Information for heat pump space heaters and heat pump combination heaters Warm climate and Medium temperature (55)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + CTC EcoZenith i350/ i350F						
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:	187	%			
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	13	kW	Seasonal space heating energy efficiency	η _s	183	%
Declared capacity for heating fo and outdoor temperature T j	or part load at i	ndoor temperat	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	- 1
T j = + 2 °C	Pdh	14,0	kW	T j = +2 °C	COPd	2,15] -
T j = + 7 °C	Pdh	8,6	kW	T j = +7 °C	COPd	4,13	
T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	6,07	-
T j = bivalent temperature	Pdh	14,0	kW	T j = bivalent temperature	COPd	2,15	-
T j = operation limit temperature	Pdh	14,0	kW	T j = operation limit temperature	COPd	2,15	-
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 activ	re <u>mode</u>		Supplementary heater			-
Off mode	P _{OFF}	0,012	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P _{TO}	0,012	kW				
Standby mode	P _{SB}	0,012	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	-	6200	m3/h
Sound power level, indoors/	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	3746	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}	112	%
Daily electricity consumption	Qelec	6,835	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1504	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produc great importance	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 resel c'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 E	nertech AB_Bc	0x 309 SF-341 26	5 Liungby Tel	+46 372 88000 www.ctc.se			180529

Information for heat pump space heaters and heat pump combination heaters Warm climate and Low temperature (35)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622N	CTC EcoAir 622M + CTC EcoZenith i350/ i350F						
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:	249	%				
Equipped with a supplementary heater:	Yes	Package efficiency class:		-				
Heat pump combination heater:	Yes							

Declared capacity for heating for partand outdoor temperature T jT j = -7 °CT j = + 2 °CT j = + 7 °CT j = + 12 °CT j = bivalent temperatureT j = operation limittemperatureFor air-to-water heat pumps:T j = - 15 °C (if TOL < - 20 °C)Bivalent temperatureTCycling interval capacity forheating	ated load at ind Pdh Pdh Pdh Pdh Pdh Pdh	13 oor temperat 12,9 8,3 5,6 12,9	kW ure 20 °C kW kW kW kW	Seasonal space heating energy efficiency Declared coefficient of performan part load at indoor temperature 2 T j = -7 °C T j = +2 °C T j = +7 °C		tdoor tempe	
and outdoor temperature T jT j = -7 °CT j = + 2 °CT j = + 7 °CT j = + 7 °CT j = + 12 °CF j = bivalent temperatureT j = operation limittemperatureFor air-to-water heat pumps:T j = - 15 °C (if TOL < - 20 °C)	Pdh Pdh Pdh Pdh Pdh	na 12,9 8,3 5,6	kW kW kW	part load at indoor temperature 2 T j = - 7 °C T j = +2 °C	20 °C and out COPd	tdoor tempe	
T j = + 2 °CFT j = + 7 °CFT j = + 7 °CFT j = + 12 °CFT j = bivalent temperatureFT j = operation limit temperatureFFor air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh Pdh Pdh 	12,9 8,3 5,6	kW kW	T j = +2 °C			
T j = + 7 °CFT j = + 12 °CFT j = bivalent temperatureFT j = operation limit temperatureFFor air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh Pdh Pdh	8,3 5,6	kW		COD4	na] - [
T j = + 12 °CFT j = bivalent temperatureFT j = operation limitFtemperatureFFor air-to-water heat pumps:FT j = - 15 °C (if TOL < - 20 °C)	Pdh Pdh	5,6		T i = +7 °C	COPU	3,16	
T j = bivalent temperatureFT j = operation limitFtemperatureFFor air-to-water heat pumps:FT j = -15 °C (if TOL < -20 °C)FBivalent temperatureTCycling interval capacity forPheatingP	Pdh		kW	-	COPd	5,88	-
T j = operation limit temperatureFFor air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	-	12,9		T j = +12 °C	COPd	7,61	-
temperature For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C) F Bivalent temperature T Cycling interval capacity for P heating P	Pdh		kW	T j = bivalent temperature	COPd	3,16	-
T j = -15 °C (if TOL < -20 °C) Bivalent temperature Cycling interval capacity for heating		12,9	kW	T j = operation limit temperature	COPd	3,16	-
Cycling interval capacity for P	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
heating	biv	2	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Degradation co-efficient C	cych	na	kW	Cycling interval efficiency	СОРсус	na	
	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other the	han active r			Supplementary heater	1		-
Off mode P	OFF	0,012	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode P	то	0,012	kW				
Standby mode F	P _{SB}	0,012	kW	Type of energy input		Electric	
Crankcase heater mode F	^р ск	0,000	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	m3/h
Sound power level, indoors/	WA	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption Q	HE	2804	kWh	flow rate, outdoor heat exchanger			
For heat pump combination heater:							
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	η_{wh}	112	%
Daily electricity consumption Q	elec	6,835	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity Annual electricity	AEC	1504	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:	6	end of the produc	ct'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 Enerted		-		's refrigerant, compressor oil and electrical/elec nold waste is not permitted.	•		

Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature (55)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + CTC EcoZenith i350/ i350F						
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-			
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:	152	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:	A+++	-			
Heat pump combination heater:	Yes						

Rated heat output (*)PratedDeclared capacity for heating for part load at in and outdoor temperature T jT j = -7 °CPdhT j = + 2 °CPdhT j = + 2 °CPdhT j = + 7 °CPdhT j = bivalent temperaturePdhT j = operation limit temperaturePdhFor air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)PdhBivalent temperatureT bivCycling interval capacity for heatingP cychDegradation co-efficientCdhPower consumption in modes other than active Off modeP c_KOther itemsP capacity controlSound power level, indoors/ outdoorsL WAAnnual energy consumptionQ HE	9 door temperat 7,5 4,6 4,7 5,6 8,7 8,7 8,7 na -10 na	kW ure 20 °C kW kW kW kW kW kW	Seasonal space heating energy efficiencyDeclared coefficient of performa part load at indoor temperatureT j = $-7 °C$ T j = $+2 °C$ T j = $+7 °C$ T j = $+7 °C$ T j = $+12 °C$ T j = bivalent temperatureT j = operation limit temperatureFor air-to-water heat pumps: T j = $-15 °C$ (if TOL < $-20 °C$)For air-to-water heat pumps:			
and outdoor temperature T jT j = - 7 °C Pdh T j = + 2 °C Pdh T j = + 7 °C Pdh T j = + 12 °C Pdh T j = bivalent temperature Pdh T j = operation limit Pdh temperature Pdh For air-to-water heat pumps: Pdh T j = - 15 °C (if TOL < - 20 °C) Pdh Bivalent temperature T_{biv} Cycling interval capacity for heating P_{cych} Degradation co-efficient Cdh Power consumption in modes other than activeOff mode P_{oFF} Thermostat-off mode P_{oFF} Capacity control $Capacity control$ Sound power level, indoors/ outdoors L_{WA}	7,5 4,6 4,7 5,6 8,7 8,7 na -10	kW kW kW kW kW	part load at indoor temperature 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 < $-20 \degree C$)	20 °C and ou COPd COPd COPd COPd COPd COPd	tdoor tempe 2,41 3,81 4,76 6,15 1,99 1,99	
T j = + 2 °CPdhT j = + 7 °CPdhT j = + 12 °CPdhT j = bivalent temperaturePdhT j = operation limit temperaturePdhFor air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	4,6 4,7 5,6 8,7 8,7 na -10	kW kW kW kW	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)	COPd COPd COPd COPd COPd	3,81 4,76 6,15 1,99 1,99	
T j = + 7 °CPdhT j = + 12 °CPdhT j = bivalent temperaturePdhT j = operation limit temperaturePdhFor air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	4,7 5,6 8,7 8,7 na -10	kW kW kW kW	T j = +7 °C T j = +12 °C T j = bivalent temperature 	COPd COPd COPd COPd	4,76 6,15 1,99 1,99	
T j = + 12 °CPdhT j = bivalent temperaturePdhT j = operation limit temperaturePdhFor air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	5,6 8,7 8,7 na -10	kW KW KW	T j = +12 °C T j = bivalent temperature T j = operation limit temperature For air-to-water heat pumps: 	COPd COPd COPd	6,15 1,99 1,99	
T j = bivalent temperature Pdh T j = operation limit temperature Pdh For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	8,7 8,7 na -10	kW kW kW	T j = bivalent temperature T j = operation limit temperature For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd COPd	1,99 1,99	- - -
T j = operation limit temperature Pdh For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	8,7 na -10	kW kW	T j = operation limit temperature For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,99	-
Pdhtemperature Pdh For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	na -10	kW	temperature For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)			-
T j = - 15 °C (if TOL < - 20 °C)PanBivalent temperature T_{biv} Cycling interval capacity for heating P_{cych} Degradation co-efficient Cdh Power consumption in modes other than active Off mode P_{ofF} Thermostat-off mode P_{TO} Standby mode P_{SB} Crankcase heater mode P_{CK} Other itemsCapacity controlSound power level, indoors/ outdoors L_{WA}	-10		T j = – 15 °C (if TOL < – 20 °C)	COPd	na	
Cycling interval capacity for heating P cych Degradation co-efficient Cdh Power consumption in modes other than active Off mode Off mode P oFF Thermostat-off mode P TO Standby mode P SB Crankcase heater mode P CK Other items Capacity control Sound power level, indoors/ outdoors L WA		°C	For air-to-water heat pumps:			-
heating P cych Degradation co-efficient Cdh Power consumption in modes other than active Off mode Off mode P oFF Thermostat-off mode P TO Standby mode P SB Crankcase heater mode P CK Other items Capacity control Sound power level, indoors/ outdoors L WA	na		Operation limit temperature	TOL	-10	°C
Power consumption in modes other than active Off mode P _{OFF} Thermostat-off mode P _{TO} Standby mode P _{SB} Crankcase heater mode P _{CK} Other items Capacity control Sound power level, indoors/ outdoors L _{WA}		kW	Cycling interval efficiency	СОРсус	na	-
Off mode P OFF Thermostat-off mode P TO Standby mode P SB Crankcase heater mode P CK Other items Capacity control Sound power level, indoors/ outdoors L WA	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Thermostat-off mode P TO Standby mode P SB Crankcase heater mode P CK Other items Capacity control Sound power level, indoors/ L WA	e mode		Supplementary heater			-
Standby mode P_{SB} Crankcase heater mode P_{CK} Other items Capacity control Sound power level, indoors/ outdoors L_{WA}	0,012	kW	Rated heat output (*)	Psup	0,0	kW
Standby mode P_{SB} Crankcase heater mode P_{CK} Other items Capacity control Sound power level, indoors/ outdoors L_{WA}	0,012	kW				
Crankcase heater mode Р ск Other items Capacity control	0,012	kW	Type of energy input		Electric	
Other items Capacity control Sound power level, indoors/ L _{WA}	0,000	kW				
Capacity control Sound power level, indoors/ L _{WA}	0,000		-			
outdoors L _{WA}	Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	m3/h
Annual energy consumption O	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption Q HE	4656	kWh	flow rate, outdoor heat exchanger			
For heat pump combination heater:	· · · · ·		· · · · · · · · · · · · · · · · · · ·		• 	<u></u>
Declared load profile XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	98	%
Daily electricity consumption Qelec	7,816	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity AEC consumption	1720	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:	end of the produc	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 rese 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ller 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 Low temperature (35)**

