

## Information requirements for heat pumps

**Energy Index:** SCOP

**Regulations:** calculated according to commission regulation (EU) 2013/813, implementing the directive of the european commission 2009/125/ec "ecodesign".

**Climate:** Average

**Source type:** Outdoor air

**User type:** Low temperature

**User flow:** Constant user flow rate

Model: PAE 881 Kp							
Air-to-water heat pump: yes							
Water-to-water heat pump: no							
Brine-to-water heat pump: no							
Low-temperature heat pump: yes							
Equipped with a supplementary heater: no							
Heat pump combination heater: no							
Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For lowtemperature heat pumps, parameters shall be declared for low-temperature application.							
Parameters shall be declared for average, colder and warmer climate conditions							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	71	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	152	%
Declared heating capacity for part load at indoor temperature 20 °C and outdoor temperature <i>T<sub>j</sub></i>				Declared coefficient of performance or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures <i>T<sub>j</sub></i>			
<i>T<sub>j</sub></i> = -7°C	<i>P<sub>dh</sub></i>	57.0	kW	<i>T<sub>j</sub></i> = -7°C	<i>COP<sub>d</sub></i>	2.51	-
<i>T<sub>j</sub></i> = 2°C	<i>P<sub>dh</sub></i>	43.6	kW	<i>T<sub>j</sub></i> = 2°C	<i>COP<sub>d</sub></i>	3.82	-
<i>T<sub>j</sub></i> = 7°C	<i>P<sub>dh</sub></i>	51.5	kW	<i>T<sub>j</sub></i> = 7°C	<i>COP<sub>d</sub></i>	5.18	-
<i>T<sub>j</sub></i> = 12°C	<i>P<sub>dh</sub></i>	58.7	kW	<i>T<sub>j</sub></i> = 12°C	<i>COP<sub>d</sub></i>	6.38	-
<i>T<sub>biv</sub></i> = -6°C	<i>P<sub>dh</sub></i>	59.3	kW	<i>T<sub>biv</sub></i> = -6°C	<i>COP<sub>d</sub></i>	2.61	-
<i>TOL</i> = -10°C	<i>P<sub>dh</sub></i>	52.5	kW	<i>TOL</i> = -10°C	<i>COP<sub>d</sub></i>	2.31	-
For air-to-water heat pumps: Operation limit temperature <i>T<sub>j</sub></i> = -°C	<i>P<sub>dh</sub></i>	-	kW	For air-to-water heat pumps: <i>T<sub>j</sub></i> = +-°C	<i>COP<sub>d</sub></i>	-	-
Bivalent temperature	<i>T<sub>biv</sub></i>	-6	°C	For air-to-water heat pumps: Operation limit temperature	<i>T<sub>ol</sub></i>	-10	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	-	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	-	-
Degradation co-efficient chillers (**)	<i>C<sub>dh</sub></i>	1.0	-	Heating water operating limit temperature	<i>WTol</i>	70	°C
Power consumption in modes other than 'active mode'				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	0.100	kW	Rated heat output (**)	<i>P<sub>sup</sub></i>	-	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	0.438	kW	Type of energy input	-		
Standby mode	<i>P<sub>SB</sub></i>	0.100	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>		kW				
Other items							
Capacity control	staged			For air-to-air heat pumps: air flow rate, outdoor measured	-	31927	m <sup>3</sup> /h
Sound power level, indoor/outdoor	<i>L<sub>WA</sub></i>	0/87	dB	For water/brine-to-air heat pumps: Rated brine	-	-	m <sup>3</sup> /h



measured  
Annual energy  
consumption

$Q_{HE}$

38138

kWh

or water flow rate,  
outdoor side heat  
exchanger

Contact details

prova

(\*) For heat pump space heaters and heat pump combination heaters, the rated heat output  $Prated$  is equal to the design load for heating

$P_{designh}$ , and the rated heat output of a supplementary heater  $P_{sup}$  is equal to the supplementary capacity for heating  $sup(Tj)$ .

(\*\*) If  $Cdh$  is not determined by measurement then the default degradation coefficient is  $Cdh = 0,9$ .