

# SEAMAC

Piping Solutions Inc.

An ISO 9001:2008 Certified Co.



Quality of our products will speak Quality of our relation



Stainless Steel | Duplex Steel | Alloys Steel | Carbon Steel | Nickel Alloys | Copper Nickel.



An ISO 9001:2008 Certified Co.

# SEAMAC

Piping Solutions Inc.

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## Company Profile



Since Seamac was founded, it has been our mission to not only manufacture butt-weld fittings, long radius (3D, 5D, Customized) bends and large diameter welded 2 Halves Pipe Fittings but also provide complete piping package solutions to our customers.

By flexibility, skill, experience and dedication to our work as well as long-standing relationships with leading manufacturers for all piping related products, we have become over the years a well-known and leading supplier to EPC and End users across the globe.

We have also become a ONE STOP SHOP for reliable Indian origin Piping Supplies for various stockists and traders around the world. Hard-to-find items, short delivery times, rare material grades and similar tasks are just as much our daily business as standard items from mass production. We find solutions for your individual requirements.

We have our own in-house inspection and commissioning staff enabling us to satisfy each customer's individual logistical requirements.

## Quality Policy

Quality is our mission, the quality policy is our main tool in achieving it.

Utmost Satisfaction of client's expectation.

Innovative, Cost and time effective services

Consistent and Continuous quality improvement

Fulfillments of defined quality objective targets

Develop the organization as an International for excellence

Continuous evaluation of market to explore challenging areas of operation



The group is determined to improve productivity and focus continuously on innovation and up gradation of its products and people.

### Testing Facility available

- Chemical Analysis
- Mechanical Tests
- Metallography Test
- Hydrostatic
- Corrosion Test
- Ultrasonic Test
- Radiography
- Miscellaneous Test



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Piping Solutions Inc.



Heat Treatment



Pipe Bending



Plate Pressing

## *Our Facility*



We have all in house facilities for manufacturing of L. R. Bend, Welded 2 Half Fittings, Flanges, Outlets such as Cutting, Hot & Cold Forming, Pressing, Rolling, Ball Passing, Welding, Grinding, Finishing, Gauging, Handling, Hydraulic Test, Heat Treatment, Solutions annealing, Temperature Controlling With Heat Treatment Chart for Client review, surface Treatment, Machining Drilling, Boring, ID Control Picking, Passivation anti rust Coating for excellent protection and durable packaging.

Each of our product comes with a manufacturer test certificate with a manufacturer test certificate with any reputed National & International Third Party Inspection can be done as per Customer requirement 3.1 / 3.2 Certification

## *Our Mission*



To provide the best quality products & services by maintaining high standards of manufacturing low cost, on time delivery customized products & clients satisfaction.





## Butt-weld Fitting

### Stainless Steel & Duplex Steel Fittings

Size	: 1/2"NB to 36"NB ANSI B 16.9 MSS-SP-43
Schedule	: 10S/40S/80S/160S/XXS
Stainless Steel	: ASTM A 403 WP - TP 304/304H/304L/316/ 316H/316L/316Ti/309/310/317L/321/347/904L
Duplex Steel	: ASTM A815 - UNS S31803, S32750, S32760, S32205

### Alloy Steel, Carbon Steel & LTCS Fittings

Size	: 1/2"NB to 36"NB ANSI B 16.9
Schedule	: 10S/40S/80S/160S/XXS
Alloy Steel	: ASTM A 234 WPB WP5, WP9, WP11, WP12, WP91
Carbon Steel	: ASTM A 234 WPB, IS 1239 PART II
Low Temp. CS	: ASTM A-420 WPL6
Other Service	: Hot Dip Galvanizing, Sand Blasting

### Copper & Nickel Alloys Fittings

Size	: 1/2"NB to 36"NB ANSI B 16.9
Schedule	: 10S/40S/80S
Copper Nickel	: C70600(90:10), C71500 (70:30), C71640
Nickel	: UNS N02200, N02201
Monel	: UNS N04400, N05500, Alloy 20
Inconel	: UNS N06600, N06601, N06625, N08800, N08810, N08825
Hastelloy	: UNS N10276, N06022, N10665, N06455

## Test Certificate

Manufacturer Test Certification  
En 3.1 & 3.2  
IBR Test Certificate Form IIC

Stubend - (Long & Short)

## Type

U Bend  
End Cap  
Laterals

Elbow (45 DEG, 90 DEG, 180 DEG)

Tee - (Barred, Equal, Reducing)

Reducer - (Concentric & Eccentric)

Nipple - (Swage & Barrel)





## Forged Fittings

### Stainless Steel & Duplex Steel Forged Fittings

Size	: 1/2"NB to 4"NB (Socket Weld & Threaded)
Class	: 3000#, 6000#, 9000# in ANSI B 16.11
Stainless Steel	: ASTM A 182F - 304/304H/304L/316/316H 316/316Ti, 309, 310, 317L, 321, 347, 904L
Duplex Steel	: ASTM A 182 - F51, F53, F55

