

# MBS HT

## BRINE-WATER HEAT PUMPS FOR INDOOR INSTALLATION



### Options

#### Operating mode

- R - Heating and cooling  
(reversible on refrigerant side)
- H - Heating

#### Acoustic setting up

- B - Base setting up
- S - Low noise setting up

#### Plant side flow rate management

- None
- Standard pump
- Modulating pump
- High head pump

#### Source side flow rate management

- None
- Standard pump
- Modulating pump
- High head pump

#### Compressor starter

- Standard
- Soft starter

### Accessories

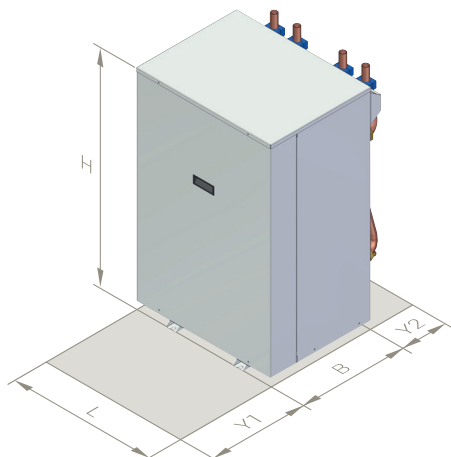
- Vibration dampers
- Remote interface

TECHNICAL DATA	05	07	10	13	17	21	
Efficiency class - EU reg 811/2013 <i>average climate - medium temperature application</i>	A++	A++	A++	A++	A++	A++	-
Power supply	230V - 1 - 50Hz 400V - 3N - 50Hz			400V - 3N - 50Hz			-
Refrigerant	R410A						-
Type of compressors	high temperature scroll						-
N° of compressors / N° of refrigerant circuits	1 / 1						-
Type of plant side heat exchangers	stainless steel brazed plates						-
Type of source side heat exchangers	stainless steel brazed plates						-
Hydraulic fittings	1" M	1" M	1"1/4 M	1"1/4 M	1"1/4 M	1"1/4 M	-
Weight *	65	81	95	97	111	132	kg
Maximum power input *	2,4	3,5	4,4	5,8	7,8	9,1	kW

\* base unit without options and accessories

OPERATING RANGE	HEATING		COOLING		
	min	max	min	max	
Water outlet temperature	15	65 *	6	25	°C
Source inlet temperature (brine)	-15	25	5	50	°C

\* The maximum water outlet temperature can be increased up to 70°C keeping a  $\Delta T$  of 10°C between inlet and outlet



	05	07	10	13	17	21	
L	600	600	600	600	600	600	mm
B	350	350	450	450	450	450	mm
H	795	795	945	945	945	945	mm
Y1	600	600	600	600	600	600	mm
Y2	200	200	200	200	200	200	mm

HEATING		B	W	05	07	10	13	17	21	
B0W35	Heating capacity	0	35	4,93	7,51	10,1	13,1	17,2	21,6	kW
	Power input			1,13	1,71	2,31	3,01	3,94	4,92	kW
	COP			<b>4,36</b>	<b>4,39</b>	<b>4,37</b>	<b>4,35</b>	<b>4,37</b>	<b>4,39</b>	-
	Plant side water flow rate			849	1295	1749	2251	2961	3723	l/h
	Plant side pressure drops			11	10	13	21	20	18	kPa
	Source side water flow rate			1222	1864	2517	3239	4260	5358	l/h
	Source side pressure drops			15	14	15	24	25	24	kPa
B0W45	Heating capacity	0	45	4,61	7,03	9,49	12,2	16,1	20,2	kW
	Power input			1,33	2,02	2,72	3,54	4,64	5,80	kW
	COP			<b>3,47</b>	<b>3,48</b>	<b>3,49</b>	<b>3,45</b>	<b>3,47</b>	<b>3,48</b>	-
	Plant side water flow rate			796	1216	1642	2113	2779	3494	l/h
	Plant side pressure drops			10	9	11	18	17	16	kPa
	Source side water flow rate			1053	1607	2169	2791	3671	4618	l/h
	Source side pressure drops			11	11	12	18	19	18	kPa
B0W55	Heating capacity	0	55	4,34	6,63	8,95	11,5	15,2	19,0	kW
	Power input			1,49	2,26	3,05	3,95	5,19	6,51	kW
	COP			<b>2,91</b>	<b>2,93</b>	<b>2,93</b>	<b>2,91</b>	<b>2,93</b>	<b>2,92</b>	-
	Plant side water flow rate			472	721	973	1253	1648	2072	l/h
	Plant side pressure drops			4	4	4	7	6	6	kPa
	Source side water flow rate			916	1398	1887	2428	3193	4017	l/h
	Source side pressure drops			9	9	9	14	15	14	kPa
B0W65	Heating capacity	0	65	4,20	6,41	8,65	11,1	14,6	18,4	kW
	Power input			1,69	2,57	3,47	4,49	5,90	7,40	kW
	COP			<b>2,49</b>	<b>2,49</b>	<b>2,49</b>	<b>2,47</b>	<b>2,47</b>	<b>2,49</b>	-
	Plant side water flow rate			367	560	756	973	1280	1609	l/h
	Plant side pressure drops			2	3	2	4	4	4	kPa
	Source side water flow rate			804	1227	1656	2130	2802	3525	l/h
	Source side pressure drops			7	7	7	11	11	11	kPa

