Chiller | Product Information

MITSUBISHI ELECTRIC

i-FX2-G05-K

Compact Inverter Screw Air Cooled Chiller

The new generation of customisable screw compressor chillers has arrived with Climaveneta's range of **i-FX2** air cooled chillers. The second generation of this chiller family marks considerable developments in seasonal efficiency, footprint, noise, operating envelope and configuration and customisation.

The **i-FX2-G05-K** is designed to strike the best balance between footprint and efficiency. This second generation of air cooled chiller is more compact that the first generation making it ideal for refurbishment projects. Larger cooling capacity are achieved by utilising the low GWP refrigerant R513A, which being non-flammable, has an ASHRAE A1 safety class.

The **i-FX2** is the ultimate configurable screw chiller; available with 4 different levels of noise performance, options for integrated fixed speed or variable speed hydronic pumps, multiple heat exchanger coating options, several refrigerant leak detection options, energy and thermal meters and multiple methods for group controls configuration. With a wide operating envelope, an **i-FX2** air cooled chiller can be made just the way you need it.

CLIMAVENETA SUSTAINABLE COMFORT

R513A

Key Features & Benefits:

- Next generation of efficiency with full inverter screw compressors using low GWP refrigerant
- Wide operating envelope for comfort and process applications
- Variety of low noise versions to match your project requirements
- Exceptionally compact design
- Wide variety of customisations available including factory fitted hydronic pump(s) for fixed or variable waterflow
- Available with EC Fans including High ESP version
- Refrigerant leak detection logic that can detect leaks without additional sensors provided as standard
- V-Shaped microchannel heat exchangers with patented Reduced Exergy Depletion (R.E.D.) Cooler

