Information for heat pump space heaters and heat pump combination heaters

Warm climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoZenith i350/ i350F			
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	184	%
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*	**13**	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*	**12,8**	kW
T j = + 7 °C	*Pdh*	**8,2**	kW
T j = + 12 °C	*Pdh*	**5,8**	kW
T j = bivalent temperature	*Pdh*	**12,8**	kW
T j = operation limit temperature	*Pdh*	**12,8**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**2**	°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}	**0,015**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*
Standby mode	P_{SB}	**0,000**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Variable**	
Sound power level, indoors/ outdoors	L_{WA}	**na/61**	*dB*
Annual energy consumption	Q_{HE}	**3730**	*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*	**2,33**	-
T j = +7 °C	*COPd*	**3,95**	-
T j = +12 °C	*COPd*	**6,16**	-
T j = bivalent temperature	*COPd*	**2,33**	-
T j = operation limit temperature	*COPd*	**2,33**	-
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*	**2**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**55**	°C
Supplementary heater			
Rated heat output (*)	*Psup*	**0,0**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*

For heat pump combination heater:

Declared load profile	**XL**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**112**	%
Daily electricity consumption	Qelec	**6,835**	kWh	Daily fuel consumption	Qfuel	**na**	kWh
Annual electricity consumption	AEC	**1504**	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.

Information for heat pump space heaters and heat pump combination heaters

Warm climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoZenith i350/ i350F			
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	244	%
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*	**14**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**na**	kW
T j = + 2 °C	*Pdh*	**13,5**	kW
T j = + 7 °C	*Pdh*	**8,7**	kW
T j = + 12 °C	*Pdh*	**5,6**	kW
T j = bivalent temperature	*Pdh*	**13,5**	kW
T j = operation limit temperature	*Pdh*	**13,5**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**2**	°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}	**0,015**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*
Standby mode	P_{SB}	**0,000**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Variable**	
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*
Annual energy consumption	Q_{HE}	**2968**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**240**	%
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*	**3,32**	-
T j = +7 °C	*COPd*	**5,67**	-
T j = +12 °C	*COPd*	**7,55**	-
T j = bivalent temperature	*COPd*	**3,32**	-
T j = operation limit temperature	*COPd*	**3,32**	-
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*	**2**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**55**	°C
Supplementary heater			
Rated heat output (*)	*Psup*	**0,0**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*

For heat pump combination heater:

Declared load profile	**XL**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**112**	%
Daily electricity consumption	Qelec	**6,835**	kWh	Daily fuel consumption	Qfuel	**na**	kWh
Annual electricity consumption	AEC	**1504**	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.

Information for heat pump space heaters and heat pump combination heaters

Average climate and Medium temperature (55)

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Model(s):	**CTC EcoAir 520M + CTC EcoZenith i350/ i350F**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**136**	%
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 (*)	*Prated*	**9**	kW	**Seasonal space heating energy efficiency**	η_s	**132**	%
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	*Pdh*	**7,6**	kW	T j = – 7 °C	*COPd*	**2,07**	-
T j = + 2 °C	*Pdh*	**4,6**	kW	T j = +2 °C	*COPd*	**3,49**	-
T j = + 7 °C	*Pdh*	**4,8**	kW	T j = +7 °C	*COPd*	**4,69**	-
T j = + 12 °C	*Pdh*	**5,8**	kW	T j = +12 °C	*COPd*	**6,36**	-
T j = bivalent temperature	*Pdh*	**8,4**	kW	T j = bivalent temperature	*COPd*	**1,71**	-
T j = operation limit temperature	*Pdh*	**8,4**	kW	T j = operation limit temperature	*COPd*	**1,71**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
Bivalent temperature	T_{biv}	**-10**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-10**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,99**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,015**	*kW*	Rated heat output (*)	*Psup*	**0,1**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,000**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/61**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**5090**	*kWh*				

For heat pump combination heater:

Declared load profile	**XL**	**Efficiency class**	**A**	**Water heating energy efficiency**	η_{wh}	**98**	%
Daily electricity consumption	Qelec	**7,816**	kWh	Daily fuel consumption	Qfuel	**NA**	kWh
Annual electricity consumption	AEC	**1720**	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.

