

Warm climate and Medium temperature

Model(s):	CTC EcoAir 614M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	180 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	176	%
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>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	9,4	kW	T _j = +2 °C	<i>COP_d</i>	1,81	-
T _j = +7 °C	<i>P_{dh}</i>	6,2	kW	T _j = +7 °C	<i>COP_d</i>	3,83	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	6,27	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,5	kW	T _j = bivalent temperature	<i>COP_d</i>	1,81	-
T _j = operation limit temperature	<i>P_{dh}</i>	9,5	kW	T _j = operation limit temperature	<i>COP_d</i>	1,81	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	2	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	2	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,014	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	Variable			-		2350	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	na/52	dB	-		na	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	2845	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	η_{wh}	122	%
Daily electricity consumption	Q _{elec}	6,232	kWh	Daily fuel consumption	Q _{fuel}	NA	kWh
Annual electricity consumption	AEC	1371	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.

Contact details

Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000

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200701

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Model(s):	CTC EcoAir 614M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	236 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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 (*)	P_{rated}	10	kW	Seasonal space heating energy efficiency	η_s	232	%
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	P_{dh}	na	kW	T _j = -7 °C	COP_d	na	-
T _j = +2 °C	P_{dh}	9,3	kW	T _j = +2 °C	COP_d	2,50	-
T _j = +7 °C	P_{dh}	6,2	kW	T _j = +7 °C	COP_d	5,39	-
T _j = +12 °C	P_{dh}	3,1	kW	T _j = +12 °C	COP_d	7,79	-
T _j = bivalent temperature	P_{dh}	9,3	kW	T _j = bivalent temperature	COP_d	2,50	-
T _j = operation limit temperature	P_{dh}	9,3	kW	T _j = operation limit temperature	COP_d	2,50	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	P_{dh}	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	COP_d	na	-
Bivalent temperature	T_{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P_{cych}	na	kW	Cycling interval efficiency	COP_{cyc}	na	-
Degradation co-efficient	C_{dh}	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,014	kW	Rated heat output (*)	P_{sup}	0,0	kW
Thermostat-off mode	P_{TO}	0,014	kW	Type of energy input: Electric			
Standby mode	P_{SB}	0,014	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/ outdoors	L_{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	Q_{HE}	2164	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	η_{wh}	122	%
Daily electricity consumption	Qelec	6,232	kWh	Daily fuel consumption	Q _{fuel}	NA	kWh
Annual electricity consumption	AEC	1371	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.

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Average climate and Medium temperature

Model(s):	CTC EcoAir 614M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	152 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++ -
Heat pump combination heater:	Yes		

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>	8	kW	Seasonal space heating energy efficiency	η_s	148	%
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>P_{dh}</i>	6,8	kW	T _j = -7 °C	<i>COP_d</i>	2,01	-
T _j = +2 °C	<i>P_{dh}</i>	4,1	kW	T _j = +2 °C	<i>COP_d</i>	3,94	-
T _j = +7 °C	<i>P_{dh}</i>	2,6	kW	T _j = +7 °C	<i>COP_d</i>	5,14	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	6,53	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,7	kW	T _j = bivalent temperature	<i>COP_d</i>	1,51	-
T _j = operation limit temperature	<i>P_{dh}</i>	7,7	kW	T _j = operation limit temperature	<i>COP_d</i>	1,51	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-10	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	-10	°C
Cycling interval capacity for heating	<i>P_{cy}</i>	na	kW	Cycling interval efficiency	<i>COP_{cy}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,014	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	4153	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	A	Water heating energy efficiency	η_{wh}	97	%
Daily electricity consumption	Q _{elec}	7,880	kWh	Daily fuel consumption	Q _{fuel}	NA	kWh
Annual electricity consumption	AEC	1734	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

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Model(s):	CTC EcoAir 614M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	197 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++ -
Heat pump combination heater:	Yes		

