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

Enertech AB



Warm climate and Medium	n temperature				341 26 Lju	ingby	
Model(s):		CTC EcoAir 41	10 + CTC EcoL	ogic			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	149	%	
Equipped with a supplementa	ry heater:	No		Package efficiency class:		-	
Heat pump combination heate Parameters shall be declared f parameters shall be declared f	er: for medium-temp for low-temperatu	No erature applic ure applicatior	ation, except	for low-temperature heat pumps. F	or low- temp	erature heat	pumps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	145	%
Declared capacity for heating for part load at indoor temperature 20 $^{\circ}\mathrm{C}$ and outdoor temperature T j				Declared coefficient of performa part load at indoor temperature	ance or prima 20 °C and ou	ary energy ra Itdoor tempe	tio for erature T j
T j = – 7 °C	Pdh	na	kW	T j = − 7 °C	COPd	na] -
T j = + 2 °C	Pdh	8,0	kW	T j = +2 °C	COPd	2,62	
T j = + 7 °C	Pdh	10,6	kW	T j = +7 °C	COPd	3,39	
J = +12 °C	Pdh	13,1	kW	J = +12 °C	COPd	4,69	
T j = bivalent temperature	Pdh	8,3	kW	T j = bivalent temperature	COPd	2,76	-
T j = operation limit temperature	Pdh	8,1	kW	T j = operation limit temperature	COPd	2,40	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode	1	Supplementary heater		r	7
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	Р _{то}	0,013	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW	-			
Other items Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3227	kWh	now rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:			exenanger			<u> </u>
Declared load profile		na		Water heating energy efficiency	$\boldsymbol{\eta}_{wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		The packaging mi end of the production importance that the Disposing of the	ust be deposited ct's life cycle, it m the product's refr product as house	at a recycling station or with the installation er nust be sent correctly to a waste station or rese igerant, compressor oil and electrical/electron hold waste is not permitted	ngineer for correce eller offering a se ic equipment are	ct waste manage rvice of that type properly dispos	ment. At the e. t is of great ed of.

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



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Model(s):		CTC EcoAir 4	10 + CTC Ecol	ogic			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	193	%	
Equipped with a supplementa	ry heater:	No		Package efficiency class:		-	
Heat pump combination heate	er:	No					
Parameters shall be declared f	or medium-temp	erature applic	ation, except	for low-temperature heat pumps. For	or low- tempe	erature heat	pumps,
parameters shall be declared f	for low-temperatu	ire application	1. 				
Item	Symbol	Value	Unit		Symbol	Value	Unit
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η _s	189	%
Declared capacity for heating for part load at indoor temperature 20 $^\circ C$ and outdoor temperature T j				Declared coefficient of performa part load at indoor temperature	ance or prima 20 °C and ou	ry energy rat tdoor tempe	tio for rature T j
T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na	- [
T j = + 2 °C	Pdh	8,9	kW	T j = +2 °C	COPd	3,72] -
T j = + 7 °C	Pdh	11,6	kW	T j = +7 °C	COPd	4,84	- 1
T j = + 12 °C	Pdh	13,9	kW	T j = +12 °C	COPd	6,07	- 1
T j = bivalent temperature	Pdh	9,1	kW	T j = bivalent temperature	COPd	3,83	-
T j = operation limit temperature	Pdh	9,3	kW	T j = operation limit temperature	COPd	3,87	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode	_	Supplementary heater			_
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,7	kW
Thermostat-off mode	Р _{то}	0,041	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2734	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		The packaging m end of the produ importance that Disposing of the	ust be deposited Ict's life cycle, it n the product's refi product as house	at a recycling station or with the installation er nust be sent correctly to a waste station or rese rigerant, compressor oil and electrical/electron shold waste is not permitted.	ngineer for correc eller offering a sen ic equipment are	t waste manage vice of that type properly dispose	ment. At the e. t is of great ed of.
Contact details	Enertech AB, Box	309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			181001

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

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 410 + CTC EcoLogic					
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-		
Water-to-water heat pump:	No	Controller class:	VII	-		
Brine-to-water heat pump:	No	Controller contribution:	3,5	%		
Low-temperature heat pump:	No	Package efficiency:	125	%		
Equipped with a supplementary heater:	No	Package efficiency class:	A++	-		
Heat pump combination heater:	No					

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	127	%
Declared capacity for heating	for part load at in	door tempera	ture 20 °C	Declared coefficient of performance or primary energy ratio for			
and outdoor temperature T j	·			part load at indoor temperature	, 20 °C and ou	itdoor tempe	rature T j
T j = – 7 °C	Pdh	7,1	kW	T j = − 7 °C	COPd	2,35	-
T j = + 2 °C	Pdh	8,6	kW	T j = +2 °C	COPd	3,17	-
T j = + 7 °C	Pdh	11,4	kW	T j = +7 °C	COPd	4,29	-
T j = + 12 °C	Pdh	13,4	kW	T j = +12 °C	COPd	5,23	-
T j = bivalent temperature	Pdh	7,1	kW	T j = bivalent temperature	COPd	2,35	-
T j = operation limit temperature	Pdh	6,4	kW	T j = operation limit temperature	COPd	2,04	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	N/A	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	N/A	-
Bivalent temperature	T _{biv}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	N/A	kW	Cycling interval efficiency	СОРсус	N/A	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	e mode	_	Supplementary heater			_
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,1	kW
Thermostat-off mode	Р _{то}	0,018	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Рск	0,000	kW				
Other items		,					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	N/A /58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5403	kWh	flow rate, outdoor heat exchanger	-	N/A	m3/h
For heat pump combination h	eater:						
Declared load profile		N/A		Water heating energy efficiency	η_{wh}	N/A	%
Daily electricity consumption	Qelec	N/A	kWh	Daily fuel consumption	Qfuel	N/A	kWh
Annual electricity consumption	AEC	N/A	kWh	Annual fuel consumption	AFC	N/A	GJ
Specific precautions and end of life information:		The packaging m end of the produ importance that Disposing of the	ust be deposited ct's life cycle, it m the product's refr product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic hold waste is not permitted.	gineer for correc ler offering a sei c equipment are	t waste manager rvice of that type properly dispose	nent. At the . t is of great d of.
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Information for heat pump space heaters and heat pump combination heaters Average climate and Low temperature

