

# MECHANICAL PIPING SYSTEMS



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# 19

## In this Section

### Grooved Couplings

Zero-Flex® Rigid Coupling .....	19.2
Standard Flexible Coupling .....	19.2
QuickVic® Rigid Coupling .....	19.2

### Grooved Fittings

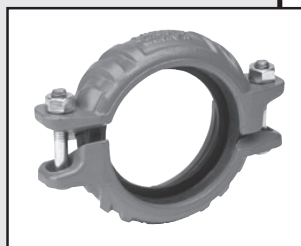
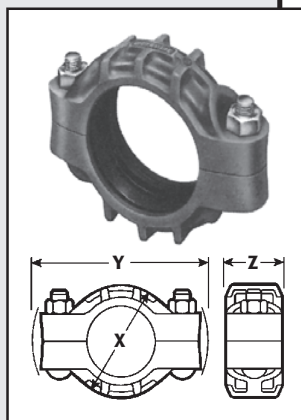
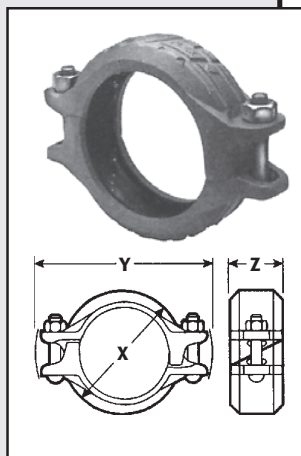
Elbows, Tees & Crosses .....	19.3
Caps and Nipples .....	19.4
Reducer Threaded .....	19.4
Swaged Nipples .....	19.4
Concentric/Eccentric Reducers .....	19.5
Reducing Tees .....	19.5

### Grooved Valves

With Standard Handle .....	19.6
3-Piece Threaded Ball Valve .....	19.6
With Gear Operator .....	19.6
Three Port Diverter .....	19.7
Brass Body .....	19.7

### Steel Pipe Nipples & Fittings

Forged Steel Fittings .....	19.7
Black Hydraulic Piping .....	19.7
Rupture Valves .....	19.7



## IPS Carbon Steel Pipe Grooved Couplings

### Zero-Flex® Rigid Couplings (Style 07)

This unique angle-pad design of Zero-Flex® Style 07 adjusts to standard pipe and roll or cut groove tolerances, positively clamping the pipe to resist flexural and torsional loads. Wider key section fills more of the groove area. (Request 06.02)

Nom. Size	Max. Work Press.	Dimensions			Approx. Wgt. Each
Inches (mm)	PSI (kPa)	X	Y	Z	Lbs (kg)
1 (25)	750 (5175)	2.45 (62)	4.13 (105)	1.88 (48)	1.6 (0.7)
1¼ (32)	750 (5175)	2.60 (66)	4.00 (102)	1.88 (48)	1.6 (0.7)
1½ (40)	750 (5175)	2.94 (75)	4.81 (122)	1.88 (48)	1.6 (0.7)
2 (50)	750 (5175)	3.19 (81)	5.44 (141)	1.88 (48)	2.3 (1.0)
2½ (65)	750 (5175)	3.88 (98)	6.13 (156)	1.88 (48)	2.8 (1.3)
3*	750 (5175)	4.25 (108)	5.75 (146)	1.86 (47)	3.6 (1.6)
3 (80)	750 (5175)	4.56 (116)	6.81 (173)	1.88 (48)	3.1 (1.4)

\*O.D. Dimension

### Standard Flexible Coupling (Style 77)

Style 77 couplings are designed with cross-ribbed construction to provide a strong component for pressure piping systems. Sizes ¾–12" (20–300mm) are two-piece housings. Sizes 14–22" (350–550mm) are cast in four identical segments, with larger sizes cast in six segments. (Request 06.04)

