



# **ARIES** *iNverter*



Air cooled liquid chillers featuring  
inverter reciprocating compressors with propane.  
Nominal cooling capacity 232 – 448 kW



*Cooling your industry,  
optimising your process.*



Cooling, conditioning, purifying.

## THE NATURAL ANSWER TO YOUR COOLING NEEDS

iASN 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 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 as the perfect plug & play solution, the ideal fit in a variety of process cooling applications.

## R290: THE NATURAL CHOICE FOR THE FUTURE

**PURE** > R290 is a pure 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.

R290  
TRULY  
GREEN

## Versions

- **iASN** - The benefit of a variable speed and a fixed speed compressor in 2 circuits, offering high efficiency in any load condition.

## Acoustic configurations

HE

Basic acoustic configuration with integral enclosure and acoustic insulation on compressor compartment

SHE

Low noise acoustic configuration

## Certified performances

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



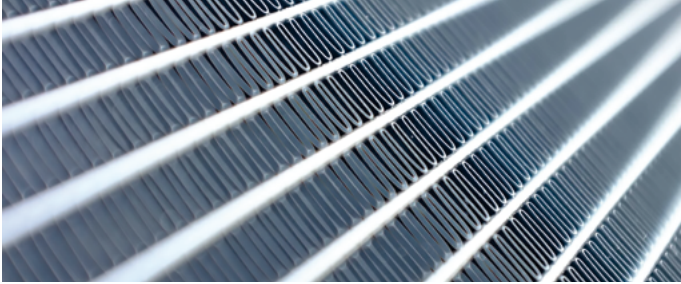
SILENT OPERATION THANKS TO INTEGRAL ENCLOSURE DESIGN

UP TO   
**-7 dB(A)**

For silenced SHE version

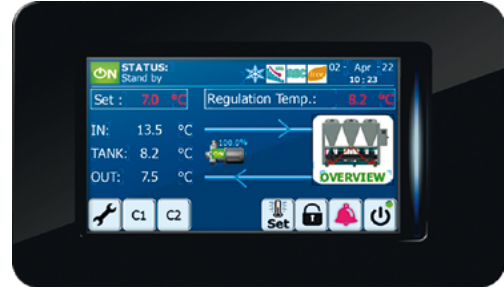
## Microchannel condensers

- 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.



### Standard features

- Natural refrigerant R290 – Propane;
- 2 reciprocating compressors in 2 circuits with 1+i configuration;
- Compressor crankcase heater and phase-monitor;
- Integral enclosure and acoustic insulation on compressor compartment;
- Brazed plate evaporator heat exchanger;
- Microchannel condenser coils;
- Axial EC brushless fans complete with protective grids and die-cast aluminium airfoil blade profiles;
- 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);
- Partial heat recovery;
- Energy meter;
- Protective epoxy coating for condenser coils, for installation in aggressive environments;
- Metal mesh filters for condenser coil protection.

### Kits

- Antivibration mounts;
- Metal mesh filters for condenser coil protection;
- Modularity kit (master/slave from 3 to 4 units).

## Wide operating range

PRODUCTION OF EVAPORATOR  
OUTLET WATER TEMPERATURE

**-10/+20 °C**

OPERATION AT FULL LOAD WITH  
EXTERNAL AIR TEMPERATURE

**-20/+45 °C**

## 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.

iASN		075		100		110		150	
Versions		HE	SHE	HE	SHE	HE	SHE	HE	SHE
Nominal cooling capacity (1)	kW	232,1	226,0	297,5	289,9	360,5	348,3	447,7	432,4
Total absorbed power (1)	kW	56,3	57,0	69,3	68,7	90,6	91,0	107,1	106,2
EER (1)	-	4,13	3,97	4,29	4,22	3,98	3,83	4,18	4,07
SEPR HT (2)	-	5,34	5,36	5,58	5,75	5,02	5,04	5,10	5,13
SEPR MT (3)	-	3,85	-	3,94	-	3,68	-	3,58	-
Max external air temperature (4)	°C	45	45	45	45	45	45	45	45
Power supply	V/Ph/Hz	400±10% / 3-PE / 50							
Circuits / Compressors	N°	1 on/off + 1 inverter							
Sound power (5)	dB(A)	93,2	85,9	95,1	87,6	95,2	87,9	96,6	89,3
Sound pressure (6)	dB(A)	65,2	57,9	67,1	59,6	67,2	59,9	68,6	61,3
Width	mm	2238		2241		2241		2241	
Depth	mm	3541		3541		3541		4531	
Height	mm	2475		2475		2475		2475	
Installed weight	kg	2242		2368		2631		3341	

**Data declared according to UNI EN 14511, referring to standard units without accessories/options.**

- (1) External air temperature 25 °C and evaporator water IN/OUT temperature 20/15 °C;
- (2) Data declared in compliance with the European Regulation (EU) 2016/2281 and high temperature process chillers;
- (3) Data declared in compliance with the European Regulation (UE) 2015/1095 for medium temperature process chillers;
- (4) Data declared with evaporator outlet water temperature 15 °C;
- (5) Sound power: determined on the basis of measurements taken in accordance with the standard ISO 3744;
- (6) 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.



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](http://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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