



ZEOZORB® Silica Gel Breathers

Ultimate protection against moisture and particulate contamination



LET MOISTURE BE OUR PROBLEM

ZEOZORB® Breathers

Applications

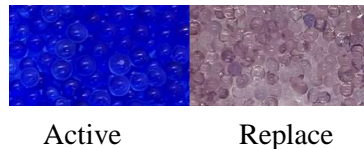
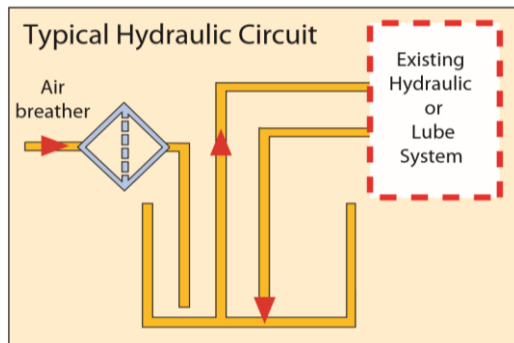
- Reservoirs
- Mobile Equipment
- Small Gearboxes
- Transformers
- Storage Tanks
- Totes
- 55 Gallon Drums

How They Work:

In harsh operating environments, the elimination of moisture and contaminants becomes more critical to the performance of equipment. These harsh environments where ZEOZORB® desiccant breathers become essential are those where operating temperatures may increase beyond 100°F. ZEOZORB® desiccant breathers utilize a superior adsorbent which retains water vapor/water molecules across a broader temperature range. This is the market differentiator for our proprietary ZEOZORB® desiccant blend.

As pressure, temperature or fluid level changes occur, air will enter equipment through the breather, which uses layered filter element to remove particulate while the ZEOZORB® silica gel absorbs harmful moisture, from entering the atmosphere.

The color changing silica gel will change from blue to pink, indicating it fully saturated and should be replaced.



Features

- Silica Gel adsorbent capacity, less than 250 ppm H₂O
- Optimal flow via non-mechanical air-flow control plenum
- Multi-layer filtration – (2) diffusion filters, activated carbon, 0.3µ PTFE filter, 100µ stainless steel filter
- UV resistant to prevent discoloring
- Easy visible color indication of spent adsorbent
- Diffusion cap- replaces use of valves to control air flow, allows for long term storage

Bi-Directional Air Flow

Air entering the breather is filtered and dried. Air expelled through the breather is filtered through an activated carbon filter, prolonging the life of the breather.

Rugged Construction

ZEOZORB® breathers are made of hard PC plastic and fully constructed of UV resistant polycarbonate.

Silica Gel Adsorbent

Silica Gel adsorbent provides up to 28-30% by weight adsorption and provides clean dry air less than 250 PPM.

Multi-Layer Filtration

All ZEOZORB® breathers' features (2) diffusion filters, an activated carbon filter, 0.3µ filter, 3µ PTFE filter, and 100µ stainless steel filter and diffusion technology. The diffusion cap replaces the mechanical valves to control air flow. The breathers will only allow air flow when a pressure differential occurs.

Application Flexibility

ZEOZORB® breathers feature a standard 1" multi-thread which easily adapt to many applicants.

Color Indication

When maximum adsorption is reached, the blue indicating Silica Gel beads will turn from blue to pink, to indicate that a replacement is required.

Drawings are for reference only.
Contact factory for current* version.

Reservoir Accessories

Specifications

General Data

Model #	ZZ- 125	ZZ- 175	ZZ- 225
Amount of Silica Gel	399 g.	630.5 g.	861.8 g.
	0.88 lbs.	1.39 lbs.	1.90 lbs.
Adsorption Capacity @ 33%	162 g.	248 g.	345 g.
	5.7 oz.	8.7 oz.	12.1 oz.
Net Weight of Unit	725.7 g.	1020.5g	1306.3 g
	1.60 lbs.	2.25 lbs.	2.88 lbs.
Filtration Area	8.4 in ² / 54.2 cm ²	8.4 in ² / 54.2 cm ²	8.4 in ² / 54.2 cm ²
Direction of Flow	Bidirectional	Bidirectional	Bidirectional
Operating Temperature Range	-40 °F to 100 °F / -40 °C to 37 °C	-40 °F to 100 °F / -40 °C to 37 °C	-40 °F to 100 °F / -40 °C to 37 °C

