No

Yes

CTC EcoPart 408 + CTC EcoLogic

Energy efficiency class:

Controller contribution:

Controller class:

Warm climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Brine-to-water heat pump:

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%

VII

3,5

Low-temperature heat pump:		No		Package efficiency:	139	%	
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 applicat	ion, except fo	r low-temperature heat pumps. For l	ow- tempera	ture heat pu	mps,
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	135	%
Declared capacity for heating foutdoor temperature T j	or part load at ind	door temperatu	re 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	7,6	kW	T j = +2 °C	COPd	3,13	1 -
T j = + 7 °C	Pdh	7,8	kW	T j = +7 °C	COPd	3,46	1 -
T j = + 12 °C	Pdh	8,0	kW	T j = +12 °C	COPd	4,12] -
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	3,22] -
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	3,13	_
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	na	°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	65	°C
Power consumption in modes	other than active	mode	-	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,6	kW
Thermostat-off mode	P _{TO}	0,004	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
	. ск	0,000		† 			
Other items Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3083	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination he	eater:			· · · · · · · · · · · · · · · · · · ·		-	
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
	Enertech AB, Box	309, SE-341 26	Ljungby Tel +	46 372 88000 www.ctc.se		•	•

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC EcoLogic

Energy efficiency class:

Controller class:

Warm climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Enertech AB, 341 26 Ljungby

VII

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	181	%	
Equipped with a supplementary	y heater:	No		Package efficiency class:		-	
Heat pump combination heater	:	No					
			tion, except fo	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
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}	177	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ire 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = - 7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	8,2	kW	T j = +2 °C	COPd	4,58] -
T j = + 7 °C	Pdh	8,3	kW	T j = +7 °C	COPd	4,81	
T j = + 12 °C	Pdh	8,4	kW	T j = +12 °C	COPd	5,09	
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,66	-
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,58	-
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	na	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na] -
Degradation co-efficient (**)	Cdh	0,98	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	other than active	mode	_	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,7	kW
Thermostat-off mode	P _{TO}	0,013	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2558	kWh	flow rate, outdoor heat exchanger	<u>-</u>	2,0	m3/
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWl
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC EcoLogic

Energy efficiency class:

Controller class:

ENERTECH GROUP

Average climate and High temperature

Model(s):

consumption Contact details

Air-to-water heat pump:

Water-to-water heat pump:

Enertech AB, 341 26 Ljungby

A++

VII

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	140	%	
Equipped with a supplementary	y heater:	No		Package efficiency class:	A++	-	
Heat pump combination heater	••	No					
			tion, except fo	r low-temperature heat pumps. For	low- tempera	iture heat pu	mps,
parameters shall be declared for Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
	•			Seasonal space heating energy			
Rated heat output (*)	Prated	9	kW	efficiency	η _s	136	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performa part load at indoor temperature			
T j = - 7 °C	Pdh	7,7	kW	T j = - 7 °C	COPd	3,28] -
T j = + 2 °C	Pdh	7,9	kW	T j = +2 °C	COPd	3,62	-
T j = + 7 °C	Pdh	8,0	kW	T j = +7 °C	COPd	4	-
T j = + 12 °C	Pdh	8,1	kW	T j = +12 °C	COPd	4,38	-
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	3,13	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	3,28	-
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}	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes of	other than active	mode	_	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,1	kW
Thermostat-off mode	P _{TO}	0,004	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4995	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination he	ater:	-	-	· · · · · · · · · · · · · · · · · · ·			-
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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No

CTC EcoPart 408 + CTC EcoLogic

Energy efficiency class:

Controller class:

ENERTECH

Average climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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A++

