

SB Series Bladder Accumulators

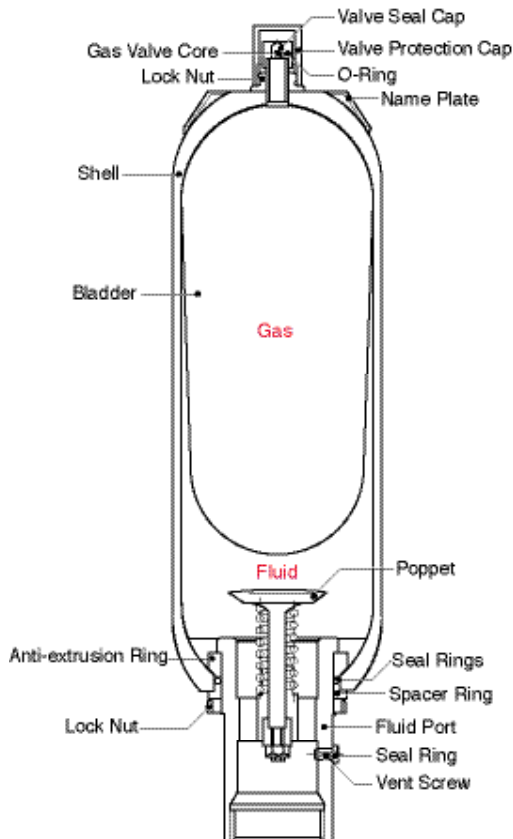


Description

Bladder accumulators are a very versatile and cost effective option for numerous types of hydraulic systems involving energy storage, shock absorption, pulsation dampening, leakage loss compensation and volume compensation. They are a first choice for a great variety of general applications and have the widest range of standard sizes and model options. Bladder accumulators also have very quick shock response characteristics in sizes much larger than diaphragm accumulators (see pg. 24)

Construction

HYDAC bladder accumulators consist of a welded or forged pressure vessel (*shell*), a bladder and ports for gas and fluid inlet. The gas and fluid sides are separated by the bladder.



Bladder Materials

Not all fluids are compatible with every elastomer at all temperatures. Therefore, HYDAC offers the following choice of elastomers:

- NBR (*Standard Nitrile*)
- LT-NBR (*Low Temperature Nitrile*)
- ECO (*Epichlorohydrin*)
- IIR (*Butyl*)
- FPM (*Fluoroelastomer*)
- Others (*available upon request*)

To determine which material is appropriate...

ALWAYS REFER TO FLUID MANUFACTURER'S RECOMMENDATION

Corrosion Protection

For use with certain aggressive or corrosive fluids, or in a corrosive environment, HYDAC offers protective coatings and corrosive resistant materials (i.e. stainless steel) for the accumulator parts that come in contact with the fluid, or are exposed to the hostile environment.

Mounting Position

HYDAC bladder accumulators can be installed in any orientation depending upon the application. When installing vertically or at an angle, the fluid port must be at the bottom. On certain applications listed below, specific positions are preferable:

- Energy Storage: vertical
- Pulsation Dampening: any position from vertical to horizontal
- Maintaining Constant Pressure: any position from vertical to horizontal
- Volume Compensation: any position from vertical to horizontal

Caution: Mounting a HYDAC bladder accumulator horizontally or at an angle will decrease the amount of usable volume available.

System Mounting

HYDAC bladder accumulators are designed to be screwed directly onto the system. We also recommend the use of our mounting components, which are detailed on page 70, to minimize risk of failure due to system vibrations.

Applications

Some common applications of bladder accumulators are:

- Agricultural Machinery & Equipment
- Forestry Equipment
- Oil Field & Offshore
- Machine Tools
- Mining Machinery & Equipment
- Mobile & Construction Equipment
- Off-Road Equipment

For specific examples of applications using bladder accumulators, please see pages 75 and 76.

Model Code

Model Codes containing RED selections are non-standard items – Contact HYDAC for information and availability
Not all combinations are available

SB 330 - 20 A 1 / 112 S - 210 C XXX

Series _____

SB 330 = Bladder accumulator (3000 psi, Typically)
SB 600 = Bladder accumulator (5000 psi, Typically)

Design _____

(omit) = Standard (bottom repairable)
N = Modified Flow (396 gpm)
H = High Flow (480 gpm)
TR = Standard (top repairable)
NTR = Modified Flow (396 gpm) (top repairable)

Size (in Liters, see dimension tables on following pages for most common sizes) _____

1 = 1 quart
4 = 1 gallon
6 = 1.5 gallons
10 = 2.5 gallons
20 = 5 gallons
32 = 10 gallons
42 = 11 gallons
54 = 15 gallons

Line Connection _____

A = Threaded
F = Flanged

Gas Port _____

1 = Standard model, HYDAC gas valve version 4 (8V1 - ISO 4570)

Material Code _____

Depending on Application

112 = Standard for oil service (mineral oil)

Fluid Port _____

0 = Synthetic coated carbon steel (PTFE solid film, internal & external for water service)
1 = Carbon steel
2 = High strength stainless steel (typically 17-4 PH)
3 = Stainless steel (corrosion resistance, typically 316 ss)
4 = Chemically plated carbon steel (internal & external for water service)
6 = Low temperature carbon steel (<-40°F, min)

Shell _____

0 = Synthetic coated carbon steel (PTFE solid film, internal & external for water service)
1 = Carbon steel
2 = Chemically plated carbon steel (internal & external for water service)
6 = Low temperature carbon steel (<-40°F, min)
7 = Others available on request

Bladder Compound _____

Compound	Oper. Temp Range	Typical Fluids
2 = NBR (Buna N)	5° to 180°F	mineral oils
3 = ECO (Hydrin)	32° to 180°F	water & water-glycols (5% minimum glycol)
4 = IIR (Butyl)	-50° to 180°F	mineral oils
5 = LT-NBR (low temp. Buna)	-20° to 250°F	mineral oils
6 = FPM (Fluoroelastomer)	-40° to 250°F	mineral oils (with low temperature CS shell)
7 = Others (available on request)	-20° to 200°F	phosphate esters & brake fluids
	5° to 300°F	chlorinated hydrocarbons