Enertech AB



Average climate and Low to	emperature				341 26 Lju	ingby	
Model(s):		CTC EcoAir 4	10 + CTC EcoL	ogic			
Air-to-water heat pump:		Yes		Energy efficiency class:	A++	-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	158	%	
Equipped with a supplementa	ry heater:	No		Package efficiency class:	A++	-	
Heat pump combination heate	er:	No					
Parameters shall be declared f	or medium-temp	perature applic	ation, except	for low-temperature heat pumps. For	or low- tempe	erature hea	at pumps,
parameters shall be declared f	or low-temperat	ure applicatior	۱.				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	n _s	154	%
Declared capacity for heating for part load at indoor temperature 20 $^{\circ}\mathrm{C}$ and outdoor temperature T j				Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = − 7 °C	Pdh	7,4	kW	T j = – 7 °C	COPd	3,25	-
T j = + 2 °C	Pdh	9,0	kW	T j = +2 °C	COPd	3,94	-
T j = + 7 °C	Pdh	11,7	kW	T j = +7 °C	COPd	5,08	-
T j = + 12 °C	Pdh	14,0	kW	T j = +12 °C	COPd	6,23	-
T j = bivalent temperature	Pdh	7,8	kW	T j = bivalent temperature	COPd	3,42	-
T j = operation limit temperature	Pdh	6,1	kW	T j = operation limit temperature	COPd	2,97	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-5	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	e mode	-	Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,9	kW
Thermostat-off mode	Р _{то}	0,041	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items		•					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5063	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
		The packaging m	ust be deposited	at a recycling station or with the installation er	ngineer for correc	t waste mana	gement. At the

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

 Of life information:
 Disposing of the product as household waste is not permitted.

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

Enertech AB



Cold climate and Medium to	emperature				341 26 Lju	ingby	
Model(s):		CTC EcoAir 4	10 + CTC Ecol	ogic			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	113	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heate	r:	No					
Parameters shall be declared for	or medium-temp	erature applic	ation, except	for low-temperature heat pumps. F	or low- tempe	erature heat	t pumps,
parameters shall be declared for	or low-temperat	ure application	1. 				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	7	kW	efficiency	n _s	109	%
Declared capacity for heating for and outdoor temperature T j	or part load at ir	ndoor tempera	ture 20 °C	Declared coefficient of performation part load at indoor temperature	ance or prima 20 °C and ou	ary energy ra Itdoor temp	atio for erature T j
T j = – 7 °C	Pdh	6,9	kW	T j = - 7 °C	COPd	2,56	- [
T j = + 2 °C	Pdh	8,7	kW	T j = +2 °C	COPd	3,28	
T j = + 7 °C	Pdh	11,3	kW	T j = +7 °C	COPd	4,25	
T j = + 12 °C	Pdh	13,4	kW	T j = +12 °C	COPd	5,21	-
T j = bivalent temperature	Pdh	5,5	kW	T j = bivalent temperature	COPd	2,13	-
T j = operation limit temperature	Pdh	3,6	kW	T j = operation limit temperature	COPd	1,50	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	5,1	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,95	-
Bivalent temperature	T _{biv}	-13	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes of	other than active	e mode	-	Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	3,7	kW
Thermostat-off mode	Р _{то}	0,013	kW				·
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{ск}	0,000	kW				
Other items		÷					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	6381	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:					T	-
Declared load profile		na		Water heating energy	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:		The packaging m end of the produ importance that Disposing of the	ust be deposited ict's life cycle, it n the product's refi product as house	at a recycling station or with the installation er nust be sent correctly to a waste station or rese rigerant, compressor oil and electrical/electron shold waste is not permitted.	ngineer for correc eller offering a se ic equipment are	t waste manag rvice of that typ properly dispo	ement. At the be. t is of grea sed of.

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



Cold climate and Low temp	erature				341 26 Ljı	ungby	
Model(s):		CTC EcoAir 42	LO + CTC EcoL	ogic			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	140	%	
Equipped with a supplementa	ry heater:	No		Package efficiency class:		-	
Heat pump combination heate	er:	No					
Parameters shall be declared f	or medium-temp	erature applic	ation, except	for low-temperature heat pumps. F	or low- temp	erature heat	pumps,
parameters shall be declared f	or low-temperati	ure applicatior	۱.				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	7	kW	Seasonal space heating energy efficiency	η _s	136	%
Declared capacity for heating for part load at indoor temperature 20 $^\circ C$ and outdoor temperature T j				Declared coefficient of performa part load at indoor temperature	ance or prima 20 °C and ou	ary energy ra utdoor tempe	tio for erature T j
T j = − 7 °C	Pdh	7,5	kW	T j = − 7 °C	COPd	3,41	7 -
T j = + 2 °C	Pdh	9,1	kW	T j = +2 °C	COPd	4,06	- 1
T j = + 7 °C	Pdh	11,8	kW	T j = +7 °C	COPd	5,21] -
T j = + 12 °C	Pdh	14,0	kW	T j = +12 °C	COPd	6,20	- 1
T j = bivalent temperature	Pdh	5,9	kW	T j = bivalent temperature	COPd	2,95	-
T j = operation limit temperature	Pdh	4,1	kW	T j = operation limit temperature	COPd	2,07	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	5,7	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	2,74	-
Bivalent temperature	T _{biv}	-14	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	3,4	kW
Thermostat-off mode	P _{TO}	0,041	kW				
Standby mode	P _{SB}	0.018	kW	Type of energy input		Electric	
, Crankcase heater mode	Рск	0.000	kW				
Other items	CA	.,			ļ		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5337	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		The packaging m end of the produ importance that Disposing of the	ust be deposited ct's life cycle, it n the product's refi product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or rese rigerant, compressor oil and electrical/electron hold waste is not permitted.	ngineer for corre eller offering a se ic equipment are	ct waste manage rvice of that type properly dispos	ment. At the e. t is of great ed of.
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Information for heat pump space heaters and heat pump combination heaters Warm climate and Medium temperature

Yes

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 410 + CTC EcoZenith i255						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	No	Controller contribution:	3,5	%			
Low-temperature heat pump:	No	Package efficiency:	136	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:		-			

Heat pump combination heater:

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η _s	132	%	
Declared capacity for heating and outdoor temperature T j	for part load at ir	idoor tempera	ture 20 °C	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j				
Ti=-7℃	Pdh	na	kw	$T_{i} = -7^{\circ}C$	COPd	na	I _	
Ti=+2°C	Pdh	8.0	kW	$T_i = +2 °C$	COPd	2 37	-	
T j = + 7 °C	Pdh	10,6	kW	T j = +7 °C	COPd	3,15	-	
T j = + 12 °C	Pdh	13,1	kW	T j = +12 °C	COPd	4,37	-	
T j = bivalent temperature	Pdh	8,6	kW	T j = bivalent temperature	COPd	2,63	-	
T j = operation limit temperature	Pdh	8,1	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}	4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C	
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-	
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C	
Power consumption in modes	other than active	e mode	_	Supplementary heater				
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,0	kW	
Thermostat-off mode	Р _{то}	0,030	kW					
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric		
Crankcase heater mode	Р _{СК}	0,000	kW					
Other items		·						
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h	
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water				
Annual energy consumption	Q _{HE}	3971	kWh	flow rate, outdoor heat exchanger	-	na	m3/h	
For heat pump combination h	eater:							
Declared load profile	L	Efficiency class	na	Water heating energy efficiency	η_{wh}	70	%	
Daily electricity consumption	Qelec	6,622	kWh	Daily fuel consumption	Qfuel	NA	kWh	
Annual electricity consumption	AEC	1457	kWh	Annual fuel consumption	AFC	NA	GJ	
Specific precautions and end of life information:		The packaging mi end of the produ importance that Disposing of the	ust be deposited ct's life cycle, it m the product's refr product as house	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic hold waste is not permitted.	gineer for correct ler offering a se equipment are	ct waste manager rvice of that type properly dispose	nent. At the t is of great d of.	
Contact details	Enertech AB, Box	x 309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			200701	

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

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 410 + CTC EcoZenith i255						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	Νο	Controller class:	VII	-			
Brine-to-water heat pump:	No	Controller contribution:	3,5	%			
Low-temperature heat pump:	Νο	Package efficiency:	166	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:		-			
Heat pump combination heater:	Yes						

Heat pump combination heater:

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11	kW	Seasonal space heating energy efficiency	η _s	162	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	ary energy rat itdoor tempe	io for rature T j
T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na	-
T j = + 2 °C	Pdh	8,9	kW	T j = +2 °C	COPd	3,26	-
T j = + 7 °C	Pdh	11,6	kW	T j = +7 °C	COPd	4,38	-
T j = + 12 °C	Pdh	13,9	kW	T j = +12 °C	COPd	5,56	-
T j = bivalent temperature	Pdh	9,3	kW	T j = bivalent temperature	COPd	3,46	-
T j = operation limit temperature	Pdh	9,3	kW	T j = operation limit temperature	COPd	3,41	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,94	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	e mode		Supplementary heater			_
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,0	kW
Thermostat-off mode	Р _{то}	0,096	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3512	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination h	eater:						
Declared load profile	L	Efficiency class	na	Water heating energy efficiency	η_{wh}	70	%
Daily electricity consumption	Qelec	6,622	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1457	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mu end of the produc importance that t Disposing of the p	ust be deposited ct's life cycle, it m he product's refr product as house	at a recycling station or with the installation eng nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic hold waste is not permitted.	gineer for correc ler offering a se : equipment are	ct waste manager rvice of that type properly dispose	nent. At the . t is of great d of.
Contact details	Enertech AB, Box	(309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			200701

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

Yes

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 410 + CTC EcoZenith i255						
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-			
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	No	Controller contribution:	3,5	%			
Low-temperature heat pump:	No	Package efficiency:	135	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:	A++	-			

Heat pump combination heater:

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	131	%
Declared capacity for heating and outdoor temperature T j	for part load at ir	ndoor temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	ary energy rat Itdoor tempe	io for rature T j
T j = – 7 °C	Pdh	7,7	kW	T j = – 7 °C	COPd	2,59	- 1
T j = + 2 °C	Pdh	9,6	kW	T j = +2 °C	COPd	3,47	-
T j = + 7 °C	Pdh	11,8	kW	T j = +7 °C	COPd	4,16	-
T j = + 12 °C	Pdh	13,6	kW	T j = +12 °C	COPd	4,89	-
T j = bivalent temperature	Pdh	8,3	kW	T j = bivalent temperature	COPd	2,92	-
T j = operation limit temperature	Pdh	6,9	kW	T j = operation limit temperature	COPd	2,24	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	e mode	-	Supplementary heater			_
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,6	kW
Thermostat-off mode	Р _{то}	0,030	kW				
Standby mode	P _{SB}	0,018	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	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5826	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination h	eater:						
Declared load profile	L	Efficiency class	В	Water heating energy efficiency	η_{wh}	59	%
Daily electricity consumption	Qelec	7,969	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1753	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mu end of the produ- importance that the Disposing of the p	ust be deposited ct's life cycle, it n the product's refi product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or resel rigerant, compressor oil and electrical/electronic shold waste is not permitted.	gineer for correc ler offering a se c equipment are	ct waste manager rvice of that type properly dispose	nent. At the . t is of great d of.
Contact details	Enertech AB, Bo	x 309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			200701

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



Average climate and Low t	emperature				341 26 Lji	ungby 📘		
Model(s):		CTC EcoAir 41	LO + CTC Ecoz	Zenith i255				
Air-to-water heat pump:		Yes		Energy efficiency class:	A+	-		
Water-to-water heat pump:		No		Controller class:	VII	-		
Brine-to-water heat pump:		No		Controller contribution:	3,5	%		
Low-temperature heat pump:		No		Package efficiency:	134	%		
Equipped with a supplementa	ry heater:	Yes		Package efficiency class:	A+	-		
Heat pump combination heate Parameters shall be declared t	er: for medium-temp	Yes perature application	ation, except	for low-temperature heat pumps. F	or low- temp	erature heat	pumps,	
Item	Symbol	Ure application Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η _s	130	%	
Declared capacity for heating and outdoor temperature T j	for part load at ir	ndoor temperat	ture 20 °C	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j				
Ti=−7 °C	Pdh	7.4	kW	Ti=−7°C	COPd	2.77	7	
T j = + 2 °C	Pdh	9.0	kW	T j = +2 °C	COPd	3.43		
T j = + 7 °C	Pdh	11,7	kW	T j = +7 °C	COPd	4,57	- 1	
T j = + 12 °C	Pdh	14,0	kW	T j = +12 °C	COPd	5,69	1 -	
T j = bivalent temperature	Pdh	14,0	kW	T j = bivalent temperature	COPd	3,01	-	
T j = operation limit temperature	Pdh	7,9	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}	-4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C	
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na] -	
Degradation co-efficient	Cdh	0,94	-	Heating water operating limit temperature	WTOL	55	°C	
Power consumption in modes	other than active	e mode		Supplementary heater			<u> </u>	
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	3,7	kW	
Thermostat-off mode	Ρτο	0.096	kW		,			
Standby mode	Psp	0.018	kW	Type of energy input		Electric		
Crankcase heater mode	Рск	0.000	kW					
Other items	- Ch				1			
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h	
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water				
Annual energy consumption	Q _{HE}	6399	kWh	flow rate, outdoor heat exchanger	-	na	m3/h	
For heat pump combination h	eater:							
Declared load profile	L	Efficiency class	В	Water heating energy efficiency	η_{wh}	59	%	
Daily electricity consumption	Qelec	7,969	kWh	Daily fuel consumption	Qfuel	NA	kWh	
Annual electricity consumption	AEC	1753	kWh	Annual fuel consumption	AFC	NA	GJ	
Specific precautions and end of life information:		The packaging mu end of the produc importance that t Disposing of the p	ust be deposited ct's life cycle, it n the product's ref product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or rese rigerant, compressor oil and electrical/electron shold waste is not permitted.	ngineer for corre eller offering a se ic equipment are	ct waste manage rvice of that type e properly dispos	ment. At the e. t is of great ed of.	
Contact details	Enertech AB, Bo	x 309, SE-341 2	6 Ljungby Te	l +46 372 88000 www.ctc.se	2		200701	

