CTC CombiAir 8M + CTC EcoLogic

Warm climate and Medium temperature

Model(s):



Model(s):		CTC CombiAir	8IVI + CTC ECO	Logic			
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:	184	%	
Equipped with a supplementar	v heater:	No		Package efficiency class:		-	
Heat pump combination heater		No		r delage emerency class.			
			ition, except fo	or low-temperature heat pumps. Fo	r low- tempe	rature heat p	umps,
parameters shall be declared for							,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	η_s	180	%
Declared capacity for heating for outdoor temperature T j	or part load at in	ndoor temperat	ure 20 °C and	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	6,9	kW	T j = +2 °C	COPd	2,43	-
Tj=+7°C	Pdh	5,2	kW	T j = +7 °C	COPd	3,69	-
T j = + 12 °C	Pdh	3,8	kW	T j = +12 °C	COPd	6,50	-
T j = bivalent temperature	Pdh	7,4	kW	T j = bivalent temperature	COPd	2,69	-
T j = operation limit temperature	Pdh	6,9	kW	T j = operation limit temperature	COPd	2,43	-
For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes of	other than active	e mode		Supplementary heater			-
Off mode	P _{OFF}	0,002	kW	Rated heat output (*)	Psup	1,1	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	2333	kWh	flow rate, outdoor heat exchanger	-	iia	וועכווו
For heat pump combination he	ater:						
Declared load profile	na	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the production importance that t	t's life cycle, it mu he product's refrig	a recycling station or with the installation en st be sent correctly to a waste station or rese erant, compressor oil and electrical/electroni old waste is not permitted.	ller offering a serv	vice of that type.	It is of grea
Contact details	Enertech AB. Bo	x 309, SE-341 26	6 Ljungbv Tel +	46 372 88000 www.ctc.se			200331
Contact details	Effect (Cell Ab, bo	X 303, 3L 341 2	b Ljungby ici i	40 37 2 00000 WWW.ctc.3c			20055

CTC CombiAir 8M + CTC EcoLogic

Warm climate and Low temperature

Model(s):



Model(s):		CTC COMBIAN	SIVI + CICECO	DEUGIC				
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:	229	%		
Equipped with a supplementary	, heater	No		Package efficiency class:		-		
Heat pump combination heater		No		Tuckage efficiency class.				
			ition, except fo	or low-temperature heat pumps. Fo	r low- tempe	rature heat n	umps.	
parameters shall be declared for						аса. с пеас р	шро,	
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	η_{s}	225	%	
Declared capacity for heating for outdoor temperature T j	or part load at ir	idoor temperat	ure 20 °C and	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature				
T j = -7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na	-	
T j = + 2 °C	Pdh	6,7	kW	T j = +2 °C	COPd	3,77	-	
Tj=+7°C	Pdh	5,2	kW	T j = +7 °C	COPd	5,11	-	
T j = + 12 °C	Pdh	3,6	kW	T j = +12 °C	COPd	7,29	-	
T j = bivalent temperature	Pdh	7,2	kW	T j = bivalent temperature	COPd	4,05	-	
T j = operation limit temperature	Pdh	6,7	kW	T j = operation limit temperature	COPd	3,77	_	
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	na	-	
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C	
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-	
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	58	°C	
Power consumption in modes of	ther than active	e mode		Supplementary heater		•		
Off mode	P OFF	0,002	kW	Rated heat output (*)	Psup	1,3	kW	
Thermostat-off mode	P _{TO}	0,015	kW			1		
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric		
Crankcase heater mode	P _{CK}	0,030	kW					
Other items	, CK	0,030	NVV					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h	
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h	
Annual energy consumption	Q _{HE}	1879	kWh	flow rate, outdoor heat exchanger			5,11	
For heat pump combination he	ater:							
Declared load profile	na	Efficiency class	na	Water heating energy efficiency	$\eta_{\mbox{\tiny wh}}$	na	%	
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh	
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ	
Specific precautions and end of life information:		end of the productimportance that t	t's life cycle, it mu he product's refrig	t a recycling station or with the installation en ust be sent correctly to a waste station or rese gerant, compressor oil and electrical/electroniol old waste is not permitted.	ller offering a serv	vice of that type.	It is of grea	

Model(s):

