
WARNING
BEFORE ATTEMPTING MAINTENANCE ON SYSTEM, ISOLATE OR EXHAUST ACCUMULATOR.
BEFORE REMOVAL OF ACCUMULATOR, EXHAUST LIQUID PRESSURE.
NITROGEN PRECHARGED TO
BAR
NEXT INSPECTION TO AS3788 DUE
STAUFF
WARNING
NITROGEN PRECHARGED TO

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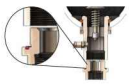
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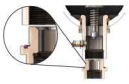
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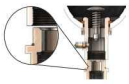
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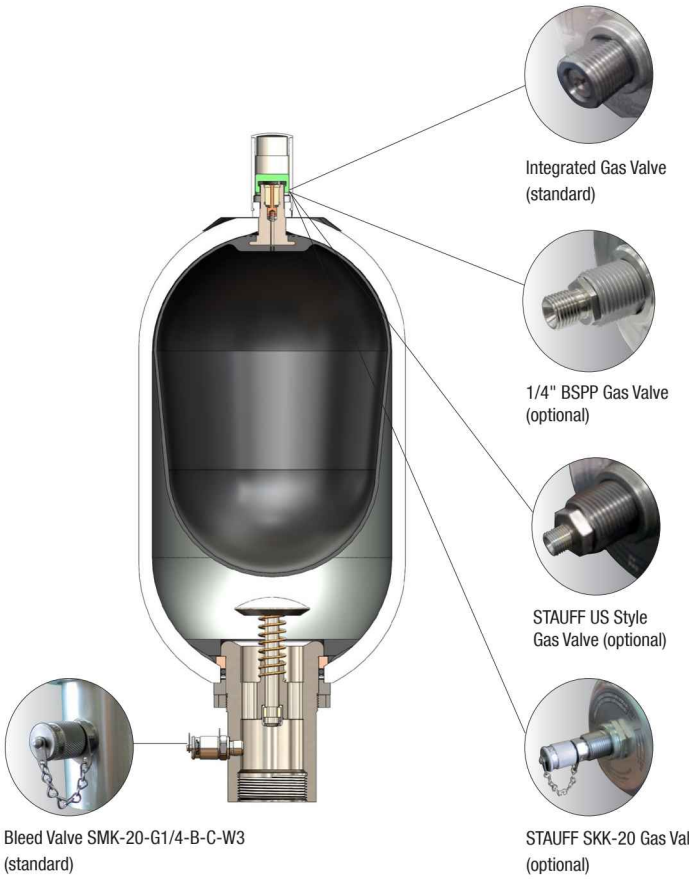
Bladder Accumulator Assemblies
Type STBA



Fluid Port
BSPP Female Flat Face
(standard)

Fluid Port
1-1/2" SAE Code 62
(optional)

Product Description

STAUFF bladder accumulator assemblies consist of three key components; shell, bladder, fluid port assembly, and are available in sizes 1 - 55 Litres with pressures up to 400 bar. STAUFF bladder accumulators can be used in applications such as pulsation dampening, surge alleviation, thermal expansion and energy storage.
STAUFF bladder accumulators comply with AS1210 standards and are suitable in all states of Australia, New Zealand and are accepted throughout Asia.

Features

- Meets AS1210 and ASME VIII Div 1 specifications
- Full flow fluid port
- STAUFF Test coupling and Integrated gas valve options
- Standard Nitrile rubber high strength bladder
- High flow bladder / port design
- Bottom repairable accumulators via fluid port
- High strength chrome molybdenum / alloy steel shell
- Corrosion resistant black acrylic polyurethane coating
- 4:1 design factor at normal operating pressure
- Interchangeable with most competitors units
- Fluid port assembly high-grade steel, zinc plated
- Fluid bleed port connection supplied standard with STAUFF Test coupling
- Assembled and tested in Australia

Technical Data

- Range of connections from G3/4" to 2" BSPP and 1-1/2" SAE flange
- NBR (Buna-N®) diaphragm material (standard)
- Maximum compression ratio 4:1
- Operating temperature shell -40°C … +93°C
- Operating temperature bladder - according to material used
- Operating pressure to 360 Bar AS1210 (standard) 4000 PSI ASME APP 22 (standard)
- Capacity up to 55 Litres
- Bladder compatibility to most common fluids, refer to page 11
- Fluid bleed port connection G1/4"

Options

- Housing materials
- Fluid ports
- Gas valves
- Bladder materials
- Private branding
- Brackets, charging kits and accessories

Applications

- Mobile and stationary hydraulic systems
- Test benches
- Light and heavy industrial plants
- Transport equipment

