

# VALVES FOR HYDROGEN PEROXIDE

Metso has developed a complete line of Ball and Butterfly Valves designed specifically for Hydrogen Peroxide service. Materials of construction have been selected to meet the special needs of Peroxide and valve internals have been designed to eliminate stagnant cavities where decomposition may begin.

Hydrogen Peroxide Valves are offered in several configurations to accommodate all commonly employed piping styles.

**Flanged End Ball Valves:** The valve type and style most commonly used in Hydrogen Peroxide systems is the flanged end ball valve. This style is used in all concentrations and JAMESBURY® has been the leader in this technology for 40 years. These valves are available in sizes 1/2" – 6" (DN 15 – 150) and ANSI 150# end connections and pressure ratings.

**High Performance Butterfly Valves:** The economies usually associated with Butterfly Valves make them an attractive alternative to Flanged Ball valves in the larger sizes. JAMESBURY pioneered the development of this style of valve and makes it available for Hydrogen Peroxide service. These valves are available in lugged body styles with ANSI 150# rating. Sizes produced are 3" – 6" (DN 80 – 150).

## FEATURES

### Bubble Tight Shut-off

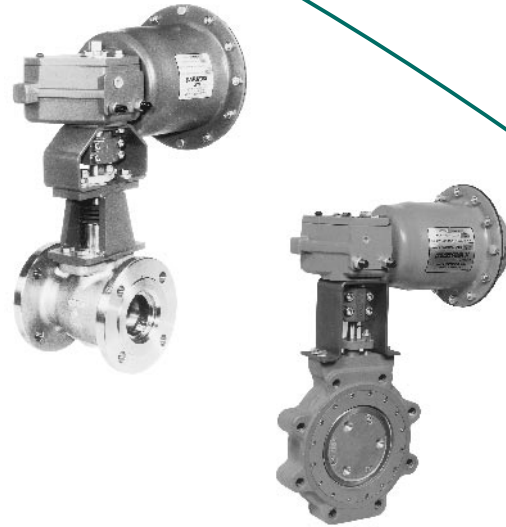
- JAMESBURY DOUBLE-SEAL® Ball and WAFER-SPHERE® High Performance Butterfly Valves offer bubble-tight shut-off which exceeds the requirements of ANSI/FCI 70 -2 Class VI.

### Cavity Pressure Relief

- In addition to their standard self-relieving seats, JAMESBURY DOUBLE-SEAL Ball Valves for Peroxide service have ball cavities vented to prevent entrapment of Peroxide fluid in the open or closed position. WAFER-SPHERE High Performance Butterfly Valves have no unvented cavities in normal operation.

### Simple Quarter-Turn Operation

- Ball and Butterfly valves provide simple quarter-turn operation from open to close. In addition, the handles of both styles provide quick, easily recognized position indication. Another feature of these quarter-turn valves is the ease by which they can be automated.



## Peroxide Compatible Assembly and Test Procedures

- Hydrogen Peroxide service requires assembly and test procedures that ensure that the finished product is completely free from all contaminants. JAMESBURY has worked with the major peroxide producers to develop assembly and packaging procedures that meet their industry requirements.

### Passivation

- JAMESBURY valves are passivated and tested to ASTM A380 unless otherwise specified.

## Material Availability

- Both Ball and Butterfly Valves for peroxide service are available in 316 stainless steel with PTFE seats and seals.

