Tech Bulletin Page 14-17

STAYFLOW

Fire Safe Threaded Ball Valves

Fusion Series

3/4" T23

Models:

T23 2 PC Design
S23 1 PC Design

1 1/2" S23 with oval handle

Full Port:

Size 1/4 - 2" 2000 WOG
Size 2 1/2 - 4" 1500 WOG

Steam Rated:

S23 250 WSP
T23 150 WSP

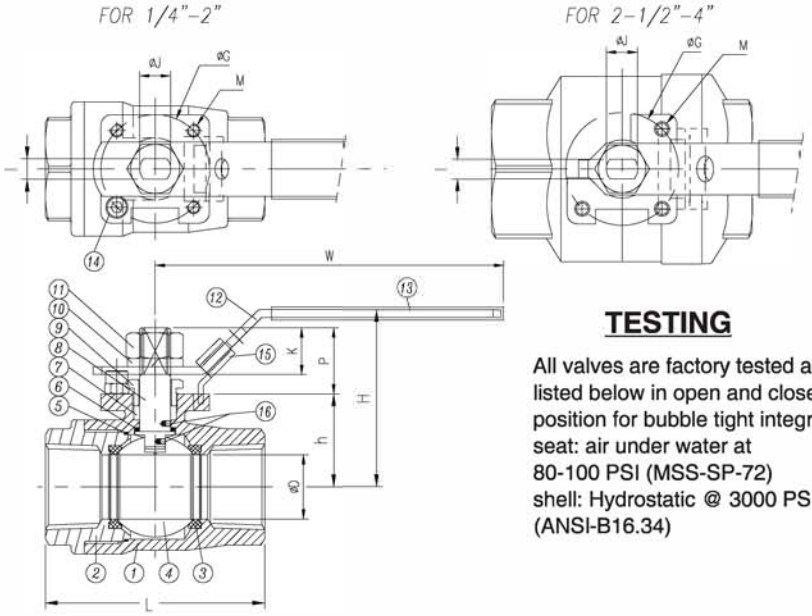
3" T23

Design Features

- ISO Automation Pad
- Anti-Static Grounding
- Adjustable Stem Packing
- Supertek Seating
- Safety Locking Handles
- Quality Investment Castings Foundry Heat for Full Traceability
- Metal Name Plates For Ease of Identifying Soft Parts
- API 608
- Fire Safe API 607-5 Certified
- NACE-MR-0175
- CE Marking
- Vacuum Service to 20 Microns
- NPT Connection ANSI B1-20-1
- Shell Wall Testing to 3000 PSI
- Pressure Balanced Ball
- Corrosion Resistant Black Phosphate Coating
- Blow-Out Proof Stem

One Valve Built To Handle Multiple Plant Applications

Fusion Series T23 - 2PC Body



TESTING

All valves are factory tested as listed below in open and closed position for bubble tight integrity seat: air under water at 80-100 PSI (MSS-SP-72) shell: Hydrostatic @ 3000 PSI (ANSI-B16.34)

Materials of Construction

No.	Parts	T23-SS	T23-CS
1	Body	ASTM A351 CF8M	ASTM A216 WCB
2	End Cap	ASTM A351 CF8M	ASTM A216 WCB
3	Seat #	Super Tek	Super Tek
4	Ball	ASTM A351 CF8M	ASTM A351 CF8
5	Gasket #	Graphite	Graphite
6	Thrust Washer #	TFM	TFM
7	Stem Packing #	TFM / GRAPHITE *	TFM / GRAPHITE *
8	Stem	ASTM A276-316	ASTM A276-304
9	Gland	SS304	SS304
10	Handle Washer	SS304	SS304
11	Handle Nut	SS304	SS304
12	Handle	SS304	Zinc Plated Steel
13	Handle Cover	PVC	PVC
14	Stop Screw	SS304	Steel
15	Locking Device	SS304	Zinc Plated CS
16	Anti-Static Device	SS316	SS304

Parts included in repair kits; * Fire Safe uses graphite

MODELS

T23-SS Stainless Steel
T23 -CS Carbon Steel

SIZE Range 1/4 thru 4"

1/4 - 2" 2000 WOG
2 1/2 - 4" 1500 WOG
150 WSP

THREADED ENDS

ANSI B1-20-1 NPT
British Pipe Thread
Available, C/F

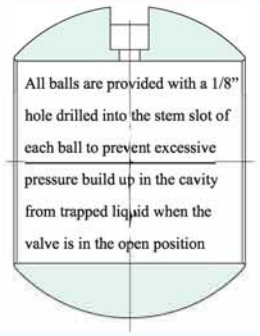
ALSO AVAILABE:
Locking Handle
Oval Handle
Stem Extension