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>P_{rated}</i>	8	kW	Seasonal space heating energy efficiency	η_s	193	%
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>P_{dh}</i>	6,8	kW	T _j = -7 °C	<i>COP_d</i>	2,88	-
T _j = +2 °C	<i>P_{dh}</i>	4,1	kW	T _j = +2 °C	<i>COP_d</i>	5,21	-
T _j = +7 °C	<i>P_{dh}</i>	2,6	kW	T _j = +7 °C	<i>COP_d</i>	6,24	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	7,17	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,7	kW	T _j = bivalent temperature	<i>COP_d</i>	2,25	-
T _j = operation limit temperature	<i>P_{dh}</i>	7,7	kW	T _j = operation limit temperature	<i>COP_d</i>	2,25	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-10	°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>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,014	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	Variable			-	2350	<i>m³/h</i>	
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/51	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	3163	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	A	Water heating energy efficiency	η_{wh}	97	%
Daily electricity consumption	<i>Q_{elec}</i>	7,880	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1734	kWh	Annual fuel consumption	<i>AFC</i>	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.

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Cold climate and Medium temperature

Model(s):	CTC EcoAir 614M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	124 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	120	%
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>P_{dh}</i>	6,7	kW	T _j = -7 °C	<i>COP_d</i>	2,40	-
T _j = +2 °C	<i>P_{dh}</i>	4,2	kW	T _j = +2 °C	<i>COP_d</i>	4,44	-
T _j = +7 °C	<i>P_{dh}</i>	2,5	kW	T _j = +7 °C	<i>COP_d</i>	5,29	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	6,92	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,9	kW	T _j = bivalent temperature	<i>COP_d</i>	1,74	-
T _j = operation limit temperature	<i>P_{dh}</i>	2,7	kW	T _j = operation limit temperature	<i>COP_d</i>	1,32	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	7,1	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	1,51	-
Bivalent temperature	<i>T_{biv}</i>	-11	°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/60	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	8,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,014	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	Variable			-	2350	<i>m³/h</i>	
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/52	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	8797	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	A	Water heating energy efficiency	η_{wh}	82	%
Daily electricity consumption	<i>Q_{elec}</i>	9,257	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2037	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ

Specific precautions and end of life information:

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Model(s):	CTC EcoAir 614M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	155 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	151	%
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>P_{dh}</i>	6,6	kW	T _j = -7 °C	<i>COP_d</i>	3,16	-
T _j = +2 °C	<i>P_{dh}</i>	4,3	kW	T _j = +2 °C	<i>COP_d</i>	5,57	-
T _j = +7 °C	<i>P_{dh}</i>	2,7	kW	T _j = +7 °C	<i>COP_d</i>	6,79	-
T _j = +12 °C	<i>P_{dh}</i>	3,1	kW	T _j = +12 °C	<i>COP_d</i>	7,04	-
T _j = bivalent temperature	<i>P_{dh}</i>	8,1	kW	T _j = bivalent temperature	<i>COP_d</i>	2,20	-
T _j = operation limit temperature	<i>P_{dh}</i>	5,0	kW	T _j = operation limit temperature	<i>COP_d</i>	1,81	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	7,4	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	1,82	-
Bivalent temperature	<i>T_{biv}</i>	-11	°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	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	6,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,014	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	7038	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	A	Water heating energy efficiency	η_{wh}	82	%
Daily electricity consumption	<i>Q_{elec}</i>	9,257	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	AEC	2037	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