Average climate and Medium temperature

CTC CombiAir 8M + CTC EcoLogic



Model(3).		CTC COITIDIAII	0.00 - 0.00 - 0.00	0			
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:	131	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:	A++	-	
Heat pump combination heate	r:	No					
				or low-temperature heat pumps. Fo	or low- tempe	rature heat p	umps,
parameters shall be declared for	•						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	7	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	127	%
Declared capacity for heating foutdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C and	Declared coefficient of performa	-		
T j = - 7 °C	Pdh	6,3	kW	T j = − 7 °C	COPd	1,94	٦.
T j = + 2 °C	Pdh	3,9	kW	T j = +2 °C	COPd	3,11] -
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	4,42] -
T j = + 12 °C	Pdh	3,7	kW	T j = +12 °C	COPd	5,93	-
T j = bivalent temperature	Pdh	6,6	kW	T j = bivalent temperature	COPd	1,83	_
T j = operation limit temperature	Pdh	5,9	kW	T j = operation limit temperature	COPd	1,86	
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-8,6	°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	58	°C
Power consumption in modes	other than activ	e mode		Supplementary heater			_
Off mode	P OFF	0,002	kW	Rated heat output (*)	Psup	1,1	kW
Thermostat-off mode	P _{TO}	0,010	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items					•		
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	4435	kWh	flow rate, outdoor heat exchanger		110	5/11
For heat pump combination he	ater:						
Declared load profile	na	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the produc importance that t	t's life cycle, it mu he product's refrig	t a recycling station or with the installation en ist be sent correctly to a waste station or rese gerant, compressor oil and electrical/electroni old waste is not permitted.	ller offering a serv	vice of that type.	. It is of gre

CTC CombiAir 8M + CTC EcoLogic

Average climate and Low temperature

Model(s):



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:	176	%	
Equipped with a supplementar	ry heater:	No		Package efficiency class:	A+++	-	
Heat pump combination heate	er:	No					
				or low-temperature heat pumps. Fo	or low- tempe	rature heat p	umps,
parameters shall be declared f	or low-temperatu	re application					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	η_s	172	%
Declared capacity for heating foutdoor temperature T j	for part load at in	door temperat	ure 20 °C and	Declared coefficient of performation part load at indoor temperature	•		
T j = - 7 °C	Pdh	7,4	kW	T j = - 7 °C	COPd	2,92] -
T j = + 2 °C	Pdh	4,5	kW	T j = +2 °C	COPd	4,30	_
T j = + 7 °C	Pdh	2,9	kW	T j = +7 °C	COPd	5,42	-
T j = + 12 °C	Pdh	3,5	kW	T j = +12 °C	COPd	7,37	-
T j = bivalent temperature	Pdh	7,4	kW	T j = bivalent temperature	COPd	2,86	-
T j = operation limit temperature	Pdh	6,9	kW	T j = operation limit temperature	COPd	2,67	_
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}	-8	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			-
Off mode	P _{OFF}	0,002	kW	Rated heat output (*)	Psup	1,4	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water		na	m3/h
Annual energy consumption	Q _{HE}	3882	kWh	flow rate, outdoor heat exchanger		IIa	1113/11
For heat pump combination he	eater:						
Declared load profile	na	Efficiency class	na	Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the productimportance that t	ct's life cycle, it mu he product's refrig	a recycling station or with the installation er st be sent correctly to a waste station or rese erant, compressor oil and electrical/electron old waste is not permitted.	eller offering a ser	vice of that type.	It is of great
Contact details	Enertech AB, Box	309. SE-341 26	6 Liungby Tel +	46 372 88000 www.ctc.se			200331

