No

CTC EcoPart 406 + CTC EcoLogic

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

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	132	%	
Equipped with a supplementary	/ heater:	No		Package efficiency class:		-	
Heat pump combination heater	:	No					
		erature applica	tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared fo	r low-temperati	ure application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	$\eta_{s}$	128	%
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	na	kW	T j = - 7 °C	COPd	na	] -
T j = + 2 °C	Pdh	5,2	kW	T j = +2 °C	COPd	2,91	] -
T j = + 7 °C	Pdh	5,4	kW	T j = +7 °C	COPd	3,31	-
T j = + 12 °C	Pdh	5,7	kW	T j = +12 °C	COPd	4,02	-
T j = bivalent temperature	Pdh	5,2	kW	T j = bivalent temperature	COPd	3,02	-
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 <sub>biv</sub>	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	ther than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,5	kW
Thermostat-off mode	P <sub>TO</sub>	0,003	kW				
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items			•		·!·		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/ł
Sound power level, indoors/ outdoors	L <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	2209	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

<sup>(\*)</sup> 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 406 + 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:	179	%	
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	6	kW	Seasonal space heating energy efficiency	$\eta_{s}$	176	%
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	na	kW	T j = - 7 °C	COPd	na	] -
T j = + 2 °C	Pdh	5,9	kW	T j = +2 °C	COPd	4,57	1 -
T j = + 7 °C	Pdh	6,0	kW	T j = +7 °C	COPd	4,82	-
T j = + 12 °C	Pdh	6,1	kW	T j = +12 °C	COPd	5,12	-
T j = bivalent temperature	Pdh	5,9	kW	T j = bivalent temperature	COPd	4,65	] -
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 <sub>biv</sub>	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	0,5	kW
Thermostat-off mode	P <sub>TO</sub>	0,005	kW				-
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items	- CK	5,000	ļ		!		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	1860	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

<sup>(\*)</sup> 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 406 + CTC EcoLogic

Energy efficiency class:

Controller class:

# ENERTECH

Average climate and High temperature

Model(s):

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:	134	%	
Equipped with a supplementary	heater:	No		Package efficiency class:	A++	-	
Heat pump combination heater	:	No					
			ion, except fo	r low-temperature heat pumps. Fo	or 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	6	kW	Seasonal space heating energ efficiency	γ η <sub>ς</sub>	130	%
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	5,3	kW	T j = - 7 °C	COPd	3,10	] -
T j = + 2 °C	Pdh	5,5	kW	T j = +2 °C	COPd	3,52	] -
T j = + 7 °C	Pdh	5,6	kW	T j = +7 °C	COPd	3,91	-
T j = + 12 °C	Pdh	5,8	kW	T j = +12 °C	COPd	4,32	_
T j = bivalent temperature	Pdh	5,3	kW	T j = bivalent temperature	COPd	3,16	-
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 <sub>biv</sub>	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	1,1	kW
Thermostat-off mode	P <sub>TO</sub>	0,003	kW			•	•
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	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 <sub>WA</sub>	43/na	dB	For water-/brine-to-water hea pumps: Rated brine or water	t		
Annual energy consumption	Q <sub>HE</sub>	3743	kWh	flow rate, outdoor heat exchanger	-	1,5	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	GJ
	enertech AB, Box	309, SE-341 26	Ljungby Tel +	46 372 88000 www.ctc.se			

<sup>(\*)</sup> 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 406 + 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:

Enertech AB, 341 26 Ljungby

A++

VII

	INU		COTILIONEL Class.	VII		
	Yes		Controller contribution:	3,5	%	
	No		Package efficiency:	183	%	
/ heater:	No		Package efficiency class:	A+++	_	
:	No					
	erature applicat	tion, except for	r low-temperature heat pumps. For	low- tempera	iture heat pu	mps,
r low-temperatu	re application.					
Symbol	Value	Unit	Item	Symbol	Value	Unit
Prated	7	kW	Seasonal space heating energy efficiency	$\eta_{s}$	179	%
or part load at ind	door temperatu	ire 20 °C and	1 I			
Pdh	5,9	kW	T j = - 7 °C	COPd	4,67	] -
Pdh	6,0	kW	T j = +2 °C	COPd	4,88	] -
Pdh	6,1	kW	T j = +7 °C	COPd	5,06	
Pdh	6,2	kW	T j = +12 °C	COPd	5,25	
Pdh	5,9	kW	T j = bivalent temperature	COPd	4,67	-
Pdh	na	kW	T j = operation limit temperature	COPd	na	-
Pdh	na	kW	For air-to-water heat pumps: T j = - 15 °C (if TOL < - 20 °C)	COPd	na	-
T <sub>biv</sub>	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
P <sub>cych</sub>	na	kW	Cycling interval efficiency	СОРсус	na	_
Cdh	0,98	] -	Heating water operating limit temperature	WTOL	65	°C
ther than active	mode		Supplementary heater			_
P <sub>OFF</sub>	0,018	kW	Rated heat output (*)	Psup	0,8	kW
P <sub>TO</sub>	0,005	kW				
$P_{SB}$	0,018	kW	Type of energy input		Electric	
P <sub>CK</sub>	0,000	kW				
	<u>,                                      </u>	_!		ļ		
	Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
L <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Q <sub>HE</sub>	2967	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/h
ater:						
	na		Water heating energy efficiency	$\eta_{wh}$	na	%
Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
						1
	r medium-tempor r low-temperature symbol  Prated  Prated  or part load at incomplete proper load	No r heater: No remedium-temperature application. Symbol Value Prated 7  Path 5,9 Path 6,0 Path 6,1 Path 6,2 Path 6,2 Path 7  Path 7 Pa	No r heater: No remedium-temperature application, except for row-temperature application.  Symbol Value Unit Prated 7 kW  Prated 7 kW  Prated 6,0 kw Pdh 6,0 kw Pdh 6,1 kw Pdh 6,2 kw Pdh 5,9 kw Pdh 6,2 kw Pdh 10 kw Pd	No Package efficiency:  It heater: No Package efficiency class:  No redium-temperature application, except for low-temperature heat pumps. For it low-temperature application.  Symbol Value Unit Item  Proted 7 kW Seasonal space heating energy efficiency  Path 5,9 kW Tj = -7 °C  Path 6,0 kW Tj = +2 °C  Path 6,1 kW Tj = +12 °C  Path 6,2 kW Tj = +12 °C  Path 5,9 kW Tj = bivalent temperature  Path 5,9 kW Tj = operation limit temperature  Path 5,9 kW Tj = operation limit temperature  For air-to-water heat pumps: Operation limit temperature  Poych na kW Cycling interval efficiency  Heating water operating limit temperature  Rated heat output (*)  For air-to-water heat pumps: Rated heat output (*)  For air-to-water heat pumps: Rated heat output (*)  For air-to-water heat pumps: Rated air flow rate, outdoors  For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  ater:  No  Package efficiency:  About 1 temperature heat pumps provided provi	No Package efficiency: 183  r heater: No Package efficiency class: A+++  r medium-temperature application, except for low-temperature heat pumps. For low- temperar r low-temperature application.  Symbol Value Unit Item Symbol  Proted 7 kW Seasonal space heating energy efficiency  or part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out of part load at indoor temperature 20 °C and out figure 10 °C COPd COPd Pdh 6,1 kW Tj = 12 °C COPd	No Package efficiency: 183 %  I cheater: No Package efficiency class: A+++ -  The redium-temperature application, except for low-temperature heat pumps. For low-temperature heat pumps row-temperature application.  Symbol Value Unit Item Symbol Value  Practed 7 kW  For part load at indoor temperature 20 °C and outdoor 20 °C and outdoor 20 °C and 2

<sup>(\*)</sup> 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 406 + CTC EcoLogic

