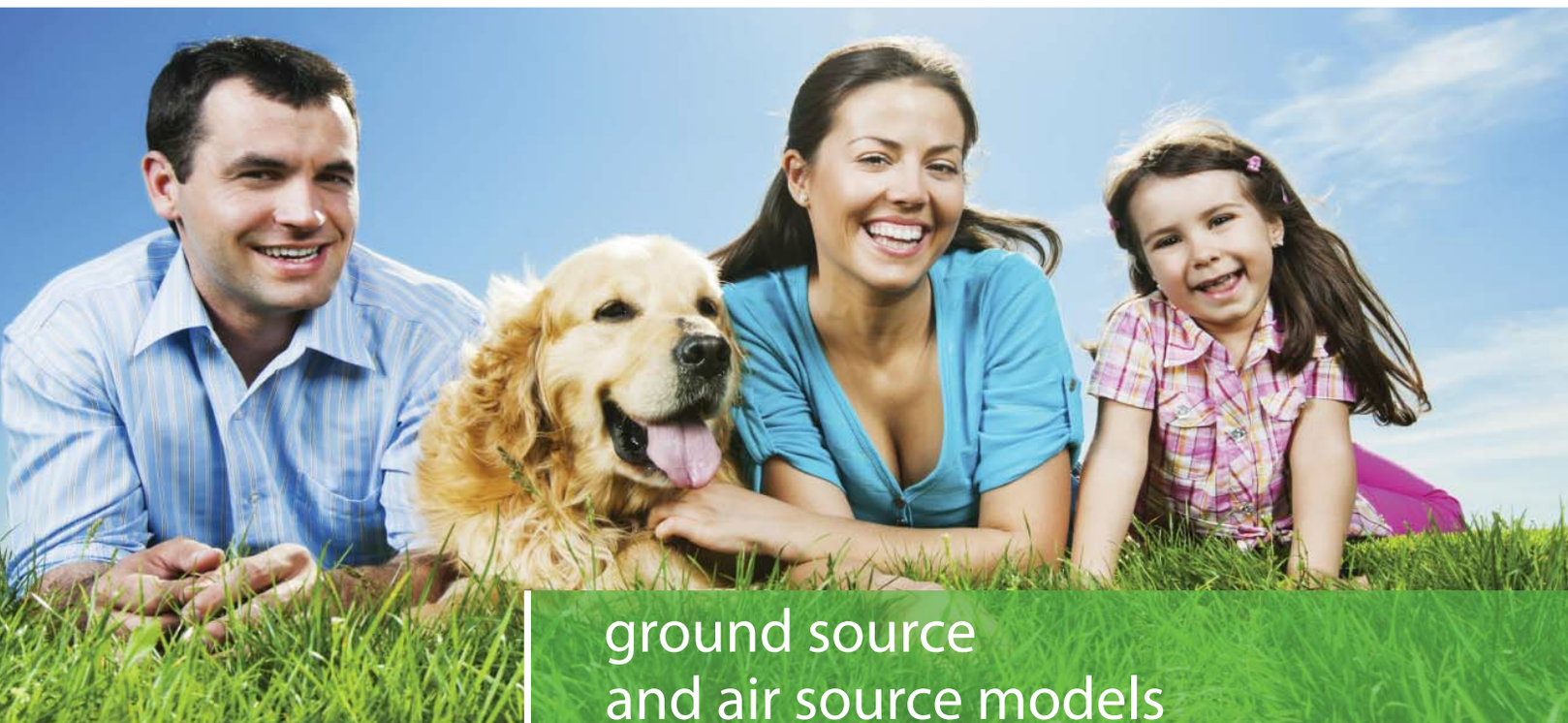
CTC
Heat Pumps

Ashburn
Designed & Built
For The UK Market



ground source
and air source models

Innovation with engineering excellence

7 Year Warranty
Energy Saving Solutions
Wi-Fi Control

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Approved Products

The Microgeneration Certification Scheme is a nationally recognised quality assurance scheme.
MCS is also an eligibility requirement for the Government's financial incentives, which include the Feed-in Tariff and the Renewable Heat Incentive.
CTC Heat Pumps have been awarded the CEN European Heat Pump KEYMARK

Warranty

Thanks to the high quality of all components and the reliability of CTC Heat Pumps, all parts and components have a 7 year warranty

CTC Enertec

CTC Enertec are renowned for quality engineering and innovation.

