

**Warm climate and Medium temperature**

Model(s):	<b>CTC GS 8</b>		
Air-to-water heat pump:	<b>No</b>	Energy efficiency class:	-
Water-to-water heat pump:	<b>No</b>	Controller class:	<b>VII</b> -
Brine-to-water heat pump:	<b>Yes</b>	Controller contribution:	<b>3,5</b> /
Low-temperature heat pump:	<b>No</b>	Package efficiency:	<b>148</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>8</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>145</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>na</b>	kW	T <sub>j</sub> = - 7 °C	<i>COP<sub>d</sub></i>	<b>na</b>	-
T <sub>j</sub> = + 2 °C	<i>P<sub>dh</sub></i>	<b>7,7</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>3,00</b>	-
T <sub>j</sub> = + 7 °C	<i>P<sub>dh</sub></i>	<b>7,7</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>3,65</b>	-
T <sub>j</sub> = + 12 °C	<i>P<sub>dh</sub></i>	<b>8,0</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>4,46</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>7,5</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>3,27</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>7,7</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>3,00</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>3</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</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>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>0,5</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,004</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>39/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>1,3</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>2842</b>	kWh				

For heat pump combination heater:

<b>Declared load profile/ Energy efficiency class</b>	<b>XL / A</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>111</b>	/
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>4,200</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>924</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)

181001

**Warm climate and Low temperature**

Model(s):	<b>CTC GS 8</b>		
Air-to-water heat pump:	<b>No</b>	Energy efficiency class:	-
Water-to-water heat pump:	<b>No</b>	Controller class:	<b>VII</b> -
Brine-to-water heat pump:	<b>Yes</b>	Controller contribution:	<b>3,5</b> /
Low-temperature heat pump:	<b>No</b>	Package efficiency:	<b>192</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>9</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>188</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>na</b>	kW	T <sub>j</sub> = - 7 °C	<i>COP<sub>d</sub></i>	<b>na</b>	-
T <sub>j</sub> = + 2 °C	<i>P<sub>dh</sub></i>	<b>8,2</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>4,78</b>	-
T <sub>j</sub> = + 7 °C	<i>P<sub>dh</sub></i>	<b>8,3</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,06</b>	-
T <sub>j</sub> = + 12 °C	<i>P<sub>dh</sub></i>	<b>8,4</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,42</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>8,3</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>4,89</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>8,2</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>4,78</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>3</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</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>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>0,7</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,013</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>39/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>1,7</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>2443</b>	kWh				

For heat pump combination heater:

<b>Declared load profile/ Energy efficiency class</b>	<b>XL / A</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>111</b>	/
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>4,200</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>924</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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181001

**Average climate and Medium temperature**

Model(s):	<b>CTC GS 8</b>		
Air-to-water heat pump:	<b>No</b>	Energy efficiency class:	<b>A++</b> -
Water-to-water heat pump:	<b>No</b>	Controller class:	<b>VII</b> -
Brine-to-water heat pump:	<b>Yes</b>	Controller contribution:	<b>3,5</b> /
Low-temperature heat pump:	<b>No</b>	Package efficiency:	<b>151</b> /
Equipped with a supplementary heater:	<b>Yes</b>	Package efficiency class:	<b>A+++</b> -
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>9</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>147</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>7,6</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,35</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>7,8</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>8,0</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,33</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>8,2</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>4,78</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>7,6</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>3,47</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>7,5</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>3,14</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>-6</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</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>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>1,2</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,004</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	<b>Fixed</b>			-	<b>na</b>	<i>m<sup>3</sup>/h</i>	
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>39/na</b>	<i>dB</i>	-	<b>1,3</b>	<i>m<sup>3</sup>/h</i>	
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>4594</b>	<i>kWh</i>				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	<b>XL / A</b>			Water heating energy efficiency	$\eta_{wh}$	<b>111</b>	/
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>4,200</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>924</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):	<b>CTC GS 8</b>		
Air-to-water heat pump:	<b>No</b>	Energy efficiency class:	<b>A++</b> -
Water-to-water heat pump:	<b>No</b>	Controller class:	<b>VII</b> -
Brine-to-water heat pump:	<b>Yes</b>	Controller contribution:	<b>3,5</b> /
Low-temperature heat pump:	<b>No</b>	Package efficiency:	<b>194</b> /
Equipped with a supplementary heater:	<b>Yes</b>	Package efficiency class:	<b>A+++</b> -
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>9</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>191</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>8,3</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>4,89</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>8,3</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>5,13</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>8,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,33</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>8,4</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,50</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>8,3</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>4,89</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>8,2</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>4,78</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>na</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>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>1,2</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,013</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>39/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>1,7</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>3923</b>	kWh				

