

Product sheet

Munters DSS Pro

Desiccant dehumidification system



DSS Pro is a fully integrated, modular solution combining customer-centric design with cutting-edge technology and engineered to deliver precise temperature and humidity control for even the most demanding applications.

The highly configurable pre- and/or post-treatment modules come pre-assembled, factory-tested and ready for operation and feature the state-of-the-art AirPro casing which enhances system flexibility while delivering superior thermal insulation, increased structural strength for long-term durability, and improved energy efficiency.

Manufactured in an ISO 9001-certified facility and fully compliant with EN1886 standards, the DSS Pro is equipped with an integrated AirC800 controller for communication, which enables intelligent, modulating humidity control tailored to the specific needs of each application. The controller supports multiple communication protocols – including Modbus, BACnet, and LON – ensuring seamless integration with modern building management systems and enabling centralized monitoring and control.

To further enhance adaptability and future-readiness, DSS Pro includes advanced features such as sensors and robust connectivity options, making it easy to scale and integrate into existing industrial or commercial infrastructures.

Features

- Energy-efficient dehumidification
- Full humidity and temperature control
- Airflow range from 2 800 m³/h up to 145 000 m³/h
- Reactivation options: gas, steam, electric and hot water
- Dual-react and heat pump ready
- All-in-one modular system with configurable pre-/post-treatment
- AirPro casing for increased durability, strength, and energy efficiency
- Communication and external control options
- Remote monitoring and control
- DSS Pro SE edition available as standalone and PLUS

All-in-one solution

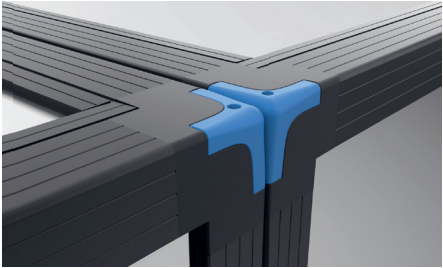
Munters DSS Pro is a versatile configurable solution with full functional integration, designed to deliver optimal indoor climate control wherever and whenever it's needed. It is available for both indoor and outdoor installation in 20 configurable sizes, with two desiccant rotor types offered to suit different applications and installation environments. Additionally, 8 rotor sizes are available, each with varying widths to match the required dehumidification capacity, allowing precise customization for performance and efficiency.

Small footprint

DSS Pro reduces the overall space required for a standard industrial dehumidification system by up to 40%, unlocking significant cost savings and freeing up valuable space for revenue-generating activities.

Flexibility and simplicity

Munters' modular concept makes delivery and site installation easy.



AirPro enclosure

The AirPro casing provides exceptional strength, flexibility, and long-term efficiency. Its advanced design enhances thermal break and insulation, minimizes air leakage and ensures reduced energy consumption, improved system durability, and reliable performance over time.



Inspection windows

Easily monitor internal components through a built-in inspection window designed for quick visual checks. A convenient LED light with push-button activation ensures clear visibility inside the unit, even in poorly lit areas, streamlining maintenance and inspection routines.

Advanced communication and control

The DSS Pro is equipped with a powerful, integrated AirC800 controller for communication, providing intelligent, modulating humidity control. Available controls include local or remote HMI systems and various remote connectivity options such as Munters AirC Connect, as well as flow- or pressure-based control.

Enhanced system control and connectivity

User-friendly interface: Equipped with an intuitive HMI for easy local or remote operation.

Flexible connectivity: Supports Modbus TCP/IP, Modbus RTU, BACnet IP, and remote control options.

Precision control: Allows regulation by absolute humidity, relative humidity, dew point, flow, or pressure.

Pre-configured wiring: All controls are factory-wired and tested before delivery, ensuring a seamless plug-and-play setup.

Alarm management: Includes monitoring and alarm functions for system safety and efficiency.

Industry standards compliance: The DSS Pro uses BTL Certified BACnet communication and conforms to CE marking specifications, RoHS and to the EU standards below:

- EU 60204-1:2018
- EU 61000-6:2019
- EN IEC 61000-6-3:2021

Innovative purge technologies

The advanced patented rotor technologies ensure that every unit extracts maximum moisture with minimal energy consumption. Whether operating in demanding industrial environments or controlled storage conditions, the DSS Pro guarantees efficient, reliable performance, while reducing your energy and total operational costs.

