MITSUBISHI ELECTRIC
HYDRONICS & IT COOLING SYSTEMS S.p.A.

COMFORT

CHILLERS

HEAT PUMPS

NX-G06
NX-N-G06

AIR SOURCE CHILLERS AND HEAT PUMPS FOR OUTDOOR INSTALLATION, FROM 49,6 TO 338 kW

R454B

climaveneta.com

CLIMAVENETA®

NX-G06
NX-N-G06

THE ECO-FRIENDLY SOLUTION FOR YOUR PERFECT COMFORT

Air source chillers and heat pumps with scroll compressors and low GWP refrigerant. From 49,6 to 338 kW

NX-G06 and NX-N-G06 are air source chiller and heat pump ranges with scroll compressors designed for delivering the best efficiencies in comfort applications.

Reduced refrigerant charge and low GWP refrigerant ensure the lowest CO_2eq tons, for an environmental-friendly approach.

Available in three different acoustical versions, NX-G06 and NX-N-G06 feature extremely low sound emissions, with zero compromises in efficiency.

The new ranges are brilliantly engineered to integrate all the main hydraulic and mechanic components inside the unit, providing installers the ideal plug & play solution for the HVAC plant.

COMFORT APPLICATIONS

- Hotels
- Shopping centres
- Office buildings
- Museums
- Education centres
- Sport facilities
- Banks
- Institutions

PREMIUM EFFICIENCIES IN HEATING AND COOLING

COOLING **NX-G06** Air cooled chillers — UP TO

	EER	SEER
CA	3,26	4,69
K	2,89	4,34

CA ▸ Very high efficiency
K ▸ Key efficiency

HEATING **NX-N-G06** Air source heat pumps — UP TO

	COP	SCOP
CA	3,34	4,17
K	3,18	3,90

CA ▸ Very high efficiency
K ▸ Key efficiency

OPERATING RANGE

COOLING

AIR	from **-20°C** up to **46°C**
WATER	from **-10°C** up to **20°C**

OPERATING RANGE

HEATING

AIR	down to **-15°C**
WATER	up to **52°C**

Average values (EN14511) / SEER: Regulation (EU) N. 2016/2281 / SCOP: Regulation (EU) N. 813/2013

3 ACOUSTIC VERSIONS

-	**Standard**	Standard soundproofing equipment	**Baseline**
LN	**Low noise**	Increased acoustic insulation, slower fan speed, larger heat exchange surface.	**up to -6 dB(A)**
SL	**Super low noise**	The highest level of noise reduction. NO COMPROMISES IN EFFICIENCY!	**up to -9 dB(A)**

HEAT RECOVERY CONFIGURATIONS

-	**Standard unit**	Unit without heat recovery.	-
D	**Partial heat recovery**	A desuperheater on the compressor discharge line recovers approximately 20% of the unit's capacity. **Suitable for DHW production or other secondary uses, such as the integration of an existing boiler.**	**60°C**

NEW GENERATION GREEN REFRIGERANT

R454B

Fully committed to support the creation of a greener tomorrow, Mitsubishi Electric Hydronics & IT Cooling Systems presents the G06 series, chillers and heat pumps with reduced environmental impact.

Thanks to the new generation refrigerant R454B, the environmental impact of NX-G06 and NX-N-G06 is greatly reduced. Combining reduced refrigerant charge with a low GWP refrigerant, these units boast the lowest amount of CO_2eq in the scroll unit market, thus resulting as the perfect choice for any new forward looking installation.

R454B REFRIGERANT

High density, low **GWP refrigerant**. Its physical properties are **similar to R410A**, so the same type of equipment / components can be used.

REDUCED ENVIRONMENTAL IMPACT

- **Low GWP**, only 466
- **Reduced refrigerant charge** (-10% vs R410A)

RELIABILITY

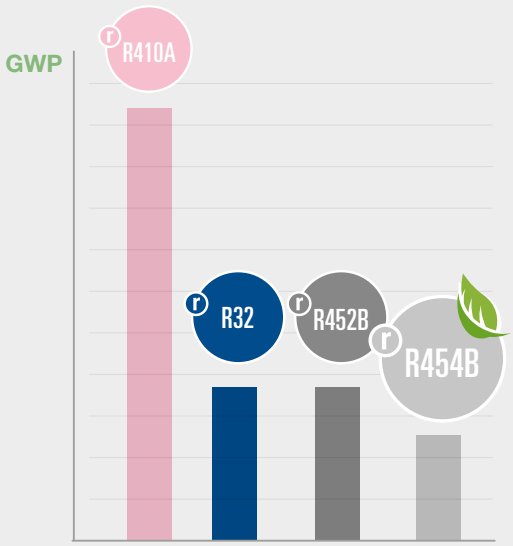
- Use of **well-known components**
- Refrigerant circuit **reliability** is maintained

PERFORMANCE & ENVELOPE

- **Same operating limits** of R410A both in **cooling** and **heating**
- Higher efficiency (full load +3,5%, seasonal +2% vs R410A)

GWP: 466

-76% vs R410A
-31% vs R32



W3000+ CONTROL SOFTWARE

Fast adaptive responses and functional options, developed fully in-house. For the customer's complete peace of mind.

NIGHT MODE

The advanced control system is engineered to maintain optimal comfort conditions according to occupancy needs and variations.

Thanks to the night mode function, the unit lowers its sound emissions (-3 dB(A) with factory settings) leveraging on a reduced usage of its resources. Offering excellent comfort during low load periods.

SMART DEFROST

Thanks to the extensive know-how in heat pump technology, a series of smart proprietary auto adaptive algorithms have been developed to manage the defrosting cycles in the smartest way.

- Reduction in defrosting time
- Minimum impact on leaving water temperature
- Reduction of energy required for defrosting
- Increase of COP

+10%
NET HEATING CAPACITY

compared to units with traditional defrost cycles.