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622N	oAir 622M + CTC EcoZenith i350/ i350F					
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:	198	%			
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	9	kW	Seasonal space heating energy efficiency	η _s	194	%
Declared capacity for heating fo and outdoor temperature T j	or part load at ii	ndoor temperat	ure 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = – 7 °C	Pdh	7,8	kW	T j = – 7 °C	COPd	3,53	- 1
T j = + 2 °C	Pdh	4,5	kW	T j = +2 °C	COPd	4,97	-
T j = + 7 °C	Pdh	4,8	kW	T j = +7 °C	COPd	5,94	-
T j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	7,35	-
T j = bivalent temperature	Pdh	8,8	kW	T j = bivalent temperature	COPd	3,04	-
T j = operation limit temperature	Pdh	8,8	kW	T j = operation limit temperature	COPd	3,04	-
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 o	other than activ	e mode		Supplementary heater			
Off mode	P _{OFF}	0,012	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P _{TO}	0,012	kW				
Standby mode	P _{SB}	0,012	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	-	6200	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	3567	kWh	flow rate, outdoor heat exchanger			,
For heat pump combination he	ater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	98	%
Daily electricity consumption	Qelec	7,816	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1720	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produc great importance	ct'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	Enertech AB, Bo	x 309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			180529

Information for heat pump space heaters and heat pump combination heaters **Cold climate and Medium temperature (55)**

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + CTC EcoZenith i350/ i350F						
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:	140	%			
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	12	kW	Seasonal space heating energy efficiency	η _s	136	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performat part load at indoor temperature 2			
T j = – 7 °C	Pdh	7,3	kW	T j = – 7 °C	COPd	2,91	-
T j = + 2 °C	Pdh	4,6	kW	T j = +2 °C	COPd	4,53	-
T j = + 7 °C	Pdh	4,8	kW	T j = +7 °C	COPd	5,28	
T j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	6,44	-
T j = bivalent temperature	Pdh	10,9	kW	T j = bivalent temperature	COPd	1,46	-
T j = operation limit temperature	Pdh	4,6	kW	T j = operation limit temperature	COPd	1,51	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	9,6	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,81	-
Bivalent temperature	T _{biv}	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	ther than activ	re mode		Supplementary heater			
Off mode	P _{OFF}	0,012	kW	Rated heat output (*)	Psup	11,5	kW
Thermostat-off mode	P _{TO}	0,012	kW				
Standby mode	P _{SB}	0,012	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	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	8159	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}	82	%
Daily electricity consumption	Qelec	9,257	kWh	Daily fuel consumption	Qfuel	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 resell 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	er offering a sei	vice of that type	e. It is of
Contact details E	nertech AB, Bo	ox 309, SE-341 26	6 Ljungby Tel	+46 372 88000 www.ctc.se			180529

Information for heat pump space heaters and heat pump combination heaters Cold climate and Low temperature (35)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + CTC EcoZenith i350/ i350F						
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:	172	%			
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	13	kW	Seasonal space heating energy efficiency	n _s	168	%
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	7,6	kW	T j = – 7 °C	COPd	3,67	- [
T j = + 2 °C	Pdh	4,7	kW	T j = +2 °C	COPd	5,49	-
T j = + 7 °C	Pdh	4,9	kW	T j = +7 °C	COPd	6,70	-
T j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	7,77	-
T j = bivalent temperature	Pdh	11,4	kW	T j = bivalent temperature	COPd	1,99	-
T j = operation limit temperature	Pdh	4,9	kW	T j = operation limit temperature	COPd	1,99	
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	10,3	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	2,36	-
Bivalent temperature	T _{biv}	-17	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°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	re mode		Supplementary heater			
Off mode	P _{OFF}	0,012	kW	Rated heat output (*)	Psup	12,5	kW
Thermostat-off mode	Р _{то}	0,012	kW				
Standby mode	P _{SB}	0,012	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	CK	0,000					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	7225	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}	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 ser	vice of that type	e. It is of
Contact details E	Enertech AB, Bo	ox 309, SE-341 20	6 Ljungby Tel	+46 372 88000 www.ctc.se			180529

Information for heat pump space heaters and heat pump combination heaters Warm climate and Medium temperature (55)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + 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:	187	%			
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	13	kW	Seasonal space heating energy efficiency	η _s	183	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	cure 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na	- 1
T j = + 2 °C	Pdh	14,0	kW	T j = +2 °C	COPd	2,15] -
T j = + 7 °C	Pdh	8,6	kW	T j = +7 °C	COPd	4,13	-
T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	6,07	-
T j = bivalent temperature	Pdh	14,0	kW	T j = bivalent temperature	COPd	2,15	-
T j = operation limit temperature	Pdh	14,0	kW	T j = operation limit temperature	COPd	2,15	-
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 of	other than activ	e mode		Supplementary heater			
Off mode	P _{OFF}	0,012	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,012	kW				
Standby mode	P _{SB}	0,012	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	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	3746	kWh	flow rate, outdoor heat exchanger			-,
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produc great importance	ct's life cycle, it n that the product	at a recycling station or with the installation enginest 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	Enertech AB, Bo	x 309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			180529

Information for heat pump space heaters and heat pump combination heaters Warm climate and Low temperature (35)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + 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:	249	%			
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	13	kW	Seasonal space heating energy efficiency	n _s	245	%
Declared capacity for heating for and outdoor temperature T j	or part load at i	ndoor temperat	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	- 1
T j = + 2 °C	Pdh	12,9	kW	T j = +2 °C	COPd	3,16	-
T j = + 7 °C	Pdh	8,3	kW	T j = +7 °C	COPd	5,88	-
T j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	7,61	-
T j = bivalent temperature	Pdh	12,9	kW	T j = bivalent temperature	COPd	3,16	-
T j = operation limit temperature	Pdh	12,9	kW	T j = operation limit temperature	COPd	3,16	-
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 of	other than activ	e <u>mode</u>		Supplementary heater			-
Off mode	P _{OFF}	0,012	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	P _{TO}	0,012	kW				
Standby mode	P _{SB}	0,012	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	-	6200	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	2804	kWh	flow rate, outdoor heat exchanger			
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	$\eta_{\rm wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produc 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 ser	vice of that type	. It is of
Contact details	Enertech AB, Bo	x 309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			180529

Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature (55)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + 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						

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	148	%
Declared capacity for heating for a neating	or part load at iı	ndoor temperat	cure 20 °C	Declared coefficient of performat part load at indoor temperature 2			
T j = – 7 °C	Pdh	7,5	kW	T j = – 7 °C	COPd	2,41	1 -
T j = + 2 °C	Pdh	4,6	kW	T j = +2 °C	COPd	3,81	- 1
T j = + 7 °C	Pdh	4,7	kW	T j = +7 °C	COPd	4,76	- 1
T j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	6,15	- 1
T j = bivalent temperature	Pdh	8,7	kW	T j = bivalent temperature	COPd	1,99	-
T j = operation limit temperature	Pdh	8,7	kW	T j = operation limit temperature	COPd	1,99	-
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 <u>mode</u>	r	Supplementary heater			-
Off mode	P _{OFF}	0,012	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,012	kW				
Standby mode	P _{SB}	0,012	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	-	6200	m3/h
Lound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	4656	kWh	flow rate, outdoor heat exchanger			-
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the produc great importance	ct'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
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Information for heat pump space heaters and heat pump combination heaters **Average climate and Low temperature (35)**

