No

Warm climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Enertech AB, 341 26 Ljungby

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	141	%	
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 pui	mps,
parameters shall be declared for	or low-temperati	ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	34	kW	Seasonal space heating energy efficiency	η_{s}	137	%
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	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	31,8	kW	T j = +2 °C	COPd	3,07	-
T j = + 7 °C	Pdh	32,0	kW	T j = +7 °C	COPd	3,42	-
T j = + 12 °C	Pdh	33	kW	T j = +12 °C	COPd	4,09	-
T j = bivalent temperature	Pdh	31,8	kW	T j = bivalent temperature	COPd	3,17	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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	2,6	kW
Thermostat-off mode	P _{TO}	0,008	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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	12630	kWh	flow rate, outdoor heat exchanger	-	3,1/3,1	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

CTC EcoPart 435 + CTC EcoLogic, CTC EcoPart i435 PRO

Energy efficiency class:

VII

Controller 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

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:	184	%	
Equipped with a supplementary	heater:	No		Package efficiency class:		-	
Heat pump combination heater	:	No					
	•		ion, except fo	r low-temperature heat pumps. Fo	r low- tempera	ture heat pu	mps,
parameters shall be declared for	r low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	36	kW	Seasonal space heating energy efficiency	η _s	180	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of perform			
T j = -7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	33,8	kW	T j = +2 °C	COPd	4,55] -
T j = + 7 °C	Pdh	34,0	kW	T j = +7 °C	COPd	4,78	-
T j = + 12 °C	Pdh	34,6	kW	T j = +12 °C	COPd	5,06	-
T j = bivalent temperature	Pdh	33,8	kW	T j = bivalent temperature	COPd	4,63	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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	ther than active	mode	-	Supplementary heater		-	
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	2,8	kW
Thermostat-off mode	P _{TO}	0,027	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}	56/na	dB	For water-/brine-to-water hear pumps: Rated brine or water	t		
Annual energy consumption	Q _{HE}	10360	kWh	flow rate, outdoor heat exchanger	-	3,8/3,8	m3/h
For heat pump combination hea	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	Gl
Contact details	nertech AB, Box	309, SE-341 26	Ljungby Tel +	46 372 88000 www.ctc.se			

CTC EcoPart 435 + CTC EcoLogic, CTC EcoPart i435 PRO

Energy efficiency class:

Controller 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

Average climate and High temperature

Model(s):

consumption Contact details

Air-to-water heat pump:

Water-to-water heat pump:

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VII

				Controller classi			
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	141	%	
Equipped with a supplementary	y heater:	No		Package efficiency class:	A++	-	
Heat pump combination heater	r:	No					
			tion, except fo	r low-temperature heat pumps. For	low- tempera	iture heat pu	mps,
parameters shall be declared for		ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	36	kW	Seasonal space heating energy efficiency	η_{s}	137	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ure 20 °C and	Declared coefficient of performa part load at indoor temperature			
T j = - 7 °C	Pdh	32,0	kW	T j = - 7 °C	COPd	3,23] -
T j = + 2 °C	Pdh	32,2	kW	T j = +2 °C	COPd	3,60	-
T j = + 7 °C	Pdh	32,8	kW	T j = +7 °C	COPd	3,97	-
T j = + 12 °C	Pdh	33,4	kW	T j = +12 °C	COPd	4,36	-
T j = bivalent temperature	Pdh	32,0	kW	T j = bivalent temperature	COPd	3,23	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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 of	other than active	mode	=	Supplementary heater		-	
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	4,4	kW
Thermostat-off mode	P _{TO}	0,008	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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	20572	kWh	flow rate, outdoor heat exchanger	-	3,1/3,1	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

CTC EcoPart 435 + CTC EcoLogic, CTC EcoPart i435 PRO

Energy efficiency class:

Controller class:

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^(*) 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

kWh

GJ

na

na

Qfuel

AFC

Average climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Daily electricity consumption

