

BD Series Drymicron



Description

Drymicron breathers use a three-stage filtration design to ensure optimum protection by removing water vapor and solid contaminant before they enter the fluid system.

Drymicron Breathers replace the standard breather cap or vent tube on a tank or reservoir. They are easy to install using one of several adapters designed for different applications.

When the fluid in the system is lowered, or pressure changes occur, air is drawn in through openings under the breather cap. First, air passes through a fine, 2 micron solid particle filter. The air then passes through a diffuser to ensure maximum effectiveness within the silica gel chamber.

Next, water vapor is removed as the air travels through a bed of silica gel — the highest capacity adsorbent available. After being dried, the air passes through a second 2 micron solid particle filter and enters the reservoir clean and dry!

Operational Features

Bi-directional Air Flow

- Air entering is cleaned and dried. Expelled air partially regenerates the silica gel and “backflushes” the particulate filter to prolong the life of the breather.

Durable Construction

- DRYMICRON is manufactured from rugged ABS plastic and impact-modified Plexiglas.

Water Vapor Adsorbent

- Silica gel is chemically inert, non-toxic, and non-corrosive. The internal structure is composed of interconnected microscopic pores that adsorb up to 40% of its weight.

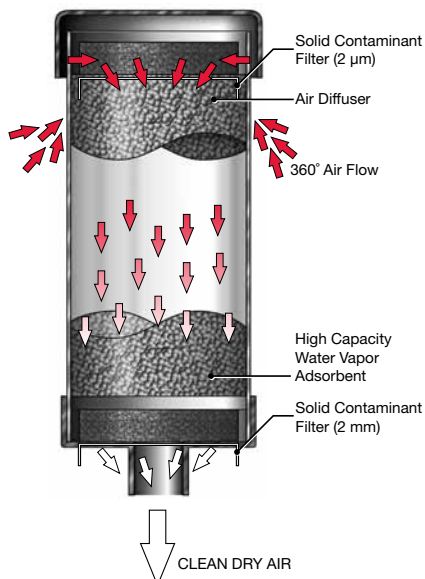
Color Indicator

- When maximum adsorption is reached, the silica gel turns from gold to green to indicate that replacement of the breather is required.



Safety Sealed

- Seals keep moisture from entering the units until they are placed in service. They are easily removed without tools or sharp instruments.



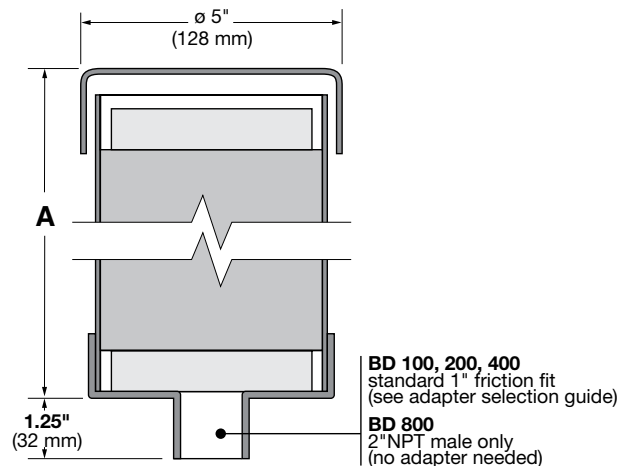
Advantages

Drymicron Breathers protect expensive equipment, increase operation efficiency, and reduce maintenance costs by:

- Eliminating corrosion
- Extending life of hydraulic, lubrication, and process fluids
- Minimizing component wear, downtime, and repairs
- Eliminating oil oxidation, additive depletion, and freezing
- Extending oil filter life

Applications

- Hydraulic Reservoirs
- Gear Boxes
- Storage Tanks



Unit Selection Guide (adapters sold separately)

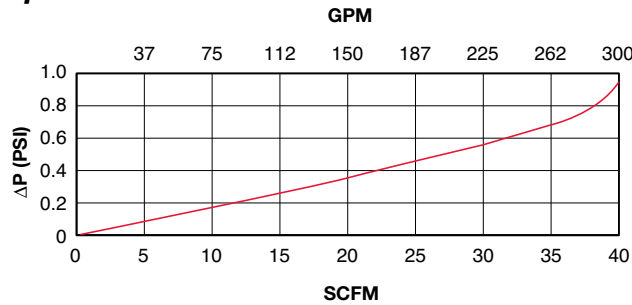
Model Code	Part No.	Height (A)	Weight	Max. H ₂ O Capacity lbs (ltr)
BD 100 X 2 W 0.0	02074253	3.5 (90)	1.3 (0.6)	0.2 (0.1)
BD 200 X 2 W 0.0	02074254	5 (128)	1.9 (0.9)	0.4 (0.2)
BD 400 X 2 W 0.0	02074465	8 (205)	3.3 (1.5)	0.9 (0.4)
BD 800 X 2 W 0.0	02075158	10 (254)	4.9 (2.2)	1.3 (0.6)

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print. Dimensions are in inches/(mm) and lbs./(kg.)

