

EMERGENCY SHUTOFF AND FIRESAFE VALVES FIGURE 1075

The JAMESBURY® brand FM (Factory Mutual) approved Emergency Shutoff and Firesafe Valves Figure 1075 are manual assemblies consisting of the JAMESBURY FIRE-TITE® valves and the JAMESBURY TORQ-HANDLE®. These assemblies provide automatic closure of a normally open valve in the event of a fire or excessive temperature. These assemblies are used for all types of media including flammable gases, liquids, and toxic fluids.

Figure 1075 assemblies carry FM approval as Firesafe Valves, specifically designed for flammable liquid service. To meet the requirements of this category, the JAMESBURY FIRE-TITE valves have been tested and qualified to resist direct exposure typical of uncontrolled fire for at least 15 minutes.

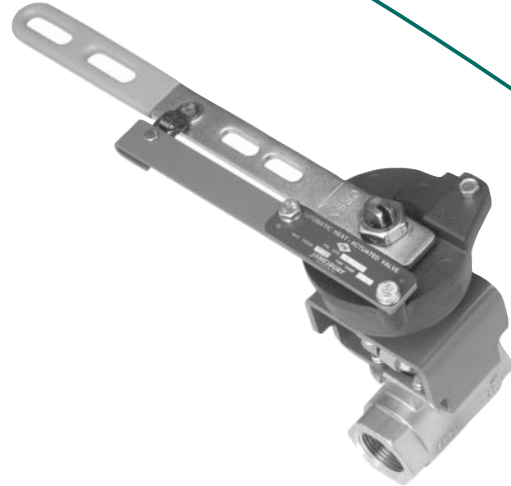
Included in the line of Figure 1075 Emergency Shutoff Valve assemblies are 1/2"-1" (DN 15-25) Series 7150 flanged ball valves and 1"-2" (DN 25-50) ELIMINATOR™ Series screwed-end ball valves equipped with TORQ-HANDLE spring-return handles and a choice of fusible links for specific temperature requirements.

FEATURES

- Automatic closure in the event of a fire.
- FM approved for Emergency Shutoff service.
- FM approved as Firesafe Valves for flammable liquid service.
- Quarter-turn operation for quick shutoff in the event of an emergency.
- Flexible-lip seat design for reliable long-lasting sealing.
- PTFE seats and seals for easy cycling, even when operated infrequently.

ACCESSORIES

Limit switches can be provided for remote indication of valve position or for various electrical interlocks. Switch arrangements available with these assemblies are:



Switch Ratings in Amperes		
Voltage	QZM2VB1DSS (SPDT)	QZM14B1DSS (DPDT)
125V AC	10	4.5
250V AC	10	4.5
125V DC	.50*	—

* Not recommended for electrical circuits operating at less than 20mA @ 24 VDC.

Approved for Watertight and Hazardous Location

- The limit switch housing assemblies are also CSA approved, filling NEMA 4, 4x, 6 and 7 Class I Groups C & D, and 9 Class II Groups E, F and G Div. 1 specifications for combined watertight and hazardous location design.

Unless otherwise specified, assemblies with limit switches are adjusted at the factory so that one switch is actuated when the valve is closed, and the other when the valve is fully open.

Spring-return handles may be specified with optional accessories when FM approval is not a consideration. Locking devices to padlock the handle in position or electrothermal links to allow connection to a remote device like a smoke or heat detector are available. See Bulletin B160-1 for non-FM-approved standard spring-return handles and various accessories.

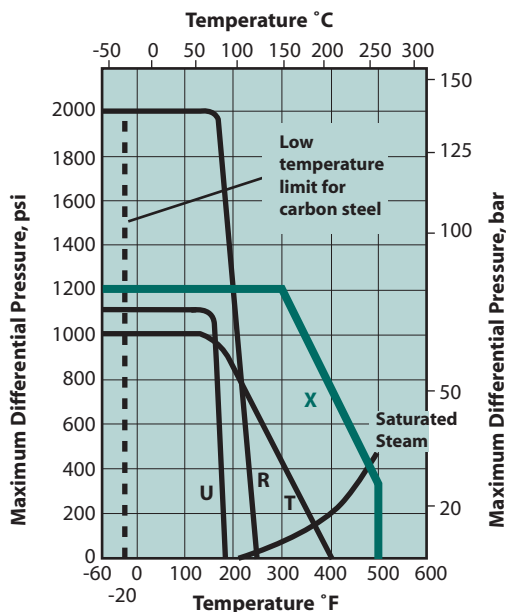
SPECIFICATIONS

Valve Seat Ratings

Seat ratings, indicated by solid lines in the charts, are based on differential pressure with the valve ball in the fully closed position and refer to seats only. In the charts below the dotted lines indicate maximum working pressures for carbon steel valve bodies. Maximum working pressure of 316 stainless steel bodies are shown below. The combination of dotted and solid lines indicates the

