

MEHP-iB-G07 07V-40Y

REVERSIBLE HEAT PUMP UNITS



For outdoor installation

Cooling Capacity: 6.0 – 36.0kW

Heating Capacity: 7.0 – 41.0kW

Air sourced reversible heat pump unit for the production of heating and chilled water, featuring variable-speed (inverter-driven) twin rotary or scroll compressors and R32 refrigerant in a single-circuit configuration.

Flexible and reliable, the MEHP-iB easily adapts to different thermal load conditions using precise temperature control and inverter technology.

A high level of performance, both at full and partial load, is achieved through the unit's detailed design and the use of a variable-speed (inverter) motor. The unit supplies heating, chilled water and (indirectly) domestic hot water.



High Efficiency Performance



*1 MEHP-iB-G07 15Y, EN14511 value.

*2 MEHP-iB-G07 15Y at Reg. EU2016/2281.

*3 MEHP-iB-G07 23Y at LT Reg. EU813/2013.

*4 Energy efficiency class referred to low temperature (35°C) applications in average climate conditions according to (Regulation [EU] N. 811/2013).

**MITSUBISHI ELECTRIC
HYDRONICS & IT COOLING SYSTEMS**

AIR SOURCED HEAT PUMP CHILLER

Key Features

High Performance Compressors

Mitsubishi Electric Hermetic Variable-Speed Compressors are designed to deliver high performance in any load condition and are optimised for R32 refrigerant. MEHP-iB units are with a single refrigeration circuit featuring a single inverter-driven twin-rotary compressor up to size 11V and a single inverter-driven scroll compressor from size 15V and above. Inverter logic ensures a soft start, reducing inrush current. Compressors are mounted on rubber anti-vibration mounts and are enclosed in dedicated sound-absorbing coverings for noise reduction.

Low GWP Refrigerant

R32 refrigerant is an eco-friendly alternative to traditional R410A, offering a 66% reduction in GWP, higher efficiency, and a lower refrigerant charge.

Plant Side Heat Exchanger

The heat exchanger is externally lined with closed-cell neoprene lagging to prevent condensation. During operation, it is protected against no-flow conditions by a flow switch. The unit is also designed to operate with non-freezing fluid mixes, supporting heat exchanger outlet temperatures as low as -8°C, with an integrated frost protection heater.

Source Side Heat Exchanger

The finned coil exchanger is constructed with copper tubes and aluminium fins, ensuring excellent heat conduction. The copper pipes are brazed to the coil headers and joined by mechanical expansion to correctly spaced aluminium fins for optimal performance. Coil protection grids are included as standard on all sizes.

Integrated Hydronic Module

The integrated hydronic module includes all essential water circuit components, such as an anti-freeze electrical heater on the plate heat exchanger, air vents, flow switch, water filter, safety valve, EC water pumps, and an expansion tank. This design optimises installation space, time, and costs.

Smart Defrost

The advanced self-adaptive proprietary defrost logic continuously analyses operating parameters and external conditions, ensuring defrost cycles occur only when necessary. This minimises both the number and duration of defrost cycles, maximising efficiency and the unit's net heating capacity.

Wide Operating Range

Designed for versatility, the unit can produce hot water up to 60°C for both space heating and (indirectly) domestic hot water (DHW). It operates efficiently even in extreme conditions, with outdoor air temperatures as low as -20°C.

Capacity Range

VERSION	SIZE	COOLING CAPACITY	HEATING CAPACITY
MEHP-iB-G07 (1Ph)	07V-15V	6.0 – 14.0kW	7.0 – 15.0kW
MEHP-iB-G07 (3Ph)	15Y-40Y	14.0 – 36.0kW	15.0 – 41.0kW

