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

COMFORT

CHILLERS

HEAT PUMPS

i-NX
i-NX-N

AIR SOURCE CHILLERS AND HEAT PUMPS FOR OUTDOOR INSTALLATION FROM 41,9-129 kW

climaveneta.com

CLIMAVENETA®

i-NX i-NX-N

PERFECT COMFORT AND MAXIMUM EFFICIENCY

Air source chillers and heat pumps, with variable speed scroll compressors

From 41 to 129 kW

i-NX and i-NX-N combine fixed speed and variable speed scroll compressors in a single refrigerant circuit, thus delivering brilliant energy efficiency and precise temperature control in any load condition.

The range includes cooling only chillers and reversible heat pumps and, thanks to a wide range of versions and options, allows custom-made application design for individual projects.

COOLING
HEATING
SCROLL
INVERTER

THE CHILLER FOR EVERY NEED

In comfort applications, the air conditioning systems works at part load for most the time, while only for a limited number of hours at full load.

The inverter technology brings uncompromised part load efficiency and makes i-NX and i-NX-N the ideal solutions for the residential and light commercial segment.

COMFORT APPLICATIONS

- Shopping centers
- Offices
- Hotels and resorts
- Health facilities
- Banks
- Infrastructure for entertainment
- Museums and theatres

QUICK & EASY INSTALLATION

The integrated hydronic modules and the advanced water flow controls allows time-saving installation and commissioning.

HIGH DEGREE OF CONFIGURABILITY

Always the right solution for every project thanks to many specifically developed versions and bespoke options.

EXTENDED OPERATING RANGE

The units are designed to operate all-year-round, delivering consistent cooling or heating to the system.

Devoted accessories extend the operating limits to grant continuous operation even in extreme climate conditions.

COOLING	AIR	from **-20°C** up to **48°C**
	WATER	from **-10°C** up to **20°C**
HEATING	AIR	down to **-12°C** (-15°C partialized)
	WATER	up to **55°C** (58°C partialized)

ACOUSTIC VERSIONS

-	**Standard**	Unit with standard soundproofing equipment. Unit with Kit Low Noise (Opt. 2671)	**Baseline** **-2 dB(A)**
SL	**Super low noise**	Special acoustic insulation of the compressor enclosure and the pumps (if present), devoted fan speed reduction and increased heat exchange surface. No compromises on efficiency!	**-7 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**

Highest operating reliability, unbeatable energy efficiency, fast-and-easy installation: these are the distinguishing features of i-NX and i-NX-N.

INVERTER LEADING INVERTER TECHNOLOGY

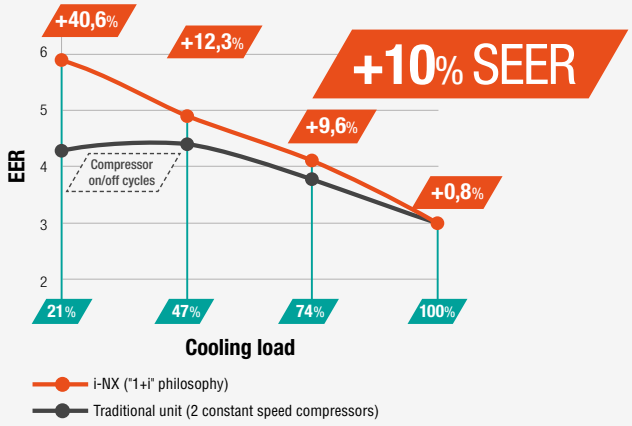
UNBEATABLE EFFICIENCY

Designed to reach outstanding seasonal efficiency, i-NX and i-NX-N really make the difference at part loads.

This is due to the innovative “1+i” philosophy, that combines a constant speed and a variable speed compressor in the same refrigerant circuit:

- The inverter compressor allows an efficient capacity regulation, avoiding on/off cycles.
- The single-circuit configuration always makes the most of the available heat exchange surface.

