

**Warm climate and Medium temperature**

Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	177 %
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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>173</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	na	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	7,3	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	2,36	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	4,6	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	4,06	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	2,8	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	5,68	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	7,3	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	2,36	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	7,3	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	2,36	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	na	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	na	-
Bivalent temperature	<i>T<sub>biv</sub></i>	2	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	2	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	na	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	na	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	0,014	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	0,0	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	0,014	kW	Type of energy input <b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	0,014	kW				
Crankcase heater mode	<i>P<sub>CK</sub></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	Variable			-	2350	m <sup>3</sup> /h	
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	na/53	dB	-	na	m <sup>3</sup> /h	
Annual energy consumption	<i>Q<sub>HE</sub></i>	2121	kWh				

For heat pump combination heater:

<b>Declared load profile</b>	<b>XL</b>	<b>Efficiency class</b>	<b>na</b>	<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>122</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	6,232	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	1371	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ

Specific precautions and end of life information:

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

Contact details

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

www.ctc.se

200701

**Warm climate and Low temperature**

Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	238 %
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
<b>Rated heat output (*)</b>	$P_{rated}$	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>234</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	$P_{dh}$	na	kW	T <sub>j</sub> = -7 °C	$COP_d$	na	-
T <sub>j</sub> = +2 °C	$P_{dh}$	6,5	kW	T <sub>j</sub> = +2 °C	$COP_d$	3,47	-
T <sub>j</sub> = +7 °C	$P_{dh}$	4,4	kW	T <sub>j</sub> = +7 °C	$COP_d$	6,02	-
T <sub>j</sub> = +12 °C	$P_{dh}$	2,9	kW	T <sub>j</sub> = +12 °C	$COP_d$	7,13	-
T <sub>j</sub> = bivalent temperature	$P_{dh}$	6,5	kW	T <sub>j</sub> = bivalent temperature	$COP_d$	3,47	-
T <sub>j</sub> = operation limit temperature	$P_{dh}$	6,5	kW	T <sub>j</sub> = operation limit temperature	$COP_d$	3,47	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$P_{dh}$	na	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$COP_d$	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	$COP_{cyc}$	na	-
Degradation co-efficient	$C_{dh}$	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	$P_{OFF}$	0,014	kW	Rated heat output (*)	$P_{sup}$	0,0	kW
Thermostat-off mode	$P_{TO}$	0,014	kW	Type of energy input <b>Electric</b>			
Standby mode	$P_{SB}$	0,014	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	-	2350	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	$L_{WA}$	na/53	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m <sup>3</sup> /h
Annual energy consumption	$Q_{HE}$	1469	kWh				

For heat pump combination heater:

<b>Declared load profile</b>	<b>XL</b>	<b>Efficiency class</b>	<b>na</b>	<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>122</b>	%
Daily electricity consumption	Q <sub>elec</sub>	6,232	kWh	Daily fuel consumption	Q <sub>fuel</sub>	NA	kWh
Annual electricity consumption	AEC	1371	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

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

Contact details

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200701

**Average climate and Medium temperature**

Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	150 %
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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>146</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>5,9</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>2,03</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>4,1</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,94</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,93</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,9</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,98</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>5,9</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>2,03</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>5,3</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>1,77</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-7</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>-10</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>1,7</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Variable</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>2350</b>	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>na/53</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>na</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>3883</b>	kWh				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	A	Water heating energy efficiency	$\eta_{wh}$	97	%
Daily electricity consumption	Q <sub>elec</sub>	<b>7,880</b>	kWh	Daily fuel consumption	Q <sub>fuel</sub>	<b>NA</b>	kWh
Annual electricity consumption	AEC	<b>1734</b>	kWh	Annual fuel consumption	AFC	<b>NA</b>	GJ

Specific precautions and end of life information:

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

Contact details

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

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201012

**Average climate and Low temperature**

Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	193 %
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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>6</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>189</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>5,6</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,03</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>3,5</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>5,14</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,5</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,83</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,9</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>7,27</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>5,9</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>2,66</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>5,7</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>2,59</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-9</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>-10</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,98</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>0,3</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	Type of energy input <b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	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	<b>Variable</b>			-	<b>2350</b>	<i>m<sup>3</sup>/h</i>	
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>na/53</b>	<i>dB</i>	-	<b>na</b>	<i>m<sup>3</sup>/h</i>	
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>2579</b>	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	XL	Efficiency class	A	Water heating energy efficiency	$\eta_{wh}$	97	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>7,880</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>1734</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	GJ

