No

Yes

CTC EcoPart 417 + CTC EcoLogic

Energy efficiency class:

Controller contribution:

Controller class:

Warm climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

Brine-to-water heat pump:

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%

VII

3,5

Billie-to-water fleat pullip.		163		Controller contribution.	3,3	/0	
Low-temperature heat pump:		No		Package efficiency:	141	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heate	r:	No		•			
Parameters shall be declared f	or medium-temp		ion, except for	low-temperature heat pumps. For I	ow- tempera	nture heat pu	mps,
parameters shall be declared f							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	17	kW	Seasonal space heating energy efficiency	η_s	137	%
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	15,9	kW	T j = +2 °C	COPd	3,07	-
T j = + 7 °C	Pdh	16,0	kW	T j = +7 °C	COPd	3,42	-
T j = + 12 °C	Pdh	16,5	kW	T j = +12 °C	COPd	4,09	-
T j = bivalent temperature	Pdh	15,9	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	other than active	mode	-	Supplementary heater			-
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,3	kW
Thermostat-off mode	P _{TO}	0,008	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	CK	-,	<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 _{WA}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	6315	kWh	flow rate, outdoor heat exchanger	-	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	G۱
	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 417 + CTC EcoLogic

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

				COTILIONET Class.	VII		
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	184	%	
Equipped with a supplementary	y heater:	No		Package efficiency class:		-	
Heat pump combination heater	:	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	18	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	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	16,9	kW	T j = +2 °C	COPd	4,55] -
T j = + 7 °C	Pdh	17,0	kW	T j = +7 °C	COPd	4,78] -
T j = + 12 °C	Pdh	17,3	kW	T j = +12 °C	COPd	5,06	_
T j = bivalent temperature	Pdh	16,9	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 o	ther than active	mode	•	Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,4	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	CN	3,000	1		ļ		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/I
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}	5180	kWh	flow rate, outdoor heat exchanger	-	3,8	m3/l
For heat pump combination he	ater:	•					
Declared load profile		na		Water heating energy efficiency	η_{wh}	na	%
Daily electricity consumption	Qelec	na	kWh	Daily fuel consumption	Qfuel	na	kWł
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

CTC EcoPart 417 + CTC EcoLogic

Energy efficiency class:

Controller class:

Average climate and High 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:	141	%	
Equipped with a supplementary	heater:	No		Package efficiency class:	A++	-	
Heat pump combination heater		No					
Parameters shall be declared fo parameters shall be declared fo			tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	18	kW	Seasonal space heating energy efficiency	n _s	137	%
Declared capacity for heating fo outdoor temperature T j	r part load at in	door temperatu	re 20 °C and	Declared coefficient of perform part load at indoor temperature			
T j = - 7 °C	Pdh	16	kW	T j = - 7 °C	COPd	3,23] -
T j = + 2 °C	Pdh	16,1	kW	T j = +2 °C	COPd	3,60] -
T j = + 7 °C	Pdh	16,4	kW	T j = +7 °C	COPd	3,97	
T j = + 12 °C	Pdh	16,7	kW	T j = +12 °C	COPd	4,36	-
T j = bivalent temperature	Pdh	16	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 o	ther than active	mode	7	Supplementary heater			-
Off mode	P _{OFF}	0,018	kW	Rated heat output (*)	Psup	2,2	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}	10286	kWh	flow rate, outdoor heat exchanger	-	3,1	m3/h
For heat pump combination hea	ater:	•	•				
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	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ

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

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consumption Contact details

www.ctc.se

AFC

GJ

No

Yes

CTC EcoPart 417 + CTC EcoLogic

Energy efficiency class:

Controller contribution:

Controller class:

Average climate and Low 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:	185	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:	A+++	_	
Heat pump combination heate	r:	No					
Parameters shall be declared for	or medium-temp		ion, except fo	or low-temperature heat pumps. For	low- tempera	iture 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	19	kW	Seasonal space heating energy efficiency	η_{s}	181	%
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	16,9	kW	T j = - 7 °C	COPd	4,64] -
T j = + 2 °C	Pdh	17,1	kW	T j = +2 °C	COPd	4,83	-
T j = + 7 °C	Pdh	17,2	kW	T j = +7 °C	COPd	5,01	1 -
T j = + 12 °C	Pdh	17,4	kW	T j = +12 °C	COPd	5,18] -
T j = bivalent temperature	Pdh	16,9	kW	T j = bivalent temperature	COPd	4,64] -
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	other than active	mode	_	Supplementary heater			=
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	2,3	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}	8362	kWh	flow rate, outdoor heat exchanger	-	3,8	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
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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

CTC EcoPart 417 + CTC EcoLogic

Energy efficiency class:

Controller class:

Cold climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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water to water near pamp:		110		Correroner class:	•			
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%		
Low-temperature heat pump:		No		Package efficiency:	144	%		
Equipped with a supplementary	y heater:	No		Package efficiency class:		-		
Heat pump combination heater	r:	No						
Parameters shall be declared for	or medium-temp	erature applicat	tion, except fo	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,	
parameters shall be declared for	or low-temperati	re application.						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
Rated heat output (*)	Prated	17	kW	Seasonal space heating energy efficiency	$\eta_{\mathcal{S}}$	140	%	
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performance or primary energy ratio fo part load at indoor temperature 20 °C and outdoor temperature				
T j = -7 °C	Pdh	16,1	kW	T j = - 7 °C	COPd	3,51] -	
T j = + 2 °C	Pdh	16,4	kW	T j = +2 °C	COPd	3,89] -	
T j = + 7 °C	Pdh	16,6	kW	T j = +7 °C	COPd	4,24	-	
T j = + 12 °C	Pdh	16,8	kW	T j = +12 °C	COPd	4,50		
T j = bivalent temperature	Pdh	15,9	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 of		mode	7	Supplementary heater			7	
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,4	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}	11554	kWh	flow rate, outdoor heat exchanger	-	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	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ	

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

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consumption Contact details

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No

CTC EcoPart 417 + CTC EcoLogic

Energy efficiency class:

Controller class:

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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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:	166	%		
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 pu	mps,	
parameters shall be declared for	-	ire application.						
Item	Symbol	Value	Unit	ltem	Symbol	Value	Unit	
Rated heat output (*)	Prated	18	kW	Seasonal space heating energy efficiency	η_{s}	184	%	
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	re 20 °C and	Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature				
T j = - 7 °C	Pdh	17,1	kW	T j = -7 °C	COPd	4,84] -	
T j = + 2 °C	Pdh	17,2	kW	T j = +2 °C	COPd	5,01	-	
T j = + 7 °C	Pdh	17,3	kW	T j = +7 °C	COPd	5,13	-	
T j = + 12 °C	Pdh	17,3	kW	T j = +12 °C	COPd	5,15	-	
T j = bivalent temperature	Pdh	16,9	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	1,0	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}	9166	kWh	flow rate, outdoor heat exchanger	-	3,8	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	Gl	
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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

Yes

CTC EcoPart 417 + 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	r:	Yes		-			
		erature applicat	tion, except fo	r low-temperature heat pumps. For l	ow- tempera	ature heat pu	mps,
parameters shall be declared for	or low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	17	kW	Seasonal space heating energy efficiency	η_{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	15,9	kW	T j = +2 °C	COPd	2,77	-
T j = + 7 °C	Pdh	16,0	kW	T j = +7 °C	COPd	3,07	-
T j = + 12 °C	Pdh	16,5	kW	T j = +12 °C	COPd	3,64	_
T j = bivalent temperature	Pdh	15,9	kW	T j = bivalent temperature	COPd	2,85	-
T j = operation limit temperature	Pdh	15,9	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	0,99	-	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	1,3	kW
Thermostat-off mode	P _{TO}	0,052	kW			•	•
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
•			1	, pe a analy input			
Crankcase heater mode	P _{CK}	0,000	kW	1			
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}	7168	kWh	flow rate, outdoor heat exchanger	-	3,1	m3/h
For heat pump combination he	eater:						
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	100	%
Daily electricity consumption	Qelec	7,659	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1685	kWh	Annual fuel consumption	AFC	NA	GJ
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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