Country of Installation _____

S = USA
S1 = Canada (CRN registered)
W1 = ABS Type Approval
W3 = DNV Type Approval
U = PED/CE
(for other countries see page 3 for proper code designation)

Maximum Working Pressure in bar _____

210 = 3000 psi
345 = 5000 psi

Fluid Port Connection _____

Threaded _____

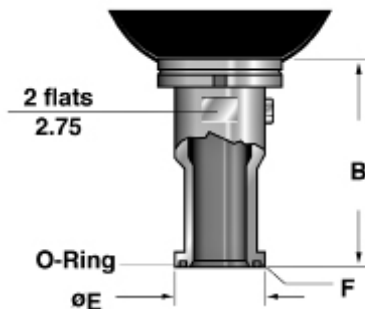
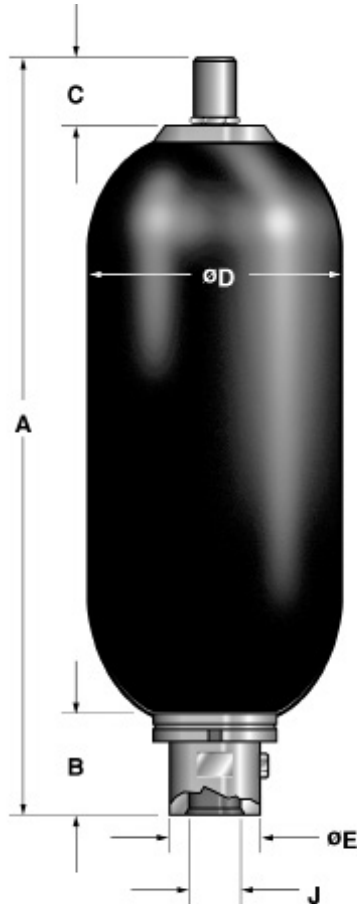
Flanged _____

A = BSPP (ISO 228) Radial Seal Design NOT Axial
B = Metric (DIN 13)
C = SAE (ANSI B1.1)
D = NPT (ANSI B1.2)
E = SAE 2" - 3000 psi (Code 61)
F = SAE 1 1/2" - 6000 psi (Code 62)
G = SAE 1 1/4" - 3000 psi (Code 61) (only available in sizes 4 liters & 6 liters)
H = SAE 1" - 6000 psi (Code 62) (only available in sizes 1 liter & 4 liters)

Gas Precharge Pressure (P_o) in bar _____

xxx = 3 digits

Dimensions Bottom Repairable



SB 330... (3000 psi)

Size (L)	Nom. Vol. (gal.)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B ⁽¹⁾	C	ØD	ØE	Thread-J		Q ⁽²⁾ gpm
									SAE	NPTF BSPP	
1	1/4	66 (0.29)	10 (4.5)	12.0 (303)	2.0 (51)	2.3 (58)	4.6 (117)	1.4 (36)	1 1/16-12 UN (SAE-12)	3/4"	60
4	1	226 (0.98)	30 (14)	16.3 (415)	2.6 (66)	2.3 (58)	6.6 (168)	2.1 (53)	1 5/8-12 UN (SAE-20)	1 1/4"	160
6	1 1/2	340 (1.47)	33 (15)	20.5 (521)	2.6 (66)	2.3 (58)	6.6 (168)	2.1 (53)	1 5/8-12 UN (SAE-20)	1 1/4"	160
10	2 1/2	566 (2.45)	86 (39)	22.0 (559)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
20	5	1125 (4.87)	140 (63)	34.5 (876)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
32	10	2080 (9.00)	226 (102)	54.7 (1390)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
42	11	2320 (10.04)	270 (123)	60.2 (1530)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
54	15	3205 (13.87)	330 (150)	78.3 (1990)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240

See notes at bottom of page

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

SB 600... (5000 psi)

Size (L)	Nom. Vol. (gal.)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B ⁽¹⁾	C	ØD	ØE	Thread-J		Q ⁽²⁾ gpm
									SAE	NPTF BSPP	
1	1/4	66 (0.29)	17 (7.7)	13.2 (335)	2.4 (62)	2.3 (58)	4.8 (122)	2.1 (53)	1 5/8-12 UN (SAE - 20)	1 1/4"	160
4	1	226 (0.98)	33 (15)	16.3 (415)	2.5 (64)	2.3 (58)	6.8 (173)	2.1 (53)	1 5/8-12 UN (SAE - 20)	1 1/4"	160
10	2 1/2	566 (2.45)	154 (70)	22.4 (568)	3.1 (80)	2.8 (70)	9.1-9.7 (232-247)	3.0 (76)	1 7/8-12 UN (SAE - 24)	2"	240
20	5	1125 (4.87)	248 (113)	35.0 (888)	3.1 (80)	2.8 (70)	9.1-9.7 (232-247)	3.0 (76)	1 7/8-12 UN (SAE - 24)	2"	240
32	10	2080 (9.00)	413 (188)	55.2 (1402)	3.1 (80)	2.8 (70)	9.1-9.7 (232-247)	3.0 (76)	1 7/8-12 UN (SAE - 24)	2"	240
54	15	3180 (13.77)	611 (278)	78.8 (2002)	3.1 (80)	2.8 (70)	9.1-9.7 (232-247)	3.0 (76)	1 7/8-12 UN (SAE - 24)	2"	240

See notes at bottom of page

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

Split Flange Connection (sizes 10 - 54)

Series	B	ØE	F Split Flange Connection	Q ⁽²⁾ gpm
SB 330 SB 330 TR ⁽³⁾	4.1 (104)	2.8 (71.4)	SAE 2" - 3000 psi Code 61	240
SB 600 SB 600 TR ⁽³⁾	5.5 (140)	2.5 (63.5)	SAE 1 1/2" - 5000 psi Code 62	240

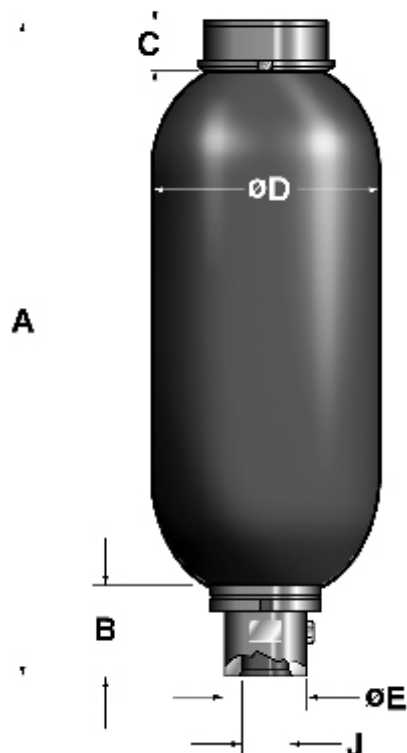
NOTE: Higher pressure may be available. Please consult HYDAC for more information.

