

Air Sourced Mini Chiller

MECH-iB-G07 15Y-40Y



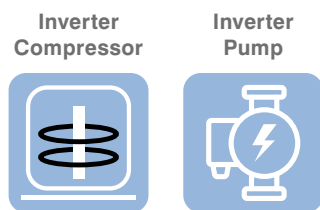
For outdoor installation

Nominal Cooling Capacity:

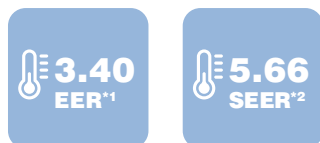
15.0 – 38.0kW

The Mitsubishi Electric MECH-iB is a modern air-sourced mini chiller that delivers class leading efficiency in a compact, ready-to-use monoblock design. Available in six models from 15kW to 40kW, it's ideal across diverse applications including mission-critical IT cooling.

With R32 inverter scroll compressors, EC fans and pumps, and full inverter technology, it ensures energy savings, quiet operation, and reliable performance. Featuring extended operating limits and factory-fitted hydronic components, the MECH-iB redefines what a compact mini chiller can achieve.



High Efficiency Performance



*1 MECH-iB-G07 18Y, value in compliance with EN14511.

*2 MECH-iB-G07 23Y, value in compliance with Reg. EU 2016/2281.

**MITSUBISHI ELECTRIC
HYDRONICS & IT COOLING SYSTEMS**

AIR SOURCED CHILLER

Key Features

High Performance Compressors

The MECH-iB features Mitsubishi Electric variable-speed scroll compressors engineered for high efficiency and reliability. The inverter-driven design provides soft start, reducing inrush current and mechanical stress while precisely controlling capacity to match demand. Mounted on rubber anti-vibration mounts and enclosed within sound-absorbing panels, the compressor ensures quiet operation under all load conditions.

Integrated Hydronic Module

Supplied as standard with an integrated hydronic module simplifies installation. Featuring a variable-speed EC water pump, expansion tank, safety valve, air vent, flow switch, anti-freeze heater, and water strainer (water strainer supplied loose).

A high-head pump version is available, and configurations without the pump and expansion tank can be supplied while retaining the other components. This flexibility allows easy adaptation to various system designs and project requirements.

Wide Operating Range

Full inverter technology provides precise, reliable temperature control across a broad range of conditions. Capable of producing chilled water from -12°C to +24°C in ambient air temperatures between -20°C and +50°C, ensures dependable performance in demanding environments.

This versatility makes the MECH-iB ideal for comfort cooling, process cooling, and mission-critical IT applications where consistent performance and reliability are essential.

Optimised Design and Compact Footprint

Precisely engineered, the MECH-iB delivers exceptional cooling performance with a best-in-class footprint-to-capacity ratio. Its compact design allows seamless integration into space-constrained installations, optimising plant layouts without compromising accessibility or serviceability.

Exceptional Energy Efficiency

Delivering exceptional performance through copper-aluminium air-side and stainless-steel brazed plate water-side heat exchangers, combined with advanced inverter technology across the compressor, fan, and pump, this fully modulating system continuously adjusts capacity to match real-time demand for optimal efficiency under all load conditions.

The result is lower energy use, reduced operating costs, and a faster return on investment. By optimising performance in every scenario, the MECH-iB sets a new benchmark for seasonal efficiency among compact air-cooled mini chillers.

Integrated Multi-Unit Control

The W3000+ Advanced Controller enables seamless master/client management of up to four MECH-iB units with one additional temperature sensor. Using intelligent proportional control linked to the plant's storage temperature, it automatically calculates demand and determines the number of units needed for optimal performance and efficiency.

This integrated control simplifies coordination, enhances load sharing, and maximises efficiency across all connected units.

Specifications



MECH-iB-G07

		15Y	18Y	23Y	27Y	35Y	40Y
Power supply	V/ph/hz	400/3+N/50					
PERFORMANCE							
COOLING ONLY (EN14511 VALUE)							
Cooling capacity (1) (4)	kW	15.00	17.90	21.10	27.80	32.70	38.40
EER (1) (4)	kW/kW	3.10	3.40	3.25	3.31	3.30	3.23
ENERGY EFFICIENCY							
SEASONAL EFFICIENCY IN COOLING (REG. EU 2016/2281)							
AMBIENT REFRIGERATION							
Prated, c (9)	kW	15.00	17.90	21.10	27.80	32.70	38.40
SEER (9) (10)		5.23	5.40	5.66	5.39	5.46	5.24
Performance ηs (9) (11)	%	206	213	223	212	215	207
EXCHANGERS							
HEAT EXCHANGER USER SIDE IN COOLING							
Water flow (1)	L/s	0.71	0.85	1.01	1.33	1.55	1.83
Pressure drop at the heat exchanger (1) (4)	kPa	15.20	21.60	15.10	20.50	25.10	23.80
Water flow min-max	L/s	0.39-1.00	0.46-1.18	0.58-1.43	0.73-1.81	0.86-2.11	0.99-2.47
Expansion tank volume (only if pump present)	L	2	5	5	5	5	5
Minimum system volume	L	75	90	115	140	165	193
REFRIGERANT CIRCUIT							
Compressors nr.	No.	1	1	1	1	1	1
No. Circuits	No.	1	1	1	1	1	1
Theoretical refrigerant charge	kg	2.10	2.83	3.60	4.74	5.67	6.00
CO ₂ equivalent	t	1.42	1.93	2.43	3.20	3.84	4.06
NOISE LEVEL							
Total sound pressure (5)	dB(A)	39	40	45	46	47	48
Total sound power level in cooling (6) (7)	dB(A)	70	71	76	78	79	80
SIZE AND WEIGHT							
Width (8)	mm	900	900	1,450	1,450	1,450	1,700
Depth (8)	mm	420	420	550	550	550	650
Height (8)	mm	1,390	1,390	1,200	1,700	1,700	1,700
Operating weight (8)	kg	144	155	207	256	272	306
Water connection size (male thread)	in	1 ¼"	1 ¼"	1 ¼"	1 ¼"	1 ½"	1 ½"
Water side pressure relief valve	kPa	600	600	600	600	600	600

(1) Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.

(2) N/A.

(3) N/A.

(4) Values in compliance with EN14511.

(5) Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.

(6) Sound power on the basis of measurements taken in compliance with ISO 9614.

(7) Sound power level in cooling, outdoors.

(8) Unit in standard configuration, without optional accessories.

(9) Parameter calculated according to [REGULATION (EU) N. 2016/2281].

(10) Seasonal energy efficiency ratio.

(11) Seasonal space cooling energy efficiency.

Data highlighted in green are Eurovent Certified.

Optional Extras

- KIPLINK – Wi-Fi Control (Keyboard In Your Pocket)
- Without Pump
- High Head Pump
- Antifreeze Piping and Pumps
- BMS Interface Modules – Such As Modbus and Bacnet
- Buffer Tanks
- Anti-Vibration Mounts
- Temperature Probe(s) Kit
- Options For IT Cooling:
 - External Free-Cooler Management
 - HPC Control Function
 - Dual Power Supply Kit (ATS)

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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