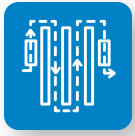


Donaldson  
Torit®

**ULTRAPAC SMART  
HEATLESS REGENERATED  
ADSORPTION DRYERS**





# PRODUCING DRY COMPRESSED AIR

## DRYING AIR FOR INDUSTRIAL APPLICATIONS

Dry air for industrial compressed air applications like dust collection reduces moisture that can interrupt operations, shorten component life and reduce filter performance. Environmental factors like high humidity or freezing temperatures create condensation which can increase moisture in equipment requiring costly maintenance or potential shut down.

Utilizing industrial air dryers to reduce this moisture and target dewpoints of -40° F can help reduce the chance of interruption and keep your dust collection equipment running smoothly.

## DONALDSON ULTRAPAC SMART COMPRESSED AIR DRYER

Donaldson Ultrapac Smart Dessicant Dryers are a complete and compact compressed air treatment solution designed to reduce downtime and maintenance costs. By reducing moisture and oils in the dust collector air supply, Solenoid and diaphragm valves remain free and dry and can operate more efficiently.

Ultrapac Smart Dessicant Dryers also reduces overall maintenance cost by removing moisture and oil in the air used to pulse clean dust collector filters. This avoids clogging, improving the regeneration cycle and extending Filter life.

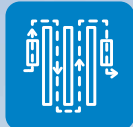
Finally, providing flexibility for your particular facility configuration, Donaldson Ultrapac Smart Dryers cost significantly less than central drying systems and are ideal for point of use systems where specific processes can use moisture reduction.



## INNOVATIVE FEATURES



Validated performance data: Stable pressure dew point at minimal regeneration air requirements (ISO 7183) and innovative UltraPleat™ filtration technology provides a high filtration efficiency (ISO 12500).



Saving regeneration air through a capacity control and compressor coupling, lower differential pressure through UltraPleat™ compressed air filter.



The all-round package includes easy handling of maintenance and service. All relevant components are easily accessible; filter elements and desiccant cartridge can be quickly and easily exchanged.



Reliable achievement of compressed air quality suitable for the application in accordance to ISO 8573-1:2010. Validations in accordance to ISO 7183 Ultrapac Smart dryer, ISO 12500-1 and 12500-3 UltraPleat after-filter, ISO 3744 Ultra Silencer technology.



The adsorption dryer can be flexibly configured and installed, as well as integrated in machines and equipment.



The newly developed UltraSilencer keeps noise emissions at or below 60 db



## REDUCING YOUR MAINTENANCE COST

Dust collectors require preventative maintenance. Ensuring clean dry air with a Donaldson Ultrapac Smart Dryer can support your preventative maintenance programs and help reduce labor and operating cost:

- Reduce dust reactions to moisture and condensation causing plugging
- Decrease compressed air needed to release filter dust
- Help reduce unplanned downtime for equipment repair
- Decrease moisture related pulse valve damage
- Reduce filter clogging



# MODULAR, VARIABLE, COMPACT

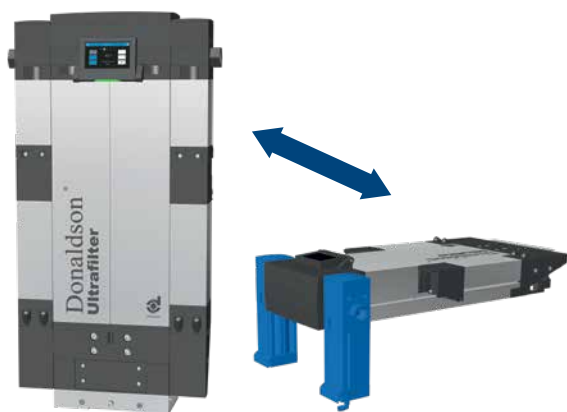
## MODULAR DESIGN

The Ultrapac Smart dryer impresses through its variably arranged modules and flexible installation variants. Whether standing, vertical, horizontal or attached to the wall. The Ultrapac Smart dryer can be customized to fit most spatial conditions.

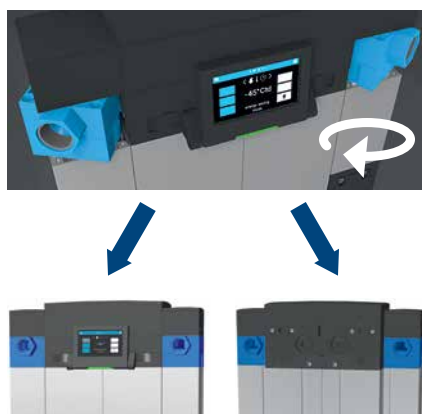
Additionally the inlet and outlet compressed air connections can be aligned in different directions and the pre-filter and after-filter are integrated into the dryer to provide maximum flexibility during installation.