Annual electricity

consumption Contact details Qelec

AEC

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VII

Trate: to trate: near pamp.				Correct Glasser			
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	185	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:	A+++	-	
Heat pump combination heate		No		· · · · · · · · · · · · · · · · · · ·			
		erature applicat	tion, except fo	r low-temperature heat pumps. For	r low- tempera	ture heat pu	mps,
parameters shall be declared for	or low-temperati	ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Uni
Rated heat output (*)	Prated	38	kW	Seasonal space heating energy efficiency	η_{s}	181	%
Declared capacity for heating f	or part load at in	door temperatu	ire 20 °C and	Declared coefficient of perform	nance or prima	ry energy rat	io for
outdoor temperature T j				part load at indoor temperatur	e 20 °C and ou	tdoor temper	rature 1
T j = - 7 °C	Pdh	33,8] kW	T j = - 7 °C	COPd	4,64	1 _
T j = + 2 °C	Pdh	34,2	kW	T j = +2 °C	COPd	4,83	1 [
Tj=+7°C	Pdh	34,4	kW	T j = +7 °C	COPd	5,01	1 -
T j = + 12 °C	Pdh	34,8	kW	T j = +12 °C	COPd	5,18	1 -
T j = bivalent temperature	Pdh	33,8	kW	T j = bivalent temperature	COPd	4,64	1
•	Full	33,8	_ KVV		COFU	4,04	
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: $T j = -15 ^{\circ}C \text{ (if TOL } < -20 ^{\circ}C \text{)}$	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	7	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	4,6	kW
Thermostat-off mode	P _{TO}	0,027	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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	16724	kWh	flow rate, outdoor heat exchanger	-	3,8/3,8	m3/
For heat pump combination he	eater:	•	•				
Declared load profile		na		Water heating energy efficiency	$\eta_{\sf wh}$	na	%
							1 .

CTC EcoPart 435 + CTC EcoLogic, CTC EcoPart i435 PRO

Energy efficiency class:

Controller class:

kWh

kWh

na

na

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Daily fuel consumption

Annual fuel consumption

^(*) 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

Cold climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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VII

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	145	%	
Equipped with a supplementary	y heater:	No		Package efficiency class:		-	
Heat pump combination heater	·:	No					
		erature applicat	tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pui	mps,
parameters shall be declared for	or low-temperatu	re application.					
ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	34	kW	Seasonal space heating energy efficiency	η_{s}	140	%
Declared capacity for heating fo 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	32,2	kW	T j = - 7 °C	COPd	3,51] -
T j = + 2 °C	Pdh	32,8	kW	T j = +2 °C	COPd	3,89	-
T j = + 7 °C	Pdh	33,2	kW	T j = +7 °C	COPd	4,24	-
T j = + 12 °C	Pdh	33,6	kW	T j = +12 °C	COPd	4,50	-
T j = bivalent temperature	Pdh	31,8	kW	T j = bivalent temperature	COPd	3,19	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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	0,99	-	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	2,8	kW
Thermostat-off mode	P _{TO}	0,008	kW				
Standby mode	P_{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		, ,			<u>I</u>		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/l
Sound power level, indoors/ outdoors	L _{WA}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	23108	kWh	flow rate, outdoor heat exchanger	-	3,1/3,1	m3/l
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	kWł
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ

CTC EcoPart 435 + CTC EcoLogic, CTC EcoPart i435 PRO

Energy efficiency class:

Controller 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

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:	188	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heate	r:	No					
			ion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pui	nps,
parameters shall be declared for	or low-temperatu	ire application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	36	kW	Seasonal space heating energy efficiency	η_s	184	%
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	34,2	kW	T j = - 7 °C	COPd	4,84] -
T j = + 2 °C	Pdh	34,4	kW	T j = +2 °C	COPd	5,01	-
T j = + 7 °C	Pdh	34,6	kW	T j = +7 °C	COPd	5,13	-
T j = + 12 °C	Pdh	34,6	kW	T j = +12 °C	COPd	5,15	-
T j = bivalent temperature	Pdh	33,8	kW	T j = bivalent temperature	COPd	4,61	-
T j = operation limit temperature	Pdh	na	kW	T j = operation limit temperature	COPd	na	-
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	0,018	kW	Rated heat output (*)	Psup	2,0	kW
Thermostat-off mode	P _{TO}	0,027	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	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	18332	kWh	flow rate, outdoor heat exchanger	-	3,8/3,8	m3/h
For heat pump combination he	ater:		<u> </u>			·	
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
	Enertech AB, Box	309, SE-341 26	Ljungby Tel +4	16 372 88000 www.ctc.se			