Nom. Size	Max. Work Press.	Dimensions			Approx. Wgt. Each
Inches (mm)	PSI (kPa)	X	Y	Z	Lbs (kg)
¾ (20)	1000 (6900)	2.13 (54)	3.63 (92)	1.75 (44)	1.1 (0.5)
1 (25)	1000 (6900)	2.38 (60)	3.88 (98)	1.75 (44)	1.3 (0.6)
1¼ (32)	1000 (6900)	2.63 (67)	4.63 (118)	1.75 (44)	2.0 (0.9)
1½ (40)	1000 (6900)	3.00 (76)	5.00 (127)	1.75 (44)	2.1 (1.0)
2 (50)	1000 (6900)	3.63 (92)	5.63 (143)	1.75 (44)	2.6 (1.2)
2½ (65)	1000 (6900)	4.25 (108)	6.25 (159)	1.75 (44)	3.1 (1.4)
3*	1000 (6900)	4.31 (110)	6.31 (160)	1.75 (44)	3.6 (1.6)
3 (80)	1000 (6900)	5.00 (127)	7.00 (178)	1.75 (44)	3.5 (1.6)

\*O.D. Dimension

### QuickVic® Flexible Coupling (Style 177)

(Also available in Regid version, Style 107)

This unique angle pad, installation-ready design is ready to install without disassembly of the coupling. Style 177 adjusts to standard pipe and roll or cut groove tolerances, positively clamping the pipe to resist flexural and torsional loads, while reducing installation time. (Request 06.19)

Nom. Size	Max. Work Press.	Joint Assembled Dimensions			Approx. Wgt. Each
Inches (mm)	PSI (kPa)	X	Y	Z	Lbs (kg)
2 (50)	1,000 (6900)	3.66 (93)	5.98 (152)	1.93 (49)	2.7 (1.2)
2½ (65)	1,000 (6900)	4.16 (106)	6.54 (166)	1.94 (49)	3.1 (1.4)
3 (80)	1,000 (6900)	4.82 (111)	7.13 (181)	1.94 (49)	3.5 (1.6)
4 (100)	1,000 (6900)	6.03 (153)	8.43 (214)	2.13 (54)	5.1 (2.3)

Questions? Answers at...

Western US: 866 CED-ELEV or 866-233-3538  
 Eastern US: 866-253-2915 or 860-256-2211

# IPS Carbon Steel Pipe Grooved Fittings

## Elbows, Tees & Crosses

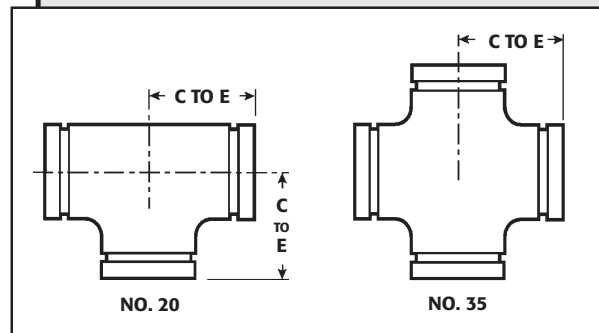
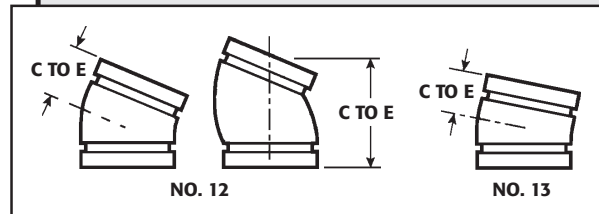
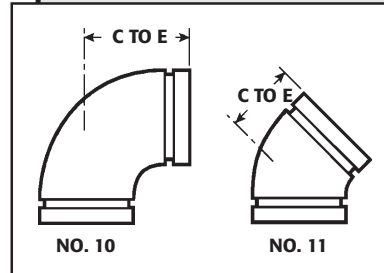
Ductile Iron (except as noted)

Nominal Size	No. 10 (90° Elbow)		No. 11 (45° Elbow)	
	C to E	Approx. Wgt. Ea.	C to E	Approx. Wgt. Ea.
Inches (mm)	Inches (mm)	Lbs (kg)	Inches (mm)	Lbs (kg)
3/4 (20)	2.25 (57)	0.5 (0.2)	1.50 (38)	0.5 (0.2)
1 (25)	2.25 (57)	0.6 (0.3)	1.75 (44)	0.6 (0.3)
1 1/4 (32)	2.75 (70)	1.0 (0.5)	1.75 (44)	0.9 (0.4)
1 1/2 (40)	2.75 (70)	1.1 (0.5)	1.75 (44)	0.9 (0.4)
2 (50)	3.25 (83)	2.0 (0.9)	2.00 (51)	1.4 (0.6)
2 1/2 (65)	3.75 (95)	3.2 (1.5)	2.25 (57)	2.2 (1.0)
3*	3.75 (95)	3.7 (1.7)	2.25 (57)	3.4 (1.5)
3 (80)	4.25 (108)	4.4 (2.0)	2.50 (64)	3.1 (1.4)

