Accumulator Accessories

For Piston, Bladder and Diaphragm Accumulators, Gas Bottles, SurgeKushons and PulseTones

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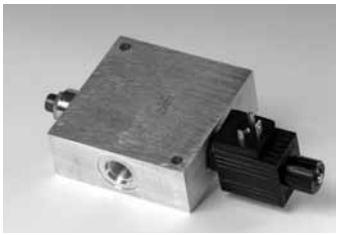
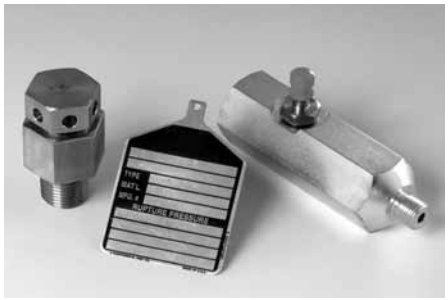




Charging & Gauging Assemblies

Charging and Gauging Assembly consists of 10' charging hose with standard right-hand thread nitrogen fittings, adapter incorporating gas valve, bleeder valve and gas chuck. Assemblies are packed in a plastic storage case. Gauge not included.

Assemblies Packed in Carrying Case

3000 PSI Charging & Gauging Assemblies (with 3000 PSI Gauge)			
Part Number	Piston Style	Bladder Style	Diaphragm Style
144595 3000	All	All*	with Cored valve
144596 3000	All	All*	with Cored valve
148675 3000	—	—	with M28 valve
087100 3000	—	1-15 gal.*	—
087102 3000	—	10-150 CI*	—
4000/5000 PSI Charging & Gauging Assemblies (with 5000 PSI Gauge)			
870816 5000	All	All	—

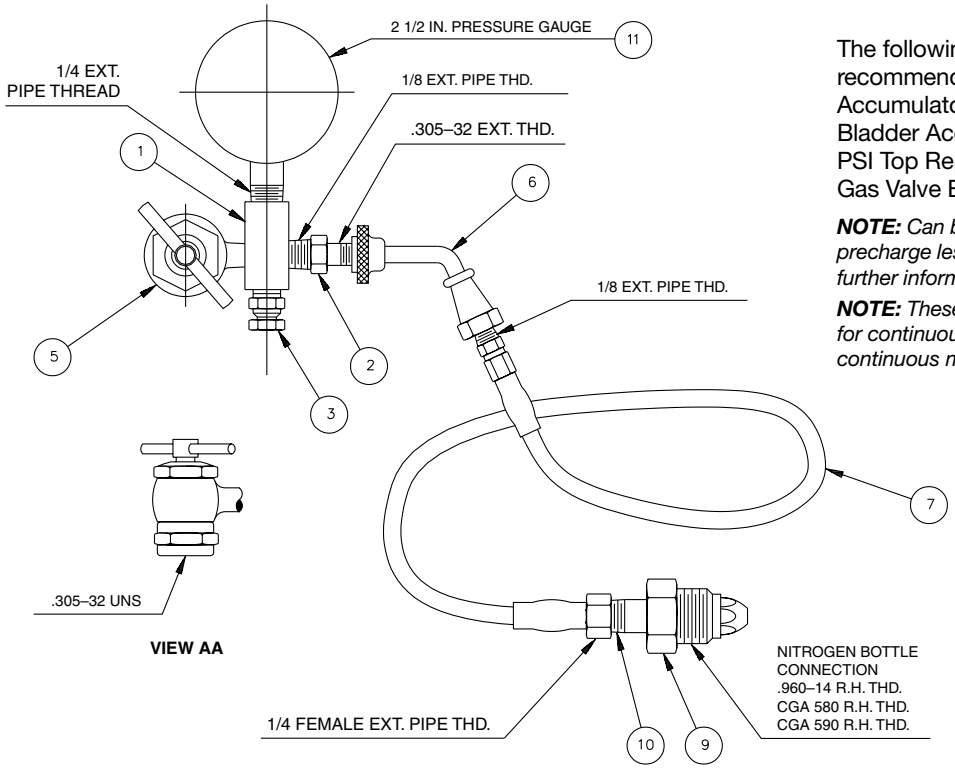
** Used primarily for top repairable accumulators and/or permanent mount gauge.*

Gauges

Gauges are 2½" dial type pressure gauges with 100 PSI graduation. Include blowout safety case and orifice surge damper.

Part Number	Pressure Range
087040 1000	0 - 1000 PSI
087040 2000	0 - 2000 PSI
087040 3000	0 - 3000 PSI
087040 4000	0 - 4000 PSI
087040 6000	0 - 6000 PSI

3000 PSI Piston and Bladder Accumulators, Diaphragms with Cored Valve (B Option)



The following assemblies and parts are recommended for use on all 3000 PSI Piston Accumulators and 3000 PSI Bottom Repairable Bladder Accumulators. Can be used with 3000 PSI Top Repairable Accumulators, but require a Gas Valve Extension.

