



Heat Pumps for your home



↑ Home 3ⁱⁿ¹ Monoblock Heat Pump for hydronic heating, cooling and hot water



↑ Home 3ⁱⁿ¹ DC Inverter Monoblock for use with PV panels



↑ Home 2ⁱⁿ¹ High Temp Heat Pump for hydronic radiators

SIDDONS SOLARSTREAM

3ⁱⁿ¹ and 2ⁱⁿ¹ heat pump benefits

- ▶ Reduce home energy costs by up to 70%
- ▶ Go off grid with photo voltaic panels, use hot water storage tanks as batteries
- ▶ Add solar tubes, wood fire wetbacks for additional solar savings
- ▶ Retrofit to your existing home
- ▶ Replace your gas heater

Home Heat Pumps

Energy Efficient

The best way to apply the heating from the Siddons Home range of heat pumps is via radiant heating.

Methods include radiant skirting boards, under floor coils and wall radiators. Fan coils are ideal for cooling and can also be used for heating and could be considered as a first step towards the best radiant solution.

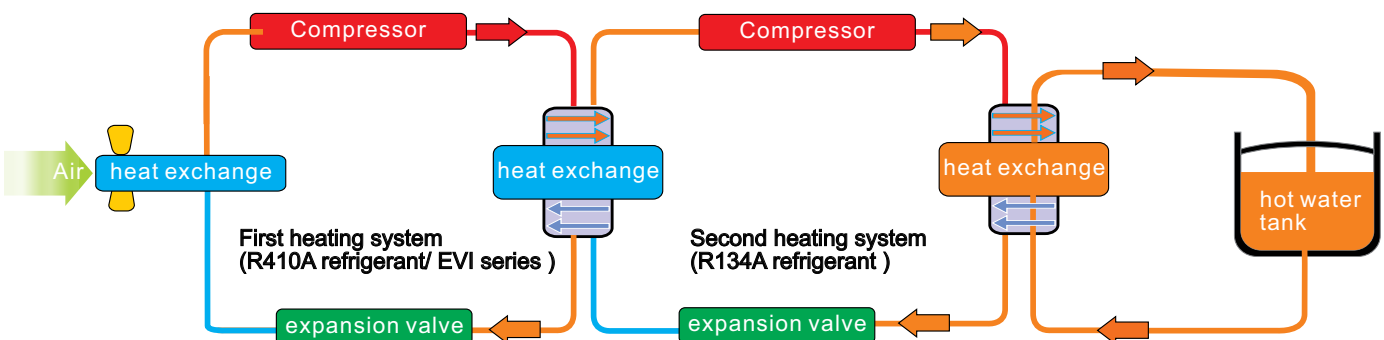
HOW DOES THE HEAT PUMP WORK?

Siddons Home heat pumps work effectively in air as cold as -15°C and in the rain and at night making heat for both hydronic space heating and hot water up to 80°C , or the 3in1 units can go into reverse cycle and provide cold water at 8°C for efficient air conditioning through fan coil units. They work so well, they only require single phase power to produce hydronic heating or cooling for your home.

The Home 3in1 Monoblock EVI models use a special Efficient Vapour Injection (EVI) technology that boosts performance in sub zero temperatures. This technology recovers residual energy in the form of gas vapour still in the system after the first refrigeration cycle by using a second refrigeration cycle to inject the residual gas vapour into the compressor.

The Home 3in1 DC Inverter Monoblock heat pump is ideally suited to PV power generating systems and for off-grid homes. DC inverter technology adds further efficiency from its variable speed compressor and fan.

The Home 2in1 High Temperature heat pump can replace your gas heater because it uses a unique two stage system that can make heat from sub zero air temperatures as low as -15°C yet heat the water up to 80°C using only a small amount of single phase power. If you are concerned about rising gas prices and looking for a direct solar electric replacement to work with your existing hydronic radiators, then this is the model for your home.



↑ Schematic of 2in1 High Temperature two stage refrigeration system.