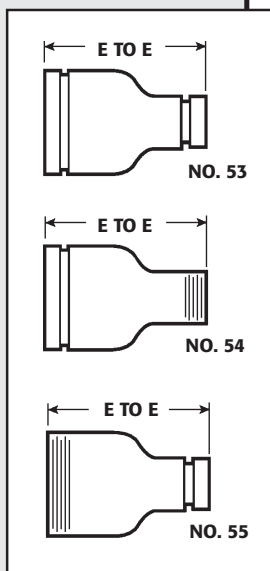
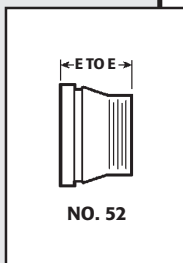
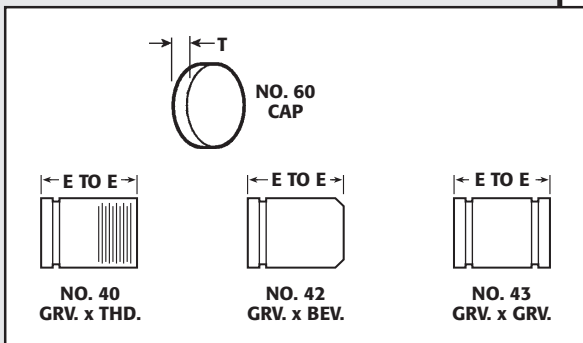
Nominal Size	No. 12 (22 1/2° Elbow)		No. 13 (11 1/4° Elbow)	
	C to E	Approx. Wgt. Ea.	C to E	Approx. Wgt. Ea.
Inches (mm)	Inches (mm)	Lbs (kg)	Inches (mm)	Lbs (kg)
3/4 (20)	1.63sw (41)	-	1.38 sw (35)	-
1 (25)	3.25 (83)**	0.6 (0.3)	1.38 (35)	0.3 (0.1) sw
1 1/4 (32)	1.75 (44)	0.8 (0.4) sw	1.38 (35)	0.5 (0.2) sw
1 1/2 (40)	1.75 (44)	0.8 (0.4) sw	1.38 (35)	0.5 (0.2) sw
2 (50)	3.375 (95)**	1.4 (0.6)	1.38 (35)	1.0 (0.5)
2 1/2 (65)	4.00 (102)**	2.3 (1.0)	1.50 (38)	1.5 (0.7) sw
3*	-	-	-	-
3 (80)	4.50 (114)**	3.1 (1.4)	1.50 (38)	2.1 (1.0)

Nominal Size	No. 20 Tee		No. 35 Cross (sw)	
	C to E	Approx. Wgt. Ea.	C to E	Approx. Wgt. Ea.
Inches (mm)	Inches (mm)	Lbs (kg)	Inches (mm)	Lbs (kg)
3/4 (20)	2.25 (57)	0.6 (0.3)	2.25 (57)	0.9 (0.4)
1 (25)	2.25 (57)	1.0 (0.5)	2.25 (57)	1.3 (0.6)
1 1/4 (32)	2.75 (70)	1.5 (0.7)	2.75 (1.0)	2.1 (1.0)
1 1/2 (40)	2.75 (70)	2.0 (0.9)	2.75 (70)	2.5 (1.1)
2 (50)	3.25 (83)	3.0 (1.4)	3.25 (83)	3.8 (1.7) d
2 1/2 (65)	3.75 (95)	4.8 (2.1)	3.75 (95)	6.1 (2.8)
3*	3.75 (95)	7.3 (3.3)	-	-
3 (80)	4.25 (108)	6.8 (3.0)	4.25 (108)	10.5 (4.8)

