

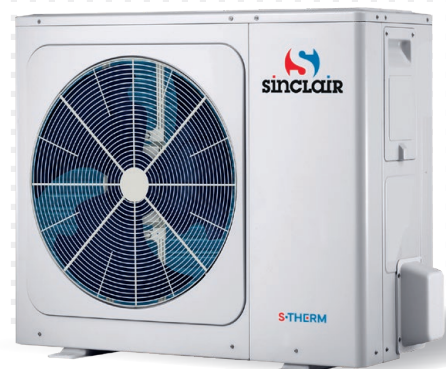
OUTDOOR UNITS

FEATURES

- We offer you outdoor units in a single-propeller version in capacity of 6, 8, 10, 12, 14, 16 kW in single-phase and three-phase versions (units with suffix -3)
- Outdoor units of compact dimensions facilitating problem-free installations and also transportation
- The device uses environmentally friendly refrigerant R32 with low GWP value
- Compressor with added economizer and intermediate stage injection of refrigerant, thanks to which high efficiency and energy saving are achieved
- Motor control technology by semiconductor frequency converter
- The units are equipped with an inverter control that changes the speed of the compressor. The delivered power of the units is precisely adapted to the heating system
- Energy savings of up to 40 % and temperature fluctuations are avoided
- Between the outdoor unit and the indoor unit, the pipe length can be up to 30 meters. Elevation up to 20 meters

MSH-60EB
MSH-80EB
MSH-100EB
MSH-120EB
MSH-140EB
MSH-160EB

MSH-120EB-3
MSH-140EB-3
MSH-160EB-3



Model MSH-			60EB	80EB	100EB	120EB/120EB-3	140EB/140EB-3	160EB/160EB-3		
Power supply		V / Ph / Hz	220-240 / 1 / 50			380-415 / 3 / 50				
Capacity	Heating	kW	6,2	8,3	10	12,1	14,5	16		
	Cooling	kW	6,55	8,4	10	12	13,5	14,2		
Power	Heating	kW	1,24	1,6	2,0	2,4	3,1	3,6		
	Cooling	kW	1,34	1,66	2,08	3,0	3,7	3,9		
COP	Heating	-	5	5,2	5	4,95	4,7	4,5		
EER	Cooling	-	4,9	5,05	4,8	4	3,61	3,61		
Technical parameters	Level of acoustic pressure	Max.	dB (A)		44	46	49	50	51	55
	Energy class	Heating (55 °C / 35 °C)	-						A++ / A+++	
	SCOP	Heating (55 °C / 35 °C)	-	3,52 / 4,95	3,37 / 5,22	3,47 / 5,2	3,45 / 4,81	3,47 / 4,72	3,41 / 4,62	
	Refrigerant	Type	-						R32	
		Amount	kg	1,5	1,65		1,84			
	Domestic hot water temperature	°C	-			12 - 60				
	Refrigerant pipes	Gas	inch / mm		5/8" / 16,0					
		Liquid	inch / mm		1/4" / 6,0 3/8" / 9,5					
	Unit Dimension	(w x h x d)	mm			1008 x 712 x 426 1118 x 865 x 523				
	Package Dimension	(w x h x d)	mm			1065 x 810 x 485 1190 x 970 x 560				
	Weight netto/brutto	kg	58 / 63,5	75 / 89		112 / 125,5				
	Operating temperature range	°C	-			-25 - 43				
	Standard pipe length	m	-			15				
	Max. pipe length	m	-			30				
	Max. elevation	m	-			20				
	Additional refrigeration	g/m	20	-		38				

CAPACITIES AND POWER INPUTS ARE BASED ON THE FOLLOWING CONDITIONS:

COOLING conditions: Indoor Water Temperature 23 °C / 18 °C. Outdoor Air Temperature 35 °C DB / 24 °C WB.

HEATING conditions: Indoor Water Temperature 30 °C / 35 °C. Outdoor Air Temperature 7 °C DB / 6 °C WB.

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. Contains fluorinated greenhouse gases covered by the Kyoto Protocol. R32 (100% HFC-32), GWP of refrigerant used: 675. Sound pressure level is tested in a soundless chamber, actual values may be affected by local conditions.

DC INVERTER

ECOLOGICAL REFRIGERANT R32

INDOOR UNIT ALL IN ONE

FEATURES

- Possibility of control via internet with Comfort Home application
- High efficiency
- Integrated expansion vessel and safety valve
- Circulatory pump with self-regulation of speed
- Possibility of the equitherm control, control by reference room temperature or thermostat
- Silent mode
- Built-in electric cartridge with 3 or 9 kW capacity

MSH-190TB/3
MSH-240TB/3
MSH-190TB-3/9
MSH-240TB-3/9



Possible combinations	
Indoor	Outdoor
MSH-190TB/3	MSH-60EB
MSH-240TB/3	MSH-120EB
MSH-240TB/3	MSH-140EB
MSH-240TB/3	MSH-160EB
MSH-190TB-3/9	MSH-80EB
MSH-190TB-3/9	MSH-100EB
MSH-240TB-3/9	MSH-120EB-3
MSH-240TB-3/9	MSH-140EB-3
MSH-240TB-3/9	MSH-160EB-3

Model MSH-			190TB/3	240TB/3	190TB-3/9	240TB-3/9
Power supply		V / Ph / Hz	220 - 240 / 1 / 50		380 - 415 / 3 / 50	
Connecting pipe (refrigerant)	Gas	inch / mm			5/8" / 16,0	
	Liquid				3/8" / 9,5	
Connecting pipe (water)	Inlet	inch			1"	
	Outlet					
Safety valve		bar			3	
Leaving water temperature	Cooling	°C			5 - 25	
	Heating	°C			25 - 65	
Main components	Water pump	Type			Inverter	
		Speed			Automatic	
		Max. power			90	
Hot water tank	Volume	l	190	240	190	240
	El. heater	kW			1,5+1,5	
Expansion tank	Volume	l			8	
	Max. pressure	bar			3	
	Pressure	bar			1	
Auxiliary electric heater	Mode	-			Automatic	
	Capacity	kW	3		9	
	Combination	-	3		3+3+3	
	Power supply	V / Ph / Hz	220 - 240 / 1 / 50		380 - 415 / 3 / 50	
Heat exchanger	Type	-			Brazed plate	
	Amount	-			1	
Level of acoustic pressure in 1m		dB (A)			29	
Dimensions	Outline (w x d x h)	mm	600 x 600 x 1683	600 x 600 x 1943	600 x 600 x 1683	600 x 600 x 1943
	Packaged (w x d x h)	mm	730 x 730 x 1920	730 x 730 x 2180	730 x 730 x 1920	730 x 730 x 2180
Weight	Netto	kg	140	157	140	157
	Brutto	kg	161	178	161	178

YUKON