Information for heat pump space heaters and heat pump combination heaters

Warm climate and Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 417 + CTC EcoLogic**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**141**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
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*	**na**	kW
T j = + 2 °C	*Pdh*	**15,9**	kW
T j = + 7 °C	*Pdh*	**16,0**	kW
T j = + 12 °C	*Pdh*	**16,5**	kW
T j = bivalent temperature	*Pdh*	**15,9**	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}	**0,008**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**6315**	*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*	**na**	-
T j = +2 °C	*COPd*	**3,07**	-
T j = +7 °C	*COPd*	**3,42**	-
T j = +12 °C	*COPd*	**4,09**	-
T j = bivalent temperature	*COPd*	**3,17**	-
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*	**1,3**	*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	-	**3,1**	*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 417 + CTC EcoLogic**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**184**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**18**	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*	**16,9**	kW
T j = + 7 °C	*Pdh*	**17,0**	kW
T j = + 12 °C	*Pdh*	**17,3**	kW
T j = bivalent temperature	*Pdh*	**16,9**	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}	**0,027**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**5180**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**180**	%
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*	**4,78**	-
T j = +12 °C	*COPd*	**5,06**	-
T j = bivalent temperature	*COPd*	**4,63**	-
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*	**1,4**	*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	-	**3,8**	*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 Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 417 + CTC EcoLogic**			
Air-to-water heat pump:	**No**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**141**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:	**A++**	-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**18**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**16**	kW
T j = + 2 °C	*Pdh*	**16,1**	kW
T j = + 7 °C	*Pdh*	**16,4**	kW
T j = + 12 °C	*Pdh*	**16,7**	kW
T j = bivalent temperature	*Pdh*	**16**	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*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,008**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**10286**	*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*	**3,23**	-
T j = +2 °C	*COPd*	**3,60**	-
T j = +7 °C	*COPd*	**3,97**	-
T j = +12 °C	*COPd*	**4,36**	-
T j = bivalent temperature	*COPd*	**3,23**	-
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*	**2,2**	*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	-	**3,1**	*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 417 + CTC EcoLogic**			
Air-to-water heat pump:	**No**	Energy efficiency class:	**A+++**	-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**185**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:	**A+++**	-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**19**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**16,9**	kW
T j = + 2 °C	*Pdh*	**17,1**	kW
T j = + 7 °C	*Pdh*	**17,2**	kW
T j = + 12 °C	*Pdh*	**17,4**	kW
T j = bivalent temperature	*Pdh*	**16,9**	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*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,027**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**8362**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**181**	%
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*	**4,83**	-
T j = +7 °C	*COPd*	**5,01**	-
T j = +12 °C	*COPd*	**5,18**	-
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*	**2,3**	*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	-	**3,8**	*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 417 + CTC EcoLogic**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**144**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
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*	**16,1**	kW
T j = + 2 °C	*Pdh*	**16,4**	kW
T j = + 7 °C	*Pdh*	**16,6**	kW
T j = + 12 °C	*Pdh*	**16,8**	kW
T j = bivalent temperature	*Pdh*	**15,9**	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}	**-19**	°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}	**0,008**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**11554**	*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*	**3,51**	-
T j = +2 °C	*COPd*	**3,89**	-
T j = +7 °C	*COPd*	**4,24**	-
T j = +12 °C	*COPd*	**4,50**	-
T j = bivalent temperature	*COPd*	**3,19**	-
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*	**1,4**	*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	-	**3,1**	*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 417 + CTC EcoLogic**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VII**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**3,5**	%
Low-temperature heat pump:	**No**	Package efficiency:	**166**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**18**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**17,1**	kW
T j = + 2 °C	*Pdh*	**17,2**	kW
T j = + 7 °C	*Pdh*	**17,3**	kW
T j = + 12 °C	*Pdh*	**17,3**	kW
T j = bivalent temperature	*Pdh*	**16,9**	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}	**-20**	°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}	**0,027**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**9166**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**184**	%
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*	**5,01**	-
T j = +7 °C	*COPd*	**5,13**	-
T j = +12 °C	*COPd*	**5,15**	-
T j = bivalent temperature	*COPd*	**4,61**	-
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*	**1,0**	*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	-	**3,8**	*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 417 + 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:	**124**	%
Equipped with a supplementary heater:	**Yes**	Package efficiency class:		-
Heat pump combination heater:	**Yes**			