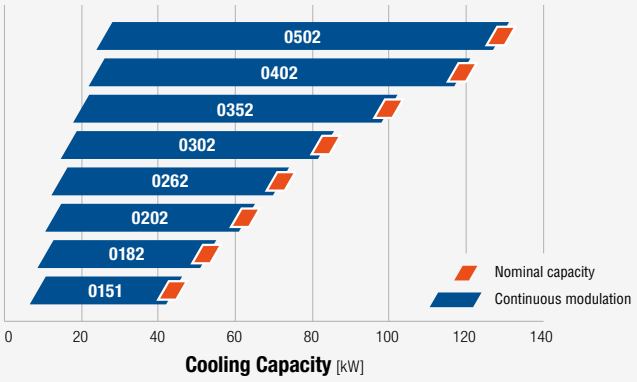
The graph shows the unit’s efficiency with the variation of the cooling load and air temperature (EN14825 - SEER operating conditions).



CONTINUOUS CAPACITY MODULATION

The inverter technology allows continuous, stepless modulation of the delivered capacity.

The units can easily adapt to any part load, without performing inefficient on/off cycles.

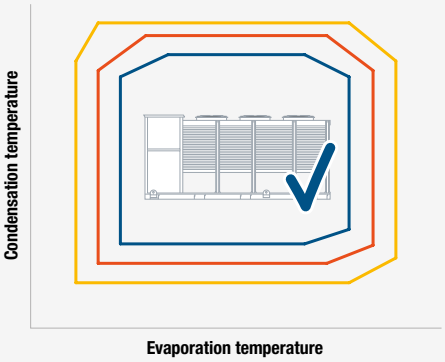


EVERYTHING UNDER CONTROL

The use of a fixed speed and a variable speed compressor in the same circuit brings great advantages in terms of efficiency, but also increased complexity in the refrigerant circuit control.

Thanks to the advanced proprietary logics, several parameters are constantly monitored (temperatures, pressures, oil levels), ensuring that the hybrid tandem of compressors is always kept safe, in all conditions.

The result is the total unit reliability.



ASHRAE 90.1 compliant

Compliant with ASHRAE 90.1-2013, the new range helps you meet LEED requirements, which adds value to your buildings.

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

All the models of i-NX and i-NX-N are Eurovent certified.

ErP 2021 COMPLIANT

The new family exceeds the strictest Ecodesign Directive tier, placing it on the top level of the market.

TECHNOLOGICAL CHOICES

W3000+ CONTROL

Fully in-house developed management software.

- Proprietary settings for faster adaptive responses to different dynamics
- Devoted User Limit Control function to ensure complete reliability in extreme conditions
- Precise temperature control with continuous capacity modulation
- 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, in addition or in substitution to the Compact keyboard

Refrigerant circuit

- Single circuit to guarantee the best energy efficiency at part loads
- Electronic expansion valve for enhanced performance and better dynamic response

Structure

Base and frame made of hot-galvanized steel, all parts polyester-powder painted.

- Maximum accessibility to all internal components
- High resistance to atmospheric agents
- Easy handling, lifting, and transport thanks to the standard eyebolts

Brazed 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

Maximum quality of every single component, attention to detail, and advanced application of inverter technology: i-NX and i-NX-N are the ideal solutions for forward-looking cooling systems.

Fans

High efficiency axial electric fans with devoted devices for speed modulation (DVV).

- Precise airflow management, reduced energy consumption, and lower sound level at partial loads
- Condensation control for an extended operating range

UP TO + 8% MORE SEASONAL EFFICIENCY

EC AXIAL

EC fans (opt.)

- Continuous regulation of the air flow
- Reduced power consumption and increased efficiencies at partial loads
- Very low ambient temperature operation

Highly resistent finned coils

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

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.)

Built-in pump group (Opt.)

VPF

Factory-mounted pumps and pre-plumbed hydraulic components, for minimum on-site installation time, work, and cost.