1) Applies to SAE thread type only. For Split Flange, see separate chart and illustration.

2) Maximum discharge flow rate recommended for vertically mounted accumulators.

3) Sizes 10 to 54 only.

Top Repairable and Modified Flow



SB 330 TR... (3000 psi)

Size (L)	Nom. Vol. (gal.)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B ⁽¹⁾	C	ØD	ØE	Thread-J		Q ⁽²⁾ gpm
									SAE	NPTF BSPP	
10	2.5	566 (2.45)	94 (43)	21.3 (540)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE - 24)	2"	240
20	5	1125 (4.87)	140 (63)	34.8 (883)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE - 24)	2"	240
32	10	2080 (9.00)	226 (102)	55.0 (1397)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE - 24)	2"	240
42	11	2320 (10.04)	270 (123)	60.2 (1530)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE - 24)	2"	240
54	15	3205 (13.87)	330 (150)	78.6 (1997)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE - 24)	2"	240

See notes at bottom of page

Dimensions are for general information only, all critical dimensions should be verified.

Dimensions are in inches/(mm) and lbs/(kg)

SB 600 TR... (5000 psi)

Size (L)	Nom. Vol. (gal.)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B ⁽¹⁾	C	ØD	ØE	Thread J		Q ⁽²⁾ gpm
									SAE	NPTF BSPP	
10	2.5	566 (2.45)	154 (70)	20.9 (531)	3.1 (80)	1.6 (40)	9.1-9.7 (232-247)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
20	5	1125 (4.87)	248 (113)	33.5 (851)	3.1 (80)	1.6 (40)	9.1-9.7 (232-247)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
32	10	2080 (9.00)	413 (188)	53.7 (1364)	3.1 (80)	1.6 (40)	9.1-9.7 (232-247)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
54	15	3205 (13.87)	611 (278)	77.3 (1964)	3.1 (80)	1.6 (40)	9.1-9.7 (232-247)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240

See notes at bottom of page

Dimensions are for general information only, all critical dimensions should be verified.

Dimensions are in inches/(mm) and lbs/(kg)

SB 330 NTR... (3000 psi, Modified Flow)

Size (L)	Nom. Vol. (gal.)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B ⁽¹⁾	C	ØD	ØE	Thread J		Q ⁽²⁾ gpm
									SAE	NPTF BSPP	
10	2.5	566 (2.45)	94 (43)	21.3 (540)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
20	5	1125 (4.87)	140 (63)	34.8 (883)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
32	10	2080 (9.00)	226 (102)	55.0 (1397)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240
54	15	3205 (13.87)	330 (150)	77.3 (1964)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"	240

Dimensions are for general information only, all critical dimensions should be verified.

Dimensions are in inches/(mm) and lbs/(kg)

Note:

1) Applies to SAE thread type only. For Split Flange, see chart and illustration on previous page.

2) Maximum discharge flow rate recommended for vertically mounted accumulators.

Water Service

RED selections are non-standard items – Contact HYDAC for information and availability
Not all combinations are available

Size (L)	Effective Gas Vol (in3)	MAWP psi/(bar)	Model Code	P/N	Fluid Connection Thread Size
1	66	3000 (210)	SB330-1A1/002S-210C	2055285	SAE 1 1/16" - 12 UN
4	226	3000 (210)	SB330-4A1/002S-210C	2055070	SAE 1 5/8" - 12 UN
4	226	3000 (210)	SB330-4A1/005S-210C	2092089	SAE 1 5/8" - 12 UN
4	226	3000 (210)	SB330-4A1/006S-210D (USES 1.25" NPT ADAP)	2091080	1 1/4" NPT
6	340	3000 (210)	SB330-6A1/002S-210D (USES 1.25" NPT ADAP)	2092310	1 1/4" NPT
10	566	3000 (210)	SB330-10A1/002S-210C	2055224	SAE 1 7/8" - 12 UN
10	566	3000 (210)	SB330-10A1/002S-210D	2087571	2" NPT
10	566	3000 (210)	SB330-10F1/002S-210E	2069474	Flanged SAE 2" (Code 61)
20	1125	3000 (210)	SB330-20A1/002S-210C	2054720	SAE 1 7/8" - 12 UN
20	1125	3000 (210)	SB330-20A1/002S-210D	2087570	2" NPT
20	1125	3000 (210)	SB330-20A1/002S1-210A CRN	2082666	2" BSPP
20	1125	3000 (210)	SB330-20A1/002S1-210C CRN	2084359	SAE 1 7/8" - 12 UN
20	1125	3000 (210)	SB330-20F1/002S-210E	2072909	Flanged SAE 2" (Code 61)
32	2080	3000 (210)	SB330-32A1/002S-210C	2083387	SAE 1 7/8" - 12 UN
32	2080	3000 (210)	SB330-32A1/002S-210D	2063921	2" NPT
32	2080	3000 (210)	SB330-32F1/002S-210E	2072536	Flanged SAE 2" (Code 61)
54	3205	3000 (210)	SB330-54A1/002S-210C	2055269	SAE 1 7/8" - 12 UN
54	3205	3000 (210)	SB330-54A1/002S-210D	2069311	2" NPT
54	3205	3000 (210)	SB330-54A1/002S1-210A CRN	2082667	2" BSPP
54	3205	3000 (210)	SB330-54F1/002S-210E	2055105	Flanged SAE 2" (Code 61)

