EcoPart XL

Large Ground Source Heat Pump

Enertech Group

Large Capacity Heat pump for Borehole, Ground and Water collectors

CTC's EcoPart XL range of ground source heat pumps offer an extremely efficient solution for space heating and hot water generation. Absorbing energy from the ground, borehole or water the CTC EcoPart XL raises the collected energy temperature by means of the refrigeration circuit providing higher temperatures to the heating system.

Using two cooling modules the CTC EcoPart XL is able to increase power in three stages resulting in a smoother operation, adapting to the different capacity requirements of the building. Reducing the number of start/stop cycles and using class A Low Energy Pumps for brine and heating circuits improve the efficiency of the EcoPart XL.

With the built in EcoLogic Pro Controller the i-pro version is able to control up to 10 compressors, 4 heating circuits, solar panels, borehole recharging, swimming pool as well as other options. The EcoLogic controller can control a single installation of up to 5 EcoPart XL units with a combined nominal output of 175 kW.

The EcoPart XL range include the 425 and 430 (25 & 30 kW nominal outputs) in single phase, possibly the largest output single phase heat pump available and 425, 430 and 435 (25, 30 & 35 kW nominal outputs) in three phase.

A newly developed refrigeration circuit with an electronically controlled expansion valve and efficient compressor the EcoPart XL 400 boasts excellent efficiency with COP's as high as 5. The compressor and refrigeration components are housed in a separate removable sound insulated unit which provides exceptionally low noise levels below 46dB(A) making it one of the quietest heat pumps ever developed.

Key features

- High efficiency with a COP of 5.0
- Stylish white casing
- Pro range offers Inbuilt colour touch screen control interface
- Compact size
- Low energy pumps available for both brine and charge circuits
- Significantly reduces heating costs
- Wide range of outputs up to 35kW
- Low noise operation

ENERGY FLEX

EcoPart XL

TECHNICAL DATA								
Electrical Data		EcoPart i425				EcoPart i430		
Type		KM414EP 2xLEP		KM410EP 2xLEP		KM414EP 2xLEP		KM414EP 2xLEP
Operating System		EcoLogic Pro				EcoLogic Pro		
Voltage		230V 1Ph						
Rated Power	kW	15.3				17.2		
Rated Current	A	38.0		33.5		38.0		38.0
IP Class		IPX1						
Max. operating current Compressors	A	47.7				54.2		
Max. operating current Compressor	A	27.1		20.6		27.1		27.1
		EcoPart 425				EcoPart 430		
Type		KM414EP 2xLEP		KM410EP 2xLEP		KM414EP 2xLEP		KM414EP 2xLEP
Operating System		Basic Controller				Basic Controller		
Voltage		230V 1Ph						
Rated Power	kW	10.7				12.6		
Rated Current	A	28.0		24.0		28.0		28.0
IP Class		IPX1						
Max. operating current Compressors	A	47.7				54.2		
Max. operating current Compressor	A	27.1		20.6		27.1		27.1
Energy Efficiency		EcoPart i425/425				EcoPart i430/430		
Energy Class[2]		A++				A++		
Operational data for heat pump								
Output from compressors[1])	kW @ -5/45	20.42				24.18		
Output from compressor[1])	kW @ -5/45	12.09		8.33		12.09		12.09
COP1) @ -5/45		3.24		3.30		3.24		3.24
Output from compressors[1]) @ 0/35 | 0/45 | 0/55	kW	24.44 | 24.48 | 22.68				28.94 | 27.86 | 26.80		
Output from compressor[1]) @ 0/35 | 0/45 | 0/55	kW	14.47|13.93|13.40		9.97|9.55|9.28		14.47|13.93|13.40		14.47|13.93|13.40
COP[1]) @0/35 | 0/45 | 0/55		4.54 | 3.64 | 2.95		4.60 | 3.68 | 2.98		4.54 | 3.64 | 2.95		4.54 | 3.64 | 2.95
Output from compressors[1]) @ 5/35 | 5/45 | 5/55	kW	27.90 | 26.97 | 25.86				32.96 | 31.96 | 30.56		
Output from compressor[1]) @ 5/35 | 5/45 | 5/55	kW	16.48|15.98|15.28		11.42|10.99|10.58		16.48|15.98|15.28		16.48|15.98|15.28
COP1) @5/35 | 5/45 | 5/55		5.13 | 4.11 | 3.28		5.20 | 4.16 | 3.28		5.13 | 4.11 | 3.28		5.13 | 4.11 | 3.28
Heating system								
Heating system nominal flow at Δt5K 0/35	l/s	0.68		0.48		0.68		0.68
Brine system								
Water volume (V)	l	6.97				8.14		
Brine system min/max temp (TS)	°C	-5/20						
Brine system min/max pressure (PS)	bar	0.2/3.0						
Brine system nominal flow Δt 3°K	l/s	0.88		0.64		0.88		0.88
Other data								
Refrigerant quantity (R407C)	kg	2.7		1.9		2.7		2.7
High pressure switch rating MPa/Bar		3.1/31						
Weight	kg	334				354		
Width x Height x Depth	mm	596 x 1760 x 680						
Noise level EN 12102	dB(A)	50				53		