\*O.D. Dimension  
\*\*Gooseneck design, end-to-end dimension  
(d) Ductile iron  
(sw) Segmentally welded steel



**Questions? Answers at...**  
Western US: 866 CED-ELEV or 866-233-3538  
Eastern US: 866-253-2915 or 860-256-2211



# IPS Carbon Steel Pipe Grooved Fittings

## Caps and Nipples (No. 60, 40, 42, 43)

Cap: Ductile Iron, Nipples: Steel

Nominal Size Inches (mm)	Thickness T Inches (mm)	No. 60 Cap**		No. 40, 42, 43 Nipple	
		Approx. Wgt. Ea. Lbs (kg)	E to E Inches (mm)	Approx. Wgt. Ea. Lbs (kg)	
3/4 (20)	0.88 (22)	0.2 (0.1)	3.00 (76)	0.3 (0.1)	
1 (25)	0.88 (22)	0.3 (0.1)	3.00 (76)	0.4 (0.2)	
1 1/4 (32)	0.88 (22)	0.3 (0.1)	4.00 (102)	0.8 (0.4)	
1 1/2 (40)	0.88 (22)	0.5 (0.2)	4.00 (102)	0.9 (0.4)	
2 (50)	0.88 (22)	0.6 (0.3)	4.00 (102)	1.2 (0.5)	
2 1/2 (65)	0.88 (22)	1.0 (0.5)	4.00 (102)	1.9 (0.9)	
3*	0.88 (22)	1.2 (0.5)	-	-	
3 (80)	0.88 (22)	1.2 (0.5)	4.00 (102)	2.5 (1.1)	

\*O.D. Dimension

\*\*No. 60 cap is not suitable for use in vacuum service with Style 72 or 750 couplings. No. 61 Bull Plugs should be used.

## Reducer Threaded—Small End (No. 52)

Nominal Size Inches (mm)	E to E Inches (mm)	Approx. Wgt. Ea. Lbs (kg)
1 1/2 x 1 (40 x 25)	2.50 (64)	0.8 (0.4)
2 x 3/4 (50 x 20)	2.50 (64)	0.9 (0.4)
2 x 1 (50 x 25)	2.50 (64)	1.0 (0.5)
2 x 1 1/4 (50 x 32)	2.50 (64)	1.2 (0.5)
2 x 1 1/2 (50 x 40)	3.00 (76)	1.3 (0.6)
2 1/2 x 2 (65 x 50)	2.50 (64)	1.4 (0.6)
3 x 1 (80 x 25)	2.50 (64)	1.3 (0.6)
3 x 2 (80 x 50)	2.50 (64)	1.5 (0.7)
3 x 2 1/2 (80 x 65)	2.50 (64)	2.4 (1.1)

Available with British Standard Pipe Threads, specify "BSP" clearly on order.

## Swaged Nipples (No. 53, 54, 55)

Steel

Nominal Size Inches (mm)	E to E Inches (mm)	Approx. Wgt. Ea. Lbs (kg)
2 x 1 (50 x 25)	6.50 (165)	2.0 (0.9)
2 x 1 1/4 (50 x 32)	6.50 (165)	2.0 (0.9)
2 x 1 1/2 (50 x 40)	6.50 (165)	2.0 (0.9)
2 1/2 x 1 (65 x 25)	7.00 (178)	3.0 (1.4)
2 1/2 x 1 1/4 (65 x 32)	7.00 (178)	3.0 (1.4)
2 1/2 x 1 1/2 (65 x 40)	7.00 (178)	3.0 (1.4)
2 1/2 x 2 (65 x 50)	7.00 (178)	3.0 (1.4)
3 x 1 (80 x 25)	8.00 (203)	4.5 (2.0)
3 x 1 1/4 (80 x 32)	8.00 (203)	4.5 (2.0)
3 x 1 1/2 (80 x 40)	8.00 (203)	4.4 (2.0)
3 x 2 (80 x 50)	8.00 (203)	4.5 (2.0)
3 x 2 1/2 (80 x 65)	8.00 (203)	4.5 (2.0)

Questions? Answers at...

