

# Desiccant Dryers

Compressed Air Dryers  
Flow Rates: 3 - 177 SCFM (5 - 301 Nm<sup>3</sup>/Hr)



Clean and dry compressed air is easily achieved with the new range of ultra-high purity compressed air dryers.

Ohio Medical Corporation® (OMC) dryers reliably gives you:

- More for your money - everything needed for installation is in the box
- Moisture & particulate protection of your production process
- Lower life cycle costs - low energy costs and simplified maintenance
- Built in dewpoint monitoring (optional)
- Space saving - can be easily wall mounted
- Safe and quiet operation
- 3 - 177 scfm (5 - 301 Nm<sup>3</sup>/hr) at pressures of 100 psig (7 barg)
- Peace of mind - One of the most reliable products of its kind

Designed for use at the point of application, OMC dryers are an effective solution to the problems of contaminated compressed air.

**Reliability is built in...and backed by our 5 year product warranty!**



## benefits - get more for your money

### Guaranteed Performance

- The OMC dryers have been 100% function and performance tested at the factory to ensure the highest standard of performance, delivering compressed air purity in accordance with ISO8573:1, Class 2 dirt (1 micron) and Class 2 water (-40<sup>o</sup> C pressure dewpoint).

### Reliable Operation

- High efficiency moisture removal and reliable operation with PLC controlled solenoid valves
- Integral volumetric flow limiter prevents overflow ensuring consistent dewpoint performance
- Condensate is automatically removed every cycle to eliminate possible carry over

### Quiet Depressurization

- Unique exhaust air silencers significantly reduce noise levels

### Energy Saving Design

- Integrated inlet & outlet filtration eliminates the need for external filter housings\*
- Advanced design limits regeneration of purged air to approximately 15%
- Energy saving dew point monitoring option can save up to 60% during reduced inlet moisture loading

### PLC Controls and Digital Display Optional

- A clear digital display provides a full view of PLC operation and monitoring data

### High Quality Construction

- 100% tested for leaks, proper operation and dewpoint performance

### Easy to Install

- Easy to install & ready for use - package includes everything you need for either floor or wall mounting, and 3 power cables for operation (115v / 60 hZ).

### Easy to Maintain

- Patented, combined filter and desiccant cartridges
- 12,000 hour and 5 year service interval kits
- Built in inlet and outlet filters
- No special tools required
- No handling of loose desiccant
- No handling of contaminants
- Replacement of cartridges takes less than 15 minutes

\* An upstream coalescing filter may be required in some applications.

## Patented combined filter & desiccant cartridges

- Water separation, inlet and outlet filtration and desiccant are all integrated into a single cartridge (eliminates up to 3 external filters and drains).
- Built in inlet filter improves flow distribution and lowers pressure drop.
- Snow storm filled desiccant provides maximum adsorption capacity.
- Easy to replace cartridges simplify maintenance requirements.

## PLC controlled operation (Optional)

- The dryer is operated by a robust and reliable PLC control system, offering valuable features including 'power on', 'hours run' and 'service required' indicators.
- The PLC remembers where it stopped in the drying cycle to ensure consistently clean and dry air downstream.
- A standard energy saving feature starts and stops the dryer with a signal from the compressor or point-of-use equipment to eliminate purge loss when drying is not required.

## Energy saving dewpoint control option

- With this option, a dewpoint sensor is incorporated into the dryer package providing the ultimate in energy savings
- The outlet dewpoint is constantly monitored, allowing the cycle time to be adjusted depending on the actual moisture load - saving valuable purge air.

## Floor or wall installation

- Can be floor or wall mounted - simply by rotating the feet 90°.

## Optimum dewpoint performance

- Air velocity (and therefore air to desiccant contact time) is carefully controlled via a pressure maintaining device to ensure optimum dewpoint performance.