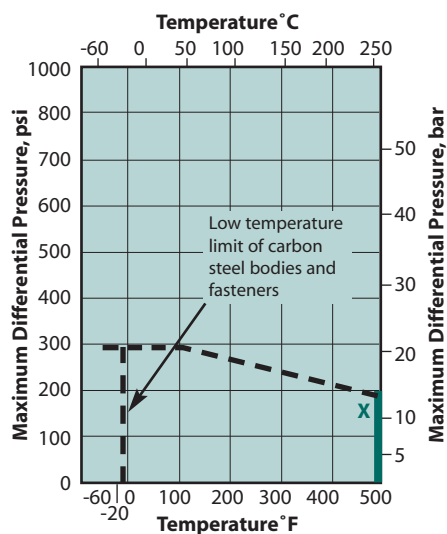
maximum valve rating at specific pressure and temperature conditions. Valves with PTFE, XTREME® and filled PTFE seats can be used in service to -60°F (-51°C) provided the valve body material and body fasteners are suitable for such temperatures. **Note:** Fasteners for FM-approved ELIMINATOR valves are rated for -20°F only.

1/2" – 2" (DN 15 – 50) Standard Port



T - PTFE M - Filled PTFE X - XTREME

1/2"-1" (DN 15-25) Series 7150 Valves



VALVE BODY RATINGS

These are maximum working pressure ratings of the valve body only. The seat ratings, shown above, determine the practical pressure limitations according to actual service conditions. Test pressures are for hydrostatic test with ball half open.

Valve Size inches	Working Pressure Rating - psi			
	Carbon Steel		Stainless Steel	
	ANSI Rated	CWP Rated	ANSI Rated	CWP Rated
1/2" – 2"	1480	2000	1440	2000

Valve Size DN	Working Pressure Rating - bar			
	Carbon Steel		Stainless Steel	
	ANSI Rated	CWP Rated	ANSI Rated	CWP Rated
15 – 50	102	138	99	138

Temperature °F	Carbon Steel* psi	316 Stainless Steel* psi
-20 to 100	285	275
200	260	235
300	230	215
400	200	195
500	170	170
Test Pressure	450	425

Temperature °C	Carbon Steel* bar	316 Stainless Steel* bar
-29 to +38	19.6	19.0
100	17.7	16.2
150	15.8	14.8
200	13.8	13.7
250	12.1	12.1
Test Pressure	30	29

