
HY-PRO
FILTER ELEMENT
FISHERS, IN.
317-849-3535
(ISO 4572)
(ISO 16889)
$\beta_{12} = 200$
$\beta_{12 (c)} = 1000$
HP75L4-12MB
INSTRUCTIONS: SHUTDOWN EQUIPMENT AND DRAIN FLUID PRIOR TO REPLACING FILTER ELEMENT. LUBRICATE GASKET WITH OIL. SCREW ON UNTIL GASKET MAKES CONTACT. TIGHTEN ONE HALF TURN. START SYSTEM AND CHECK FOR LEAKS.


HY-PRO
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Remove air intake seal prior to installation.
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Spin-on Breathers

Adaptors and Disposable Breathers

Fluid contamination is the root cause of most hydraulic system failures. Controlling airborne contamination is critical. The synergy of Hy-Pro fluid filter elements and Hy-Pro Spin-on breathers yields clean fluid and a healthy hydraulic system.

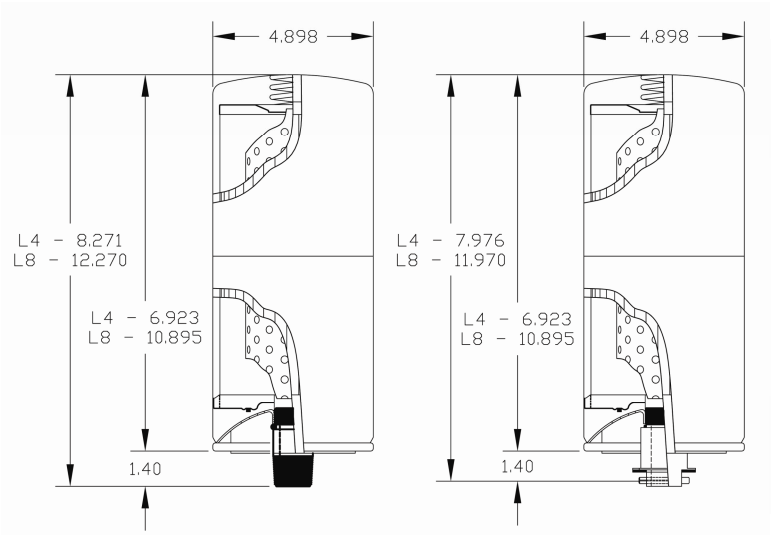
PRODUCT SPECIFICATIONS

Media Code	Media Efficiency (Air)
3M	0.3µ absolute
6M	0.6µ absolute
10C	3.0µ absolute
12M	1.0µ absolute
25C	10.0µ absolute
25M	2.5µ absolute
Operating temp.	-20°F (-28°C) to 200°F (93°C)

SPIN-ON BREATHER APPLICATIONS

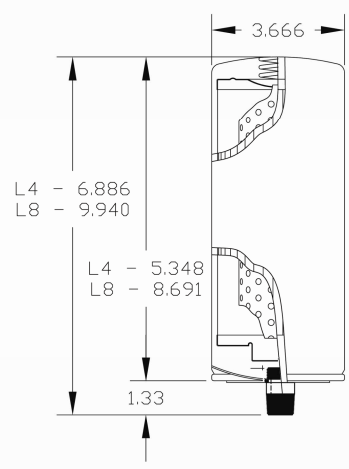
- Replace ineffective filler / breather caps
- Control contaminant ingression with glass media elements
- High capacity, High efficiency pleated elements extend the life of other filters in the system.

