

Model(s):	CTC EcoAir C116 + CTC EcoLogic		
Air-to-water heat pump:	Yes	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VI
Brine-to-water heat pump:	No	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	201 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
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 (*)	Prated	12	kW	Seasonal space heating energy efficiency	ηs	197	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	NA	kW	Tj = -7 °C	COPd	NA	-
Tj = +2 °C	Pdh	12,0	kW	Tj = +2 °C	COPd	2,48	-
Tj = +7 °C	Pdh	7,7	kW	Tj = +7 °C	COPd	4,15	-
Tj = +12 °C	Pdh	3,8	kW	Tj = +12 °C	COPd	6,70	-
Tj = bivalent temperature	Pdh	12,0	kW	Tj = bivalent temperature	COPd	2,48	-
Tj = operation limit temperature	Pdh	12,0	kW	Tj = operation limit temperature	COPd	2,48	-
For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	Pdh	NA	kW	For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	Tbiv	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	-
Degradation co-efficient	Cdh	0,90	-	Heating water operating limit temperature	WTOL	75	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	POFF	0,006	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Pto	0,006	kW	Type of energy input	Electric		
Standby mode	PSB	0,006	kW				
Crankcase heater mode	PCK	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	7100	m³/h
Sound power level, indoors/outdoors	LWA	NA / 51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	NA	m³/h
Annual energy consumption	QHE	3210	kWh				

For heat pump combination heater:

Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	η_{wh}	NA	%
Daily electricity consumption	<i>Q_{elec}</i>	NA	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	AEC	NA	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.

Model(s):	CTC EcoAir C116 + CTC EcoLogic		
Air-to-water heat pump:	Yes	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VI
Brine-to-water heat pump:	No	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	268 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
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 (*)	Prated	13	kW	Seasonal space heating energy efficiency	ηs	264	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	NA	kW	Tj = -7 °C	COPd	NA	-
Tj = +2 °C	Pdh	12,6	kW	Tj = +2 °C	COPd	3,33	-
Tj = +7 °C	Pdh	8,1	kW	Tj = +7 °C	COPd	5,92	-
Tj = +12 °C	Pdh	3,7	kW	Tj = +12 °C	COPd	8,27	-
Tj = bivalent temperature	Pdh	12,6	kW	Tj = bivalent temperature	COPd	3,33	-
Tj = operation limit temperature	Pdh	12,6	kW	Tj = operation limit temperature	COPd	3,33	-
For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	Pdh	NA	kW	For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	Tbiv	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	-
Degradation co-efficient	Cdh	0,90	-	Heating water operating limit temperature	WTOL	75	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	POFF	0,006	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Pto	0,006	kW	Type of energy input	Electric		
Standby mode	PSB	0,006	kW				
Crankcase heater mode	PCK	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	7100	m³/h
Sound power level, indoors/outdoors	LWA	NA / 52	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	NA	m³/h
Annual energy consumption	QHE	2564	kWh				

For heat pump combination heater:

Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	η_{wh}	NA	%
Daily electricity consumption	<i>Q_{elec}</i>	NA	<i>kWh</i>	Daily fuel consumption	<i>Q_{fuel}</i>	NA	<i>kWh</i>
Annual electricity consumption	<i>AEC</i>	NA	<i>kWh</i>	Annual fuel consumption	<i>AFC</i>	NA	<i>GJ</i>

Specific precautions and end of life information:

The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.

