

Warm climate and Medium temperature

Model(s):	CTC GSi 616		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VI -
Brine-to-water heat pump:	Yes	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	157 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	16	kW	Seasonal space heating energy efficiency	η_s	153	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	14,3	kW	T _j = +2 °C	<i>COP_d</i>	2,57	-
T _j = +7 °C	<i>P_{dh}</i>	10,4	kW	T _j = +7 °C	<i>COP_d</i>	3,50	-
T _j = +12 °C	<i>P_{dh}</i>	4,4	kW	T _j = +12 °C	<i>COP_d</i>	5,13	-
T _j = bivalent temperature	<i>P_{dh}</i>	14,5	kW	T _j = bivalent temperature	<i>COP_d</i>	2,68	-
T _j = operation limit temperature	<i>P_{dh}</i>	14,34	kW	T _j = operation limit temperature	<i>COP_d</i>	2,57	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	3	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,020	kW	Rated heat output	<i>P_{sup}</i>	1,7	kW
Thermostat-off mode	<i>P_{TO}</i>	0,020	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,020	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	42 / na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,6	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	5300	kWh				

For heat pump combination heater:

Declared load profile	XL			Water heating energy efficiency/Energy class	$\eta_{wh/-}$	95 / A	%
Daily electricity consumption	<i>Q_{elec}</i>	8,010	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1762	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 GSi 616		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VI -
Brine-to-water heat pump:	Yes	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	206 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	16	kW	Seasonal space heating energy efficiency	η_s	202	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	na	kW	T _j = -7 °C	<i>COP_d</i>	na	-
T _j = +2 °C	<i>P_{dh}</i>	15,6	kW	T _j = +2 °C	<i>COP_d</i>	3,77	-
T _j = +7 °C	<i>P_{dh}</i>	10,4	kW	T _j = +7 °C	<i>COP_d</i>	5,01	-
T _j = +12 °C	<i>P_{dh}</i>	4,4	kW	T _j = +12 °C	<i>COP_d</i>	6,00	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,6	kW	T _j = bivalent temperature	<i>COP_d</i>	3,77	-
T _j = operation limit temperature	<i>P_{dh}</i>	15,6	kW	T _j = operation limit temperature	<i>COP_d</i>	3,77	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	2	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,020	kW	Rated heat output	<i>P_{sup}</i>	0,0	kW
Thermostat-off mode	<i>P_{TO}</i>	0,020	kW	Type of energy input: Electric			
Standby mode	<i>P_{SB}</i>	0,020	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Variable			-	na	<i>m³/h</i>	
Sound power level, indoors/outdoors	<i>L_{WA}</i>	42 / na	<i>dB</i>	-	2,3	<i>m³/h</i>	
Annual energy consumption	<i>Q_{HE}</i>	4080	<i>kWh</i>				

For heat pump combination heater:

Declared load profile	XL			Water heating energy efficiency/Energy class	$\eta_{wh/-}$	95 / A	%
Daily electricity consumption	<i>Q_{elec}</i>	8,010	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1762	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.



Average climate and Medium temperature

Model(s):	CTC GSi 616		
Air-to-water heat pump:	No	Energy efficiency class:	A+++ -
Water-to-water heat pump:	No	Controller class:	VI -
Brine-to-water heat pump:	Yes	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	158 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++ -
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	16	kW	Seasonal space heating energy efficiency	η_s	154	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = - 7 °C	<i>Pdh</i>	14,2	kW	T j = - 7 °C	<i>COPd</i>	2,79	-
T j = + 2 °C	<i>Pdh</i>	8,8	kW	T j = +2 °C	<i>COPd</i>	4,13	-
T j = + 7 °C	<i>Pdh</i>	5,5	kW	T j = +7 °C	<i>COPd</i>	4,89	-
T j = + 12 °C	<i>Pdh</i>	4,4	kW	T j = +12 °C	<i>COPd</i>	5,14	-
T j = bivalent temperature	<i>Pdh</i>	14,6	kW	T j = bivalent temperature	<i>COPd</i>	2,70	-
T j = operation limit temperature	<i>Pdh</i>	14,34	kW	T j = operation limit temperature	<i>COPd</i>	2,57	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	<i>Pdh</i>	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	<i>COPd</i>	na	-
Bivalent temperature	<i>T biv</i>	-8	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P cych</i>	na	kW	Cycling interval efficiency	<i>COPcyc</i>	na	-
Degradation co-efficient	<i>Cdh</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P OFF</i>	0,020	kW	Rated heat output	<i>Psup</i>	1,7	kW
Thermostat-off mode	<i>P TO</i>	0,020	kW	Type of energy input Electric			
Standby mode	<i>P SB</i>	0,020	kW				
Crankcase heater mode	<i>P CK</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Variable			-	na	m3/h	
Sound power level, indoors/ outdoors	<i>L WA</i>	42 / na	dB	-	1,6	m3/h	
Annual energy consumption	<i>Q HE</i>	8176	kWh				

For heat pump combination heater:

Declared load profile	XL			Water heating energy efficiency/Energy class	$\eta_{wh/-}$	95 / A	%
Daily electricity consumption	<i>Qelec</i>	8,010	kWh	Daily fuel consumption	<i>Qfuel</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1762	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.



Average climate and Low temperature

Model(s):	CTC GSi 616		
Air-to-water heat pump:	No	Energy efficiency class:	A+++ -
Water-to-water heat pump:	No	Controller class:	VI -
Brine-to-water heat pump:	Yes	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	205 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++ -
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>Prated</i>	16	kW	Seasonal space heating energy efficiency	η_s	201	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = - 7 °C	<i>Pdh</i>	14,0	kW	T j = - 7 °C	<i>COPd</i>	4,17	-
T j = + 2 °C	<i>Pdh</i>	8,5	kW	T j = +2 °C	<i>COPd</i>	5,36	-
T j = + 7 °C	<i>Pdh</i>	5,6	kW	T j = +7 °C	<i>COPd</i>	5,87	-
T j = + 12 °C	<i>Pdh</i>	4,6	kW	T j = +12 °C	<i>COPd</i>	6,03	-
T j = bivalent temperature	<i>Pdh</i>	15,3	kW	T j = bivalent temperature	<i>COPd</i>	3,88	-
T j = operation limit temperature	<i>Pdh</i>	15,6	kW	T j = operation limit temperature	<i>COPd</i>	3,77	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	<i>Pdh</i>	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	<i>COPd</i>	na	-
Bivalent temperature	<i>T biv</i>	-9	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P cych</i>	na	kW	Cycling interval efficiency	<i>COPcyc</i>	na	-
Degradation co-efficient	<i>Cdh</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P OFF</i>	0,020	kW	Rated heat output	<i>Psup</i>	0,4	kW
Thermostat-off mode	<i>P TO</i>	0,020	kW	Type of energy input Electric			
Standby mode	<i>P SB</i>	0,020	kW				
Crankcase heater mode	<i>P CK</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Variable			-	na	2,3	m ³ /h
Sound power level, indoors/ outdoors	<i>L WA</i>	42 / na	dB	-	na		m ³ /h
Annual energy consumption	<i>Q HE</i>	6321	kWh				

For heat pump combination heater:

Declared load profile	XL			Water heating energy efficiency/Energy class	$\eta_{wh/-}$	95 / A	%
Daily electricity consumption	<i>Qelec</i>	8,010	kWh	Daily fuel consumption	<i>Qfuel</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1762	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.

Cold climate and Medium temperature

Model(s):	CTC GSi 616		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VI -
Brine-to-water heat pump:	Yes	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	165 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	16	kW	Seasonal space heating energy efficiency	η_s	161	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	9,84	kW	T _j = -7 °C	<i>COP_d</i>	3,79	-
T _j = +2 °C	<i>P_{dh}</i>	5,9	kW	T _j = +2 °C	<i>COP_d</i>	4,78	-
T _j = +7 °C	<i>P_{dh}</i>	4,5	kW	T _j = +7 °C	<i>COP_d</i>	5,31	-
T _j = +12 °C	<i>P_{dh}</i>	4,5	kW	T _j = +12 °C	<i>COP_d</i>	5,31	-
T _j = bivalent temperature	<i>P_{dh}</i>	14,3	kW	T _j = bivalent temperature	<i>COP_d</i>	2,76	-
T _j = operation limit temperature	<i>P_{dh}</i>	14,34	kW	T _j = operation limit temperature	<i>COP_d</i>	2,57	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-18	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,020	kW	Rated heat output	<i>P_{sup}</i>	1,7	kW
Thermostat-off mode	<i>P_{TO}</i>	0,020	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,020	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	42 / na	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1,6	m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	9352	kWh				

For heat pump combination heater:

Declared load profile	XL			Water heating energy efficiency/Energy class	$\eta_{wh/-}$	95 / A	%
Daily electricity consumption	<i>Q_{elec}</i>	8,010	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1762	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

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200331

**Cold climate and Low temperature**

Model(s):	CTC GSi 616		
Air-to-water heat pump:	No	Energy efficiency class:	-
Water-to-water heat pump:	No	Controller class:	VI -
Brine-to-water heat pump:	Yes	Controller contribution:	4 %
Low-temperature heat pump:	No	Package efficiency:	214 %
Equipped with a supplementary heater:	Yes	Package efficiency class:	-
Heat pump combination heater:	Yes		

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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	<i>P_{rated}</i>	16	kW	Seasonal space heating energy efficiency	η_s	210	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T _j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T _j			
T _j = -7 °C	<i>P_{dh}</i>	9,9	kW	T _j = -7 °C	<i>COP_d</i>	5,22	-
T _j = +2 °C	<i>P_{dh}</i>	5,9	kW	T _j = +2 °C	<i>COP_d</i>	5,93	-
T _j = +7 °C	<i>P_{dh}</i>	4,5	kW	T _j = +7 °C	<i>COP_d</i>	6,07	-
T _j = +12 °C	<i>P_{dh}</i>	4,4	kW	T _j = +12 °C	<i>COP_d</i>	5,76	-
T _j = bivalent temperature	<i>P_{dh}</i>	15,5	kW	T _j = bivalent temperature	<i>COP_d</i>	3,77	-
T _j = operation limit temperature	<i>P_{dh}</i>	15,6	kW	T _j = operation limit temperature	<i>COP_d</i>	3,77	-
For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>P_{dh}</i>	na	kW	For air-to-water heat pumps: T _j = -15 °C (if TOL < -20 °C)	<i>COP_d</i>	na	-
Bivalent temperature	<i>T_{biv}</i>	-21	°C	For air-to-water heat pumps: Operation limit temperature	<i>TOL</i>	na	°C
Cycling interval capacity for heating	<i>P_{cych}</i>	na	kW	Cycling interval efficiency	<i>COP_{cyc}</i>	na	-
Degradation co-efficient	<i>C_{dh}</i>	0,99	-	Heating water operating limit temperature	<i>WTOL</i>	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	<i>P_{OFF}</i>	0,020	kW	Rated heat output	<i>P_{sup}</i>	0,4	kW
Thermostat-off mode	<i>P_{TO}</i>	0,020	kW	Type of energy input	Electric		
Standby mode	<i>P_{SB}</i>	0,020	kW				
Crankcase heater mode	<i>P_{CK}</i>	0,000	kW	For air-to-water heat pumps: Rated air flow rate, outdoors			
Other items				For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger			
Capacity control	Variable			-	na	2,3	m ³ /h
Sound power level, indoors/ outdoors	<i>L_{WA}</i>	42 / na	dB	-	na		m ³ /h
Annual energy consumption	<i>Q_{HE}</i>	7239	kWh				

For heat pump combination heater:

Declared load profile	XL			Water heating energy efficiency/Energy class	$\eta_{wh/-}$	95 / A	%
Daily electricity consumption	<i>Q_{elec}</i>	8,010	kWh	Daily fuel consumption	<i>Q_{fuel}</i>	na	kWh
Annual electricity consumption	<i>AEC</i>	1762	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.

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