CTC EcoPart 435 + CTC EcoLogic, CTC EcoPart i435 PRO

Energy efficiency class:

Controller 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

Model(s):

consumption Contact details

Air-to-water heat pump:

Water-to-water heat pump:

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VII

Trate: to trate: near pamp.					• • • • • • • • • • • • • • • • • • • •		
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	123	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heate	r:	Yes					
			tion, except for	low-temperature heat pumps. For	low- tempera	iture heat pui	nps,
parameters shall be declared for							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	34	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	119	%
Declared capacity for heating for 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	31,7	kW	T j = +2 °C	COPd	2,77	-
T j = + 7 °C	Pdh	32,1	kW	T j = +7 °C	COPd	3,07	-
T j = + 12 °C	Pdh	33,0	kW	T j = +12 °C	COPd	3,64	-
T j = bivalent temperature	Pdh	31,8	kW	T j = bivalent temperature	COPd	2,85	-
T j = operation limit temperature	Pdh	31,7	kW	T j = operation limit temperature	COPd	2,77	-
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	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	0,025	kW	Rated heat output (*)	Psup	2,5	kW
Thermostat-off mode	P _{TO}	0,169	kW				
Standby mode	P_{SB}	0,025	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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	14445	kWh	flow rate, outdoor heat exchanger	-	3,1/3,1	m3/h
For heat pump combination he	eater:						
Declared load profile		XXL		Water heating energy efficiency	$\eta_{\sf wh}$	100	%
Daily electricity consumption	Qelec	9,851	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2167	kWh	Annual fuel consumption	AFC	NA	GJ

CTC EcoPart 435 + CTC EcoZenith 550

Energy efficiency class:

Controller 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

Yes

CTC EcoPart 435 + CTC EcoZenith 550

Energy efficiency class:

Controller contribution:

Controller class:

Warm climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Brine-to-water heat pump:

Enertech AB, 341 26 Ljungby

%

VII

3,5

Brille-to-water fleat pullip.		163		Controller Contribution.	3,3	/0	
Low-temperature heat pump:		No		Package efficiency:	147	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heate	r:	Yes					
Parameters shall be declared f	or medium-temp	erature applicat	tion, except fo	r low-temperature heat pumps. For	ow- tempera	ature heat pui	nps,
parameters shall be declared f	or low-temperati	ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	40	kW	Seasonal space heating energy efficiency	η_{s}	143	%
Declared capacity for heating foutdoor 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	na	kW	T j = - 7 °C	COPd	na	-
T j = + 2 °C	Pdh	33,7	kW	T j = +2 °C	COPd	4,01	-
T j = + 7 °C	Pdh	34,1	kW	T j = +7 °C	COPd	4,22	-
T j = + 12 °C	Pdh	34,6	kW	T j = +12 °C	COPd	4,44	-
T j = bivalent temperature	Pdh	34,0	kW	T j = bivalent temperature	COPd	4,13	-
T j = operation limit temperature	Pdh	33,7	kW	T j = operation limit temperature	COPd	4,01	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	na	kW	For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	COPd	na	-
Bivalent temperature	T _{biv}	4	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient (**)	Cdh	0,94	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode	_	Supplementary heater			
Off mode	P OFF	0,003	kW	Rated heat output (*)	Psup	5,9	kW
Thermostat-off mode	P _{TO}	0,497	kW			•	
Standby mode	P_{SB}	0,025	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
	, ck	0,000	NVV				
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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	4964	kWh	flow rate, outdoor heat exchanger		3,8/3,8	m3/h
For heat pump combination he	eater:						
Declared load profile		XXL		Water heating energy efficiency	$\eta_{\sf wh}$	100	%
Daily electricity consumption	Qelec	9,851	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2167	kWh	Annual fuel consumption	AFC	NA	GJ
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.