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





Model(s):	CTC EcoAir 410 + CTC EcoZenith i255						
Air-to-water heat pump:	Yes	Energy efficiency class:	Energy efficiency class:				
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	No	Controller contribution:	3,5	%			
Low-temperature heat pump:	No	Package efficiency:	100	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:		-			
					-		

 Heat pump combination heater:
 Yes

 Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η _s	96	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door tempera	iture 20 °C	Declared coefficient of performa part load at indoor temperature i	nce or prima 20 °C and ou	ary energy rat utdoor tempe	io for rature T
T j = – 7 °C T i = + 2 °C	Pdh Pdh	6,9 8,7	kW kW	, Τ j = – 7 °C Τ i = +2 °C	COPd COPd	2,31 2.96	-
$T_i = +7 °C$	Pdh	11.3	kW	T i = +7 °C	COPd	3.90	-
T j = + 12 °C	Pdh	13,4	kW	T j = +12 °C	COPd	4,82	-
T j = bivalent temperature	Pdh	6,5	kW	T j = bivalent temperature	COPd	2,18	-
T j = operation limit temperature	Pdh	3,6	kW	T j = operation limit temperature	COPd	1,25	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	5,1	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,67	-
Bivalent temperature	T _{biv}	-9	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	6,3	kW
Thermostat-off mode	P _{TO}	0,030	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	9752	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination h	leater:						
Declared load profile	L	Efficiency class	na	Water heating energy efficiency	η_{wh}	52	%
Daily electricity consumption	Qelec	9,017	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1984	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mu end of the produc great importance Disposing of the p	ust be deposited a ct's life cycle, it mu that the product' product as househ	t a recycling station or with the installation en ust be sent correctly to a waste station or resel s refrigerant, compressor oil and electrical/ele old waste is not permitted.	gineer for correctiler offering a se ctronic equipme	t waste manager rvice of that type nt are properly d	nent. At the . t is of isposed of.
Contact details	Enertech AB, Box	309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			200701

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

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 410 + CTC EcoZenith i255						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	No	Controller class:	VII	-			
Brine-to-water heat pump:	No	Controller contribution:	3,5	%			
Low-temperature heat pump:	No	Package efficiency:	116	%			
Equipped with a supplementary heater:	Yes	Package efficiency class:		-			

 Heat pump combination heater:
 Yes

 Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps,

 parameters shall be declared for low-temperature application.

ltem	Symbol	Value	Unit	ltem	Symbol	Value	Unit
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η _s	112	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door tempera	ture 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	ry energy rat tdoor tempe	io for rature T j
T j = – 7 °C	Pdh	7,5	kW	T j = – 7 °C	COPd	2,92	-
T j = + 2 °C	Pdh	9,1	kW	T j = +2 °C	COPd	3,54	-
T j = + 7 °C	Pdh	11,8	kW	T j = +7 °C	COPd	4,68	-
T j = + 12 °C	Pdh	14,0	kW	T j = +12 °C	COPd	5,67	-
T j = bivalent temperature	Pdh	6,8	kW	T j = bivalent temperature	COPd	2,73	-
T j = operation limit temperature	Pdh	4,1	kW	T j = operation limit temperature	COPd	1,61	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	5,7	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	2,24	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,94	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode	_	Supplementary heater			_
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	5,9	kW
Thermostat-off mode	Р _{то}	0,096	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{ск}	0,000	kW				
Other items							_
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	8586	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination h	eater:	-	-				-
Declared load profile	L	Efficiency class	na	Water heating energy efficiency	η_{wh}	52	%
Daily electricity consumption	Qelec	9,017	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1984	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging m end of the produ importance that Disposing of the	ust be deposited a ct's life cycle, it m the product's refr product as house	at a recycling station or with the installation en ust be sent correctly to a waste station or resel igerant, compressor oil and electrical/electronic hold waste is not permitted.	gineer for correc ller offering a sei c equipment are	t waste manager vice of that type properly dispose	nent. At the . t is of great d of.
Contact details	Enertech AB, Box	309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			200701

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



Model(s):	CTC EcoAir 410 + CTC Eco			ith i555			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	136	%	
Equipped with a supplementa	ry heater:	Yes		Package efficiency class:		-	
Heat pump combination heat	er:	Yes					
Parameters shall be declared	for medium-temp	erature applicat	ion, except for	low-temperature heat pumps. For	low- tempera	ature heat pur	nps,
parameters shall be declared	for low-temperatu	ire application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	132	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performa part load at indoor temperature	ance or prima 20 °C and ou	ary energy rati utdoor temper	o for ature T j
T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na	-
T j = + 2 °C	Pdh	8,0	kW	T j = +2 °C	COPd	2,37	-
T j = +7 °C	Pdh	10,6	kW	T j = +7 °C	COPd	3,11	-
T j = + 12 °C	Pdh	13,1	kW	T j = +12 °C	COPd	4,34	-
T j = bivalent temperature	Pdh	8,3	kW	T j = bivalent temperature	COPd	2,50	-
T j = operation limit temperature	Pdh	8,1	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}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode	-	Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	Р _{то}	0,024	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{ск}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3526	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination h	eater:						
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	η_{wh}	85	%
Daily electricity consumption	Qelec	9,006	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1981	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging must end of the product' importance that the of the product as he	t be deposited at a s life cycle, it must e product's refrige pusehold waste is	recycling station or with the installation engin t be sent correctly to a waste station or reselle rant, compressor oil and electrical/electronic en not permitted.	neer for correct v r offering a servi equipment are p	waste managemen ice of that type. t i roperly disposed o	t. At the s of great f. Disposing
Contact details	Enertech AB, Box	309, SE-341 26	Ljungby Tel +4	46 372 88000 www.ctc.se			200701