### Space-saving application through compact design and modular arrangement

#### VERTICAL AND HORIZONTAL ALIGNMENT



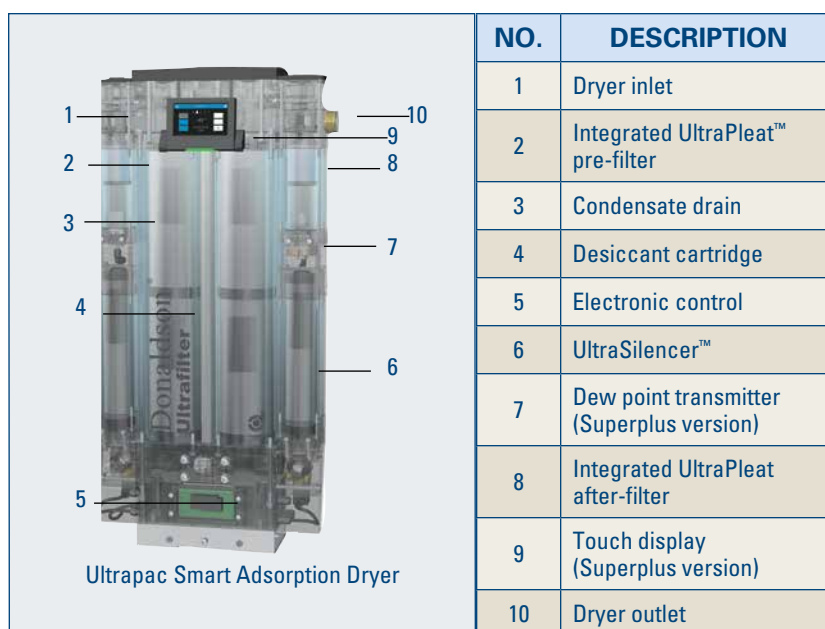
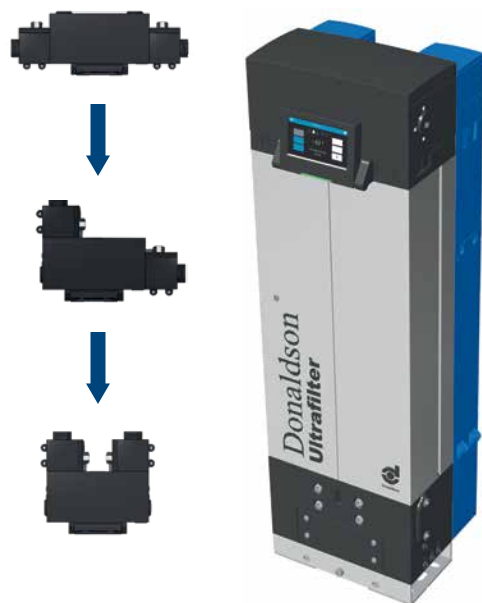
#### ROTATABLE INLET AND OUTLET