Western US: 866 CED-ELEV or 866-233-3538  
Eastern US: 866-253-2915 or 860-256-2211

# IPS Carbon Steel Pipe Grooved Fittings

## Concentric/Eccentric Reducers (No. 50, 51)

Steel (except as noted)

Nominal Size Inches (mm)	No. 50		No. 51	
	E to E Inches (mm)	Approx. Wgt. Ea. Lbs (kg)	E to E Inches (mm)	Approx. Wgt. Ea. Lbs (kg)
1 1/4 x 3/4 (32 x 20)	*	*	-	-
1 1/4 x 1 (32 x 25)	*	*	-	-
1 1/2 x 3/4 (40 x 20)	*	*	-	-
1 1/2 x 1 (40 x 25)	2.50 (64) d	0.8 (0.4)	8.50 (216)	4.5 (2.0)
1 1/2 x 1 1/4 (40 x 32)	*	*	-	-
2 x 3/4 (50 x 20)	2.50 (64) d	0.6 (0.3)	9.00 (229)	2.0 (0.9)
2 x 1 (50 x 25)	2.50 (65) d	0.7 (0.3)	9.00 (229)	2.3 (1.0)
2 x 1 1/4 (50 x 32)	2.50 (65) d	1.2 (0.5)	9.00 (229)	4.6 (2.1)
2 x 1 1/2 (50 x 40)	2.50 (64) d	1.1 (0.5)	9.00 (229)	4.6 (2.1)
2 1/2 x 1 (65 x 25)	9.50 (241)	3.3 (1.5)	9.50 (241)	3.3 (1.5)
2 1/2 x 1 1/4 (65 x 32)	9.50 (241)	3.6 (1.6)	9.50 (241)	*
2 1/2 x 1 1/2 (65 x 40)	9.50 (241)	3.6 (1.6)	9.50 (241)	3.6 (1.6)
2 1/2 x 2 (65 x 50)	2.50 (64) d	1.4 (0.6)	3.50 (89) d	1.6 (0.7)
3 x 1 (80 x 25)	2.50 (64) d	1.4 (0.6)	9.50 (241)	4.8 (2.2)
3 x 2 (80 x 50)	2.50 (64) d	1.6 (0.7)	3.50 (89) d	2.1 (1.0)
3 x 2 1/2 (80 x 65)	2.50 (64) d	1.8 (0.8)	3.50 (89) d	2.2 (1.0)

(d) Ductile iron.

## Reducing Tees (No. 25, 29)

Segmentally Welded Steel (except as noted)

