

DM500APF Plate Type Compressed Air Freeze Dryer

Refrigerated Air Dryer







Product Specifications

Capacity	55m ³ /min
Working pressure	0.6-1Mpa
Power	12HP
Dimension	1980*930*1826mm
Refrigerant	R22 or R410a or R407C
Weight	680kg
Dew point	2~10°C

Product Description

Product Core Advantages

- **Stable Dew Point Control:** Adopts high-performance hermetic scroll compressor and premium aluminum plate-fin heat exchanger, realizing stable pressure dew point output at 2-10°C, ensuring dry and clean compressed air for industrial production.
- **Low Energy Consumption & Low Pressure Loss:** Optimized refrigeration circuit and aerodynamic design reduce pressure loss to ≤25Kpa, cutting down air compressor operating load and overall energy consumption of the pneumatic system.
- **Durable & Corrosion-resistant Structure:** Core heat exchange components made of aluminum-magnesium alloy feature excellent thermal conductivity and corrosion resistance, prolonging equipment service life and reducing maintenance frequency.
- **Intelligent Control & Easy Operation:** Equipped with real-time dew point display, local/remote dual start-stop mode, complete fault alarm system and 485 communication interface, supporting remote monitoring and automated system linkage.
- **Hassle-free Installation & Maintenance:** Supports foundation-free installation, with electronic timing automatic blowdown device and compact structure; indoor installation is available, greatly lowering installation and daily maintenance costs.
- **Wide Operating Adaptability:** Adapts to inlet pressure up to 13 Bar and ambient temperature ranging from 2-38°C, matching various industrial compressed air system operating conditions without performance degradation.

Product Key Features

- Air-cooled cooling type with top-mounted exhaust, no extra cooling water system required, flexible site layout.
- Full-enclosed scroll compressor runs quietly with high efficiency, stable performance and long service life.
- Environment-friendly R407C refrigerant, compliant with international industrial environmental protection standards.
- Compact overall structure, small footprint, suitable for limited indoor equipment layout space.
- Complete high & low pressure protection devices, effectively avoiding refrigeration system failures and equipment damage.
- Non-hazardous equipment, safe and reliable operation, suitable for continuous long-term industrial operation.
- Electronic automatic condensate blowdown, avoiding manual operation omission and ensuring thorough condensate discharge.

Product Core Parameters

Basic Equipment Data

Item	Parameter	Item	Parameter
Equipment Type	Plate Type Freeze Dryer	Model	DM500APF
Applied Medium	Compressed Air	Pressure Loss	≤25Kpa
Rated Inlet Air Flow	50 Nm³/min	Outlet Air Flow	50 Nm³/min
Rated Inlet Air Pressure	7 Bar	Max Inlet Air Pressure	13 Bar
Rated Inlet Air Temperature	45°C	Max Inlet Air Temperature	55°C
Relative Humidity	65%	Pressure Dew Point	2-10°C

Refrigeration System Data

Item	Parameter	Item	Parameter
Refrigeration Compressor	Hermetic Scroll Compressor	Refrigerant	R407C
Refrigerant Charge	5.5 Kg	Main Unit Power	10 HP

Dew Point Display	Equipped	Cooling Type	Air-cooled
Exhaust Mode	Top-mounted Exhaust	Heat Exchanger Type	Aluminum Plate-fin Heat Exchanger
Heat Exchanger Material	Aluminum-magnesium Alloy	Evaporator	Aluminum Plate-fin Type
Air-cooled Condenser	Standard Configuration	-	-

Electrical & Control System Data

Item	Parameter	Item	Parameter
Total Power	10.4 kW	Ambient Temperature	2-38°C
Start-stop Mode	Local / Remote Control	Cooling Air Volume	15800 m³/h
Fault Alarm	Local Alarm	Fan Power	1100 W
Communication Mode	485 Interface	Installation Location	Indoor
Power Specification	380V/3PH/50HZ	Hazard Characteristic	Non-hazardous

Mechanical & Installation Data

Item	Parameter	Item	Parameter
Connection Size	DN100	Inlet Oil Content	3 mg
Blowdown Size	Φ8 mm Hose	Inlet Particle Content	1 ppm
Blowdown Type	Electronic Timing Automatic Blowdown	Condensate Treatment	On-site Collection
Main Material	Aluminum-magnesium Alloy	Installation Method	Foundation-free Installation
Transport Mode	Hydraulic Trolley / Manual Handling	Overall Dimension	1650*1050*1700 mm
Net Weight	450 kg	-	-

