

WILLIAMS VALVE

EMERGENCY SHUT OFF VALVES



Founded in 1918, the William E. Williams Valve Corporation has continuously produced high quality valves for industrial and commercial applications including: oil & gas, midstream pipeline, terminal storage, chemical processing, power generation, mining, paper, pharmaceutical processes, as well as commercial and military shipbuilding.

Williams' valves are designed, manufactured and tested to meet and exceed all applicable specifications. Valves are constructed and constant improvements to meet the latest environmental standards are always being implemented. Our goal is to produce high quality valves, with fully traceable quality records, at prices competitive in the global marketplace and deliveries to match the "just in time" requirements of today's business world. In order to accomplish this goal, we maintain large inventories of finished products to support our distribution network.

We have years of experience working on special requirements: electric, hydraulic or pneumatic automation, gear operators emergency shut-off valves, soft seats and discs, by-pass valve installations and extended bonnets are no challenge for Williams.

We believe that William E. Williams has a record of quality equal to or better than any in the valve industry. We are a privately owned company whose accomplishments have been achieved by the dedication and commitment of our employees to provide a standard of excellence in all our products for you, our present and future customers.

William's emergency shut-off valves are American made, manufactured at our factory in Long Island City, New York. Detailed drawings are available in several formats. We appreciate your business and hope to be your primary valve source.

Sincerely,



Nicholas Sherman

President



6D - 1421



600 - 0191



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INTRODUCTION to Emergency Shut-Off Valves

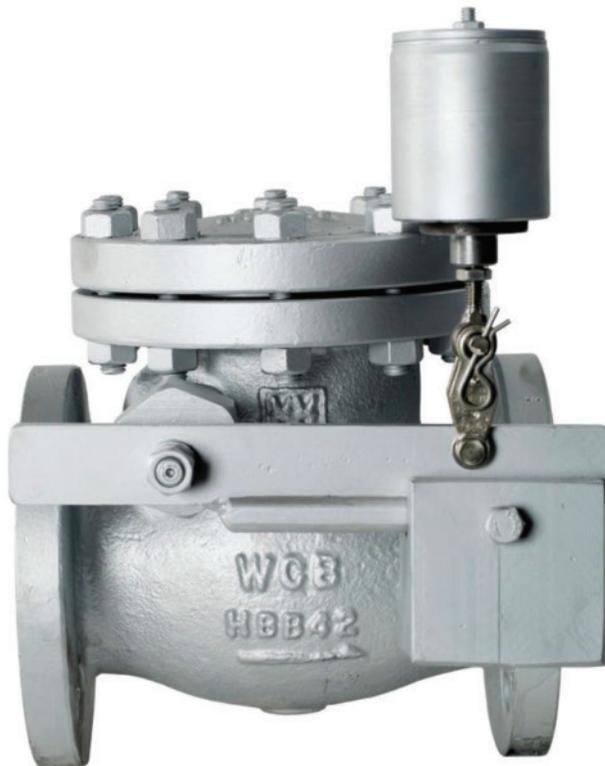
Since 1918 Williams has been delivering efficient and dependable performance for practically every known valve service. The very name Williams is your assurance that every valve meets or exceeds the specification required for your application. Williams offers a wide variety and range of proven valves to precisely match your needs. And when your needs call to respond quickly and effectively to a catastrophic situation; your needs depend on the W.E.W. Emergency Shut-Off Valve.

During the early 70's based on actual field experiences and market research Williams identified a need for a simple, effective, economical valve to stop the flow of liquids, gases and vapors in emergency situations. Using the A.P.I. 600 and A.P.I. 6D standards, R & D Engineering designed a quick closing valve that can be actuated at the valve or from a remote location. These valves are now time tested and proven the most cost effective candidate to safely manage fire, high levels of heat, excess pressure, or dangerously high pressure fluid conditions. Add the fail-safe fusible link features and these valves will close instantaneously & automatically at the heat of a fire.

Williams Emergency Shut-Off Valves are on guard and at the ready in major refineries, petrochemical plants, dockside marine installations, fuel storage terminals, pipeline distribution, and off-shore rigs throughout the world. They are recognized for their quality and dependability.

