NELES

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.

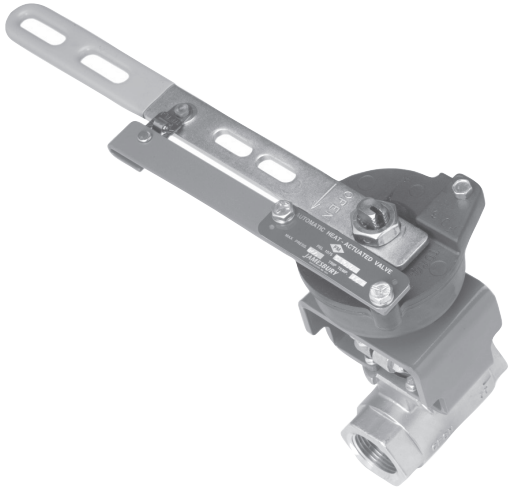


Figure 1075 assemblies carry FM approval as firesafe valves, specifically designed for flammable liquid service. To meet the requirements of this category, the *Jamesbury Fire-Tite* valves have been tested and qualified to resist direct exposure typical of uncontrolled fire for at least 15 minutes.

Included in the line of figure 1075 emergency shutoff valve assemblies are series 2000, Eliminator™, 4000, 7000 and 9000, equipped with *Torq-Handle* spring-return handles and a choice of fusible links for specific temperature requirements.

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.

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:

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.

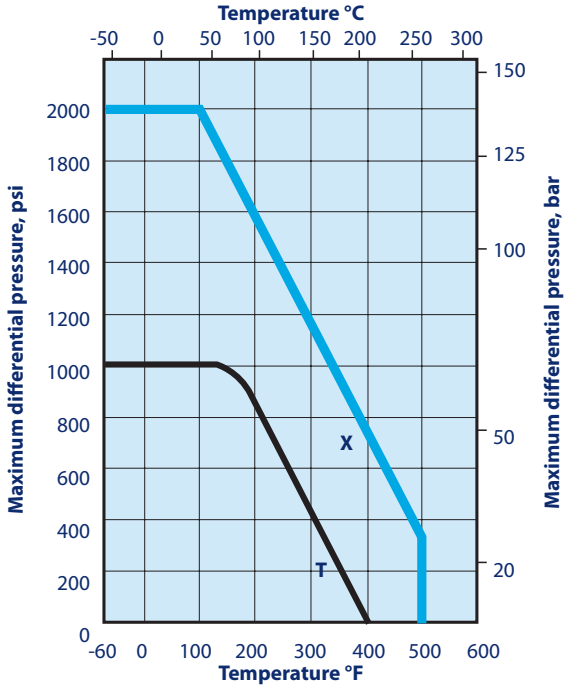
SPECIFICATIONS

Valve seat ratings

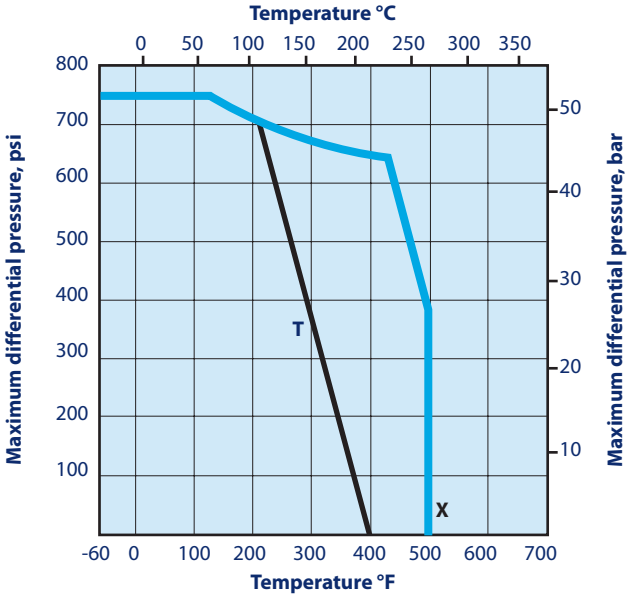
Seat ratings, indicated by solid lines in the charts, are based on differential pressure with the valve ball in the fully closed position and refer to seats only. In the charts below the dotted lines indicate maximum working pressures for carbon steel valve bodies. Maximum working pressure of 316 stainless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

1/4" - 1-1/4" (DN 8 - 32) Eliminator valves



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



T - PTFE M - Filled PTFE X - *Xtreme*

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	
	ASME rated	CWP rated	ASME rated	CWP rated
1/2" – 2"	1480	2000	1440	2000

