ZEKS
COMPRESSED AIR SOLUTIONS®

ZMA Series
3-177 SCFM

Modular
Desiccant Dryers

Heatless Regeneration

www.zeks.com

The Need For High Quality Compressed Air...

Compressed air is a versatile energy resource that's required or preferred for many production and finishing processes. Powering pneumatic tools, equipment and process machinery, driving spray and coating applications, and actuating valves and instruments are among its many uses. For these to operate reliably and at peak efficiency, the compressed air supply must be clean and dry.

Contaminants present at the intake of an air compressor will effect compressed air quality. The compression process is what causes concentrations of water, compressor lubricant and particulate that are in air to increase to levels that can damage tools and instruments, spoil finished product, and increase maintenance requirements. To make compressed air useable, installation of drying and filtration equipment is necessary.

Modular
Desiccant Dryers

ZMA Series
Heatless Regeneration

ZEKS ZMA Modular Desiccant Dryers are a compact, fully integrated drying solution ideally suited to point-of-use and small compressed air applications where very high quality air is needed. They enable delivery of ISO Class 2 dew point (optional ISO Class 1) to prevent corrosion, minimize production disruptions, and eliminate losses due to moisture or contamination in the compressed air supply.

The ZMA Series includes eleven models, all with features that enhance reliability while enabling dryer performance to be monitored, and serviceable parts to be maintained.

Advanced Controller
Provides precision control of dryer operating cycle and visual indication of dryer status.

Proprietary Flow Valve
Controls directional flow for alternating drying and regeneration functions.

Internal/External Anodized Towers
Provides exceptional corrosion resistance. External surface powder coated for additional protection.

High Strength Desiccant
Resists dusting and breakdown for enhanced dryer performance and afterfilter life.

Pressure Gauges
Present immediate visual indication of dryer operation.

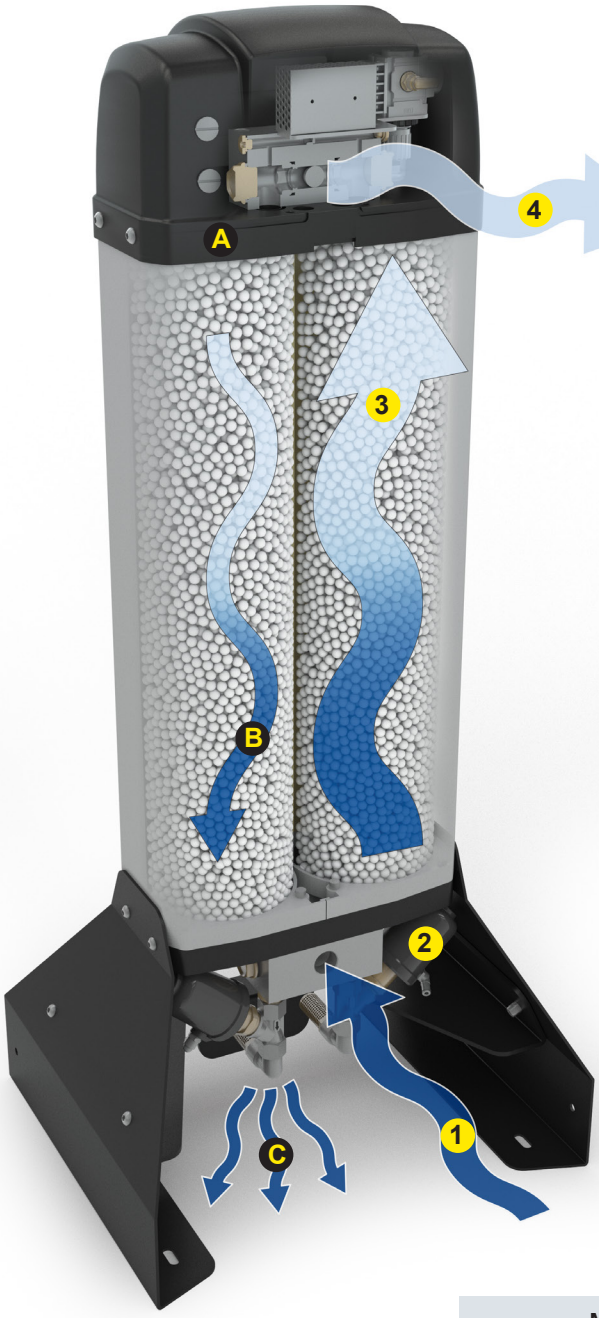
Purge Mufflers
Provide noise attenuation (<75 dBA) for expanded point-of-use applicability.

Durable Purge Valves
All-stainless steel angle seat design. Application-proven.

Multi-Function Base
Enables forklift placement while protecting dryer components. Can be angled for wall-mounting (3-15ZMA).

Filtration
Prefilter and afterfilter provided to ensure long dryer life and air quality.

ZEKS COMPRESSED AIR SOLUTIONS®
www.zeks.com



ZMA Dryer Operation

Through an operating cycle that enables simultaneous air drying and heatless desiccant regeneration, ZMA Series dryers deliver a continuous supply of high quality compressed air.

DRYING PROCESS

1. Wet, untreated compressed air flows from the coalescing prefilter into the ZMA dryer.
2. Purge valves open or close in a timed cycle to direct the flow of incoming compressed air into the tower that contains regenerated desiccant.
3. Desiccant media adsorbs moisture as the air flows through it, making the air clean and dry.
4. High quality air exits the dryer and particulate after filter and continues on to downstream processes for safe use.

