

Warm climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	141 %
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>	17	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	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	15,9	kW	T _j = +2 °C	<i>COP_d</i>	3,07	-
T _j = +7 °C	<i>P_{dh}</i>	16,0	kW	T _j = +7 °C	<i>COP_d</i>	3,42	-
T _j = +12 °C	<i>P_{dh}</i>	16,5	kW	T _j = +12 °C	<i>COP_d</i>	4,09	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,9	kW	T _j = bivalent temperature	<i>COP_d</i>	3,17	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,008	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6315	kWh				

For heat pump combination heater:

Declared load profile / Energy 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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Warm climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	184 %
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>	18	kW	Seasonal space heating energy efficiency	η_s	180	%
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>	16,9	kW	T _j = +2 °C	<i>COP_d</i>	4,55	-
T _j = + 7 °C	<i>P_{dh}</i>	17,0	kW	T _j = +7 °C	<i>COP_d</i>	4,78	-
T _j = + 12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	5,06	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,63	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,4	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	Fixed					na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger		3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5180	kWh				

For heat pump combination heater:

Declared load profile / Energy 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.



Average climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	A++ -
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	141 %
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>	18	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	<i>P_{dh}</i>	16	kW	T _j = -7 °C	<i>COP_d</i>	3,23	-
T _j = +2 °C	<i>P_{dh}</i>	16,1	kW	T _j = +2 °C	<i>COP_d</i>	3,60	-
T _j = +7 °C	<i>P_{dh}</i>	16,4	kW	T _j = +7 °C	<i>COP_d</i>	3,97	-
T _j = +12 °C	<i>P_{dh}</i>	16,7	kW	T _j = +12 °C	<i>COP_d</i>	4,36	-
T _j = bivalent temperature	<i>P_{dh}</i>	16	kW	T _j = bivalent temperature	<i>COP_d</i>	3,23	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	2,2	kW
Thermostat-off mode	<i>P_{TO}</i>	0,008	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	Fixed					na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger		3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	10286	kWh				

For heat pump combination heater:

Declared load profile / Energy 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.



Average climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	A+++ -
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	185 %
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>	19	kW	Seasonal space heating energy efficiency	η_s	181	%
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>	16,9	kW	T _j = -7 °C	<i>COP_d</i>	4,64	-
T _j = +2 °C	<i>P_{dh}</i>	17,1	kW	T _j = +2 °C	<i>COP_d</i>	4,83	-
T _j = +7 °C	<i>P_{dh}</i>	17,2	kW	T _j = +7 °C	<i>COP_d</i>	5,01	-
T _j = +12 °C	<i>P_{dh}</i>	17,4	kW	T _j = +12 °C	<i>COP_d</i>	5,18	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,64	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	2,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	8362	kWh				

For heat pump combination heater:

Declared load profile / Energy 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.

Cold climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	144 %
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>	17	kW	Seasonal space heating energy efficiency	η_s	140	%
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>	16,1	kW	T _j = -7 °C	<i>COP_d</i>	3,51	-
T _j = +2 °C	<i>P_{dh}</i>	16,4	kW	T _j = +2 °C	<i>COP_d</i>	3,89	-
T _j = +7 °C	<i>P_{dh}</i>	16,6	kW	T _j = +7 °C	<i>COP_d</i>	4,24	-
T _j = +12 °C	<i>P_{dh}</i>	16,8	kW	T _j = +12 °C	<i>COP_d</i>	4,50	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,9	kW	T _j = bivalent temperature	<i>COP_d</i>	3,19	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	-19	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,4	kW
Thermostat-off mode	<i>P_{TO}</i>	0,008	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	11554	kWh				

For heat pump combination heater:

Declared load profile / Energy 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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Cold climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	166 %
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>	18	kW	Seasonal space heating energy efficiency	η_s	184	%
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>	17,1	kW	T _j = -7 °C	<i>COP_d</i>	4,84	-
T _j = +2 °C	<i>P_{dh}</i>	17,2	kW	T _j = +2 °C	<i>COP_d</i>	5,01	-
T _j = +7 °C	<i>P_{dh}</i>	17,3	kW	T _j = +7 °C	<i>COP_d</i>	5,13	-
T _j = +12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	5,15	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,61	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	-20	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input: Electric			
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Fixed			-			
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	-			
Annual energy consumption	<i>Q_{HE}</i>	9166	kWh	-			

For heat pump combination heater:

Declared load profile / Energy 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 Medium temperature