Quality assurance for peace of mind

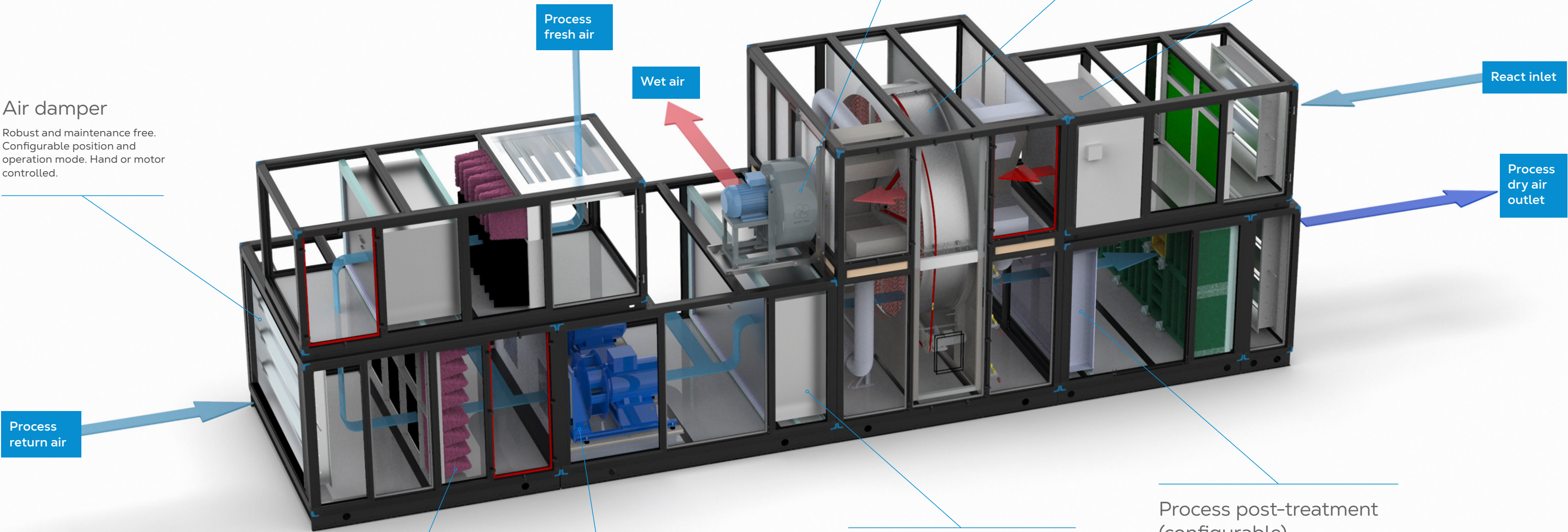
Outstanding Munters' design and quality components ensure reliable operation and optimal performance while complying with harmonized European standards and technical specifications for CE and UKCA marking, including TÜV test on the AirPro enclosure.

Smart selection process

Thanks to our innovative and intuitive selection tool Genesys, our sales engineers provide you with preliminary mechanical sketches, flow diagrams, technical specifications, energy calculations, spare part lists and price details, ensuring you get the right solution tailored to your specific needs.

Customizable DSS Pro configurations

All individual components and the rotor are fitted inside the fully configurable AirPro enclosure, which is a modular construction with insulated panels meeting EN1886 standards. All casing parts are corrosion resistant by use of special Munters Protect plates or stainless steel, and unit consists of a self-supporting and stable sectional frame construction with form-fitting panels inserted. The AirPro casing itself offers a range of benefits and allows the technology inside to perform at optimal levels.



Air damper
Robust and maintenance free. Configurable position and operation mode. Hand or motor controlled.

Process return air

Munters DSS Pro casing properties for pre- and post-treatment according EN 1886:

- D1 Casing strength
- L1 Leakage class
- T2 Thermal insulation
- TB2 Thermal bridging
- Filter bypass F9

High density mineral insulation with A1 fire protection (no contribution to fire).

