



ARIES  | **iARIES**  *inverter*



Air cooled liquid chillers featuring reciprocating compressors with propane.
Nominal cooling capacity 245 – 472 kW



*Cooling your industry,
optimising your process.*



Cooling, conditioning, purifying.

THE NATURAL ANSWER TO YOUR COOLING NEEDS

iASN and ASN air-cooled industrial process chillers are designed specifically to deliver absolute dependability for the most demanding industrial applications.

MTA is fully committed to supporting the green transition of energy systems towards an all-inclusive solution. Advanced technologies and the application of natural refrigerant R290, with zero environmental impact, are combined in ARIES N and iARIES N chillers, offering a long-term sustainable solution.

The chiller features all the main hydraulic and mechanical components integrated inside the unit, as standard.

An extensive range of options, coupled with wide operating limits, confirm iASN and ASN as the perfect plug & play solution, the ideal to fit in a variety of process cooling applications.

R290: THE NATURAL CHOICE FOR THE FUTURE

NATURAL > R290 is a totally natural refrigerant.

ECOLOGICAL > With a GWP of only 3 and an ODP of zero, R290 is the most ecological refrigerant and does not impact the environment.

SAFE & RELIABLE > R290 is a non-toxic A3 refrigerant; it has been applied for over 100 years and is fully tried and tested.

ECONOMICAL > Applying R290 avoids carbon taxes and benefits from local national incentives.

FUTURE PROOF > R290 is exempt from HFC phase-out programs, consequently your chiller is future proof.



Versions

- **iASN** - The benefit of a variable speed and a fixed speed compressor in 2 circuits, offering high efficiency in any load condition (*Full-inverter configuration available on request*).
- **ASN** - Features 2 fixed speed compressors in 2 independent circuits. Efficient and dependable.

Acoustic configurations

- **HE** - Basic acoustic configuration.
- **SHE** - Low noise acoustic configuration.

Up to **-5 dB(A)** for silenced **SHE** version.
Silent operation thanks to **integral enclosure** design.

Certified performances

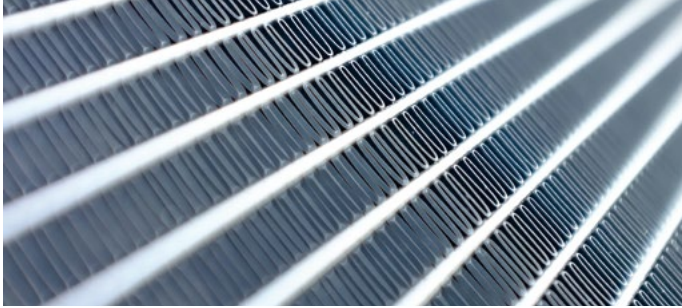
iASN and **ASN** chillers efficiency exceeds the latest Ecodesign standard for process cooling applications and are guaranteed by Eurovent-certification.

SEPR HT 5,9
UP TO
iARIES N (REG. 2016/2281)

SEPR HT 5,6
UP TO
ARIES N (REG. 2016/2281)

Microchannel condensers

- Highly resistant aluminium alloys;
- Up to 30% refrigerant charge reduction;
- High energy efficiency with closer thermal approach temperatures;
- Optional epoxy coating available to extend durability in corrosive environments.



Integrated controller

- User friendly touch screen interface;
- Control software developed in-house for fast and adaptive capacity management;
- Enhanced diagnostics with data-logging function;
- Extensive connectivity and supervision via Ethernet, USB and RS485 Modbus;
- Remote control, management and monitoring with xVISION.



Standard features

- Natural Refrigerant R290 – Propane;
- 2 reciprocating compressors in 2 circuits; 1+1 configuration on iASN;
- Compressor crankcase heater and phase-monitor;
- Integral enclosure and acoustic insulation on compressor compartment;
- Brazed plate evaporator heat exchanger;
- Microchannel condenser coils;
- Axial fans complete with protective grids and die-cast aluminium airfoil blade profiles (EC as standard on iASN);
- Electronic expansion valves;
- Electrical cabinet protection rating IP54;
- Electronic microprocessor controller with touch screen user display;
- Modbus RS485 serial output for connection to supervision systems;
- IN/OUT compressor valves;
- "Victaulic" hydraulic connections kit (supplied for each unit);
- Extensive tests and verifications performed in the factory;
- Non-freezing oil and refrigerant charge for configurations up to 12 kg of refrigerant volume.

Options

- MWT version (down to -10 °C outlet water temperature);
- Low ambient temperature option (down to -20 °C);
- Single or twin water pumps with low (P2) or medium head pressure (P3);
- Water accumulation tank;
- Anti-freeze protection heaters for heat exchangers, pump/s and water accumulation tank (if installed);
- High efficiency EC brushless fans (standard on iASN);
- Protective epoxy coating for condenser coils, for installation in aggressive environments;
- Finned pack condensing coils with copper pipes and aluminium fins;
- Metal mesh filters for condenser coil protection.

