

NX2-Q-G06 0344 - 0808

INTEGRA 4-PIPE AIR SOURCED HEAT PUMP CHILLER



NX²-Q G06



**MITSUBISHI ELECTRIC
HYDRONICS & IT COOLING SYSTEMS**

INTEGRA 4-PIPE AIR SOURCED HEAT PUMP CHILLER

For outdoor installation

Cooling Capacity: 316 – 799kW

Heating Capacity: 364 – 854kW

Multi-purpose outdoor unit for use in 4-pipe systems for the simultaneous production of hot and chilled water by means of two independent hydronic circuits.

These INTEGRA units are able to satisfy the demand for heating and chilled water simultaneously through a system that does not require seasonal switching and therefore, is an alternative to traditional plants with chiller and boiler. This unit is equipped with hermetic rotary scroll compressors, with R454B refrigerant, axial fans, electronic expansion valve as well as shell and tube heat exchangers.

The range is composed of units equipped with four, six, or eight compressors in a multi-circuit configuration.

High Efficiency Performance



Key Features

Scroll Compressors

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 = 1923 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

The shell and tube exchanger provides the highest flexibility for the unit's installation, keeping the pressure drops on the hydronic side at a minimum.

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 a reduction in operating consumption, a faster start-up of the unit and a wider extension of the operating limits.

Wide Operating Range

The unit's operation is guaranteed with external air temperature down to -15°C during winter and up to 46°C during summer. Achieves production of hot water up to 55°C without accessories.

Patented Ventilation Section Layout

This technological solution patented by MEHITS ensures independent operation of circuits, reduces the unit's footprint and improves the efficiency at partial load both in Heating Mode and Cooling Mode.

Capacity Range

VERSION		COOLING CAPACITY	HEATING CAPACITY
K	STANDARD EFFICIENCY	334 – 533kW	367 – 583kW
A†	HIGH EFFICIENCY	345 – 799kW	379 – 854kW
SL	SUPER LOW NOISE	316 – 506kW	364 – 572kW

† Performance data overleaf.

*1 NX2-Q-G06 A / 0768. Seasonal space heating energy efficiency class MEDIUM TEMPERATURE [REGULATION (EU) 2016/2281].

*2 NX2-Q-G06 A / 0768 EN14511 value.

*3 NX2-Q-G06 A / 0404 version with EC fans. EU N 813/3013.

Specifications



NX2-Q-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	2.90	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)	kW	378.7	399.7	429.4	495.5	534.2	577.0	599.6	640.6	753.4	795.3	826.0	854.1
COP (2) (3)	kW/kW	3.20	3.21	3.21	3.19	3.20	3.21	3.21	3.26	3.26	3.28	3.26	3.26
COOLING WITH TOTAL HEAT RECOVERY													
Cooling capacity (4)	kW	347.3	367.2	403.5	452.3	494.9	533.5	551.1	606.2	696.4	734.7	770.3	807.9
Total power input (4)	kW	103.9	107.6	118.1	136.8	146.7	156.5	162.1	176.3	206.3	216.3	226.4	235.4
Recovery heat exchanger capacity (4)	kW	445	468.4	514.5	580.9	632.8	680.7	703.5	771.9	890.3	938	983.1	1,029
TER	kW/kW	7.63	7.77	7.77	7.55	7.69	7.76	7.74	7.82	7.69	7.74	7.74	7.8
ENERGY EFFICIENCY													
SEASONAL EFFICIENCY IN HEATING (REG. EU 813/2013)													
PDesign (5)	kW	273	297	322	370	388	357	373					
SCOP (5) (14)		3.89	3.95	3.96	3.96	3.88	3.89	3.91					
Performance ηs (5) (15)	%	153	155	156	155	152	153	153					
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	18.26	19.27	20.70	23.89	25.76	27.83	28.91	30.89	36.34	38.36	39.84	41.19
Pressure drop at the heat exchanger (3)	kPa	62.6	49.6	57.2	58.4	67.9	55.2	59.6	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	99.9	101.0	107.0	128.0	128.0	137.0	142.0	142.0	178.0	190.0	190.0	190.0
NOISE LEVEL													
Total sound pressure (6)	dB(A)	65	65	65	64	65	65	65	66	66	67	67	67
Total sound power level in cooling (7) (8)	dB(A)	97	97	97	97	98	98	98	99	99	100	100	100
Total sound power level in heating (7) (9)	dB(A)	97	97	97	97	98	98	98					
SIZE AND WEIGHT													
A (10)	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 (10)	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 (10)	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 (10)	kg	3,720	3,820	3,860	5,290	5,530	5,700	5,780	5,840	7,440	7,640	7,680	7,720

- (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) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
 (4) Plant (side) cooling exchanger water (in/out) 12°C/7°C; Plant (side) heat exchanger water (in/out) 40°C/45°C.
 (5) Parameter calculated for LOW-TEMPERATURE applications in AVERAGE climate conditions according to [REGULATION (EU) N. 813/2013]

- (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 measurements taken in compliance with ISO 9614.
 (8) Sound power level in cooling, outdoors.
 (9) Sound power level in heating, outdoors.
 (10) Unit in standard configuration, without optional accessories.
 (14) Seasonal coefficient of performance.

- (15) Seasonal space heating energy efficiency. The units highlighted in this publication contain [GWP_{eq} 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
- 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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