Information for heat pump space heaters and heat pump combination heaters

Average climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoZenith i350/ i350F**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**181**	%
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 (*)	*Prated*	**8**	kW	**Seasonal space heating energy efficiency**	η_s	**177**	%
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	*Pdh*	**6,9**	kW	T j = – 7 °C	*COPd*	**3,09**	-
T j = + 2 °C	*Pdh*	**4,2**	kW	T j = +2 °C	*COPd*	**4,82**	-
T j = + 7 °C	*Pdh*	**5,0**	kW	T j = +7 °C	*COPd*	**6,18**	-
T j = + 12 °C	*Pdh*	**5,7**	kW	T j = +12 °C	*COPd*	**7,62**	-
T j = bivalent temperature	*Pdh*	**8,0**	kW	T j = bivalent temperature	*COPd*	**2,72**	-
T j = operation limit temperature	*Pdh*	**8,0**	kW	T j = operation limit temperature	*COPd*	**2,72**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
Bivalent temperature	T_{biv}	**-10**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-10**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,98**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,015**	*kW*	Rated heat output (*)	*Psup*	**0,0**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,000**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**3526**	*kWh*				

For heat pump combination heater:

Declared load profile	**XL**	**Efficiency class**	**A**	**Water heating energy efficiency**	η_{wh}	**98**	%
Daily electricity consumption	Qelec	**7,816**	kWh	Daily fuel consumption	Qfuel	**na**	kWh
Annual electricity consumption	AEC	**1720**	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.

Information for heat pump space heaters and heat pump combination heaters

Cold climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoZenith i350/ i350F			
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	125	%
Equipped with a supplementary heater:	Yes	Package efficiency class:		-
Heat pump combination heater:	Yes			

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

Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**10**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**6,1**	kW
T j = + 2 °C	*Pdh*	**4,1**	kW
T j = + 7 °C	*Pdh*	**5,0**	kW
T j = + 12 °C	*Pdh*	**5,7**	kW
T j = bivalent temperature	*Pdh*	**7,9**	kW
T j = operation limit temperature	*Pdh*	**5,4**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**7,8**	kW
Bivalent temperature	T_{biv}	**-14**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,98**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,015**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*
Standby mode	P_{SB}	**0,000**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Variable**	
Sound power level, indoors/ outdoors	L_{WA}	**na/61**	*dB*
Annual energy consumption	Q_{HE}	**7956**	*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*	**2,49**	-
T j = +2 °C	*COPd*	**4,12**	-
T j = +7 °C	*COPd*	**5,40**	-
T j = +12 °C	*COPd*	**6,84**	-
T j = bivalent temperature	*COPd*	**1,69**	-
T j = operation limit temperature	*COPd*	**1,01**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**1,60**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**-22**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**55**	°C
Supplementary heater			
Rated heat output (*)	*Psup*	**4,6**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*

For heat pump combination heater:

Declared load profile	**XL**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**82**	%
Daily electricity consumption	Qelec	**9,257**	kWh	Daily fuel consumption	Qfuel	**na**	kWh
Annual electricity consumption	AEC	**2037**	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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Cold climate and Low temperature (35)

Enertech AB
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Model(s):	**CTC EcoAir 520M + CTC EcoZenith i350/ i350F**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
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 (*)	*Prated*	**11**	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	*Pdh*	**6,7**	kW	T j = – 7 °C	*COPd*	**3,42**	-
T j = + 2 °C	*Pdh*	**4,1**	kW	T j = +2 °C	*COPd*	**4,51**	-
T j = + 7 °C	*Pdh*	**5,0**	kW	T j = +7 °C	*COPd*	**6,57**	-
T j = + 12 °C	*Pdh*	**5,6**	kW	T j = +12 °C	*COPd*	**7,53**	-
T j = bivalent temperature	*Pdh*	**8,4**	kW	T j = bivalent temperature	*COPd*	**2,44**	-
T j = operation limit temperature	*Pdh*	**5,6**	kW	T j = operation limit temperature	*COPd*	**1,70**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**7,9**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**2,26**	-
Bivalent temperature	T_{biv}	**-13**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-22**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,98**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,015**	*kW*	Rated heat output (*)	*Psup*	**5,4**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,000**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**7156**	*kWh*				

For heat pump combination heater:

Declared load profile	**XL**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**82**	%
Daily electricity consumption	Q_{elec}	**9,257**	kWh	Daily fuel consumption	Q_{fuel}	**na**	kWh
Annual electricity consumption	AEC	**2037**	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.

Information for heat pump space heaters and heat pump combination heaters

Warm climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoLogic			
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
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*	**13**	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*	**12,8**	kW
T j = + 7 °C	*Pdh*	**8,2**	kW
T j = + 12 °C	*Pdh*	**5,8**	kW
T j = bivalent temperature	*Pdh*	**12,8**	kW
T j = operation limit temperature	*Pdh*	**12,8**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**2**	°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}	**0,015**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*
Standby mode	P_{SB}	**0,000**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Variable**	
Sound power level, indoors/ outdoors	L_{WA}	**na/61**	*dB*
Annual energy consumption	Q_{HE}	**3730**	*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*	**2,33**	-
T j = +7 °C	*COPd*	**3,95**	-
T j = +12 °C	*COPd*	**6,16**	-
T j = bivalent temperature	*COPd*	**2,33**	-
T j = operation limit temperature	*COPd*	**2,33**	-
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*	**2**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**55**	°C
Supplementary heater			
Rated heat output (*)	*Psup*	**0,0**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*

For heat pump combination heater:

Declared load profile		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**na**	kWh	Daily fuel consumption	Qfuel	**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.