### Alloy Steel, Carbon Steel & LTCS Forged Fittings

Size	: 1/2"NB to 4"NB (Socket Weld & Threaded)
Schedule	: 3000#, 6000#, 9000# in ANSI B 16.11
Alloy Steel	: ASTM A 182 - F5, F9, F11, F21, F22 & F91
Carbon Steel	: ASTM A 105
Low Temp. CS	: Hot Dip Galvanizing, Sand Blasting, Customized Machining

### Copper & Nickel Alloys Forged Fittings

Size	: 1/2"NB to 4"NB, (Socket Weld & Threaded)
Class	: 3000#, 6000#, 9000#, in ANSI B 16.11
Copper Nickel	: C70600(90:10), C71500 (70:30), C71640
Nickel	: UNS N02200, N02201
Monel	: UNS N04400, N05500, Alloy 20
Inconel	: UNS N06600, N06601, N06625, N08800, N08810, N08825
Hastelloy	: UNS N10276, N06022, N10665, N06455
Titanium	: Gr. 1,2,3 DTH 3.7025, DTH 3.7065, DTH 3.7055

## Test Certificate

Manufacturer Test Certification  
En 3.1 & 3.2  
IBR Test Certificate Form IIIC

## Type

Elbow (45 & 90 Deg)	Coupling
Tee	Cap
Union	Plug
Cross	Bushing
Swage Nipple	Boss





**Branch Connections**

**Stainless Steel & Duplex Steel Outlets**

- Size : 1/2"NB to 24"NB in Various Schedule
- Class : 3000LBS, 6000LBS
- Stainless Steel : ASTM A 182F - 304/304H/304L/316/316H  
316/316Ti, 309, 310, 317L, 321, 347, 904L
- Duplex Steel : ASTM A 182 - F51, F53, F55

**Alloy Steel, Carbon Steel & LTCS Outlets**

- Size : 1/2"NB to 4"NB in various Schedule
- Schedule : 3000 LBS, 6000 LBS
- Alloy Steel : ASTM A 182 - F5, F9, F11, F21, F22 & F91
- Carbon Steel : ASTM A 105
- Low Temp. CS : A 350 LF2

**Copper & Nickel Alloys Outlets**

- Size : 1/2"NB to 24"NB in various Schedule
- Class : 3000 LBS, 6000 LBS
- Copper Nickel : C70600 (90:10), C71500 (70:30), C71640
- Nickel : UNS N02200, N02201
- Monel : UNS N04400, N05500, Alloy 20
- Inconel : UNS N06600, N06601, N06625, N08800, N08810, N08825
- Hastelloy : UNS N10276, N06022, N10665, N06455
- Titanium : Gr. 1,2,3 DTH 3.7025, DTH 3.7035, DTH 3.7055

**Test Certificate**

Manufacturer Test Certification  
En 3.1 & 3.2  
IBR Test Certificate Form IIIC

**Type**

- Weldolet
- Socketlet
- Elbolet
- Theadolet
- Nipolet
- Latrolet
- Sweepolet





## Long Radius Bend



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### Stainless Steel & Duplex Steel Bends

Size	: 1/2" NB to 34" NB
Schedule	: Sch. 10 to Sch. 160 in 3D, 5D, 6D, 8D, 10D
Stainless Steel	: ASTM A 403 WP - TP 304/304H/304L/316/316H/ 316L/316Ti/309/310/317L/321/347/904L
Duplex Steel	: ASTM A815 - UNS S31803, S32750, S32760, S32205

### Alloy Steel, Carbon Steel & LTCS Bends

Size	: 2" to 24"
Schedule	: Sch. 2 to Sch XXS in 3D, 5D, 6D, 8D, 10D
Alloy Steel	: ASTM A 234 WPB WP5, WP9, WP11, WP12, WP91
Carbon Steel	: ASTM A 234 WPB
Low Temp. CS	: ASTM A-420 WPL6

### Copper & Nickel Alloys Bends

Size	: 1/2" to 12"
Schedule	: Sch. 10 to Sch 80 in 3D, 5D, 6D, 8D, 10D
Copper Nickel	: C70600(90:10), C71500 (70:30), C71640
Nickel	: UNS N02200, N02201
Monel	: UNS N04400, N05500, Alloy 20
Inconel	: UNS N06600, N06601, N06625, N08800, N08810, N08825
Hastelloy	: UNS N10276, N06022, N10665, N06455
Tolerance	: Minimum wall Thickness Rate and Ovality, No Wrinkles, with required Tangent length

