

COMPRESSED AIR TO MEET YOUR STRINGENT STANDARDS

# BURAN REFRIGERATED DRYER



# PUT MOISTURE IN ITS PLACE

When compressed air contains moisture and contaminants, your entire production process is at risk. Increase your level of protection with Donaldson's premium Buran Refrigerated Dryer that delivers state-of-the-art drying performance and equipment longevity.



## INDUSTRIES & APPLICATIONS

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# DRYER AIR FOR PREMIUM PRODUCTION

The Buran Refrigerated Dryer from Donaldson removes moisture from compressed air and helps:

- + Reduce or eliminate condensation
- + Protect against equipment corrosion and failure
- + Support the quality of the final product or process

## HOW THE BURAN WORKS

The Buran's innovative aluminum heat exchanger provides a consistent supply of clean, dry air for your valuable equipment and processes.

Compressed air enters the dryer and is pre-cooled via the air-to-air heat exchanger. The inlet air is initially cooled by the outgoing cold compressed air.

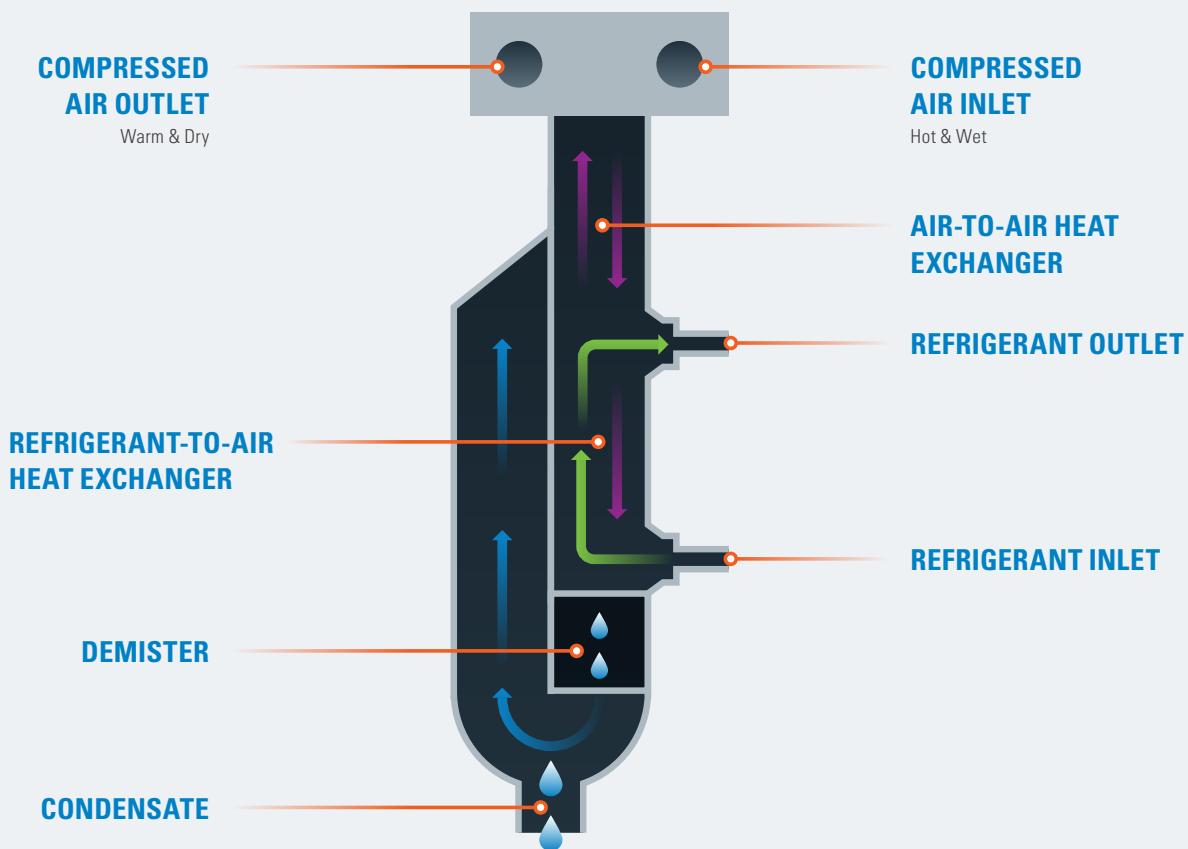
The pre-cooled air then passes through the refrigerant-to-air heat exchanger where it is cooled to the required pressure dewpoint.