Product Specifications

Performance		Specification
Nominal Air Flow Rate	BD 100-400	35 scfm (990 l/min) Equivalent of 260 gpm of fluid volume change
	BD 800	100 scfm (2850 l/min) Equivalent of 750 gpm of fluid volume change
Solid Contamination Filtration Level		2 micron, 100% efficiency @ 35 scfm air flow
Solid Contamination Filtration Surface area		20.6 in ² / 133 cm ²
Operating Temperature Range		-26° to 200°F (-32° to 93°C)
Silica Gel:	Adsorption	Up to 40% of its weight of water
Chemical Resistance		Resistant to alkalis, hydrocarbons, non-oxidizing acids, salt water, and mineral or synthetic oils

Flow Rate vs Pressure Drop



Adapters Selection Guide (adapters sold separately - Note: no adapter needed for BD 800)

Bayonet Adapter
Part No. 02074251

1" Friction fit

Plastic Threaded Adapter
Part No. 02074248 (3/4" NPT)
Part No. 02074249 (1" NPT)

1" Friction fit

Plastic Threaded Standpipe Adapter
Part No. 02077124

1" Friction fit

1 1/2-16 UN-2B
Existing Standpipe
or HYDAC: 00416311
ADAPTER BL 160/180 S (PHOS)

Plastic Flange Adapter
Part No. 02074250 (not drilled)
Part No. 02075193 (pre-drilled)

gasket not provided

Mounting Hole Pattern for Pre-drilled Adapter
(Flange Interface to DIN 24557/T2)

2.874" ϕ 73mm
0.18" ϕ 4.5mm (6 places)
2.36" ϕ 60mm

Bayonet Flange Kit with 3.5" Steel Basket
Part No. 02079076

- 1 Bayonet Fitting
- 1 gasket
- 1 Filler Basket
- 1 gasket
- 6 Screws for installation

Plastic Bypass Adapter Part No. 01278016

- 1" Friction Fit to Drymicron Breather
- 0.3 psi spring in both check valves
- Vent to atmosphere
- 1" Friction Fit to any Drymicron Adapter

Plastic Adapter
Part No. 02081637

- 1" Friction Fit
- 1 1/4" NPT Female

BD 900 Series Designed for high airflow requirements



DRYMICRONS help stop oil contamination and protect your expensive equipment!

Description

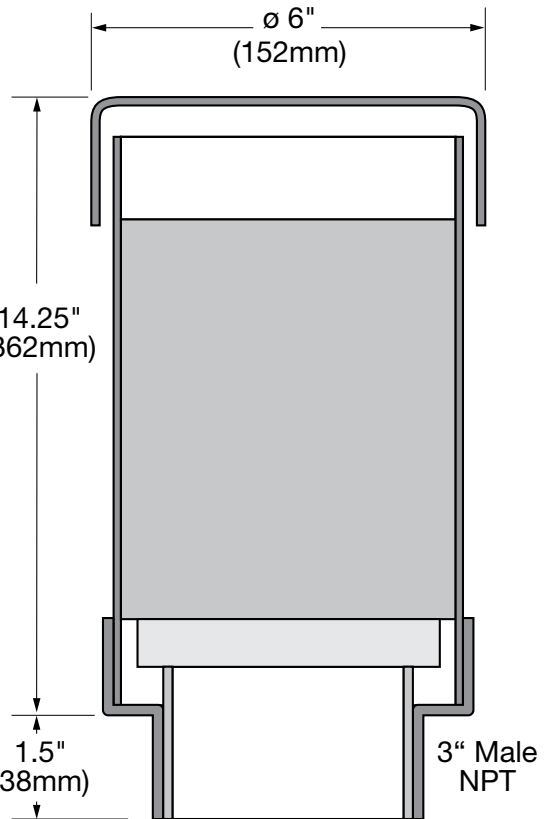
A disposable desiccant cartridge screws into the top cap assembly for economical replacement when the breather has reached the end of its useful life. The BD 900 is designed for applications with airflow requirements up to 250 scfm (1875 gpm). Operating at this flow rate produces a pressure drop of less than 1 psi. Water and abrasive particles are removed before the air enters the system.

Replacement Cartridge (top cap not included)

BD 900 G 2W 1.0 / Cartridge

Part Number

02081633



Cap (not included)

Replacement Cartridge

Model Code	Part Number	Rated Airflow	H2O Capacity	Mounting	Weight
BD 900 G 2 W 1.0	02080979	250 cfm / 1875 gpm	1.2 lbs / 0.54 liter	3" Male NPT	6.5 (2.9)

BDR Series Mobile DRYMICRON



DRYMICRONS help stop oil contamination and protect your expensive equipment!

