

NX2-N-G06 0344 - 0808

REVERSIBLE 2-PIPE HEAT PUMP CHILLER



NX²-N G06

**MITSUBISHI ELECTRIC
HYDRONICS & IT COOLING SYSTEMS**

REVERSIBLE AIR SOURCE HEAT PUMP CHILLER

For outdoor installation

Cooling Capacity: 316 – 799kW

Heating Capacity: 363 – 854kW

Outdoor reversible heat pump for the production of chilled or hot water with hermetic rotary scroll compressors, ozone-friendly refrigerant R454B, axial-flow fans, shell and tubes exchanger and electronic expansion valve.

Shell and tube water side vessel fully designed and produced by MEHITS.

The range includes units equipped with four, six or eight compressors in multi-circuit configuration.

Key Features

Scroll Compressors

Features new generation scroll compressors, developed for the use of high density A2L Refrigerants (Fluid Group 1 of PED Directive). The tandem configuration benefits higher seasonal efficiency and provides a specific oil management solution for enhanced reliability.

Low GWP Refrigerant

The new generation refrigerant R454B is an eco-sustainable alternative to traditional refrigerant R410A, offering a 76% reduction in terms of GWP (Global Warming Potential GWP of R454B = 467, GWP of R410A = 1924 as per IPCC rev. 5th) and zero impact on the ozone layer.

Copper/Aluminium Tube and Fin Coils

The air-refrigerant heat exchanger works as a condenser or an evaporator depending on the specific operating mode. Made with copper tubes and aluminium fins. The aluminium fins are spaced to guarantee the best heat exchange efficiency.

Shell and Tube Heat Exchanger

Direct expansion multi-circuit shell and tube exchanger is manufactured using copper tubes with internal grooves improving heat exchange. The tubes are mechanically expanded onto the tube plates. Insulated with 9mm thick closed-cell neoprene to prevent condensation, with a thermal conductivity of 0.33 W/mK at 0°C. The heat exchanger is fitted with a differential pressure switch to monitor the correct flow of water when the unit is operating. An electric antifreeze heater prevents ice from forming inside the exchanger when the unit is not working but connected to the electrical supply. The heat exchanger is also fitted with a 10 bar water side safety pressure relief valve.

Electronic Expansion Valve Supplied as Standard

The use of the electronic expansion valve generates considerable benefits, especially in cases of variable demand and at different working conditions. It guarantees energy savings due to efficiency optimisation in various different working conditions which translates into operating efficiency, a faster start-up of the unit and a wider extension of the operating limits.

Operating Range

Full load operation is ensured with outdoor air temperature from -15°C up to 46°C. Achieves production of heating water up to 55°C.

High Efficiency Performance

4.58
SEER^{*1}

3.03
EER^{*2}

4.04
SCOP^{*3}

3.26
COP^{*2}

*1 NX2-N-G06 A /0768 version with EC fans. Seasonal space heating energy efficiency class MEDIUM TEMPERATURE [REGULATION (EU) N. 2016/2281 EN14511].

*2 NX2-N-G06 A /0768 version with EC fans EN14511.

*3 NX2-N-G06 A/0446 version with EC fans. REGULATION (EU) N. 813/2013.

Capacity Range

VERSION		COOLING CAPACITY	HEATING CAPACITY
K	STANDARD EFFICIENCY	334 – 533kW	365 – 581kW
A [†]	HIGH EFFICIENCY	345 – 799kW	377-854kW
SL	SUPER LOW NOISE	316 – 506kW	363- 569kW

† Performance data overleaf.

Specifications



NX2-N-G06/A

NOTE: Performance data of other versions are available upon request.

