



Warm climate and Medium temperature

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

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	17	kW	Seasonal space heating energy efficiency	η_s	137	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	15,9	kW	T _j = +2 °C	<i>COP_d</i>	3,07	-
T _j = +7 °C	<i>P_{dh}</i>	16,0	kW	T _j = +7 °C	<i>COP_d</i>	3,42	-
T _j = +12 °C	<i>P_{dh}</i>	16,5	kW	T _j = +12 °C	<i>COP_d</i>	4,09	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,9	kW	T _j = bivalent temperature	<i>COP_d</i>	3,17	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,008	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6315	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se			

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Warm climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	184 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	18	kW	Seasonal space heating energy efficiency	η_s	180	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	16,9	kW	T _j = +2 °C	<i>COP_d</i>	4,55	-
T _j = +7 °C	<i>P_{dh}</i>	17,0	kW	T _j = +7 °C	<i>COP_d</i>	4,78	-
T _j = +12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	5,06	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,63	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	1,4	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5180	kWh				
For heat pump combination heater:							
Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se			

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Average climate and Medium temperature

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

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

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

For heat pump combination heater:

Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se			

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{design,h}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Average climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	A++ -
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	185 %
Equipped with a supplementary heater:	No	Package efficiency class:	A+++ -
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	19	kW	Seasonal space heating energy efficiency	η_s	181	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	<i>P_{dh}</i>	16,9	kW	T _j = - 7 °C	<i>COP_d</i>	4,64	-
T _j = + 2 °C	<i>P_{dh}</i>	17,1	kW	T _j = +2 °C	<i>COP_d</i>	4,83	-
T _j = + 7 °C	<i>P_{dh}</i>	17,2	kW	T _j = +7 °C	<i>COP_d</i>	5,01	-
T _j = + 12 °C	<i>P_{dh}</i>	17,4	kW	T _j = +12 °C	<i>COP_d</i>	5,18	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,64	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-7	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	2,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	8362	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se			

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Cold climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	144 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	<i>P_{rated}</i>	17	kW	Seasonal space heating energy efficiency	η_s	140	%	
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j				
T _j = - 7 °C	<i>P_{dh}</i>	16,1	kW	T _j = - 7 °C	<i>COP_d</i>	3,51	-	
T _j = + 2 °C	<i>P_{dh}</i>	16,4	kW	T _j = +2 °C	<i>COP_d</i>	3,89	-	
T _j = + 7 °C	<i>P_{dh}</i>	16,6	kW	T _j = +7 °C	<i>COP_d</i>	4,24	-	
T _j = + 12 °C	<i>P_{dh}</i>	16,8	kW	T _j = +12 °C	<i>COP_d</i>	4,50	-	
T _j = bivalent temperature	<i>P_{dh}</i>	15,9	kW	T _j = bivalent temperature	<i>COP_d</i>	3,19	-	
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-	
For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>COP_d</i>	na	-	
Bivalent temperature	<i>T_{biv}</i>	-19	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C	
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-	
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C	
Power consumption in modes other than active mode				Supplementary heater				
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	1,4	kW	
Thermostat-off mode	<i>P_{TO}</i>	0,008	kW	Type of energy input	Electric			
Standby mode	<i>P_{SB}</i>	0,018	kW					
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW					
Other items								
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h	
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h	
Annual energy consumption	<i>Q_{HE}</i>	11554	kWh					
For heat pump combination heater:				Declared load profile / Energy efficiency class				
Declared load profile / Energy efficiency class		na		Water heating energy efficiency		η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh	
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ	
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se				

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{design,h}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Cold climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC EcoLogic		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	166 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

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

For heat pump combination heater:

Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se			

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Warm climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	124 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	17	kW	Seasonal space heating energy efficiency	η_s	120	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	15,9	kW	T _j = +2 °C	<i>COP_d</i>	2,77	-
T _j = +7 °C	<i>P_{dh}</i>	16,0	kW	T _j = +7 °C	<i>COP_d</i>	3,07	-
T _j = +12 °C	<i>P_{dh}</i>	16,5	kW	T _j = +12 °C	<i>COP_d</i>	3,64	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,9	kW	T _j = bivalent temperature	<i>COP_d</i>	2,85	-
T _j = operation limit temperature	<i>P_{dh}</i>	15,9	kW	T _j = operation limit temperature	<i>COP_d</i>	2,77	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,052	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	7168	kWh				
For heat pump combination heater:							
Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	<i>Q_{elec}</i>	7,659	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1685	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170904		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Warm climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	153 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	18	kW	Seasonal space heating energy efficiency	η_s	149	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	<i>P_{dh}</i>	na	kW	T _j = - 7 °C	<i>COP_d</i>	na	-
T _j = + 2 °C	<i>P_{dh}</i>	16,9	kW	T _j = +2 °C	<i>COP_d</i>	4,01	-
T _j = + 7 °C	<i>P_{dh}</i>	17,0	kW	T _j = +7 °C	<i>COP_d</i>	4,20	-
T _j = + 12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	4,43	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,07	-
T _j = operation limit temperature	<i>P_{dh}</i>	16,9	kW	T _j = operation limit temperature	<i>COP_d</i>	4,01	-
For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,96	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	1,4	kW
Thermostat-off mode	<i>P_{TO}</i>	0,146	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	6208	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	<i>Q_{elec}</i>	7,659	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1685	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170904		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Average climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	A+ -
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	125 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++ -
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	19	kW	Seasonal space heating energy efficiency	η_s	121	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	<i>P_{dh}</i>	16,0	kW	T _j = - 7 °C	<i>COP_d</i>	2,91	-
T _j = + 2 °C	<i>P_{dh}</i>	16,1	kW	T _j = +2 °C	<i>COP_d</i>	3,24	-
T _j = + 7 °C	<i>P_{dh}</i>	16,4	kW	T _j = +7 °C	<i>COP_d</i>	3,55	-
T _j = + 12 °C	<i>P_{dh}</i>	16,7	kW	T _j = +12 °C	<i>COP_d</i>	3,86	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,0	kW	T _j = bivalent temperature	<i>COP_d</i>	2,96	-
T _j = operation limit temperature	<i>P_{dh}</i>	15,9	kW	T _j = operation limit temperature	<i>COP_d</i>	2,77	-
For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-6	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	3,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,052	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	12137	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	<i>Q_{elec}</i>	7,659	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1685	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170904		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Average climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	A++ -
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	157 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++ -
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	20	kW	Seasonal space heating energy efficiency	η_s	153	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	16,9	kW	T _j = -7 °C	<i>COP_d</i>	4,09	-
T _j = +2 °C	<i>P_{dh}</i>	17,1	kW	T _j = +2 °C	<i>COP_d</i>	4,25	-
T _j = +7 °C	<i>P_{dh}</i>	17,2	kW	T _j = +7 °C	<i>COP_d</i>	4,39	-
T _j = +12 °C	<i>P_{dh}</i>	17,4	kW	T _j = +12 °C	<i>COP_d</i>	4,53	-
T _j = bivalent temperature	<i>P_{dh}</i>	17,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,12	-
T _j = operation limit temperature	<i>P_{dh}</i>	16,9	kW	T _j = operation limit temperature	<i>COP_d</i>	4,01	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-6	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,96	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	3,2	kW
Thermostat-off mode	<i>P_{TO}</i>	0,146	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	10312	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	<i>Q_{elec}</i>	7,659	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1685	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170904		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Cold climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	126 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	18	kW	Seasonal space heating energy efficiency	η_s	122	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	16,1	kW	T _j = -7 °C	<i>COP_d</i>	3,17	-
T _j = +2 °C	<i>P_{dh}</i>	16,4	kW	T _j = +2 °C	<i>COP_d</i>	3,48	-
T _j = +7 °C	<i>P_{dh}</i>	16,6	kW	T _j = +7 °C	<i>COP_d</i>	3,76	-
T _j = +12 °C	<i>P_{dh}</i>	16,8	kW	T _j = +12 °C	<i>COP_d</i>	3,97	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,0	kW	T _j = bivalent temperature	<i>COP_d</i>	2,94	-
T _j = operation limit temperature	<i>P_{dh}</i>	15,9	kW	T _j = operation limit temperature	<i>COP_d</i>	2,77	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-17	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	2,5	kW
Thermostat-off mode	<i>P_{TO}</i>	0,052	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	13902	kWh				
For heat pump combination heater:							
Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	<i>Q_{elec}</i>	7,659	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1685	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170904		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output P_{rated} is equal to the design load for heating $P_{designh}$, and the rated heat output of a supplementary heater P_{sup} is equal to the supplementary capacity for heating $sup(T_j)$. (**) If C_{dh} is not determined by measurement then the default degradation coefficient is $C_{dh} = 0,9$.