Model(s):	CTC EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
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>	17	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>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	15,9	kW	T _j = +2 °C	<i>COP_d</i>	2,77	-
T _j = +7 °C	<i>P_{dh}</i>	16,0	kW	T _j = +7 °C	<i>COP_d</i>	3,07	-
T _j = +12 °C	<i>P_{dh}</i>	16,5	kW	T _j = +12 °C	<i>COP_d</i>	3,64	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,9	kW	T _j = bivalent temperature	<i>COP_d</i>	2,85	-
T _j = operation limit temperature	<i>P_{dh}</i>	15,9	kW	T _j = operation limit temperature	<i>COP_d</i>	2,77	-
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>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,052	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	7168	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	89	%
Daily electricity consumption	<i>Q_{elec}</i>	9,110	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2004	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 EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	153 %
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>	18	kW	Seasonal space heating energy efficiency	η_s	149	%
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>	16,9	kW	T _j = +2 °C	<i>COP_d</i>	4,01	-
T _j = +7 °C	<i>P_{dh}</i>	17,0	kW	T _j = +7 °C	<i>COP_d</i>	4,20	-
T _j = +12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	4,43	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,07	-
T _j = operation limit temperature	<i>P_{dh}</i>	16,9	kW	T _j = operation limit temperature	<i>COP_d</i>	4,01	-
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>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	0,96	-	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>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,4	kW
Thermostat-off mode	<i>P_{TO}</i>	0,146	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6208	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	89	%
Daily electricity consumption	<i>Q_{elec}</i>	9,110	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2004	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 EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	A+ -
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	125 %
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>	19	kW	Seasonal space heating energy efficiency	η_s	121	%
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>	16,0	kW	T _j = -7 °C	<i>COP_d</i>	2,91	-
T _j = +2 °C	<i>P_{dh}</i>	16,1	kW	T _j = +2 °C	<i>COP_d</i>	3,24	-
T _j = +7 °C	<i>P_{dh}</i>	16,4	kW	T _j = +7 °C	<i>COP_d</i>	3,55	-
T _j = +12 °C	<i>P_{dh}</i>	16,7	kW	T _j = +12 °C	<i>COP_d</i>	3,86	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,0	kW	T _j = bivalent temperature	<i>COP_d</i>	2,96	-
T _j = operation limit temperature	<i>P_{dh}</i>	15,9	kW	T _j = operation limit temperature	<i>COP_d</i>	2,77	-
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>	-6	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	3,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,052	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	12137	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	89	%
Daily electricity consumption	<i>Q_{elec}</i>	9,110	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2004	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 EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	A++ -
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	157 %
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>	20	kW	Seasonal space heating energy efficiency	η_s	153	%
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>	16,9	kW	T _j = -7 °C	<i>COP_d</i>	4,09	-
T _j = +2 °C	<i>P_{dh}</i>	17,1	kW	T _j = +2 °C	<i>COP_d</i>	4,25	-
T _j = +7 °C	<i>P_{dh}</i>	17,2	kW	T _j = +7 °C	<i>COP_d</i>	4,39	-
T _j = +12 °C	<i>P_{dh}</i>	17,4	kW	T _j = +12 °C	<i>COP_d</i>	4,53	-
T _j = bivalent temperature	<i>P_{dh}</i>	17,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,12	-
T _j = operation limit temperature	<i>P_{dh}</i>	16,9	kW	T _j = operation limit temperature	<i>COP_d</i>	4,01	-
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>	-6	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	0,96	-	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>	0,018	kW	Rated heat output	<i>P_{sup}</i>	3,2	kW
Thermostat-off mode	<i>P_{TO}</i>	0,146	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	10312	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	89	%
Daily electricity consumption	<i>Q_{elec}</i>	9,110	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2004	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 EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	126 %
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>	18	kW	Seasonal space heating energy efficiency	η_s	122	%
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>	16,1	kW	T _j = -7 °C	<i>COP_d</i>	3,17	-
T _j = +2 °C	<i>P_{dh}</i>	16,4	kW	T _j = +2 °C	<i>COP_d</i>	3,48	-
T _j = +7 °C	<i>P_{dh}</i>	16,6	kW	T _j = +7 °C	<i>COP_d</i>	3,76	-
T _j = +12 °C	<i>P_{dh}</i>	16,8	kW	T _j = +12 °C	<i>COP_d</i>	3,97	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,0	kW	T _j = bivalent temperature	<i>COP_d</i>	2,94	-
T _j = operation limit temperature	<i>P_{dh}</i>	15,9	kW	T _j = operation limit temperature	<i>COP_d</i>	2,77	-
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>	-17	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	2,5	kW
Thermostat-off mode	<i>P_{TO}</i>	0,052	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	Fixed					na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger		3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	13902	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	89	%
Daily electricity consumption	<i>Q_{elec}</i>	9,110	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2004	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 EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	158 %
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>	19	kW	Seasonal space heating energy efficiency	η_s	154	%
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>	17,1	kW	T _j = - 7 °C	<i>COP_d</i>	4,27	-
T _j = + 2 °C	<i>P_{dh}</i>	17,2	kW	T _j = + 2 °C	<i>COP_d</i>	4,39	-
T _j = + 7 °C	<i>P_{dh}</i>	17,3	kW	T _j = + 7 °C	<i>COP_d</i>	4,49	-
T _j = + 12 °C	<i>P_{dh}</i>	17,3	kW	T _j = + 12 °C	<i>COP_d</i>	4,51	-
T _j = bivalent temperature	<i>P_{dh}</i>	17,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,11	-
T _j = operation limit temperature	<i>P_{dh}</i>	16,9	kW	T _j = operation limit temperature	<i>COP_d</i>	4,01	-
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>	-18	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cy}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,96	-	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>	0,018	kW	Rated heat output	<i>P_{sup}</i>	2,1	kW
Thermostat-off mode	<i>P_{TO}</i>	0,146	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Fixed			-	na	3,8	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	-	na		m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	11573	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	89	%
Daily electricity consumption	<i>Q_{elec}</i>	9,110	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	2004	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 Medium temperature

