

# i-FX-Q2-G05

Air Sourced Polyvalent Unit with Inverter Scroll Compressors



Mitsubishi Electric's **i-FX-Q2-G05** is our flagship range for air sourced simultaneous heating and cooling (polyvalent / 4-pipe). Thanks to its Variable Speed Drive (VSD) screw compressors and EC fans fitted as standard it brings exceptional seasonal efficiency by recovering heat from the cooling circuit to be used in the heating circuit.

The **i-FX-Q2-G05** uses low GWP refrigerant R513A and is available in 9 sizes from 340kw to 1,125kw cooling and as three different configurations for noise performance, with a wide operating range from -8°C to +18°C evaporator leaving water temperatures (ELWT) and hot water leaving up to 60°C.

The **i-FX-Q2-G05** can also be fitted with a range of options including fast restart, energy and thermal meters, BEMS cards and on board hydronic kits.

**R513A**

**CLIMVENETA**

## Key Features & Benefits:

- Best-in-class seasonal efficiency in a compact footprint
- High efficiency inverter screw compressors providing a dual refrigeration circuit
- EC fans supplied as standard
- 3 different configurations for noise performance available
- Low GWP refrigerant R513A
- Wide range of options available including: inbuilt hydronic pumps, thermal and energy meters, Smart LAN functions and many more
- Copper/Aluminium auxiliary heat exchanger with other protection coating options available



i-FX-Q2-G05 /CA			0502	0532	0602	0652	0702	0802	0902	1002	1102
<b>Cooling With Heat Recovery<sup>1,2,3</sup></b>											
Cooling Capacity	kW		488.1	532.5	570.1	623.5	682.1	783.9	913.9	986.8	1101
Recovery Heat Exchanger Capacity	kW		623.1	681.2	728.8	795.2	872.3	1002	1168	1257	1405
Total Power Input	kW		145.7	160.5	170.6	185.6	205.6	234.7	275.7	292.5	329.6
TER	kW/kW		7.63	7.56	7.62	7.65	7.56	7.61	7.55	7.67	7.60
<b>Performance - Heating Only<sup>4,2</sup></b>											
Total Heat Capacity	kW		463.4	491.5	531.3	599.0	659.5	765.3	871.2	938.3	1029
COP	kW/kW		3.31	3.27	3.00	3.34	3.32	3.38	3.33	3.36	3.35
<b>Performance - Cooling Only<sup>1,2</sup></b>											
Total Cooling Capacity	kW		487.0	530.8	569.5	626.3	688.4	786.9	914.4	984.6	1082
EER	kW/kW		2.99	2.99	2.99	2.99	2.99	2.99	3.03	3.01	2.86
<b>Seasonal Performance<sup>5</sup></b>											
Prated,c	kW		487.0	530.8	569.5	626.3	688.4	786.9	914.4	984.6	1082
SEER			5.16	5.10	5.12	5.09	5.13	5.03	4.74	4.67	4.65
<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
FLA <sup>6</sup>	Total A		362	362	387	458	484	515	576	625	699
<b>Exchangers</b>											
Minimum Water Flow in Cooling <sup>4</sup>	Evaporator l/s		11.11	11.11	16.39	16.39	16.39	25.00	25.00	30.56	30.56
Minimum Water Flow in Heating <sup>1</sup>	Condenser l/s		10.97	10.97	16.08	17.83	14.31	17.67	17.67	22.19	29.69
<b>Refrigerant Circuit</b>											
Compressors	No.		2	2	2	2	2	2	2	2	2
Circuits	No.		2	2	2	2	2	2	2	2	2
Refrigerant Charge <sup>7</sup>	kg		255	255	300	305	370	460	475	420	425
<b>Noise Levels</b>											
Total Sound Pressure <sup>8</sup>	dB(A)		67	67	68	69	69	68	70	70	70
Total Sound Power Level in Cooling <sup>9</sup>	dB(A)		100	100	101	102	102	101	103	103	103
Total Sound Power Level in Heating <sup>10</sup>	dB(A)		100	100	101	102	102	101	103	103	103
<b>Size and Weight<sup>11</sup></b>											
Width (A)	mm		8150	8150	8900	9650	10400	10400	10750	12250	12250
Depth (B)	mm		2260	2260	2260	2260	2260	2260	2260	2260	2260
Height (H)	mm		2530	2530	2530	2530	2530	2530	2530	2530	2530
Operation Weight	kg		8350	8380	9080	9590	10060	11010	12490	14170	14210