1	66	5000 (345)	SB600-1A1/002S-345C	2054911	SAE 1 5/8" - 12 UN
1	66	5000 (345)	SB600-1F1/002S-345H	2094814	Flanged SAE 1" (Code 62)
4	226	5000 (345)	SB600-4A1/002S-345C	2055063	SAE 1 5/8" - 12 UN
10	566	5000 (345)	SB600-10A1/002S-345C	2055093	SAE 1 7/8" - 12 UN
10	566	5000 (345)	SB600-10A1/002S1-345C CRN	2093123	SAE 1 7/8" - 12 UN
10	566	5000 (345)	SB600-10F1/002S-345F	2089028	Flanged SAE 1 1/2" (Code 62)
20	1125	5000 (345)	SB600-20A1/002S-345C	2056383	SAE 1 7/8" - 12 UN
20	1125	5000 (345)	SB600-20F1/002S-345F	2083359	Flanged SAE 1 1/2" (Code 62)
32	2080	6000 (414)	SB600-32A1/002S-414A	2070756	2" BSPP
32	2080	5000 (345)	SB600-32F1/002S-345F	2076097	Flanged SAE 1 1/2" (Code 62)
54	3180	5000 (345)	SB600-54A1/002S-345C	2062971	SAE 1 7/8" - 12 UN
54	3180	5000 (345)	SB600-54A1/006S-345C	2094879	SAE 1 7/8" - 12 UN
54	3180	5000 (345)	SB600-54F1/002S-345F	2074828	Flanged SAE 1 1/2" (Code 62)

Model Code

Model Codes containing RED selections are non-standard items – Contact HYDAC for information and availability
 Not all combinations are available

SB 90 - 20 S 11/ 332S1-82C

Series
 SB 50 = Bladder Accumulator (725 psi, Nominal)
 SB 90 = Bladder accumulator (1190 psi, Nominal)

Size
 10 = 2.5 gal
 20 = 5 gal
 35 = 10 gal
 50 = 15 gal

Line Connection
 S = Threaded (SAE Lock Nut)
 F = Flanged (SAE Lock Nut)

Gas Port
 11 = 2pc 316 SS Gas Valve (MS28889-2)
 (see page 68 for permanent gauge blocks. See page 60 for charging and gauging info, FPO is recommended)

Fluid port
 3 = 316 Stainless steel

Shell
 3 = 316 Stainless steel (Static Storage Temp -40 Deg C to 100 Deg C) Vessel Only

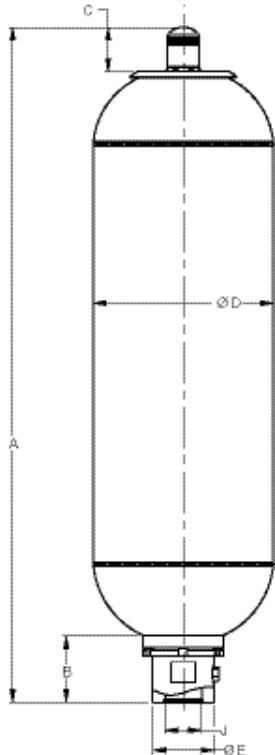
Bladder Compound

Compound	Oper. Temp Range	Typical Fluids
NBR	5° to 180°F	mineral oils
3	32° to 180°F	water & water-glycols (5% minimum glycol)
4	-20° to 250°F	mineral oils
5	-50° to 180°F	mineral oils
6	-20° to 250°F	mineral oils
7	-40° to 250°F	mineral oils (with low temperature CS shell)
IIR	-20° to 200°F	phosphate esters & brake fluids
FPM	5° to 300°F	chlorinated hydrocarbons

Country of Installation
 S1 = USA & Canada

Maximum Working Pressure (in bar)
 50 = SB50's 725 PSI
 82 = SB90's 1189 PSI

Fluid Port Connection (316SS)
 Threaded
 C = SAE
 D = NPT
 Flanged
 E = SAE 2" - 3000 psi



SB 90... (1190 psi)

Nom. Vol. (L)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B ⁽¹⁾	C	ØD	ØE	Thread J	
								SAE	NPTF
10	566	59 (31)	21.2 (538)	3.1 (80)	2.3 (58)	8.6 (219)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"
20	1125	102 (46)	33.4 (848)	3.1 (80)	2.3 (58)	8.6 (219)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"
35	2080	146 (66)	53.9 (1368)	3.1 (80)	2.3 (58)	8.6 (219)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"
50	3205	212 (96)	77.9 (1978)	3.1 (80)	2.3 (58)	8.6 (219)	3.0 (76)	1 7/8-12 UN (SAE-24)	2"

Dimensions are in inches/(mm) and lbs/(kg)

Additional sizes available.

For sizes above 15 gal., contact HYDAC Accumulator Product Management.

Model Code	Part Number
SB90-10S11/332S-82C	2200084
SB90-20S11/332S-82C	2200090
SB90-35S11/332S-82C	2200097
SB90-50S11/332S-82C	2200101

Model Code

Model Codes containing RED selections are non-standard items – Contact HYDAC for information and availability
 Not all combinations are available

SB 330 - 20 S 11 / 112 S - 210 C XXX

Series

- SB 330 = Bladder accumulator (3000 psi, Typically)
- SB 600 = Bladder accumulator (5000 psi, Typically)

Design

- (omit) = Standard (bottom repairable)
- TR = Top Repairable

Size (see dimension tables on the previous pages for most common sizes)

- 10 = 2.5 gallons
- 20 = 5 gallons
- 32 = 10 gallons
- 42 = 11 gallons
- 54 = 15 gallons

Line Connection

- S = Threaded (SAE Lock Nut)
- F = Flanged (SAE Lock Nut)

Gas Port

- 11 = 2 Piece Gas Valve (see pg 19 for details)

Material Code

Depending on Application

- 112 = Standard for oil service (mineral oil)

