

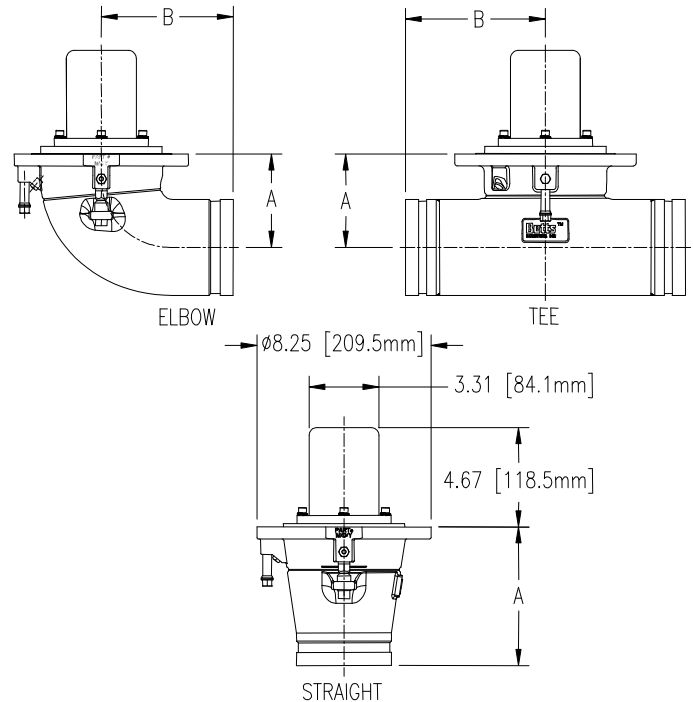
# Emergency Valve

**INTERNAL AIR**

## 4" Aluminum Internal Air w/ 3" Air Cylinder

Betts internal air emergency valve meets HM183 requirements for an internal self-closing stop valve. Body is constructed of aluminum and incorporates a shear section that satisfies 49CFR178.345-8 tested per TTMA RP 84. The 1/8" NPT air inlet is designed to shear and close the valve in the event of an under-ride accident. A fusible plug is installed to dump air pressure if temperatures exceed 212°F.†† Valve uses Teflon® encapsulated seals for compatibility with a wide range of products. Other seal options are also available. Internal air cylinder saves space on exterior of valve providing maximum clearance for piping. Valve is equipped with stainless steel jackscrew that allows for manual operation in the event of an air system failure.

The Maximum Operating Pressure is defined as the maximum tank pressure that valve can open against w/ given air line pressure. Maximum Operating Pressure is 18 psi with 80 psi line pressure and 25 psi with 100 psi line pressure. The Valve MAWP is 35 psi [2.4 bar] and the Minimum Bursting Pressure is 140 psi [9.7 bar].



See section 30 Page 13B for 4" parts list.

Size	Assembly No.	Inlet Flange (4" Sump)		Outlet (4" TTMA)		Dimensions		Wt.	F <sub>b-max</sub> Per TTMA RP86
		B.C.	8 Holes	B.C.	8 Holes	A	B		
4" Straight Grooved	EV46909AL**	7.25" [184 mm]	.563" Dia. [14.3 mm]	4" GROOVED O.D. 4.5" [114.3 mm]		6.50" [165 mm]	N.A.	8.0 lb. [3.6 kg]	24,000 lb. [10,886 kg]
4" Straight Flanged	EV46910AL**			5.88" [149 mm]	.438" Dia. [11.1 mm]	6.50" [165 mm]	N.A.	8.5 lb. [3.9 kg]	
4" Elbow Grooved	EV46911AL**	7.25" [184 mm]	.563" Dia. [14.3 mm]	4" GROOVED O.D. 4.5" [114.3 mm]		4.38" [111.3 mm]	6.25" [158.8 mm]	8.7 lb. [4.0 kg]	44,400 lb. [20,140 kg]
4" Elbow Flanged	EV46912AL**			5.88" [149 mm]	.438" Dia. [11.1 mm]	4.38" [111.3 mm]	5.00" [127.0 mm]	9.0 lb. [4.1 kg]	
4" Tee Grooved	EV46991AL**	7.25" [184 mm]	.563" Dia. [14.3 mm]	4" GROOVED O.D. 4.5" [114.3 mm]		4.38" [111.3 mm]	6.63" [168.4 mm]	10.5 lb. [4.8 kg]	32,000 lb. [14,515 kg]
4" Tee Flanged	EV46992AL**			5.88" [149 mm]	.438" Dia. [11.1 mm]	4.38" [111.3 mm]	5.13" [130.3 mm]	10.8 lb. [4.9 kg]	

\* Values shown are test values. Actual values may vary due to service conditions.

