EMICON
INNOVATION AS ENERGY
AN ENEX TECHNOLOGIES COMPANY

Sede operativa: Via A. Volta n°49 - 47014 Meldola (FC) ITALY
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Information requirements for heat pumps

Energy Index: SCOP
Regulations: calculated according to commision 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: GPE 881 Kp

Air-to-water heat pump: yes

Water-to-water heat pump: no

Brine-to-water heat pump: no

Low-temperature heat pump: no

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
Rated heat output (*)	*Prated*	72	kW
Declared heating capacity for part load at indoor temperature 20 °C and outdoor temperature *Tj*			
Tj = -7°C	*Pdh*	55.7	kW
Tj = 2°C	*Pdh*	45.7	kW
Tj = 7°C	*Pdh*	52.1	kW
Tj = 12°C	*Pdh*	58.8	kW
Tbiv = -5°C	*Pdh*	58.6	kW
TOL = -10°C	*Pdh*	51.5	kW
For air-to-water heat pumps: Operation limit temperature *Tj* = -°C	*Pdh*	-	kW
Bivalent temperature	T_{biv}	-5	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient chillers (**)	C_{dh}	0.9	–
Power consumption in modes other than 'active mode'			
Off mode	P_{OFF}	0.100	kW
Thermostat-off mode	P_{TO}	0.414	kW
Standby mode	P_{SB}	0.100	kW
Crankcase heater mode	P_{CK}		kW
Other items			
Capacity control		staged	
Sound power level, indoor/outdoor	L_{WA}	0/87	dB

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	149	%
Declared coefficient of performance or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures *Tj*			
Tj = -7°C	COP_d	2.48	-
Tj = 2°C	COP_d	4.19	-
Tj = 7°C	COP_d	5.34	-
Tj = 12°C	COP_d	6.50	-
Tbiv = -5°C	COP_d	2.60	-
TOL = -10°C	COP_d	2.30	-
For air-to-water heat pumps: *Tj* = +-°C	COP_d	-	-
For air-to-water heat pumps: Operation limit temperature	T_{ol}	-10	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	*WTol*	70	°C
Supplementary heater Rated heat output (**)	*Psup*	-	kW
Type of energy input		-	
For air-to-air heat pumps: air flow rate, outdoor measured	–	33681	m^3/h
For water/brine-to-air heat pumps: Rated brine	–	-	m^3/h

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measured Annual energy consumption	Q_{HE}	39183	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
Pdesignh, and the rated heat output of a supplementary heater Psup 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.

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Information requirements for heat pumps

Energy Index: SCOP
Regulations: calculated according to commision regulation (EU) 2013/811, implementing the directive of the european commission 2009/125/ec "ecodesign".
Climate: Average
Source type: Outdoor air
User type: Medium temperature
User flow: Constant user flow rate

Model: GPE 881 Kp
Air-to-water heat pump: yes
Water-to-water heat pump: no
Brine-to-water heat pump: no
Low-temperature heat pump: no
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
Rated heat output (*)	*Prated*	68	kW	**Seasonal space heating energy efficiency**	η_s	125	%
Declared heating capacity for part load at indoor temperature 20 °C and outdoor temperature *Tj*				Declared coefficient of performance or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures *Tj*			
Tj = -7°C	*Pdh*	52.5	kW	*Tj* = -7°C	COP_d	1.96	-
Tj = 2°C	*Pdh*	43.3	kW	*Tj* = 2°C	COP_d	3.49	-
Tj = 7°C	*Pdh*	49.9	kW	*Tj* = 7°C	COP_d	4.54	-
Tj = 12°C	*Pdh*	56.9	kW	*Tj* = 12°C	COP_d	5.63	-
Tbiv = -5°C	*Pdh*	55.4	kW	*Tbiv* = -5°C	COP_d	2.09	-
TOL = -10°C	*Pdh*	48.5	kW	*TOL* = -10°C	COP_d	1.78	-
For air-to-water heat pumps: Operation limit temperature *Tj* = -°C	*Pdh*	-	kW	For air-to-water heat pumps: *Tj* = +-°C	COP_d	-	-
Bivalent temperature	T_{biv}	-5	°C	For air-to-water heat pumps: Operation limit temperature	T_{ol}	-10	°C
Cycling interval capacity for heating	P_{cych}	-	kW	Cycling interval efficiency	COP_{cyc}	-	-
Degradation co-efficient chillers (**)	C_{dh}	0.9	–	Heating water operating limit temperature	*WTol*	70	°C
Power consumption in modes other than 'active mode'				Supplementary heater			
Off mode	P_{OFF}	0.100	kW	Rated heat output (**)	*Psup*	-	kW
Thermostat-off mode	P_{TO}	0.191	kW	Type of energy input		-	
Standby mode	P_{SB}	0.100	kW				
Crankcase heater mode	P_{CK}		kW				
Other items							
Capacity control		staged		For air-to-air heat pumps: air flow rate, outdoor measured	–	31705	m^3/h
Sound power level, indoor/outdoor	L_{WA}	0/87	dB	For water/brine-to-air heat pumps: Rated brine	–	-	m^3/h

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measured Annual energy consumption	Q_{HE}	44115	kWh		or water flow rate, outdoor side heat exchanger	

Contact details	prova

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Pdesignh, and the rated heat output of a supplementary heater Psup 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.