Chiller | Product Information

MITSUBISHI ELECTRIC

MECH-iF-G04

High Performance Air Cooled Chiller

Mitsubishi Electric's **MECH-iF-G04** is our new flagship in high performance chillers, thanks to its proprietary Variable Speed Drive (VSD) single screw compressor. The new MS Compressor has been developed using Mitsubishi Electric's 35 years of experience in single screw compressors specifically for this chiller. It is also assembled with our patented Reduced Exergy Depletion (RED) Cooler, which maximises the energy saving potential of sub-cooling, unlocking a new level of efficiency to make the MECH-iF-G04 chiller best-in-class.

The MECH-iF-G04 is available as three different configurations for noise performance, with a wide operating range from -6°C to +20°C evaporator leaving water temperatures (ELWT) and with the option to have hydronic pumps inbuilt. The MECH-iF-G04 can also be fitted with options including fast restart, energy and thermal meters, BEMS cards and Copper/Aluminium heat exchangers.

R1234ze

Key Features & Benefits:

- Best-in-class seasonal efficiency in a compact footprint
- A new single screw compressor, designed by Mitsubishi Electric specifically for the MECH-iF-G04
- Electromagnetic Interference (EMI) filters supplied as standard
- 3 different configurations for noise performance available
- Low GWP refrigerant (GWP_{100} = 1)*
- Available options include; inbuilt hydronic pumps, thermal and energy meters, Smart LAN functions and many more
- V-Shaped microchannel heat exchangers with patented Reduced Exergy Depletion (R.E.D.) Cooler

PATENTED R.E.D. Cooler Reduced Exergy Depletion PATENTED

*IPCC AR5.

Specifications

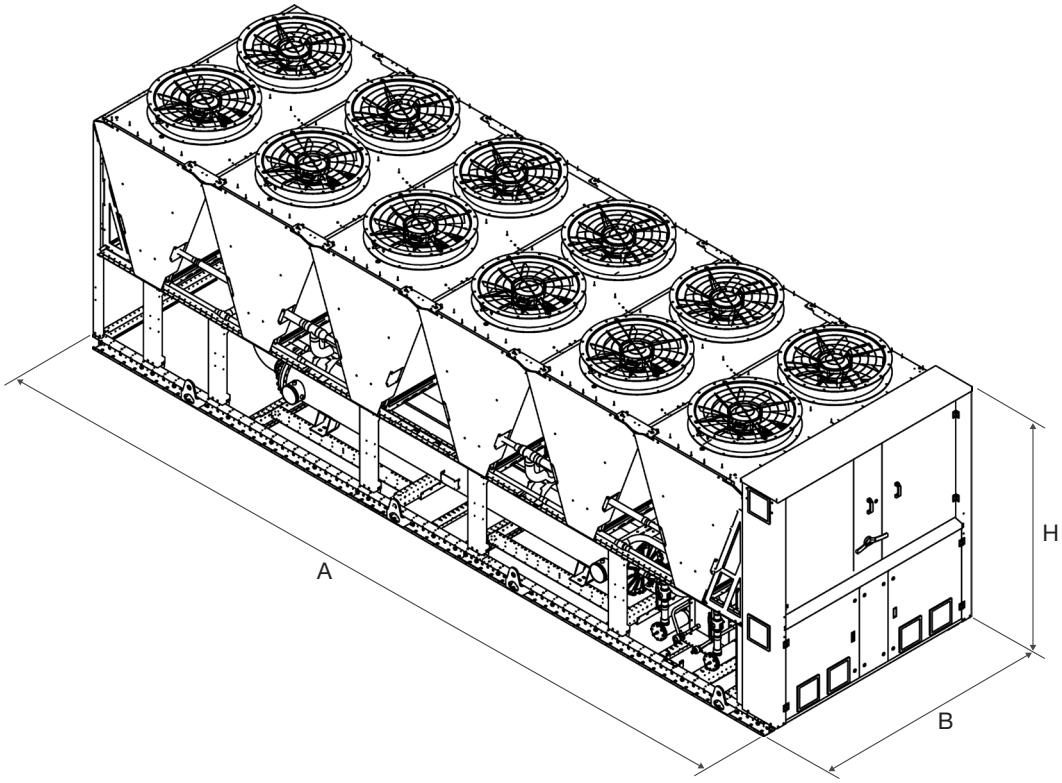
MECH-iF-G04			0351	0702	0802	0351	0702	0802	0351	0702	0802
VERSION			-	-	-	-NR	-NR	-NR	-SL	-SL	-SL
PERFORMANCE - COOLING ONLY											
GROSS VALUE[*1]											
TOTAL COOLING CAPACITY		kW	346.0	701.9	828.1	342.6	696.2	819.5	339.2	690.0	811.0
TOTAL POWER INPUT		kW	105.8	213.0	269.5	106.0	213.5	270.5	106.6	214.3	271.6
EER		kW/kW	3.27	3.30	3.07	3.23	3.26	3.03	3.18	3.22	2.99
EN14511 VALUES[*1*2]											
TOTAL COOLING CAPACITY		kW	345.5	701.3	827.4	342.2	695.6	818.8	338.8	689.3	810.4
EER		kW/kW	3.22	3.25	3.04	3.19	3.22	3.00	3.14	3.18	2.95
SEASONAL PERFORMANCE[*3]											
PRATED,C		kW	345.5	701.3	827.4	342.2	695.6	818.8	338.8	689.3	810.4
SEER			5.68	5.83	5.85	5.68	5.83	5.85	5.67	5.83	5.84
PERFORMANCE ηs		%	224	230	231	224	230	231	224	230	231
HEAT EXCHANGER IN COOLING[*1]											
WATER FLOW	User Side	l/s	16.5	33.6	39.6	16.4	33.3	39.2	16.2	33.0	38.8
PRESSURE DROP[*2]	User Side	kPa	48	54.1	48.4	47.2	53.4	47.6	46.5	52.6	46.7
ELECTRICAL DATA											
POWER SUPPLY		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
F.L.A.[*4]	Total	A	251	503	509	251	503	509	251	503	509
EXCHANGERS											
MINIMUM WATER FLOW	Evaporator	l/s	5.7	12.3	14.6	5.7	12.3	14.6	5.7	12.3	14.6
MINIMUM WATER CONTENT	Plant	l	1700	2400	2800	1700	2400	2800	1700	2400	2800
FANS											
QUANTITY		No.	6	12	14	6	12	14	6	12	14
AIRFLOW		m/s	32.4	64.8	75.6	29.4	58.8	68.6	27.8	55.6	64.8
REFRIGERANT CIRCUIT											
COMPRESSORS		No.	1	2	2	1	2	2	1	2	2
CIRCUITS		No.	1	2	2	1	2	2	1	2	2
REFRIGERANT			R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze
REFRIGERANT CHARGE[*5]		kg	74	150	177	74	150	177	74	150	177
NOISE LEVELS											
TOTAL SOUND PRESSURE[*6]		dB(A)	68	70	72	66	68	70	59	61	63
TOTAL SOUND POWER LEVEL IN COOLING[*7]		dB(A)	100	103	105	98	101	103	91	94	96
SIZE AND WEIGHT[*8]											
WIDTH (A)		mm	4150	7900	9150	4150	7900	9150	4150	7900	9150
DEPTH (B)		mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
HEIGHT (H)		mm	2500	2500	2500	2500	2500	2500	2500	2500	2500
OPERATING WEIGHT		kg	4050	7650	8580	4050	7650	8580	4110	7730	8670