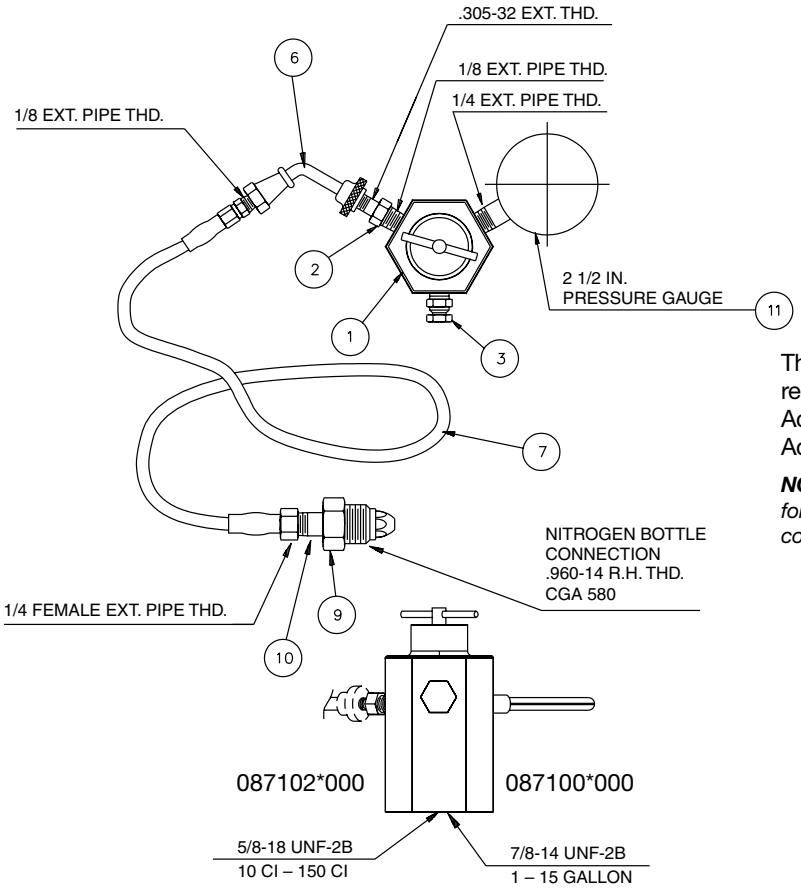
NOTE: *Can be used on all accumulators with a gas precharge less than 3000 PSI. Consult factory for further information.*

NOTE: *These assemblies are not recommended for continuous monitoring of gas precharge. For continuous monitoring, see Gauging Adapters.*

Item	Part Number	Description
1-10	1445950000	Standard Assembly with Right Hand (RH) Nitrogen Bottle Connection, No Gauge
1-11	1445950500	Standard Assembly RH Connection with 500 PSI Gauge
1-11	1445951000	Standard Assembly RH Connection with 1000 PSI Gauge
1-11	1445952000	Standard Assembly RH Connection with 2000 PSI Gauge
1-11	1445953000	Standard Assembly RH Connection with 3000 PSI Gauge
1-10L	1445960000	Optional Assembly with Left Hand (LH) Nitrogen Bottle Connection, No Gauge
1-5	0851220000	Gauging Assembly, No Hose or Gauge
1-5H	5420880000	Optional Gauging assembly w/ 2" Hose Ext. between Gas Chuck (5) and Adapter Cross (1), No Hose or Gauge
6-10	1457810000	Hose Assembly with RH Connection
6-10L	1457820000	Hose Assembly with LH Connection
1	5420910000	Adapter Cross
2	5420920000	Gas Valve with 1/8" NPT
3	0832140000	Bleeder Valve
5*	8708150000	Gas Chuck
6**	5420860000	Hose Coupling with Female Thread Connection
7	0870520000	Charging Hose
9	6661250000	Nitrogen Bottle Nut with RH Connection (CGA 580)
9L	6661260000	Nitrogen Bottle Nut with LH Connection (CGA 590)
10	6661240000	Nitrogen Bottle Nipple
11	See Gauges	2.5" Pressure Gauge SAE #6
	1333290000	Case with Insert for Complete Charging and Gauging Assembly
*	5824390000	Gasket for 5422150000 (5)
**	8702770000	Gasket for 5420860000 (6)

A 10-150 cu in Bladders (087102*000)

B 1-15 gal Bladders (087100*000)



The following assemblies and parts are recommended for use on all 3000 PSI Bladder Accumulators. Cannot be used with Piston Accumulators.