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Model(s):	CTC EcoAir 614M 400V+ 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:	180 %
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 (*)	P_{rated}	10	kW	Seasonal space heating energy efficiency	η_s	176	%
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	P_{dh}	na	kW	T _j = -7 °C	COP_d	na	-
T _j = +2 °C	P_{dh}	9,4	kW	T _j = +2 °C	COP_d	1,81	-
T _j = +7 °C	P_{dh}	6,2	kW	T _j = +7 °C	COP_d	3,83	-
T _j = +12 °C	P_{dh}	3,0	kW	T _j = +12 °C	COP_d	6,27	-
T _j = bivalent temperature	P_{dh}	9,5	kW	T _j = bivalent temperature	COP_d	1,81	-
T _j = operation limit temperature	P_{dh}	9,5	kW	T _j = operation limit temperature	COP_d	1,81	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	P_{dh}	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	COP_d	na	-
Bivalent temperature	T_{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P_{cych}	na	kW	Cycling interval efficiency	COP_{cyc}	na	-
Degradation co-efficient	C_{dh}	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,014	kW	Rated heat output (*)	P_{sup}	0,0	kW
Thermostat-off mode	P_{TO}	0,014	kW	Type of energy input: Electric			
Standby mode	P_{SB}	0,014	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	L_{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	Q_{HE}	2845	kWh				

For heat pump combination heater:

Declared load profile	na	Efficiency class	na	Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Q _{elec}	na	kWh	Daily fuel consumption	Q _{fuel}	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.

Contact details

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181005

**Warm climate and Low temperature**

Model(s):	CTC EcoAir 614M 400V+ 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:	236 %
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 (*)	P_{rated}	10	kW	Seasonal space heating energy efficiency	η_s	232	%
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	P_{dh}	na	kW	T _j = -7 °C	COP_d	na	-
T _j = +2 °C	P_{dh}	9,3	kW	T _j = +2 °C	COP_d	2,50	-
T _j = +7 °C	P_{dh}	6,2	kW	T _j = +7 °C	COP_d	5,39	-
T _j = +12 °C	P_{dh}	3,1	kW	T _j = +12 °C	COP_d	7,79	-
T _j = bivalent temperature	P_{dh}	9,3	kW	T _j = bivalent temperature	COP_d	2,50	-
T _j = operation limit temperature	P_{dh}	9,3	kW	T _j = operation limit temperature	COP_d	2,50	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	P_{dh}	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	COP_d	na	-
Bivalent temperature	T_{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P_{cych}	na	kW	Cycling interval efficiency	COP_{cyc}	na	-
Degradation co-efficient	C_{dh}	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,014	kW	Rated heat output (*)	P_{sup}	0,0	kW
Thermostat-off mode	P_{TO}	0,014	kW	Type of energy input: Electric			
Standby mode	P_{SB}	0,014	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	L_{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	Q_{HE}	2164	kWh				

For heat pump combination heater:

Declared load profile	na	Efficiency class	na	Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Q_{elec}	na	kWh	Daily fuel consumption	Q_{fuel}	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.

Contact details

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Average climate and Medium temperature

Model(s):	CTC EcoAir 614M 400V+ 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:	152 %
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 (*)	<i>P_{rated}</i>	8	kW	Seasonal space heating energy efficiency	η_s	148	%
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>P_{dh}</i>	6,8	kW	T _j = -7 °C	<i>COP_d</i>	2,01	-
T _j = +2 °C	<i>P_{dh}</i>	4,1	kW	T _j = +2 °C	<i>COP_d</i>	3,94	-
T _j = +7 °C	<i>P_{dh}</i>	2,6	kW	T _j = +7 °C	<i>COP_d</i>	5,14	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	6,53	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,7	kW	T _j = bivalent temperature	<i>COP_d</i>	1,51	-
T _j = operation limit temperature	<i>P_{dh}</i>	7,7	kW	T _j = operation limit temperature	<i>COP_d</i>	1,51	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-10	°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>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,014	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	Variable			-	2350	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/52	dB	-	na		m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	4153	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	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	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.