API 607-5th: Certified *
NACE MR-0175: Compliance
CRN Registered
CE Approved per PED97/23/EC

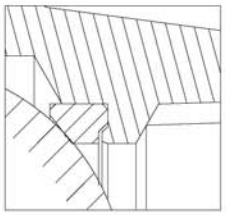
Vacuum service:
Standard valve to 25 torr.
Specially prepared valve to 20 microns

TRACEABILITY: FOUNDRY HEAT # FOR ALL VALVES
METAL NAME PLATES IDENTIFY ALL SOFT PARTS

Ball Design Added Safety Feature for All Sizes of S23 and T23



Fire Safe Design Feature:



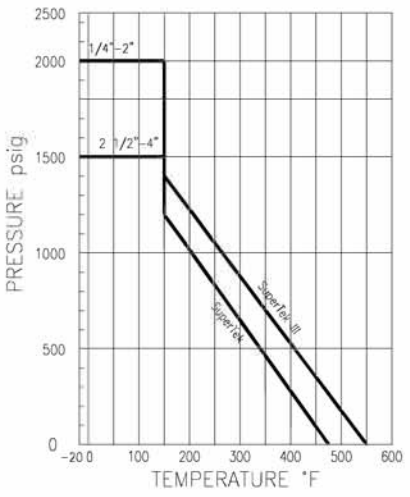
T23 valves can be supplied as standard with graphite stem packing and body seal. Valves are certified fire safe. In the event of fire, after heat destroys the primary resilient seat, the ball makes contact with the secondary metal seat, forming a secure seal. The graphite body seal prevents external leakage. The graphite stem packing prevents stem leakage.

Dimensions and Weights

SIZE	D	G	H	h	I	J	K	L	M	P	W	Cv	Torque in-lb # 1000 psi	Torque in-lb # 2000 psi	Weight lbs
1/4"	0.43	1.42	2.17	0.94	0.20	0.31	0.35	2.32	M5	0.59	5.31	8	68	100	0.97
3/8"	0.49	1.42	2.17	0.94	0.20	0.31	0.35	2.32	M5	0.59	5.31	8	68	100	0.97
1/2"	0.59	1.42	2.24	1.02	0.20	0.31	0.45	2.52	M5	0.69	5.31	15	68	100	0.97
3/4"	0.79	1.42	2.46	1.28	0.24	0.39	0.59	2.87	M5	0.79	5.31	38	90	115	1.35
1"	0.98	1.65	2.70	1.42	0.31	0.47	0.65	3.35	M5	0.91	6.50	65	102	178	2.25
1 1/4"	1.26	1.65	2.91	1.63	0.31	0.47	0.71	3.94	M5	1.00	6.50	118	210	270	3.20
1 1/2"	1.50	1.97	3.56	2.01	0.31	0.55	0.79	4.53	M6	1.06	6.89	195	330	430	5.20
2"	1.97	1.97	4.17	2.56	0.39	0.55	0.79	5.28	M6	1.06	9.65	320	420	586	8.65
2-1/2"	2.56	2.76	5.06	3.15	0.47	0.79	1.14	6.54	M8	1.56	12.6	410	585	674	14.77
3"	3.15	2.76	5.49	3.58	0.47	0.79	1.14	7.44	M8	1.56	12.6	640	975	1238	21.60
4"	3.94	4.02	6.50	4.41	0.63	0.98	1.48	9.09	M10	2.07	10.8	1110	1908	2200	44.75