Fluid Port

- 0 = Synthetic coated carbon steel (PTFE solid film, internal & external for water service)
- 1 = Carbon steel
- 2 = High strength stainless steel (typically 17-4 PH)
- 3 = Stainless steel (corrosion resistance) (typically 316SS)
- 4 = Chemically plated carbon steel (internal & external for water service)
- 6 = Low temperature carbon steel (<-40°F, min)
- 7 = Others available on request

Shell

- 0 = Synthetic coated carbon steel (PTFE solid film, internal & external for water service)
- 1 = Carbon steel
- 2 = Chemically plated carbon steel (internal & external for water service)
- 6 = Low temperature carbon steel (<-40°F)
- 7 = Others available on request

Bladder Compound

Compound	Oper. Temp Range	Typical Fluids
2 = NBR (Buna N)	-10° to 220°F	mineral oils
3 = ECO (Hydrin)	-10° to 220°F	water & water-glycols (5% minimum glycol)
4 = IIR (Butyl)	-50° to 180°F	mineral oils
5 = LT-NBR (low temp. Buna)	-20° to 250°F	mineral oils
6 = FPM (Fluoroelastomer)	-40° to 250°F	mineral oils (with low temperature CS shell)
7 = Others (available on request)	-20° to 200°F	phosphate esters & brake fluids
	5° to 300°F	chlorinated hydrocarbons

Country of Installation

- S = USA
- W1 = ABS Type Approval
- W3 = DNV Type Approval
- S1 = Canada (CRN Registration)
- U = PED/CE

(for other countries see page 3 for proper code designation)

Maximum Working Pressure

- 210 = 3000 psi
- 345 = 5000 psi
- 414 = 6000 psi

Fluid Port Connection

Threaded

- C = SAE (ANSI B1.1)
- D = NPT (ANSI B1.2)

Flanged

- E = SAE 2" - 3000 psi (Code 61)
- F = SAE 1 1/2" - 6000 psi (Code 62)

Gas Precharge Pressure (P₀) in bar

- xxx = 3 digits

Note: For the full line of bladder accumulators please refer to page 4.

Bladder Accumulators SB Series Bottom Repairable

SB 330... (3000 psi)

Size (L)	Nom. Vol. (gal.)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B	C	ØD	ØE	Thread-J NPTF		Q ⁽¹⁾ gpm
10	2 1/2	566 (2.45)	86 (39)	22.0 (559)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 1/4	2"	240
20	5	1125 (4.87)	140 (63)	34.5 (876)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 1/4	2"	240
32	10	2080 (9.00)	226 (102)	54.7 (1390)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 1/4	2"	240
42	11	2320 (10.04)	270 (123)	60.2 (1530)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 1/4	2"	240
54	15	3205 (13.87)	330 (150)	78.3 (1990)	3.1 (80)	2.3 (58)	9.1 (231)	3.0 (76)	1 1/4	2"	240

See notes at bottom of page

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

SB 600... (5000 psi)

Size (L)	Nom. Vol. (gal.)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B	C	ØD	ØE	Thread-J NPTF		Q ⁽¹⁾ gpm
10	2 1/2	566 (2.45)	154 (70)	22.4 (568)	3.1 (80)	2.8 (70)	9.1-9.7 (232 -247)	3.0 (76)	1 1/4	2"	240
20	5	1125 (4.87)	248 (113)	35.0 (888)	3.1 (80)	2.8 (70)	9.1-9.7 (232-247)	3.0 (76)	1 1/4	2"	240
32	10	2080 (9.00)	413 (188)	55.2 (1402)	3.1 (80)	2.8 (70)	9.1-9.7 (232-247)	3.0 (76)	1 1/4	2"	240
54	15	3180 (13.77)	611 (278)	78.8 (2002)	3.1 (80)	2.8 (70)	9.1-9.7 (232-247)	3.0 (76)	1 1/4	2"	240

See notes at bottom of page

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

Split Flange Connections (sizes 10 - 54)

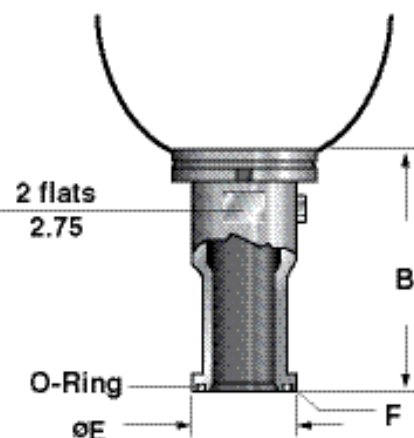
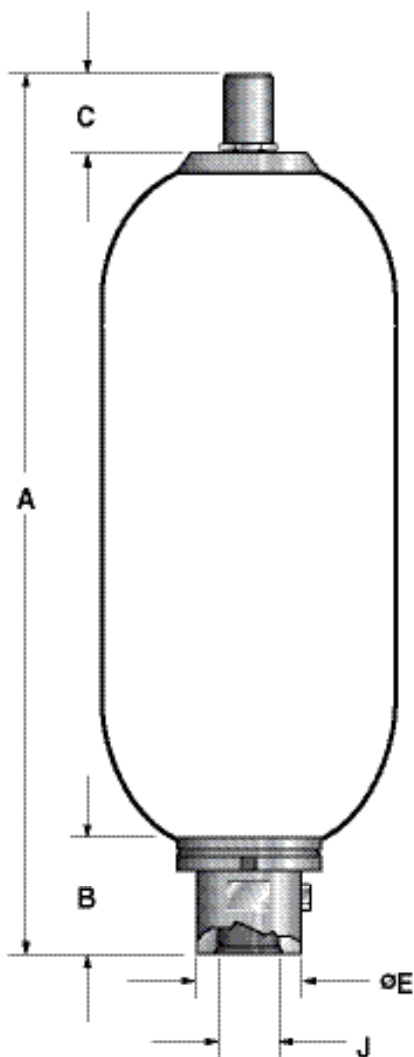
Series	B	ØE	Split Flange Connection F	Q ⁽¹⁾ gpm
SB 330 SB 330 TR	4.1 (104)	2.8 (71.4)	SAE 2" - 3000 psi Code 61	240
SB 600 SB 600 TR	5.5 (140)	2.5 (63.5)	SAE 1 1/2" - 5000 psi Code 62	240

