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

CTC AB Ljungby



Model(s):	CTC EcoAir 614M				
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	180	%	
Equipped with a supplementary heater:	No	Package efficiency class:		-	
Heat pump combination heater:	No				

Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature 20°C and outdoor temperature 20°C and outdoor temperature 20°C part load at indoor temperature 20°C and outdoor 20°C and and 0.014 anual teact ondoor 20°C <br< th=""><th>ltem</th><th>Symbol</th><th>Value</th><th>Unit</th><th>Item</th><th>Symbol</th><th>Value</th><th>Uni</th></br<>	ltem	Symbol	Value	Unit	Item	Symbol	Value	Uni
and outdoor temperature T jT] = -7°CPdhnaT] = -7°CPdh9,4T] = + 2°CPdh9,4T] = + 2°CPdh9,4T] = + 2°CPdh9,4T] = + 12°CPdh9,5T] = + 12°CPdh9,5KWT] = + 12°CCOPdL = participation limitPdhP = operation limitPdhP = operation limitPdhP = -15°C (If TOL < -20°C)PdhN = -15°C (If TOL < -20°C)NaPoreNaKWNaN = -15°C (If TOL < -20°C)NaN = -15°C (If TOL < -20°C)Na <tr< th=""><th>Rated heat output (*)</th><th>Prated</th><th>10</th><th>kW</th><th></th><th>η_s</th><th>176</th><th>%</th></tr<>	Rated heat output (*)	Prated	10	kW		η _s	176	%
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		or part load at i	ndoor temperat	ure 20 °C	-	•		
Tj = + 7 °CPdh6.2kWTj = + 7 °CCOPd3.83Tj = + 12 °CPdh3.0kWTj = + 7 °CCOPd6.27-Tj = bivalent temperaturePdh9.5kWTj = bivalent temperatureCOPd1.81-Tj = operation limitpdh9.5kWTj = operation limitCOPd1.81-Tj = operation limitpdh9.5kWTj = operation limitCOPd1.81-For air-to-water heat pumps:pdhnakWFor air-to-water heat pumps:COPdna-Tj = -15 °C (if TOL < -20 °C)	T j = – 7 °C	Pdh	na	kW	T j = − 7 °C	COPd	na] -
T j = +12 °CPdh3,0kWT j = +12 °CCOPd6,27T j = bivalent temperaturePdh9,5kWT j = bivalent temperatureCOPd1,81T j = operation limit temperaturePdh9,5kWT j = operation limit temperatureCOPd1,81For air-to-water heat pumps: $j = -15 °C (if TOL < -20 °C)$ PdhnakWT j = -15 °C (if TOL < -20 °C)	T j = + 2 °C	Pdh	9,4	kW	T j = +2 °C	COPd	1,81	-
T j = bivalent temperaturePdh9,5kWT j = bivalent temperatureCOPd1,81T j = operation limit temperaturePdh9,5kWT j = operation limit temperatureCOPd1,81For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	T j = + 7 °C	Pdh	6,2	kW	T j = +7 °C	COPd	3,83	-
T j = operation limit temperaturePdh9,5kWT j = operation limit temperature $COPd$ 1,81For air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)	T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,27	-
temperaturePan9,5KWtemperature $COPa$ 1,81-For air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)	T j = bivalent temperature	Pdh	9,5	kW	T j = bivalent temperature	COPd	1,81	-
T j = -15 °C (if TOL < -20 °C)PannakwT j = -15 °C (if TOL < -20 °C)CDPanaBivalent temperatureT biv2°C°COperation limit temperatureTOL2°CCycling interval capacity for heatingP cychnakWCycling interval efficiencyCOPcycna-Degradation co-efficientCdh0,99-Heating water operating limit temperatureWTOL55°CPower consumption in modes other than active mode0,014kWKWRated heat output (*)Psup0,0kVThermostat-off modeP orr 0,0140,014kWType of energy inputElectricElectricCapacity controlVariableVariableFor air-to-water heat pumps: na-2350m3Sound power level, indoors/ outdoorsL wA nual energy consumption classna/52dBMater heating energy efficiencynam3Delared load profilenaEfficiency classnaWater heating energy efficiencynam3Daily electricity consumptionQelecnakWhDaily fuel consumptionQfuelNAKWAnnual electricity consumptionAECnakWhAnnual fuel consumptionAFCNAGSpecific precautions and end of life information:The packaging must be deposited at a recycling station or with the installation engineer for correct water entropy disposedGGGThe packaging furst be deposited if the pr		Pdh	9,5	kW		COPd	1,81	-
Bivalent temperature I biv 2 -C Operation limit temperature IOL 2 -C Cycling interval capacity for heating P cych na kW Cycling interval efficiency COPcyc na Degradation co-efficient Cdh 0,99 - Heating water operating limit WTOL 55 -C Power consumption in modes other than active mode Operation 10mit temperature Supplementary heater Rated heat output (*) Psup 0,0 kW Thermostat-off mode P cor 0,014 kW Type of energy input Electric Electric Crankcase heater mode P cor 0,000 kW Type of energy input Electric m3 Capacity control Variable Sound power level, indoors/ L WA na/52 dB For air-to-water heat pumps: - na m3 Annual energy consumption Q HE 2845 kWh Baily fuel consumption Q fuel NA KW Daily electricity consumption Qelec na kWh Annual fuel consumption Q fuel NA KW <tr< td=""><td></td><td>Pdh</td><td>na</td><td>kW</td><td></td><td>COPd</td><td>na</td><td>-</td></tr<>		Pdh	na	kW		COPd	na	-
heating P_{cych} nakwCycling interval efficiencyCOPcycnaDegradation co-efficientCdh0,99-Heating water operating limit temperatureWTOL55*CPower consumption in modes other than active mode0,014kWSupplementary heaterRated heat output (*)Psup0,0kWThermostat-off mode P_{orr} 0,014kWType of energy inputElectricElectricCrankcase heater mode P_{cx} 0,000kWType of energy inputElectricm3Capacity controlVariableFor air-to-water heat pumps: nated air flow rate, outdoors2350m3Sound power level, indoors/ outdoorsL wAna/52dBflow rate, outdoorsnam3Annual energy consumptionQHE2845kWhFor air-to-water heat pumps: nanam3Declared load profilenaEfficiency classnam3m3Daily electricity consumption consumptionQelecnakWhAnnual fuel consumptionQfuelNAkWSpecific precautions and end of life information:The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. A end of the product's life cycle, it must be sent correct to a waste station or reselier offering as service of that type. It is oo green timportance that the product's refreserant, compresso i and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Bivalent temperature	T _{biv}	2	°C		TOL	2	°C
Degradation co-enticient Can 0,99 - temperature WIOL SS Construction Power consumption in modes other than active mode Optimized Supplementary heater Supplementary heater Rated heat output (*) Psup 0,0 kW Off mode Proper 0,014 kW KW Type of energy input Electric Electric Standby mode Pss 0,014 kW Type of energy input Electric Electric Crankcase heater mode Pcx 0,000 kW Type of energy input Electric ma Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors 2350 m3 Sound power level, indoors/ outdoors L _{WA} na/52 dB dB pumps: Rated brine or water flow rate, outdoors na m3 For heat pump combination heater: Efficiency na Ma efficiency na m3 Daily electricity consumption Qelec na kWh Daily fuel consumption Qfuel NA kW Specific precautions and end of life information: Specific precautions and end		P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Off mode P off 0,014 kW Rated heat output (*) Psup 0,0 kW Thermostat-off mode P ro 0,014 kW Type of energy input Electric Standby mode P ss 0,014 kW Type of energy input Electric Crankcase heater mode P cx 0,000 kW Type of energy input Electric Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3 Sound power level, indoors/ outdoors L wA na/52 dB For water-/brine-to-water heat pumps: Rated brine or water - na m3 Annual energy consumption Q HE 2845 kWh Water heating energy - na m3 Declared load profile na Efficiency class na Water heating energy - na m3 Daily electricity consumption Qelec na kWh Annual fuel consumption Qfuel NA KW Annual electricity consumption AEC na kWh Annual fuel consumption AFC NA G S	Degradation co-efficient	Cdh	0,99	-		WTOL	55	°C
Thermostat-off mode P TO 0,014 KW Standby mode P SB 0,014 KW Crankcase heater mode P CK 0,000 KW Other items Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3 Sound power level, indoors/ outdoors L WA na/52 dB For water-/brine-to-water heat pumps: Rated brine or water - na m3 For heat pump combination heater: Declared load profile na Efficiency class na Water heating energy efficiency N_wh na % Daily electricity consumption Qelec na KWh Daily fuel consumption Qfuel NA KW Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation equipment are properly disposed Disposing of the product's information. The packaging must be deposited at a recycling station or with the installation equipment are properly disposed Disposing of the product is household waste is not permitted.	Power consumption in modes	other than activ	e mode		Supplementary heater			
Standby mode P ss 0,014 kW Type of energy input Electric Crankcase heater mode P cx 0,000 kW Type of energy input Electric Other items Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3 Sound power level, indoors/ outdoors L wA na/52 dB For water-/brine-to-water heat pumps: Rated brine or water - na m3 Annual energy consumption Q HE 2845 kWh Efficiency na m3 Por heat pump combination heater: Efficiency na KWh Daily fuel consumption Qfuel NA kW Daily electricity consumption Qelec na kWh Annual fuel consumption Qfuel NA kW Annual electricity consumption AEC na kWh Annual fuel consumption AFC NA G Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct wate management. A great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product	Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kИ
Crankcase heater mode P ck 0,000 kW Other items Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3 Sound power level, indoors/ outdoors L wa na/52 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat - na m3 Annual energy consumption Q HE 2845 kWh Variable - na m3 For heat pump combination heater: Efficiency class na KWh Variable Na M3 Daily electricity consumption consumption Qelec na kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption AEC na kWh Annual fuel consumption AFC NA KW 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. A end of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product se household waste is not permitted.	Thermostat-off mode	Р _{то}	0,014	kW				
Crankcase heater mode P ck 0,000 kW Other items Other items For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3 Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3 Sound power level, indoors/ outdoors L wA na/52 dB B For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - na m3 For heat pump combination heater: Efficiency class na M3 M4 na % Daily electricity consumption consumption Qelec na kWh Manual fuel consumption Qfuel NA kW Annual electricity consumption AEC na kWh Annual fuel consumption AFC NA KW 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. A end of the product's refigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product shousehold waste is not permitted.	Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Other items Capacity control Variable Sound power level, indoors/ outdoors L wA na/52 dB Annual energy consumption Q HE 2845 kWh For heat pump combination heater: Efficiency na ma Daily electricity consumption Qelec na kWh Manual fuel consumption Qfuel NA Annual electricity consumption AEC na kWh Annual fuel consumption Qfuel NA Manual electricity consumption AEC na kWh Annual fuel consumption AFC NA 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. A end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of preat importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Crankcase heater mode			kW				
Capacity control Variable Rated air flow rate, outdoors - 2350 m3 Sound power level, indoors/ outdoors L _{WA} na/52 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat na m3 Annual energy consumption Q _{HE} 2845 kWh Water heating energy exchanger na m3 For heat pump combination heater: Efficiency class na Water heating energy efficiency n _{wh} na % Daily electricity consumption Qelec na kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption AEC na kWh Annual fuel consumption AFC NA G 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. A end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.		C.						
outdoorsL wAna/52dBpumps: Rated brine or water flow rate, outdoor heat exchangernam3Annual energy consumptionQ HE2845kWhexchangernam3For heat pump combination heater:Efficiency classnaWater heating energy efficiencyna%Daily electricity consumptionQelecnakWhDaily fuel consumptionQfuelNAkWAnnual electricity consumptionAECnakWhAnnual fuel consumptionAFCNAGSpecific precautions and end of life information:The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. A end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Capacity control		Variable			-	2350	m3/
Annual energy consumption Q _{HE} 2845 kWh flow rate, outdoor heat exchanger For heat pump combination heater:		L _{WA}	na/52	dB	pumps: Rated brine or water	-	na	m3/
Declared load profilenaEfficiency classnaWater heating energy efficiencyn_whna%Daily electricity consumptionQelecnakWhDaily fuel consumptionQfuelNAkWAnnual electricity consumptionAECnakWhAnnual fuel consumptionAFCNAGSpecific precautions and end of life information:The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. A end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Annual energy consumption	Q _{HE}	2845	kWh				
Declared load profile na class na efficiency Ilwh na % Daily electricity consumption Qelec na kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC na kWh Annual fuel consumption AFC NA G 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. A rend of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	For heat pump combination he	eater:			-			
Annual electricity consumption AEC na kWh Annual fuel consumption AFC NA G 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. A end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Declared load profile	na	-	na		η_{wh}	na	%
Consumption AEC na KWh Annual fuel consumption AFC NA G 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. A end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kW
Specific precautions and endend of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	•	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se F0076 2312	Specific precautions and end		end of the product great importance t	t's life cycle, it m that the product	nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec	ler offering a se	rvice of that type	e. It is of
	Contact details	CTC AB, Näsväge	en 8, SE-341 34 L	-jungby Tel +	-46 372 88000 www.ctc.se		F0076	2312

