Information for heat pump space heaters and heat pump combination heaters
Warm climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + 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:	**140**	%
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
Rated heat output (*)	*Prated*	**15**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**na**	kW
T j = + 2 °C	*Pdh*	**13,5**	kW
T j = + 7 °C	*Pdh*	**13,8**	kW
T j = + 12 °C	*Pdh*	**14,2**	kW
T j = bivalent temperature	*Pdh*	**13,5**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**3**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,032**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**5396**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**136**	%
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	*COPd*	**na**	-
T j = +2 °C	*COPd*	**3,11**	-
T j = +7 °C	*COPd*	**3,48**	-
T j = +12 °C	*COPd*	**4,12**	-
T j = bivalent temperature	*COPd*	**3,21**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,1**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,0**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters
Warm climate and Low temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + 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:	**174**	%
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
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**na**	kW
T j = + 2 °C	*Pdh*	**14,5**	kW
T j = + 7 °C	*Pdh*	**14,7**	kW
T j = + 12 °C	*Pdh*	**14,8**	kW
T j = bivalent temperature	*Pdh*	**14,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**3**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,96**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,097**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**4702**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**170**	%
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	*COPd*	**na**	-
T j = +2 °C	*COPd*	**4,55**	-
T j = +7 °C	*COPd*	**4,76**	-
T j = +12 °C	*COPd*	**5,02**	-
T j = bivalent temperature	*COPd*	**4,62**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,2**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,6**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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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Information for heat pump space heaters and heat pump combination heaters
Average climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC EcoLogic**			
Air-to-water heat pump:	**No**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**141**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:	**A++**	-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**13,6**	kW
T j = + 2 °C	*Pdh*	**13,9**	kW
T j = + 7 °C	*Pdh*	**14,2**	kW
T j = + 12 °C	*Pdh*	**14,4**	kW
T j = bivalent temperature	*Pdh*	**13,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-6**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,032**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**9158**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**137**	%
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	*COPd*	**3,29**	-
T j = +2 °C	*COPd*	**3,68**	-
T j = +7 °C	*COPd*	**4,03**	-
T j = +12 °C	*COPd*	**4,37**	-
T j = bivalent temperature	*COPd*	**3,34**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**2,7**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,0**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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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Information for heat pump space heaters and heat pump combination heaters

Average climate and Low temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + 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:	**178**	%
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
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**14,6**	kW
T j = + 2 °C	*Pdh*	**14,7**	kW
T j = + 7 °C	*Pdh*	**14,8**	kW
T j = + 12 °C	*Pdh*	**14,9**	kW
T j = bivalent temperature	*Pdh*	**14,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-7**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,96**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,097**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**7467**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**174**	%
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	*COPd*	**4,64**	-
T j = +2 °C	*COPd*	**4,81**	-
T j = +7 °C	*COPd*	**4,97**	-
T j = +12 °C	*COPd*	**5,13**	-
T j = bivalent temperature	*COPd*	**4,64**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**2,0**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,6**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters
Cold climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC EcoLogic**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**144**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**15**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**13,8**	kW
T j = + 2 °C	*Pdh*	**14,1**	kW
T j = + 7 °C	*Pdh*	**14,3**	kW
T j = + 12 °C	*Pdh*	**14,5**	kW
T j = bivalent temperature	*Pdh*	**13,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-18**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,032**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**10139**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**140**	%
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	*COPd*	**3,59**	-
T j = +2 °C	*COPd*	**3,94**	-
T j = +7 °C	*COPd*	**4,26**	-
T j = +12 °C	*COPd*	**4,49**	-
T j = bivalent temperature	*COPd*	**3,28**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,7**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,0**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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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Information for heat pump space heaters and heat pump combination heaters
Cold climate and Low temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + 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:	**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
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**14,7**	kW
T j = + 2 °C	*Pdh*	**14,8**	kW
T j = + 7 °C	*Pdh*	**14,9**	kW
T j = + 12 °C	*Pdh*	**14,9**	kW
T j = bivalent temperature	*Pdh*	**14,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-18**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,96**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,097**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**8758**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**176**	%
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	*COPd*	**4,84**	-
T j = +2 °C	*COPd*	**4,98**	-
T j = +7 °C	*COPd*	**5,08**	-
T j = +12 °C	*COPd*	**5,11**	-
T j = bivalent temperature	*COPd*	**4,67**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,8**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,6**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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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Information for heat pump space heaters and heat pump combination heaters
Warm climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC EcoZenith i555**			
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:	**125**	%
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**
Rated heat output (*)	*Prated*	**15**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**na**	kW
T j = + 2 °C	*Pdh*	**13,5**	kW
T j = + 7 °C	*Pdh*	**13,8**	kW
T j = + 12 °C	*Pdh*	**14,2**	kW
T j = bivalent temperature	*Pdh*	**13,5**	kW
T j = operation limit temperature	*Pdh*	**13,5**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**3**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,039**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**6019**	*kWh*

