

# i-FX2-G04-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-G04-K** is designed to strike the best balance between footprint and efficiency. This second generation of air cooled chiller is more compact than the first generation making it ideal for refurbishment projects. Utilising the ultra-low GWP refrigerant R1234ze for reduced embodied carbon and advanced controls strategy it maximum output within a small footprint.

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.



# R1234ze

### Key Features & Benefits:

- Next generation of efficiency with full inverter screw compressors using exceptionally low GWP refrigerant ( $GWP_{100} = 1$ )\*
- 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

\*IPCC AR5



# i-FX2-G04-K Specifications

i-FX2-G04-K		0422	0452	0512	0572	0602	0672	0712	0772	0862	0962	1062	1152	1253	1333	1463	1573	1683	
<b>PERFORMANCE - COOLING ONLY</b>																			
<b>GROSS VALUE<sup>1</sup></b>																			
TOTAL COOLING CAPACITY	kW	422.6	454.8	508.8	571.6	594.3	667.1	711.1	766.6	859.8	958.3	1066	1148	1248	1329	1461	1566	1675	
TOTAL POWER INPUT	kW	130.5	146.3	164.5	177.3	186.1	225.7	229.2	252.3	282.1	307.9	335.8	368.2	397.7	444.7	461.2	497.5	531.0	
EER	kW/kW	3.24	3.11	3.09	3.22	3.19	2.96	3.11	3.03	2.05	3.11	3.18	3.12	3.14	2.99	3.17	3.15	3.15	
<b>EN14511 VALUES<sup>1,2</sup></b>																			
TOTAL COOLING CAPACITY	kW	422.2	454.3	508.3	571.1	593.7	666.5	711.0	765.9	859.2	957.7	1065	1147	1247	1328	1460	1565	1674	
EER	kW/kW	3.20	3.07	3.06	3.19	3.15	2.92	3.06	3.00	3.02	3.08	3.13	3.07	3.10	2.95	3.13	3.11	3.11	
<b>SEASONAL PERFORMANCE<sup>3</sup></b>																			
P <sub>Rated,C</sub>	kW	422.2	454.3	508.3	571.1	593.7	666.5	711.0	765.9	859.2	957.7	1065	1147	1247	1328	1460	1565	1674	
SEER		5.17	5.12	5.14	5.15	5.17	5.10	5.20	5.01	4.95	5.00	5.06	5.09	4.98	4.89	5.08	5.15	5.16	
PERFORMANCE $\eta_s$	%	204	202	203	203	204	201	205	197	195	197	199	200	196	193	200	203	203	
<b>HEAT EXCHANGER IN COOLING<sup>1</sup></b>																			
WATER FLOW	User Side	l/s	20.2	21.8	24.3	27.3	28.4	31.9	34.0	36.7	41.1	45.8	51.0	54.9	59.7	63.5	69.9	74.9	80.1
PRESSURE DROP <sup>2</sup>	User Side	kPa	45.4	52.6	34.6	43.7	47.2	52.4	59.6	62.9	33.6	41.8	62.9	63.4	50.0	56.7	52.0	64.2	73.5
<b>ELECTRICAL DATA</b>																			
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
F.L.A. <sup>4</sup>	Total	A	303	328	355	404	413	480	507	533	597	665	749	780	848	922	999	1058	1110
<b>EXCHANGERS</b>																			
MINIMUM WATER FLOW	Evaporator	l/s	9.2	9.2	13.9	13.9	13.9	14.4	14.4	16.7	24.7	22.5	23.6	28.3	28.3	37.2	38.9	38.9	
MINIMUM WATER CONTENT	Plant	l	1500	1600	1800	2000	2100	2300	2500	2700	3000	3400	3700	4000	4400	4700	5100	5500	5900
<b>FANS</b>																			
QUANTITY	No.	6	6	6	8	8	8	10	10	10	12	14	14	16	16	18	18	20	
AIRFLOW	m <sup>3</sup> /s	30.9	30.9	30.9	41.2	41.2	41.2	51.5	51.5	51.5	61.8	72.1	72.1	82.4	82.4	92.7	92.7	103	
<b>REFRIGERANT CIRCUIT</b>																			
COMPRESSORS	No.	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	
CIRCUITS	No.	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	
REFRIGERANT		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	
REFRIGERANT CHARGE <sup>5</sup>	kg	72	76	78	92	94	96	125	130	136	158	178	183	227	232	256	276	300	
<b>NOISE LEVELS</b>																			
TOTAL SOUND PRESSURE <sup>6</sup>	dB(A)	68	69	69	70	70	70	71	71	73	73	73	73	73	73	74	74	74	
TOTAL SOUND POWER LEVEL IN COOLING <sup>7</sup>	dB(A)	100	101	101	102	102	102	104	104	106	106	106	106	106	106	107	107	107	
<b>SIZE AND WEIGHT<sup>8</sup></b>																			
WIDTH (A)	mm	4150	4150	4150	5400	5400	5400	6650	6650	6650	7900	9150	9150	10400	10400	11650	11650	12900	
DEPTH (B)	mm	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	
OPERATING WEIGHT	kg	4428	4439	4535	5105	5105	5137	5693	6053	6815	7346	8099	8270	10491	10493	11623	11714	12278	