The Williams Emergency Shut-Off Valve has proven superior to other designs. The valves can be installed in either the vertical or horizontal positions. An optional soft seat design is also available. Each valve is individually tested to A.P.I. 598.

In short you provide the basic sizing information, environmental conditions, and accessories desired; the Williams technicians provide a valve tailored to your need.



New Applications

Leaders in many industries
insist on Williams Valves!

The Williams Emergency Shut-Off Valve (ESOV) has been in a wide variety of applications throughout the world. The following are a few examples:



- A. A Leading Petroleum Corp.** Is using the Williams ESOV with fusible link and spring at a major tank farm on Staten Island, New York. Valves are located on highly flammable fuel oil and gasoline tank feed, tank discharge and product tanker discharge lines.
- B. A Houston Based Oil Exploration Firm** Is using ESOV with solenoids on off-shore rigs. The valves are designed to close when power fails on the rigs. The valves are located between the main header line and crude storage tanks.
- C. A Major Multi-National Chemical Company** Utilizes Williams ESOV with solenoid and pressure switches on hydrogen feed lines. They are designed to close when dangerously high pressure builds in the lines, with addition of the fusible link, the valves feature a fail-safe design that assures timely closing if fire occurs.
- D. A Major Oil Company** Utilizes the basic Williams ESOV on all feed lines from its propane bullets to its processing plant. The valve features fail-safe close design in case of fire.
- E. A California Based Petroleum Corporation** Uses the basic ESOV with a slam retardent gearing mechanism on its product transfer lines from ship-to-shore. The medium is liquid natural gas.
- F. A Large Tank Farm & Storage Facility** In Long Island, New York utilizes the Williams ESOV with solenoid on product lines running from pressure vessel storage areas to truck loading racks. The valves are strategically positioned to actuate in case of fire or other calamities such as a spillage at the truck racks.
- G. Navy Tankers** Use Williams ESOV with solenoid on key steam piping systems, the valves are designed to shut-down superheated steam lines in emergency situations.

Warranty

Seller warrants the material to be free of defects in material and workmanship, under normal use and proper operation, for a period of one year from date of delivery to a common carrier for shipment to buyer. Seller's obligation is limited to: (1) Repair of the material, or (2) replacement of any part or parts proven defective in material or workmanship, or (3) refund of the purchase price. The choice of said remedies shall be determined by seller in its sole discretion.

All implied warranties, including the implied warranties of merchantability and fitness for a particular purpose, are hereby disclaimed and excluded. The within limited warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of seller. In no event shall seller be liable for consequential or incidental damages.

NO.	PART	MATERIAL
1	Body	ASTM A216 Gr WCB
2	Disc	ASTM A182 Gr F6
3	Disc Arm-Hanger	ASTM A216 Gr WCB
4	Cover	ASTM A216 Gr WCB
5	Hinge Pin	ASTM A479 Gr 410
6	Disc Washer	ASTM A182 Gr F6
7	Disc Nut	ASTM A194 Gr 2H
8	Seat Ring	ASTM A182 Gr F6
9	Cover Gasket	Graphite
10	Cover Studs	ASTM A193 Gr B7
11	Cover Nuts	ASTM A194 Gr 2H
12	Lever	Cold Rolled Steel
13	Lever Nut	ASTM A194 Gr 2H
14	Fusible Link	Lead
15	Spring (Fig.PSL-2)	Steel
16	Weight (Fig.PL-2)	Steel
17	Pin	SS 18-8
18	Locking Screw (Fig.PL-2)	Steel
19	Packer Nut-Not Shown	Carbon Steel
20	Packer Box-Not Shown	Carbon Steel