PACKAGED SOLUTION

NX-G06 and NX-N-G06 are all-in-one solutions, ready to be installed. The integrated hydronic modules includes the pumps, the buffer tanks and the main hydraulic components, allowing simplified installation and time-saving commissioning.

SILENT OPERATION AND NO COMPROMISES IN EFFICIENCY

A

NX-G06 and NX-N-G06 ranges have been designed for the perfect environmental well-being. Thanks to a specific design, the SL versions (super low noise) achieve the minimum sound level while maintaining the same performance as the standard acoustical version.

TECHNOLOGICAL CHOICES

W3000+ CONTROL

Management software developed fully in-house

- Proprietary settings for faster adaptive responses to different dynamics
- Enhanced diagnostics thanks to the black box function
- Connectivity with the most commonly used BMS protocols and M-Net Mitsubishi Electric proprietary protocol (Opt.)

Compact keyboard

- Large LCD display and functional keys
- Quick and easy parameter consultation and adjustment by means of a multi-level menu
- KIPlink, the innovative Wi-Fi interface, is available as an option.

Highly resistent finned coils

Copper and aluminum tube & fins coils for reversible heat pumps

- Ideally designed to optimize airflow and heat transfer
- Protective coating available for harsh industrial and marine environments (Opt.)

New generation full aluminum micro-channel coils for cooling only chillers

- Long Life Alloy (LLA) for higher corrosion resistance and longer life cycle
- Up to 30% of refrigerant charge reduction vs. traditional solutions

Scroll compressors

New generation scroll compressors, developed for the use of high density A2L refrigerants (Fluid Group 1 of PED Directive).

- **Tandem or trio configuration** to benefit from **higher seasonal efficiency**
- **Specific oil management solution** for enhanced reliability

R454B

R454B Refrigerant

GWP: 466

-76% vs R410A
-31% vs R32

High density, **low GWP refrigerant**

- **Composition:**
  69% R32 + 31% R1234yf
- **Global Warming Potential:**
  467 (IPCC AR5)
- **Safety classification:**
  - A2L midly flammable (ISO 817)
  - Fluid Group 1 (PED)

NX-G06 and NX-N-G06 ranges: the ideal solutions for forward-looking cooling systems.

FANS

High performing, axial fans:

- Different sizes and speeds to perfectly fit the requirements of each unit model
- Speed control (DVV) based on refrigerant pressure.

UP TO + 8% MORE SEASONAL EFFICIENCY

EC AXIAL

EC fans (opt. For 2 cmpr units, available for CA versions)

- Continuous regulation of the air flow
- Reduced power consumption and increased efficiencies at partial loads

Shell&Tube heat exchanger

Dry expansion, single pass S&T evaporator, fully in-house developed. (4 compressors units)

- Internally grooved copper tubes
- Possibility of inspection and tubes cleaning
- Low pressure drops

Plate heat exchanger

Compact and robust, made of AISI 316 steel plates, copper-brazed.

- Low pressure drops
- Fully protected against ice formation
- Closed-cell neoprene external lining

HYDRONIC MODULES

The **fully integrated hydronic module** (opt.) includes the pumps, the buffer tank, and all the main hydraulic components, for the best **optimization of the installation space, time and costs**.

Pumps

- End-suction configuration
- 2-pole motor
- Single or twin pumps
- Low or high head (approx. 100 or 200 kPa).

Pumps+Inverter

(Available for 4 cmpr. units)

- External inverter to adjust the waterflow
- Reduced energy consumption through speed regulation

Pumps + Buffer tank

- Up to 500 liter l buffer tank
- 20mm insulation lining
- Including: expansion vessel, safety valve, manometer.

Only terminals

- On/off control
- 1 or 2 external pumps

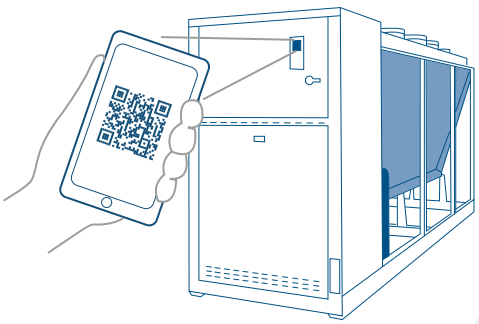
ACCESSORIES AND FURTHER OPTIONS

KIPlink user interface

KIP LINK
Keyboard In your Pocket

An exclusive product of Mitsubishi Electric Hydronics & IT Cooling Systems.

Based on Wi-Fi technology, KIPlink is an option that allows one to operate on the unit directly from a mobile device (smartphone, tablet, or notebook) by simply scanning the QR code positioned on the unit.



MAIN FEATURES

Easier on-site operation

Monitor each component while moving around the unit for maintenance operations.
View and change all parameters with easy-to-understand screenshots and dedicated tooltips.
Get devoted “help” messages / for alarm reset and trouble shooting.

Real-time graphs and trends

Monitor the immediate labor status of the compressors, heat exchangers, cooling circuits, and pumps.
View the real-time graphs of the key operating variable trends.

Data logger function

View history of events and use the filter for a simple search.
Enhance diagnostics with data and graphs of 10 minutes before and after each alarm.
Download all the data for detailed analysis.

FURTHER OPTIONS

Set-point adjustment

4-20 mA: Enables remote set-point adjustments (analog input).
Double set-point: Enables the remote switch between 2 set-points (digital input).
Set-point compensation: Automatic adjustment of the set-point on the basis of the outdoor temperature.

Control functions

Night mode: Limits the unit sound level reducing the usage of the resources. Sound power reduction (with factory settings): -3 dB(A).
U.L.C. User Limit Control: Controls a mixing valve (not included) to ensure a safe start-up and operation of the unit even in critical conditions.
Remote probe: Controls the unit's and pump's activation on the base of the water temperature of the buffer tank or hydraulic decoupler.
Demand limit: Limits the unit's power absorption for safety reasons or in temporary situations (digital input).