Specific precautions and end of life information:

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

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Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	128 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>124</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>4,0</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>2,66</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>2,3</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>4,11</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,08</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,9</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>6,08</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>5,0</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>1,75</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>3,6</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>1,25</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>4,7</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>1,75</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-13</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>-22</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,98</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>2,9</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	Type of energy input <b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	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	<b>Variable</b>			-	<b>2350</b>	<i>m<sup>3</sup>/h</i>	
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>na/53</b>	<i>dB</i>	-	<b>na</b>	<i>m<sup>3</sup>/h</i>	
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>5052</b>	<i>kWh</i>				

For heat pump combination heater:

<b>Declared load profile</b>	<b>XL</b>	<b>Efficiency class</b>	<b>na</b>	<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>82</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>9,257</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>2037</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	GJ

Specific precautions and end of life information:

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



Model(s):	CTC EcoAir 610M 400V + CTC EcoZenith i360/ EcoVent i360F		
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:	164 %
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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>160</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>4,3</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,61</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>2,4</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>5,08</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,5</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>6,00</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,9</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>7,13</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>5,2</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>2,52</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>4,0</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>1,91</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>5,0</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>2,44</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-14</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>-22</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,98</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>2,6</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Variable</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>2350</b>	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>na/53</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>na</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>3932</b>	kWh				

For heat pump combination heater:

<b>Declared load profile</b>	<b>XL</b>	<b>Efficiency class</b>	<b>na</b>	<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>82</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>9,257</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	AEC	<b>2037</b>	kWh	Annual fuel consumption	AFC	<b>NA</b>	GJ

Specific precautions and end of life information:

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



Model(s):	CTC EcoAir 610M 400V+ 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:	177 %
Equipped with a supplementary heater:	No	Package efficiency class:	-
Heat pump combination heater:	No		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>173</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	na	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	na	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	7,3	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	2,36	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	4,6	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	4,06	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	2,8	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	5,68	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	7,3	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	2,36	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	7,3	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	2,36	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	na	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	na	-
Bivalent temperature	<i>T<sub>biv</sub></i>	2	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	2	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	na	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	na	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	0,014	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	0,0	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	0,014	kW	Type of energy input: <b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	0,014	kW				
Crankcase heater mode	<i>P<sub>CK</sub></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	Variable			-	2350	m <sup>3</sup> /h	
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	na/53	dB	-	na	m <sup>3</sup> /h	
Annual energy consumption	<i>Q<sub>HE</sub></i>	2121	kWh				

For heat pump combination heater:

<b>Declared load profile</b>	na	<b>Efficiency class</b>	na	<b>Water heating energy efficiency</b>	$\eta_{wh}$	na	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	na	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	NA	kWh
Annual electricity consumption	<i>AEC</i>	na	kWh	Annual fuel consumption	<i>AFC</i>	NA	GJ

Specific precautions and end of life information:

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

**Warm climate and Low temperature**

Model(s):	CTC EcoAir 610M 400V+ 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:	238 %
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
<b>Rated heat output (*)</b>	$P_{rated}$	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>234</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	$P_{dh}$	na	kW	T <sub>j</sub> = -7 °C	$COP_d$	na	-
T <sub>j</sub> = +2 °C	$P_{dh}$	6,5	kW	T <sub>j</sub> = +2 °C	$COP_d$	3,47	-
T <sub>j</sub> = +7 °C	$P_{dh}$	4,4	kW	T <sub>j</sub> = +7 °C	$COP_d$	6,02	-
T <sub>j</sub> = +12 °C	$P_{dh}$	2,9	kW	T <sub>j</sub> = +12 °C	$COP_d$	7,13	-
T <sub>j</sub> = bivalent temperature	$P_{dh}$	6,5	kW	T <sub>j</sub> = bivalent temperature	$COP_d$	3,47	-
T <sub>j</sub> = operation limit temperature	$P_{dh}$	6,5	kW	T <sub>j</sub> = operation limit temperature	$COP_d$	3,47	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$P_{dh}$	na	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$COP_d$	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	$COP_{cyc}$	na	-
Degradation co-efficient	$C_{dh}$	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	$P_{OFF}$	0,014	kW	Rated heat output (*)	$P_{sup}$	0,0	kW
Thermostat-off mode	$P_{TO}$	0,014	kW	Type of energy input <b>Electric</b>			
Standby mode	$P_{SB}$	0,014	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	-	2350	m <sup>3</sup> /h
Sound power level, indoors/outdoors	$L_{WA}$	na/53	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m <sup>3</sup> /h
Annual energy consumption	$Q_{HE}$	1469	kWh				