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



Cold cliffiate and Medium to	emperature				341 26 Lju	iiguy 🛌	4
Model(s):		CTC CombiAir	8M + CTC Eco	Logic			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VI	-	
Brine-to-water heat pump:		No		Controller contribution:	4	%	
Low-temperature heat pump:		No		Package efficiency:	112	%	
Equipped with a supplementar	v heater:	No		Package efficiency class:		-	
Heat pump combination heate	•	No					
	or medium-temp	perature applica		or low-temperature heat pumps. Fo	r low- tempe	rature heat p	umps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
				Seasonal space heating energy			
Rated heat output (*)	Prated	10	kW	efficiency	$\eta_{\mathcal{S}}$	108	%
Declared capacity for heating foutdoor temperature T j	or part load at ir	ndoor temperati	ure 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = - 7 °C	Pdh	6,2	kW	T j = - 7 °C	COPd	2,29] -
T j = + 2 °C	Pdh	3,8	kW	T j = +2 °C	COPd	3,43] -
T j = + 7 °C	Pdh	2,7	kW	T j = +7 °C	COPd	4,80	-
T j = + 12 °C	Pdh	3,7	kW	T j = +12 °C	COPd	6,94	
T j = bivalent temperature	Pdh	6,7	kW	T j = bivalent temperature	COPd	2,05	-
T j = operation limit	Pdh	3,7	kW	T j = operation limit	COPd	1,60	
temperature	Pull	3,7	KVV	temperature	COPU	1,00	
For air-to-water heat pumps:	Pdh	1,7	kW	For air-to-water heat pumps:	COPd	3,01	_
T j = - 15 °C (if TOL < - 20 °C)	7 477	_,,,	XVV	T j = -15 °C (if TOL < -20 °C)	2014	3,01	
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval capacity for heating	P _{cych}	-/50	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	e mode		Supplementary heater		ı	
Off mode	P OFF	0,002	kW	Rated heat output (*)	Psup	10,0	kW
Thermostat-off mode	P _{TO}	0,015	kW		·	1	
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items	CA	-,			1		
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water			2 //s
Annual energy consumption	Q _{HE}	8844	kWh	flow rate, outdoor heat exchanger	-	na	m3/h
For heat pump combination he	ater:						•
Declared load profile	na	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the produc importance that the	t's life cycle, it mu he product's refrig	t a recycling station or with the installation en ist be sent correctly to a waste station or rese gerant, compressor oil and electrical/electroni old waste is not permitted.	ller offering a serv	vice of that type.	It is of great

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



Cold climate and Low temp	Ciutuic				341 26 Lju	ligby	
Model(s):		CTC CombiAir	8M + CTC Eco				
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:	136	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heate		No					
Parameters shall be declared for parameters shall be declared for				or low-temperature heat pumps. Fo	r low- tempei	rature heat p	umps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
item	Зуппоп		Ollic	Seasonal space heating energy	Зуппоот	Value	I
Rated heat output (*)	Prated	9	kW	efficiency	η_s	132	%
Declared capacity for heating foutdoor temperature T j	or part load at ir	ndoor temperat	ure 20 °C and	Declared coefficient of performa part load at indoor temperature			
T j = -7 °C	Pdh	5,5	kW	T j = -7 °C	COPd	3,13] -
T j = + 2 °C	Pdh	3,4	kW	T j = +2 °C	COPd	4,32	
Tj=+7°C	Pdh	2,6	kW	T j = +7 °C	COPd	5,48	-
T j = + 12 °C	Pdh	3,5	kW	T j = +12 °C	COPd	7,34	-
T j = bivalent temperature	Pdh	6,4	kW	T j = bivalent temperature	COPd	2,77	-
T j = operation limit temperature	Pdh	4,4	kW	T j = operation limit temperature	COPd	2,08	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	1,7	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	4,02	-
Bivalent temperature	T _{biv}	-11	°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	0,95	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	e mode		Supplementary heater			
Off mode	P OFF	0,002	kW	Rated heat output (*)	Psup	9,0	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P_{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water	-	na	m3/h
Annual energy consumption	Q _{HE}	6264	kWh	flow rate, outdoor heat exchanger			,
For heat pump combination he	eater:						
Declared load profile	na	Efficiency class	na	Water heating energy efficiency	$\eta_{\scriptscriptstyle wh}$	na	%
Daily electricity consumption	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 productimportance that t	ct's life cycle, it mu he product's refrig	a recycling station or with the installation en st be sent correctly to a waste station or rese terant, compressor oil and electrical/electroni old waste is not permitted.	ller offering a serv	vice of that type	It is of grea

