



Model(s):	CTC EcoAir 610M 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:	177 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	173	%
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>	7,3	kW	T _j = +2 °C	<i>COP_d</i>	2,36	-
T _j = +7 °C	<i>P_{dh}</i>	4,6	kW	T _j = +7 °C	<i>COP_d</i>	4,06	-
T _j = +12 °C	<i>P_{dh}</i>	2,8	kW	T _j = +12 °C	<i>COP_d</i>	5,68	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,3	kW	T _j = bivalent temperature	<i>COP_d</i>	2,36	-
T _j = operation limit temperature	<i>P_{dh}</i>	7,3	kW	T _j = operation limit temperature	<i>COP_d</i>	2,36	-
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				
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/53	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>	2121	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.

Warm climate and Low temperature

Model(s):	CTC EcoAir 610M 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:	238 %
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}	7	kW	Seasonal space heating energy efficiency	η_s	234	%
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}	6,5	kW	T _j = +2 °C	COP_d	3,47	-
T _j = +7 °C	P_{dh}	4,4	kW	T _j = +7 °C	COP_d	6,02	-
T _j = +12 °C	P_{dh}	2,9	kW	T _j = +12 °C	COP_d	7,13	-
T _j = bivalent temperature	P_{dh}	6,5	kW	T _j = bivalent temperature	COP_d	3,47	-
T _j = operation limit temperature	P_{dh}	6,5	kW	T _j = operation limit temperature	COP_d	3,47	-
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/53	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}	1469	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

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

www.ctc.se

181005

Average climate and Medium temperature

Model(s):	CTC EcoAir 610M 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:	147 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	143	%
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>	5,9	kW	T _j = -7 °C	<i>COP_d</i>	2,03	-
T _j = +2 °C	<i>P_{dh}</i>	3,6	kW	T _j = +2 °C	<i>COP_d</i>	3,81	-
T _j = +7 °C	<i>P_{dh}</i>	2,4	kW	T _j = +7 °C	<i>COP_d</i>	4,86	-
T _j = +12 °C	<i>P_{dh}</i>	2,8	kW	T _j = +12 °C	<i>COP_d</i>	5,90	-
T _j = bivalent temperature	<i>P_{dh}</i>	5,9	kW	T _j = bivalent temperature	<i>COP_d</i>	2,03	-
T _j = operation limit temperature	<i>P_{dh}</i>	5,3	kW	T _j = operation limit temperature	<i>COP_d</i>	1,77	-
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>	-7	°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>	1,3	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	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/53	dB	-	na		m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3743	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 610M 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:	193 %
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 (*)	P_{rated}	6	kW	Seasonal space heating energy efficiency	η_s	189	%
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}	5,6	kW	T _j = -7 °C	COP_d	3,03	-
T _j = +2 °C	P_{dh}	3,5	kW	T _j = +2 °C	COP_d	5,14	-
T _j = +7 °C	P_{dh}	2,5	kW	T _j = +7 °C	COP_d	5,83	-
T _j = +12 °C	P_{dh}	2,9	kW	T _j = +12 °C	COP_d	7,27	-
T _j = bivalent temperature	P_{dh}	5,9	kW	T _j = bivalent temperature	COP_d	2,66	-
T _j = operation limit temperature	P_{dh}	5,7	kW	T _j = operation limit temperature	COP_d	2,59	-
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}	-9	°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}	0,3	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/53	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}	2579	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

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

www.ctc.se

190911



Model(s):	CTC EcoAir 610M 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:	128 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	124	%
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>	4,0	kW	T _j = -7 °C	<i>COP_d</i>	2,66	-
T _j = +2 °C	<i>P_{dh}</i>	2,3	kW	T _j = +2 °C	<i>COP_d</i>	4,11	-
T _j = +7 °C	<i>P_{dh}</i>	2,4	kW	T _j = +7 °C	<i>COP_d</i>	5,08	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	6,08	-
T _j = bivalent temperature	<i>P_{dh}</i>	5,0	kW	T _j = bivalent temperature	<i>COP_d</i>	1,75	-
T _j = operation limit temperature	<i>P_{dh}</i>	3,6	kW	T _j = operation limit temperature	<i>COP_d</i>	1,25	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	4,7	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	1,75	-
Bivalent temperature	<i>T_{biv}</i>	-13	°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>	2,9	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/53	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	5052	<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.



