

Warm climate and Medium temperature

Model(s):	CTC EcoPart 410 + 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>	10	kW	Seasonal space heating energy efficiency	η_s	137	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	9,3	kW	T _j = +2 °C	<i>COP_d</i>	3,10	-
T _j = +7 °C	<i>P_{dh}</i>	9,5	kW	T _j = +7 °C	<i>COP_d</i>	3,47	-
T _j = +12 °C	<i>P_{dh}</i>	9,8	kW	T _j = +12 °C	<i>COP_d</i>	4,15	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,3	kW	T _j = bivalent temperature	<i>COP_d</i>	3,21	-
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>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,003	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3701	kWh				

For heat pump combination heater:

Declared load profile	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

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

www.ctc.se

181001



Warm climate and Low temperature

Model(s):	CTC EcoPart 410 + 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:	183 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	179	%
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>	10,0	kW	T _j = +2 °C	<i>COP_d</i>	4,60	-
T _j = + 7 °C	<i>P_{dh}</i>	10,1	kW	T _j = +7 °C	<i>COP_d</i>	4,82	-
T _j = + 12 °C	<i>P_{dh}</i>	10,2	kW	T _j = +12 °C	<i>COP_d</i>	5,10	-
T _j = bivalent temperature	<i>P_{dh}</i>	10	kW	T _j = bivalent temperature	<i>COP_d</i>	4,67	-
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>	0,98	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger		2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3079	kWh				

For heat pump combination heater:

Declared load profile	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 410 + 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:	142 %
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>	11	kW	Seasonal space heating energy efficiency	η_s	138	%
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>	9,4	kW	T _j = -7 °C	<i>COP_d</i>	3,28	-
T _j = +2 °C	<i>P_{dh}</i>	9,5	kW	T _j = +2 °C	<i>COP_d</i>	3,66	-
T _j = +7 °C	<i>P_{dh}</i>	9,7	kW	T _j = +7 °C	<i>COP_d</i>	4,03	-
T _j = +12 °C	<i>P_{dh}</i>	9,9	kW	T _j = +12 °C	<i>COP_d</i>	4,41	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,4	kW	T _j = bivalent temperature	<i>COP_d</i>	3,28	-
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>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,003	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5999	kWh				

For heat pump combination heater:

Declared load profile	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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Average climate and Low temperature

Model(s):	CTC EcoPart 410 + 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>	11	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>	10,0	kW	T _j = -7 °C	<i>COP_d</i>	4,69	-
T _j = +2 °C	<i>P_{dh}</i>	10,1	kW	T _j = +2 °C	<i>COP_d</i>	4,88	-
T _j = +7 °C	<i>P_{dh}</i>	10,2	kW	T _j = +7 °C	<i>COP_d</i>	5,05	-
T _j = +12 °C	<i>P_{dh}</i>	10,3	kW	T _j = +12 °C	<i>COP_d</i>	5,22	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,69	-
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>	0,98	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	4944	kWh				

For heat pump combination heater:

Declared load profile	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 Medium temperature

Model(s):	CTC EcoPart 410 + 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:	145 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	10	kW	Seasonal space heating energy efficiency	η_s	141	%
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}	9,5	kW	$T_j = -7$ °C	COP_d	3,58	-
$T_j = +2$ °C	P_{dh}	9,7	kW	$T_j = +2$ °C	COP_d	3,96	-
$T_j = +7$ °C	P_{dh}	9,8	kW	$T_j = +7$ °C	COP_d	4,29	-
$T_j = +12$ °C	P_{dh}	10,0	kW	$T_j = +12$ °C	COP_d	4,54	-
$T_j =$ bivalent temperature	P_{dh}	9,4	kW	$T_j =$ bivalent temperature	COP_d	3,27	-
$T_j =$ 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}	-18	°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}	1,2	kW
Thermostat-off mode	P_{TO}	0,003	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}	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	Q_{HE}	6939	kWh				

For heat pump combination heater:

Declared load profile	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 410 + 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:	188 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	P_{rated}	11	kW	Seasonal space heating energy efficiency	η_s	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	P_{dh}	10,1	kW	T _j = -7 °C	COP_d	4,89	-
T _j = +2 °C	P_{dh}	10,2	kW	T _j = +2 °C	COP_d	5,05	-
T _j = +7 °C	P_{dh}	10,2	kW	T _j = +7 °C	COP_d	5,16	-
T _j = +12 °C	P_{dh}	10,2	kW	T _j = +12 °C	COP_d	5,19	-
T _j = bivalent temperature	P_{dh}	10,0	kW	T _j = bivalent temperature	COP_d	4,66	-
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}	-20	°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}	0,98	-	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}	0,6	kW
Thermostat-off mode	P_{TO}	0,014	kW	Type of energy input: Electric			
Standby mode	P_{SB}	0,018	kW				
Crankcase heater mode	P_{CK}	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Fixed			-	na	na	m ³ /h
Sound power level, indoors/ outdoors	L_{WA}	49/na	dB	-	2,3	2,3	m ³ /h
Annual energy consumption	Q_{HE}	5414	kWh				

For heat pump combination heater:

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Declared load profile		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

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Warm climate and Medium temperature

Model(s):	CTC EcoPart 410 + CTC EcoZenith i350/ i350F		
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:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	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>	9,3	kW	T _j = +2 °C	<i>COP_d</i>	3,10	-
T _j = +7 °C	<i>P_{dh}</i>	9,5	kW	T _j = +7 °C	<i>COP_d</i>	3,47	-
T _j = +12 °C	<i>P_{dh}</i>	9,8	kW	T _j = +12 °C	<i>COP_d</i>	4,15	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,3	kW	T _j = bivalent temperature	<i>COP_d</i>	3,21	-
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>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,003	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3701	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	102	%
Daily electricity consumption	<i>Q_{elec}</i>	7,508	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1652	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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Warm climate and Low temperature

Model(s):	CTC EcoPart 410 + CTC EcoZenith i350/ i350F		
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:	183 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	179	%
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>	10,0	kW	T _j = +2 °C	<i>COP_d</i>	4,60	-
T _j = + 7 °C	<i>P_{dh}</i>	10,1	kW	T _j = +7 °C	<i>COP_d</i>	4,82	-
T _j = + 12 °C	<i>P_{dh}</i>	10,2	kW	T _j = +12 °C	<i>COP_d</i>	5,10	-
T _j = bivalent temperature	<i>P_{dh}</i>	10	kW	T _j = bivalent temperature	<i>COP_d</i>	4,67	-
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>	0,98	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3079	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	102	%
Daily electricity consumption	<i>Q_{elec}</i>	7,508	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1652	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 410 + CTC EcoZenith i350/ i350F		
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:	142 %
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>	11	kW	Seasonal space heating energy efficiency	η_s	138	%
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>	9,4	kW	T _j = -7 °C	<i>COP_d</i>	3,28	-
T _j = +2 °C	<i>P_{dh}</i>	9,5	kW	T _j = +2 °C	<i>COP_d</i>	3,66	-
T _j = +7 °C	<i>P_{dh}</i>	9,7	kW	T _j = +7 °C	<i>COP_d</i>	4,03	-
T _j = +12 °C	<i>P_{dh}</i>	9,9	kW	T _j = +12 °C	<i>COP_d</i>	4,41	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,4	kW	T _j = bivalent temperature	<i>COP_d</i>	3,28	-
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>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,003	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5999	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	102	%
Daily electricity consumption	<i>Q_{elec}</i>	7,508	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1652	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ

Specific precautions and end of life information:

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

Contact details

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Average climate and Low temperature

Model(s):	CTC EcoPart 410 + CTC EcoZenith i350/ i350F		
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:	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>	11	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>	10,0	kW	T _j = -7 °C	<i>COP_d</i>	4,69	-
T _j = +2 °C	<i>P_{dh}</i>	10,1	kW	T _j = +2 °C	<i>COP_d</i>	4,88	-
T _j = +7 °C	<i>P_{dh}</i>	10,2	kW	T _j = +7 °C	<i>COP_d</i>	5,05	-
T _j = +12 °C	<i>P_{dh}</i>	10,3	kW	T _j = +12 °C	<i>COP_d</i>	5,22	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,69	-
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>	0,98	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	4944	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	102	%
Daily electricity consumption	<i>Q_{elec}</i>	7,508	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1652	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 410 + CTC EcoZenith i350/ i350F		
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:	145 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	141	%
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>	9,5	kW	T _j = - 7 °C	<i>COP_d</i>	3,58	-
T _j = + 2 °C	<i>P_{dh}</i>	9,7	kW	T _j = +2 °C	<i>COP_d</i>	3,96	-
T _j = + 7 °C	<i>P_{dh}</i>	9,8	kW	T _j = +7 °C	<i>COP_d</i>	4,29	-
T _j = + 12 °C	<i>P_{dh}</i>	10,0	kW	T _j = +12 °C	<i>COP_d</i>	4,54	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,4	kW	T _j = bivalent temperature	<i>COP_d</i>	3,27	-
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>	-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_{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>	1,2	kW
Thermostat-off mode	<i>P_{TO}</i>	0,003	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6939	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	102	%
Daily electricity consumption	<i>Q_{elec}</i>	7,508	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1652	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 410 + CTC EcoZenith i350/ i350F		
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:	188 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	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>	10,1	kW	T _j = -7 °C	<i>COP_d</i>	4,89	-
T _j = +2 °C	<i>P_{dh}</i>	10,2	kW	T _j = +2 °C	<i>COP_d</i>	5,05	-
T _j = +7 °C	<i>P_{dh}</i>	10,2	kW	T _j = +7 °C	<i>COP_d</i>	5,16	-
T _j = +12 °C	<i>P_{dh}</i>	10,2	kW	T _j = +12 °C	<i>COP_d</i>	5,19	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,66	-
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>	0,98	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	0,6	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5414	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	102	%
Daily electricity consumption	<i>Q_{elec}</i>	7,508	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1652	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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Warm climate and Medium temperature