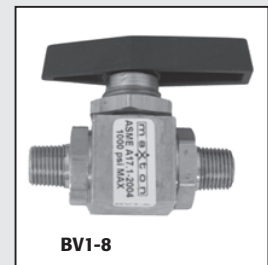
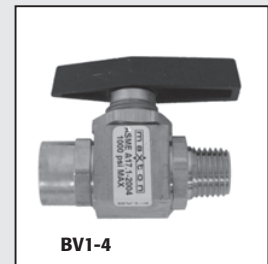
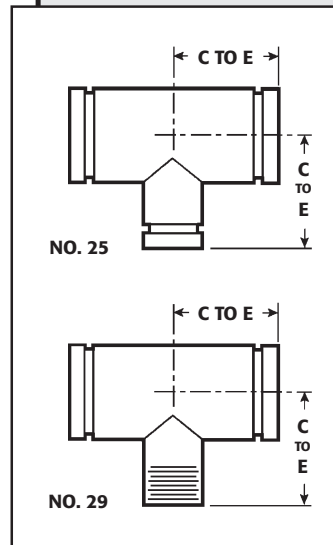
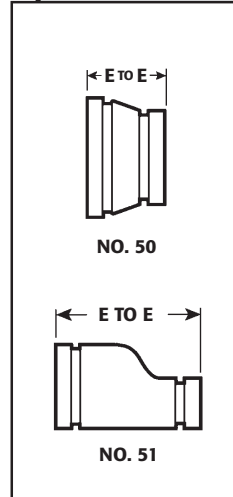
Nominal Size Inches (mm)	No. 25 Standard C to E		No. 29 w/Thd. Branch C to E		Approx. Wgt. Ea. Lbs (kg)
	Inches (mm)	Inches (mm)	Inches (mm)	Inches (mm)	
2 x 2 x 3/4 (50 x 50 x 20)	3.25 (83) d	3.25 (83) d	3.25 (83) d	2.5 (1.1)	
2 x 2 x 1 (50 x 50 x 25)	3.25 (83) d	3.25 (83) d	3.25 (83) d	2.3 (1.0)	
2 x 2 x 1 1/2 (50 x 50 x 40)	3.25 (83)	3.25 (83)	3.25 (83)	3.2 (1.5)	
2 1/2 x 2 1/2 x 1 (65 x 65 x 25)	3.75 (95)	3.75 (95)	3.75 (95)	3.8 (1.7)	
2 1/2 x 2 1/2 x 1 1/2 (65 x 65 x 40)	3.75 (95) d	3.75 (95) d	3.75 (95) d	4.0 (2.0)	
2 1/2 x 2 1/2 x 2 (65 x 65 x 50)	3.75 (95)	3.75 (95)	3.75 (95)	4.5 (2.0)	
3 x 3 x 1 (80 x 80 x 25)	4.25 (108) d	4.25 (108) d	4.25 (108) d	6.5 (2.9)	
3 x 3 x 1 1/2 (80 x 80 x 40)	4.25 (108)	4.25 (108)	4.25 (108)	6.5 (2.9)	
3 x 3 x 2 (80 x 80 x 50)	4.25 (108)	4.25 (108)	4.25 (108)	6.2 (2.8)	
3 x 3 x 2 1/2 (80 x 80 x 65)	4.25 (108)	4.25 (108)	4.25 (108)	6.4 (2.9)	

No. 29 Threaded Outlet Reducing Tees are supplied NPT and are available with British Standard threads. For British Standard specify "BSP" clearly on order.  
(d) Ductile iron.

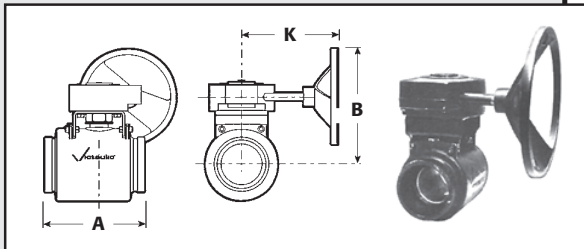
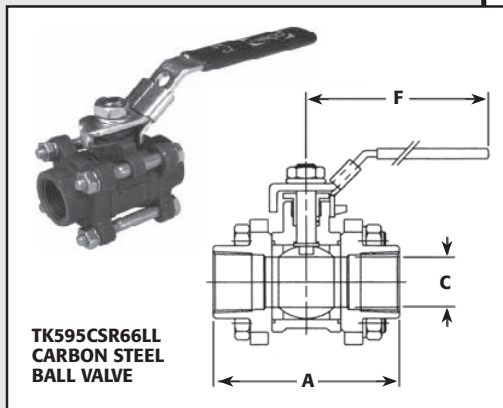
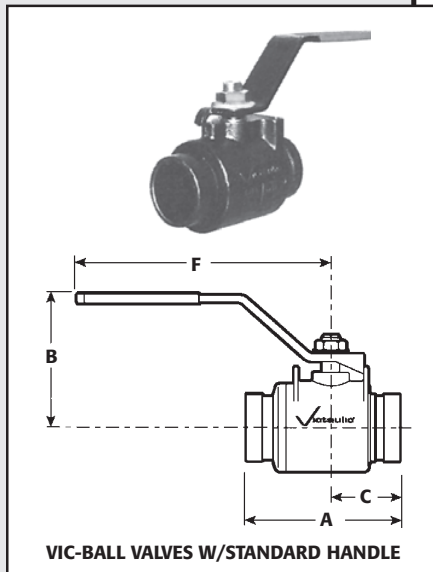
## Pressure Gauge Shut Off Ball Valve

The Maxton Hydraulic Shut Off 1/8" Ball Valve has been tested specifically for hydraulic elevator applications. This bar-stock brass design with a double O-ring stem seal features a blow out proof stem and a metal retainer seal. Complies with ASME A17.1