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

Item	**Symbol**	**Value**	**Unit**
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*	**na**	kW
T j = + 2 °C	*Pdh*	**15,9**	kW
T j = + 7 °C	*Pdh*	**16,0**	kW
T j = + 12 °C	*Pdh*	**16,5**	kW
T j = bivalent temperature	*Pdh*	**15,9**	kW
T j = operation limit temperature	*Pdh*	**15,9**	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}	**0,052**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**7168**	*kWh*

Item	**Symbol**	**Value**	**Unit**
Seasonal space heating energy efficiency	η_s	**120**	%
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*	**2,77**	-
T j = +7 °C	*COPd*	**3,07**	-
T j = +12 °C	*COPd*	**3,64**	-
T j = bivalent temperature	*COPd*	**2,85**	-
T j = operation limit temperature	*COPd*	**2,77**	-
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*	**1,3**	*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	-	**3,1**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**89**	%
Daily electricity consumption	Qelec	**9,110**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**2004**	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 417 + 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*	**18**	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*	**16,9**	kW
T j = + 7 °C	*Pdh*	**17,0**	kW
T j = + 12 °C	*Pdh*	**17,3**	kW
T j = bivalent temperature	*Pdh*	**16,9**	kW
T j = operation limit temperature	*Pdh*	**16,9**	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}	**0,146**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**6208**	*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*	**4,20**	-
T j = +12 °C	*COPd*	**4,43**	-
T j = bivalent temperature	*COPd*	**4,07**	-
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*	**1,4**	*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	-	**3,8**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**89**	%
Daily electricity consumption	Qelec	**9,110**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**2004**	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 417 + 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:	**125**	%
Equipped with a supplementary heater:	**Yes**	Package efficiency class:	**A++**	-
Heat pump combination heater:	**Yes**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**19**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**16,0**	kW
T j = + 2 °C	*Pdh*	**16,1**	kW
T j = + 7 °C	*Pdh*	**16,4**	kW
T j = + 12 °C	*Pdh*	**16,7**	kW
T j = bivalent temperature	*Pdh*	**16,0**	kW
T j = operation limit temperature	*Pdh*	**15,9**	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}	**0,052**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**12137**	*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*	**2,91**	-
T j = +2 °C	*COPd*	**3,24**	-
T j = +7 °C	*COPd*	**3,55**	-
T j = +12 °C	*COPd*	**3,86**	-
T j = bivalent temperature	*COPd*	**2,96**	-
T j = operation limit temperature	*COPd*	**2,77**	-
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*	**3,0**	*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	-	**3,1**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**89**	%
Daily electricity consumption	Qelec	**9,110**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**2004**	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 417 + 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*	**20**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**16,9**	kW
T j = + 2 °C	*Pdh*	**17,1**	kW
T j = + 7 °C	*Pdh*	**17,2**	kW
T j = + 12 °C	*Pdh*	**17,4**	kW
T j = bivalent temperature	*Pdh*	**17,0**	kW
T j = operation limit temperature	*Pdh*	**16,9**	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}	**0,146**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**10312**	*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*	**4,09**	-
T j = +2 °C	*COPd*	**4,25**	-
T j = +7 °C	*COPd*	**4,39**	-
T j = +12 °C	*COPd*	**4,53**	-
T j = bivalent temperature	*COPd*	**4,12**	-
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*	**3,2**	*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	-	**3,8**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**89**	%
Daily electricity consumption	Qelec	**9,110**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**2004**	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 417 + 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:	**126**	%
Equipped with a supplementary heater:	**Yes**	Package efficiency class:		-
Heat pump combination heater:	**Yes**			

