

DBE Series Desiccant Air Breather

With Extended Service Life

Description

The new breather dryer DBE (with Extended service life) was mainly developed for wind industry applications. The special feature of the filter are the two separated chambers storing two adsorbent types with different water holding capacity and response behavior. Four check valves can be integrated in the filter bottom in order to protect the adsorbent material avoiding a saturation during system's downtime. The dirt holding capacity of the filter is increased through the star-pleated air breather filter element. All included new features contribute to an extended lifetime of the breather dryer. The entire design of the breather dryer prohibits the adsorbent material from getting into the tank or the gearbox. The filter is available in three sizes.

Features

2-Stage Adsorbent Filling

Combination of 2 adsorbent stages (molecular sieve and silica gel) to optimize the water adsorption capacity and efficiency. **see fig. 1 & 2*

Saturation Protection

Protection of the adsorbent against saturation during system's downtime through the valves in the housing.

Distribution of Flow

The special design of the inner components guarantees an optimal flow over the complete adsorbent volume of both stages.

Air Filter

Star-pleated air filter element (2 µm) reduces/ prevents dirt and dust ingress into the tank. **see fig. 3*

Anti-splash Features

Integrated suction tube and anti-splash tool to protect the adsorbent from oil contamination.

Exchangeable Cartridges

With adsorbent and integrated air filter element (base and connecting piece remains as an adapter at the customer's location).

Connecting Piece

Made of zinc die-casting (very stable installation of the complete filter, robust connection to the tank/ gears).

Safety Sealed for a Long Storage Time

Cartridge will be delivered with a o-ring sealed safety cap to guarantee a storage time up to 3 years (at cool, dry and UV proof storage conditions).

Color Indication

When maximum adsorption is reached, the silica gel turns from red to bright orange. **see fig. 4*



DBE-4



fig. 1: molecular sieve



fig. 2: silica gel



fig. 3: star-pleated element

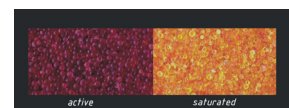


fig. 4: color indicator

Schroeder
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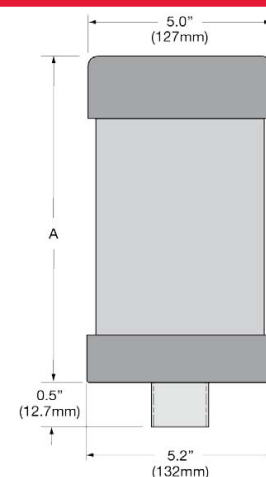
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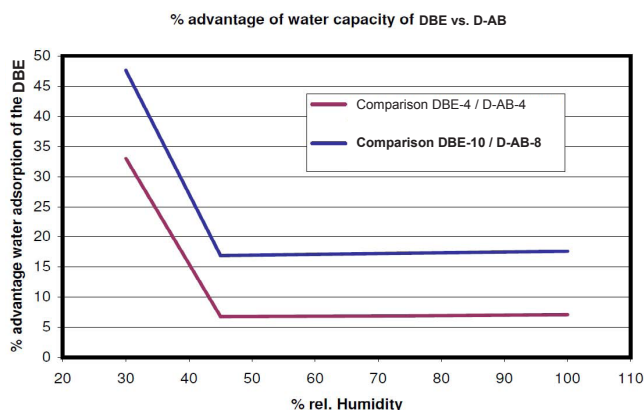
DBE vs. D-AB

Breather Series	D-AB Series		DBE Series	
Breather Model	D-AB-4	D-AB-8	DBE-4	DBE-10
Dim "A"	9.25" (235 mm)	12" (305 mm)	11.96" (304 mm)	15.11" (384 mm)
Diameter	5" (127 mm)	5" (127 mm)	5.35" (136 mm)	5.35" (136 mm)
Anti Splash Device	N	N	Y	Y
Pleated Particle Breather Media	N	N	Y	Y
Desiccant Type	Silica Gel	Silica Gel	Silica Gel <i>and</i> Molecular Sieve	Silica Gel <i>and</i> Molecular Sieve
Private Labeling	N	N	Y	Y
Cost Saving \$\$	N	N	Y	Y



Advantage of DBE vs. D-AB

Water Absorption Capacity



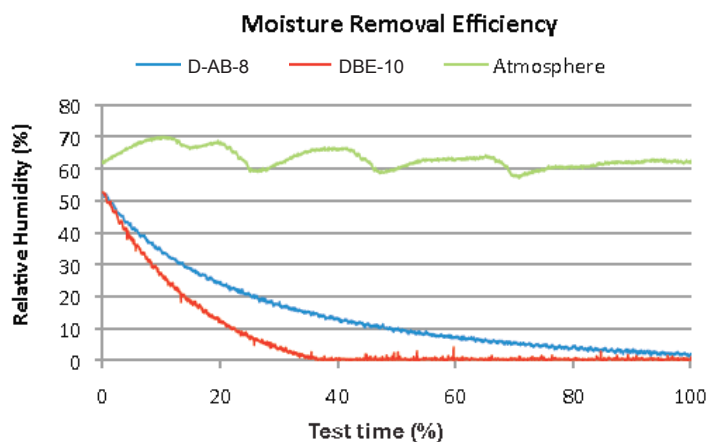
I. DBE-4 vs. D-AB-4

- +15% @ 40% relative humidity
- +7% @ 75% relative humidity

II. DBE-10 vs. D-AB-8

- +25% @ 40% relative humidity
- +17% @ 75% relative humidity

Water Adsorption Efficiency



Significant increase of the Water Adsorption Efficiency up to 15%

- Better protection of the gear box lube oil
- Longer life time of the gear box lube oil
- Longer life time of the lube filter