Information for heat pump space heaters and heat pump combination heaters

Warm climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoLogic			
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	244	%
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*	14	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	na	kW
T j = + 2 °C	*Pdh*	13,5	kW
T j = + 7 °C	*Pdh*	8,7	kW
T j = + 12 °C	*Pdh*	5,6	kW
T j = bivalent temperature	*Pdh*	13,5	kW
T j = operation limit temperature	*Pdh*	13,5	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	na	kW
Bivalent temperature	T_{biv}	2	°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}	0,015	*kW*
Thermostat-off mode	P_{TO}	0,010	*kW*
Standby mode	P_{SB}	0,000	*kW*
Crankcase heater mode	P_{CK}	0,000	*kW*
Other items			
Capacity control		Variable	
Sound power level, indoors/ outdoors	L_{WA}	na/55	*dB*
Annual energy consumption	Q_{HE}	2968	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	240	%
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*	3,32	-
T j = +7 °C	*COPd*	5,67	-
T j = +12 °C	*COPd*	7,55	-
T j = bivalent temperature	*COPd*	3,32	-
T j = operation limit temperature	*COPd*	3,32	-
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*	2	°C
Cycling interval efficiency	*COPcyc*	na	-
Heating water operating limit temperature	*WTOL*	55	°C
Supplementary heater			
Rated heat output (*)	*Psup*	0,0	*kW*
Type of energy input		*Electric*	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	*m3/h*

For heat pump combination heater:

Declared load profile		na		**Water heating energy efficiency**	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	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.

Information for heat pump space heaters and heat pump combination heaters

Average climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoLogic**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**136**	%
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 (*)	*Prated*	**9**	kW	**Seasonal space heating energy efficiency**	η_s	**132**	%
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	*Pdh*	**7,6**	kW	T j = – 7 °C	*COPd*	**2,07**	-
T j = + 2 °C	*Pdh*	**4,6**	kW	T j = +2 °C	*COPd*	**3,49**	-
T j = + 7 °C	*Pdh*	**4,8**	kW	T j = +7 °C	*COPd*	**4,69**	-
T j = + 12 °C	*Pdh*	**5,8**	kW	T j = +12 °C	*COPd*	**6,36**	-
T j = bivalent temperature	*Pdh*	**8,4**	kW	T j = bivalent temperature	*COPd*	**1,71**	-
T j = operation limit temperature	*Pdh*	**8,4**	kW	T j = operation limit temperature	*COPd*	**1,71**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
Bivalent temperature	T_{biv}	**-10**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-10**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,99**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,015**	*kW*	Rated heat output (*)	*Psup*	**0,1**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,000**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/61**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**5090**	*kWh*				

For heat pump combination heater:

Declared load profile		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**na**	kWh	Daily fuel consumption	Qfuel	**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.

Information for heat pump space heaters and heat pump combination heaters

Average climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoLogic**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**181**	%
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 (*)	*Prated*	**8**	kW	**Seasonal space heating energy efficiency**	η_s	**177**	%
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	*Pdh*	**6,9**	kW	T j = – 7 °C	*COPd*	**3,09**	-
T j = + 2 °C	*Pdh*	**4,2**	kW	T j = +2 °C	*COPd*	**4,82**	-
T j = + 7 °C	*Pdh*	**5,0**	kW	T j = +7 °C	*COPd*	**6,18**	-
T j = + 12 °C	*Pdh*	**5,7**	kW	T j = +12 °C	*COPd*	**7,62**	-
T j = bivalent temperature	*Pdh*	**8,0**	kW	T j = bivalent temperature	*COPd*	**2,72**	-
T j = operation limit temperature	*Pdh*	**8,0**	kW	T j = operation limit temperature	*COPd*	**2,72**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
Bivalent temperature	T_{biv}	**-10**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-10**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,98**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,015**	*kW*	Rated heat output (*)	*Psup*	**0,0**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,000**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**3526**	*kWh*				

For heat pump combination heater:

Declared load profile		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Qelec	**na**	kWh	Daily fuel consumption	Qfuel	**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.

