

**Information requirements for heat pump space heaters and heat pump combination heaters- 813/2013**

Model: Samsung AE090JXYDEH & Joule 200L H.G Cyclone
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: Yes
Heat Pump combination heater: Yes
Parameters are declared for: low-temperature application
Parameters are declared for: average climate conditions

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
<b>Rated heat output</b>	<b><i>P<sub>rated</sub></i></b>	<b>7</b>	<b>kW</b>	<b>Seasonal space heating energy efficiency</b>	<b><math>\eta_s</math></b>	<b>176</b>	<b>%</b>
Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature $T_j$				Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature $T_j$			
$T_j = -7^\circ\text{C}$	<i>P<sub>dh</sub></i>	6.00	kW	$T_j = -7^\circ\text{C}$	<i>COP<sub>d</sub></i>	2.63	-
$T_j = +2^\circ\text{C}$	<i>P<sub>dh</sub></i>	3.70	kW	$T_j = +2^\circ\text{C}$	<i>COP<sub>d</sub></i>	4.20	-
$T_j = +7^\circ\text{C}$	<i>P<sub>dh</sub></i>	2.40	kW	$T_j = +7^\circ\text{C}$	<i>COP<sub>d</sub></i>	6.11	-
$T_j = +12^\circ\text{C}$	<i>P<sub>dh</sub></i>	2.20	kW	$T_j = +12^\circ\text{C}$	<i>COP<sub>d</sub></i>	9.37	-
$T_j = \text{operation limit temperature}$	<i>P<sub>dh</sub></i>	6.80	kW	$T_j = \text{operation limit temperature}$	<i>COP<sub>d</sub></i>	2.55	-
Bivalent temperature	<i>T<sub>biv</sub></i>	-10.00	°C	Operation limit temperature	<i>TOL</i>	-10	°C
Degradation co-efficient	<i>C<sub>dh</sub></i>	0.9	-	Heating water operating limit temperature	<i>WTOL</i>	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	0.08	kW	Rated heat output	<i>P<sub>sup</sub></i>	3	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	0.011	kW	Type of energy Input	Electricity		
Standby mode	<i>P<sub>SB</sub></i>	0.011	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	0	kW				
Other items				Outdoor sound power level			
Capacity control		Variable		$L_{WA}$		63	dB

For heat pump combination heater:

<b>Declared load profile</b>	L		<b>Water heating energy efficiency</b>	$\eta_{wh}$	96	%
Standby cylinder heat loss	2.136	kWh	Reference hot water temperature		48.97	°C
			DHW volume accounted for in test		177	L

Contact details	Joule IE, Kylemore Park West, Ballyfermot, Dublin 10.
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