#### HEIGHT REDUCTION



#### VARIABLE, COMPACT ARRANGEMENT

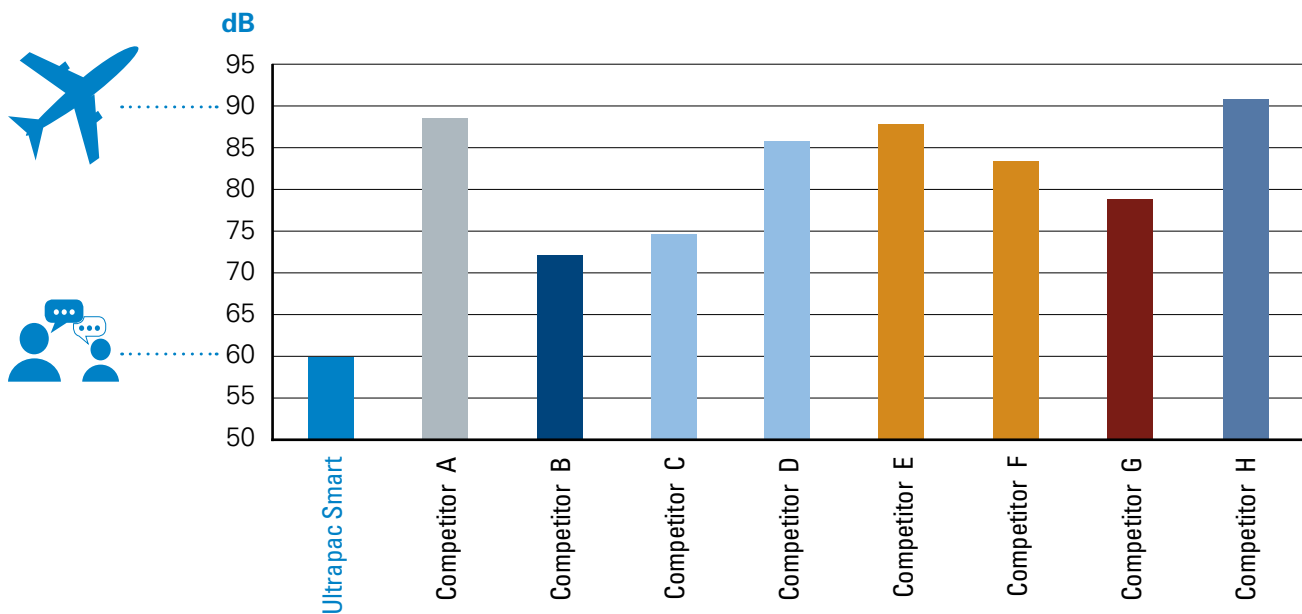




## QUIET, CLEVER, STABLE

### NEW SILENCER, QUIET OPERATION

With the addition of the UltraSilencer, the Ultrapac Smart dryer is significantly quieter than comparable adsorption dryers. It operates with noise emissions in the range of just 60 dB. This is roughly the volume of a normal conversation and helps to reduce noise in the workplace.



## SERVICE-FRIENDLY CARTRIDGE, STABLE PRESSURE DEW POINT

The desiccant has a high adsorption capacity and excellent regeneration capabilities. The flow-optimized design leads to an efficient utilization of the desiccant volume even in partial load operation.

An additional innovation is the spring-loaded desiccant bed, which prevents abrasion of the desiccant and extends service life. The desiccant is protected against external influences such as pressure shocks by spring-loading.



Clean and easy exchange of the desiccant cartridge



## KEY FEATURES:

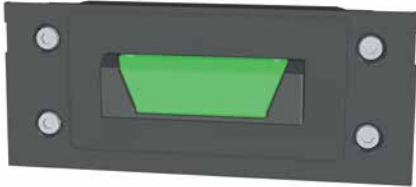
Dewpoint range: -40° F to -70° F

SMF: Built in to dryer

Mounting: Floor, Wall or Cabinet

Operating Noise: < 60 DbA

### Standard



- Alarm Contact
- Intermittent operation (Compressor Coupling)
- Time-controlled operating mode
- USB Interface for service software
- IP65 Protection (Indoor and Outdoor Installation)



## ISO CERTIFIED EXTENSIVE APPLICATION OPTIONS

Adsorption dryers are applied where highly purified and dry compressed air is required in accordance with ISO 8573-1. Some examples of industries with these applications:

- |                   |                        |                 |              |
|-------------------|------------------------|-----------------|--------------|
| • Food processing | • Medical              | • Laser cutting | • Mining     |
| • Beverage        | • Industrial machinery | • Bottling      | • Automotive |
| • Pharmaceutical  | • Plastic industry     | • Packaging     | • Energy     |

Food Processing



Automotive



Energy



Pharmaceutical



Chemical



Medical



Packaging & Bottling



Beverage



Industrial Machinery



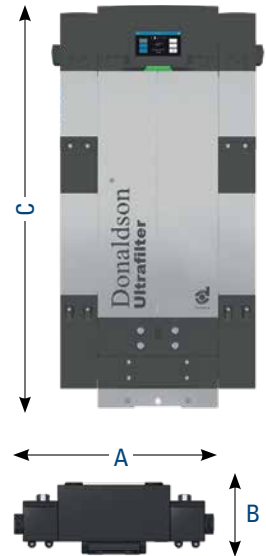
## CAPACITIES:

| Compressed air quality classes | Solid particles                                                    |               |               | Water              | Oil (liquid and steam) |
|--------------------------------|--------------------------------------------------------------------|---------------|---------------|--------------------|------------------------|
|                                | Maximum particle count per m <sup>3</sup> (particle size, d in µm) |               |               | Pressure dew point | Concentration          |
|                                | 0.10 < d ≤ 0.5                                                     | 0.5 < d ≤ 1.0 | 1.0 < d ≤ 5.0 | °F                 | mg/m <sup>3</sup>      |
| 0                              | Specified according to application and better than Class 1         |               |               |                    |                        |
| 1                              | 20,000                                                             | 400           | 10            | ≤ -94              | ≤ 0.01                 |
| 2                              | 400,000                                                            | 6,000         | 100           | ≤ -40              | ≤ 0.1                  |
| 3                              | NA                                                                 | 90,000        | 1,000         | ≤ -4               | ≤ 1                    |
| 4                              | NA                                                                 | NA            | 10,000        | ≤ +37              | ≤ 5                    |
| 5                              | NA                                                                 | NA            | 100,000       | ≤ +45              | > 5                    |