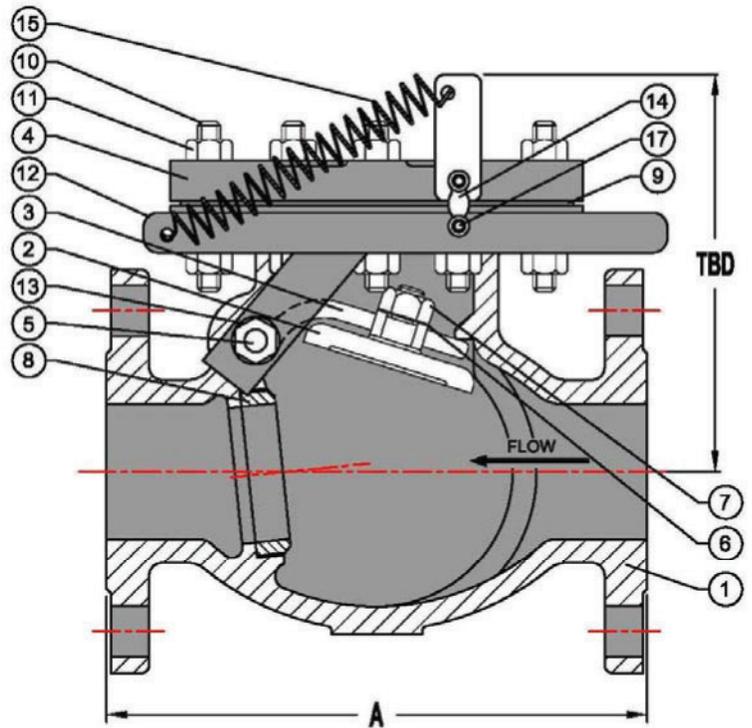


Figure No. PSL-2

The Basic ESOV (150lb)

Years of Trouble-Free Service

The Williams Fig. No. **PL-2** or **PSL-2** is our Basic Emergency Shut-Off Valve. It was designed to provide an effective yet simple method of closing in an emergency or hazardous situation. The valve is designed with an external spring load or weight-assisted handle held in the open position with the fire-sensitive fusible link. The valve will automatically close when the link melts due to fire or high temperatures. The external handle rotates the hinge pin that directs the disc into the flow of the liquid, gas or vapor. The valve can be provided with spring-loaded Release for manual cable operations.

Product Features

- A.** Local and/or remote location
- B.** Once closed valve can only be reset manually as fail-safe feature
- C.** Economical
- D.** Can be moved in horizontal and vertical service
- E.** Factory tested
- F.** Back pressure assures a tight seal between disc and seat
- G.** Fire-Safe fusible link

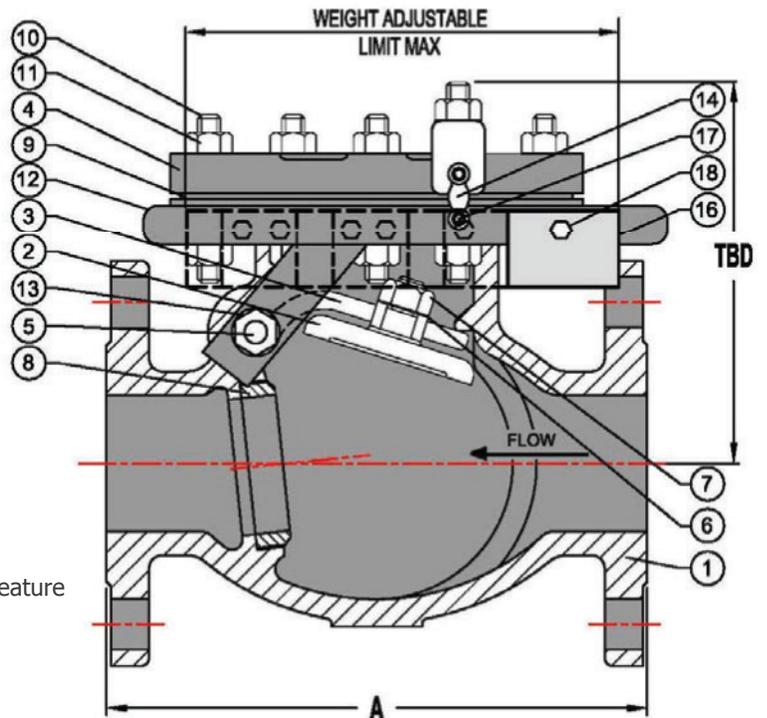


Figure No. PL-2

* These valves are available in Class 300lb & A351 CF8M Stainless Steel Body with 316 SS Trim.