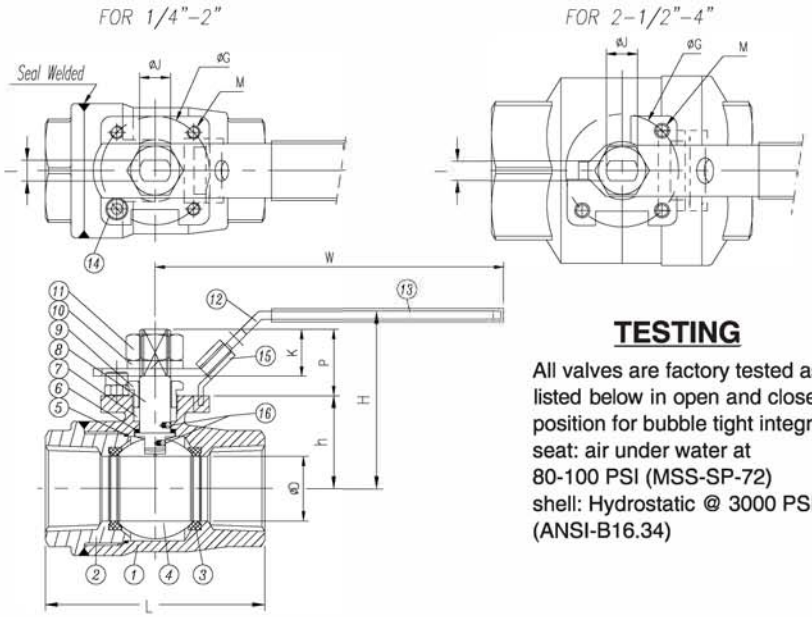
Torque based on clean liquid media

Pressure/Temperature Chart



STAYFLOW

Fusion Series S23 - 1PC Body



TESTING

All valves are factory tested as listed below in open and closed position for bubble tight integrity
seat: air under water at 80-100 PSI (MSS-SP-72)
shell: Hydrostatic @ 3000 PSI (ANSI-B16.34)

Materials of Construction

No.	Parts	S23-SS	S23-CS
1	Body	ASTM A351 CF8M	ASTM A216 WCB
2	End Cap	ASTM A351 CF8M	ASTM A216 WCB
3	Seat #	Super Tek III	Super Tek III
4	Ball	ASTM A351 CF8M	ASTM A351 CF8
5	Gasket #	Graphite	Graphite
6	Thrust Washer #	25% Carbon PTFE	25% Carbon PTFE
7	Stem Packing #	Graphite	Graphite
8	Stem	ASTM A276-316	ASTM A276-304
9	Gland	SS304	SS304
10	Handle Washer	SS304	SS304
11	Handle Nut	SS304	SS304
12	Handle	SS304	Zinc Plated Steel
13	Handle Cover	PVC	PVC
14	Stop Screw	SS304	Steel
15	Locking Device	SS304	Zinc Plated CS
16	Anti-Static Device	SS316	SS304

Alternative materials, special order C/F

MODELS

S23-SS Stainless Steel
S23 -CS Carbon Steel

SIZE Range 1/4 thru 4"

1/4 - 2" 2000 WOG
2 1/2 - 4" 1500 WOG
200 WSP

THREADED ENDS

ANSI B1-20-1 NPT
British Pipe Thread
Available, C/F.

ALSO AVAILABE:
Locking Handle
Oval Handle
Stem Extension

API 607-5th: Certified
NACE MR-0175: Compliance
CRN Registered
CE Approved per PED97/23/EC

Vacuum service:
Standard valve to 25 torr.
Specially prepared valve to 20 microns

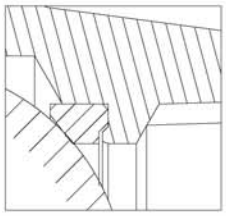
TRACEABILITY: FOUNDRY HEAT # FOR ALL VALVES
METAL NAME PLATES IDENTIFY ALL SOFT PARTS

Seal Weld Design Model S23

Eliminating the possibility of body tail piece unthreading
Eliminating any possible leakage at body joints - safe, sure pressure containment.

Automatic Welding equipment is used for welding body joints. The welding width is always uniform and the weld penetration is consistent. Our equipment maintains a consistent water flow inside the valve, this assures a safe temperature which prevents damage to all valve seats and seals.

Fire Safe Design Feature:



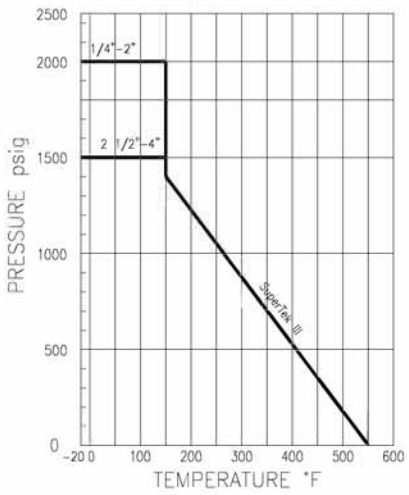
S23 valves are supplied as standard with graphite stem packing and body seal. Valves are certified fire safe. In the event of fire, after heat destroys the primary resilient seat, the ball makes contact with the secondary metal seat, forming a secure seal. The graphite body seal prevents external leakage. The graphite stem packing prevents stem leakage.