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

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	137	%	
Equipped with a supplementary	heater:	No		Package efficiency class:		-	
Heat pump combination heater	:	No					
			tion, 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	6	kW	Seasonal space heating energy efficiency	$\eta_{s}$	133	%
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	5,4	kW	T j = - 7 °C	COPd	3,42	] -
T j = + 2 °C	Pdh	5,6	kW	T j = +2 °C	COPd	3,82	] -
T j = + 7 °C	Pdh	5,7	kW	T j = +7 °C	COPd	4,19	
T j = + 12 °C	Pdh	5,9	kW	T j = +12 °C	COPd	4,46	-
T j = bivalent temperature	Pdh	5,3	kW	T j = bivalent temperature	COPd	3,09	-
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 <sub>biv</sub>	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	0,7	kW
Thermostat-off mode	P <sub>TO</sub>	0,003	kW				•
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items	C.K	3,000	<u> </u>				
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	43/na	dB	For water-/brine-to-water hea pumps: Rated brine or water	t		
Annual energy consumption	Q <sub>HE</sub>	4107	kWh	flow rate, outdoor heat exchanger	-	1,5	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	G۱
Contact details	nertech AB, Box	309, SE-341 26	Ljungby Tel +	46 372 88000 www.ctc.se			

<sup>(\*)</sup> 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 406 + CTC EcoLogic

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

					<b>-</b> /-		
Low-temperature heat pump:		No		Package efficiency:	187	%	
Equipped with a supplementar	ry heater:	No		Package efficiency class:		-	
Heat pump combination heate	er:	No					
Parameters shall be declared f parameters shall be declared f			ion, except fo	r low-temperature heat pumps. For l	ow- tempera	ture heat pu	mps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	$\eta_{s}$	183	%
Declared capacity for heating foutdoor temperature T j	for part load at ind	door temperatu	re 20 °C and	Declared coefficient of performa part load at indoor temperature			
T j = -7 °C	Pdh	6,0	kW	T j = - 7 °C	COPd	4,9	] -
T j = + 2 °C	Pdh	6,1	kW	T j = +2 °C	COPd	5,07	1 -
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	2,2	1 -
T j = + 12 °C	Pdh	6,2	kW	T j = +12 °C	COPd	5,22	_
T j = bivalent temperature	Pdh	5,9	kW	T j = bivalent temperature	COPd	4,67	-
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 <sub>biv</sub>	-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	0,98	-	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	0,5	kW
Thermostat-off mode	P <sub>TO</sub>	0,005	kW				
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items	<del></del>	.,		-			
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	3332	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/h
For heat pump combination he	eater:		<u> </u>	- Textorianger			
Declared load profile		na		Water heating energy efficiency	$\eta_{wh}$	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ
	Enertech AB, Box	309, SE-341 26	Ljungby Tel +4	46 372 88000 www.ctc.se			

<sup>(\*)</sup> 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 406 + CTC EcoZenith 250

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:

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:	123	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heate	r:	Yes					
		erature applicat	ion, except for	r low-temperature heat pumps. For l	ow- tempera	nture 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	6	kW	Seasonal space heating energy efficiency	$\eta_{s}$	119	%
Declared capacity for heating f outdoor 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	5,2	kW	T j = +2 °C	COPd	2,72	1 -
T j = + 7 °C	Pdh	5,4	kW	T j = +7 °C	COPd	3,11	] -
T j = + 12 °C	Pdh	5,7	kW	T j = +12 °C	COPd	3,76	] -
T j = bivalent temperature	Pdh	5,3	kW	T j = bivalent temperature	COPd	2,83	-
T j = operation limit temperature	Pdh	5,2	kW	T j = operation limit temperature	COPd	2,72	-
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 <sub>biv</sub>	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	0,4	kW
Thermostat-off mode	P <sub>TO</sub>	0,010	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items	CA.	3,000		<del>                                   </del>			
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	2382	kWh	flow rate, outdoor heat exchanger	-	1	m3/h
For heat pump combination he	eater:						
Declared load profile		L		Water heating energy efficiency	$\eta_{\sf wh}$	78	%
Daily electricity consumption	Qelec	5,985	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1317	kWh	Annual fuel consumption	AFC	NA	GJ
•	Enertech AB, Box	309, SF-341 26	Liunghy Tel +4	46 372 88000 www.ctc.se			