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



Model(s):		CTC EcoAir 410	0 + CTC EcoZer	ith i555			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	170	%	
Equipped with a supplementa	ry heater:	Yes		Package efficiency class:		-	
Heat pump combination heat	er:	Yes					
Parameters shall be declared	for medium-temp	erature applicat	tion, except fo	r low-temperature heat pumps. For	low- temper	ature heat pu	nps,
parameters shall be declared	for low-temperat	ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η _s	166	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	ary energy rat utdoor temper	o for ature T j
T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na	-
T j = + 2 °C	Pdh	8,9	kW	T j = +2 °C	COPd	4,24	-
T j = + 7 °C	Pdh	11,6	kW	T j = +7 °C	COPd	3,26	-
T j = + 12 °C	Pdh	13,9	kW	T j = +12 °C	COPd	4,35	-
T j = bivalent temperature	Pdh	9,1	kW	T j = bivalent temperature	COPd	5,55	-
T j = operation limit temperature	Pdh	9,3	kW	T j = operation limit temperature	COPd	3,36	-
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	3,41	-
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	e mode	-	Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	Р _{то}	0,073	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3099	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination h	eater:	•	•			-	-
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	η_{wh}	85	%
Daily electricity consumption	Qelec	9,006	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1981	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging mus end of the product importance that th of the product as h	st be deposited at a s's life cycle, it mus he product's refrige household waste is	a recycling station or with the installation engin t be sent correctly to a waste station or reselle rrant, compressor oil and electrical/electronic e not permitted.	neer for correct v r offering a servi equipment are p	waste managemer ice of that type. t roperly disposed o	nt. At the s of great of. Disposing
Contact details	Enertech AB, Bo	x 309, SE-341 26	Ljungby Tel +4	46 372 88000 www.ctc.se			200701

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



Model(s):		CTC EcoAir 410	+ CTC EcoZer	hith i555			
Air-to-water heat pump:		Yes		Energy efficiency class:	A+	-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	114	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:	A+	-	,
Heat pump combination heate	r:	Yes					
Parameters shall be declared for	or medium-temp	erature applicati	ion, except fo	r low-temperature heat pumps. For	low- tempera	ature heat pur	nps,
parameters shall be declared f	or low-temperatu	ire application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	110	%
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature T j				Declared coefficient of performa part load at indoor temperature	ince or prima 20 °C and ou	ary energy rati Itdoor temper	o for ature T j
T j = – 7 °C	Pdh	6,6	kW	T j = – 7 °C	COPd	2,05	-
T j = + 2 °C	Pdh	8,9	kW	T j = +2 °C	COPd	2,97	-
T j = + 7 °C	Pdh	10,8	kW	T j = +7 °C	COPd	3,55	-
T j = + 12 °C	Pdh	12,6	kW	T j = +12 °C	COPd	4,31	-
T j = bivalent temperature	Pdh	7,0	kW	T j = bivalent temperature	COPd	2,30	-
T j = operation limit temperature	Pdh	5,8	kW	T j = operation limit temperature	COPd	1,71	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode	_	Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	3,7	kW
Thermostat-off mode	Р _{то}	0,024	kW				
Standby mode	P _{SB}	0.018	kW	Type of energy input		Electric	
Crankcase heater mode	Pcr	0,000	kW				
Othor itoms		0,000		┨ ┠─────			
				4			İ
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	6901	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	η_{wh}	89	%
Daily electricity consumption	Qelec	9,230	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2031	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end		The packaging must end of the product'	be deposited at a slife cycle, it mus	a recycling station or with the installation engir t be sent correctly to a waste station or reselle	neer for correct v r offering a servi	vaste managemen ce of that type. t i	t. At the s of great
of life information:		importance that the of the product as he	e product's refrige ousehold waste is	rant, compressor oil and electrical/electronic e not permitted.	equipment are pr	roperly disposed o	f. Disposing
Contact details	Enertech AB, Box	309, SE-341 26	Ljungby Tel +4	46 372 88000 www.ctc.se			200701

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



Model(s):		CTC EcoAir 410	+ CTC EcoZer	hith i555				
Air-to-water heat pump:		Yes		Energy efficiency class:	A+	-		
Water-to-water heat pump:		No		Controller class:	VII	-		
Brine-to-water heat pump:		No		Controller contribution:	3,5	%		
Low-temperature heat pump:		No		Package efficiency:	136	%		
Equipped with a supplementar	ry heater:	Yes		Package efficiency class:	A+	-		
Heat pump combination heate	er:	Yes		5 ,				
Parameters shall be declared f	or medium-tempe	erature applicat	ion, except fo	r low-temperature heat pumps. For	low- tempera	ature heat pur	nps,	
parameters shall be declared f	or low-temperatu	re application.						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	n _s	132	%	
Declared capacity for heating to outdoor temperature T j	for part load at ind	door temperatu	re 20 °C and	Declared coefficient of performa part load at indoor temperature	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j			
T j = – 7 °C	Pdh	7,4	kW	T j = – 7 °C	COPd	2,77	-	
T j = + 2 °C	Pdh	9,0	kW	T j = +2 °C	COPd	3,43	-	
T j = + 7 °C	Pdh	11,7	kW	T j = +7 °C	COPd	4,57	-	
T j = + 12 °C	Pdh	14,0	kW	T j = +12 °C	COPd	5,69	-	
T j = bivalent temperature	Pdh	7,9	kW	T j = bivalent temperature	COPd	3,01	-	
T j = operation limit temperature	Pdh	6,7	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}	-4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C	
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-	
Degradation co-efficient	Cdh	0,95	-	Heating water operating limit temperature	WTOL	55	°C	
Power consumption in modes	other than active	mode		Supplementary heater			l l	
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	3,7	kW	
Thermostat-off mode	Р _{то}	0,073	kW					
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric		
Crankcase heater mode	Р _{СК}	0,000	kW					
Other items		•			•			
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h	
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water				
Annual energy consumption	Q _{HE}	6320	kWh	flow rate, outdoor heat exchanger	-	na	m3/h	
For heat pump combination he	eater:							
Declared load profile	XL	Efficiency class	Α	Water heating energy	η_{wh}	89	%	
Daily electricity consumption	Qelec	9,230	kWh	Daily fuel consumption	Qfuel	NA	kWh	
Annual electricity consumption	AEC	2031	kWh	Annual fuel consumption	AFC	NA	GJ	
Specific precautions and end of life information:		The packaging must end of the product' importance that the of the product as he	be deposited at a s life cycle, it mus product's refrige pusehold waste is	a recycling station or with the installation engin t be sent correctly to a waste station or reselle rant, compressor oil and electrical/electronic en not permitted.	neer for correct v r offering a servi equipment are pr	vaste managemen ce of that type. t i operly disposed o	t. At the s of great f. Disposing	
Contact details	Enertech AB, Box	309, SE-341 26	Ljungby Tel +4	46 372 88000 www.ctc.se			200701	