## Constant flow and pressure

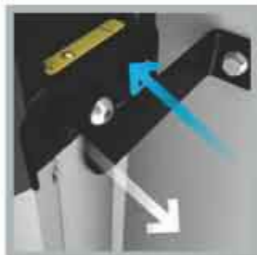
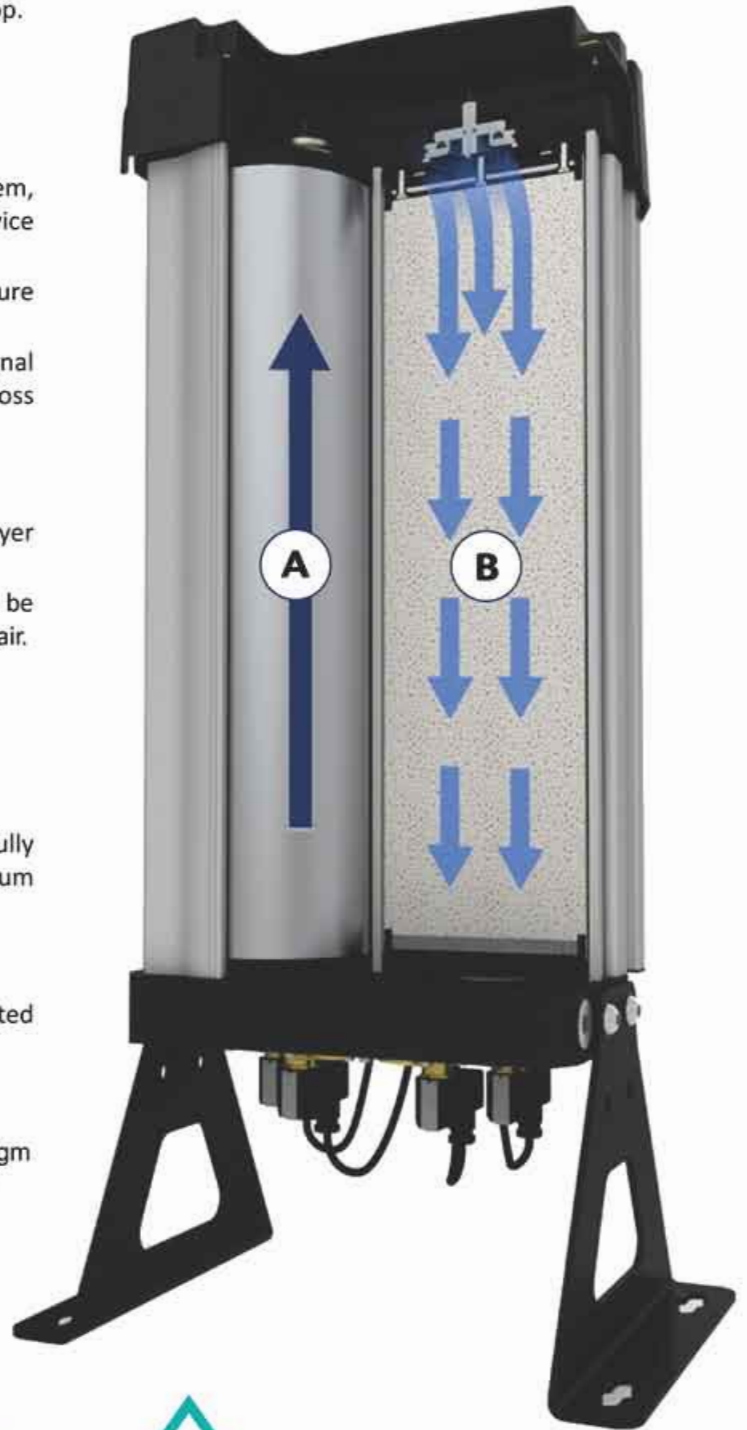
- Pressure is equalized before switching columns to ensure uninterrupted compressed air at all times with no changes in pressure.

## Reliable high performance valves

- Three way ball valves (10 to 50 SCFM) or solenoid operated diaphragm valves (60 to 130 SCFM) provide proven performance and reliability.