- Single or twin in-line pumps available, high or low head, fixed or variable speed
- Integrated buffer tank availability
- Electronic primary flow controls for constant pressure or constant temperature

EXCLUSIVE “1+i” PHILOSOPHY

INVERTER

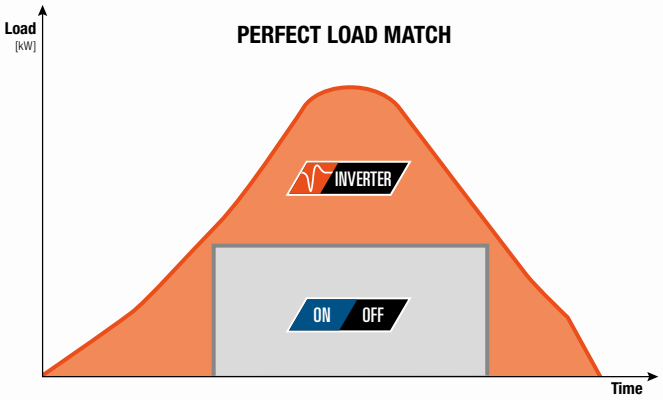
The unit combines a constant speed and a variable speed hermetic scroll compressor in the same refrigerant circuit (the size 0151 has one variable speed compressor only).

The hybrid core “1+i” takes full advantage of both technologies, ensuring high performance and accurate regulation in any load condition, especially at part loads.

Proprietary oil management logics grant safe and stable operation of the compressor tandem in any working conditions.

- Unbeatable seasonal efficiency
- Continuous and accurate capacity modulation
- Stable leaving water temperature

The inverter compressor is always the first to start up and the last to turn off.



ACCESSORIES AND FURTHER OPTIONS

HYDRONIC MODULES AND FLOW CONTROLS

The units can be equipped with a factory-mounted complete pump group, which **optimizes hydraulic and electrical installation** space, time and costs, or simply with terminals to control the external pumps with the unit control logic.

Pump group
Single or twin in-line pumps available, high or low head (approximately 100kPa or 200kPa), with fixed or variable speed.
A pump group with a buffer tank is also provided in case the minimum system volume is not guaranteed.

Fixed speed pumps
1 pump 2-poles, low head
1 pump 2-poles, high head
2 pumps 2-poles, low head
2 pumps 2-poles, high head

Variable speed pumps
1 pump 2-poles, low head
1 pump 2-poles, high head
2 pumps 2-poles, low head
2 pumps 2-poles, high head

Connections for external pump groups
Dedicated terminals available for the management of 1 or 2 external pumps at fixed or variable speed.

ON / OFF Signal
1 pump / 2 pumps

Modulating signal
1 pump / 2 pumps

VPF CONTROL LOGICS

The logic of the VPF (Variable Primary Flow) series regulates the speed of the pumps following the thermal load and at the same time positively influencing the unit's thermoregulation algorithm, optimizing it for variable flow operation.

In this way maximum energy savings, stability of operation, and reliability are always guaranteed.

VPF: constant ΔP on the plant side
For systems composed of the primary circuit only

VPF.E: constant ΔT on the plant side
For systems composed of the primary circuit only

VPF.D: constant ΔT on the plant side
For systems composed of primary and secondary circuits separated by hydraulic circuit breaker

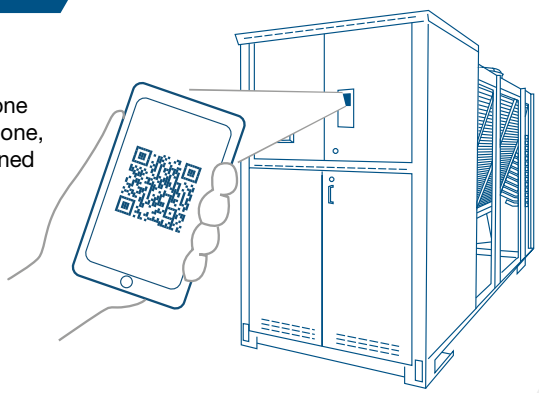
KIPlink user interface

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.

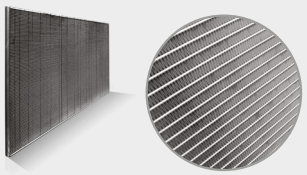
- User-friendly navigation menu
- Easier on-site operation
- Real-time graphs and trends
- Enhanced data logger function



COILS AND COATINGS

MICROCHANNEL

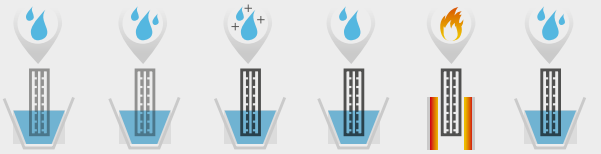
Al - Regular (std for i-NX)



Al - E-coating

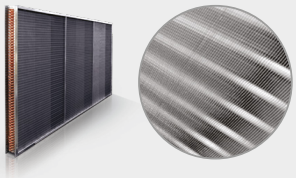
- Excellent resistance to UV rays.