No

Average climate and High temperature

Model(s):

Air-to-water heat pump:

Annual electricity

consumption Contact details AEC

Water-to-water heat pump:

Enertech AB, 341 26 Ljungby

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	124	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:	A+	-	
Heat pump combination heate		Yes					
			ion, 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
	3,20.			Seasonal space heating energy	5,50.		
Rated heat output (*)	Prated	38	kW	efficiency	η_{s}	120	%
Declared capacity for heating for outdoor temperature T j	or part load at ind	door temperatu	re 20 °C and	Declared coefficient of perform part load at indoor temperature	•		
T j = -7 °C	Pdh	31,9	kW	T j = -7 °C	COPd	2,91] -
T j = + 2 °C	Pdh	32,3	kW	T j = +2 °C	COPd	3,24	1 -
T j = + 7 °C	Pdh	32,9	kW	T j = +7 °C	COPd	3,55	-
T j = + 12 °C	Pdh	33,5	kW	T j = +12 °C	COPd	3,86	-
T j = bivalent temperature	Pdh	32,0	kW	T j = bivalent temperature	COPd	2,96	-
T j = operation limit temperature	Pdh	31,7	kW	T j = operation limit temperature	COPd	2,77	-
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}	-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	0,025	kW	Rated heat output (*)	Psup	6,0	kW
Thermostat-off mode	P _{TO}	0,169	kW				
Standby mode	P_{SB}	0,025	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	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	24390	kWh	flow rate, outdoor heat exchanger		3,1/3,1	m3/h
For heat pump combination he	ater:						
Declared load profile		XXL		Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	Qelec	9,851	kWh	Daily fuel consumption	Qfuel	NA	kWh

CTC EcoPart 435 + CTC EcoZenith 550

Energy efficiency class:

Controller class:

A+

VII

AFC

NA

GJ

Annual fuel consumption

www.ctc.se

kWh

2167

^(*) 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 435 + CTC EcoZenith 550

Energy efficiency class:

Controller class:

Average climate and Low 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:	153	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:	A+++	-	
Heat pump combination heater	r:	Yes					
		erature applica	tion, except for	r low-temperature heat pumps. For	low- tempera	iture heat pui	mps,
parameters shall be declared for	or low-temperati	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	40	kW	Seasonal space heating energy efficiency	η_s	149	%
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	33,9	kW	T j = - 7 °C	COPd	4,09	-
T j = + 2 °C	Pdh	34,2	kW	T j = +2 °C	COPd	4,25	-
T j = + 7 °C	Pdh	34,5	kW	T j = +7 °C	COPd	4,39	-
T j = + 12 °C	Pdh	34,7	kW	T j = +12 °C	COPd	4,53	-
T j = bivalent temperature	Pdh	34,0	kW	T j = bivalent temperature	COPd	4,12	-
Γ j = operation limit temperature	Pdh	33,7	kW	T j = operation limit temperature	COPd	4,01	-
For air-to-water heat pumps: $T j = -15 ^{\circ}C \text{ (if TOL } < -20 ^{\circ}C \text{)}$	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 neating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient (**)	Cdh	0,93	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	other than active	mode	_	Supplementary heater			
Off mode	P OFF	0,025	kW	Rated heat output (*)	Psup	6,4	kW
Thermostat-off mode	P _{TO}	0,497	kW				
Standby mode	P_{SB}	0,025	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	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	21141	kWh	flow rate, outdoor heat exchanger	-	3,8/3,8	m3/h
For heat pump combination he	ater:						1
Declared load profile		XXL		Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	Qelec	9,851	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2167	kWh	Annual fuel consumption	AFC	NA	G۱

^(*) 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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Cold climate and High temperature