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614M				
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	236	%	
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	10	kW	Seasonal space heating energy efficiency	η _s	232	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor temperati	ure 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	9,3	kW	T j = +2 °C	COPd	2,50] -
T j = + 7 °C	Pdh	6,2	kW	T j = +7 °C	COPd	5,39	-
T j = + 12 °C	Pdh	3,1	kW	T j = +12 °C	COPd	7,79	- 1
T j = bivalent temperature	Pdh	9,3	kW	T j = bivalent temperature	COPd	2,50	-
T j = operation limit temperature	Pdh	9,3	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}	2	°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 of	other than active	e mode		Supplementary heater			
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items		,					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	2164	kWh	flow rate, outdoor heat exchanger			
For heat pump combination heat	ater:						
Declared load profile	na	Efficiency class	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 product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a se	rvice of that type	e. It is of
Contact details	CTC AB, Näsväge	en 8, SE-341 34 L	jungby Tel +	46 372 88000 www.ctc.se		F0076	231218

Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 614M 400V+ CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	152	%			
Equipped with a supplementary heater:	No	Package efficiency class:	A+++	-			
Heat pump combination heater:	No						

ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	η _s	148	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = – 7 °C	Pdh	6,8	kW	T j = – 7 °C	COPd	2,01] -
T j = + 2 °C	Pdh	4,1	kW	T j = +2 °C	COPd	3,94	- 1
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	5,14	- 1
T j = + 12 °C	Pdh	2,9	kW	T j = +12 °C	COPd	6,53	-
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	1,51	-
T j = operation limit temperature	Pdh	7,7	kW	T j = operation limit temperature	COPd	1,51	-
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}	-10	°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 of	other than activ	e mode		Supplementary heater			
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	CK	.,					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	4153	kWh	flow rate, outdoor heat exchanger			
For heat pump combination he	ater:						
Declared load profile	na	Efficiency class	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 product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation en nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a sei	rvice of that type	e. It is of
Contact details (CTC AB, Näsväg	en 8, SE-341 34 L	jungby Tel +	46 372 88000 www.ctc.se		F0076	231218

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614M 400V+ CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	197	%			
Equipped with a supplementary heater:	No	Package efficiency class:	A+++	-			
Heat pump combination heater:	No						

Rated heat output (*)Prated8kWSeasonal space heating energy efficiencyDeclared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T jDeclared capacity for heating for part load at indoor temperature 20 °C T j = +7 °CDeclared coefficient of perform part load at indoor temperature T j = -7 °CT j = -7 °CPdh6,8 4,1 kWKWT j = +2 °CPdh2,6 8,0 kWT j = -7 °CT j = +12 °CPdh2,6 8,0 2,0KWT j = operation limit temperaturePdh7,7 7,7T j = operation limit temperaturePdh7,7 7,7For air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)PdhBivalent temperatureT biv-10 0 °CBivalent temperatureT biv-10 0,014Power consumption in modes other than active mode Off modeP orr 0,014Off modeP orr 0,0140,014Capacity controlVariableSound power level, indoors/ outdoorsL wA N an/51An and the maximum control0,014Capacity controlVariable	n _s		
and outdoor temperature T jT j = - 7 °CPdh6,8kWT j = + 2 °CPdh4,1kWT j = + 2 °CPdh2,6kWT j = + 12 °CPdh3,0kWT j = bivalent temperaturePdh7,7kWT j = operation limit temperaturePdh7,7kWT j = operation limit temperaturePdh7,7kWT j = -15 °C (if TOL < - 20 °C)PdhnakWFor air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)PdhnaBivalent temperatureT biv-10°CFor air-to-water heat pumps: Operation limit temperatureCycling interval capacity for heatingP cychnakWCycling interval efficiencyDegradation co-efficientCdh0,98-For air-to-water heat pumps: Operation limit temperatureOff modeP orr to 0,0140,014kWSupplementary heater Rated heat output (*)Thermostat-off modeP or to 0,0140,014kWCapacity controlVariableFor air-to-water heat pumps: Rated air flow rate, outdoorsCapacity controlL wA uudoorsNa/51dB	e 20 °C and ou COPd COPd COPd COPd COPd COPd COPd TOL COPcyc	2,88 5,21 6,24 7,17 2,25 2,25 na -10 na	erature T j - - - - - - - - - - - - - - - - - - -
T j = + 2 °CPdh4,1kWT j = +2 °CT j = + 7 °CPdh2,6kWT j = +7 °CT j = + 12 °CPdh3,0kWT j = +7 °CT j = bivalent temperaturePdh7,7kWT j = bivalent temperatureT j = operation limit temperaturePdh7,7kWT j = operation limit temperatureFor air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd COPd COPd COPd COPd TOL COPcyc	5,21 6,24 7,17 2,25 2,25 na -10 	-
T j = + 7 °CPdh2,6kWT j = +7 °CT j = + 12 °CPdh3,0kWT j = +12 °CT j = bivalent temperaturePdh7,7kWT j = bivalent temperatureT j = operation limit temperaturePdh7,7kWT j = operation limit temperatureFor air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd COPd COPd COPd TOL COPcyc	6,24 7,17 2,25 2,25 na 	-
T j = +12 °CPdh3,0kWT j = +12 °CT j = bivalent temperaturePdh7,7kWT j = bivalent temperatureT j = operation limit temperaturePdh7,7kWT j = operation limit temperatureFor air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)	COPd COPd COPd COPd TOL COPcyc	7,17 2,25 2,25 na -10 na	-
T j = bivalent temperature Pdh $7,7$ kW T j = bivalent temperatureT j = operation limit temperature Pdh $7,7$ kW T j = operation limit temperatureFor air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd COPd COPd TOL COPcyc	2,25 2,25 na -10 na	-
T j = operation limit temperature Pdh $7,7$ kW T j = operation limit temperatureFor air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd COPd TOL COPcyc	2,25 na -10 na	-
temperaturePan7,7KWtemperatureFor air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)	COPd TOL COPcyc	na -10 na	-
T j = - 15 °C (if TOL < - 20 °C)PannakWT j = - 15 °C (if TOL < - 20 °C)Bivalent temperatureT $_{biv}$ -10°CFor air-to-water heat pumps: Operation limit temperatureCycling interval capacity for heatingP $_{cych}$ nakWCycling interval efficiencyDegradation co-efficientCdh0,98-Heating water operating limit temperaturePower consumption in modes other than active modeOff modeP $_{OFF}$ 0,014kWOff modeP $_{OFF}$ 0,014kWSupplementary heaterOff modeP $_{SB}$ 0,014kWType of energy inputCrankcase heater modeP $_{CK}$ 0,000kWOther itemsCapacity controlVariableFor air-to-water heat pumps: Rated air flow rate, outdoorsSound power level, indoors/ outdoorsL $_{WA}$ na/51dB	TOL COPcyc	-10 na	-
Bivalent temperature I_{biv} -10 C Operation limit temperatureCycling interval capacity for heating P_{cych} nakWCycling interval efficiencyDegradation co-efficient Cdh $0,98$ -Heating water operating limit temperaturePower consumption in modes other than active mode $0,014$ kW Supplementary heaterOff mode P_{OFF} $0,014$ kW Supplementary heaterOff mode P_{TO} $0,014$ kW Type of energy inputThermostat-off mode P_{SB} $0,014$ kW Standby mode P_{SB} $0,014$ kW Crankcase heater mode P_{CK} $0,000$ kW Other itemsCapacity controlVariableFor air-to-water heat pumps: Rated air flow rate, outdoorsSound power level, indoors/ outdoors L_{WA} na/51 dB	СОРсус	na	-
heating P_{cych} nakWCycling interval efficiencyDegradation co-efficient Cdh $0,98$ -Heating water operating limit temperaturePower consumption in modes other than active modeOff mode P_{oFF} $0,014$ kW Off mode P_{oFF} $0,014$ kW Supplementary heaterRated heat output (*)Thermostat-off mode P_{TO} $0,014$ kW Standby mode P_{SB} $0,014$ kW Type of energy inputCrankcase heater mode P_{CK} $0,000$ kW For air-to-water heat pumps: Rated air flow rate, outdoorsCapacity controlVariableFor air-to-water heat pumps: Rated air flow rate, outdoorsFor water-/brine-to-water heat pumps: Rated brine or water	-		- °C
Degradation co-efficient Cdh $0,98$ $-$ temperaturePower consumption in modes other than active modeSupplementary heaterSupplementary heaterOff mode P_{OFF} $0,014$ kW Thermostat-off mode P_{TO} $0,014$ kW Standby mode P_{SB} $0,014$ kW Crankcase heater mode P_{CK} $0,000$ kW Other items $Variable$ For air-to-water heat pumps: Rated air flow rate, outdoorsSound power level, indoors/ outdoors L_{WA} $na/51$ dB	WTOL	55	°C
Off mode P OFF 0,014 kW Thermostat-off mode P TO 0,014 kW Standby mode P SB 0,014 kW Crankcase heater mode P CK 0,000 kW Other items Other items For air-to-water heat pumps: Rated air flow rate, outdoors Sound power level, indoors/ outdoors L WA na/51 dB		÷	
Thermostat-off mode P TO 0,014 kW Standby mode P SB 0,014 kW Crankcase heater mode P CK 0,000 kW Other items Other items For air-to-water heat pumps: Rated air flow rate, outdoors Sound power level, indoors/ outdoors L WA na/51 dB			
Standby mode P SB 0,014 kW Crankcase heater mode P CK 0,000 kW Other items 0,000 kW Capacity control Variable Sound power level, indoors/ outdoors L WA na/51 dB	Psup	0,0	kW
Crankcase heater mode P CK 0,000 kW Other items Other items For air-to-water heat pumps: Rated air flow rate, outdoors Sound power level, indoors/ outdoors L WA na/51 dB			
Crankcase heater mode P CK 0,000 kW Other items Other items For air-to-water heat pumps: Rated air flow rate, outdoors Sound power level, indoors/ outdoors L WA na/51 dB		Electric	
Other items For air-to-water heat pumps: Capacity control Variable Sound power level, indoors/ outdoors L WA na/51 dB			
Capacity controlVariableFor air-to-water heat pumps: Rated air flow rate, outdoorsSound power level, indoors/ outdoorsL WAna/51dBGrain de level, indoors/ pumps: Rated brine or waterFor water-/brine-to-water heat pumps: Rated brine or water			
outdoors <i>L_{WA}</i> na/51 <i>dB</i> pumps: Rated brine or water	-	2350	m3/h
flow rate outdoor heat	: _	na	m3/h
Annual energy consumption Q _{HE} 3163 kWh exchanger			
For heat pump combination heater:			
Declared load profile na Efficiency class na Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption Qelec na kWh Daily fuel consumption	Qfuel	NA	kWh
Annual electricity AEC na kWh Annual fuel consumption	AFC	NA	GJ
Specific precautions and endThe packaging must be deposited at a recycling station or with the installation end of the product's life cycle, it must be sent correctly to a waste station or re great importance that the product's refrigerant, compressor oil and electrical/e Disposing of the product as household waste is not permitted.	seller offering a se	ervice of that typ	e. It is of
Contact details CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se			