## SPECIFICATIONS

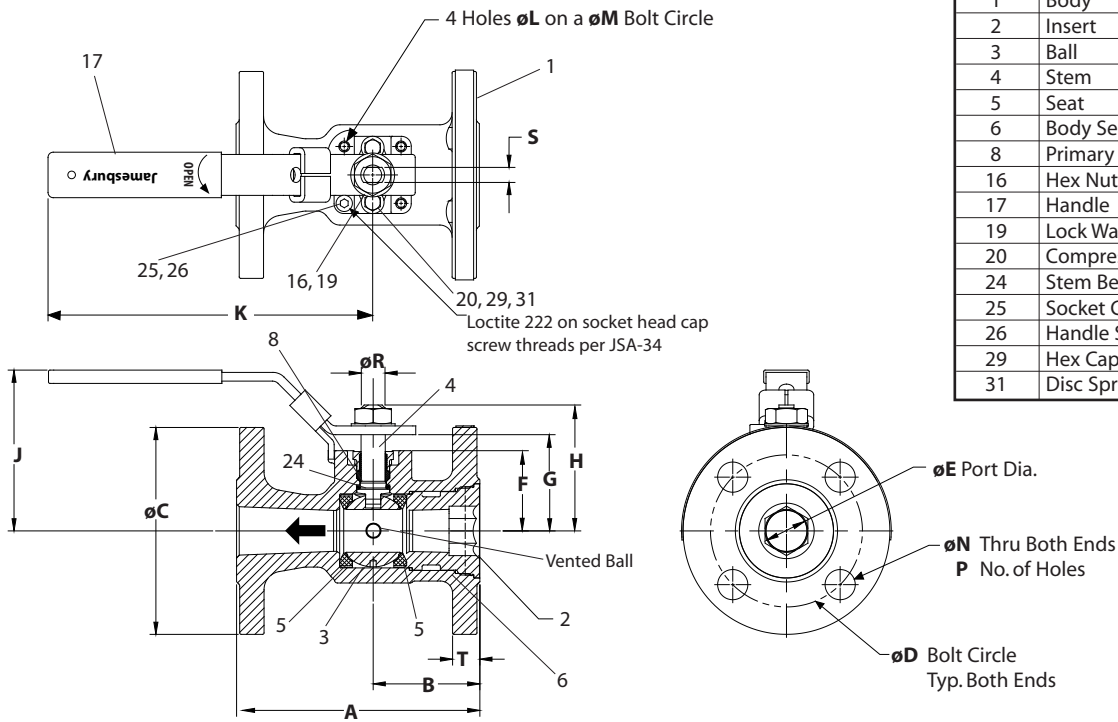
Valve Pressure Ratings				
	316 Stainless Steel			
	Body Rating		Seat Rating	
Flanged Ball Valves	275 psi	19 bar	275 psi	19 bar
Lugged 150# Butterfly Valves	275 psi	19 bar	275 psi	19 bar

Flow Capacity (Cv*)				
Valve Size		Flanged Ball Valves	Butterfly Valves	
Inches	DN			
1/2	15	9		
3/4	20	19		
1	25	45		
1-1/2	40	125		
2	50	165		
3	80	350		165
4	100	550		400
6	150	765		1050

\*Cv = 1.167 Kv

**DIMENSIONS**

**1/2" - 2" (DN 15 - 50) Series 7150 Standard Bore**

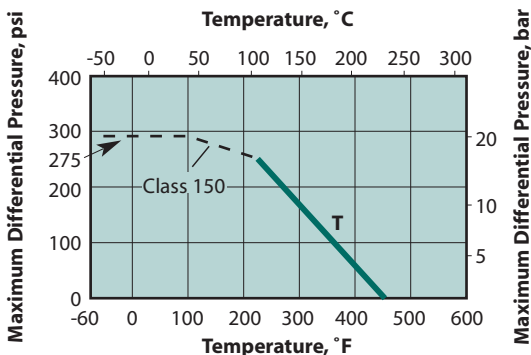


Part No.	Part Name
1	Body
2	Insert
3	Ball
4	Stem
5	Seat
6	Body Seal
8	Primary Stem Seal
16	Hex Nut
17	Handle
19	Lock Washer
20	Compression Plate
24	Stem Bearing
25	Socket Cap Screw
26	Handle Stop Spacer
29	Hex Cap Screw
31	Disc Springs

Valve Size inches	Series 7150 ANSI Class 150 Approximate Dimensions - inches																	ISO Bonnet	Approx Weight lb
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T		
1/2	4.25	1.94	3.50	2.38	0.50	1.06	1.33	1.63	3.38	5.00	M5	1.42	0.62	4	0.31	0.18	0.50	F03	3.5
3/4	4.63	2.00	3.88	2.75	0.69	1.22	1.49	1.79	3.50	5.00	M5	1.42	0.62	4	0.31	0.18	0.50	F03	4.5
1	5.00	2.19	4.25	3.12	0.88	1.65	2.04	2.58	3.69	6.50	M5	1.65	0.62	4	0.50	0.31	0.56	F04	7.5
1-1/2	6.50	2.65	5.00	3.88	1.25	2.08	2.59	3.30	4.27	8.00	M6	1.97	0.62	4	0.62	0.37	0.69	F05	11.5
2	7.00	2.64	6.00	4.75	1.50	2.26	2.78	3.49	4.46	8.00	M6	1.97	0.75	4	0.62	0.37	0.75	F05	16.0