Item	**Symbol**	**Value**	**Unit**
Seasonal space heating energy efficiency	η_s	**121**	%
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	*COPd*	**na**	-
T j = +2 °C	*COPd*	**2,81**	-
T j = +7 °C	*COPd*	**3,14**	-
T j = +12 °C	*COPd*	**3,67**	-
T j = bivalent temperature	*COPd*	**2,90**	-
T j = operation limit temperature	*COPd*	**2,81**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,1**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,0**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**102**	%
Daily electricity consumption	Qelec	**7,515**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**1653**	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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters
Warm climate and Low temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC EcoZenith i555**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**153**	%
Equipped with a supplementary heater:	**Yes**	Package efficiency class:		-
Heat pump combination heater:	**Yes**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**na**	kW
T j = + 2 °C	*Pdh*	**14,5**	kW
T j = + 7 °C	*Pdh*	**14,7**	kW
T j = + 12 °C	*Pdh*	**14,8**	kW
T j = bivalent temperature	*Pdh*	**14,6**	kW
T j = operation limit temperature	*Pdh*	**14,5**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**3**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,96**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,107**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**5335**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**149**	%
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	*COPd*	**na**	-
T j = +2 °C	*COPd*	**4,01**	-
T j = +7 °C	*COPd*	**4,18**	-
T j = +12 °C	*COPd*	**4,39**	-
T j = bivalent temperature	*COPd*	**4,01**	-
T j = operation limit temperature	*COPd*	**4,07**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,2**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,6**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**102**	%
Daily electricity consumption	Qelec	**7,515**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**1653**	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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters
Average climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC EcoZenith i555**			
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:	**127**	%
Equipped with a supplementary heater:	**Yes**	Package efficiency class:	**A++**	-
Heat pump combination heater:	**Yes**			

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

Item	**Symbol**	**Value**	**Unit**
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**13,6**	kW
T j = + 2 °C	*Pdh*	**13,9**	kW
T j = + 7 °C	*Pdh*	**14,2**	kW
T j = + 12 °C	*Pdh*	**14,4**	kW
T j = bivalent temperature	*Pdh*	**13,6**	kW
T j = operation limit temperature	*Pdh*	**13,5**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-6**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,039**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**10197**	*kWh*

Item	**Symbol**	**Value**	**Unit**
Seasonal space heating energy efficiency	η_s	**123**	%
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	*COPd*	**2,96**	-
T j = +2 °C	*COPd*	**3,31**	-
T j = +7 °C	*COPd*	**3,59**	-
T j = +12 °C	*COPd*	**3,87**	-
T j = bivalent temperature	*COPd*	**3,02**	-
T j = operation limit temperature	*COPd*	**2,81**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**2,7**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,0**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**102**	%
Daily electricity consumption	Qelec	**7,515**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**1653**	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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters

Average climate and Low temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC EcoZenith i555**			
Air-to-water heat pump:	**No**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**157**	%
Equipped with a supplementary heater:	**Yes**	Package efficiency class:	**A++**	-
Heat pump combination heater:	**Yes**			

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

Item	**Symbol**	**Value**	**Unit**
Rated heat output (*)	*Prated*	**17**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**14,6**	kW
T j = + 2 °C	*Pdh*	**14,7**	kW
T j = + 7 °C	*Pdh*	**14,8**	kW
T j = + 12 °C	*Pdh*	**14,9**	kW
T j = bivalent temperature	*Pdh*	**14,6**	kW
T j = operation limit temperature	*Pdh*	**14,5**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-6**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,96**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,107**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**8881**	*kWh*