Model(s):

Air-to-water heat pump:

Annual electricity

consumption Contact details AEC

Water-to-water heat pump:

water-to-water neat pump.		NO		Controller class.	VII		
Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	153	%	
Equipped with a supplementa	ry heater:	Yes		Package efficiency class:		-	
Heat pump combination heate Parameters shall be declared f parameters shall be declared f	or medium-tempo		ion, except fo	r low-temperature heat pumps. For	low- tempera	ature heat pu	mps,
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	18	kW	Seasonal space heating energy efficiency	η _s	149	%
Declared capacity for heating to outdoor temperature T j	for part load at ind	door temperatu	re 20 °C and	Declared coefficient of performa	•		
T j = – 7 °C	Pdh	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	16,9	kW	T j = +2 °C	COPd	4,01	1 -
T j = + 7 °C	Pdh	17,0	kW	T j = +7 °C	COPd	4,20] -
T j = + 12 °C	Pdh	17,3	kW	T j = +12 °C	COPd	4,43	_
T j = bivalent temperature	Pdh	16,9	kW	T j = bivalent temperature	COPd	4,07	-
T j = operation limit temperature	Pdh	16,9	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}	3	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P cych	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient (**)	Cdh	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes	other than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	1,4	kW
Thermostat-off mode	P _{TO}	0,146	kW				
Standby mode	P _{SB}	0,018	kW	Type of energy input		Electric	
Crankcase heater mode	P _{CK}	0,000	kW				
Other items	CK	0,000			ļ		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	6208	kWh	flow rate, outdoor heat exchanger	-	3,8	m3/h
For heat pump combination he	eater:	•					
Declared load profile		XL		Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	Qelec	7,659	kWh	Daily fuel consumption	Qfuel	NA	kWh

CTC EcoPart 417 + CTC EcoZenith 550

Energy efficiency class:

VII

Controller class:

Annual fuel consumption

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AFC

NA

GJ

kWh

1685

^(*) 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 417 + CTC EcoZenith 550

Energy efficiency class:

Controller class:

Average climate and High 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:	125	%	
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	•						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	19	kW	Seasonal space heating energy efficiency	η_{s}	121	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ire 20 °C and	Declared coefficient of perform part load at indoor temperature			
T j = - 7 °C	Pdh	16,0	kW	T j = - 7 °C	COPd	2,91] -
T j = + 2 °C	Pdh	16,1	kW	T j = +2 °C	COPd	3,24] -
T j = + 7 °C	Pdh	16,4	kW	T j = +7 °C	COPd	3,55	-
T j = + 12 °C	Pdh	16,7	kW	T j = +12 °C	COPd	3,86	-
T j = bivalent temperature	Pdh	16,0	kW	T j = bivalent temperature	COPd	2,96	-
T j = operation limit temperature	Pdh	15,9	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	0,99	-	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	3,0	kW
Thermostat-off mode	P _{TO}	0,052	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}	12137	kWh	flow rate, outdoor heat exchanger	<u>-</u>	3,1	m3/
For heat pump combination he	ater:						
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	100	%
Daily electricity consumption	Qelec	7,659	kWh	Daily fuel consumption	Qfuel	NA	kWl
Annual electricity consumption	AEC	1685	kWh	Annual fuel consumption	AFC	NA	GJ

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

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Average climate and Low temperature

Model(s):

Air-to-water heat pump:

Annual electricity

consumption Contact details AEC

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A++

AFC

NA

GJ

7111 to Water Heat pamps		110		Energy entererity class.	74		
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:	157	%	
Equipped with a supplementa	ry heater:	Yes		Package efficiency class:	A+++	-	
Heat pump combination heat	-	Yes					
			ion, except fo	r low-temperature heat pumps. For	· low- tempera	ture heat pu	mps,
parameters shall be declared t	for low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	20	kW	Seasonal space heating energy efficiency	η_{s}	153	%
Declared capacity for heating outdoor temperature T j	for part load at ind	door temperatu	re 20 °C and	Declared coefficient of perform part load at indoor temperature			
T j = -7 °C	Pdh	16,9	kW	T j = - 7 °C	COPd	4,09] -
T j = + 2 °C	Pdh	17,1	kW	T j = +2 °C	COPd	4,25] -
T j = + 7 °C	Pdh	17,2	kW	T j = +7 °C	COPd	4,39	
T j = + 12 °C	Pdh	17,4	kW	T j = +12 °C	COPd	4,53	-
T j = bivalent temperature	Pdh	17,0	kW	T j = bivalent temperature	COPd	4,12	-
T j = operation limit temperature	Pdh	16,9	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: $T j = -15 ^{\circ}C \text{ (if TOL } < -20 ^{\circ}C \text{)}$	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	0,96	-	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	3,2	kW
Thermostat-off mode	P _{TO}	0,146	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}	10312	kWh	flow rate, outdoor heat exchanger		3,8	m3/h
For heat pump combination h	eater:						
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	100	%
Daily electricity consumption	Qelec	7,659	kWh	Daily fuel consumption	Qfuel	NA	kWh
			-				_

CTC EcoPart 417 + CTC EcoZenith 550

Energy efficiency class:

Annual fuel consumption

www.ctc.se

kWh

1685

^(*) 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 417 + CTC EcoZenith 550

Energy efficiency class:

Controller class:

Cold climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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VII

Brine-to-water heat pump:		Yes		Controller contribution:	3,5	%	
Low-temperature heat pump:		No		Package efficiency:	126	%	
Equipped with a supplementary	y heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	•	Yes					
Parameters shall be declared fo	or medium-temp	erature applicat	tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for	or low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	18	kW	Seasonal space heating energy efficiency	η_{s}	122	%
Declared capacity for heating fo 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	16,1	kW	T j = - 7 °C	COPd	3,17] -
T j = + 2 °C	Pdh	16,4	kW	T j = +2 °C	COPd	3,48	-
T j = + 7 °C	Pdh	16,6	kW	T j = +7 °C	COPd	3,76	-
T j = + 12 °C	Pdh	16,8	kW	T j = +12 °C	COPd	3,97	-
T j = bivalent temperature	Pdh	16,0	kW	T j = bivalent temperature	COPd	2,94	-
T j = operation limit temperature	Pdh	15,9	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	0,99	-	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	2,5	kW
Thermostat-off mode	P _{TO}	0,052	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}	13902	kWh	flow rate, outdoor heat exchanger	-	3,1	m3/h
For heat pump combination he	ater:						
Declared load profile		XL		Water heating energy efficiency	$\eta_{\sf wh}$	100	%
Daily electricity consumption	Qelec	7,659	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity	AEC	1685	kWh	Annual fuel consumption	AFC	NA	GJ

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

No

CTC EcoPart 417 + CTC EcoZenith 550

Energy efficiency class:

Controller class:

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:	158	%	
Equipped with a supplementary	heater:	Yes		Package efficiency class:		-	
Heat pump combination heater	:	Yes					
	•		ion, except for	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	19	kW	Seasonal space heating energy efficiency	η_s	154	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatui	re 20 °C and	Declared coefficient of perforn part load at indoor temperatur	•		
T j = -7 °C	Pdh	17,1	kW	T j = - 7 °C	COPd	4,27	-
T j = + 2 °C	Pdh	17,2	kW	T j = +2 °C	COPd	4,39] -
T j = + 7 °C	Pdh	17,3	kW	T j = +7 °C	COPd	4,49] -
T j = + 12 °C	Pdh	17,3	kW	T j = +12 °C	COPd	4,51	-
T j = bivalent temperature	Pdh	17,0	kW	T j = bivalent temperature	COPd	4,11	-
T j = operation limit temperature	Pdh	16,9	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}	-18	°C	For air-to-water heat pumps: Operation limit temperature	TOL	na	°C
Cycling interval capacity for heating	P _{cych}	na	kW	Cycling interval efficiency	СОРсус	na	-
Degradation co-efficient (**)	Cdh	0,96	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes of	ther than active	mode		Supplementary heater			
Off mode	P OFF	0,018	kW	Rated heat output (*)	Psup	2,1	kW
Thermostat-off mode	P _{TO}	0,146	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}	11573	kWh	flow rate, outdoor heat exchanger	-	3,8	m3/h
For heat pump combination hea	ater:			-			
Declared load profile		XL		Water heating energy efficiency	η_{wh}	100	%
Daily electricity consumption	Qelec	7,659	kWh	Daily fuel consumption	Qfuel	NA	kWh
Annual electricity consumption	AEC	1685	kWh	Annual fuel consumption	AFC	NA	GJ
	nertech 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