Home Heat Pumps

Application Methods



↑ Radiant skirting boards

↑ Under floor heating

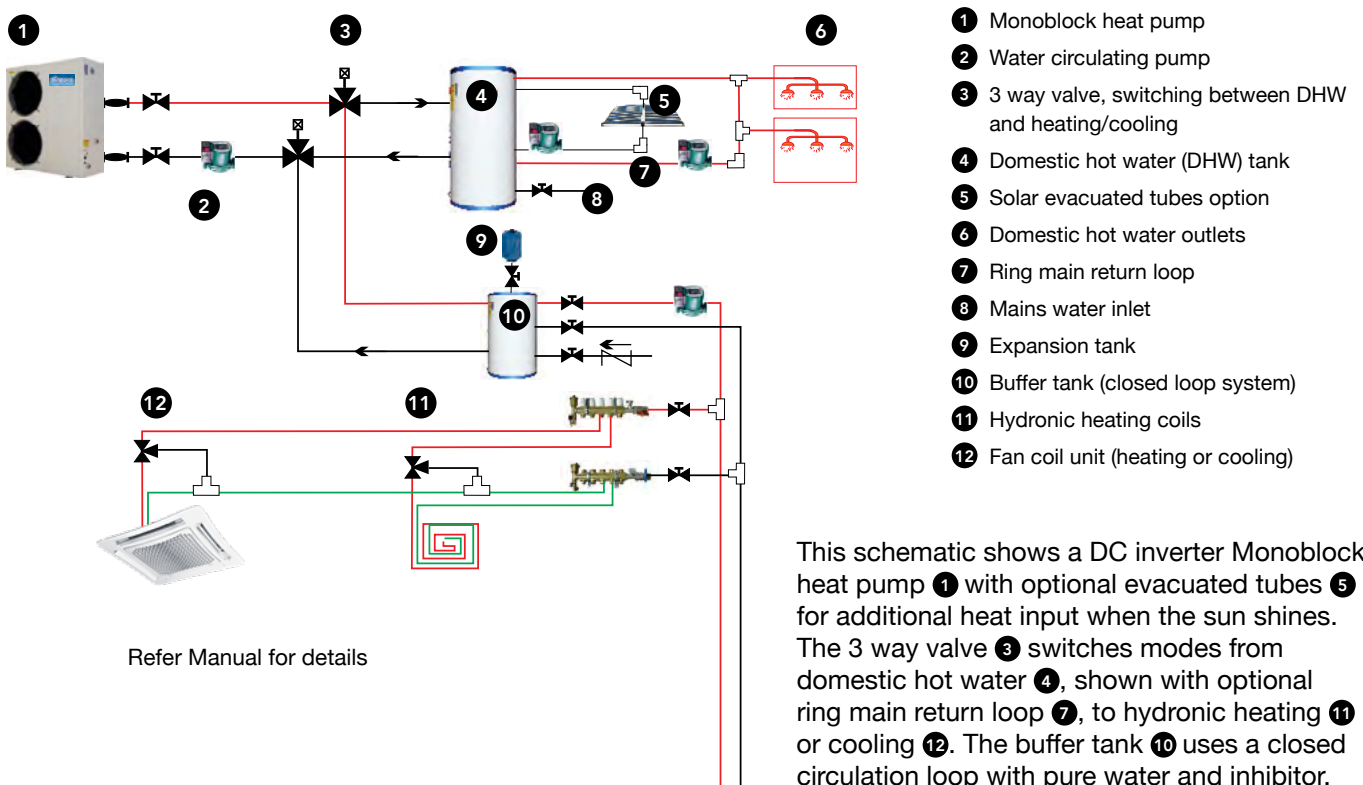
↑ Fan coils, cooling & heating

↑ Conventional radiators

HYDRONIC BENEFITS

- ▶ Rapid response heating options
- ▶ Low allergenic and hygienic, no dust
- ▶ Energy efficient heating and cooling
- ▶ Improves your home's energy rating
- ▶ Compatible with timber floors
- ▶ Best form of heating, luxuriant warmth
- ▶ Does not conflict with your room furnishings
- ▶ Zone rooms to reduce running costs even further