SPIN-ON BREATHER + ADAPTOR ASSEMBLY INSTALLATION DRAWINGS

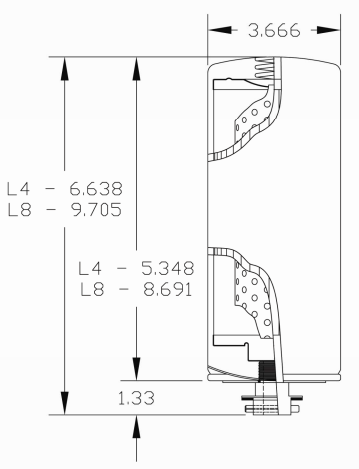


HP75L* -** + ADTB-75

HP75L*-** + ADBB-75



HP76L*-** + ADTB-76

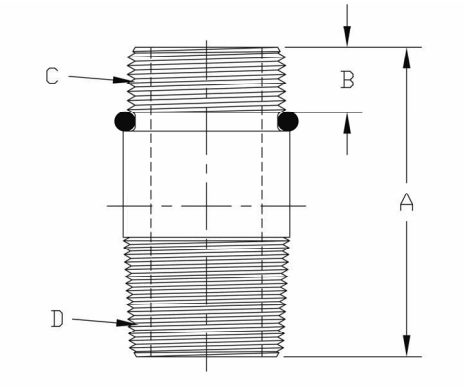


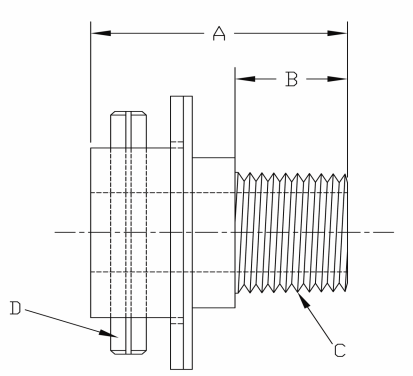
HP76L*-** + ADBB-76

SPIN-ON BREATHER ADAPTOR DIMENSIONS

Spin-on adaptor number	A - IN (mm) Overall length	B - IN (mm) Thread length	C - IN (mm) Element connection	D - IN (mm) Reservoir connection	Seal Material	Case qty
ADBB-75 (aluminum)	3.00 (76,2)	0.50 (12,7)	1 1/2" - 16 UN (HP75** series spin-on)	1.87” pin length 1.40” diameter boss	Buna-Nitrile	1
ADBB-76 (aluminum)	2.00 (50,8)	0.50 (12,7)	1" - 12 UNF-2A (HP76** series spin-on)	1.87” pin length 1.40” diameter boss	Buna-Nitrile	1
ADTB-75 (plated steel)	3.00 (76,2)	0.50 (12,7)	1 1/2" - 16 UN (HP75** series spin-on)	1 1/4" NPT	Buna-Nitrile	1
ADTB-76 (plated steel)	2.00 (50,8)	0.50 (12,7)	1" - 12 UNF-2A (HP76** series spin-on)	3/4" NPT	Buna-Nitrile	1
ADTB-76V (plated steel)	2.00 (50,8)	0.50 (12,7)	1 1/8" - 12 UNF-2A (HP76** series spin-on)	3/4" NPT	Buna-Nitrile	1

ADTB-75
ADTB-76
ADTB76V





ADBB-75
ADBB-76

REPLACEMENT ELEMENT ORDER GUIDE

table 1 table 2

HP ____ - ____ B

table 1 code	flow rate (spin-on size)
75L4	290 gpm, 39 cfm (5.0” OD x 11.0” OAL)
75L8	290 gpm, 39 cfm (5.0” OD x 11.0” OAL)
76L4	212 gpm, 28 cfm (3.75” OD x 5.4” OAL)
76L8	212 gpm, 28 cfm (3.75” OD x 8.7” OAL)

table 2 code	filtration rating
1M	0.1 µ absolute air filtration
3M	0.3 µ absolute air filtration
6M	0.6 µ absolute air filtration
12M	1.0 µ absolute air filtration
25M	2.2 µ absolute air filtration

BF Breathers

High Flow Particulate Breathers with coreless glass media element and integral vacuum gage.

Fluid contamination is the root cause of most hydraulic system failures. Controlling airborne contamination is critical. The synergy of Hy-Pro fluid filter elements and Hy-Pro BF breathers yields clean fluid and a healthy hydraulic system.