Information for heat pump space heaters and heat pump combination heaters

Cold climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoLogic			
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	125	%
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*	10	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	6,1	kW
T j = + 2 °C	*Pdh*	4,1	kW
T j = + 7 °C	*Pdh*	5,0	kW
T j = + 12 °C	*Pdh*	5,7	kW
T j = bivalent temperature	*Pdh*	7,9	kW
T j = operation limit temperature	*Pdh*	5,4	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	7,8	kW
Bivalent temperature	T_{biv}	-14	°C
Cycling interval capacity for heating	P_{cych}	na	kW
Degradation co-efficient	*Cdh*	0,98	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	0,015	*kW*
Thermostat-off mode	P_{TO}	0,010	*kW*
Standby mode	P_{SB}	0,000	*kW*
Crankcase heater mode	P_{CK}	0,000	*kW*
Other items			
Capacity control		Variable	
Sound power level, indoors/ outdoors	L_{WA}	na/61	*dB*
Annual energy consumption	Q_{HE}	7956	*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*	2,49	-
T j = +2 °C	*COPd*	4,12	-
T j = +7 °C	*COPd*	5,40	-
T j = +12 °C	*COPd*	6,84	-
T j = bivalent temperature	*COPd*	1,69	-
T j = operation limit temperature	*COPd*	1,01	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	1,60	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	-22	°C
Cycling interval efficiency	*COPcyc*	na	-
Heating water operating limit temperature	*WTOL*	55	°C
Supplementary heater			
Rated heat output (*)	*Psup*	4,6	*kW*
Type of energy input		*Electric*	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	*m3/h*

For heat pump combination heater:

Declared load profile		na		**Water heating energy efficiency**	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	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.

Information for heat pump space heaters and heat pump combination heaters

Cold climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoLogic**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**153**	%
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*	**11**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**6,7**	kW
T j = + 2 °C	*Pdh*	**4,1**	kW
T j = + 7 °C	*Pdh*	**5,0**	kW
T j = + 12 °C	*Pdh*	**5,6**	kW
T j = bivalent temperature	*Pdh*	**8,4**	kW
T j = operation limit temperature	*Pdh*	**5,6**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**7,9**	kW
Bivalent temperature	T_{biv}	**-13**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW
Degradation co-efficient	*Cdh*	**0,98**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,015**	*kW*
Thermostat-off mode	P_{TO}	**0,010**	*kW*
Standby mode	P_{SB}	**0,000**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Variable**	
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*
Annual energy consumption	Q_{HE}	**7156**	*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*	**3,42**	-
T j = +2 °C	*COPd*	**4,51**	-
T j = +7 °C	*COPd*	**6,57**	-
T j = +12 °C	*COPd*	**7,53**	-
T j = bivalent temperature	*COPd*	**2,44**	-
T j = operation limit temperature	*COPd*	**1,70**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**2,26**	-
For air-to-water heat pumps: Operation limit temperature	*TOL*	**-22**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**55**	°C
Supplementary heater			
Rated heat output (*)	*Psup*	**5,4**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*

For heat pump combination heater:

Declared load profile		**na**		**Water heating energy efficiency**	η_{wh}	**na**	%
Daily electricity consumption	Q_{elec}	**na**	kWh	Daily fuel consumption	Q_{fuel}	**na**	kWh
Annual electricity consumption	AEC	**na**	kWh	Annual fuel consumption	AFC	**na**	GJ

Specific precautions and end of life information:

The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. 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.

Information for heat pump space heaters and heat pump combination heaters

Warm climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoZenith 250**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**145**	%
Equipped with a supplementary heater:	**Yes**	Package efficiency class:		-
Heat pump combination heater:	**Yes**			

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	*Prated*	**12**	kW	**Seasonal space heating energy efficiency**	η_s	**141**	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**na**	kW	T j = – 7 °C	*COPd*	**na**	-
T j = + 2 °C	*Pdh*	**12,3**	kW	T j = +2 °C	*COPd*	**1,54**	-
T j = + 7 °C	*Pdh*	**8,0**	kW	T j = +7 °C	*COPd*	**3,05**	-
T j = + 12 °C	*Pdh*	**5,7**	kW	T j = +12 °C	*COPd*	**5,28**	-
T j = bivalent temperature	*Pdh*	**12,3**	kW	T j = bivalent temperature	*COPd*	**1,54**	-
T j = operation limit temperature	*Pdh*	**12,3**	kW	T j = operation limit temperature	*COPd*	**1,54**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
Bivalent temperature	T_{biv}	**2**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**2**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,99**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,031**	*kW*	Rated heat output (*)	*Psup*	**0,0**	*kW*
Thermostat-off mode	P_{TO}	**0,009**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,031**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/61**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**4525**	*kWh*				

For heat pump combination heater:

Declared load profile	**L**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**66**	%
Daily electricity consumption	Qelec	**7,118**	kWh	Daily fuel consumption	Qfuel	**NA**	kWh
Annual electricity consumption	AEC	**1566**	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.