Model(s):	CTC EcoPart 410 + CTC EcoZenith 250		
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:	128 %
Equipped with a supplementary heater:	yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	124	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	9,3	kW	T _j = +2 °C	<i>COP_d</i>	2,86	-
T _j = +7 °C	<i>P_{dh}</i>	9,5	kW	T _j = +7 °C	<i>COP_d</i>	3,20	-
T _j = +12 °C	<i>P_{dh}</i>	9,8	kW	T _j = +12 °C	<i>COP_d</i>	3,78	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,3	kW	T _j = bivalent temperature	<i>COP_d</i>	2,96	-
T _j = operation limit temperature	<i>P_{dh}</i>	9,3	kW	T _j = operation limit temperature	<i>COP_d</i>	2,86	-
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>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,026	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	4090	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	L / A			Water heating energy efficiency	η_{wh}	87	%
Daily electricity consumption	<i>Q_{elec}</i>	5,377	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1183	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 410 + CTC EcoZenith 250		
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:	156 %
Equipped with a supplementary heater:	yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	152	%
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>	10,0	kW	T _j = +2 °C	<i>COP_d</i>	4,16	-
T _j = + 7 °C	<i>P_{dh}</i>	10,1	kW	T _j = +7 °C	<i>COP_d</i>	4,35	-
T _j = + 12 °C	<i>P_{dh}</i>	10,2	kW	T _j = +12 °C	<i>COP_d</i>	4,58	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,22	-
T _j = operation limit temperature	<i>P_{dh}</i>	10,0	kW	T _j = operation limit temperature	<i>COP_d</i>	4,16	-
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>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,082	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3592	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	L / A			Water heating energy efficiency	η_{wh}	87	%
Daily electricity consumption	<i>Q_{elec}</i>	5,377	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1183	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 410 + CTC EcoZenith 250		
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:	129 %
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>	11	kW	Seasonal space heating energy efficiency	η_s	125	%
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>	9,4	kW	T _j = -7 °C	<i>COP_d</i>	3,02	-
T _j = +2 °C	<i>P_{dh}</i>	9,6	kW	T _j = +2 °C	<i>COP_d</i>	3,39	-
T _j = +7 °C	<i>P_{dh}</i>	9,7	kW	T _j = +7 °C	<i>COP_d</i>	3,69	-
T _j = +12 °C	<i>P_{dh}</i>	9,9	kW	T _j = +12 °C	<i>COP_d</i>	4,00	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,4	kW	T _j = bivalent temperature	<i>COP_d</i>	3,08	-
T _j = operation limit temperature	<i>P_{dh}</i>	9,3	kW	T _j = operation limit temperature	<i>COP_d</i>	2,86	-
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>	0,98	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,026	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6900	kWh				

For heat pump combination heater:

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

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 410 + CTC EcoZenith 250		
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:	161 %
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>	12	kW	Seasonal space heating energy efficiency	η_s	157	%
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>	10,0	kW	T _j = -7 °C	<i>COP_d</i>	4,24	-
T _j = +2 °C	<i>P_{dh}</i>	10,1	kW	T _j = +2 °C	<i>COP_d</i>	4,40	-
T _j = +7 °C	<i>P_{dh}</i>	10,2	kW	T _j = +7 °C	<i>COP_d</i>	4,54	-
T _j = +12 °C	<i>P_{dh}</i>	10,3	kW	T _j = +12 °C	<i>COP_d</i>	4,68	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,27	-
T _j = operation limit temperature	<i>P_{dh}</i>	10,0	kW	T _j = operation limit temperature	<i>COP_d</i>	4,16	-
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>	1,9	kW
Thermostat-off mode	<i>P_{TO}</i>	0,082	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5938	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	L / A			Water heating energy efficiency	η_{wh}	87	%
Daily electricity consumption	<i>Q_{elec}</i>	5,377	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1183	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 410 + CTC EcoZenith 250		
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:	131 %
Equipped with a supplementary heater:	yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	127	%
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>	9,5	kW	T _j = -7 °C	<i>COP_d</i>	3,30	-
T _j = +2 °C	<i>P_{dh}</i>	9,7	kW	T _j = +2 °C	<i>COP_d</i>	3,62	-
T _j = +7 °C	<i>P_{dh}</i>	9,8	kW	T _j = +7 °C	<i>COP_d</i>	3,90	-
T _j = +12 °C	<i>P_{dh}</i>	10,0	kW	T _j = +12 °C	<i>COP_d</i>	4,11	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,4	kW	T _j = bivalent temperature	<i>COP_d</i>	3,02	-
T _j = operation limit temperature	<i>P_{dh}</i>	9,3	kW	T _j = operation limit temperature	<i>COP_d</i>	2,86	-
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_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,98	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,2	kW
Thermostat-off mode	<i>P_{TO}</i>	0,026	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	7647	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	L / A			Water heating energy efficiency	η_{wh}	87	%
Daily electricity consumption	<i>Q_{elec}</i>	5,377	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1183	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 410 + CTC EcoZenith 250		
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:	162 %
Equipped with a supplementary heater:	yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	158	%
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>	10,1	kW	T _j = - 7 °C	<i>COP_d</i>	4,42	-
T _j = + 2 °C	<i>P_{dh}</i>	10,2	kW	T _j = +2 °C	<i>COP_d</i>	4,54	-
T _j = + 7 °C	<i>P_{dh}</i>	10,2	kW	T _j = +7 °C	<i>COP_d</i>	4,64	-
T _j = + 12 °C	<i>P_{dh}</i>	10,2	kW	T _j = +12 °C	<i>COP_d</i>	4,66	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,26	-
T _j = operation limit temperature	<i>P_{dh}</i>	10,0	kW	T _j = operation limit temperature	<i>COP_d</i>	4,16	-
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>	1,2	kW
Thermostat-off mode	<i>P_{TO}</i>	0,082	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>	49/na	dB	-			
Annual energy consumption	<i>Q_{HE}</i>	6656	kWh	-			

For heat pump combination heater:

Declared load profile/ Energy efficiency class	L / A			Water heating energy efficiency	η_{wh}	x	%
Daily electricity consumption	<i>Q_{elec}</i>	x	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	x	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 410 + 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:	128 %
Equipped with a supplementary heater:	yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	124	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	9,3	kW	T _j = +2 °C	<i>COP_d</i>	2,86	-
T _j = +7 °C	<i>P_{dh}</i>	9,5	kW	T _j = +7 °C	<i>COP_d</i>	3,20	-
T _j = +12 °C	<i>P_{dh}</i>	9,8	kW	T _j = +12 °C	<i>COP_d</i>	3,78	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,3	kW	T _j = bivalent temperature	<i>COP_d</i>	2,96	-
T _j = operation limit temperature	<i>P_{dh}</i>	9,3	kW	T _j = operation limit temperature	<i>COP_d</i>	2,86	-
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>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,019	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	4070	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	<i>Q_{elec}</i>	7,552	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1661	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 410 + 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:	160 %
Equipped with a supplementary heater:	yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	156	%
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>	10,0	kW	T _j = +2 °C	<i>COP_d</i>	4,16	-
T _j = +7 °C	<i>P_{dh}</i>	10,1	kW	T _j = +7 °C	<i>COP_d</i>	4,35	-
T _j = +12 °C	<i>P_{dh}</i>	10,2	kW	T _j = +12 °C	<i>COP_d</i>	4,58	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,22	-
T _j = operation limit temperature	<i>P_{dh}</i>	10,0	kW	T _j = operation limit temperature	<i>COP_d</i>	4,16	-
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>	0,97	-	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>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,051	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3506	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	<i>Q_{elec}</i>	7,552	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1661	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 410 + 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:	141 %
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>	9	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>	9,4	kW	T _j = -7 °C	<i>COP_d</i>	3,02	-
T _j = +2 °C	<i>P_{dh}</i>	9,6	kW	T _j = +2 °C	<i>COP_d</i>	3,39	-
T _j = +7 °C	<i>P_{dh}</i>	9,7	kW	T _j = +7 °C	<i>COP_d</i>	3,69	-
T _j = +12 °C	<i>P_{dh}</i>	9,9	kW	T _j = +12 °C	<i>COP_d</i>	4,00	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,4	kW	T _j = bivalent temperature	<i>COP_d</i>	3,08	-
T _j = operation limit temperature	<i>P_{dh}</i>	9,3	kW	T _j = operation limit temperature	<i>COP_d</i>	2,86	-
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>	1,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,019	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6880	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	<i>Q_{elec}</i>	7,552	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1661	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 410 + 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:	164 %
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>	11	kW	Seasonal space heating energy efficiency	η_s	160	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	10,0	kW	T _j = -7 °C	<i>COP_d</i>	4,24	-
T _j = +2 °C	<i>P_{dh}</i>	10,1	kW	T _j = +2 °C	<i>COP_d</i>	4,39	-
T _j = +7 °C	<i>P_{dh}</i>	10,2	kW	T _j = +7 °C	<i>COP_d</i>	4,53	-
T _j = +12 °C	<i>P_{dh}</i>	10,3	kW	T _j = +12 °C	<i>COP_d</i>	4,68	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,24	-
T _j = operation limit temperature	<i>P_{dh}</i>	10,0	kW	T _j = operation limit temperature	<i>COP_d</i>	4,16	-
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>	0,97	-	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>	0,051	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5582	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	<i>Q_{elec}</i>	7,552	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1661	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 Medium temperature