<sup>(\*)</sup> 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 406 + CTC EcoZenith 250

Energy efficiency class:

Controller class:

## Warm climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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VII

				Controller class.	VII		
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	161	%	
Equipped with a supplementary	/ heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	:	Yes					
			tion, except for	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	6	kW	Seasonal space heating energy efficiency	$\eta_{s}$	157	%
Declared capacity for heating fooutdoor 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	5,9	kW	T j = +2 °C	COPd	4,23	] -
T j = + 7 °C	Pdh	6,0	kW	T j = +7 °C	COPd	4,45	] -
T j = + 12 °C	Pdh	6,2	kW	T j = +12 °C	COPd	4,71	
T j = bivalent temperature	Pdh	5,9	kW	T j = bivalent temperature	COPd	4,30	-
T j = operation limit temperature	Pdh	5,9	kW	T j = operation limit temperature	COPd	4,23	_
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 <sub>biv</sub>	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 o	ther than active	mode		Supplementary heater			-
Off mode	P <sub>OFF</sub>	0,018	kW	Rated heat output (*)	Psup	0,5	kW
Thermostat-off mode	P <sub>TO</sub>	0,027	kW				-
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items		,			ļ		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/I
Sound power level, indoors/ outdoors	L <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	2073	kWh	flow rate, outdoor heat exchanger	-	1,4	m3/l
For heat pump combination hea	ater:			<u> </u>			
Declared load profile		L	_	Water heating energy efficiency	$\eta_{\sf wh}$	78	%
Daily electricity consumption	Qelec	5,977	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity	AEC	1315	kWh	Annual fuel consumption	AFC	na	GJ

<sup>(\*)</sup> 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 406 + CTC EcoZenith 250

Energy efficiency class:

Controller class:

### Average climate and High temperature

Model(s):

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:	123	%	
Equipped with a supplementary	y heater:	Yes		Package efficiency class:	A+	-	
Heat pump combination heater	r:	Yes					
				r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for	-						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	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 performation part load at indoor temperature	•		
T j = - 7 °C	Pdh	5,3	kW	T j = - 7 °C	COPd	2,90	] -
T j = + 2 °C	Pdh	5,4	kW	T j = +2 °C	COPd	3,32	] -
T j = + 7 °C	Pdh	5,6	kW	T j = +7 °C	COPd	3,66	-
T j = + 12 °C	Pdh	5,8	kW	T j = +12 °C	COPd	4,01	
T j = bivalent temperature	Pdh	5,2	kW	T j = bivalent temperature	COPd	2,96	-
T j = operation limit temperature	Pdh	5,2	kW	T j = operation limit temperature	COPd	2,72	_
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 <sub>biv</sub>	-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 of	other than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,18	kW	Rated heat output (*)	Psup	1,1	kW
Thermostat-off mode	P <sub>TO</sub>	0,010	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	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 <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	4006	kWh	flow rate, outdoor heat exchanger	-	1	m3/h
For heat pump combination he	ater:						
Declared load profile		L		Water heating energy efficiency	$\eta_{\sf wh}$	78	%
Daily electricity consumption	Qelec	5,985	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity					AFC		GJ