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614M 400V+ CTC EcoLogic						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	124	%			
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	11	kW	Seasonal space heating energy efficiency	η _s	120	%
Declared capacity for heating fo and outdoor temperature T j	r part load at ir	idoor temperati	ure 20 °C	Declared coefficient of performat part load at indoor temperature 2	•		
T j = − 7 °C	Pdh	6,7	kW	T j = – 7 °C	COPd	2,40] -
T j = + 2 °C	Pdh	4,2	kW	T j = +2 °C	COPd	4,44	- [
T j = + 7 °C	Pdh	2,5	kW	T j = +7 °C	COPd	5,29	
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,92	-
T j = bivalent temperature	Pdh	7,9	kW	T j = bivalent temperature	COPd	1,74	-
T j = operation limit temperature	Pdh	2,7	kW	T j = operation limit temperature	COPd	1,32	- 1
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	7,1	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,51	-
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/60	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	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	8,3	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors/	L _{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	8797	kWh	flow rate, outdoor heat exchanger			-,
For heat pump combination hea	ater:	· ·		· · · ·		·	
Declared load profile	na	Efficiency class	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 product great importance t	t's life cycle, it m hat the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a sei	rvice of that type	e. It is of
Contact details C	TC AB, Näsväge	en 8, SE-341 34 L	jungby Tel +	46 372 88000 www.ctc.se		F0076	231218

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614N	A 400V+ CTC EcoLogic		
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	Νο	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	Νο	Package efficiency:	155	%
Equipped with a supplementary heater:	No	Package efficiency class:		-
Heat pump combination heater:	No			

ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11	kW	Seasonal space heating energy efficiency	η _s	151	%
Declared capacity for heating fo and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = – 7 °C	Pdh	6,6	kW	T j = – 7 °C	COPd	3,16] -
T j = + 2 °C	Pdh	4,3	kW	T j = +2 °C	COPd	5,57	- [
T j = + 7 °C	Pdh	2,7	kW	T j = +7 °C	COPd	6,79	-
T j = + 12 °C	Pdh	3,1	kW	T j = +12 °C	COPd	7,04	-
T j = bivalent temperature	Pdh	8,1	kW	T j = bivalent temperature	COPd	2,20	-
T j = operation limit temperature	Pdh	5,0	kW	T j = operation limit temperature	COPd	1,81	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	7,4	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,82	-
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	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	ther than activ	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	6,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items		,					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/I
Sound power level, indoors/ outdoors	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/I
Annual energy consumption	Q _{HE}	7038	kWh	flow rate, outdoor heat exchanger			
For heat pump combination hea	ater:			· · · · · · · · · · · · · · · · · · ·			-
Declared load profile	na	Efficiency class	na	Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Q _{elec}	na	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	NA	kWł
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a ser	vice of that type	e. It is of
Contact details C	CTC AB, Näsväge	0 CE 241 24 1	iunghy Tolu	46 372 88000 www.ctc.se		F0076	23121

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

CTC AB Liungby



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Model(s):	CTC EcoAir 614	M 400V + CTC EcoZenith i350/i360, CTC Eco	vent i350F/i	360F	
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	180	%	
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	10	kW	Seasonal space heating energy efficiency	η _s	176	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor temperati	ure 20 °C	Declared coefficient of performat part load at indoor temperature			
T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na] -
T j = + 2 °C	Pdh	9,4	kW	T j = +2 °C	COPd	1,81	-
T j = + 7 °C	Pdh	6,2	kW	T j = +7 °C	COPd	3,83	-
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,27	-
T j = bivalent temperature	Pdh	9,5	kW	T j = bivalent temperature	COPd	1,81	-
T j = operation limit temperature	Pdh	9,5	kW	T j = operation limit temperature	COPd	1,81	-
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 _{biv}	2	°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 active	e mode		Supplementary heater			
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	2845	kWh	flow rate, outdoor heat exchanger			
For heat pump combination hea	ater:	•		· · · · · · · · · · · · · · · · · · ·		-	-
Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	η_{wh}	122	%
Daily electricity consumption	Qelec	6,232	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1371	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a sei	vice of that type	e. It is of
Contact details C	TC AB, Näsväge	en 8, SE-341 34 L	jungby Tel +	46 372 88000 www.ctc.se		F0076	231218

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

CTC AB Liungby



warm chinate and low temperature			Ljuligu	'Y				
Model(s):	CTC EcoAir 614M 400V + CTC EcoZenith i350/i360, CTC EcoVent i350F/i360F							
Air-to-water heat pump:	Yes	Energy efficiency class:		-				
Water-to-water heat pump:	No	Controller class:	VI	-				
Brine-to-water heat pump:	No	Controller contribution:	4	%				
Low-temperature heat pump:	No	Package efficiency:	236	%				
Equipped with a supplementary heater:	Yes	Package efficiency class:		-				
Heat nump combination heater:	Voc							

 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	10	kW	Seasonal space heating energy efficiency	η _s	232	%
Declared capacity for heating fo and outdoor temperature T j	or part load at ir	ndoor temperati	ure 20 °C	Declared coefficient of performat part load at indoor temperature 2			
T j = – 7 °C	Pdh	na	kW	T j = − 7 °C	COPd	na] -
T j = + 2 °C	Pdh	9,3	kW	T j = +2 °C	COPd	2,50	-
T j = + 7 °C	Pdh	6,2	kW	T j = +7 °C	COPd	5,39	-
T j = + 12 °C	Pdh	3,1	kW	T j = +12 °C	COPd	7,79	-
T j = bivalent temperature	Pdh	9,3	kW	T j = bivalent temperature	COPd	2,50	-
T j = operation limit temperature	Pdh	9,3	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}	2	°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 c	other than active	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	2164	kWh	flow rate, outdoor heat exchanger			
For heat pump combination he	ater:						
Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	$\boldsymbol{\eta}_{wh}$	122	%
Daily electricity consumption	Qelec	6,232	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1371	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation eng ust be sent correctly to a waste station or resell 's refrigerant, compressor oil and electrical/elec nold waste is not permitted.	er offering a sei	vice of that type	e. It is of
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Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature

CTC AB Ljungby



			-jango					
Model(s):	CTC EcoAir 614M 400V + CTC EcoZenith i350/i360, CTC EcoVent i350F/i360F							
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-				
Water-to-water heat pump:	Νο	Controller class:	VI	-				
Brine-to-water heat pump:	No	Controller contribution:	4	%				
Low-temperature heat pump:	Νο	Package efficiency:	152	%				
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++	-				
Heat pump combination heater:	Yes							