CTC EcoPart 417 + CTC EcoBasic

Energy efficiency class:

Controller class:

Warm climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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water to water near pump.							
Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	109	%	
Equipped with a supplementar	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 for	or low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	17	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	na	kW	T j = - 7 °C	COPd	na] -
T j = + 2 °C	Pdh	15,9	kW	T j = +2 °C	COPd	3,07] -
T j = + 7 °C	Pdh	15,9	kW	T j = +7 °C	COPd	2,98	-
T j = + 12 °C	Pdh	15,9	kW	T j = +12 °C	COPd	2,88	-
T j = bivalent temperature	Pdh	15,9	kW	T j = bivalent temperature	COPd	3,07	-
T j = operation limit temperature	Pdh	15,9	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 of	other than active	mode	•	Supplementary heater	•		•
Off mode	P OFF	0,007	kW	Rated heat output (*)	Psup	1,2	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				
Other items	- Cr	3,000	<u>,</u>		!		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	- na n		
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}	7871	kWh	flow rate, outdoor heat exchanger	-	3,1	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	kWl
Annual electricity consumption	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ

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

No

CTC EcoPart 417 + CTC EcoBasic

Energy efficiency class:

Controller class:

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

					•		
Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	162	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heate	r:	No					
Parameters shall be declared for	or medium-temp	erature applica	tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for	or low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	18	kW	Seasonal space heating energy efficiency	η_{s}	161	%
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	16,9	kW	T j = +2 °C	COPd	4,55	-
T j = + 7 °C	Pdh	16,8	kW	T j = +7 °C	COPd	4,41	-
T j = + 12 °C	Pdh	16,6	kW	T j = +12 °C	COPd	4,23	_
T j = bivalent temperature	Pdh	16,9	kW	T j = bivalent temperature	COPd	4,55	-
T j = operation limit temperature	Pdh	16,9	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 of	other than active	mode	_	Supplementary heater			_
Off mode	P OFF	0,007	kW	Rated heat output (*)	Psup	1,3	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}	5751	kWh	flow rate, outdoor heat exchanger	-	3,8	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
	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 417 + 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:

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%

A+

1

Low-temperature heat pump:		No		Package efficiency:	110	%	
Equipped with a supplementar	ry heater:	No		Package efficiency class:	A+	-	
Heat pump combination heate	er:	No					
			ion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared f							
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	18	kW	Seasonal space heating energy efficiency	η_{s}	109	%
Declared capacity for heating foutdoor temperature T j	for part load at inc	loor temperatu	re 20 °C and	Declared coefficient of perform part load at indoor temperature			
T j = -7 °C	Pdh	15,9	kW	T j = - 7 °C	COPd	3,07] -
T j = + 2 °C	Pdh	15,9	kW	T j = +2 °C	COPd	2,96	1 -
T j = + 7 °C	Pdh	15,9	kW	T j = +7 °C	COPd	2,90	1 -
T j = + 12 °C	Pdh	15,9	kW	T j = +12 °C	COPd	2,84] -
T j = bivalent temperature	Pdh	15,9	kW	T j = bivalent temperature	COPd	3,07] -
T j = operation limit temperature	Pdh	15,9	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	2,1	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	- CA	3,000			ļ		
Capacity control		Fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	na	m3/h
Sound power level, indoors/ outdoors	L _{WA}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	12670	kWh	flow rate, outdoor heat exchanger	-	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
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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