Components and Material

Main Components	Standard Material		Material Options	
Shell	Chrome-Molybdenum Alloy Steel SA 372 - 34 CrMo4 Black RAL 9017 Acrylic Polyurethane		Internal PTFE lined shell Stainless Steel shell	
Bladder	NBR (Buna-N®)	Temperature	Material	Temperature
		-15°C ... +100°C	FKM (Viton®)	-20°C ... +140°C
			Butyl	-15°C ... +120°C
			EPDM	-40°C ... +120°C
			Hydrin (ECO)	-32°C ... +115°C
Fluid Port Assembly	Steel SCM 440 material specification with Zinc Plating		Stainless Steel 630 Grade	

Bladders

STAUFF bladder accumulators offer excellent system performance and operational life, the key component being the bladder (available in various types of elastomer). STAUFF's standard NBR (Buna-N®) range offers resistance to permeation and a wide temperature range (it is essential that the bladder selected is compatible with the fluid media and operating temperature range).

Compatibility Resistance Table

Compatibility		Mineral Oil	Aromatic - unleaded	Water glycol	Phosphates Ester (Skydrol)	High Temperature	Low Temperature	Mechanical characteristics	Permeation
0	Exceptional resistance								
1	Good resistance								
2	Average resistance								
3	Minor resistance								
4	Little or no resistance								
Shaded	Heavy duty								
NBR (Buna-N®) 28		2	3	2	4	3	**1**	2	4
NBR (Buna-N®) 33 (STD)		1	3	2	4	3	2	2	3
NBR (Buna-N®) 40		**1**	2	2	4	1	3	2	**1**
ECO		1	2	2	4	2	**1**	2	2
EPDM		4	4	1	**1**	2	1	3	4
BUTYL		4	4	**1**	2	2	2	3	2
FPM		1	**1**	1	4	**1**	3	3	4

Other materials are available on request.

Bladder Storage

Bladders are required to be stored away from direct sunlight or in the close vicinity of machinery and electrical equipment that can generate electromechanical forces. It is recommended that bladders be slightly inflated to less than 0.4 bar air pressure and stored in the original plastic packaging shipped by STAUFF (it is not recommended that they be pre-charged or slightly inflated with gas). If bladders cannot be stored slightly inflated then it is recommended that they be stored flat and not folded. If stored correctly bladders can retain their elastomer properties for a long period of time without any deteriorating effect to the elastomer. If stored inside an accumulator, bladders can remain in good condition for up to 5 years.

Gas Valve Connections

Option T

Integrated Gas Valve (standard)

Option A

1/4" BSPP Gas Valve (optional)

Option Y

STAUFF US Style Gas Valve (optional)

Option S

STAUFF SKK-20 Gas Valve (optional)

Option T
Integrated Gas Valve (standard)

The valve seats internally inside the bladder stem. Direct coupling to the bladder stem is via the 7/8–14 UNF connection. The valve cannot become loose when removing the charge head, therefore it is impossible to remove the gas valve whilst the accumulator is pre-charged.

Option A
1/4" BSPP Gas Valve

The 1/4" BSPP gas valve, used extensively in Australia, is being phased out and replaced by STAUFF's integrated gas valve.

Option Y
STAUFF US Style Gas Valve

The STAUFF US style gas valve provides a robust connection (0.305"-32 UNS 2A) as the valve seals deep inside the bladder stem (if the male connection is damaged the valve still retains its seal and prevents the loss of the nitrogen gas).

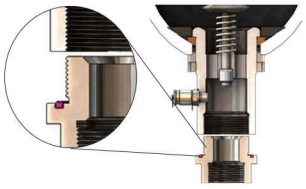
Option S
STAUFF SKK-20 Gas Valve

The STAUFF SKK-20 gas valve (gas rated) allows easy connection to the accumulator using a standard test fitting. The advantage is that the pre-charge can be checked by simply using a STAUFF safety pattern gauge fitted with a direct gauge adaptor. The safety pattern gauge and gauge adaptor can either be installed on the accumulator permanently or used to check the pre-charge during service intervals. No charge kit is required to check pre-charge pressure.

Note: Gas valve options T, A, Y and S are designed to suit STAUFF bladders only

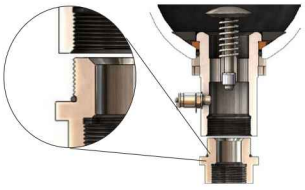
Fluid Port Connections

Option B



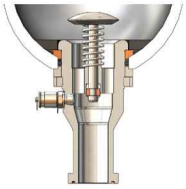
BSPP Female Connection Flat Face (standard)

Option G



BSPP Female Connection O-Ring seal (optional)

Option F



1-1/2" SAE Code 62 (optional)

Option B
BSPP Female Connection Flat Face seal (Steel)

Designed to connect a fitting that can incorporate either a bonded washer or encapsulated seal. Also available in stainless steel.