Warm climate and Medium temperature



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Model(s):		CTC CombiAir	r 8M + CTC Eco	Zenith i360/EcoVent i360F			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VI	-	
Brine-to-water heat pump:		No		Controller contribution:	4	%	
Low-temperature heat pump:		No		Package efficiency:	184	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heate Parameters shall be declared for parameters shall be declared for	or medium-tem _l			or low-temperature heat pumps. Fo	or low- tempe	rature heat p	umps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	180	%
Declared capacity for heating f outdoor temperature T j	or part load at i	ndoor temperat	cure 20 °C and	Declared coefficient of performa	-		
Tj=-7°C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	6,9	kW	T j = +2 °C	COPd	2,43	1 -
T j = + 7 °C	Pdh	5,2	kW	T j = +7 °C	COPd	3,69] -
T j = + 12 °C	Pdh	3,8	kW	T j = +12 °C	COPd	6,50] -
T j = bivalent temperature	Pdh	7,4	kW	T j = bivalent temperature	COPd	2,69	-
T j = operation limit temperature	Pdh	6,9	kW	T j = operation limit temperature	COPd	2,43	_
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient	Cdh	0,97	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes of	other than activ	e mode	_	Supplementary heater			
Off mode	P _{OFF}	0,002	kW	Rated heat output (*)	Psup	1,1	kW
Thermostat-off mode	P_{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items	-				ı		
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water		na	m2/h
Annual energy consumption	Q _{HE}	2333	kWh	flow rate, outdoor heat exchanger		na	m3/h
For heat pump combination he	eater:						
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	107	%
Daily electricity consumption	Qelec	7,610	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1563	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the production importance that t	ct's life cycle, it mu the product's refrig	a recycling station or with the installation er st be sent correctly to a waste station or rese erant, compressor oil and electrical/electroni old waste is not permitted.	ller offering a serv	vice of that type.	It is of grea
Contact details	Enertech AB. Bo		•	·			201209

Warm climate and Low temperature



Model(s):		CTC CombiAir	8M + CTC Eco	Zenith i360/EcoVent i360F			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VI	-	
Brine-to-water heat pump:		No		Controller contribution:	4	%	
Low-temperature heat pump:		No		Package efficiency:	229	%	
Equipped with a supplementar	ry heater:	Yes		Package efficiency class:		-	
Heat pump combination heate	er:	Yes					
				or low-temperature heat pumps. Fo	r low- temper	ature heat p	umps,
parameters shall be declared f	•						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	225	%
Declared capacity for heating to outdoor temperature T j	for part load at in	door temperat	ure 20 °C and	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	6,7	kW	T j = +2 °C	COPd	3,77] -
T j = + 7 °C	Pdh	5,2	kW	T j = +7 °C	COPd	5,11] -
T j = + 12 °C	Pdh	3,6	kW	T j = +12 °C	COPd	7,29	-
T j = bivalent temperature	Pdh	7,2	kW	T j = bivalent temperature	COPd	4,05	-
T j = operation limit temperature	Pdh	6,7	kW	T j = operation limit temperature	COPd	3,77	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	mode		Supplementary heater			=
Off mode	P _{OFF}	0,002	kW	Rated heat output (*)	Psup	1,3	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P_{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/h
Annual energy consumption	Q _{HE}	1879	kWh	flow rate, outdoor heat exchanger			1113711
For heat pump combination he	eater:						
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	$\eta_{\sf wh}$	107	%
Daily electricity consumption	Qelec	7,610	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1563	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 mu he product's refrig	t a recycling station or with the installation en ist be sent correctly to a waste station or rese gerant, compressor oil and electrical/electroni old waste is not permitted.	ller offering a serv	vice of that type.	It is of great