Hygroscopic Agent (Silica Gel)

Apparent Bulk Density	600-700 kg/m ³
Average Particle Diameter	0.100/ 2.54 mm
Specific Heat	0.24 BTU/lb. F

Unit Material Data

Material	UV Resistant Polycarbonate
Maximum Operating Temperature	100°F / 37°C
Check Valve Adapter	Zinc Plated Steel

Filter Media

Material	ePTFE
Porosity	3.5 - 7.5 Ft./min. @ 0.5 in. - H ₂ O (ASTM D 737)
Air Filtration Efficiency	1DT7670X-SG: 99.97% @ 3μ

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Desiccant Type

Specifications

Materials:

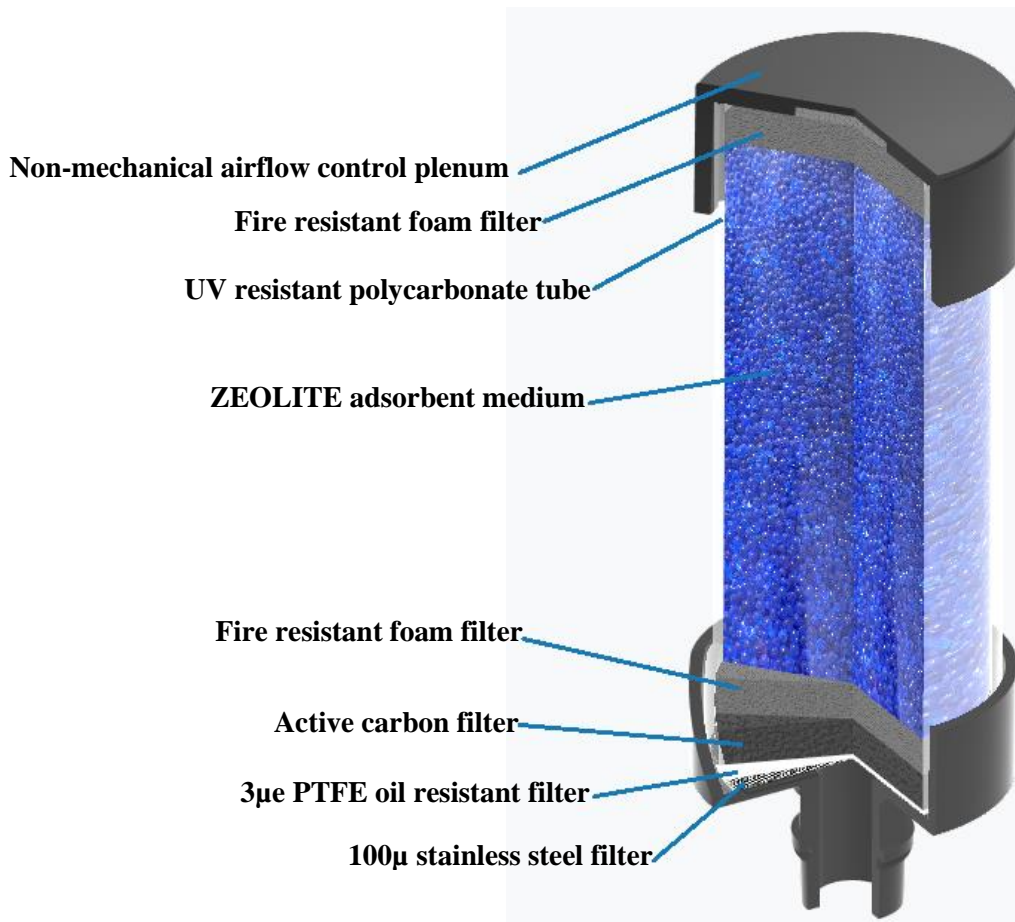
Tube: Clear UV Resistant Polycarbonate

End Caps: UV Resistant Polycarbonate

Multi-layer Filtration: 2 diffusion filters, activated carbon filter, 3µ PTFE filter, 100µ stainless steel filter

Operation Temperature: -40°F (-40°C) to 100°F (37°C)