<sup>(\*)</sup> 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 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:	166	%	
Equipped with a supplementary	heater:	Yes		Package efficiency class:	A+++	-	
Heat pump combination heater		Yes					
			tion, except fo	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared fo	r low-temperatu Symbol	value	Unit	Item	Symbol	Value	Unit
Item	Зуппрог	Value	T	Seasonal space heating energy	Зуппоп	value	I
Rated heat output (*)	Prated	7	kW	efficiency	$\eta_{s}$	162	%
Declared capacity for heating fo 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	6,0	kW	T j = - 7 °C	COPd	4,32	] -
T j = + 2 °C	Pdh	6,0	kW	T j = +2 °C	COPd	4,50	] -
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	4,66	
T j = + 12 °C	Pdh	6,2	kW	T j = +12 °C	COPd	4,83	-
T j = bivalent temperature	Pdh	6,0	kW	T j = bivalent temperature	COPd	4,32	-
T j = operation limit temperature	Pdh	5,9	kW	T j = operation limit temperature	COPd	4,23	-
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 <sub>biv</sub>	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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 <sub>OFF</sub>	0,018	kW	Rated heat output (*)	Psup	0,8	kW
Thermostat-off mode	P <sub>TO</sub>	0,027	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	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 <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	3281	kWh	flow rate, outdoor heat exchanger	-	1,4	m3/h
For heat pump combination hea	ater:						
Declared load profile		L		Water heating energy efficiency	$\eta_{\sf wh}$	78	%
Daily electricity consumption	Qelec	5,985	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity	AEC	1317	kWh	Annual fuel consumption	AFC	na	GJ

CTC EcoPart 406 + CTC EcoZenith 250

Energy efficiency class:

Controller class:

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consumption Contact details

<sup>(\*)</sup> 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):

consumption Contact details

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:	128	%	
Equipped with a supplementary	/ heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	:	Yes					
			tion, except for	r low-temperature heat pumps. For	low- tempera	iture heat pu	mps,
parameters shall be declared for <b>Item</b>	Symbol	Value	Unit	Item	Symbol	Value	Unit
	•			Seasonal space heating energy	•		
Rated heat output (*)	Prated	6	kW	efficiency	η <sub>s</sub>	124	%
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	5,4	kW	T j = - 7 °C	COPd	3,23	] -
T j = + 2 °C	Pdh	5,6	kW	T j = +2 °C	COPd	3,59	-
T j = + 7 °C	Pdh	5,7	kW	T j = +7 °C	COPd	3,91	-
T j = + 12 °C	Pdh	5,9	kW	T j = +12 °C	COPd	4,14	-
T j = bivalent temperature	Pdh	5,3	kW	T j = bivalent temperature	COPd	2,94	-
T j = operation limit temperature	Pdh	5,2	kW	T j = operation limit temperature	COPd	2,72	-
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 <sub>biv</sub>	-17	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	ther than active	mode	_	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	0,9	kW
Thermostat-off mode	P <sub>TO</sub>	0,010	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	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 <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	4560	kWh	flow rate, outdoor heat exchanger	-	1	m3/h
For heat pump combination he	ater:	•	•				
Declared load profile		L		Water heating energy efficiency	$\eta_{\sf wh}$	78	%
Daily electricity consumption	Qelec	5,985	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity consumption	AEC	1317	kWh	Annual fuel consumption	AFC	na	GJ

CTC EcoPart 406 + CTC EcoZenith 250

Energy efficiency class:

Controller class:

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<sup>(\*)</sup> 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 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:	168	%	
Equipped with a supplementary	/ heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	:	Yes					
			tion, except for	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	7	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	164	%
Declared capacity for heating fooutdoor 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	6,1	kW	T j = - 7 °C	COPd	4,52	] -
T j = + 2 °C	Pdh	6,1	kW	T j = +2 °C	COPd	4,66	] -
T j = + 7 °C	Pdh	6,2	kW	T j = +7 °C	COPd	4,78	-
T j = + 12 °C	Pdh	6,2	kW	T j = +12 °C	COPd	4,80	
T j = bivalent temperature	Pdh	6,0	kW	T j = bivalent temperature	COPd	4,32	-
T j = operation limit temperature	Pdh	5,9	kW	T j = operation limit temperature	COPd	4,23	_
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 <sub>biv</sub>	-19	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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 <sub>OFF</sub>	0,018	kW	Rated heat output (*)	Psup	0,6	kW
Thermostat-off mode	P <sub>TO</sub>	0,027	kW				
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
Other items					<u>.</u>		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/l
Sound power level, indoors/ outdoors	L <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	3709	kWh	flow rate, outdoor heat exchanger	-	1,4	m3/ł
For heat pump combination hea	ater:						
Declared load profile		L		Water heating energy efficiency	$\eta_{\sf wh}$	78	%
Daily electricity consumption	Qelec	5,985	kWh	Daily fuel consumption	Qfuel	na	kWh
Annual electricity	AEC	1317	kWh	Annual fuel consumption	AFC	na	GJ