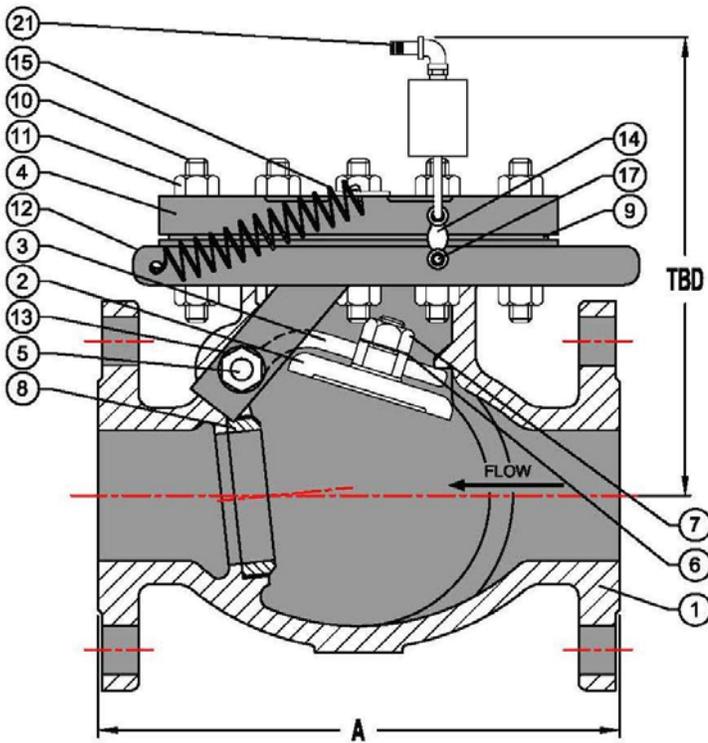


Figure No. CPSL-2

NO.	PART	MATERIAL
1	Body	ASTM A216 Gr WCB
2	Disc	ASTM A182 Gr F6
3	Disc Arm-Hanger	ASTM A216 Gr WCB
4	Cover	ASTM A216 Gr WCB
5	Hinge Pin	ASTM A479 Gr 410
6	Disc Washer	ASTM A182 Gr F6
7	Disc Nut	ASTM A194 Gr 2H
8	Seat Ring	ASTM A182 Gr F6
9	Cover Gasket	Graphite
10	Cover Studs	ASTM A193 Gr B7
11	Cover Nuts	ASTM A194 Gr 2H
12	Lever	Cold Rolled Steel
13	Lever Nut	ASTM A194 Gr 2H
14	Fusible Link	Lead
15	Spring (Fig.CPSL-2)	Steel
16	Weight (Fig.CPL-2)	Steel
17	Pin	SS 18-8
18	Locking Screw (Fig.PL-2)	Steel
19	Packer Nut-Not Shown	Carbon Steel
20	Packer Box-Not Shown	Carbon Steel
21	Air Cylinder	Commercial

Pneumatic Operated ESOV (150lb)

Shuts off without electrical power!

The Williams Air Actuated Emergency Shut-Off Valve Fig. No. **CPL-2** or **CPSL-2** is designed to provide remote operation when electrical current is not available or not desired because of environmental conditions. The valve incorporates our basic ESOV construction with a fusible link and pneumatic actuator. The external lever is connected to a plunger pin, which, in turn is connected to the rod on the pneumatic cylinder. The cylinder can be provided either air-to-close or air-to-hold-open.

