



# Fire Safe Threaded Ball Valves

## Fusion Series

### Models:

T23 2 PC Design

S23 1 PC Design

### Full Port:

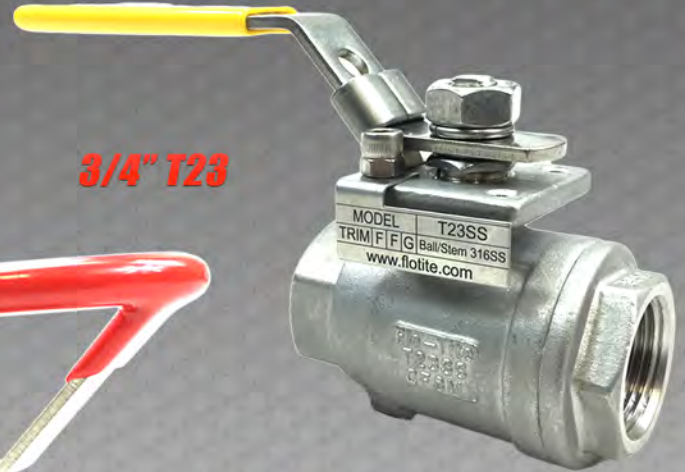
Size 1/4 - 2" 2000 WOG

Size 2 1/2 - 4" 1500 WOG

### Steam Rated:

S23 250 WSP

T23 150 WSP



3/4" T23



1 1/2" S23  
with oval  
handle



3" T23

## Design Features

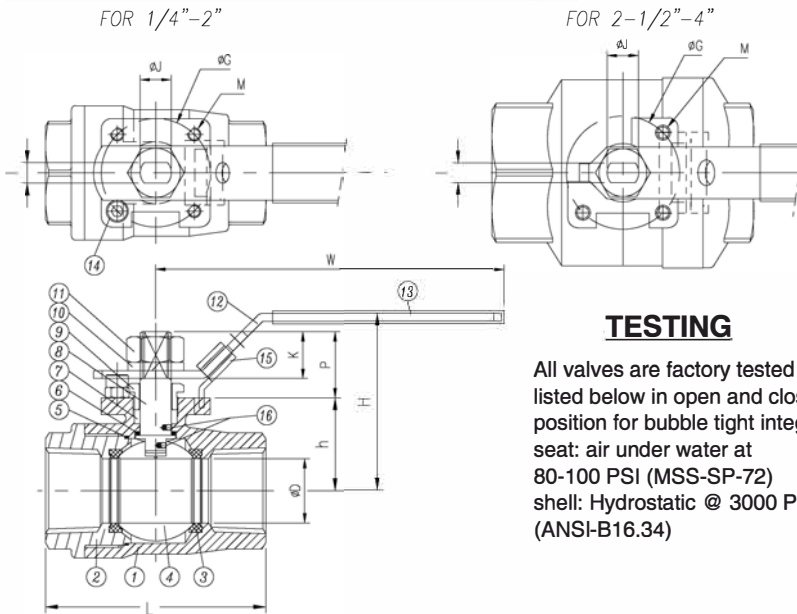
- ISO Automation Pad
- Anti-Static Grounding
- Adjustable Stem Packing
- Supertek Seating
- Safety Locking Handles
- Quality Investment Castings  
Foundry Heat for Full Traceability
- Metal Name Plates For  
Ease of Identifying Soft Parts
- API 608
- Fire Safe API 607-5 Certified
- NACE-MR-0175
- CE 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

Materials of Construction



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)

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 #	SuperTek	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

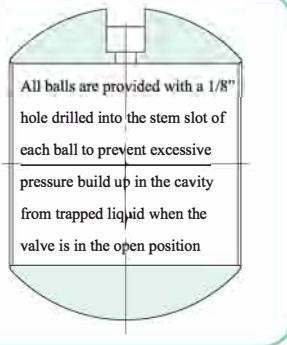
Vacuum service:

Standard valve to 25 torr.

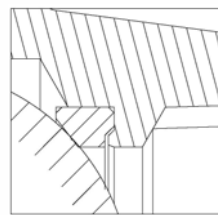
Specially prepared valve  
to 20 microns

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

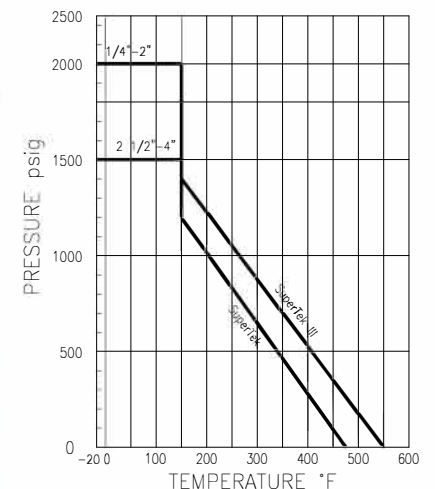


Fire Safe Design Feature:



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.