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

Item	**Symbol**	**Value**	**Unit**
Rated heat output (*)	*Prated*	**18**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**16,1**	kW
T j = + 2 °C	*Pdh*	**16,4**	kW
T j = + 7 °C	*Pdh*	**16,6**	kW
T j = + 12 °C	*Pdh*	**16,8**	kW
T j = bivalent temperature	*Pdh*	**16,0**	kW
T j = operation limit temperature	*Pdh*	**15,9**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**-17**	°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}	**0,052**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**13902**	*kWh*

Item	**Symbol**	**Value**	**Unit**
Seasonal space heating energy efficiency	η_s	**122**	%
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*	**3,17**	-
T j = +2 °C	*COPd*	**3,48**	-
T j = +7 °C	*COPd*	**3,76**	-
T j = +12 °C	*COPd*	**3,97**	-
T j = bivalent temperature	*COPd*	**2,94**	-
T j = operation limit temperature	*COPd*	**2,77**	-
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*	**2,5**	*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	-	**3,1**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**89**	%
Daily electricity consumption	Qelec	**9,110**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**2004**	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 417 + 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:	**158**	%
Equipped with a supplementary heater:	**Yes**	Package efficiency class:		-
Heat pump combination heater:	**Yes**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**19**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**17,1**	kW
T j = + 2 °C	*Pdh*	**17,2**	kW
T j = + 7 °C	*Pdh*	**17,3**	kW
T j = + 12 °C	*Pdh*	**17,3**	kW
T j = bivalent temperature	*Pdh*	**17,0**	kW
T j = operation limit temperature	*Pdh*	**16,9**	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}	**0,146**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**11573**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**154**	%
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*	**4,27**	-
T j = +2 °C	*COPd*	**4,39**	-
T j = +7 °C	*COPd*	**4,49**	-
T j = +12 °C	*COPd*	**4,51**	-
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*	**2,1**	*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	-	**3,8**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**XL / A**		**Water heating energy efficiency**	η_{wh}	**89**	%
Daily electricity consumption	Qelec	**9,110**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**2004**	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 417 + CTC Basicstyrning**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**I**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**1**	%
Low-temperature heat pump:	**No**	Package efficiency:	**138**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	**Symbol**	**Value**	**Unit**
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*	**na**	kW
T j = + 2 °C	*Pdh*	**15,9**	kW
T j = + 7 °C	*Pdh*	**16,0**	kW
T j = + 12 °C	*Pdh*	**16,5**	kW
T j = bivalent temperature	*Pdh*	**15,9**	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}	**0,008**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**6315**	*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*	**na**	-
T j = +2 °C	*COPd*	**3,07**	-
T j = +7 °C	*COPd*	**3,42**	-
T j = +12 °C	*COPd*	**4,09**	-
T j = bivalent temperature	*COPd*	**3,17**	-
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*	**1,3**	*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	-	**3,1**	*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 417 + CTC Basicstyrning**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**I**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**1**	%
Low-temperature heat pump:	**No**	Package efficiency:	**181**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**18**	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*	**16,9**	kW
T j = + 7 °C	*Pdh*	**17,0**	kW
T j = + 12 °C	*Pdh*	**17,3**	kW
T j = bivalent temperature	*Pdh*	**16,9**	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}	**0,027**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**5180**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**180**	%
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*	**4,78**	-
T j = +12 °C	*COPd*	**5,06**	-
T j = bivalent temperature	*COPd*	**4,63**	-
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*	**1,4**	*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	-	**3,8**	*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 417 + CTC Basicstyrning**			
Air-to-water heat pump:	**No**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**I**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**1**	%
Low-temperature heat pump:	**No**	Package efficiency:	**138**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:	**A++**	-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**18**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**16**	kW
T j = + 2 °C	*Pdh*	**16,1**	kW
T j = + 7 °C	*Pdh*	**16,4**	kW
T j = + 12 °C	*Pdh*	**16,7**	kW
T j = bivalent temperature	*Pdh*	**16**	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*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,008**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**10286**	*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*	**3,23**	-
T j = +2 °C	*COPd*	**3,60**	-
T j = +7 °C	*COPd*	**3,97**	-
T j = +12 °C	*COPd*	**4,36**	-
T j = bivalent temperature	*COPd*	**3,23**	-
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*	**2,2**	*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	-	**3,1**	*m3/h*