Electrical

Compressor rephasing: The capacitors on the compressors' line increase the unit's power factor.
Soft-starter: Manages the inrush current enabling lower motor windings' mechanical wear, avoidance of mains voltage fluctuations during starting and favorable sizing for the electrical system.

Connectivity

Serial card interface module to allow integration with BMS protocols:
Modbus / LonWorks / BACnet MS/TP / BACnet over IP / Konnex / Modbus TCP/IP/ SNMP
M-Net interface kit: Interface module to allow the integration of the unit with Mitsubishi Electric proprietary communication protocol M-Net.

Energy Meter

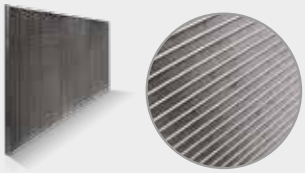
Energy meter for BMS: Acquires electrical data and the power absorbed by the unit and sends them the BMS for energy metering (Modbus RS485).
Energy meter for W3000: The electrical data acquired is available directely on the unit's control.

All the flexibility you need for the most diverse application requirements

COILS AND COATINGS

MICROCHANNEL COILS

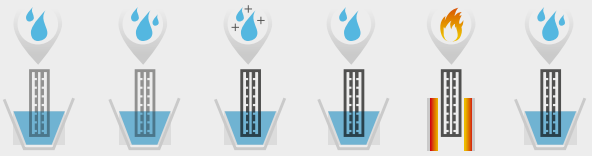
Al - Regular (std for NX-G06)



Al - E-coating

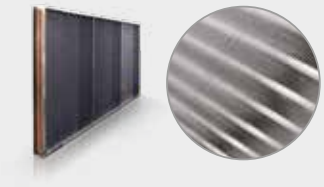
- Excellent resistance to UV rays.

E-coating process



TUBE & FINS COILS

Cu/Al - Regular (std for NX-N-G06)



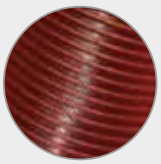
Cu/Al - Pre-painted fins

- Fins treated with protective polyester resin paint.
- 1000 h of salt spray protection as per ASTM B117.
- Excellent resistance to UV rays.

Cu/Al - Fin Guard Silver SB

- Polyurethane paint with metallic emulsion.
- 3000 h of salt spray protection as per ASTM B117.
- Excellent resistance to UV rays.

Cu/Cu - Tube & fin coil



Refrigerant circuit

Compressor suction and discharge valves: Installed for each compressor tandem or trio, the valves simplify maintenance activities. The user can work on the isolated valve for periodic maintenance or replacement, without removing the refrigerant from the circuit.

Dual pressure relief valves with switch: One valve is isolated from the refrigerant circuit while the other is in service. The userr can work on the isolated valve for periodic maintenance or replacement, without removing the refrigerant from the circuit.

Refrigerant leak detector

Leak detector: Factory installed device. In case of a gas leak detection it raises an alarm.

Leak detector + compressor off: Factory installed device. In case of a gas leak detection it raises an alarm and stops the units.

Hydraulic

Water flow switch: Designed to protect the unit when the water flow across the evaporator is not sufficient and falls outside of the operating parameters.

Water filter: Filters the water before the unit's inlet.

Structure

Anti-intrusion grilles: Perimeter metal grilles to protect against the intrusion of solid bodies into the unit structure.

Spring or rubber type anti-vibration mountings: Reduce vibrations, keeping noise transmission to a minimum.

Packing

Standard or nylon packing: The unit is provided with plastic supports, with or without a protective nylon layer.

Container slides or packing: The unit is provided with metal slides to load it in a conrtainer, with or without a protective nylon layer.

Wooden cage packing: The unit is provided with a robust wooden cage, with or without a protective nylon layer.

NX-G06

Chiller with 2 compressors, air cooled for outdoor installation, from 49,6 to 218 kW.

NX-G06/CA			0202P	0252P	0262P	0302P	0352P	0402P
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3/50	400/3/50	400/3/50
PERFORMANCE								
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1)	kW	52,80	59,95	66,81	81,64	92,73	103,6
Total power input	(1)	kW	15,59	17,95	20,27	24,80	28,22	31,39
EER	(1)	kW/kW	3,385	3,352	3,291	3,290	3,287	3,299
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	52,70	59,80	66,70	81,40	92,40	103,3
EER	(1)(2)	kW/kW	3,330	3,290	3,240	3,240	3,200	3,230
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7)	kW	52,7	59,8	66,7	81,4	92,4	103
SEER	(7)(8)		4,05	4,12	4,16	3,97	3,95	4,02
Performance ηs	(7)(9)	%	159	162	163	156	155	158
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	2,525	2,867	3,195	3,904	4,435	4,956
Pressure drop	(1)	kPa	37,5	34,6	35,1	37,5	59,4	51,6
REFRIGERANT CIRCUIT								
Compressors nr.		N°	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	7,30	7,90	8,00	9,30	12,4	12,5
NOISE LEVEL								
Sound Pressure	(3)	dB(A)	53	53	54	56	56	58
Sound power level in cooling	(4)(5)	dB(A)	85	85	86	88	88	90
SIZE AND WEIGHT								
A	(6)	mm	2395	2395	2395	2825	3360	3360
B	(6)	mm	1195	1195	1195	1195	1195	1195
H	(6)	mm	1865	1865	1865	1980	1980	1980
Operating weight	(6)	kg	550	560	570	680	830	960