For heat pump combination heater:

Declared load profile	NA	Efficiency class	na	Water heating energy efficiency	$\eta_{wh}$	NA	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Q <sub>fuel</sub>	NA	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

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

Contact details

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**Average climate and Medium temperature**

Model(s):	CTC EcoAir 610M 400V+ 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:	147 %
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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>143</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>5,9</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>2,03</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>3,6</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,81</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,86</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,8</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,90</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>5,9</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>2,03</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>5,3</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>1,77</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-7</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>-10</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,98</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>1,3</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	Type of energy input <b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	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	<b>Variable</b>			-	<b>2350</b>	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>na/53</b>	dB	-	<b>na</b>		m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>3743</b>	kWh				

For heat pump combination heater:

Declared load profile	na	Efficiency class	na	Water heating energy efficiency	$\eta_{wh}$	na	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>na</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	GJ

Specific precautions and end of life information:

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

Contact details

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**Average climate and Low temperature**

Model(s):	CTC EcoAir 610M 400V+ 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:	193 %
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
<b>Rated heat output (*)</b>	$P_{rated}$	<b>6</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>189</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	$P_{dh}$	<b>5,6</b>	kW	T <sub>j</sub> = -7 °C	$COP_d$	<b>3,03</b>	-
T <sub>j</sub> = +2 °C	$P_{dh}$	<b>3,5</b>	kW	T <sub>j</sub> = +2 °C	$COP_d$	<b>5,14</b>	-
T <sub>j</sub> = +7 °C	$P_{dh}$	<b>2,5</b>	kW	T <sub>j</sub> = +7 °C	$COP_d$	<b>5,83</b>	-
T <sub>j</sub> = +12 °C	$P_{dh}$	<b>2,9</b>	kW	T <sub>j</sub> = +12 °C	$COP_d$	<b>7,27</b>	-
T <sub>j</sub> = bivalent temperature	$P_{dh}$	<b>5,9</b>	kW	T <sub>j</sub> = bivalent temperature	$COP_d$	<b>2,66</b>	-
T <sub>j</sub> = operation limit temperature	$P_{dh}$	<b>5,7</b>	kW	T <sub>j</sub> = operation limit temperature	$COP_d$	<b>2,59</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$P_{dh}$	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$COP_d$	<b>na</b>	-
Bivalent temperature	$T_{biv}$	<b>-9</b>	°C	For air-to-water heat pumps: Operation limit temperature	TOL	<b>-10</b>	°C
Cycling interval capacity for heating	$P_{cych}$	<b>na</b>	kW	Cycling interval efficiency	$COP_{cyc}$	<b>na</b>	-
Degradation co-efficient	$C_{dh}$	<b>0,98</b>	-	Heating water operating limit temperature	WTOL	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	$P_{OFF}$	<b>0,014</b>	kW	Rated heat output (*)	$P_{sup}$	<b>0,3</b>	kW
Thermostat-off mode	$P_{TO}$	<b>0,014</b>	kW	Type of energy input <b>Electric</b>			
Standby mode	$P_{SB}$	<b>0,014</b>	kW				
Crankcase heater mode	$P_{CK}$	<b>0,000</b>	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	<b>Variable</b>			-	<b>2350</b>	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	$L_{WA}$	<b>na/53</b>	dB	-	<b>na</b>		m <sup>3</sup> /h
Annual energy consumption	$Q_{HE}$	<b>2579</b>	kWh				

For heat pump combination heater:

Declared load profile	na	Efficiency class	na	Water heating energy efficiency	$\eta_{wh}$	na	%
Daily electricity consumption	Q <sub>elec</sub>	<b>na</b>	kWh	Daily fuel consumption	Q <sub>fuel</sub>	<b>na</b>	kWh
Annual electricity consumption	AEC	<b>na</b>	kWh	Annual fuel consumption	AFC	<b>na</b>	GJ

