

i-FX-N

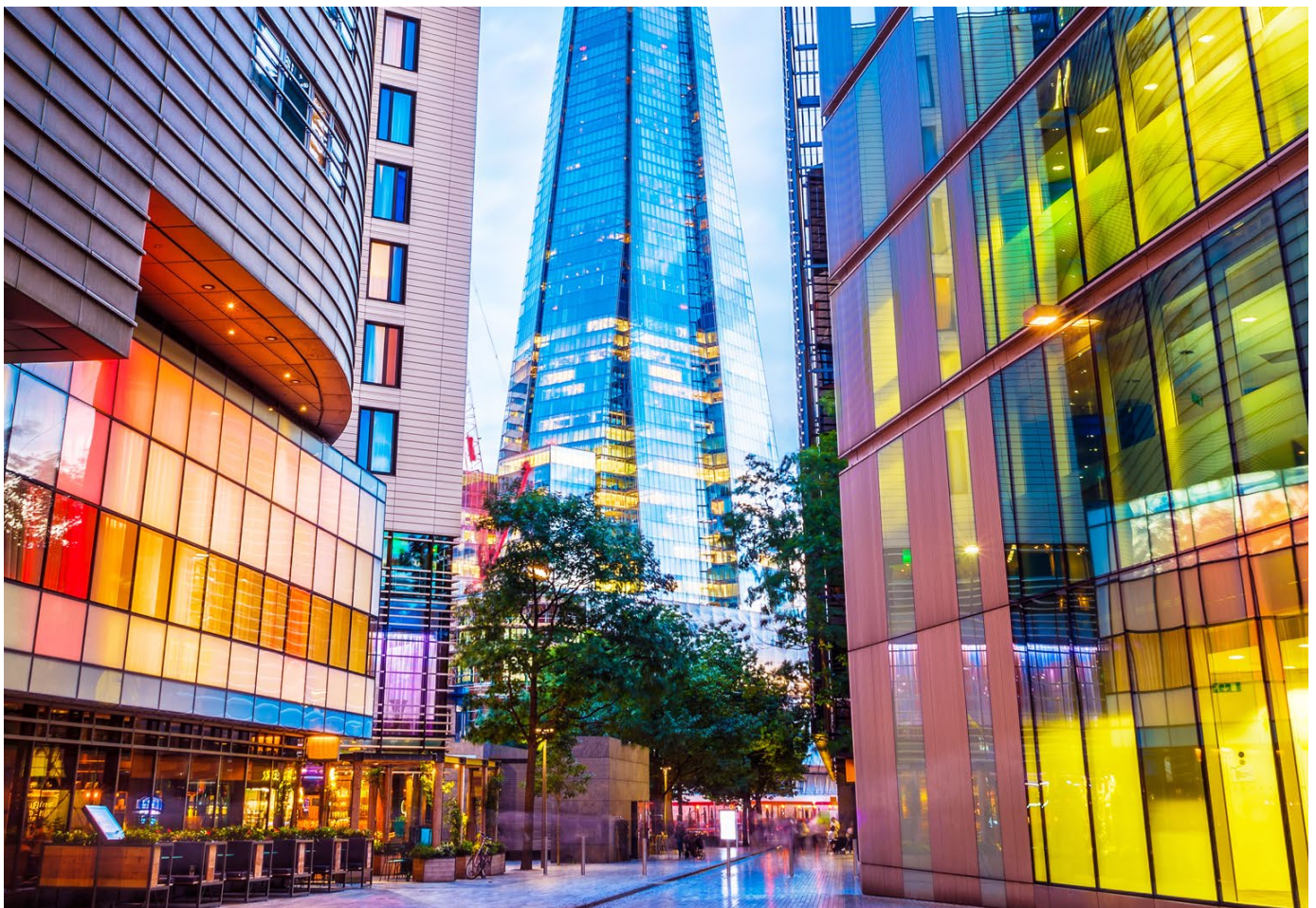
Air Source Heat Pump

Designed for medium to large capacity LTHW commercial applications, the Climaveneta i-FX-N heat pump features inverter driven screw compressors and is suitable for a wide range of projects.

The new generation of air source heat pump has been perfectly designed for reducing operating costs while keeping an extremely compact design.

Key Features & Benefits:

- Total inverter technology
- Low GWP R513A refrigerant
- Inverter screw compressors



