

Average climate and High temperature

Model(s):	CTC EcoAir 415 + CTC EcoLogic
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 low-temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	12	kW	Seasonal space heating energy efficiency	η_s	119	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = - 7 °C	<i>Pdh</i>	9,5	kW	T j = - 7 °C	<i>COPd</i>	2,32	-
T j = + 2 °C	<i>Pdh</i>	11,5	kW	T j = + 2 °C	<i>COPd</i>	2,96	-
T j = + 7 °C	<i>Pdh</i>	15,2	kW	T j = + 7 °C	<i>COPd</i>	3,91	-
T j = + 12 °C	<i>Pdh</i>	17,9	kW	T j = + 12 °C	<i>COPd</i>	4,78	-
T j = bivalent temperature	<i>Pdh</i>	9,9	kW	T j = bivalent temperature	<i>COPd</i>	2,48	-
T j = operation limit temperature	<i>Pdh</i>	8,6	kW	T j = operation limit temperature	<i>COPd</i>	2,06	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	<i>Pdh</i>	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	<i>COPd</i>	na	-
Bivalent temperature	<i>T biv</i>	-5	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	-10	°C
Cycling interval capacity for heating	<i>P cych</i>	na	kW	Cycling interval efficiency	<i>COPcyc</i>	na	-
Degradation co-efficient (**)	<i>Cdh</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P OFF</i>	0,018	kW	Rated heat output (*)	<i>Psup</i>	3,7	kW
Thermostat-off mode	<i>P TO</i>	0,020	kW	Type of energy input Electric			
Standby mode	<i>P SB</i>	0,018	kW				
Crankcase heater mode	<i>P CK</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Fixed			-	4100	<i>m3/h</i>	
Sound power level, indoors/outdoors	<i>L WA</i>	na/64	<i>dB</i>	-	na	<i>m3/h</i>	
Annual energy consumption	<i>Q HE</i>	8314	<i>kWh</i>	-	na	<i>m3/h</i>	
For heat pump combination heater:							
Declared load profile	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Qelec</i>	na	kWh	Daily fuel consumption	<i>Qfuel</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ

Contact details **Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000** www.ctc.se

(*) 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.

Average climate and Low temperature

Model(s):	CTC EcoAir 415 + CTC EcoLogic
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 low-temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	13	kW	Seasonal space heating energy efficiency	η_s	147	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = - 7 °C	<i>Pdh</i>	10,1	kW	T j = - 7 °C	<i>COPd</i>	3,08	-
T j = + 2 °C	<i>Pdh</i>	12,3	kW	T j = + 2 °C	<i>COPd</i>	3,78	-
T j = + 7 °C	<i>Pdh</i>	16,3	kW	T j = + 7 °C	<i>COPd</i>	4,89	-
T j = + 12 °C	<i>Pdh</i>	18,8	kW	T j = + 12 °C	<i>COPd</i>	5,70	-
T j = bivalent temperature	<i>Pdh</i>	10,6	kW	T j = bivalent temperature	<i>COPd</i>	3,25	-
T j = operation limit temperature	<i>Pdh</i>	9,2	kW	T j = operation limit temperature	<i>COPd</i>	2,83	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	<i>Pdh</i>	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	<i>COPd</i>	na	-
Bivalent temperature	<i>T biv</i>	-5	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	-10	°C
Cycling interval capacity for heating	<i>P cych</i>	na	kW	Cycling interval efficiency	<i>COPcyc</i>	na	-
Degradation co-efficient (**)	<i>Cdh</i>	0,97	-	Heating water operating limit temperature	<i>WTOL</i>	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P OFF</i>	0,018	kW	Rated heat output (*)	<i>Psup</i>	3,9	kW
Thermostat-off mode	<i>P TO</i>	0,067	kW	Type of energy input Electric			
Standby mode	<i>P SB</i>	0,018	kW				
Crankcase heater mode	<i>P CK</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Fixed			-	4100	<i>m3/h</i>	
Sound power level, indoors/outdoors	<i>L WA</i>	na/64	<i>dB</i>	-	na	<i>m3/h</i>	
Annual energy consumption	<i>Q HE</i>	7193	<i>kWh</i>				
For heat pump combination heater:							
Declared load profile	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Qelec</i>	na	kWh	Daily fuel consumption	<i>Qfuel</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ

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