Available for sizes:

1 and 2.5 Litre - G3/4" BSPP

4 and 6 Litre - G1-1/4" BSPP

10 - 55 Litres - G2" BSPP

Option G
BSPP Female Connection O-Ring seal

This connection is fitted with an O-Ring seal positioned at the root of the male thread. This is a European style adaptor and is not suitable for use with a bonded washer.

Available for sizes:

10 - 55 Litres - G2" BSPP only

Option F
1-1/2" SAE Code 62

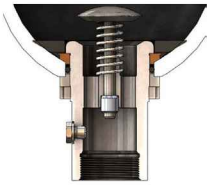
This Fluid Port is manufactured with a 1-1/2" SAE code 62 connection and is ideally suited to allow connection directly onto a manifold without requiring adaptors. Also available in stainless steel.

Available for sizes:

10 - 55 Litres only

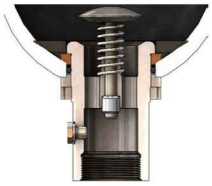
Refer to page 26 for range of SAE Flange Clamps

Option U



1-7/8" UNF (special)

Option N



2" NPT (special)

Option U
1-7/8" UNF

Designed to take a UNF fitting commonly used in the U.S

Only available in Carbon Steel to suit accumulator sizes 10 - 55 Litres

Option N
2" NPT

Designed to a NPT fitting commonly used in the U.S

Only available in Carbon Steel to suit accumulator sizes 10 - 55 Litres

STBA Assemblies
Order Codes

STBA	-	020	-	360A1	-	B	T	-	U10S	-	G	-	A
①		②		③		④	⑤		⑥		⑦		⑧

① Type

Bladder Accumulator	**STBA**

② Size Code

1 Ltr / 1 qrt	**001**
2.5 Ltr / 2.5 qrt	**002**
4 Ltr / 1 Gal	**004**
6 Ltr / 1.5 Gal	**006**
10 Ltr / 2.5 Gal	**010**
20 Ltr / 5 Gal	**020**
35 Ltr / 10 Gal	**035**
40 Ltr / 11 Gal	**040**
50 Ltr / 13 Gal	**050**
55 Ltr / 15 Gal	**055**

③ Pressure Rating and Design Code

AS1210 (only)	**360A**
AS1210 360 Bar + ASME 4000 PSI	**360A1**

④ Bladder Material

NBR (Buna-N®) (standard)	**B**
NBR (Buna-N®) (Low Permeation) For Special Fuels	**B40**
EPDM	**E**
Butyl II R	**I**
FKM (Viton®)	**V**
NBR (Buna-N®) Special High Flexibility	**W**

⑤ Gas Valve Connection

Integrated Gas Valve 7/8–14 UNF (standard)	**T**
1/4" BSPP	**A**
STAUFF US Style Gas Valve 0.305"-32 UNS 2A	**Y**
STAUFF SKK-20 Gas Valve	**S**
Gas Valve USA 3000 PSI 0.305" x 32 TPI	**U**
Not Fitted	**0**

⑥ Bladder Stem Size

7/8–14 UNF (standard)	**U10S**
2–12 UNF	**U26S**

⑦ Fluid Port Connection

BSPP Flat Face Seal (standard)	**G**
BSPP O-Ring Seal	**GO**
SAE Threaded	**U**
NPT	**N**
1-1/2" SAE Code 61 Flanged	**F324**
1-1/2" SAE Code 62 Flanged	**F624**

⑧ Material / Surface Protection

Gas Valve	Bladder Stem	Fluid Port	Shell		
Stainless Steel	Carbon Steel / Zinc-Nickel	Carbon Steel	Carbon Steel	(standard)	**A**
Carbon Steel / Zinc-Nickel	Carbon Steel / Zinc-Nickel	Carbon Steel	Carbon Steel		**B**
Carbon Steel / Zinc-Nickel	Carbon Steel / Zinc-Nickel	Zinc Phosphate	Carbon Steel	(USA standard)	**C**
Stainless Steel	Carbon Steel / Zinc-Nickel	17/4 PH Stainless Steel	Carbon Steel		**D**
Stainless Steel	Stainless Steel	17/4 PH Stainless Steel	Carbon Steel		**F**
Stainless Steel	Stainless Steel	17/4 PH Stainless Steel	Carbon Steel Internally PTFE Lined		**P**