

## 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 HYDROBOX

### FEATURES

- Possibility of control via internet with Comfort Home application
- High efficiency
- Circulatory pump with self-regulation of speed
- Integrated expansion vessel and safety valve
- Possibility of equithermal regulation, regulation, according to the reference room temperature or by thermostat
- Possibility cooling in convector units
- Preparation of hot domestic water
- Possibility of adding a 3-way valve - not included in the package

MSH-60IB/3  
MSH-100IB/3  
MSH-100IB-3/9  
MSH-160IB/3  
MSH-160IB-3/9



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

Model MSH-			60IB/3	100IB/3 100IB-3/9	160IB/3 160IB-3/9
Power supply		V / Ph / Hz	220-240 / 1 / 50		
Connecting pipe (refrigerant)	Gas	inch / mm	5/8" / 16,0		
	Liquid		1/4" / 6,0	3/8" / 9,5	
Connecting pipe (water)	Inlet	inch	1"		
	Outlet				
Safety valve		bar	3		
Leaving water temperature	Cooling	°C	5 - 25		
	Heating		25 - 65		
Main components	Water pump	Type	-		
		Speed	-		
		Max. power	W		
	Expansion tank	Volume	l	8	
Max. pressure		bar	3		
Pressure		bar	1		
Auxiliary electric heater	Mode	-	Automatic		
	Capacity	kW	3	3/9	
	Combination	-	3	3/3+3+3	
	Power supply	V / Ph / Hz	220-240 / 1 / 50		
Heat exchanger	Type	-	Braze plate		
	Amount	-	1		
Level of acoustic pressure in 1m		dB (A)	28	30	32
Dimensions	Outline (w x d x h)	mm	420 x 790 x 270		
	Packaged (w x d x h)		525 x 1050 x 360		
Weight	Net	kg	37		39
	Gross		43		45

# YUKON