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + CTC EcoLogic						
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:	198	%			
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	9	kW	Seasonal space heating energy efficiency	η _s	194	%
Declared capacity for heating for and outdoor temperature T j	or part load at in	door temperat	ure 20 °C	Declared coefficient of performat part load at indoor temperature 2			
T j = – 7 °C	Pdh	7,8	kW	T j = – 7 °C	COPd	3,53	- [
T j = + 2 °C	Pdh	4,5	kW	T j = +2 °C	COPd	4,97	-
T j = + 7 °C	Pdh	4,8	kW	T j = +7 °C	COPd	5,94	-
T j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	7,35	-
T j = bivalent temperature	Pdh	8,8	kW	T j = bivalent temperature	COPd	3,04	-
T j = operation limit temperature	Pdh	8,8	kW	T j = operation limit temperature	COPd	3,04	-
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}	0,012	kW	Rated heat output (*)	Psup	0,0	kW
Thermostat-off mode	Р _{то}	0,012	kW				
Standby mode	P _{SB}	0,012	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	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	3567	kWh	flow rate, outdoor heat exchanger			
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produc great importance	ct'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 resel 's refrigerant, compressor oil and electrical/elec hold waste is not permitted.	ler offering a ser	vice of that type	. It is of
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Information for heat pump space heaters and heat pump combination heaters **Cold climate and Medium temperature (55)**

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + 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:	140	%			
Equipped with a supplementary heater:	No	Package efficiency class:		-			
Heat pump combination heater:	No						

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	12	kW	Seasonal space heating energy efficiency	η _s	136	%
Declared capacity for heating f and outdoor temperature T j	for part load at ii	ndoor temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = – 7 °C	Pdh	7,3	kW	T j = − 7 °C	COPd	2,91	-
T j = + 2 °C	Pdh	4,6	kW	T j = +2 °C	COPd	4,53	- [
T j = + 7 °C	Pdh	4,8	kW	T j = +7 °C	COPd	5,28	- 1
T j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	6,44	-
T j = bivalent temperature	Pdh	10,9	kW	T j = bivalent temperature	COPd	1,46	-
T j = operation limit temperature	Pdh	4,6	kW	T j = operation limit temperature	COPd	1,51	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	9,6	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,81	-
Bivalent temperature	T _{biv}	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°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	other than activ	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,012	kW	Rated heat output (*)	Psup	11,5	kW
Thermostat-off mode	Р _{то}	0,012	kW				
Standby mode	P _{SB}	0,012	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	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	8159	kWh	flow rate, outdoor heat exchanger			
For heat pump combination he	eater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produce great importance	ct'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
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Information for heat pump space heaters and heat pump combination heaters Cold climate and Low temperature (35)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + 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:	172	%			
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	13	kW	Seasonal space heating energy efficiency	η _s	168	%
Declared capacity for heating f and outdoor temperature T j	for part load at ir	idoor temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature			
T j = – 7 °C	Pdh	7,6	kW	T j = – 7 °C	COPd	3,67	-
T j = + 2 °C	Pdh	4,7	kW	T j = +2 °C	COPd	5,49	-
T j = + 7 °C	Pdh	4,9	kW	T j = +7 °C	COPd	6,70	-
T j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	7,77	-
T j = bivalent temperature	Pdh	11,4	kW	T j = bivalent temperature	COPd	1,99	-
T j = operation limit temperature	Pdh	4,9	kW	T j = operation limit temperature	COPd	1,99	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	10,3	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	2,36	-
Bivalent temperature	T _{biv}	-17	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°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}	0,012	kW	Rated heat output (*)	Psup	12,5	kW
Thermostat-off mode	Ρ _{το}	0,012	kW				
Standby mode	P _{SB}	0,012	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	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	7225	kWh	flow rate, outdoor heat exchanger			,
For heat pump combination he	eater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	\mathbf{Q}_{elec}	na	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produc great importance	ct'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'r 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 Warm climate and Medium temperature (55)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + CTC EcoZenith 250						
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:	146	%			
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	13	kW	Seasonal space heating energy efficiency	η _s	142	%
Declared capacity for heating fo and outdoor temperature T j	or part load at i	ndoor temperat	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	12,5	kW	T j = +2 °C	COPd	1,56	- [
T j = + 7 °C	Pdh	8,0	kW	T j = +7 °C	COPd	3,15	- 1
T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	4,89	-
T j = bivalent temperature	Pdh	12,5	kW	T j = bivalent temperature	COPd	1,56	-
T j = operation limit temperature	Pdh	12,5	kW	T j = operation limit temperature	COPd	1,56	-
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 activ	e <u>mode</u>		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	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	4792	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}	66	%
Daily electricity consumption	Qelec	7,118	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1566	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
Contact details E	nertech AB. Bo	x 309. SE-341 20	6 Liungby Tel	+46 372 88000 www.ctc.se			180705

Information for heat pump space heaters and heat pump combination heaters Warm climate and Low temperature (35)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622N	CTC EcoAir 622M + CTC EcoZenith 250							
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:	200	%					
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	13	kW	Seasonal space heating energy efficiency	η _s	196	%
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	na	kW	T j = – 7 °C	COPd	na	-
T j = + 2 °C	Pdh	12,6	kW	T j = +2 °C	COPd	2,51	-
T j = + 7 °C	Pdh	8,2	kW	T j = +7 °C	COPd	4,70	-
T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	6,12	-
T j = bivalent temperature	Pdh	12,6	kW	T j = bivalent temperature	COPd	2,51	-
T j = operation limit temperature	Pdh	12,6	kW	T j = operation limit temperature	COPd	2,51	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	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 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	-						
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	3483	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}	66	%
Daily electricity consumption	Qelec	7,118	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1566	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 enginest 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	Enertech AB, Bo	x 309, SE-341 20	6 Ljungby Tel	+46 372 88000 www.ctc.se			180705

Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature (55)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622	CTC EcoAir 622M + CTC EcoZenith 250							
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:	126	%					
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	9	kW	Seasonal space heating energy efficiency	η _s	122	%
Declared capacity for heating fo and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performat part load at indoor temperature 2			
T j = – 7 °C	Pdh	6,2	kW	T j = – 7 °C	COPd	1,00	- 1
T j = + 2 °C	Pdh	4,1	kW	T j = +2 °C	COPd	1,97	- [
T j = + 7 °C	Pdh	4,4	kW	T j = +7 °C	COPd	3,35	
Г ј = + 12 °С	Pdh	5,5	kW	T j = +12 °C	COPd	4,40	-
۲ j = bivalent temperature	Pdh	7,0	kW	T j = bivalent temperature	COPd	6,01	-
T j = operation limit temperature	Pdh	7,0	kW	T j = operation limit temperature	COPd	1,59	-
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	1,59	-
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 o	ther than activ	e mode		Supplementary heater			
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	1,5	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	-	6200	m3/I
L Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/
Annual energy consumption	Q _{HE}	5630	kWh	flow rate, outdoor heat exchanger			-,
For heat pump combination hea	ater:						
Declared load profile	L	Efficiency class	В	Water heating energy efficiency	η_{wh}	53	%
Daily electricity consumption	Qelec	8,780	kWh	Daily fuel consumption	Qfuel	NA	kWl
Annual electricity consumption	AEC	1932	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 ser	vice of that type	e. It is of
Contact details E		200 65 244 2		+46 372 88000 www.ctc.se			18070

Information for heat pump space heaters and heat pump combination heaters **Average climate and Low temperature (35)**

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622	CTC EcoAir 622M + CTC EcoZenith 250							
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:	169	%					
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++	-					
Heat pump combination heater:	Yes								