NX-G06/CA			0452P	0502P	0562P	0612P	0712P	0812P
Power supply	V/ph/Hz	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	117,0	132,3	153,9	171,3	193,2	218,0
Total power input	(1)	kW	35,66	39,89	45,80	51,88	59,31	65,98
EER	(1)	kW/kW	3,277	3,316	3,360	3,301	3,258	3,303
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	116,8	132,0	153,6	171,0	192,8	217,6
EER	(1)(2)	kW/kW	3,210	3,250	3,290	3,240	3,200	3,240
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7)	kW	117	132	154	171	193	218
SEER	(7)(8)		4,12	3,99	3,99	4,03	4,12	3,94
Performance ηs	(7)(9)	%	162	157	157	158	162	155
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	5,597	6,326	7,361	8,191	9,237	10,43
Pressure drop	(1)	kPa	53,6	52,9	59,3	52,7	51,8	65,9
REFRIGERANT CIRCUIT								
Compressors nr.		N°	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	12,9	17,5	19,8	20,3	20,8	23,0
NOISE LEVEL								
Sound Pressure	(3)	dB(A)	58	58	59	59	60	61
Sound power level in cooling	(4)(5)	dB(A)	90	90	91	91	92	93
SIZE AND WEIGHT								
A	(6)	mm	3360	3980	3160	3160	3160	4335
B	(6)	mm	1195	1195	2250	2250	2250	2250
H	(6)	mm	1980	1980	2170	2170	2170	2170
Operating weight	(6)	kg	1000	1080	1510	1550	1570	1810

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

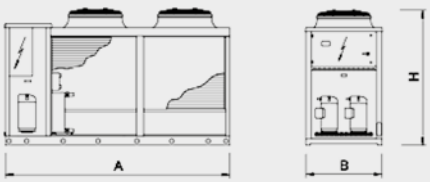
The units highlighted in this publication contain R454B [GWP_{100} 466] fluorinated greenhouse gases.
Certified data in EUROVENT

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

COOLING SCROLL PLATES AXIAL R454B

NX-G06/SL-CA			0202P	0252P	0262P	0302P	0352P	0402P
Power supply		V/ph/Hz	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	53,11	59,72	66,44	78,67	90,71	101,8
Total power input	(1)	kW	15,93	17,65	19,87	23,73	27,54	30,10
EER	(1)	kW/kW	3,340	3,373	3,337	3,321	3,298	3,382
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	53,00	59,60	66,30	78,50	90,40	101,5
EER	(1)(2)	kW/kW	3,280	3,330	3,290	3,260	3,220	3,310
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7)	kW	53,0	59,6	66,3	78,5	90,4	102
SEER	(7)(8)		3,99	3,99	4,05	4,20	4,06	4,16
Performance ηs	(7)(9)	%	157	157	159	165	159	163
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	2,540	2,856	3,177	3,762	4,338	4,867
Pressure drop	(1)	kPa	38,0	34,4	34,7	34,9	56,8	49,7
REFRIGERANT CIRCUIT								
Compressors nr.		N°	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	7,70	9,00	9,70	9,80	11,7	14,2
NOISE LEVEL								
Sound Pressure	(3)	dB(A)	46	47	47	47	48	49
Sound power level in cooling	(4)(5)	dB(A)	78	79	79	79	80	81
SIZE AND WEIGHT								
A	(6)	mm	2825	3360	3360	3360	3980	3160
B	(6)	mm	1195	1195	1195	1195	1195	2250
H	(6)	mm	1980	1980	1980	1980	1980	2170
Operating weight	(6)	kg	670	760	770	780	940	1410

NX-G06/SL-CA			0452P	0502P	0562P	0612P	0712P	0812P
Power supply	V/ph/Hz	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	113,9	127,7	145,6	165,4	187,1	208,9
Total power input	(1)	kW	34,29	38,87	43,94	49,10	57,20	63,36
EER	(1)	kW/kW	3,321	3,283	3,317	3,369	3,271	3,295
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	113,5	127,4	145,3	165,1	186,7	208,5
EER	(1)(2)	kW/kW	3,250	3,220	3,250	3,310	3,220	3,230
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)								
Ambient refrigeration								
Prated,c	(7)	kW	114	127	145	165	187	208
SEER	(7)(8)		4,22	4,25	4,30	4,30	4,41	4,21
Performance ηs	(7)(9)	%	166	167	169	169	173	165
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	5,447	6,106	6,962	7,911	8,945	9,989
Pressure drop	(1)	kPa	50,8	49,3	53,1	49,1	48,5	60,5
REFRIGERANT CIRCUIT								
Compressors nr.		N°	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	14,9	17,4	21,6	23,5	23,6	27,0
NOISE LEVEL								
Sound Pressure	(3)	dB(A)	50	50	51	52	53	54
Sound power level in cooling	(4)(5)	dB(A)	82	82	83	84	85	86
SIZE AND WEIGHT								
A	(6)	mm	3160	3160	4335	4335	4335	5510
B	(6)	mm	2250	2250	2250	2250	2250	2250
H	(6)	mm	2170	2170	2170	2170	2170	2170
Operating weight	(6)	kg	1450	1480	1740	1820	1850	2130



NX-G06

Chiller with 4 compressors, air cooled for outdoor installation, from 153 to 338 kW.