Specific precautions and end of life information:

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

Contact details

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Model(s):	CTC EcoAir 610M 400V+ 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:	128 %
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
<b>Rated heat output (*)</b>	$P_{rated}$	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>124</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	$P_{dh}$	<b>4,0</b>	kW	T <sub>j</sub> = -7 °C	$COP_d$	<b>2,66</b>	-
T <sub>j</sub> = +2 °C	$P_{dh}$	<b>2,3</b>	kW	T <sub>j</sub> = +2 °C	$COP_d$	<b>4,11</b>	-
T <sub>j</sub> = +7 °C	$P_{dh}$	<b>2,4</b>	kW	T <sub>j</sub> = +7 °C	$COP_d$	<b>5,08</b>	-
T <sub>j</sub> = +12 °C	$P_{dh}$	<b>2,9</b>	kW	T <sub>j</sub> = +12 °C	$COP_d$	<b>6,08</b>	-
T <sub>j</sub> = bivalent temperature	$P_{dh}$	<b>5,0</b>	kW	T <sub>j</sub> = bivalent temperature	$COP_d$	<b>1,75</b>	-
T <sub>j</sub> = operation limit temperature	$P_{dh}$	<b>3,6</b>	kW	T <sub>j</sub> = operation limit temperature	$COP_d$	<b>1,25</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$P_{dh}$	<b>4,7</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$COP_d$	<b>1,75</b>	-
Bivalent temperature	$T_{biv}$	<b>-13</b>	°C	For air-to-water heat pumps: Operation limit temperature	TOL	<b>-22</b>	°C
Cycling interval capacity for heating	$P_{cych}$	<b>na</b>	kW	Cycling interval efficiency	$COP_{cyc}$	<b>na</b>	-
Degradation co-efficient	$C_{dh}$	<b>0,98</b>	-	Heating water operating limit temperature	WTOL	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	$P_{OFF}$	<b>0,014</b>	kW	Rated heat output (*)	$P_{sup}$	<b>2,9</b>	kW
Thermostat-off mode	$P_{TO}$	<b>0,014</b>	kW	Type of energy input <b>Electric</b>			
Standby mode	$P_{SB}$	<b>0,014</b>	kW				
Crankcase heater mode	$P_{CK}$	<b>0,000</b>	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	<b>Variable</b>			-	<b>2350</b>	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	$L_{WA}$	<b>na/53</b>	dB	-	<b>na</b>		m <sup>3</sup> /h
Annual energy consumption	$Q_{HE}$	<b>5052</b>	kWh				

For heat pump combination heater:

<b>Declared load profile</b>	<b>na</b>	<b>Efficiency class</b>	<b>na</b>	<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	$Q_{elec}$	<b>na</b>	kWh	Daily fuel consumption	$Q_{fuel}$	<b>na</b>	kWh
Annual electricity consumption	AEC	<b>na</b>	kWh	Annual fuel consumption	AFC	<b>na</b>	GJ

Specific precautions and end of life information:

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



Model(s):	CTC EcoAir 610M 400V+ 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:	164 %
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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>160</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>4,3</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,61</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>2,4</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>5,08</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,5</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>6,00</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,9</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>7,13</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>5,2</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>2,52</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>4,0</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>1,91</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>5,0</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>2,44</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-14</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>-22</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,98</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>2,6</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	Type of energy input <b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	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	<b>Variable</b>			-	<b>2350</b>	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>na/53</b>	dB	-	<b>na</b>		m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>3932</b>	kWh				

For heat pump combination heater:				For heat pump combination heater:			
<b>Declared load profile</b>	<b>na</b>	<b>Efficiency class</b>	<b>na</b>	<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>na</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>na</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	AEC	<b>na</b>	kWh	Annual fuel consumption	AFC	<b>NA</b>	GJ