* available on request

Air filtration
Configurable filter classes, types and mounting system. Filter standard ISO16890. Filter monitoring.

Process fan
Highly efficiency with flow or pressure control to achieve optimal working point using VFD or EC technology.

React fan
High efficiency fan with adjustable flow and wet air protective properties.

Performance
Premium high-performance desiccant wheel for superior strength and durability.

React heater
Steam, electrical, gas and hot water. Ready for sustainable energy. Configurable size and power.

React inlet

Process dry air outlet

Process pre-treatment (configurable)
• Cooling: Fluid or DX*
• Heating: Fluid, Electric or Steam*
• Noise reduction baffles to achieve optimal working point.

Coolers are foreseen with stainless steel frame and sloped drip tray and if required, foreseen with integrated droplet separator, in compliance with hygienic standards e.g. VDI6022.

* Only available on request, not available in standard configuration.

Process post-treatment (configurable)
• Cooling: Fluid or DX*
• Heating: Fluid, Electric or Steam*
• Noise reduction baffles
• Humidification: Steam or evaporative humidifier

Munters' evaporative solution featuring our outstanding evaporative media within a flexible unit built with efficiency and simplicity in mind. Works perfectly both for cooling and humidifying solutions.

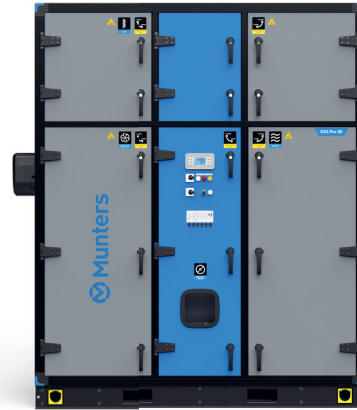
* Only available on request, not available in standard configuration.

DSS Pro SE: the Streamlined Edition

DSS Pro SE is a refined version of the DSS Pro system, offering a simplified yet powerful solution that delivers all the core benefits in a more accessible format. This edition is designed to meet the needs of users who value efficiency, reliability, and ease of deployment, without requiring the full complexity of the standard DSS Pro configuration.



DSS Pro SE with optional process box (EC fan + filter)



DSS Pro SE (DH unit)

Leveraging the same proven modular technology, DSS Pro SE features a fully integrated layout that consolidates essential components into a single-box design. This not only reduces setup time but also enhances system integrity and serviceability. The streamlined architecture ensures consistent performance across applications, maintaining the robustness and flexibility that DSS Pro is known for.

Ideal for a wide range of operational environments, DSS Pro SE supports seamless integration with existing systems and workflows. It's a smart choice for organizations looking to optimize their operations with a dependable, easy-to-maintain solution that doesn't compromise on functionality or performance.

The DSS Pro SE can be expanded into a PLUS version with pre- and/or post treatment modules added to the desiccant dehumidification core unit and customized to your requirements for full humidity and temperature control.

The DSS Pro SE PLUS modules are all housed in the state-of-the-art AirPro casing that enhances flexibility and ensures reliable, consistent performance.

Features

- Airflow range from 2 800 m³/h to 14 000 m³/h
- Reactivation options: steam, electric and hot water
- Dual-react and heat pump ready
- HPS (High performance silica) rotor
- Innovative purges for energy recovery
- Munters Protect corrosion protection
- Integrated AirC800 control
- Forklift slots for ease of transportation