Declared capacity for heating for par and outdoor temperature T j T j = $-7 \degree C$ T j = $+2 \degree C$ T j = $+7 \degree C$ T j = $+12 \degree C$ T j = bivalent temperature T j = operation limit temperature For air-to-water heat pumps: T j = $-15 \degree C$ (if TOL < $-20 \degree C$) Bivalent temperature Cycling interval capacity for heating	Pdh Pdh Pdh Pdh Pdh	8 door temperatu <u>6,8</u> 4,1 2,6 2,9	kW ure 20 °C kW kW kW	Seasonal space heating energy efficiency Declared coefficient of performan part load at indoor temperature 2 T j = -7 °C	20 °C and out		
and outdoor temperature T j T j = $-7 \degree C$ T j = $+2 \degree C$ T j = $+7 \degree C$ T j = $+12 \degree C$ T j = bivalent temperature T j = operation limit temperature For air-to-water heat pumps: T j = $-15 \degree C$ (if TOL $< -20 \degree C$) Bivalent temperature Cycling interval capacity for heating	Pdh Pdh Pdh Pdh Pdh	6,8 4,1 2,6	kW kW	part load at indoor temperature 2 T j = - 7 °C	20 °C and out		
T j = + 2 °C T j = + 7 °C T j = + 12 °C T j = bivalent temperature T j = operation limit temperature For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C) Bivalent temperature Cycling interval capacity for heating	Pdh Pdh Pdh Pdh	4,1 2,6	kW		r		rature T j
T j = + 7 °C T j = + 12 °C T j = bivalent temperature T j = operation limit temperature For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C) Bivalent temperature Cycling interval capacity for heating	Pdh Pdh Pdh	2,6			COPd	2,01] - [
T j = + 12 °C T j = bivalent temperature T j = operation limit temperature For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C) Bivalent temperature Cycling interval capacity for heating	Pdh Pdh		kW	T j = +2 °C	COPd	3,94] -
T j = bivalent temperature T j = operation limit temperature For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C) Bivalent temperature Cycling interval capacity for heating	Pdh	2,9		T j = +7 °C	COPd	5,14	- [
T j = operation limit temperature For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C) Bivalent temperature Cycling interval capacity for heating			kW	T j = +12 °C	COPd	6,53	
temperature For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C) Bivalent temperature Cycling interval capacity for heating	- <i>"</i>	7,7	kW	T j = bivalent temperature	COPd	1,51	-
T j = -15 °C (if TOL < -20 °C) Bivalent temperature Cycling interval capacity for heating	Pdh	7,7	kW	T j = operation limit temperature	COPd	1,51	-
Cycling interval capacity for F	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
heating	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Degradation co-efficient	² cych	na	kW	Cycling interval efficiency	СОРсус	na	_
	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other t	than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items				'			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors/	L _{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	4153	kWh	flow rate, outdoor heat exchanger			
For heat pump combination heater:					4		<u></u>
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	97	%
Daily electricity consumption	Qelec	7,880	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1734	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product	's life cycle, it m	at a recycling station or with the installation eng ust be sent correctly to a waste station or resell		-	
Contact details CTC AI				's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	-		

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

CTC AB Liungby



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Model(s):	CTC EcoAir 614	VI 400V + CTC EcoZenith i350/i360, CTC Ecc	Vent i350F/i3	860F	
Air-to-water heat pump:	Yes	Energy efficiency class:	A+++	-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	197	%	
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	8	kW	Seasonal space heating energy efficiency	η _s	193	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperati	ure 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = – 7 °C	Pdh	6,8	kW	T j = – 7 °C	COPd	2,88	- [
T j = + 2 °C	Pdh	4,1	kW	T j = +2 °C	COPd	5,21	-
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	6,24	-
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	7,17	-
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	2,25	-
T j = operation limit temperature	Pdh	7,7	kW	T j = operation limit temperature	COPd	2,25	-
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}	-10	°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 of	other than activ	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors/	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	3163	kWh	flow rate, outdoor heat exchanger		ind ind	
For heat pump combination he	ater:			· · · · · ·			
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	97	%
Daily electricity consumption	Qelec	7,880	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1734	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m hat the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a se	rvice of that type	e. It is of
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Information for heat pump space heaters and heat pump combination heaters **Cold climate and Medium temperature**

CTC AB Liungby



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Model(s):	CTC EcoAir 614	VI 400V + CTC EcoZenith i350/i360, CTC Eco	vent i350F/i	360F	
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	124	%	
Equipped with a supplementary heater:	Yes	Package efficiency class:		-	
Heat pump combination heater:	Yes				

ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11	kW	Seasonal space heating energy efficiency	η _s	120	%
Declared capacity for heating fo and outdoor temperature T j	or part load at i	ndoor temperati	ure 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = – 7 °C	Pdh	6,7	kW	T j = – 7 °C	COPd	2,40	7 -
T j = + 2 °C	Pdh	4,2	kW	T j = +2 °C	COPd	4,44] -
T j = + 7 °C	Pdh	2,5	kW	T j = +7 °C	COPd	5,29	-
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,92	-
T j = bivalent temperature	Pdh	7,9	kW	T j = bivalent temperature	COPd	1,74	-
T j = operation limit temperature	Pdh	2,7	kW	T j = operation limit temperature	COPd	1,32	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	7,1	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,51	-
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/60	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 activ	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	8,3	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{ск}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/
Sound power level, indoors	L _{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/
Annual energy consumption	Q _{HE}	8797	kWh	flow rate, outdoor heat exchanger			
For heat pump combination hea	ater:			· · · · · · · · · · · · · · · · · · ·			·
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	82	%
Daily electricity consumption	Qelec	9,257	kWh	Daily fuel consumption	Qfuel	NA	kW
Annual electricity consumption	AEC	2037	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a se	rvice of that type	e. It is of
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Information for heat pump space heaters and heat pump combination heaters **Cold climate and Low temperature**

CTC AB Liungby



cold climate and low temperature			Ljuligu	y	
Model(s):	CTC EcoAir 614M	/I 400V + CTC EcoZenith i350/i360, CTC Eco	Vent i350F/i	i360F	
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	155	%	
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	11	kW	Seasonal space heating energy efficiency	η _s	151	%
Declared capacity for heating f and outdoor temperature T j	or part load at ir	idoor temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature	-		
T j = – 7 °C	Pdh	6,6	kW	T j = − 7 °C	COPd	3,16] -
T j = + 2 °C	Pdh	4,3	kW	T j = +2 °C	COPd	5,57	- [
T j = + 7 °C	Pdh	2,7	kW	T j = +7 °C	COPd	6,79	
T j = + 12 °C	Pdh	3,1	kW	T j = +12 °C	COPd	7,04	-
T j = bivalent temperature	Pdh	8,1	kW	T j = bivalent temperature	COPd	2,20	-
T j = operation limit temperature	Pdh	5,0	kW	T j = operation limit temperature	COPd	1,81	- [
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	7,4	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,82	-
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	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	e mode		Supplementary heater			
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	6,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							_
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	7038	kWh	flow rate, outdoor heat exchanger			-,
For heat pump combination he	eater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	82	%
Daily electricity consumption	Q_{elec}	9,257	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	NA	kWh
Annual electricity consumption	AEC	2037	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the produc great importance	t's life cycle, it m that the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a sei	vice of that type	e. It is of
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Information for heat pump space heaters and heat pump combination heaters Warm climate and Medium temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 614N	CTC EcoAir 614M 400V + EcoZenith i250/i255					
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	138	%			
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	10	kW	Seasonal space heating energy efficiency	η _s	134	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	indoor temperati	ure 20 °C	Declared coefficient of performation part load at indoor temperature 2			
T j = – 7 °C	Pdh	na	kW	T j = − 7 °C	COPd	na	1 -
T j = + 2 °C	Pdh	8,4	kW	T j = +2 °C	COPd	1,31] -
T j = + 7 °C	Pdh	5,8	kW	T j = +7 °C	COPd	2,92	-
T j = + 12 °C	Pdh	2,9	kW	T j = +12 °C	COPd	5,05	-
T j = bivalent temperature	Pdh	8,5	kW	T j = bivalent temperature	COPd	1,31	-
T j = operation limit temperature	Pdh	8,5	kW	T j = operation limit temperature	COPd	1,31	-
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}	2	°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 activ	ve mode		Supplementary heater			
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	1,0	kW
Thermostat-off mode	P _{TO}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items		,					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	3701	kWh	flow rate, outdoor heat exchanger			-,
For heat pump combination hea	ater:						
Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	η_{wh}	67	%
Daily electricity consumption	Qelec	6,958	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1531	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it n hat the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a sei	vice of that type	e. It is of
Contact details C	CTC AB, Näsväg	gen 8, SE-341 34 L		•		F0076	231218

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614M	CTC EcoAir 614M 400V + EcoZenith i250/i255					
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	190	%			
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	10	kW	Seasonal space heating energy efficiency	η _s	186	%
Declared capacity for heating fo and outdoor temperature T j	or part load at i	ndoor temperati	ure 20 °C	Declared coefficient of performat part load at indoor temperature			
T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na	- 1
T j = + 2 °C	Pdh	9,1	kW	T j = +2 °C	COPd	1,98] -
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	4,31	- 1
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,26	-
T j = bivalent temperature	Pdh	9,1	kW	T j = bivalent temperature	COPd	1,98	-
T j = operation limit temperature	Pdh	9,1	kW	T j = operation limit temperature	COPd	1,98	-
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}	2	°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	ther than activ	e mode		Supplementary heater			-
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items				1			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	2682	kWh	flow rate, outdoor heat exchanger			
For heat pump combination hea	ater:						
Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	η_{wh}	67	%
Daily electricity consumption	Qelec	6,958	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1531	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m hat the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a ser	vice of that type	e. It is of
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Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 614N			
Air-to-water heat pump:	Yes	Energy efficiency class:	A+	-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
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	8	kW	Seasonal space heating energy efficiency	η _s	123	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor temperati	ure 20 °C	Declared coefficient of performan part load at indoor temperature 2			
T j = – 7 °C	Pdh	6,4	kW	T j = – 7 °C	COPd	1,59	-
T j = + 2 °C	Pdh	4,0	kW	T j = +2 °C	COPd	3,38	- 1
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	4,25	- 1
T j = + 12 °C	Pdh	2,7	kW	T j = +12 °C	COPd	5,02	-
T j = bivalent temperature	Pdh	6,9	kW	T j = bivalent temperature	COPd	1,24	-
T j = operation limit temperature	Pdh	6,9	kW	T j = operation limit temperature	COPd	1,24	-
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}	-10	°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	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than active	e mode		Supplementary heater			
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	4973	kWh	flow rate, outdoor heat exchanger			-,
For heat pump combination heat	ater:						
Declared load profile	L	Efficiency class	В	Water heating energy efficiency	η_{wh}	53	%
Daily electricity consumption	Qelec	8,570	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1885	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resell t's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	er offering a sei	vice of that type	e. It is of
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Information for heat pump space heaters and heat pump combination heaters **Average climate and Low temperature**