Contact details

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181005

Average climate and Low temperature

Model(s):	CTC EcoAir 614M 400V+ 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:	197 %
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 (*)	<i>P_{rated}</i>	8	kW	Seasonal space heating energy efficiency	η_s	193	%
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>P_{dh}</i>	6,8	kW	T _j = -7 °C	<i>COP_d</i>	2,88	-
T _j = +2 °C	<i>P_{dh}</i>	4,1	kW	T _j = +2 °C	<i>COP_d</i>	5,21	-
T _j = +7 °C	<i>P_{dh}</i>	2,6	kW	T _j = +7 °C	<i>COP_d</i>	6,24	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	7,17	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,7	kW	T _j = bivalent temperature	<i>COP_d</i>	2,25	-
T _j = operation limit temperature	<i>P_{dh}</i>	7,7	kW	T _j = operation limit temperature	<i>COP_d</i>	2,25	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-10	°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>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,014	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	Variable			-	2350	<i>m³/h</i>	
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/51	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	3163	<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	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	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.

Contact details

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Model(s):	CTC EcoAir 614M 400V+ 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:	124 %
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>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	120	%
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>P_{dh}</i>	6,7	kW	T _j = -7 °C	<i>COP_d</i>	2,40	-
T _j = +2 °C	<i>P_{dh}</i>	4,2	kW	T _j = +2 °C	<i>COP_d</i>	4,44	-
T _j = +7 °C	<i>P_{dh}</i>	2,5	kW	T _j = +7 °C	<i>COP_d</i>	5,29	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	6,92	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,9	kW	T _j = bivalent temperature	<i>COP_d</i>	1,74	-
T _j = operation limit temperature	<i>P_{dh}</i>	2,7	kW	T _j = operation limit temperature	<i>COP_d</i>	1,32	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	7,1	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	1,51	-
Bivalent temperature	<i>T_{biv}</i>	-11	°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/60	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	8,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,014	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	Variable			-	2350	<i>m³/h</i>	
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/52	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	8797	<i>kWh</i>				

For heat pump combination heater:				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	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	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 614M 400V+ 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:	155 %
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 (*)	P_{rated}	11	kW	Seasonal space heating energy efficiency	η_s	151	%
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	P_{dh}	6,6	kW	T _j = -7 °C	COP_d	3,16	-
T _j = +2 °C	P_{dh}	4,3	kW	T _j = +2 °C	COP_d	5,57	-
T _j = +7 °C	P_{dh}	2,7	kW	T _j = +7 °C	COP_d	6,79	-
T _j = +12 °C	P_{dh}	3,1	kW	T _j = +12 °C	COP_d	7,04	-
T _j = bivalent temperature	P_{dh}	8,1	kW	T _j = bivalent temperature	COP_d	2,20	-
T _j = operation limit temperature	P_{dh}	5,0	kW	T _j = operation limit temperature	COP_d	1,81	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	P_{dh}	7,4	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	COP_d	1,82	-
Bivalent temperature	T_{biv}	-11	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P_{cych}	na	kW	Cycling interval efficiency	COP_{cyc}	na	-
Degradation co-efficient	C_{dh}	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,014	kW	Rated heat output (*)	P_{sup}	6,0	kW
Thermostat-off mode	P_{TO}	0,014	kW	Type of energy input: Electric			
Standby mode	P_{SB}	0,014	kW				
Crankcase heater mode	P_{CK}	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	Variable			-	2350	na	m ³ /h
Sound power level, indoors/outdoors	L_{WA}	na/51	dB	-	na		m ³ /h
Annual energy consumption	Q_{HE}	7038	kWh				

For heat pump combination heater:				For heat pump combination heater:			
Declared load profile	na	Efficiency class	na	Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Q_{elec}	na	kWh	Daily fuel consumption	Q_{fuel}	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 614M 400V + EcoZenith i255		
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:	138 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	134	%
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>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	8,4	kW	T _j = +2 °C	<i>COP_d</i>	1,31	-
T _j = +7 °C	<i>P_{dh}</i>	5,8	kW	T _j = +7 °C	<i>COP_d</i>	2,92	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	5,05	-
T _j = bivalent temperature	<i>P_{dh}</i>	8,5	kW	T _j = bivalent temperature	<i>COP_d</i>	1,31	-
T _j = operation limit temperature	<i>P_{dh}</i>	8,5	kW	T _j = operation limit temperature	<i>COP_d</i>	1,31	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	2	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	2	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	1,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,014	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3701	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	η_{wh}	67	%
Daily electricity consumption	<i>Q_{elec}</i>	6,958	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1531	kWh	Annual fuel consumption	<i>AFC</i>	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.