## Maximum corrosion protection

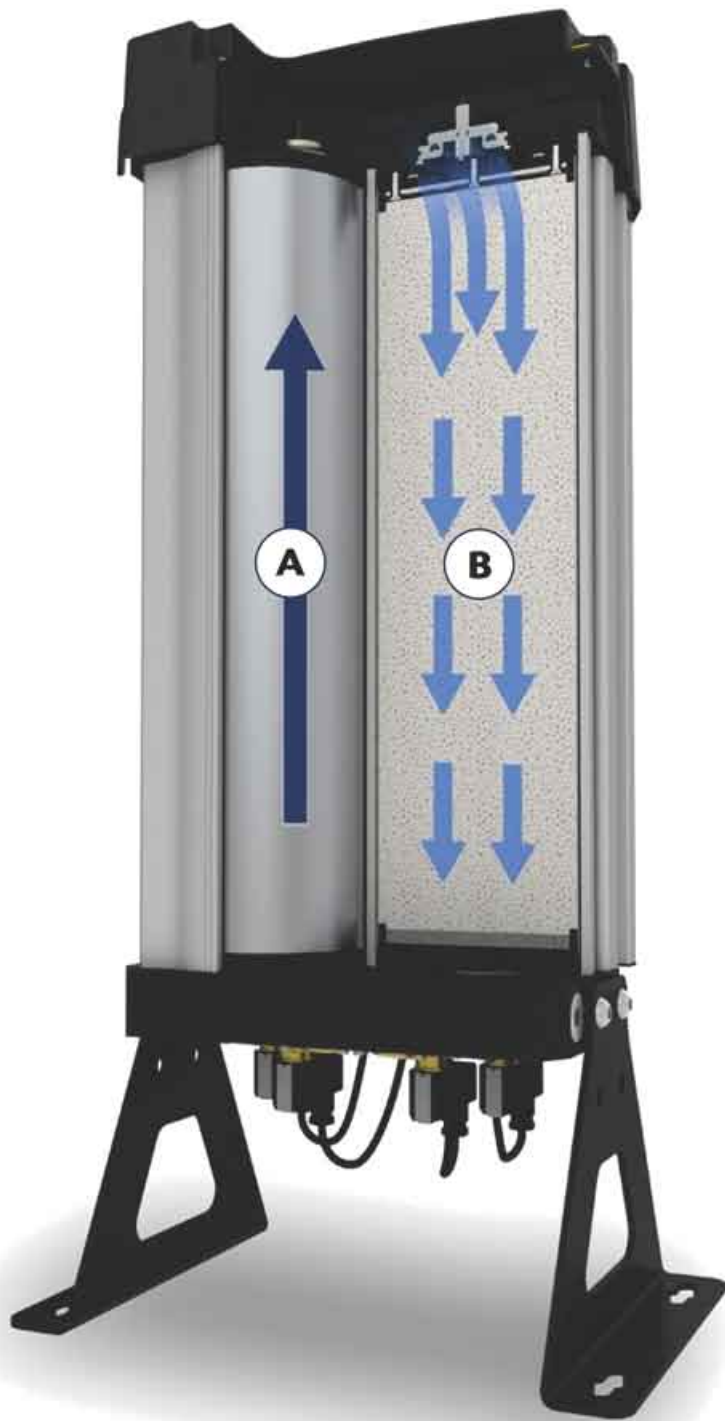
- Anodized extruded high tensile aluminum columns provide maximum protection for corrosive environments.



Unique patented cartridge design

Flexible piping & installation options

Mount on the floor or wall.



The advanced Ohio Medical Corporation® D-Series dryers use the pressure swing adsorption principle to efficiently dry compressed air. They use a heatless twin tower configuration (see diagram opposite) housed in a modular design. Each column contains a unique desiccant cartridge which incorporates inlet and outlet filtration.

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be vented to atmosphere as it is depressurised. Following the filtration stage, air passes through the desiccant bed where any remaining moisture is adsorbed. Finally, the dry air passes through a particle filter, which retains any remaining desiccant particles that may have been carried through the system (<1 micron / ISO8573.1 class 2 for dust).

Simultaneously, a small amount of dry air is counter-flowed down through cartridge B and exhausted to atmosphere, removing the moisture and regenerating the desiccant.

## PLC Option

The dryer is controlled by a PLC which periodically switches the solenoid valves when the compressor is running, reversing the function of each column and therefore ensuring the continuous supply of dry air.



PLC controller with clear text display.

