



## 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: <b>LAHP-2304LT454</b>							
Outdoor side heat exchanger of heat pump: <b>Air</b>							
Indoor side heat exchanger of heat pump: <b>Water</b>							
Indication if the heater is equipped with a supplementary heater: <b>No</b>							
If applicable: driver of compressor: <b>Electric motor</b>							
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	$P_{rated,h}$	148	kW	Seasonal space heating energy efficiency	$\eta_{s,h}$	162	%
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 $T_j$			
$T_j = -7^{\circ}\text{C}$	$P_{dh}$	131	kW	$T_j = -7^{\circ}\text{C}$	$COP_d$	2.44	%
$T_j = 2^{\circ}\text{C}$	$P_{dh}$	85.1000	kW	$T_j = 2^{\circ}\text{C}$	$COP_d$	4.01	%
$T_j = 7^{\circ}\text{C}$	$P_{dh}$	51.8000	kW	$T_j = 7^{\circ}\text{C}$	$COP_d$	5.61	%
$T_j = 12^{\circ}\text{C}$	$P_{dh}$	59.9000	kW	$T_j = 12^{\circ}\text{C}$	$COP_d$	7.38	%
$T_{biv} = -7^{\circ}\text{C}$	$P_{dh}$	131	kW	$T_j = -7^{\circ}\text{C}$	$COP_d$	2.44	%
$TOL = -10^{\circ}\text{C}$	$P_{dh}$	119	kW	$T_j = -10^{\circ}\text{C}$	$COP_d$	2.16	%
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	$P_{cyc}$	-	kW	Cycling interval efficiency	$COP_{cyc}$	-	%
Degradation co-efficient chillers(*)	$C_{dh}$	0.97	—	Heating water operating limit temperature	$WTol$	60.0000	°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	$P_{TO}$	0.66	kW	Type of energy input	-		
Crankcase heater mode	$P_{CK}$	0.21	kW	Standby mode	$P_{SB}$	0.15	kW
Other items							
Capacity control	staged			For air-to-air heat pumps: air flow rate, outdoor measured	—	72397	m³/h
Sound power level, indoor/outdoor measured	$L_{WA}$ NOx(** *)	0/90.7 0.0	dB	For water/brine-to-air heat pumps: Rated brine or water flow rate, outdoor side heat exchanger	—	-	m³/h
Emissions of nitrogen oxides (if applicable)			mg/kW h fuel input				
			GCV				
GWP of the refrigerant		466	kg CO₂ eq (100 years)				
Contact details	prova						
(*)							
(**) If $C_{dh}$ is not determined by measurement then the default degradation coefficient of heat pumps shall be 0,25.							
(***) From 26 September 2018. Where information relates to multi-split heat pumps, the test result and performance data may be obtained on the basis of the performance of the outdoor unit, with a combination of indoor unit(s) recommended by the manufacturer or importer.							