CTC AB Ljungby



Model(s):	CTC EcoAir 614M 400V + EcoZenith i250/i255							
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-				
Water-to-water heat pump:	No	Controller class:	VI	-				
Brine-to-water heat pump:	No	Controller contribution:	4	%				
Low-temperature heat pump:	No	Package efficiency:	168	%				
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++	-				
Heat pump combination heater:	Yes							

ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	η _s	164	%
Declared capacity for heating for and outdoor temperature T j	or part load at in	door temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature	-		
T j = − 7 °C	Pdh	6,5	kW	T j = − 7 °C	COPd	2,40	- [
T j = + 2 °C	Pdh	4,0	kW	T j = +2 °C	COPd	4,44	-
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	5,35	-
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,18	-
T j = bivalent temperature	Pdh	7,3	kW	T j = bivalent temperature	COPd	1,86	-
T j = operation limit temperature	Pdh	7,3	kW	T j = operation limit temperature	COPd	1,86	-
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}	-10	°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 of	other than active	mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items		I I I					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	3710	kWh	flow rate, outdoor heat exchanger		110	1113/11
For heat pump combination he	ater:	••		•••			•
Declared load profile	L	Efficiency class	В	Water heating energy efficiency	η_{wh}	53	%
Daily electricity consumption	Qelec	8,570	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1885	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation en nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a ser	vice of that type	e. It is of
Contact details	CTC AB, Näsväge	n 8, SE-341 34 l	jungby Tel +	46 372 88000 www.ctc.se		F0076	231218

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614N	CTC EcoAir 614M 400V + EcoZenith i250/i255					
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VI	-			
Brine-to-water heat pump:	No	Controller contribution:	4	%			
Low-temperature heat pump:	No	Package efficiency:	97	%			
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	11	kW	Seasonal space heating energy efficiency	η _s	93	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperati	ure 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = – 7 °C	Pdh	5,5	kW	T j = – 7 °C	COPd	1,96	-
T j = + 2 °C	Pdh	3,7	kW	T j = +2 °C	COPd	3,90	-
T j = + 7 °C	Pdh	2,4	kW	T j = +7 °C	COPd	4,89	-
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,77	-
T j = bivalent temperature	Pdh	6,4	kW	T j = bivalent temperature	COPd	1,38	-
T j = operation limit temperature	Pdh	2,1	kW	T j = operation limit temperature	COPd	1,01	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	5,6	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,18	-
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	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than activ	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	8,9	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items	-						
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	11331	kWh	flow rate, outdoor heat exchanger			-,
For heat pump combination he	ater:						
Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	η_{wh}	47	%
Daily electricity consumption	Qelec	9,856	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2168	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a sei	vice of that type	e. It is of
Contact details (CTC AB, Näsväg	en 8, SE-341 34 L	jungby Tel +	46 372 88000 www.ctc.se		F0076	231218

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614M 400V + EcoZenith i250/i255					
Air-to-water heat pump:	Yes	Energy efficiency class:		-		
Water-to-water heat pump:	Νο	Controller class:	VI	-		
Brine-to-water heat pump:	No	Controller contribution:	4	%		
Low-temperature heat pump:	No	Package efficiency:	132	%		
Equipped with a supplementary heater:	Yes	Package efficiency class:		-		
Heat pump combination heater:	Yes					

Rated heat output (*)							-
	Prated	11	kW	Seasonal space heating energy efficiency	η _s	128	%
Declared capacity for heating for and outdoor temperature T j	r part load at i	ndoor temperati	ure 20 °C	Declared coefficient of performan part load at indoor temperature 2	•		
T j = – 7 °C	Pdh	6,3	kW	T j = – 7 °C	COPd	2,64	1 -
T j = + 2 °C	Pdh	4,2	kW	T j = +2 °C	COPd	4,74	- [
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	5,82	-
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,07	-
T j = bivalent temperature	Pdh	7,6	kW	T j = bivalent temperature	COPd	1,82	-
T j = operation limit temperature	Pdh	4,6	kW	T j = operation limit temperature	COPd	1,43	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	6,9	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,48	-
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	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes ot	her than activ	ve mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	6,4	kW
Thermostat-off mode	P _{TO}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items		,					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/
Sound power level, indoors/ outdoors	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/
Annual energy consumption	Q _{HE}	8306	kWh	flow rate, outdoor heat exchanger			-,
For heat pump combination heat	ter:						
Declared load profile	L	Efficiency class	NA	Water heating energy efficiency	η_{wh}	47	%
Daily electricity consumption	Q _{elec}	9,856	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	NA	kWł
Annual electricity consumption	AEC	2168	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	's life cycle, it m hat the product	at a recycling station or with the installation eng ust be sent correctly to a waste station or resell t's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	er offering a ser	vice of that type	e. It is of
Contact details CT	ГС AB, Näsväg	en 8, SE-341 34 L		•		F0076	23121

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614M	400V + EcoZenith i555		
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	Νο	Controller class:	VI	-
Brine-to-water heat pump:	Νο	Controller contribution:	4	%
Low-temperature heat pump:	Νο	Package efficiency:	141	%
Equipped with a supplementary heater:	Yes	Package efficiency class:		-
Heat pump combination heater:	Yes			