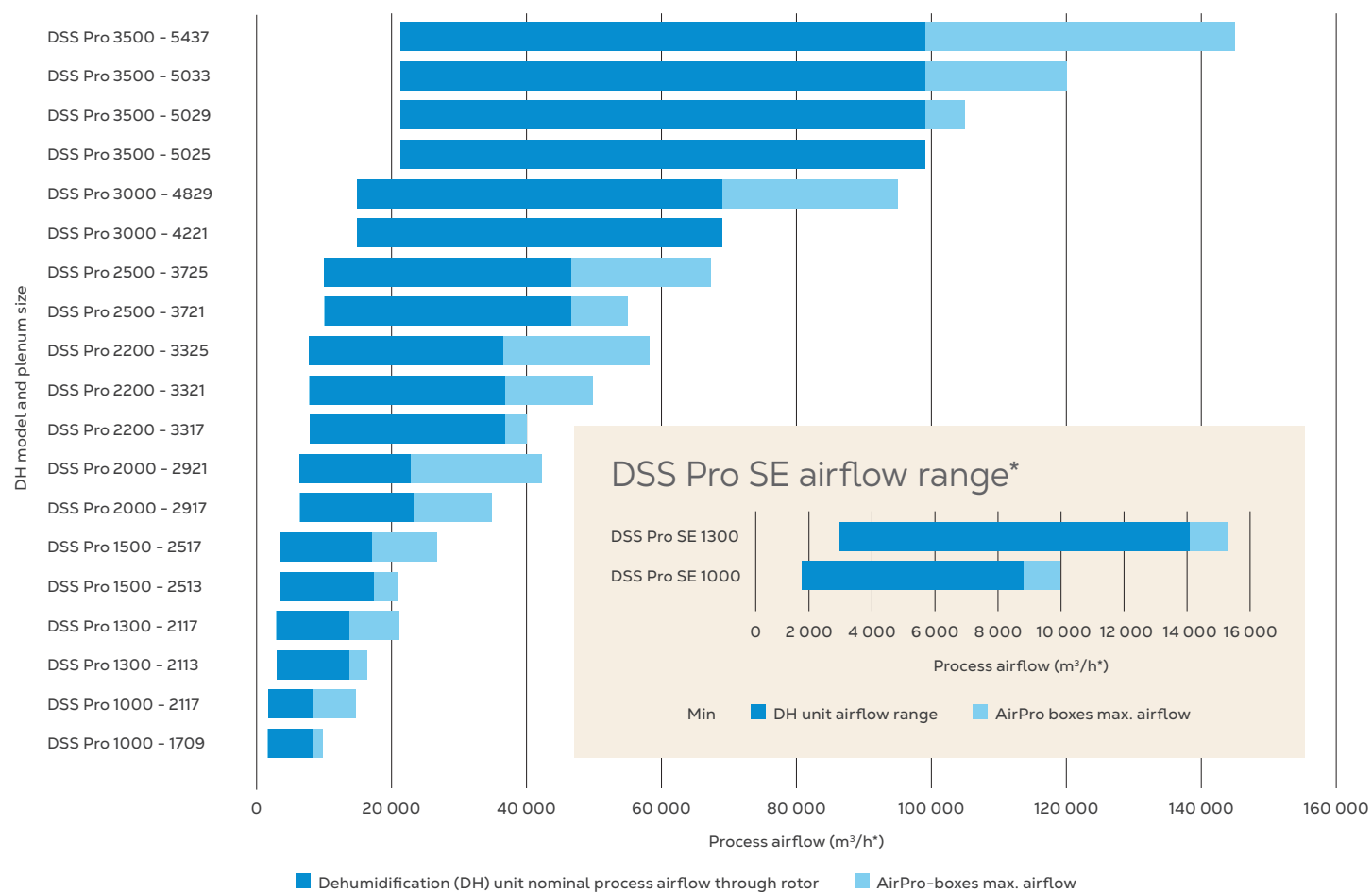


HMI control



Forklift slots

DSS Pro airflow range*



* Airflow data is measured under standard dry air conditions (20 °C, 1 013 hPa). The airflow range gives an indication of nominal/maximal airflow for DSS Pro series. The components added to the complete system can have impact on the total maximal airflow through the DH system.

The DSS Pro SE and DSS Pro SE PLUS is a streamlined edition that offers a choice of innovative purges for energy recovery.