Contact details

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Model(s):	CTC EcoAir C116 + CTC EcoLogic			
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	160	%
Equipped with a supplementary heater:	No	Package efficiency class:	A+++	-
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 (*)	Prated	13	kW	Seasonal space heating energy efficiency	ηs	156	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	10,5	kW	Tj = -7 °C	COPd	2,14	-
Tj = +2 °C	Pdh	7,3	kW	Tj = +2 °C	COPd	3,83	-
Tj = +7 °C	Pdh	4,7	kW	Tj = +7 °C	COPd	5,74	-
Tj = +12 °C	Pdh	3,9	kW	Tj = +12 °C	COPd	8,47	-
Tj = bivalent temperature	Pdh	10,5	kW	Tj = bivalent temperature	COPd	2,14	-
Tj = operation limit temperature	Pdh	9,9	kW	Tj = operation limit temperature	COPd	1,98	-
For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	Pdh	NA	kW	For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	-
Degradation co-efficient	Cdh	0,90	-	Heating water operating limit temperature	WTOL	75	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	POFF	0,006	kW	Rated heat output (*)	Psup	2,6	kW
Thermostat-off mode	Pto	0,006	kW	Type of energy input	Electric		
Standby mode	PSB	0,006	kW				
Crankcase heater mode	PCK	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	7100	m³/h
Sound power level, indoors/outdoors	LWA	NA / 51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	NA	m³/h
Annual energy consumption	QHE	6507	kWh				

For heat pump combination heater:

Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	η_{wh}	NA	%
Daily electricity consumption	<i>Q_{elec}</i>	NA	<i>kWh</i>	Daily fuel consumption	<i>Q_{fuel}</i>	NA	<i>kWh</i>
Annual electricity consumption	<i>AEC</i>	NA	<i>kWh</i>	Annual fuel consumption	<i>AFC</i>	NA	<i>GJ</i>

Specific precautions and end of life information:

The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.

Model(s):	CTC EcoAir C116 + CTC EcoLogic			
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	207	%
Equipped with a supplementary heater:	No	Package efficiency class:	A+++	-
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 (*)	Prated	14	kW	Seasonal space heating energy efficiency	ηs	203	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	11,2	kW	Tj = -7 °C	COPd	2,92	-
Tj = +2 °C	Pdh	7,1	kW	Tj = +2 °C	COPd	5,00	-
Tj = +7 °C	Pdh	4,4	kW	Tj = +7 °C	COPd	7,21	-
Tj = +12 °C	Pdh	3,9	kW	Tj = +12 °C	COPd	10,43	-
Tj = bivalent temperature	Pdh	11,2	kW	Tj = bivalent temperature	COPd	2,92	-
Tj = operation limit temperature	Pdh	10,6	kW	Tj = operation limit temperature	COPd	2,60	-
For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	Pdh	NA	kW	For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	COPd	NA	-
Bivalent temperature	Tbiv	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	-
Degradation co-efficient	Cdh	0,90	-	Heating water operating limit temperature	WTOL	75	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	POFF	0,006	kW	Rated heat output (*)	Psup	2,9	kW
Thermostat-off mode	Pto	0,006	kW	Type of energy input	Electric		
Standby mode	Psb	0,006	kW				
Crankcase heater mode	Pck	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	7100	m³/h
Sound power level, indoors/outdoors	LWA	NA / 52	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	NA	m³/h
Annual energy consumption	QHE	5421	kWh				

For heat pump combination heater:

Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	η_{wh}	NA	%
Daily electricity consumption	<i>Q_{elec}</i>	NA	<i>kWh</i>	Daily fuel consumption	<i>Q_{fuel}</i>	NA	<i>kWh</i>
Annual electricity consumption	<i>AEC</i>	NA	<i>kWh</i>	Annual fuel consumption	<i>AFC</i>	NA	<i>GJ</i>

Specific precautions and end of life information:

The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.