See notes at bottom of page

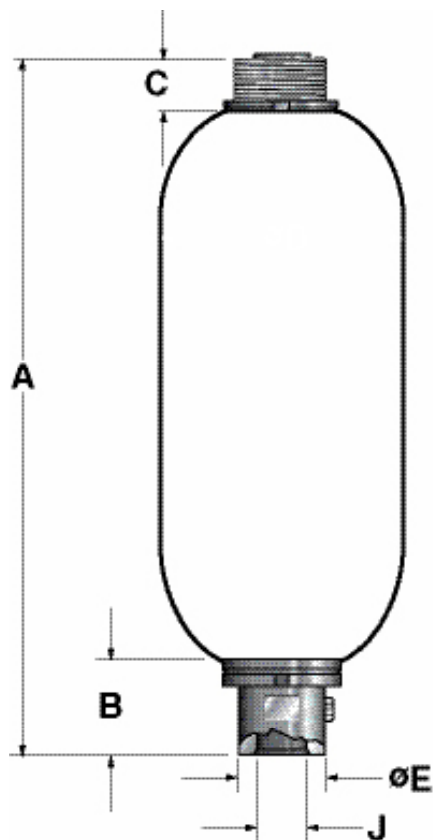
Dimensions are for general information only, all critical dimensions should be verified.
Dimensions are in inches/(mm) and lbs/(kg)

Note:

1) Maximum discharge flow rate recommended for vertically mounted accumulators.



Top Repairable



SB 330 TR... (3000 psi)

Size (L)	Nom. Vol. (gal.)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B	C	ØD	ØE	Thread-J NPTF		Q ⁽¹⁾ gpm
10	2 1/2	566 (2.45)	94 (43)	21.3 (540)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 1/4	2"	240
20	5	1125 (4.87)	140 (63)	34.8 (883)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 1/4	2"	240
32	10	2080 (9.00)	226 (102)	55.0 (1397)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 1/4	2"	240
42	11	2320 (10.04)	270 (123)	60.2 (1530)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 1/4	2"	240
54	15	3205 (13.87)	330 (150)	78.6 (1997)	3.1 (80)	1.6 (40)	9.1 (231)	3.0 (76)	1 1/4	2"	240

See note at bottom of page

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

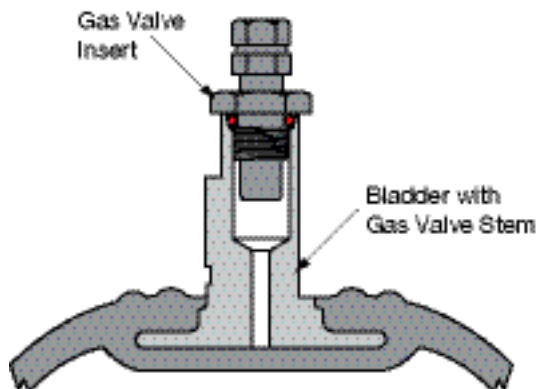
SB 600 TR... (5000 psi)

Size (L)	Nom. Vol. (gal.)	Eff. Gas Vol. in ³ / (gal.)	Weight	A	B	C	ØD	ØE	Thread-J NPTF		Q ⁽¹⁾ gpm
10	2.5	566 (2.45)	154 (70)	20.9 (531)	3.1 (80)	1.6 (40)	9.1-9.7 (232 -247)	3.0 (76)	1 1/4	2"	240
20	5	1125 (4.87)	248 (113)	33.5 (851)	3.1 (80)	1.6 (40)	9.1-9.7 (232 -247)	3.0 (76)	1 1/4	2"	240
32	10	2080 (9.00)	413 (188)	53.7 (1364)	3.1 (80)	1.6 (40)	9.1-9.7 (232-247)	3.0 (76)	1 1/4	2"	240
54	15	3205 (13.87)	611 (278)	77.3 (1964)	3.1 (80)	1.6 (40)	9.1-9.7 (232-247)	3.0 (76)	1 1/4	2"	240

See note at bottom of page

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

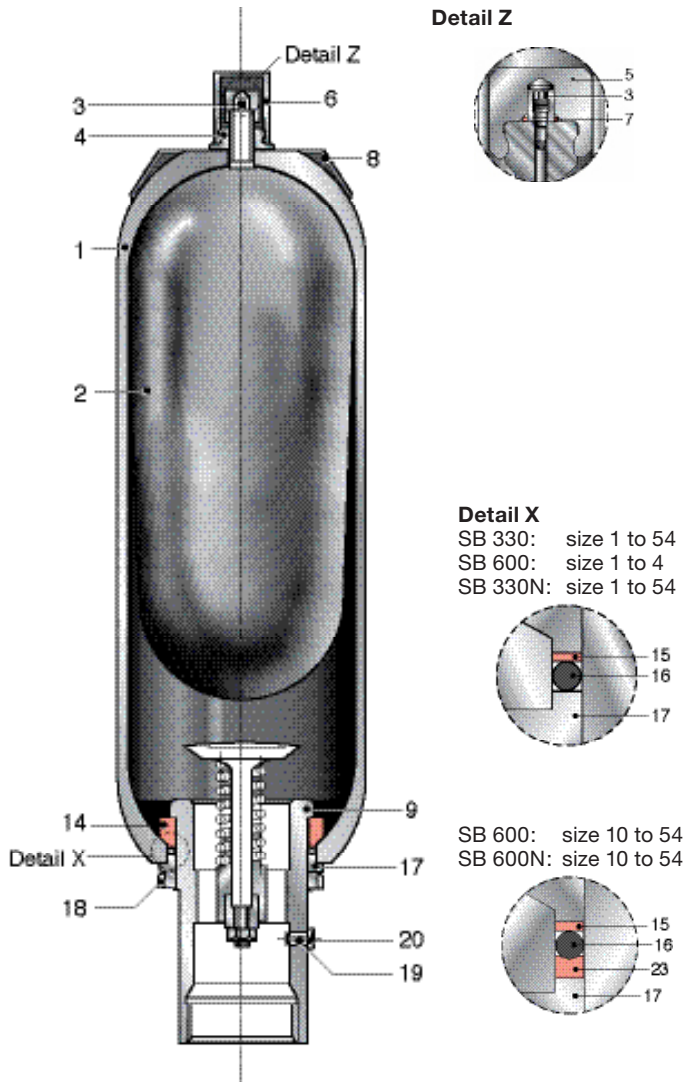
2 Piece Gas Valve MS28889-2



Note: Maximum discharge flow rate recommended for vertically mounted accumulators.