Thermostat-off mode P TO 0,014 kW Standby mode P 58 0,014 kW Crankcase heater mode P CK 0,000 kW Other items Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3/s Sound power level, indoors/ L WA na/52 dB For water/brine-to-water heat pumps: Rated air flow rate, outdoors - na m3/s Sound power level, indoors/ L WA na/52 dB For water/brine-to-water heat pumps: Rated brine or water - na m3/s For heat pump combination heater: Declared load profile XL Efficiency class NA Water heating energy efficiency nwh 101 % Daily electricity consumption Qelec 8,129 kWh Annual fuel consumption Qfuel NA KWH Annual electricity AEC 1788 kWh Annual fuel consumption AFC NA end of the product's life cycling station or with the installation engineer for correct wase management. At end of the product's life cycling station or with the installation engineer offering a sotice of that type colice of that typerice of that as bestoor or senelice offeri	Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
and outdoor temperature T jif j = 7 °CPdhnaif j = 7 °CPdhnaif j = 7 °CPdhnaif j = 7 °CPdh6,0kWT j = -7 °CCOPdif j = +12 °CPdh6,0kWT j = +7 °CCOPdif j = +12 °CPdh2,9kWT j = +12 °CCOPdif j = bialent temperaturePdhPdh9,0kWt j = bialent temperatureCOPdif j = bialent temperaturePdhPdh9,0kWt j = operation limitCOPdt j = coperation limitPdhPdh9,0kWt j = -15 °C (if TOL < -20 °C)PdhnakWt j = -15 °C (if TOL < -20 °C)PdhnakWt j = -15 °C (if TOL < -20 °C)PdhnakWt j = -15 °C (if TOL < -20 °C)PdhnakWt j = -15 °C (if TOL < -20 °C)PdhnakWt j = -15 °C (if TOL < -20 °C)Pasivalent temperatureT biv2°CCycling interval capacity for heatingP cychnakWCapacity control0,014KWP cychcate d art flow rate, outdoors-2apacity controlVariableSupplementary heater contanton heaterCapacity controlVariableSund power level, indoors/ L wA1,722chanual energy cons	Rated heat output (*)	Prated	10	kW		η _s	137	%
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		or part load at i	ndoor temperati	ure 20 °C				
T j = + 7 °CPdh6,0kWT j = + 7 °CCOPd2,97-T j = + 12 °CPdh2,9kWT j = + 12 °CCOPd4,99-T j = bivalent temperaturePdh9,0kWT j = bivalent temperatureCOPd1,37-T j = operation limitPdh9,0kWT j = operation limitCOPd1,37-For air-to-water heat pumps:PdhnakWFor air-to-water heat pumps:COPdna-For air-to-water heat pumps:PdhnakWFor air-to-water heat pumps:COPdna-Bivalent temperatureT biv2°CCoperation limit temperatureTol2°CCycling interval capacity for heatingP cychnakWCycling interval efficiencyCOPcycna-Heating water operating limitWTOL55°C°C°C°C°COperation limit temperatureP orr0,014kWSupplementary heaterRate heat output (*)P sup0,0kWType of energy inputElectricFor air-to-water heat pumps:nam3/4Sound power level, indoors/L wAna/52dBMWhFor air-to-water heat pumps:nam3/4Capacity controlVariableSol14KWhPoily fuel consumptionnam3/4Daily electricity consumptionQelec8,129kWhDaily fuel consumptionAfuelNADeclared load profileXL	Г ј = — 7 °С	Pdh	na	kW	T j = – 7 °C	COPd	na	1 -
T j = +12 °CPdh2,9kWT j = +12 °C $COPd$ 4,99T j = bivalent temperaturePdh9,0kWT j = bivalent temperature $COPd$ 1,37T j = operation limit temperaturePdh9,0kWT j = operation limit temperature $COPd$ 1,37F or air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	T j = + 2 °C	Pdh	8,9	kW	T j = +2 °C	COPd	1,37] -
Tj = bivalent temperature Pdh $9,0$ KW Tj = bivalent temperature $COPd$ $1,37$.T j = operation limit emperature Pdh $9,0$ kW TT j = operation limit temperature $COPd$ $1,37$.or air-to-water heat pumps: r j = -15 °C (if TOL < -20 °C)	Г ј = + 7 °С	Pdh	6,0	kW	T j = +7 °C	COPd	2,97	-
r_j = operation limit emperature Pdh $9,0$ kWT_j = operation limit temperature $COPd$ $1,37$ $-$ or air-to-water heat pumps: r j = -15 °C (if TOL < -20 °C)	Г ј = + 12 °С	Pdh	2,9	kW	T j = +12 °C	COPd	4,99	-
emperaturePan9,0KWtemperatureCOPa1,37ior air-to-water heat pumps: i j = -15 °C (if TOL < -20 °C)	ī j = bivalent temperature	Pdh	9,0	kW	T j = bivalent temperature	COPd	1,37	-
r j = -15 °C (if TOL < -20 °C)PannaKWT j = -15 °C (if TOL < -20 °C)CUPdnaSivalent temperature T_{biv} 2°C°CFor air-to-water heat pumps: Operation limit temperature TOL 2°CCycling interval capacity for neating P_{cych} nakWCycling interval efficiency $COPcyc$ na-Degradation co-efficient Cdh $0,99$ Heating water operating limit temperature $WTOL$ 55°CPower consumption in modes other than active mode P_{ors} $0,014$ kW KWSupplementary heater Rated heat output (*) P_{Sup} $0,0$ kW Themode P_{ors} $0,014$ kW Type of energy input $Electric$ $Electric$ Sound power level, indoors/ butdoors L_{WA} $na/52$ dB WWh Type of energy input $Electric$ Sound power level, indoors/ butdoors L_{WA} $na/52$ dB WWh P_{ort} na $m3/4$ Capacity controlVariable $Variable$ For air-to-water heat pumps: Rated brine or water rlow rate, outdoor heat exchanger- na $m3/4$ Declared load profileXLEfficiency classNAWater heating energy efficiency $na/4$ Daily electricity consumption consumptionQelec $8,129$ kWhAnnual fuel consumption Q_{fuel} NASpecific precautions and end of rest information:The packaging must be deposited at a recycling stati	• •	Pdh	9,0	kW		COPd	1,37	-
Bivalent temperature I_{biv} Z C_{C} Operation limit temperature IOL Z C_{C} Cycling interval capacity for heating P_{cych} na KW Operation limit temperature IOL Z C_{C} Degradation co-efficient Cdh $0,99$ -Heating water operating limit wTOL $WTOL$ 55 C_{C} Power consumption in modes other than active mode $0,014$ kW KW Heating water operating limit wTOL $WTOL$ 55 C_{C} Power consumption in modes other than active mode $0,014$ kW KW Supplementary heaterSupplementary heaterSupplementary heaterPower consumption one P_{orr} $0,014$ kW KW Type of energy inputElectricCrankcase heater mode P_{cx} $0,000$ kW KW Type of energy inputElectricCapacity controlVariableFor air-to-water heat pumps: purps: Rated air flow rate, outdoors-2350 $m3/a$ Sound power level, indoors/ butdoors L_{WA} $na/52$ dB dB MWh dB ma/a For heat pump combination heater:Efficiency classNAWater heating energy efficiency n_{wh} 101 %Daily electricity consumptionQelec $8,129$ kWhAnnual fuel consumption AFC NA G_{J} 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 <br< td=""><td></td><td>Pdh</td><td>na</td><td>kW</td><td></td><td>COPd</td><td>na</td><td>-</td></br<>		Pdh	na	kW		COPd	na	-
neating P _{cych} na kW Cycing interval efficiency COPcyc na - Degradation co-efficient Cdh 0,99 - Heating water operating limit WTOL 55 *C Power consumption in modes other than active mode 0,014 kW Supplementary heater Supplementary heater Rated heat output (*) Psup 0,0 kW Off mode P orr 0,014 kW Type of energy input Electric Electric Standby mode P sis 0,014 kW Type of energy input Electric m3/i Crankcase heater mode P cx 0,000 kW For air-to-water heat pumps: Rated air flow rate, outdoors 2350 m3/i Capacity control Variable For air-to-water heat pumps: Rated brine or water flow rate, outdoors 2350 m3/i Capacity control L wA na/52 dB Mare heating energy na m3/i Capacity control L wA na/52 dB KWh Stated brine or water flow rate, outdoors na m3/i Capacity control L wA na/52 dB	Bivalent temperature	T _{biv}	2	°C		TOL	2	°C
Degradation co-efficient Cdh 0,99 - temperature W/OL 55 *C Power consumption in modes other than active mode Off mode Porre 0,014 kW Supplementary heater Off mode Porre 0,014 kW Type of energy input Electric Standby mode Psa 0,014 kW Type of energy input Electric Crankcase heater mode Pcx 0,000 kW Type of energy input Electric Capacity control Variable For air-to-water heat pumps: Rated brine or water na m3/. Sound power level, indoors/ L wA na/52 dB dB maket brine or water na m3/. For heat pump combination heater: Efficiency NA Mater heating energy na m3/. Declared load profile XL Efficiency NA Efficiency NA efficiency Na kW Daily electricity consumption Qelec 8,129 kWh Annual fuel consumption Qfuel NA kW Specific precautions and end of life information: The packa		P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	
Off mode P orf 0,014 kW Rated heat output (*) P sup 0,0 kW Thermostat-off mode P ro 0,014 kW Type of energy input Electric Standby mode P ss 0,014 kW Type of energy input Electric Crankcase heater mode P cx 0,000 kW Type of energy input Electric Other items Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors 2350 m3/4 Sound power level, indoors/ L wA na/52 dB For water-/brine-to-water heat pumps: Rated brine or water na m3/4 Sound power level, indoors/ L wA na/52 dB ma/4 ma/52 ma Sound power level, indoors/ L wA na/52 dB ma/4 ma/4 ma/4 Sound power level, indoors/ L wA na/52 dB ma/4 ma/4 ma/4 Sound power level, indoors/ L wA fals kWh ma/4 ma/4 ma/4 Sound power level, indoors/ L wA fals kWh filow rate, outdoor heat	Degradation co-efficient	Cdh	0,99	-		WTOL	55	°C
Thermostat-off mode P TO 0,014 kW Standby mode P SB 0,014 kW Crankcase heater mode P CK 0,000 kW Crankcase heater mode P CK 0,000 kW Dther items - - - Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3/s Sound power level, indoors/ L WA na/52 dB - - na m3/s Sound power level, indoors/ L WA na/52 dB - - na m3/s Annual energy consumption Q HE 3618 kWh - - na m3/s For heat pump combination heater: - - na m3/s - - na m3/s Declared load profile XL Efficiency NA Water heating energy - na m3/s Daily electricity consumption Qelec 8,129 kWh Annual fuel consumption Qfuel NA KWh Annual electricity AEC	Power consumption in modes o	other than activ	re mode		Supplementary heater			-
Standby mode P sB 0,014 kW Type of energy input Electric Crankcase heater mode P cx 0,000 kW Type of energy input Electric Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3/s Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - na m3/s Sound power level, indoors/ butdoors L WA na/52 dB B For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - na m3/s For heat pump combination heater: Efficiency NA Water heating energy efficiency nwh 101 % Daily electricity consumption Qelec 8,129 kWh Annual fuel consumption Qfuel NA KWH Annual electricity AEC 1788 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 end of the product's life cycle, it must be sent correctly to a waste station or seglieer offering a service of that type. It	Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Crankcase heater mode P cx 0,000 kW Dther items For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3/s Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3/s Sound power level, indoors/ butdoors L wA na/52 dB Go water-/brine-to-water heat pumps: Rated brine or water - na m3/s Annual energy consumption Q HE 3618 kWh For water-/brine-to-water heat pumps: Rated brine or water - na m3/s For heat pump combination heater: Efficiency class NA Water heating energy efficiency nwh 101 % Daily electricity consumption Qelec 8,129 kWh Daily fuel consumption Qfuel NA kWH Annual electricity consumption AEC 1788 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 end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product'	Thermostat-off mode	Р _{то}	0,014	kW				
Other items Capacity control Variable Sound power level, indoors/ L wa Dutdoors L wa Annual energy consumption Q HE 3618 kWh For water /brine-to-water heat pumps: na Providoors Annual energy consumption Q HE 3618 Sound power level, indoors/ L wa Annual energy consumption Q HE Sound power level, indoors Annual energy consumption Q HE 3618 KWh Rated air flow rate, outdoor heat exchanger For heat pump combination heater: Efficiency Declared load profile XL Efficiency NA class NA Daily electricity consumption Qelec 8,129 kWh Annual electricity AEC Consumption AFC The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed or Disposi	Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors 2350 m3/A Sound power level, indoors/ butdoors L WA na/52 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat - na m3/A Annual energy consumption Q HE 3618 kWh For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat - na m3/A For heat pump combination heater: Efficiency class NA Water heating energy efficiency nwh 101 % Daily electricity consumption Qelec 8,129 kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC 1788 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. Att end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of Disposing of the product as household waste is not permitted.	Crankcase heater mode	Р _{СК}	0,000	kW				
Apacity control Variable Rated air flow rate, outdoors - 2350 m3/A Boundoors L WA na/52 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - na m3/A Annual energy consumption Q HE 3618 kWh For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - na m3/A Boot heat pump combination heater: Efficiency NA Water heating energy nwh 101 % Daily electricity consumption Qelec 8,129 kWh Daily fuel consumption Qfuel NA kWH Annual electricity AEC 1788 kWh Annual fuel consumption AFC NA GJ Specific precautions and end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed or Disposing of the product as household waste is not permitted.	Other items							
Dutdoors L wa na/52 dB pumps: Rated brine or water Annual energy consumption Q HE 3618 kWh pumps: Rated brine or water na m3/4 For heat pump combination heater: Declared load profile XL Efficiency class NA Water heating energy ficiency nwh 101 % Daily electricity consumption Qelec 8,129 kWh Daily fuel consumption Qfuel NA kWh Annual electricity AEC 1788 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 product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed or Disposing of the product as household waste is not permitted.	Capacity control		Variable			-	2350	m3/I
Annual energy consumption Q _{HE} 3618 kWh Tow rate, outdoor heat exchanger For heat pump combination heater: Efficiency NA Water heating energy η_{wh} 101 % Declared load profile XL Efficiency NA efficiency η_{wh} 101 % Daily electricity consumption Qelec 8,129 kWh Daily fuel consumption Qfuel NA kWh Annual electricity AEC 1788 kWh Annual fuel consumption AFC NA GJ Specific precautions and end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed or Disposing of the product as household waste is not permitted.		L _{WA}	na/52	dB	pumps: Rated brine or water	-	na	m3/I
Declared load profileXLEfficiency classNAWater heating energy efficiency η_{wh} 101%Daily electricity consumptionQelec8,129kWhDaily fuel consumptionQfuelNAkWhAnnual electricity consumptionAEC1788kWhAnnual fuel consumptionAFCNAGJSpecific 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 great importance that the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of Disposing of the product as household waste is not permitted.	Annual energy consumption	Q _{HE}	3618	kWh				-,
Declared load profile XL class NA efficiency The paily fuel consumption Qfuel NA kWh Daily electricity consumption Qelec 8,129 kWh Daily fuel consumption Qfuel NA kWh Annual electricity AEC 1788 kWh Annual fuel consumption AFC NA GJ Specific precautions and end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed or Disposing of the product as household waste is not permitted.	or heat pump combination he	ater:	· ·		· · · · · · · · · · · · · · · · · · ·			•
Annual electricity consumption AEC 1788 kWh Annual fuel consumption AFC NA GJ The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of Disposing of the product as household waste is not permitted.	Declared load profile	XL	-	NA	• •	η_{wh}	101	%
AEC1788KWnAnnual fuel consumptionAFCNAGJSpecific 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 end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of Disposing of the product as household waste is not permitted.	Daily electricity consumption	Qelec	8,129	kWh	Daily fuel consumption	Qfuel	NA	kWł
Specific precautions and endend of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of Disposing of the product as household waste is not permitted.		AEC	1788	kWh	Annual fuel consumption	AFC	NA	GJ
	pecific precautions and end		end of the product great importance t	t's life cycle, it m hat the product	nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec	ler offering a ser	vice of that type	e. It is of
	Contact detailsC	CTC AB, Näsväg			•		F0076	23121