PRODUCT SPECIFICATIONS

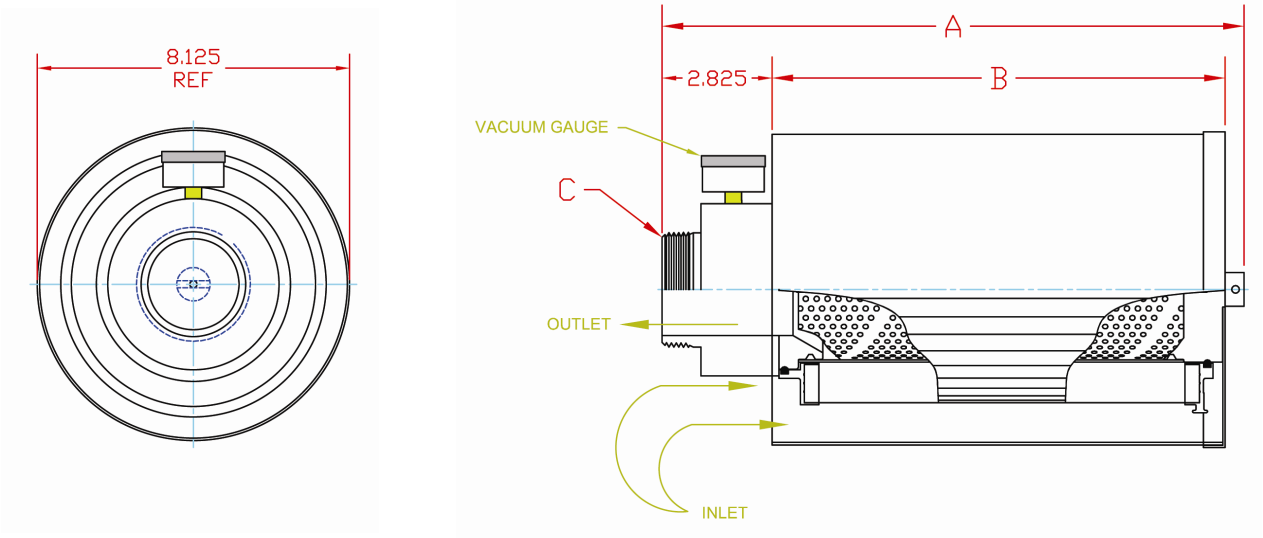
Construction materials	Tube assembly & Shroud: Plated steel Element: Synthetic end-caps, handle (element will incinerate at 1100°F)
Filtration Efficiency	Media code -3M: 0.3µ absolute Media code-6M: 0.6µ absolute Media code-10M: 1.0µ absolute Media code-25M: 2.5µ absolute
Weight	BF25*11, BF30*11 23.5 Lbs, 10.4 kg BF25*17, BF30*17 26.5 Lbs, 12 kg
Temperature	Nitrile: -40f(-40c) to 225f (107c) Fluorocarbon: -15f(-26c) to 275f(135c)

Breather Number	Air Flow		
	GPM	CFM	L/min
BF*2511	1450	195	5500
BF*2517	1580	212	6000
BF*3011	2100	280	8000
BF*3017	2375	317	9000

APPLICATIONS

- Replace ineffective filler / breather caps
- Control contaminant ingression with glass media elements
- High capacity, High efficiency pleated elements extend the life of other filters in the system.
- Large element surface area yields long life and extends service interval.

BF INSTALLATION DRAWING



Part Number	A (11 length)	A (17 length)	B (11 length)	B (17 length)	C
A20	16.95 (430)	22.55 (573)	13.64 (347)	19.23 (488)	2" ANSI Flange
A30	16.95 (430)	22.55 (573)	13.64 (347)	19.23 (488)	3" ANSI Flange
B25	14.95 (380)	20.55 (522)	11.64 (296)	17.23 (438)	2.5” Male BSPT
B30	14.95 (380)	20.55 (522)	11.64 (296)	17.23 (438)	3.0” Male BSPT
N25	14.95 (380)	20.55 (522)	11.64 (296)	17.23 (438)	2.5” Male NPT
N30	14.95 (380)	20.55 (522)	11.64 (296)	17.23 (438)	3.0” Male NPT