NOTE: *These assemblies are not recommended for continuous monitoring of gas precharge. For continuous monitoring, see Gauging Adapters.*

	Item	Part Number	Description
A	1-10	0871020000	Standard Assembly for 10 to 150 Cubic Inch with RH Nitrogen Bottle Connection, No Gauge
	1-11	0871021000	Standard Assembly for 10 to 150 Cubic Inch with RH Connection with 1000 PSI Gauge
	1-11	0871022000	Standard Assembly for 10 to 150 Cubic Inch with RH Connection with 2000 PSI Gauge
	1-11	0871023000	Standard Assembly for 10 to 150 Cubic Inch with RH Connection with 3000 PSI Gauge
	1S-5	0871030000	Gauging Assembly for 10 to 150 Cubic Inch (No Hose or Gauge)
B	1-10	0871000000	Standard Assembly for 1 to 15 Gallon with RH Nitrogen Bottle Connection, No Gauge
	1-11	0871001000	Standard Assembly for 1 to 15 Gallon with RH Connection with 1000 PSI Gauge
	1-11	0871002000	Standard Assembly for 1 to 15 Gallon with RH Connection with 2000 PSI Gauge
	1-11	0871003000	Standard Assembly for 1 to 15 Gallon with RH Connection with 3000 PSI Gauge
	1-5	0871010000	Gauging Assembly for 1to 15 Gallon (No Hose or Gauge)
	6-10	1457810000	Hose Assembly with RH Connection
	2	5420920000	Gas Valve with 1/8" NPT
	3	0832140000	Bleeder Valve
	6*	5420860000	Hose Coupling with 0.305-32 Female Thread Connection
	7	0870520000	Charging Hose
	9	6661250000	Nitrogen Bottle Nut with RH Connection (CGA 580)
	10	6661240000	Nitrogen Bottle Nipple (CGA 580)
	11	See Gauges	2.5" Pressure Gauge
	*	8702770000	Gasket for 5420860000 (6)
		1353290000	Case with Insert for Complete Charging and Gauging Assembly

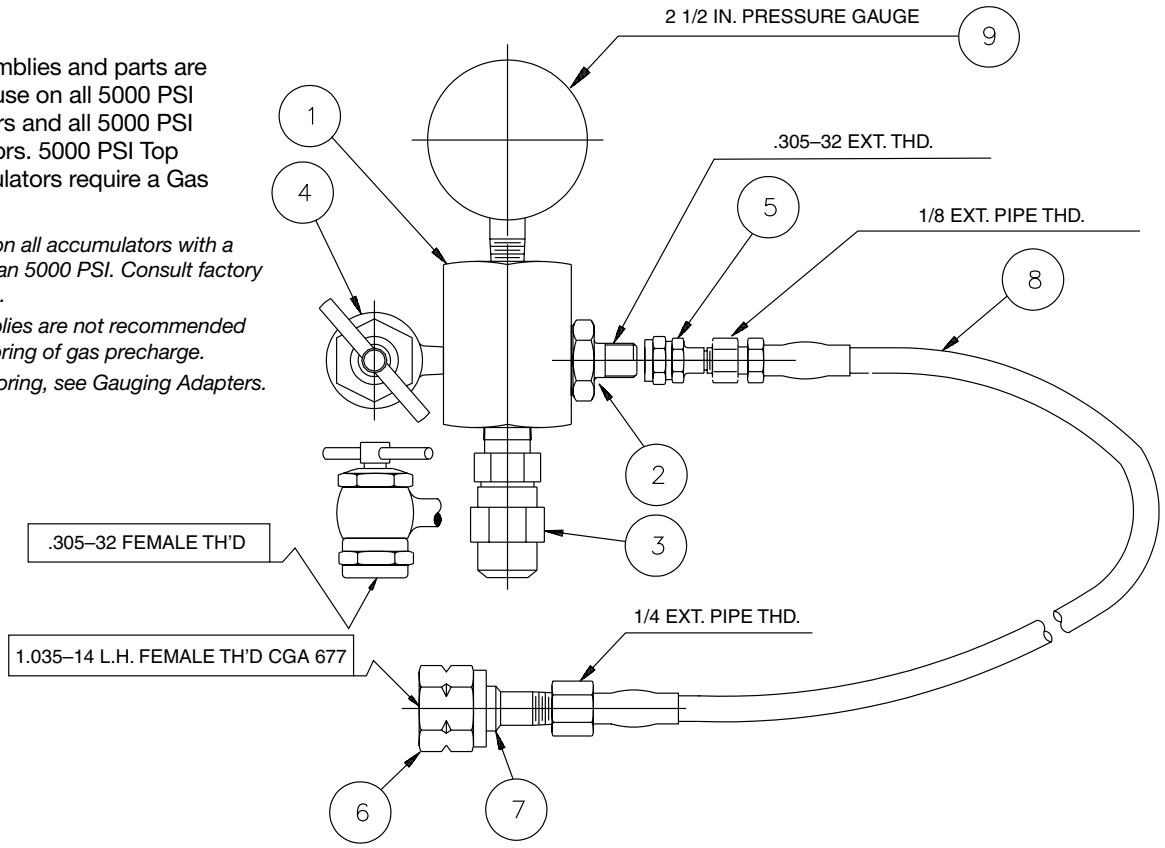
4000 & 5000 PSI Piston and Bladder Accumulators