Information for heat pump space heaters and heat pump combination heaters

Warm climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoZenith 250			
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	197	%
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*	**13**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**na**	kW
T j = + 2 °C	*Pdh*	**13,3**	kW
T j = + 7 °C	*Pdh*	**8,6**	kW
T j = + 12 °C	*Pdh*	**5,6**	kW
T j = bivalent temperature	*Pdh*	**13,3**	kW
T j = operation limit temperature	*Pdh*	**13,3**	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW
Bivalent temperature	T_{biv}	**2**	°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}	**0,031**	*kW*
Thermostat-off mode	P_{TO}	**0,005**	*kW*
Standby mode	P_{SB}	**0,031**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Variable**	
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*
Annual energy consumption	Q_{HE}	**3634**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**193**	%
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*	**2,43**	-
T j = +7 °C	*COPd*	**4,61**	-
T j = +12 °C	*COPd*	**6,31**	-
T j = bivalent temperature	*COPd*	**2,43**	-
T j = operation limit temperature	*COPd*	**2,43**	-
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*	**2**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**55**	°C
Supplementary heater			
Rated heat output (*)	*Psup*	**0,0**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*

For heat pump combination heater:

Declared load profile	**L**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**66**	%
Daily electricity consumption	Qelec	**7,118**	kWh	Daily fuel consumption	Qfuel	**NA**	kWh
Annual electricity consumption	AEC	**1566**	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.

Information for heat pump space heaters and heat pump combination heaters

Average climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoZenith 250**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:	**A+**	-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**118**	%
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 (*)	*Prated*	**7**	kW	**Seasonal space heating energy efficiency**	η_s	**114**	%
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	*Pdh*	**6,6**	kW	T j = – 7 °C	*COPd*	**1,75**	-
T j = + 2 °C	*Pdh*	**4,1**	kW	T j = +2 °C	*COPd*	**2,94**	-
T j = + 7 °C	*Pdh*	**4,6**	kW	T j = +7 °C	*COPd*	**4,01**	-
T j = + 12 °C	*Pdh*	**5,7**	kW	T j = +12 °C	*COPd*	**5,55**	-
T j = bivalent temperature	*Pdh*	**6,6**	kW	T j = bivalent temperature	*COPd*	**1,75**	-
T j = operation limit temperature	*Pdh*	**7,2**	kW	T j = operation limit temperature	*COPd*	**1,47**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
Bivalent temperature	T_{biv}	**-7**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-10**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,98**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,031**	*kW*	Rated heat output (*)	*Psup*	**0,2**	*kW*
Thermostat-off mode	P_{TO}	**0,009**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,031**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/61**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**5246**	*kWh*				

For heat pump combination heater:

Declared load profile	**L**	**Efficiency class**	**B**	**Water heating energy efficiency**	η_{wh}	**53**	%
Daily electricity consumption	Qelec	**8,780**	kWh	Daily fuel consumption	Qfuel	**NA**	kWh
Annual electricity consumption	AEC	**1932**	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.

Information for heat pump space heaters and heat pump combination heaters

Average climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoZenith 250**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**154**	%
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*	**8**	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**6,7**	kW
T j = + 2 °C	*Pdh*	**4,0**	kW
T j = + 7 °C	*Pdh*	**4,9**	kW
T j = + 12 °C	*Pdh*	**5,7**	kW
T j = bivalent temperature	*Pdh*	**6,7**	kW
T j = operation limit temperature	*Pdh*	**7,7**	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*	**0,98**	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	**0,031**	*kW*
Thermostat-off mode	P_{TO}	**0,005**	*kW*
Standby mode	P_{SB}	**0,031**	*kW*
Crankcase heater mode	P_{CK}	**0,000**	*kW*
Other items			
Capacity control		**Variable**	
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*
Annual energy consumption	Q_{HE}	**4047**	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	**150**	%
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*	**2,51**	-
T j = +2 °C	*COPd*	**3,93**	-
T j = +7 °C	*COPd*	**5,12**	-
T j = +12 °C	*COPd*	**6,38**	-
T j = bivalent temperature	*COPd*	**2,51**	-
T j = operation limit temperature	*COPd*	**2,25**	-
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*	**-10**	°C
Cycling interval efficiency	*COPcyc*	**na**	-
Heating water operating limit temperature	*WTOL*	**55**	°C
Supplementary heater			
Rated heat output (*)	*Psup*	**0,0**	*kW*
Type of energy input		***Electric***	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*

For heat pump combination heater:

Declared load profile	**L**	**Efficiency class**	**B**	**Water heating energy efficiency**	η_{wh}	**53**	%
Daily electricity consumption	Qelec	**8,780**	kWh	Daily fuel consumption	Qfuel	**NA**	kWh
Annual electricity consumption	AEC	**1932**	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.