Pressure/Temperature Chart



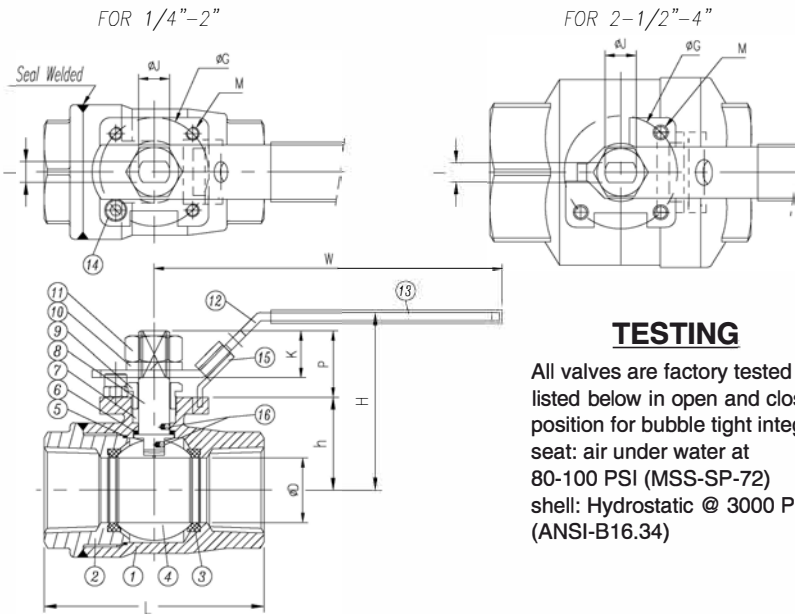
Dimensions and Weights

SIZE	D	G	H	h	I	J	K	L	M	P	W	Cv	Torque in-lb #		Weight lbs
													1000 psi	2000 psi	
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

Fusion Series S23 - 1PC Body

Materials of Construction



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)

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  
250 WSP

THREADED ENDS

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

ALSO AVAILABLE:

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

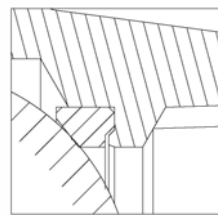
METAL NAME PLATES IDENTIFY ALL SOFT PARTS

Seal Weld Design Model S23

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

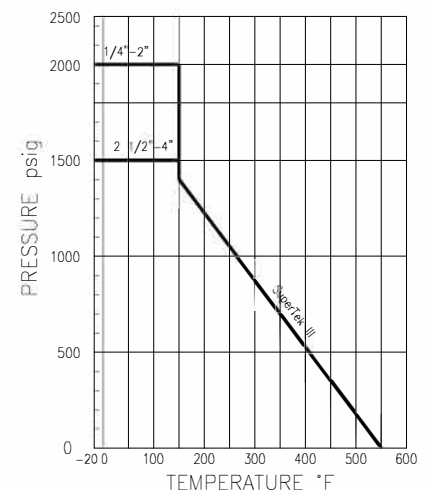
Automatic Welding equipment is used for welding body joints. The welding width is always uniform and the weld penetration is consistent. Our equipment maintains a consistent water flow inside the valve, this assures a safe temperature which prevents damage to all valve seats and seals.

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 seal, forming a secure seal. The graphite body seal prevents external leakage. The graphite stem packing prevents stem leakage.

Pressure/Temperature Chart



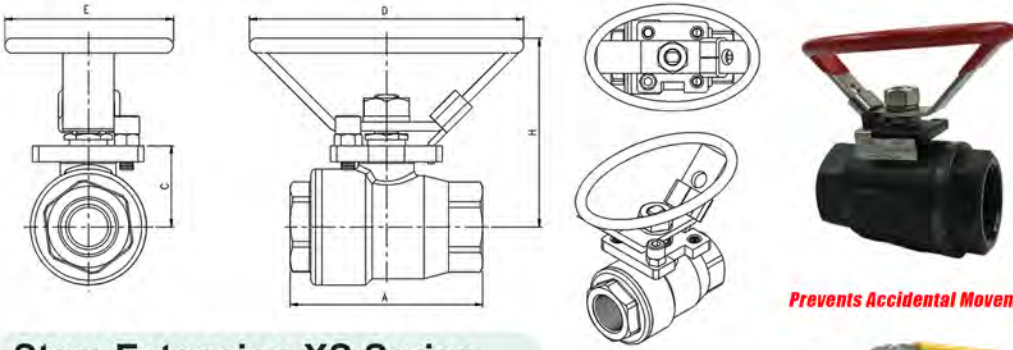
Dimensions and Weights

SIZE	D	G	H	h	I	J	K	L	M	P	W	Cv	Torque in-lb #		Weight lbs
													1000 psi	2000 psi	
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



## Valve with Oval Dimensions



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

**Prevents Accidental Movement**

## Stem Extension XS Series



SIZE	Model of Stem Extension	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!!!