



PROCESS COOLING SOLUTIONS
SEPR



AIR CONDITIONING SYSTEMS
SEER

ARIES  **iNverter**



Air cooled liquid chillers featuring
inverter reciprocating compressors with R290.
Nominal cooling capacity 170 – 320 kW

R290



*Cooling your industry,
maximising your comfort.*



Cooling, conditioning, purifying.

THE NATURAL ANSWER TO YOUR COOLING NEEDS

MTA is fully committed to accelerating the adoption of sustainable technology for thermal systems. That's why *iASN* combines the latest advancement in refrigeration technology combined with R290, a refrigerant which delivers reliable performance, high efficiency.

iASN air-cooled chillers are designed to deliver absolute dependability for comfort air conditioning and for industrial applications, and to deliver an efficient solution for tomorrow cooling system needs.

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 and air conditioning applications.

BENEFITS OF R290

PURE > R290 is a pure refrigerant.

ECOLOGICAL > With a direct GWP of only 3 (AR4) and an ODP of zero, R290 is one of the most ecological refrigerant.

SAFE & RELIABLE > R290 is A3 (ASHRAE) classified and non-toxic. The unit is designed in strict compliance with safety standards.

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

FUTURE PROOF > R290 is exempt from HFC phase-out programs.

HIGH PERFORMANCE > R290 has excellent thermodynamic properties which deliver high efficiency and wide operating maps.



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.

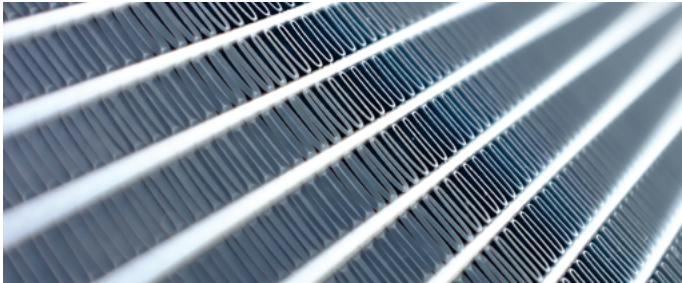


Easy maintenance

Easy access to all components.

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

- R290 Refrigerant;
- 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.

Options

- Low ambient air temperature option (down to -20 °C);
- Nitrogen refrigerant charge (if required for transport and handling);
- 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).

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 air conditioning and 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

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	-
Nominal cooling capacity (4)	kW	170,2	166,2	215,5	211,1	259,8	252,5	318,9	309,5
Total absorbed power (4)	kW	61,2	60,2	76,6	74,3	95,6	94,0	112,5	109,3
EER (4)		2,78	2,76	2,81	2,84	2,72	2,69	2,84	2,83
SEER (5)		4,10	4,11	4,15	4,14	4,12	4,10	4,10	4,11
Max external air temperature (6)	°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 (7)	dB(A)	93	86	95	88	95	88	97	89
Sound pressure (8)	dB(A)	65	58	67	60	67	60	69	61
Width	mm	2238		2241		2241		2241	
Depth	mm	3541		3541		3541		4531	
Height	mm	2475		2475		2475		2475	
Installed weight	kg	2191		2422		2649		3309	

Data declared according to UNI EN 14511.

- (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 referred to full load operation and nominal conditions, ambient temperature 35 °C and evaporator water IN/OUT temperature 12/7 °C;
(5) Data declared in compliance with the European Regulation (EU) 2016/2281 for cooling products (air conditioning applications);
(6) Data declared with evaporator outlet water temperature 15 °C;
(7) Sound power: determined on the basis of measurements taken in accordance with the standard ISO 3744;
(8) 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
Certification applied to the units:
- Air/Water up to 600 kW
- Water/Water up to 1500 kW

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