NX-G06/CA			0614T	0714T	0814T	0914T	1014T	1114T	1214T
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
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	167,1	197,0	226,0	255,8	289,8	316,8	337,9
Total power input	(1)	kW	51,13	61,29	68,61	79,06	89,89	96,72	104,4
EER	(1)	kW/kW	3,270	3,214	3,294	3,234	3,224	3,276	3,237
ESEER	(1)	kW/kW							
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	166,9	196,7	225,6	255,4	289,5	316,4	337,5
EER	(1)(2)	kW/kW	3,240	3,170	3,240	3,190	3,190	3,230	3,190
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-
Cooling energy class			-	-	-	-	-	-	-
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(7)	kW	167	197	226	255	290	316	338
SEER	(7)(8)		4,18	4,17	4,31	4,38	4,41	4,28	4,26
Performance ηs	(7)(9)	%	164	164	169	172	174	168	167
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	7,993	9,422	10,81	12,23	13,86	15,15	16,16
Pressure drop	(1)	kPa	24,0	33,4	54,8	48,3	33,6	40,2	45,7
REFRIGERANT CIRCUIT									
Compressors nr.		N°	4	4	4	4	4	4	4
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	21,9	27,9	33,1	35,7	35,8	40,1	41,5
NOISE LEVEL									
Sound Pressure	(3)	dB(A)	60	61	62	63	63	64	65
Sound power level in cooling	(4)(5)	dB(A)	92	93	94	95	95	96	97
SIZE AND WEIGHT									
A	(6)	mm	3160	4335	4335	4335	4335	5510	5510
B	(6)	mm	2250	2250	2250	2250	2250	2250	2250
H	(6)	mm	2170	2170	2170	2170	2170	2170	2170
Operating weight	(6)	kg	1740	2030	2030	2200	2500	2860	2870

Notes:

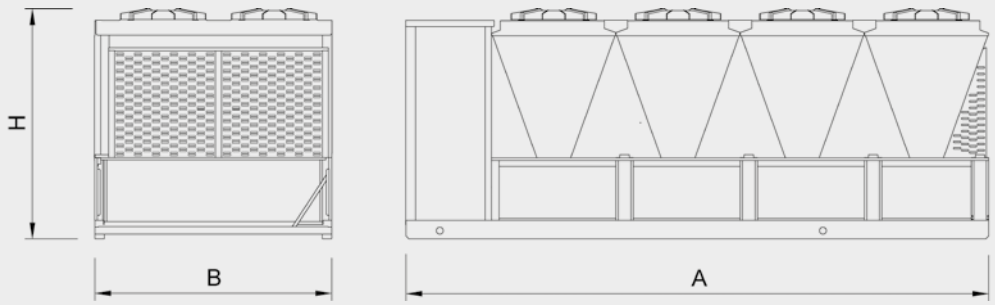
1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
2 Values in compliance with EN14511
3 Average sound pressure level at 10m distance, unit in a free field on a reflective surface; non-binding value calculated from the sound power level.
4 Sound power on the basis of measurements made in compliance with ISO 9614.
5 Sound power level in cooling, outdoors.
6 Unit in standard configuration/execution, without optional accessories.
7 Parameter calculated according to [REGULATION (EU) N. 2016/2281]
8 Seasonal energy efficiency ratio
9 Seasonal space cooling energy efficiency

The units highlighted in this publication contain R454B [GWP_{100} 466] fluorinated greenhouse gases.
Certified data in EUROVENT

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

COOLING SCROLL SHELL & TUBES AXIAL R454B

NX-G06/SL-CA			0614T	0714T	0814T	0914T	1014T	1114T	1214T
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
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	160,6	187,1	215,3	249,0	280,1	303,9	329,9
Total power input	(1)	kW	48,84	57,05	65,39	76,66	86,53	93,09	101,6
EER	(1)	kW/kW	3,291	3,277	3,292	3,246	3,238	3,264	3,247
ESEER	(1)	kW/kW							
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	160,4	186,8	214,9	248,6	279,8	303,6	329,5
EER	(1)(2)	kW/kW	3,260	3,240	3,240	3,200	3,200	3,230	3,200
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-
Cooling energy class			-	-	-	-	-	-	-
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(7)	kW	160	187	215	249	280	304	330
SEER	(7)(8)		4,50	4,57	4,51	4,59	4,69	4,61	4,56
Performanceη_s	(7)(9)	%	177	180	177	180	184	181	180
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	7,680	8,949	10,29	11,91	13,39	14,53	15,78
Pressure drop	(1)	kPa	22,2	30,1	49,7	45,7	31,4	37,0	43,5
REFRIGERANT CIRCUIT									
Compressors nr.		N°	4	4	4	4	4	4	4
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	25,6	27,9	33,1	35,7	36,9	40,1	41,5
NOISE LEVEL									
Sound Pressure	(3)	dB(A)	51	51	52	53	54	55	55
Sound power level in cooling	(4)(5)	dB(A)	83	83	84	85	86	87	87
SIZE AND WEIGHT									
A	(6)	mm	4335	4335	5510	5510	5510	5510	5510
B	(6)	mm	2250	2250	2250	2250	2250	2250	2250
H	(6)	mm	2170	2170	2170	2170	2170	2170	2170
Operating weight	(6)	kg	2010	2030	2360	2530	2830	2840	2850



NX-N-G06

Heat pump with 2 compressors, air source
for outdoor installation, from 49,6 to 218.