BF BREATHER ASSEMBLY PART NUMBER GUIDE

	table 1	table 2		table 3	table 4	
BF			-			G

REPLACEMENT FILTER ELEMENT PART NUMBER GUIDE

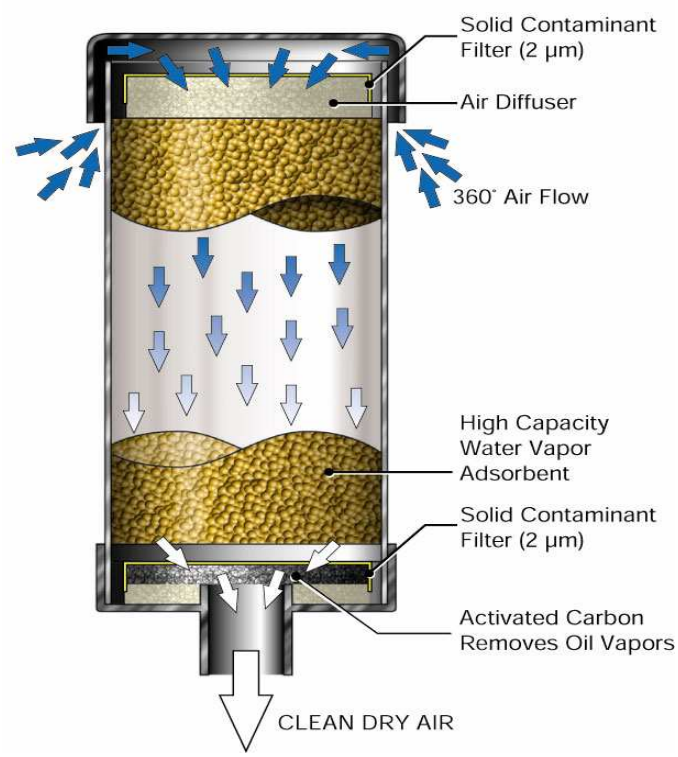
	table 2	table 3		table 4
HPBF30L			-	

table 1 code	Connection
A20	2" ANSI Flange
A30	3" ANSI Flange
B25	2.5” Male BSPT
B30	3.0” Male BSPT
N25	2.5” Male NPT
N30	3.0” Male NPT

table 2 code	Element length
11	Single length
17	Double length

table 3 code	Filtration rating	media type
3M	0.3µ absolute	G7 Dualglass
6M	0.6µ absolute	G7 Dualglass
10M	1.0µ absolute	G7 Dualglass
25M	2.5µ absolute	G7 Dualglass

table 4 code	Seal material
B	Nitrile-Buna
V	Fluorocarbon-Viton



Hy-Dry Breathers

Disposable Air Purifying Breathers

Fluid contamination is the root cause of most hydraulic system failures. Controlling airborne contamination is critical. The synergy of Hy-Pro fluid filter elements and Hy-Dry desiccant breathers yields fluid clarification and a healthy hydraulic system.

PRODUCT SPECIFICATIONS

Air flow rate	From 35 CFM (262 gpm) up to 250 CFM (1875 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) HPB-100 HPB-101 HPB-102, B-302 HPBR-102 HPB-108 HPB-109	2.8 fl oz / 0.35 cup water capacity 3.1 fl oz / 0.4 cup water capacity 6.2 fl oz / 0.8 cup water capacity 13.9 fl oz / 1.7 cup water capacity 13.9 fl oz / 1.7 cup water capacity 18.5 fl oz / 2.3 cup water capacity 18.5 fl oz / 2.3 cup water capacity
Operating temp.	-20°F (-28°C) to 200°F (93°C)

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	

FEATURES, BENEFITS, ADVANTAGES

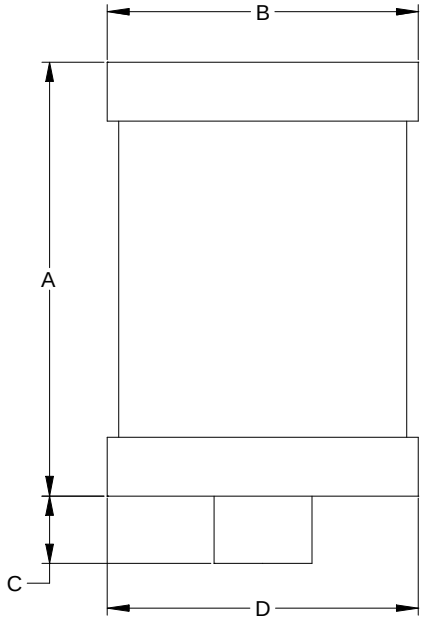
Retro-fit existing reservoirs	With adaptors a Hy-Dry breather can be installed on virtually any existing reservoir. (Versatility)
Water adsorption	Eliminate water contamination from reservoir ingression Minimize rust and acid corrosion. Reduce component wear. Reduce maintenance costs. Prolong fluid life. 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)