Dimensions and Weights

SIZE	D	G	H	h	I	J	K	L	M	P	W	Cv	Torque in-lb # 1000 psi	Torque in-lb # 2000 psi	Weight lbs
1/4"	0.43	1.42	2.17	0.94	0.20	0.31	0.35	2.32	M5	0.59	5.31	8	90	110	0.97
3/8"	0.49	1.42	2.17	0.94	0.20	0.31	0.35	2.32	M5	0.59	5.31	8	90	110	0.97
1/2"	0.59	1.42	2.24	1.06	0.20	0.31	0.45	2.52	M5	0.65	5.31	15	90	110	0.97
3/4"	0.79	1.42	2.46	1.28	0.24	0.39	0.59	2.87	M5	0.79	5.31	38	122	140	1.35
1"	0.98	1.65	2.70	1.42	0.31	0.47	0.65	3.35	M5	0.91	6.50	65	148	189	2.25
1 1/4"	1.26	1.65	2.91	1.63	0.31	0.47	0.71	3.94	M5	1.00	6.50	118	282	360	3.20
1 1/2"	1.50	1.97	3.56	2.01	0.31	0.55	0.79	4.53	M6	1.06	6.89	195	490	600	5.20
2"	1.97	1.97	4.17	2.56	0.39	0.55	0.79	5.28	M6	1.06	9.65	320	638	850	8.65
2-1/2"	2.56	2.76	5.06	3.15	0.47	0.79	1.14	6.54	M8	1.56	12.6	410	695	1200	14.77
3"	3.15	2.76	5.49	3.58	0.47	0.79	1.14	7.44	M8	1.56	12.6	640	1180	1475	21.60
4"	3.94	4.02	6.50	4.41	0.63	0.98	1.48	9.09	M10	2.07	10.8	1110	2478	2750	44.75

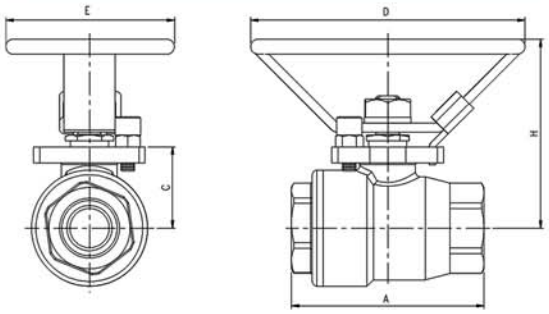
Torque based on clean liquid media

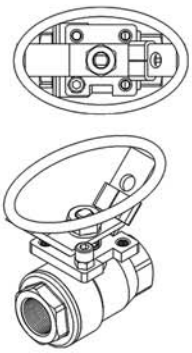
Pressure/Temperature Chart



Unique Valve Designs for Safety and Convenience

Valve with Oval Dimensions

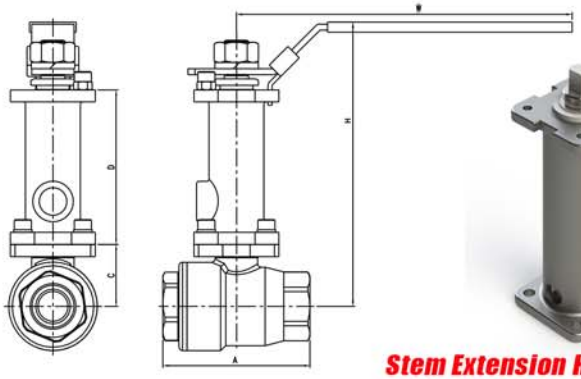




Prevents Accidental Movement

SIZE	A	C	D	E	H
1/4"	2.32	0.94	3.58	2.20	2.40
3/8"	2.32	0.94	3.58	2.20	2.40
1/2"	2.52	1.06	3.58	2.20	2.52
3/4"	2.87	1.28	3.58	2.20	2.74
1"	3.35	1.52	4.88	2.76	3.66
1 1/4"	3.94	1.63	4.88	2.76	3.78
1 1/2"	4.53	2.01	5.28	3.31	4.27
2"	5.28	2.56	5.28	3.31	4.80

Stem Extension XS Series



SIZE	Model of Stem Extensiomn	A	C	D	H	W
1/4"	XS1	2.32	0.94	3.00	5.16	5.31
3/8"	XS1	2.32	0.94	3.00	5.16	5.31
1/2"	XS1	2.52	1.06	3.00	5.28	5.31
3/4"	XS2	2.87	1.28	3.00	5.49	5.31
1"	XS3	3.35	1.52	3.00	5.79	6.50
1 1/4"	XS3	3.94	1.63	3.00	5.91	6.50
1 1/2"	XS4	4.53	2.01	3.00	6.54	9.65
2"	XS5	5.28	2.56	3.00	7.09	9.65

Stem Extension Helps Protects Operator from High Temperatures

Seal Welded Body Option

Prevents Installer ERROR

Safety Trigger Locking Handle

Prevents Unwanted Movement

Prevents Unwanted Access

Standard Unique Features

- Flo-Tites safety trigger handle is designed to prevent accidental movement.
- The valve can be latch locked in the open or closed positions.
- The valve can also be padlocked to limit unwanted access.
- The safety trigger locking device is also standard.

SAFETY FIRST!!!

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