**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 option accessories.

ELCA\_Engine ver.4.8.2.0

■ Eurovent Certified Data

# i-FX2-G04-SL-K Specifications

i-FX2-G04-SL-K Low Noise Version		0422	0452	0512	0572	0602	0672	0712	0772	0862	0962	1062	1152	1253	1333	1463	1573	1683	
<b>PERFORMANCE - COOLING ONLY</b>																			
<b>GROSS VALUE<sup>1</sup></b>																			
TOTAL COOLING CAPACITY	kW	408.5	439.1	482.0	544.7	575.0	636.0	688.8	741.6	797.0	924	1016	1110	1186	1234	1412	1511	1619	
TOTAL POWER INPUT	kW	130.4	146.7	161.5	171.8	185.6	221.4	228.7	252.7	265.0	308.6	326.2	367.9	388.1	409.0	466.7	504.5	535.9	
EER	kW/kW	3.13	2.99	2.99	3.17	3.10	2.87	3.01	2.94	3.01	3.00	3.12	3.02	3.06	3.02	3.03	3.00	3.02	
<b>EN14511 VALUES<sup>1,2</sup></b>																			
TOTAL COOLING CAPACITY	kW	408.1	438.6	481.6	544.2	574.5	635.4	688.1	740.9	796.5	925.7	1015	1109	1185	1233	1411	1510	1619	
EER	kW/kW	3.09	2.95	2.96	3.14	3.06	2.84	2.97	2.90	2.98	2.97	3.07	2.98	3.03	2.98	2.99	2.96	2.98	
<b>SEASONAL PERFORMANCE<sup>3</sup></b>																			
P <sub>Rated,C</sub>	kW	408.1	438.6	481.6	544.2	574.5	635.4	688.1	740.9	796.5	925.7	1015	1109	1185	1233	1411	1510	1619	
SEER		5.18	5.10	5.06	5.12	5.09	5.01	5.13	4.92	4.90	4.91	5.01	5.01	4.92	4.94	4.96	5.01	5.03	
PERFORMANCE $\eta_s$	%	204	201	199	202	201	197	202	194	193	194	197	197	194	195	195	197	198	
<b>HEAT EXCHANGER IN COOLING<sup>1</sup></b>																			
WATER FLOW	User Side	l/s	19.5	21.0	23.1	26.1	27.5	30.4	32.9	35.5	38.1	44.3	48.6	53.1	56.7	59.0	67.5	72.3	77.4
PRESSURE DROP <sup>2</sup>	User Side	kPa	42.4	49.0	31.1	39.7	44.2	47.6	55.8	58.8	28.9	39.0	57.2	59.3	45.2	48.8	48.5	59.8	68.7
<b>ELECTRICAL DATA</b>																			
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
F.L.A. <sup>4</sup>	Total	A	296	321	344	385	404	464	497	533	559	660	713	775	825	870	1001	1059	1113
<b>EXCHANGERS</b>																			
MINIMUM WATER FLOW	Evaporator	l/s	9.2	9.2	13.9	13.9	13.9	14.4	14.4	16.7	24.7	24.7	22.5	23.6	28.3	28.3	37.2	38.9	38.9
MINIMUM WATER CONTENT	Plant	l	1400	1500	1700	1900	2000	2200	2400	2600	2800	3200	3600	3900	4200	4300	4900	5300	5700
<b>FANS</b>																			
QUANTITY	No.	6	6	6	8	8	8	10	10	10	12	14	14	16	16	18	18	20	
AIRFLOW	m <sup>3</sup> /s	27.8	27.8	27.8	37.0	37.0	37.0	46.0	46.0	46.0	55.6	64.8	64.8	74.1	74.1	83.3	83.3	92.6	
<b>REFRIGERANT CIRCUIT</b>																			
COMPRESSORS	No.	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	
CIRCUITS	No.	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	
REFRIGERANT		R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	R1234ze	
REFRIGERANT CHARGE <sup>5</sup>	kg	72	76	78	92	94	96	125	130	136	158	178	183	227	232	256	276	300	
<b>NOISE LEVELS</b>																			
TOTAL SOUND PRESSURE <sup>6</sup>	dB(A)	59	60	60	61	61	61	62	62	63	63	63	63	63	63	64	64	64	
TOTAL SOUND POWER LEVEL IN COOLING <sup>7</sup>	dB(A)	91	92	92	93	93	93	95	95	96	96	96	96	96	96	97	97	97	
<b>SIZE AND WEIGHT<sup>8</sup></b>																			
WIDTH (A)	mm	4150	4150	4150	5400	5400	5400	6650	6650	6650	7900	9150	9150	10400	10400	11650	11650	12900	
DEPTH (B)	mm	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	
OPERATING WEIGHT	kg	4949	4961	5056	5686	5686	5718	6283	6643	7405	7935	8697	8869	11375	11377	12508	12598	13171	