Product feature comparison

	DSS Pro SE and DSS Pro SE PLUS	DSS Pro
Product type	Standalone and dehumidification system	Dehumidification system
Size and airflow	2 sizes - 1 000 and 1 300	8 sizes from 1 000 up to 3 500
Customization	Streamlined configurations	Highly customizable configurations
Installation	Indoor	Indoor and outdoor
Control system	Integrated AirC800	Onboard AirC800
Connectivity	AirC Connect and BMS	AirC Connect and BMS
React option	Steam, electric and hot water	Gas, steam, electric and hot water
Energy solution	Dual-react and heat pump ready*	Dual-react and heat pump ready*
Desiccant technology	HPS	HPS or HPX
Compliance	CE, UKCA	CE, UKCA, UL*, ULCA*
EN1886	L2, TB2, T2, D1, F9	L1, TB2, T2, D1, F9
Corrosion protection	Munters Protect	Munters Protect and/or stainless steel
Power supply	380-440 V 50/60 Hz	380-440 V 50/60 Hz

* On request

Material selection

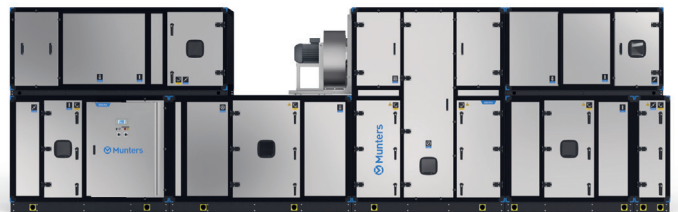
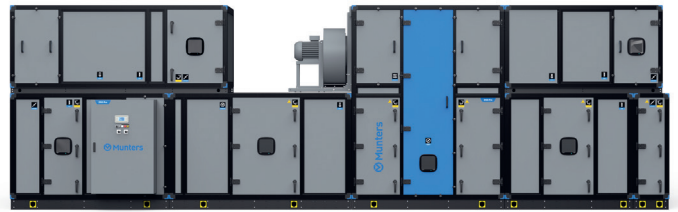
Built to the highest industrial standards, the DSS Pro is engineered for longevity, hygiene, and robustness. Every unit features the Pro enclosure, a robust double-wall construction with insulated panels meeting EN1886 standards, which are corrosion resistant by use of special Munters Protect plates or stainless steel.

Munters Protect

Munters Protect is the best-in-class anti-corrosion protection on the European market. This special coating has self-healing properties eliminating the microscopic weak points coming from cuts, bend and hole punches and gives substantially longer protection to the metal than conventional galvanization. Benefits are a longer product life cycle, less maintenance, reduced total cost of ownership and less environmental impact.

Stainless steel

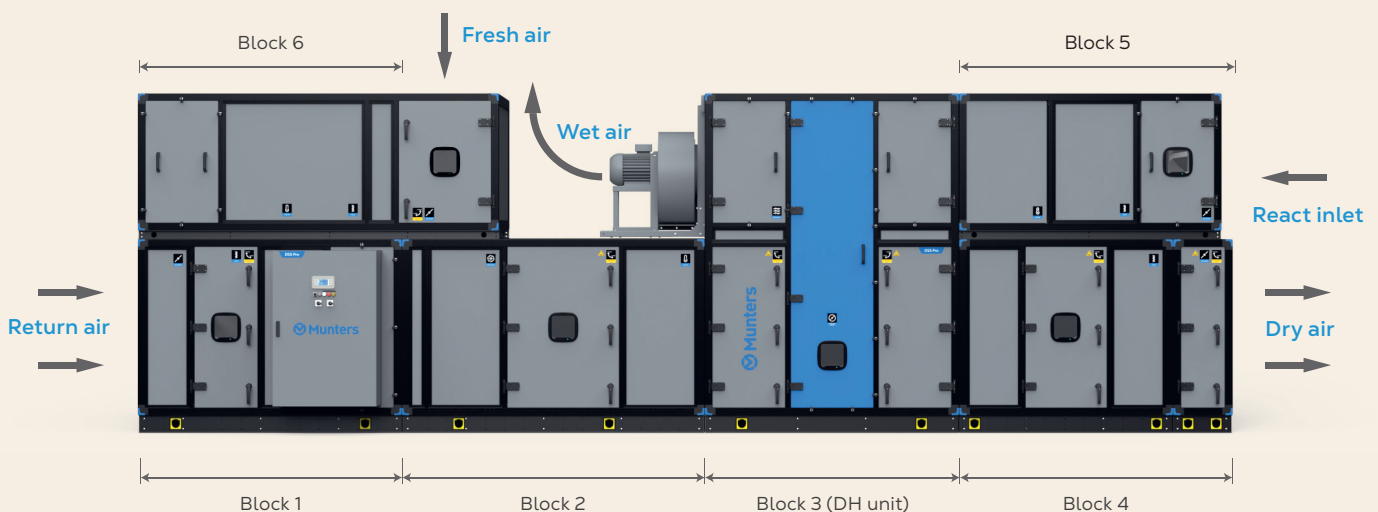
Food processes require food safe materials to keep their processes safe and prevent hygienic risk and contamination. Munters DSS Pro can be delivered in stainless steel with hygienic and food grade properties compliant with the hygienic standards such as the VDI6022.



