CTC AB Ljungby



Warm climate and Medium temperatu	re		Ljungby		CIC
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 (*)	Prated	16	kW	Seasonal space heating energy efficiency	η_s	153	%
Declared capacity for heating for outdoor temperature T j	or part load at ir	ndoor temperatu	re 20 °C and	Declared coefficient of performal part load at indoor temperature 2			
T j = -7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	14,3	kW	T j = +2 °C	COPd	2,57	-
T j = + 7 °C	Pdh	10,4	kW	T j = +7 °C	COPd	3,50	-
T j = + 12 °C	Pdh	4,4	kW	T j = +12 °C	COPd	5,13	-
T j = bivalent temperature	Pdh	14,5	kW	T j = bivalent temperature	COPd	2,68	-
T j = operation limit temperature	Pdh	14,34	kW	T j = operation limit temperature	COPd	2,57	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	other than active	e mode	-	Supplementary heater			
Off mode	P _{OFF}	0,020	kW	Rated heat output	Psup	1,7	kW
Thermostat-off mode	P _{TO}	0,020	kW				
Standby mode	P_{SB}	0,020	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		•	•				
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	42 / na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5300	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination he	ater:						
Declared load profile		XL		Water heating energy efficiency/Energy class	$\eta_{wh/-}$	95 / A	%
Daily electricity consumption	Qelec	8,010	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1762	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end		end of the product'	s life cycle, it mus	a recycling station or with the installation engine t be sent correctly to a waste station or reseller erant, compressor oil and electrical/electronic et	offering a servi	ice of that type. t	is of great

of life information:

of the product as household waste is not permitted.

 $importance\ that\ the\ product's\ refrigerant,\ compressor\ oil\ and\ electrical/electronic\ equipment\ are\ properly\ disposed\ of.\ Disposing$

CTC AB Ljungby



Warm climate and Low temperature			Ljungby		GIG
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.

Prated part load at in	16	kW	Seasonal space heating energy	η_s	202	%
part load at in	da a u ka wa wa a a	-	efficiency	- ''3		/6
	aoor temperatu	re 20 °C and	Declared coefficient of performar	nce or prima	ry energy rati	io for
			part load at indoor temperature 2	20 °C and ou	tdoor temper	ature T
Pdh	na	kW	T j = − 7 °C	COPd	na	-
Pdh	15,6	kW	T j = +2 °C	COPd	3,77	-
Pdh	10,4	kW	T j = +7 °C	COPd	5,01	-
Pdh	4,4	kW	T j = +12 °C	COPd	6,00	-
Pdh	15,6	kW	T j = bivalent temperature	COPd	3,77	-
Pdh	15,6	kW	T j = operation limit temperature	COPd	3,77	-
Pdh	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd	na	-
T _{biv}	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Cdh	0,99	-	Heating water operating limit temperature	WTOL	65	°C
er than active	mode	_	Supplementary heater			_
P OFF	0,020	kW	Rated heat output	Psup	0,0	kW
P _{TO}	0,020	kW				
P _{SB}	0,020	kW	Type of energy input		Electric	
P _{CK}	0,000	kW				
	•	•				_
	Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
L _{WA}	42 / na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Q _{HE}	4080	kWh	flow rate, outdoor heat exchanger	-	2,3	m3/h
er:						
	XL		Water heating energy efficiency/Energy class	$\eta_{\text{wh/-}}$	95 / A	%
Qelec	8,010	kWh	Daily fuel consumption	Qfuel	na	kWh
AEC	1762	kWh	Annual fuel consumption	AFC	na	GJ
	Pdh Pdh Pdh Pdh T biv P cych Cdh Ter than active P OFF P TO P SB P CK L WA Q HE er:	Pdh 4,4 Pdh 15,6 Pdh 15,6 Pdh na T biv 2 P cych na Cdh 0,99 Deer than active mode 0,020 P TO 0,020 P SB 0,020 P CK 0,000 Variable L WA 42 / na Q HE 4080 eer: XL Qelec 8,010 AEC 1762 The packaging musend of the product	Pdh 4,4 kW Pdh 15,6 kW Pdh 15,6 kW Pdh 15,6 kW Pdh na kW T biv 2 °C P cych na kW Cdh 0,99 - Per than active mode P OFF 0,020 kW P TO 0,020 kW P SB 0,020 kW P CK 0,000 kW Variable L WA 42 / na dB Q HE 4080 kWh er: XL Qelec 8,010 kWh The packaging must be deposited at a end of the product's life cycle, it mus	Pdh 4,4 kW T j = +12 °C T j = bivalent temperature T j = operation limit temperature For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C) For air-to-water heat pumps: Operation limit temperature Cycling interval efficiency Heating water operating limit temperature Supplementary heater Rated heat output Type of energy input Variable Augusta pumps: Rated air flow rate, outdoors For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger exchanger Exchanger Exchanger Augusta pumps: Augusta pu	Pdh 4,4 kW T j = +12 °C COPd Pdh 15,6 kW T j = bivalent temperature COPd Pdh 15,6 kW T j = operation limit temperature COPd Pdh na kW For air-to-water heat pumps: Operation limit temperature COPd T biv 2 °C For air-to-water heat pumps: Operation limit temperature TOL P cych na kW Cycling interval efficiency COPcyc Heating water operating limit temperature WTOL WTOL Bur than active mode Supplementary heater Rated heat output Psup P ro 0,020 kW Type of energy input Psup Variable For air-to-water heat pumps: Rated brine or water heat pumps: Rated brine or water flow rate, outdoors For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger Er: XL Water heating energy efficiency/Energy class Num/- Qelec 8,010 kWh Daily fuel consumption Qfuel AEC 1762 kWh Annual fuel consumption AFC	Pdh

of life information:

of the product as household waste is not permitted.

Average climate and Medium temperature

CTC AB Ljungby



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 (*)	Prated	16	kW	Seasonal space heating energy efficiency	η_s	154	%
Declared capacity for heating fo outdoor temperature T j	r part load at in	door temperatu	re 20 °C and	Declared coefficient of performal part load at indoor temperature 2			
T j = -7 °C	Pdh	14,2	kW	T j = - 7 °C	COPd	2,79] -
T j = + 2 °C	Pdh	8,8	kW	T j = +2 °C	COPd	4,13	1 -
T j = + 7 °C	Pdh	5,5	kW	T j = +7 °C	COPd	4,89	1 -
T j = + 12 °C	Pdh	4,4	kW	T j = +12 °C	COPd	5,14	-
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	2,70	-
T j = operation limit temperature	Pdh	14,34	kW	T j = operation limit temperature	COPd	2,57	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-8	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes o	ther than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,020	kW	Rated heat output	Psup	1,7	kW
Thermostat-off mode	P_{TO}	0,020	kW			-	
Standby mode	P_{SB}	0,020	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		•					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	42 / na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	8176	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination hea	iter:						
Declared load profile		XL		Water heating energy efficiency/Energy class	$\eta_{\text{wh/-}}$	95 / A	%
Daily electricity consumption	Qelec	8,010	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1762	kWh	Annual fuel consumption	AFC	na	GJ

Specific precautions and end of life information:

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

Average climate and Low temperature

CTC AB Ljungby



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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 (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	201	%
Declared capacity for heating for	or part load at in	door temperatu	ure 20 °C and	Declared coefficient of performar			
outdoor temperature T j				part load at indoor temperature 2	20 °C and ou	tdoor tempe	rature T j
T j = -7 °C	Pdh	14,0	kW	T j = − 7 °C	COPd	4,17] -
T j = + 2 °C	Pdh	8,5	kW	T j = +2 °C	COPd	5,36] -
T j = + 7 °C	Pdh	5,6	kW	T j = +7 °C	COPd	5,87] -
T j = + 12 °C	Pdh	4,6	kW	T j = +12 °C	COPd	6,03	-
T j = bivalent temperature	Pdh	15,3	kW	T j = bivalent temperature	COPd	3,88	-
T j = operation limit temperature	Pdh	15,6	kW	T j = operation limit temperature	COPd	3,77	-
For air-to-water heat pumps: $T j = -15 ^{\circ}\text{C} \text{ (if TOL } < -20 ^{\circ}\text{C)}$	Pdh	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-9	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	other than active	mode	_	Supplementary heater			-
Off mode	P OFF	0,020	kW	Rated heat output	Psup	0,4	kW
Thermostat-off mode	P _{TO}	0,020	kW			-	
Standby mode	P _{SB}	0,020	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		-					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	42 / na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	6321	kWh	flow rate, outdoor heat exchanger	-	2,3	m3/h
For heat pump combination he	ater:					1	
Declared load profile		XL		Water heating energy efficiency/Energy class	$\eta_{\text{wh/-}}$	95 / A	%
Daily electricity consumption	Qelec	8,010	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1762	kWh	Annual fuel consumption	AFC	na	GJ

Specific precautions and end of life information:

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

CTC AB



Cold climate and Medium temperature	· ·		Ljungby	•	CIC
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 (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	161	%
Declared capacity for heating fo	r part load at in	door temperatu	re 20 °C and	Declared coefficient of performar	nce or prima	ry energy rat	io for
outdoor temperature T j		·		part load at indoor temperature 2			
T j = - 7 °C	Pdh	9,84	kW	T j = - 7 °C	COPd	3,79] -
T j = + 2 °C	Pdh	5,9	kW	T j = +2 °C	COPd	4,78] -
Г j = + 7 °C	Pdh	4,5	kW	T j = +7 °C	COPd	5,31	-
T j = + 12 °C	Pdh	4,5	kW	T j = +12 °C	COPd	5,31	-
T j = bivalent temperature	Pdh	14,3	kW	T j = bivalent temperature	COPd	2,76	-
T j = operation limit temperature	Pdh	14,34	kW	T j = operation limit temperature	COPd	2,57	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes o	ther than active	mode		Supplementary heater			
Off mode	P OFF	0,020	kW	Rated heat output	Psup	1,7	kW
Thermostat-off mode	P _{TO}	0,020	kW	[]			-
Standby mode	P _{SB}	0,020	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	42 / na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	9352	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination hea	iter:						
Declared load profile		XL		Water heating energy efficiency/Energy class	$\eta_{\text{wh/-}}$	95 / A	%
Daily electricity consumption	Qelec	8,010	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1762	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product'	s life cycle, it must e product's refrige	recycling station or with the installation engine the sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic eductions and permitted.	offering a servic	e of that type. t	is of great

Information for heat pump space heaters and heat pump combination heaters **Cold climate and Low temperature**

CTC AB Ljungby



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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 (*)	Prated	16	kW	Seasonal space heating energy efficiency	η_{s}	210	%
Declared capacity for heating fo	r part load at in	door temperatur	e 20 °C and	Declared coefficient of performar	nce or prima	ry energy rati	io for
outdoor temperature T j				part load at indoor temperature 2	20 °C and ou	tdoor temper	ature T
T j = - 7 °C	Pdh	9,9	kW	T j = - 7 °C	COPd	5,22] -
T j = + 2 °C	Pdh	5,9	kW	T j = +2 °C	COPd	5,93	-
T j = + 7 °C	Pdh	4,5	kW	T j = +7 °C	COPd	6,07	-
T j = + 12 °C	Pdh	4,4	kW	T j = +12 °C	COPd	5,76	-
T j = bivalent temperature	Pdh	15,5	kW	T j = bivalent temperature	COPd	3,77	-
T j = operation limit temperature	Pdh	15,6	kW	T j = operation limit temperature	COPd	3,77	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-21	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes o	ther than active	mode	•	Supplementary heater		•	•
Off mode	P OFF	0,020	kW	Rated heat output	Psup	0,4	kW
Thermostat-off mode	P _{TO}	0,020	kW	[]			
Standby mode	P_{SB}	0,020	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		•					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	42 / na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	7239	kWh	flow rate, outdoor heat exchanger	-	2,3	m3/h
For heat pump combination hea	iter:						
Declared load profile		XL		Water heating energy efficiency/Energy class	$\eta_{\text{wh/-}}$	95 / A	%
Daily electricity consumption	Qelec	8,010	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1762	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product's	s life cycle, it must product's refrige	recycling station or with the installation engine be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic eq not permitted.	offering a servic	e of that type. t i	s of great