\*\* Last two letters of part number designate seal material. See material table at right for seal options.

†† Fusible plug melts at 212°F [100°C]. If valve is subject to higher temperatures, the fusible plug must be relocated to isolate fusible from heat.

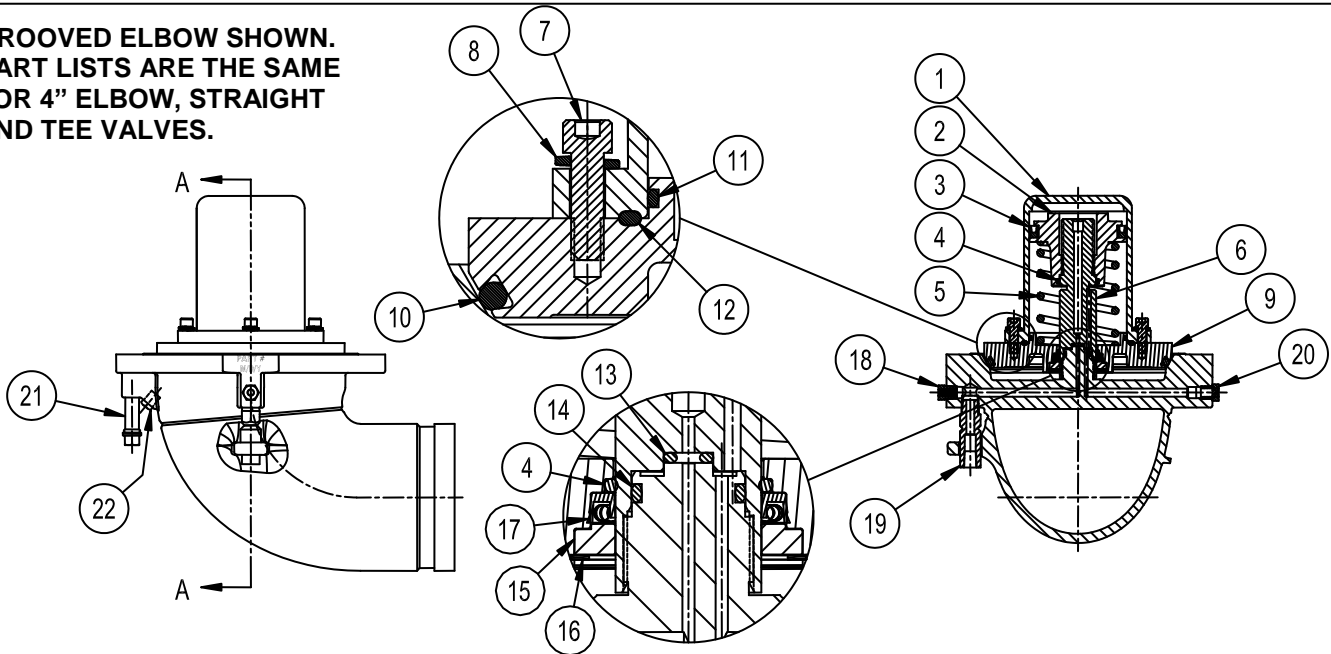
**CAUTION:** Valve must be properly installed and maintained. Never bottom load through emergency valve without first opening valve. Failure to do so may result in damage to the tank and/or valve.

Part # Suffix	Description	Valve Temp. Range * ††
TS	Teflon product contact seals, nitrile interior seals, and polyurethane air piston seal.	-40°F to +220°F [-40°C to 104°C]
TS030	Teflon product contact seals, FKM "A" interior seals.	5°F to +400°F [-15°C to 204°C]
TS038	Teflon product contact seals, fluorosilicone interior seals, and polyurethane air piston seal.	-50°F to +220°F [-45°C to 104°C]
VB	FKM "BLT" product contact seals w/ polyurethane air piston seal.	-20°F to +220°F [-29°C to 104°C]
VF	FKM "GFLT-s" product contact seals w/ polyurethane air piston seal.	-20°F to +220°F [-29°C to 104°C]

# Parts List

## 4" Internal Air Aluminum Emergency Valve w/ 3" Air Cylinder

GROOVED ELBOW SHOWN.  
PART LISTS ARE THE SAME  
FOR 4" ELBOW, STRAIGHT  
AND TEE VALVES.