Model(s):	CTC EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	138 %
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>	17	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	<i>P_{dh}</i>	na	kW	T _j = - 7 °C	<i>COP_d</i>	na	-
T _j = + 2 °C	<i>P_{dh}</i>	15,9	kW	T _j = +2 °C	<i>COP_d</i>	3,07	-
T _j = + 7 °C	<i>P_{dh}</i>	16,0	kW	T _j = +7 °C	<i>COP_d</i>	3,42	-
T _j = + 12 °C	<i>P_{dh}</i>	16,5	kW	T _j = +12 °C	<i>COP_d</i>	4,09	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,9	kW	T _j = bivalent temperature	<i>COP_d</i>	3,17	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,008	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	Fixed					na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger		3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6315	kWh				

For heat pump combination heater:

Declared load profile / Energy 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 EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	181 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	18	kW	Seasonal space heating energy efficiency	η_s	180	%
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>	16,9	kW	T _j = +2 °C	<i>COP_d</i>	4,55	-
T _j = +7 °C	<i>P_{dh}</i>	17,0	kW	T _j = +7 °C	<i>COP_d</i>	4,78	-
T _j = +12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	5,06	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,63	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,4	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5180	kWh				

For heat pump combination heater:

Declared load profile / Energy 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.

Average climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	A++ -
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	138 %
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}	18	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}	16	kW	T j = - 7 °C	COP_d	3,23	-
T j = + 2 °C	P_{dh}	16,1	kW	T j = +2 °C	COP_d	3,60	-
T j = + 7 °C	P_{dh}	16,4	kW	T j = +7 °C	COP_d	3,97	-
T j = + 12 °C	P_{dh}	16,7	kW	T j = +12 °C	COP_d	4,36	-
T j = bivalent temperature	P_{dh}	16	kW	T j = bivalent temperature	COP_d	3,23	-
T j = operation limit temperature	P_{dh}	na	kW	T j = operation limit temperature	COP_d	na	-
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}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,018	kW	Rated heat output	P_{sup}	2,2	kW
Thermostat-off mode	P_{TO}	0,008	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0,018	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	L_{WA}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	Q_{HE}	10286	kWh				

For heat pump combination heater:

Declared load profile / Energy 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 Low temperature

Model(s):	CTC EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	A+++ -
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	182 %
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>	19	kW	Seasonal space heating energy efficiency	η_s	181	%
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>	16,9	kW	T _j = -7 °C	<i>COP_d</i>	4,64	-
T _j = +2 °C	<i>P_{dh}</i>	17,1	kW	T _j = +2 °C	<i>COP_d</i>	4,83	-
T _j = +7 °C	<i>P_{dh}</i>	17,2	kW	T _j = +7 °C	<i>COP_d</i>	5,01	-
T _j = +12 °C	<i>P_{dh}</i>	17,4	kW	T _j = +12 °C	<i>COP_d</i>	5,18	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,64	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	2,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	Fixed					na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger		3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	8362	kWh				

For heat pump combination heater:

Declared load profile / Energy 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.

Cold climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	141 %
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}	17	kW	Seasonal space heating energy efficiency	η_s	140	%
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}	16,1	kW	T _j = -7 °C	COP_d	3,51	-
T _j = +2 °C	P_{dh}	16,4	kW	T _j = +2 °C	COP_d	3,89	-
T _j = +7 °C	P_{dh}	16,6	kW	T _j = +7 °C	COP_d	4,24	-
T _j = +12 °C	P_{dh}	16,8	kW	T _j = +12 °C	COP_d	4,50	-
T _j = bivalent temperature	P_{dh}	15,9	kW	T _j = bivalent temperature	COP_d	3,19	-
T _j = operation limit temperature	P_{dh}	na	kW	T _j = operation limit temperature	COP_d	na	-
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}	-19	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	0,018	kW	Rated heat output	P_{sup}	1,4	kW
Thermostat-off mode	P_{TO}	0,008	kW	Type of energy input	Electric		
Standby mode	P_{SB}	0,018	kW				
Crankcase heater mode	P_{CK}	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	L_{WA}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	Q_{HE}	11554	kWh				

For heat pump combination heater:

Declared load profile / Energy 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.

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Cold climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	185 %
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>	18	kW	Seasonal space heating energy efficiency	η_s	184	%
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>	17,1	kW	T _j = -7 °C	<i>COP_d</i>	4,84	-
T _j = +2 °C	<i>P_{dh}</i>	17,2	kW	T _j = +2 °C	<i>COP_d</i>	5,01	-
T _j = +7 °C	<i>P_{dh}</i>	17,3	kW	T _j = +7 °C	<i>COP_d</i>	5,13	-
T _j = +12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	5,15	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,61	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
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>	-20	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°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>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	9166	kWh				

For heat pump combination heater:

Declared load profile / Energy 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.

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