Information for heat pump space heaters and heat pump combination heaters

Cold climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoZenith 250**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**108**	%
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 (*)	*Prated*	**8**	kW	**Seasonal space heating energy efficiency**	η_s	**104**	%
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	*Pdh*	**5,0**	kW	T j = – 7 °C	*COPd*	**2,16**	-
T j = + 2 °C	*Pdh*	**3,4**	kW	T j = +2 °C	*COPd*	**3,57**	-
T j = + 7 °C	*Pdh*	**4,7**	kW	T j = +7 °C	*COPd*	**4,72**	-
T j = + 12 °C	*Pdh*	**5,7**	kW	T j = +12 °C	*COPd*	**6,03**	-
T j = bivalent temperature	*Pdh*	**5,9**	kW	T j = bivalent temperature	*COPd*	**1,79**	-
T j = operation limit temperature	*Pdh*	**4,4**	kW	T j = operation limit temperature	*COPd*	**1,14**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**6,3**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**1,49**	-
Bivalent temperature	T_{biv}	**-11**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-22**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,98**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,026**	*kW*	Rated heat output (*)	*Psup*	**8,2**	*kW*
Thermostat-off mode	P_{TO}	**0,028**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,000**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/61**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**7524**	*kWh*				

For heat pump combination heater:

Declared load profile	**L**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**46**	%
Daily electricity consumption	Qelec	**10,113**	kWh	Daily fuel consumption	Qfuel	**NA**	kWh
Annual electricity consumption	AEC	**2225**	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.

Information for heat pump space heaters and heat pump combination heaters

Cold climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoZenith 250**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
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 (*)	*Prated*	**11**	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	*Pdh*	**6,4**	kW	T j = – 7 °C	*COPd*	**2,85**	-
T j = + 2 °C	*Pdh*	**3,9**	kW	T j = +2 °C	*COPd*	**3,62**	-
T j = + 7 °C	*Pdh*	**4,9**	kW	T j = +7 °C	*COPd*	**5,51**	-
T j = + 12 °C	*Pdh*	**5,6**	kW	T j = +12 °C	*COPd*	**6,29**	-
T j = bivalent temperature	*Pdh*	**7,2**	kW	T j = bivalent temperature	*COPd*	**2,56**	-
T j = operation limit temperature	*Pdh*	**5,9**	kW	T j = operation limit temperature	*COPd*	**1,84**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**7,6**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**1,96**	-
Bivalent temperature	T_{biv}	**-10**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-22**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,98**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,031**	*kW*	Rated heat output (*)	*Psup*	**10,5**	*kW*
Thermostat-off mode	P_{TO}	**0,005**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,031**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**8260**	*kWh*				

For heat pump combination heater:

Declared load profile	**L**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**46**	%
Daily electricity consumption	Q_{elec}	**10,113**	kWh	Daily fuel consumption	Q_{fuel}	**NA**	kWh
Annual electricity consumption	AEC	**2225**	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.

Information for heat pump space heaters and heat pump combination heaters

Warm climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoZenith i550 230/400V			
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	147	%
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*	12	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*	12,3	kW
T j = + 7 °C	*Pdh*	8,0	kW
T j = + 12 °C	*Pdh*	5,7	kW
T j = bivalent temperature	*Pdh*	12,3	kW
T j = operation limit temperature	*Pdh*	12,3	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	na	kW
Bivalent temperature	T_{biv}	2	°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}	0,024	*kW*
Standby mode	P_{SB}	0,018	*kW*
Crankcase heater mode	P_{CK}	0,000	*kW*
Other items			
Capacity control		Variable	
Sound power level, indoors/ outdoors	L_{WA}	na/61	*dB*
Annual energy consumption	Q_{HE}	4479	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	143	%
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*	1,54	-
T j = +7 °C	*COPd*	3,05	-
T j = +12 °C	*COPd*	5,28	-
T j = bivalent temperature	*COPd*	1,54	-
T j = operation limit temperature	*COPd*	1,54	-
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*	2	°C
Cycling interval efficiency	*COPcyc*	na	-
Heating water operating limit temperature	*WTOL*	55	°C
Supplementary heater			
Rated heat output (*)	*Psup*	0,0	*kW*
Type of energy input		*Electric*	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	*m3/h*

For heat pump combination heater:

Declared load profile	XL	**Efficiency class**	NA	**Water heating energy efficiency**	η_{wh}	112	%
Daily electricity consumption	Qelec	6,835	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1504	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.