i-FX-Q2-G05 /SL-CA			0502	0532	0602	0652	0702	0802	0902	1002	1102
<b>Cooling With Heat Recovery<sup>1,2,3</sup></b>											
Cooling Capacity	kW		488.1	532.6	570.1	623.5	682.1	783.8	913.9	986.8	1100
Recovery Heat Exchanger Capacity	kW		623.1	681.4	728.8	795.2	872.3	1002	1168	1257	1405
Total Power Input	kW		145.5	160.3	170.4	185.3	205.4	234.5	274.6	291.6	329.3
TER	kW/kW		7.64	7.57	7.62	7.66	7.57	7.61	7.58	7.70	7.61
<b>Performance - Heating Only<sup>4,2</sup></b>											
Total Heat Capacity	kW		459.0	486.8	526.4	593.3	653.7	756.8	860.7	929.0	1018
COP	kW/kW		3.33	3.28	3.31	3.35	3.34	3.39	3.33	3.38	3.36
<b>Performance - Cooling Only<sup>1,2</sup></b>											
Total Cooling Capacity	kW		467.1	508.0	548.6	603.6	664.5	765.1	880.5	951.2	1038
EER	kW/kW		2.86	2.85	2.88	2.92	2.94	2.91	2.85	2.87	2.66
<b>Seasonal Performance<sup>5</sup></b>											
Prated,c	kW		467.1	508.0	548.6	603.6	664.5	765.1	880.5	951.2	1038
SEER			5.11	5.08	5.08	5.08	5.13	4.97	4.71	4.63	4.61
<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
FLA <sup>6</sup>	Total A		362	362	387	458	484	515	576	625	699
<b>Exchangers</b>											
Minimum Water Flow in Cooling <sup>4</sup>	Evaporator l/s		11.11	11.11	16.39	16.39	16.39	25.00	25.00	30.56	30.56
Minimum Water Flow in Heating <sup>1</sup>	Condenser l/s		10.97	10.97	16.08	17.83	14.31	17.67	17.67	22.19	29.69
<b>Refrigerant Circuit</b>											
Compressors	No.		2	2	2	2	2	2	2	2	2
Circuits	No.		2	2	2	2	2	2	2	2	2
Refrigerant Charge <sup>7</sup>	kg		255	255	300	305	370	460	475	420	425
<b>Noise Levels</b>											
Total Sound Pressure <sup>8</sup>	dB(A)		57	58	58	59	59	59	61	61	59
Total Sound Power Level in Cooling <sup>9</sup>	dB(A)		90	91	91	92	92	92	94	94	92
Total Sound Power Level in Heating <sup>10</sup>	dB(A)		90	91	91	92	92	92	94	94	92
<b>Size and Weight<sup>11</sup></b>											
Width (A)	mm		8150	8150	8900	9650	10400	10400	10750	12250	12250
Depth (B)	mm		2260	2260	2260	2260	2260	2260	2260	2260	2260
Height (H)	mm		2530	2530	2530	2530	2530	2530	2530	2530	2530
Operation Weight	kg		8800	8830	9530	10040	10510	11450	12940	14620	14660

■ Eurovent Certified Data

**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. Plant (side) heat exchanger water (in/out) 12°C/7°C; Plant (side) heat exchanger water (in/out) 40°C / 45°C. 4. Plant (side) exchanger hot water temperature (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H. 5. Parameter calculated according to [Regulation (EU) N. 2016/2281]. 6. 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. 7. Theoretical - refer to serial plate for actual charge volumes. 8. Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level. 9. Sound power level in cooling, outdoors, on the basis of measurement taken in compliance with ISO 9614. 10. Sound power level in heating, outdoors on the basis of measurement taken in compliance with ISO 9614. 11. Unit in standard configuration, without option accessories.

