

# EcoPart XL



Enertech Group

## Large Ground Source Heat Pump

### 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

# 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
Electrical Data		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 <sup>2</sup>		A++		A++	
Operational data for heat pump					
Output from compressors <sup>1)</sup>	kW @ -5/45	20.42		24.18	
Output from compressor <sup>1)</sup>	kW @ -5/45	12.09	8.33	12.09	12.09
COP <sup>1)</sup> @ -5/45		3.24	3.30	3.24	3.24
Output from compressors <sup>1)</sup> @ 0/35   0/45   0/55	kW	24.44   24.48   22.68		28.94   27.86   26.80	
Output from compressor <sup>1)</sup> @ 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 <sup>1)</sup> @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 <sup>1)</sup> @ 5/35   5/45   5/55	kW	27.90   26.97   25.86		32.96   31.96   30.56	
Output from compressor <sup>1)</sup> @ 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
COP <sup>1)</sup> @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 $\Delta t_{5K}$ 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 $\Delta t$ 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	

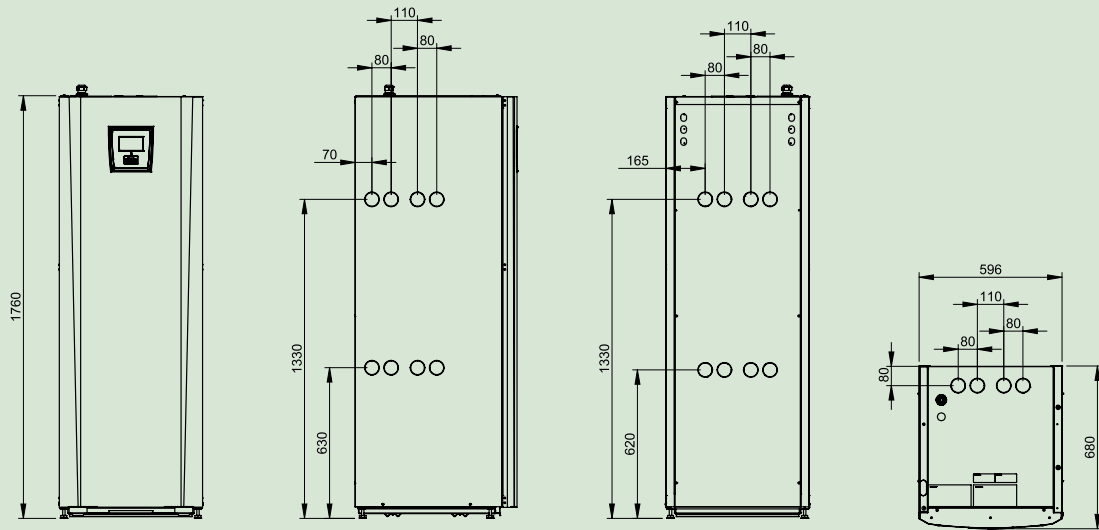
1) EN14511:2007 including heating medium pump and brine pump

2) Ecodesign label for more information visit the CTC website

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
		EcoPart i425/425		EcoPart i430/430		EcoPart i435/435	
Energy Efficiency		A++		A++		A++	
Energy Class <sup>2</sup>		A++		A++		A++	
Operational data for heat pump							
Output from compressors <sup>1)</sup> @ -5/45	kW	20.89		23.93		28.10	
Output from compressor <sup>1)</sup> @ -5/45	kW	14.05	6.84	14.05	9.88	14.05	14.05
COP <sup>1)</sup> @ -5/45		3.19	3.34	3.19	3.30	3.19	3.19
Output from compressors <sup>1)</sup> @ 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 <sup>1)</sup> @ 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
COP <sup>1)</sup> @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 <sup>1)</sup> @ 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 <sup>1)</sup> @ 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
COP <sup>1)</sup> @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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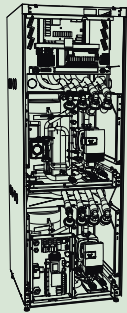


## General Information

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.



### 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



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