Warm climate and Low temperature

Model(s):	CTC EcoAir 614M 400V + EcoZenith i255		
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:	190 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	186	%
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>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	9,1	kW	T _j = +2 °C	<i>COP_d</i>	1,98	-
T _j = +7 °C	<i>P_{dh}</i>	6,1	kW	T _j = +7 °C	<i>COP_d</i>	4,31	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	6,26	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,1	kW	T _j = bivalent temperature	<i>COP_d</i>	1,98	-
T _j = operation limit temperature	<i>P_{dh}</i>	9,1	kW	T _j = operation limit temperature	<i>COP_d</i>	1,98	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	2	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	2	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,014	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	2682	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	η_{wh}	67	%
Daily electricity consumption	<i>Q_{elec}</i>	6,958	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1531	kWh	Annual fuel consumption	<i>AFC</i>	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.

Contact details

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Average climate and Medium temperature

Model(s):	CTC EcoAir 614M 400V + EcoZenith i255		
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:	127 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++ -
Heat pump combination heater:	Yes		

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>P_{rated}</i>	8	kW	Seasonal space heating energy efficiency	η_s	123	%
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>P_{dh}</i>	6,4	kW	T _j = -7 °C	<i>COP_d</i>	1,59	-
T _j = +2 °C	<i>P_{dh}</i>	4,0	kW	T _j = +2 °C	<i>COP_d</i>	3,38	-
T _j = +7 °C	<i>P_{dh}</i>	2,6	kW	T _j = +7 °C	<i>COP_d</i>	4,25	-
T _j = +12 °C	<i>P_{dh}</i>	2,7	kW	T _j = +12 °C	<i>COP_d</i>	5,02	-
T _j = bivalent temperature	<i>P_{dh}</i>	6,9	kW	T _j = bivalent temperature	<i>COP_d</i>	1,24	-
T _j = operation limit temperature	<i>P_{dh}</i>	6,9	kW	T _j = operation limit temperature	<i>COP_d</i>	1,24	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-10	°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>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Electric			
Standby mode	<i>P_{SB}</i>	0,014	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW	Type of energy input			
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	4973	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	B	Water heating energy efficiency	η_{wh}	53	%
Daily electricity consumption	<i>Q_{elec}</i>	8,570	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1885	kWh	Annual fuel consumption	<i>AFC</i>	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.

Average climate and Low temperature

Model(s):	CTC EcoAir 614M 400V + EcoZenith i255		
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:	168 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++ -
Heat pump combination heater:	Yes		

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 (*)	P_{rated}	8	kW	Seasonal space heating energy efficiency	η_s	164	%
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	P_{dh}	6,5	kW	T _j = -7 °C	COP_d	2,40	-
T _j = +2 °C	P_{dh}	4,0	kW	T _j = +2 °C	COP_d	4,44	-
T _j = +7 °C	P_{dh}	2,6	kW	T _j = +7 °C	COP_d	5,35	-
T _j = +12 °C	P_{dh}	3,0	kW	T _j = +12 °C	COP_d	6,18	-
T _j = bivalent temperature	P_{dh}	7,3	kW	T _j = bivalent temperature	COP_d	1,86	-
T _j = operation limit temperature	P_{dh}	7,3	kW	T _j = operation limit temperature	COP_d	1,86	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	P_{dh}	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	COP_d	na	-
Bivalent temperature	T_{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P_{cych}	na	kW	Cycling interval efficiency	COP_{cyc}	na	-
Degradation co-efficient	C_{dh}	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,014	kW	Rated heat output (*)	P_{sup}	0,0	kW
Thermostat-off mode	P_{TO}	0,014	kW	Type of energy input Electric			
Standby mode	P_{SB}	0,014	kW				
Crankcase heater mode	P_{CK}	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	Variable			-	2350	na	m ³ /h
Sound power level, indoors/ outdoors	L_{WA}	na/51	dB	-	na		m ³ /h
Annual energy consumption	Q_{HE}	3710	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	B	Water heating energy efficiency	η_{wh}	53	%
Daily electricity consumption	Q _{elec}	8,570	kWh	Daily fuel consumption	Q _{fuel}	NA	kWh
Annual electricity consumption	AEC	1885	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.