For heat pump combination heater:

Declared load profile / Energy efficiency class		**na**	
Daily electricity consumption	Qelec	**na**	kWh
Annual electricity consumption	AEC	**na**	kWh

Water heating energy efficiency	η_{wh}	**na**	%
Daily fuel consumption	Q_{fuel}	**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 417 + CTC Basicstyrning**			
Air-to-water heat pump:	**No**	Energy efficiency class:	**A+++**	-
Water-to-water heat pump:	**No**	Controller class:	**I**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**1**	%
Low-temperature heat pump:	**No**	Package efficiency:	**182**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:	**A+++**	-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**19**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**16,9**	kW
T j = + 2 °C	*Pdh*	**17,1**	kW
T j = + 7 °C	*Pdh*	**17,2**	kW
T j = + 12 °C	*Pdh*	**17,4**	kW
T j = bivalent temperature	*Pdh*	**16,9**	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*	**0,99**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,018**	*kW*
Thermostat-off mode	P_{TO}	**0,027**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**8362**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**181**	%
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*	**4,83**	-
T j = +7 °C	*COPd*	**5,01**	-
T j = +12 °C	*COPd*	**5,18**	-
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*	**2,3**	*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	-	**3,8**	*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 Medium temperature

CTC AB
Ljungby

Model(s):	**CTC EcoPart 417 + CTC Basicstyrning**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**I**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**1**	%
Low-temperature heat pump:	**No**	Package efficiency:	**141**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
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*	**16,1**	kW
T j = + 2 °C	*Pdh*	**16,4**	kW
T j = + 7 °C	*Pdh*	**16,6**	kW
T j = + 12 °C	*Pdh*	**16,8**	kW
T j = bivalent temperature	*Pdh*	**15,9**	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}	**-19**	°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}	**0,008**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**11554**	*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*	**3,51**	-
T j = +2 °C	*COPd*	**3,89**	-
T j = +7 °C	*COPd*	**4,24**	-
T j = +12 °C	*COPd*	**4,50**	-
T j = bivalent temperature	*COPd*	**3,19**	-
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*	**1,4**	*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	-	**3,1**	*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 417 + CTC Basicstyrning**			
Air-to-water heat pump:	**No**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**I**	-
Brine-to-water heat pump:	**Yes**	Controller contribution:	**1**	%
Low-temperature heat pump:	**No**	Package efficiency:	**185**	%
Equipped with a supplementary heater:	**No**	Package efficiency class:		-
Heat pump combination heater:	**No**			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**18**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**17,1**	kW
T j = + 2 °C	*Pdh*	**17,2**	kW
T j = + 7 °C	*Pdh*	**17,3**	kW
T j = + 12 °C	*Pdh*	**17,3**	kW
T j = bivalent temperature	*Pdh*	**16,9**	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}	**-20**	°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}	**0,027**	*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}	**56/na**	*dB*
Annual energy consumption	Q_{HE}	**9166**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**184**	%
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*	**5,01**	-
T j = +7 °C	*COPd*	**5,13**	-
T j = +12 °C	*COPd*	**5,15**	-
T j = bivalent temperature	*COPd*	**4,61**	-
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*	**1,0**	*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	-	**3,8**	*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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