Cold climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC EcoZenith 550		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VII -
Brine-to-water heat pump:	Yes	Controller contribution:	3,5 %
Low-temperature heat pump:	No	Package efficiency:	158 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	19	kW	Seasonal space heating energy efficiency	η_s	154	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	17,1	kW	T _j = -7 °C	<i>COP_d</i>	4,27	-
T _j = +2 °C	<i>P_{dh}</i>	17,2	kW	T _j = +2 °C	<i>COP_d</i>	4,39	-
T _j = +7 °C	<i>P_{dh}</i>	17,3	kW	T _j = +7 °C	<i>COP_d</i>	4,49	-
T _j = +12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	4,51	-
T _j = bivalent temperature	<i>P_{dh}</i>	17,0	kW	T _j = bivalent temperature	<i>COP_d</i>	4,11	-
T _j = operation limit temperature	<i>P_{dh}</i>	16,9	kW	T _j = operation limit temperature	<i>COP_d</i>	4,01	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-18	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cy}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,96	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	2,1	kW
Thermostat-off mode	<i>P_{TO}</i>	0,146	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Fixed			-			
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	-			
Annual energy consumption	<i>Q_{HE}</i>	11573	kWh	-			

For heat pump combination heater:

Declared load profile / Energy efficiency class	XL / A			Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	<i>Q_{elec}</i>	7,659	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1685	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170904		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Warm climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	138 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	17	kW	Seasonal space heating energy efficiency	η_s	137	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	15,9	kW	T _j = +2 °C	<i>COP_d</i>	3,07	-
T _j = +7 °C	<i>P_{dh}</i>	16,0	kW	T _j = +7 °C	<i>COP_d</i>	3,42	-
T _j = +12 °C	<i>P_{dh}</i>	16,5	kW	T _j = +12 °C	<i>COP_d</i>	4,09	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,9	kW	T _j = bivalent temperature	<i>COP_d</i>	3,17	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	1,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,008	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Fixed			-	na	<i>m³/h</i>	
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	<i>dB</i>	-	3,1	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	6315	<i>kWh</i>				
For heat pump combination heater:							
Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se		170410	

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Warm climate and Low temperature

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

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	18	kW	Seasonal space heating energy efficiency	η_s	180	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	16,9	kW	T _j = +2 °C	<i>COP_d</i>	4,55	-
T _j = +7 °C	<i>P_{dh}</i>	17,0	kW	T _j = +7 °C	<i>COP_d</i>	4,78	-
T _j = +12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	5,06	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,63	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	1,4	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5180	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170410		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Average climate and Medium temperature

Model(s):	CTC EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	A++ -
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	138 %
Equipped with a supplementary heater:	No	Package efficiency class:	A++ -
Heat pump combination heater:	No		

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

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

For heat pump combination heater:

Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170410		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.