The moisture in the inbound compressed air condenses and collects in the dryer's drain and discharges automatically.

Finally, the cold, discharged air is reheated by the incoming compressed air before it enters your system. The process prevents moisture from forming beyond the dryer.

The cooling capacity of the refrigeration cycle is controlled by a hot gas bypass, which provides proper functioning and compressed air delivery even during partial loading.

## ALUMINUM HEAT EXCHANGER



# FEATURES & BENEFITS



## EASY TO INSTALL, MONITOR & SERVICE

- + Compact design, intuitive set-up
- + Service kits
- + Service display
- + Easy access to components within the housing

## CERTIFIED TO MEET STRINGENT STANDARDS

- + cETLus certification: Intertek (ETL) certified in accordance with Underwriters Laboratories (UL) and CSA group (CSA) standards

## HIGH OVERLOAD CAPACITY

- + In case of overload, the dryer will only switch off at a dewpoint above approximately 68 °F

## INTEGRATED ALARM SIGNAL

- + Economical operation and integrated alarm installation in the compressed air network
- + Connection to higher-level control possible

## ELECTRONIC LEVEL CONTROLLED CONDENSATE ZERO LOSS DRAIN

- + No compressed air loss due to condensate removal

## ALUMINUM HEAT EXCHANGER

- + Low operating costs due to low pressure drop across the heat exchanger
- + No corrosion inside the heat exchanger due to contact with wet compressed air

## HOT GAS BYPASS CONTROL

- + Proven and reliable technology
- + Constant dewpoint even with changing loads