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614N	1 400V + EcoZenith i555			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	189	%	
Equipped with a supplementary heater:	Yes	Package efficiency class:		-	
Heat nump combination bostor	Voc				

Heat pump combination heater: Yes

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η _s	185	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = − 7 °C	Pdh	na	kW	T j = − 7 °C	COPd	na	1 -
T j = + 2 °C	Pdh	9,2	kW	T j = +2 °C	COPd	1,98	- [
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	4,28	
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,20	-
T j = bivalent temperature	Pdh	9,2	kW	T j = bivalent temperature	COPd	1,98	-
T j = operation limit temperature	Pdh	9,2	kW	T j = operation limit temperature	COPd	1,98	-
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}	2	°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	65	°C
Power consumption in modes o	other than active	e mode		Supplementary heater			-
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors/	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	2704	kWh	flow rate, outdoor heat exchanger			
For heat pump combination hea	ater:						
Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	Qelec	8,129	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1788	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a ser	vice of that type	e. It is of
Contact details C	CTC AB, Näsväge	en 8, SE-341 34 L	jungby Tel +	46 372 88000 www.ctc.se		F0076	231218

Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature

CTC AB Ljungby



Model(s):	CTC EcoAir 614N	1 400V + EcoZenith i555		
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-
Water-to-water heat pump:	Νο	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	140	%
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	8	kW	Seasonal space heating energy efficiency	η _s	136	%
Declared capacity for heating for and outdoor temperature T j	or part load at ii	ndoor temperati	ure 20 °C	Declared coefficient of performa part load at indoor temperature	-		
T j = – 7 °C	Pdh	6,3	kW	T j = – 7 °C	COPd	1,77] -
T j = + 2 °C	Pdh	3,8	kW	T j = +2 °C	COPd	3,60	- 1
T j = + 7 °C	Pdh	2,5	kW	T j = +7 °C	COPd	4,81	
T j = + 12 °C	Pdh	2,9	kW	T j = +12 °C	COPd	6,28	-
T j = bivalent temperature	Pdh	6,9	kW	T j = bivalent temperature	COPd	1,32	-
T j = operation limit temperature	Pdh	6,9	kW	T j = operation limit temperature	COPd	1,32	-
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}	-10	°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 of	other than activ	e mode		Supplementary heater			
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{ск}	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/52	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	4534	kWh	flow rate, outdoor heat exchanger			
For heat pump combination he	ater:						
Declared load profile	XL	Efficiency class	В	Water heating energy efficiency	η_{wh}	75	%
Daily electricity consumption	Qelec	10,807	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2378	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it n hat the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a ser	vice of that type	e. It is of
Contact details (CTC AB, Näsväge	en 8, SE-341 34 L	jungby Tel +	46 372 88000 www.ctc.se		F0076	231218

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614N	1 400V + EcoZenith i555		
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	167	%
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	8	kW	Seasonal space heating energy efficiency	η _s	163	%
Declared capacity for heating fo and outdoor temperature T j	r part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performat part load at indoor temperature			
T j = – 7 °C	Pdh	6,7	kW	T j = – 7 °C	COPd	2,42] -
T j = + 2 °C	Pdh	4,0	kW	T j = +2 °C	COPd	4,41	- [
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	5,31	-
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,11	-
T j = bivalent temperature	Pdh	7,5	kW	T j = bivalent temperature	COPd	1,88	-
T j = operation limit temperature	Pdh	7,5	kW	T j = operation limit temperature	COPd	1,88	-
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}	-10	°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 of	ther than activ	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Crankcase heater mode	Ρ _{CK}	0,000	kW				
Other items		,					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/
Sound power level, indoors/	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/
Annual energy consumption	Q _{HE}	3726	kWh	flow rate, outdoor heat exchanger			
For heat pump combination hea	iter:						
Declared load profile	XL	Efficiency class	В	Water heating energy efficiency	η_{wh}	75	%
Daily electricity consumption	Qelec	10,807	kWh	Daily fuel consumption	Qfuel	NA	kW
Annual electricity consumption	AEC	2378	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	t's life cycle, it m that the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a ser	vice of that type	e. It is of

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

CTC AB	
Ljungby	



Model(s):	CTC EcoAir 614N	1 400V + EcoZenith i555			
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	VI	-	
Brine-to-water heat pump:	No	Controller contribution:	4	%	
Low-temperature heat pump:	No	Package efficiency:	112	%	
Equipped with a supplementary heater:	Yes	Package efficiency class:		-	
Heat pump combination heater:	Yes				

Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature 20 °C and outdoor temperature 20 °C and outdoor temperature 20 °C and outdoor temperature 20 °C part load at indoor temperature 20 °C part load a	Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
and outdoor temperature T jT j = -7 °CPdh6,1kWT j = -7 °CC OPd2,12-T j = +2 °CPdh4,0kWT j = -7 °CC OPd4,06-T j = +7 °CPdh2,5kWT j = +2 °CC OPd4,06-T j = +12 °CPdh3,0kWT j = +12 °CC OPd4,06-T j = operation limitPdh2,4kWT j = bivalent temperatureC OPd1,52-T j = operation limitPdh2,4kWT j = operation limitC OPd1,13-For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)Pdh6,3kWT j = -15 °C (if TOL < -20 °C)C OPd1,31-Bivalent temperatureT biv-11°COperation limit temperatureT oL-22°CCycling interval capacity for heatingP cycbnakWCycling interval efficiencyC OPcycna-Degradation co-efficientCdh0,98ElectricSupplementary heaterSupplementary heaterSupplementary heaterRated heat output (*)P sup8,6kWWType of energy inputElectric-2350m3,7Copacity controlVariableSuplementary heater-nam3,7Sound power level, indoors/ controlL wAna/52dBdBNAWater heating energy efficiencyNa,58%Decla	Rated heat output (*)	Prated	11	kW		η _s	108	%
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		or part load at i	ndoor temperati	ure 20 °C				
Tj = + 7 °CPdh2,5kWTj = + 7 °CCOPd4,95-Tj = + 12 °CPdh3,0kWTj = + 12 °CCOPd6,66-Tj = operation limitPdh7,1kWTj = operation limitCOPd1,52-Tj = operation limitPdh2,4kWTj = operation limitCOPd1,13-For air-to-water heat pumps:Pdh6,3kWFor air-to-water heat pumps:COPd1,31-Tj = -15 °C (if TOL < - 20 °C)	T j = – 7 °C	Pdh	6,1	kW	T j = – 7 °C	COPd	2,12] -
T j = + 12 °CPdh3,0kWT j = +12 °CCOPd6,66T j = bivalent temperaturePdh7,1kWT j = bivalent temperatureCOPd1,52T j = operation limit temperaturePdh2,4kWT j = operation limit temperatureCOPd1,13For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	-	Pdh	4,0	kW	T j = +2 °C	COPd	4,06	-
Tj = bivalent temperaturePdh7,1KWTj = bivalent temperatureCOPd1,52-Tj = operation limit temperaturePdh2,4KWTj = operation limit temperatureCOPd1,13-For air-to-water heat pumps: Tj = -15 °C (if TOL < -20 °C)		Pdh	2,5	kW	T j = +7 °C	COPd	4,95	-
T j = operation limit temperaturePdh2,4kWT j = operation limit temperature $COPd$ 1,13-For air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)	T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,66	-
temperaturePan2,4KWtemperature $CDPa$ 1,13-For air-to-water heat pumps: T] = -15 °C (if TOL < - 20 °C)	T j = bivalent temperature	Pdh	7,1	kW	T j = bivalent temperature	COPd	1,52	-
T j = -15 °C (if TOL < -20 °C)Panb,3KWT j = -15 °C (if TOL < -20 °C)COPa1,51Bivalent temperatureT b_{IV} -11°CFor air-to-water heat pumps: Operation limit temperatureTOL-22°CCycling interval capacity for heating P_{cych} nakWCycling interval efficiencyCOPcycna-Degradation co-efficientCdh0,98-Heating water operating limit temperatureWTOL55°CPower consumption in modes other than active mode0,014 twokWSupplementary heater Rated heat output (*)Psup8,6kWType of energy inputElectricCrankcase heater mode P c_{cx} 0,000 0,000kWType of energy inputElectricCapacity controlVariableFor air-to-water heat pumps: nated air flow rate, outdoors-2350m3,Sound power level, indoors/ outdoorsL wA Manual energy consumption Capacity controlQHE9746kWhFor water-/brine-tw-water heat pumps: Rated air flow rate, outdoors-nam3,Daily electricity consumptionQelec14,672kWhMater heating energy efficiencyNAMater heating energy efficiencyNAKWDaily electricity consumptionQelec14,672kWhAnnual fuel consumptionQfuelNAKWSpecific precautions and end of life information:3228kWhAnnual delectrici/electronic equipment are properly dispostGraven timp energe of that typ		Pdh	2,4	kW		COPd	1,13	-
Bivalent temperature T_{biv} -11 C Operation limit temperature IOL -22 C Cycling interval capacity for heating P_{cych} nakWOperation limit temperature IOL -222 C Degradation co-efficient Cdh 0.98 - C $Cycling interval efficiencyCOPcycna-Power consumption in modes other than active mode0.914kWWWTOL55cOff modeP_{orr}0.014kWWRated heat output (*)Psup8,6kWThermostat-off modeP_{ro}0.014kWType of energy inputElectricElectricCapacity controlVariableVariableFor air-to-water heat pumps:rated air flow rate, outdoors-2350m3/Sound power level, indoors/outdoorsL_{WA}na/52dBdBFor water-/brine-to-water heatpumps: Rated brine or waterflow rate, outdoor heatexchanger-nam3/For heat pump combination heater:CaassNAWater heating energyefficiencyn_{wh}58%Daily electricity consumptionconsumptionAEC3228kWhAnnual fuel consumptionAFCNAGiSpecific precautions and endof life information:AEC3228kWhAnnual fuel consumptionAFCNAGiDaily electricityconsumptionAEC3228kWhAn$		Pdh	6,3	kW		COPd	1,31	-
heating P_{cych} nakwCycling interval efficiencyCOPcycnaDegradation co-efficientCdh0,98-Heating water operating limit temperatureWTOL55*CCPower consumption in modes other than active mode0,014kWSupplementary heater Rated heat output (*)Supplementary heaterSupplementary heaterRated heat output (*)Psup8,6kWThermostat-off mode P_{orr} 0,014kWType of energy inputElectricElectricCrankcase heater mode P_{cx} 0,000kWType of energy inputElectricma/sCapacity controlVariableFor air-to-water heat pumps: nated air flow rate, outdoors2350m3/sSound power level, indoors/ outdoorsL wAna/52dBflow rate, outdoorsnaAnnual energy consumption Q_{HE} 9746kWhWater heating energy efficiencynam3/sDeclared load profileXLEfficiency classNAWater heating energy efficiencyna%Daily electricity consumptionQelec14,672kWhAnnual fuel consumptionQfuelNAkWSpecific precautions and end of the product's fle cycli, it must be sent correct to a wate the stoor or reselier offering as ervice of that type. Its of great importance that the product's flegreat, compreso of and electrical/electronic equipment are properly disposed posting of the product as household waste is not permitted.	Bivalent temperature	T _{biv}	-11	°C		TOL	-22	°C
Degradation co-efficient Can 0,98 - temperature W10L S5 Construction Power consumption in modes other than active mode Off mode Power 0,014 kW Supplementary heater Rated heat output (*) Psup 8,6 kW Thermostat-off mode Pro 0,014 kW Type of energy input Electric Electric Cankcase heater mode Pox 0,000 kW Type of energy input Electric m3/ Capacity control Variable For air-to-water heat pumps: - 2350 m3/ Sound power level, indoors/ L wA na/52 dB Annual energy consumption Q HE 9746 kWh For water-/brine-to-water heat pumps: - na m3/ For heat pump combination heater: Efficiency NA Water heating energy nwh 58 % Daily electricity consumption Qelec 14,672 kWh Annual fuel consumption Qfuel NA KW Specific precautions and end of life information: Statign gmust be deposited at a recycing station or with the installation engineer of correct waste management. At end of the pro		P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Off mode P orf 0,014 kW Rated heat output (*) Psup 8,6 kW Thermostat-off mode P ro 0,014 kW Type of energy input Electric Standby mode P ss 0,014 kW Type of energy input Electric Crankcase heater mode P cx 0,000 kW Type of energy input Electric Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3/ Sound power level, indoors/ outdoors L WA na/52 dB For water-/brine-to-water heat pumps: Rated brine or water - na m3/ Sound power level, indoors/ outdoors L WA na/52 dB For water-/brine-to-water heat pumps: Rated brine or water - na m3/ Sound power level, indoors/ outdoors L WA na/52 dB For water, outdoor heat exchanger - na m3/ Sound power level, indoors/ outdoors L WA State dair flow rate, outdoor heat exchanger - na m3/ Sound power level, indoors/ outdoors L WA State dair flow rate, outdoor heat exchanger -	Degradation co-efficient	Cdh	0,98	-		WTOL	55	°C
Thermostat-off mode P TO 0,014 kW Standby mode P SB 0,014 kW Crankcase heater mode P CK 0,000 kW Other items - <td>Power consumption in modes of</td> <td>other than activ</td> <td>re mode</td> <td></td> <td>Supplementary heater</td> <td></td> <td></td> <td>_</td>	Power consumption in modes of	other than activ	re mode		Supplementary heater			_
Standby mode P sg 0,014 kW Type of energy input Electric Crankcase heater mode P ck 0,000 kW Type of energy input Electric Other items	Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	8,6	kW
Crankcase heater mode P _{CK} 0,000 kW Other items Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 2350 m3/ Sound power level, indoors/ outdoors L _{WA} na/52 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat - na m3/ Annual energy consumption Q _{HE} 9746 kWh Water heating energy efficiency n m3/ Declared load profile XL Efficiency class NA Water heating energy efficiency n_wh 58 % Daily electricity consumption Qelec 14,672 kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption AEC 3228 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 end of the product's life cycle, it must be sent correctly to a wast estation or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product a household waste is not permitted.	Thermostat-off mode	P _{TO}	0,014	kW				
Other items Capacity control Variable Sound power level, indoors/ outdoors L wA na/52 dB Annual energy consumption Q HE 9746 kWh For water-/brine-to-water heat pumps: Rated air flow rate, outdoors - flow rate, outdoor heat - na m3/ For heat pump combination heater: 9746 kWh Water heating energy efficiency nu 58 % Daily electricity consumption Qelec 14,672 kWh Wh Paily fuel consumption Qfuel NA kW Annual electricity consumption AEC 3228 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 end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Other items Capacity control Variable Sound power level, indoors/ outdoors L wa na/52 dB Annual energy consumption Q HE 9746 kWh For water-/brine-to-water heat pumps: Rated brine or water - na m3/ For heat pump combination heater: - na m3/ Declared load profile XL Efficiency class NA Water heating energy efficiency n_wh 58 % Daily electricity consumption Qelec 14,672 kWh Daily fuel consumption Qfuel NA KW Specific precautions and end of life information: AEC 3228 kWh Annual best correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product's not permitted.	Crankcase heater mode	Р _{СК}	0,000	kW				
Capacity control Variable Rated air flow rate, outdoors 2350 m3/ Sound power level, indoors/ outdoors L _{WA} na/52 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger na m3/ Annual energy consumption Q _{HE} 9746 kWh Reted air flow rate, outdoor heat exchanger na m3/ For heat pump combination heater: Efficiency class NA Water heating energy efficiency nwh 58 % Daily electricity consumption Qelec 14,672 kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption AEC 3228 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 end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Other items							
outdoorsL WAna/52dB B pumps: Rated brine or water flow rate, outdoor heat exchangernam3/Annual energy consumptionQ HE9746kWhflow rate, outdoor heat exchangernam3/For heat pump combination heater:Efficiency classNAWater heating energy efficiencynwh58%Declared load profileXLEfficiency classNADaily fuel consumptionQfuelNAkWhDaily electricity consumptionQelec14,672kWhDaily fuel consumptionQfuelNAkWAnnual electricity consumptionAEC3228kWhAnnual fuel consumption or with the installation engineer for correct waste management. At end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Capacity control		Variable			-	2350	m3/I
Annual energy consumption Q _{HE} 9746 kWh How rate, outdoor neat exchanger For heat pump combination heater: Peclared load profile XL Efficiency class NA Water heating energy efficiency η_{wh} 58 % Daily electricity consumption Qelec 14,672 kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption Qelec 3228 kWh Annual fuel consumption AFC NA GJ Specific precautions and end of the product's life cycle, it must be deposited at a recycling station or with the installation engineer for correct waste management. At end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.		L _{WA}	na/52	dB	pumps: Rated brine or water	-	na	m3/
For heat pump combination heater: Efficiency class NA Water heating energy efficiency η_{wh} 58 % Daily electricity consumption Qelec 14,672 kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption AEC 3228 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 product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposing of the product as household waste is not permitted.	Annual energy consumption	Q _{HE}	9746	kWh				
Declared load profile XL class NA efficiency I wh 58 % Daily electricity consumption Qelec 14,672 kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption AEC 3228 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 end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	For heat pump combination he	ater:						
Annual electricity consumption AEC 3228 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 end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Declared load profile	XL	-	NA		η_{wh}	58	%
Consumption AEC 3228 KWn 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 great importance that the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.	Daily electricity consumption	Qelec	14,672	kWh	Daily fuel consumption	Qfuel	NA	kWl
Specific precautions and endend of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed Disposing of the product as household waste is not permitted.		AEC						GJ
Contact details CTC AB, Näsvägen 8, SE-341 34 Ljungby Tel +46 372 88000 www.ctc.se F0076 2312			end of the product great importance t	t's life cycle, it m hat the product	nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec	ler offering a ser	vice of that type	e. It is of
	Contact details	CTC AB, Näsväg	en 8, SE-341 34 L	jungby Tel +	-46 372 88000 www.ctc.se		F0076	23121

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

CTC AB Ljungby



Model(s):	CTC EcoAir 614N	1 400V + EcoZenith i555		
Air-to-water heat pump:	Yes	Energy efficiency class:		-
Water-to-water heat pump:	No	Controller class:	VI	-
Brine-to-water heat pump:	No	Controller contribution:	4	%
Low-temperature heat pump:	No	Package efficiency:	132	%
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	11	kW	Seasonal space heating energy efficiency	η _s	128	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperati	ure 20 °C	Declared coefficient of performation part load at indoor temperature 2	•		
T j = – 7 °C	Pdh	6,4	kW	T j = – 7 °C	COPd	2,65] -
T j = + 2 °C	Pdh	4,3	kW	T j = +2 °C	COPd	4,72	- 1
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	5,77	-
T j = + 12 °C	Pdh	3,0	kW	T j = +12 °C	COPd	6,00	-
T j = bivalent temperature	Pdh	7,8	kW	T j = bivalent temperature	COPd	1,84	-
T j = operation limit temperature	Pdh	4,8	kW	T j = operation limit temperature	COPd	1,48	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	7,2	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,51	-
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	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	ther than activ	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	6,2	kW
Thermostat-off mode	P _{TO}	0,014	kW				
Standby mode	P _{SB}	0,014	kW	Type of energy input	Electric		
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control	Variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2350	m3/h
Sound power level, indoors/	L _{WA}	na/51	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/ł
Annual energy consumption	Q _{HE}	8271	kWh	flow rate, outdoor heat exchanger			-,
For heat pump combination hea	ater:						
Declared load profile	XL	Efficiency class	NA	Water heating energy efficiency	η_{wh}	58	%
Daily electricity consumption	Q_{elec}	14,672	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	NA	kWh
Annual electricity consumption	AEC	3228	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product great importance t	's life cycle, it m hat the product	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel t's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a ser	vice of that type	e. It is of
Contact details C	TC AB, Näsväg	en 8, SE-341 34 L		•		F0076	23121