

# i-FX2-G05-E

## High Efficiency 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-E** is an efficiency focused design, with enlarged heat exchanger surfaces and EC fans fitted as standard. Larger cooling capacity are achieved by utilising the low GWP refrigerant R513A, which being non-flammable, has an ASHRAE A1 safety class.

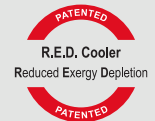
The **i-FX2** is the ultimate configurable screw chiller; available with 4 different levels of noise performance, options for integrated fixed speed or variable speed hydronic pumps, multiple heat exchanger coating options, several refrigerant leak detection options, energy and thermal meters and multiple 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.



# 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
- EC Fans as standard, available with High ESP as an option
- 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



# i-FX2-G05-E Specifications

i-FX2-G05-E		0522	0572	0612	0642	0702	0792	0862	0922	0982	1062	1132	1202	1252	1042	1482	
<b>PERFORMANCE - COOLING ONLY</b>																	
<b>GROSS VALUE<sup>1</sup></b>																	
TOTAL COOLING CAPACITY	kW	523.4	566.1	605.2	643.1	702.0	787.0	861.6	922.2	983.5	1056	1130	1198	1248	1395	1484	
TOTAL POWER INPUT	kW	160.6	174.7	186.2	199.3	218.3	251.8	279.7	296.5	314.0	331.6	348.3	378.5	384.5	430.7	463.8	
EER	kW/kW	3.26	3.24	3.25	3.23	3.22	3.13	3.08	3.11	3.13	3.19	3.24	3.17	3.25	3.24	3.20	
<b>EN14511 VALUES<sup>1,2</sup></b>																	
TOTAL COOLING CAPACITY	kW	522.9	565.6	604.7	642.5	701.4	786.4	860.9	921.6	982.9	1055	1129	1197	1247	1394	1483	
EER	kW/kW	3.22	3.21	3.21	3.19	3.17	3.09	3.04	3.08	3.10	3.14	3.20	3.13	3.21	3.20	3.16	
<b>SEASONAL PERFORMANCE<sup>3</sup></b>																	
P <sub>Rated,C</sub>	kW	522.9	565.6	604.7	642.5	701.4	786.4	860.9	921.6	982.9	1055	1129	1197	1247	1394	1483	
SEER		5.59	5.60	5.52	5.45	5.49	5.47	5.45	5.35	5.30	5.38	5.51	5.48	5.53	5.57	5.59	
PERFORMANCE $\eta_s$	%	220	221	218	215	217	216	215	211	209	212	217	216	218	220	221	
<b>HEAT EXCHANGER IN COOLING<sup>1</sup></b>																	
WATER FLOW	User Side	l/s	25.0	27.1	28.9	30.8	33.6	37.6	41.2	44.1	47.0	50.5	54.0	57.3	59.7	66.7	71.0
PRESSURE DROP <sup>2</sup>	User Side	kPa	41.8	37.7	43.1	48.7	52.7	44.7	53.6	38.7	44.0	61.7	61.5	46.1	50.0	47.4	57.7
<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
F.L.A. <sup>4</sup>	Total	A	347	368	395	422	455	521	588	609	630	714	797	845	859	940	984
<b>EXCHANGERS</b>																	
MINIMUM WATER FLOW	Evaporator	l/s	13.1	14.4	14.4	14.4	16.7	20.0	20.0	24.7	24.7	22.5	23.6	28.3	28.3	37.2	38.9
MINIMUM WATER CONTENT	Plant	l	1800	2000	2100	2200	2500	2800	3000	3200	3400	3700	4000	4200	4400	4900	5200
<b>FANS</b>																	
QUANTITY	No.	8	8	9	10	10	11	12	13	14	15	16	16	18	20	20	
AIRFLOW	m <sup>3</sup> /s	41.2	41.2	46.4	51.5	51.5	56.7	61.8	67.0	72.1	77.3	82.4	82.4	92.7	103	103	
<b>REFRIGERANT CIRCUIT</b>																	
COMPRESSORS	No.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
CIRCUITS	No.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
REFRIGERANT		R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	
REFRIGERANT CHARGE <sup>5</sup>	kg	98	104	115	122	125	151	160	169	192	201	217	238	278	314	314	
<b>NOISE LEVELS</b>																	
TOTAL SOUND PRESSURE <sup>6</sup>	dB(A)	68	69	68	68	69	69	70	71	71	71	72	73	73	73	73	
TOTAL SOUND POWER LEVEL IN COOLING <sup>7</sup>	dB(A)	100	101	101	101	102	102	103	104	104	104	105	106	106	106	106	
<b>SIZE AND WEIGHT<sup>8</sup></b>																	
WIDTH (A)	mm	5400	5400	6650	6650	6650	7900	7900	9150	9150	10400	10400	10400	11650	12900	12900	
DEPTH (B)	mm	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	
OPERATING WEIGHT	kg	5078	5085	5548	5649	5931	6384	6500	7169	7291	8141	8779	8983	9583	10708	10744	