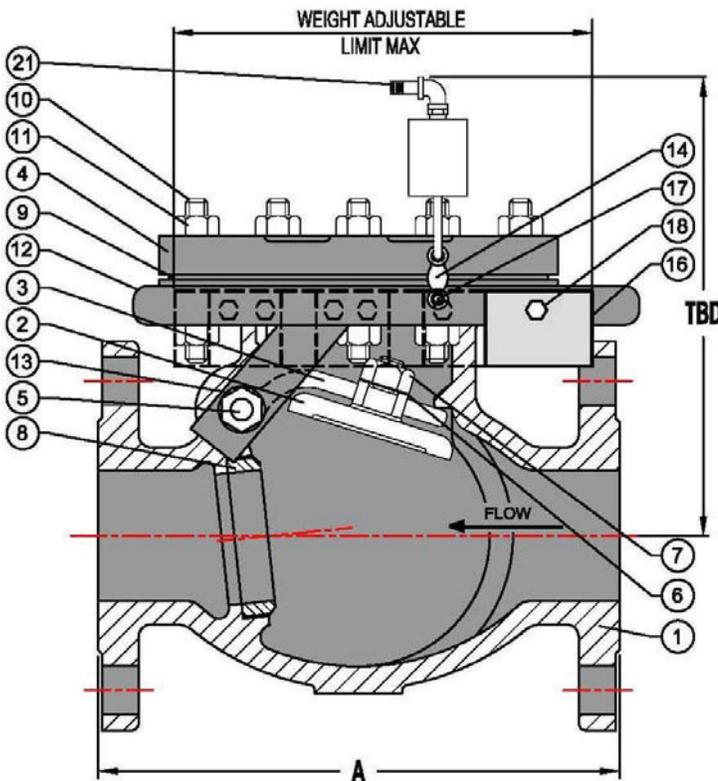


Figure No. CPL-2

Product Features

- A.** Corrosion resistant cyclinder
- B.** Once closed valve can only be reset manually as fail-safe feature
- C.** Economical
- D.** Can be mounted in horizontal or vertical service
- E.** Factory tested
- F.** Back pressure assures a tight seal between disc & seat
- G.** Fire-Safe fusible link

* These valves are available in Class 300lb & A351 CF8M Stainless Steel Body with 316 SS Trim.

NO.	PART	MATERIAL
1	Body	ASTM A216 Gr WCB
2	Disc	ASTM A182 Gr F6
3	Disc Arm-Hanger	ASTM A216 Gr WCB
4	Cover	ASTM A216 Gr WCB
5	Hinge Pin	ASTM A479 Gr 410
6	Disc Washer	ASTM A182 Gr F6
7	Disc Nut	ASTM A194 Gr 2H
8	Seat Ring	ASTM A182 Gr F6
9	Cover Gasket	Graphite
10	Cover Studs	ASTM A193 Gr B7
11	Cover Nuts	ASTM A194 Gr 2H
12	Lever	Cold Rolled Steel
13	Lever Nut	ASTM A194 Gr 2H
14	Fusible Link	Lead
15	Spring (Fig.MPSL-2)	Steel
16	Electro Magnet	Steel
17	Magnetic Disc	Carbon Steel
18	Pin	SS 18-8
19	Packer Nut-Not Shown	Carbon Steel
20	Packer Box-Not Shown	Carbon Steel
21	Limit Switch (Optional)	SS 316
22	Locking Screw (Fig.MPL-2)	Steel
23	Weight (Fig.MPL-2)	Steel

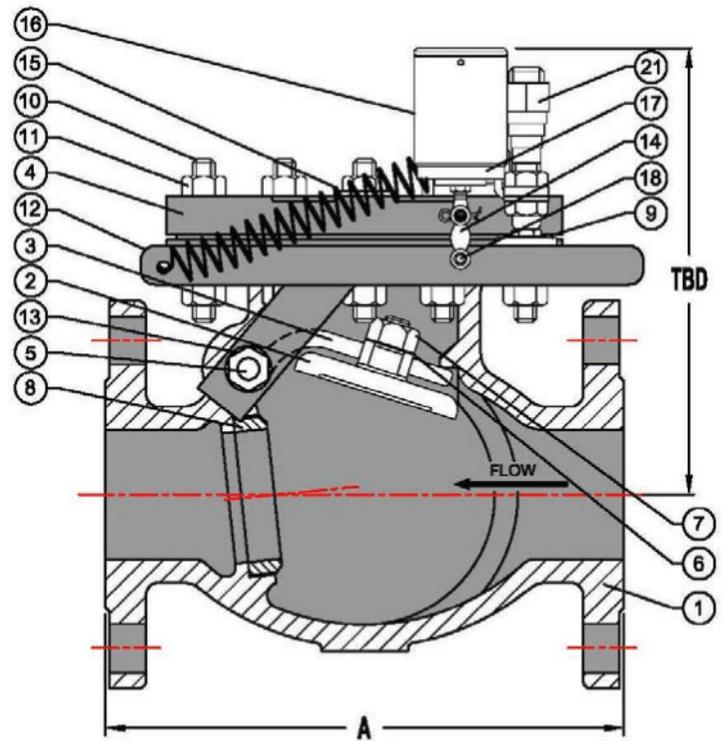


Figure No. MPSL-2

ESOV with Electro-Magnetic Release & Optional Limit Switch (150lb)

Faster Shutoff-local or remote!