Item	**Symbol**	**Value**	**Unit**
Seasonal space heating energy efficiency	η_s	**153**	%
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	*COPd*	**4,08**	-
T j = +2 °C	*COPd*	**4,23**	-
T j = +7 °C	*COPd*	**4,35**	-
T j = +12 °C	*COPd*	**4,48**	-
T j = bivalent temperature	*COPd*	**4,11**	-
T j = operation limit temperature	*COPd*	**4,01**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**2,7**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,6**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**102**	%
Daily electricity consumption	Qelec	**7,515**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**1653**	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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters
Cold climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC EcoZenith i555**			
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
Rated heat output (*)	*Prated*	**15**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**13,8**	kW
T j = + 2 °C	*Pdh*	**14,1**	kW
T j = + 7 °C	*Pdh*	**14,3**	kW
T j = + 12 °C	*Pdh*	**14,5**	kW
T j = bivalent temperature	*Pdh*	**13,6**	kW
T j = operation limit temperature	*Pdh*	**13,5**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-18**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,039**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**11314**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**124**	%
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	*COPd*	**3,23**	-
T j = +2 °C	*COPd*	**3,52**	-
T j = +7 °C	*COPd*	**3,78**	-
T j = +12 °C	*COPd*	**3,97**	-
T j = bivalent temperature	*COPd*	**2,96**	-
T j = operation limit temperature	*COPd*	**2,81**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,7**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,0**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**102**	%
Daily electricity consumption	Qelec	**7,515**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**1653**	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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters
Cold climate and Low temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC EcoZenith i555**			
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:	**157**	%
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**
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**14,7**	kW
T j = + 2 °C	*Pdh*	**14,8**	kW
T j = + 7 °C	*Pdh*	**14,9**	kW
T j = + 12 °C	*Pdh*	**14,9**	kW
T j = bivalent temperature	*Pdh*	**14,6**	kW
T j = operation limit temperature	*Pdh*	**14,5**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-18**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,96**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,107**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**9957**	*kWh*

Item	**Symbol**	**Value**	**Unit**
Seasonal space heating energy efficiency	η_s	**153**	%
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	*COPd*	**4,24**	-
T j = +2 °C	*COPd*	**4,35**	-
T j = +7 °C	*COPd*	**4,44**	-
T j = +12 °C	*COPd*	**4,46**	-
T j = bivalent temperature	*COPd*	**4,10**	-
T j = operation limit temperature	*COPd*	**4,01**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,8**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,6**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**102**	%
Daily electricity consumption	Qelec	**7,515**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**1653**	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. t 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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Information for heat pump space heaters and heat pump combination heaters

Warm climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + 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:	**137**	%
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**
Rated heat output (*)	*Prated*	**15**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**na**	kW
T j = + 2 °C	*Pdh*	**13,5**	kW
T j = + 7 °C	*Pdh*	**13,8**	kW
T j = + 12 °C	*Pdh*	**14,2**	kW
T j = bivalent temperature	*Pdh*	**13,5**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**3**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,032**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**5396**	*kWh*

Item	**Symbol**	**Value**	**Unit**
Seasonal space heating energy efficiency	η_s	**136**	%
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	*COPd*	**na**	-
T j = +2 °C	*COPd*	**3,11**	-
T j = +7 °C	*COPd*	**3,48**	-
T j = +12 °C	*COPd*	**4,12**	-
T j = bivalent temperature	*COPd*	**3,21**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,1**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,0**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters
Warm climate and Low temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + 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:	**171**	%
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
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**na**	kW
T j = + 2 °C	*Pdh*	**14,5**	kW
T j = + 7 °C	*Pdh*	**14,7**	kW
T j = + 12 °C	*Pdh*	**14,8**	kW
T j = bivalent temperature	*Pdh*	**14,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**3**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,96**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,097**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**4702**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**170**	%
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	*COPd*	**na**	-
T j = +2 °C	*COPd*	**4,55**	-
T j = +7 °C	*COPd*	**4,76**	-
T j = +12 °C	*COPd*	**5,02**	-
T j = bivalent temperature	*COPd*	**4,62**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,2**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,6**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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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Information for heat pump space heaters and heat pump combination heaters
Average climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC Basicstyrning**			
Air-to-water heat pump:	**No**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**I**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**1**	%
Low-temperature heat pump:	**No**	Package efficiency:	**138**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:	**A++**	-
Heat pump combination heater:	**No**			