i-FX-Q2-G05 /XL-CA			0502	0532	0602	0652	0702	0802	0902	1002
<b>Cooling With Heat Recovery<sup>1,2,3</sup></b>										
Cooling Capacity		kW	463.2	507.6	547.7	589.8	649.8	750.6	882.2	920.2
Recovery Heat Exchanger Capacity		kW	590.9	648.3	696.5	752.2	829.8	959.9	1126	1178
Total Power Input		kW	137.2	151.5	159.7	174.6	193.8	224.9	262.8	278.0
TER		kW/kW	7.68	7.63	7.79	7.69	7.63	7.61	7.64	7.55
<b>Performance - Heating Only<sup>4,2</sup></b>										
Total Heat Capacity		kW	438.6	466.8	507.3	566.3	627.3	728.8	834.0	898.0
COP		kW/kW	3.35	3.31	3.35	3.37	3.36	3.41	3.37	3.41
<b>Performance - Cooling Only<sup>1,2</sup></b>										
Total Cooling Capacity		kW	442.5	483.0	525.3	571.2	632.0	731.4	847.1	911.7
EER		kW/kW	2.87	2.83	2.90	2.94	2.95	2.91	2.86	2.87
<b>Seasonal Performance<sup>5</sup></b>										
Prated,c		kW	442.5	483.0	525.3	571.2	632.0	731.4	847.1	911.7
SEER			5.10	5.08	5.10	5.04	5.19	5.00	4.60	4.56
<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
F.L.A. <sup>6</sup>	Total	A	333	352	387	420	464	515	576	625
<b>Exchangers</b>										
Minimum Water Flow in Cooling <sup>4</sup>	Evaporator	l/s	11.11	11.11	16.39	16.39	16.39	25.00	25.00	30.56
Minimum Water Flow in Heating <sup>1</sup>	Condenser	l/s	10.97	10.97	16.08	17.83	14.31	17.67	17.67	22.19
<b>Refrigerant Circuit</b>										
Compressors	No.		2	2	2	2	2	2	2	2
Circuits	No.		2	2	2	2	2	2	2	2
Refrigerant Charge <sup>7</sup>	kg		255	255	300	305	370	460	475	420
<b>Noise Levels</b>										
Total Sound Pressure <sup>8</sup>		dB(A)	53	54	55	55	55	56	55	56
Total Sound Power Level in Cooling <sup>9</sup>		dB(A)	86	87	88	88	88	89	88	89
Total Sound Power Level in Heating <sup>10</sup>		dB(A)	87	88	89	89	89	90	89	90
<b>Size and Weight<sup>11</sup></b>										
Width (A)		mm	8150	8150	8900	9650	10400	10400	10750	12250
Depth (B)		mm	2260	2260	2260	2260	2260	2260	2260	2260
Height (H)		mm	2530	2530	2530	2530	2530	2530	2530	2530
Operation Weight		kg	8800	8830	9530	10040	10510	11450	12940	14620

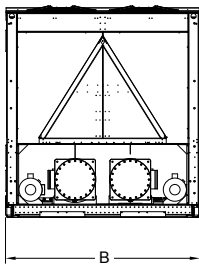
■ Eurovent Certified Data

**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. Plant (side) heat exchanger water (in/out) 12°C/7°C; Plant (side) heat exchanger water (in/out) 40°C / 45°C. 4. Plant (side) exchanger hot water temperature (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H. 5. Parameter calculated according to [Regulation (EU) N. 2016/2281]. 6. 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. 7. Theoretical - refer to serial plate for actual charge volumes. 8. Average sound pressure level at 1m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level. 9. Sound power level in cooling, outdoors, on the basis of measurement taken in compliance with ISO 9614. 10. Sound power level in heating, outdoors. 11. Unit in standard configuration, without option accessories.

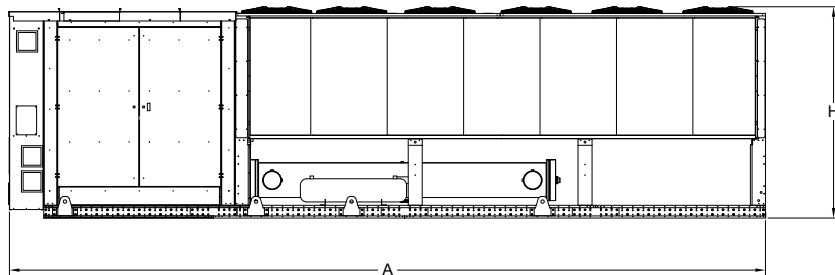
### i-FX-Q2-G05 DIMENSIONS AND CLEARANCES

All dimensions are in millimetres.