CTC EcoPart 417 + 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 neat 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	r:	No					
		* *	tion, except for	r low-temperature heat pumps. For	low- tempera	ture heat pu	mps,
parameters shall be declared for		re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	19	kW	Seasonal space heating energy efficiency	η_{s}	163	%
Declared capacity for heating for outdoor temperature T j	or part load at in	door temperatu	ire 20 °C and	Declared coefficient of performations part load at indoor temperature	•		
T j = - 7 °C	Pdh	16,9	kW	T j = - 7 °C	COPd	4,55] -
T j = + 2 °C	Pdh	16,7	kW	T j = +2 °C	COPd	4,37	-
T j = + 7 °C	Pdh	16,7	kW	T j = +7 °C	COPd	4,27	_
T j = + 12 °C	Pdh	16,6	kW	T j = +12 °C	COPd	4,17	-
T j = bivalent temperature	Pdh	16,9	kW	T j = bivalent temperature	COPd	4,55	-
T j = operation limit temperature	Pdh	16,9	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	2,2	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	<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 _{WA}	56/na	dB	For water-/brine-to-water heat pumps: Rated brine or water			
Annual energy consumption	Q _{HE}	9217	kWh	flow rate, outdoor heat exchanger	-	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

^(*) 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 417 + CTC EcoBasic

Energy efficiency class:

Controller class:

ENERTECH

Cold climate and High temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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water-to-water neat pump.		INU		Controller class.	<u>'</u>		
Brine-to-water heat pump:		Yes		Controller contribution:	1	%	
Low-temperature heat pump:		No		Package efficiency:	109	%	
Equipped with a supplementar	y heater:	No		Package efficiency class:		-	
Heat pump combination heater		No		•			
		erature applicat	tion, except for	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	17	kW	Seasonal space heating energy efficiency	η_{s}	108	%
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	15,9	kW	T j = - 7 °C	COPd	2,97] -
T j = + 2 °C	Pdh	16,4	kW	T j = +2 °C	COPd	2,90] -
T j = + 7 °C	Pdh	16,4	kW	T j = +7 °C	COPd	2,86] -
T j = + 12 °C	Pdh	16,4	kW	T j = +12 °C	COPd	2,82	-
T j = bivalent temperature	Pdh	16,4	kW	T j = bivalent temperature	COPd	3,07	-
T j = operation limit temperature	Pdh	16,4	kW	T j = operation limit temperature	COPd	3,07	_
For air-to-water heat pumps: T j = -15 °C (if TOL < -20 °C)	Pdh	16,4	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 of	other than active	mode		Supplementary heater			
Off mode	P OFF	0,007	kW	Rated heat output (*)	Psup	0,9	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		•	•				
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}	14203	kWh	flow rate, outdoor heat exchanger	<u>-</u>	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	AEC	na	kWh	Annual fuel consumption	AFC	na	GJ

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

No

CTC EcoPart 417 + CTC EcoBasic

Energy efficiency class:

Controller class:

Cold climate and Low temperature

Model(s):

Air-to-water heat pump:

Water-to-water heat pump:

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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	or medium-tempe	erature applicati	ion, except for	r low-temperature heat pumps. For	· low- tempera	ture heat pu	mps,
parameters shall be declared for	or low-temperatu	re application.					
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output (*)	Prated	18	kW	Seasonal space heating energy efficiency	η_{s}	162	%
Declared capacity for heating for outdoor temperature T j	or part load at ind	door temperatui	re 20 °C and	Declared coefficient of perform part load at indoor temperatur			
T j = -7 °C	Pdh	16,7	kW	T j = -7 °C	COPd	4,38] -
T j = + 2 °C	Pdh	16,7	kW	T j = +2 °C	COPd	4,27	-
T j = + 7 °C	Pdh	16,6	kW	T j = +7 °C	COPd	4,21] -
T j = + 12 °C	Pdh	16,6	kW	T j = +12 °C	COPd	4,14	-
T j = bivalent temperature	Pdh	16,9	kW	T j = bivalent temperature	COPd	4,55	-
T j = operation limit temperature	Pdh	16,9	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: $T j = -15 ^{\circ}C \text{ (if TOL } < -20 ^{\circ}C \text{)}$	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	0,9	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}	10344	kWh	flow rate, outdoor heat exchanger	-	3,8	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	G۱
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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.