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

HEAT PUMPS

CHILLER

i-NX² G07

i-NX² N G07

AIR SOURCE CHILLERS AND
REVERSIBLE HEAT PUMPS
FOR OUTDOOR INSTALLATION.
FROM 50 TO 220 KW.

melcohit.com

CLIMAVENETA®

i-NX²G07
i-NX²N G07

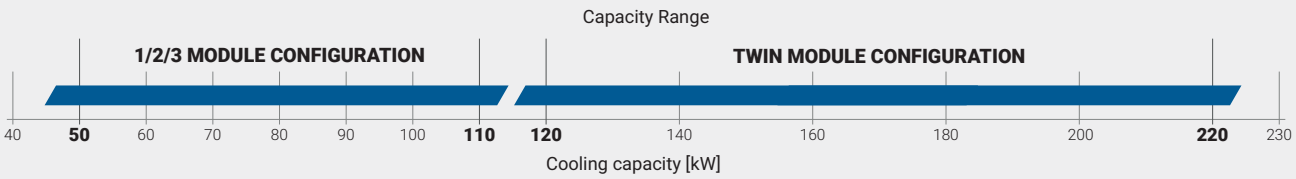
Formidable.
In every aspect.

Air source chillers and reversible heat pumps with Mitsubishi Electric variable speed scroll compressors and R32 low GWP refrigerant. From 50 to 220 kW.

i-NX2-G07 and i-NX2-N-G07 are the new chiller and heat pump ranges designed with the utmost care in terms of quality and details. Dedicated to different applications, from comfort to industrial or IT cooling processes, i-NX2-G07 and i-NX2-N-G07 achieve top-level energy efficiencies, in the most compact footprints in their category.

EXTENDED RANGE

7 new sizes developed in 3 compact modules to fit any thermal load request up to 110 kW, extendable up to 220 kW through the optional twin module configuration, the connection of two modules of the same size.



Module 1
50 / 60 / 70 kW

Module 2
80 / 90 kW

Module 3
100 / 110 kW

Designed down to a fine art.

Groundbreaking performance. Especially in partial load

i-NX2-G07 and i-NX2-N-G07 bring brilliant performance, particularly in partial load conditions, thus helping individuals and business reduce the energy bill of their HVAC system.

	EER	**SEER**	SEPR HT	
i-NX2-G07	**3,3**	**5,6**	**6,5**	UP TO

	COP	SEER	**SCOP LT**	SCOP MT
i-NX2-N-G07	**3,4**	**4,6**	**4,6**	**3,5**

EER – conditions: evap. 12/7°C, air 35°C – NET values [EN14511 – EN14825]
SEER – Regulation (EU) N.2281/2016
SEPR-HT – Regulation (EU) N.2281/2016

COP – conditions: cond. 40/45°C, air 7(6)°C – NET values [EN14511 – EN14825]
SCOP LT – Regulation (EU) N.813/2013
SCOP MT – Regulation (EU) N.813/2013

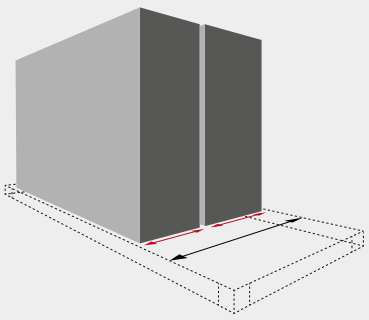
Supreme class quietness

Best-in-class sound levels without additional accessories. i-NX2-G07 and i-NX2-N-G07 units are equipped as standard with the acoustical enclosure for compressors and hydronic kits.

Down to
77 dB(A)

Best-in-class footprint

Extremely compact footprint, among the best in the category. The reduced width of the units is ideal for multi-unit transportation, optimizing the shipping spaces and shipment via container.



Huge Benefits for every Kind of Application

COMFORT APPLICATIONS

- Top-level performance at partial loads
- Extremely silent and compact unit
- Large operating map down to -20°C of outdoor air temperature; up to 65°C of hot water production in heat pump mode
- Plug & Play solution, thanks to integrated pumps kit + buffer tank
- Domestic Hot Water production (for i-NX2-N-G07)
- Optimized for heating mode (i-NX2-N-G07)

PROCESS APPLICATIONS

- Large operating map down to -12°C of evaporator leaving water temperature and down to -20°C of outdoor air temperature
- Extremely high reliability components
- Fully accessible service points for an easier maintenance
- Refrigerant leak detection options available
- Several coil solutions including e-coated microchannel, Cu/Al, pre-painted fins, fin guard silver and hydrophilic treatments (for i-NX2-N-G07)

IT COOLING APPLICATIONS

- i-NX2-G07 combined with w-AV close control series creates a complete ideal for small and medium data centers
- High leaving water temperature up to 24°C
- LAN functions with up to 8 units
- HPC software for optimizing the entire chillers + CRAHs systems
- Wide option availability ideal for this kind of application (demand limit, external capacity cap, thermal energy meter)

Why R32?

i-NX2-G07 and i-NX2-N-G07 with R32 refrigerant are key in the company's path towards the creation of a greener future.