ENERTECH GROUPEnertech AB, 341 26 Ljungby

cora emmate ama mgm temperature				2.1.c. (co, 12) 0 12 20 2jan.ga
Model(s):	CTC EcoPart 43	5 + CTC EcoZenith 550	•	
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:	126	%
Equipped with a supplementary heater:	Yes	Package efficiency class:		-
Heat pump combination heater:	Yes			
Parameters shall be declared for medium-	temperature applicat	ion, except for low-temperature heat pumps.	For low- tem	perature heat pumps,
parameters shall be declared for low-temp	erature application.			
Itama Cumba	l Value	l luit lann	Crossela	al Malua Hait

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	37	kW	Seasonal space heating energy efficiency	η_{s}	122	%
Declared capacity for heating foutdoor temperature T j	for part load at ind	door temperatu	re 20 °C and	Declared coefficient of performal part load at indoor temperature 2			
T j = -7 °C	Pdh	32,2	kW	T j = - 7 °C	COPd	3,17	-
T j = + 2 °C	Pdh	32,7	kW	T j = +2 °C	COPd	3,48	-
T j = + 7 °C	Pdh	33,3	kW	T j = +7 °C	COPd	3,76	-
T j = + 12 °C	Pdh	33,7	kW	T j = +12 °C	COPd	3,97	-
T j = bivalent temperature	Pdh	31,9	kW	T j = bivalent temperature	COPd	2,94	-
T j = operation limit temperature	Pdh	31,7	kW	T j = operation limit temperature	COPd	2,77	-
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}	-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	0,98	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode	-	Supplementary heater			
Off mode	P OFF	0,025	kW	Rated heat output (*)	Psup	5,0	kW
Thermostat-off mode	P _{TO}	0,169	kW				
Standby mode	P_{SB}	0,025	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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	27998	kWh	flow rate, outdoor heat exchanger	-	3,1/3,1	m3/h
For heat pump combination he	eater:						
Declared load profile		XXL		Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	Qelec	9,851	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	2167	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			

^(*) 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

Yes

CTC EcoPart 435 + CTC EcoZenith 550

Energy efficiency class:

Controller contribution:

Controller class:

Cold climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Brine-to-water heat pump:

Enertech AB, 341 26 Ljungby

%

VII

3,5

Billie-to-water fleat pullip.		163		Controller Contribution.	3,3	/0	
Low-temperature heat pump:		No		Package efficiency:	153	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heate		Yes					
Parameters shall be declared f	or medium-temp		ion, except for	low-temperature heat pumps. For lo	ow- tempera	ture heat pur	nps,
parameters shall be declared f	or low-temperati	ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	39	kW	Seasonal space heating energy efficiency	η_{s}	149	%
Declared capacity for heating foutdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performal part load at indoor temperature			
T j = -7 °C	Pdh	34,2	kW	T j = - 7 °C	COPd	4,27	-
T j = + 2 °C	Pdh	34,5	kW	T j = +2 °C	COPd	4,40	-
T j = + 7 °C	Pdh	34,7	kW	T j = +7 °C	COPd	4,49	-
T j = + 12 °C	Pdh	34,7	kW	T j = +12 °C	COPd	4,51	-
T j = bivalent temperature	Pdh	34,0	kW	T j = bivalent temperature	COPd	4,14	-
T j = operation limit temperature	Pdh	33,7	kW	T j = operation limit temperature	COPd	4,01	-
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	0,93	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode	·	Supplementary heater			•
Off mode	P OFF	0,025	kW	Rated heat output (*)	Psup	5,4	kW
Thermostat-off mode	P _{TO}	0,497	kW				
Standby mode	P_{SB}	0,025	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW]]			
Other items	CA	3,000					
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	24650	kWh	flow rate, outdoor heat exchanger	-	3,8/3,8	m3/h
For heat pump combination he	eater:						
Declared load profile		XXL		Water heating energy efficiency	$\eta_{\sf wh}$	100	%
Daily electricity consumption	Qelec	9,851	kWh	Daily fuel consumption	Q fuel	NA	kWh
Annual electricity consumption	AEC	2167	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details	Enertech AB, Box	309, SE-341 26	Ljungby Tel +4	6 372 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

Yes

CTC EcoPart 435 + CTC EcoBasic

Energy efficiency class:

Controller contribution:

1

Controller class:

Warm 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

%

Low-temperature heat pump:		No		Package efficiency:	121	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heate	r:	No					
Parameters shall be declared for	or medium-temp		ion, except fo	r low-temperature heat pumps. For l	ow- tempera	iture heat pui	mps,
parameters shall be declared f	or low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	38	kW	Seasonal space heating energy efficiency	η_{s}	120	%
Declared capacity for heating f outdoor temperature T j	or part load at inc	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	31,8	kW	T j = +2 °C	COPd	3,07	1 -
T j = + 7 °C	Pdh	31,8	kW	T j = +7 °C	COPd	2,98] -
T j = + 12 °C	Pdh	31,8	kW	T j = +12 °C	COPd	2,88] -
T j = bivalent temperature	Pdh	31,8	kW	T j = bivalent temperature	COPd	3,07	-
T j = operation limit temperature	Pdh	31,8	kW	T j = operation limit temperature	COPd	3,07	-
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	1,00	-	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	2,4	kW
Thermostat-off mode	P _{TO}	0,008	kW				
Standby mode	P_{SB}	0,007	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items		7,200	•	1			
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	15742	kWh	flow rate, outdoor heat exchanger	-	3,1/3,1	m3/h
For heat pump combination he	eater:						
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
	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 435 + CTC EcoBasic

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

		NU		COTILIONET Class.			
Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	162	%	
Equipped with a supplementary	y heater:	No		Package efficiency class:		-	
Heat pump combination heater	r:	No					
			tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared fo	-	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	36	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	161	%
Declared capacity for heating for outdoor temperature T j	or part load at inc	door temperatu	ire 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	33,8	kW	T j = +2 °C	COPd	4,55	-
T j = + 7 °C	Pdh	33,6	kW	T j = +7 °C	COPd	4,41	-
T j = + 12 °C	Pdh	33,2	kW	T j = +12 °C	COPd	4,23	-
T j = bivalent temperature	Pdh	33,8	kW	T j = bivalent temperature	COPd	4,55	-
T j = operation limit temperature	Pdh	33,8	kW	T j = operation limit temperature	COPd	4,55	-
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 o	other than active	mode	•	Supplementary heater			•
Off mode	P OFF	0,007	kW	Rated heat output (*)	Psup	2,6	kW
Thermostat-off mode	P _{TO}	0,027	kW				•
Standby mode	P _{SB}	0,007	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	J.	-,	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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	11502	kWh	flow rate, outdoor heat exchanger		3,8/3,8	m3/l
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.

No

Yes

CTC EcoPart 435 + CTC EcoBasic

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+

brille-to-water fleat pump.		163		Controller Contribution.	1	70	
Low-temperature heat pump:		No		Package efficiency:	110	%	
Equipped with a supplementar	ry heater:	No		Package efficiency class:	A+	-	
Heat pump combination heate		No					
			ion, except fo	or low-temperature heat pumps. For	ow- tempera	ature heat pui	mps,
parameters shall be declared f	or low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	36	kW	Seasonal space heating energy efficiency	η_{s}	109	%
Declared capacity for heating foutdoor temperature T j	for part load at in	door temperatu	re 20 °C and	Declared coefficient of performa part load at indoor temperature	•		
T j = -7 °C	Pdh	31,8	kW	T j = - 7 °C	COPd	3,07	-
T j = + 2 °C	Pdh	31,8	kW	T j = +2 °C	COPd	2,96	1 -
T j = + 7 °C	Pdh	31,8	kW	T j = +7 °C	COPd	2,90	1 -
T j = + 12 °C	Pdh	31,8	kW	T j = +12 °C	COPd	2,84	-
T j = bivalent temperature	Pdh	31,8	kW	T j = bivalent temperature	COPd	3,07	-
T j = operation limit temperature	Pdh	31,8	kW	T j = operation limit temperature	COPd	3,07	-
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	1,00	-	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	4,2	kW
Thermostat-off mode	P _{TO}	0,008	kW				
Standby mode	P_{SB}	0,007	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
	, CK	0,000	NVV				
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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	25340	kWh	flow rate, outdoor heat exchanger	-	3,1/3,1	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
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.