**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-G05-SL-E Specifications

i-FX2-G05-SL-E Low Noise Version		0522	0572	0612	0642	0702	0792	0862	0922	0982	1062	1132	1202	1252	1042	1482	
<b>PERFORMANCE - COOLING ONLY</b>																	
<b>GROSS VALUE<sup>1</sup></b>																	
TOTAL COOLING CAPACITY	kW	507.0	574.0	596.8	623.6	700.4	770.8	832.8	914.1	966.5	1043	1115	1184	1230	1353	1436	
TOTAL POWER INPUT	kW	159.1	179.0	182.4	197.0	213.5	245.8	269.4	289.1	306.3	323.8	340.5	370.7	376.9	426.2	459.4	
EER	kW/kW	3.19	3.21	3.27	3.17	3.28	3.14	3.09	3.16	3.16	3.22	3.23	3.16	3.23	3.14	3.09	
<b>EN14511 VALUES<sup>1,2</sup></b>																	
TOTAL COOLING CAPACITY	kW	506.5	573.5	596.3	623.0	699.8	770.2	832.2	913.5	965.8	1042	1115	1184	1230	1352	1435	
EER	kW/kW	3.15	3.17	3.23	3.13	3.24	3.10	3.05	3.13	3.12	3.18	3.23	3.16	3.23	3.14	3.09	
<b>SEASONAL PERFORMANCE<sup>3</sup></b>																	
P <sub>Rated,C</sub>	kW	506.5	573.5	596.3	623.0	699.8	770.2	832.2	913.5	965.8	1042	1115	1184	1230	1352	1435	
SEER		5.58	5.42	5.48	5.38	5.43	5.45	5.37	5.41	5.27	5.41	5.51	5.48	5.54	5.53	5.52	
PERFORMANCE $\eta_s$	%	220	214	216	212	214	215	212	213	208	214	217	216	218	218	218	
<b>HEAT EXCHANGER IN COOLING<sup>1</sup></b>																	
WATER FLOW	User Side	l/s	24.2	27.5	28.5	29.8	33.5	36.9	39.8	43.7	46.2	49.9	53.3	56.6	58.8	64.7	68.7
PRESSURE DROP <sup>2</sup>	User Side	kPa	39.2	38.8	41.9	45.8	52.5	42.9	50.1	38.0	42.4	60.3	59.9	45.0	48.6	44.5	54.0
<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	
F.L.A. <sup>4</sup>	Total	A	347	385	398	422	462	525	594	616	637	720	803	851	866	940	984
<b>EXCHANGERS</b>																	
MINIMUM WATER FLOW	Evaporator	l/s	13.1	14.4	14.4	14.4	16.7	20.0	20.0	24.8	24.7	22.5	23.6	28.3	28.3	37.2	38.9
MINIMUM WATER CONTENT	Plant	l	1800	2000	2100	2200	2500	2700	2900	3200	3400	3700	3900	4100	4300	4700	5000
<b>FANS</b>																	
QUANTITY	No.	8	9	10	10	12	12	14	15	16	17	18	18	20	20	20	
AIRFLOW	m <sup>3</sup> /s	37.0	41.7	46.3	46.3	55.6	55.6	64.8	69.5	74.1	78.7	83.3	83.3	92.6	92.6	92.6	
<b>REFRIGERANT CIRCUIT</b>																	
COMPRESSORS	No.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
CIRCUITS	No.	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
REFRIGERANT		R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	
REFRIGERANT CHARGE <sup>5</sup>	kg	98	109	120	122	135	156	170	179	202	211	227	248	288	314	314	
<b>NOISE LEVELS</b>																	
TOTAL SOUND PRESSURE <sup>6</sup>	dB(A)	59	59	59	59	60	60	60	61	62	63	63	63	63	63	63	
TOTAL SOUND POWER LEVEL IN COOLING <sup>7</sup>	dB(A)	91	92	92	92	93	93	93	94	95	96	96	96	96	96	96	
<b>SIZE AND WEIGHT<sup>8</sup></b>																	
WIDTH (A)	mm	5400	6650	6650	6650	7900	7900	9150	10400	10400	11650	11650	11650	12900	12900	12900	
DEPTH (B)	mm	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	
OPERATING WEIGHT	kg	5658	6135	6229	6239	7045	7063	7806	8287	8409	9347	9985	10191	10738	11316	11352	

