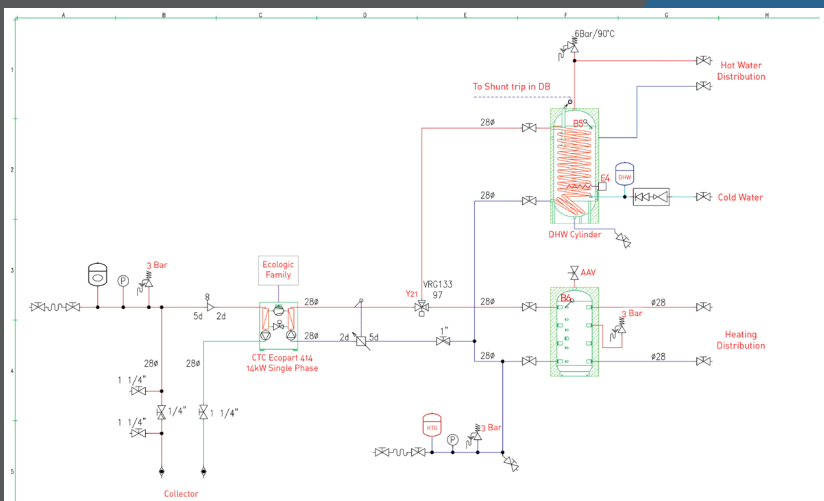


## CTC 400 Series : 10 – 17kW

The CTC 400 series are a robust and highly efficient range of heat pumps with outputs ranging from 6-14kW on a single phase. They come fitted with a Copeland scroll compressor module which has a reputation across the industry for being both extremely reliable and producing currently unmatched efficiency. The units also come with integral PWM controlled variable speed brine and heating circulation pumps. The new user-friendly touch screen ecologic controller gives the functionality to control independent temperatures for multiple heating circuits along with swimming pools.

The rig comes with a Joule 200l buffer tank as standard to improve the efficiency of the unit and improve the lifespan of the compressor by reducing the number of starts. It also comes with well insulated Joule 500lt hot water cylinder (depending on the sites hot water requirements), with extremely large coiled heat exchanger to maximise heat transfer and therefore efficiency of the heat pump unit.

The controller interface enables quick and easy changes to your heating and hot water temperature as well as providing a detailed fault finding system. It has a very high COP of 4.6, tested at a Brine Temperature of 0°C, Water temperature of 35°C.



### Includes as a complete kit :

- ✔ Suitably sized CTC 400 series Unit
- ✔ Suitably sized and dressed Hot Water Cylinder for the property including built in 3kW immersion which can be both manually and automatically controlled.
- ✔ Brine Circulation Pump, Expansion Vessel, cold mains fill set, discharge, pressure gauge, flow testing point and filter.
- ✔ Joule 200l steel buffer vessel suitable for unvented systems, heating expansion vessel incl pressure gauge, discharge and cold mains fill set, 28mm connections and an easily cleanable heating filter. Buffer charge pump also supplied inside unit.
- ✔ 500lt Joule cylinder with Potable water connections for cold water, hot water and secondary return in 28mm copper pipework, suitably sized potable expansion vessel, T&P relief valve and Tundish.
- ✔ Complete distribution board incl. quick connect electrical plugs to all non-attached electrical components. Electric meter included as part of the distribution board to monitor consumption. North facing sensor pack.
- ✔ All of the above mounted on a durable melamine board for easy installation.
- ✔ Complete CTC & Spire Renewables installation manuals, taking you step by step through installation and commissioning.

	<b>406</b>	<b>408</b>	<b>410</b>	<b>412</b>	<b>414</b>	<b>417</b>
Maximum Heating Output ( At EN14511 Brine 0°C, Water 35°C)	5.9kW	8.19kW	9.97kW	11.75kW	14.47kW	16.76kW
Sound effect according to EN12102 [dB(A)]	43.0	42.5	48.5	50.3	53.0	55.5
COP (At EN14511 Brine 0°C, Water 35°C)	4.57	4.58	4.6	4.6	4.54	4.52
Refrigerant	R407C	R407C	R407C	R407C	R407C	R407C
Refrigerant Charge	2.1kg	2.1kg	2.1kg	2.5kg	2.9kg	2.9kg
Dimensions (heat pump only – space requirements below)			673D, 600W, 763H			
Weight (Heat Pump Only)	138kg	143kg	148kg	164kg	168kg	168kg
<b>Primary Circuit (Brine)</b>						
Nominal Flow Rate (L/s) ( $\Delta T^{\circ}C = 3$ )	0.37	0.51	0.64	0.73	0.88	1.05
Max Flow Temp from ground (°C)	20	20	20	20	20	20
Min Flow Temp from ground (°C)	-5	-5	-5	-5	-5	-5
<b>Secondary Circuit (Heating)</b>						
Nominal Flow Rate (L/s)	0.28	0.39	0.48	0.56	0.68	0.81
Max Flow temperature from Compressor (°C)	65	65	65	65	65	65
Max Hot Water temperature from Tank (°C)	55	55	55	55	55	55
Max Heating temperature from Buffer (°C)	60	60	60	60	60	60
<b>Electrical Specifications</b>						
Sedes dual thermostat Immersion (1/N/PE 230V/50Hz B16A MCB)	3kW	3kW	3kW	3kW	3kW	17kW is 3Ph only 3kW
Rated Running Current (Compressor)	14A	19.5A	21.6A	27.1A	31.2A	13.9A
Starting Current	⩽ 45A	⩽ 45A	⩽ 45A	⩽ 60A	⩽ 65A	32A
MCB Size for Compressor (1/N/PE 230V/50Hz)	C16A	C20A	C25A	C32A	C32A	C16A