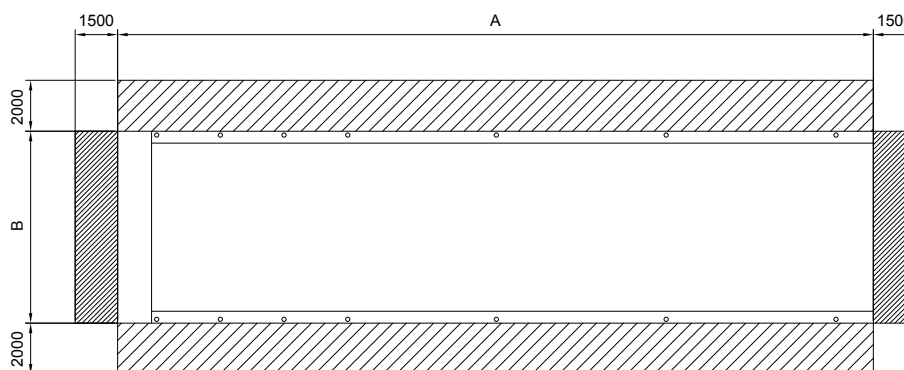
FRONT VIEW



SIDE VIEW

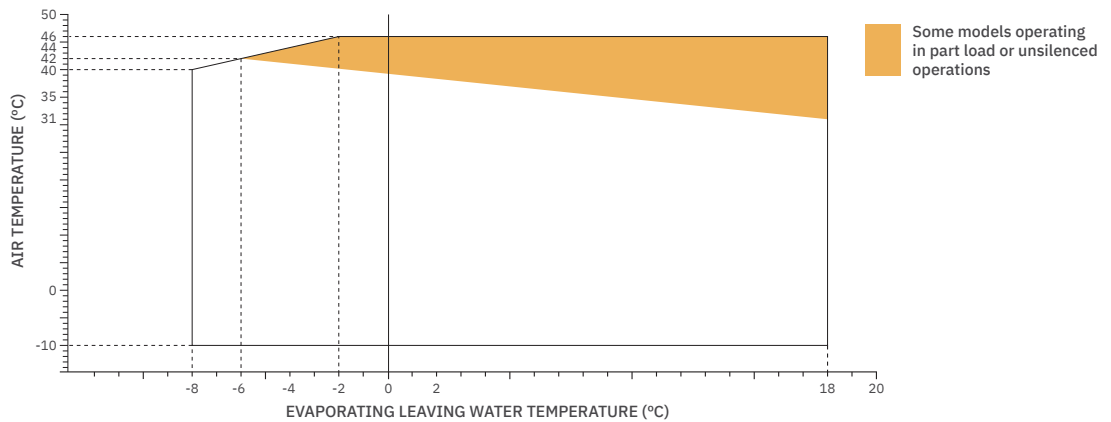


TOP VIEW

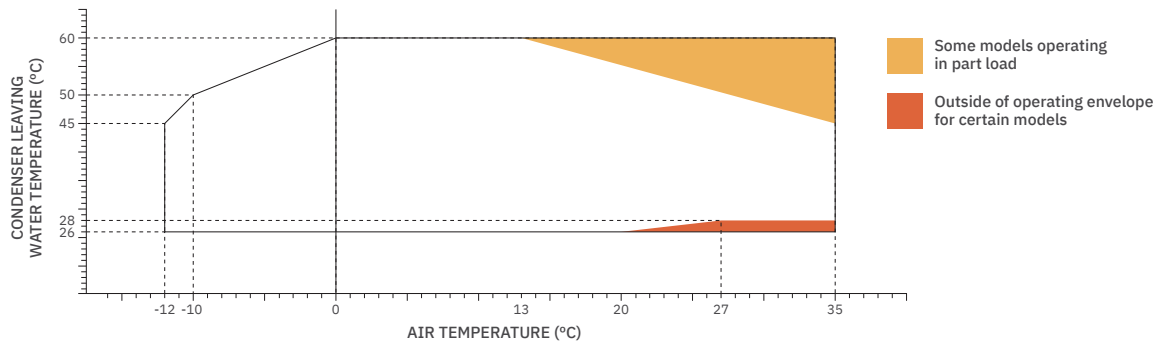


## i-FX-Q2-G05 OPERATING ENVELOPES

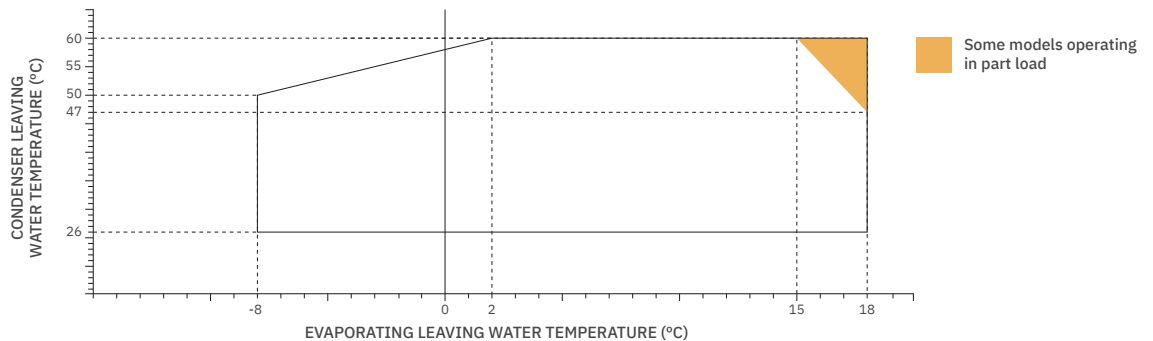
### Cooling Only



### Heating Only



### Cooling with Heat Recovery



**Note:** Operating envelopes shown are indicative and should not be used only for design. Equipment to be used in low or negative ambient temperatures must be fitted with the low ambient options available. Equipment operating with low or negative evaporating leaving water temperature should use suitable type and concentration of glycol or similar. Additional installation considerations may be required at the limits of the operating envelope. For specific recommendations and limits of each model, please contact your local sales representative.



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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 IP CC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

Effective as of September 2024