No

CTC EcoPart 435 + CTC EcoLogic

Energy efficiency class:

Controller class:

Average climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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A++

water to water near pump.							
Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	164	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:	A+++	-	
Heat pump combination heater		No					
		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	ire application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	38	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	163	%
Declared capacity for heating foutdoor 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	33,8	kW	T j = - 7 °C	COPd	4,55] -
T j = + 2 °C	Pdh	33,4	kW	T j = +2 °C	COPd	4,37	-
T j = + 7 °C	Pdh	33,4	kW	T j = +7 °C	COPd	4,27	-
T j = + 12 °C	Pdh	33,2	kW	T j = +12 °C	COPd	4,17	-
T j = bivalent temperature	Pdh	33,8	kW	T j = bivalent temperature	COPd	4,55	-
T j = operation limit temperature	Pdh	33,8	kW	T j = operation limit temperature	COPd	4,55	-
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 of	other than active	mode	•	Supplementary heater			
Off mode	P OFF	0,007	kW	Rated heat output (*)	Psup	4,4	kW
Thermostat-off mode	P TO	0,027	kW				
Standby mode	P _{SB}	0,007	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	. ск	0,000	1		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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	18434	kWh	flow rate, outdoor heat exchanger	-	3,8/3,8	m3/l
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	kWł
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

Yes

CTC EcoPart 435 + CTC EcoBasic

Energy efficiency class:

Controller contribution:

Controller class:

ENERTECH

Cold 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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%

Low-temperature heat pump:		No		Package efficiency:	109	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heate	r:	No					
			ion, except for	r low-temperature heat pumps. For l	ow- tempera	ture heat pu	mps,
parameters shall be declared f		re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	34	kW	Seasonal space heating energy efficiency	η_{s}	108	%
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	31,8	kW	T j = - 7 °C	COPd	2,97] -
T j = + 2 °C	Pdh	32,8	kW	T j = +2 °C	COPd	2,90	1 -
T j = + 7 °C	Pdh	32,8	kW	T j = +7 °C	COPd	2,86	1 -
T j = + 12 °C	Pdh	32,8	kW	T j = +12 °C	COPd	2,82] -
T j = bivalent temperature	Pdh	32,8	kW	T j = bivalent temperature	COPd	3,07	-
T j = operation limit temperature	Pdh	32,8	kW	T j = operation limit temperature	COPd	3,07	-
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	32,8	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	1,00	-	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	1,8	kW
Thermostat-off mode	P _{TO}	0,008	kW				-
Standby mode	P_{SB}	0,007	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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	28406	kWh	flow rate, outdoor heat exchanger	-	3,1/3,1	m3/h
For heat pump combination he	eater:		<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

CTC EcoPart 435 + CTC EcoBasic

Energy efficiency class:

Controller class:

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:	163	%	
Equipped with a supplementary	heater:	No		Package efficiency class:		-	
Heat pump combination heater		No					
Parameters shall be declared for parameters shall be declared for			tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pur	nps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	36	kW	Seasonal space heating energy efficiency	η_{s}	162	%
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	33,4	kW	T j = - 7 °C	COPd	4,38	-
T j = + 2 °C	Pdh	33,4	kW	T j = +2 °C	COPd	4,27	-
T j = + 7 °C	Pdh	33,2	kW	T j = +7 °C	COPd	4,21	-
T j = + 12 °C	Pdh	33,2	kW	T j = +12 °C	COPd	4,14	-
T j = bivalent temperature	Pdh	33,8	kW	T j = bivalent temperature	COPd	4,55	-
T j = operation limit temperature	Pdh	33,8	kW	T j = operation limit temperature	COPd	4,55	-
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	ther than active	mode	_	Supplementary heater			•
Off mode	P OFF	0,007	kW	Rated heat output (*)	Psup	1,8	kW
Thermostat-off mode	P _{TO}	0,027	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}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	20688	kWh	flow rate, outdoor heat exchanger	-	3,8/3,8	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
Contact details	nertech 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.