Description

HYDAC BDR Series breathers are designed for applications where gearboxes and reservoirs are subjected to continuous vibration such as railroad maintenance equipment, off-road vehicles, mining equipment, and many more.

The units are easily attached to the equipment by rugged steel pipe threads.

Features

The metal reinforced base of the unit remains on the gearbox or reservoir, and a replacement cartridge is threaded into the base.

Benefits

- Minimize rust & acid corrosion
- Reduce component wear
- Reduce maintenance cost
- Prolong fluid life
- Reduce oil oxidation
- Enhance lubrication

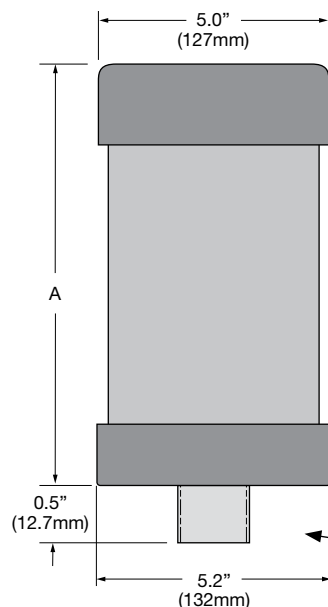
Components



Replacement Cartridge

Re-usable Bottom Cap

Dimensions



Model	Part No.	A	B	C	D	Air Flow	H ₂ O lbs ² (litr)	Wt.
BDR 100 G 2 W 1.0	02080971	5.0"	5.2"	4.0"	5.0"	260 gpm 35 scfm	0.2 (0.1)	2.5
BDR 200 G 2 W 1.0	02080972	5.0"	5.2"	5.5"	6.5"	260 gpm 35 scfm	0.4 (0.2)	3.2
BDR 400 G 2 W 1.0	02080973	5.0"	5.2"	8.5"	9.5"	260 gpm 35 scfm	0.9 (0.4)	4.5
BDR 800 G 2 W 1.0	02080974	5.0"	5.2"	10.5"	12.0"	750 gpm 100 scfm	1.3 (0.6)	5.5
BDR 100 X 2 W 0.0/Cartridge	02080975	5.0"	-	3.75"	-	260 gpm 35 scfm	0.2 (0.1)	1.8
BDR 200 X 2 W 0.0/Cartridge	02080976	5.0"	-	5.0"	-	260 gpm 35 scfm	0.4 (0.2)	2.0
BDR 400 X 2 W 0.0/Cartridge	02080977	5.0"	-	8.0"	-	260 gpm 35 scfm	0.9 (0.4)	3.3
BDR 800 X 2 W 0.0/Cartridge	02080978	5.0"	-	10.0"	-	750 gpm 100 scfm	1.3 (0.6)	4.6

BDR Series breathers are attached to the reservoir, gearbox, or tank by 1" male NPT (Models BDR 100, BDR 200, & BDR 400), and by a 2" male NPT (Models BDR 800). Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print. Dimensions are in inches and lbs

BDX Series Extreme Operating Environment Drymicron

DRYMICRONS help stop oil contamination and protect your expensive equipment!

Description

The BDX Series is ideal for certain extreme operating environments such as paper mill, steam cleaning rooms, etc. The humidity level far exceeds that which is experienced in normal industrial applications. In these situations, lubricants and other fluids stored in tanks and reservoirs need the protection of a desiccant breather even more. However, small temperature variations draw in the humid air and unnecessarily reduce the life of the breather.



Complete Assembly

Cartridge

Cap

Features

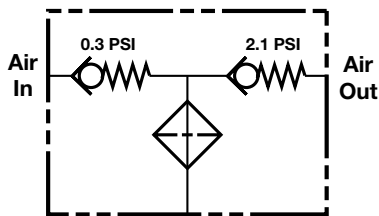
Two check valves

- One to control airflow into the protected reservoir
- One to control airflow out
- These valves establish thresholds of vacuum and pressure.