VII

	Yes		Controller contribution:	3,5	%	
	No		Package efficiency:	184	%	
y heater:	No		Package efficiency class:	A+++	-	
r:	No					
or medium-temp	erature applica	tion, except for	low-temperature heat pumps. For	low- tempera	iture heat pu	mps,
or low-temperatu	re application.					
Symbol	Value	Unit	Item	Symbol	Value	Unit
Prated	9	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	180	%
or part load at ind	door temperatu	ıre 20°C and				
Pdh	8,2	kW	T j = - 7 °C	COPd	4,67] -
Pdh	8,3	kW	T j = +2 °C	COPd	4,86	-
Pdh	8,3	kW	T j = +7 °C	COPd	5,04	-
Pdh	8,4	kW	T j = +12 °C	COPd	5,21	-
Pdh	8,2	kW	T j = bivalent temperature	COPd	4,67	-
Pdh	8,2	kW	T j = operation limit temperature	COPd	4,58	-
Pdh	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd	na	-
T _{biv}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	_
Cdh	0,98	-	Heating water operating limit temperature	WTOL	65	°C
other than active	mode	_	Supplementary heater			_
P OFF	0,018	kW	Rated heat output (*)	Psup	1,1	kW
P _{TO}	0,013	kW				
P_{SB}	0,018	kW	Type of energy input		Electric	
P _{CK}	0,000	kW				
		•		•		
	Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Q _{HE}	4092	kWh	flow rate, outdoor heat exchanger	-	2,0	m3/h
ater:						
	na		Water heating energy efficiency	η_{wh}	na	%
Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
						1
	Symbol Prated Or part load at incomplete properties of part load at incomplete properties propertity properties properties properties properties properties propert	No y heater: No r: No remedium-temperature application. Symbol Prated Prated Prated Pah	No y heater: No r: No or medium-temperature application, except for or low-temperature application. Symbol Value Unit Prated 9 kW or part load at indoor temperature 20 °C and Pdh 8,2 kW Pdh 8,3 kW Pdh 8,3 kW Pdh 8,2 kW Pdh 8,2 kW Pdh 8,2 kW Pdh 8,2 kW Pdh 8,2 kW Pdh 8,2 kW Pdh 9,2 kW Pdh 9,2 kW Pdh 9,2 kW Pdh 0,98 - Other than active mode Poff 0,018 kW Pro 0,013 kW PsB 0,018 kW PcK 0,000 kW Fixed LwA 43/na dB QHE 4092 kWh ater:	No Package efficiency: y heater: No Package efficiency class: r: No predium-temperature application, except for low-temperature heat pumps. For or low-temperature application. Symbol Value Unit Item Prated 9 kW Seasonal space heating energy efficiency Declared coefficient of performs part load at indoor temperature 20 °C and Path 8,3 kW File Path 8,3 kW File Path 8,4 kW File Path 8,2 kW Tj = +7 °C Tj = +2 °C Tj = +2 °C Tj = +2 °C Tj = +12 °C Tj = -15 °C (if TOL < -20 °C) Path 8,2 kW Tj = operation limit temperature Path 10 kW Tj = -15 °C (if TOL < -20 °C) Poych 10 kW Cycling interval efficiency Poych 10 kW Type of energy input For air-to-water heat pumps: Operation limit temperature Poych 10 kW Type of energy input For air-to-water heat pumps: Rated heat output (*) For air-to-water heat pumps: Rated brine or water flow rate, outdoors For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger ater: No Package efficiency: Awa 43/na AB Water heating energy efficiency Water heating energy efficiency	No Package efficiency: 184 y heater: No Package efficiency: 184 y heater: No Package efficiency class: A+++ T: No Package efficiency class: A+++ T: No Package efficiency class: A+++ To medium-temperature application. Symbol Value Unit Prated 9 kW Trated 9 kW Path 8,2 kW Trated 10	No Package efficiency: 184 % y heater: No Package efficiency class: A+++ - The package efficiency class: A

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC EcoLogic

Energy efficiency class:

Controller class:

Cold climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	143	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heater	r:	No					
Parameters shall be declared fo	or medium-temp	erature applicat	tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for	or low-temperati	ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η_{s}	139	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ıre 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = - 7 °C	Pdh	7,8	kW	T j = - 7 °C	COPd	3,55] -
T j = + 2 °C	Pdh	8,0	kW	T j = +2 °C	COPd	3,92] -
T j = + 7 °C	Pdh	8,1	kW	T j = +7 °C	COPd	4,27] -
T j = + 12 °C	Pdh	8,2	kW	T j = +12 °C	COPd	4,52	-
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	3,28	-
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	3,13	-
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}	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes of	other than active	mode		Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,0	kW
Thermostat-off mode	P TO	0,004	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	- CA	5,000	!		!		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5773	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC EcoLogic

Energy efficiency class:

Controller class:

Cold climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Enertech AB, 341 26 Ljungby

VII

water-to-water neat pump.		NU		CONTROLLER Class.	VII		
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	187	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heater	••	No					
Parameters shall be declared for	or medium-tempo	erature applicat	ion, except for	low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for		re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η_s	183	%
Declared capacity for heating for outdoor temperature T j	or part load at ind	door temperatu	re 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = -7 °C	Pdh	8,3	kW	T j = - 7 °C	COPd	4,88] -
T j = + 2 °C	Pdh	8,3	kW	T j = +2 °C	COPd	5,04	-
T j = + 7 °C	Pdh	8,4	kW	T j = +7 °C	COPd	5,16	-
T j = + 12 °C	Pdh	8,4	kW	T j = +12 °C	COPd	5,19] -
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,67	-
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,58	-
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}	-19	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient (**)	Cdh	0,98	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	other than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,7	kW
Thermostat-off mode	P _{TO}	0,013	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items			•				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4612	kWh	flow rate, outdoor heat exchanger	-	2,0	m3/h
For heat pump combination he	ater:			<u> </u>		•	
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
	Enertech AB, Box	309, SE-341 26	Ljungby Tel +4	16 372 88000 www.ctc.se			•