Ashburn provide full technical support and warranty management, design and specification services their work in the UK.

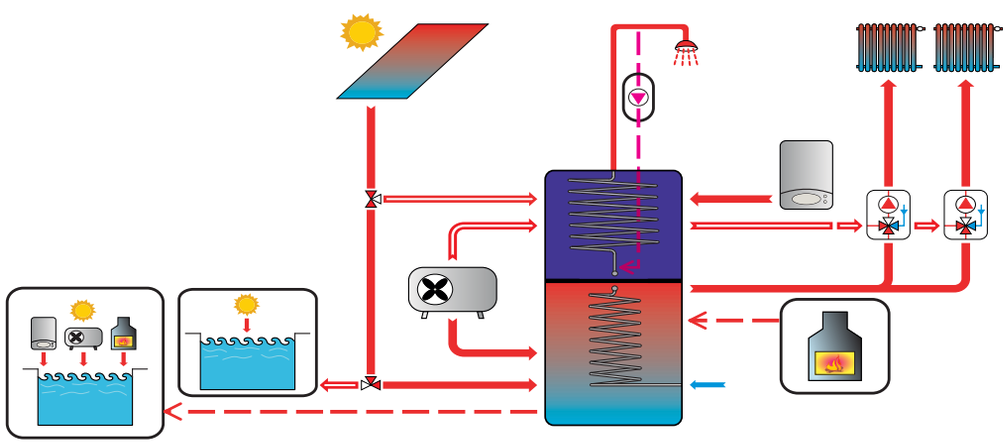
How it works...like a fridge in reverse

Heat pumps draws low-temperature energy from the ambient environment and "pumps" it to a higher temperature

Air or ground temperature is usually the heat source

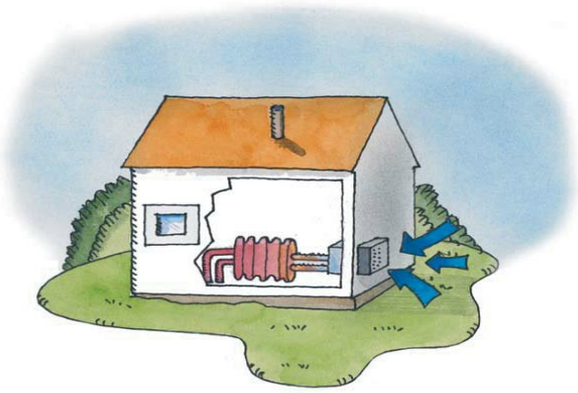
Multi-Energy Future-Proof Controllable Heating

- Biomass
- Solar
- Heat Pump
- Gas
- Oil
- Electricity



WHERE DOES A HEAT PUMP TAKE THE ENERGY FROM?

In milder climates air is the most available heat source for heat pumps. Air-source heat pumps benefit from easy installation requiring no deep bores and no groundwork.
In order to gain heat from the ground, either deep bores need to be drilled, or loops buried about 1.2m underground. In these systems the output is stable even under severe frost as the soil maintains a stable temperature.



Air-to-water heat pumps

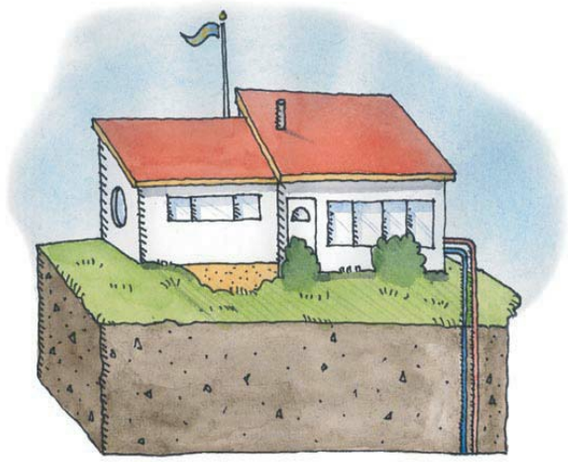
Advantages of air-to-water heat pumps
+ Low purchase costs
+ Easy installation
+ No groundwork