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

**Warm climate and Medium temperature**

Model(s):	CTC EcoAir 610M 400V + EcoZenith i255		
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:	140 %
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
<b>Rated heat output (*)</b>	$P_{rated}$	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>136</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	$P_{dh}$	na	kW	T <sub>j</sub> = -7 °C	$COP_d$	na	-
T <sub>j</sub> = +2 °C	$P_{dh}$	6,6	kW	T <sub>j</sub> = +2 °C	$COP_d$	1,71	-
T <sub>j</sub> = +7 °C	$P_{dh}$	4,3	kW	T <sub>j</sub> = +7 °C	$COP_d$	3,10	-
T <sub>j</sub> = +12 °C	$P_{dh}$	2,8	kW	T <sub>j</sub> = +12 °C	$COP_d$	4,58	-
T <sub>j</sub> = bivalent temperature	$P_{dh}$	6,6	kW	T <sub>j</sub> = bivalent temperature	$COP_d$	1,71	-
T <sub>j</sub> = operation limit temperature	$P_{dh}$	6,6	kW	T <sub>j</sub> = operation limit temperature	$COP_d$	1,71	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$P_{dh}$	na	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$COP_d$	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	$COP_{cyc}$	na	-
Degradation co-efficient	$C_{dh}$	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	$P_{OFF}$	0,014	kW	Rated heat output (*)	$P_{sup}$	0,0	kW
Thermostat-off mode	$P_{TO}$	0,014	kW	Type of energy input: <b>Electric</b>			
Standby mode	$P_{SB}$	0,014	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	-	2350	m <sup>3</sup> /h
Sound power level, indoors/outdoors	$L_{WA}$	na/53	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m <sup>3</sup> /h
Annual energy consumption	$Q_{HE}$	2701	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	$\eta_{wh}$	67	%
Daily electricity consumption	Q <sub>elec</sub>	6,958	kWh	Daily fuel consumption	Q <sub>fuel</sub>	NA	kWh
Annual electricity consumption	AEC	1531	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

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

Contact details

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200701

**Warm climate and Low temperature**

Model(s):	CTC EcoAir 610M 400V + EcoZenith i255		
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:	193 %
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
<b>Rated heat output (*)</b>	$P_{rated}$	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>189</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	$P_{dh}$	na	kW	T <sub>j</sub> = -7 °C	$COP_d$	na	-
T <sub>j</sub> = +2 °C	$P_{dh}$	6,3	kW	T <sub>j</sub> = +2 °C	$COP_d$	2,76	-
T <sub>j</sub> = +7 °C	$P_{dh}$	4,3	kW	T <sub>j</sub> = +7 °C	$COP_d$	4,82	-
T <sub>j</sub> = +12 °C	$P_{dh}$	2,9	kW	T <sub>j</sub> = +12 °C	$COP_d$	5,73	-
T <sub>j</sub> = bivalent temperature	$P_{dh}$	6,3	kW	T <sub>j</sub> = bivalent temperature	$COP_d$	2,76	-
T <sub>j</sub> = operation limit temperature	$P_{dh}$	6,3	kW	T <sub>j</sub> = operation limit temperature	$COP_d$	2,76	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$P_{dh}$	na	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	$COP_d$	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	$COP_{cyc}$	na	-
Degradation co-efficient	$C_{dh}$	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	$P_{OFF}$	0,014	kW	Rated heat output (*)	$P_{sup}$	0,0	kW
Thermostat-off mode	$P_{TO}$	0,014	kW	Type of energy input: <b>Electric</b>			
Standby mode	$P_{SB}$	0,014	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	-	2350	m <sup>3</sup> /h
Sound power level, indoors/outdoors	$L_{WA}$	na/53	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	na	m <sup>3</sup> /h
Annual energy consumption	$Q_{HE}$	1814	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	$\eta_{wh}$	67	%
Daily electricity consumption	Q <sub>elec</sub>	6,958	kWh	Daily fuel consumption	Q <sub>fuel</sub>	NA	kWh
Annual electricity consumption	AEC	1531	kWh	Annual fuel consumption	AFC	NA	GJ

Specific precautions and end of life information:

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

Contact details

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

www.ctc.se

200701

**Average climate and Medium temperature**

Model(s):	CTC EcoAir 610M 400V + EcoZenith i255		
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:	126 %
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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>122</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>5,3</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>1,77</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>3,6</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,25</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,3</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,15</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,7</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,02</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>5,3</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>1,77</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>4,6</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>1,47</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-7</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>-10</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,99</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>2,0</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Variable</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>2350</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>na/53</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>na</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>4361</b>	kWh				

For heat pump combination heater:

Declared load profile	L	Efficiency class	B	Water heating energy efficiency	$\eta_{wh}$	53	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>8,570</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>1885</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	GJ

Specific precautions and end of life information:

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

Contact details

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

[www.ctc.se](http://www.ctc.se)

201002

**Average climate and Low temperature**

Model(s):	CTC EcoAir 610M 400V + EcoZenith i255		
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:	165 %
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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>6</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>161</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>5,4</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>2,53</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>3,4</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>4,38</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,00</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,9</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>6,27</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>5,6</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>2,21</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>5,4</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>2,14</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>na</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>na</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-9</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>0</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,98</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>0,6</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	Type of energy input <b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	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	<b>Variable</b>			-	<b>2350</b>	<i>m<sup>3</sup>/h</i>	
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>na/53</b>	<i>dB</i>	-	<b>na</b>	<i>m<sup>3</sup>/h</i>	
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>3022</b>	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	<b>L</b>	Efficiency class	<b>B</b>	Water heating energy efficiency	$\eta_{wh}$	<b>53</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>8,570</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>1885</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	GJ

Specific precautions and end of life information:

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

Contact details

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Model(s):	<b>CTC EcoAir 610M 400V + EcoZenith i255</b>		
Air-to-water heat pump:	<b>Yes</b>	Energy efficiency class:	-
Water-to-water heat pump:	<b>No</b>	Controller class:	<b>VI</b>
Brine-to-water heat pump:	<b>No</b>	Controller contribution:	<b>4</b> %
Low-temperature heat pump:	<b>No</b>	Package efficiency:	<b>93</b> %
Equipped with a supplementary heater:	<b>Yes</b>	Package efficiency class:	-
Heat pump combination heater:	<b>Yes</b>		

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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>89</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>3,4</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>2,17</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>2,1</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,61</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,3</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,70</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,8</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,94</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>4,0</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>1,50</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>2,8</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>0,95</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>3,7</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>1,36</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-13</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>-22</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,98</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>3,7</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	<b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW	Type of energy input			
Other items							
Capacity control	<b>Variable</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>2350</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>na/53</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>na</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>6980</b>	kWh				

For heat pump combination heater:

<b>Declared load profile</b>	<b>L</b>	<b>Efficiency class</b>	<b>NA</b>	<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>47</b>	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>9,856</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>2168</b>	kWh	Annual fuel consumption	<i>AFC</i>	<b>NA</b>	GJ

Specific precautions and end of life information:

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

**Cold climate and Low temperature**

Model(s):	CTC EcoAir 610M 400V + EcoZenith i255		
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:	138 %
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
<b>Rated heat output (*)</b>	<i>P<sub>rated</sub></i>	<b>7</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>134</b>	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T <sub>j</sub>			
T <sub>j</sub> = -7 °C	<i>P<sub>dh</sub></i>	<b>4,1</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,01</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>2,3</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>4,33</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>2,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,15</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>2,9</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>6,15</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>4,8</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>2,06</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>3,6</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>1,51</b>	-
For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>P<sub>dh</sub></i>	<b>4,7</b>	kW	For air-to-water heat pumps: T <sub>j</sub> = -15 °C (if TOL < -20 °C)	<i>COP<sub>d</sub></i>	<b>1,99</b>	-
Bivalent temperature	<i>T<sub>biv</sub></i>	<b>-14</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>-22</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cyc</sub></i>	<b>na</b>	-
Degradation co-efficient	<i>C<sub>dh</sub></i>	<b>0,98</b>	-	Heating water operating limit temperature	<i>WTOL</i>	<b>55</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,014</b>	kW	Rated heat output (*)	<i>P<sub>sup</sub></i>	<b>2,9</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,014</b>	kW	Type of energy input <b>Electric</b>			
Standby mode	<i>P<sub>SB</sub></i>	<b>0,014</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	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	<b>Variable</b>			-	<b>2350</b>	<i>m<sup>3</sup>/h</i>	
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>na/5</b>	<i>dB</i>	-	<b>na</b>	<i>m<sup>3</sup>/h</i>	
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>4759</b>	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	$\eta_{wh}$	47	%
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>9,856</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>NA</b>	kWh
Annual electricity consumption	AEC	<b>2168</b>	kWh	Annual fuel consumption	AFC	<b>NA</b>	GJ

Specific precautions and end of life information:

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

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