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

Warm climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

GROUP Enertech AB, 341 26 Ljungby

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B				6		0/	
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	128	%	
Equipped with a supplementary		Yes		Package efficiency class:		-	
Heat pump combination heater		Yes	tion overant fo	r low-temperature heat pumps. For	low tompora	tura haat nu	mns
parameters shall be declared for				r low-temperature neat pumps. For	iow- tempera	iture neat pu	mps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	n _s	124	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ure 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = - 7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	7,6	kW	T j = +2 °C	COPd	2,91] -
T j = + 7 °C	Pdh	7,8	kW	T j = +7 °C	COPd	3,22] -
T j = + 12 °C	Pdh	8,0	kW	T j = +12 °C	COPd	3,80	
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	3,00	-
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	2,91	_
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	na	°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	65	°C
Power consumption in modes of	other than active	mode	7	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,6	kW
Thermostat-off mode	P _{TO}	0,018	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		,			,		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3356	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination he	ater:						
Declared load profile		L	_	Water heating energy efficiency	$\eta_{\sf wh}$	88,1	%
Daily electricity consumption	Qelec	5,292	kWh	Daily fuel consumption	Q fuel	na	kWh
Annual electricity	AEC	1164	kWh	Annual fuel consumption	AFC	na	GJ

CTC EcoPart 408 + CTC EcoZenith 250

Energy efficiency class:

Controller class:

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consumption Contact details

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC EcoZenith 250

Energy efficiency class:

VII

Controller class:

ENERTECH

Warm climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	158	%	
Equipped with a supplementary	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	••	Yes					
Parameters shall be declared fo	or medium-temp	erature applicat	tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared fo	or low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η_{s}	154	%
Declared capacity for heating foutdoor temperature T j	or part load at in	door temperatu	re 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	8,2	kW	T j = +2 °C	COPd	4,19] -
T j = + 7 °C	Pdh	8,3	kW	T j = +7 °C	COPd	4,38	-
T j = + 12 °C	Pdh	8,4	kW	T j = +12 °C	COPd	4,63	-
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,25] -
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,19	-
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	na	°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	65	°C
Power consumption in modes o	ther than active	mode	•	Supplementary heater	•		
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,7	kW
Thermostat-off mode	P _{TO}	0,055	kW				•
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	CA	3,000	1		!		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/l
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2910	kWh	flow rate, outdoor heat exchanger	-	2,0	m3/
For heat pump combination he	ater:			-			
Declared load profile		L		Water heating energy efficiency	$\eta_{\sf wh}$	88,1	%
Daily electricity consumption	Qelec	5,292	kWh	Daily fuel consumption	Qfuel	na	kWł
Annual electricity	AEC	1164	kWh	Annual fuel consumption	AFC	na	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC EcoZenith 250

Energy efficiency class:

Controller class:

ENERTECH GROUP

Average climate and High temperature

Model(s):

consumption Contact details

Air-to-water heat pump:

Water-to-water heat pump:

Enertech AB, 341 26 Ljungby

A++

VII

water-to-water neat pump.		NU		Controller class.	VII		
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	129	%	
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 applica	tion, except for	r low-temperature heat pumps. For	low- tempera	ature heat pu	mps,
parameters shall be declared for	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}	125	%
Declared capacity for heating foutdoor temperature T j	or part load at in	door temperati	ure 20 °C and	Declared coefficient of performa part load at indoor temperature			
T j = -7 °C	Pdh	7,7	kW	T j = - 7 °C	COPd	3,05] -
T j = + 2 °C	Pdh	7,9	kW	T j = +2 °C	COPd	3,39] -
T j = + 7 °C	Pdh	8,0	kW	T j = +7 °C	COPd	3,71	-
T j = + 12 °C	Pdh	8,1	kW	T j = +12 °C	COPd	4,03	-
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	3,11	-
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	2,91	-
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}	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient (**)	Cdh	0,98	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode	_	Supplementary heater			
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	1,5	kW
Thermostat-off mode	P _{TO}	0,018	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items						_	
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5670	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination he	eater:						
Declared load profile		L		Water heating energy efficiency	η_{wh}	88,1	%
Daily electricity consumption	Qelec	5,292	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1164	kWh	Annual fuel consumption	AFC	na	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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Average climate and Low temperature