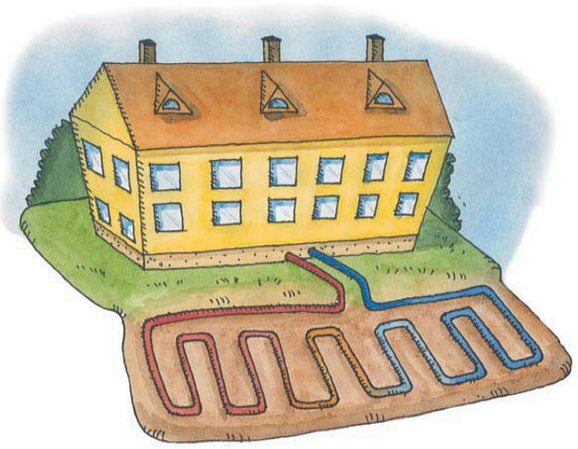
Drawbacks of air-to-water heat pumps
- Inconsiderate placement might cause noise disturbance
- Power output sinks at extremely low temperatures

Heat pumps with deep bore holes

Advantages of heat pumps with a deep bore
+ Stable heat source under low outdoor temperature
+ Deep bores do not require a big ground area+ Summer cooling possible

Drawbacks of heat pumps with a deep bore
- Higher installation costs
- Deep bores need a permit
- Water resources must be taken into consideration





Heat pumps with ground collector

Advantages of heat pumps with ground collector
+ Lower installation costs against deep bores
+ Relatively stable heat source under low outdoor temperature
+ No special permit needed

Drawbacks of heat pumps with ground collector
- Groundwork on a large area

Eco**Air** 400 series Air-to-Water Heat

The EcoAir 400 series Air to Water Heat Pump is available for 3 phase or single phase electrical supplies.

- Output figures for 3 phase models range from 6 kW to 20 kW
- Output figures for single phase models range from 6 kW to 10 kW

Eco**Air** 500 series Ground-to-Water Heat Pump

The EcoAir 500M are variable speed inverter driven Air to Water Heat Pumps

- Output figures between 2 kW to 10 kW single phase and 3 phase 4.9 kw to 22 kW

Eco**Heat** - Ground to Water

Eco**Part** 400 series Ground-to-Water Heat

The EcoPart 400 series Ground to Water Heat Pump

- output figures range from 6 kW to 14 kW single phase and 6 kW to 17 kW 3 phase

Heat Pumps

Energy-saving solutions

Smart Controller

The main advantages

- Smart control for the best utilisation of renewable energy sources
- Multiple heating zones control, hot water and heating
- Simple temperature control by an adjustable thermostat in the room
- Simple controller adjustments via a web browser
- Control and information on your heating system from anywhere over the internet
- Access to the controller menu from a computer, tablet or mobile phone
- The controller can send failure reports directly to your e-mail account
- Communication with the controller is also possible via SmS text messages
- Remote monitoring which can avoiding the need for a technician travelling to the site

Technical Data				EcoAir 406	EcoAir 408	EcoAir 410	EcoAir 415	EcoAir 420
Air/water temperature in °C	A7/W35*	Heat output	[kW]	6.22	7.83	11.45	16.19	17,52
		Power input	[kW]	1.30	1.62	2.36	3.53	4.23
		COP	[-]	4.78	4.83	4.86	4.58	4.15
	A2/W35*	Heat output	[kW]	4.69	6.02	8.80	11.42	14.55
		Power input	[kW]	1.28	1.60	2.30	3.24	4.13
		COP	[-]	3.66	3.76	3.83	3.52	3.52
	A-7/W35*	Heat output	[kW]	3.87	4.73	7.32	9.96	11.51
		Power input	[kW]	1.25	1.57	2.29	3.27	3.94
		COP	[-]	3.10	3.02	3.19	3.04	2.92
Dimensions and weight		Width	[mm]	1245	1245	1375	1375	1375
		Height	[mm]	1075	1075	1175	1175	1175
		Depth	[mm]	545	545	610	610	610
		Weight	[kg]	120	126	180	187	190
Sound power level			[dB(A)]	56.2	58.3	57.3	64.2	65.7
Noise level: (medium/reduced speed)		1 m distance	[dB(A)]	48.2	50.3	50	56	56
		5 m distance	[dB(A)]	34.2	36.3	36	42	44
		10 m distance	[dB(A)]	28.2	30.3	30	36	39
Code				13 243	13 244	12 994	12 995	12 848

*Values measured according to EN 14511 incl. defrost cycle in a Test Lab of the manufacturer.

Each CTC Heat Pump is equipped with a max. current limiter for compressor startup.
CTC 400 Heat Pumps are supplied with high-efficiency circulation pumps.