Sound power level, indoors/ outdoors L ma/55 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat na m3/h Annual energy consumption Q HE 4185 kWh For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat na m3/h For heat pump combination heater: Efficiency B Water heating energy nwh 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC 1932 kWh Annual fuel consumption AFC NA GJ Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's iffe 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.	ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
and outdoor temperature T $T = -7^{+}C$ Pdh 7.4 $T = -7^{+}C$ Pdh 7.4 $T = -7^{+}C$ Pdh 7.4 $T = -7^{+}C$ Pdh 4.7 $T = +7^{+}C$ COPd 4.23 $T = +7^{+}C$ Pdh 8.3 KW $T = +7^{+}C$ COPd 6.34 $T = -7^{+}C$ Pdh 8.3 KW $T = -7^{+}C$ COPd 6.34 $T = -7^{+}C$ Pdh 8.3 KW $T = -7^{+}C$ COPd 2.52 $T = -7^{+}C$ Pdh 8.3 KW $T = -7^{+}C$ COPd 2.52 $T = -7^{+}C$ COPd 2.52 $T = -7^{+}C$ Pdh 8.3 KW $T = -7^{+}C$ COPd 2.52 $T = -7^{+}C$ Pdh 8.3 KW $T = -7^{+}C$ COPd 2.52 $T = -7^{+}C$ Pdh 8.3 KW $T = -5^{+}C$ (if $TOL < -20^{+}C$) $COPd$ 2.52 $For air-to-water heat pumps:TOL-10T = -5^{+}C (if TOL < -20^{+}C)COPdnaPareT_{bv}-10*CCycling interval capacity forP_{cych}naPare0.014KWKWRead heat output (*)Psup<$	Rated heat output (*)	Prated	9	kW		η _s	165	%
T j = + 2 °CPdh4,4kwT j = + 2 °CCOPd4,23.T j = + 7 °CPdh4,7kwT j = + 7 °CCOPd5,10T j = bivalent temperaturePdh8,3kWT j = + 12 °CCOPd6,34.T j = operation limitPdh8,3kWT j = operation limitCOPd2,52.For air-to-water heat pumps:Pdh8,3kWT j = operation limitCOPd2,52.For air-to-water heat pumps:PdhnakWT j = -15 °C (if TOL < -20 °C)		or part load at i	ndoor temperat	ure 20 °C				
T j = + 7 °CPdh4,7kwT j = + 7 °CCOPd5,10-T j = +1 °CPdh5,5kwT j = +1 °CCOPd6,24-T j = bivalent temperaturePdh8,3kwT j = bivalent temperatureCOPd2,52-T j = operation limitPdh8,3kwT j = operation limitCOPd2,52-For air-to-water heat pumps:PdhnakwT j = operation limitCOPd2,52-For air-to-water heat pumps:PdhnakwT j = -15 °C (fT TOL < -20 °C)	T j = – 7 °C	Pdh	7,4	kW	T j = – 7 °C	COPd	2,95	- [
T j = + 12 °CPdh5,5kWT j = + 12 °CCOPd6,34T j = bivalent temperaturePdh8,3kWT j = bivalent temperatureCOPd2,52-T j = operation limit temperaturePdh8,3kWT j = operation limit temperatureCOPd2,52-T j = -15 °C (if TOL < - 20 °C)	-	Pdh	4,4	kW		COPd	4,23	- [
Tj = bivalent temperaturePdh8,3kWTj = bivalent temperatureCOPd2,52.Tj = operation limit temperaturePdh8,3kWTj = operation limit temperatureCOPd2,52.For air-to-water heat pumps: T j = -15 °C (if TOL <-20 °C)		Pdh		kW		COPd	5,10	
J = operation limit temperaturePdh8,3kwT j = operation limit temperatureCOPd2,52-For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	6,34	-
temperaturePdn8,3KWtemperatureCOPd2,52-For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	T j = bivalent temperature	Pdh	8,3	kW	T j = bivalent temperature	COPd	2,52	-
T j = -15 *C (if TOL < - 20 *C)PannaKWT j = -15 *C (if TOL < -20 *C)CDPanaBivalent temperatureT biv -10*CFor air-to-water heat pumps: Operation limit temperatureTOL-10*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 mode0,014kWSupplementary heaterSupplementary heaterSupplementary heaterRated heat output (*)Psup0,0.0kWType of energy inputElectricCapacity controlVariableFor air-to-water heat pumps: row act, outdoors-6200m3/hSound power level, indoors/ outdoorsL wana/55dBWater heating energy efficiencynam3/hFor heat pump combination heater:Efficiency classBWater heating energy efficiencynam3/hDeclared load profileLEfficiency classBWater heating energy efficiencyna%Daily electricity consumptionQelec8,780kWhDaily fuel consumptionQruelNAAnnual electricity consumptionAEC1932kWhAnnual fuel consumptionAFCNAGJSpecific precautions and end of life information:The packaging must be deposited at a recycling station or with the installati		Pdh	8,3	kW		COPd	2,52	-
Bradent temperature I_{biv} -10*COperation limit temperature IOL -10*CCycling interval capacity for heating P_{cych} nakWCycling interval efficiency $COPcyc$ na-Degradation co-efficient Cdh 0,98-Heating water operating limit $WTOL$ 55*CPower consumption in modes other than active mode $O,014$ kW Heating water operating limit $WTOL$ 55*CPower consumption in modes other than active mode $O,014$ kW Rated heat output (*) $Psup$ $0,0$ kW Thermostat-off mode P_{orp} $0,014$ kW Type of energy input $Electric$ Standby mode P_{ss} $0,014$ kW Type of energy input $Electric$ Capacity controlVariableFor air-to-water heat pumps: nated air flow rate, outdoors-6200 $m3/h$ Sound power level, indoors/ outdoors L_{WA} na/55 dB For water/brine-to-water heat pumps: Rated brine or water flow rate, outdoorsna $m3/h$ For heat pump combination heater:Efficiency classBWater heating energy efficiency N_{wh} 53%Daily electricity consumptionQelec $8,780$ kWhDaily fuel consumption Afe NAkWhAnnual electricity consumptionAEC1932kWhAnnual fuel consumptionAFCNAGJSpecific precautions and end of life information:The packaging must be d		Pdh	na	kW		COPd	na	-
heating P_{cych} nakwCycing interval efficiency $COPyc$ naDegradation co-efficient Cdh $0,98$ -Power consumption in modes other than active mode $0,014$ kW Off mode P_{orr} $0,014$ kW Thermostat-off mode P_{ro} $0,014$ kW Standby mode P_{sg} $0,014$ kW Tarkcase heater mode P_{cx} $0,000$ kW Capacity controlVariableFor air-to-water heat pumps: Rated air flow rate, outdoors-Gapacity control $Variable$ For air-to-water heat pumps: Rated bino rate, outdoors-Annual energy consumption Q_{HE} 4185 kWh For water, /brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat-Pechared load profileLEfficiency classBefficiency efficiency n_{wh} Daily electricity consumptionQelec $8,780$ kWhDaily fuel consumption AFC NASpecific precautions and end of life information:Acc1932kWhAnnual fuel consumption AFC NASpecific precautions and end of life information:The packaging must be deposited at a recycling station or with the installation engineer 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.	Bivalent temperature	T _{biv}	-10	°C		TOL	-10	°C
Degradation co-entricient Can 0,98 - Power consumption in modes other than active mode Signal action in modes other than active mode Off mode Porr 0,014 kW Thermostat-off mode Pro 0,014 kW Standby mode Pse 0,014 kW Crankcase heater mode Pcc 0,000 kW Other items - For air-to-water heat pumps: Electric Capacity control Variable For air-to-water heat pumps: 6200 m3/h Sound power level, indoors/ outdoors L wA na/55 dB Mater heating energy na m3/h Annual energy consumption QHE 4185 kWh Paily fuel consumption na m3/h Daily electricity consumption Qelec 8,780 KWh Daily fuel consumption Qfuel NA kWh Annual electricity AEC 1932 kWh Annual fuel consumption AFC NA KWh Daily fuel consumption AEC 1932 kWh Annual fuel consumption AFC NA KWh Specific precautions and end of life information: The packaging must be deposited at a recycling action or with the installation engineer for cord water management. At the e		P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Off mode P orr 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 Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 6200 m3/h Sound power level, indoors/ outdoors L wA na/55 dB B For water-/brine-to-water heat pumps: Rated brine or water - na m3/h For heat pump combination heater: Efficiency B Water heating energy Twh 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity AEC 1932 kWh Annual fuel consumption Qfuel NA KWh Annual fuel consumption AFC NA GJ GJ erecycling station or with the installation englere offor correct wate of that	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 - - - Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 6200 m3/h Sound power level, indoors/ outdoors L WA na/55 dB For water/brine-to-water heat pumps: Rated brine or water - na m3/h Annual energy consumption Q _{HE} 4185 kWh Efficiency na m3/h Declared load profile L Efficiency B Water heating energy nwh 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC 1932 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	Power consumption in modes of	other than activ	ve <u>mode</u>		Supplementary heater			-
Standby mode P 58 0,014 kW Type of energy input Electric Crankcase heater mode P ck 0,000 kW Type of energy input Electric Other items - - - 6200 m3/h Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 6200 m3/h Sound power level, indoors/ outdoors L WA na/55 dB For water-/brine-to-water heat pumps: Rated brine or water - na m3/h Annual energy consumption Q HE 4185 kWh Water heating energy - na m3/h Declared load profile L Efficiency B Water heating energy Twin 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC 1932 kWh Annual fuel consumption AFC NA GJ Specific precautions and end of life information: The packaging must be deposited at a recycing station or with the installation engineer for correct waste management. At t end of the product's iff cycy	Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	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 - 6200 m3/h Sound power level, indoors/ outdoors L wA na/55 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - 6200 m3/h For heat pump combination heater: 4185 kWh Rater heating energy efficiency - na m3/h Declared load profile L Efficiency class B Water heating energy efficiency n_wh 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC 1932 kWh Annual fuel consumption AFC NA GJ Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent corrective to a waste station or reseller offering a service of that type. It is of great importance that the product's refresore oil and electrical/electronic equipment are properly disposed of Disposing of the product as household waste is not permitted. <td>Thermostat-off mode</td> <td>Р _{то}</td> <td>0,014</td> <td>kW</td> <td></td> <td></td> <td></td> <td></td>	Thermostat-off mode	Р _{то}	0,014	kW				
Other items Capacity control Variable Sound power level, indoors/ outdoors L wa na/55 dB Annual energy consumption Q HE 4185 kWh For heat pump combination heater: Efficiency B Water heating energy nwh 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC 1932 kWh Daily fuel consumption AFC NA GJ Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of 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/55 dB Annual energy consumption Q HE 4185 kWh For heat pump combination heater: Efficiency class B Water heating energy efficiency nwn 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC 1932 kWh Daily fuel consumption AFC NA GJ The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the 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. Disposing of the product as household waste is not permitted.	Crankcase heater mode	Р _{ск}	0,000	kW				
Capacity control Variable Rated air flow rate, outdoors 6200 m3/h Sound power level, indoors/ outdoors L wA na/55 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger na m3/h For heat pump combination heater: 4185 kWh B Water heating energy efficiency na m3/h Declared load profile L Efficiency class B Water heating energy efficiency nwh 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC 1932 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 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.	Other items							
outdoorsL wAna/55dBpumps: Rated brine or water flow rate, outdoor heat exchangernam3/hAnnual energy consumptionQ HE4185kWhflow rate, outdoor heat exchangernam3/hFor heat pump combination heater:Efficiency classBWater heating energy efficiencyn_wh53%Daily electricity consumptionQelec8,780kWhDaily fuel consumptionQfuelNAkWhAnnual electricity consumptionAEC1932kWhAnnual fuel consumption or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of Disposing of the product as household waste is not permitted.	Capacity control		Variable			-	6200	m3/h
Annual energy consumption Q _{HE} 4185 kWh Tow rate, outdoor heat exchanger For heat pump combination heater: Efficiency B Water heating energy η_{wh} 53 % Declared load profile L Efficiency B Water heating energy η_{wh} 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity AEC 1932 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 of Disposing of the product as household waste is not permitted.		L _{WA}	na/55	dB	pumps: Rated brine or water	_	na	m3/h
Declared load profileLEfficiency classBWater heating energy efficiency η_{wh} 53%Daily electricity consumptionQelec8,780kWhDaily fuel consumptionQfuelNAkWhAnnual electricity consumptionAEC1932kWhAnnual 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 the 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}	4185	kWh				
Declared load profile L class B efficiency I lwh 53 % Daily electricity consumption Qelec 8,780 kWh Daily fuel consumption Qfuel NA kWh Annual electricity consumption AEC 1932 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 of Disposing of the product as household waste is not permitted.	For heat pump combination he	ater:						
Annual electricity AEC 1932 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 of Disposing of the product as household waste is not permitted.	Declared load profile	L	-	В		η_{wh}	53	%
AEC 1932 KWn Annual fuel consumption AFC NA GJ consumption 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 of Disposing of the product as household waste is not permitted.	Daily electricity consumption	Qelec	8,780	kWh	Daily fuel consumption	Qfuel	NA	kWh
Specific precautions and end The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of Disposing of the product as household waste is not permitted.		AEC	1932	kWh	Annual fuel consumption	AFC	NA	GJ
Contact datails Epertach AB, Box 300, SE-341 26 Liunghy Tol ±46 272 88000 www.ctc.co 190700	Specific precautions and end		end of the produc great importance	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
UUIIAU UEIAIN EHELEULAD, DUX 303, 3E341 ZU EIULIKUV (EL 140, 577, 66000) WWW.UU.SE 16070	Contact details	Enertech AB. Bo			·			180705