NX-N-G06/CA			0202P	0252P	0262P	0302P	0352P	0402P
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3/50	400/3/50	400/3/50
PERFORMANCE								
COOLING ONLY (GROSS VALUE)								
Cooling capacity	(1)	kW	49,19	57,23	64,17	77,67	88,29	98,07
Total power input	(1)	kW	16,76	18,54	20,90	25,29	28,80	32,07
EER	(1)	kW/kW	2,929	3,092	3,072	3,071	3,066	3,056
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	49,10	57,10	64,00	77,50	88,00	97,80
EER	(1)(2)	kW/kW	2,890	3,040	3,030	3,030	3,000	3,000
HEATING ONLY (GROSS VALUE)								
Total heating capacity	(3)	kW	56,66	66,73	71,55	83,30	96,89	106,0
Total power input	(3)	kW	16,84	19,88	21,32	24,83	28,16	31,50
COP	(3)	kW/kW	3,375	3,352	3,362	3,359	3,436	3,365
HEATING ONLY (EN14511 VALUE)								
Total heating capacity	(3)(2)	kW	56,80	66,90	71,70	83,50	97,20	106,3
COP	(3)(2)	kW/kW	3,330	3,310	3,320	3,320	3,360	3,310
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)								
PDesign	(4)	kW	41,9	49,1	53,1	62,0	71,3	77,3
SCOP	(4)(13)		4,01	3,85	3,84	3,61	3,63	3,62
Performance ηs	(4)(14)	%	157	151	151	142	142	142
Seasonal efficiency class	(15)		A++	A++	A++	A+	-	-
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	2,352	2,737	3,069	3,714	4,222	4,690
Pressure drop	(1)	kPa	32,6	31,5	32,3	34,0	53,8	46,2
HEAT EXCHANGER USER SIDE IN HEATING								
Water flow	(3)	l/s	2,735	3,221	3,454	4,021	4,677	5,115
Pressure drop	(3)	kPa	44,0	43,7	41,0	39,8	66,0	54,9
REFRIGERANT CIRCUIT								
Compressors nr.		N°	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	13,5	14,9	15,2	18,0	24,8	28,2
NOISE LEVEL								
Sound Pressure	(5)	dB(A)	66	67	67	70	70	71
Sound power level in cooling	(6)(7)	dB(A)	84	85	85	88	88	89
Sound power level in heating	(6)(8)	dB(A)	84	85	85	88	88	89
SIZE AND WEIGHT								
A	(9)	mm	2395	2395	2395	2825	3360	3360
B	(9)	mm	1195	1195	1195	1195	1195	1195
H	(9)	mm	1865	1865	1865	1980	1980	1980
Operating weight	(9)	kg	670	700	700	830	940	990

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) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
4 Parameter calculated for LOW-TEMPERATURE application 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 made in compliance with ISO 9614.
7 Sound power level in cooling, outdoors.
8 Sound power level in heating, outdoors.
9 Unit in standard configuration/execution, 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
15 Energy efficiency class referred to LOW-TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

The units highlighted in this publication contain R454B [GWP_{100} 466] fluorinated greenhouse gases.

Certified data in EUROVENT

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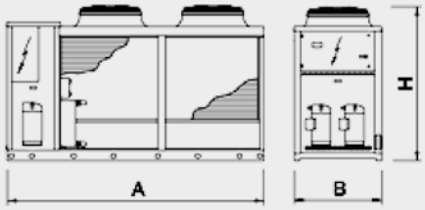
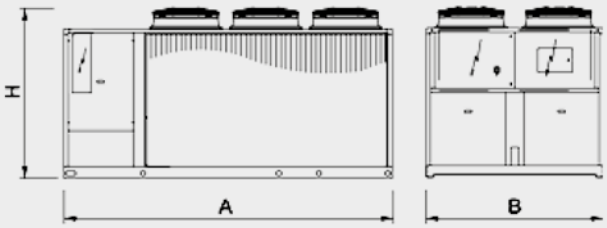
HEATING COOLING SCROLL PLATES AXIAL R454B

NX-N-G06/CA			0452P	0502P	0562P	0612P	0712P	0812P
Power supply		V/ph/Hz	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	111,6	125,7	146,4	162,9	189,8	210,7
Total power input	(1)	kW	36,45	40,71	48,05	52,84	62,38	67,71
EER	(1)	kW/kW	3,058	3,088	3,044	3,085	3,042	3,112
ESEER	(1)	kW/kW						
COOLING ONLY (EN14511 VALUE)								
Cooling capacity	(1)(2)	kW	111,2	125,3	146,1	162,6	189,4	210,3
EER	(1)(2)	kW/kW	3,000	3,030	2,990	3,030	2,990	3,060
HEATING ONLY (GROSS VALUE)								
Total heating capacity	(3)	kW	117,3	132,6	154,9	173,4	200,9	222,9
Total power input	(3)	kW	34,96	39,46	46,27	51,75	60,06	66,34
COP	(3)	kW/kW	3,351	3,357	3,346	3,354	3,343	3,362
HEATING ONLY (EN14511 VALUE)								
Total heating capacity	(3)(2)	kW	117,6	133,0	155,3	173,7	201,2	223,4
COP	(3)(2)	kW/kW	3,290	3,300	3,290	3,300	3,290	3,300
ENERGY EFFICIENCY								
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)								
PDesign	(4)	kW	88,1	99,1	109	128	147	170
SCOP	(4)(13)		3,71	3,60	3,47	3,59	3,42	3,38
Performance ηs	(4)(14)	%	145	141	136	140	134	132
Seasonal efficiency class	(15)		-	-	-	-	-	-
EXCHANGERS								
HEAT EXCHANGER USER SIDE IN REFRIGERATION								
Water flow	(1)	l/s	5,336	6,009	7,003	7,792	9,075	10,08
Pressure drop	(1)	kPa	48,7	47,7	53,7	47,7	50,0	61,6
HEAT EXCHANGER USER SIDE IN HEATING								
Water flow	(3)	l/s	5,662	6,403	7,479	8,370	9,696	10,76
Pressure drop	(3)	kPa	54,8	54,2	61,3	55,0	57,0	70,2
REFRIGERANT CIRCUIT								
Compressors nr.		N°	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1
Refrigerant charge		kg	30,2	34,7	41,7	48,7	54,3	63,8
NOISE LEVEL								
Sound Pressure	(5)	dB(A)	71	71	71	71	72	73
Sound power level in cooling	(6)(7)	dB(A)	89	90	91	91	92	93
Sound power level in heating	(6)(8)	dB(A)	89	90	91	91	92	93
SIZE AND WEIGHT								
A	(9)	mm	3360	3980	4110	4110	5110	5110
B	(9)	mm	1195	1195	2220	2220	2220	2220
H	(9)	mm	1980	1980	2150	2150	2150	2150
Operating weight	(9)	kg	1090	1270	1740	1840	2070	2200





NX-N-G06

Heat pump with 4 compressors, air source for outdoor installation, from 142 to 322 kW