Modular design and full integration

Munters DSS Pro is an all-in-one modular climate control solution engineered for flexibility and simplicity, with a wide range of standardized components and special designs to ensure the best fit for your application. The block-based design allows the DSS Pro to be

configured to suit your environment and performance goals, making delivery and installation seamless. The modular design also means ease of maintenance, as each section is accessible and serviceable.



A premium rotor for every application

Built on Munters' patented desiccant rotor technology, our DSS Pro systems provide high moisture adsorbing capacity year after year, enhanced performance through the energy recovery sector and certified bacteriostatic desiccant rotors.

Proven outstanding quality

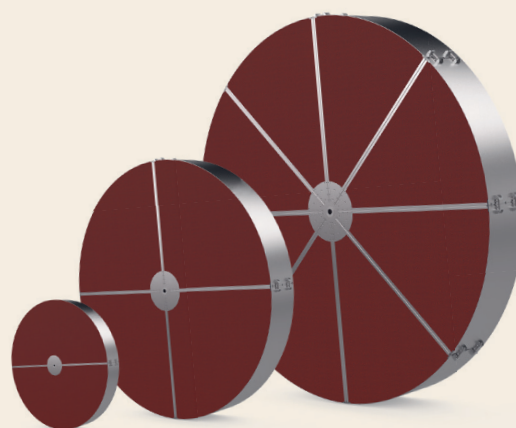
Made of a non-metallic, ceramic composite, Munters' highly hygroscopic rotors are engineered for superior strength and durability.

Our patented manufacturing method ensures a robust, stable structure with a smooth, uniform surface. Strict quality control eliminates imperfections that could affect dehumidifier performance, ensuring long-lasting reliability.

Munters HPS

The HPS rotor uses a water-resistant silica gel adsorbent to deliver high moisture removal across a wide range of applications.

- Certified bactericidal effect to contaminants; does not release particles into processed air
- Even when exposed to air at 100% RH the silica gel desiccant is not "washed out"
- Resistant to acids, sulfur products and most chemicals
- Silicone-free version available for sensitive industries (e.g., automotive, electronics)

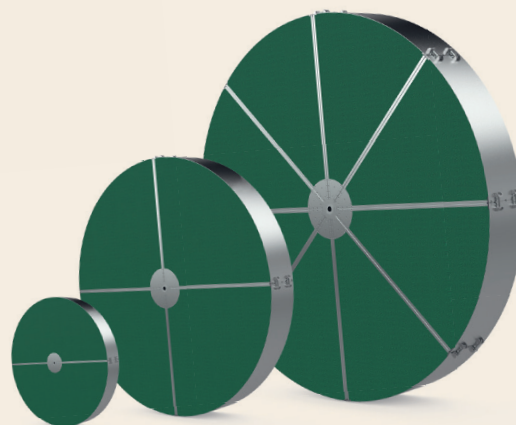


Munters HPX

The HPX rotor features a specialized desiccant pore system and material for exceptional longevity.

- Specifically designed for ultra-low dew points
- Even when exposed to air at 100% RH the silica gel desiccant is not "washed out"
- Silicone-free version available for sensitive industries (e.g., automotive, electronics)

* HPX not available with DSS Pro SE



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