Information for heat pump space heaters and heat pump combination heaters **Cold climate and Medium temperature (55)**

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622M + CTC EcoZenith 250						
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:	108	%			
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 7 jEfficiencyS $T = -7 °C$ $T = +2 °C$ $P = +2 °C °C$ $P = +2 °C °C$ $P = +2 °C °C$ $P = +2 °C $	ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
and outdoor temperature T j T = -7 °C Pdh 6,1 T = -7 °C Pdh 6,1 KW T = -7 °C COPd 2,37 T = +2 °C COPd 3,98 T = +7 °C COPd 4,88 T = +12 °C COPd 4,88 T = -15 °C (1 °TOL < -20 °C) 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T = -15 °C (1 °TOL < -20 °C) COPd 1,41 T	Rated heat output (*)	Prated	12	kW		η _s	104	%
$ \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				
T j = + 7 °CPdh4,5kWT j = +7 °CCOPd4,88-T j = + 12 °CPdh5,5kWT j = +12 °CCOPd6,30-T j = bivalent temperaturePdh8,5kWT j = bivalent temperatureCOPd1,13-T j = operation limit temperaturePdh3,6kWT j = operation limit temperatureCOPd1,16-For air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)	T j = – 7 °C	Pdh	6,1	kW	T j = – 7 °C	COPd	2,37	-
T j = + 12 °CPdh5,5kWT j = +12 °CCOPd6,30-T j = bivalent temperaturePdh8,5kWT j = bivalent temperatureCOPd1,13-T j = operation limit temperaturePdh3,6kWT j = operation limit temperatureCOPd1,16-For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	-	Pdh	4,1	kW		COPd	3,98	-
Tj = bivalent temperaturePdh8,5kWTj = bivalent temperatureCOPd1,13-Tj = operation limit temperaturePdh3,6kWTj = operation limit temperatureCOPd1,16-For air-to-water heat pumps: T j = -15 *C (if TOL < -20 *C)		Pdh	4,5	kW		COPd	4,88	-
T j = operation limit temperature Pdh $3,6$ kWT j = operation limit temperature $COPd$ $1,16$ $-$ For air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)	T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	6,30	-
temperaturePdn3,5KWtemperatureCOPd1,15-For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	T j = bivalent temperature	Pdh	8,5	kW	T j = bivalent temperature	COPd	1,13	-
T j = -15 °C (if TOL < -20 °C)Pan7,5KWT j = -15 °C (if TOL < -20 °C)CDPa1,41Bivalent temperatureTT-18°CFor air-to-water heat pumps: Operation limit temperatureTOL-20°CCycling interval capacity for heatingP cychnakWCycling interval efficiencyCOPcycna-Degradation co-efficientCdh0,99Cycling interval efficiencyCOPcycna-Power consumption in modes other than active mode0,014kWSupplementary heaterSupplementary heaterRated heat output (*)Psup11,5kWType of energy inputElectricFor air-to-water heat pumps: crankcase heater mode0,004kWType of energy inputElectricCapacity controlVariableVariableFor air-to-water heat pumps: Rated air flow rate, outdoors-6200m3/Sound power level, indoors/ outdoorsL WAna/55dBMater heating energy efficiencyna-Por heat pump combination heater:Efficiency classNAWater heating energy efficiencyna-Daily electricity consumptionQelec10,113kWhDaily fuel consumptionAFCNAGiThe packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At end of the product's fit cycle, it must be sent correctly to waste station or with the installation engineer for correct waste management. At end of the product's fit cycle, it		Pdh	3,6	kW		COPd	1,16	-
Bradent temperature T_{biv} -13 -C Operation limit temperature TOL -20 -C Quering interval capacity for P_{cych} na kW Operation limit temperature TOL -20 -C Quering interval efficiency $COPcyc$ na - Power consumption in modes other than active mode Off mode P_{orr} 0,014 kW Heating water operating limit $WTOL$ 55 *C Power consumption in modes other than active mode Off mode P_{orr} 0,014 kW Thermostat-off mode P_{ro} 0,014 kW Standby mode P_{sa} 0,014 kW Crankcase heater mode P_{cx} 0,000 kW Other items Capacity control Variable Capacity consumption Q_{HE} 10614 kWh The detaing energy P_{wh} 46 % Annual energy consumption Q_{HE} 10614 kWh There are proved for water P_{ro} or water P_{ro} $P_$		Pdh	7,6	kW		COPd	1,41	-
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 Off mode P orr 0,014 kW Supplementary heater Rated heat output (*) P sup 11,5 kW Off mode P orr 0,014 kW Supplementary heater Supplementary heater Rated heat output (*) P sup 11,5 kW Standby mode P ss 0,014 kW Type of energy input Electric For air-to-water heat pumps: 6200 m3/ Capacity control Variable Variable For air-to-water heat pumps: 6200 m3/ Sound power level, indoors/ L wA na/55 dB Mater heating energy na m3/ Annual energy consumption Q HE 10614 kWh Efficiency Na Mater heating energy nwh 46 % Daily electricity consumption Qelec 10,113 kWh Annual fuel consumption AFC	Bivalent temperature	T _{biv}	-18	°C		TOL	-20	°C
Degradation co-efficient Can 0,99 - temperature W10L 55 Co Power consumption in modes other than active mode Off mode P orf 0,014 kW Supplementary heater Rated heat output (*) Psup 11,5 kW Off mode P orf 0,014 kW KW Type of energy input Electric Electric Standby mode P sa 0,014 kW Type of energy input Electric m3/ Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 6200 m3/ Sound power level, indoors/ outdoors L wA na/55 dB flow rate, outdoors - na m3/ For heat pump combination heater: Efficiency NA Water heating energy nwh 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption AFC NA Manual 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, c		P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	- [
Off mode P orF 0,014 kW Thermostat-off mode P ro 0,014 kW Standby mode P sa 0,014 kW Crankcase heater mode P cx 0,000 kW Other items 0 0000 kW Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 6200 m3/ Sound power level, indoors/ outdoors L wA na/55 dB For water-/brine-to-water heat pumps: Rated brine or water - na m3/ For heat pump combination heater: Efficiency class NA Water heating energy efficiency N_wh 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption Qfuel NA KW Specific precautions and end of life information: The packaging must be deposited at a revcling station or with the installation engineer for correct waste management. At great importance that the product's refrigerant, compressor oil and electrici/electronic equipment are properly disposed	Degradation co-efficient	Cdh	0,99	-		WTOL	55	°C
Thermostat-off mode P ro 0,014 kW Standby mode P s8 0,014 kW Crankcase heater mode P cx 0,000 kW Other items - - - Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 6200 m3/ Sound power level, indoors/ outdoors L wA na/55 dB - na m3/ Annual energy consumption Q HE 10614 kWh For water -/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat - na m3/ Declared load profile L Efficiency class NA Water heating energy efficiency n _{wh} 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption Qfuel NA KW Annual electricity consumption AEC 22225 kWh Annual fuel consumption 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 the product's refrigerant. Mate heating on reseller offering a service of that type. It is of great importance that the product's refrigerant.	Power consumption in modes	other than activ	e mode		Supplementary heater			
Standby mode P sg 0,014 kW Type of energy input Electric Crankcase heater mode P cx 0,000 kW Type of energy input Electric Other items - <t< td=""><td>Off mode</td><td>P _{OFF}</td><td>0,014</td><td>kW</td><td>Rated heat output (*)</td><td>Psup</td><td>11,5</td><td>kW</td></t<>	Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	11,5	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 - 6200 m3/ Sound power level, indoors/ outdoors L WA na/55 dB For water-/brine-to-water heat pumps: Rated brine or water - na m3/ Annual energy consumption Q HE 10614 kWh Water heating energy efficiency - na m3/ Declared load profile L Efficiency class NA Water heating energy efficiency N_wh 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption Qfuel NA KW Annual electricity consumption AEC 2225 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 or diffic information: The packaging must be deposited at a recycling station or with the installation engineer of correct waste management. At or great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed	Thermostat-off mode	Р _{то}	0,014	kW				
Crankcase heater mode P cx 0,000 kW Other items Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 6200 m3/ Sound power level, indoors/ outdoors L wA na/55 dB For water-/brine-to-water heat pumps: Rated brine or water - na m3/ Annual energy consumption Q HE 10614 kWh Reschanger - na m3/ For heat pump combination heater: Efficiency class NA Water heating energy efficiency n_wh 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption Qfuel NA KW Annual electricity consumption AEC 2225 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 or diffe information: The packaging must be deposited at a recycling station or with the installation engineer 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	Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Other items Capacity control Variable Sound power level, indoors/ outdoors L na/55 dB Annual energy consumption Q 10614 kWh For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat - na m3/ For heat pump combination heater: 10614 kWh Water heating energy efficiency n _{wh} 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption Qfuel NA kWh Specific precautions and end of life information: AEC 2225 kWh Annual 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	Crankcase heater mode			kW				
Capacity control Variable Rated air flow rate, outdoors 6200 m3/ Sound power level, indoors/ outdoors L wa na/55 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger na m3/ For heat pump combination heater: 10614 kWh Water heating energy efficiency nwh 46 % Declared load profile L Efficiency class NA Water heating energy efficiency nwh 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption AEC 2225 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		<u>en</u>						
outdoors L wA na/55 dB pumps: Rated brine or water na m3/ Annual energy consumption Q HE 10614 kWh flow rate, outdoor heat - na m3/ For heat pump combination heater: Declared load profile L Efficiency class NA Water heating energy flicency efficiency nwh 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption Qelec 2225 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	Capacity control		Variable			-	6200	m3/h
Annual energy consumption Q _{HE} 10614 kWh flow rate, outdoor heat exchanger For heat pump combination heater: Declared load profile L Efficiency class NA Water heating energy efficiency efficiency η_{wh} 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption Qfuel NA kW Annual electricity consumption Qelec 2225 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 of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of the product's refrigerant, compressor oil and electric		L _{WA}	na/55	dB	pumps: Rated brine or water	_	na	m3/h
Declared load profileLEfficiency classNAWater heating energy efficiency η_{wh} 46%Daily electricity consumptionQelec10,113kWhDaily fuel consumptionQfuelNAkWAnnual electricity consumptionAEC2225kWhAnnual 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	Annual energy consumption	Q _{HE}	10614	kWh				-,
Declared load profile L class NA efficiency I wh 46 % Daily electricity consumption Qelec 10,113 kWh Daily fuel consumption Qfuel NA kW Annual electricity AEC 2225 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 of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of the product is refrigerant.	For heat pump combination he	eater:						
Annual electricity consumption AEC 2225 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	Declared load profile	L	-	NA		$\eta_{\rm wh}$	46	%
AEC ZZZ5 kWh Annual fuel consumption AFC NA GJ consumption 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 the product's refrigerant.	Daily electricity consumption	Qelec	10,113	kWh	Daily fuel consumption	Qfuel	NA	kWh
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	•	AEC	2225	kWh	Annual fuel consumption	AFC	NA	GJ
	Specific precautions and end		end of the produc great importance	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 sei	vice of that type	e. It is of
Contact details Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 www.ctc.se 18070	Contact details	Enertech AB. Bo	ox 309, SE-341 26	6 Ljungby Tel	+46 372 88000 www.ctc.se			180705

