Dimplex Brine-to-Water Heat Pumps:
Heating and Cooling with a single system

Heat energy from the garden
Dimplex brine-to-water heat pumps draw up to 80 % of the required heating energy from the ground. The solar energy stored in the ground is available free of charge and in unlimited abundance. To be able to extract geothermal energy from the ground and use it for heating purposes on a continuous basis, ground collectors in the form of flexible PE pipes are buried in the garden at a depth of around 1.2 m. A mixture of water and antifreeze, the so-called brine, is circulated in the pipe loops. Where not enough area for laying the pipes is available or if cooling is to be provided in addition, ground coils are installed in vertical direction.

Everything under control
The Dimplex Heat Pump Controller WPM 2004 plus incorporates a heating controller designed to regulate, control and monitor the entire heating system. The heat pump, brine-,heating- and hot water pumps, mixer motor and supplementary heating source are all automatically activated by the WPM 2004 plus unit. A programmable load management for space heating and hot water supply can be tailored to individual requirements and provides a high degree of "feel well comfort" in combination with energy savings.

Versatility is what matters
Variable options for brine and heating connections as well as freely selectable components offer maximum planning and installation flexibility. A wide range of capacities enables comfortable warmth to be provided throughout the cool months of the year in accordance with the individual heating demands of the buildings and comfort levels desired.

The challenge: heating and cooling with a single system
Until now heating and cooling have primarily been confined to the luxury building sector.

The solution: the reversible heat pump from Dimplex – switched to “cooling”
With our reversible brine-to-water heat pump Dimplex offers a central heating/cooling system in one single unit – in conjunction with a control concept which makes all this possible. In winter the heat pump functions as an energyefficient heating device. Alternativly, by reversing the heat pump process the system is usable as a refrigerating machine in summer. Thus the reversible heat pump can be used for both “silent” (e.g. surface heating/cooling systems) and „dynamic” cooling (e.g. fan convectors).

Dimplex

Brine-to-Water „Ground Source“ Heat Pumps: Modern Heating Systems

The MS and MSR brine-to-water heat pump models allow you to combine a water-based heating system with a modern heat producing device. It extracts a major part of the required heating energy from the ground. The heating system is supplied with hot water, without the combustion of any fossil fuels. The international quality label for heat pumps, guarantee compliance with high quality standards and professional planning support for the installer.

MS and MSR series brine-to-water heat pumps

- Variable options for brine and heating connections
- Built-in heat pump controller WPM 2004 plus
- Capacities: 5, 7, 9 and 11 kW

Type and commercial description		SI 5MS	SI 7MS	SI 9MS	SI 11MS
Performance Data					
Operating temperature limits heating water supply	°C	max. 55	max. 55	max. 55	max. 55
Operating temperature limits brine (heat source, heating)	°C	-5 to +25	-5 to +25	-5 to +25	-5 to +25
Heating capacity/coeff. of perform. at B-5 / W55	kW / -	4,0 / 2,0	5,4 / 2,1	7,6 / 2,1	9,4 / 2,0
at B0 / W50	kW / -	4,8 / 2,7	6,2 / 2,7	8,8 / 2,7	10,5 / 2,6
at B0 / W35	kW / -	4,9 / 3,9	6,4 / 3,8	9,2 / 4,0	11,0 / 4,0
Dimensons connections and weight					
Equipment dimensions without connections	H x W x L mm	800 • 600 • 450	800 • 600 • 450	800 • 600 • 450	800 • 600 • 450
Equipment connections for heating system inches		1 1/4" ext	1 1/4" ext	1 1/4" ext	1 1/4" ext
Equipment connections for heat source Inches		1 1/4" ext	1 1/4" ext	1 1/4" ext	1 1/4" ext
Weight of transport unit(s) incl. packaging	kg	95	98	104	108
Electrical connection					
Nominal voltage / fusing	V / A	230/16	230/16	230/20	230/25
Nominal power consumption B0/W35	kW	1,25	1,68	2,3	2,8
Starting current with soft starter	A	24	26	38	38
Controller		integrated	integrated	integrated	integrated

Type and commercial description		SI 5MSR	SI 7MSR	SI 9MSR	SI 11MSR
Performance Data					
Operating temperature limits Cooling, supply	°C	+8 to +20	+8 to +20	+8 to +20	+8 to +20
Brine (heat sink, cooling)	°C	+5 to +25	+5 to +25	+5 to +25	+5 to +25
Cooling capacity, coeff. of perform. at B20 / W8	kW / -	5,4 / 4,6	7,0 / 4,5	9,9 / 4,6	11,4 / 4,6
at B20 / W18	kW / -	6,6 / 5,3	8,6 / 5,3	12,0 / 5,4	14,1 / 5,3
at B10 / W8	kW / -	5,4 / 5,6	7,0 / 5,5	9,9 / 5,6	11,6 / 5,7
at B10 / W18	kW / -	6,8 / 6,7	8,8 / 6,6	12,4 / 6,7	14,1 / 6,5
Refrigerant; total charge weight	type / kg	R407C / 0,9	R407C / 0,9	R407C / 1,25	R407C / 1,6
Heating water flow rate at internal pressure difference	m³/h / Pa	0,45 / 1900	0,6 / 3300	0,75 / 2300	1,0 / 4100
Brine flow rate at internal pressure difference (heat source)	m³/h / Pa	1,2 / 16000	1,7 / 29500	2,3 / 25000	3,0 / 24000
Weight of transport unit(s) incl. packaging	kg	101	104	110	114

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