Average climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	A++ -
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	182 %
Equipped with a supplementary heater:	No	Package efficiency class:	A+++ -
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	19	kW	Seasonal space heating energy efficiency	η_s	181	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = - 7 °C	<i>P_{dh}</i>	16,9	kW	T _j = - 7 °C	<i>COP_d</i>	4,64	-
T _j = + 2 °C	<i>P_{dh}</i>	17,1	kW	T _j = +2 °C	<i>COP_d</i>	4,83	-
T _j = + 7 °C	<i>P_{dh}</i>	17,2	kW	T _j = +7 °C	<i>COP_d</i>	5,01	-
T _j = + 12 °C	<i>P_{dh}</i>	17,4	kW	T _j = +12 °C	<i>COP_d</i>	5,18	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,64	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = - 15 °C (if TOL < - 20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-7	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	2,3	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,8	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	8362	kWh				

For heat pump combination heater:

Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170410		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Cold climate and Medium temperature

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

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	17	kW	Seasonal space heating energy efficiency	η_s	140	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	16,1	kW	T _j = -7 °C	<i>COP_d</i>	3,51	-
T _j = +2 °C	<i>P_{dh}</i>	16,4	kW	T _j = +2 °C	<i>COP_d</i>	3,89	-
T _j = +7 °C	<i>P_{dh}</i>	16,6	kW	T _j = +7 °C	<i>COP_d</i>	4,24	-
T _j = +12 °C	<i>P_{dh}</i>	16,8	kW	T _j = +12 °C	<i>COP_d</i>	4,50	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,9	kW	T _j = bivalent temperature	<i>COP_d</i>	3,19	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-19	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	1,4	kW
Thermostat-off mode	<i>P_{TO}</i>	0,008	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3,1	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	11554	kWh				
For heat pump combination heater:							
Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se	170410		

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.

Cold climate and Low temperature

Model(s):	CTC EcoPart 417 + CTC Basicstyrning		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	I -
Brine-to-water heat pump:	Yes	Controller contribution:	1 %
Low-temperature heat pump:	No	Package efficiency:	185 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	18	kW	Seasonal space heating energy efficiency	η_s	184	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	17,1	kW	T _j = -7 °C	<i>COP_d</i>	4,84	-
T _j = +2 °C	<i>P_{dh}</i>	17,2	kW	T _j = +2 °C	<i>COP_d</i>	5,01	-
T _j = +7 °C	<i>P_{dh}</i>	17,3	kW	T _j = +7 °C	<i>COP_d</i>	5,13	-
T _j = +12 °C	<i>P_{dh}</i>	17,3	kW	T _j = +12 °C	<i>COP_d</i>	5,15	-
T _j = bivalent temperature	<i>P_{dh}</i>	16,9	kW	T _j = bivalent temperature	<i>COP_d</i>	4,61	-
T _j = operation limit temperature	<i>P_{dh}</i>	na	kW	T _j = operation limit temperature	<i>COP_d</i>	na	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-20	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cy}</i>	na	-
Degradation co-efficient (**)	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,018	kW	Rated heat output (*)	<i>P_{sup}</i>	1,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,027	kW	Type of energy input Electric			
Standby mode	<i>P_{SB}</i>	0,018	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Fixed			-			
Sound power level, indoors/outdoors	<i>L_{WA}</i>	56/na	dB	-			
Annual energy consumption	<i>Q_{HE}</i>	9166	kWh	-			
For heat pump combination heater:				For heat pump combination heater:			
Declared load profile / Energy efficiency class	na			Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	<i>Q_{elec}</i>	na	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	na	GJ
Contact details	Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000			www.ctc.se		170410	

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output *P_{rated}* is equal to the design load for heating *P_{designh}*, and the rated heat output of a supplementary heater *P_{sup}* is equal to the supplementary capacity for heating *sup(T_j)*. (**) If *C_{dh}* is not determined by measurement then the default degradation coefficient is *C_{dh}* = 0,9.