Refrigeration System Operating Protection Data

Item	Parameter	Item	Parameter
Evaporation Pressure	5 Bar	Condensation Pressure	18 Bar
High Pressure Protection	27 Bar	Low Pressure Protection	0.2 Bar

Core Applications & Applied Industries

Core Applications

This plate type compressed air freeze dryer is specially used for drying, dehumidifying and purifying compressed air, removing moisture, oil mist and tiny particles in compressed air, providing stable dry compressed air for industrial pneumatic systems, precision instruments, pneumatic actuators and production processes, preventing pipeline corrosion, instrument failure and production quality defects caused by wet air.

Applied Industries

- Automobile Manufacturing & Auto Parts Processing
- Electronics & Precision Instrument Manufacturing
- Food & Beverage Processing & Packaging
- Pharmaceutical & Medical Equipment Production
- Textile Printing & Dyeing Industry
- Petrochemical & Chemical Engineering
- General Industrial Manufacturing & Mechanical Processing

- Powder Coating & Surface Treatment Industry
 - Packaging & Printing Industry
 - Air Compressor Station & Centralized Pneumatic System
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Refrigerated Air Dryer & Desiccant Air Dryer - Demargo

Demargo (Shanghai) Energy-Saving Technology Co., Ltd. is a national high-tech enterprise and a Shanghai "Specialized, Refined, Characteristic and Innovative" enterprise, devoting itself to the R&D, production, sales and after-sales service of compressed air purification equipment for 19 years. With a firm commitment to energy conservation, environmental protection and technological innovation, we have grown into a leading manufacturer in the air compression post-treatment industry, providing high-quality, customized solutions for global industrial customers.

Our core strength lies in strong technological research and development capabilities. Up to now, we have owned 24 authorized patents and 22 patents under application, covering key technologies of air drying and purification equipment, which effectively guarantees the stability and energy efficiency of our products. We have passed ISO9001 and QS certifications, and our products comply with international industrial standards, with dew point ranging from -23°C to -70°C, air treatment capacity of 1~500Nm³/min, and outlet oil content as low as 0.003PPM, reaching the industry-leading precision level.

We boast a comprehensive and diverse product portfolio, covering more than 60 product categories, including 21 standard products and a variety of non-standard customized products that lead the industry. Our main products include air compressors and their accessories, air receivers, refrigerated dryers (including plate heat exchanger type, high-temperature air-cooled type, DC inverter type, etc.), adsorption dryers, combined dryers, heat of compression adsorption dryers, filters, zero-air-consumption blower-heated dryers, self-cleaning air filters, compressed air pre-cooling units, low-temperature high-pressure nitrogen pre-cooling units, industrial chillers, oil-water separators, oil removers and aftercoolers, etc.. We support 12 types of product configurations such as air-cooled/water-cooled, fluorine-free/high-temperature, inverter/explosion-proof, and can provide intelligent solutions such as industrial computer and programmable control according to customer needs.

With excellent product quality and professional service, we have won wide recognition in the global market. Our customers are distributed in more than 20 countries and regions around the world, including Brazil, Australia, etc., and we have established in-depth cooperation with more than 20 OEM manufacturers and 2299 brand agents. Our annual output reaches 9,682 sets, and the cumulative sales volume exceeds 100,000 sets, which fully demonstrates the market influence and customer trust in our brand.

Customer-centricity is our consistent service philosophy. We provide a full-cycle service system from pre-sales design, in-sales installation to after-sales maintenance: we promise 30-minute response, 24-hour online guidance and 48-hour on-site service, and ensure spare parts supply response within 24 hours, effectively solving the worries of customers in product use. We are committed to tailoring the most suitable compressed air purification solutions for customers in more than 30 industries such as power, aerospace, electronics, and chemical industry, helping enterprises reduce energy consumption, improve production efficiency and product quality.

Looking forward to the future, Demargo will continue to increase R&D investment, accelerate technological innovation, expand the global market layout, and strive to become a world-class provider of compressed air purification and energy-saving solutions. We sincerely look forward to cooperating with partners from all over the world to jointly promote the development of the global industrial energy-saving and environmental protection industry!

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