



HEATING | COOLING | RECOVERY

TempAir

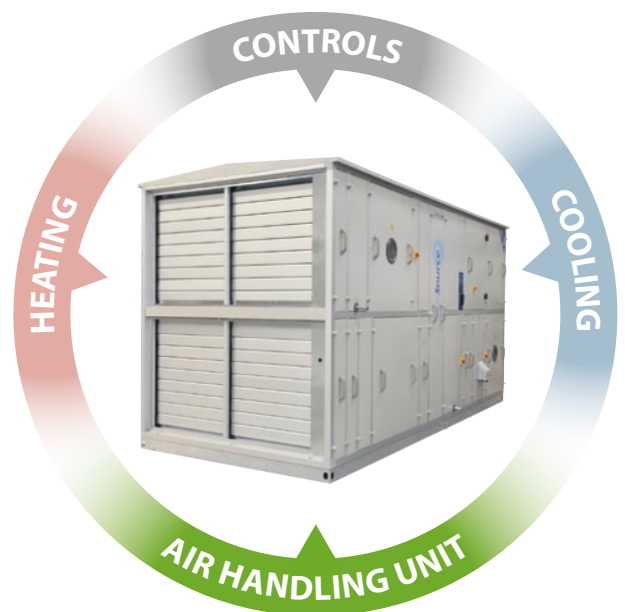
INTEGRATED HEAT PUMP WITH HEATING,
COOLING & THERMAL ENERGY RECOVERY

TempAir benefits:

- » Factory commissioned and assembled
- » High efficiency, low running costs
- » Low installation costs
- » Integrated wiring and controls
- » Renewable energy heat pump
- » Free cooling

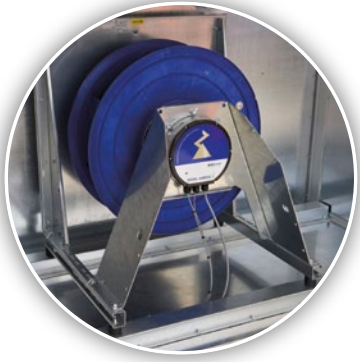
AirSource TempAir is a renewable energy heating, cooling and ventilation system that improves air quality and creates a better indoor environment. In colder outside temperatures it recovers 75% of the heat from the exhaust air to warm the fresh air supply and then additional heat is provided, from the heat pump. In warmer outside conditions a combination of free cooling, recovery and heat pump cooling creates a naturally cooler environment.

What's In A TempAir?



Traditionally an installation would include remote condensing units or a chiller and connection to the LPHW circuit. This would require multiple trades on site.

The TempAir combines all services in one unit, without split responsibility. All the controls are included and the unit is tested at the factory prior to despatch.



Cooling Energy Balance (EER)₁

Heating Energy Balance (COP)₂



Thermal wheel included. Fan power excluded.

1 @ 28°C outdoor temperature, 23°C room temperature. 2 @ -5°C outdoor temperature, 20°C room temperature.

TempAir Heating And Cooling Concept

The TempAir is an occupancy fresh air system providing space heating and cooling, combining an integrated reversible heat pump and an energy recovery wheel. The exhaust air from the room provides the renewable source of energy for the heat pump. This gives a high thermal capacity output to power in ratio.

The process of energy transfer, from the exhaust to the supply air starts with the 75% efficient recovery wheel. This permeable storage mass rotates slowly through both the supply and exhaust airstreams transferring the recovered thermal energy.

Next, the independent airstreams pass through the air coils of the heat pump to absorb energy from one coil and transferred via a compressor to the other coil. The compressor system is reversible, providing both heating and cooling capabilities.

TempAir Model	9	11	17	22	33T	39T	45T	56T	67T	84T	97T
Volume (m³/s) (Lo/Hi)	0.53 / 0.73	0.67 / 0.92	0.92 / 1.32	1.34 / 1.76	1.80 / 2.67	2.32 / 3.05	2.70 / 3.84	3.40 / 4.52	4.00 / 5.27	5.00 / 6.1	5.85 / 7.70
Comp Cooling (kW)	8.8	11	16	21	32	37	46	54	63	73	92
Comp Heating (kW)	4.5	6	9	12	18	22	25	32	38	48	55
Cooling EER (1)	7.4	7.8	7.35	7.2	8.8	8.6	9.05	8.72	8.9	8.8	9.06
Heating COP (2)	18.41	18.6	19.13	18.53	24	23.7	23.8	24	24.5	23.7	23.8
Unit SFP (3)	1.6 / 1.72	1.65 / 1.77	1.65 / 1.78	1.68 / 1.77	1.59 / 1.75	1.61 / 1.81	1.61 / 1.88	1.62 / 1.71	1.67 / 1.76	1.58 / 1.89	1.71 / 2.00
FLC A	13	16.36	19.96	28.46	40.30	46.70	51.90	74.70	76.70	83.20	106.80
MCB	20	20	25	50	50	50	63	80	80	125	125
Length (mm)	3200	3445	3570	3940	4095	4125	4255	4095	4095	4630	4720
Width (mm)	1020	1220	1420	1620	1920	2020	2220	2420	2620	2820	3020
Height (inc. base) (mm)	1660	1660	1800	2000	2300	2400	2500	2800	2900	3300	3500
R410a Refrigerant (kg)	5.2	6.6	10.2	13.2	19.8	23.6	27.1	33.6	40.0	44	58.1

Heights stated do not include for weatherproofing.

1) Cooling capacity and EER based on 28°C/45%RH ambient, 23°C return, 20°C supply air at max volume. 2) Heating capacity and COP based on -5°C ambient, 21°C/40%RH return, 20°C supply at max volume. 3) SFP based on external pressure of 250Pa. 4) EER & COP include 75% efficient recovery device, but excludes fan power. 5) Model Selections based on 20°C supply air temperature.



Unit B1-B2 Lyntown Trading Estate, Manchester M30 9QG

T: +44 (0) 161 4258553 F: +44 (0) 161 6370232 E: info@air-source.net