Model(s):	CTC EcoPart 410 + 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:	132 %
Equipped with a supplementary heater:	yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	10	kW	Seasonal space heating energy efficiency	η_s	128	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	9,5	kW	T _j = -7 °C	<i>COP_d</i>	3,30	-
T _j = +2 °C	<i>P_{dh}</i>	9,7	kW	T _j = +2 °C	<i>COP_d</i>	3,62	-
T _j = +7 °C	<i>P_{dh}</i>	9,8	kW	T _j = +7 °C	<i>COP_d</i>	3,90	-
T _j = +12 °C	<i>P_{dh}</i>	10,0	kW	T _j = +12 °C	<i>COP_d</i>	4,11	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,4	kW	T _j = bivalent temperature	<i>COP_d</i>	3,02	-
T _j = operation limit temperature	<i>P_{dh}</i>	9,3	kW	T _j = operation limit temperature	<i>COP_d</i>	2,86	-
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_{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>	1,2	kW
Thermostat-off mode	<i>P_{TO}</i>	0,019	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	7618	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	<i>Q_{elec}</i>	7,552	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1661	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ

Specific precautions and end of life information:

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

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Cold climate and Low temperature

Model(s):	CTC EcoPart 410 + 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:	165 %
Equipped with a supplementary heater:	yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	161	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	10,1	kW	T _j = -7 °C	<i>COP_d</i>	4,42	-
T _j = +2 °C	<i>P_{dh}</i>	10,2	kW	T _j = +2 °C	<i>COP_d</i>	4,54	-
T _j = +7 °C	<i>P_{dh}</i>	10,2	kW	T _j = +7 °C	<i>COP_d</i>	4,64	-
T _j = +12 °C	<i>P_{dh}</i>	10,2	kW	T _j = +12 °C	<i>COP_d</i>	4,66	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,26	-
T _j = operation limit temperature	<i>P_{dh}</i>	10,0	kW	T _j = operation limit temperature	<i>COP_d</i>	4,16	-
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>	0,97	-	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>	1,2	kW
Thermostat-off mode	<i>P_{TO}</i>	0,051	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6528	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	<i>Q_{elec}</i>	7,552	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1661	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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Warm climate and Medium temperature

Model(s):	CTC EcoPart 410 + 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>	10	kW	Seasonal space heating energy efficiency	η_s	137	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	9,3	kW	T _j = +2 °C	<i>COP_d</i>	3,10	-
T _j = +7 °C	<i>P_{dh}</i>	9,5	kW	T _j = +7 °C	<i>COP_d</i>	3,47	-
T _j = +12 °C	<i>P_{dh}</i>	9,8	kW	T _j = +12 °C	<i>COP_d</i>	4,15	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,3	kW	T _j = bivalent temperature	<i>COP_d</i>	3,21	-
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>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,003	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3701	kWh				