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Model(s):	CTC EcoAir 614M 400V + EcoZenith i255		
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:	97 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	93	%
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>P_{dh}</i>	5,5	kW	T _j = -7 °C	<i>COP_d</i>	1,96	-
T _j = +2 °C	<i>P_{dh}</i>	3,7	kW	T _j = +2 °C	<i>COP_d</i>	3,90	-
T _j = +7 °C	<i>P_{dh}</i>	2,4	kW	T _j = +7 °C	<i>COP_d</i>	4,89	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	6,77	-
T _j = bivalent temperature	<i>P_{dh}</i>	6,4	kW	T _j = bivalent temperature	<i>COP_d</i>	1,38	-
T _j = operation limit temperature	<i>P_{dh}</i>	2,1	kW	T _j = operation limit temperature	<i>COP_d</i>	1,01	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	5,6	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	1,18	-
Bivalent temperature	<i>T_{biv}</i>	-11	°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	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	8,9	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Electric			
Standby mode	<i>P_{SB}</i>	0,014	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW	Type of energy input			
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	11331	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	η_{wh}	47	%
Daily electricity consumption	<i>Q_{elec}</i>	9,856	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2168	kWh	Annual fuel consumption	<i>AFC</i>	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.

Cold climate and Low temperature

Model(s):	CTC EcoAir 614M 400V + EcoZenith i255		
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:	132 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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 (*)	P_{rated}	11	kW	Seasonal space heating energy efficiency	η_s	128	%
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	P_{dh}	6,3	kW	T _j = -7 °C	COP_d	2,64	-
T _j = +2 °C	P_{dh}	4,2	kW	T _j = +2 °C	COP_d	4,74	-
T _j = +7 °C	P_{dh}	2,6	kW	T _j = +7 °C	COP_d	5,82	-
T _j = +12 °C	P_{dh}	3,0	kW	T _j = +12 °C	COP_d	6,07	-
T _j = bivalent temperature	P_{dh}	7,6	kW	T _j = bivalent temperature	COP_d	1,82	-
T _j = operation limit temperature	P_{dh}	4,6	kW	T _j = operation limit temperature	COP_d	1,43	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	P_{dh}	6,9	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	COP_d	1,48	-
Bivalent temperature	T_{biv}	-11	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P_{cych}	na	kW	Cycling interval efficiency	COP_{cyc}	na	-
Degradation co-efficient	C_{dh}	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,014	kW	Rated heat output (*)	P_{sup}	6,4	kW
Thermostat-off mode	P_{TO}	0,014	kW	Type of energy input Electric			
Standby mode	P_{SB}	0,014	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	L_{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	Q_{HE}	8306	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	η_{wh}	47	%
Daily electricity consumption	Q_{elec}	9,856	kWh	Daily fuel consumption	Q_{fuel}	NA	kWh
Annual electricity consumption	AEC	2168	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.