i-FX-N Air Source Heat Pump High Efficiency Version



MODEL		472	512	572	602	652	772	902	1002	1152
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
PERFORMANCE										
COOLING ONLY (GROSS VALUE)										
Cooling Capacity ¹	kW	465	517.9	549.9	590.8	669.9	764.1	899	1034	1154
Total Power Input ¹	kW	166	177.9	194.2	211.1	238	265.5	314	351.4	390.5
EER ¹	kW/kW	2.8	2.91	2.8	2.8	2.82	2.9	2.86	2.94	2.96
ESEER ¹	kW/kW	4.56	4.66	4.66	4.61	4.51	4.55	4.58	4.66	4.7
COOLING ONLY (EN14511 VALUE)										
Cooling Capacity ^{1,2}	kW	464.6	517.4	549	590.4	669.4	763.6	898.8	1033	1153
EER ^{1,2}	kW/kW	2.78	2.9	2.8	2.78	2.79	2.85	2.84	2.91	2.93
ESEER ^{1,2}	kW/kW	4.41	4.49	4.47	4.48	4.36	4.41	4.44	4.5	4.56
HEATING ONLY (GROSS VALUE)										
Total Heating Capacity ³	kW	452.8	506.3	547.4	575.3	663.8	747.6	871.4	1006	1111
Total Power Input ³	kW	139.1	152.6	166	174.8	202.2	223.2	261.3	293.8	327.5
COP ³	kW/kW	3.26	3.32	3.3	3.3	3.28	3.35	3.34	3.42	3.4
HEATING ONLY (EN14511 VALUE)										
Total Heating Capacity ^{3,2}	kW	453.2	506.8	547.9	575.7	664	748.1	872	1007	1112
COP ^{3,2}	kW/kW	3.23	3.29	3.26	3.27	3.26	3.32	3.31	3.39	3.36
HEATING ONLY (EN14825 VALUE - AVERAGE CLIMATE)										
Rated Heating Capacity at Tdesign,h ^{11,12}	kW	348	384	-	-	-	-	-	-	-
Bivalent Temperature ^{11,12}	°C	-7	-7	-	-	-	-	-	-	-
SCOP ^{11,12}	kW/kW	4.00	4.03	-	-	-	-	-	-	-
Seasonal Space Heating Energy Efficiency ^{11,12}	%	157	158	-	-	-	-	-	-	-
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN COOLING										
Water Flow ⁷	l/s	22.24	24.76	26.29	28.25	32.04	36.5	43	49.43	55.17
Pressure Drop ¹	kPa	32	36.6	41.2	27	33.3	34.3	32.4	42.8	37.5
HEAT EXCHANGER USER SIDE IN HEATING										
Water Flow ³	l/s	21.86	24.44	26.42	27.77	32.04	36.09	42.1	48.56	53.64
Pressure Drop ³	kPa	31	35.6	41.6	26	33.30	33.4	31	41.3	35.4
REFRIGERANT CIRCUIT										
Compressors	No.	2	2	2	2	2	2	2	2	2
Number of Capacity Steps	No.	0	0	0	0	0	0	0	0	0
No. Circuits	No.	2	2	2	2	2	2	2	2	2
Regulation		STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS
Minimum Capacity Step	%	-	-	-	-	-	-	-	-	-
Refrigerant Type		R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A
Refrigerant Charge	kg	233	259	253	276	288	391	495	518	618
Oil Charge	kg	44	44	44	44	38	60	60	60	60
Rc (ASHRAE) ⁵	kg/kW	0.51	0.51	0.46	0.47	0.43	0.52	0.56	0.51	0.54
FANS										
Quantity	No.	10	12	12	12	14	16	20	24	24
Air Flow	m ³ /s	48.5	58.37	58.37	58.37	69.25	79.14	97.00	121.01	116.73
Fans Power Input	kW	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
NOISE LEVEL										
Sound Pressure ⁶	dB(A)	80	81	81	81	81	81	81	82	82
Sound Power Level in Cooling ^{7,8}	dB(A)	100	102	102	102	102	103	103	105	105
Sound Power Level in Heating ^{7,9}	dB(A)	101	103	103	103	103	104	104	106	106
DIMENSIONS AND WEIGHT										
L ¹⁰	mm	4900	5800	5800	5800	7000	7900	10000	11800	11800
W ¹⁰	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
H ¹⁰	mm	2580	2580	2580	2580	2580	2580	2580	2580	2580
Operating Weight ¹⁰	kg	6400	6894	7033	7256	7518	8551	9835	11578	12651

1. Plant (side) cooling exchanger water (in/out) 12.00°C/7.00°C; Source (side) heat exchanger air (in) 35.0°C.
 2. Values in compliance with EN14511.
 3. Plant (side) heat exchanger water (in/out) 40.00°C/45.00°C; Source (side) heat exchanger air (in) 7.0°C - 87% R.H.
 4. Plant (side) cooling exchanger water (in/out) 12.00°C/7.00°C; Plant (side) heat exchanger water (in/out) 40.00°C/45.00°C.
 5. Rated in accordance with AHRI Standard 550/590.
 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. Parameter calculated according to [REGULATION (EU) N. 2016/2281].
 8. Seasonal energy efficiency ratio.
 9. Seasonal space cooling energy efficiency.
 10. Sound power on the basis of measurements made in compliance with ISO 9614.
 11. Sound power level in cooling, outdoors.
 12. Sound power level in heating, outdoors.
 13. Unit in standard configuration/execution, without optional accessories.
 - Not available