Bladder Accumulators - Spare Parts

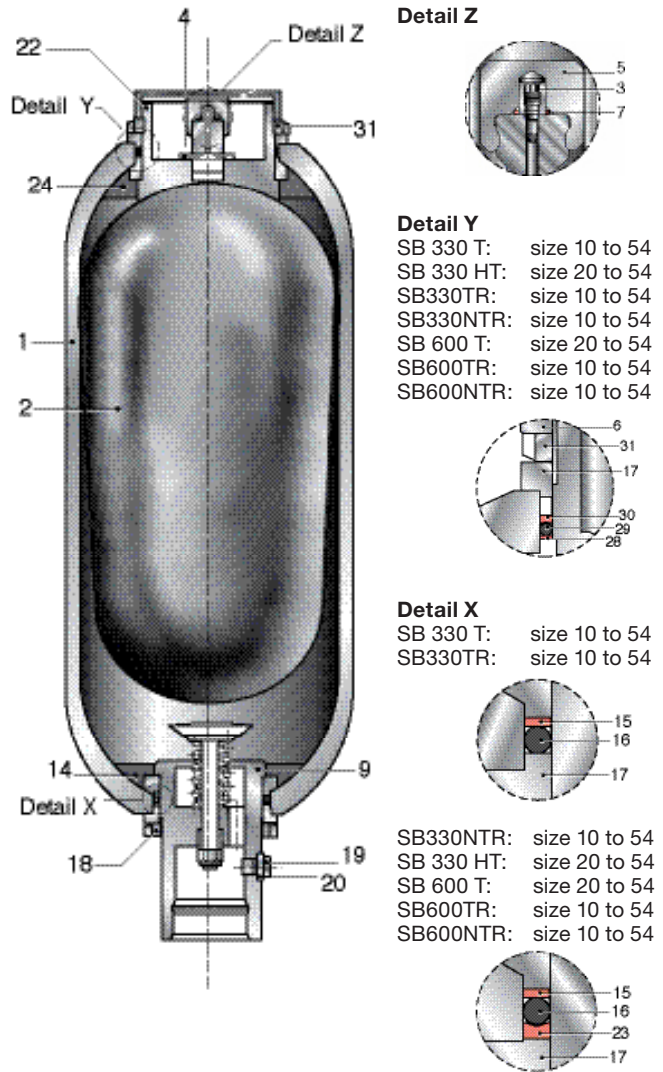
Bottom Repairable SB330, SB330H, SB330N SB600, SB600N



Repair Kits consist of items
2, 3, 4 (SB 600 only), 5, 7, 15, 16, 23 (where applicable)

Seal Kits consist of items
15, 16, 23 (where applicable)

Top Repairable SB330T, SB330HT, SB330TR, SB330NTR, SB 600T, SB600TR, SB600NTR



Repair Kits consist of items
SB330T, SB330TR, SB330NTR SB600T, SB600TR, SB600NTR:
2, 3, 5, 7, 15, 16, 23 (where applicable), 28, 29, 30
SB330HT: 2, 3, 5, 7, 23 (where applicable), 28, 29, 30

Seal Kits consist of items
15, 16, 23 (where applicable), 28, 29, 30

Parts Legend

Gas Side

- | | |
|------------------------|------------------------|
| 1 Shell | 8 Name Plate |
| 2 Bladder | 22 Gas Port Adapter |
| 3 Gas Valve Core | 24 Anti-extrusion Ring |
| 4 Gas Side Lock Nut | 28 Flat Ring |
| 5 Valve Seal Cap | 29 O-ring |
| 6 Valve Protection Cap | 30 Back-up Ring |
| 7 O-ring | 31 Gas Port Lock Nut |

Fluid Side

- | |
|------------------------|
| 9 Fluid Port |
| 14 Anti-extrusion Ring |
| 15 Flat Ring |
| 16 O-ring |
| 17 Spacer Ring |
| 18 Fluid Port Lock Nut |
| 19 Vent Screw |
| 20 Seal Ring |
| 23 Back-up Ring |

Seal Kits

For seal kits and repair kits other than Buna N, and for sizes not listed please consult factory.

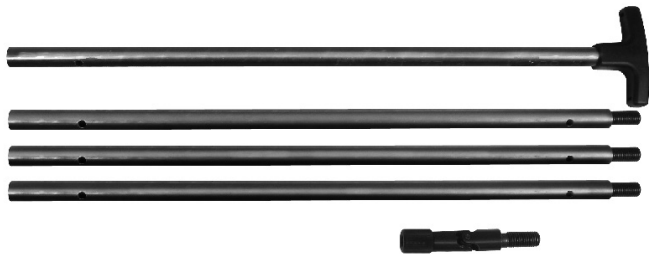
Bottom Repairable - Buna N*

Size	3000 PSI		5000 PSI	
	Fluid Port Seal Kit	Bladder Repair Kit	Fluid Port Seal Kit	Bladder Repair Kit
1 (1 qt.)	2054031	2054034	2054032	2054455
4 (1 gal.)	2054032	2054035	2054032	2054035
6 (1.5gal.)	2054032	2054677	N/A	N/A
10 (2.5 gal.)	2054033	2054036	2054283	2054279
20 (5 gal.)	2054033	2054037	2054283	2054280
32 (10 gal.)	2054033	2054038	2054283	2054281
42 (11 gal.)	2054033	2075963	N/A	N/A
54 (15 gal.)	2054033	2054039	2054283	2054282

*For seal kits and repair kits other than Buna N, and for sizes and types not listed please contact HYDAC.