As a novelty, 400 series heat pumps are fitted with a condensate tray for efficient disposal of condensed humidity. The tray is fitted with an electric heating cable that heats the condensate during and shortly after defrost, protecting it from freezing. Heat pump parameters already involve the energy needed to heat up the condensate tray.

Technical Data				EcoAir 406 1f	EcoAir 408 1f	EcoAir 410 1f
Air/water temperature in °C	A7/W35*	Heat output	[kW]	6.20	7.70	11.60
		Power input	[kW]	1.30	1.70	2.5
		COP	[-]	4.59	4.64	4.86
	A2/W35*	Heat output	[kW]	4.70	6.00	8.9
		Power input	[kW]	1.30	1.60	2.40
		COP	[-]	3.53	3.62	3.65
	A-7/W35*	Heat output	[kW]	3.70	4.80	7.1
		Power input	[kW]	1.30	1.60	2.30
		COP	[-]	2.87	2.97	3.03
Code				14 893	14 894	14 895

Values measured according to EN 14511 incl. defrost cycle in a Test Lab of the manufacturer.

Technical Data				EcoAir 520
Output			[kW]	3-20
SCOP			[-]	4,5
Air/water temperature in °C	A7/W35* 20 rps	Heat output	[kW]	4.90
		Power input	[kW]	0.90
		COP	[-]	5.24
	A2/W35* 38 rps	Heat output	[kW]	6.73
		Power input	[kW]	1.70
		COP	[-]	3.97
	A-7/W35* 90 rps	Heat output	[kW]	10.40
		Power input	[kW]	3.80
		COP	[-]	2.71
Dimensions and weight		Width	[mm]	1375
		Height	[mm]	1180
		Depth	[mm]	610
		Weight	[kg]	186
Sound power level			[dB(A)]	55,4
Sound pressure level at distance of		5 m	[dB(A)]	35
		10 m	[dB(A)]	29

Technical Data			EcoHeat 406	EcoHeat 408	EcoHeat 410	EcoHeat 412
Primary circuit/HP flow temp. at B0/W25	Heat output	[kW]	6.1	8.5	10.4	12.3
	Power input	[kW]	1.20	1.72	1.87	2.23
	COP	[-]	5.10	4.93	5.55	5.51
Primary circuit/HP flow temp. at B0/W35	Heat output	[kW]	5.9	8.2	10	11.8
	Power input	[kW]	1.29	1.79	2.17	2.57
	COP	[-]	4.57	4.58	4.60	4.60
Primary circuit/HP flow temp. at B0/W55	Heat output	[kW]	5.2	7.6	9.3	11.0
	Power input	[kW]	1.88	2.54	3.12	3.72
	COP	[-]	2.76	2.99	2.98	2.96
Dimensions and weight	Width	[mm]	595	595	595	595
	Height	[mm]	1904	1904	1904	1904
	Depth	[mm]	672	672	672	672
	Weight	[kg]	267	270	272	279
Electric backup heating in 300W steps		[kW]	0 - 9	0 - 9	0 - 9	0 - 9
Thermal store	Volume	[l]	223	223	223	223
Volume of 40°C warm DHW available at the temperatures in the thermal store of 60/40°C (upper/lower)	if 8 l/min. DHW is drawn	[l]	174	233	283	348
	if 12 l/min. DHW is drawn	[l]	107	134	157	187
Code		[-]	13 441	13 442	13 443	13 444

COP given according to EN 14511 incl. power input for both the circulation pumps.

Max. flow temperature of the heat pump is 65°C.

Each CTC Heat Pump is fitted with a max. current limiter for compressor startup.

A solar module can be connected to EcoHeat to utilize solar energy from solar thermal collectors. Solar energy can be used together with a heat pump which means combining the most ecologic energy sources (more on Page 7). Solar energy is used to heat DHW in the summer and to support space heating in the winter. At the same time, this prolongs the service life of the heat pump. For a heat pump with a deep bore, summer solar energy surplus can be stored in the bore which helps increase the operation efficiency of the heat pump.