Enertech AB



Average climate and Medium	•		COMBINATION	Trieaters	Enertech A 341 26 Lju		CIC
Model(s):		CTC CombiAir	8M + CTC Eco	Zenith i360/EcoVent i360F			
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:	131	%	
Equipped with a supplementary	heater:	Yes		Package efficiency class:	A++	_	
Heat pump combination heater		Yes		ge emerency enece			
			tion, except fo	or low-temperature heat pumps. Fo	r low- temper	rature heat p	umps,
parameters shall be declared fo	r low-temperat	ture application.			•		
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	7	kW	Seasonal space heating energy efficiency	η_{s}	127	%
Declared capacity for heating fo outdoor temperature T j	or part load at i	ndoor temperat	ure 20 °C and	Declared coefficient of performa part load at indoor temperature	-		
T j = - 7 °C	Pdh	6,3	kW	T j = - 7 °C	COPd	1,94	1 -
T j = + 2 °C	Pdh	3,9	kW	T j = +2 °C	COPd	3,11	1 -
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	4,42] -
T j = + 12 °C	Pdh	3,7	kW	T j = +12 °C	COPd	5,93] -
T j = bivalent temperature	Pdh	6,6	kW	T j = bivalent temperature	COPd	1,83	-
T j = operation limit temperature	Pdh	5,9	kW	T j = operation limit temperature	COPd	1,86	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	-8,6	°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	58	°C
Power consumption in modes o	ther than activ	e <u>mode</u>	i	Supplementary heater			-
Off mode	P OFF	0,002	kW	Rated heat output (*)	Psup	1,1	kW
Thermostat-off mode	P _{TO}	0,010	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items	Cit.	, , , , , , ,			1		
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water	_	na	m3/l
Annual energy consumption	Q _{HE}	4435	kWh	flow rate, outdoor heat exchanger		IId	1113/1
For heat pump combination hea	ater:						
Declared load profile	XL	Efficiency class	Α	Water heating energy efficiency	$\eta_{\mbox{\tiny wh}}$	86	%
Daily electricity consumption	Qelec	9,390	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1953	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.

Average climate and Low temperature



Average climate and Low to					341 20 Lju	iiigby	
Model(s):		CTC CombiAir	8M + CTC Eco	Zenith i360/EcoVent i360F			
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:	176	%	
Equipped with a supplementar	ry heater:	Yes		Package efficiency class:	A+++	-	
Heat pump combination heate	er:	Yes					
				or low-temperature heat pumps. Fo	or low- tempe	rature heat p	umps,
parameters shall be declared f	•						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	η_{s}	172	%
Declared capacity for heating foutdoor temperature T j	for part load at in	ndoor temperat	ure 20 °C and	Declared coefficient of performation part load at indoor temperature			
·	5.4						, 7
Tj=-7°C Tj=+2°C	Pdh Pdh	7,4	kW	T j = - 7 °C T j = +2 °C	COPd	2,92	-
Tj=+2 C	Pdh Pdh	4,5 2,9	kW kW	T j = +2 °C	COPd COPd	4,30 5,42	1
Tj=+12°C	Pdh	3,5	kW	T j = +12 °C	COPd	7,37	1 -
T j = bivalent temperature	Pdh	7,4	kW	T j = bivalent temperature	COPd	2,86	-
		- 7.					4
T j = operation limit temperature	Pdh	6,9	kW	T j = operation limit temperature	COPd	2,67	-
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}	-8	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes	other than active	e mode		Supplementary heater		•	
Off mode	P OFF	0,002	kW	Rated heat output (*)	Psup	1,4	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P _{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items		•					
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water		na	m3/h
Annual energy consumption	Q _{HE}	3882	kWh	flow rate, outdoor heat exchanger	_	Ha	1113/11
For heat pump combination he	eater:						
Declared load profile	XL	Efficiency class	A	Water heating energy efficiency	$\eta_{\sf wh}$	86	%
Daily electricity consumption	Qelec	9,390	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1953	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the produc importance that t	ct's life cycle, it mu the product's refrig	a recycling station or with the installation en st be sent correctly to a waste station or rese erant, compressor oil and electrical/electroni old waste is not permitted.	ller offering a serv	vice of that type.	It is of great

Cold climate and Medium temperature

Model(s):

