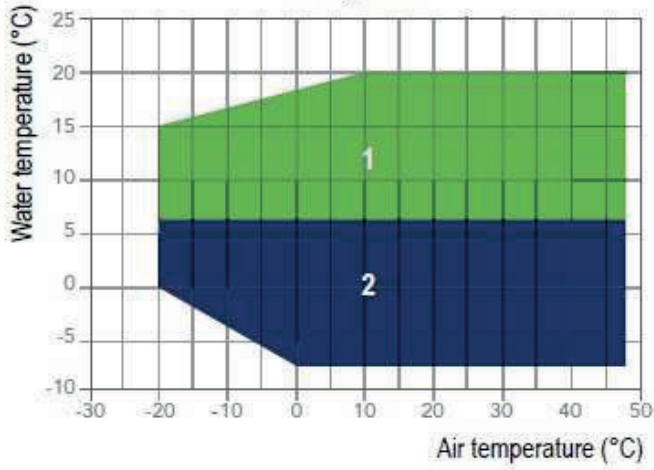
Configuration

Number of units	L
1	1110
2	2220
3	3330
4	4440
5	5550
6	6660
7	7770
8	8880
9	9990
10	11100



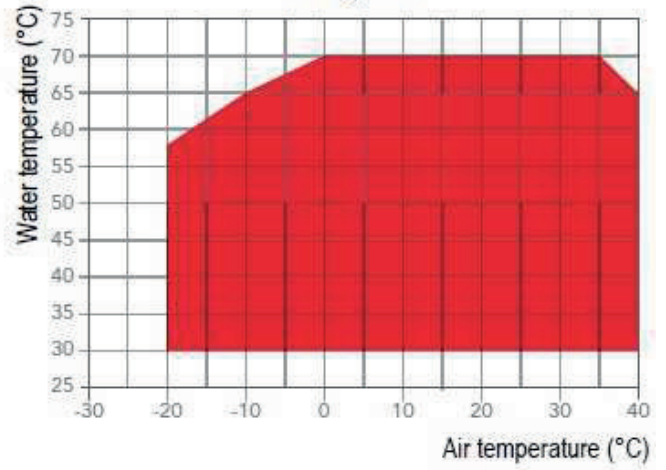
PAE Kp

Cooling mode



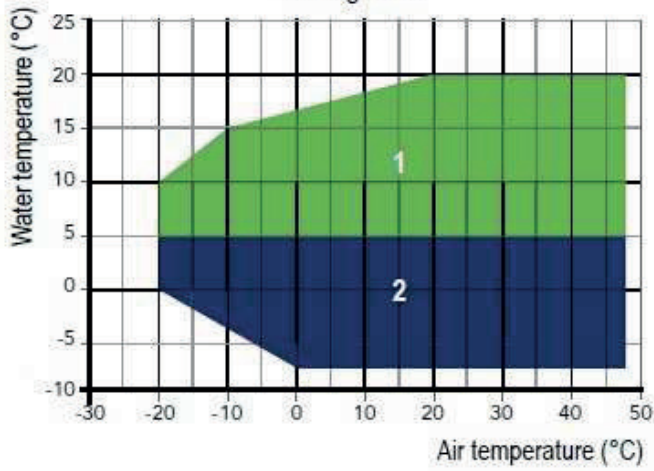
- 1 Cooling mode
- 2 Cooling with glycol

Heating mode



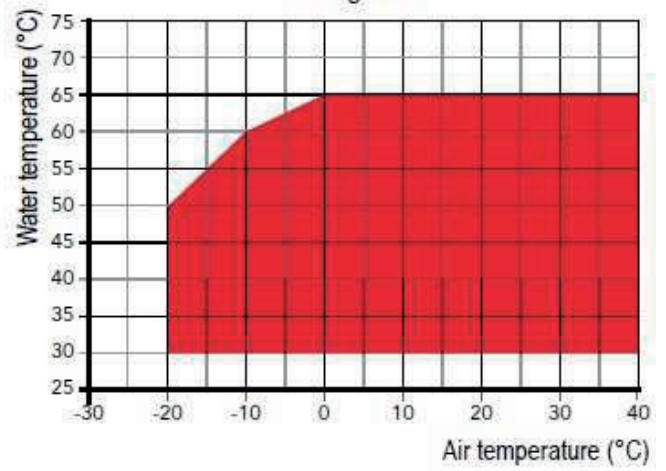
PAE WA Kp

Cooling mode



- 1 Cooling mode
- 2 Cooling with glycol

Heating mode



Operational limits