Notes:

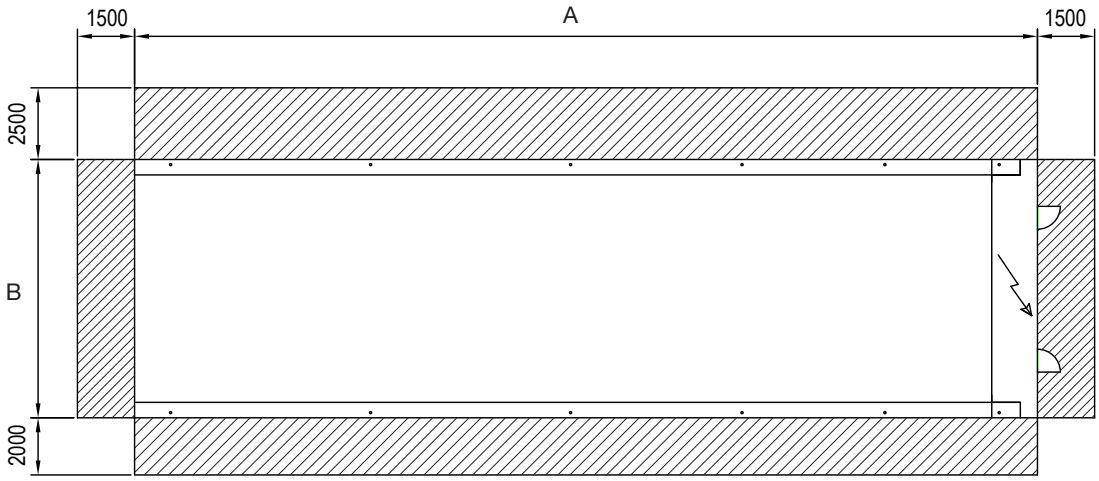
1. Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
2. Values in compliance with EN14511.
3. Parameter calculated according to [Regulation (EU) N. 2016/2281].
4. Data valid for standard units without any additional options and only indicative. Safety values to be considered when cabling the unit for power supply and line-protection. Refer to Databook.
5. Theoretical - refer to serial plate for actual charge volumes.
6. 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.
7. Sound power on the basis of measurement taken in compliance with ISO 9614. Sound power level in cooling, outdoors.
8. Unit in standard configuration, without optional accessories.