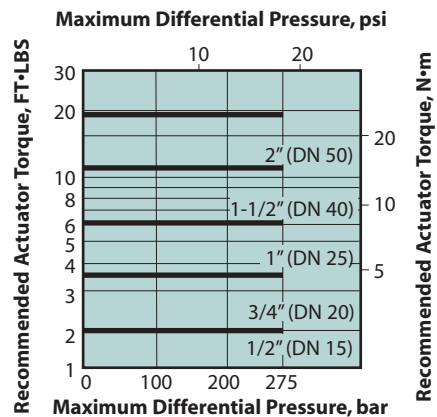
Valve Size DN	Series 7150 ANSI Class 150 Approximate Dimensions - mm																	ISO Bonnet	Approx Weight kg
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T		
15	108	49	89	60	13	27	34	41	86	127	M5	36	16	4	8	5	13	F03	1.6
20	118	51	99	70	18	31	38	45	89	127	M5	36	16	4	8	5	13	F03	2.0
25	127	56	108	79	22	42	52	66	94	165	M5	42	16	4	13	8	14	F04	3.4
40	165	67	127	99	32	53	66	84	108	203	M6	50	16	4	16	9	18	F05	5.2
50	178	67	152	121	38	57	71	89	113	203	M6	50	19	4	16	9	19	F05	7.3

**1/2" - 2" (DN 15 - 50) Standard Bore**



**T = PTFE Valve Seat Ratings**

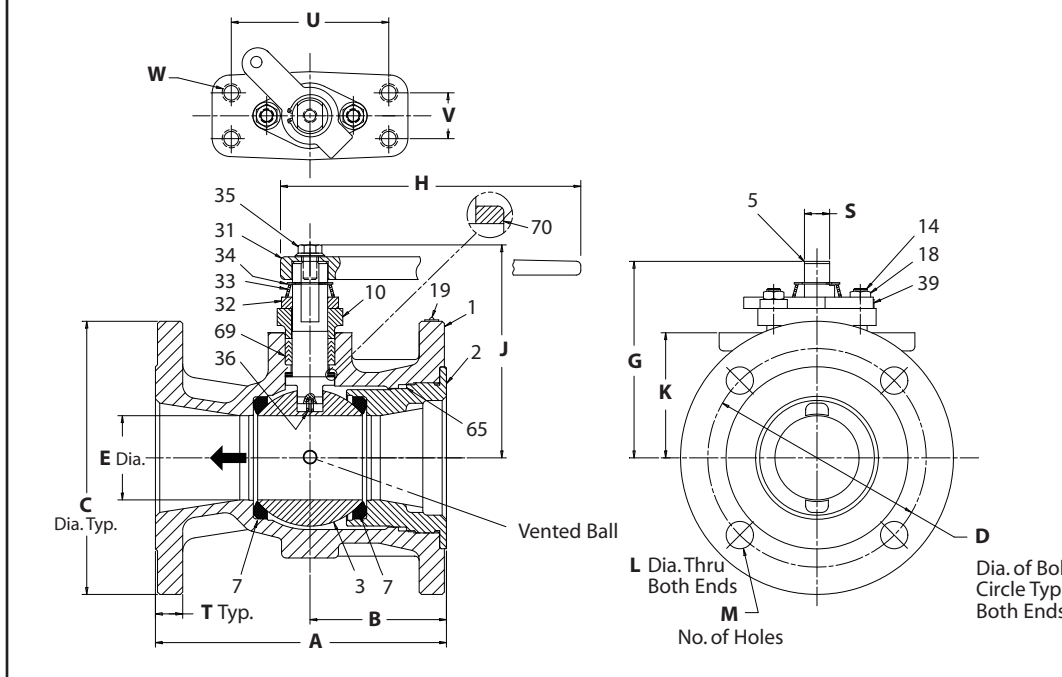
**PTFE (T) Seated Valves**



**Valve Torque Data**

**DIMENSIONS**

**3" – 6" (DN 80 – 150) Series 7150 Standard Bore**

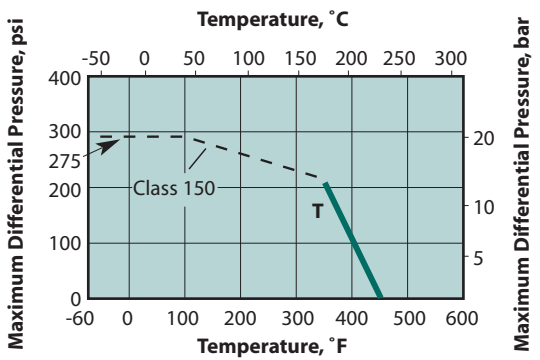


Part No.	Part Name
1	Body
2	Insert
3	Ball
5	Stem
7	Seat
10	Compression Plate
14	Stud
18	Nut
19	Identification Tag
31	Handle
32	Indicator Stop
33	Conical Spring
34	Retainer Ring
35	Cap Screw
36	Grounding Spring
39	Stop Bushing
65	Body Seal
69	Packing
70	Thrust Bearing