CTC EcoPart 406 + CTC EcoZenith 250

Energy efficiency class:

Controller class:

<sup>(\*)</sup> 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 406 + CTC EcoZenith 550

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:

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:	124	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heate	er:	Yes					
		erature applicat	tion, except fo	r low-temperature heat pumps. For	low- tempera	ature heat pu	mps,
parameters shall be declared f	or low-temperati	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	6	kW	Seasonal space heating energy efficiency	$\eta_{s}$	120	%
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	5,2	kW	T j = +2 °C	COPd	2,72	-
T j = + 7 °C	Pdh	5,4	kW	T j = +7 °C	COPd	3,14	-
T j = + 12 °C	Pdh	5,7	kW	T j = +12 °C	COPd	3,78	-
T j = bivalent temperature	Pdh	5,3	kW	T j = bivalent temperature	COPd	2,94	-
T j = operation limit temperature	Pdh	5,2	kW	T j = operation limit temperature	COPd	2,72	-
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 <sub>biv</sub>	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 <sub>OFF</sub>	0,018	kW	Rated heat output (*)	Psup	1,0	kW
Thermostat-off mode	P <sub>TO</sub>	0,005	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
	· CK	0,000	KVV	1			
Other items Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	- na		
Sound power level, indoors/ outdoors	L <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	2585	kWh	flow rate, outdoor heat exchanger		1,5	m3/h
For heat pump combination he	eater:						
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	92	%
Daily electricity consumption	Qelec	8,273	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1820	kWh	Annual fuel consumption	AFC	NA	GJ
Contact details	Enertech AB, Box	309, SE-341 26	Ljungby Tel +	46 372 88000 www.ctc.se			-

<sup>(\*)</sup> 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 406 + CTC EcoZenith 550

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:	162	%	
Equipped with a supplementary	/ heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	:	Yes					
			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	6	kW	Seasonal space heating energy efficiency	$\eta_{s}$	158	%
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	5,9	kW	T j = +2 °C	COPd	4,23	] -
T j = + 7 °C	Pdh	6,0	kW	T j = +7 °C	COPd	4,45	-
T j = + 12 °C	Pdh	6,2	kW	T j = +12 °C	COPd	4,71	
T j = bivalent temperature	Pdh	5,9	kW	T j = bivalent temperature	COPd	4,30	-
T j = operation limit temperature	Pdh	5,9	kW	T j = operation limit temperature	COPd	4,23	_
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 <sub>biv</sub>	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°c
Cycling interval capacity for heating	P <sub>cych</sub>	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	0,5	kW
Thermostat-off mode	P <sub>TO</sub>	0,021	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	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 <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	2056	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/l
For heat pump combination he	ater:						
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	92	%
Daily electricity consumption	Qelec	8,273	kWh	Daily fuel consumption	Qfuel	NA	kWl
Annual electricity consumption	AEC	1820	kWh	Annual fuel consumption	AFC	NA	GJ

<sup>(\*)</sup> 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 406 + 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:

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%

A+

VII

3,5

					-,-		
Low-temperature heat pump:		No		Package efficiency:	126	%	
Equipped with a supplementar	y heater:	Yes		Package efficiency class:	A++	_	
Heat pump combination heate	r:	Yes					
Parameters shall be declared f	or medium-temp	erature applicat	ion, except fo	or low-temperature heat pumps. For	low- tempera	iture 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	6	kW	Seasonal space heating energy efficiency	$\eta_s$	122	%
Declared capacity for heating foutdoor 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	5,3	kW	T j = - 7 °C	COPd	2,90	] -
T j = + 2 °C	Pdh	5,4	kW	T j = +2 °C	COPd	3,32	1 -
T j = + 7 °C	Pdh	5,6	kW	T j = +7 °C	COPd	3,66	1 -
T j = + 12 °C	Pdh	5,8	kW	T j = +12 °C	COPd	4,01	] -
T j = bivalent temperature	Pdh	5,3	kW	T j = bivalent temperature	COPd	2,97	-
T j = operation limit temperature	Pdh	5,2	kW	T j = operation limit temperature	COPd	2,72	] -
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 <sub>biv</sub>	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	1,1	kW
Thermostat-off mode	P <sub>TO</sub>	0,005	kW				
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	0,000	kW				
	- ск	0,000		† <b> </b>			
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 <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	3992	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/h
For heat pump combination he	eater:	•	-			•	
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	92	%
Daily electricity consumption	Qelec	8,273	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1820	kWh	Annual fuel consumption	AFC	NA	GJ
	Enertech AB, Box	309, SE-341 26	Liungby Tel +	46 372 88000 www.ctc.se		•	•

<sup>(\*)</sup> 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 Low temperature

Model(s):

consumption Contact details

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:	167	%	
Equipped with a supplementar	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. Fo	r low- tempera	iture heat pu	mps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	7	kW	Seasonal space heating energy efficiency		163	%
Declared capacity for heating for outdoor temperature T j	or part load at ind		Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature T j				
T j = -7 °C	Pdh	6,0	kW	T j = - 7 °C	COPd	4,32	] -
T j = + 2 °C	Pdh	6,1	kW	T j = +2 °C	COPd	4,51	] -
T j = + 7 °C	Pdh	6,1	kW	T j = +7 °C	COPd	4,67	-
T j = + 12 °C	Pdh	6,2	kW	T j = +12 °C	COPd	4,83	-
T j = bivalent temperature	Pdh	6,0	kW	T j = bivalent temperature	COPd	4,36	-
T j = operation limit temperature	Pdh	5,9	kW	T j = operation limit temperature	COPd	4,23	-
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 <sub>biv</sub>	-6	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	7	Supplementary heater			7
Off mode	P <sub>OFF</sub>	0,018	kW	Rated heat output (*)	Psup	1,2	kW
Thermostat-off mode	P <sub>TO</sub>	0,021	kW				
Standby mode	$P_{SB}$	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	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 <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water	:		
Annual energy consumption	Q <sub>HE</sub>	3423	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/h
For heat pump combination he	ater:						
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	92	%
Daily electricity consumption	Qelec	8,273	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1820	kWh	Annual fuel consumption	AFC	NA	GJ

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Energy efficiency class:

Controller class:

<sup>(\*)</sup> 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 406 + CTC EcoZenith 550

Energy efficiency class:

Controller contribution:

Controller class:

### **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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%

VII

3,5

					-,-		
Low-temperature heat pump:		No		Package efficiency:	129	%	
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	ion, except fo	r low-temperature heat pumps. For l	ow- tempera	ture 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	6	kW	Seasonal space heating energy efficiency	$\eta_s$	125	%
Declared capacity for heating foutdoor 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	5,4	kW	T j = - 7 °C	COPd	3,23	] -
T j = + 2 °C	Pdh	5,6	kW	T j = +2 °C	COPd	3,59	1 -
T j = + 7 °C	Pdh	5,7	kW	T j = +7 °C	COPd	3,91	] -
T j = + 12 °C	Pdh	5,9	kW	T j = +12 °C	COPd	4,14	] -
T j = bivalent temperature	Pdh	5,3	kW	T j = bivalent temperature	COPd	2,94	-
T j = operation limit temperature	Pdh	5,2	kW	T j = operation limit temperature	COPd	2,72	-
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 <sub>biv</sub>	-17	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P <sub>cych</sub>	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	0,9	kW
Thermostat-off mode	P <sub>TO</sub>	0,005	kW				
Standby mode	P <sub>SB</sub>	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P <sub>CK</sub>	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 <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q <sub>HE</sub>	4539	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/h
For heat pump combination he	eater:			· · · · · · · · · · · · · · · · · · ·			
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	92	%
Daily electricity consumption	Qelec	8,273	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1820	kWh	Annual fuel consumption	AFC	NA	GJ
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<sup>(\*)</sup> 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