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Stable 37.4 °F Dewpoint

Low Pressure Drop

Optimal Performance  
& Equipment Longevity

# TECHNICAL SPECIFICATIONS

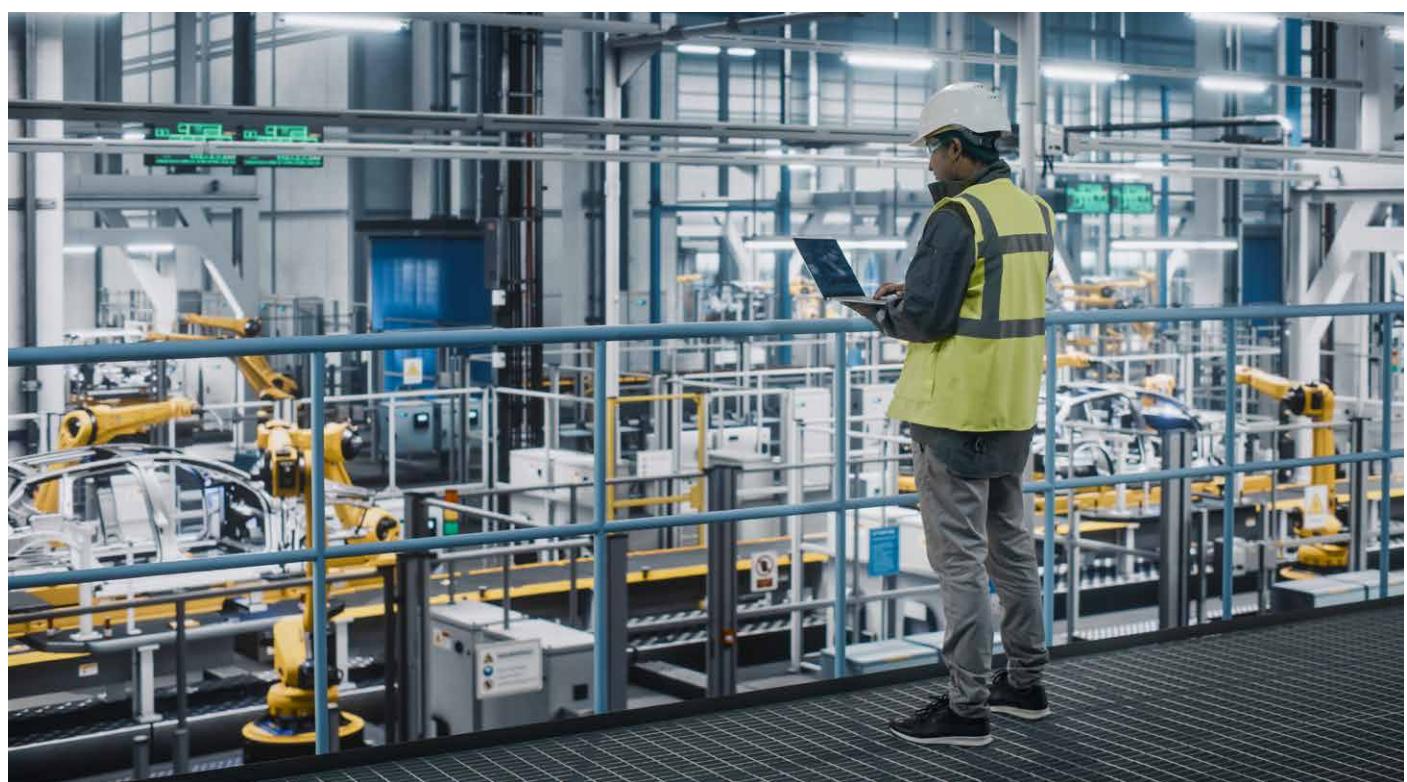
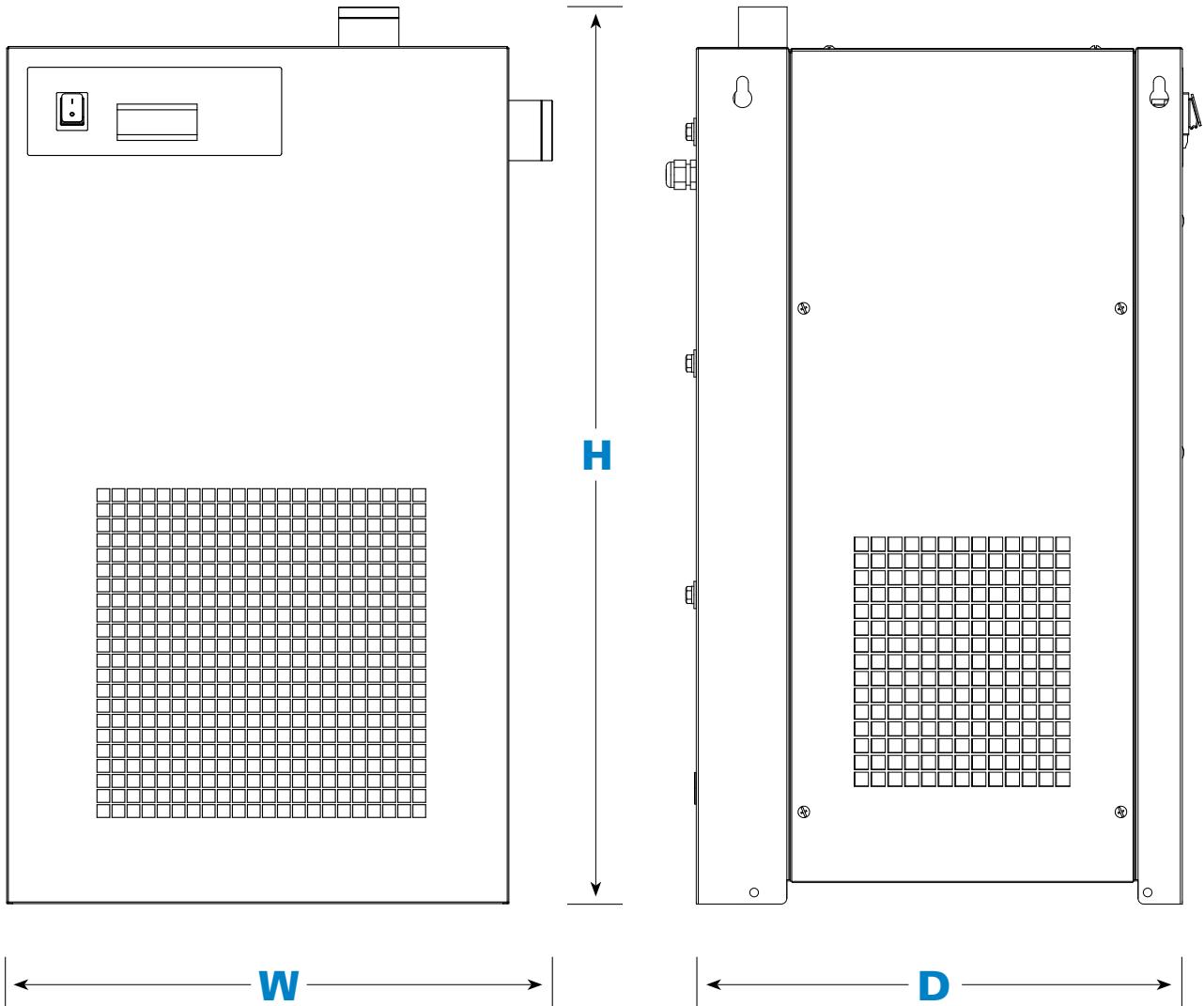
| Donaldson | Donaldson Description             | Power Supply    | Volume Flow | Power Consumption | Cooling Air Requirement CFM (m³/h) | Dryer Dimensions (inches) |       |        |
|-----------|-----------------------------------|-----------------|-------------|-------------------|------------------------------------|---------------------------|-------|--------|
|           |                                   |                 |             |                   |                                    | Width                     | Depth | Height |
| AX0641401 | BURAN 0020 CFM<br>1 / 115 / 60 Hz | 1 / 115 / 60 Hz | 20.01 CFM   | .26 kW            | 180 (305)                          | 14.76                     | 16.53 | 29.13  |
| AX0641501 | BURAN 0030 CFM<br>1 / 115 / 60 Hz | 1 / 115 / 60 Hz | 30.02 CFM   | .27 kW            | 180 (305)                          | 14.76                     | 16.53 | 29.13  |
| AX0641601 | BURAN 0050 CFM<br>1 / 115 / 60 Hz | 1 / 115 / 60 Hz | 50.03 CFM   | .39 kW            | 180 (305)                          | 14.76                     | 16.53 | 29.13  |
| AX0641701 | BURAN 0075 CFM<br>1 / 115 / 60 Hz | 1 / 115 / 60 Hz | 74.75 CFM   | .48 kW            | 180 (305)                          | 14.96                     | 16.53 | 29.13  |