Technical Data			EcoPart 406	EcoPart 408	EcoPart 410	EcoPart 412	EcoPart 414	EcoPart 417
Primary circuit/HP flow temp. at B0/W25	Heat output	[kW]	6.1	8.5	10.4	12.3	14.63	--
	Power input	[kW]	1.20	1.72	1.87	2.23	2.79	--
	COP	[-]	5.10	4.93	5.55	5.51	5.25	--
Primary circuit/HP flow temp. at B0/W35	Heat output	[kW]	5.9	8.2	10	11.8	14.5	16.76
	Power input	[kW]	1.29	1.79	2.17	2.57	3.19	3.71
	COP	[-]	4.57	4.58	4.60	4.60	4.54	4.52
Primary circuit/HP flow temp. at B0/W55	Heat output	[kW]	5.2	7.6	9.3	11.0	13.4	15.9
	Power input	[kW]	1.88	2.54	3.12	3.72	4.54	5.17
	COP	[-]	2.76	2.99	2,98	2.96	2,95	3.07
Dimensions and weight	Width	[mm]	600	600	600	600	600	600
	Height	[mm]	760	760	760	760	760	760
	Depth	[mm]	672	672	672	672	672	672
	Weight	[kg]	138	143	148	164	168	172
Code		[-]	12 647	12 648	12 649	12 650	12 651	12 652

COP given according to EN 14511 incl. power input for both the circulation pumps.

Max. flow temperature of the heat pump is 65 °C.

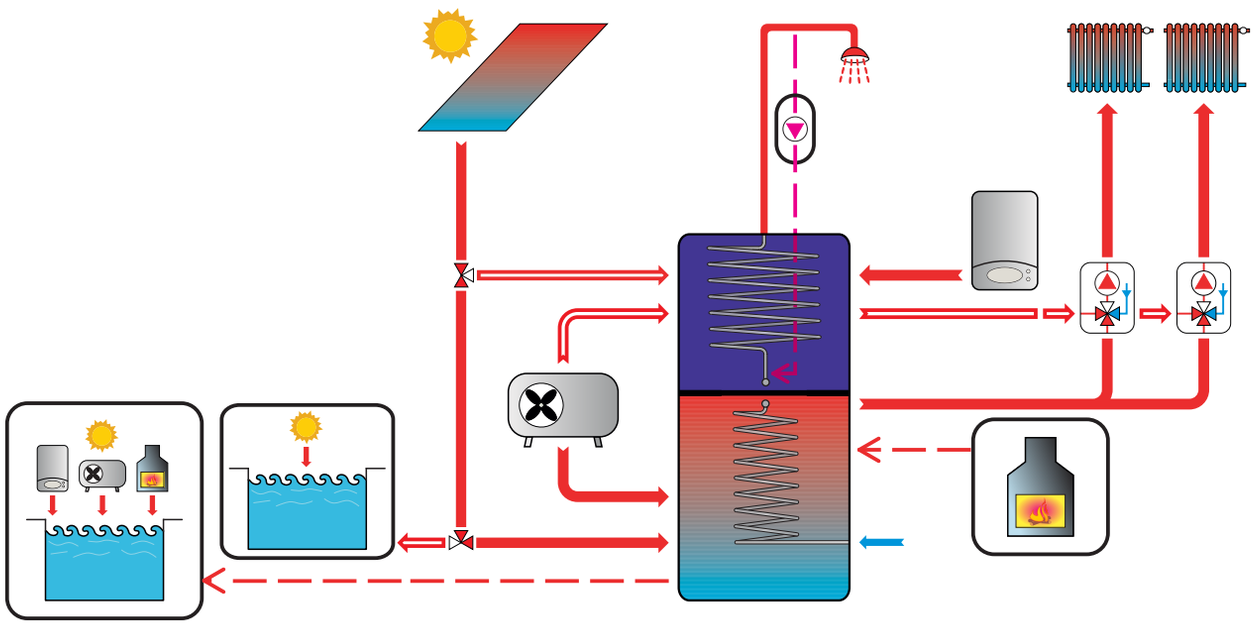
Each CTC Heat Pump is fitted with a max. current limiter for compressor startup.

Each CTC Heat Pump comes with a high-efficiency circulation pump for secondary circuit (the heating water circuit between a heat pump and a thermal store) and with an integrated primary circuit pump (bore/collector).

Ashburn are industry leaders in innovative technology and are recognised for the quality of their engineering. Ashburn provide the full range of parts and components for renewable heating systems.

Ashburn have an in-depth understanding of renewable heating installations within the UK and can provide expert advice, specification and design services.

In short - everything you require from one source.



You can find out more about CTC Heat Pumps on
www.AshburnHeating.co.uk

Find us at the RenewableHeatingCentre.co.uk

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