Valve Size inches	Type 7150 ANSI Class 150 Approximate Dimensions – inches															Approx. Weight lbs	
	A	B	C	D	E	G	H	J	K	L	M	S	T	U	V		W
3	8.00	3.75	7.50	6.00	2.31	5.40	14.00	5.85	3.44	0.75	4	0.69	0.81	4.33	1.26	1/2-13	39
4	9.00	4.00	9.00	7.50	3.00	5.89	14.00	6.32	3.93	0.75	8	0.69	1.00	4.33	1.26	1/2-13	63
6	10.50	4.25	11.00	9.50	4.00	8.32	19.44	8.78	5.51	0.88	8	0.97	1.06	5.10	1.26	1/2-13	124

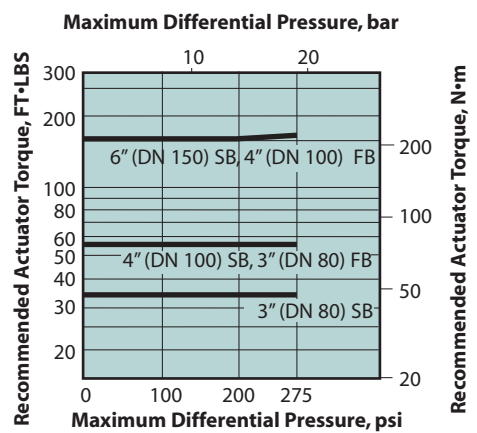
Valve Size DN	Type 7150 ANSI Class 150 Approximate Dimensions – mm															Approx. Weight kg	
	A	B	C	D	E	G	H	J	K	L	M	S	T	U	V		W
80	203	95	191	152	59	137	356	149	87	19	4	18	21	110	32	1/2-13	18
100	229	102	229	191	76	150	356	161	100	19	8	18	25	110	32	1/2-13	29
150	267	108	279	341	102	211	506	223	140	22	8	25	27	130	32	1/2-13	56

**3" – 6" (DN 80 – 150) Standard Bore**



**T = PTFE Valve Seat Ratings**

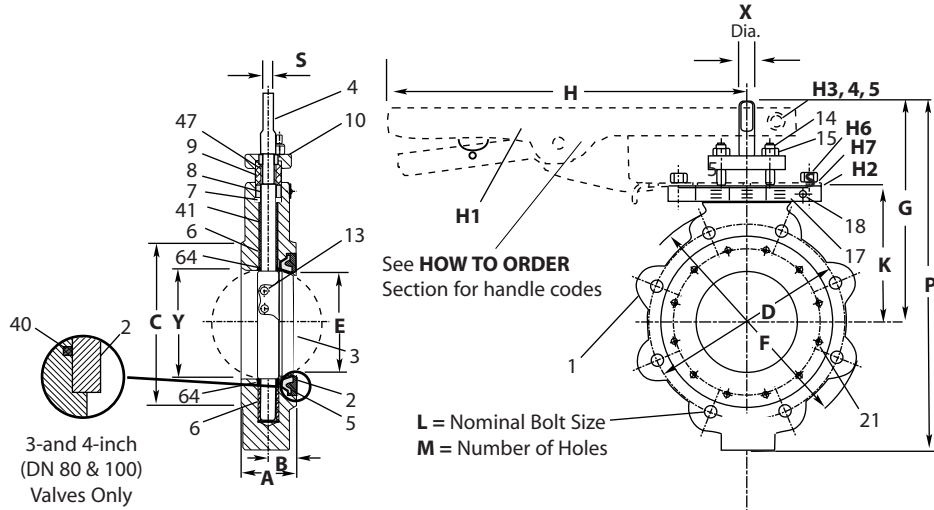
**PTFE (T) Seated Valves**



**Valve Torque Data**

**DIMENSIONS**

**3" – 6" (DN 80 – 150) Type 815L (Model C) Valves  
ANSI Class 150, Single Flanged Lug Design**



Part No.	Part Name
1	Body
2	Insert
3	Disc
4	Shaft
5	Seat
6	Shaft Bearing
7	Spacer
8	Shaft Seal
9	Compression Ring
10	Top Compression Plate
13	Disc Pin
14	Stud
15	Nut
17	Name Plate
18	Drive Screw
21	Cap Screw
40	Body Seal
41	Top Bearing Spacer
47	Retaining Ring
64	Thrust Bearing