E-coating process



TUBE & FINS

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



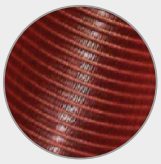
Cu/Al - Pre-painted fins

- 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



FURTHER OPTIONS

4-20mA auxiliary signal	Enables remote water set-point adjustments (analog input).
Double set-point remote signal	Enables the remote switch between 2 water set-points (digital input).
Water set point compensation for outdoor air temperature	An air temperature probe adjusts the water set-point according to summer and winter climatic curves.
Kit Low Noise	The compressor compartment is lined with a soundproofing material. Sound power reduction: -2 dB(A).
Night mode	Limits the unit sound level reducing the speed of compressor and fans. Sound power reduction (with factory settings): -3 dB(A).
Auxiliary source management (only for heat pumps)	Allows the use of an auxiliary heating source to integrate the heat pump capacity (e.g. solar collectors, gas boilers).
DHW valve management (only for heat pumps)	Controls an external 3-way valve for DHW production.
U.L.C. - User Limit Control	Guarantees start-up and operation in case of critical plant water temperature. Devoted control functions manage unit's protections and control a modulating mixing valve (not supplied).
Network analyzer for BMS	Acquires the electrical data and the power absorbed by the unit and sends them to the BMS for energy metering (Modbus RS485).

i-NX 0151P - 0502P

Air cooled chiller
for outdoor installation
43,9-129 kW

COOLING SCROLL AXIAL PLATES
EEV VPF INVERTER HFC R410A

i-NX			0151P	0182P	0202P	0262P	0302P	0352P	0402P	0502P
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	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	43,9	52,9	63,1	72,1	83,8	101	120	129
Total power input	(1)	kW	15,7	18,8	21,4	25,0	29,2	35,2	41,9	46,8
EER	(1)	kW/kW	2,80	2,81	2,95	2,88	2,87	2,87	2,86	2,76
COOLING ONLY (EN14511 VALUE)										
Cooling capacity	(1)(2)	kW	43,6	52,6	62,7	71,7	83,4	100	119	129
EER	(1)(2)	kW/kW	2,73	2,75	2,88	2,82	2,82	2,82	2,80	2,72
Cooling energy class			C	C	C	C	C	C	C	C
ENERGY EFFICIENCY										
SEASONAL EFFICIENCY IN COOLING (REG. EU 2016/2281)										
AMBIENT REFRIGERATION										
Prated,c	(10)	kW	43,6	52,6	62,7	71,7	83,4	100	119	129
SEER	(10)(11)		4,15	4,11	4,13	4,18	4,23	4,36	4,32	4,30
Performance η_s	(10)(12)	%	163	161	162	164	166	171	170	169
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN REFRIGERATION										
Water flow	(1)	l/s	2,10	2,53	3,02	3,45	4,01	4,82	5,73	6,18
Pressure drop	(1)	kPa	37,2	41,2	42,3	39,4	35,0	36,2	42,9	38,9
REFRIGERANT CIRCUIT										
Compressors nr.		N°	1	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1	1
Refrigerant charge		kg	7,00	7,20	8,90	9,40	9,50	12,5	12,9	13,5
NOISE LEVEL										
Sound Pressure	(5)	dB(A)	51	52	53	53	54	55	57	57
Sound power level in cooling	(6)(7)	dB(A)	83	84	85	85	86	87	89	89
SIZE AND WEIGHT										
Length	(9)	mm	2000	2000	2625	2625	2625	3250	3250	3250
Width	(9)	mm	1350	1350	1350	1350	1350	1350	1350	1350
Height	(9)	mm	2070	2070	2070	2070	2070	2170	2170	2170
Operating weight	(9)	kg	600	660	750	780	810	1060	1070	1080

