EVEREST R290 PAE WA Kp

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

Modular Air/water heat pumps HEATING/COOLING type EVEREST R290 PAE WA Kp

The EVEREST[290] **PAE WA Kp** is a modular 2-pipe air/water heat pumps that are suitable for heating and cooling. Up to a maximum of 10 of these modules can be placed in a cascade system. The monoblock unit are filled with the natural refrigerant propane (R290) and easily reaches water temperatures up to 70°C (for the standard version PAE Kp) and up to 65°C (for the PAE WA Kp version).
The EVEREST[290] is a heating/cooling unit that uses 2 scroll compressors of equal capacity. This ensures 2 power stages and low power consumption. Due to the specific construction, the device will switch to defrost mode less often and the defrost cycle will be completed as efficiently as possible.
The unit maintains its high COP values even at negative outside temperatures. **The PAE 881 WA Kp has a plate heat exchanger/air-side coil that has been optimized for cooling.**

Brand

- Emicon

Application

- Production of domestic hot water (to 65°C)
- Commercial heating or cooling
- Industrial heating or cooling

Characteristics

Per module:

- **PAE 881 WA Kp:** Cooling: 105 kW Heating capacity: 88,2 kW

Composition

- Modules of 2-pipe monoblock heat pumps that can be used stand-alone or in a cascade of maximum 10 units
- Reliable
- Propane modules with maintenance-free leak detector
- Strong, compact, steel structure with powder coating RAL 7035
- Movable with 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
- Batteries mounte in V, copper/aluminum, innovative mini-channel technology and hydrophilic coating
- Winter regulation down to -20°C
- Phase monitor

- Maintenance-free refrigerant gas leak detection
- Plug-and-play hydraulic and electrical connections

Options

- PA Rubber anti-vibration mounts
- PM Anti-vibration mounts with springs
- CL Soundproofing jacket on compressors
- A+V Ampere and voltmeter used to measure the electrical current absorbed and the electrical supply voltage of the unit
- KTA Tablet interface kit in combination with KGR5/10 or KGH/10 kit in modular use
- PQ Remote display
- CFP Protective casing around the built-in pump
- ECP Anti-corrosion coating on air batteries (epoxy coating)
- HRV2 Double pressure relief valve
- KCA Water Collector kit without insulation (1 required per unit)
- KCC Insulation for Water Collector
- KG10 Gateway frame kit up to 10 units in modular use (necessary option for cascade 6 to 10 units)
- KG5 Gateway frame kit up to 5 units in modular use (necessary option for cascade 2 to 5 units)
- KGH1 Gateway board for stand-alone unit with Hi-web and Wi-Fi router
- KGH10 Gateway board for 6 to 10 units in a module with Hi-web and Wi-Fi router
- KGH5 Gateway board for 2 to 5 units in a module with Hi-web and Wi-Fi router
- KGR1 Gateway kit for stand-alone unit with Wi-Fi router
- KGR10 Gateway kit for 6 to 10 units in a module with Wi-Fi router
- KGR5 Gateway kit board for 2 to 5 units in a module with Wi-Fi router
- KLD Display interface kit for monitoring leak detector
- KP10 Electrical switch and connection board for a kit up to 10 modules (here main power conn. with cascade)
- KP5 Electrical switch and connection board for a kit up to 5 modules (here connect main power with cascade)
- KTT Victaulic cap + Socket kit/welded
- MG Lifting brackets securely attached to the frame to lift the unit with hooks and cables
- RA Anti-freeze tracing around the evaporator
- VB Double insulation around the evaporator
- VH Anti-freeze tracing around the internal hydraulic lines
- IH RS485 serial card
- IWG Interface => SNMP or TCP/IP or BACNET IP or MODBUS IP
- IH BAC BACNET RS485 serial card
- I1 Insulation for around the Victaulic flanges from pump to hydraulic lines
- I2 Insulation for around the Victaulic flanges from buffer tank to hydraulic lines