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



Model(s):		CTC EcoAir 410	+ CTC EcoZen	ith i555			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		No		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	101	%	
Equipped with a supplementa	ry heater:	Yes		Package efficiency class:		-	
Heat pump combination heate	er:	Yes					<u> </u>
Parameters shall be declared	or medium-temp	erature applicat	ion, except for	r low-temperature heat pumps. For	low- tempera	ature heat pur	nps,
parameters shall be declared	for low-temperatu	ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	97	%
Declared capacity for heating for part load at indoor temperature 20 $^\circ C$ and outdoor temperature T j				Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	ary energy rati utdoor temper	o for ature T j
T j = – 7 °C	Pdh	6,9	kW	T j = – 7 °C	COPd	2,30	-
T j = + 2 °C	Pdh	8,7	kW	T j = +2 °C	COPd	2,95	-
j = + / C	Pdh	11,3	kW	I J = +7 °C	COPd	3,89	-
T j = + 12 °C	Pdh	13,4	kW	T j = +12 °C	COPd	4,81	-
T j = bivalent temperature	Pdh	6,2	kW	T j = bivalent temperature	COPd	2,10	-
T j = operation limit temperature	Pdh	3,6	kW	T j = operation limit temperature	COPd	1,25	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	5,1	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,67	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode	•	Supplementary heater			i
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	5,6	kW
Thermostat-off mode	Р _{то}	0,024	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items			•		•		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	9015	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination h	eater:						
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	η_{wh}	66	%
Daily electricity consumption	Qelec	11,558	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2543	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		The packaging must end of the product ² importance that the of the product as h	t be deposited at a s life cycle, it mus e product's refrige ousehold waste is	a recycling station or with the installation engin t be sent correctly to a waste station or reselle rant, compressor oil and electrical/electronic on not permitted.	neer for correct v r offering a servi equipment are pi	waste managemen ice of that type. t i roperly disposed o	t. At the s of great f. Disposing
Contact details	Enertech AB, Box	309, SE-341 26	Ljungby Tel +4	46 372 88000 www.ctc.se			200701

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



Madal(c):				ith ifff	,	<u> </u>		
		CTC EcoAir 410 + CTC EcoZe		lith i555				
Air-to-water heat pump:		Yes		Energy efficiency class:		-		
Water-to-water heat pump:		NO		Controller class:	VII	-		
Brine-to-water heat pump:		No		Controller contribution:	3,5	%		
Low-temperature heat pump:		No		Package efficiency: 117 %				
Equipped with a supplementa	ry heater:	Yes		Package efficiency class: -				
Heat pump combination heat	er:	Yes						
Parameters shall be declared t	for medium-temp	erature applicat	ion, except foi	r low-temperature heat pumps. For	iow- tempera	ature heat pui	nps,	
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	113	%	
Declared capacity for heating outdoor temperature T j	for part load at in	door temperatu	re 20 °C and	Declared coefficient of performa part load at indoor temperature	ance or prima 20 °C and ou	iry energy rati itdoor temper	o for ature⊤j	
T j = – 7 °C	Pdh	7,5	kW	T j = – 7 °C	COPd	2,91	-	
T j = + 2 °C	Pdh 	9,1	kW	T j = +2 °C	COPd	3,54	-	
T j = + 7 °C	Pdh	11,8	kW	T j = +7 °C	COPd	4,67	-	
T j = + 12 °C	Pdh	14,0	kW	T j = +12 °C	COPd	5,67	-	
T j = bivalent temperature	Pdh	6,6	kW	T j = bivalent temperature	COPd	2,65	-	
T j = operation limit temperature	Pdh	4,1	kW	T j = operation limit temperature	COPd	1,61	-	
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	5,7	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	2,24	-	
Bivalent temperature	T _{biv}	-11	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C	
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-	
Degradation co-efficient	Cdh	0,95	-	Heating water operating limit temperature	WTOL	55	°C	
Power consumption in modes	other than active	mode	-	Supplementary heater				
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	5,2	kW	
Thermostat-off mode	Р _{то}	0,073	kW					
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric		
Crankcase heater mode	Рск	0,000	kW					
Other items								
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h	
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water				
Annual energy consumption	Q _{HE}	7894	kWh	flow rate, outdoor heat exchanger	-	na	m3/h	
For heat pump combination h	eater:	-	-			-	· · · · · · · · ·	
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	η_{wh}	66	%	
Daily electricity consumption	Qelec	11,558	kWh	Daily fuel consumption	Qfuel	XL	kWh	
Annual electricity consumption	AEC	2543	kWh	Annual fuel consumption	AFC	XL	GJ	
Specific precautions and end of life information:		The packaging must end of the product ² importance that the of the product as h	t be deposited at a 's life cycle, it mus' e product's refrige ousehold waste is	a recycling station or with the installation engin t be sent correctly to a waste station or reselle rant, compressor oil and electrical/electronic on not permitted.	neer for correct v r offering a servi equipment are pr	vaste managemer ce of that type. t i operly disposed c	it. At the s of great of. Disposing	
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Information for heat pump space heaters and heat pump combination heaters Warm climate and Medium temperature

Enertech AB 341 26 Ljungby



Model(s): CTC EcoAir 410 + CTC Basicstyrning					
Air-to-water heat pump:	Yes	Energy efficiency class:		-	
Water-to-water heat pump:	No	Controller class:	I.	-	
Brine-to-water heat pump:	No	Controller contribution:	1	%	
Low-temperature heat pump:	No	Package efficiency:	146	%	
Equipped with a supplementary heater:	No	Package efficiency class:		-	
Heat pump combination heater:	No				