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Warm climate and Medium temperature

Model(s):	CTC EcoAir 614M 400V + EcoZenith i555		
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:	141 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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 (*)	P_{rated}	10	kW	Seasonal space heating energy efficiency	η_s	137	%
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	P_{dh}	na	kW	T _j = -7 °C	COP_d	na	-
T _j = +2 °C	P_{dh}	8,9	kW	T _j = +2 °C	COP_d	1,37	-
T _j = +7 °C	P_{dh}	6,0	kW	T _j = +7 °C	COP_d	2,97	-
T _j = +12 °C	P_{dh}	2,9	kW	T _j = +12 °C	COP_d	4,99	-
T _j = bivalent temperature	P_{dh}	9,0	kW	T _j = bivalent temperature	COP_d	1,37	-
T _j = operation limit temperature	P_{dh}	9,0	kW	T _j = operation limit temperature	COP_d	1,37	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	P_{dh}	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	COP_d	na	-
Bivalent temperature	T_{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P_{cych}	na	kW	Cycling interval efficiency	COP_{cyc}	na	-
Degradation co-efficient	C_{dh}	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,014	kW	Rated heat output (*)	P_{sup}	0,0	kW
Thermostat-off mode	P_{TO}	0,014	kW	Type of energy input: Electric			
Standby mode	P_{SB}	0,014	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	L_{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	Q_{HE}	3618	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	Qelec	8,129	kWh	Daily fuel consumption	Q _{fuel}	NA	kWh
Annual electricity consumption	AEC	1788	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.

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Warm climate and Low temperature

Model(s):	CTC EcoAir 614M 400V + EcoZenith i555		
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:	189 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	185	%
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>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	9,2	kW	T _j = +2 °C	<i>COP_d</i>	1,98	-
T _j = +7 °C	<i>P_{dh}</i>	6,1	kW	T _j = +7 °C	<i>COP_d</i>	4,28	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	6,20	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,2	kW	T _j = bivalent temperature	<i>COP_d</i>	1,98	-
T _j = operation limit temperature	<i>P_{dh}</i>	9,2	kW	T _j = operation limit temperature	<i>COP_d</i>	1,98	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	2	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	2	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,014	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	2704	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	<i>Q_{elec}</i>	8,129	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1788	kWh	Annual fuel consumption	<i>AFC</i>	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.



Average climate and Medium temperature

Model(s):	CTC EcoAir 614M 400V + EcoZenith i555		
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:	140 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++ -
Heat pump combination heater:	Yes		

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>P_{rated}</i>	8	kW	Seasonal space heating energy efficiency	η_s	136	%
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>P_{dh}</i>	6,3	kW	T _j = -7 °C	<i>COP_d</i>	1,77	-
T _j = +2 °C	<i>P_{dh}</i>	3,8	kW	T _j = +2 °C	<i>COP_d</i>	3,60	-
T _j = +7 °C	<i>P_{dh}</i>	2,5	kW	T _j = +7 °C	<i>COP_d</i>	4,81	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	6,28	-
T _j = bivalent temperature	<i>P_{dh}</i>	6,9	kW	T _j = bivalent temperature	<i>COP_d</i>	1,32	-
T _j = operation limit temperature	<i>P_{dh}</i>	6,9	kW	T _j = operation limit temperature	<i>COP_d</i>	1,32	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-10	°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>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,014	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	Variable			-	2350	<i>m³/h</i>	
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/52	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	4534	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	B	Water heating energy efficiency	η_{wh}	75	%
Daily electricity consumption	<i>Q_{elec}</i>	10,807	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2378	kWh	Annual fuel consumption	<i>AFC</i>	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.