Kits

- Antivibration mounts;
- Metal mesh filters for condenser coil protection;
- xVISION web-based remote management and monitoring platform.

Wide operating range

PRODUCTION OF EVAPORATOR
OUTLET WATER TEMPERATURE

-10/+20 °C

OPERATION AT FULL LOAD WITH
EXTERNAL AIR TEMPERATURE*

-20/+47 °C

*[-20/+45 °C for iASN]

Key points



Plug and Play

Wide range of accessories and kits for a customized solution.



Safe

Extensive standard safety equipment.



Easy maintenance

Easy access to all components.

Models iASN		075		100		110		150	
Versions		HE	SHE	HE	SHE	HE	SHE	HE	SHE
Nominal cooling capacity (1)	kW	245,0	239,4	314,5	307,8	388,3	375,5	472,4	459,6
Total absorbed power (1)	kW	58,1	58,5	72,6	72,7	93,5	93,7	108,9	108,4
EER (1)		4,22	4,09	4,33	4,23	4,15	4,01	4,34	4,24
SEPR HT (2)		5,69	5,54	5,88	5,80	5,49	5,39	5,45	5,37
Max external air temperature (3)	°C	45	45	45	45	45	45	45	45
Power supply	V/Ph/Hz	400±10% / 3-PE / 50							
Circuits / Compressors	N°	2/2							
Sound power (4)	dB(A)	89,9	84,6	91,6	86,2	91,8	86,7	93,1	88,2
Sound pressure (5)	dB(A)	61,9	56,6	63,6	58,2	63,8	58,7	65,1	60,2
Width	mm	2241	2241	2241	2241	2241	2241	2241	2241
Depth	mm	3542	3542	3542	3542	3542	3542	4532	4532
Height	mm	2426	2426	2426	2426	2426	2426	2426	2426
Installed weight	Kg	2087	2087	2282	2282	2437	2437	3147	3147

Models ASN (*)		075		100		110		150	
Versions		HE	SHE	HE	SHE	HE	SHE	HE	SHE
Nominal cooling capacity (1)	kW	236,5	226,9	291,2	298,1	369,8	351,7	480,8	458,5
Total absorbed power (1)	kW	54,8	54,8	72,6	68,0	86,3	86,4	109,5	109,8
EER (1)		4,32	4,14	4,01	4,38	4,29	4,07	4,39	4,18
SEPR HT (2)		5,40	5,32	5,01	5,56	5,13	5,00	5,29	5,15
Max external air temperature (3)	°C	47	47	47	47	47	47	47	47
Power supply	V/Ph/Hz	400±10% / 3-PE / 50							
Circuits / Compressors	N°	2/2							
Sound power (4)	dB(A)	89,9	84,6	91,6	86,2	91,8	86,7	93,1	88,2
Sound pressure (5)	dB(A)	61,9	56,6	63,6	58,2	63,8	58,7	65,1	60,2
Width	mm	2241	2241	2241	2241	2241	2241	2241	2241
Depth	mm	3542	3542	3542	3542	3542	3542	4532	4532
Height	mm	2426	2426	2426	2426	2426	2426	2426	2426
Installed weight	Kg	2159	2159	2283	2283	2601	2601	3309	2601

Data declared according to UNI EN 14511:2018, referring to standard units without accessories/options and in nominal working conditions.

- (1) Data referred to full load operation and nominal conditions, ambient temperature 25 °C and evaporator water IN/OUT temperature 20/15 °C;
- (2) Data declared in compliance with the European Regulation (EU) 2016/2281 with regard to ecodesign requirements for cooling products and high temperature process chillers;
- (3) Data declared referred to cooling mode and outlet water temperature 15 °C;
- (4) Sound power: determined on the basis of measurements taken in accordance with the standard ISO 3744;
- (5) Sound pressure: average value obtained in free field on a reflective surface at a distance of 10 m from the external side of the electrical panel of machine and at height of 1.6 m from the unit support base. Values with tolerance ± 2 dB. The sound levels refer to operation of the unit under full load in nominal conditions.

The listed noise levels, weights and dimensions refer to base units with no options fitted.

(*) Data refers to ASN equipped with condensing coils in copper pipes and aluminium fins.



MTA is ISO9001 certified, a sign of its commitment to complete customer satisfaction.



MTA products comply with European safety directives, as recognised by the CE symbol.



MTA participates in the E.C.C. programme for LCP-HP. Certified products are listed on: www.eurovent-certification.com
Certification applied to the units:
- Air/Water up to 600 kW
- Water/Water up to 1500 kW

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