Heat pump combination heater:

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	145	%
Declared capacity for heating and outdoor temperature T j	for part load at in	idoor tempera	ture 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	iry energy rat tdoor tempe	io for rature T j
T j = − 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na	-
T j = + 2 °C	Pdh	8,0	kW	T j = +2 °C	COPd	2,62	-
T j = + 7 °C	Pdh	10,6	kW	T j = +7 °C	COPd	3,39	-
T j = + 12 °C	Pdh	13,1	kW	T j = +12 °C	COPd	4,69	-
T j = bivalent temperature	Pdh	8,3	kW	T j = bivalent temperature	COPd	2,76	-
T j = operation limit temperature	Pdh	8,1	kW	T j = operation limit temperature	COPd	2,40	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	s other than active	e mode	-	Supplementary heater			_
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	Р _{то}	0,013	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items		•					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3227	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination h	neater:			· · · · ·			
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:		The packaging m end of the produ importance that Disposing of the	ust be deposited a ct's life cycle, it m the product's refr product as house	at a recycling station or with the installation eng ust be sent correctly to a waste station or resel igerant, compressor oil and electrical/electronic hold waste is not permitted.	gineer for correct ler offering a ser c equipment are	t waste manager rvice of that type properly dispose	nent. At the . t is of great d of.
Contact details	Enertech AB, Box	< 309, SE-341 2	6 Ljungby Tel	+46 372 88000 www.ctc.se			181001

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

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 410 + CTC Basicstyrning						
Air-to-water heat pump:	Yes	Energy efficiency class:		-			
Water-to-water heat pump:	Νο	Controller class:	1	-			
Brine-to-water heat pump:	No	Controller contribution:	1	%			
Low-temperature heat pump:	Νο	Package efficiency:	190	%			
Equipped with a supplementary heater:	No	Package efficiency class:		-			
					,		

 Heat pump combination heater:
 No

 Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η _s	189	%
Declared capacity for heating temperature T j	for part load at in	door temperature 20 °C ai	nd outdoor	Declared coefficient of performa load at indoor temperature 20 °C	nce or prima Cand outdoo	ry energy rati r temperature	o for part e T j
T j = – 7 °C	Pdh	na	kW	T j = – 7 °C	COPd	na	1 -
T j = + 2 °C	Pdh	8,9	kW	T j = +2 °C	COPd	3,72	- 1
T j = + 7 °C	Pdh	11,6	kW	T j = +7 °C	COPd	4,84	-
T j = + 12 °C	Pdh	13,9	kW	T j = +12 °C	COPd	6,07	-
T j = bivalent temperature	Pdh	9,1	kW	T j = bivalent temperature	COPd	3,83	-
T j = operation limit temperature	Pdh	9,3	kW	T j = operation limit temperature	COPd	3,87	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,98	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode	_	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	P _{TO}	0,041	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{ск}	0,000	kW				
Other items	_	·					-
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2734	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination h	eater:			<u> </u>			
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	#VÄRDEFEL!	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		The packaging must be deposite product's life cycle, it must be s product's refrigerant, compress is not permitted.	ed at a recycling sta ent correctly to a w or oil and electrical	ation or with the installation engineer for correct vaste station or reseller offering a service of that I/electronic equipment are properly disposed of.	waste managem type. t is of grea Disposing of the	ent. At the end o t importance that product as house	f the t the ehold waste
Contact details	Enertech AB. Bo	x 309. SE-341 26 Liungby T	el +46 372 880	00 www.ctc.se			181001

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

No

Enertech AB 341 26 Ljungby



Model(s):	CTC EcoAir 410 + CTC Basicstyrning					
Air-to-water heat pump:	Yes	Energy efficiency class:	A++	-		
Water-to-water heat pump:	No	Controller class:	T	-		
Brine-to-water heat pump:	No	Controller contribution:	1	%		
Low-temperature heat pump:	No	Package efficiency:	122	%		
Equipped with a supplementary heater:	No	Package efficiency class:	A++	-		

Heat pump combination heater:

Parameters shall be declared for medium-temperature application, except for low-temperature heat pumps. For low- temperature heat pumps, parameters shall be declared for low-temperature application.

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	127	%
Declared capacity for heating and outdoor temperature T j	for part load at ind	door temperat	ture 20 °C	Declared coefficient of performa part load at indoor temperature	nce or prima 20 °C and ou	ary energy rat itdoor tempe	io for rature T j
T j = – 7 °C	Pdh	7,1	kW	T j = − 7 °C	COPd	2,35	- 1
T j = + 2 °C	Pdh	8,6	kW	T j = +2 °C	COPd	3,17	-
T j = + 7 °C	Pdh	11,4	kW	T j = +7 °C	COPd	4,29	-
T j = + 12 °C	Pdh	13,4	kW	T j = +12 °C	COPd	5,23	-
T j = bivalent temperature	Pdh	7,1	kW	T j = bivalent temperature	COPd	2,35	-
T j = operation limit temperature	Pdh	6,4	kW	T j = operation limit temperature	COPd	2,04	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	N/A	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	N/A	-
Bivalent temperature	T _{biv}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	N/A	kW	Cycling interval efficiency	СОРсус	N/A	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,1	kW
Thermostat-off mode	P _{TO}	0,018	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	N/A /58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5826	kWh	flow rate, outdoor heat exchanger	-	N/A	m3/h
For heat pump combination h	eater:						
Declared load profile		N/A		Water heating energy efficiency	η_{wh}	N/A	%
Daily electricity consumption	Qelec	N/A	kWh	Daily fuel consumption	Qfuel	N/A	kWh
Annual electricity consumption	AEC	N/A	kWh	Annual fuel consumption	AFC	N/A	GJ
Specific precautions and end of life information:		The packaging mu end of the produ- importance that to Disposing of the p	ust be deposited a ct's life cycle, it m the product's refr product as housel	at a recycling station or with the installation en iust be sent correctly to a waste station or resel igerant, compressor oil and electrical/electronic hold waste is not permitted.	gineer for correc ler offering a se equipment are	t waste manager rvice of that type properly dispose	nent. At the . t is of great d of.
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Information for heat pump space heaters and heat pump combination heaters Average climate and Low temperature