For heat pump combination heater:

Declared load profile	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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181001



Warm climate and Low temperature

Model(s):	CTC EcoPart 410 + 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:	180 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	11	kW	Seasonal space heating energy efficiency	η_s	179	%
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>	10,0	kW	T _j = +2 °C	<i>COP_d</i>	4,60	-
T _j = + 7 °C	<i>P_{dh}</i>	10,1	kW	T _j = +7 °C	<i>COP_d</i>	4,82	-
T _j = + 12 °C	<i>P_{dh}</i>	10,2	kW	T _j = +12 °C	<i>COP_d</i>	5,10	-
T _j = bivalent temperature	<i>P_{dh}</i>	10	kW	T _j = bivalent temperature	<i>COP_d</i>	4,67	-
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>	0,98	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	0,8	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	3079	kWh				

For heat pump combination heater:

Declared load profile	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 410 + 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:	139 %
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>	11	kW	Seasonal space heating energy efficiency	η_s	138	%
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>	9,4	kW	T _j = -7 °C	<i>COP_d</i>	3,28	-
T _j = +2 °C	<i>P_{dh}</i>	9,5	kW	T _j = +2 °C	<i>COP_d</i>	3,66	-
T _j = +7 °C	<i>P_{dh}</i>	9,7	kW	T _j = +7 °C	<i>COP_d</i>	4,03	-
T _j = +12 °C	<i>P_{dh}</i>	9,9	kW	T _j = +12 °C	<i>COP_d</i>	4,41	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,4	kW	T _j = bivalent temperature	<i>COP_d</i>	3,28	-
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>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,003	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5999	kWh				

For heat pump combination heater:

Declared load profile	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

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

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181001

Average climate and Low temperature

Model(s):	CTC EcoPart 410 + 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>	11	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>	10,0	kW	T _j = -7 °C	<i>COP_d</i>	4,69	-
T _j = +2 °C	<i>P_{dh}</i>	10,1	kW	T _j = +2 °C	<i>COP_d</i>	4,88	-
T _j = +7 °C	<i>P_{dh}</i>	10,2	kW	T _j = +7 °C	<i>COP_d</i>	5,05	-
T _j = +12 °C	<i>P_{dh}</i>	10,3	kW	T _j = +12 °C	<i>COP_d</i>	5,22	-
T _j = bivalent temperature	<i>P_{dh}</i>	10,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,69	-
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>	0,98	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output	<i>P_{sup}</i>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,014	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	4944	kWh				

For heat pump combination heater:

Declared load profile	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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Cold climate and Medium temperature

Model(s):	CTC EcoPart 410 + 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:	142 %
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>	10	kW	Seasonal space heating energy efficiency	η_s	141	%
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>	9,5	kW	T _j = - 7 °C	<i>COP_d</i>	3,58	-
T _j = + 2 °C	<i>P_{dh}</i>	9,7	kW	T _j = +2 °C	<i>COP_d</i>	3,96	-
T _j = + 7 °C	<i>P_{dh}</i>	9,8	kW	T _j = +7 °C	<i>COP_d</i>	4,29	-
T _j = + 12 °C	<i>P_{dh}</i>	10,0	kW	T _j = +12 °C	<i>COP_d</i>	4,54	-
T _j = bivalent temperature	<i>P_{dh}</i>	9,4	kW	T _j = bivalent temperature	<i>COP_d</i>	3,27	-
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>	-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_{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>	1,2	kW
Thermostat-off mode	<i>P_{TO}</i>	0,003	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>	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,9	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6939	kWh				

For heat pump combination heater:

Declared load profile	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 Low temperature

Model(s):	CTC EcoPart 410 + 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 (*)	P_{rated}	11	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	P_{dh}	10,1	kW	T _j = -7 °C	COP_d	4,89	-
T _j = +2 °C	P_{dh}	10,2	kW	T _j = +2 °C	COP_d	5,05	-
T _j = +7 °C	P_{dh}	10,2	kW	T _j = +7 °C	COP_d	5,16	-
T _j = +12 °C	P_{dh}	10,2	kW	T _j = +12 °C	COP_d	5,19	-
T _j = bivalent temperature	P_{dh}	10,0	kW	T _j = bivalent temperature	COP_d	4,66	-
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}	-20	°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}	0,98	-	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}	0,6	kW
Thermostat-off mode	P_{TO}	0,014	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}	49/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	2,3	m ³ /h
Annual energy consumption	Q_{HE}	5414	kWh				

For heat pump combination heater:

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Declared load profile		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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