The following assemblies and parts are recommended for use on all 5000 PSI Piston Accumulators and all 5000 PSI BladderAccumulators. 5000 PSI Top Repairable Accumulators require a Gas Valve Extension.

***NOTE**: Can be used on all accumulators with a gas precharge less than 5000 PSI. Consult factory for further information.*

***NOTE:** These assemblies are not recommended for continuous monitoring of gas precharge.*

For continuous monitoring, see Gauging Adapters.



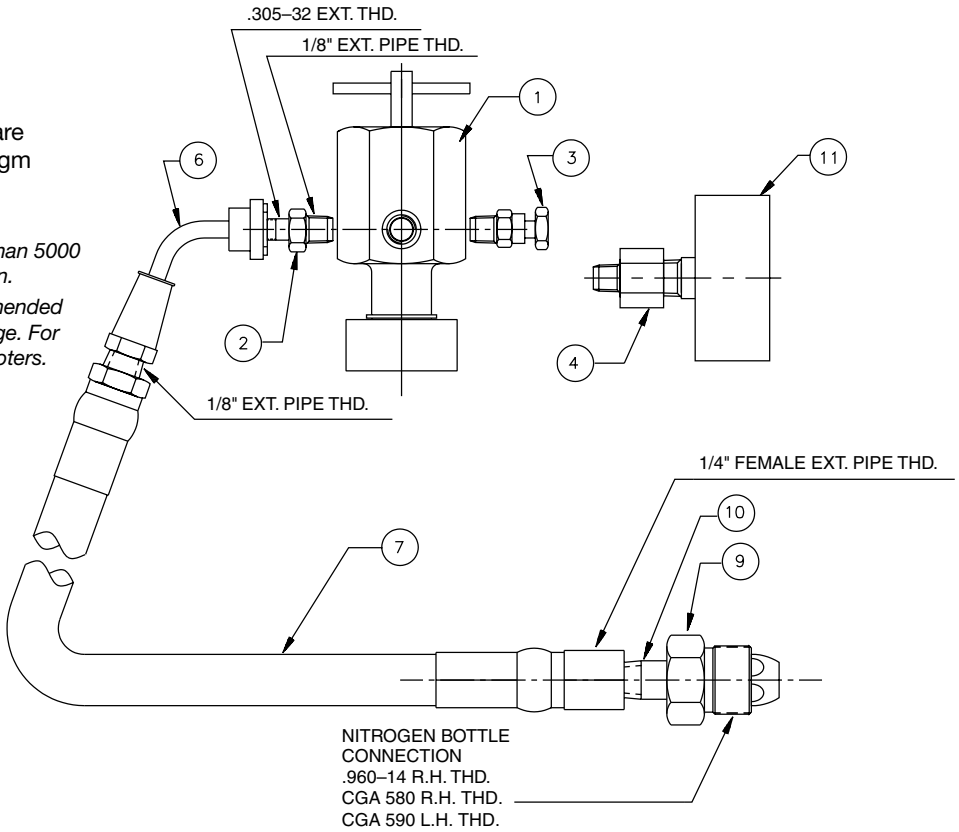
Item	Part Number	Description
1-8	8708160000	Standard Assembly with Left Hand (LH) Connection, No Gauge
1-9	8708165000	Standard Assembly LH Connection with 5000 PSI Gauge
1-9	8708166000	Standard Assembly LH Connection with 6000 PSI Gauge
1-4	8713720000	Gauging Assembly (No Hose or Gauge)
5-8	8712640000	Hose Assembly with LH Connection
1	8708460000	Adapter Cross
2	L07688000K	Gas Valve Assembly
3	8708140000	Bleed Valve
4	8708150000	Gas Chuck
5	0854210000	Valve Connector
6	0854220000	Nitrogen Bottle Nut with LH Connection
7	0854250000	Gas Tank Nipple (CGA 677)
8	0854150000	Charging Hose (10 ft.)
9	See Gauges	2.5" Pressure Gauge

Diaphragm with M28 Gas Valve

The following assemblies and parts are recommended for use on all Diaphragm Accumulators with M28 Gas Valve.

