

**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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>17</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>137</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	na	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	15,9	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	3,07	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	16,0	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	3,42	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	16,5	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	4,09	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	15,9	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	3,17	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	na	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	na	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	na	-
Bivalent temperature	<i>T<sub>biv</sub></i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	na	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	na	-
Degradation co-efficient	<i>C<sub>dh</sub></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<sub>OFF</sub></i>	0,018	kW	Rated heat output	<i>P<sub>sup</sub></i>	1,3	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	0,008	kW	Type of energy input	Electric		
Standby mode	<i>P<sub>SB</sub></i>	0,018	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	6315	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	na			<b>Water heating energy efficiency</b>	$\eta_{wh}$	na	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	na	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></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

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

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181001

**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
<b>Rated heat output (*)</b>	$P_{rated}$	<b>18</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>180</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	$P_{dh}$	na	kW	T <sub>j</sub> = -7 °C	$COP_d$	na	-
T <sub>j</sub> = +2 °C	$P_{dh}$	16,9	kW	T <sub>j</sub> = +2 °C	$COP_d$	4,55	-
T <sub>j</sub> = +7 °C	$P_{dh}$	17,0	kW	T <sub>j</sub> = +7 °C	$COP_d$	4,78	-
T <sub>j</sub> = +12 °C	$P_{dh}$	17,3	kW	T <sub>j</sub> = +12 °C	$COP_d$	5,06	-
T <sub>j</sub> = bivalent temperature	$P_{dh}$	16,9	kW	T <sub>j</sub> = bivalent temperature	$COP_d$	4,63	-
T <sub>j</sub> = operation limit temperature	$P_{dh}$	na	kW	T <sub>j</sub> = operation limit temperature	$COP_d$	na	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$P_{dh}$	na	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$COP_d$	na	-
Bivalent temperature	$T_{biv}$	3	°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	$P_{TO}$	0,027	kW	Type of energy input	Electric		
Standby mode	$P_{SB}$	0,018	kW				
Crankcase heater mode	$P_{CK}$	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	Fixed					na	m <sup>3</sup> /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		3,8	m <sup>3</sup> /h
Annual energy consumption	$Q_{HE}$	5180	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	na			<b>Water heating energy efficiency</b>	$\eta_{wh}$	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:

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Contact details

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**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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>18</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>137</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>16</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,23</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>16,1</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,60</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>16,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>3,97</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>16,7</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>4,36</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>16</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>3,23</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>na</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>na</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-7</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>2,2</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,008</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>3,1</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>10286</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>na</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>na</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>na</b>	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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>19</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>181</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>16,9</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>4,64</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>17,1</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>4,83</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>17,2</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,01</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>17,4</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,18</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>16,9</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>4,64</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>na</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>na</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-7</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>2,3</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,027</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>3,8</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>8362</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>na</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>na</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>na</b>	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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>17</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>140</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>16,1</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,51</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>16,4</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,89</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>16,6</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,24</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>16,8</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>4,50</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>15,9</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>3,19</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>na</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>na</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-19</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>1,4</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,008</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>3,1</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>11554</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>na</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>na</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>na</b>	GJ

Specific precautions and end of life information:

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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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>18</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>184</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	<i>P<sub>dh</sub></i>	<b>17,1</b>	kW	T <sub>j</sub> = - 7 °C	<i>COP<sub>d</sub></i>	<b>4,84</b>	-
T <sub>j</sub> = + 2 °C	<i>P<sub>dh</sub></i>	<b>17,2</b>	kW	T <sub>j</sub> = + 2 °C	<i>COP<sub>d</sub></i>	<b>5,01</b>	-
T <sub>j</sub> = + 7 °C	<i>P<sub>dh</sub></i>	<b>17,3</b>	kW	T <sub>j</sub> = + 7 °C	<i>COP<sub>d</sub></i>	<b>5,13</b>	-
T <sub>j</sub> = + 12 °C	<i>P<sub>dh</sub></i>	<b>17,3</b>	kW	T <sub>j</sub> = + 12 °C	<i>COP<sub>d</sub></i>	<b>5,15</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>16,9</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>4,61</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>na</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>na</b>	-
For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-20</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cy</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>1,0</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,027</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>3,8</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>9166</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>na</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>na</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>na</b>	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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>17</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>120</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = - 7 °C	<i>COP<sub>d</sub></i>	na	-
T <sub>j</sub> = + 2 °C	<i>P<sub>dh</sub></i>	15,9	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	2,77	-
T <sub>j</sub> = + 7 °C	<i>P<sub>dh</sub></i>	16,0	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	3,07	-
T <sub>j</sub> = + 12 °C	<i>P<sub>dh</sub></i>	16,5	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	3,64	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	15,9	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	2,85	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	15,9	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	2,77	-
For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>P<sub>dh</sub></i>	na	kW	For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>COP<sub>d</sub></i>	na	-
Bivalent temperature	<i>T<sub>biv</sub></i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	na	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	na	-
Degradation co-efficient	<i>C<sub>dh</sub></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<sub>OFF</sub></i>	0,018	kW	Rated heat output	<i>P<sub>sup</sub></i>	1,3	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	0,052	kW	Type of energy input	Electric		
Standby mode	<i>P<sub>SB</sub></i>	0,018	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	7168	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	XL / A			<b>Water heating energy efficiency</b>	$\eta_{wh}$	100	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	7,659	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1685	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 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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>18</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>149</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = - 7 °C	<i>COP<sub>d</sub></i>	na	-
T <sub>j</sub> = + 2 °C	<i>P<sub>dh</sub></i>	16,9	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	4,01	-
T <sub>j</sub> = + 7 °C	<i>P<sub>dh</sub></i>	17,0	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	4,20	-
T <sub>j</sub> = + 12 °C	<i>P<sub>dh</sub></i>	17,3	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	4,43	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	16,9	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	4,07	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	16,9	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	4,01	-
For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>P<sub>dh</sub></i>	na	kW	For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>COP<sub>d</sub></i>	na	-
Bivalent temperature	<i>T<sub>biv</sub></i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	na	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	na	-
Degradation co-efficient	<i>C<sub>dh</sub></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<sub>OFF</sub></i>	0,018	kW	Rated heat output	<i>P<sub>sup</sub></i>	1,4	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	0,146	kW	Type of energy input	Electric		
Standby mode	<i>P<sub>SB</sub></i>	0,018	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	6208	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	XL / A			<b>Water heating energy efficiency</b>	$\eta_{wh}$	100	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	7,659	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1685	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 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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>19</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>121</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>16,0</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>2,91</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>16,1</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,24</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>16,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>3,55</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>16,7</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>3,86</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>16,0</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>2,96</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>15,9</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>2,77</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-6</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>3,0</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,052</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>3,1</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>12137</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>XL / A</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>100</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>7,659</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>1685</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	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 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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>20</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>153</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>16,9</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>4,09</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>17,1</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>4,25</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>17,2</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,39</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>17,4</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>4,53</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>17,0</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>4,12</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>16,9</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>4,01</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-6</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,96</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>3,2</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,146</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>3,8</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>10312</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>XL / A</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>100</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>7,659</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>1685</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	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 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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>18</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>122</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	<i>P<sub>dh</sub></i>	<b>16,1</b>	kW	T <sub>j</sub> = - 7 °C	<i>COP<sub>d</sub></i>	<b>3,17</b>	-
T <sub>j</sub> = + 2 °C	<i>P<sub>dh</sub></i>	<b>16,4</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,48</b>	-
T <sub>j</sub> = + 7 °C	<i>P<sub>dh</sub></i>	<b>16,6</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>3,76</b>	-
T <sub>j</sub> = + 12 °C	<i>P<sub>dh</sub></i>	<b>16,8</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>3,97</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>16,0</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>2,94</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>15,9</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>2,77</b>	-
For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-17</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>2,5</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,052</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>3,1</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>13902</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>XL / A</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>100</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>7,659</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>1685</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>19</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>154</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>17,1</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>4,27</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>17,2</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>4,39</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>17,3</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,49</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>17,3</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>4,51</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>17,0</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>4,11</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>16,9</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>4,01</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-18</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cy</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,96</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>2,1</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,146</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	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	<b>Fixed</b>			-	<b>na</b>	<b>3,8</b>	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	-	<b>na</b>		
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>11573</b>	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	<b>XL / A</b>			Water heating energy efficiency	$\eta_{wh}$	<b>100</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>7,659</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>1685</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	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 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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>17</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>137</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	na	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	15,9	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	3,07	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	16,0	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	3,42	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	16,5	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	4,09	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	15,9	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	3,17	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	na	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	na	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	na	-
Bivalent temperature	<i>T<sub>biv</sub></i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	na	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	na	-
Degradation co-efficient	<i>C<sub>dh</sub></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<sub>OFF</sub></i>	0,018	kW	Rated heat output	<i>P<sub>sup</sub></i>	1,3	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	0,008	kW	Type of energy input	Electric		
Standby mode	<i>P<sub>SB</sub></i>	0,018	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	6315	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	na			<b>Water heating energy efficiency</b>	$\eta_{wh}$	na	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	na	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>18</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>180</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = - 7 °C	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = - 7 °C	<i>COP<sub>d</sub></i>	na	-
T <sub>j</sub> = + 2 °C	<i>P<sub>dh</sub></i>	16,9	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	4,55	-
T <sub>j</sub> = + 7 °C	<i>P<sub>dh</sub></i>	17,0	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	4,78	-
T <sub>j</sub> = + 12 °C	<i>P<sub>dh</sub></i>	17,3	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	5,06	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	16,9	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	4,63	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	na	-
For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>P<sub>dh</sub></i>	na	kW	For air-to-water heat pumps: T <sub>j</sub> = - 15 °C (if TOL < - 20 °C)	<i>COP<sub>d</sub></i>	na	-
Bivalent temperature	<i>T<sub>biv</sub></i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	na	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	na	-
Degradation co-efficient	<i>C<sub>dh</sub></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<sub>OFF</sub></i>	0,018	kW	Rated heat output	<i>P<sub>sup</sub></i>	1,4	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P<sub>SB</sub></i>	0,018	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	5180	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	na			<b>Water heating energy efficiency</b>	$\eta_{wh}$	na	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	na	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>18</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>137</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>16</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,23</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>16,1</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,60</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>16,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>3,97</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>16,7</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>4,36</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>16</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>3,23</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>na</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>na</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-7</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>2,2</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,008</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>3,1</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>10286</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>na</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>na</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>na</b>	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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>19</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>181</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>16,9</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>4,64</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>17,1</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>4,83</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>17,2</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,01</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>17,4</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,18</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>16,9</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>4,64</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>na</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>na</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-7</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>2,3</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,027</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>3,8</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>8362</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>na</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>na</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>na</b>	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):	<b>CTC EcoPart 417 + CTC Basicstyrning</b>		
Air-to-water heat pump:	<b>No</b>	Energy efficiency class:	-
Water-to-water heat pump:	<b>No</b>	Controller class:	<b>I</b> -
Brine-to-water heat pump:	<b>Yes</b>	Controller contribution:	<b>1</b> %
Low-temperature heat pump:	<b>No</b>	Package efficiency:	<b>141</b> %
Equipped with a supplementary heater:	<b>No</b>	Package efficiency class:	-
Heat pump combination heater:	<b>No</b>		