*In accordance with ASME B16-34-2004

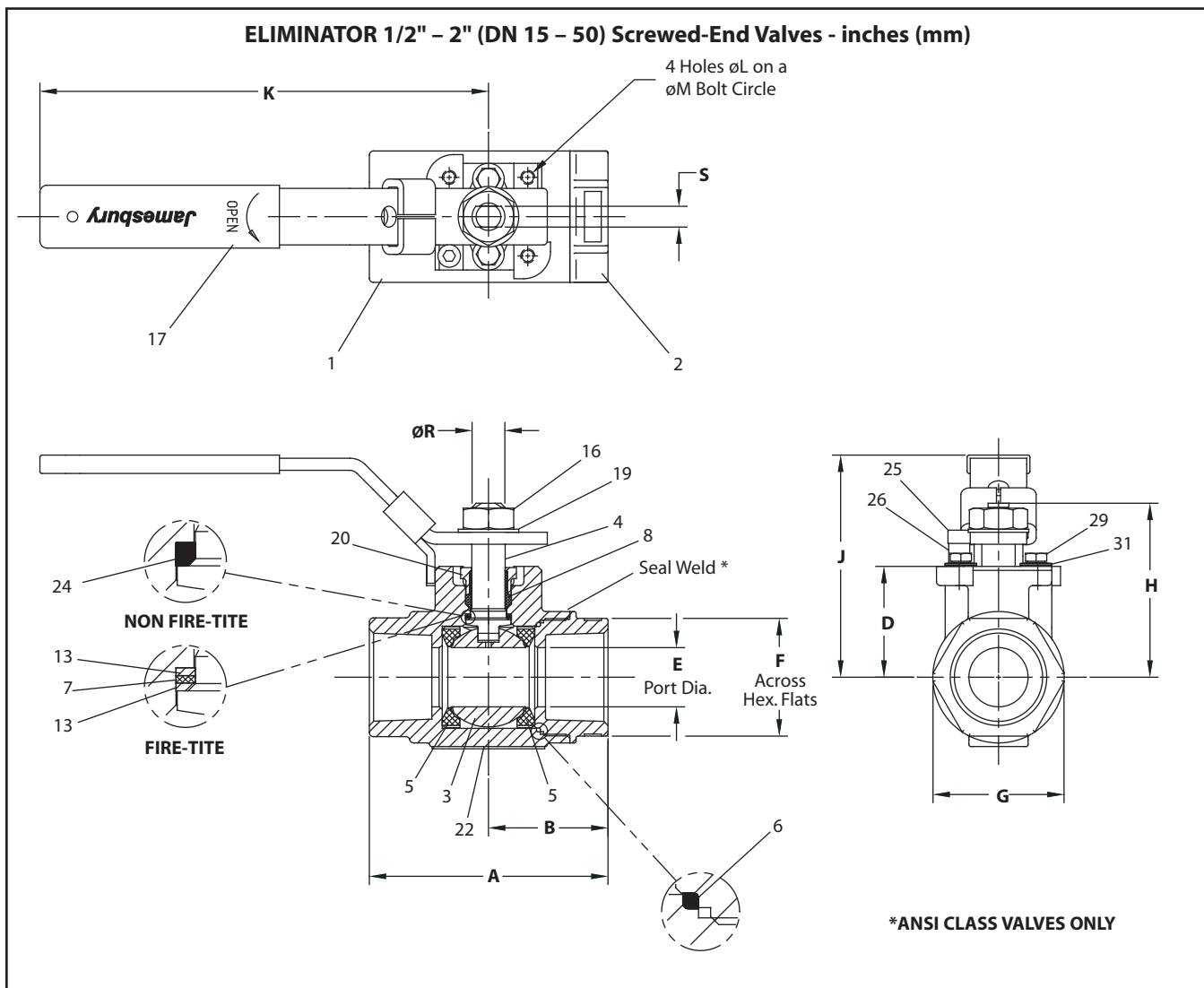
FLOW DATA

The tables to the right provide flow coefficients for JAMESBURY valves covered in this section. The C_v values represent the flow of water at +60°F through the valve in U.S. gallons per minute at a pressure drop of 1 psi. The metric equivalent, K_v , is the flow of water at 16°C through the valve in cubic meters per hour at a pressure drop of 1 kg/cm². To convert C_v to K_v , multiply by 0.8569

Valve Size		C_v	Equivalent length of pipe - ft.
inches	DN		
1/2	15	13	1.5
3/4	20	33	1.1
1	25	44	2.1
1-1/4	32	46	8.4
1-1/2	40	95	4.5
2	50	111	12.0