DESICCANT REGENERATION PROCESS

A. A small portion of the dried air is directed into the offline tower.

B. The air, now expanded to atmospheric pressure, strips away the moisture that was held on the surface of the desiccant media in the previous operating cycle.

C. Purge valves are configured to enable the purge air flow to exit the dryer, carrying moisture and contaminants out of the dryer.

Microprocessor Dryer Controls

3-15ZMA
Provides precision control of dryer operating cycle and real-time visual indication of operating cycle status.

24-177ZMA
Advanced microprocessor controls all dryer functions and enables user-access to adjustable parameters. Includes *Compressor Interlock* which links purge air consumption to air compressor operation.

- *Alarms and Alarm History*
- *Maintenance Reminders*
- *RS485 Remote Communications*
- *Dryer Step and Time Counter*

ZMA Series Modular Desiccant Dryers

Save Energy With Moisture Load Control (24–177ZMA)

For applications where periods of reduced air demand or low moisture loading are common, significant energy savings can be realized with the optional Moisture Load Control (MLC). MLC commands the purge valves to remain closed during periods of low compressed air system usage to reduce purge air consumption. MLC is a field-installed option.

-100°F Dew Point Performance (24–177ZMA)

Where ISO Class 1 compressed air quality is needed, ZMA dryers can be fit to achieve -100°F dew point. This feature is also available as a field-installed kit.

Technical Specifications

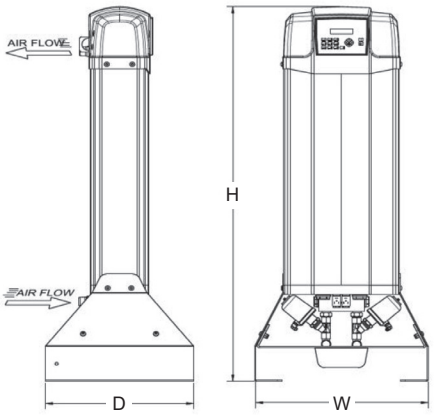
MODEL	CAPACITY SCFM* -40°F	-100°F	PURGE VOLUME scfm	DIMENSIONS** IN. W	D	H	DRYER WEIGHT LBS.	DESICCANT PER TOWER LBS.	ELECTRICAL VOLTAGE
3ZMA	3	NA	0.5	9.4	8.3	16.7	24.2	1.5	115/1/60
9ZMA	9	NA	1.6	9.4	8.3	32.4	39.7	4.7	115/1/60
15ZMA	15	NA	2.7	9.4	8.3	42.2	59.5	6.6	115/1/60
24ZMA	24	19	4.2	18.7	15.9	38.1	97.0	14.1	115/1/60
32ZMA	32	26	5.8	18.7	15.9	44.0	110.2	18.4	115/1/60
41ZMA	41	33	7.4	18.7	15.9	51.9	132.2	24.0	115/1/60
59ZMA	59	47	10.6	18.7	15.9	65.9	160.9	33.9	115/1/60
88ZMA	88	71	15.9	18.7	15.9	73.7	198.4	39.6	115/1/60
118ZMA	118	94	21.2	21.1	19.5	67.1	390.1	67.9	115/1/60
147ZMA	147	118	26.6	21.1	19.5	75.0	396.7	79.1	115/1/60
177ZMA	177	142	31.9	21.1	19.5	75.0	414.4	79.1	115/1/60

Performance data obtained as per ISO 7183, Table 2, Option A2.

* Pressure Dew Point (PDP) at 100 psig, 100ºF inlet air, 100ºF ambient air.

Maximum Working Pressure is 200 psig.
Minimum Working Pressure is 60 psig.

Desiccant is factory-installed on all models.



** Dimensions shown represent dryer without filters installed. Optional equipment may alter dryer dimensions and weight. Dimensions and weights are approximate.

Standard Features

- Microprocessor Controller
  Advanced: 24-177ZMA
  Standard: 3-15ZMA
- Purge control valve
- RS485 connectivity
- Extruded aluminum vessel(s)
- Tower pressure gauges (L/R)
- High Strength desiccant
- Coalescing prefilter
- Particulate afterfilter
- Stainless steel purge valves
- Exhaust mufflers
- Stable, formed base
  Wall-mount (3ZMA-15ZMA)

Optional Features

- Moisture Load Control (MLC) kit
- -100°F Dew Point Performance kit

ZEKS ZFC™ prefilter and afterfilter are standard on ZMA dryers.

Intertek

MEMBER OF CAGI Compressed Air & Gas Institute

ZEKS COMPRESSED AIR SOLUTIONS®

ZEKS ZMA Modular Desiccant Dryers dryers are not designed, intended or approved for breathing air applications.

Specifications, illustrative materials and descriptions contained herein were as accurate as known at the time this publication was approved for printing. The company reserves the right to change specifications, discontinue models, equipment or design without notice and without incurring obligation. The information set out in this brochure is for preliminary information only and is not intended to constitute any representation or warranty by ZEKS to potential customers or to form the basis of a contract with any customer.

1302 Goshen Parkway
West Chester, PA 19380

Phone: 610-692-9100 800-888-2323
Fax: 610-692-9192
Web: www.zeks.com

