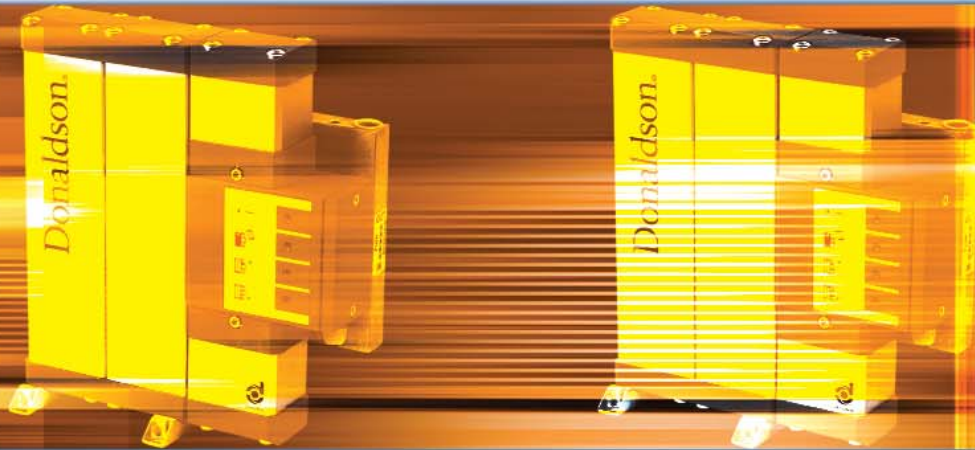


Donaldson®  
Ultrafilter

## Heatless Regenerative Desiccant Dryer

Ultrapac 2000



# Heatless Regenerative Desiccant Dryer

## *Leading the Way in Air Purification*

**Adsorption drying — Why?** Compressed air is an important process and energy medium applied in almost all areas of industrial production. The atmospheric air taken in contains contaminants, dirt particles and humidity, i.e. water vapor, which condensates in compressed air pipes. This condensation can lead to considerable costs (corrosion, freezing). These costs can be avoided by using the applications of the **Donaldson Ultrapac 2000 heatless desiccant dryer**. This complete purification system includes a prefilter, dryer, afterfilter, control system, and automatic condensate drain and silencer.

The prefilter retains solids and condensate (oil/water mixture) up to residual oil content 0.03 ppm. The adsorption dryer next in line adsorbs the moisture in the compressed air up to a pressure dew point of -40°F. Finally, in the afterfilter, remaining particles from the drying agent are retained.

### Features & Benefits

- Easy installation and setup
- Less maintenance
- Minimal downtime for repairs
- Increased cost savings

### Applications

- Laser cutting systems
- Bottling plants
- Dental laboratories
- Packaging machines
- Rail vehicles
- Optical measuring systems
- Sprinkler systems

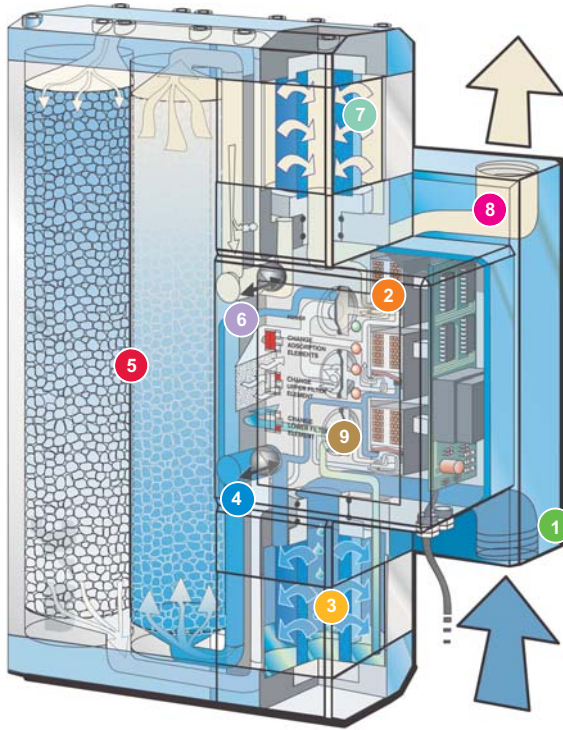


UP0015-60 and  
UP0020-60



# Heatless Regenerative Desiccant Dryer

## How The Ultrapac 2000 Works



- 1 Dryer Inlet
- 2 Processor Control
- 3 Prefilter
- 4 Lower Shuttle Valve
- 5 Desiccant Cartridges
- 6 Upper Shuttle Valve
- 7 Afterfilter
- 8 Dryer Outlet
- 9 Condensate Drain