Model(s):

Air-to-water heat pump:

Sound power level, indoors/

Annual energy consumption

Daily electricity consumption

Declared load profile

Annual electricity

consumption Contact details

For heat pump combination heater:

outdoors

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2,0

88,1

na

na

 η_{wh}

 \mathbf{Q}_{fuel}

AFC

m3/h

kWh

GJ

A++

Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	163	%	
Equipped with a supplementary	y heater:	Yes		Package efficiency class:	A+++	-	
Heat pump combination heater	·:	Yes					
Parameters shall be declared for parameters shall be declared for			tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Un
Rated heat output (*)	Prated	10	kW	Seasonal space heating energy efficiency	η_{s}	159	%
Declared capacity for heating for part load at indoor temperature 20 $^{\circ}$ C and outdoor temperature T j				Declared coefficient of performation part load at indoor temperature			
T j = - 7 °C	Pdh	8,2	kW	T j = - 7 °C	COPd	4,27] -
T j = + 2 °C	Pdh	8,3	kW	T j = +2 °C	COPd	4,44	1 -
T j = + 7 °C	Pdh	8,3	kW	T j = +7 °C	COPd	4,59	-
T j = + 12 °C	Pdh	8,4	kW	T j = +12 °C	COPd	4,73	
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,31	-
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,19] -
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}	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°(
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	65	°(
Power consumption in modes of	other than active		7	Supplementary heater			,
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,5	kV
Thermostat-off mode	P _{TO}	0,055	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items			-				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3,

CTC EcoPart 408 + CTC EcoZenith 250

Energy efficiency class:

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

dΒ

kWh

kWh

kWh

43/na

4816

L

5,292

1164

Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000

 L_{WA}

 Q_{HE}

Qelec

AEC

For water-/brine-to-water heat

pumps: Rated brine or water flow rate, outdoor heat

Water heating energy

Daily fuel consumption

Annual fuel consumption

www.ctc.se

exchanger

e<u>fficiency</u>

No

CTC EcoPart 408 + CTC EcoZenith 250

Energy efficiency class:

Controller class:

Cold climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Enertech AB, 341 26 Ljungby

VII

water-to-water neat pump.		NU		Controller class.	VII		
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	131	%	
Equipped with a supplementary	/ heater:	Yes		Package efficiency class:		-	
Heat pump combination heater		Yes				<u> </u>	
			tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
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}	127	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ire 20 °C and	Declared coefficient of performa part load at indoor temperature			
T j = - 7 °C	Pdh	7,8	kW	T j = - 7 °C	COPd	3,31] -
T j = + 2 °C	Pdh	8,0	kW	T j = +2 °C	COPd	3,63] -
T j = + 7 °C	Pdh	8,1	kW	T j = +7 °C	COPd	3,92	
T j = + 12 °C	Pdh	8,2	kW	T j = +12 °C	COPd	4,14	-
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	3,05	-
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	2,91	-
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}	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	_
Degradation co-efficient (**)	Cdh	0,98	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes o	ther than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,0	kW
Thermostat-off mode	P _{TO}	0,018	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items			•		•		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/l
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	6273	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/l
For heat pump combination he	ater:						
Declared load profile		L		Water heating energy efficiency	$\eta_{\sf wh}$	88,1	%
Daily electricity consumption	Qelec	5,292	kWh	Daily fuel consumption	Qfuel	na	kWl
Annual electricity	AEC	1164	kWh	Annual fuel consumption	AFC	na	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Annual energy consumption

Daily electricity consumption

Declared load profile

Annual electricity

For heat pump combination heater:

2,0

88,1

na

na

 η_{wh}

 Q_{fuel}

AFC

m3/h

kWh

GJ

cold climate and low tempe	rature					ertech Ab, 341	zo zjango y
Model(s):		CTC EcoPart 40	08 + CTC EcoZe	nith 250			
Air-to-water heat pump:		No		Energy efficiency class:		-	
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	165	%	
Equipped with a supplementary	heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	:	Yes					
			tion, except for	low-temperature heat pumps. For	low- tempera	iture heat pui	mps,
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}	161	%
Declared capacity for heating fo outdoor temperature T j	r part load at ir	idoor temperatu	re 20 °C and	Declared coefficient of perform part load at indoor temperature			
T j = -7 °C	Pdh	8,3	kW	T j = - 7 °C	COPd	4,46] -
T j = + 2 °C	Pdh	8,3	kW	T j = +2 °C	COPd	4,59] -
T j = + 7 °C	Pdh	8,4	kW	T j = +7 °C	COPd	4,69	-
T j = + 12 °C	Pdh	8,4	kW	T j = +12 °C	COPd	4,71	-
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,3	-
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,19	-
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}	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes o	ther than active	mode	_	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,0	kW
Thermostat-off mode	P _{TO}	0,055	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		-	7		-		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			1

consumption Contact details Enertech AB, Box 309, SE-341 26 Ljungby Tel +46 372 88000 www.ctc.se (*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

kWh

kWh

kWh

5383

L

5,292

1164

 Q_{HE}

Qelec

AEC

flow rate, outdoor heat

Water heating energy

Daily fuel consumption

Annual fuel consumption

exchanger

efficiency

No

CTC EcoPart 408 + CTC EcoZenith 550

Energy efficiency class:

Controller class:

Warm climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Enertech AB, 341 26 Ljungby

VII

water-to-water neat pump.		NU		COTILIONEL Class.	VII		
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	128	%	
Equipped with a supplementary	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	r:	Yes					
			tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared fo	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}	124	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ire 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = - 7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	7,6	kW	T j = +2 °C	COPd	2,91] -
T j = + 7 °C	Pdh	7,8	kW	T j = +7 °C	COPd	3,22] -
T j = + 12 °C	Pdh	8,0	kW	T j = +12 °C	COPd	3,80	-
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	3,00] -
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	2,91	-
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	na	°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	65	°C
Power consumption in modes of	other than active	mode	•	Supplementary heater			•
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,6	kW
Thermostat-off mode	P _{TO}	0,014	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW			-	
Other items	, ск	0,000	NVV				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/l
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3015	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/l
For heat pump combination he	ater:						
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	102	%
Daily electricity consumption	Qelec	7,449	kWh	Daily fuel consumption	Qfuel	NA	kWł
Annual electricity	AEC	1639	kWh	Annual fuel consumption	AFC	NA	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC EcoZenith 550

Energy efficiency class:

Controller class:

Warm climate and Low temperature

Model(s):

consumption Contact details

Air-to-water heat pump:

Water-to-water heat pump:

Enertech AB, 341 26 Ljungby

VII

water-to-water neat pump.		NO		Controller class.	VII		
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	162	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heate	r:	Yes					
				r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for	or low-temperati	ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η_{s}	158	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ure 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = -7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	8,2	kW	T j = +2 °C	COPd	4,19	-
T j = + 7 °C	Pdh	8,3	kW	T j = +7 °C	COPd	4,38	-
T j = + 12 °C	Pdh	8,4	kW	T j = +12 °C	COPd	4,63	-
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,25	-
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,19	-
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	na	°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	65	°C
Power consumption in modes of	other than active	mode	_	Supplementary heater			,
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	0,7	kW
Thermostat-off mode	P _{TO}	0,035	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items							
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L WA	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2439	kWh	flow rate, outdoor heat exchanger	-	2,0	m3/h
For heat pump combination he	ater:						
Declared load profile		XL		Water heating energy efficiency	η_{wh}	102	%
Daily electricity consumption	Qelec	7,449	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1639	kWh	Annual fuel consumption	AFC	NA	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

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No

Yes

CTC EcoPart 408 + CTC EcoZenith 550

Energy efficiency class:

Controller contribution:

Controller class:

Average climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Brine-to-water heat pump:

Enertech AB, 341 26 Ljungby

%

A++

VII

3,5

					-,-		
Low-temperature heat pump:		No		Package efficiency:	130	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:	A++	_	
Heat pump combination heate	r:	Yes					
		erature applicat	ion, except fo	r low-temperature heat pumps. For	low- tempera	iture heat pu	mps,
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}	126	%
Declared capacity for heating foutdoor temperature T j	or part load at ind	door temperatu	re 20 °C and	Declared coefficient of performa part load at indoor temperature			
T j = - 7 °C	Pdh	7,7	kW	T j = - 7 °C	COPd	3,05] -
T j = + 2 °C	Pdh	7,9	kW	T j = +2 °C	COPd	3,39	-
T j = + 7 °C	Pdh	8,0	kW	T j = +7 °C	COPd	3,71	-
T j = + 12 °C	Pdh	8,1	kW	T j = +12 °C	COPd	4,03] -
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	3,11	-
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	2,91	_
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}	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes	other than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,5	kW
Thermostat-off mode	P _{TO}	0,014	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	· CK	0,000					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5248	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination he	eater:	<u> </u>		<u> </u>		<u> </u>	
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	102	%
Daily electricity consumption	Qelec	7,449	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1639	kWh	Annual fuel consumption	AFC	NA	GJ
	Enertech AB, Box	309. SE-341 26	Liungby Tel +	46 372 88000 www.ctc.se		•	•

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

ENERTECH GROUP

Average climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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A++

