ARIES N DF

R290

Air-Cooled Packaged Deep Freezing Chiller with R290 refrigerant.
Nominal cooling capacity 90 - 250 kW

Cooling your industry,
maximising your comfort.

ARIES N DF

FOR SIMPLER AND MORE SUSTAINABLE INDUSTRIAL REFRIGERATION.

Built on Aries N platform, the new Aries N Deep Freezing packaged air-cooled chiller is capable of delivering leaving brine temperature between -12 to -30 degrees Celsius, making it ideal for a wide range of industrial refrigeration processes. Reliability and efficiency are at the core of the design of ASN DF. Available in 7 models, ASN DF bundles the best thermal technology available in a packaged air-cooled chiller, making the installation, operation and maintenance fast and simple.

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

LEAVING BRINE TEMPERATURE

-30/-12 °C

OUTDOOR AIR TEMPERATURE

-20/+46 °C

Suitable for a wide range of industrial refrigeration applications

- **Food and beverage**
- **Logistics and cold-chain (including cold warehouses)**
- **Pharma**
- **Chemicals**

Designed for efficient and simplified refrigeration

MTA's Aries N Deep Freezing (ASN DF) chiller features inverter driven screw compressors engineered and optimized for use with R290 ultra-low GWP refrigerant.
An optional heat-recovery system is available to further boost energy efficiency on a system level by recovering and reusing otherwise wasted heat.
Its packaged all-in-one design enables fast and easy installation, operation and maintenance.

Built to last. Proven to perform.

Aries N Deep Freezing chiller complies to the most stringent safety design protocols for A3 refrigerant chillers according to MTA's SDS2E approach (Segregate, Detect, Stop, Signal, and Extract).
Customers benefit from a short manufacturing lead times, thanks to standardized design.
Units have undergone rigorous testing and validation in one of the most advanced test facilities in EMEA.

Standard features

- R290 Refrigerant;
- Semi-hermetic, VFD driven screw compressors (one per circuit);
- ATEX certified leak detection and 2 ATEX ventilation fans;
- 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

- Protective Epoxy Electrophoretic Coating for condenser coils, for installation in aggressive environments;
- 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;
- Modularity kit (master/slave from 3 to 4 units).

Intelligent control, connected and digital-ready.

Aries N DF is equipped with the Symbio™ 800 controller, programmed with specific features to maximize energy efficiency in deep freezing applications.
The TD7 touchscreen display allows for intuitive user interaction.
System integration and building connectivity is secure and compliant with the latest cybersecurity standards.

ARIES N DF		080	100	115	140	165	190	225
Capacity (1)	kW	88	102	128	142	170	197	249
EER (1)		1,06	1,03	1,09	1	1,03	1	1,08
SEPR-LT (2)		1,65	1,61	1,72	1,57	1,63	1,58	1,72
Type of compressors		Screw						
Capacity control		AFD						
Compressors	n	1	1	1	2	2	2	2
Circuits	n	1	1	1	2	2	2	2
Dimensions								
Lenght	mm	3540	4530	4530	5520	5520	6510	7500
Width	mm	2191	2191	2191	2191	2191	2191	2191
Height	mm	2423	2423	2423	2423	2423	2423	2423
Operating weight	kg	2748	3582	3621	4607	4638	5714	6355

(1) External air temperature 35 °C and evaporator water IN/OUT temperature -19/-25 °C; 50% ethylene glycol.
(2) SEPR-LT with pump. Data declared in compliance with the European Regulation (EU) 2016/2281 and low temperature process chillers.
(3) Please refer to dimensional drawings for extra dimensions and extra weights for hydraulic versions. Dimensional data and weight may change. For further information please contact our sales office.

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ISO 9001 BUREAU VERITAS Certification N° 220817

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.

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