## TECHNICAL DATA

| Ultracac Smart dryer | Volume flow rate* inlet scfm @ 100 psig | Regeneration air consumption* scfm | Compressed air connection FNPT | Dimensions (inches) |          |         |
|----------------------|-----------------------------------------|------------------------------------|--------------------------------|---------------------|----------|---------|
|                      |                                         |                                    |                                | Width A             | Height C | Depth B |
| UPS20                | 20                                      | 3.5                                | 1"                             | 18.3                | 34.1     | 6.6     |
| UPS40                | 40                                      | 6.5                                | 1"                             | 18.3                | 54.9     | 6.6     |

Explanations: \*volume flow rate represents standard temperature and pressure atmospheric air at compressor inlet (68 °F, 14.7 psia), and a dryer inlet conditions of 95°F at 100 psig operating pressure. Dryer outlet pressure dew point: -40 °F. Allowable operating pressure and temperatures: 60-232 psig (MINI); 60-175 psig (MIDI) at inlet temperatures 40-130°F. Please consult table below for volume flow correction factors to be used at non-standard operating conditions.



## SIZING

| f     | 60 psi (g) | 75 psi (g) | 90 psi (g) | 105 psi (g) | 120 psi (g) | 135 psi (g) | 150 psi (g) | 165 psi (g) | 180 psi (g) | 195 psi (g) | 210 psi (g) | 225 psi (g) | 240 psi (g) |
|-------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 65°F  | 0.94       | 1.02       | 1.12       | 1.20        | 1.27        | 1.34        | 1.42        | 1.48        | 1.54        | 1.60        | 1.67        | 1.71        | 1.78        |
| 75°F  | 0.92       | 1.01       | 1.11       | 1.19        | 1.26        | 1.33        | 1.41        | 1.47        | 1.52        | 1.58        | 1.64        | 1.70        | 1.76        |
| 85°F  | 0.86       | 1.00       | 1.10       | 1.17        | 1.25        | 1.31        | 1.39        | 1.45        | 1.51        | 1.56        | 1.61        | 1.67        | 1.73        |
| 95°F  | 0.65       | 0.78       | 0.91       | 1.03        | 1.16        | 1.29        | 1.38        | 1.44        | 1.50        | 1.55        | 1.60        | 1.65        | 1.71        |
| 105°F | 0.50       | 0.59       | 0.69       | 0.79        | 0.89        | 0.98        | 1.09        | 1.18        | 1.28        | 1.38        | 1.48        | 1.57        | 1.68        |
| 115°F | 0.38       | 0.46       | 0.53       | 0.60        | 0.68        | 0.76        | 0.84        | 0.91        | 0.98        | 1.07        | 1.14        | 1.21        | 1.29        |
| 120°F | 0.29       | 0.35       | 0.41       | 0.48        | 0.53        | 0.59        | 0.65        | 0.70        | 0.77        | 0.82        | 0.88        | 0.94        | 1.00        |
| 130°F | 0.23       | 0.28       | 0.32       | 0.37        | 0.41        | 0.46        | 0.51        | 0.55        | 0.60        | 0.64        | 0.69        | 0.73        | 0.79        |

$V_{corr} = \frac{V_{nom}}{f}$  Example:  $V_{nom} = 15 \text{ scfm}$ , inlet temperature = 95°F, operating pressure = 150 psi (g)

$V_{korr} = \frac{15 \text{ scfm}}{1.38} = 10.87 \text{ scfm}$  calculated dryer size: Ultracac Smart dryer, type 0020

At Donaldson, we provide comprehensive dust control solutions. From the initial process audit and installation, through unparalleled aftermarket inventory, automated monitoring, and post-sale support, we're with you every step of the way.

## Industry-Leading Technology

- Advanced filtration technology for optimal performance
- Reduced energy consumption and cost of ownership
- Advanced design and testing capabilities

## The Most Filters and Parts

- For every brand and style of collector
- Wide range of filtration media for any application
- 90,000 filters and parts in stock and ready to ship

## Unparalleled Support

- Live technical specialists
- Comprehensive pre- and post-sale support
- 40 manufacturing plants and 14 distribution centers worldwide

Significantly improve the performance of your collector with genuine Donaldson Torit replacement filters and parts

### Important Notice

Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, product specifications, availability and data are subject to change without notice, and may vary by region or country.



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