The reduced GWP level of this refrigerant gas tackles both direct and indirect global warming, offering customers a concrete forward-looking solution for your building and a concrete alternative to traditional refrigerants.

R 32

Low GWP
-66% GWP vs R410A

Safety Class A2L

REDUCED ENVIRONMENTAL IMPACT

- **0 ODP** - Ozone Depletion Potential
- **One-third OWP** that R410A
- F-Gas phasedown compliant

RELIABILITY

- **Easy to handle,** reuse, and recycle
- **Low toxicity,** low flammability
- A single component refrigerant

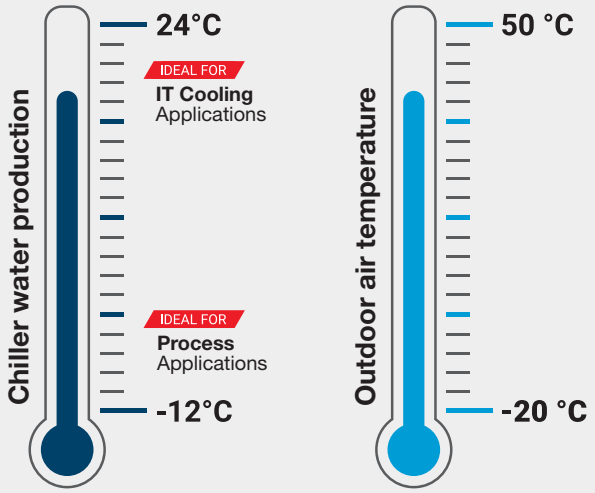
PERFORMANCE & ENVELOPE

- Ideal for the next generation of equipment
- Requires **less refrigerant volume per kW**
- **High refrigeration** and thermal conductivity
- **Low pressure drops**
- **Affordable** and readily available

Wide Operating Range

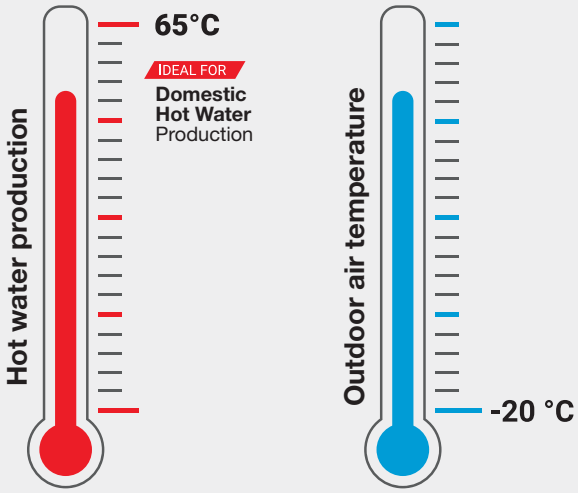
Going beyond ordinary limits of standard heat pumps and chillers, i-NX2-G07 and i-NX2-N-G07 ranges achieve extreme water temperatures, making these units ideal for many uses from Comfort to Process and IT Cooling applications.

Matching Mission Critical Applications Requirements



i-NX2-G07 can operate with outdoor temperatures up to +50°C and chilled water temperatures from -12°C to +24°C, significant values which make these units ideal for Process and IT Cooling applications.

One Unique Unit For Heating, Cooling and Producing Hot Water



i-NX2-N-G07 can produce, alone and without any auxiliary accessory, both medium temperature water for space heating and cooling, and hot water for domestic use up to 65°C. These key features make i-NX2-N-G07 an interesting alternative for classic gas or fuel oil heating systems.

- Use of renewables sources
- Considerable energy savings
- Green footprint

Technological Choices

Electrical Control Box

W3000+ control software, available with standard keyboard or touch screen, features proprietary settings, to perfectly manageeach single product dynamic.

Compact keyboard (STD)

7 inch touch screen (opt.)

KIPLink (opt.)
Full access by simply scanning the QR code

Source side heat exchanger

V-shape micro-channel coils for chillers and Cu/Al coils for heat pumps with several optional coil types and treatments available.

Mitsubishi Electric quality components

Complete Fan assembly

With high-efficiency EC fans as std

Inverter scroll compressors

With acoustical enclosure as std

Fans & Compressors' drivers

EMI filters and DC reactors included

Complete Hydronic Kit Options

Factory-installed **several pumps** (with VPF options) and **buffer tank** (opt.)

Single-head in-line pump

Twin-head in-line pump

Group Control Systems

INTEGRATED SOLUTIONS

- LAN Multi Manager+

1 Architecture

Exploits proprietary LAN technology to connect a group of chillers and heat pumps.

2 Interfacing

Completely integrated in the units.

3 Applications

Comfort, Process and IT Cooling applications.

Chillers and heat pumps.