Specifications



MEHP-iB-G07

		07V	09V	11V	15V	15Y	18Y	23Y	27Y	35Y	40Y
Power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50
PERFORMANCE											
COOLING ONLY (EN14511 VALUE): 12/7°C - 35°C											
Cooling capacity (1) (2)	kW	6.25	7.77	10.40	13.60	13.60	15.70	19.80	26.00	31.10	36.00
EER (1) (2)	kW/kW	3.06	2.92	3.00	3.10	3.19	2.81	2.84	2.98	2.79	2.93
HEATING ONLY (EN14511 VALUE): 40/45°C - 7°C/87%RH											
Total heating capacity (4) (2)	kW	6.68	8.72	11.20	15.00	15.20	17.10	23.70	27.10	34.00	40.70
COP (4) (2)	kW/kW	3.26	3.55	3.42	3.32	3.57	3.52	3.52	3.38	3.18	3.52
ENERGY EFFICIENCY											
SEASONAL EFFICIENCY IN COOLING (REG. EU 2016/2281)											
Ambient refrigeration											
Prated, c (13)	kW	6.25	7.77	10.40	13.60	13.60	15.70	19.80	26.00	31.10	36.00
SEER (13) (14)		4.74	4.68	4.73	4.45	5.17	5.01	4.88	4.82	4.81	4.93
Performance ηs (13) (15)	%	187	184	186	175	204	197	192	190	189	194
SEASONAL EFFICIENCY IN HEATING (REG. EU 813/2013)											
MEDIUM TEMPERATURE (55°C)											
PDesign (7)	kW	3.86	5.51	7.59	9.02	9.10	12.00	14.70	19.20	23.10	29.30
SCOP (7) (16)		2.85	3.20	3.21	2.85	3.21	3.25	3.42	3.21	3.21	3.48
Performance ηs (7) (17)	%	111	125	126	111	125	127	134	125	125	136
Seasonal efficiency class (19) (from D to A ⁺⁺⁺)		A ⁺	A ⁺⁺	A ⁺⁺	A ⁺	A ⁺⁺	A ⁺⁺	A ⁺⁺	A ⁺⁺	A ⁺⁺	A ⁺⁺
EXCHANGERS											
HEAT EXCHANGER USER SIDE IN COOLING											
Water flow (1)	L/s	0.30	0.37	0.50	0.65	0.65	0.75	0.94	1.24	1.48	1.71
Available unit head (1)	kPa	74.70	67.30	67.10	61.30	61.20	85.10	77.60	62.80	92.10	81.10
HEAT EXCHANGER USER SIDE IN HEATING											
Water flow (4)	L/s	0.33	0.42	0.54	0.73	0.74	0.83	1.15	1.31	1.65	1.97
Available unit head (4)	kPa	70.50	59.50	61.10	55.20	54.30	78.90	63.90	57.80	79.50	63.20
REFRIGERANT CIRCUIT											
Compressors nr.	No.	1	1	1	1	1	1	1	1	1	1
No. Circuits	No.	1	1	1	1	1	1	1	1	1	1
Theoretical refrigerant charge	kg	1.90	3.50	3.60	3.90	3.90	4.55	6.20	6.90	8.85	9.30
NOISE LEVEL											
Total sound pressure (11)	dB(A)	53	53	54	55	55	56	61	62	63	64
Total sound power level in cooling (8) (9)	dB(A)	67	68	69	70	70	71	76	78	79	80
Total sound power level in heating (8) (10)	dB(A)	65	65	69	70	70	70	76	78	78	78
SIZE AND WEIGHT											
A (12)	mm	900	900	900	900	900	1,450	1,450	1,450	1,450	1,700
B (12)	mm	370	420	420	420	420	550	550	550	550	650
H (12)	mm	940	1,240	1,240	1,390	1,390	1,200	1,200	1,700	1,700	1,700
Operating weight (12)	kg	85	105	115	135	150	185	215	260	280	315

- Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
- Values in compliance with EN14511.
- Plant (side) cooling exchanger water (in/out) 23°C/18°C; Source (side) heat exchanger air (in) 35°C.
- Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- Plant (side) heat exchanger water (in/out) 30°C/35°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
- Parameter calculated for LOW-TEMPERATURE applications in AVERAGE

- climate conditions according to [REGULATION (EU) N. 813/2013].
- Parameter calculated for MEDIUM TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013].
- Sound power on the basis of measurements taken in compliance with ISO 9614.
- Sound power level in cooling, outdoors.
- Sound power level in heating, outdoors.
- Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
- Unit in standard configuration, without optional accessories.

- Parameter calculated according to [REGULATION (EU) N. 2016/2281].
 - Seasonal energy efficiency ratio.
 - Seasonal space cooling energy efficiency.
 - Seasonal coefficient of performance.
 - Seasonal space heating energy efficiency.
 - Energy efficiency class referred to LOW-TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013].
 - Energy efficiency class referred to MEDIUM TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013].
- Data highlighted in green are Eurovent Certified.

Optional Extras

- User interface versions, including KIPLINK
- Base frame electrical heater
- Touch room HMI
- Buffer tanks
- 3-way valve (DHW)
- Traditional CU/AL coils, also available with Hydrophilic Treatment
- Anti-vibration mountings
- BMS Interface, such as BACnet and Modbus
- Probes
- Condensation drain pan (for sizes 18Y – 40Y)

For more information please visit our website
or call our Applied Products Sales Team.
www.mitsubishi-electric.co.nz | 0800 784 382

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