i-NX / SL			0151P	0182P	0202P	0262P	0302P	0352P	0402P	0502P
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE										
COOLING ONLY (GROSS VALUE)										
Cooling capacity	(1)	kW	42,6	51,2	60,1	68,1	81,2	96,7	115	124
Total power input	(1)	kW	14,4	17,8	20,9	24,5	28,3	33,9	39,3	44,3
EER	(1)	kW/kW	2,96	2,88	2,88	2,78	2,87	2,85	2,93	2,81
COOLING ONLY (EN14511 VALUE)										
Cooling capacity	(1)(2)	kW	42,3	50,9	59,8	67,7	80,8	96,3	115	124
EER	(1)(2)	kW/kW	2,89	2,81	2,81	2,73	2,82	2,80	2,88	2,76
Cooling energy class			C	C	C	C	C	C	C	C
ENERGY EFFICIENCY										
SEASONAL EFFICIENCY IN COOLING (REG. EU 2016/2281)										
AMBIENT REFRIGERATION										
Prated,c	(10)	kW	42,3	50,9	59,8	67,7	80,8	96,3	115	124
SEER	(10)(11)		4,18	4,10	4,11	4,17	4,22	4,46	4,50	4,48
Performance η_s	(10)(12)	%	164	161	162	164	166	176	177	176
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN REFRIGERATION										
Water flow	(1)	l/s	2,04	2,45	2,87	3,26	3,88	4,62	5,50	5,95
Pressure drop	(1)	kPa	35,1	38,7	38,3	35,2	32,9	33,2	39,6	36,0
REFRIGERANT CIRCUIT										
Compressors nr.		N°	1	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1	1
Refrigerant charge		kg	8,10	8,30	8,70	9,20	11,8	12,3	14,7	15,2
NOISE LEVEL										
Sound Pressure	(5)	dB(A)	45	45	46	46	47	48	50	50
Sound power level in cooling	(6)(7)	dB(A)	77	77	78	78	79	80	82	82
SIZE AND WEIGHT										
Length	(9)	mm	2625	2625	2625	2625	3250	3250	3875	3875
Width	(9)	mm	1350	1350	1350	1350	1350	1350	1350	1350
Height	(9)	mm	2070	2070	2070	2070	2170	2170	2170	2170
Operating weight	(9)	kg	700	760	790	820	980	1090	1180	1200

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 R410A [GWP_{100} 2088] fluorinated greenhouse gases.