Seals: Oil Resistant Viton O-Ring



Part Number	A (in/mm)	B (in/mm)	C
ZZ- 125	3.87 / 98.3	5 / 127	1" NPT thread
ZZ- 175	3.87 / 98.3	7 / 177.8	1" NPT thread
ZZ- 225	3.87 / 98.3	9 / 228.6	1" NPT thread

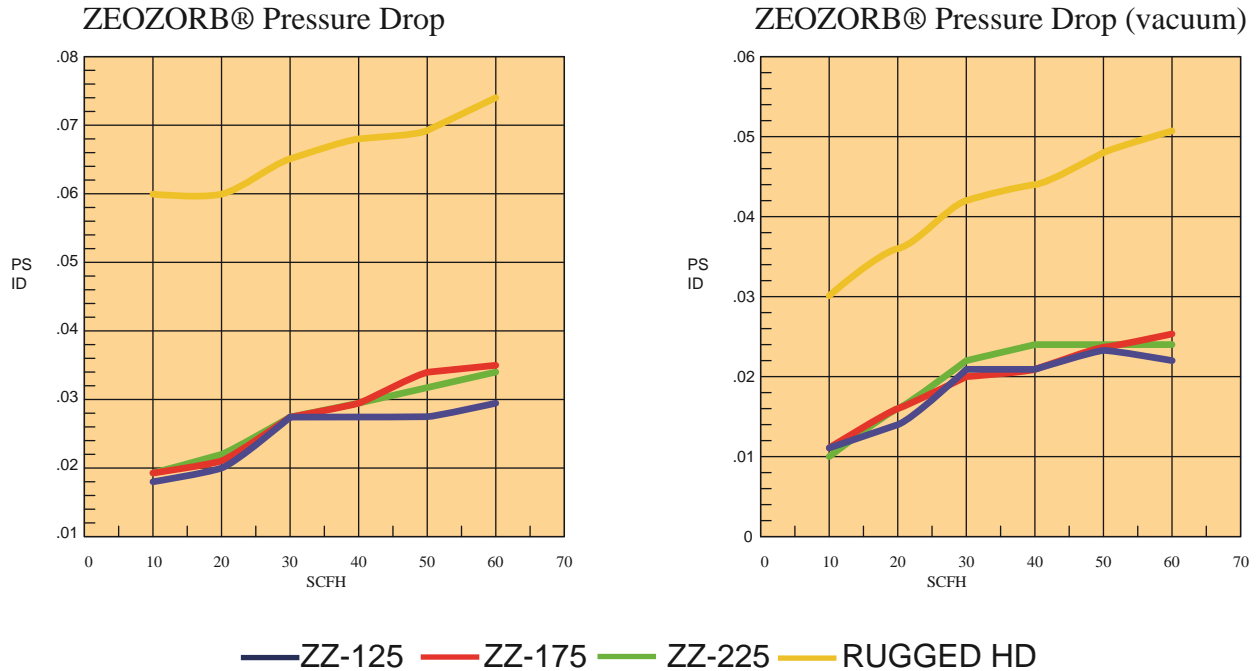
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Reservoir Accessories

Performance

Air Flow Performance

The curves below show the air flow performance of the ZEOZORB breathers. To ensure the longest life possible, the initial clean pressure drop should not exceed 1.5 psid (.103 Bar)



Maintenance

ZEOZORB® breathers are designed for simple installation on most equipment, regardless of mounting connection. Since ZEOZORB® breathers are disposable, the threaded connection allows for quick and easy maintenance. Several mounting adapters (see page 4) are available to provide the desired mounting.



Active

Replace

The installation/replacement process consists of three easy steps:

Installation:

1. Remove safety cap at the bottom of the breather
2. Mount the breather to the tank or reservoir using the adapter best suited for the application

Disposal:

1. Verify that the breather is fully saturated – (all blue beads will be pink in color)
2. Remove breather from gearbox, tank, reservoir, or other application
3. Remove and save the adapter fitting to be used with a new breather
4. Verify and dispose of breather in accordance with your state and local environmental control regulations

Recommendations:

1. Replace spin on air filter vents, turn down pipes, or vent caps with ZEOZORB® disposable silica gel breathers for additional protection against contaminants.
2. Inspect your breather at the time interval recommended based on the environment and flow rate.
3. Add breather replacements to plant operations & maintenance schedule