Enertech AB 341 26 Ljungby



Model(3).		CTC COITIDIAII	BIVI T CTC LCC	DZEIIILII 1300/ ECOVEIIL 1300F			
Air-to-water heat pump:		Yes		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VI	-	
Brine-to-water heat pump:		No		Controller contribution:	4	%	
Low-temperature heat pump:		No		Package efficiency:	112	%	
Equipped with a supplementary	/ heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	:	Yes					
				or low-temperature heat pumps. Fo	r low- tempe	rature heat p	oumps,
parameters shall be declared for	•						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η_s	108	%
Declared capacity for heating for outdoor temperature T j	or part load at in	ndoor temperatu	ıre 20 °C and	Declared coefficient of performa part load at indoor temperature			
T j = -7 °C	Pdh	6,2	kW	T j = - 7 °C	COPd	2,29	-
T j = + 2 °C	Pdh	3,8	kW	T j = +2 °C	COPd	3,43	-
T j = + 7 °C	Pdh	2,7	kW	T j = +7 °C	COPd	4,80	-
T j = + 12 °C	Pdh	3,7	kW	T j = +12 °C	COPd	6,94	-
T j = bivalent temperature	Pdh	6,7	kW	T j = bivalent temperature	COPd	2,05	-
T j = operation limit temperature	Pdh	3,7	kW	T j = operation limit temperature	COPd	1,60	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	1,7	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	3,01	-
Bivalent temperature	T _{biv}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval capacity for heating	P cych	-/50	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient	Cdh	0,96	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes of	ther than activ	e mode		Supplementary heater			•
Off mode	P _{OFF}	0,002	kW	Rated heat output (*)	Psup	10,0	kW
Thermostat-off mode	P_{TO}	0,015	kW				
Standby mode	P_{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water		na	m2/h
Annual energy consumption	Q _{HE}	8844	kWh	flow rate, outdoor heat exchanger		na	m3/h
For heat pump combination hea	ater:						
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	$\eta_{\scriptscriptstyle wh}$	74	%
Daily electricity consumption	Qelec	10,860	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	2261	kWh	Annual fuel consumption	AFC	na	GJ
Specific precautions and end of life information:		end of the product	i's life cycle, it mu ne product's refrig	t a recycling station or with the installation en ust be sent correctly to a waste station or rese gerant, compressor oil and electrical/electroni old waste is not permitted.	ller offering a se	rvice of that type	. It is of grea
Contact details	nortech AR Ro	x 309 SF-341 26	Liunghy Tel -	+46 372 88000 www.ctc.se			201209

CTC CombiAir 8M + CTC EcoZenith i360/EcoVent i360F

Cold climate and Low temperature

Model(s):

Enertech AB 341 26 Ljungby



Model(3).		CTC COMBIAN	DIVI I CIC ECC	DZEIIILII 1300/ ECOVEIIL 1300F			
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:	136	%	
Equipped with a supplementary	heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	:	Yes					
				or low-temperature heat pumps. Fo	r low- tempe	erature heat p	oumps,
parameters shall be declared fo							
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 outdoor temperature T j	or part load at ir	ndoor temperatu	ıre 20°C and	Declared coefficient of performa part load at indoor temperature			
T j = -7 °C	Pdh	5,5	kW	T j = - 7 °C	COPd	3,13	-
T j = + 2 °C	Pdh	3,4	kW	T j = +2 °C	COPd	4,32	-
T j = + 7 °C	Pdh	2,6	kW	T j = +7 °C	COPd	5,48	-
T j = + 12 °C	Pdh	3,5	kW	T j = +12 °C	COPd	7,34	-
T j = bivalent temperature	Pdh	6,4	kW	T j = bivalent temperature	COPd	2,77	-
T j = operation limit temperature	Pdh	4,4	kW	T j = operation limit temperature	COPd	2,08	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	1,7	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	4,02	-
Bivalent temperature	T _{biv}	-11	°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	0,95	-	Heating water operating limit temperature	WTOL	58	°C
Power consumption in modes o	ther than active	e mode		Supplementary heater			1
Off mode	P OFF	0,002	kW	Rated heat output (*)	Psup	9,0	kW
Thermostat-off mode	P _{TO}	0,015	kW				
Standby mode	P_{SB}	0,015	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,030	kW				
Other items							
Capacity control		Variable		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3000	m3/h
Sound power level, indoors/ outdoors	L _{WA}	-/54	dB	For water-/brine-to-water heat pumps: Rated brine or water		na	m3/h
Annual energy consumption	Q _{HE}	6264	kWh	flow rate, outdoor heat exchanger	-	IIa	ШЭДП
For heat pump combination hea	ater:						
Declared load profile	XL	Efficiency class	na	Water heating energy efficiency	η_{wh}	74	%
Daily electricity consumption	Q_{elec}	10,860	kWh	Daily fuel consumption	\mathbf{Q}_{fuel}	NA	kWh
Annual electricity consumption	AEC	2261	kWh	Annual fuel consumption	AFC	NA	GJ
Specific precautions and end of life information:		end of the product	c's life cycle, it mu ne product's refrig	t a recycling station or with the installation en ust be sent correctly to a waste station or rese gerant, compressor oil and electrical/electroni old waste is not permitted.	ller offering a se	rvice of that type	. It is of grea
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CTC CombiAir 8M + CTC EcoZenith i360/EcoVent i360F