Certified data in EUROVENT

i-NX-N 0151P - 0502P

Air source heat pump
for outdoor installation
41,0-128 kW

HEATING COOLING SCROLL AXIAL PLATES
EEV VPF INVERTER R HFC R410A

i-NX-N			0151P	0182P	0202P	0262P	0302P	0352P	0402P	0502P
Power supply		V/ph/Hz	400/3+N/50	400/3+N/50	400/3+N/50	400/3+N/50	400/3/50	400/3/50	400/3/50	400/3/50
PERFORMANCE										
COOLING ONLY (GROSS VALUE)										
Cooling capacity	(1)	kW	43,87	50,90	62,09	74,40	85,27	104,7	113,8	128,3
Total power input	(1)	kW	15,79	18,34	22,11	26,13	30,40	37,39	41,10	46,15
EER	(1)	kW/kW	2,778	2,781	2,810	2,851	2,806	2,799	2,769	2,783
COOLING ONLY (EN14511 VALUE)										
Cooling capacity	(1)(2)	kW	43,60	50,60	61,70	74,00	84,90	104,2	113,3	127,7
EER	(1)(2)	kW/kW	2,710	2,720	2,750	2,790	2,750	2,750	2,720	2,740
Cooling energy class			C	C	C	C	C	C	C	C
HEATING ONLY (GROSS VALUE)										
Total heating capacity	(3)	kW	46,80	53,82	66,60	79,72	90,60	111,6	119,5	138,0
Total power input	(3)	kW	14,85	17,09	21,08	24,83	28,81	35,54	37,97	42,95
COP	(3)	kW/kW	3,141	3,146	3,156	3,214	3,146	3,144	3,145	3,209
HEATING ONLY (EN14511 VALUE)										
Total heating capacity	(3)(2)	kW	47,10	54,10	67,00	80,20	91,10	112,2	120,1	138,7
COP	(3)(2)	kW/kW	3,100	3,100	3,110	3,170	3,110	3,110	3,110	3,170
Cooling energy class			B	B	B	B	B	B	B	B
ENERGY EFFICIENCY										
SEASONAL EFFICIENCY IN HEATING (REG. EU 813/2013)										
PDesign	(4)	kW	34,7	41,4	45,9	61,2	68,9	85,4	85,2	106
SCOP	(4)(13)		3,73	3,80	3,68	3,83	3,84	4,02	3,98	3,97
Performance η_s	(4)(14)	%	146	149	144	150	151	158	156	156
Seasonal efficiency class	(15)		A+	A+	A+	A++	A++	-	-	-
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN REFRIGERATION										
Water flow	(1)	l/s	2,098	2,434	2,969	3,558	4,078	5,008	5,442	6,137
Pressure drop	(1)	kPa	37,2	38,2	40,9	42,0	36,2	39,0	38,8	38,4
HEAT EXCHANGER USER SIDE IN HEATING										
Water flow	(3)	l/s	2,259	2,598	3,215	3,848	4,373	5,387	5,768	6,659
Pressure drop	(3)	kPa	43,1	43,6	48,0	49,1	41,6	45,1	43,6	45,2
REFRIGERANT CIRCUIT										
Compressors nr.		N°	1	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1	1
Refrigerant charge		kg	14,4	19,5	22,9	27,1	26,8	38,7	39,2	50,9
NOISE LEVEL										
Sound Pressure	(5)	dB(A)	66	66	68	69	68	70	70	70
Sound power level in cooling	(6)(7)	dB(A)	84	84	86	87	87	89	89	89
Sound power level in heating	(6)(8)	dB(A)	84	84	85	86	87	89	89	89
SIZE AND WEIGHT										
Length	(9)	mm	2000	2000	2625	2625	3250	3250	3250	3875
Width	(9)	mm	1350	1350	1350	1350	1350	1350	1350	1350
Height	(9)	mm	2070	2070	2070	2070	2170	2170	2170	2170
Operating weight	(9)	kg	650	730	820	880	1030	1190	1210	1340

i-NX-N /SL			0151P	0182P	0202P	0262P	0302P	0352P	0402P	0502P
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	400/3/50	400/3/50
PERFORMANCE										
COOLING ONLY (GROSS VALUE)										
Cooling capacity	(1)	kW	40,96	48,39	59,30	72,40	81,36	98,56	111,7	125,7
Total power input	(1)	kW	14,76	17,30	21,37	25,36	28,32	35,56	40,19	43,83
EER	(1)	kW/kW	2,770	2,798	2,771	2,850	2,876	2,770	2,779	2,870
COOLING ONLY (EN14511 VALUE)										
Cooling capacity	(1)(2)	kW	40,80	48,10	59,00	72,00	81,00	98,20	111,2	125,1
EER	(1)(2)	kW/kW	2,710	2,740	2,710	2,790	2,830	2,720	2,730	2,820
Cooling energy class			C	C	C	C	C	C	C	C
HEATING ONLY (GROSS VALUE)										
Total heating capacity	(3)	kW	45,67	54,94	66,62	81,40	90,40	110,8	124,4	139,5
Total power input	(3)	kW	13,89	16,82	20,35	24,94	27,68	33,96	38,08	42,74
COP	(3)	kW/kW	3,288	3,268	3,281	3,269	3,264	3,259	3,265	3,267
HEATING ONLY (EN14511 VALUE)										
Total heating capacity	(3)(2)	kW	46,00	55,30	67,00	81,90	90,90	111,4	125,1	140,2
COP	(3)(2)	kW/kW	3,240	3,220	3,230	3,220	3,230	3,220	3,230	3,230
Cooling energy class			A	A	A	A	A	A	A	A
ENERGY EFFICIENCY										
SEASONAL EFFICIENCY IN HEATING (REG. EU 813/2013)										
PDesign	(4)	kW	34,4	41,3	50,0	57,0	67,8	77,4	94,1	105
SCOP	(4)(13)		3,77	3,76	3,68	3,82	3,96	3,93	4,02	4,04
Performance η_s	(4)(14)	%	148	147	144	150	155	154	158	158
Seasonal efficiency class	(15)		A+	A+	A+	A++	A++	-	-	-
EXCHANGERS										
HEAT EXCHANGER USER SIDE IN REFRIGERATION										
Water flow	(1)	l/s	1,959	2,314	2,836	3,462	3,891	4,713	5,341	6,010
Pressure drop	(1)	kPa	32,4	34,6	37,3	39,8	33,0	34,6	37,3	36,8
HEAT EXCHANGER USER SIDE IN HEATING										
Water flow	(3)	l/s	2,205	2,652	3,216	3,929	4,364	5,348	6,004	6,732
Pressure drop	(3)	kPa	41,1	45,4	48,0	51,2	41,5	44,5	47,2	46,2
REFRIGERANT CIRCUIT										
Compressors nr.		N°	1	2	2	2	2	2	2	2
No. Circuits		N°	1	1	1	1	1	1	1	1
Refrigerant charge		kg	18,8	25,4	26,2	26,6	37,6	37,0	49,9	61,0
NOISE LEVEL										
Sound Pressure	(5)	dB(A)	60	60	61	61	61	63	63	63
Sound power level in cooling	(6)(7)	dB(A)	78	78	79	80	80	82	82	82
Sound power level in heating	(6)(8)	dB(A)	78	78	79	80	80	82	82	82
SIZE AND WEIGHT										
Length	(9)	mm	2000	2625	2625	3250	3250	3875	3875	4500
Width	(9)	mm	1350	1350	1350	1350	1350	1350	1350	1350
Height	(9)	mm	2070	2070	2070	2170	2170	2170	2170	2170
Operating weight	(9)	kg	670	830	860	1010	1080	1260	1320	1460