Series 7150 Valves		
Valve Size		C_v
Inches	DN	
1/2	15	9
3/4	20	19
1	25	45

DIMENSIONS

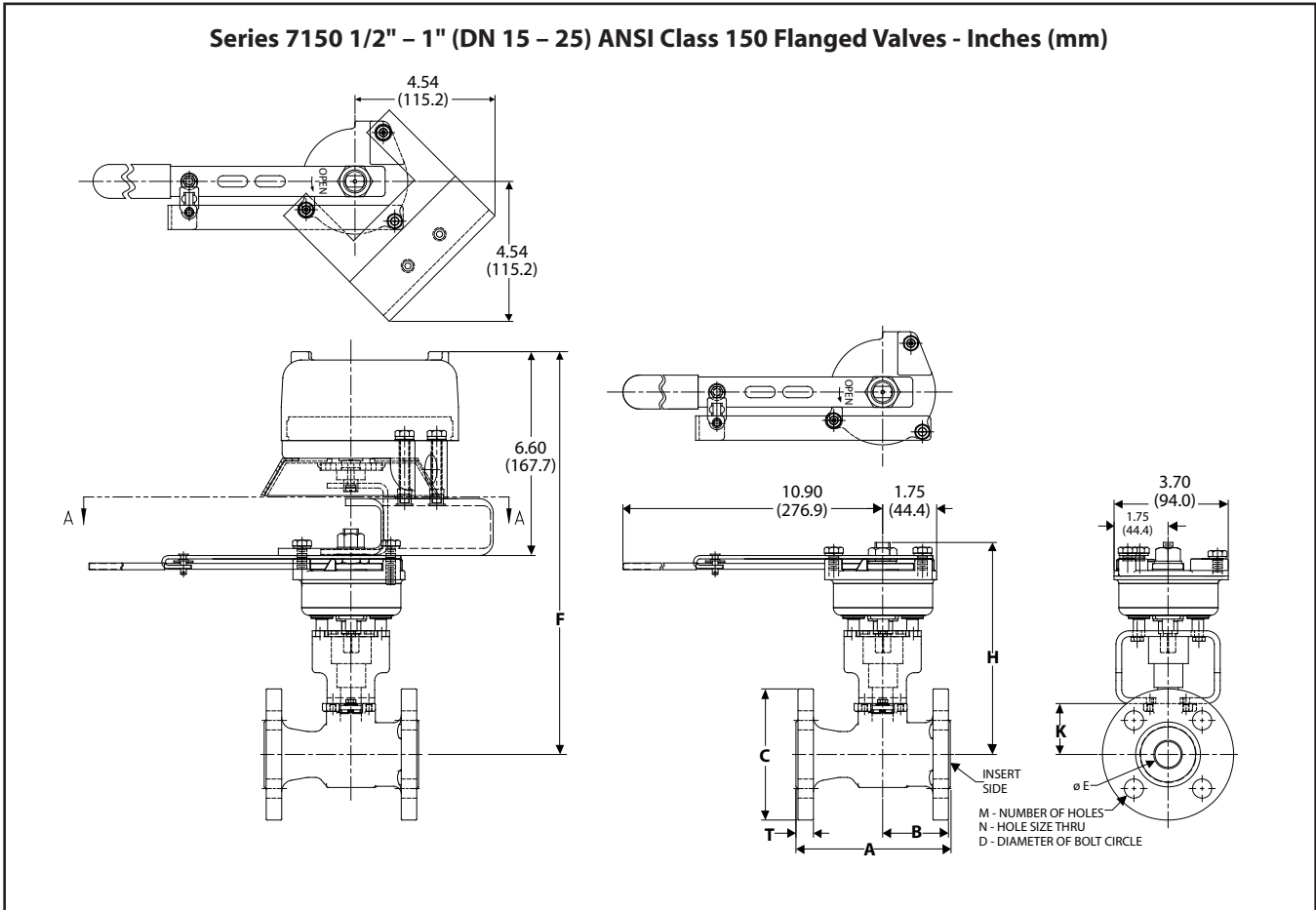


Valve Size Inches	APPROXIMATE DIMENSIONS - inches														Approx. Weight lbs.
	A	B	D	E	F	G	H	J	K	L	M	R	S	ISO BONNET	
1/2	2.62	1.34	1.06	0.50	1.13	1.2	1.63	2.36	5.00	M5	1.42	0.31	0.18	F03	1.0
3/4	3.00	1.50	1.22	0.69	1.38	1.6	1.79	2.52	5.00	M5	1.42	0.31	0.18	F03	2.0
1	3.55	1.78	1.65	0.88	1.75	2.0	2.58	3.29	7.50	M5	1.65	0.50	0.31	F04	3.0
1-1/4	4.00	2.00	1.78	1.00	2.00	2.3	2.71	3.42	7.50	M5	1.65	0.50	0.31	F04	4.0
1-1/2	4.38	2.19	2.08	1.25	2.31	2.7	3.30	4.27	8.25	M6	1.97	0.63	0.37	F05	5.5
2	5.50	2.75	2.26	1.50	2.81	3.1	3.49	4.46	8.25	M6	1.97	0.63	0.37	F05	7.5

Valve Size DN	APPROXIMATE DIMENSIONS - mm														Approx. Weight kg
	A	B	D	E	F	G	H	J	K	L	M	R	S	ISO BONNET	
15	67	34	27	13	29	31	41	60	127	M5	36	08	05	F03	.4
20	76	38	31	18	35	41	45	64	127	M5	36	08	05	F03	.9
25	90	45	42	22	44	51	65	84	190	M5	42	13	08	F04	1.3
32	102	51	45	25	51	59	69	87	190	M5	42	13	08	F04	1.8
40	111	56	53	32	59	69	84	108	210	M6	50	16	09	F05	2.5
50	140	70	57	38	71	79	89	113	210	M6	50	16	09	F05	3.4

DIMENSIONS

Series 7150 1/2" - 1" (DN 15 - 25) ANSI Class 150 Flanged Valves - Inches (mm)