# sizing & specifications

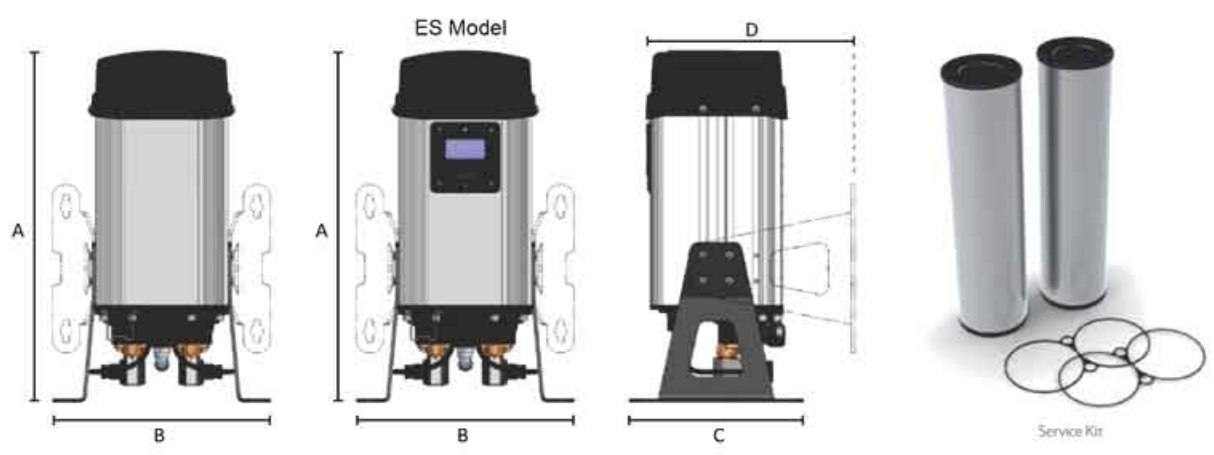
Model	Maximum Rated Flow		Inlet & Outlet Connections	Dimensions inches (mm)				Approximate Weight	Model with Energy Saving Dewpoint Sensor	Service Kit (12,000 hrs or 2 years)
	Inlet <sup>(1)</sup>	Outlet <sup>(2)</sup>		A	B	C	D			
	scfm (Nm <sup>3</sup> /hr)							lbs (kg)		
233551	3 (5.1)	2.4 (4.1)	3/8" Push to Connect	17 (447)	9 (241)	6 (160)	10 (252)	18 (8.3)	233551-ES	NDK-010
233552	5 (8.5)	4 (6.8)		17 (447)	9 (241)	6 (160)	10 (252)	18 (8.3)	233552-ES	NDK-020
233553	10 (17)	8 (14)		25 (647)	9 (241)	6 (160)	10 (252)	28 (13)	233553-ES	NDK-030
233554	15 (26)	12 (20)		35 (897)	9 (241)	13 (330)	10 (252)	36 (16)	233554-ES	NDK-040
233555	24 (41)	19 (33)	1/2" Push to Connect	43 (1097)	9 (241)	13 (330)	10 (252)	43 (19)	233555-ES	NDK-050
233556	34 (58)	27 (46)	1" NPT	30 (734)	17 (440)	12 (295)	13 (335)	88 (40)	233556-ES	NDK-060
233557	41 (70)	33 (56)		30 (734)	17 (440)	12 (295)	13 (335)	88 (40)	233557-ES	NDK-070
233558	53 (90)	42 (71)		36 (914)	17 (440)	12 (295)	13 (335)	119 (54)	233558-ES	NDK-080
233559	66 (112)	53 (90)		36 (914)	17 (440)	12 (295)	13 (335)	119 (54)	233559-ES	NDK-090
233560	88 (150)	70 (119)		43 (1089)	17 (440)	12 (295)	13 (335)	141 (64)	233560-ES	NDK-100
233561	106 (180)	85 (144)		49 (1239)	17 (440)	12 (295)	13 (335)	172 (78)	233561-ES	NDK-110
233562	132 (224)	106 (180)		59 (1489)	17 (440)	12 (295)	13 (335)	209 (95)	233562-ES	NDK-120
233563	177 (301)	142 (241)		72 (1839)	17 (440)	12 (295)	13 (335)	262 (119)	233563-ES	NDK-130

**Notes:**

- (1) Maximum Rated Inlet Flow assumes an inlet air pressure of 100 psig (7.0 barg) and temperature of 100°F (37.7°C).
- (2) Outlet flow is inlet flow minus average purge & depressurization loss over time.
- For rated flows at other inlet conditions or for -100°F (-70°C) dewpoint applications go to: [www.n-psi.com](http://www.n-psi.com).
- If the dryer is to be installed downstream of an oil lubricated compressor, we recommend installing a coalescing filter immediately upstream of the dryer.

## specifications

<b>ISO8573-1: Quality Classes</b>	Dirt: Class 2: 1 micron Water: Class 2: -40°F (-40°C) Pressure Dew Point
<b>Minimum working pressure</b>	58 psig (4 barg)
<b>Maximum working pressure</b>	232 psig (16 barg)
<b>Power supply</b>	115V / 60 Hz
<b>Minimum inlet temperature</b>	34.7°F (1.5°C)
<b>Maximum inlet temperature</b>	122°F (50°C)



For 24/7 Technical Support,  
Call 1-847-855-6234 for Assistance



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