Information for heat pump space heaters and heat pump combination heaters

Warm climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoZenith i550 230/400V			
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	197	%
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*	13	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	na	kW
T j = + 2 °C	*Pdh*	13,3	kW
T j = + 7 °C	*Pdh*	8,6	kW
T j = + 12 °C	*Pdh*	5,6	kW
T j = bivalent temperature	*Pdh*	13,3	kW
T j = operation limit temperature	*Pdh*	13,3	kW
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	na	kW
Bivalent temperature	T_{biv}	2	°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}	0,073	*kW*
Standby mode	P_{SB}	0,018	*kW*
Crankcase heater mode	P_{CK}	0,000	*kW*
Other items			
Capacity control		Variable	
Sound power level, indoors/ outdoors	L_{WA}	na/55	*dB*
Annual energy consumption	Q_{HE}	3628	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	193	%
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*	2,43	-
T j = +7 °C	*COPd*	4,61	-
T j = +12 °C	*COPd*	6,31	-
T j = bivalent temperature	*COPd*	2,43	-
T j = operation limit temperature	*COPd*	2,43	-
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*	2	°C
Cycling interval efficiency	*COPcyc*	na	-
Heating water operating limit temperature	*WTOL*	55	°C
Supplementary heater			
Rated heat output (*)	*Psup*	0,0	*kW*
Type of energy input		*Electric*	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	*m3/h*

For heat pump combination heater:

Declared load profile	XL	**Efficiency class**	NA	**Water heating energy efficiency**	η_{wh}	112	%
Daily electricity consumption	Qelec	6,835	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1504	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.

Information for heat pump space heaters and heat pump combination heaters
Average climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	CTC EcoAir 520M + CTC EcoZenith i550 230/400V			
Air-to-water heat pump:	Yes	Energy efficiency class:	A+	-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	119	%
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*	7	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	7,6	kW
T j = + 2 °C	*Pdh*	4,1	kW
T j = + 7 °C	*Pdh*	4,6	kW
T j = + 12 °C	*Pdh*	5,7	kW
T j = bivalent temperature	*Pdh*	6,6	kW
T j = operation limit temperature	*Pdh*	7,2	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*	0,98	-
Power consumption in modes other than active mode			
Off mode	P_{OFF}	0,015	*kW*
Thermostat-off mode	P_{TO}	0,024	*kW*
Standby mode	P_{SB}	0,018	*kW*
Crankcase heater mode	P_{CK}	0,000	*kW*
Other items			
Capacity control		Variable	
Sound power level, indoors/ outdoors	L_{WA}	na/61	*dB*
Annual energy consumption	Q_{HE}	5201	*kWh*

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	η_s	115	%
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*	1,75	-
T j = +2 °C	*COPd*	2,94	-
T j = +7 °C	*COPd*	4,01	-
T j = +12 °C	*COPd*	5,55	-
T j = bivalent temperature	*COPd*	1,75	-
T j = operation limit temperature	*COPd*	1,47	-
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*	-10	°C
Cycling interval efficiency	*COPcyc*	na	-
Heating water operating limit temperature	*WTOL*	55	°C
Supplementary heater			
Rated heat output (*)	*Psup*	0,2	*kW*
Type of energy input		*Electric*	
For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	*m3/h*
For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	*m3/h*

For heat pump combination heater:

Declared load profile	XL	**Efficiency class**	A	**Water heating energy efficiency**	η_{wh}	98	%
Daily electricity consumption	Qelec	7,816	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1719	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.

Information for heat pump space heaters and heat pump combination heaters
Average climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoZenith i550 230/400V**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:	**A++**	-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**156**	%
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 (*)	*Prated*	**8**	kW	**Seasonal space heating energy efficiency**	η_s	**152**	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	*Pdh*	**6,7**	kW	T j = – 7 °C	*COPd*	**2,51**	-
T j = + 2 °C	*Pdh*	**4,0**	kW	T j = +2 °C	*COPd*	**3,93**	-
T j = + 7 °C	*Pdh*	**4,3**	kW	T j = +7 °C	*COPd*	**5,12**	-
T j = + 12 °C	*Pdh*	**5,7**	kW	T j = +12 °C	*COPd*	**6,37**	-
T j = bivalent temperature	*Pdh*	**6,7**	kW	T j = bivalent temperature	*COPd*	**2,51**	-
T j = operation limit temperature	*Pdh*	**7,7**	kW	T j = operation limit temperature	*COPd*	**2,25**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**na**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**na**	-
Bivalent temperature	T_{biv}	**-7**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-10**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,98**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,018**	*kW*	Rated heat output (*)	*Psup*	**0,0**	*kW*
Thermostat-off mode	P_{TO}	**0,073**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,018**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**4011**	*kWh*				

For heat pump combination heater:

Declared load profile	**XL**	**Efficiency class**	**A**	**Water heating energy efficiency**	η_{wh}	**98**	%
Daily electricity consumption	Qelec	**7,816**	kWh	Daily fuel consumption	Qfuel	**na**	kWh
Annual electricity consumption	AEC	**1719**	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.

