

air prep

UMR Series

Mini Regenerative Air Dryer



numatics®

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Air-Oil Systems, Inc. www.airoil.com



The UMR Series Mini Regenerative Desiccant Dryer offers a total cleaning solution for many applications.

Principle of Operation

Drying Cycle: Moist air from the compressor is sent through the inlet port of the optional coalescing filter where water & oil coalesce and are purged through the electronic drain valve. The clean air with water vapor passes through the control valve into the desiccant filled drying tower where the air is completely dried. The air then exits through a built in strainer and an optional external particulate filter giving the customer incredibly clean and dry air (down to a -40 F° dew point, see correction factor chart).

Regeneration Cycle: Occurs every 2 minutes for a period of 90 seconds. During the regeneration cycle, the control valve at the bottom of the tower opens and depressurizes. Sudden depressurization brings out water molecules trapped in the Desiccant pores to the surface of the beads. A small portion (12%) of dry compressed air from the drying tower then passes over the desiccant through the regeneration orifice built in the Top Block. This results in complete regeneration of the desiccant.

Specifications

UMR Series	
Maximum Pressure:	225 PSIG (16 BAR)
Minimum Pressure:	29 PSIG (2 BAR)
Maximum Temperature:	158 F
Voltage:	115/1/60, 208-230/1/60, 220-240/1/50
Power Consumption:	12 Watt Max
Pre-filter Rating:	0.3 Micron (Coalescer)
Afterfilter Rating:	3.0 Micron (Particulate)
Cycle Time:	4 Minutes
Purge Loss:	12%
Air Outlet Conditions:	See correction factor chart
Power Cord:	Standard 8 ft

How to Order

Model	Flow (SCFM)	Inlet/Outlet Connection	Weight	Voltages	
				A	B
UMR 10	10	1/2 NPTF	24	•	•
UMR 20	20	1/2 NPTF	35	•	•
UMR 30	30	1/2 NPTF	62	•	•
UMR 45	45	1/2 NPTF	75	•	•
UMR 60	60	*1/2 NPTF	121	•	•
UMR 90	90	*1/2 NPTF	148	•	•

* UMR 60 and UMR 90 have 3/4 NPTF inlet/outlet with filtration package

** UMR 200 has 1 1/2 NPTF inlet/outlet with filtration package

Voltage Options:

A = 115v, 50/60hz
B = 208-240v, 50/60hz

Deluxe Options:

F = Econo-Purge
T = Three Valve Bypass
U = Filtration Package
W = Wallmount
UL Controller

Example Model Number:

UMR45-AU

Description:

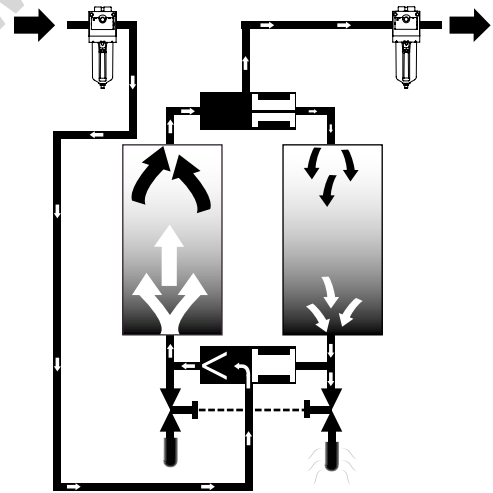
45 SCFM Mini Regenerative Air Dryer with 115v, 50/60hz voltage, and filtration package

Typical Applications:

- Paint spray booths
- Medical
- Tool, Valve, Cylinder protection
- Laboratories
- Food packaging
- Pharmaceutical
- Auto Garage
- OEM
- Textile & Garment
- Instrumentation

Features

- Microprocessor based controller for accurate and trouble free operation (UL listed options).
- Optional sub-micron prefilter for protection to the dryer and particulate afterfilter captures desiccant dust keeping it from downstream components.
- Shuttle valves for low pressure drop.
- All Aluminum Drying Towers resist oxidation & scale formation.
- 1 year warranty with filtration package

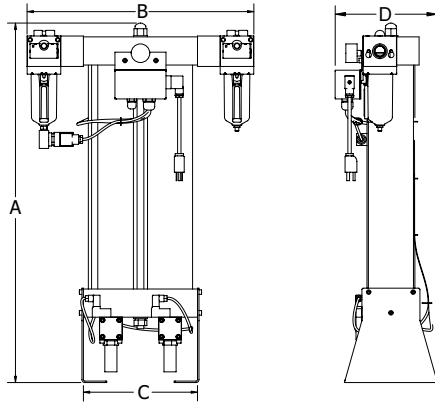




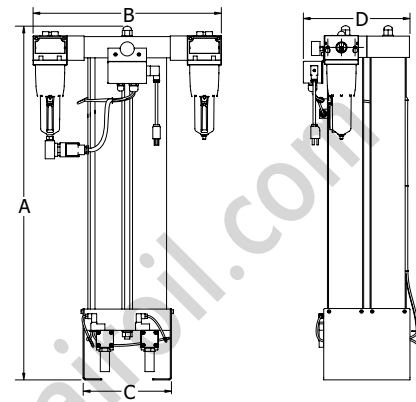
UMR Series

Dimensions

UMR - 10/20/30/45



UMR - 60/90



* Drawings shown with optional filtration package

Dimensions

Model	A	B	C	D
UMR 10	23.25	15.90	6.72	7.33
UMR 20	25.20	20.25	10.13	9.75
UMR 30	31.90	20.25	10.13	9.75
UMR 45	41.55	20.25	10.13	9.75
UMR 60	31.90	22.25	10.13	13.27
UMR 90	41.55	22.25	10.13	13.27

Filtration Replacement Elements

Model	Prefilter Element (0.3 Micron) Number	Afterfilter Element (3.0 Micron) Number
UMR 10	EKF32D	EKF32G
UMR 20	EKF32D	EKF32G
UMR 30	EKF32D	EKF32G
UMR 45	EKF32D	EKF32G
UMR 60	EKF42D	EKF42G
UMR 90	EKF42D	EKF42G

Correction Factor

Model	100% Rated Flow		50% Rated Flow	
	Atompsheric DP	Pressure DP	Atompsheric DP	Pressure DP
UMR 10	-35	2	-53	-20
UMR 20	-40	-5	-62	-30
UMR 30	-40	-5	-62	-30
UMR 45	-40	-5	-62	-30
UMR 60	-40	-5	-62	-30
UMR 90	-40	-5	-62	-30

Note: 0.000053 lbs of water per SCFM of air @ -5°F P.D.P.

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