		0344	0364	0404	0446	0506	0526	0546	0606	0708	0738	0768	0808
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
PERFORMANCE													
COOLING ONLY (EN14511 VALUE)													
Cooling capacity (1) (2)	kW	344.9	361.1	399.3	446.0	499.5	525.3	543.0	598.8	696.0	724.2	761.4	798.6
EER (1) (2)	kW/kW	2.92	2.95	2.96	2.9	2.92	2.94	2.95	3.01	3.01	3.01	3.03	3.02
HEATING ONLY (EN14511 VALUE)													
Total heating capacity (2) (3)		376.8	397.7	427.2	493.1	531.6	574.2	596.6	640.6	753.4	795.3	826.0	854.1
COP (2) (3)	kW/kW	3.19	3.19	3.20	3.17	3.19	3.20	3.20	3.26	3.26	3.28	3.26	3.26
ENERGY EFFICIENCY													
SEASONAL EFFICIENCY IN COOLING (REG. EU 2016/2281)													
Ambient refrigeration													
Prated, c (10)	kW	344.9	361.1	399.3	446.0	499.5	525.3	543.0	598.8	696.0	724.2	761.4	798.6
SEER (10) (11)		4.28	4.39	4.44	4.36	4.28	4.37	4.37	4.56	4.56	4.56	4.58	4.56
Performance ηs (10) (12)	%	168	172	175	171	168	172	172	180	179	180	180	179
EXCHANGERS													
HEAT EXCHANGER USER SIDE IN COOLING													
Water flow (1)	L/s	16.51	17.29	19.12	21.35	23.91	25.14	25.99	28.66	33.31	34.66	36.44	38.22
Pressure drop at the heat exchanger (1)	kPa	51.2	39.9	48.8	46.7	58.5	45.1	48.2	51.1	50.3	40.5	44.7	49.2
HEAT EXCHANGER USER SIDE IN HEATING													
Water flow (3)	L/s	18.17	19.17	20.60	23.77	25.63	27.69	28.77	30.89	36.34	38.36	39.84	41.19
Pressure drop at the heat exchanger (3)	kPa	62.0	49.1	56.6	57.9	67.3	54.6	59.0	59.4	59.9	49.6	53.5	57.2
REFRIGERANT CIRCUIT													
Compressors nr.	No.	4	4	4	6	6	6	6	6	8	8	8	8
No. Circuits	No.	2	2	2	3	3	3	3	3	4	4	4	4
Theoretical refrigerant charge	kg	81.0	86.4	86.9	109.0	113.0	124.0	133.0	133.0	162.0	173.0	174.0	176.0
NOISE LEVEL													
Total sound pressure (5)	dB(A)	77	77	77	76	77	77	77	78	77	78	78	78
Total sound power level in cooling (6) (7)	dB(A)	97	97	97	97	98	98	98	99	99	100	100	100
Total sound power level in heating (6) (8)	dB(A)	97	97	97	97	98	98	98	0	0	0	0	0
SIZE AND WEIGHT													
A (9)	mm	5,080	5,080	5,080	6,255	7,430	7,430	7,430	7,430	9,780	9,780	9,780	9,780
B (9)	mm	2,260	2,260	2,260	2,260	2,260	2,260	2,260	2,260	2,260	2,260	2,260	2,260
H (9)	mm	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450	2,450
Operating weight (9)	kg	3,350	3,440	3,480	4,650	4,900	5,060	5,140	5,200	6,580	6,760	6,800	6,840

- (1) Plant (side) cooling exchanger water (in/out) 12°C/7°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°C/45°C; Source (side) heat exchanger air (in) 7.0°C - 87% R.H.
- (4) Parameter calculated for LOW-TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013].
- (5) 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.

- (6) Sound power on the basis of measurements taken in compliance with ISO 9614.
- (7) Sound power level in cooling, outdoors.
- (8) Sound power level in heating, outdoors.
- (9) Unit in standard configuration, without optional accessories.
- (10) Parameter calculated according to [REGULATION (EU) N. 2016/2281].
- (11) Seasonal energy efficiency ratio.
- (12) Seasonal space cooling energy efficiency.

- (13) Seasonal coefficient of performance.
 - (14) Seasonal space heating energy efficiency.
- The units highlighted in this publication contain [GWP₁₀₀ 467] fluorinated greenhouse gases.
- Data highlighted in green are Eurovent Certified.

Optional Extras

- User Interface versions including KIPLINK
- Condenser coil corrosion protection coatings
- Compressor Enclosures & Acoustical Enclosures
- EC Fans with DC brushless motor
- Refrigerant Leak Detector
- Night Mode to limit the maximum noise level of the unit
- Automatic circuit breakers on loads
- Compressor power factor correction
- Soft start
- Integrated hydronic group-pumps & tanks
- Variable Primary flow control
- Compressor suction and discharge valves
- BMS Interface – such as Bacnet, Modbus
- Refrigerant pressure relief valves
- Group controllers
- C4 Corrosion Classification
- Energy meter

For more options refer to Databook

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