NOTE: *Can be used on all diaphragm accumulators with a gas precharge less than 5000 PSI. Consult factory for further information.*

NOTE: *These assemblies are not recommended for continuous monitoring of gas precharge. For continuous monitoring, see Gauging Adapters.*



Item	Part Number	Description
1-10	1486750000	Standard Assembly with Right Hand (RH) Nitrogen Bottle Connection, No Gauge
1-11	1486751000	Standard Assembly RH Connection with 1000 PSI Gauge
1-11	1486752000	Standard Assembly RH Connection with 2000 PSI Gauge
1-11	1486753000	Standard Assembly RH Connection with 3000 PSI Gauge
1-11	1456755000	Standard Assembly RH Connection with 5000 PSI Gauge
1-10L	8700430000	Optional Assembly with Left Hand (LH) Nitrogen Bottle Connection, No Gauge
1-4	8702780000	Gauging Assembly (No Hose or Gauge)
6-10	1457810000	Hose Assembly with RH Connection
6-10L	1457820000	Hose Assembly with LH Connection
1		
2	5420920000	Gas Valve with 1/8" NPT
3	0832140000	Bleeder Valve
4	0873930000	Reducer – 1/4 x 1/8
6*	5420860000	Swivel Connector with Female Thread Connection
7	0870520000	Charging Hose
9	6661250000	Nitrogen Bottle Nut with RH Connection (CGA 580)
9L	6661260000	Nitrogen Bottle Nut with LH Connection (CGA 590)
10	6661240000	Nitrogen Bottle Nipple
11	See Gauges	2.5" Pressure Gauge
*	8702770000	Gasket for 5420860000 (6)
	1353290000	Case with Insert for Complete Charging and Gauging Assembly

Gauging Assemblies

Gauging Assembly consists of adapter incorporating gas valve, bleeder valve and gas chuck (less gauge).

3000 PSI			
Part Number (Assembly only)	**Piston Styles**	**Bladder Styles**	**Diaphragm Styles**
085122 0000	All	All	w/Cored valve
087101 0000	—	1-15 gal.	—
087103 0000	—	10-150 CI	—
4000/5000 PSI			
871372 0000	All	All	—

0851220000

871372 0000

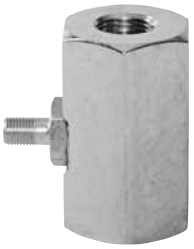
0871030000

0871010000

Gauging Adapters (Fixed Mount)

For continuous monitoring of gas precharge. Order gauge separately.

Part Number	Description
086213 0000	For 10-150 CI Bladder Accumulators (3000 PSI only) – includes gas valve
085057 0000	For 1 Gal. and above bladder and all piston accumulators (3000 - 5000 PSI)



086213 0000

085057 0000

Unloading Valve

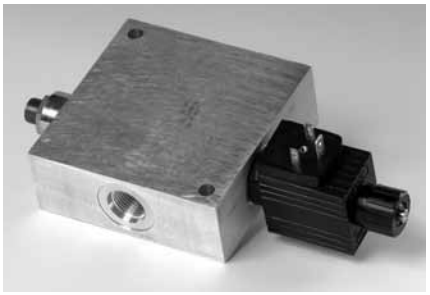
Unloading valves provide cost effective safety for your hydraulics by relieving hydraulic pressure when the system is de-energized. Valves conform to OSHA Rule 29CFR1910.147 to enhance safe system operation. Needle valve allows for manual accumulator bleed-down.

How to Order Unloading Valves

DV Series unloading valves can be specified by using the symbols in the chart below to develop a model number. Select only those symbols that represent the features desired, and place them in the sequence indicated by the example at the top of the chart.

Features

- Lightweight aluminum housing
- 2-way normally open solenoid
- 3000 PSI operating pressure
- Encapsulated 17W Solenoid
- Four standard voltage and connection options
- Fluorocarbon seals standard
- Small compact manifold design
- Leakproof SAE ports standard
- Needle valve override
- 10 GPM flow rate @ 3000 PSI
- 8 GPM @ 2000 PSI average



Series	Size	Coil Voltage	Coil Connection	Ports
DV	10	A	D	C

DV Accumulator Unloading Valve

A 120/110 VAC, 60/50 Hz
B 240/220 VAC, 60/50 Hz
C 12 VDC
D 24 VDC

C 1/2 NPTF Conduit Connector with 24" Class H Wires
D DIN 43650 (Hirschmann Plug)
P SAE 18-0.25 SAE Double Spade (DC Only)
W Double Wire 24" Class H (DC Only)

C SAE #8 Accumulator and Tank Ports, SAE #5 Test Port

Accumulator Repair Tools

1. Bladder Pull Rods — (Bladder Type Accumulator) Pull rods are available in different lengths for different size accumulators. The pull rods attach to the gas valve of the bladder for ease of assembly into shell during reassembly.