The Williams Fig. No. **MPL-2** or **MPSL-2** is designed to provide remote shut-off for the flow of fluids or gasses with the use of a electro-magnet. The valve incorporates our basic ESOV construction with a fusible link and **electro-magnet**. The valve optional **limit switch** will provide open-close position detection. Electro-magnet are available in various AC & DC voltages as required. This valve can be mounted to respond to such triggering devices as relays, fire-detectors, probes, and various sensors.

Product Features

- A.** Optional limit switch for open-close detection
- B.** Electro-magnet available in various AC & DC voltages
- C.** Once closed valve can be reset manually as a fail-safe feature
- D.** Economical
- E.** Can be mounted in horizontal or vertical service
- F.** Factory tested
- G.** Back pressure assures a tight seal between the disc & seat
- H.** Fire-Safe Fusible link

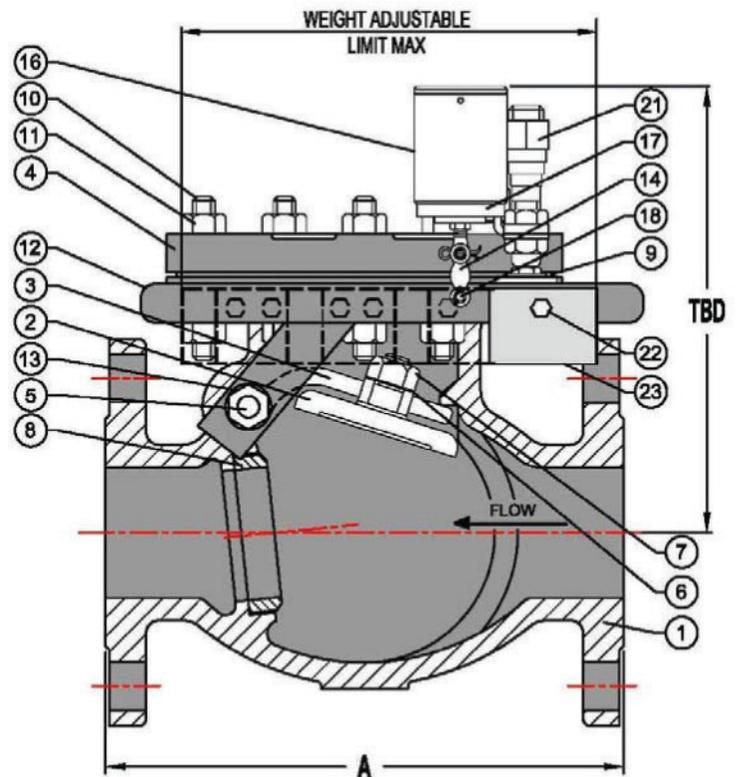


Figure No. MPL-2

* These valves are available in Class 300lb & A351 CF8M Stainless Steel Body with 316 SS Trim.

ESOV Dimension Chart (150lb)

inches (mm)

Size In	A	Flanged Dia.	Bolt Circle	Raised Face Dia.	No. & Size of Holes	Flanged Thickness
2"	8 (203)	6 (152)	4.75 (121)	3.62 (92)	4 - .75 (19)	.75 (19)
2-1/2"	8.50 (216)	7 (179)	5.50 (140)	4.12 (105)	4 - .75 (19)	.87 (22)
3"	9.50 (241)	7.50 (191)	6 (152)	5 (127)	4 - .75 (19)	.93 (24)
4"	11.50 (292)	9 (229)	7.50 (191)	6.18 (157)	8 - .75 (19)	.93 (24)
5"	13 (330)	10 (254)	8.50 (216)	7.31 (186)	8 - .87 (22)	.93 (24)
6"	14 (356)	11 (279)	9.50 (241)	8.50 (216)	8 - .87 (22)	1 (25)
8"	19.50 (495)	13.50 (343)	11.75 298	10.62 (270)	8 - .87 (22)	1.12 (29)
10"	24.50 (622)	16 (406)	14.25 (362)	12.75 (324)	12 - 1 (25)	1.18 (30)
12"	27.50 (699)	19 (483)	17 (432)	15 (381)	12 - 1 (25)	1.25 (32)
14"	31 (787)	21 (533)	18.75 (476)	16.25 (413)	12 - 1.12 (29)	1.37 (35)
16"	34 (864)	23.50 (597)	21.25 (540)	18.50 (470)	16 - 1.12 (29)	1.43 (36)