Valve size DN	Working pressure rating - psi			
	Carbon steel		Stainless steel	
	ASME rated	CWP rated	ASME 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

FLOW DATA

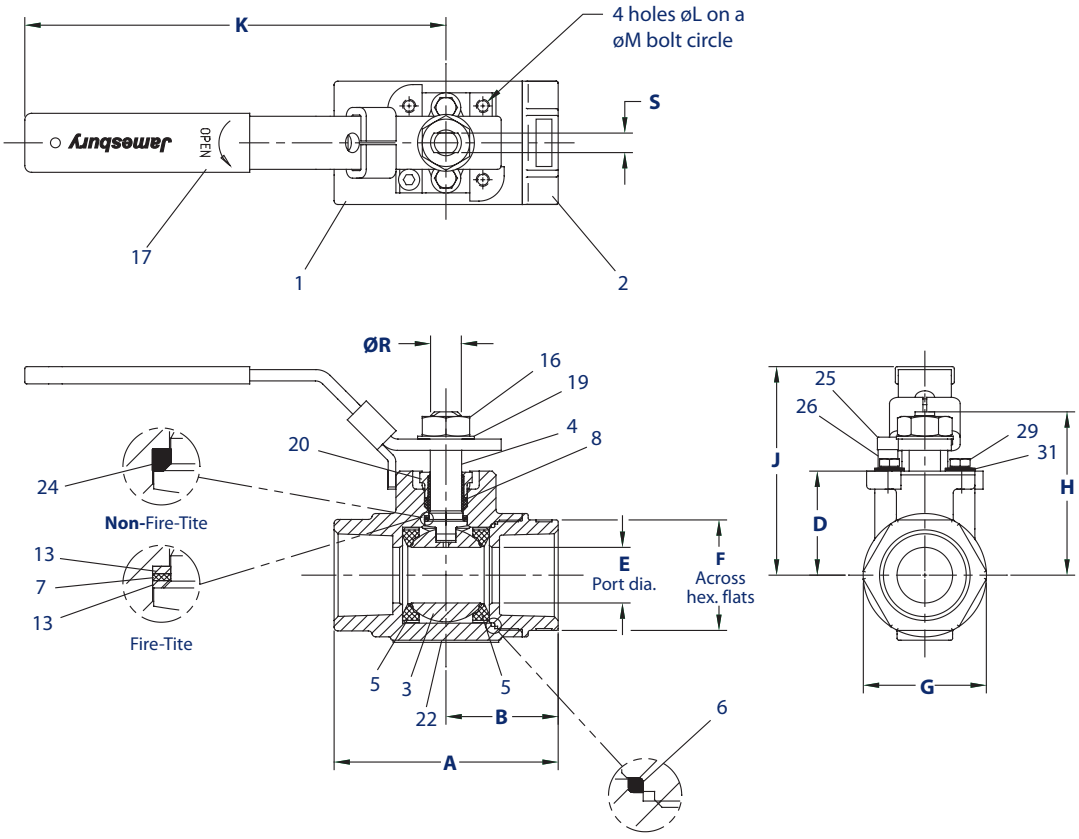
The tables to the right provide flow coefficients for *Jamesbury* valves covered in this section. The C_v values represent the flow of water at +60°F through the valve in U.S. gallons per minute at a pressure drop of 1 psi. The metric equivalent, K_v, is the flow of water at 16°C through the valve in cubic meters per hour at a pressure drop of 1 kg/cm^2. 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