VII

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	165	%	
Equipped with a supplementary	heater:	Yes		Package efficiency class:	A+++	-	
Heat pump combination heater		Yes					
Parameters shall be declared fo parameters shall be declared fo			tion, except fo	r low-temperature heat pumps. For	low- tempera	iture heat pu	mps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η _s	161	%
Declared capacity for heating foo outdoor temperature T j	or part load at in	door temperatu	ire 20 °C and	Declared coefficient of perform part load at indoor temperature			
T j = - 7 °C	Pdh	8,2	kW	T j = - 7 °C	COPd	4,27] -
T j = + 2 °C	Pdh	8,3	kW	T j = +2 °C	COPd	4,43] -
T j = + 7 °C	Pdh	8,3	kW	T j = +7 °C	COPd	4,58	
T j = + 12 °C	Pdh	8,4	kW	T j = +12 °C	COPd	4,73	
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,27	-
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,19	_
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}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes o	ther than active	mode	-	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	1,1	kW
Thermostat-off mode	P _{TO}	0,035	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items					-		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4542	kWh	flow rate, outdoor heat exchanger	-	2,0	m3/h
For heat pump combination hea	ater:						
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	102	%
Daily electricity consumption	Qelec	7,449	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity	AEC	1639	kWh	Annual fuel consumption	AFC	NA	GJ

CTC EcoPart 408 + CTC EcoZenith 550

Energy efficiency class:

Controller class:

consumption Contact details

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AFC

GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC EcoZenith 550

Energy efficiency class:

Controller class:

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

VII

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	132	%	
Equipped with a supplementary	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	••	Yes					
		erature applica	tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for	or low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	128	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ure 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = - 7 °C	Pdh	7,8	kW	T j = - 7 °C	COPd	3,31] -
T j = + 2 °C	Pdh	8,0	kW	T j = +2 °C	COPd	3,64] -
T j = + 7 °C	Pdh	8,1	kW	T j = +7 °C	COPd	3,93] -
T j = + 12 °C	Pdh	8,2	kW	T j = +12 °C	COPd	4,14	_
T j = bivalent temperature	Pdh	7,7	kW	T j = bivalent temperature	COPd	3,09	-
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	2,91	-
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}	-17	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes of	ther than active	mode		Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,3	kW
Thermostat-off mode	P _{TO}	0,014	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items			ļ		Ţ.		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	5781	kWh	flow rate, outdoor heat exchanger	-	1,6	m3/h
For heat pump combination he	ater:			· · · · · · · · · · · · · · · · · · ·			
Declared load profile		XL	_	Water heating energy efficiency	$\eta_{\sf wh}$	102	%
Daily electricity consumption	Qelec	7,449	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity		1639	kWh	Annual fuel consumption	AFC	NA	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Model(s):

Air-to-water heat pump:

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				Energy entreiency class.			
Water-to-water heat pump:		No		Controller class:	VII	-	
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	167	%	
Equipped with a supplementary	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	:	Yes					
			ion, except for	low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for							
Item	Symbol	Value	Unit	ltem	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η_{s}	163	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = -7 °C	Pdh	8,3	kW	T j = - 7 °C	COPd	4,46] -
T j = + 2 °C	Pdh	8,3	kW	T j = +2 °C	COPd	4,59	-
T j = + 7 °C	Pdh	8,4	kW	T j = +7 °C	COPd	4,69	-
T j = + 12 °C	Pdh	8,4	kW	T j = +12 °C	COPd	4,71	-
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,30	_
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,19	-
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}	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes of	other than active	mode	-	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,0	kW
Thermostat-off mode	P _{TO}	0,035	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		-	-		=		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4374	kWh	flow rate, outdoor heat exchanger		2,0	m3/h
For heat pump combination he	ater:						
Declared load profile		XL		Water heating energy efficiency	η_{wh}	102	%
Daily electricity consumption	Qelec	7,449	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1639	kWh	Annual fuel consumption	AFC	NA	GJ

CTC EcoPart 408 + CTC EcoZenith 550

Energy efficiency class:

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC Basic

Energy efficiency class:

Controller class:

Warm climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	110	%	
Equipped with a supplementary	heater:	No		Package efficiency class:		-	
Heat pump combination heater	:	No					
Parameters shall be declared fo	r medium-temp	erature applicat	tion, except for	low-temperature heat pumps. For l	ow- tempera	ture heat pu	mps,
parameters shall be declared fo	r 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	109	%
Declared capacity for heating fo outdoor temperature T j	or part load at in	door temperatu	ıre 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	7,6	kW	T j = +2 °C	COPd	3,13	1 -
T j = + 7 °C	Pdh	7,6	kW	T j = +7 °C	COPd	3,03] -
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	2,92] -
T j = bivalent temperature	Pdh	7,6	kW	T j = bivalent temperature	COPd	3,13] -
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	3,13	_
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	na	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na] -
Degradation co-efficient (**)	Cdh	1	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes o	ther than active	mode	_	Supplementary heater			_
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	0,6	kW
Thermostat-off mode	P _{TO}	0,004	kW				-
Standby mode	P_{SB}	0,007	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0	kW				
Other items		ļ					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	3756	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/h
For heat pump combination he	ater:						
Declared load profile		na	_	Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh
			7		AFC		GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC Basic

Energy efficiency class:

Controller class:

ENERTECH

Warm climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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water-to-water neat pump.		IVU		CONTRONET Class.			
Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	162	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heater	r:	No					
				low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for	·						
Item	Symbol	Value	Unit	ltem	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η_{s}	161	%
Declared capacity for heating for outdoor temperature T j	or part load at ind	door temperatu	ire 20 °C and	Declared coefficient of performation part load at indoor temperature			
T j = - 7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	8,2	kW	T j = +2 °C	COPd	4,58] -
T j = + 7 °C	Pdh	8,1	kW	T j = +7 °C	COPd	4,44	-
T j = + 12 °C	Pdh	8,1	kW	T j = +12 °C	COPd	4,26	
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,58	-
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,58	_
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	na	°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	65	°C
Power consumption in modes of	other than active	mode		Supplementary heater			
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	0,6	kW
Thermostat-off mode	P _{TO}	0,013	kW				
Standby mode	P_{SB}	0,007	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items					ļ		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/l
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	2796	kWh	flow rate, outdoor heat exchanger	-	1,9	m3/ł
For heat pump combination he	ater:						
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC Basic

Energy efficiency class:

Controller class:

A+

ī

Average climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

GROUP Enertech AB, 341 26 Ljungby

water to water near pamp:		110		Correr oner class:	•			
Brine-to-water heat pump:		Yes		Controller contribution:	1	%		
Low-temperature heat pump:		No		Package efficiency:	111	%		
Equipped with a supplementary	y heater:	No		Package efficiency class:	A+	-		
Heat pump combination heater	r:	No						
Parameters shall be declared for	or medium-temp	erature applicat	ion, except for	r low-temperature heat pumps. For	low- tempera	ature heat pu	mps,	
parameters shall be declared for	or low-temperatu	re 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 outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performance or primary energy ratio part load at indoor temperature 20 °C and outdoor 20 °				
T j = -7 °C	Pdh	7,6	kW	T j = -7 °C	COPd	3,13	-	
T j = + 2 °C	Pdh	7,6	kW	T j = +2 °C	COPd	3,01] -	
T j = + 7 °C	Pdh	7,6	kW	T j = +7 °C	COPd	2,94	-	
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	2,87		
T j = bivalent temperature	Pdh	7,6	kW	T j = bivalent temperature	COPd	3,13	-	
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	3,13	-	
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}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C	
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-	
Degradation co-efficient (**)	Cdh	1	-	Heating water operating limit temperature	WTOL	65	°C	
Power consumption in modes of		mode	7	Supplementary heater			7	
Off mode	P OFF	0,007	kW	Rated heat output (*)	Psup	1	kW	
Thermostat-off mode	P _{TO}	0,004	kW					
Standby mode	P_{SB}	0,007	kW	Type of energy input		Electric		
Crankcase heater mode	P _{CK}	0,000	kW					
Other items								
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h	
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water				
Annual energy consumption	Q _{HE}	6029	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/h	
For heat pump combination he	ater:							
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%	
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh	
Annual electricity	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ	

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

na

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consumption Contact details

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CTC EcoPart 408 + CTC Basic

Energy efficiency class:

Average climate and Low temperature

Model(s):

Air-to-water heat pump:

Annual electricity

consumption Contact details

AEC

ENERTECH GROUPEnertech AB, 341 26 Ljungby

A++

AFC

NA

GJ

Air-to-water neat pump:		NO		Energy enficiency class:	A++	-	
Water-to-water heat pump:		No		Controller class:	1	-	
Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	164	%	
Equipped with a supplementar	ry heater:	No		Package efficiency class:	A+++	_	
Heat pump combination heate		No		a consider a constant of const			
			ion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared f			, ,		•		. ,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η_s	163	%
Declared capacity for heating f	for part load at in	door temperatu	re 20 °C and	Declared coefficient of perform	ance or prima	ry energy rat	io for
outdoor temperature T j	or part load at in	door temperatu	re 20 Cana	part load at indoor temperature			
			7				, -
T j = -7 °C	Pdh	8,2	kW	T j = -7 °C	COPd	4,58	-
T j = + 2 °C	Pdh	8,1	kW	T j = +2 °C	COPd	4,40	- I
T j = + 7 °C	Pdh	8,1	kW	T j = +7 °C	COPd	4,30	
T j = + 12 °C	Pdh	8,1	kW	T j = +12 °C	COPd	4,20	-
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,58	-
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,58	-
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}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°C
Power consumption in modes	other than active	mode	•	Supplementary heater			-
Off mode	P _{OFF}	0,007	kW	Rated heat output (*)	Psup	1,1	kW
Thermostat-off mode	P _{TO}	0,013	kW				
Standby mode	P _{SB}	0,007	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0	kW				
Other items	<u> </u>						
other items				4			7
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4467	kWh	flow rate, outdoor heat exchanger	-	1,9	m3/h
For heat pump combination he		<u> </u>	1	Levenduger		I	1
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh

Annual fuel consumption

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kWh

na

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC Basic

Energy efficiency class:

ī

Controller class:

ENERTECH GROUP

Cold climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	111	%	
Equipped with a supplementary	/ heater:	No		Package efficiency class:		-	
Heat pump combination heater		No					
Parameters shall be declared for parameters shall be declared for		* *	ion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	8	kW	Seasonal space heating energy efficiency	η_{s}	110	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performa			
T j = - 7 °C	Pdh	7,6	kW	T j = - 7 °C	COPd	3,02] -
T j = + 2 °C	Pdh	7,6	kW	T j = +2 °C	COPd	2,94] -
T j = + 7 °C	Pdh	7,6	kW	T j = +7 °C	COPd	2,90	-
T j = + 12 °C	Pdh	7,6	kW	T j = +12 °C	COPd	2,86	
T j = bivalent temperature	Pdh	7,6	kW	T j = bivalent temperature	COPd	3,13	-
T j = operation limit temperature	Pdh	7,6	kW	T j = operation limit temperature	COPd	3,13	-
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}	-19	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient (**)	Cdh	1	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	ther than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,007	kW	Rated heat output (*)	Psup	0,7	kW
Thermostat-off mode	P _{TO}	0,004	kW				
Standby mode	P_{SB}	0,007	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0	kW				
Other items			,				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	6950	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/h
For heat pump combination he	ater:			1 1 2			
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details	Enertech AB, Box	309, SE-341 26	Ljungby Tel +4	46 372 88000 www.ctc.se	<u></u>		

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

No

CTC EcoPart 408 + CTC Basic

Energy efficiency class:

Controller class:

Cold climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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water to water near pamp.								
Brine-to-water heat pump:		Yes		Controller contribution:	1	%		
Low-temperature heat pump:		No		Package efficiency:	163	%		
Equipped with a supplementary	y heater:	No		Package efficiency class:		-		
Heat pump combination heater		No						
Parameters shall be declared fo	or medium-temp	erature applicat	ion, except for	r low-temperature heat pumps. For	low- temperat	ure heat pu	mps,	
parameters shall be declared for	or low-temperatu	re application.						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	9	kW	Seasonal space heating energy efficiency	η_{s}	162	%	
Declared capacity for heating fo outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performance or primary energy ratio part load at indoor temperature 20 °C and outdoor tempera				
T j = - 7 °C	Pdh	8,1	kW	T j = - 7 °C	COPd	4,41] -	
T j = + 2 °C	Pdh	8,1	kW	T j = +2 °C	COPd	4,30	1 -	
T j = + 7 °C	Pdh	8,1	kW	T j = +7 °C	COPd	4,23	_	
T j = + 12 °C	Pdh	8,1	kW	T j = +12 °C	COPd	4,17		
T j = bivalent temperature	Pdh	8,2	kW	T j = bivalent temperature	COPd	4,58	-	
T j = operation limit temperature	Pdh	8,2	kW	T j = operation limit temperature	COPd	4,58		
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}	-20	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°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	65	°c	
Power consumption in modes of	other than active	mode	•	Supplementary heater			•	
Off mode	P OFF	0,007	kW	Rated heat output (*)	Psup	0,5	kW	
Thermostat-off mode	P _{TO}	0,013	kW				•	
Standby mode	P _{SB}	0,007	kW	Type of energy input		Electric		
Crankcase heater mode	P _{CK}	0,000	kW					
Other items								
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/	
Sound power level, indoors/ outdoors	L _{WA}	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water				
Annual energy consumption	Q _{HE}	5009	kWh	flow rate, outdoor heat exchanger	-	1,9	m3/	
For heat pump combination he	ater:	•						
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%	
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	NA	kW	
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	NA	GJ	

^(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). (**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.