2. Core Tool — The core tool is used to remove and reinstall the valve core. It is also used to ream valve seat and repair threads.

3. Spanner Wrench — Fits all standard size bladder accumulators. Used to remove hydraulic poppet assembly from accumulator shell.

Description	Part No
Pull Rod (1 Qt.-21/ 2 Gal.)	085109 0250
Pull Rod (5 Gal.)	085109 0500
Pull Rod (10-11 Gal.)	085109 1000
Pull Rod (15 Gal.)	085109 1500
Core Repair Tool	582441 0000
Core Installation Tool	300987
Spanner Wrench	085110 0000

Port Adapters

SAE to SAE Port Adapters	
Part Number	**Description**
562684000	24 SAE to #20 SAE
562685000	24 SAE to #16 SAE
562686000	24 SAE to #12 SAE
562687000	20 SAE to #16 SAE
562688000	20 SAE to #12 SAE
562689000	20 SAE to #10 SAE
086473000	16 SAE to #12 SAE
562690000	12 SAE to #10 SAE
562691000	12 SAE to #8 SAE
572086000	32 SAE to #24 SA
572087000	32 SAE to #20 SAE
572088000	32 SAE to #16 SAE
SAE to NPT Port Adapters	
Part Number	**Description**
562681000	24 SAE to 1-1/2" NPT
562682000	20 SAE to 1-1/4" NPT
562683000	12 SAE to 3/4" NPT
572089000	32 SAE to 2" NPT
6560070001	#12 SAE to 1/2" NPT
6560070002	#20 SAE to 1" NPT

"U" Bolts for Piston & Bladder-Type Accumulators

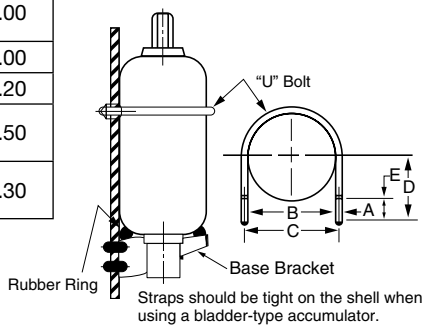
Accumulator Models (2000 / 3000 PSI)		Part No. and Dimensions							
Piston Bore	**Bladder Size**	**"U" Bolt Part No.**	**A**	**B**	**C**	**D**	**E**	**Thd.**	**Wt. Lbs.**
A2	—	0854370000	0.250	2.438	2.688	2.688	1.750	1/4-20	0.20
A3	1 Pint	0862090000	0.500	3.688	4.063	3.625	2.000	3/8-16	0.90
—	1 Quart	0854380000	0.500	4.625	5.125	4.500	3.000	1/2-13	1.20
A4	—	0864960000	0.500	5.000	5.500	4.500	3.000	1/2-13	1.30
—	1 Gallon	0854390000	0.625	6.750	7.375	6.125	3.750	5/8-11	2.40
A6	—	0864970000	0.625	7.125	7.750	6.125	3.750	5/8-11	2.50
A7	—	0854400000	0.625	8.250	8.875	7.000	3.750	5/8-11	3.00
—	2.5 to 15	0853360000	0.625	9.000	9.625	7.125	3.750	5/8-11	3.00
A9	—	0854410000	0.750	11.250	12.000	9.500	4.500	3/4-10	6.00
A12 (2K)	—	0854420000	0.875	14.125	15.000	10.250	4.250	7/8-9	8.20
—	2.5 to 15*	0865020000	0.625	9.750	10.375	7.250	3.750	5/8-11	3.50
A12 (3K)	—	0865610000	0.875	14.500	15.375	10.625	4.250	7/8-9	8.30

NOTE: *"U" Bolts should never be mounted more than 1 inch from end of accumulator (piston type).*