Information for heat pump space heaters and heat pump combination heaters

Cold climate and Medium temperature (55)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoZenith i550 230/400V**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**109**	%
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 (*)	*Prated*	**8**	kW	**Seasonal space heating energy efficiency**	η_s	**105**	%
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	*Pdh*	**6,1**	kW	T j = – 7 °C	*COPd*	**2,16**	-
T j = + 2 °C	*Pdh*	**3,4**	kW	T j = +2 °C	*COPd*	**3,57**	-
T j = + 7 °C	*Pdh*	**4,7**	kW	T j = +7 °C	*COPd*	**4,72**	-
T j = + 12 °C	*Pdh*	**5,7**	kW	T j = +12 °C	*COPd*	**6,03**	-
T j = bivalent temperature	*Pdh*	**5,9**	kW	T j = bivalent temperature	*COPd*	**1,79**	-
T j = operation limit temperature	*Pdh*	**4,4**	kW	T j = operation limit temperature	*COPd*	**1,14**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**6,3**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**1,49**	-
Bivalent temperature	T_{biv}	**-11**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-22**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,98**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,018**	*kW*	Rated heat output (*)	*Psup*	**8,2**	*kW*
Thermostat-off mode	P_{TO}	**0,024**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,018**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/61**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**7497**	*kWh*				

For heat pump combination heater:

Declared load profile	**XL**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**82**	%
Daily electricity consumption	Qelec	**9,257**	kWh	Daily fuel consumption	Qfuel	**na**	kWh
Annual electricity consumption	AEC	**2037**	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.

Information for heat pump space heaters and heat pump combination heaters

Cold climate and Low temperature (35)

Enertech AB
341 26 Ljungby

Model(s):	**CTC EcoAir 520M + CTC EcoZenith i550 230/400V**			
Air-to-water heat pump:	**Yes**	Energy efficiency class:		-
Water-to-water heat pump:	**No**	Controller class:	**VI**	-
Brine-to-water heat pump:	**No**	Controller contribution:	**4**	%
Low-temperature heat pump:	**No**	Package efficiency:	**127**	%
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 (*)	*Prated*	**11**	kW	**Seasonal space heating energy efficiency**	η_s	**123**	%
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	*Pdh*	**6,7**	kW	T j = – 7 °C	*COPd*	**2,85**	-
T j = + 2 °C	*Pdh*	**3,9**	kW	T j = +2 °C	*COPd*	**3,62**	-
T j = + 7 °C	*Pdh*	**4,9**	kW	T j = +7 °C	*COPd*	**5,51**	-
T j = + 12 °C	*Pdh*	**5,6**	kW	T j = +12 °C	*COPd*	**6,29**	-
T j = bivalent temperature	*Pdh*	**7,2**	kW	T j = bivalent temperature	*COPd*	**2,56**	-
T j = operation limit temperature	*Pdh*	**5,9**	kW	T j = operation limit temperature	*COPd*	**1,84**	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*Pdh*	**7,6**	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	*COPd*	**1,96**	-
Bivalent temperature	T_{biv}	**-10**	°C	For air-to-water heat pumps: Operation limit temperature	*TOL*	**-22**	°C
Cycling interval capacity for heating	P_{cych}	**na**	kW	Cycling interval efficiency	*COPcyc*	**na**	-
Degradation co-efficient	*Cdh*	**0,98**	-	Heating water operating limit temperature	*WTOL*	**55**	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P_{OFF}	**0,018**	*kW*	Rated heat output (*)	*Psup*	**10,5**	*kW*
Thermostat-off mode	P_{TO}	**0,073**	*kW*	Type of energy input		***Electric***	
Standby mode	P_{SB}	**0,018**	*kW*				
Crankcase heater mode	P_{CK}	**0,000**	*kW*				
Other items							
Capacity control		**Variable**		For air-to-water heat pumps: Rated air flow rate, outdoors	-	**6200**	*m3/h*
Sound power level, indoors/ outdoors	L_{WA}	**na/55**	*dB*	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	**na**	*m3/h*
Annual energy consumption	Q_{HE}	**8238**	*kWh*				

For heat pump combination heater:

Declared load profile	**XL**	**Efficiency class**	**NA**	**Water heating energy efficiency**	η_{wh}	**82**	%
Daily electricity consumption	Q_{elec}	**9,257**	kWh	Daily fuel consumption	Q_{fuel}	**na**	kWh
Annual electricity consumption	AEC	**2037**	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.