** Please consult with factory for valves larger than 16" NPS and valve dimension specified as TBD.*

ESOV Major Components or Accessories Available

Many more reasons to choose

William E. Williams Emergency Shut-Off Valves:

- | | |
|--|---|
| 1. Electro-magnet in D.C. or A.C. | 6. Fusible links with various temperature ratings |
| 2. Air actuated cyclinder | 7. Toggle switches, push buttons, or key locks to ease reassembling |
| 3. Limit switches: <ul style="list-style-type: none">a) Proximity-intrinsically safeb) Plunger-type limit switch-Environmentally safec) Explosion proof, heavy-duty switch | 8. Spring or weight to assure closure |
| 4. Thermal temperature sensing devices | 9. By-passes |
| 5. Teflon inserts in seats | 10. High level or multi station level switches |
| | 11. Available up to A.N.S.I. 600 |

HOW TO ORDER - WILLIAMS FIGURE NUMBER (EMERGENCY SHUT-OFF VALVES)

A	B		C		D		E	
SIZE	BODY MATERIAL PREFIX		VALVE TYPE		TRIM		CLASS	
	none	Carbon Steel	PL	ESOV with Lever and Adjustable Weight and Fusible Link	0	Special Trim	none	150#
	S	Stainless Steel	PSL	ESOV with Lever and Spring and Fusible Link	2	API Trim 8	300	300#
			CPSL	ESOV with Pneumatic Actuator and Fusible Link	6	API Trim 10		
			APL	ESOV with solenoid (NEMA 7) and Fusible Link				
			MPSL	ESOV with Lever and Spring and Fusible Link and Electro Magnet				

CAST STEEL EMERGENCY SHUT OFF VALVE EXAMPLE:

3" 150# ESOV, WCB Body and Trim 8, with Lever, Spring and Fusible Link - 3" PSL-2

A	B	C	D	E
3"		PSL	2	

STAINLESS STEEL EMERGENCY SHUT OFF VALVE EXAMPLE:

2" 300# ESOV, A351-CF8M Body and Trim 10, with Lever, Spring and Fusible Link - 2" SPSL-6-300

A	B	C	D	E
2"	S	PSL	6	300

In order to meet your ESOV requirements, please advise us with the following details.

<p>Figure No _____</p> <p>Size of pipe _____</p> <p>Pressure involved _____</p> <p>Weight or spring _____</p> <p>Environmental conditions _____</p> <p>Fluid to be controlled _____</p> <p>Horizontal or vertical _____</p> <p>Valve construction (i.e. body material) _____</p> <p>Trim _____</p>	<p>TYPE OF ACTUATOR:</p> <p><input type="checkbox"/> ELECTRIC:</p> <p style="margin-left: 20px;">a) to close valve <input type="checkbox"/></p> <p style="margin-left: 20px;">b) current characteristics</p> <p style="margin-left: 40px;">Volts _____</p> <p style="margin-left: 40px;">Cycle _____</p> <p style="margin-left: 40px;">Phase _____</p> <p><input type="checkbox"/> FUSIBLE LINK:</p> <p style="margin-left: 40px;">Melting Temperature: _____</p> <p><input type="checkbox"/> AIR:</p> <p style="margin-left: 20px;">a) to close valve <input type="checkbox"/></p> <p style="margin-left: 20px;">b) Fail safe close-Loss of air</p> <p style="margin-left: 20px;">c) air pressure available _____</p> <p><input type="checkbox"/> MANUAL RELEASE:</p> <p style="margin-left: 20px;">Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p style="margin-left: 20px;">With cable: Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p style="margin-left: 20px;">Distance away _____ feet</p>
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WILLIAM E. WILLIAMS EMERGENCY SHUT-OFF VALVES CUSTOM BUILT TO MEET YOUR SPECIFICATIONS

** Because of a policy of continuous product improvement, William E. Williams Valve Corporation reserves the right to change designs, materials or specifications without notice.*



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