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

Item	**Symbol**	**Value**	**Unit**
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**13,6**	kW
T j = + 2 °C	*Pdh*	**13,9**	kW
T j = + 7 °C	*Pdh*	**14,2**	kW
T j = + 12 °C	*Pdh*	**14,4**	kW
T j = bivalent temperature	*Pdh*	**13,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-6**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,032**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**9158**	*kWh*

Item	**Symbol**	**Value**	**Unit**
Seasonal space heating energy efficiency	η_s	**137**	%
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	*COPd*	**3,29**	-
T j = +2 °C	*COPd*	**3,68**	-
T j = +7 °C	*COPd*	**4,03**	-
T j = +12 °C	*COPd*	**4,37**	-
T j = bivalent temperature	*COPd*	**3,34**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**2,7**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,0**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters
Average climate and Low temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + 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:	**175**	%
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
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**14,6**	kW
T j = + 2 °C	*Pdh*	**14,7**	kW
T j = + 7 °C	*Pdh*	**14,8**	kW
T j = + 12 °C	*Pdh*	**14,9**	kW
T j = bivalent temperature	*Pdh*	**14,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-7**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,96**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,097**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**7467**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**174**	%
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	*COPd*	**4,64**	-
T j = +2 °C	*COPd*	**4,81**	-
T j = +7 °C	*COPd*	**4,97**	-
T j = +12 °C	*COPd*	**5,13**	-
T j = bivalent temperature	*COPd*	**4,64**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**2,0**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,6**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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 CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

Information for heat pump space heaters and heat pump combination heaters
Cold climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + CTC Basicstyrning**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**I**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**1**	%
Low-temperature heat pump:	**No**	Package efficiency:	**141**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**15**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**13,8**	kW
T j = + 2 °C	*Pdh*	**14,1**	kW
T j = + 7 °C	*Pdh*	**14,3**	kW
T j = + 12 °C	*Pdh*	**14,5**	kW
T j = bivalent temperature	*Pdh*	**13,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-18**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,032**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**10139**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**140**	%
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	*COPd*	**3,59**	-
T j = +2 °C	*COPd*	**3,94**	-
T j = +7 °C	*COPd*	**4,26**	-
T j = +12 °C	*COPd*	**4,49**	-
T j = bivalent temperature	*COPd*	**3,28**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,7**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,0**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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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Information for heat pump space heaters and heat pump combination heaters
Cold climate and Low temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 414 + 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:	**177**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	**Symbol**	**Value**	**Unit**
Rated heat output (*)	*Prated*	**16**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**14,7**	kW
T j = + 2 °C	*Pdh*	**14,8**	kW
T j = + 7 °C	*Pdh*	**14,9**	kW
T j = + 12 °C	*Pdh*	**14,9**	kW
T j = bivalent temperature	*Pdh*	**14,6**	kW
T j = operation limit temperature	*Pdh*	**na**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-18**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,96**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,097**	*kW*
Standby mode	P_{SB}	**0,018**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Fixed**	
Sound power level, indoors/ outdoors	L_{WA}	**53/na**	*dB*
Annual energy consumption	Q_{HE}	**8758**	*kWh*

Item	**Symbol**	**Value**	**Unit**
Seasonal space heating energy efficiency	η_s	**176**	%
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	*COPd*	**4,84**	-
T j = +2 °C	*COPd*	**4,98**	-
T j = +7 °C	*COPd*	**5,08**	-
T j = +12 °C	*COPd*	**5,11**	-
T j = bivalent temperature	*COPd*	**4,67**	-
T j = operation limit temperature	*COPd*	**na**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**na**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**65**	°C
Supplementary heater			
Rated heat output	*Psup*	**1,8**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**na**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**3,6**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**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. t 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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