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Energy efficiency class:

Controller class:

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

VII

	NU		Controller class.	VII		
	Yes		Controller contribution:	3,5	%	
	No		Package efficiency:	169	%	
y heater:	Yes		Package efficiency class:		-	
:	Yes					
		ion, except for	low-temperature heat pumps. For	low- tempera	iture heat pu	mps,
Symbol	Value	Unit	1	Symbol	Value	Unit
Prated	7	kW	efficiency	η <sub>s</sub>	165	%
or part load at in	door temperatu	re 20 °C and	l I			
Pdh	6,1	kW	T j = - 7 °C	COPd	4,53	] -
Pdh	6,1	kW	T j = +2 °C	COPd	4,67	] -
Pdh	6,2	kW	T j = +7 °C	COPd	4,78	] -
Pdh	6,2	kW	T j = +12 °C	COPd	4,80	-
Pdh	6,0	kW	T j = bivalent temperature	COPd	4,35	-
Pdh	5,9	kW	T j = operation limit temperature	COPd	4,23	_
Pdh	na	kW	For air-to-water heat pumps: T j = $-15$ °C (if TOL < $-20$ °C)	COPd	na	-
T <sub>biv</sub>	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
P cych	na	kW	Cycling interval efficiency	СОРсус	na	_
Cdh	0,97	-	Heating water operating limit temperature	WTOL	65	°C
ther than active	mode	_	Supplementary heater			
P OFF	0,018	kW	Rated heat output (*)	Psup	0,8	kW
P <sub>TO</sub>	0,021	kW				
$P_{SB}$	0,018	kW	Type of energy input		Electric	
P <sub>CK</sub>	0,000	kW				
	•	•		•		
	Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
L <sub>WA</sub>	43/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Q <sub>HE</sub>	3800	kWh	flow rate, outdoor heat exchanger	-	1,5	m3/h
ater:						
	XL		Water heating energy efficiency	$\eta_{\sf wh}$	92	%
Qelec	8,273	kWh	Daily fuel consumption	Qfuel	NA	kWh
		1	1			1
	Symbol  Prated  or part load at in  Pdh Pdh Pdh Pdh Pdh Pdh Pdh  Pdh  Pdh	No y heater: Yes Tr: Yes Tr: Yes Tr: Yes Tr: Yes Tr: Yes Tr: The service of medium-temperature application.  Symbol Value  Prated 7  Tr: Part load at indoor temperature  Part load at indoor temperat	No y heater: Yes Tryes or medium-temperature application, except for or low-temperature application.  Symbol Value Unit  Prated 7 kW  Or part load at indoor temperature 20 °C and  Pdh 6,1 kW Pdh 6,1 kW Pdh 6,2 kW Pdh 6,2 kW Pdh 6,0 kW  Pdh 5,9 kW  Pdh 10 ha kW  Perper 10 ha kw  Per	No Package efficiency: y heater: Yes Package efficiency class: Test Package fficiency class: Test Package fficiency class: Test Package fficiency class: Test Package efficiency class: Test Package fficiency class	No Package efficiency: 169 y heater: Yes Package efficiency class: Texport package ficiency class: Texport package ficiency class: Texport pac	No Package efficiency: 169 %  y heater: Yes Package efficiency class:  Tes Yes Package efficiency class

<sup>(\*)</sup> 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.