HYDRONIC SYSTEM



MONOBLOCK 3in1 HYDRONIC HEATING/COOLING, DOMESTIC HOT WATER

Type	AC Monoblock (2hp) heating/cooling, DHW	AC Monoblock (3hp) heating/cooling, DHW	DC Inverter, EVI (4hp) heating/cooling, DHW	DC inverter, EVI (5hp) heating/cooling, DHW
Model	MACHRW020ZA/P	MACHRW030ZA/P	MACHRW040ZA/P(BE01)	MACHRW050ZA/P(BE01)
Sizing Guide for 6 star home (m2)*	100	135	180	230
Rated Cooling Capacity (kW) ①	5	7.5	10	12.5
Rated Input Power (kW) ①	1.75	2.6	3.1	3.9
Rated Input Current (A) ①	8	12	14.2	17.8
Performance COP (W/W) ①	2.9	2.9	3.2	3.2
Rated Heating Capacity (kW) ②	6	8.2	11	13.8
Rated Input Power (kW) ②	1.7	2.6	3.3	4.1
Rated Input Current (A) ②	7.7	11.6	15.1	18.8
Performance COP (W/W) ②	3.3	3.3	3.3	3.3
Power Supply (V/Ph/Hz)	220/1/50	220/1/50	220/1/50	220/1/50
Max water output temp (°C)	60	60	60	60
Sound level (dBa)	48	52	49	50
Compressor type (2 pcs)	Rotary	Scroll	Scroll	Scroll
Water inlet/outlet pipe diam. (inch)	1"	1"	1"	1"
Water Flow Volume (litres/min)	17	23	32	40
Refrigerant type	R410a	R410a	R410a	R410a
Net Dimensions (L/W/H mm)	885/410/550	1115/470/690	1115/470/940	1115/470/1250
Shipping Dimensions (L/W/H mm)	950/430/580	1205/525/725	1205/525/975	1205/525/1280
Net Weight (kg)	83	101	120	140
Shipping Weight (kg)	88	116	138	160

HIGH TEMP 2in1 HYDRONIC HEATING AND DOMESTIC HOT WATER

Type	High Temp (2.5hp) space heating, DHW	High Temp (3hp) space heating, DHW	High Temp (4hp) space heating, DHW	High Temp (5hp) space heating, DHW
Model	MAHRW025ZB/P(02H)	MAHRW030ZB/P(02H)	MAHRW040ZB/P(02H)	MAHRW050ZB/P(02H)
Sizing Guide for 6 star home (m2)*	170	225	300	375
Sizing for 6 star homes & hydronic radiators (m2)**	90	110	150	185
Rated Heating Capacity (kW) ②	8	10.1	13.8	17.3
Rated Input Power (kW) ②	3.1	4.4	6	7.5
Rated Input Current (A) ②	14	19.9	27.3	34
Performance COP (W/W) ②	2.6	2.3	2.3	2.3
Rated Heating Capacity (kW) ③	5.7	8	10.8	13.7
Rated Input Power (kW) ③	3.3	4.2	5.6	7
Rated Input Current (A) ③	14.8	18.9	25.3	32
Performance COP (W/W) ③	1.7	1.9	1.9	2
Power Supply (V/Ph/Hz)	220/1/50	220/1/50	220/1/50	220/1/50
Max water temp (°C)	80	80	80	80
Sound level (dBa)	52	52	54	54
Compressor type (1 pc)	Scroll/scroll	Scroll/scroll	Scroll/scroll	Scroll/scroll
Water inlet/outlet pipe diam. (inch)	1"	1"	1"	1"
Water Flow Volume (litres/min)	30	35	46	60
Refrigerant type	R410a / R134a	R410a / R134a	R410a / R134a	R410a / R134a
Net Dimensions (L/W/H mm)	950/870/1130	950/870/1130	950/870/1130	950/870/1130
Shipping Dimensions (L/W/H mm)	1020/900/1170	1020/900/1170	1020/900/1170	1020/900/1170
Net Weight (kg)	115	120	140	145
Shipping Weight (kg)	130	135	150	155
ASSUMPTIONS	① Outdoor air temp 35°C /24°C, Inlet water temp 12°C, Outlet water temp 7°C (Cooling mode) ② Outdoor air temp 7°C /6°C, Inlet water temp 40°C, Outlet water temp 45°C (Heating mode) ③ Outdoor air temp -7°C, Inlet water temp 60°C, Outlet water temp 65°C (Heating, sub zero air) * Using hydronic radiant skirting boards, note under floor heating sizing depends on the floor covering, tiles are more efficient, carpet least efficient. ** Using hydronic radiators with 2.5m ceiling height.			