Average climate and Low temperature

Model(s):	CTC EcoAir 614M 400V + EcoZenith i555		
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:	167 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++ -
Heat pump combination heater:	Yes		

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>P_{rated}</i>	8	kW	Seasonal space heating energy efficiency	η_s	163	%
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>P_{dh}</i>	6,7	kW	T _j = -7 °C	<i>COP_d</i>	2,42	-
T _j = +2 °C	<i>P_{dh}</i>	4,0	kW	T _j = +2 °C	<i>COP_d</i>	4,41	-
T _j = +7 °C	<i>P_{dh}</i>	2,6	kW	T _j = +7 °C	<i>COP_d</i>	5,31	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	6,11	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,5	kW	T _j = bivalent temperature	<i>COP_d</i>	1,88	-
T _j = operation limit temperature	<i>P_{dh}</i>	7,5	kW	T _j = operation limit temperature	<i>COP_d</i>	1,88	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-10	°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>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,014	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	Variable			-	2350	<i>m³/h</i>	
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/51	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	3726	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	B	Water heating energy efficiency	η_{wh}	75	%
Daily electricity consumption	<i>Q_{elec}</i>	10,807	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2378	kWh	Annual fuel consumption	<i>AFC</i>	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.

Contact details

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Model(s):	CTC EcoAir 614M 400V + EcoZenith i555		
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:	112 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	108	%
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>P_{dh}</i>	6,1	kW	T _j = -7 °C	<i>COP_d</i>	2,12	-
T _j = +2 °C	<i>P_{dh}</i>	4,0	kW	T _j = +2 °C	<i>COP_d</i>	4,06	-
T _j = +7 °C	<i>P_{dh}</i>	2,5	kW	T _j = +7 °C	<i>COP_d</i>	4,95	-
T _j = +12 °C	<i>P_{dh}</i>	3,0	kW	T _j = +12 °C	<i>COP_d</i>	6,66	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,1	kW	T _j = bivalent temperature	<i>COP_d</i>	1,52	-
T _j = operation limit temperature	<i>P_{dh}</i>	2,4	kW	T _j = operation limit temperature	<i>COP_d</i>	1,13	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	6,3	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	1,31	-
Bivalent temperature	<i>T_{biv}</i>	-11	°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	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	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>	0,014	kW	Rated heat output (*)	<i>P_{sup}</i>	8,6	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Electric			
Standby mode	<i>P_{SB}</i>	0,014	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW	Type of energy input			
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	9746	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	η_{wh}	58	%
Daily electricity consumption	<i>Q_{elec}</i>	14,672	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	3228	kWh	Annual fuel consumption	<i>AFC</i>	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.

Cold climate and Low temperature

Model(s):	CTC EcoAir 614M 400V + EcoZenith i555		
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:	132 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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 (*)	P_{rated}	11	kW	Seasonal space heating energy efficiency	η_s	128	%
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	P_{dh}	6,4	kW	T _j = -7 °C	COP_d	2,65	-
T _j = +2 °C	P_{dh}	4,3	kW	T _j = +2 °C	COP_d	4,72	-
T _j = +7 °C	P_{dh}	2,6	kW	T _j = +7 °C	COP_d	5,77	-
T _j = +12 °C	P_{dh}	3,0	kW	T _j = +12 °C	COP_d	6,00	-
T _j = bivalent temperature	P_{dh}	7,8	kW	T _j = bivalent temperature	COP_d	1,84	-
T _j = operation limit temperature	P_{dh}	4,8	kW	T _j = operation limit temperature	COP_d	1,48	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	P_{dh}	7,2	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	COP_d	1,51	-
Bivalent temperature	T_{biv}	-11	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P_{cych}	na	kW	Cycling interval efficiency	COP_{cyc}	na	-
Degradation co-efficient	C_{dh}	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,014	kW	Rated heat output (*)	P_{sup}	6,2	kW
Thermostat-off mode	P_{TO}	0,014	kW	Type of energy input Electric			
Standby mode	P_{SB}	0,014	kW				
Crankcase heater mode	P_{CK}	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	Variable			-	2350	m^3/h	
Sound power level, indoors/ outdoors	L_{WA}	na/51	dB	-	na	m^3/h	
Annual energy consumption	Q_{HE}	8271	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	η_{wh}	58	%
Daily electricity consumption	Q_{elec}	14,672	kWh	Daily fuel consumption	Q_{fuel}	NA	kWh
Annual electricity consumption	AEC	3228	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.

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