Approximate Dimensions - inches

Valve Size inches	A	B	C	D	E	F	H	K	M	N	T	Approx. Weight lb.
1/2	4.25	1.94	3.50	2.38	0.50	12.42	6.19	1.06	4	0.63	0.50	8.1
3/4	4.63	2.00	3.88	2.75	0.68	12.58	6.38	1.22	4	0.63	0.50	9.1
1	5.00	2.19	4.25	3.13	0.88	13.05	6.88	1.65	4	0.63	0.56	12.9

Approximate Dimensions - mm

Valve Size DN	A	B	C	D	E	F	H	K	M	N	T	Approx. Weight kg.
15	108	49	89	60	13	315	157	27	4	16	13	3.7
20	118	51	99	70	17	320	162	31	4	16	13	4.1
25	127	56	108	80	22	331	175	42	4	16	14	5.8

HOW TO ORDER EMERGENCY SHUTOFF AND FIRESAFE VALVES

The designation for Emergency Shutoff Valves is made up of numbers and letters that fully describe all features of the available variations of these units. Coding is as follows:

Example: A 1-1/2" Emergency Shutoff Valve Assembly ELIMINATOR, screwed end in carbon steel with 316 stainless trim and PTFE seats with +165°F (74°C) fusible link and TORQ-HANDLE set for spring-to-close operation without limit switches is designated as Figure 1075-71T010.

1	2	3	4	5	6
7	1	T	0	1	0

1	Size	3	4	5	6*	7†	8†
	inches	1/2	3/4	1	1-1/4	1-1/2	2
	DN	15	20	25	32	40	50

*ELIMINATOR Valves only. †Series 2000 Valves Only.

2	Body Style & Materials
1	2000 Series 2236, Screwed End, Carbon Steel Body - S/S Trim
3	2000 Series 3600, Screwed End, Stainless Steel Body - S/S Trim
5	ELIMINATOR 2236
6	ELIMINATOR 3600
A	7150 Series, Flanged, Carbon Steel Body - S/S Trim
B	7150 Series, Flanged, Stainless Steel Body - S/S Trim

3	Seat Material
T	PTFE
M	Filled PTFE (Clincher only)
X	XTREME (7150 and ELIMINATOR)

4	Temperature Rating of Fusible Link
0	165°F (74°C)
1	135°F (57°C)
2	212°F (100°C)
3	286°F (141°C)

5	TORQ-HANDLE Release Mode
1	Spring-to-close
2	Spring-to-open

6	Optional Limit Switch
0	No switch
2	QZM2VB1DSS (2SPDT)
3	QZM14B1DSS (2SPDT)

Available Sizes by Valve Type and Seat Material		
Style	Seat Material	Available Sizes
ELIMINATOR	T Seats	1/2" – 1-1/4" (DN 15 – 32)
2000	M Seats	1" – 1-1/4" (DN 25 – 32)
7150	X Seats	1/2" – 1" (DN 15 – 25)
ELIMINATOR	X Seats	1/2" – 1-1/4" (DN 15 – 32)
7150	T Seats	1/2" – 1-1/2" (DN 15 – 40)
2000	T Seats	1" – 2" (DN 25 – 50)

Subject to change without prior notice.

Metso Automation Inc.

Europe, Levytie 6, P.O. Box 310, 00811 Helsinki, Finland.
Tel. +358 20 483 150. Fax +358 20 483 151

North America, 44 Bowditch Drive, P.O. Box 8044, Shrewsbury, MA 01545, USA.
Tel. +1 508 852 0200. Fax +1 508 852 8172

Europe, 6-8 rue du Maine, 68271 Wittenheim Cedex, France.
Tel. +33 (0)3 89 50 64 00. Fax +33 (0)3 89 50 64 40

South America, Av. Independência, 2500- Iporanga, 18087-101, Sorocaba-São Paulo
Brazil. Tel. +55 15 2102 9700. Fax +55 15 2102 9748/49

Asia Pacific, 238A Thomson Road, #25-09 Novena Square Tower A, 307684 Singapore.
Tel. +65 6511 1011. Fax +65 6250 0830

China, 19/F, the Exchange Beijing, No. 118, Jianguo Lu Yi, Chaoyang Dist, 100022 Beijing, China.
Tel. +86-10-6566-6600. Fax +86-10-6566-2575

Middle East, Roundabout 8, Unit AB-07, P.O. Box 17175, Jebel Ali Freezone, Dubai,
United Arab Emirates. Tel. +971 4 883 6974. Fax +971 4 883 6836

www.metso.com/automation