1) EN14511:2007 including heating medium pump and brine pump
2) Ecodesign label for more information visit the CTC website

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TECHNICAL DATA								
Electrical Data		**EcoPart i425**		**EcoPart i430**		**EcoPart i435**	
Type		KM417EP 2xLEP	KM408EP 2xLEP	KM417EP 2xLEP	KM412EP 2xLEP	KM417EP 2xLEP	KM417EP 2xLEP
Operating System		EcoLogic Pro		EcoLogic Pro		EcoLogic Pro	
Voltage		400V 3Ph					
Rated Power	kW	15.4		17.0		19.4	
Rated Current	A	22.2		24.6		28.0	
IP Class		IPX1					
Max. operating current Compressors	A	16.7		19.7		23.0	
Max. operating current Compressor	A	11.5	5.2	11.5	8.2	11.5	11.5
		EcoPart 425		**EcoPart 430**		**EcoPart 435**	
Type		KM417EP 2xLEP	KM408EP 2xLEP	KM417EP 2xLEP	KM412EP 2xLEP	KM417EP 2xLEP	KM417EP 2xLEP
Operating System		Basic Controller		Basic Controller		Basic Controller	
Voltage		400V 3Ph					
Rated Power	kW	10.8		12.4		14.8	
Rated Current	A	15.6		17.9		21.4	
IP Class		IPX1					
Max. operating current Compressors	A	16.7		19.7		23.0	
Max. operating current Compressor	A	11.5	5.2	11.5	8.2	11.5	11.5
Energy Efficiency		**EcoPart i425/425**		**EcoPart i430/430**		**EcoPart i435/435**	
Energy Class[2]		A++		A++		A++	
Operational data for heat pump							
Output from compressors[1]) @ -5/45	kW	20.89		23.93		28.10	
Output from compressor[1]) @ -5/45	kW	14.05	6.84	14.05	9.88	14.05	14.05
COP1) @ -5/45		3.19	3.34	3.19	3.30	3.19	3.19
Output from compressors[1]) @ 0/35 | 0/45 | 0/55	kW	24.43 | 24.01 | 23.42		27.99 | 27.38 | 26.84		32.48 | 32.28 | 31.74	
Output from compressor[1]) @ 0/35 | 0/45 | 0/55	kW	16.24|16.14|15.87	8.19|7.87|7.55	16.24|16.14|15.87	11.75|11.24|10.97	16.24|16.14|15.87	16.24|16.14|15.87
COP1) @0/35 | 0/45 | 0/55		4.36 | 3.61 | 3.07	4.58 | 3.64 | 2.99	4.36 | 3.61 | 3.07	4.60 | 3.66 | 2.96	4.36 | 3.61 | 3.07	4.36 | 3.61 | 3.07
Output from compressors[1]) @ 5/35 | 5/45 | 5/55	kW	28.69 | 27.47 | 26.81		32.78 | 31.37 | 30.73		38.50 | 36.84 | 36.32	
Output from compressor[1]) @ 5/35 | 5/45 | 5/55	kW	19.25|18.42|18.16	9.44|9.05|8.65	19.25|18.42|18.16	13.53|12.95|12.57	19.25|18.42|18.16	19.25|18.42|18.16
COP1) @5/35 | 5/45 | 5/55		5.02 | 4.05 | 3.38	5.02 | 4.04 | 3.30	5.02 | 4.05 | 3.38	5.11 | 4.11 | 3.35	5.02 | 4.05 | 3.38	5.02 | 4.05 | 3.38
Heating system							
Heating system nominal flow at Δt5K 0/35	l/s	1.20		1.37		1.62	
Brine system							
Water volume (V)	l	6.97		7.47		8.14	
Brine system min/max temp (TS)	°C	-5/20					
Brine system min/max pressure (PS)	bar	0.2/3.0					
Brine system nominal flow Δt 3°K	l/s	1.56		1.78		2.10	
Other data							
Refrigerant quantity (R407C)	kg	2.7 + 1.9		2.7 + 2.3		2.7 + 2.7	
High pressure switch rating MPa/Bar		3.1/31					
Weight	kg	334		354		359	
Width x Height x Depth	mm	596 x 1760 x 680					
Noise level EN 12102	dB(A)	50		53		56	