Model(s):	CTC EcoAir 610M 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:	164 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	160	%
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>	4,3	kW	T _j = -7 °C	<i>COP_d</i>	3,61	-
T _j = +2 °C	<i>P_{dh}</i>	2,4	kW	T _j = +2 °C	<i>COP_d</i>	5,08	-
T _j = +7 °C	<i>P_{dh}</i>	2,5	kW	T _j = +7 °C	<i>COP_d</i>	6,00	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	7,13	-
T _j = bivalent temperature	<i>P_{dh}</i>	5,2	kW	T _j = bivalent temperature	<i>COP_d</i>	2,52	-
T _j = operation limit temperature	<i>P_{dh}</i>	4,0	kW	T _j = operation limit temperature	<i>COP_d</i>	1,91	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	5,0	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	2,44	-
Bivalent temperature	<i>T_{biv}</i>	-14	°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>	2,6	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/53	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>	3932	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	<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.

**Warm climate and Medium temperature**

Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i355/ EcoVent i355F		
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:	177 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	173	%
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>	7,3	kW	T _j = +2 °C	<i>COP_d</i>	2,36	-
T _j = +7 °C	<i>P_{dh}</i>	4,6	kW	T _j = +7 °C	<i>COP_d</i>	4,06	-
T _j = +12 °C	<i>P_{dh}</i>	2,8	kW	T _j = +12 °C	<i>COP_d</i>	5,68	-
T _j = bivalent temperature	<i>P_{dh}</i>	7,3	kW	T _j = bivalent temperature	<i>COP_d</i>	2,36	-
T _j = operation limit temperature	<i>P_{dh}</i>	7,3	kW	T _j = operation limit temperature	<i>COP_d</i>	2,36	-
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				
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/53	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>	2121	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	η_{wh}	122	%
Daily electricity consumption	<i>Q_{elec}</i>	6,232	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1371	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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Warm climate and Low temperature

Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i355/ EcoVent i355F		
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:	238 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	234	%
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>	6,5	kW	T _j = +2 °C	<i>COP_d</i>	3,47	-
T _j = +7 °C	<i>P_{dh}</i>	4,4	kW	T _j = +7 °C	<i>COP_d</i>	6,02	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	7,13	-
T _j = bivalent temperature	<i>P_{dh}</i>	6,5	kW	T _j = bivalent temperature	<i>COP_d</i>	3,47	-
T _j = operation limit temperature	<i>P_{dh}</i>	6,5	kW	T _j = operation limit temperature	<i>COP_d</i>	3,47	-
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	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/53	dB	-	na	m ³ /h	
Annual energy consumption	<i>Q_{HE}</i>	1469	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	η_{wh}	122	%
Daily electricity consumption	<i>Q_{elec}</i>	6,232	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1371	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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Average climate and Medium temperature

Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i355/ EcoVent i355F		
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:	147 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	143	%
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>	5,9	kW	T _j = -7 °C	<i>COP_d</i>	2,03	-
T _j = +2 °C	<i>P_{dh}</i>	3,6	kW	T _j = +2 °C	<i>COP_d</i>	3,81	-
T _j = +7 °C	<i>P_{dh}</i>	2,4	kW	T _j = +7 °C	<i>COP_d</i>	4,86	-
T _j = +12 °C	<i>P_{dh}</i>	2,8	kW	T _j = +12 °C	<i>COP_d</i>	5,90	-
T _j = bivalent temperature	<i>P_{dh}</i>	5,9	kW	T _j = bivalent temperature	<i>COP_d</i>	2,03	-
T _j = operation limit temperature	<i>P_{dh}</i>	5,3	kW	T _j = operation limit temperature	<i>COP_d</i>	1,77	-
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>	-7	°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>	1,3	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/53	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	3743	<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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Average climate and Low temperature

Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i355/ EcoVent i355F		
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:	193 %
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>	6	kW	Seasonal space heating energy efficiency	η_s	189	%
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>	5,6	kW	T _j = -7 °C	<i>COP_d</i>	3,03	-
T _j = +2 °C	<i>P_{dh}</i>	3,5	kW	T _j = +2 °C	<i>COP_d</i>	5,14	-
T _j = +7 °C	<i>P_{dh}</i>	2,5	kW	T _j = +7 °C	<i>COP_d</i>	5,83	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	7,27	-
T _j = bivalent temperature	<i>P_{dh}</i>	5,9	kW	T _j = bivalent temperature	<i>COP_d</i>	2,66	-
T _j = operation limit temperature	<i>P_{dh}</i>	5,7	kW	T _j = operation limit temperature	<i>COP_d</i>	2,59	-
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>	-9	°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>	0,3	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/53	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	2579	<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 610M 400V + CTC EcoZenith i355/ EcoVent i355F		
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:	128 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	124	%
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>	4,0	kW	T _j = -7 °C	<i>COP_d</i>	2,66	-
T _j = +2 °C	<i>P_{dh}</i>	2,3	kW	T _j = +2 °C	<i>COP_d</i>	4,11	-
T _j = +7 °C	<i>P_{dh}</i>	2,4	kW	T _j = +7 °C	<i>COP_d</i>	5,08	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	6,08	-
T _j = bivalent temperature	<i>P_{dh}</i>	5,0	kW	T _j = bivalent temperature	<i>COP_d</i>	1,75	-
T _j = operation limit temperature	<i>P_{dh}</i>	3,6	kW	T _j = operation limit temperature	<i>COP_d</i>	1,25	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	4,7	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	1,75	-
Bivalent temperature	<i>T_{biv}</i>	-13	°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>	2,9	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/53	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	5052	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	na	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:

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 Low temperature

Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i355/ EcoVent i355F		
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:	164 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	160	%
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>	4,3	kW	T _j = -7 °C	<i>COP_d</i>	3,61	-
T _j = +2 °C	<i>P_{dh}</i>	2,4	kW	T _j = +2 °C	<i>COP_d</i>	5,08	-
T _j = +7 °C	<i>P_{dh}</i>	2,5	kW	T _j = +7 °C	<i>COP_d</i>	6,00	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	7,13	-
T _j = bivalent temperature	<i>P_{dh}</i>	5,2	kW	T _j = bivalent temperature	<i>COP_d</i>	2,52	-
T _j = operation limit temperature	<i>P_{dh}</i>	4,0	kW	T _j = operation limit temperature	<i>COP_d</i>	1,91	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	5,0	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	2,44	-
Bivalent temperature	<i>T_{biv}</i>	-14	°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>	2,6	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/53	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	3932	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	na	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:

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 Medium temperature

Model(s):	CTC EcoAir 610M 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:	140 %
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}	7	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	P_{dh}	na	kW	T _j = -7 °C	COP_d	na	-
T _j = +2 °C	P_{dh}	6,6	kW	T _j = +2 °C	COP_d	1,71	-
T _j = +7 °C	P_{dh}	4,3	kW	T _j = +7 °C	COP_d	3,10	-
T _j = +12 °C	P_{dh}	2,8	kW	T _j = +12 °C	COP_d	4,58	-
T _j = bivalent temperature	P_{dh}	6,6	kW	T _j = bivalent temperature	COP_d	1,71	-
T _j = operation limit temperature	P_{dh}	6,6	kW	T _j = operation limit temperature	COP_d	1,71	-
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/53	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}	2701	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	η_{wh}	67	%
Daily electricity consumption	Q _{elec}	6,958	kWh	Daily fuel consumption	Q _{fuel}	NA	kWh
Annual electricity consumption	AEC	1531	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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Warm climate and Low temperature

Model(s):	CTC EcoAir 610M 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:	193 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	189	%
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>	6,3	kW	T _j = +2 °C	<i>COP_d</i>	2,76	-
T _j = +7 °C	<i>P_{dh}</i>	4,3	kW	T _j = +7 °C	<i>COP_d</i>	4,82	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	5,73	-
T _j = bivalent temperature	<i>P_{dh}</i>	6,3	kW	T _j = bivalent temperature	<i>COP_d</i>	2,76	-
T _j = operation limit temperature	<i>P_{dh}</i>	6,3	kW	T _j = operation limit temperature	<i>COP_d</i>	2,76	-
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	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			
Sound power level, indoors/outdoors	<i>L_{WA}</i>	na/53	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Annual energy consumption	<i>Q_{HE}</i>	1814	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.