Versions

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

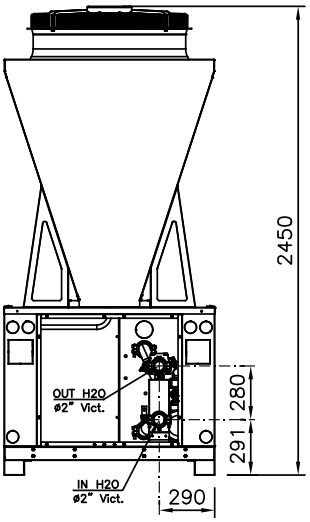
Order example

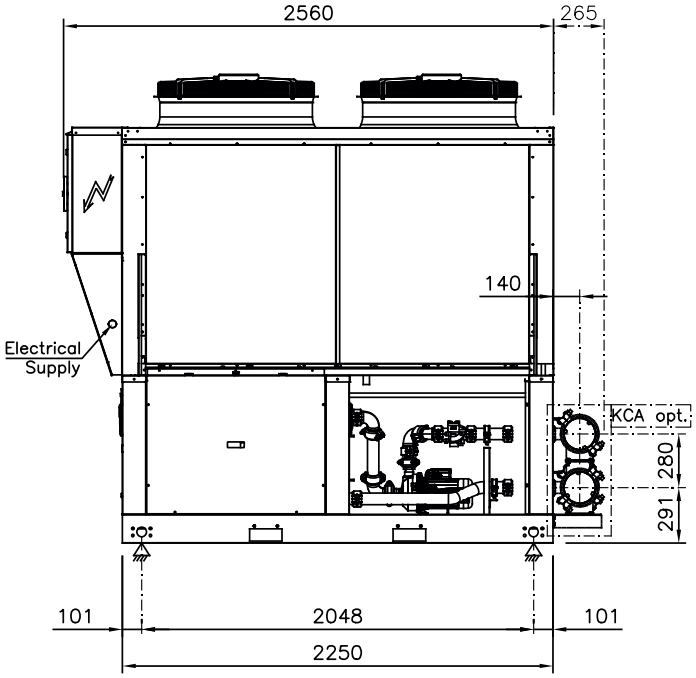
- **PAE 881 WA Kp**

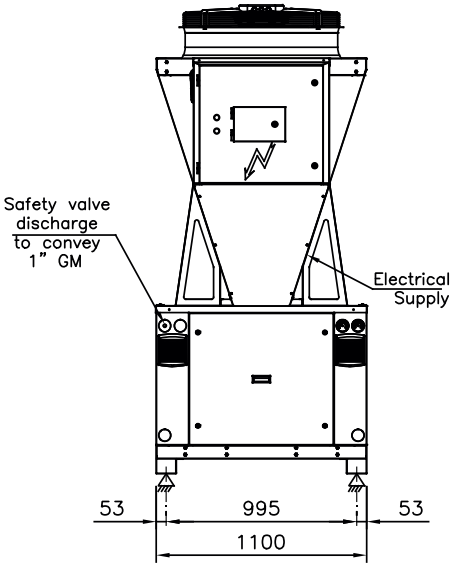
Explanation
88
=
Nominal heating capacity (KW)
1 = Number of cooling circuits
WA = plate exchanger optimised for cooling
Kp = Propane Refrigerant

Specifications		
EVEREST		PAE 881 WA Kp
Nominal Cooling capacity (EN14511) (1)	kW	105
Total input power Cooling (EN14511)	kW	29.6
Total nominal current Cooling	A	55
EER (EN14511)		3,55*
Refrigerant circuits	n°	1
Compressors	n°	2
Number of axial fans	n°	2
Total air flow axial fans (1)	m³/h	38770
Total fan power input (1)	kW	2.3
Total fan current (1)	A	4.1
Number of user side plate exchanger	n°	1
Total capacity	m³/h	18
Pressure drop	kPa	55,5*
Diameter of water connections	DN	2" Victaulic*
Total electrical power input Pump group P1 (1)	kW	0.9
Current Pump group P1 (1)	A	1.6
Total electrical power input (unit side)	kW	0.5
Heating capacity (EN14511) (2)	kW	88.2
Total input power Heating (EN14511)	kW	22.5
Total nominal current Heating	A	46.3
SCOP (3)		3,77*
COP (EN14511)		3,92*
Total air flow axial fans (2)	m³/h	32470
Total fan power input (2)	kW	1.54
Total fan current (2)	A	3.01
User side plate exchanger (2)		
Total capacity	m³/h	15.3
Pressure drop	kPa	43,5*
Diameter of water connections	A	2" Victaulic*
Total electrical power input Pump group P1 (2)	kW	0.8
Current	A	1.6
Total electrical power input (unit side)	kW	0.3
Refrigerant charge of R290	Kg	6.1
Global warming potential (GWP)		3
Equivalent CO2 charge	Kg	18.3
Transport weight	Kg	835
Operating Weight	Kg	840
Lenght	mm	2.560*
Depth	mm	1100
Height	mm	2.450*
Sound pressure level (4)	dB(A)	87**
Sound power level (5)	dB(A)	55**
Power supply	V/Ph/Hz	400/3/50+PE
Performances are refered to the following conditions:		
(1) Fluid: water - In/Out temperature: 7/12°C - air 35°C		
(2) Fluid: water - In/Out temperature: 30/35°C - 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 (exept those marked with "*") by n to obtain the total values.		
** In case of modular system see paragraph * Sound data*		

