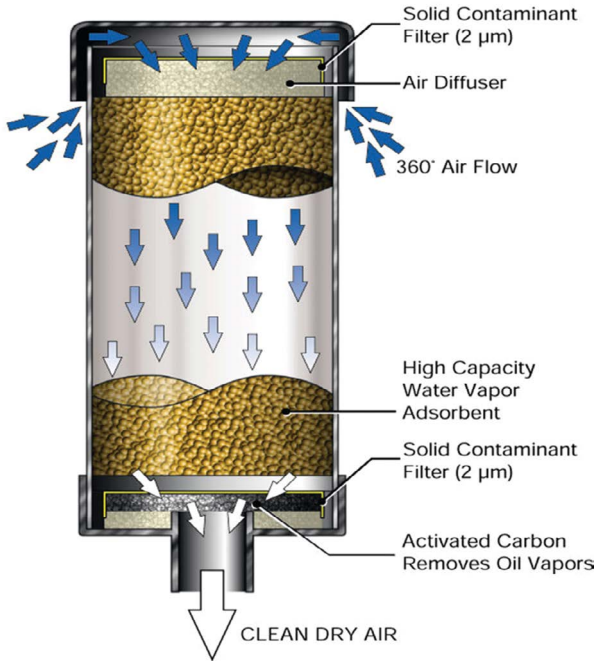


# Hy-Dry Breathers

## Disposable Air Purifying Breathers



Fluid contamination is the root cause of most hydraulic system failures.

Controlling airborne contamination is critical.

Combine Hy-Dry Breathers with Hy-Pro Filter Elements for complete fluid conditioning.

### PRODUCT SPECIFICATIONS

### FEATURES, BENEFITS, ADVANTAGES

Air flow rate	From 20 CFM (150 gpm)
Solid contaminant filtration efficiency	2 micron, 100% efficiency (35 CFM)
Chemical resistance	Impervious to alkalis, mineral oils, non-oxidizing acids, salt water, hydrocarbons, and synthetic oils.
HPB-34 (mini)	2.8 fl oz / 0.35 cup water capacity
HPB-100	4.9 fl oz / 0.6 cup water capacity
HPB-101, B-154	8.6 fl oz / 0.6 cup water capacity
HPB-102, B-302	16.56 fl oz / 2.1 cup water capacity
HPBR-102	16.56 fl oz / 2.1 cup water capacity
HPB-103	16.56 fl oz / 2.1 cup water capacity
HPB-108	21.47 fl oz / 2.6 cup water capacity
HPB-109	21.47 fl oz / 2.6 cup water capacity
Operating temp.	-20°F (-28°C) to 200°F (93°C)

Retro-fit existing reservoirs	With adaptors a Hy-Dry breather can be installed on virtually any existing reservoir. (Versatility)
Water adsorption	Eliminate water contamination from reservoir ingress Minimize rust and acid corrosion. Reduce component wear. Reduce maintenance costs. Prolong fluid life. Reduce oil oxidation. Enhance lubricity of fluids.
Chemically inert	Gold silica gel is chemically inert, non toxic, non-deliquescent and non-corrosive. (chemically inert)
Disposable	Materials meet U.S Pharmacopoeia XXI Class VI toxicity requirements. Hy-Dry contains no metal components. (easy disposal)
Color indicator	When maximum adsorption is reached Hy-Dry will turn from Gold to Green as an indicator to replace it. (easy condition indicator)
Bi-directional air flow	Air inhaled is cleaned and dried, and oil is removed from exhausted air .
Activated carbon	As air is exhausted from the tank activated carbon removes oil vapor, fumes, and odors. (clean exhaust)

Contaminant	Problem	Solution
Water vapor	Rust & oxidation Additive depletion Freezing Increased conductivity Fluid degradation	Water adsorbent silica
Solid particulate	Component wear Stiction Orifice blockage	2 micron removal efficiency 100%
Acids & salts	Chemical reaction Microbial growth Overheating Corrosion	