For heat pump combination heater:

<b>Declared load profile/ Energy efficiency class</b>	<b>XL / A</b>			<b>Water heating energy efficiency</b>	$\eta_{wh}$	<b>111</b>	/
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>4,200</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>924</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 Medium temperature**

Model(s):	<b>CTC GS 8</b>		
Air-to-water heat pump:	<b>No</b>	Energy efficiency class:	-
Water-to-water heat pump:	<b>No</b>	Controller class:	<b>VII</b> -
Brine-to-water heat pump:	<b>Yes</b>	Controller contribution:	<b>3,5</b> /
Low-temperature heat pump:	<b>No</b>	Package efficiency:	<b>154</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>8</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>151</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>7,7</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>3,78</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>8,0</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>4,28</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>8,1</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>4,64</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>8,2</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>4,94</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>7,6</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>3,35</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>7,5</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>3,14</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>-18</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</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>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>1,0</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,004</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/outdoors	<i>L<sub>WA</sub></i>	<b>39/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>1,3</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>5275</b>	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	<b>XL / A</b>			Water heating energy efficiency	$\eta_{wh}$	<b>111</b>	/
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>4,200</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>924</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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**Cold climate and Low temperature**

Model(s):	<b>CTC GS 8</b>		
Air-to-water heat pump:	<b>No</b>	Energy efficiency class:	-
Water-to-water heat pump:	<b>No</b>	Controller class:	<b>VII</b> -
Brine-to-water heat pump:	<b>Yes</b>	Controller contribution:	<b>3,5</b> /
Low-temperature heat pump:	<b>No</b>	Package efficiency:	<b>197</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>9</b>	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_s$	<b>194</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>8,3</b>	kW	T <sub>j</sub> = -7 °C	<i>COP<sub>d</sub></i>	<b>5,13</b>	-
T <sub>j</sub> = +2 °C	<i>P<sub>dh</sub></i>	<b>8,4</b>	kW	T <sub>j</sub> = +2 °C	<i>COP<sub>d</sub></i>	<b>5,33</b>	-
T <sub>j</sub> = +7 °C	<i>P<sub>dh</sub></i>	<b>8,4</b>	kW	T <sub>j</sub> = +7 °C	<i>COP<sub>d</sub></i>	<b>5,48</b>	-
T <sub>j</sub> = +12 °C	<i>P<sub>dh</sub></i>	<b>8,4</b>	kW	T <sub>j</sub> = +12 °C	<i>COP<sub>d</sub></i>	<b>5,50</b>	-
T <sub>j</sub> = bivalent temperature	<i>P<sub>dh</sub></i>	<b>8,3</b>	kW	T <sub>j</sub> = bivalent temperature	<i>COP<sub>d</sub></i>	<b>4,89</b>	-
T <sub>j</sub> = operation limit temperature	<i>P<sub>dh</sub></i>	<b>8,2</b>	kW	T <sub>j</sub> = operation limit temperature	<i>COP<sub>d</sub></i>	<b>4,78</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>-19</b>	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	<b>na</b>	°C
Cycling interval capacity for heating	<i>P<sub>cych</sub></i>	<b>na</b>	kW	Cycling interval efficiency	<i>COP<sub>cy</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>65</b>	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P<sub>OFF</sub></i>	<b>0,018</b>	kW	Rated heat output	<i>P<sub>sup</sub></i>	<b>0,8</b>	kW
Thermostat-off mode	<i>P<sub>TO</sub></i>	<b>0,013</b>	kW	Type of energy input	<b>Electric</b>		
Standby mode	<i>P<sub>SB</sub></i>	<b>0,018</b>	kW				
Crankcase heater mode	<i>P<sub>CK</sub></i>	<b>0,000</b>	kW				
Other items							
Capacity control	<b>Fixed</b>			For air-to-water heat pumps: Rated air flow rate, outdoors	-	<b>na</b>	m <sup>3</sup> /h
Sound power level, indoors/ outdoors	<i>L<sub>WA</sub></i>	<b>39/na</b>	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	<b>1,7</b>	m <sup>3</sup> /h
Annual energy consumption	<i>Q<sub>HE</sub></i>	<b>4424</b>	kWh				

For heat pump combination heater:

Declared load profile/ Energy efficiency class	<b>XL / A</b>			Water heating energy efficiency	$\eta_{wh}$	<b>111</b>	/
Daily electricity consumption	<i>Q<sub>elec</sub></i>	<b>4,200</b>	kWh	Daily fuel consumption	<i>Q<sub>fuel</sub></i>	<b>na</b>	kWh
Annual electricity consumption	<i>AEC</i>	<b>924</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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