| AX0641801 | BURAN 0100 CFM<br>1 / 115 / 60 Hz | 1 / 115 / 60 Hz | 100.06 CFM  | .58 kW            | 180 (305)                          | 20.47                     | 17.91 | 32.48  |
| AX0641901 | BURAN 0125 CFM<br>1 / 115 / 60 Hz | 1 / 115 / 60 Hz | 124.78 CFM  | 1.00 kW           | 350 (594)                          | 20.47                     | 17.91 | 32.48  |
| AX0642001 | BURAN 0150 CFM<br>1 / 115 / 60 Hz | 1 / 115 / 60 Hz | 150.09 CFM  | 1.05 kW           | 350 (594)                          | 20.47                     | 17.91 | 32.48  |
| AX0642101 | BURAN 0200 CFM<br>1 / 115 / 60 Hz | 1 / 115 / 60 Hz | 200.12 CFM  | 1.10 kW           | 530 (900)                          | 23.82                     | 22.83 | 34.84  |
| AX0642201 | BURAN 0250 CFM<br>1 / 230 / 60 Hz | 1 / 230 / 60 Hz | 250.15 CFM  | 1.39 kW           | 530 (900)                          | 23.82                     | 22.83 | 34.84  |
| AX0642301 | BURAN 0300 CFM<br>1 / 230 / 60 Hz | 1 / 230 / 60 Hz | 299.59 CFM  | 1.64 kW           | 1500 (2548)                        | 24.02                     | 24.60 | 38.38  |
| AX0642401 | BURAN 0350 CFM<br>1 / 230 / 60 Hz | 1 / 230 / 60 Hz | 349.62 CFM  | 2.19 kW           | 1550 (2633)                        | 24.02                     | 24.60 | 38.38  |
| AX0642501 | BURAN 0400 CFM<br>1 / 230 / 60 Hz | 1 / 230 / 60 Hz | 399.64 CFM  | 2.48 kW           | 2100 (3567)                        | 28.15                     | 28.54 | 43.50  |
| AX0642601 | BURAN 0500 CFM<br>1 / 230 / 60 Hz | 1 / 230 / 60 Hz | 499.70 CFM  | 2.5 kW            | 2100 (3567)                        | 28.15                     | 28.54 | 43.50  |