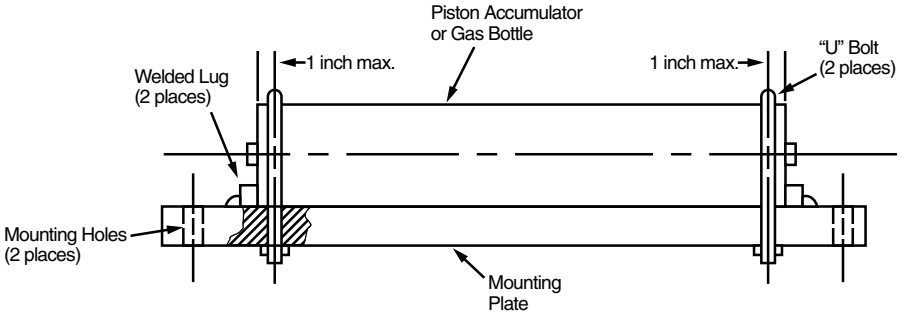
Bladder-Type Accumulator

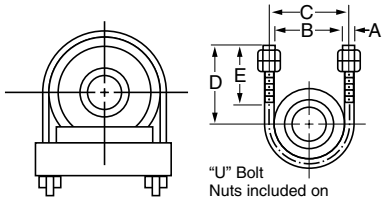
Bladder-type accumulators should be mounted vertically with the hydraulic port down.

CAUTION: Bladder-type accumulators should never be mounted more than 25° angle from the vertical.



Straps should be tight on the shell when using a bladder-type accumulator.

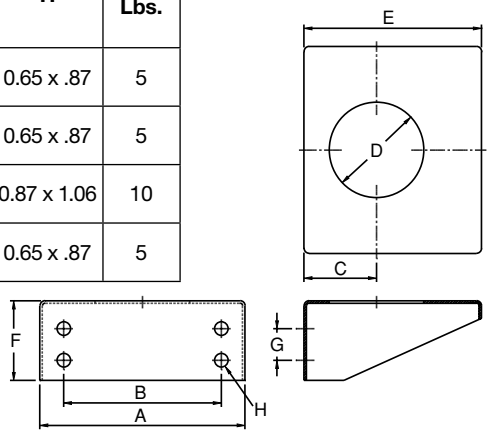




"U" Bolt Nuts included on all "U" Bolts.

Base Bracket Assembly for Bladder Accumulators

Accumulator Models	Part Number and Dimensions									
Bladder Size	**Base Bracket Assembly Part No. (included rubber rings)**	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Wt. Lbs.**
1 Gal. (3K)	1449100000	10.3	7.87	3.62	4.75	8.87	3.85	1.58	0.65 x .87	5
2½ -15 Gal. (3K)	1448720000	10.3	7.87	4.84	6.75	8.87	3.85	1.58	0.65 x .87	5
25-40 Gal. (3K)	1480020000	15.3	10.6	7.68	8.18	15.3	9.40	4.18	0.87 x 1.06	10
2½ -15 Gal. (5K)	1481410000	10.3	7.87	5.35	6.75	8.87	3.85	1.58	0.65 x .87	5



Clamp Brackets for Bladder-Type Accumulators

Bladder Size	Clamp Part No.	Dimensions							
		A	B	C Max.	D Max.	E	F	G	Wt. Lbs.
1 Qt., 150 C.I. (Figure A)	1466230000	4.5	3.9	5.5	6.3	2.6	.35 x .51	1.2	1.8
1 Gal. (Figure A)	1449080000	6.8	6.3	7.6	8.5	3.6	.35 x .51	1.2	2.7
2½ -15 Gal. (3K) (Figure B)	1449070000	9.0	8.5	10.0	11.7	4.8	.50 x .75	1.2	4.2
2½ -15 Gal. (5K) (Figure B)	1349200000	9.5	8.5	10.5	12.0	5.4	.50 x .75	1.2	4.5

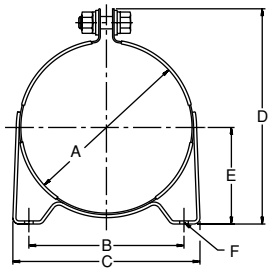


Figure A

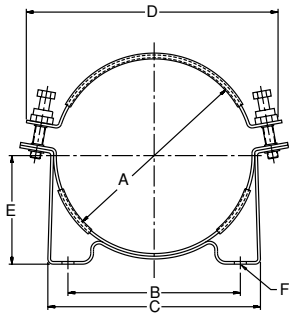
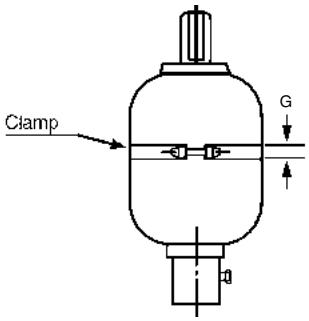
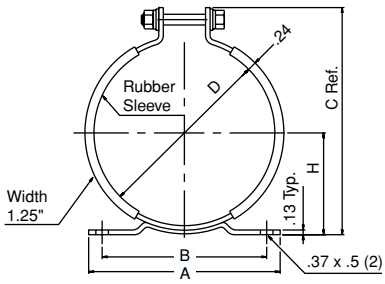