SUMMARY

DBE-4 replaces D-AB-4

- Similar size
- Higher Water Capacity - (depending on ambient conditions +7% advantage can be achieved)

DBE-10 replaces D-AB-8

- Similar size
- Higher Water Capacity - (depending on ambient conditions +17% advantage can be achieved)

DBE Advantages:

- Better Adsorption Efficiency
- Star-pleated filter element (High Dirt Holding Capacity)
- Better protection against oil splash (filter media and desiccant)
- Mechanical stability
- High efficiency desiccant (2-stage: Silica Gel + molecular sieve)
- Bypass and adsorbent protection valves

Benefits

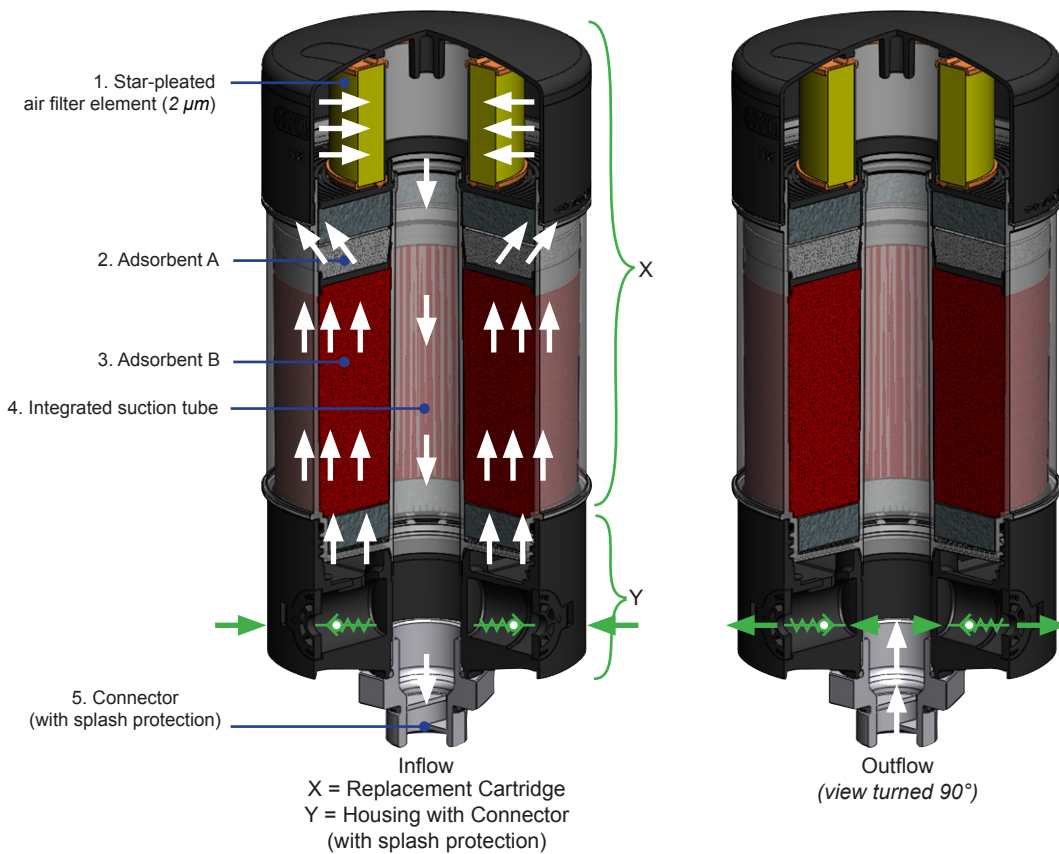
Protects gearbox by removing moisture from incoming air:

- Extending the life cycle of the gearbox lube oil
- Minimize component wear, down time and repairs due to moisture
- Minimize oil oxidation, additive depletion and freezing due to moisture
- Minimize corrosion
- Extended oil filter life

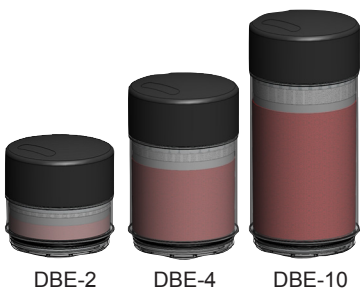
Applications

Applicable for all hydraulic tank and gearbox applications where problems with water entry can occur.

Functioning



Replacement Cartridges



How to Build a Valid Model Number for a Schroeder DBE:

Filter Model Number Selection

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
DBE							

Example: Note: One option per box

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
DBE	4	R	P	2	N	1	R.04	= DBE4RP2N1R.04

BOX 1 Model Number DBE	BOX 2 Size 2 4 10	BOX 3 Replacement Element R = Replaceable	BOX 4 Connection Type P = NPT B = BSPT
BOX 5 Filtration Rating 2	BOX 6 Gauge Options N = None	BOX 7 Connection Size 1 = 1" 2 = 2" (NPT only)	BOX 8 Options R.3 = 0.3 psi Protection Valve R.04 = 0.04 psi Protection Valve

Base Assembly Only:

BOX 1 Model Number DBE	BOX 2 Replacement Element R = Replaceable	BOX 3 Connection Type P = NPT B = BSPT	BOX 4 Connection Size 1 = 1" 2 = 2" (NPT only)	BOX 5 Options R.3 = 0.3 psi Protection Valve R.04 = 0.04 psi Protection Valve
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Replacement Cartridge Only:

BOX 1 Replacement Element R = Replaceable	BOX 2 Model Number DBE	BOX 3 Size 2 4 10
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