HY-DRY DISPOSAL CARTRIDGE ORDER GUIDE

Hy-Dry Number	A	B	C	D	Weight	CFM	GPM	Hy-Dry Connection
HPB-34	3.25" (3,3cm)	3.25" (3,3cm)	N/A	3.25" (3,3cm)	0.8lb (1,7kg)	10	75	1/2" FNPT
HPB-100	3.5" (9cm)	5.0" (12,8cm)	1.25" (3,2cm)	5.0" (12,8cm)	1.3lb (0.6kg)	35	262	Male 1" scd 40
HPB-101	5.0" (12,8cm)	5.0" (12,8cm)	1.25" (3,2cm)	5.0" (12,8cm)	1.9lb (0.9kg)	35	262	Male 1" scd 40
HPB-102	8.0" (20,5cm)	5.0" (12,8cm)	1.25" (3,2cm)	5.0" (12,8cm)	3.3lb (1.5kg)	35	262	Male 1" scd 40
HPB-302	8.5" (21,8cm)	5.0" (12,8cm)	N/A	5.2" (13,3cm)	3.3lb (1.5kg)	35	262	Male 1" scd 40
HPBR-102	9.5" (24,4cm)	5.0" (12,8cm)	N/A	5.2" (13,3cm)	5.0lb (2.3kg)	35	262	Male 1" scd 40
HPB-108	10.0" (25,4cm)	5.0" (12,8cm)	1.25" (3,2cm)	5.0" (12,8cm)	5.0lb (2.3kg)	100	750	2" MNPT
HPB-109	14.0" (35,5cm)	5.0" (12,8cm)	1.25" (3,2cm)	5.0" (12,8cm)	5.0lb (2.3kg)	250	1875	3" MNPT

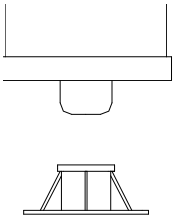
WHEN TO CHANGE THE HY-DRY BREATHER

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.

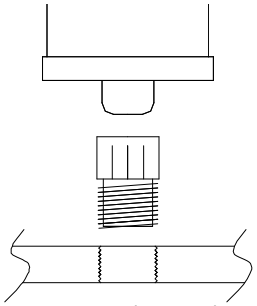


RESERVOIR ADAPTORS

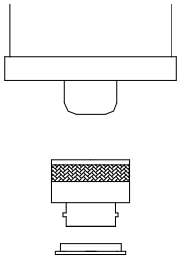
Adaptors are available to retrofit any reservoir or gearbox to accept the Hy-Dry breather. HPB-100 through HPB-102 will require one of the adaptors displayed below. HPB-108 through HPBR-102 do not require adaptors.



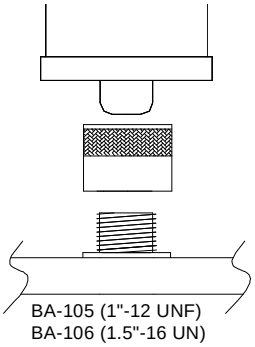
BA-101 (No Holes)
BA-114 (Six Holes)
Flange adaptors



BA-102 (1" MNPT)
BA-103 (3/4" MNPT)



BA-104
(Bayonet adaptor)
Fits filler breather flange



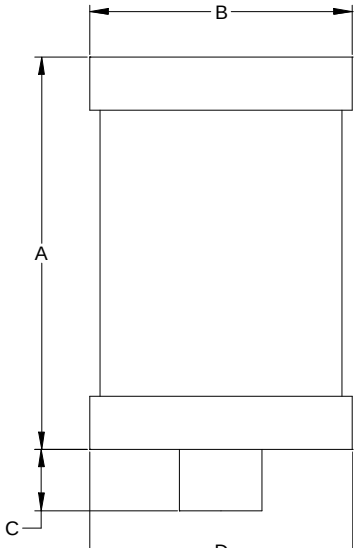
BA-105 (1"-12 UNF)
BA-106 (1.5"-16 UN)
BA-201 (1.125"-16UN-2B)

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

C SERIES BREATHERS HIGH HUMIDITY APPLICATIONS

Hy-Dry Assembly	Check valve psi (bar)	A	B	C	Replacement Element	Weight	CFM (gpm,lpm)	Hy-Dry Stem
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	0.8lb (1,7kg)	35 (262,990)	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	1.3lb (0.6kg)	35 (262,990)	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	1.9lb (0.9kg)	35 (262,990)	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	3.3lb (1.5kg)	35 (262,990)	2" MNPT

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 and 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.



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 adaptor could become dislodged. HPBR-102 has a 1" Male NPT connection. See page 4 table for dimensional and performance information.