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Average climate and Medium temperature

Model(s):	CTC EcoAir 610M 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:	123 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	119	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	4,9	kW	T _j = -7 °C	<i>COP_d</i>	1,66	-
T _j = +2 °C	<i>P_{dh}</i>	3,2	kW	T _j = +2 °C	<i>COP_d</i>	3,35	-
T _j = +7 °C	<i>P_{dh}</i>	2,3	kW	T _j = +7 °C	<i>COP_d</i>	4,49	-
T _j = +12 °C	<i>P_{dh}</i>	2,8	kW	T _j = +12 °C	<i>COP_d</i>	5,77	-
T _j = bivalent temperature	<i>P_{dh}</i>	4,9	kW	T _j = bivalent temperature	<i>COP_d</i>	1,66	-
T _j = operation limit temperature	<i>P_{dh}</i>	4,3	kW	T _j = operation limit temperature	<i>COP_d</i>	1,42	-
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>	-7	°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>	2,3	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/53	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	4483	<i>kWh</i>				

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.

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Average climate and Low temperature

Model(s):	CTC EcoAir 610M 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:	165 %
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>	6	kW	Seasonal space heating energy efficiency	η_s	161	%
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>	5,4	kW	T _j = -7 °C	<i>COP_d</i>	2,53	-
T _j = +2 °C	<i>P_{dh}</i>	3,4	kW	T _j = +2 °C	<i>COP_d</i>	4,38	-
T _j = +7 °C	<i>P_{dh}</i>	2,4	kW	T _j = +7 °C	<i>COP_d</i>	5,00	-
T _j = +12 °C	<i>P_{dh}</i>	2,9	kW	T _j = +12 °C	<i>COP_d</i>	6,27	-
T _j = bivalent temperature	<i>P_{dh}</i>	5,6	kW	T _j = bivalent temperature	<i>COP_d</i>	2,21	-
T _j = operation limit temperature	<i>P_{dh}</i>	5,4	kW	T _j = operation limit temperature	<i>COP_d</i>	2,14	-
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>	-9	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	0	°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>	0,6	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/53	<i>dB</i>	-	na	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	3022	<i>kWh</i>				

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.

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Model(s):	CTC EcoAir 610M 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:	93 %
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>	7	kW	Seasonal space heating energy efficiency	η_s	89	%
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>	3,4	kW	T _j = -7 °C	<i>COP_d</i>	2,17	-
T _j = +2 °C	<i>P_{dh}</i>	2,1	kW	T _j = +2 °C	<i>COP_d</i>	3,61	-
T _j = +7 °C	<i>P_{dh}</i>	2,3	kW	T _j = +7 °C	<i>COP_d</i>	4,70	-
T _j = +12 °C	<i>P_{dh}</i>	2,8	kW	T _j = +12 °C	<i>COP_d</i>	5,94	-
T _j = bivalent temperature	<i>P_{dh}</i>	4,0	kW	T _j = bivalent temperature	<i>COP_d</i>	1,50	-
T _j = operation limit temperature	<i>P_{dh}</i>	2,8	kW	T _j = operation limit temperature	<i>COP_d</i>	0,95	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	3,7	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	1,36	-
Bivalent temperature	<i>T_{biv}</i>	-13	°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>	3,7	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/53	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>	6980	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 610M 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 (*)	P_{rated}	7	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	P_{dh}	4,1	kW	T _j = -7 °C	COP_d	3,01	-
T _j = +2 °C	P_{dh}	2,3	kW	T _j = +2 °C	COP_d	4,33	-
T _j = +7 °C	P_{dh}	2,4	kW	T _j = +7 °C	COP_d	5,15	-
T _j = +12 °C	P_{dh}	2,9	kW	T _j = +12 °C	COP_d	6,15	-
T _j = bivalent temperature	P_{dh}	4,8	kW	T _j = bivalent temperature	COP_d	2,06	-
T _j = operation limit temperature	P_{dh}	3,6	kW	T _j = operation limit temperature	COP_d	1,51	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	P_{dh}	4,7	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	COP_d	1,99	-
Bivalent temperature	T_{biv}	-14	°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}	2,9	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/5	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}	4759	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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