Part Number	Description
BV1-8	1/8" male to male thread
BV1-4	1/4" male to female thread



**Questions? Answers at...**  
Western US: 866 CED-ELEV or 866-233-3538  
Eastern US: 866-253-2915 or 860-256-2211



## IPS Carbon Steel Pipe Grooved Valves

### Vic-Ball® Valves (Series 726)

Vic-Ball valve is a standard port, end-entry valve designed for 1000 PSI (4130 kPa) WOG service. Valve body and end cap are ductile iron. Micro-finished steel ball and stem (316 stainless available), TFE seat streamlined design provides excellent flow characteristics. Vic-Ball valves are available with internal plastic coating or with a full stainless (316) body in 2, 2½, 3 and 4" (50, 65, 80 and 100 mm) sizes. Vic-Ball is available with standard manual handles or gear operators. A tamper resistant lock/seal option is available. For electric or pneumatic actuation, contact Victaulic. Pinned handle are available; contact Victaulic for details.

Request 08.13.

### Vic-Ball Valves with Standard Handle (Series 726)

Nom Size Inches (mm)	Dimensions - Inches (mm)				Approx. Wgt. Each Lbs (kg)
	E-E A	Hgt. B	C	F	
1½ (40)	5.00 (127)	2.53 (64)	2.32 (60)	7.13 (181)	5.0 (2.3)
2 (50)**	5.50 (140)	3.31 (84)	2.47 (63)	9.13 (232)	6.5 (2.9)
2½ (65)	6.30 (160)	3.68 (94)	2.82 (72)	9.13 (232)	10.5 (4.8)
3*	6.30 (160)	3.68 (94)	2.82 (72)	9.13 (232)	10.5 (4.8)
3 (80)**	6.71 (170)	3.87 (98)	3.03 (77)	9.13 (232)	13.5 (6.1)

\*O.D. Dimension

\*\* Stainless steel body also available.

### 3-Piece Carbon Steel Ball Valve (TK595CSR66LL)

Full port. Female threaded ends

Nom Size Inches (mm)	Dimensions - Inches (mm)				Approx. Wgt. Each Lbs (kg)
	E-E A	Hgt. B	C	F	
2 (50)	5.43 (138)	4.25 (108)	1.97 (50)	7.95 (202)	9.5 (4.32)

### Vic-Ball Valves with Gear Operator (Series 726)

Nominal Size** Inches (mm)	Dimensions - Inches (mm)			Approx. Wgt. Each Lbs (kg)
	E-E A	Height B	K	
2 (50)	5.50 (140)	10.94 (278)	6.87 (175)	11.8 (5.4)
2½ (65)	6.30 (160)	10.88 (276)	6.87 (175)	15.6 (7.1)
3*	6.30 (160)	10.88 (276)	6.87 (175)	15.6 (7.1)
3 (80)	6.71 (170)	11.28 (287)	6.87 (175)	21.8 (9.9)

\*O.D. Dimension

\*\*1½ (40mm) sizes available.

Questions? Answers at...

Western US: 866 CED-ELEV or 866-233-3538

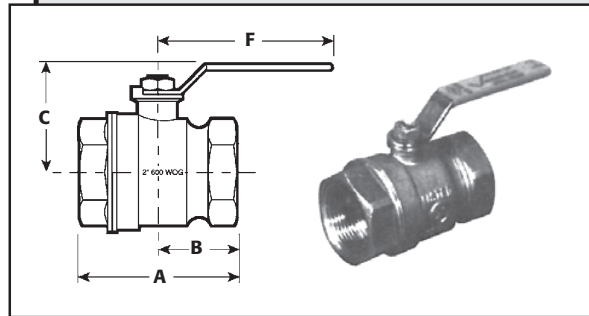
Eastern US: 866-253-2915 or 860-256-2211