No.	Description	Req.	Material	Part No.
1	3" Air Cylinder	1	Alum. (356-T6)	36001AL
2	3" Piston	1	Alum. (319)	75092AL
3	3" U-Cup Seal	1	Polyurethane	75564PY
4	Piston/Shaft O-Ring	2	Nitrile	17669BN
			FKM "A"	17669VT
			Nitrile	3357BN
			FKM "A"	3357VT
			FKM "BLT"	3357VB
5	Spring	1	Steel (E-Coated)	18222EY
			FKM "GFLT-s"	3357VF
			Fluorosilicone	3357FS
			FKM "BLT"	3357VB
6	Air Supply Shaft	1	Alum. Anodized	75090AL
7	Cap Screw	4	18-8 SS	9Q5822
8	Lock Washer	4	304 SS	9Q5844
9	4" O-Ring Holder	1	Alum. (319)	28157AL
10	4" Main Seat O-Ring	1	Tef-Sil	19935TS
			Nitrile	19935BN
			FKM "A"	19935VT
			FKM "BLT"	19935VB
			FKM "GFLT-s"	19935VF
11	O-Ring 3" Air Cylinder Bore	1	Nitrile	75097BN
			FKM "A"	75097VT
			FKM "BLT"	75097VB
			FKM "GFLT-s"	75097VF
			Fluorosilicone	75097FS

No.	Description	Req.	Material	Part No.
12	O-Ring 3" Face	1	Tef-Sil	75410TS
13	O-Ring Air Inlet Shaft	1	Nitrile	75159BN
			FKM "A"	75159VT
			FKM "BLT"	75159VB
			FKM "GFLT-s"	75159VF
14	O-Ring Air Inlet Shaft Bore	1	Fluorosilicone	75159FS
			Nitrile	75096BN
			FKM "A"	75096VT
			FKM "BLT"	75096VB
			FKM "GFLT-s"	75096VF
15*	Bearing Ring	1	Graphite-PTFE	75656TR
	Bearing Ring Elevated-Temp. Valve			75656TR001
16	Retaining Ring	1	302 SS	9Q4993
17*	Shaft U-Cup Seal	1	PTFE/301 SS	75210SSTF
	Shaft U-cup Seal Elevated-Temp Valve			75430SLTP
18	Fusible Plug	1	Brass/Solder	FP15003BR
19	Air Inlet Frangible	1	Aluminum	75108AL
20	Breather Plug	1	Steel (Nic. Plt.)	9Z4895
21	Jack Screw	1	303 SS/Nitrile	75141SLBN
22	1/8" NPT Plug	1	316 SS	9V4921

\* 75210SSTF and 75656TR must be used in standard and low-temperature (suffix 038) valves. 75430SLTP and 75656TR001 must be used in elevated-temperature (suffix 030) valves.

**Seal Kit # EV75435ALTS includes:** (12) 75410TS, (17) 75210SSTF, (3) 75564PY, (4) 3357BN -2, (11) 75097BN, (13) 75159BN, (14) 75096BN, (15) 75656TR, (16) 9Q4993, & 75100AL (not shown).

**Seal Kit # EV75435ALTS038 (low temp.) includes:** (12) 75410TS, (17) 75210SSTF, (2) 75092AL, (3) 75564PY, (4) 3357FS -2, (11) 75097FS, (13) 75159FS, (14) 75096FS, (15) 75656TR, (16) 9Q4993, & 75100AL (not shown).

**Seal Kit # EV75435ALTS030 (elevated temp.) includes:** (12) 75410TS, (17) 75430SLTP, (3) 17669VT, (4) 3357VT -2, (11) 75097VT, (13) 75159VT, (14) 75096VT, (15) 75656TR001, (16) 9Q4993, & 75100AL (not shown).

**WARNING:** Use only genuine BETTS INDUSTRIES INC. replacement parts. Substitute parts can impair the proper function of this product.