Tools

Item	Part Number
Pull Rod (Schrader Valve)	2092306
Pull Rod (G 1/4" valve)	2094570
Gas Valve Torque Wrench	2080987
Gas Valve Core Tool	0616886
Spanner Wrenches:	
1 Qt. - 52-55 mm	2054547
1-15 Gal - 68-100 mm	2054545
High Flow and Top Repairable 120-130 mm	2054548



Pull Rod: Comes complete with fitting for gas valve, and 4 extension segments to accommodate accumulators up to 54 liter

Gas Valve Torque Wrench



Gas Valve Core Tool



Spanner Wrench



WARNING: Only qualified persons should perform maintenance on any type of accumulator. Complete maintenance instructions are available - Contact HYDAC.

Competitive Crossover Bladder Accumulators

Standard Bottom Repairable 3000 PSI / Oil Service / Buna N / SAE Thread



Size	HYDAC	Accum Inc. ³	Bosch	Greer	Oil Air	Parker
1 qt	2054003	A1QT3100-3	0-531-112-640	851550	1QT-100-6	BA002B3T01A1
1 gal	2054004	A13100-3	0-531-113-640	841720	1-100-6	BA01B3T01A1
2.5 gal	2054005	A2.53100-3	0-531-114-640	849760	2.5-100-6	BA02B3T01A1
5 gal	2054006	A53100-3	0-531-115-640	849392	5-100-6	BA05B3T01A1
10 gal	2054007	A103100-3	0-531-115-650	850670	10-100-6	BA10B3T01A1
15 gal	2054008	A153100-3	0-531-116-6401	849910	15-100-6	BA15B3T01A1

Repair Kits¹⁰ Replacement Bladder

Size	HYDAC	Accum Inc. ³	Bosch ²	Greer	Oil Air	Parker
1 qt 5/8" Gas Valve	2054655	AI-1QT-3KT	N/A	7029283	A1QT-3003	08506930023
1 qt 7/8" Gas Valve (HYDAC standard)	2054034	AI-1QT-3KT	9-534-232-0243	702928	A1QT-300	N/A
1 gal	2054035	AI-1-3KT	9-534-232-025	702956	A1-300	0850693010
2.5 gal	2054036	AI-2.5-3KT	9-534-232-026	702970	A2.5-2-300	0850693025
5 gal	2054037	AI-5-3KT	9-534-232-027	702984	A5-2-300	0850693050
10 gal	2054038	AI-10-3KT	9-534-232-028	702998	A10-2-300	0850693100
15 gal	2054039	AI-15-3KT	9-534-232-0291	703026	A15-2-300	0850693150

Top Repairable 3000 PSI / Oil Service / Buna N / SAE Thread



Size	HYDAC	Accum Inc. ³	Bosch ⁵	Greer	Oil Air	Parker
2.5 gal	2089035	A2.5TR3100-3	9-530-230-075	851420	TR-2.5-100-6	BA02T3T01A1
5 gal	2081834	A5TR3100-3	9-530-230-085	851430	TR-5-100-6	BA05T3T01A1
10 gal	2079383	A10TR3100-3	9-530-230-095	851590	TR-10-100-6	BA10T3T01A1
15 gal	2079385	A15TR3100-3	9-530-230-1051	852480	TR-15-100-6	BA15T3T01A1

Repair Kits¹⁰ Replacement Bladder

Size	HYDAC	Accum Inc. ⁴	Bosch ^{2,4}	Greer	Oil Air	Parker
2.5 gal	2062823	AI-2.5-3KT	N/A	702970	A2.5-2-300	0850693025
5 gal	2054104	AI-5-3KT	9-534-232-027	702984	A5-2-300	0850693050
10 gal	2054105	AI-10-3KT	9-534-232-028	702998	A10-2-300	0850693100
15 gal	2054106	AI-15-3KT	9-534-232-0291	703026	A15-2-300	0850693150

Standard Bottom Repairable 5000 PSI / Oil Service / Buna N / SAE Thread



Size	HYDAC	Accum Inc. ³	Bosch ⁵	Greer	Oil Air	Parker
1 qt	2054188	N/A	N/A	851120	N/A	N/A
1 gal	2054189	N/A	N/A	851130	N/A	BA01B5T01A1
2.5 gal	2054276	A2.55100-3	N/A	851150	G-2.5-5-100-6	BA02B5T01A1
5 gal	2054275	A55100-3	N/A	855360	G-5-5-100-6	BA05B5T01A1
10 gal	2054277	A105100-3	N/A	850680	G-10-5-100-6	BA10B5T01A1
15 gal	2054278	A155100-3	N/A	855370	G-15-5-100-6	BA15B5T01A1

Repair Kits¹⁰ Replacement Bladder

Size	HYDAC	Accum Inc. ⁹	Bosch ^{2,4}	Greer	Oil Air	Parker
1 qt	2054455 ⁷	N/A	N/A	704040	N/A	N/A
1 gal	2054035 ⁷	N/A	N/A	704060	N/A	N/A
2.5 gal	2054279 ⁸	AI-2.5-5-3KT	N/A	704080	AG-2.5-5-300	08619050258
5 gal	2054280 ⁸	AI-5-5-3KT	N/A	704100	AG-5-5-300	08619050508
10 gal	2054281 ⁸	AI-10-5-3KT	N/A	704120	AG-10-5-300	08619051008
15 gal	2054282 ⁸	AI-15-5-3KT	N/A	704140	AG-15-5-300	08619051508

Footnotes

- 1 Only 14 gallon
- 2 Bladder only
- 3 Size of gas valve stem may be different than HYDAC standard (7/8"-14 UNF)
- 4 Style of gas valve stem (top-repairable) may differ (i.e. has flat) from HYDAC
- 5 Not ASME approved; TUV approved accumulators only
- 6 Top-repairable only
- 7 Gas valve stem 7/8"-14 UNF
- 8 Gas valve stem 2"
- 9 Size and/or style of gas valve may be different than HYDAC standard
- 10 HYDAC Repair Kit consists of:
 - Bladder
 - Lock Nut (SB 600 only)
 - Seal Kit
 - Gas Valve Core
 - Valve Seal Cap