Contact details

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Model(s):	CTC EcoAir C116 + CTC EcoLogic		
Air-to-water heat pump:	Yes	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VI
Brine-to-water heat pump:	No	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	143 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
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 (*)	Prated	13	kW	Seasonal space heating energy efficiency	ηs	139	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 °C	Pdh	7,6	kW	Tj = -7 °C	COPd	2,96	-
Tj = +2 °C	Pdh	4,7	kW	Tj = +2 °C	COPd	4,27	-
Tj = +7 °C	Pdh	4,6	kW	Tj = +7 °C	COPd	5,71	-
Tj = +12 °C	Pdh	3,9	kW	Tj = +12 °C	COPd	6,92	-
Tj = bivalent temperature	Pdh	9,9	kW	Tj = bivalent temperature	COPd	2,22	-
Tj = operation limit temperature	Pdh	7,6	kW	Tj = operation limit temperature	COPd	1,68	-
For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	Pdh	9,9	kW	For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)	COPd	2,22	-
Bivalent temperature	Tbiv	-15	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	Pcych	NA	kW	Cycling interval efficiency	COPcyc	NA	-
Degradation co-efficient	Cdh	0,90	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	POFF	0,006	kW	Rated heat output (*)	Psup	4,9	kW
Thermostat-off mode	Pto	0,006	kW	Type of energy input	Electric		
Standby mode	PSB	0,006	kW				
Crankcase heater mode	PCK	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	7100	m³/h
Sound power level, indoors/outdoors	LWA	NA / 51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	NA	m³/h
Annual energy consumption	QHE	8689	kWh				

For heat pump combination heater:

Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	η_{wh}	NA	%
Daily electricity consumption	<i>Q_{elec}</i>	NA	<i>kWh</i>	Daily fuel consumption	<i>Q_{fuel}</i>	NA	<i>kWh</i>
Annual electricity consumption	<i>AEC</i>	NA	<i>kWh</i>	Annual fuel consumption	<i>AFC</i>	NA	<i>GJ</i>

Specific precautions and end of life information:

The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.

Cold climate and Low temperature

Model(s):	CTC EcoAir C116 + CTC EcoLogic		
Air-to-water heat pump:	Yes	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VI
Brine-to-water heat pump:	No	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	181 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
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	<i>kW</i>	Seasonal space heating energy efficiency	η_s	177	%
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>	7,6	<i>kW</i>	T j = -7 °C	<i>COPd</i>	3,81	-
T j = +2 °C	<i>Pdh</i>	4,9	<i>kW</i>	T j = +2 °C	<i>COPd</i>	5,44	-
T j = +7 °C	<i>Pdh</i>	4,6	<i>kW</i>	T j = +7 °C	<i>COPd</i>	7,37	-
T j = +12 °C	<i>Pdh</i>	3,7	<i>kW</i>	T j = +12 °C	<i>COPd</i>	8,09	-
T j = bivalent temperature	<i>Pdh</i>	10,1	<i>kW</i>	T j = bivalent temperature	<i>COPd</i>	2,71	-
T j = operation limit temperature	<i>Pdh</i>	8,4	<i>kW</i>	T j = operation limit temperature	<i>COPd</i>	2,30	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	<i>Pdh</i>	10,1	<i>kW</i>	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	<i>COPd</i>	2,71	-
Bivalent temperature	<i>T biv</i>	-15	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	-22	°C
Cycling interval capacity for heating	<i>P cych</i>	NA	<i>kW</i>	Cycling interval efficiency	<i>COPcyc</i>	NA	-
Degradation co-efficient	<i>Cdh</i>	0,90	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P OFF</i>	0,006	<i>kW</i>	Rated heat output (*)	<i>Psup</i>	4,4	<i>kW</i>
Thermostat-off mode	<i>P TO</i>	0,006	<i>kW</i>	Type of energy input	Electric		
Standby mode	<i>P SB</i>	0,006	<i>kW</i>				
Crankcase heater mode	<i>P CK</i>	0,000	<i>kW</i>				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	7100	<i>m³/h</i>
Sound power level, indoors/outdoors	<i>L WA</i>	NA / 52	<i>dB</i>	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	NA	<i>m³/h</i>
Annual energy consumption	<i>Q HE</i>	7024	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	NA	Efficiency class	NA	Water heating energy efficiency	η_{wh}	NA	%
Daily electricity consumption	<i>Q_{elec}</i>	NA	<i>kWh</i>	Daily fuel consumption	<i>Q_{fuel}</i>	NA	<i>kWh</i>
Annual electricity consumption	<i>AEC</i>	NA	<i>kWh</i>	Annual fuel consumption	<i>AFC</i>	NA	<i>GJ</i>

Specific precautions and end of life information:

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