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Average climate and Low to	emperature				341 26 Lju	ungby	GIG
Model(s):		CTC EcoAir 41	LO + CTC Basi	cstyrning			
Air-to-water heat pump:		Yes		Energy efficiency class:	A++	-	
Water-to-water heat pump:		No		Controller class:	1	-	
Brine-to-water heat pump:		No		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	155	%	
Equipped with a supplementar	ry heater:	No		Package efficiency class:	A++	-	
Heat pump combination heate	er:	No					
Parameters shall be declared f	or medium-temp	erature applic	ation, except	for low-temperature heat pumps. F	or low- temp	erature hea	at pumps,
parameters shall be declared f	or low-temperat	ure applicatior	1.				
Item	Symbol	Value	Unit	ltem	Symbol	Value	Unit
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η _s	154	%
Declared capacity for heating and outdoor temperature T j	for part load at in	door temperat	ture 20 °C	Declared coefficient of perform part load at indoor temperature	ance or prima 20 °C and ou	ary energy utdoor tem	ratio for perature T j
T j = – 7 °C	Pdh	7,4	kW	T j = − 7 °C	COPd	3,25	-
T j = + 2 °C	Pdh	9,0	kW	T j = +2 °C	COPd	3,94	-
T j = + 7 °C	Pdh	11,7	kW	T j = +7 °C	COPd	5,08	-
T j = + 12 °C	Pdh	14,0	kW	T j = +12 °C	COPd	6,23	-
T j = bivalent temperature	Pdh	7,8	kW	T j = bivalent temperature	COPd	3,42	-
T j = operation limit temperature	Pdh	6,1	kW	T j = operation limit temperature	COPd	2,97	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-5	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,9	kW
Thermostat-off mode	P _{TO}	0,022	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items			-				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5063	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		The packaging mu end of the produ- importance that the Disposing of the p	ust be deposited ct's life cycle, it n the product's refu product as house	at a recycling station or with the installation en nust be sent correctly to a waste station or reso rigerant, compressor oil and electrical/electron shold waste is not permitted.	ngineer for corre eller offering a se ic equipment are	ct waste mana rvice of that ty properly disp	gement. At the /pe. t is of great osed of.

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Contact details

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

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Cold climate and Medium t	emperature				341 26 Lju	ingby	
Model(s):		CTC EcoAir 4	LO + CTC Basi	cstyrning			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	1	-	
Brine-to-water heat pump:		No		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	110	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heate	r:	No					
Parameters shall be declared f	or medium-temp	erature applic	ation, except	for low-temperature heat pumps. For	or low- temp	erature heat	pumps,
parameters shall be declared for	or low-temperat	ure application). 		C h. a. l.	Malua	11-14
Item	Symbol	value	Unit	Item	Symbol	value	Unit
Rated heat output (*)	Prated	7	kW	efficiency	η _s	109	%
Declared capacity for heating f and outdoor temperature T j	or part load at in	idoor tempera	ture 20 °C	Declared coefficient of performa part load at indoor temperature	ance or prima 20 °C and ou	ary energy ra Itdoor tempe	tio for erature T j
T j = – 7 °C	Pdh	6,9	kW	T j = – 7 °C	COPd	2,56] -
T j = + 2 °C	Pdh	8,7	kW	T j = +2 °C	COPd	3,28	-
T j = + 7 °C	Pdh	11,3	kW	T j = +7 °C	COPd	4,25	-
T j = + 12 °C	Pdh	13,4	kW	T j = +12 °C	COPd	5,21	-
T j = bivalent temperature	Pdh	5,5	kW	T j = bivalent temperature	COPd	2,13	
T j = operation limit temperature	Pdh	3,6	kW	T j = operation limit temperature	COPd	1,50	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	5,1	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	1,95	-
Bivalent temperature	T _{biv}	-13	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,99	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	e mode		Supplementary heater		r	-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	3,7	kW
Thermostat-off mode	Р _{то}	0,013	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	6381	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:					•	
Declared load profile		na		Water heating energy efficiency	$\boldsymbol{\eta}_{wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		The packaging mi end of the produ importance that Disposing of the	ust be deposited ct's life cycle, it m the product's refi product as house	at a recycling station or with the installation er nust be sent correctly to a waste station or rese rigerant, compressor oil and electrical/electron hold waste is not permitted.	ngineer for correct eller offering a se ic equipment are	t waste manage rvice of that type properly dispos	ement. At the e. t is of great ed of.

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Contact details

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

Enertech AB



Cold climate and Low temp	erature				341 26 Lju	ungby	
Model(s):		CTC EcoAir 4	10 + CTC Basi	cstyrning			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	1	-	
Brine-to-water heat pump:		No		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	137 %		
Equipped with a supplementar	ry heater:	No		Package efficiency class:		-	
Heat pump combination heate	er:	No					
Parameters shall be declared f	or medium-temp	erature applic	ation, except	for low-temperature heat pumps. F	or low- temp	erature hea	it pumps,
parameters shall be declared f	or low-temperat	ure application	า.				
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	7	kW	Seasonal space heating energy efficiency	η _s	136	%
Declared capacity for heating f and outdoor temperature T j	or part load at in	idoor tempera	ture 20 °C	Declared coefficient of performa part load at indoor temperature	ance or prima 20 °C and ou	ary energy r utdoor temp	atio for perature T j
T j = – 7 °C	Pdh	7,5	kW	T j = – 7 °C	COPd	3,41	-
T j = + 2 °C	Pdh	9,1	kW	T j = +2 °C	COPd	4,06] -
T j = + 7 °C	Pdh	11,8	kW	T j = +7 °C	COPd	5,21	-
T j = + 12 °C	Pdh	14,0	kW	T j = +12 °C	COPd	6,20	-
T j = bivalent temperature	Pdh	5,9	kW	T j = bivalent temperature	COPd	2,95	-
T j = operation limit temperature	Pdh	4,1	kW	T j = operation limit temperature	COPd	2,07	-
For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	Pdh	5,7	kW	For air-to-water heat pumps: T j = – 15 °C (if TOL < – 20 °C)	COPd	2,74	-
Bivalent temperature	T _{biv}	-14	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes	other than active	mode	۹.	Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	3,4	kW
Thermostat-off mode	Р _{то}	0,041	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	Р _{СК}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	4100	m3/h
Sound power level, indoors/ outdoors	L _{WA}	na/58	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5337	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	eater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
		The packaging m	ust be deposited	at a recycling station or with the installation er	ngineer for corre	ct waste manag	gement. At the

Specific precautions and endend of the product's life cycle, it must be sent correctly to a waste station or reseller offering a service of that type. t is of great
importance that the product's refrigerant, compressor oil and electrical/electronic equipment are properly disposed of.
Disposing of the product as household waste is not permitted.

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