| Working Overpressure | Bar (g) | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   |
|----------------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Factor               | $f_p$   | 0.49 | 0.66 | 0.77 | 0.86 | 0.93 | 1.00 | 1.05 | 1.10 | 1.14 | 1.18 | 1.21 | 1.24 | 1.27 | 1.30 | 1.33 |

| Pressure Dewpoint | °F        | 37.4 | 41   | 44.6 | 50   | Temperature of ambient air, only for air-cooled dryers | °F       | 77   | 86   | 95   | 104  | 113  | 122  | 131 | 140 | 149 | 158 |
|-------------------|-----------|------|------|------|------|--|----------|------|------|------|------|------|------|-----|-----|-----|-----|
| Factor            | $f_{tpd}$ | 1.00 | 1.09 | 1.19 | 1.37 | Factor   | $f_{tu}$ | 1.00 | 0.96 | 0.90 | 0.82 | 0.72 | 0.60 |     |     |     |     |

| Compressed air inlet temperature | °F       | 77   | 86   | 95   | 104  | 113  | 122  | 131  | 140  | 149  | 158  |
|----------------------------------|----------|------|------|------|------|------|------|------|------|------|------|
| Factor                           | $f_{te}$ | 1.20 | 1.12 | 1.00 | 0.83 | 0.69 | 0.59 | 0.50 | 0.44 | 0.39 | 0.37 |

Corrected dryer capacity = Standard dryer capacity  $\times f_p \times f_{tpd} \times f_{tu} \times f_{te}$



# THE DONALDSON DIFFERENCE

With more than a century of experience and expertise, you can count on Donaldson to help address your operation's filtration challenges.

From the initial review of your process needs to identifying the right refrigerated dryer for your operation, we will work with you to provide energy-efficient, cost-effective compressed air for your organization.

Post installation, you can continue to rely on Donaldson for unrivaled customer service and support, a comprehensive portfolio of replacement parts, and access to industry experts ready to answer your questions.



**Talk to a Donaldson representative to learn more about the Buran Refrigerated Dryer and our other filtration solutions to help meet your operational challenges.**



**Donaldson.**  
FILTRATION SOLUTIONS

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**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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