Figure B



Clamp Brackets for Diaphragm and Small Piston and Bladder Accumulators

Part No.	Dimensions					Accumulator Style/Size		
	A	B	C	D	H	Diaphragm liters/cu in	Piston bore/series	Bladder liters/cu in
8700110238	4.25	3.35	4.29	2.25 / 2.41	1.58	—	2" / 3K	0.16 / 10
8700110252	4.25	3.35	4.42	2.62 / 2.82	1.64	0.075 / 5	2" / 4-5K	—
8700110291	4.25	3.35	4.84	2.81 / 3.01	1.86	0.16 / 10	—	—
8700110358	5.00	3.94	5.62	3.35 / 3.62	2.28	0.35 / 20	3" / 3-4K	0.50 / 30
8700110413	5.25	4.33	6.06	4.04 / 4.22	2.45	0.50 / 30	3" / 5K	—
8700110476	5.25	4.33	6.71	4.55 / 4.90	2.77	0.75 / 45	4" / 3K	1-3 / 60-150
8700110500	5.25	4.33	6.71	4.82 / 5.15	2.95	0.75 / 45	4" / 4K	—
8700110535	5.75	4.92	7.43	5.32 / 5.50	3.21	1.0 / 60	—	—
8700110598	7.00	5.98	7.96	5.85 / 6.15	3.40	—	—	—
8700110630	7.00	5.98	8.29	6.15 / 6.37	3.57	1.4 / 85 & 2.0 / 120	—	—
1449080000	7.60	6.30	8.50	6.80	3.60	2.8 / 170	—	—

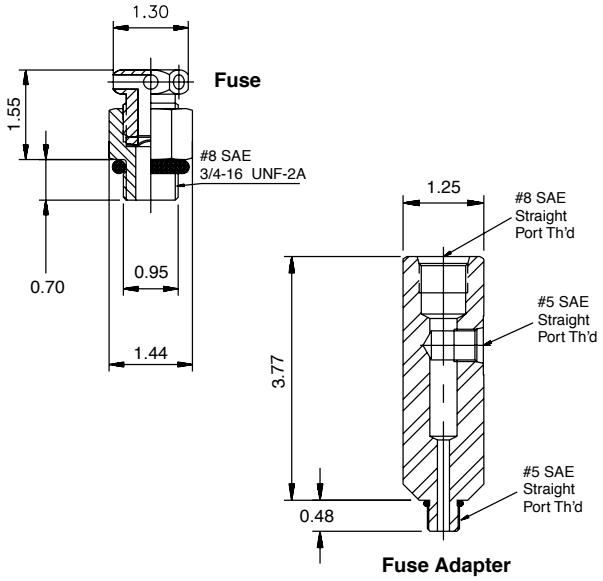


Clamp Brackets for Series 4000 & Series 5000 Piston Accumulators

Piston Bore Size	Series 4000 Part Number	Series 5000 Part Number
2"	8700110252	8700110252
3"	8700110358	8700110413
4"	8700110535	87001100535
6"	—	—
7"	N/A	–
9"	N/A	–

Safety Fuse Options (F)

Safety Fuses are used as a safety device on accumulators and gas bottles to prevent over-pressurization of gas due to external heat or hydraulic pressure (set at 140% of maximum system pressure to avoid rupture disk fatigue and premature failure). The rupture disks are calibrated to rupture at a predetermined pressure. Safety fuses are available on most sizes of piston and bladder accumulators and gas bottles. Safety fuses can be installed on all piston accumulators by using the "Fuse Adapter" as shown to the right. 4" bore units and above can be equipped with a fuse port machined in the gas cap by specifying the "Safety Fuse Option" (F) at the time of order in the model code, see "How to Order." The safety fuse assembly and/or fuse adapter must be ordered separately.



Description	Part Number
Safety Fuse Assembly[1]	086471xxxx
Replacement Rupture Disks	756003xxxx
Fuse Adapter	1468970002

[1] Assembly includes housing and rupture disk, xxxx = pressure setting in 100 PSI increments, i.e., for an assembly with a 2000 PSI setting, order P/N 0864712000.

***Note:** ASME and CRN units available upon request.*

Safety Fuse Housing

Safety Fuse/Burst Disk

Safety Fuse Name Plate

Part Number	Description
0864710000	Safety Fuse Housing SAE #8
7560010000	Safety Fuse Housing 1/2" NPT
7560033000	3000 PSI Safety Disk
7560034500	4500 PSI Safety Disk
7560035000	5000 PSI Safety Disk
1468970002	Safety Fuse Adaptor SAE #5 Male,SAE #8 Fuse Housing
1468970001	Safety Fuse Adaptor SAE #5 Male, 1/2" NPT Fuse Housing

***Note:** Other pressures offered. Consult factory.*

T+P

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