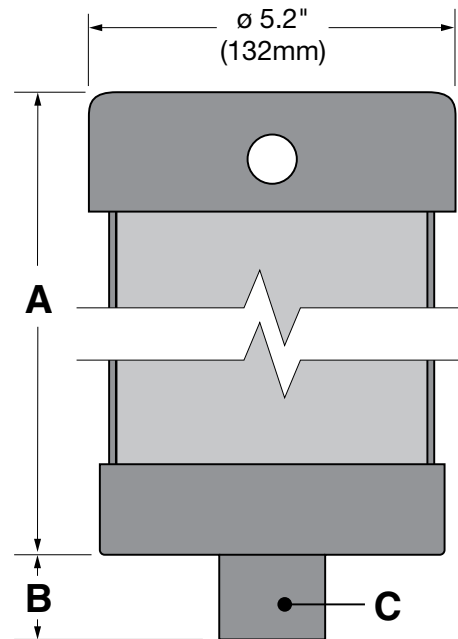
Benefits

- Reduced breathing cycles extend product life span, air to flow through the breather only when needed to protect the integrity of the tank
- The rugged design includes a reusable top cap which allows the economic replacement of the desiccant cartridge

Hydraulic Symbols



Dimensions



Model Code	Part No.	Connection (C)	Height (A)	Clearance (B)	Rated Airflow	H2O Capacity (lbs)	In (psi)	Out (psi)
BDX 200 X 2 W 0.0/RV 0.3/2.1	02084491	1" press fit	7 (178)	1.25 (32)	35 scfm / (260 gpm)	0.4	0.3	2.1
BDX 400 X 2 W 0.0/RV 0.3/2.1	02084492	1" press fit	10 (254)	1.25 (32)	35 scfm / (260 gpm)	0.9	0.3	2.1
BDX 200 G 2 W 1.0/RV 0.3/2.1	02084493	2" male NPT	7 (178)	1.5 (38)	35 scfm / (260 gpm)	0.4	0.3	2.1
BDX 400 G 2 W 1.0/RV 0.3/2.1	02084494	2" male NPT	10 (254)	1.5 (38)	35 scfm / (260 gpm)	0.9	0.3	2.1
BDX 200 X 2 W 0.0/Cartridge	02084495	1" press fit	5 (127)	1.25 (32)	35 scfm / (260 gpm)	0.4	0.3	2.1
BDX 400 X 2 W 0.0/Cartridge	02084496	1" press fit	8 (203)	1.25 (32)	35 scfm / (260 gpm)	0.9	0.3	2.1
BDX 200 G 2 W 1.0/Cartridge	02084497	2" male NPT	5 (127)	1.5 (38)	35 scfm / (260 gpm)	0.4	0.3	2.1
BDX 400 G 2 W 1.0/Cartridge	02084498	2" male NPT	8 (203)	1.5 (38)	35 scfm / (260 gpm)	0.9	0.3	2.1

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Dimensions are in inches/(mm)

BDZ Series Mini DRYMICRON



Description

HYDAC BDZ Series breathers are designed for applications when space is limited. They can replace all standard breather caps.

HYDAC BDZ Series breathers prevent dirt and water vapor from entering the gearbox or hydraulic system.

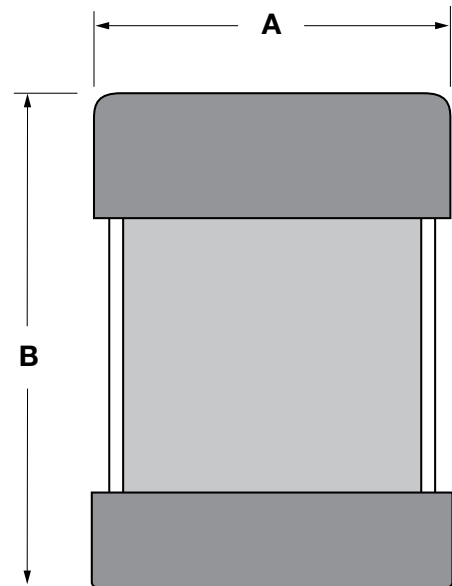
Features

- 1/2" NPT female threaded mounting hole (1.0 models only)
- 3/4" NPT male fitting (2.0 model only)
- All models are rated for 10 scfm airflow.

Benefits

- Minimize rust & acid corrosion
- Reduce component wear
- Reduce maintenance cost
- Prolong fluid life
- Reduce oil oxidation
- Enhance lubrication
- Rated Airflow - 75 gpm / 10 scfm

Dimensions



1/2" NPT Female Connection
02082356 has 3/4" male connection

Model	H2O Capacity lbs (ltr)	Part Number	A	B	Weight (lbs)
BDZ 015 G 2 W 1.0	0.032 (0.015)	02080980	2.00"	2.25"	0.19
BDZ 025 G 2 W 1.0	0.056 (0.025)	02080981	2.00"	3.50"	0.27
BDZ 045 G 2 W 1.0	0.104 (0.047)	02080982	3.25"	2.25"	0.50
BDZ 085 G 2 W 1.0	0.180 (0.082)	02080983	3.25"	3.50"	0.75
BDZ 085 G 2 W 2.0	0.180 (0.082)	02082356	3.25"	3.50"	0.75

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