Information for heat pump space heaters and heat pump combination heaters Cold climate and Low temperature (35)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622N	CTC EcoAir 622M + CTC EcoZenith 250							
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:	145	%					
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	13	kW	Seasonal space heating energy efficiency	η _s	141	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor temperat	ture 20 °C	Declared coefficient of performat part load at indoor temperature			
T j = – 7 °C	Pdh	7,3	kW	T j = – 7 °C	COPd	3,06	-
T j = + 2 °C	Pdh	4,6	kW	T j = +2 °C	COPd	4,67	-
T j = + 7 °C	Pdh	4,8	kW	T j = +7 °C	COPd	5,75	-
T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	6,70	-
T j = bivalent temperature	Pdh	10,5	kW	T j = bivalent temperature	COPd	1,61	-
T j = operation limit temperature	Pdh	4,5	kW	T j = operation limit temperature	COPd	1,59	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	9,6	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,92	-
Bivalent temperature	T _{biv}	-17	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°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	12,5	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	CK	0,000		₫ ├ ───── └			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	8538	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}	46	%
Daily electricity consumption	Q_{elec}	10,113	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	NA	kWh
Annual electricity consumption	AEC	2225	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the produc great importance	ct'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	Enertech AB, Bo	x 309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			180705

Information for heat pump space heaters and heat pump combination heaters Warm climate and Medium temperature (55)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622N	CTC EcoAir 622M + CTC EcoZenith i550 230/400V					
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:	147	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:		-			
Heat pump combination heater:	Yes						

Rated heat output (*)	Prated	13		Concerned on a construction on a series			
		13	kW	Seasonal space heating energy efficiency	η _s	143	%
Declared capacity for heating fo and outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C	Declared coefficient of performan part load at indoor temperature 2	•		
T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na] -
T j = + 2 °C	Pdh	13,3	kW	T j = +2 °C	COPd	1,62	-
T j = + 7 °C	Pdh	8,3	kW	T j = +7 °C	COPd	3,20	-
T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	4,83	-
T j = bivalent temperature	Pdh	13,3	kW	T j = bivalent temperature	COPd	1,62	-
T j = operation limit temperature	Pdh	13,3	kW	T j = operation limit temperature	COPd	1,62	-
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 of	ther than activ	re 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	CA	.,		1			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	4770	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}	112	%
Daily electricity consumption	Qelec	6,835	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1504	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produc 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 resell s'r 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 E	nertech AB, Bo	ox 309, SE-341 26	6 Ljungby Tel	+46 372 88000 www.ctc.se			180705

Information for heat pump space heaters and heat pump combination heaters Warm climate and Low temperature (35)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622N	CTC EcoAir 622M + CTC EcoZenith i550 230/400V					
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:	199	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:		-			
Heat pump combination heater:	Yes						