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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>17</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>140</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>16,1</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,51</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>16,4</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,89</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>16,6</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,24</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>16,8</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>4,50</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>15,9</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>3,19</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>na</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>na</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-19</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>1,4</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,008</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	<b>Fixed</b>			-	<b>na</b>	<i>m<sup>3</sup>/h</i>	
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	<i>dB</i>	-	<b>3,1</b>	<i>m<sup>3</sup>/h</i>	
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>11554</b>	<i>kWh</i>				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>na</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>na</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>na</b>	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):	<b>CTC EcoPart 417 + CTC Basicstyrning</b>		
Air-to-water heat pump:	<b>No</b>	Energy efficiency class:	-
Water-to-water heat pump:	<b>No</b>	Controller class:	<b>I</b> -
Brine-to-water heat pump:	<b>Yes</b>	Controller contribution:	<b>1</b> %
Low-temperature heat pump:	<b>No</b>	Package efficiency:	<b>185</b> %
Equipped with a supplementary heater:	<b>No</b>	Package efficiency class:	-
Heat pump combination heater:	<b>No</b>		

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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>18</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>184</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>17,1</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>4,84</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>17,2</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>5,01</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>17,3</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,13</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>17,3</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,15</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>16,9</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>4,61</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>na</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>na</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-20</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>1,0</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,027</b>	kW	Type of energy input <b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	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	<b>Fixed</b>			-	<b>na</b>	<b>3,8</b>	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>56/na</b>	dB	-	<b>na</b>		
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>9166</b>	kWh				

For heat pump combination heater:

<b>Declared load profile / Energy efficiency class</b>	<b>na</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>na</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>na</b>	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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