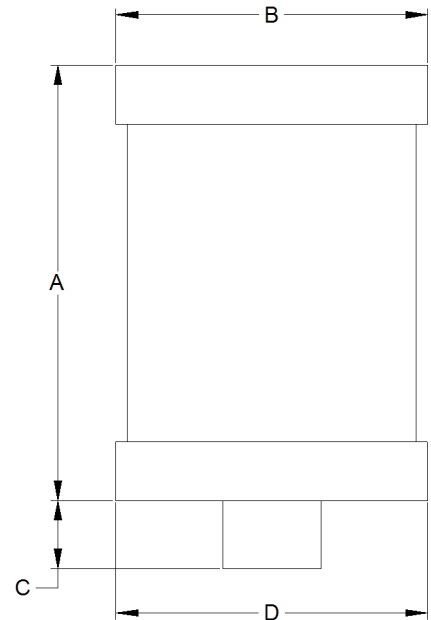
**HY-DRY DISPOSABLE CARTRIDGE ORDER GUIDE**

Hy-Dry Number	A	B	C	D	Silica Gel	CFM	GPM	Hy-Dry Connection
HPB-34	3.25" (3.3cm)	3.25" (3.3cm)	N/A	3.25" (3.3cm)	0.8lb (0.4kg)	20	150	½" FNPT
HPB-100	3.5" (9cm)	5.0" (12.8cm)	1.25" (3.2cm)	5.0" (12.8cm)	0.8lb (0.4kg)	20	150	Male 1" scd 40*
HPB-101	5.0" (12.8cm)	5.0" (12.8cm)	1.25" (3.2cm)	5.0" (12.8cm)	1.4lb (0.6kg)	20	150	Male 1" scd 40*
HPB-102	8.0" (20.3cm)	5.0" (12.8cm)	1.25" (3.2cm)	5.0" (12.8cm)	2.6lb (1.2kg)	20	150	Male 1" scd 40*
HPBR-102	9.5" (24.4cm)	5.0" (12.8cm)	N/A	5.2" (13.3cm)	5.0lb (2.3kg)	20	150	1" MNPT
HPBR-B-102	9.5" (24.4cm)	5.0" (12.8cm)	N/A	5.2" (13.3cm)	5.0lb (2.3kg)	20	150	Male 1" BSP
HPB-103	8.0" (20.3cm)	5.0" (12.8cm)	1.25" (3.2cm)	5.0" (12.8cm)	2.6lb (1.2kg)	20	150	1" MNPT
HPB-302	8.0" (20.3cm)	5.0" (12.8cm)	N/A	5.2" (13.3cm)	1.6lb (0.7kg)	20	150	Male 1" scd 40*
HPB-108	10.0" (25.4cm)	5.0" (12.8cm)	1.25" (3.2cm)	5.0" (12.8cm)	3.5lb (1.6kg)	20	150	2" MNPT
HPB-109	14.0" (35.5cm)	5.0" (12.8cm)	1.25" (3.2cm)	5.0" (12.8cm)	5.0lb (2.3kg)	20	150	3" MNPT
HPB-154	5.0" (12.8cm)	5.0" (12.8cm)	1.25" (3.2cm)	5.0" (12.8cm)	1.4lb (0.6kg)	20	150	1" MNPT
HPB-302	8.0" (20.3cm)	5.0" (12.8cm)	N/A	5.2" (13.3cm)	1.6lb (0.7kg)	20	150	Male 1" scd 40*

\*scd 40 is slip-on connection (No Threads)

**C SERIES BREATHERS HIGH HUMIDITY APPLICATIONS**

High humidity applications, such as paper mills and steel mills, need a Hy-Dry desiccant breather even more than a dry environment. The HPBC series breather utilizes dual check valves that control air flow in and out of the reservoir. Air does not enter or leave the reservoir unless the vacuum (0.3 psi, 0,02 bar) or pressure (2.1 psi, 0,15 bar) threshold is exceeded. The check valves prevent air exchange caused by temperature fluctuation with safeguards to protect the integrity of the tank while preventing exhaled air from coming in contact with the desiccant when exhausted (extending useful life). The HPBC-101 & HPBC-102 require an adaptor (see page 4). Assemblies include the element and permanent check valve cap. Upon service unscrew and keep the check valve cap and replace the element with identical part number shown on the element.