## Dimensions & Specifications

Model	Capacity (scfm)	Connection (inches FNPT)	Dimensions (inches)			Weight (lbs)	Desiccant Cartridges		Prefilter Element (MF) Afterfilter Element (PE)	
			Height	Width	Depth		Size	Qty	Size	Qty (each)
UP0003-60	3	1/2	14	12	5	15	10/2	2	0205	1
UP0005-60	5	1/2	23	12	5	24	10/2	4	0305	1
UP0010-60	10	1/2	34	12	5	33	10/2	6	0410	1
UP0015-60	15	1/2	55	12	5	53	10/2	10	0610	1
UP0020-60	20	1	26	21	7	64	10/4	4	0420	1
UP0030-60	30	1	36	21	7	84	10/4	6	0520	1
UP0040-60	40	1	46	21	7	106	10/4	8	0525	1
UP0050-60	50	1	56	21	7	125	10/4	10	0725	1
UP0060-60	60	1	66	21	7	147	10/4	12	0725	1

\* Capacity rated in accordance with CAGI ADF 200 @ 100 psig, 100°F inlet, 100° ambient, and a PDP of -40°F. A pressure dew point of -100°F can be achieved at a capacity decrease of 30%.

Ambient air temperature: 38°-125°F, inlet air temperature: 40-125°F, operating pressure: 60-225 psig.  
Standard power supply: 110V/60 Hz, other options available.

## Capacity Correction Factors

The leading manufacturers of compressed air and gas equipment in North America are organized in the Compressed Air & Gas Institute (CAGI). As the premier industry organization, CAGI has developed standards to protect users of this equipment. ADF 200 is the current standard for desiccant compressed air dryers. ADF 200 specifies the dryers performance to be rated

at 100°F inlet temperature, 100°F ambient temperature, and 100° psig system pressure. To adjust the dryer capacity from these “CAGI conditions” to your specific application, please use the correction factors below for differing inlet temperatures (C1) and system pressures (C2).

### Capacity Correction Factors Ultrapac 2000 Heatless Dryer

#### Capacity correction factors for inlet temperature (C1)

Inlet Temperature (°F)	68	77	86	100	104	115	125
Correction Factor	1.1	1.1	1.1	1	0.8	0.7	0.5

#### Capacity correction factors for system pressure (C2)

System Pressure (psig)	60	75	90	100	115	130	150	160	175	190	200	220	250
Correction Factor	0.63	0.75	0.9	1	1.12	1.25	1.38	1.5	1.63	1.75	1.88	2	2.13

### To Size the Dryer Capacity for Actual Conditions

#### Adjusted Capacity = scfm x C1 x C2

To calculate the capacity of a given dryer based on non-standard operating conditions, multiply the standard capacity by the appropriate correction factor(s).

**EXAMPLE:** Dryer Model: UP0060-60  
 Standard Capacity: 60 scfm  
 Actual Operating Conditions: 100°F inlet temperature: **C1 = 1.0**  
 150 psig system pressure: **C2 = 1.38**  
 Adjusted Capacity = 60 scfm x 1.0 x 1.38 = **82.8 scfm**

### To Select the Dryer Model for Actual Conditions

#### Adjusted Capacity = scfm/C1/C2

To choose a dryer based on a given flow at non-standard operating conditions, divide the given flow by the appropriate correction factor(s).

**EXAMPLE:** Given Flow: 34 scfm  
 100°F inlet temperature: **C1 = 1.0**  
 Actual Operating Conditions: 150 psig system pressure: **C2 = 1.38**  
 Adjusted Capacity = 34 scfm / 1.0 / 1.38 = **24.6 scfm**  
 Selected Dryer Model: UP0030-60

**T**rust Donaldson Compressed Air & Process Filtration to deliver compressed air purification solutions that improve air quality throughout your plant – from the compressor room to all points of use. With over 30 years of expertise in compressed air filtration and separation, Donaldson manufactures a complete line of drying and filtration equipment using innovative designs that focus on energy efficient operation and reliable performance.



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Information in this document is subject to change without notice.  
 © 2009 Donaldson Co., Inc.  
 Printed in U.S.A. on recycled paper  
 Bulletin No. UFSB0106 Ultrapac 2000 01-09