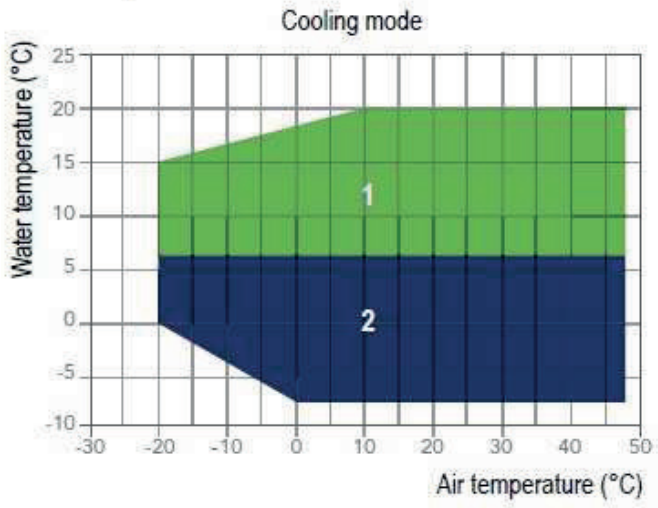
Specifications										
Sound data EVEREST 290										
Octave bands	63 Hz	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	8000 HZ	Lw	Lp1	Lp10
PAE 881 WA Kp	43 dB(A)	51 dB(A)	69 dB(A)	76 dB(A)	79 dB(A)	84 dB(A)	76 dB(A)	63 dB(A)	86,5 dB(A)	68,3 dB(A)	54,6 dB(A)
In the case of a modular system consisting of 1 to n modules, the total value of the sound level can be estimated by the following formula:											
$Leq_{tot} = 10 \times \log 10 [n \times (10^{LW1/10})]$											

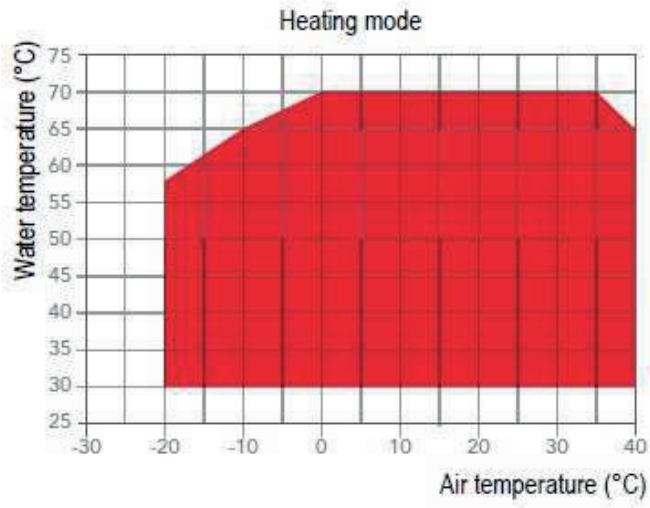

2450
OUT H2O
ø2" Vict.
280
291
IN H2O
ø2" Vict.
290


2560
265
140
Electrical
Supply
KCA opt.
280
291
101
2048
101
2250


Safety valve
discharge
to convey
1" GM
Electrical
Supply
53
995
53
1100

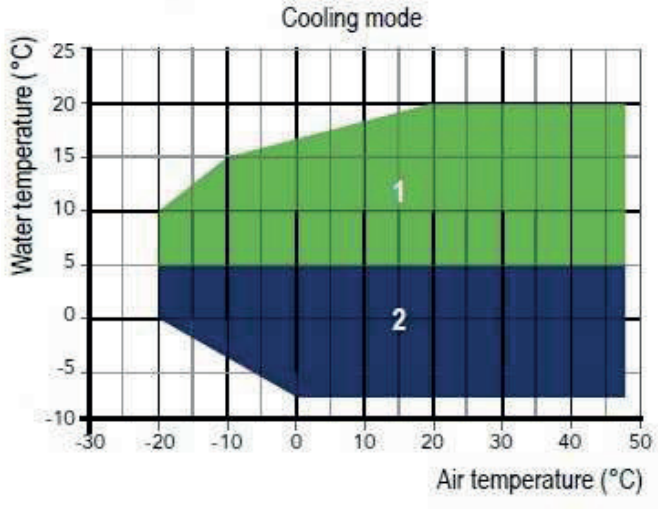
PAE Kp

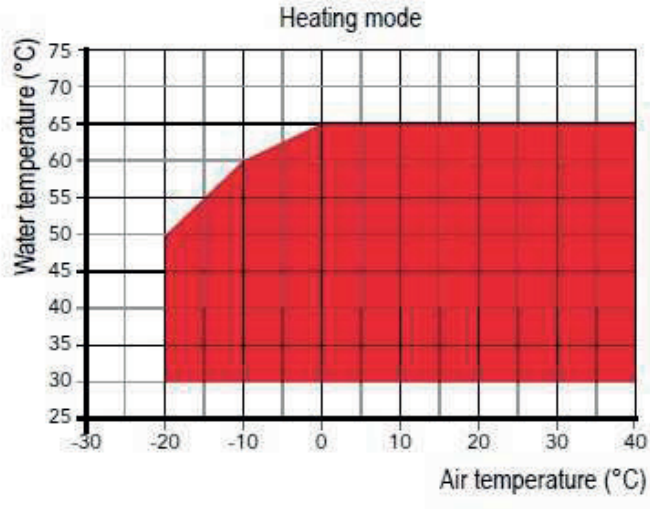




1 Cooling mode
2 Cooling with glycol

PAE WA Kp





1 Cooling mode
2 Cooling with glycol

Operational limits