**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.

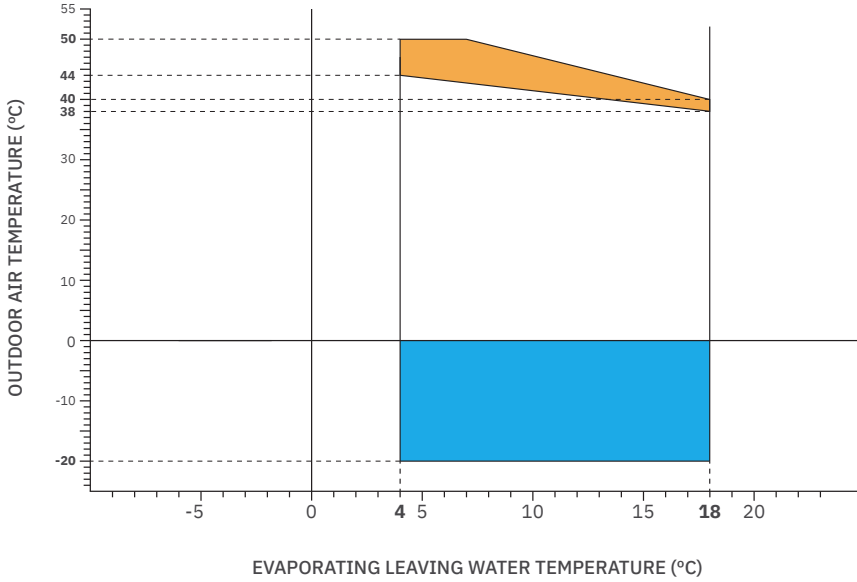
7. Sound power on the basis of measurement taken in compliance with ISO 9614. Sound power level in cooling, outdoors.

8. Unit in standard configuration, without option accessories.

ELCA\_Engine ver.4.8.2.0

■ Eurovent Certified Data

**i-FX2-G05-E OPERATING ENVELOPES**

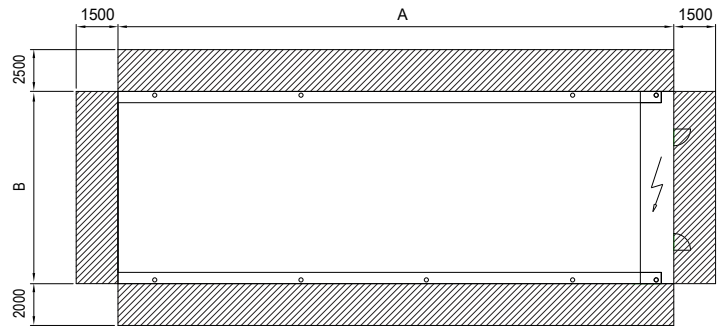
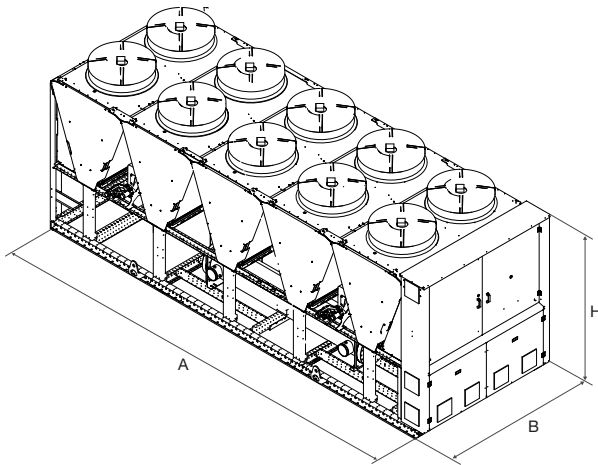


- Low noise version (-SL) not at full load
- Antifreeze option(s) required

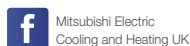
**Note:** For specific limits of each model, please consult your local sales representative.

**i-FX2-G05-E 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