i-FX-N Air Source Heat Pump

Low Noise & High Efficiency Version



MODEL		472	512	572	602	652	772	902	1002	1152
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
PERFORMANCE										
COOLING ONLY (GROSS VALUE)										
Cooling Capacity ¹	kW	443.9	497.6	531.9	570.7	649.1	740.7	870	998	1114
Total Power Input ¹	kW	168.0	177.8	197.7	217.0	242	268.5	317.0	354.5	395.7
EER ¹	kW/kW	2.6	2.80	2.7	2.63	2.69	2.8	2.75	2.82	2.82
ESEER ¹	kW/kW	4.53	4.65	4.64	4.58	4.49	4.54	4.57	4.66	4.7
COOLING ONLY (EN14511 VALUE)										
Cooling Capacity ^{1,2}	kW	443.6	497.1	531	570.3	648.7	740.2	869.6	997	1113
EER ^{1,2}	kW/kW	2.62	2.8	2.67	2.61	2.67	2.74	2.73	2.79	2.79
ESEER ^{1,2}	kW/kW	4.40	4.49	4.46	4.46	4.35	4.40	4.45	4.50	4.55
HEATING ONLY (GROSS VALUE)										
Total Heating Capacity ³	kW	448.3	500.0	541.9	567.9	657.4	740.1	862.6	997	1100
Total Power Input ³	kW	137.2	150.3	163.6	172.2	199.4	220.1	257.6	289.0	322.8
COP ³	kW/kW	3.27	3.33	3.3	3.3	3.30	3.36	3.35	3.45	3.4
HEATING ONLY (EN14511 VALUE)										
Total Heating Capacity ^{3,2}	kW	448.6	500.4	542.4	568.3	658	740.6	863.2	997	1101
COP ^{3,2}	kW/kW	3.24	3.30	3.28	3.28	3.27	3.34	3.32	3.42	3.38
HEATING ONLY (EN14825 VALUE - AVERAGE CLIMATE)										
Rated Heating Capacity at Tdesign,h ^{11,12}	kW	347	383	-	-	-	-	-	-	-
Bivalent Temperature ^{11,12}	°C	-7	-7	-	-	-	-	-	-	-
SCOP ^{11,12}	kW/kW	4.02	4.03	-	-	-	-	-	-	-
Seasonal Space Heating Energy Efficiency ^{11,12}	%	158	158	-	-	-	-	-	-	-
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN COOLING										
Water Flow ⁷	l/s	21.23	23.79	25.44	27.29	31.04	35.4	41.6	47.72	53.26
Pressure Drop ¹	kPa	29.2	33.8	38.6	25.1	31.2	32.2	30.3	39.8	34.9
HEAT EXCHANGER USER SIDE IN HEATING										
Water Flow ⁷	l/s	21.64	24.14	26.16	27.41	31.74	35.73	41.64	48.11	53.12
Pressure Drop ³	kPa	30.3	34.7	40.8	25.3	32.6	32.8	30.3	40.5	34.7
REFRIGERANT CIRCUIT										
Compressors	No.	2	2	2	2	2	2	2	2	2
Number of Capacity Steps	No.	0	0	0	0	0	0	0	0	0
No. Circuits	No.	2	2	2	2	2	2	2	2	2
Regulation		STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS	STEPLESS
Minimum Capacity Step	%	-	-	-	-	-	-	-	-	-
Refrigerant Type		R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A	R513A
Refrigerant Charge	kg	243	271	285	307	317	391	541	536	598
Oil Charge	kg	44	44	44	44	38	60	60	60	60
Rc (ASHRAE) ⁵	kg/kW	0.55	0.55	0.54	0.54	0.49	0.53	0.63	0.54	0.54
FANS										
Quantity	No.	10	12	12	12	14	16	20	24	24
Air Flow	m ³ /s	33.79	40.55	40.55	40.55	48.43	55.35	67.58	84.96	81.09
Fans Power Input	kW	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
NOISE LEVEL										
Sound Pressure ⁶	dB(A)	72	73	73	73	73	73	73	74	74
Sound Power Level in Cooling ^{7,8}	dB(A)	92	94	94	94	94	95	95	97	97
Sound Power Level in Heating ^{7,9}	dB(A)	93	95	95	95	95	96	96	98	98
DIMENSIONS AND WEIGHT										
L ¹⁰	mm	4900	5800	5800	5800	7000	7900	10000	11800	11800
W ¹⁰	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260
H ¹⁰	mm	2580	2580	2580	2580	2580	2580	2580	2580	2580
Operating Weight ¹⁰	kg	6672	7155	7307	7550	7791	8921	10101	11840	15158

1. Plant (side) cooling exchanger water (in/out) 12.00°C/7.00°C; Source (side) heat exchanger air (in) 35.0°C.
 2. Values in compliance with EN14511.
 3. Plant (side) heat exchanger water (in/out) 40.00°C/45.00°C; Source (side) heat exchanger air (in) 7.0°C - 87% R.H.
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 8. Seasonal energy efficiency ratio.
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 10. Sound power on the basis of measurements made in compliance with ISO 9614.
 11. Sound power level in cooling, outdoors.
 12. Sound power level in heating, outdoors.
 13. Unit in standard configuration/execution, without optional accessories.
 - Not available



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Note: The fuse rating is for guidance only. 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), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), 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 June 2021

