AIR TO WATER MONOBLOCK
INVERTER HEAT PUMPS

MONOBLOCK UNITS

SMH-100IRA
SMH-140IRA

NEW

Two-stage rotary compressor

New two-stage compressor with inverter achieves high efficiency even at low temperatures. On the other hand, at high temperatures it can lower its speed in order to prevent cycling of the unit.

Monoblock design

Due to monoblock design of the unit, installation is very easy. You simply connect the unit to the electricity and heating system. Because of this, costs for installation are lower than for split units.

Water pump with regulated speed

In units, WILO water pump with regulated speed is used. Because of this, the heat pump keeps requested temperature difference between inlet and outlet water. This water pump has also high efficiency and meets all requirements for energy efficiency.

EC Fan motor

Unit is equipped with EC fan motor (motors) with high efficiency. Speed of the fan is regulated according to the refrigerant pressure. Due to this type of control, high efficiency of the system in various conditions is achieved.

Expansion valves control based on refrigerant pressure

In units, there are used electronic expansion valves which provide better regulation than thermostatic expansion valves. Valve opening is based on series of information from sensors in refrigerant circuit, to provide optimal capacity and efficiency of the unit.

Easy control

For the controlling of the unit, wired controller is used which can be placed inside the building. Controller is user-friendly and easy to operate.

DC INVERTER

THERM by sinclair

TECHNICAL PARAMETERS

V / PH / HZ				SMH-100IRA	SMH-140IRA
Capacity[1]		Heating (underfloor)	kW	9,5	14,2
		Cooling (undefloor)	kW	9,8	14,5
Power input[1]		Heating (underfloor)	kW	2,2	3,4
		Cooling (undefloor)	kW	2,5	3,7
COP[1]		Heating (underfloor)	-	4,30	4,24
EER[1]		Cooling (undefloor)	-	3,92	3,92
Capacity[2]		Heating (fan coils, radiators)	kW	9,5	13,0
		Cooling (fan coils)	kW	7,4	10,3
Power input[2]		Heating (fan coils, radiators)	kW	2,7	3,6
		Cooling (fan coils)	kW	2,4	3,3
COP[2]		Heating (fan coils, radiators)	-	3,53	3,61
EER[2]		Cooling (fan coils)	-	3,11	3,12
Energy class			-	A+	A+
SCOP			-	3,7	4,3
Voltage / phase / frequency			V / Ph / Hz	210-240 / 1 / 50	380-415 / 3 / 50
Max. power input (without e-heater)		Heating	kW	3,1	4,3
		Cooling	kW	4,0	4,8
Max. current (without e-heater)		Heating	A	14,0	8,1
		Cooling	A	16,5	8,9
Refrigerant		Type		R410A	R410A
		Charge		3,5	4,0
Water pipes		Inlet	mm	DN25	
		Outlet	mm	DN25	
Water temperature range		Heating	°C	25~60	
		Cooling	°C	7~25	
Main components	Water pump	Number of speeds		externally controlled	
		Power input	W	140	
	Water flow switch	Minimum flow	l/min	9,2	
	Expansion tank	Volume	l	10	
		Maximum pressure	Bar	3	
		Precharged pressure	Bar	1	
	Electric heater	Mode		automatic	
		Steps		2	
		Capacity	kW	6	
		Combination	kW	3+3	
		Voltage / phase / frequency	V / Ph / Hz	210-240 / 1 / 50	380-415 / 3 / 50
	Heat exchanger	Type		brazed plate heat exchanger	
		Quantity		1	
	Safety valve	Pressure	bar	3	
Sound pressure level L_{pA}		Heating	dB	56	57
		Cooling	dB	53	54
Unit dimensions		W*D*H	mm	1390 x 412 x 890	1350 x 384 x 1438
Dimensions of package		W*D*H	mm	1463 x 428 x 1020	1440 x 430 x 1500
Weight		Net / Gross	kg	148 / 161	205 / 220

„The specification of products is subject to change based on further development of the units by the producer and can be changed without prior notice. Refer to rating label. SCOP/SEER was calculated according to European standards contained in EN14825 for average season, based on part load classifying and testing conditions given by norm EN14511. Contains fluorinated greenhouse gases covered by the Kyoto Protocol. R410A (50% HFC-32, 50% HFC-125), GWP of refrigerant used: 2088. Noise is tested in the semi-anechoic room. Power input is tested under standard condition."

1 Capacities and power inputs are based on the following conditions:
Cooling conditions:
Indoor Water Temperature 23ºC/18ºC;
Outdoor Air Temperature 35ºCDB/24ºCWB
Heating conditions:
Indoor Water Temperature 30ºC/35ºC
Outdoor Air Temperature 7ºCDB/6ºCWB

2 Capacities and power inputs are based on the following conditions:
Cooling conditions:
Indoor Water Temperature 12ºC/7ºC;
Outdoor Air Temperature 35ºCDB/24ºCWB
Heating conditions:
Indoor Water Temperature 40ºC/45ºC;
Outdoor Air Temperature 7ºCDB/6ºCWB

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HEAT PUMPS

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