4 Function

Smart management of the group of units with dynamic master logic, stand-by management, load and resource management.

4 Function

Smart Coordinated Defrost

PATENT PENDING
PATENT PENDING

Smart control logic for coordinating the non-simultaneous start of defrosting cycles of a group of heat pumps:

- Minimization of the energy required for defrost
- Increase of the maximum heat output of the system which can be constantly supplied
- Increased system efficiency
- Minimum impact on leaving water temperature

LAN FUNCTIONS

Thanks to LAN logics integrated into i-NX2-G07 and i-NX2-N-G07, it is possible to manage up to 8 units in a single group optimizing load distribution, alarm management, and units back-up/stand-by.

CENTRALISED SOLUTIONS

- Manager 3000+
- Data Center Manager+

1 Architecture

Designed to be connected to every chiller and heat pump.

2 Interfacing

Devoted cabinet with 10,1” touch screen display.

3 Applications

- **Manager 3000+**
  Comfort and Process applications.
  Chillers and heat pumps.
- **Data Center Manager+**
  IT Cooling applications.
  Chillers and heat pumps.

4 Function

Centralized control and monitoring of a group of units, alarm management and mailing service.

TO LEARN MORE ABOUT CENTRALISED SOLUTIONS
https://www.melcohit.com/en/products?range=72,71,69,67

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IT Cooling Applications

System approach: Chillers + CRAHs

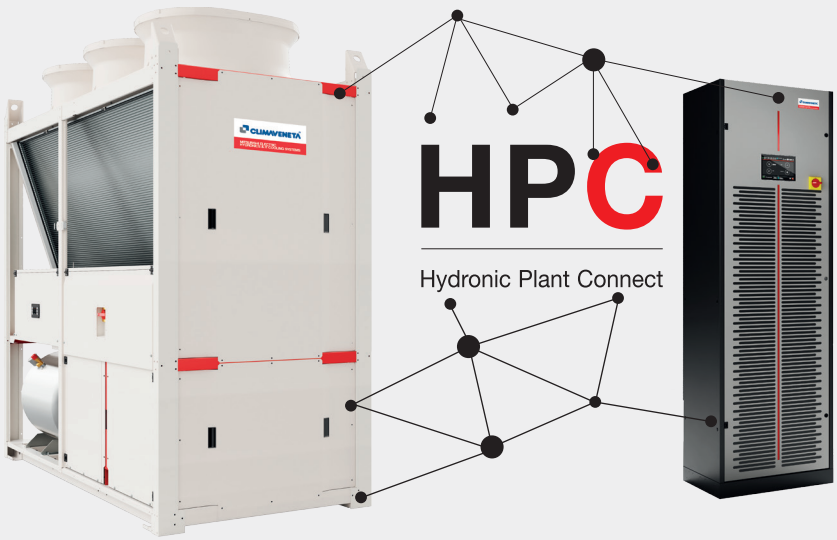
HPC

Hydronic Plant Connect

HPC

Up to 20 groups of CRAHs are connected to the group of chillers.
Proprietary LAN network for the optimization of the entire cooling system: CRAHs, chillers, FC availability, fans, pumps, and valves.

A complete cooling package dedicated to your high efficiency data center.



TO LEARN MORE ABOUT HPC
https://www.melcohit.com/en/stories/124/hpc

Main Options

Energy Meter for BMS and for W3000+	Acquires the electrical data and the power absorbed by the unit. Data is sent to the BMS or directly readable on the unit keyboard.
Thermal Energy Meter	Evaluates the cooling/heating capacity delivered by the unit.
External Capacity Cap	This option controls the maximum capacity output of the unit and it's ideal for full inverter or hybrid units.
Hydrophilic Treatment	Source side heat exchanger treatment that allows water droplets to flow off the surface (i-NX2-N-G07 only).
Hydronic Kits	Low or high head, fixed or variable speed, single or twin pumps and buffer tank always integrated in the unit.
Auxiliary Source and DHW Management	Functions for plants requiring the production of DHW in a storage tank (i-NX2-N-G07 only).
Multifunction Card	Night mode, hydraulic decoupler probe for pump activation and User Limit Control Function.
Modular Installation Kit	Two modules of the same size can be connected thanks to a dedicated kit: ✔ structural and mechanical connection for reinforcement and safety ✔ hydraulic connections ✔ a software connection through multi-unit multi manager control

Factory Acceptance Test Experience

Test your heat pump before installation and make sure its performance is totally reliable.

Factory Acceptance Test

Factory Acceptance Test is available as additional service in order to test the unit under specific conditions.

Carried out within modern and sophisticated facilities, this service gives the customer the possibility to choose among different test options in order to:

- Verify unit operation under severe conditions
- Check performance, both at full and partial loads
- Test the unit with low outdoor air temperature operation
- Detect sound emissions
- Time the fast restart

TO LEARN MORE ABOUT FACTORY ACCEPTANCE TEST
https://www.youtube.com/watch?v=Cy2FXAfhvj8

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