**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.

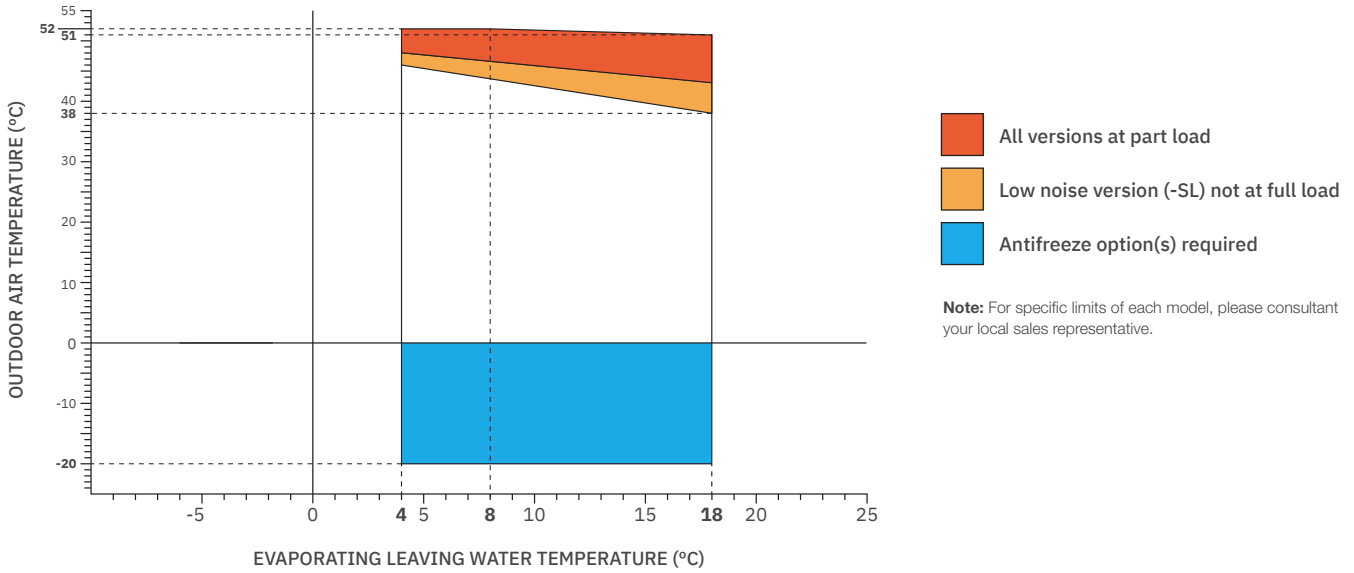
7. Sound power on the basis of measurement taken in compliance with ISO 9614. Sound power level in cooling, outdoors.

8. Unit in standard configuration, without option accessories.

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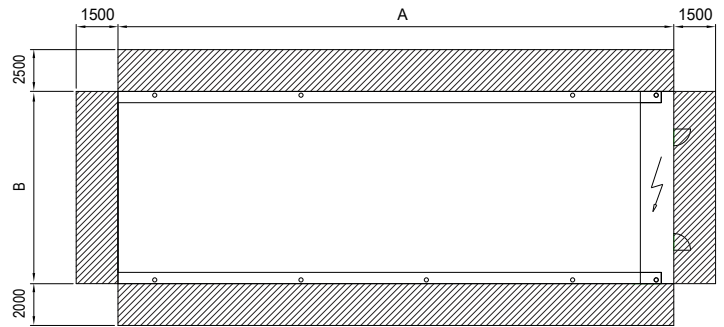
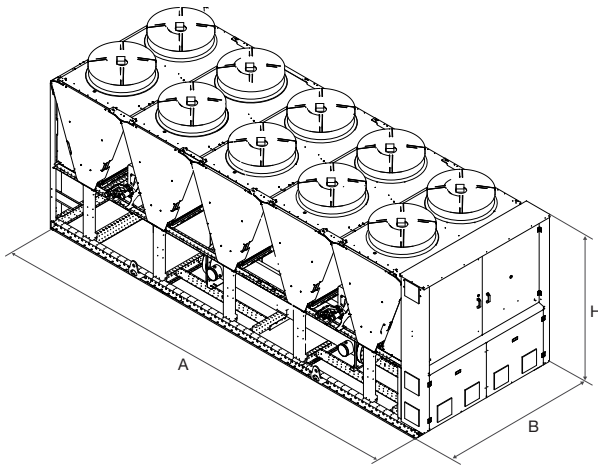
■ Eurovent Certified Data

**i-FX2-G04-K OPERATING ENVELOPES**

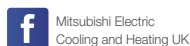


**i-FX2-G04-K DIMENSIONS**

All dimensions are in millimetres.



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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