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

i-FX2-G05-K Specifications

i-FX2-G05-K			0532	0602	0622	0672	0732	0802	0892	0972	1032	1082	1122	1192	1242	1382	1452	1552	1633	1703	1863
PERFORMANCE - COOLING ONLY																					
GROSS VALUE[*1]																					
TOTAL COOLING CAPACITY		kW	533.2	597.3	623.6	674.3	725.5	800.5	889.2	966.7	1034	1079	1123	1185	1243	1382	1450	1551	1628	1702	1859
TOTAL POWER INPUT		kW	182.5	202.8	208.4	224.5	247.3	280.9	307.4	325.4	344.5	362.8	384.0	389.6	413.8	454.1	495.0	501.8	550.3	579.2	621.9
EER		kW/kW	2.92	2.95	2.99	3.00	2.93	2.85	2.89	2.97	3.00	2.97	2.92	3.04	3.01	3.04	2.93	3.09	2.96	2.94	2.99
EN14511 VALUES[*1*2]																					
TOTAL COOLING CAPACITY		kW	532.7	596.7	623.0	673.7	724.8	799.9	888.5	966.0	1033	1078	1122	1184	1242	1382	1449	1550	1627	1701	1858
EER		kW/kW	2.89	2.91	2.96	2.97	2.90	2.82	2.86	2.94	2.97	2.93	2.88	3.00	2.96	3.01	2.89	3.05	2.92	2.90	2.96
SEASONAL PERFORMANCE[*3]																					
$P_{RATED.C}$		kW	533.0	597.0	623.0	674.0	725.0	800.0	888.0	966.0	1033	1078	1122	1184	1242	1382	1449	1550	1627	1701	1858
SEER			5.08	5.00	5.06	4.89	4.85	4.87	4.99	5.00	4.90	4.97	5.01	5.04	5.05	5.12	5.03	5.16	4.99	5.04	5.13
PERFORMANCE ηs		%	200	197	199	193	191	192	197	197	193	196	197	199	199	202	198	203	197	198	202
HEAT EXCHANGER IN COOLING[*1]																					
WATER FLOW	User Side	l/s	25.5	28.6	29.8	32.2	34.7	38.3	42.5	46.2	49.4	51.6	53.7	56.7	59.4	66.1	69.3	74.2	77.9	81.4	88.9
PRESSURE DROP[*2]	User Side	kPa	43.3	54.4	45.8	53.5	56.3	46.3	57.1	42.5	48.6	64.5	69.9	67.6	69.9	61.3	67.5	58.5	69.4	75.9	52.6
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	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	400/3/50
F.L.A.[*4]	Total	A	360	398	407	436	481	559	624	626	639	701	785	825	857	932	984	1008	1094	1178	1270
EXCHANGERS																					
MINIMUM WATER FLOW	Evaporator	l/s	13.1	13.1	14.4	14.4	16.7	20.0	20.0	24.7	24.7	22.5	22.5	23.6	24.2	28.3	28.3	37.2	38.9	38.9	41.7
MINIMUM WATER CONTENT	Plant	l	1900	2100	2200	2400	2500	2800	3100	3400	3600	3800	3900	4100	4400	4800	5100	5400	5700	6000	6500
FANS																					
QUANTITY		No.	6	7	7	8	8	9	10	11	12	12	12	14	14	16	16	18	18	18	20
AIRFLOW		m^3/s	30.9	36.1	36.1	41.2	41.2	46.4	51.5	56.7	61.8	61.8	61.8	72.1	72.1	82.4	82.4	92.7	92.7	92.7	103
REFRIGERANT CIRCUIT																					
COMPRESSORS		No.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3
CIRCUITS		No.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3
REFRIGERANT			R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A
REFRIGERANT CHARGE[*5]		kg	83	92	94	101	112	132	143	155	166	167	167	187	207	243	243	263	263	268	288
NOISE LEVELS																					
TOTAL SOUND PRESSURE[*6]		dB(A)	68	69	69	69	70	69	70	71	71	71	72	72	73	73	73	73	73	73	74
TOTAL SOUND POWER LEVEL IN COOLING[*7]		dB(A)	100	101	101	101	102	102	103	104	104	104	105	105	106	106	106	106	106	106	107
SIZE AND WEIGHT[*8]																					
WIDTH (A)		mm	4150	5400	5400	5400	5400	6650	6650	7900	7900	7900	7900	9150	9150	10400	10400	11650	11650	11650	12900
DEPTH (B)		mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
HEIGHT (H)		mm	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640
OPERATING WEIGHT		kg	4500	5000	5007	5106	5388	5863	5974	6464	6584	7031	7409	8243	8249	9008	9008	10165	11301	11679	12284

Notes:

1. Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger arir (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 option accessories.

