

## Non-standard Custom Three-Tower Desiccant Dryer

Explosion-Proof Air Dryer





















## Product Description

Demargo (Shanghai) Energy-Saving Technology Co., Ltd specializing in compressed air purification equipment, focusing on providing high-quality refrigerated air dryers and desiccant air dryers. We are committed to delivering premium non-standard customized three-tower desiccant dryer solutions that precisely match your specific industrial needs. Our three-tower desiccant dryers are designed based on advanced pressure swing adsorption (PSA) technology, adopting a three-tower cyclic operation mode to achieve continuous, efficient and stable drying of compressed air. They can effectively remove moisture, oil fumes, dust and other impurities from compressed air, ensuring the purity and stability of compressed air, which is crucial for the normal operation of your production equipment and processes, while fully complying with international standards such as CE, ISO 9001 and ASME.

### Applicable Industries

As a professional compressed air purification equipment manufacturer, our non-standard custom three-tower desiccant dryers are widely used in various industries that require high-purity compressed air, including but not limited to:

- Manufacturing Industry: Suitable for compressed air drying in automobile manufacturing, electronic component production,

machinery processing and equipment assembly, protecting precision instruments and equipment from moisture damage.

- Petrochemical & Chemical Industry: Used in compressed air drying for chemical synthesis, oil refining, plastic processing and rubber production, complying with strict industrial purity requirements for compressed air.
- Food & Beverage Industry: Applied in compressed air drying for food processing, beverage production and packaging, meeting food safety standards and ensuring product quality and shelf life.
- Pharmaceutical Industry: For compressed air drying in pharmaceutical production, sterile workshop ventilation and medical equipment processing, complying with GMP and medical hygiene standards.
- New Energy Industry: Suitable for compressed air drying in solar panel production, wind power equipment manufacturing and battery production, ensuring the stability and reliability of new energy products.
- Electronics & Semiconductor Industry: Used in compressed air drying for semiconductor manufacturing, circuit board production and electronic device assembly, avoiding moisture-induced short circuits and product failures.

### **Customization Process: What You Provide, We Customize**

Adhering to a customer-oriented customization concept, as your reliable partner in compressed air purification equipment, you only need to provide us with the following key parameters. Our professional R&D and engineering team with rich experience in compressed air purification will design and configure the most suitable three-tower desiccant dryer for you, ensuring perfect integration with your existing compressed air system:

- Compressed air handling capacity ( $\text{Nm}^3/\text{min}$  or CFM), inlet pressure and inlet temperature (adapt to different on-site working conditions).
- Required pressure dew point (from  $-40^\circ\text{C}$  to  $-70^\circ\text{C}$ , or lower according to your special requirements, meeting ISO8573.1 standard levels).
- Compressed air quality requirements (moisture content, oil content, dust particle size and other impurity indicators).
- Working environment conditions (ambient temperature, humidity, installation space, corrosion level and explosion-proof requirements).
- Special industry standards or certification requirements (such as CE, ASME, ISO, GMP certification).
- Other special needs (such as regeneration method, control system type, pipeline interface size, installation mode and remote monitoring requirements).

### **Optional Materials & Accessories**

To ensure the durability, corrosion resistance, safety and high efficiency of the equipment, we select high-quality materials and accessories that meet international compressed air purification industry standards, supporting you to choose flexibly according to your on-site environment, industry characteristics and budget:

#### **Optional Materials**

- Body Material: Carbon steel with anti-corrosion coating (standard), 304/316L stainless steel (for corrosive and high-hygiene requirement scenarios), corrosion-resistant alloy steel (for high-pressure working environments).
- Three Adsorption Towers Material: 304/316L stainless steel (standard, corrosion-resistant, easy to clean and maintain), carbon steel with anti-corrosion lining (cost-effective choice), titanium alloy (for strong corrosive and high-purity requirements).
- Pipeline Material: 304/316L stainless steel pipe, seamless steel pipe, corrosion-resistant alloy steel pipe (selected according to compressed air pressure, corrosiveness and on-site requirements).

#### **Optional Accessories**

- Adsorbent: Activated alumina, molecular sieve (3A, 4A, 5A), silica gel (international high-quality brands, large adsorption capacity, long service life and easy regeneration).
- Control System: PLC control (Siemens, Mitsubishi), touch screen operation, optional remote monitoring, dew point monitoring and fault alarm function, realizing intelligent operation and easy maintenance.

- **Regeneration System:** Heatless regeneration (standard, energy-saving and efficient), micro-thermal regeneration (optional, suitable for high-purity compressed air scenarios), with heater and circulating fan for stable regeneration effect.
- **Auxiliary Accessories:** Dew point analyzer (real-time monitoring of compressed air moisture), automatic drain valve, precision filter (further improving compressed air purity), oil removal filter, pressure gauge.
- **Valves:** Pneumatic valves, manual valves (international famous brands, reliable performance, corrosion-resistant and suitable for compressed air environment).
- **Safety Accessories:** Pressure relief valve, over-temperature and over-pressure protection device, emergency shutdown system, flame arrester (comprehensively ensuring equipment and on-site safety).

### **Our Advantages**

As a professional manufacturer of compressed air purification equipment, we have years of experience in R&D and production of desiccant dryers and other compressed air treatment equipment. We have a professional technical team familiar with compressed air purification technology and international industry standards, as well as a strict quality control system. All customized three-tower desiccant dryers undergo 48-hour full-load performance testing before leaving the factory, ensuring stable performance, reliable operation and compliance with relevant standards. We also provide 24-hour technical support, on-site installation guidance and after-sales service to solve your problems in a timely manner.

For more specific details about non-standard custom three-tower desiccant dryers, including customized solutions, technical parameters, quotation and delivery time, please contact us directly. We will provide you with one-to-one professional consultation and customized services to meet your unique compressed air purification needs.

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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 1~500Nm<sup>3</sup>/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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