NX-N-G06/CA			0604T	0704T	0804T	0904T	1004T	1104T	1204T
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
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	157,5	183,1	213,5	243,2	271,8	297,7	321,9
Total power input	(1)	kW	52,37	60,61	69,50	80,19	90,09	98,55	106,5
EER	(1)	kW/kW	3,006	3,021	3,072	3,032	3,017	3,022	3,023
ESEER	(1)	kW/kW							
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	157,3	182,8	213,1	242,9	271,5	297,4	321,5
EER	(1)(2)	kW/kW	2,980	2,990	3,020	2,990	2,990	2,990	2,990
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-
Cooling energy class			-	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	161,2	187,1	223,3	249,8	275,3	309,3	328,7
Total power input	(3)	kW	48,62	56,41	67,17	75,23	83,09	93,24	99,13
COP	(3)	kW/kW	3,317	3,317	3,323	3,322	3,313	3,319	3,317
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	161,4	187,4	223,7	250,2	275,6	309,7	329,1
COP	(3)(2)	kW/kW	3,290	3,290	3,280	3,280	3,280	3,280	3,280
Cooling energy class									
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	115	142	167	189	211	233	250
SCOP	(4)(13)		3,80	4,02	3,96	4,02	3,94	3,87	3,91
Performance ηs	(4)(14)	%	149	158	155	158	154	152	154
Seasonal efficiency class	(15)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	7,534	8,757	10,21	11,63	13,00	14,24	15,39
Pressure drop	(1)	kPa	21,3	28,8	48,9	43,6	29,6	35,5	41,5
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	7,780	9,031	10,78	12,06	13,29	14,93	15,87
Pressure drop	(3)	kPa	22,7	30,7	54,5	46,9	30,9	39,0	44,1
REFRIGERANT CIRCUIT									
Compressors nr.		N°	4	4	4	4	4	4	4
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	40,5	62,8	81,4	81,5	81,5	104	104
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	72	72	74	74	75	77	77
Sound power level in cooling	(6)(7)	dB(A)	92	92	94	94	95	97	97
Sound power level in heating	(6)(8)	dB(A)	92	92	94	94	95	97	97
SIZE AND WEIGHT									
Operating weight	(9)	kg	2100	2240	2630	2790	3100	3580	3580
A	(9)	mm	4110	4110	5110	5110	5110	6110	6110
B	(9)	mm	2220	2220	2220	2220	2220	2220	2220
H	(9)	mm	2150	2150	2150	2150	2150	2150	2150

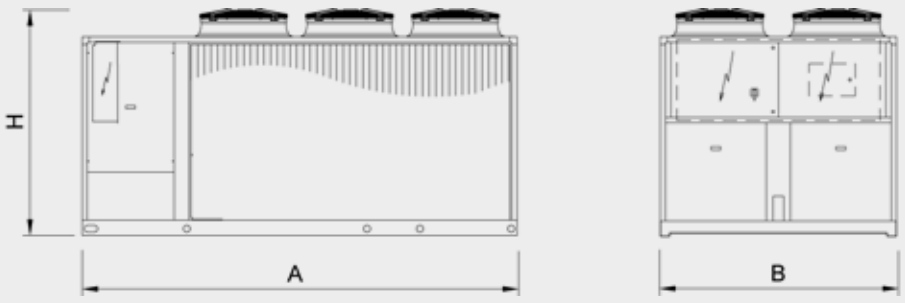
Notes:
1 Plant (side) cooling exchanger water (in/out) 12°C/7°C; Source (side) heat exchanger air (in) 35°C.
2 Values in compliance with EN14511
3 Plant (side) heat exchanger water (in/out) 40°C/45°C; Source (side) heat exchanger air (in) 7°C - 87% R.H.
4 Parameter calculated for LOW-TEMPERATURE application 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 made in compliance with ISO 9614.
7 Sound power level in cooling, outdoors.
8 Sound power level in heating, outdoors.
9 Unit in standard configuration/execution, 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
15 Energy efficiency class referred to LOW-TEMPERATURE application in AVERAGE climate conditions according to [REGULATION (EU) N. 811/2013]

The units highlighted in this publication contain R454B [GWP_{100} 466] fluorinated greenhouse gases.
Certified data in EUROVENT