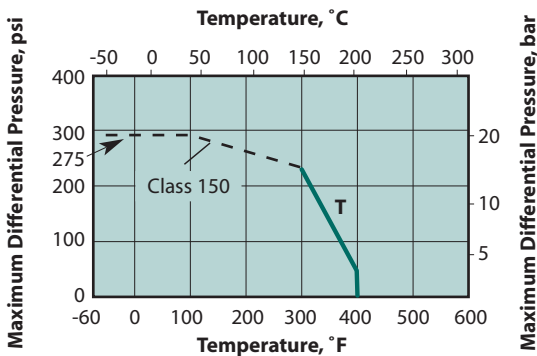
Valve Size inches	Approximate Dimensions – inches															Approx. Weight lbs.
	A	B	C	D	E	F	G	H	K	L	M	P	S Blade	X	Y*	
3	1.94	1.06	5.19	6.00	2.88	7.50	8.00	11.00	4.75	5/8-11	4	12.44	.44	.63	2.90	17
4	2.13	1.19	6.19	7.50	3.75	9.00	8.50	11.00	5.25	5/8-11	8	13.44	.44	.63	3.83	26
6	2.25	1.31	8.50	9.50	5.59	11.00	9.25	11.00	6.00	3/4-10	8	15.13	.53	.75	5.76	43

Valve Size mm	Approximate Dimensions – mm															Approx. Weight kg
	A	B	C	D	E	F	G	H	K	L	M	P	S Blade	X	Y*	
80	49	27	132	152	73	191	203	279	121	5/8-11	4	316	11	16	74	8
100	54	30	157	191	95	229	216	279	133	5/8-11	8	341	11	16	97	12
150	57	33	216	241	142	279	235	279	152	3/4-10	8	384	13	19	146	20

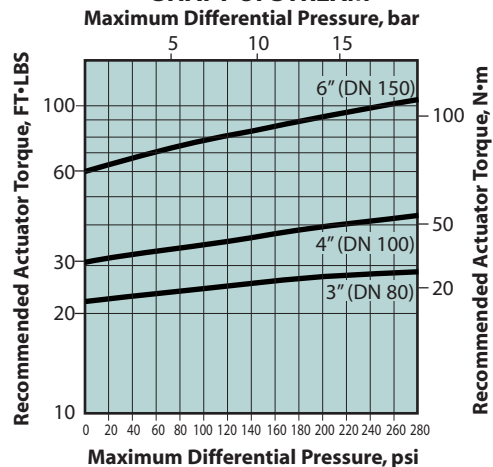
\* Conforms to API 609 and MSS-SP requirements for minimum clearances of pipe inside diameters for Schedule 80 pipe.

\*\* Weights do not include handles.

**STANDARD TYPE 815L VALVE with PTFE (T) Seat  
SHAFT UPSTREAM**



**T = PTFE  
Valve Seat Ratings**



**Valve Torque Data**

## HOW TO ORDER JAMESBURY HYDROGEN PEROXIDE VALVES

To specify a Hydrogen Peroxide Valve select a body style, the combination of body and trim material, and the proper seat material.

**EXAMPLE:** This order code calls for a 1/2" (DN 15) Flanged Valve for Hydrogen Peroxide, 316 Stainless Steel Body and Trim Passivated, with PTFE Seats & Seal.

1	Size							
inches	1/2	3/4	1	1-1/2	2	3	4	6
DN	15	20	25	40	50	80	100	150

2	Body Style
7150	Flanged End Ball Valve 1/2" – 6" (DN 15 – 150)
815L	High Performance WAFER-SPHERE 3", 4" & 6" (DN 80, 100 & 150)

3	Special Application/Construction or Service
P1	Peroxide Construction - Passivated to ASTM A380
P2	Peroxide Construction - Not Passivated

4	Construction Type
11	Non FIRE-TITE®

Code numbers are fully descriptive of a valve. They are made up of size and a figure designation based on the following coding:

1	—	2	3	4	5	6	7
1/2		7150	P1	11	36	00	TT

5	Body Materials
36	316 Stainless steel

6	Trim Material
00	316 Stainless steel

7 <sup>†</sup>	Seat & Seal Materials (Compression Plate Studs and Nuts for 7150)
TTT2	PTFE, Bolts: ASTM A193 GR. B8, B8C OR B8T (CLASS 2) Nuts: ASTM A194 GR. 8, 8C, 8M, 8I OR 8F

† Use first two letters only for 815L valves.

WAFER-SPHERE handles are ordered separately using the following codes;

Valve Size	Handle Code*
3" & 4" (DN 80 & 100)	WSH-36
6" (DN 150)	WSH-38

\* WAFER-SPHERE and 2" & smaller 7150 valves are equipped with a lockout handle as standard.

Subject to change without prior notice.

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