1) EN14511:2007 including heating medium pump and brine pump

2) Ecodesign label for more information visit the CTC website

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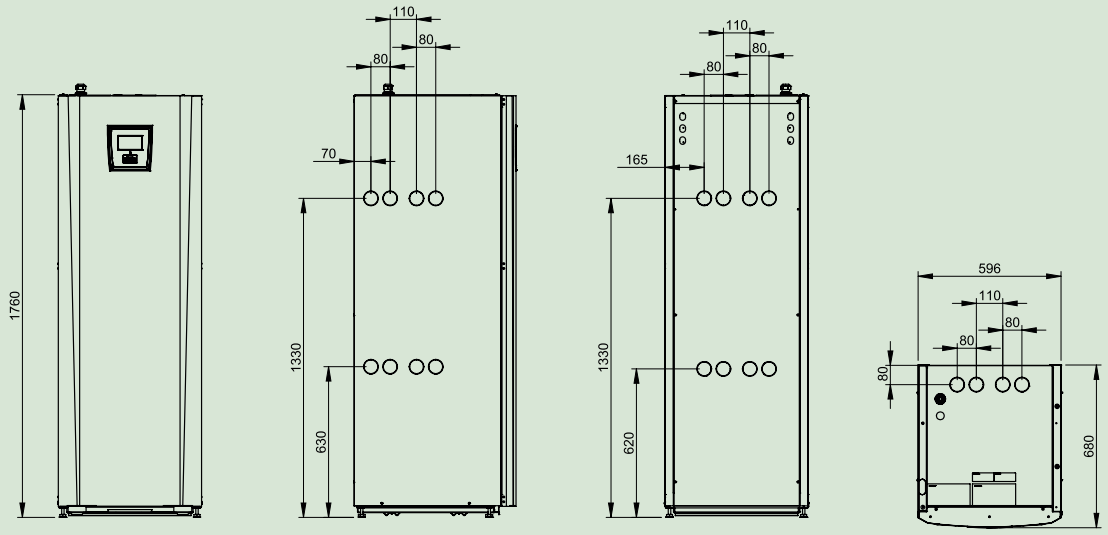
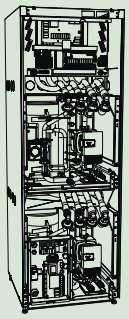


General Information

This heat pump is available in many different versions depending on how you intend to control it.

- The CTC EcoPart i425-i435 Pro has an integrated CTC EcoLogic Pro unit that controls the heat pumps and the property's heating system.
- The CTC EcoPart 425-435 has two CTC Basic Display units as standard instead.

The heat pump consists of two heat pump modules on top of each other. The structure of the different sizes is shown below.



A

B

3 x 400 V 3N~

CTC EcoPart 425 & CTC EcoPart i425 Pro
CTC EcoPart 430 & CTC EcoPart i430 Pro
CTC EcoPart 435 & CTC EcoPart i435 Pro

A	B
8 kW	17 kW
12 kW	17 kW
17 kW	17 kW

1 x 230 V 1N~

CTC EcoPart 425 & CTC EcoPart i425 Pro
CTC EcoPart 430 & CTC EcoPart i430 Pro

A	B
10 kW	14 kW
14 kW	14 kW

ENERGY FLEX

CTC Enertech Group

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APPROVED PRODUCT