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

HEATING COOLING SCROLL SHELL & TUBES AXIAL R454B

NX-N-G06/SL-CA			0604T	0704T	0804T	0904T	1004T	1104T	1204T
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
PERFORMANCE									
COOLING ONLY (GROSS VALUE)									
Cooling capacity	(1)	kW	151,4	178,1	206,9	234,9	263,8	286,7	311,2
Total power input	(1)	kW	49,98	58,78	66,45	77,27	86,73	94,35	102,6
EER	(1)	kW/kW	3,028	3,029	3,116	3,039	3,043	3,040	3,033
ESEER	(1)	kW/kW							
COOLING ONLY (EN14511 VALUE)									
Cooling capacity	(1)(2)	kW	151,2	177,8	206,6	234,6	263,5	286,3	310,9
EER	(1)(2)	kW/kW	3,000	3,000	3,070	3,000	3,010	3,010	3,000
ESEER	(1)(2)	kW/kW	-	-	-	-	-	-	-
Cooling energy class			-	-	-	-	-	-	-
HEATING ONLY (GROSS VALUE)									
Total heating capacity	(3)	kW	159,1	190,7	223,4	252,2	281,5	305,6	334,6
Total power input	(3)	kW	46,87	57,35	67,12	75,77	84,34	92,15	100,5
COP	(3)	kW/kW	3,392	3,328	3,329	3,327	3,339	3,318	3,329
HEATING ONLY (EN14511 VALUE)									
Total heating capacity	(3)(2)	kW	159,3	191,0	223,8	252,5	281,9	306,0	335,0
COP	(3)(2)	kW/kW	3,370	3,300	3,280	3,290	3,310	3,280	3,290
Cooling energy class									
ENERGY EFFICIENCY									
SEASONAL EFFICIENCY IN COOLING (Reg. EU 2016/2281)									
Ambient refrigeration									
Prated,c	(10)	kW	-	-	-	-	-	-	-
SEER	(10)(11)		-	-	-	-	-	-	-
Performance ηs	(10)(12)	%	-	-	-	-	-	-	-
SEASONAL EFFICIENCY IN HEATING (Reg. EU 813/2013)									
PDesign	(4)	kW	112	144	167	190	212	231	252
SCOP	(4)(13)		3,92	4,10	4,08	4,15	4,03	4,06	4,05
Performance ηs	(4)(14)	%	154	161	160	163	158	159	159
Seasonal efficiency class	(15)		-	-	-	-	-	-	-
EXCHANGERS									
HEAT EXCHANGER USER SIDE IN REFRIGERATION									
Water flow	(1)	l/s	7,239	8,516	9,896	11,23	12,62	13,71	14,88
Pressure drop	(1)	kPa	19,7	27,3	45,9	40,7	27,8	32,9	38,8
HEAT EXCHANGER USER SIDE IN HEATING									
Water flow	(3)	l/s	7,680	9,204	10,79	12,17	13,59	14,75	16,15
Pressure drop	(3)	kPa	22,2	31,8	54,6	47,8	32,3	38,1	45,6
REFRIGERANT CIRCUIT									
Compressors nr.		N°	4	4	4	4	4	4	4
No. Circuits		N°	2	2	2	2	2	2	2
Refrigerant charge		kg	40,5	62,8	81,4	81,5	95,4	104	104
NOISE LEVEL									
Sound Pressure	(5)	dB(A)	63	63	64	65	66	67	68
Sound power level in cooling	(6)(7)	dB(A)	83	83	84	85	86	87	88
Sound power level in heating	(6)(8)	dB(A)	84	84	85	86	87	88	89
SIZE AND WEIGHT									
Operating weight	(9)	kg	2180	2320	2730	2890	3500	3550	3660
A	(9)	mm	4110	4110	5110	5110	6110	6110	6110
B	(9)	mm	2220	2220	2220	2220	2220	2220	2220
H	(9)	mm	2150	2150	2150	2150	2150	2150	2150



“BY FAR THE BEST PROOF IS EXPERIENCE”

Sir Francis Bacon
British Philosopher (1561 - 1626)

IKEA MUSEUM

2016-18 Almhult - Sweden

Application:
Retail - Museum

Plant type:
Hydronic System

Cooling capacity:
880 kW

Installed machines:
1x NX/K 1214P,
2x NECS-FC/SL/S 0904

PROJECT

The Ikea Museum is a 7,000 sqm structure located in Almhult, Ikea’s historical headquarters. It celebrates the 70-years history of the firm through its products and the stories of people who have bought its furniture over the years and is expected to become a tourist attraction. The four floors include fully furnished rooms, old catalogues, living spaces of the future and exhibits dedicated to the store’s most popular and not-so-popular items.

CHALLENGE

The structure required a reliable and efficient HVAC system both in visitors areas and in technical rooms, in order to ensure a pleasant visiting experience, in line with the values celebrated by Ikea all over the world through a unique shopping experience.

SOLUTION

The M&E consultants opted for Climaveneta units for this prestigious project. A NX air source chiller with scroll compressors was installed for the air conditioning of the museum. The local temperate climate has made possible to equip the cooling system of the technical rooms with 2 NECS-FC chillers. Thanks to Climaveneta advanced free cooling technology system, they use outdoor temperature as a free source for cooling much more often than traditional free cooling chillers, thus maximising the energy saving achievable.

MORE THAN 1000 PROJECTS ALL OVER THE WORLD

ESSELUNGA NOVARA

Novara - Italy

Period: 2017
Application: Supermarket

Plant type: Hydronic System
Cooling capacity: 541 kW
Heating capacity: 601 kW
Installed machines:
2x NX-N SL CA T 0904,
1x NX-N/CA 0202 P,
1x MANAGER 3000

CULTURAL CENTRE, LA PLATA

Buenos Aires - Argentina

Period: 2015 - 2016
Application: Museum

Plant type: Hydronic System
Cooling capacity: 546 kW
Heating capacity: 602 kW
Installed machines:
2x NX-N-K 1004T,
14x WIZARD

Every project is characterised by different needs and system specifications for various climates. All these projects share high energy efficiency, maximum integration, and total reliability resulting from the Climaveneta brand experience.

PENGUIN SYDNEY AQUARIUM

Sydney - Australia

Period: 2016 - 2018
Application: Museum

Plant type: Hydronic System
Cooling capacity: 420 kW
Installed machines:
2x NX/K/S 1014P

FERRARI LAND

Tarragona - Spain

Period: 2017
Application: Sport structures
Plant type: Hydronic System
Cooling capacity: 1321 kW
Heating capacity: 1495 kW
Air flow: 110200 m³/h
Installed machines:
2x FOCS-N/SL-CA; 3x NECS-N/B; 1x NX-N/K; 7x WZ-E

BILL S RESIDENCE

Melbourne - Australia

Period: 2017 - 2018
Application: Residential buildings

Plant type: Hydronic System
Cooling capacity: 44 kW
Installed machines:
1x i-NX/S 0151P

NX-G06 / NX-N-G06_ENG_10-2019

CLIMAVENETA®

eco Changes for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

MITSUBISHI ELECTRIC HYDRONICS & IT COOLING SYSTEMS S.p.A.

Head Office: Via Caduti di Cefalonia 1 - 36061 Bassano del Grappa (VI) - Italy
Tel (+39) 0424 509 500 - Fax (+39) 0424 509 509
www.climaveneta.com
www.melcohit.com