"BY FAR THE BEST PROOF IS EXPERIENCE"

Sir Francis Bacon
British Philosopher (1561 - 1626)

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.

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: 2 x NX-N-K 1004T, 14 x WIZARD

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

IKEA MUSEUM

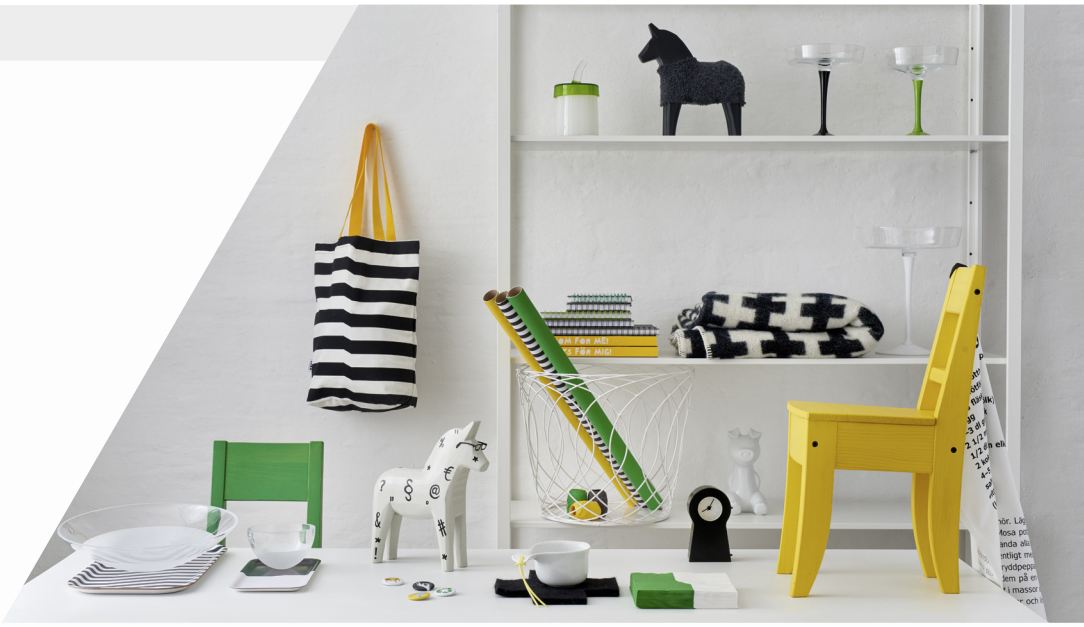
2016-18 Almhult - Sweden

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, the 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.

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

i-NX-N_ENG_11-2018

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.

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