ELCA_Engine ver.4.8.2.0

Eurovent Certified Data

i-FX2-G05-SL-K Specifications

i-FX2-G05-SL-K Low Noise Version			0532	0602	0622	0672	0732	0802	0892	0972	1032	1082	1122	1192	1242	1382	1452	1552	1633	1703	1863
PERFORMANCE - COOLING ONLY																					
GROSS VALUE[*1]																					
TOTAL COOLING CAPACITY		kW	517.6	560.7	604.6	627.1	719.3	771.9	840.1	917.2	979.1	1056	1118	1164	1222	1303	1402	1475	1602	1677	1773
TOTAL POWER INPUT		kW	171.3	181.3	200.7	215.8	233.2	267.8	301.0	323.8	342.5	361.5	374.8	376.9	401.5	442.3	472.0	494.8	547.2	573.1	634.5
EER		kW/kW	3.02	3.09	3.01	2.91	3.08	2.88	2.79	2.83	2.86	2.92	2.98	3.09	3.04	2.95	2.97	2.98	2.99	2.93	2.79
EN14511 VALUES[*1*2]																					
TOTAL COOLING CAPACITY		kW	517.1	560.2	604.1	626.5	718.7	771.3	839.4	916.5	978.4	1056	1117	1163	1221	1302	1401	1475	1601	1676	1773
EER		kW/kW	2.99	3.05	2.98	2.87	3.04	2.85	2.76	2.81	2.83	2.88	2.94	3.04	3.00	2.91	2.93	2.95	2.89	2.88	2.77
SEASONAL PERFORMANCE[*3]																					
PRATED,C		kW	517.1	560.2	604.1	626.5	718.7	771.3	839.4	916.5	978.4	1056	1117	1163	1121	1302	1401	1475	1601	1676	1773
SEER			5.10	5.11	4.98	4.84	4.97	4.85	4.93	4.90	4.80	4.93	5.04	5.07	5.09	5.07	5.07	5.12	4.95	5.05	4.99
PERFORMANCE ηs		%	201	202	196	191	196	191	194	193	189	194	199	200	201	200	200	202	195	199	197
HEAT EXCHANGER IN COOLING[*1]																					
WATER FLOW	User Side	l/s	24.8	26.8	28.9	30.0	34.4	36.9	40.2	43.9	46.8	50.5	53.5	55.6	58.4	62.3	67.0	70.6	76.6	80.2	84.8
PRESSURE DROP[*2]	User Side	kPa	40.8	47.9	43.0	46.3	55.4	43.0	51.0	38.2	43.6	61.8	69.2	65.2	67.5	54.5	63.1	53.0	67.2	73.6	47.9
ELECTRICAL DATA																					
POWER SUPPLY		V/ph/Hz	400/3/50	400/3/50	400/3/50	400/3/504	400/3/50	400/3/50	400/3/50	400/3/505	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	400/3/50	400/3/50
F.L.A.[*4]	Total	A	349	371	397	19	463	519	586	98	617	705	793	826	858	906	970	992	1102	1186	1270
EXCHANGERS																					
MINIMUM WATER FLOW	Evaporator	l/s	13.1	13.1	14.4	14.4	16.7	20.0	20.0	24.7	24.7	22.5	22.5	23.6	24.2	28.3	28.3	37.2	38.9	38.9	41.7
MINIMUM WATER CONTENT	Plant	l	1800	2000	2100	2200	2500	2700	2900	3200	3400	3700	3900	4100	4300	4600	4900	5200	5600	5900	6200
FANS																					
QUANTITY		No.	7	8	8	8	10	10	10	11	12	13	14	16	16	16	18	18	20	20	20
AIRFLOW		m^3/s	32.4	37.0	37.0	37.0	46.3	46.3	46.3	50.9	55.6	60.2	64.8	74.1	74.1	74.1	83.3	83.3	92.6	92.6	92.6
REFRIGERANT CIRCUIT																					
COMPRESSORS		No.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3
CIRCUITS		No.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3
REFRIGERANT			R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A
REFRIGERANT CHARGE[*5]		kg	88	97	99	101	122	137	143	155	166	172	177	197	217	243	253	263	273	278	288
NOISE LEVELS																					
TOTAL SOUND PRESSURE[*6]		dB(A)	59	60	60	60	60	60	60	61	62	63	63	63	63	63	63	63	63	63	64
TOTAL SOUND POWER LEVEL IN COOLING[*7]		dB(A)	91	92	92	92	93	93	93	94	95	96	96	96	96	96	96	96	96	96	97
SIZE AND WEIGHT[*8]																					
WIDTH (A)		mm	5400	5400	5400	5400	6650	6650	6650	7900	7900	9150	9150	10400	10400	10400	11650	11650	12900	12900	12900
DEPTH (B)		mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
HEIGHT (H)		mm	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640	2640
OPERATING WEIGHT		kg	5570	566`	5676	5686	6520	6543	6563	7053	7173	8205	8674	9378	9383	9607	10217	10773	12753	13131	13177

Notes:

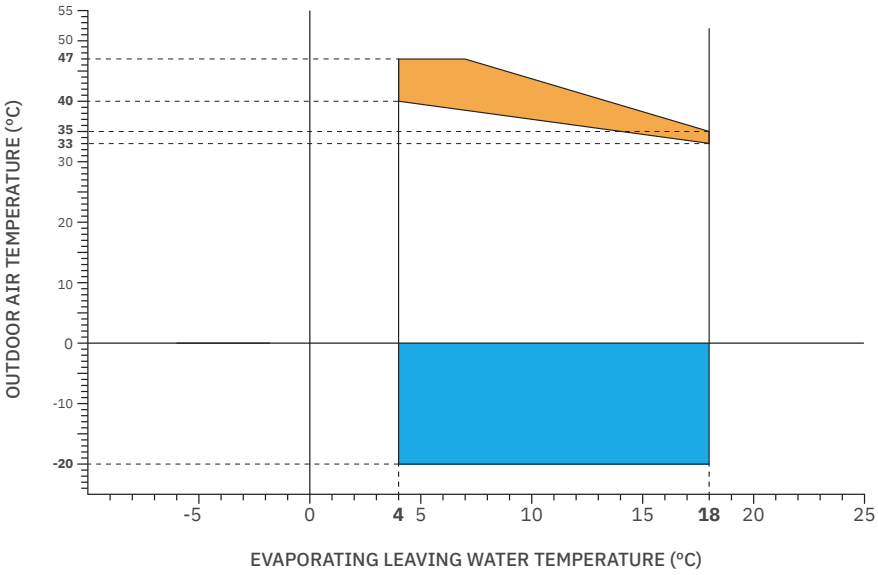
1. Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger arir (in) 35°C.
2. Values in compliance with EN14511.
3. Parameter calculated according to [Regulation (EU) N. 2016/2281].
4. Data valid for standard units without any additional options and only indicative. Safety 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 option accessories.

ELCA_Engine ver.4.8.2.0

Eurovent Certified Data

i-FX2-G05-K
Compact Inverter Screw Air Cooled Chiller

i-FX2-G05-K OPERATING ENVELOPES



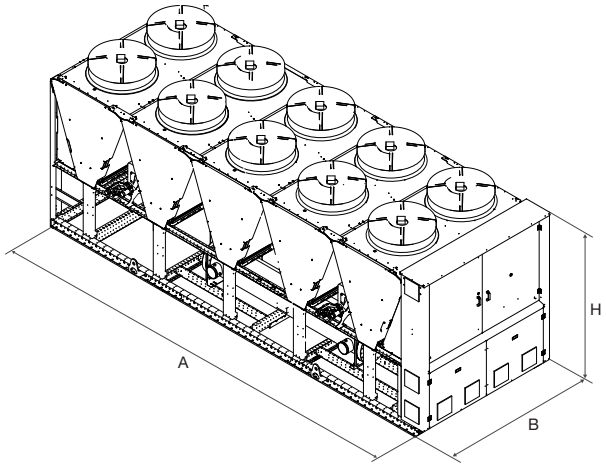
Low noise version (-SL) not at full load

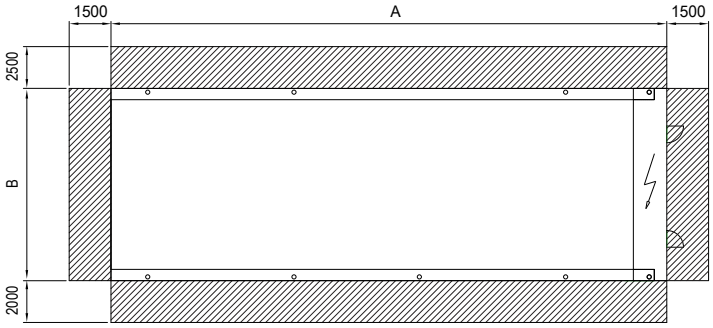
Antifreeze option(s) required

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

i-FX2-G05-K DIMENSIONS

All dimensions are in millimetres.





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Changes for the Better

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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 April 2024

Green Gateway greengateway.mitsubishielectric.co.uk