# IPS Carbon Steel Pipe Grooved Valves Steel Pipe Nipples & Fittings

## Brass Body Ball Valve (Series 722)

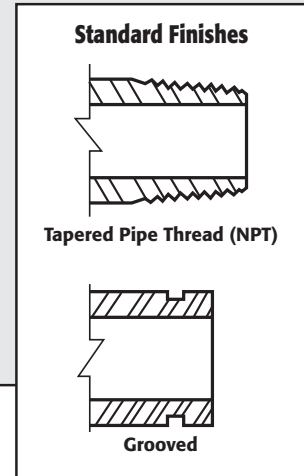
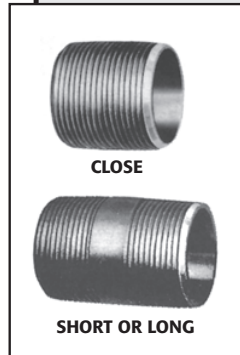
Nom Size Inches (mm)	Dimensions - Inches (mm)				Approx. Wgt. Each Lbs (kg)
	E-E A	Hgt. B	C	F	
1/4 (8)	1.54 (39)	0.77 (20)	1.03 (26)	1.65 (42)	0.2 (0.09)
3/8 (10)	1.77 (45)	0.88 (22)	1.28 (33)	3.07 (78)	0.3 (0.14)
1/2 (15)*	2.13 (54)	1.06 (27)	1.33 (34)	3.07 (78)	0.4 (0.18)
3/4 (20)*	2.44 (62)	1.22 (31)	1.79 (45)	3.78 (96)	0.7 (0.32)
1 (25)*	2.95 (75)	1.48 (37)	1.95 (50)	3.78 (96)	1.0 (0.45)
1 1/4 (32)*	3.31 (84)	1.65 (42)	2.17 (55)	3.78 (96)	1.5 (0.68)
1 1/2 (40)*	3.66 (93)	1.83 (46)	2.68 (68)	5.43 (138)	2.1 (0.95)
2 (50)*	4.21 (107)	2.11 (53)	2.89 (73)	5.43 (138)	2.4 (1.09)

\*UL Listed, FM Approved as noted in text above.



## Forged Steel Fittings

- Available in 90s, 45s, couplings, reducing bushings and reducing couplings
- 3000psi, 3000lb. rated
- Sizes 2, 2.5 and 3-inch.



## Black Hydraulic Piping

We are proud to offer Black Hydraulic Pipe in a variety of constructions and sizes. Schedule 40 and Schedule 80 available from 2-inch to 3-inch. Standard delivery is in 20-foot sections. We will cut to length! (Other sizes available upon request.)

See page 5.14 for Cush Clamps.

## Rupture Valves

The rupture valve is designed to allow an elevator to decelerate comfortably, bringing the elevator to a smooth stop in cases where the down speed exceeds allowable limits due to failure in a cylinder line and/or pre-set allowable limits.

The rupture valve can be mounted in any position directly onto the cylinder inlet.

We conveniently stock rupture valves in all sizes. We make it easy to install as we offer a standard female connection with an NPT taper (also available in grooved).

Line Size	GPM	L/Min	PSI	Bar
3/4"	1.3-20	5-100	1500	100
1"	27-45	101-175	1500	100
1 1/2"	46-110	176-425	1500	100
2"	111-208	426-800	1500	100
2 1/2"	209-318	801-1225	1500	100
3"	319-546	1226-2100	1500	100

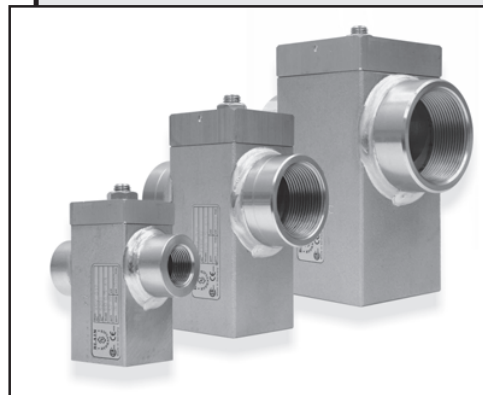
## Identification

Where possible, each seamless pipe nipple is identified with the following:

- A trademark
- Seamless designation "SMLS"
- Pipe schedule STD or XS
- Material designation A106 B



Steel pipe nipples meet Federal Specification WWN 351



**Questions? Answers at...**  
Western US: 866 CED-ELEV or 866-233-3538  
Eastern US: 866-253-2915 or 860-256-2211

