

SERIES U1-45

Heat-Actuated Safety Shut-off Valve

- Heat-Actuated Valve
- Five sizes: ½" ¾", 1", 1½" and 2" NPT threaded connections
- Approved by Factory Mutual (FM) in all sizes
- Meets OSHA 1910.106(b)(4)(iv)(c) & 1926.152(i)(4)(iv)(c) Code Requirements
- Closes automatically when subjected to external fire
- Flow tested by independent laboratory
- Easy inspection and maintenance
- Factory inspected prior to shipment
- Bronze construction

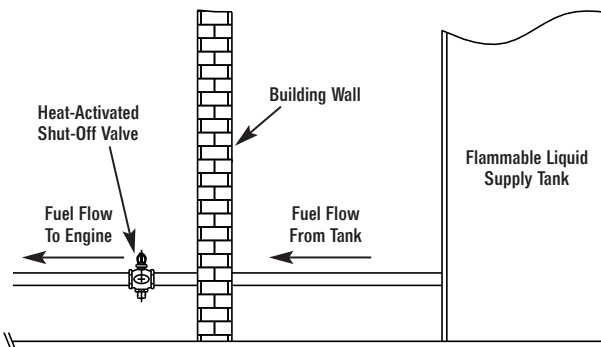


SERIES U1-45

OBJECTIVE

The Protectoseal Series No. U1-45 Heat-Actuated Safety Shut-Off Valves are specifically designed for installation in the withdrawal lines of flammable or combustible liquid storage tanks. The valves are normally held in the fully open position by a heat-activated element mechanism. In the event of exposure to an external fire source, the element is activated and the valve is closed securely by an internal spring. The flow of liquid through the withdrawal line is stopped.

TECHNIQUE



The Protectoseal Heat-Actuated Safety Shut-Off Valve is installed in the withdrawal line of a flammable or combustible liquid storage tank. The tank withdrawal line typically supplies fuel to peripheral support and emergency equipment (generator engines, pump engines, etc.) In normal operation, the valves are held in a fully open position by the element assembly. If the operational temperature of this element is exceeded (for example by the presence of a fire in the vicinity of the withdrawal line) the element is activated and the valve is forced to its closed position. Flammable liquid can no longer flow through the withdrawal line. The chance of flammable liquid from the pipe contributing to the fire is minimized. The valve can easily be reset without removal from the line and the external element can be quickly replaced to return the valve to its open position. The valve's NPT threaded connection facilitates installation. Elements for different activation temperatures are available.

SPECIAL FEATURES

Easy Installation and Maintenance. Valves are easily installed using standard NPT threaded connections. Integrity of the element is readily verified by visual inspection. Well-proven, functional design minimizes the need for inspection, maintenance or repair activities.

Fully Automatic. Heat activates the valve - shutting off the flow of flammable liquid. Provides additional safety for operating and firefighting personnel.

Rugged, Compact Design. The simple, positive shut-off mechanism is protected by high quality cast bronze housings. Damage to the element head will normally result in positive shut off of the valve. The element assembly can be replaced in minutes without special tools or equipment.

Sizes Available. ½" ¾", 1", 1½" and 2" NPT threaded connections. Use chart on reverse for dimensions and ordering information.

Thoroughly Tested. Each valve is rated for 200 PSIG operating pressure. Elements are provided with nominal temperature ratings of 155°F or 200°F. Tested for positive sealing at the seat, integrity of the castings, and all sealed joints.

Test Lab Listings. Approved by Factory Mutual (FM) in all sizes.

Quality Assurance. Each valve is inspected and tested to verify conformance to Protectoseal's high quality standards prior to shipment.

MATERIALS OF CONSTRUCTION

- Cast bronze components
- Stainless steel bellows
- Stainless steel spring
- Sealing disk - TFE or Buna-N

SERIES U1-45 PART NUMBERING SYSTEM

U1-45- | | |---------| | Table 1 | |---------| HP/BT | | |---------| | Table 2 | |---------| | | |---------| | Table 3 | |---------|

Table 1 - Size (NPT)

Size	Option Code
1/2"	05
3/4"	08
1"	10
1 1/2"	15
2"	20

Table 2 - Element Temperature

Element Temp.	Option Code
155° F	L
200° F	H

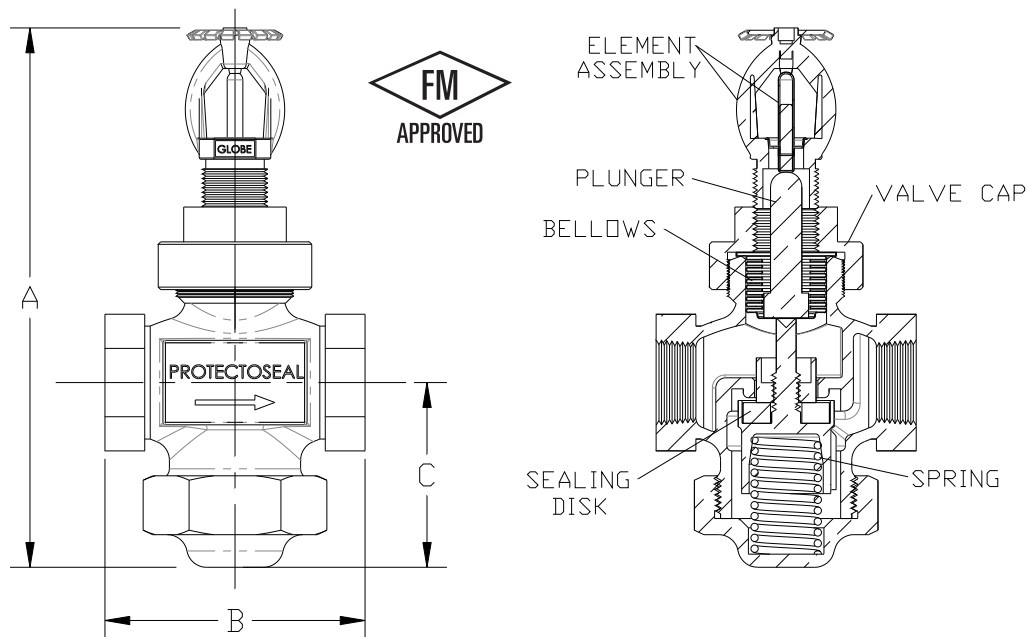
Table 3 - Sealing Disk Material

Disk Material	Option Code
TFE	T
Buna-N	B

PART NUMBER EXAMPLE: U1-45-10HP/BTLB

Heat-Actuated Safety Shut-off Valve: Size: 1"; Element Temp: 155°F; Sealing Disk: Buna-N

DIMENSIONS & ORDERING INFORMATION (Dimensions shown are for reference only, contact Factory for certified drawings.)



Cat. No.*	Size (NPT)	A	B	C	Weight (lbs)
U1-45-05HP/BT □□	1/2"	6.3"	2.8"	2.0"	2.3"
U1-45-08HP/BT □□	3/4"	6.7"	3.3"	2.3"	3.0"
U1-45-10HP/BT □□	1"	7.1"	4.0"	2.5"	4.5"
U1-45-15HP/BT □□	1 1/2"	8.0"	5.1"	3.0"	9.3"
U1-45-20HP/BT □□	2"	8.9"	6.3"	3.4"	15.0"

* To complete Cat. No. (□□) refer to Table 2 & 3 in the Series U1-45 Part Numbering System at the top of this page.



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