#### Information for heat pump space heaters and heat pump combination heaters **Warm climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC EcoPart 414 +	- CTC EcoLogic			
Air-to-water heat pump:	No	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	140	%	
Equipped with a supplementary heater:	No	Package efficiency class:		-	
Heat pump combination heater:	No				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	15	kW	Seasonal space heating energy efficiency	$\eta_{s}$	136	%
Declared capacity for heating f outdoor temperature T j	or 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	na	kW	T j = - 7 °C	COPd	na	] -
T j = + 2 °C	Pdh	13,5	kW	T j = +2 °C	COPd	3,11	-
T j = + 7 °C	Pdh	13,8	kW	T j = +7 °C	COPd	3,48	-
T j = + 12 °C	Pdh	14,2	kW	T j = +12 °C	COPd	4,12	-
T j = bivalent temperature	Pdh	13,5	kW	T j = bivalent temperature	COPd	3,21	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	other than active	mode	•	Supplementary heater			•
Off mode	P OFF	0,018	kW	Rated heat output	Psup	1,1	kW
Thermostat-off mode	P <sub>TO</sub>	0,032	kW	[ ]			•
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items			<del>!</del>				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	5396	kWh	flow rate, outdoor heat exchanger	-	3,0	m3/h
For heat pump combination he	eater:						
Declared load profile /		na		Water heating energy	$\eta_{\sf wh}$	na	%
Energy efficiency class				efficiency	· Iwn	iiu	ľ
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product	's life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ed not permitted.	offering a servi	ce of that type. t	is of great
Contact details	CTC AB. Näsväge						231218

CTC AB Ljungby



Warm climate and Low temperature			Ljungb	У	CIC
Model(s):	CTC EcoPart 414	+ CTC EcoLogic			
Air-to-water heat pump:	No	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	174	%	
Equipped with a supplementary heater:	No	Package efficiency class:		-	
Heat pump combination heater:	No				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_{s}$	170	%
Declared capacity for heating f outdoor temperature T j	or 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	na	kW	T j = - 7 °C	COPd	na	] -
T j = + 2 °C	Pdh	14,5	kW	T j = +2 °C	COPd	4,55	-
T j = + 7 °C	Pdh	14,7	kW	T j = +7 °C	COPd	4,76	-
T j = + 12 °C	Pdh	14,8	kW	T j = +12 °C	COPd	5,02	-
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	4,62	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode	•	Supplementary heater			•
Off mode	P <sub>OFF</sub>	0,018	kW	Rated heat output	Psup	1,2	kW
Thermostat-off mode	P <sub>TO</sub>	0,097	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items		•					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	4702	kWh	flow rate, outdoor heat exchanger	-	3,6	m3/h
For heat pump combination he	eater:						
Declared load profile /		na		Water heating energy	$\eta_{\sf wh}$	na	%
Energy efficiency class		- 1	ı	efficiency	·WII		
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product'	s life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller trant, compressor oil and electrical/electronic ec not permitted.	offering a service	ce of that type. t	s of great
Contact details	CTC AB. Näsväge						231218

CTC AB Ljungby



Average climate and Medium tempera	verage climate and Medium temperature			У	GIG	
Model(s):	CTC EcoPart 414	+ CTC EcoLogic				
Air-to-water heat pump:	No	Energy efficiency class:	A++	-		
Water-to-water heat pump:	No	Controller class:	VII	-		
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%		
Low-temperature heat pump:	No	Package efficiency:	141	%		
Equipped with a supplementary heater:	No	Package efficiency class:	A++	-		
Heat pump combination heater:	No					

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_{s}$	137	%
Declared capacity for heating f outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performar part load at indoor temperature 2			
T j = -7 °C	Pdh	13,6	kW	T j = - 7 °C	COPd	3,29	] -
T j = + 2 °C	Pdh	13,9	kW	T j = +2 °C	COPd	3,68	-
T j = + 7 °C	Pdh	14,2	kW	T j = +7 °C	COPd	4,03	-
T j = + 12 °C	Pdh	14,4	kW	T j = +12 °C	COPd	4,37	-
T j = bivalent temperature	Pdh	13,6	kW	T j = bivalent temperature	COPd	3,34	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	-6	°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	other than active	mode		Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output	Psup	2,7	kW
Thermostat-off mode	P <sub>TO</sub>	0,032	kW				
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items		•	•				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	9158	kWh	flow rate, outdoor heat exchanger	-	3,0	m3/h
For heat pump combination he	eater:						
Declared load profile /		na		Water heating energy	$\eta_{\sf wh}$	na	%
Energy efficiency class		1	1	efficiency	· iwn	.10	″
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product'	s life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ec not permitted.	offering a servi	ce of that type. t i	s of great
Contact details	CTC AB. Näsväge						231218

CTC AB Ljungby



Average climate and Low temperature			Ljungby		CIC	
Model(s):	CTC EcoPart 414	+ CTC EcoLogic				
Air-to-water heat pump:	No	Energy efficiency class:	A++	-		
Water-to-water heat pump:	No	Controller class:	VII	-		
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%		
Low-temperature heat pump:	No	Package efficiency:	178	%		
Equipped with a supplementary heater:	No	Package efficiency class:	A+++	-		
Heat pump combination heater:	No					

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_{s}$	174	%
Declared capacity for heating for outdoor temperature T j	or part load at ir	ndoor temperatu	ire 20 °C and	Declared coefficient of performal part load at indoor temperature 2			
T j = -7 °C	Pdh	14,6	kW	T j = - 7 °C	COPd	4,64	] -
T j = + 2 °C	Pdh	14,7	kW	T j = +2 °C	COPd	4,81	-
T j = + 7 °C	Pdh	14,8	kW	T j = +7 °C	COPd	4,97	-
T j = + 12 °C	Pdh	14,9	kW	T j = +12 °C	COPd	5,13	-
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	4,64	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	other than active	mode	-	Supplementary heater			=
Off mode	P OFF	0,018	kW	Rated heat output	Psup	2,0	kW
Thermostat-off mode	P <sub>TO</sub>	0,097	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items		•	•				_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	7467	kWh	flow rate, outdoor heat exchanger	-	3,6	m3/h
For heat pump combination he	ater:			-			
Declared load profile / Energy efficiency class		na		Water heating energy efficiency	$\eta_{wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product	's life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller grant, compressor oil and electrical/electronic ed not permitted.	offering a service	e of that type. t	is of great
Contact details	CTC AB, Näsväge	en 8, SE-341 34 L					231218

CTC AB Ljungby **Cold climate and Medium temperature** 



Model(s):	CTC EcoPart 41	4 + CTC EcoLogic			
Air-to-water heat pump:	No	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	144	%	
Equipped with a supplementary heater:	No	Package efficiency class:		-	
Heat pump combination heater:	No				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	15	kW	Seasonal space heating energy efficiency	$\eta_s$	140	%
Declared capacity for heating for outdoor temperature T j	or 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	13,8	kW	T j = - 7 °C	COPd	3,59	] -
T j = + 2 °C	Pdh	14,1	kW	T j = +2 °C	COPd	3,94	] -
T j = + 7 °C	Pdh	14,3	kW	T j = +7 °C	COPd	4,26	-
T j = + 12 °C	Pdh	14,5	kW	T j = +12 °C	COPd	4,49	-
T j = bivalent temperature	Pdh	13,6	kW	T j = bivalent temperature	COPd	3,28	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	0,018	kW	Rated heat output	Psup	1,7	kW
Thermostat-off mode	P <sub>TO</sub>	0,032	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items		-					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	10139	kWh	flow rate, outdoor heat exchanger	-	3,0	m3/h
For heat pump combination he	ater:					_	
Declared load profile / Energy efficiency class		na		Water heating energy efficiency	$\eta_{wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	Gl
Specific precautions and end of life information:		end of the product	's life cycle, it must e product's refrige ousehold waste is		offering a servi	ce of that type. t	is of great

CTC AB Ljungby



Cold climate and Low temperature			Ljungb	У	CIC
Model(s):	CTC EcoPart 414	+ CTC EcoLogic			
Air-to-water heat pump:	No	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	180	%	
Equipped with a supplementary heater:	No	Package efficiency class:		-	
Heat pump combination heater:	No				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_{s}$	176	%
Declared capacity for heating f	or part load at in	door temperatur	re 20 °C and	Declared coefficient of performan	nce or prima	ry energy rat	io for
outdoor temperature T j				part load at indoor temperature	20 °C and ou	tdoor tempe	rature T
T j = - 7 °C	Pdh	14,7	kW	T j = - 7 °C	COPd	4,84	] -
T j = + 2 °C	Pdh	14,8	kW	T j = +2 °C	COPd	4,98	-
T j = + 7 °C	Pdh	14,9	kW	T j = +7 °C	COPd	5,08	-
T j = + 12 °C	Pdh	14,9	kW	T j = +12 °C	COPd	5,11	-
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	4,67	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P <sub>OFF</sub>	0,018	kW	Rated heat output	Psup	1,8	kW
Thermostat-off mode	P <sub>TO</sub>	0,097	kW	[ ]			
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items			•				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	8758	kWh	flow rate, outdoor heat exchanger	-	3,6	m3/h
For heat pump combination he	eater:		-	· · ·		-	-
Declared load profile /		na		Water heating energy	n .	na	%
Energy efficiency class		IIa	1	efficiency	$\eta_{\sf wh}$	na	70
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		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 ec not permitted.	offering a servic	e of that type. t i	s of great
Contact details	CTC AB, Näsväge	n 8, SE-341 34 Lj	ungby Tel +46	372 88000 www.ctc.se			231218

#### Information for heat pump space heaters and heat pump combination heaters **Warm climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC EcoPart 414 +	CTC EcoZenith i555			
Air-to-water heat pump:	No	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	125	%	
Equipped with a supplementary heater:	Yes	Package efficiency class:		-	
Heat pump combination heater:	Yes				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	15	kW	Seasonal space heating energy efficiency	$\eta_{s}$	121	%
Declared capacity for heating foutdoor temperature T j	or 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	na	kW	T j = - 7 °C	COPd	na	] -
T j = + 2 °C	Pdh	13,5	kW	T j = +2 °C	COPd	2,81	] -
T j = + 7 °C	Pdh	13,8	kW	T j = +7 °C	COPd	3,14	-
T j = + 12 °C	Pdh	14,2	kW	T j = +12 °C	COPd	3,67	-
T j = bivalent temperature	Pdh	13,5	kW	T j = bivalent temperature	COPd	2,90	-
T j = operation limit temperature	Pdh	13,5	kW	T j = operation limit temperature	COPd	2,81	-
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 <sub>biv</sub>	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	other than active	mode	•	Supplementary heater		•	•
Off mode	P OFF	0,018	kW	Rated heat output	Psup	1,1	kW
Thermostat-off mode	P <sub>TO</sub>	0,039	kW	[ ]			-
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items			•				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	6019	kWh	flow rate, outdoor heat exchanger	-	3,0	m3/h
For heat pump combination he	eater:						
Declared load profile /		XL/A		Water heating energy	$\eta_{\sf wh}$	102	%
Energy efficiency class		1	Г	efficiency	TWIT		
Daily electricity consumption	Qelec	7,515	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1653	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product'	's life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ed not permitted.	offering a servi	ce of that type. t	is of great
Contact details	CTC AB. Näsväge						23121

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

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Model(s):	CTC EcoPart 414	+ CTC EcoZenith i555		•		
Air-to-water heat pump:	No	Energy efficiency class:		-		
Water-to-water heat pump:	No	Controller class:	VII	-		
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%		
Low-temperature heat pump:	No	Package efficiency:	153	%		
Equipped with a supplementary heater:	Yes	Package efficiency class:		-		
Heat pump combination heater:	Yes					

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	η <sub>s</sub>	149	%
Declared capacity for heating for outdoor temperature T j	or part load at ir	ndoor temperatu	ire 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	14,5	kW	T j = +2 °C	COPd	4,01	-
T j = + 7 °C	Pdh	14,7	kW	T j = +7 °C	COPd	4,18	-
T j = + 12 °C	Pdh	14,8	kW	T j = +12 °C	COPd	4,39	-
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	4,01	-
T j = operation limit temperature	Pdh	14,5	kW	T j = operation limit temperature	COPd	4,07	-
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 <sub>biv</sub>	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	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	other than active	e mode	_	Supplementary heater			=
Off mode	P <sub>OFF</sub>	0,018	kW	Rated heat output	Psup	1,2	kW
Thermostat-off mode	P <sub>TO</sub>	0,107	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	5335	kWh	flow rate, outdoor heat exchanger	-	3,6	m3/h
For heat pump combination he	ater:						
Declared load profile / Energy efficiency class		XL / A		Water heating energy efficiency	$\eta_{wh}$	102	%
Daily electricity consumption	Qelec	7,515	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1653	kWh	Annual fuel consumption	AFC	NA	G1
Specific precautions and end of life information:		end of the product	's life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller grant, compressor oil and electrical/electronic eco not permitted.	offering a service	e of that type. t	is of great
Contact details	CTC AB, Näsväge	en 8, SE-341 34 L					231218

CTC AB Ljungby



Average climate and Medium tempera	verage climate and Medium temperature				CIC		
Model(s):	CTC EcoPart 414 +	CTC EcoPart 414 + CTC EcoZenith i555					
Air-to-water heat pump:	No	Energy efficiency class:	A+	-			
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%			
Low-temperature heat pump:	No	Package efficiency:	127	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++	-			
Heat pump combination heater:	Yes		_				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_s$	123	%
Declared capacity for heating f	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performan	nce or prima	ry energy rati	io for
outdoor temperature T j				part load at indoor temperature	20 °C and ou	tdoor tempe	ature T j
T j = - 7 °C	Pdh	13,6	kW	T j = - 7 °C	COPd	2,96	] -
T j = + 2 °C	Pdh	13,9	kW	T j = +2 °C	COPd	3,31	1 -
T j = + 7 °C	Pdh	14,2	kW	T j = +7 °C	COPd	3,59	] -
T j = + 12 °C	Pdh	14,4	kW	T j = +12 °C	COPd	3,87	-
T j = bivalent temperature	Pdh	13,6	kW	T j = bivalent temperature	COPd	3,02	-
T j = operation limit temperature	Pdh	13,5	kW	T j = operation limit temperature	COPd	2,81	-
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 <sub>biv</sub>	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	other than active	mode	•	Supplementary heater		•	•
Off mode	P <sub>OFF</sub>	0,018	kW	Rated heat output	Psup	2,7	kW
Thermostat-off mode	P <sub>TO</sub>	0,039	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items		•	•				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	10197	kWh	flow rate, outdoor heat exchanger	-	3,0	m3/h
For heat pump combination he	eater:	•	-	· · · · · · · · · · · · · · · · · · ·		•	-
Declared load profile /		XL / A		Water heating energy	$\eta_{\sf wh}$	102	%
Energy efficiency class		T	I	efficiency			
Daily electricity consumption	Qelec	7,515	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1653	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product'	s life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller rrant, compressor oil and electrical/electronic eduno not permitted.	offering a servi	ce of that type. t	s of great
Contact details	CTC AB, Näsväge	n 8, SE-341 34 Lj	ungby Tel +46	372 88000 www.ctc.se			231218

CTC AB Ljungby



Average climate and Low temperature		Ljungby		CIC	
Model(s):	CTC EcoPart 414	+ CTC EcoZenith i555			
Air-to-water heat pump:	No	Energy efficiency class:	A++	-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	157	%	
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++	-	
Heat pump combination heater:	Yes				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	17	kW	Seasonal space heating energy efficiency	$\eta_s$	153	%
Declared capacity for heating f	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performan	nce or prima	ry energy rat	io for
outdoor temperature T j				part load at indoor temperature	20 °C and ou	tdoor tempe	rature T j
T j = - 7 °C	Pdh	14,6	kW	T j = - 7 °C	COPd	4,08	] -
T j = + 2 °C	Pdh	14,7	kW	T j = +2 °C	COPd	4,23	-
T j = + 7 °C	Pdh	14,8	kW	T j = +7 °C	COPd	4,35	-
T j = + 12 °C	Pdh	14,9	kW	T j = +12 °C	COPd	4,48	] -
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	4,11	-
T j = operation limit temperature	Pdh	14,5	kW	T j = operation limit temperature	COPd	4,01	-
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 <sub>biv</sub>	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output	Psup	2,7	kW
Thermostat-off mode	P <sub>TO</sub>	0,107	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	8881	kWh	flow rate, outdoor heat exchanger	-	3,6	m3/h
For heat pump combination he	eater:			, , U-			•
Declared load profile /		XL / A		Water heating energy	n	102	%
Energy efficiency class		AL / A	1	efficiency	$\eta_{\sf wh}$	102	
Daily electricity consumption	Qelec	7,515	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1653	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product'	s life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ed not permitted.	offering a servi	ce of that type. t	is of great
Contact details	CTC AB, Näsväge	n 8, SE-341 34 Lj	ungby Tel +46	372 88000 www.ctc.se			231218

CTC AB Ljungby



Cold climate and Medium temperature			Ljungb	у	CIC
Model(s):	CTC EcoPart 414	+ CTC EcoZenith i555			
Air-to-water heat pump:	No	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	128	%	
Equipped with a supplementary heater:	Yes	Package efficiency class:		-	
Heat pump combination heater:	Yes				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	15	kW	Seasonal space heating energy efficiency	η <sub>s</sub>	124	%
Declared capacity for heating for outdoor temperature T j	or part load at ir	ndoor temperatu	ire 20 °C and	Declared coefficient of performal part load at indoor temperature 2			
T j = -7 °C	Pdh	13,8	kW	T j = - 7 °C	COPd	3,23	] -
T j = + 2 °C	Pdh	14,1	kW	T j = +2 °C	COPd	3,52	-
T j = + 7 °C	Pdh	14,3	kW	T j = +7 °C	COPd	3,78	-
T j = + 12 °C	Pdh	14,5	kW	T j = +12 °C	COPd	3,97	-
T j = bivalent temperature	Pdh	13,6	kW	T j = bivalent temperature	COPd	2,96	-
T j = operation limit temperature	Pdh	13,5	kW	T j = operation limit temperature	COPd	2,81	_
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 <sub>biv</sub>	-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 of	other than active	e mode	-	Supplementary heater			=
Off mode	P OFF	0,018	kW	Rated heat output	Psup	1,7	kW
Thermostat-off mode	P <sub>TO</sub>	0,039	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	11314	kWh	flow rate, outdoor heat exchanger	-	3,0	m3/h
For heat pump combination he	ater:		•				•
Declared load profile / Energy efficiency class		XL / A		Water heating energy efficiency	$\eta_{wh}$	102	%
Daily electricity consumption	Qelec	7,515	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1653	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product	's life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller erant, compressor oil and electrical/electronic ec not permitted.	offering a service	e of that type. t	is of great
Contact details	CTC AB, Näsväge	en 8, SE-341 34 L					231218

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Cold climate and Low temperature			Ljungb	У	CIC
Model(s):	CTC EcoPart 414	+ CTC EcoZenith i555			
Air-to-water heat pump:	No	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	Yes	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	157	%	
Equipped with a supplementary heater:	Yes	Package efficiency class:		-	
Heat pump combination heater:	Yes				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	n <sub>s</sub>	153	%
Declared capacity for heating for outdoor temperature T j	or part load at ir	ndoor temperatu	ire 20 °C and	Declared coefficient of performal part load at indoor temperature 2	•		
T j = -7 °C	Pdh	14,7	kW	T j = - 7 °C	COPd	4,24	] -
T j = + 2 °C	Pdh	14,8	kW	T j = +2 °C	COPd	4,35	-
T j = + 7 °C	Pdh	14,9	kW	T j = +7 °C	COPd	4,44	-
T j = + 12 °C	Pdh	14,9	kW	T j = +12 °C	COPd	4,46	-
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	4,10	-
T j = operation limit temperature	Pdh	14,5	kW	T j = operation limit temperature	COPd	4,01	-
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 <sub>biv</sub>	-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	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	other than active	e <u>mode</u>	_	Supplementary heater			7
Off mode	P OFF	0,018	kW	Rated heat output	Psup	1,8	kW
Thermostat-off mode	P <sub>TO</sub>	0,107	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	9957	kWh	flow rate, outdoor heat exchanger	-	3,6	m3/h
For heat pump combination he	ater:		•			•	•
Declared load profile / Energy efficiency class		XL / A		Water heating energy efficiency	$\eta_{\sf wh}$	102	%
Daily electricity consumption	Qelec	7,515	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1653	kWh	Annual fuel consumption	AFC	NA	G1
Specific precautions and end of life information:		end of the product	's life cycle, it mus e product's refrige	recycling station or with the installation engine t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ec not permitted.	offering a servic	e of that type. t	is of great
Contact details	CTC AB, Näsväge	en 8, SE-341 34 L					231218

#### Information for heat pump space heaters and heat pump combination heaters **Warm climate and Medium temperature**

CTC AB Ljungby



Model(s):	CTC EcoPart 414 + CTC Basicstyrning					
Air-to-water heat pump:	No	Energy efficiency class:		-		
Water-to-water heat pump:	No	Controller class:	I	-		
Brine-to-water heat pump:	Yes	Controller contribution:	1	%		
Low-temperature heat pump:	No	Package efficiency:	137	%		
Equipped with a supplementary heater:	No	Package efficiency class:		-		
Heat pump combination heater:	No					

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	15	kW	Seasonal space heating energy efficiency	$\eta_{s}$	136	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performar part load at indoor temperature 2	•		
T j = - 7 °C	Pdh	na	kW	T j = − 7 °C	COPd	na	] -
T j = + 2 °C	Pdh	13,5	kW	T j = +2 °C	COPd	3,11	-
T j = + 7 °C	Pdh	13,8	kW	T j = +7 °C	COPd	3,48	-
T j = + 12 °C	Pdh	14,2	kW	T j = +12 °C	COPd	4,12	-
T j = bivalent temperature	Pdh	13,5	kW	T j = bivalent temperature	COPd	3,21	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	0,018	kW	Rated heat output	Psup	1,1	kW
Thermostat-off mode	P <sub>TO</sub>	0,032	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items							-
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	5396	kWh	flow rate, outdoor heat exchanger	-	3,0	m3/h
For heat pump combination he	ater:						
Declared load profile / Energy efficiency class		na		Water heating energy efficiency	$\eta_{wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product	s life cycle, it mus e product's refrige	recycling station or with the installation engine t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ec not permitted.	offering a servi	ce of that type. t	is of great

CTC AB Ljungby



Warm climate and Low temperature			Ljungb	У	CIC
Model(s):	CTC EcoPart 414				
Air-to-water heat pump:	No	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	1	-	
Brine-to-water heat pump:	Yes	Controller contribution:	1	%	
Low-temperature heat pump:	No	Package efficiency:	171	%	
Equipped with a supplementary heater:	No	Package efficiency class:		-	
Heat pump combination heater:	No				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_{s}$	170	%
Declared capacity for heating f outdoor temperature T j	or 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	na	kW	T j = - 7 °C	COPd	na	] -
T j = + 2 °C	Pdh	14,5	kW	T j = +2 °C	COPd	4,55	-
T j = + 7 °C	Pdh	14,7	kW	T j = +7 °C	COPd	4,76	-
T j = + 12 °C	Pdh	14,8	kW	T j = +12 °C	COPd	5,02	-
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	4,62	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode	•	Supplementary heater			•
Off mode	P <sub>OFF</sub>	0,018	kW	Rated heat output	Psup	1,2	kW
Thermostat-off mode	P <sub>TO</sub>	0,097	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items		•					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	4702	kWh	flow rate, outdoor heat exchanger	-	3,6	m3/h
For heat pump combination he	eater:						
Declared load profile /		na		Water heating energy	$\eta_{\sf wh}$	na	%
Energy efficiency class		- 1	ı	efficiency	·WII		
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product'	s life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller trant, compressor oil and electrical/electronic ec not permitted.	offering a service	ce of that type. t	s of great
Contact details	CTC AB. Näsväge						231218

CTC AB Ljungby



Average climate and Medium tempera	Ljungby		CIC		
Model(s):	CTC EcoPart 414				
Air-to-water heat pump:	No	Energy efficiency class:	A++	-	
Water-to-water heat pump:	No	Controller class:	I	-	
Brine-to-water heat pump:	Yes	Controller contribution:	1	%	
Low-temperature heat pump:	No	Package efficiency:	138	%	
Equipped with a supplementary heater:	No	Package efficiency class:	A++	-	
Heat pump combination heater:	No				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_s$	137	%
Declared capacity for heating f	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performan			
outdoor temperature T j			_	part load at indoor temperature 2	20 Cand ou		-
T j = -7 °C	Pdh	13,6	kW	T j = - 7 °C	COPd	3,29	] -
T j = + 2 °C	Pdh	13,9	kW	T j = +2 °C	COPd	3,68	-
T j = + 7 °C	Pdh	14,2	kW	T j = +7 °C	COPd	4,03	-
T j = + 12 °C	Pdh	14,4	kW	T j = +12 °C	COPd	4,37	-
T j = bivalent temperature	Pdh	13,6	kW	T j = bivalent temperature	COPd	3,34	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	other than active	mode	•	Supplementary heater		•	•
Off mode	P OFF	0,018	kW	Rated heat output	Psup	2,7	kW
Thermostat-off mode	P <sub>TO</sub>	0,032	kW	[ ]		•	•
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	9158	kWh	flow rate, outdoor heat exchanger	-	3,0	m3/h
For heat pump combination he	eater:						
Declared load profile /		na		Water heating energy	$\eta_{\sf wh}$	na	%
Energy efficiency class		1	1	efficiency	· IWII		] ~~
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product	's life cycle, it mus e product's refrige	recycling station or with the installation engine t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ec not permitted.	offering a servi	ce of that type. t	is of great

CTC AB Ljungby



Average climate and Low temperature				У	CIC
Model(s):	CTC EcoPart 414	+ CTC Basicstyrning			
Air-to-water heat pump:	No	Energy efficiency class:	A++	-	
Water-to-water heat pump:	No	Controller class:	1	-	
Brine-to-water heat pump:	Yes	Controller contribution:	1	%	
Low-temperature heat pump:	No	Package efficiency:	175	%	
Equipped with a supplementary heater:	No	Package efficiency class:	A+++	-	
Heat pump combination heater:	No				

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	$\eta_{s}$	174	%
Declared capacity for heating for outdoor temperature T j	or part load at ir	ndoor temperatu	ire 20 °C and	Declared coefficient of performal part load at indoor temperature 2			
T j = -7 °C	Pdh	14,6	kW	T j = - 7 °C	COPd	4,64	] -
T j = + 2 °C	Pdh	14,7	kW	T j = +2 °C	COPd	4,81	-
T j = + 7 °C	Pdh	14,8	kW	T j = +7 °C	COPd	4,97	-
T j = + 12 °C	Pdh	14,9	kW	T j = +12 °C	COPd	5,13	-
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	4,64	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 <sub>biv</sub>	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	other than active	mode	-	Supplementary heater			=
Off mode	P OFF	0,018	kW	Rated heat output	Psup	2,0	kW
Thermostat-off mode	P <sub>TO</sub>	0,097	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items		•	•				_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	7467	kWh	flow rate, outdoor heat exchanger	-	3,6	m3/h
For heat pump combination he	ater:			-			
Declared load profile / Energy efficiency class		na		Water heating energy efficiency	$\eta_{wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product	's life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller grant, compressor oil and electrical/electronic ed not permitted.	offering a service	e of that type. t	is of great
Contact details	CTC AB, Näsväge	en 8, SE-341 34 L					231218

Information for heat pump sp	oace heaters a	and heat pump	combination	heaters	CTC AB		57
Cold climate and Medium te	mperature				Ljungby		
Model(s):		CTC EcoPart 41	L4 + CTC Basic	styrning			
Air-to-water heat pump:		No		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	1	-	
Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	141	%	
Equipped with a supplementary	heater:	No		Package efficiency class:		-	
Heat pump combination heater:		No					
			ion, except fo	r low-temperature heat pumps. For	low- tempera	iture heat pu	mps,
parameters shall be declared for Item	Symbol	Value	Unit	Item	Symbol	Value	Uni
Rated heat output (*)	Prated	15	kW	Seasonal space heating energy efficiency	η <sub>s</sub>	140	%
Declared capacity for heating fo outdoor temperature T j	r part load at ir	ndoor temperatu	re 20 °C and	Declared coefficient of perform part load at indoor temperature			
T j = – 7 °C	Pdh	13,8	kW	T j = - 7 °C	COPd	3,59	] -
Γ j = + 2 °C	Pdh	14,1	kW	T j = +2 °C	COPd	3,94	
Г j = + 7 °C	Pdh	14,3	kW	T j = +7 °C	COPd	4,26	-
Γ j = + 12 °C	Pdh	14,5	kW	T j = +12 °C	COPd	4,49	
T j = bivalent temperature	Pdh	13,6	kW	T j = bivalent temperature	COPd	3,28	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	
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 <sub>biv</sub>	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for neating	P <sub>cych</sub>	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	ther than activ	e <u>mode</u>	7	Supplementary heater			3
Off mode	P OFF	0,018	kW	Rated heat output	Psup	1,7	kИ

Power consumption in modes other than active mode							
Off mode	P OFF	0,018	kW				
Thermostat-off mode	P <sub>TO</sub>	0,032	kW				
Standby mode	$P_{SB}$	0,018	kW				
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items							

For air-to-water heat pumps:
Rated air flow rate, outdoors

For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat

- 3,0 m3/h

**Electric** 

231218

Capacity control

Sound power level, indoors/
outdoors

Annual energy consumption

Fixed

53/na

dB

10139

kWh

For heat pump combination heater:

Declared load profile / Energy efficiency class		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ

Specific precautions and end of life information:

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

Type of energy input

exchanger

Contact details CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se

CTC AB Ljungby



Cold climate and Low temperature			Ljungb	У	CIC
Model(s):	CTC EcoPart 414				
Air-to-water heat pump:	No	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	I	-	
Brine-to-water heat pump:	Yes	Controller contribution:	1	%	
Low-temperature heat pump:	No	Package efficiency:	177	%	
Equipped with a supplementary heater:	No	Package efficiency class:		-	
Heat pump combination heater:	No		•	•	

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	16	kW	Seasonal space heating energy efficiency	η <sub>s</sub>	176	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = -7 °C	Pdh	14,7	kW	T j = - 7 °C	COPd	4,84	] -
T j = + 2 °C	Pdh	14,8	kW	T j = +2 °C	COPd	4,98	_
T j = + 7 °C	Pdh	14,9	kW	T j = +7 °C	COPd	5,08	-
T j = + 12 °C	Pdh	14,9	kW	T j = +12 °C	COPd	5,11	-
T j = bivalent temperature	Pdh	14,6	kW	T j = bivalent temperature	COPd	4,67	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	_
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 <sub>biv</sub>	-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	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output	Psup	1,8	kW
Thermostat-off mode	P <sub>TO</sub>	0,097	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input	Electric		
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items							_
Capacity control	Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h	
Sound power level, indoors/ outdoors	L <sub>WA</sub>	53/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	8758	kWh	flow rate, outdoor heat exchanger	-	3,6	m3/h
For heat pump combination he	ater:	•	•			•	•
Declared load profile /	na			Water heating energy	$\eta_{\sf wh}$	na	%
Energy efficiency class		1	1	efficiency	10011		-
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GΊ
Specific precautions and end of life information:		end of the product	's life cycle, it mus e product's refrige	a recycling station or with the installation engine t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ec not permitted.	offering a servic	e of that type. t	is of great
Contact details	CTC AB, Näsväge	en 8, SE-341 34 L			<u> </u>		231218