Rated heat output (*) Proted 13 kW Seasonal space heating energy right of the performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j 195 % Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature 7 j Provide the performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 7 part load at indoor temperature 20 °C and outdoor temperature 70 °C and 4,677 part load at indoor temperature 20 °C and 2,500 °C and 2,	Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
and outdoor temperature T jT j = -7 °CPdhnaT j = -7 °CPdhT j = -7 °CT j = -7 °CPdhT j = -7 °CT j = +7 °CPdhS.2T j = +7 °CPdhS.2T j = +7 °CPdhS.6KWT j = +7 °CCOPdJ = bivalent temperaturePdh12,7KWT j = +7 °CCOPdJ = bivalent temperaturePdh12,7KWT j = +7 °CCOPdJ = operation limitCOPdtemperaturePdh12,7KWT j = operation limittemperaturePdh1 = 0, C (If TOL < -20 °C)PdhnakWFor air-to-water heat pumps:T j = -15 °C (If TOL < -20 °C)naPower consumption in modes other than active modeOff modeP orcOn andP orcOperation limit temperatureToLStandby modeP orcOperation limit temperatureP orcOpool kWOther items-Capacity controlVariableSound power level, indoors /L wAAnnual ener	Rated heat output (*)	Prated	13	kW		η _s	195	%
$\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				
T j = + 7 °CPdh8,2kWT j = +7 °CCOPd4,67T j = +12 °CPdh5,6kWT j = +12 °CCOPd6,06-T j = bivalent temperaturePdh12,7kWT j = bivalent temperatureCOPd2,50-T j = operation limitpdh12,7kWT j = operation limitCOPd2,50-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:ToL2*CCycling interval capacity for heatingP _{cych} nakWCycling interval efficiencyCOPcycna-Degradation co-efficientCdh0,99-Heating water operating limit wtroLVToL55*CPower consumption in modes other than active mode0,014 kWkWType of energy inputElectricCapacity controlVariableFor air-to-water heat pumps: Rated air flow rate, outdoors-6200m3/hCapacity controlVariableKWhType of energy inputElectric-Declared load profileXLEfficiency classNAWater heating energy efficiencynam3/hDaily electricity consumptionQelec6,835kWhDaily fuel consumptionQuelnaSpecific precautions and endTrapedaging mode the repoduct is household water is encorrecity to a water of the product is householdAcc<	T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na] - [
T j = + 12 °CPdh5,6KWT j = + 12 °CCOPd6,06-T j = bivalent temperaturePdh12,7KWT j = bivalent temperatureCOPd2,50-T j = oparation limit temperaturePdh12,7KWT j = oparation limit temperatureCOPd2,50-For air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)	T j = + 2 °C	Pdh	12,7	kW	-	COPd	2,50	- 1
Tj = bivalent temperaturePdh12,7kWTj = bivalent temperatureCOPd2,50-T j = operation limit temperaturePdh12,7kWTj = operation limit temperatureCOPd2,50-For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	T j = + 7 °C	Pdh	8,2	kW	T j = +7 °C	COPd	4,67	-
T j = operation limit temperature Pdh 12,7kwT j = operation limit temperature $COPd$ 2,50For air-to-water heat pumps: T j = -15 °C (if TOL < - 20 °C)	T j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	6,06	-
temperaturePan12,7KWtemperatureCOPa2,50-For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	T j = bivalent temperature	Pdh	12,7	kW	T j = bivalent temperature	COPd	2,50	-
T j = -15 °C (if TOL < - 20 °C)PannakWT j = -15 °C (if TOL < - 20 °C)CDPana-Bivalent temperatureT biv2°CFor air-to-water heat pumps: Operation limit temperatureTOL2°CCycling interval capacity for heating P_{oych} nakWCycling interval efficiencyCOPcycna-Degradation co-efficientCdh0,99Heating water operating limit temperatureWTOL55°CPower consumption in modes other than active modeOff modeP orr 00,014 kWKWRated heat output (*)P Sup0,0kWThermosta-off modeP orr 00,014 kWKWType of energy inputElectricCanacity controlVariableFor air-to-water heat pumps: row tack-outdoors-6200 m3/hm3/hCapacity controlVariableFor air-to-water heat pumps: row tack-outdoors-6200 m3/hSound power level, indoors/ outdoorsL wA Manual energy consumptionQ HE3513 classKWhWater heating energy efficiencynaDaily electricity consumptionQelec6,835 classKWhMater heating energy efficiencyNa112 ma%Daily electricity consumptionAEC1504 classKWhAnnual fuel consumptionAFCnaGJSpecific precautions and end of the information:Second the epoduct's refigerant, compressor oil and electricid/electronic equipment are properly disposed		Pdh	12,7	kW		COPd	2,50	-
Brainer temperature $1 biv$ 2 C Operation limit temperature $10L$ 2 C Cycling interval capacity for heating P_{cych} na kW Cycling interval efficiency $COPcyc$ na - Heating water operating limit $WTOL$ 55 c C experimentary heater C and C $COPcyc$ na - Heating water operating limit $WTOL$ 55 c c C $Coperation is modes other than active mode C O,014 kW Crances heater mode P_{cyc} 0,014 kW Crances heater mode P_{cyc} 0,004 kW Crances heater mode P_{cyc} 0,000 kW Type of energy input Electric electric P_{cyc} na m3/h Crances heater mode P_{cyc} 0,000 kW P_{cyc} 0,000 kW P_{cyc} 0,000 kW N N N N N N N N N N$		Pdh	na	kW		COPd	na	-
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 Off mode P orr 0,014 kW Supplementary heater Rated heat output (*) P Sup 0,0 kW Off mode P orr 0,014 kW Type of energy input Electric Electric Standby mode P ss 0,000 kW Type of energy input Electric m3/h Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors 6200 m3/h Sound power level, indoors/ outdoors L wA na/55 dB dB flow rate, outdoor heat na m3/h For heat pump combination heater: Efficiency NA Water heating energy nwh 112 % Daily electricity consumption Qelec 6,835 kWh Annual fuel consumption Qfuel na kWh Annual electricity AEC 1504 kWh	Bivalent temperature	T _{biv}	2	°C		TOL	2	°C
Degradation co-efficient Can 0,99 - temperature WIDL SS C Power consumption in modes other than active mode Off mode Porr 0,014 kW Supplementary heater Rated heat output (*) Psup 0,0 kW Thermostat-off mode P ro 0,014 kW Rated heat output (*) Psup 0,0 kW Standby mode P se 0,014 kW Type of energy input Electric Electric Crankcase heater mode P cx 0,000 kW Type of energy input Electric m3/h Capacity control Variable For air-to-water heat pumps: 6200 m3/h Sound power level, indoors/ outdoors L wA na/55 dB pumps: Rated brine or water na m3/h For heat pump combination heater: Efficiency NA Water heating energy n_wh 112 % Daily electricity consumption Qelec 6,835 kWh Daily fuel consumption Qfuel na kWh Annual electricity AEC 1504 kWh Annual fuel consumption AFC		P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Off mode P orr 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 cc 0,000 kW Type of energy input Electric Capacity control Variable For air-to-water heat pumps: Rated air flow rate, outdoors - 6200 m3/h Sound power level, indoors/ outdoors L wA na/55 dB B For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat - na m3/h For heat pump combination heater: Efficiency class NA Water heating energy efficiency na m3/h Daily electricity consumption Qelec 6,835 kWh Daily fuel consumption Qfuel na kWh Annual electricity AEC 1504 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 wast	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 Image: Construct of the set of the	Power consumption in modes	other than activ	ve mode		Supplementary heater			_
Standby mode P sg 0,014 kW Type of energy input Electric Crankcase heater mode P cx 0,000 kW Type of energy input Electric Other items	Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	0,0	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 - 6200 m3/h Sound power level, indoors/ outdoors L wA na/55 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - na m3/h Annual energy consumption Q HE 3513 kWh Retendent flow rate, outdoor heat exchanger - na m3/h Declared load profile XL Efficiency class NA Water heating energy efficiency n, wh 112 % Daily electricity consumption Qelec 6,835 kWh Daily fuel consumption Qfuel na kWh Annual electricity consumption AEC 1504 kWh Annual fuel consumption AFC na GJ Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At th end of the product's iffe 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	Thermostat-off mode	Р _{то}	0,014	kW				
Other items Capacity control Variable Sound power level, indoors/ outdoors L wa na/55 dB Annual energy consumption Q HE 3513 kWh For heat pump combination heater: Efficiency class NA Water heating energy efficiency nwh 112 % Daily electricity consumption Qelec 6,835 kWh Daily fuel consumption Qfuel na kWh Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of.	Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
Other items Capacity control Variable Sound power level, indoors/ outdoors L WA MA na/55 dB MA Annual energy consumption Q HE 3513 kWh For heat pump combination heater: Fficiency class NA Water heating energy efficiency N _{wh} 112 % Daily electricity consumption Qelec 6,835 kWh Water heating energy efficiency N _{wh} 112 % Daily electricity consumption AEC 1504 kWh Annual fuel consumption Qfuel na kWh Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's iffe cycle, it must be sent corrective 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				
Capacity control Variable Rated air flow rate, outdoors - 6200 m3/h Sound power level, indoors/ outdoors L wa na/55 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat - na m3/h Annual energy consumption Q HE 3513 kWh Bated air flow rate, outdoor heat - na m3/h For heat pump combination heater: Efficiency NA Water heating energy efficiency na m3/h Daily electricity consumption Qelec 6,835 kWh Daily fuel consumption Qfuel na kWh Annual electricity consumption AEC 1504 kWh Annual fuel consumption AFC na GJ Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At th 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. Na bene difference Na bene difference	Other items							
Outdoors L wa na/55 dB pumps: Rated brine or water Annual energy consumption Q HE 3513 kWh flow rate, outdoor heat - na m3/h For heat pump combination heater: Declared load profile XL Efficiency class NA Water heating energy flicency η_{wh} 112 % Daily electricity consumption Qelec 6,835 kWh Daily fuel consumption Qfuel na kWh Annual electricity consumption Qelec 1504 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 of. Disposing of the product as household waste is not permitted.	Capacity control		Variable			-	6200	m3/h
Annual energy consumption Q _{HE} 3513 kWh flow rate, outdoor heat exchanger For heat pump combination heater: Efficiency NA Water heating energy η_{wh} 112 % Declared load profile XL Efficiency NA Water heating energy η_{wh} 112 % Daily electricity consumption Qelec 6,835 kWh Daily fuel consumption Qfuel na kWh Annual electricity consumption AEC 1504 kWh Annual fuel consumption AFC na GJ Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.		L _{WA}	na/55	dB	pumps: Rated brine or water	_	na	m3/h
Declared load profileXLEfficiency classNAWater heating energy efficiency η_{wh} 112%Daily electricity consumptionQelec6,835kWhDaily fuel consumptionQfuelnakWhAnnual electricity consumptionAEC1504kWhAnnual 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 the 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}	3513	kWh				
Declared load profile XL class NA efficiency Image: Class	For heat pump combination he	eater:			-			
Annual electricity consumption AEC 1504 kWh Annual fuel consumption AFC na GJ Specific precautions and end of life information: The packaging must be deposited at a recycling station or with the installation engineer for correct waste management. At the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. 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}	112	%
AECISU4KWnAnnual 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 the end of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. It is of great importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of. Disposing of the product as household waste is not permitted.	Daily electricity consumption	Qelec	6,835	kWh	Daily fuel consumption	Qfuel	na	kWh
Specific precautions and end of life information: bisposing 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 Disposing of 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	1504	kWh	Annual fuel consumption	AFC	na	GJ
Contact details Enertech AB, Box 309, SE-341 26 Liungby Tel +46 372 88000 www.ctc.se 180705			end of the produc great importance	t's life cycle, it n that the product	nust be sent correctly to a waste station or resel 's refrigerant, compressor oil and electrical/elec	ler offering a se	rvice of that type	e. It is of
	Contact details	Enertech AB. Bo	ox 309, SE-341 20	6 Ljungby Tel	+46 372 88000 www.ctc.se			180705