Eurovent Certified Data

MECH-iF-G04 DIMENSIONS

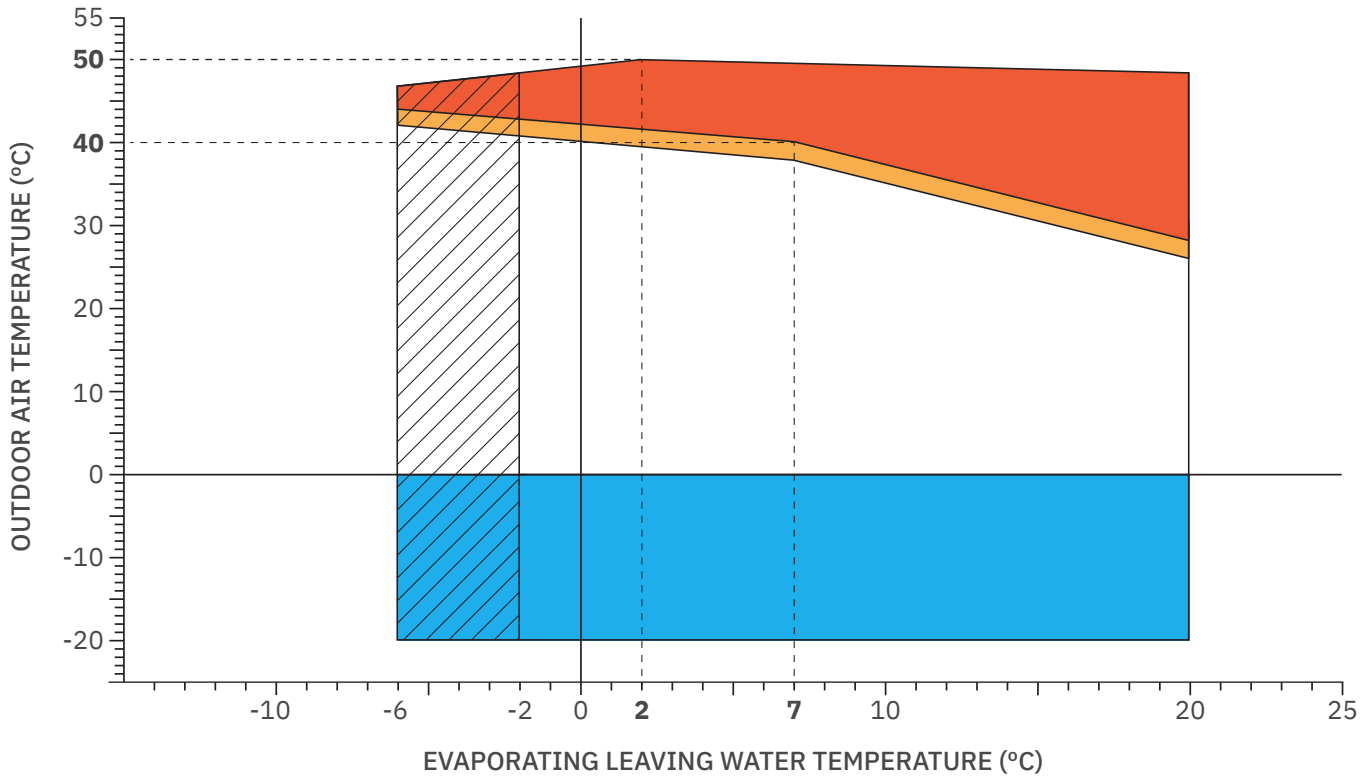


TOP VIEW



Note: All dimensions are in millimetres.

MECH-iF-G04 OPERATING ENVELOPES



All versions at part load

Low noise version (-SL) not at full load

Options required for low evaporator leaving water temperature

Antifreeze option(s) required

Note: For specific limits of each model, please consultant your local sales representative.

MITSUBISHI ELECTRIC
Changes for the Better

Telephone: **01707 282880**
email: **chillers@meuk.mee.com**
les.mitsubishielectric.co.uk

@meuk_les
@green_gateway
Mitsubishi Electric Living Environmental Systems UK
Mitsubishi Electric Cooling and Heating UK
mitsubishielectricuk_les
Mitsubishi Electric Living Environmental Systems UK
BLOG thehub.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division, Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England. Telephone: 01707 282880 Fax: 01707 278881
IRELAND Mitsubishi Electric Europe, Westgate Business Park, Ballymount, Dublin 24, Ireland. Telephone: (01) 419 8800 Fax: (01) 419 8890 International code: (003531)

Note: The fuse rating is for guidance only and please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R290 (GWP:3), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R454C (GWP:148), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

Effective as of March 2024

Green Gateway greengateway.mitsubishielectric.co.uk