Eliminator 1/4" - 1-1/4" (DN 8 - 32) screwed-end valves

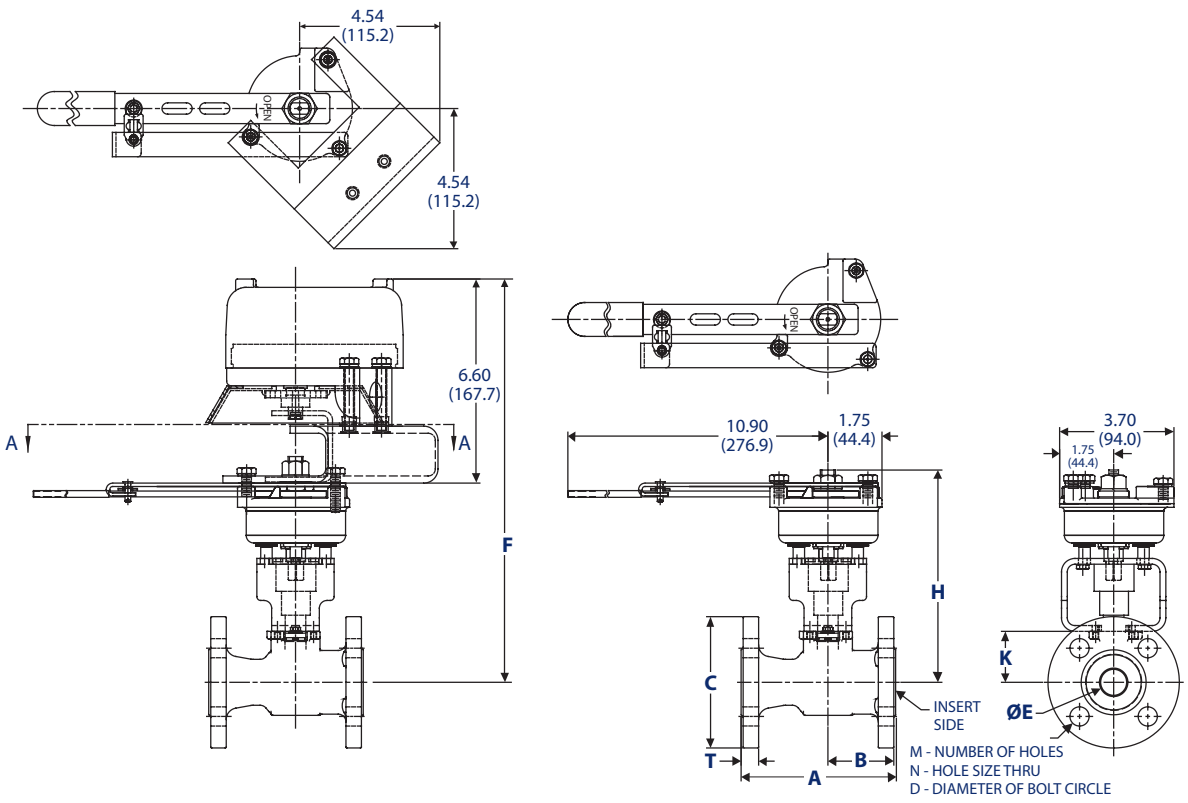


Valve size inches	APPROXIMATE DIMENSIONS - inches														Approx. weight lbs.
	A	B	D	E	F	G	H	J	K	L	M	R	S	ISO BONNET	
1/2	2.62	1.34	1.06	0.50	1.13	1.2	1.63	2.36	5.00	M5	1.42	0.31	0.18	F03	1.0
3/4	3.00	1.50	1.22	0.69	1.38	1.6	1.79	2.52	5.00	M5	1.42	0.31	0.18	F03	2.0
1	3.55	1.78	1.65	0.88	1.75	2.0	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

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

DIMENSIONS

Series 7150 1/2" – 1" (DN 15 – 25) ASME class 150 flanged valves



APPROXIMATE DIMENSIONS - inches												
Valve size inches	A	B	C	D	E	F	H	K	M	N	T	Approx. weight lbs.
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

WARNING: As the use of the assembly is application specific, a number of factors should be taken into account when selecting a valve for a given application. Therefore, some of the situations in which the valves are used are outside the scope of this manual. If you have any questions concerning the use, application or compatibility of the valve with the intended service, contact Neles for more information.

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

2	Body style & materials
1	2000 series, screwed end, carbon steel body - S/S trim
3	2000 series, screwed end, stainless steel body - S/S trim
5	Eliminator, screwed end, carbon steel body - S/S trim
6	Eliminator, screwed end, stainless steel body - S/S trim
A	7150 series, flanged, carbon steel body - S/S Trim
B	7150 Series, flanged, stainless steel body - S/S trim

Note: Series 7300, 9000 and 4000 also available. Contact Neles for information.

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)
2	212°F (100°C)
3	286°F (141°C)
4	360°F (182°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	1/4" - 1-1/4" (DN 8 - 32)
2000	M seats	1" – 1-1/4" (DN 25 – 32)
7150	X seats	1/2" – 1" (DN 15 – 25)
Eliminator	X seats	1/4" - 1-1/4" (DN 8 - 32)
2000	T seats	1" - 2" (DN 25 - 50)
7150	T seats	1/2" - 1-1/2" (DN 15 - 40)

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