

Information requirements for heat pumps

Energy Index: SCOP

Regulations: calculated according to commission regulation (EU) 2013/811, 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: LAHP-0452LT454							
Outdoor side heat exchanger of heat pump: Air							
Indoor side heat exchanger of heat pump: Water							
Indication if the heater is equipped with a supplementary heater: No							
If applicable: driver of compressor: Electric motor							
Parameters shall be declared for the average heating season, parameters for the warmer and colder heating seasons are optional.							
item	symbol	value	unit	item	symbol	value	unit
Rated heating capacity	$P_{rated,h}$	29.3	kW	Seasonal space heating energy efficiency	$\eta_{s,h}$	156	%
Declared heating capacity for part load at indoor temperature 20 °C and outdoor temperature T_j				Declared coefficient of performance or gas utilisation efficiency/auxiliary energy factor for part load at given outdoor temperatures T_j			
$T_j = -7^{\circ}\text{C}$	P_{dh}	25.9	kW	$T_j = -7^{\circ}\text{C}$	COP_d	2.23	%
$T_j = 2^{\circ}\text{C}$	P_{dh}	22.1	kW	$T_j = 2^{\circ}\text{C}$	COP_d	3.97	%
$T_j = 7^{\circ}\text{C}$	P_{dh}	26.6	kW	$T_j = 7^{\circ}\text{C}$	COP_d	5.67	%
$T_j = 12^{\circ}\text{C}$	P_{dh}	30.4	kW	$T_j = 12^{\circ}\text{C}$	COP_d	7.52	%
$T_{biv} = -7^{\circ}\text{C}$	P_{dh}	25.9	kW	$T_j = -7^{\circ}\text{C}$	COP_d	2.23	%
$TOL = -10^{\circ}\text{C}$	P_{dh}	23.4	kW	$T_j = -10^{\circ}\text{C}$	COP_d	2.02	%
For air-to-water heat pumps: Operation limit temperature $T_j = -^{\circ}\text{C}$	P_{dh}	-	kW	For air-to-water heat pumps: $T_j = +^{\circ}\text{C}$	COP_d	-	%
Bivalent temperature	T_{biv}	-7	°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}	0.98	—	Heating water operating limit temperature	$WTol$	60.0	°C
Power consumption in modes other than 'active mode'				Supplementary heater			
Off mode	P_{OFF}	0.02	kW	Back-up heating capacity (*)	$elbu$	-	kW
Thermostat-off mode	P_{TO}	0.21	kW	Type of energy input	-		
Crankcase heater mode	P_{CK}	0.096	kW	Standby mode	P_{SB}	0.02	kW
Other items							
Capacity control	staged			For air-to-air heat pumps: air flow rate, outdoor measured	—	15642	m ³ /h
Sound power level, indoor/outdoor measured Emissions of nitrogen oxides (if applicable)	L_{WA} $NO_{x(**)}$	0/77.7 0.0	dB mg/kW h fuel input	For water/brine-to-air heat pumps: Rated brine or water flow rate, outdoor side heat exchanger	—	-	m ³ /h

			GCV				
			kg CO ₂ eq (100 years)				
GWP of the refrigerant		466					
Contact details	prova						

(*)

(**) If C_{dh} is not determined by measurement then the default degradation coefficient of heat pumps shall be 0,25.

obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer