Cold climate and Low temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 406 + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	No	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	5	kW	Seasonal space heating energy efficiency	η_{s}	140	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor tempera	ture 20 °C	Declared coefficient of performal part load at indoor temperature	-		
Tj=-7°C	Pdh	na	kW	T j = - 7 °C	COPd	na	-
T j = + 2 °C	Pdh	4,3	kW	T j = +2 °C	COPd	2,43	-
T j = + 7 °C	Pdh	5,7	kW	T j = +7 °C	COPd	3,39	-
T j = + 12 °C	Pdh	7,5	kW	T j = +12 °C	COPd	4,80	_
T j = bivalent temperature	Pdh	4,5	kW	T j = bivalent temperature	COPd	2,69	-
T j = operation limit temperature	Pdh	4,3	kW	T j = operation limit temperature	COPd	2,50	-
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}	4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,99	ı	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than active	mode	7	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	P TO	0,006	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							-
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	1947	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	η_{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 production	ct's life cycle, it m the product's refr	at a recycling station or with the installation enginest be sent correctly to a waste station or reseligerant, compressor oil and electrical/electronic bold waste is not permitted.	er offering a ser	vice of that type	. t is of great
Contact details (CTC AB, Näsväge					F0001	231218

Cold climate and Low temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 406 + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	No	Controller contribution:	3,5	%			
Low-temperature heat pump:	No	Package efficiency:	192	%			
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	5	kW	Seasonal space heating energy efficiency	η_{s}	188	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor tempera	ture 20 °C	Declared coefficient of performal part load at indoor temperature	-		
Tj=-7°C	Pdh	na	kW	T j = - 7 °C	COPd	na	-
T j = + 2 °C	Pdh	4,7	kW	T j = +2 °C	COPd	3,66	_
T j = + 7 °C	Pdh	6,3	kW	T j = +7 °C	COPd	4,96	_
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,45	-
T j = bivalent temperature	Pdh	4,8	kW	T j = bivalent temperature	COPd	3,79	-
T j = operation limit temperature	Pdh	4,7	kW	T j = operation limit temperature	COPd	3,87	-
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	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than active	mode	-	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,5	kW
Thermostat-off mode	P_{TO}	0,019	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	1451	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	η_{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 production importance that the	ct's life cycle, it m the product's refr	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic	ler offering a se	rvice of that type	. t is of great
Contact details (CTC AB, Näsväge					F0001	231218

CTC AB Information for heat pump space heaters and heat pump combination heaters **Cold climate and Low temperature** Ljungby Model(s): CTC EcoAir 406 + CTC EcoLogic Air-to-water heat pump: Yes Energy efficiency class: A+ Water-to-water heat pump: No Controller class: VII Brine-to-water heat pump: No Controller contribution: 3,5 % Low-temperature heat pump: No Package efficiency: 119 % No Package efficiency class: Equipped with a supplementary heater: A+ Heat pump combination heater: No

ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	115	%
Declared capacity for heating fand outdoor temperature T j	for part load at i	ndoor tempera	ture 20 °C	Declared coefficient of performal part load at indoor temperature			
T j = - 7 °C	Pdh	3,5	kW	T j = -7 °C	COPd	2,13	-
T j = + 2 °C	Pdh	4,4	kW	T j = +2 °C	COPd	2,93] -
T j = + 7 °C	Pdh	6,0	kW	T j = +7 °C	COPd	3,99] -
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	5,21	-
T j = bivalent temperature	Pdh	3,8	kW	T j = bivalent temperature	COPd	2,44	-
T j = operation limit temperature	Pdh	3,1	kW	T j = operation limit temperature	COPd	1,82	_
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}	-5	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than activ	e mode	_	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,9	kW
Thermostat-off mode	P_{TO}	0,006	kW				,
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		•	•				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3470	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:						
Declared load profile		na		Water heating energy efficiency	η_{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 produ	ct's life cycle, it n	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic	er offering a se	rvice of that type	e. t is of grea

Information for heat pump space heaters and heat pump combination heaters

CTC AB Ljungby



Cold climate and Low temperature				,	CIC
Model(s):	CTC EcoAir 406 +	+ CTC EcoLogic			
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	No	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	155	%	
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	5	kW	Seasonal space heating energy efficiency	η_{s}	151	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	idoor temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature	-		
T j = - 7 °C	Pdh	3,9	kW	T j = - 7 °C	COPd	3,16] -
T j = + 2 °C	Pdh	4,8	kW	T j = +2 °C	COPd	3,92	-
T j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	5,25	-
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,66	-
T j = bivalent temperature	Pdh	4,1	kW	T j = bivalent temperature	COPd	3,35	-
T j = operation limit temperature	Pdh	3,5	kW	T j = operation limit temperature	COPd	2,85	-
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}	-5	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	other than active	mode	•	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	1,6	kW
Thermostat-off mode	P TO	0,019	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							-
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2722	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile		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:		end of the production importance that t	ct's life cycle, it m the product's refr	at a recycling station or with the installation engusts be sent correctly to a waste station or resel igerant, compressor oil and electrical/electronic	ler offering a ser	vice of that type	. t is of grea
Contact details (CTC AB, Näsväge			46 372 88000 www.ctc.se		F0001	231218



Model(s):	CTC EcoAir 406 + CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	No	Controller contribution:	3,5	%			
Low-temperature heat pump:	No	Package efficiency:	107	%			
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	5	kW	Seasonal space heating energy efficiency	η_{s}	103	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	idoor temperat	ture 20 °C	Declared coefficient of performal part load at indoor temperature	-		
Tj=-7°C	Pdh	3,6	kW	T j = - 7 °C	COPd	2,49	-
T j = + 2 °C	Pdh	4,5	kW	T j = +2 °C	COPd	3,22	-
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	4,34	-
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	5,44	_
T j = bivalent temperature	Pdh	3,4	kW	T j = bivalent temperature	COPd	2,37	-
T j = operation limit temperature	Pdh	1,7	kW	T j = operation limit temperature	COPd	1,67	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	2,6	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	1,76	-
Bivalent temperature	T _{biv}	-9	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than active	mode	-	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	3,5	kW
Thermostat-off mode	P _{TO}	0,006	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							-
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4785	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	η_{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 productimportance that t	ct's life cycle, it m the product's refr	at a recycling station or with the installation enginest be sent correctly to a waste station or reseligerant, compressor oil and electrical/electronic bold waste is not permitted.	ler offering a ser	vice of that type	. t is of great
Contact details (CTC AB, Näsväge					F0001	231218



		Ljungby	/	CIC
CTC EcoAir 406 +	CTC EcoLogic			
Yes	Energy efficiency class:		-	
No	Controller class:	VII	-	
No	Controller contribution:	3,5	%	
No	Package efficiency:	135	%	
No	Package efficiency class:		-	
No				
	Yes No No No No	No Controller class: No Controller contribution: No Package efficiency: No Package efficiency class: No	CTC EcoAir 406 + CTC EcoLogic Yes Energy efficiency class: No Controller class: VII No Controller contribution: 3,5 No Package efficiency: 135 No Package efficiency class: No	Yes Energy efficiency class: - No Controller class: VII - No Controller contribution: 3,5 % No Package efficiency: 135 % No Package efficiency class: - No

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	4	kW	Seasonal space heating energy efficiency	η_{s}	131	%
Declared capacity for heating fo	or part load at in	door tempera	ture 20 °C	Declared coefficient of performa	nce or prima	ry energy rat	tio for
and outdoor temperature T j				part load at indoor temperature	20 °C and ou	tdoor tempe	rature T
T j = -7 °C	Pdh	4,0	kW	T j = - 7 °C	COPd	3,34] -
T j = + 2 °C	Pdh	4,9	kW	T j = +2 °C	COPd	4,07	_
Г j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	5,40	-
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,62	-
T j = bivalent temperature	Pdh	3,2	kW	T j = bivalent temperature	COPd	2,92	-
T j = operation limit temperature	Pdh	1,9	kW	T j = operation limit temperature	COPd	1,83	_
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	2,9	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	2,58	-
Bivalent temperature	T _{biv}	-13	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	ther than active	mode		Supplementary heater			_
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,2	kW
Thermostat-off mode	P _{TO}	0,019	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							=
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3045	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:	•	•			•	
Declared load profile		na		Water heating energy efficiency	η_{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 productimportance that t	ct's life cycle, it m the product's refr	at a recycling station or with the installation eng ust be sent correctly to a waste station or resel igerant, compressor oil and electrical/electronic	ler offering a ser	vice of that type	e. t is of gre
Contact details (CTC AB, Näsväge			nold wasta is not permitted			



Cold climate and Low temperature			Ljungby	/	CIC
Model(s):	CTC EcoAir 406 +	- CTC EcoZenith i360/ EcoVent i360F			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	No	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	144	%	
Equipped with a supplementary heater:	Yes	Package efficiency class:		-	
Heat pump combination heater:	Yes				_
Parameters shall be declared for medium-te	mperature application	n, except for low-temperature heat pumps.	. For low- tem	nperature h	neat pumps,

parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	140	%
Declared capacity for heating fo outdoor temperature T j	r part load at in	door temperatu	ure 20 °C and	Declared coefficient of performar load at indoor temperature 20 °C			
T j = -7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	4,3	kW	T j = +2 °C	COPd	2,43] -
T j = + 7 °C	Pdh	5,7	kW	T j = +7 °C	COPd	3,39	
T j = + 12 °C	Pdh	7,5	kW	T j = +12 °C	COPd	4,80	-
T j = bivalent temperature	Pdh	4,5	kW	T j = bivalent temperature	COPd	2,69	-
T j = operation limit temperature	Pdh	4,3	kW	T j = operation limit temperature	COPd	2,50	-
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}	4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	ther than active	mode		Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	P _{TO}	0,006	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	1947	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination hea	iter:						•
Declared load profile/		XL / A		Water heating energy	$\eta_{\sf wh}$	112	%
Energy efficiency class		/L / /		efficiency	' Iwh	112	
Daily electricity consumption	Qelec	6,835	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1504	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produc	ct's life cycle, it mu	a recycling station or with the installation enging st be sent correctly to a waste station or resell gerant, compressor oil and electrical/electronic	er offering a ser	vice of that type	t is of grea

Information for heat pump space heaters and heat pump combination heaters

CTC AB Ljungby



Cold climate and Low temperature			Ljungby	/	CIC
Model(s):	CTC EcoAir 406	CTC EcoZenith i360/ EcoVent i360F			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	No	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	192	%	
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,

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η _s	188	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature	-		
Tj=-7°C	Pdh	na	kW	T j = -7 °C	COPd	na	1 -
T j = + 2 °C	Pdh	4,7	kW	T j = +2 °C	COPd	3,66	-
T j = + 7 °C	Pdh	6,3	kW	T j = +7 °C	COPd	4,96] -
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,45] -
T j = bivalent temperature	Pdh	4,8	kW	T j = bivalent temperature	COPd	3,79	-
T j = operation limit temperature	Pdh	4,7	kW	T j = operation limit temperature	COPd	3,87	_
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	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than activ	e mode		Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,5	kW
Thermostat-off mode	P _{TO}	0,019	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		•					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	1451	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile/		XL / A		Water heating energy	η_{wh}	111,6	%
Energy efficiency class		7E / A		efficiency	' Iwh	111,0	ļ ′°
Daily electricity consumption	Qelec	6,835	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1504	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the production	ct's life cycle, it m the product's refr	at a recycling station or with the installation en nust be sent correctly to a waste station or rese rigerant, compressor oil and electrical/electroni	ller offering a ser	vice of that type	e. t is of gre
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Information for heat pump sp		nd heat pump	o combinatio	on heaters	CTC AB		A
Cold climate and Low temper Model(s):	rature	CTC EcoAir 40)6 + CTC Fco7	enith i360/ EcoVent i360F	Ljungby		
Air-to-water heat pump:		Yes	70 : 010 2002	Energy efficiency class:	A +	_	
Water-to-water heat pump:		No		Controller class:	VII	_	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	119	%	
Equipped with a supplementary	heater:	Yes		Package efficiency class:	A+	-	
Heat pump combination heater		Yes		r deliage efficiency class.	74.		
	r medium-temp	erature applica		for low-temperature heat pumps.	For low- tempe	erature heat	pumps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_s	115	%
Declared capacity for heating fo and outdoor temperature T j	r part load at ir	idoor temperat	ture 20 °C	Declared coefficient of perform part load at indoor temperatur	-		
T j = - 7 °C	Pdh	3,5	kW	T j = -7 °C	COPd	2,13	1 -
T j = + 2 °C	Pdh	4,4	kW	T j = +2 °C	COPd	2,93	1 -
T j = + 7 °C	Pdh	6,0	kW	T j = +7 °C	COPd	3,99] -
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	5,21	-
T j = bivalent temperature	Pdh	3,8	kW	T j = bivalent temperature	COPd	2,44	-
T j = operation limit temperature	Pdh	3,1	kW	T j = operation limit temperature	COPd	1,82	_
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}	-5	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,98	_	Heating water operating limit	WTOL	55	°c

Degradation co-efficient	Cdh	0,98	-								
Power consumption in modes other than active mode											
Off mode	P OFF	0,018	kW								
Thermostat-off mode	P_{TO}	0,006	kW								
Standby mode	P_{SB}	0,018	kW								
Crankcase heater mode	P _{CK}	0,000	kW								
Other items											
F											

 L_{WA}

Q_{HE}

Fixed

na/56

3470

	P		, ,
For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
For water-/brine-to-water heat pumps: Rated brine or water			
flow rate, outdoor heat	-	na	m3/h

Psup

1,9

Electric

kW

For heat pump combination heater:

Sound power level, indoors/

Annual energy consumption

Capacity control

outdoors

Declared load profile/ Energy efficiency class		XL / A		Water heating energy efficiency	$\eta_{\sf wh}$	98	%
Daily electricity consumption	Qelec	7,752	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1705	kWh	Annual fuel consumption	AFC	na	GJ

dΒ

kWh

temperature

Supplementary heater Rated heat output (*)

Type of energy input

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.

www.ctc.se Contact details CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 F0001 231218

Information for heat pump s	pace heaters a	and heat pum	p combinati	on heaters	CTC AB		57
Cold climate and Low tempe	rature				Ljungby		
Model(s):		CTC EcoAir 4	06 + CTC EcoZ	Zenith i360/ EcoVent i360F			
Air-to-water heat pump:		Yes		Energy efficiency class:	A++	-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	155	%	
Equipped with a supplementary	heater:	Yes		Package efficiency class:	A++	-	
Heat pump combination heater		Yes		,			
		perature applic	cation, except	for low-temperature heat pumps.	For low- tempe	rature heat	pumps,
parameters shall be declared fo	r low-tempera	ture applicatio	n.				
ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η _ς	151	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor tempera	ture 20 °C	Declared coefficient of perforn part load at indoor temperatur	•		
T i = - 7 °C	Pdh	3,9	kW	T j = - 7 °C	COPd	3,16	1 -
T j = + 2 °C	Pdh	4,8	kW	T j = +2 °C	COPd	3,92	1 -
T j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	5,25] -
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,66	_
T j = bivalent temperature	Pdh	4,1	kW	T j = bivalent temperature	COPd	3,35	-
T j = operation limit temperature	Pdh	3,5	kW	T j = operation limit temperature	COPd	2,85	_
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}	-5	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-

heating	P cych	na	kW								
Degradation co-efficient	Cdh	0,97	1								
Power consumption in modes other than active mode											
Off mode	P OFF	0,018	kW								
Thermostat-off mode	P _{TO}	0,019	kW								
Standby mode	P _{SB}	0,018	kW								
Crankcase heater mode	P _{CK}	0,000	kW								
Other items											

Fixed

Supplementary heater			_
Rated heat output (*)	Psup	1,6	kW
Type of energy input	·	Electric	
For air-to-water heat pumps:		4100	m2/h

WTOL

55

°C

Sound power level, indoors/ L_{WA} na/56 outdoors

Annual energy consumption Q_{HE} 2722

For air-to-water heat pumps: - Rated air flow rate, outdoors	4100	m3/h
For water-/brine-to-water heat pumps: Rated brine or water		
flow rate, outdoor heat exchanger	na	m3/h

For heat pump combination heater:

Capacity control

Declared load profile/ Energy efficiency class		XL / A		Water heating energy efficiency	$\eta_{\sf wh}$	98	%
Daily electricity consumption	Qelec	7,752	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1705	kWh	Annual fuel consumption	AFC	na	GJ

dΒ

kWh

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.

Heating water operating limit

temperature

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Information for heat pump space heaters and heat pump combination heaters

CTC AB Ljungby



		Ljungby	/	CIC
CTC EcoAir 406 +	- CTC EcoZenith i360/ EcoVent i360F			
Yes	Energy efficiency class:		-	
No	Controller class:	VII	-	
No	Controller contribution:	3,5	%	
No	Package efficiency:	107	%	
Yes	Package efficiency class:		-	
Yes				
	Yes No No No Yes	No Controller class: No Controller contribution: No Package efficiency: Yes Package efficiency class:	CTC EcoAir 406 + CTC EcoZenith i360/ EcoVent i360F Yes Energy efficiency class: No Controller class: VII No Controller contribution: 3,5 No Package efficiency: 107 Yes Package efficiency class:	Yes Energy efficiency class: - No Controller class: VII - No Controller contribution: 3,5 % No Package efficiency: 107 % Yes Package efficiency class: -

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_s	103	%
Declared capacity for heating for and outdoor temperature T j	or part load at in	ndoor temperat	ture 20 °C	Declared coefficient of performal part load at indoor temperature	•		
T j = - 7 °C	Pdh	3,6	kW	T j = -7 °C	COPd	2,49	-
T j = + 2 °C	Pdh	4,5	kW	T j = +2 °C	COPd	3,22] -
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	4,34	_
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	5,44	-
T j = bivalent temperature	Pdh	3,4	kW	T j = bivalent temperature	COPd	2,37	-
T j = operation limit temperature	Pdh	1,7	kW	T j = operation limit temperature	COPd	1,67	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	2,6	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	1,76	-
Bivalent temperature	T _{biv}	-9	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	ther than active	e mode	-	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	3,5	kW
Thermostat-off mode	P TO	0,006	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4785	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						•
Declared load profile/		XL / A		Water heating energy	η_{wh}	89	%
Energy efficiency class		<u> </u>		efficiency	· iwh		
Daily electricity consumption	Qelec	8,552	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1881	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the productimportance that t	ct's life cycle, it n the product's refi	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel igerant, compressor oil and electrical/electronic	er offering a se	rvice of that type	. t is of gre
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Information for heat pump space heaters and heat pump combination heaters

CTC AB Ljungby



Cold climate and Low temperature			Ljungby	/	CIC
Model(s):	CTC EcoAir 406 +	CTC EcoZenith i360/ EcoVent i360F			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	=	
Brine-to-water heat pump:	No	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	135	%	
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,

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	4	kW	Seasonal space heating energy efficiency	η _s	131	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature	•		
T j = - 7 °C	Pdh	4,0	kW	T j = -7 °C	COPd	3,34	1 -
T j = + 2 °C	Pdh	4,9	kW	T j = +2 °C	COPd	4,07	-
T j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	5,40] -
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,62] -
T j = bivalent temperature	Pdh	3,2	kW	T j = bivalent temperature	COPd	2,92	-
T j = operation limit temperature	Pdh	1,9	kW	T j = operation limit temperature	COPd	1,83	_
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	2,9	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	2,58	-
Bivalent temperature	T _{biv}	-13	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than activ	e mode		Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,2	kW
Thermostat-off mode	P _{TO}	0,019	kW			•	•
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		•					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3045	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile/		XL / A		Water heating energy	η_{wh}	89	%
Energy efficiency class		AL / A		efficiency	' Iwh	65	
Daily electricity consumption	Qelec	8,552	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1881	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the production	ct's life cycle, it m the product's refr	at a recycling station or with the installation en nust be sent correctly to a waste station or rese rigerant, compressor oil and electrical/electroni	ller offering a ser	vice of that type	e. t is of gre
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		Ljungby	/	CIC
CTC EcoAir 406 +	CTC EcoZenith i255			
Yes	Energy efficiency class:		-	
No	Controller class:	VII	=	
No	Controller contribution:	3,5	%	
No	Package efficiency:	135	%	
Yes	Package efficiency class:		-	
Yes				
	Yes No No No Yes	No Controller class: No Controller contribution: No Package efficiency: Yes Package efficiency class: Yes	CTC EcoAir 406 + CTC EcoZenith i255 Yes Energy efficiency class: No Controller class: VII No Controller contribution: 3,5 No Package efficiency: 135 Yes Package efficiency class: Yes	Yes Energy efficiency class: - No Controller class: VII - No Controller contribution: 3,5 % No Package efficiency: 135 % Yes Package efficiency class: - 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	5	kW	Seasonal space heating energy efficiency	η_s	131	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	cure 20 °C	Declared coefficient of performal part load at indoor temperature			
T j = - 7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na	-
T j = + 2 °C	Pdh	4,3	kW	T j = +2 °C	COPd	2,24] -
T j = + 7 °C	Pdh	5,7	kW	T j = +7 °C	COPd	3,16	_
T j = + 12 °C	Pdh	7,5	kW	T j = +12 °C	COPd	4,54	-
T j = bivalent temperature	Pdh	4,4	kW	T j = bivalent temperature	COPd	2,37	-
T j = operation limit temperature	Pdh	4,3	kW	T j = operation limit temperature	COPd	2,31	-
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	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	other than activ	e mode	·	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,4	kW
Thermostat-off mode	P TO	0,010	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	1866	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:	•		, , · · · <u>U</u> -			
Declared load profile	L	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	71	%
Daily electricity consumption	Qelec	6,566	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1445	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the productimportance that t	ct's life cycle, it r he product's ref	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic	ler offering a se	ervice of that type	. t is of gre
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Contact details

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Cold climate and Low temperature			Ljungby	/	CIC
Model(s):	CTC EcoAir 406	+ CTC EcoZenith i255			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	No	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	178	%	
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	5	kW	Seasonal space heating energy efficiency	η_s	174	%
Declared capacity for heating f and outdoor temperature T j	or part load at i	ndoor temperat	ture 20°C	Declared coefficient of performa part load at indoor temperature	-		
Tj=-7°C	Pdh	na	kW	T j = -7 °C	COPd	na	1 -
T j = + 2 °C	Pdh	4,7	kW	T j = +2 °C	COPd	3,32] -
T j = + 7 °C	Pdh	6,3	kW	T j = +7 °C	COPd	4,60	_
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,06	_
T j = bivalent temperature	Pdh	4,8	kW	T j = bivalent temperature	COPd	3,44	-
T j = operation limit temperature	Pdh	4,7	kW	T j = operation limit temperature	COPd	3,53	-
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	2	°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	55	°C
Power consumption in modes	other than activ	e mode	•	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,5	kW
Thermostat-off mode	P_{TO}	0,027	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	1568	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:	<u>.</u>	<u>I</u>	1 Jenemenger			
Declared load profile	L	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	71	%
Daily electricity consumption	Qelec	6,566	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1445	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the production	ct's life cycle, it r the product's ref	at a recycling station or with the installation enginust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic	ler offering a se	ervice of that type	e. t is of great
	CTC AB ALL "	Disposing of the	nroduct as house	shold waste is not permitted			

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Contact details

old climate and Low temperature							
el(s): CTC EcoAir 406 + CTC EcoZenith i255							
	Yes		Energy efficiency class:	A+	-		
	No		Controller class:	VII	-		
	No		Controller contribution:	3,5	%		
	No		Package efficiency:	125	%		
eater:	Yes		Package efficiency class:	A++	-		
	Yes						
			for low-temperature heat pumps. For	or low- tempe	erature heat	pumps,	
Symbol	Value	Unit	Item	Symbol	Value	Unit	
Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	121	%	
	nedium-temp ow-temperatu Symbol <i>Prated</i>	No No No No eater: Yes Yes nedium-temperature application Symbol Value Prated 5	No No No No eater: Yes Yes nedium-temperature application, except ow-temperature application. Symbol Value Unit Prated 5 kW	No Controller class: No Controller contribution: No Package efficiency: eater: Yes Package efficiency class: Yes nedium-temperature application, except for low-temperature heat pumps. For ow-temperature application. Symbol Value Unit Item Prated 5 kW Seasonal space heating energy efficiency	No Controller class: VII No Controller contribution: 3,5 No Package efficiency: 125 eater: Yes Package efficiency class: A++ Yes medium-temperature application, except for low-temperature heat pumps. For low-temperow-temperature application. Symbol Value Unit Item Symbol Prated 5 kW Seasonal space heating energy efficiency	No Controller class: VII - No Controller contribution: 3,5 % No Package efficiency: 125 % eater: Yes Package efficiency class: A++ - Yes medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pow-temperature application. Symbol Value Unit Item Symbol Value Prated 5 kW Seasonal space heating energy	

item	Зуппрог	value	Ullit	Item	Зуппрог	value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	121	%
Declared capacity for heating f and outdoor temperature T j	for part load at i	indoor tempera	ture 20 °C	Declared coefficient of performa part load at indoor temperature	-		
T j = -7 °C	Pdh	3,8	kW	T j = -7 °C	COPd	2,23] -
T j = + 2 °C	Pdh	4,9	kW	T j = +2 °C	COPd	3,20] -
T j = + 7 °C	Pdh	6,3	kW	T j = +7 °C	COPd	4,05] -
T j = + 12 °C	Pdh	7,5	kW	T j = +12 °C	COPd	4,95	-
T j = bivalent temperature	Pdh	4,2	kW	T j = bivalent temperature	COPd	2,64	-
T j = operation limit temperature	Pdh	3,3	kW	T j = operation limit temperature	COPd	1,90	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: $T j = -15 ^{\circ}C \text{ (if TOL } < -20 ^{\circ}C \text{)}$	COPd	na	-
Bivalent temperature	T _{biv}	-4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than activ	ve mode	_	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,6	kW
Thermostat-off mode	P_{TO}	0,018	kW				
Standby mode	P _{SB}	0,018	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	-	4100	m3/h
Sound power level, indoors/outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3288	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:						
Declared load profile	L	Efficiency class	В	Water heating energy efficiency	$\eta_{\sf wh}$	59	%
Daily electricity consumption	Qelec	7,902	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1738	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end				at a recycling station or with the installation en nust be sent correctly to a waste station or rese	-	_	

of life information:

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

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Information for heat pump s Cold climate and Low temper	•	nd neat pum	p combinati	on neaters	CTC AB Ljungby		CIC
Model(s):		CTC EcoAir 40	O6 + CTC Eco2	Zenith i255			
Air-to-water heat pump:		Yes		Energy efficiency class:	A+	-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	140	%	
Equipped with a supplementary	y heater:	Yes		Package efficiency class:	A+	-	
Heat pump combination heater Parameters shall be declared for parameters shall be declared for	or medium-temp			for low-temperature heat pumps	. For low- temp	erature heat	pumps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energ	; y	136	%

parameters shall be declared f	or low-tempera	ture application						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_s	136	%	
Declared capacity for heating f and outdoor temperature T j	for part load at i	ndoor temperat	cure 20 °C	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	3,9	kW	T j = - 7 °C	COPd	2,81	-	
T j = + 2 °C	Pdh	4,8	kW	T j = +2 °C	COPd	3,54	-	
T j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	4,87	-	
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,25	-	
T j = bivalent temperature	Pdh	4,2	kW	T j = bivalent temperature	COPd	3,07	-	
T j = operation limit temperature	Pdh	3,5	kW	T j = operation limit temperature	COPd	2,51	-	
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: $T j = -15 ^{\circ}C \text{ (if TOL } < -20 ^{\circ}C \text{)}$	COPd	na	-	
Bivalent temperature	T _{biv}	-4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°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	55	°C	
Power consumption in modes	other than activ	e mode		Supplementary heater			_	
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,0	kW	
Thermostat-off mode	P _{TO}	0,027	kW				,	
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric		
Crankcase heater mode	P _{CK}	0,000	kW					
Other items		•						
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h	
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water				
Annual energy consumption	Q _{HE}	3244	kWh	flow rate, outdoor heat exchanger	-	na	m3/h	
For heat pump combination he	eater:	•		<u> </u>		•	<u> </u>	
Declared load profile	L	Efficiency class	В	Water heating energy efficiency	$\eta_{\sf wh}$	59	%	
Daily electricity consumption	Qelec	7,902	kWh	Daily fuel consumption	Qfuel	NA	kWh	
Annual electricity consumption	AEC	1738	kWh	Annual fuel consumption	AFC	NA	GJ	
Specific precautions and end of life information:		end of the productimportance that t	t's life cycle, it r he product's ref	at a recycling station or with the installation enginust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic should waste is not permitted.	ler offering a se	rvice of that type	. t is of great	

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Model(s):	CTC EcoAir 406 +	CTC EcoAir 406 + CTC EcoZenith i255						
Air-to-water heat pump:	Yes	Energy efficiency class:		-				
Water-to-water heat pump:	No	Controller class:	VII	-				
Brine-to-water heat pump:	No	Controller contribution:	3,5	%				
Low-temperature heat pump:	No	Package efficiency:	99	%				
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	
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_{s}	95	
Declared capacity for heating fo	r part load at i	ndoor temperat	ture 20 °C	Declared coefficient of performa	nce or prima	nry energy rat	tio
and outdoor temperature T j				part load at indoor temperature	-		
T j = - 7 °C	Pdh	3,6	kW	T j = -7 °C	COPd	2,29	1
T j = + 2 °C	Pdh	4,5	kW	T j = +2 °C	COPd	2,97	
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	4,07	
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	5,15	1
T j = bivalent temperature	Pdh	3,5	kW	T j = bivalent temperature	COPd	2,23	
T j = operation limit	Pdh	1,7	kW	T j = operation limit	COPd	0,96	1
temperature	run	1,7	KVV	temperature	COFU	0,90	4
For air-to-water heat pumps:	Pdh	2,6	kW	For air-to-water heat pumps:	COPd	1,55	
T j = - 15 °C (if TOL < - 20 °C)	, u.,	2,0	17.44	T j = -15 °C (if TOL < -20 °C)	50, u	1,55	
				For air-to-water heat pumps:			1
Bivalent temperature	T _{biv}	-8	°C	Operation limit temperature	TOL	-22	
Cycling interval capacity for	2			Cooling intermed officions	600		1
heating	P _{cych}	na	kW	Cycling interval efficiency	COPcyc	na	
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit	WTOL	55	
Power consumption in modes o	ther than activ	e mode		temperature Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	3,9	1
Thermostat-off mode	P _{TO}	0,010	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	- CK	3,000		1			
Γ				For air-to-water heat pumps:			1
Capacity control		Fixed		Rated air flow rate, outdoors	-	4100	
Sound power level, indoors/		1		For water-/brine-to-water heat			
outdoors	L _{WA}	na/56	dB	pumps: Rated brine or water			
Annual energy consumption	0	5625	kWh	flow rate, outdoor heat	_	na	
	Q _{HE}	3023	KVVII	exchanger	-	IId	
For heat pump combination hea		Efficiency		Water heating energy		Ī	Τ
Declared load profile	L	class	na	efficiency	η_{wh}	52	
Daily electricity consumption	Qelec	8,931	kWh	Daily fuel consumption	Qfuel	NA	
							1
Annual electricity	AEC	1965	kWh	Annual fuel consumption	AFC	NA	

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Model(s):	CTC EcoAir 406 + CTC EcoZenith i255						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	No	Controller contribution:	3,5	%			
Low-temperature heat pump:	No	Package efficiency:	120	%			
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	5	kW	Seasonal space heating energy efficiency	η_s	116	%
Declared capacity for heating f and outdoor temperature T j	or part load at i	ndoor temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature	-		
T j = -7 °C	Pdh	4,0	kW	T j = - 7 °C	COPd	3,32] -
T j = + 2 °C	Pdh	4,9	kW	T j = +2 °C	COPd	4,05	-
T j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	5,38	_
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,61	_
T j = bivalent temperature	Pdh	3,6	kW	T j = bivalent temperature	COPd	2,64	-
T j = operation limit temperature	Pdh	1,9	kW	T j = operation limit temperature	COPd	1,83	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	2,9	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	2,53	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,95	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than activ	e mode	_	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	3,3	kW
Thermostat-off mode	P_{TO}	0,027	kW				•
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		•	•				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4331	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:			• • •			
Declared load profile	L	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	52	%
Daily electricity consumption	Qelec	8,931	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1965	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the productimportance that t	ct's life cycle, it n the product's ref	at a recycling station or with the installation enginust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic	ler offering a se	ervice of that type	e. t is of great
	CTC AB ALL "	Disposing of the	nroduct as house	shold waste is not permitted			

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

Ljungby

CTC AB



Model(s):	CTC EcoAir 406 +	CTC EcoZenith i555			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	No	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	137	%	
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,

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	133	%
Declared capacity for heating fo outdoor temperature T j	or part load at i	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	4,3	kW	T j = +2 °C	COPd	2,24	-
T j = + 7 °C	Pdh	5,7	kW	T j = +7 °C	COPd	3,19	-
T j = + 12 °C	Pdh	7,5	kW	T j = +12 °C	COPd	4,56	-
T j = bivalent temperature	Pdh	4,5	kW	T j = bivalent temperature	COPd	2,50	-
T j = operation limit temperature	Pdh	4,3	kW	T j = operation limit temperature	COPd	2,31	-
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}	4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	ther than activ	e mode	,	Supplementary heater			1
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	P _{TO}	0,006	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2051	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination hea	ater:	•					
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	η_{wh}	85	%
Daily electricity consumption	Qelec	8,943	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1967	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		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 rant, compressor oil and electrical/electronic ed	offering a service	e of that type. t	is of great

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Information for heat pump space heaters and heat pump combination heaters

Cold climate and Low temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 406 + 0	CTC EcoZenith i555			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	No	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	179	%	
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	5	kW	Seasonal space heating energy efficiency	η _s	175	%
Declared capacity for heating for	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performar	nce or prima	ry energy rati	o for
outdoor temperature T j				part load at indoor temperature 2			
T j = - 7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na	-
T j = + 2 °C	Pdh	4,7	kW	T j = +2 °C	COPd	3,32	-
T j = + 7 °C	Pdh	6,3	kW	T j = +7 °C	COPd	4,60	-
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,06	-
T j = bivalent temperature	Pdh	4,8	kW	T j = bivalent temperature	COPd	3,44	-
T j = operation limit temperature	Pdh	4,7	kW	T j = operation limit temperature	COPd	3,53	-
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	2	°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	55	°C
Power consumption in modes of	other than active	mode	_	Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,5	kW
Thermostat-off mode	P _{TO}	0,023	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	1555	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination hea	ater:						
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	85	%
Daily electricity consumption	Qelec	8,943	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1967	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product	's life cycle, it mus	recycling station or with the installation engine t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ec	offering a servi	e of that type. t i	s of great

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CTC AB Information for heat pump space heaters and heat pump combination heaters Ljungby **Cold climate and Low temperature** CTC EcoAir 406 + CTC EcoZenith i555 Model(s): Air-to-water heat pump: Energy efficiency class: Yes A+ Water-to-water heat pump: No Controller class: VII Brine-to-water heat pump: No Controller contribution: % Low-temperature heat pump: No Package efficiency: 116 % Equipped with a supplementary heater: Yes Package efficiency class: A+

Yes

Heat pump combination heater:

Contact details

ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	112	%
Declared capacity for heating for outdoor temperature T j	or part load at ir	ndoor temperatu	re 20 °C and	Declared coefficient of performar part load at indoor temperature 2			
T j = - 7 °C	Pdh	3,5	kW	T j = − 7 °C	COPd	2,01] -
T j = + 2 °C	Pdh	4,7	kW	T j = +2 °C	COPd	3,01	-
T j = + 7 °C	Pdh	5,9	kW	T j = +7 °C	COPd	3,75	
Γ j = + 12 °C	Pdh	7,2	kW	T j = +12 °C	COPd	4,69	-
T j = bivalent temperature	Pdh	3,8	kW	T j = bivalent temperature	COPd	2,35	-
T j = operation limit temperature	Pdh	2,9	kW	T j = operation limit temperature	COPd	1,66	
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}	-4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	ther than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	2,0	kW
Thermostat-off mode	P _{TO}	0,006	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		,	ļ				
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/ł
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3550	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile	XL	Efficiency class	В	Water heating energy efficiency	$\eta_{\sf wh}$	73	%
Daily electricity consumption	Qelec	10,407	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2289	kWh	Annual fuel consumption	AFC	NA	GJ

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CTC AB Information for heat pump space heaters and heat pump combination heaters Ljungby **Cold climate and Low temperature** CTC EcoAir 406 + CTC EcoZenith i555 Model(s): Air-to-water heat pump: Energy efficiency class: Yes A+ Water-to-water heat pump: No Controller class: VII Brine-to-water heat pump: No Controller contribution: %

Package efficiency:

Package efficiency class:

141

A+

%

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Heat pump combination heater: Yes

No

Yes

Low-temperature heat pump:

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Equipped with a supplementary heater:

ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	137	%
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	3,9	kW	T j = − 7 °C	COPd	2,81] -
T j = + 2 °C	Pdh	4,8	kW	T j = +2 °C	COPd	3,53	-
T j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	4,86	
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,25	-
T j = bivalent temperature	Pdh	4,1	kW	T j = bivalent temperature	COPd	2,99	-
T j = operation limit temperature	Pdh	3,5	kW	T j = operation limit temperature	COPd	2,51	-
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}	-5	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°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	55	°C
Power consumption in modes o	other than active	mode	_	Supplementary heater			=
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,6	kW
Thermostat-off mode	P_{TO}	0,023	kW				-
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items			,				_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2998	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile	XL	Efficiency class	В	Water heating energy efficiency	$\eta_{\sf wh}$	73	%
Daily electricity consumption	Qelec	10,407	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2289	kWh	Annual fuel consumption	AFC	NA	GJ

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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 EcoAir 406 +	CTC EcoZenith i555			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VII	-	
Brine-to-water heat pump:	No	Controller contribution:	3,5	%	
Low-temperature heat pump:	No	Package efficiency:	99	%	
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,

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	η_{s}	95	%
Declared capacity for heating fooutdoor 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	3,6	kW	T j = - 7 °C	COPd	2,29] -
T j = + 2 °C	Pdh	4,5	kW	T j = +2 °C	COPd	2,97	-
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	4,07	-
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	5,15	-
T j = bivalent temperature	Pdh	3,5	kW	T j = bivalent temperature	COPd	2,23	-
T j = operation limit temperature	Pdh	1,7	kW	T j = operation limit temperature	COPd	0,96	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	2,589	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	1,554	-
Bivalent temperature	T _{biv}	-8	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	ther than active	mode	_	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	3,9	kW
Thermostat-off mode	P _{TO}	0,006	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		1					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5609	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:	•	•			-	-
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	66	%
Daily electricity consumption	Qelec	11,646	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2562	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product importance that the	s life cycle, it must	recycling station or with the installation engine the sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ed	offering a service	e of that type. t	is of great

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

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CTC AB

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Model(s):	CTC EcoAir 406 + CTC EcoZenith i555						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	No	Controller contribution:	3,5	%			
Low-temperature heat pump:	No	Package efficiency:	120	%			
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	5	kW	Seasonal space heating energy efficiency	η_{s}	116	%
Declared capacity for heating fo outdoor temperature T j	or part load at i	ndoor temperatu	re 20 °C and	Declared coefficient of performal part load at indoor temperature 2			
T j = -7 °C	Pdh	4,0	kW	T j = - 7 °C	COPd	2,97] -
T j = + 2 °C	Pdh	4,9	kW	T j = +2 °C	COPd	3,67	-
T j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	5,00	-
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,22	-
T j = bivalent temperature	Pdh	3,4	kW	T j = bivalent temperature	COPd	1,49	-
T j = operation limit temperature	Pdh	1,9	kW	T j = operation limit temperature	COPd	2,69] -
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	2,197	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	2,197	-
Bivalent temperature	T _{biv}	-11	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°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	55	°C
Power consumption in modes o	ther than activ	e mode	-	Supplementary heater			1
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	2,9	kW
Thermostat-off mode	P _{TO}	0,023	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items						_	_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3993	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination hea	ater:				'		
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	66	%
Daily electricity consumption	Qelec	11,646	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2562	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 enging t be sent correctly to a waste station or reseller rant, compressor oil and electrical/electronic ed	offering a servic	e of that type. t	is of great

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Cold climate and Low temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 406 +	CTC EcoAir 406 + CTC Basicstyrning						
Air-to-water heat pump:	Yes	Energy efficiency class:		-				
Water-to-water heat pump:	No	Controller class:	1	-				
Brine-to-water heat pump:	No	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							

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_s	140	%
Declared capacity for heating fo and outdoor temperature T j	or part load at ir	ndoor temperat	cure 20 °C	Declared coefficient of performa part load at indoor temperature	•		
T j = - 7 °C	Pdh	na	kW	T j = -7 °C	COPd	na	-
T j = + 2 °C	Pdh	4,3	kW	T j = +2 °C	COPd	2,43	-
T j = + 7 °C	Pdh	5,7	kW	T j = +7 °C	COPd	3,39	
T j = + 12 °C	Pdh	7,5	kW	T j = +12 °C	COPd	4,80	-
T j = bivalent temperature	Pdh	4,5	kW	T j = bivalent temperature	COPd	2,69	-
T j = operation limit temperature	Pdh	4,3	kW	T j = operation limit temperature	COPd	2,50	_
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}	4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	other than active	mode	•	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	P _{TO}	0,006	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	1947	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:					•	
Declared load profile		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:		end of the produc	ct's life cycle, it n	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic	ler offering a se	ervice of that type	e. t is of grea
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Cold climate and Low temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 406 +	CTC EcoAir 406 + CTC Basicstyrning						
Air-to-water heat pump:	Yes	Energy efficiency class:		-				
Water-to-water heat pump:	No	Controller class:	1	-				
Brine-to-water heat pump:	No	Controller contribution:	1	%				
Low-temperature heat pump:	No	Package efficiency:	189	%				
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	5	kW	Seasonal space heating energy efficiency	η_s	188	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor temperat	cure 20 °C	Declared coefficient of performa part load at indoor temperature	•		
T j = - 7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	4,7	kW	T j = +2 °C	COPd	3,66] -
T j = + 7 °C	Pdh	6,3	kW	T j = +7 °C	COPd	4,96	_
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,45	-
T j = bivalent temperature	Pdh	4,8	kW	T j = bivalent temperature	COPd	3,79	-
T j = operation limit temperature	Pdh	4,7	kW	T j = operation limit temperature	COPd	3,87	-
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	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	other than active	mode	•	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,5	kW
Thermostat-off mode	P _{TO}	0,019	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	1451	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:			0-			
Declared load profile		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:		end of the produc	ct's life cycle, it n	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic	ler offering a se	ervice of that type	. t is of gre
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CTC AB Information for heat pump space heaters and heat pump combination heaters **Cold climate and Low temperature** Ljungby CTC EcoAir 406 + CTC Basicstyrning Model(s): Air-to-water heat pump: Yes Energy efficiency class: A+ Water-to-water heat pump: No Controller class: ï Brine-to-water heat pump: No Controller contribution: 1 % Low-temperature heat pump: No Package efficiency: 116 % Equipped with a supplementary heater: No Package efficiency class: **A**+ Heat pump combination heater: No Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application. Symbol Value Unit Symbol Value Unit Seasonal space heating energy Rated heat output (*) Prated 5 kW 115 % η_s efficiency Declared capacity for heating for part load at indoor temperature 20 °C Declared coefficient of performance or primary energy ratio for and outdoor temperature T j part load at indoor temperature 20 °C and outdoor temperature T j COPd Ti = -7°C Pdh Ti = -7°C 2,13 3,5 kW COPd Tj = +2 °CPdh 4,4 kW T i = +2 °C 2,93 Tj = +7 °CPdh 6,0 kW T i = +7 °C COPd 3,99 Tj = + 12 °CPdh 7,6 T j = +12 °C COPd 5,21 kW T i = bivalent temperature

T j = bivalent temperature	Pdh	3,8	kW	T j = bivalent temperature	COPd	2,44
T j = operation limit temperature	Pdh	3,1	kW	T j = operation limit temperature	COPd	1,82
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}	-5	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55
Power consumption in modes of	ther than active	mode	_	Supplementary heater		
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,9
Thermostat-off mode	P_{TO}	0,006	kW			
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric
Crankcase heater mode	P _{CK}	0,000	kW			
Other items					<u> </u>	

Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water		
Annual energy consumption	Q _{HE}	3470	kWh	flow rate, outdoor heat exchanger	na	m3/h

For heat pump combination heater:

Declared load profile		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.

°C

°C

kW

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CTC AB Information for heat pump space heaters and heat pump combination heaters **Cold climate and Low temperature** Ljungby Model(s): CTC EcoAir 406 + CTC Basicstyrning Air-to-water heat pump: Yes Energy efficiency class: A++ Water-to-water heat pump: No Controller class: ī Brine-to-water heat pump: No Controller contribution: 1 % Low-temperature heat pump: No Package efficiency: **152** % No Package efficiency class: Equipped with a supplementary heater: A++ Heat pump combination heater: No

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	5	kW	Seasonal space heating energy efficiency	η_{s}	151	%
Declared capacity for heating for and outdoor temperature T j	or part load at ii	ndoor tempera	ture 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = - 7 °C	Pdh	3,9	kW	T j = -7 °C	COPd	3,16] -
T j = + 2 °C	Pdh	4,8	kW	T j = +2 °C	COPd	3,92	-
T j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	5,25	-
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,66	-
T j = bivalent temperature	Pdh	4,1	kW	T j = bivalent temperature	COPd	3,35	-
T j = operation limit temperature	Pdh	3,5	kW	T j = operation limit temperature	COPd	2,85	_
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}	-5	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	other than activ	e <u>mode</u>	T	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	1,6	kW
Thermostat-off mode	P_{TO}	0,019	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2722	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:	•	•			•	
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produ	ct's life cycle, it n	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic	ler offering a se	rvice of that type	. t is of gre

Cold climate and Low temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 406 +	CTC EcoAir 406 + CTC Basicstyrning						
Air-to-water heat pump:	Yes	Energy efficiency class:		-				
Water-to-water heat pump:	No	Controller class:	1	-				
Brine-to-water heat pump:	No	Controller contribution:	1	%				
Low-temperature heat pump:	No	Package efficiency:	104	%				
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	5	kW	Seasonal space heating energy efficiency	η_s	103	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor temperat	cure 20 °C	Declared coefficient of performa part load at indoor temperature	•		
T j = - 7 °C	Pdh	3,6	kW	T j = -7 °C	COPd	2,49	-
T j = + 2 °C	Pdh	4,5	kW	T j = +2 °C	COPd	3,22] -
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	4,34	
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	5,44	-
T j = bivalent temperature	Pdh	3,4	kW	T j = bivalent temperature	COPd	2,37	-
T j = operation limit temperature	Pdh	1,7	kW	T j = operation limit temperature	COPd	1,67	_
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	2,6	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	1,76	-
Bivalent temperature	T _{biv}	-9	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	other than active	mode		Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	3,5	kW
Thermostat-off mode	P _{TO}	0,006	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4785	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile		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:		end of the produc	ct's life cycle, it n	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic	ler offering a se	ervice of that type	e. t is of grea
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Cold climate and Low temperature	Ljungby	/	CIC		
Model(s):	CTC EcoAir 406	+ CTC Basicstyrning			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	I	-	
Brine-to-water heat pump:	No	Controller contribution:	1	%	
Low-temperature heat pump:	No	Package efficiency:	132	%	
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	4	kW	Seasonal space heating energy efficiency	η_{s}	131	%
Declared capacity for heating fo and outdoor temperature T j	or part load at ir	ndoor temperat	ture 20°C	Declared coefficient of performal part load at indoor temperature			
T j = - 7 °C	Pdh	4,0	kW	T j = - 7 °C	COPd	3,34] -
T j = + 2 °C	Pdh	4,9	kW	T j = +2 °C	COPd	4,07	-
T j = + 7 °C	Pdh	6,4	kW	T j = +7 °C	COPd	5,40	-
T j = + 12 °C	Pdh	7,9	kW	T j = +12 °C	COPd	6,62	-
Γ j = bivalent temperature	Pdh	3,2	kW	T j = bivalent temperature	COPd	2,92	-
T j = operation limit temperature	Pdh	1,9	kW	T j = operation limit temperature	COPd	1,83	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	2,9	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	2,58	-
Bivalent temperature	T _{biv}	-13	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	other than active	e mode	•	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,2	kW
Thermostat-off mode	P_{TO}	0,019	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input	Electric		
Crankcase heater mode	P _{CK}	0,000	kW				
Other items]			_
Capacity control	Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h	
Sound power level, indoors/ outdoors	L _{WA}	na/56	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3045	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	η_{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 productimportance that t	ct's life cycle, it m the product's refr	at a recycling station or with the installation engust be sent correctly to a waste station or resel igerant, compressor oil and electrical/electronic	ler offering a ser	vice of that type	. t is of grea
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