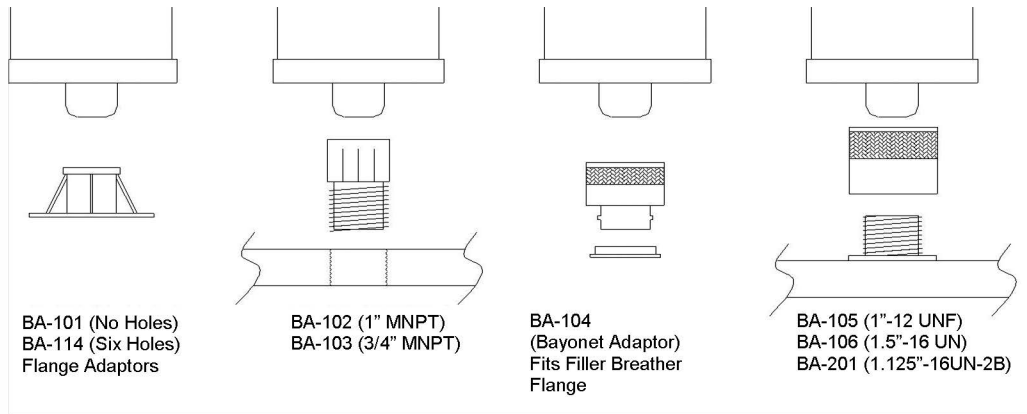


Hy-Dry Number	Check valve psi (bar)	A	B	C	Replacement Element	Silica Gel	CFM (gpm,lpm)	Hy-Dry Connection
HPBC-101	0.3 (0,02) IN 2.1 (0,15) OUT	5.0" (12.8cm)	5.0" (12,8cm)	1.25" (3.2cm)	HPB-341	1.4lb (0.6kg)	20 (150,566)	1" schd 40*
HPBC-102	0.3 (0,02) IN 2.1 (0,15) OUT	8.0" (20cm)	5.0" (12,8cm)	1.25" (3.2cm)	HPB-342	2.7lb (1.2kg)	20 (150,566)	1" schd 40*
HPBC-121	0.3 (0,02) IN 2.1 (0,15) OUT	5.0" (12.8cm)	5.0" (12,8cm)	1.87" (4.7cm)	HPB-343	1.4lb (0.6kg)	20 (150,566)	2" MNPT
HPBC-122	0.3 (0,02) IN 2.1 (0,15) OUT	8.0" (20cm)	5.0" (12.8cm)	1.87" (4.7cm)	HPB-344	2.7lb (1.2kg)	20 (150,566)	2" MNPT

RESERVOIR ADAPTORS

Hy-Dry Adaptor	Type
HPBA-101	Flange (no holes)
HPBA-102	1" Male NPT
HPBA-103	3/4" Male NPT
HPBA-104	Bayonet (standard filler/breather flange)
HPBA-105	1"-12 UNF
HPBA-106	1 1/2"-16 UNF
HPBA-114	Flange (6 holes)
HPBA-201	1 1/8"-16UNF

Adaptors are available to retrofit any reservoir or gearbox to accept the Hy-Dry breather. HPB-100 through HPB-102 will require one of the adaptors displayed below. HPB-108 through HPBR-102 do not require adaptors.



WHEN TO CHANGE THE HY-DRY BREATHER

New Hy-Dry breather silica is gold and as the silica adsorbs water the color will change to green and then to a very dark green as shown on the label located on the Hy-Dry exterior.



HPBR-102 FOR MOBILE AND HEAVY DUTY APPLICATIONS



\*HPBR-102 assembly is complete with a metal reinforced base, that remains with the reservoir or gearbox. The replacement breather element (HPB-302) is securely threaded into the base. To service remove the element only (HPB-302) and replace with a new cartridge. The HPBR-102 assembly is recommended for Heavy Duty, Continuous vibration, Mobile, and Extreme climate applications (coal pulverizer gearbox) where a slip fit breather and adapter could become dislodged. HPBR-102 has a 1" Male NPT connection. See page 4 table for dimensional and performance information.