Information for heat pump space heaters and heat pump combination heaters Average climate and Medium temperature (55)

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622N	CTC EcoAir 622M + CTC EcoZenith i550 230/400V						
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:	139	%				
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++	-				
Heat pump combination heater:	Yes							

Rated heat output (*) Declared capacity for heating for and outdoor temperature T j	Prated	9	kW	Seasonal space heating energy	n	125	
	part load at i			efficiency	η _s	135	%
		ndoor temperat	ure 20 °C	Declared coefficient of performan part load at indoor temperature 2			
T j = – 7 °C	Pdh	6,9	kW	T j = – 7 °C	COPd	2,13] -
T j = + 2 °C	Pdh	4,4	kW	T j = +2 °C	COPd	3,48] -
T j = + 7 °C	Pdh	4,6	kW	T j = +7 °C	COPd	4,45	
T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	5,92	-
T j = bivalent temperature	Pdh	7,9	kW	T j = bivalent temperature	COPd	1,74	-
T j = operation limit temperature	Pdh	7,9	kW	T j = operation limit temperature	COPd	1,74	-
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 ot	her 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	l l			-
Standby mode	P _{SB}	0,014	kW	Type of energy input		Electric	
, Crankcase heater mode	Р _{ск}	0,000	kW				
Other items	· CK	0,000		۰ <u>۱</u>			
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	5079	kWh	flow rate, outdoor heat exchanger			
For heat pump combination heat	ter:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	98	%
Daily electricity consumption	Qelec	7,816	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1719	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 resell '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 En	nertech AB, Bo	x 309, SE-341 26	6 Ljungby Tel	+46 372 88000 www.ctc.se			180705

Information for heat pump space heaters and heat pump combination heaters **Average climate and Low temperature (35)**

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 622	CTC EcoAir 622M + CTC EcoZenith i550 230/400V					
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

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	n _s	164	%
Declared capacity for heating for outdoor temperature T j	r part load at ii	ndoor temperat	ure 20 °C and	Declared coefficient of performan load at indoor temperature 20 °C			
T j = – 7 °C	Pdh	7,6	kW	T j = – 7 °C	COPd	2,96] -
T j = + 2 °C	Pdh	4,4	kW	T j = +2 °C	COPd	4,21	-
T j = + 7 °C	Pdh	4,8	kW	T j = +7 °C	COPd	5,05	-
T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	6,27	-
T j = bivalent temperature	Pdh	8,5	kW	T j = bivalent temperature	COPd	2,54	-
T j = operation limit temperature	Pdh	8,5	kW	T j = operation limit temperature	COPd	2,54	-
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 ot	her 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	-	6200	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	4204	kWh	flow rate, outdoor heat exchanger			
For heat pump combination heat	ter:			· · · ·			-
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	98	%
Daily electricity consumption	Qelec	7,816	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1719	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the productimportance that t	t's life cycle, it mus he product's refrige	a recycling station or with the installation eng st be sent correctly to a waste station or resell erant, compressor oil and electrical/electronic Id waste is not permitted.	er offering a serv	vice of that type.	. It is of great
Contact details Er	nertech AB. Bo	x 309, SE-341 26	6 Liungby Tel +	46 372 88000 www.ctc.se			180705

Information for heat pump space heaters and heat pump combination heaters **Cold climate and Medium temperature (55)**





Model(s):	CTC EcoAir 622N	CTC EcoAir 622M + CTC EcoZenith i550 230/400V					
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:	126	%			
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	12	kW	Seasonal space heating energy efficiency	η _s	122	%
Declared capacity for heating fo and outdoor temperature T j	or part load at i	ndoor temperat	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	2,57	- 1
T j = + 2 °C	Pdh	4,4	kW	T j = +2 °C	COPd	4,14	-
T j = + 7 °C	Pdh	4,6	kW	T j = +7 °C	COPd	4,94	-
T j = + 12 °C	Pdh	5,5	kW	T j = +12 °C	COPd	6,19	-
T j = bivalent temperature	Pdh	9,7	kW	T j = bivalent temperature	COPd	1,26	-
T j = operation limit temperature	Pdh	4,1	kW	T j = operation limit temperature	COPd	1,30	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	8,6	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,56	-
Bivalent temperature	T _{biv}	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	ther than activ	ve mode		Supplementary heater			_
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	11,5	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	-	6200	m3/h
L Sound power level, indoors/ outdoors	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	9055	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}	82	%
Daily electricity consumption	Qelec	9,257	kWh	Daily fuel consumption	Qfuel	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'r refrigerant, compressor oil and electrical/elec hold waste is not permitted.	er offering a ser	vice of that type	. It is of
Contact details E		ox 309, SE-341 26		+46 372 88000 www.ctc.se			180705

Information for heat pump space heaters and heat pump combination heaters Cold climate and Low temperature (35)

Enertech AB 341 26 Ljungby



Model(s): Air-to-water heat pump: Water-to-water heat pump:		CTC EcoAir 62	2M + CTC Eco	Zenith i550 230/400V			
Water-to-water heat pump:		Yes		Energy efficiency class:		-	
		No		Controller class:	VI	-	
Brine-to-water heat pump:		No		Controller contribution:	4	%	
ow-temperature heat pump:		No		Package efficiency:	146	%	
Equipped with a supplementary	/ heater:	Yes		Package efficiency class:			
Heat pump combination heater	:	Yes					
				or low-temperature heat pumps. Fo	or low- tempe	rature heat p	umps,
parameters shall be declared fo							
Item	Symbol	Value	Unit	ltem	Symbol	Value	Unit
Rated heat output (*)	Prated	13	kW	Seasonal space heating energy efficiency	η _s	142	%
Declared capacity for heating fo outdoor temperature T j	or part load at in	door temperat	ure 20 °C and	Declared coefficient of performa load at indoor temperature 20 °			
ſj=−7°C	Pdh	7,4	kW	T j = – 7 °C	COPd	3,08	1 -
j = + 2 °C	Pdh	4,6	kW	T j = +2 °C	COPd	4,65	1 -
ī j = + 7 °C	Pdh	4,8	kW	T j = +7 °C	COPd	5,70] -
j = + 12 °C	Pdh	5,6	kW	T j = +12 °C	COPd	6,62	-
j = bivalent temperature	Pdh	10,9	kW	T j = bivalent temperature	COPd	1,64] _
j = operation limit emperature	Pdh	4,7	kW	T j = operation limit temperature	COPd	1,63	-
for air-to-water heat pumps: j = – 15 °C (if TOL < – 20 °C)	Pdh	10,0	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,96	-
Bivalent temperature	T _{biv}	-17	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval capacity for neating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes o	other than active	mode		Supplementary heater			-
Off mode	P _{OFF}	0,014	kW	Rated heat output (*)	Psup	12,5	kW
hermostat-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	-	6200	m3/h
Sound power level, indoors/	L _{WA}	na/55	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	8523	kWh	flow rate, outdoor heat exchanger			
or heat pump combination hea		1		Tevenunger			
Declared load profile	XL	Efficiency class	NA	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 importance that t	t's life cycle, it mu	a recycling station or with the installation en st be sent correctly to a waste station or rese erant, compressor oil and electrical/electroni s not permitted.	ller offering a ser	vice of that type.	It is of great