COOLING		B	W	05	07	10	13	17	21	
B30W7	Cooling capacity	30	7	5,02	7,66	10,3	13,3	17,5	22,0	kW
	Power input			1,11	1,68	2,28	2,97	3,89	4,86	kW
	EER			<b>4,52</b>	<b>4,56</b>	<b>4,52</b>	<b>4,48</b>	<b>4,50</b>	<b>4,53</b>	-
	Plant side water flow rate			867	1321	1785	2300	3020	3793	l/h
	Plant side pressure drops			12	11	13	22	20	19	kPa
	Source side water flow rate			1147	1749	2364	3044	4000	5023	l/h
	Source side pressure drops			13	13	13	21	22	21	kPa
B30W18	Cooling capacity	30	18	6,56	10,00	13,50	17,40	22,90	28,70	kW
	Power input			1,13	1,70	2,31	3,03	3,95	4,92	kW
	EER			<b>5,81</b>	<b>5,88</b>	<b>5,84</b>	<b>5,74</b>	<b>5,80</b>	<b>5,83</b>	-
	Plant side water flow rate			1139	1736	2345	3022	3969	4983	l/h
	Plant side pressure drops			18	17	22	36	34	32	kPa
	Source side water flow rate			1436	2189	2958	3810	5005	6285	l/h
	Source side pressure drops			19	18	20	33	33	32	kPa

ACOUSTIC PERFORMANCES		B	W	05	07	10	13	17	21	
Base	Sound power level	0	35	<b>60</b>	<b>62</b>	<b>64</b>	<b>65</b>	<b>66</b>	<b>67</b>	dB(A)
	Sound pressure level - 1 m			47	49	50	51	52	53	dB(A)
	Sound pressure level - 5 m			35	37	39	40	41	42	dB(A)
	Sound pressure level - 10 m			29	31	33	34	35	36	dB(A)
Low noise	Sound power level	0	35	<b>57</b>	<b>59</b>	<b>60</b>	<b>61</b>	<b>62</b>	<b>63</b>	dB(A)
	Sound pressure level - 1 m			44	46	46	47	48	49	dB(A)
	Sound pressure level - 5 m			32	34	35	36	37	38	dB(A)
	Sound pressure level - 10 m			26	28	29	30	31	32	dB(A)

Data declared according to EN 14511. Acoustic performances declared according to EN 12102. The data are related to reversible units (R) without options or accessories.

B0W35	= source :	brine in 0°C out -3°C	plant :	water in 30°C out 35°C
B0W45	= source :	brine in 0°C out -3°C	plant :	water in 40°C out 45°C
B0W55	= source :	brine in 0°C out -3°C	plant :	water in 47°C out 55°C
B0W65	= source :	brine in 0°C out -3°C	plant :	water in 55°C out 65°C
B30W7	= source :	brine in 30°C out 35°C	plant :	water in 12°C out 7°C
B30W18	= source :	brine in 30°C out 35°C	plant :	water in 23°C out 18°C