## Test Certificate

Manufacturer Test Certification  
En 3.1 & 3.2  
IBR Test Certificate Form IIIC

## Type

- Long Radius Bend
- Piggable Bend
- Hot Bend
- Customized Bend







## Flanges

### Stainless Steel & Duplex Steel Flanges

Size	: 1/2"NB to 48"NB, ANSI B 16.5
Class	: 150#, 300#, 600#, 900#, 1500#, 2500#, in ASA 150 & ASA 300
Stainless Steel	: ASTM A 240 / 182 F - 304/304H/304L/316/316H/ 316L/316Ti/309/310/317L/321/347/904L
Duplex Steel	: ASTM A 182 - F51, F53, F55

### Alloy Steel, Carbon Steel & LTCS Flanges

Size	: 1/2"NB to 48"NB ANSI B16.5
Schedule	: 150#, 300#, 600#, 900#, 1500#, 2500# in ASA 150 & ASA 300
Alloy Steel	: ASTM A 182 - F5, F9, F11, F21, F22 & F91
Carbon Steel	: ASTM A 105, ASTM A694, F42, F46, F52, F60, F65, F70
Low Temp. CS	: A 350 LF2, A 516 GR. 70

### Copper & Nickel Alloys Flanges

Size	: 1/2"NB to 6"NB in various Schedule
Standard	: 150#, 300#, 600#, 900#, 1500#, 2500# in ASA 150 & ASA 300
Copper Nickel	: C70600 (90:10), C71500 (70:30), C71640
Nickel	: UNS N02200, N02201
Monel	: UNS N04400, N05500, Alloy 20
Inconel	: UNS N06600, N06601, N06625, N08800, N08810, N08825
Hastelloy	: UNS N10276, N06022, N10665, N06455
Titanium	: Gr. 1,2,3 DTH 3.7025, DTH 3.7035, DTH 3.7055

## Test Certificate

Manufacturer Test Certification  
En 3.1 & 3.2  
IBR Test Certificate Form III C

## Type

Weldolet	Screwed / Threaded
Socketwled	Long Weldneck
Slip on	Lapped Joint
Blind	Spectacle Blind





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## Welded 2 Halves Fittings

Size	: 6" NB to 60"NB
Thickness	: Sch. 10S/40S/80S/160/XXS
Dimension	: ANSI B 16.9:2007, MSS-SP-43, MSS-SP-75
Type	: Elbow, Tee, Reducer, Stubend, Laterals, Customized Fittings.
Stainless Steel	: ASTM A403, WPW-TP 304/304H/304L/, 316/316H/316L/ 316Ti, 309, 310, 317L, 321, 347, 904L
Duplex Steel	: ASTM A815 - UNS S31803, S32760, S31500
Alloy Steel	: ASTM A 234 WPW, WP5, WP9, WP11, WP12, WP91,
Carbon Steel	: ASTM A 234 WPB
Low Temperature	: ASTM A - 420 WPL6
Carbon Steel	
Copper Nickel	: C70600 (90:10), C71500 (70:30) C71640
Nickel	: UNS N02200, N02201
Monel	: UNS N04400, N05500, Alloy 20
Inconel	: UNS N06600, N06601, N06625, N08800, N08810, N08825
Other Service	: Hot Dip Galvanizing, Sand Blasting

### Test Certificate

Manufacturer Test Certification  
En 3.1 & 3.2  
IBR Test Certificate Form IIIC

### Type

Elbow	Stubend
Tee	Laterals
Reducer	Customized



S. S. Welded 90 Deg Elbow  
ASTM A 403 WPW UNS No. 8904  
Heat No. N 4114



Duplex Welded Equal Tee  
ASTM A815 UNS 31803  
Heat No. N 8102



S. S. Welded Con. Reducer  
ASTM A 403 WPW 347  
Heat No. N 9434



## Pipes

### Stainless Steel & Duplex Steel Pipe

Size	: ½" to 30"
Schedule	: Sch. 5 to Sch. XXS
Stainless Steel	: ASTM A312, A358 - TP 304/304H/304L/316/316H/ 316L/316Ti/309/310/317/317L/321/347/904L
Duplex Steel	: ASTM A790 - UNS S31803, S32750, S32760, S32205

### Alloy Steel, Carbon Steel & LTCS Pipe

Size	: 1/2" to 36"
Schedule	: Sch. 5 to Sch. XXS
Alloy Steel Pipe	: ASTM A335 Gr. P5, P9, P11, P12, P22 & P91
Carbon Steel	: ASTM A 106 Gr. B ASTM A53
Low Temp. Pipe	: ASTM A 333 Gr. 6
Line Pipe	: API 5L, X 42, 46, 52, 56, 60, 70
Mild Steel & Galvanized Pipe	: IS 1239, IS 3589

## Test Certificate

Manufacturer Test Certification  
En 3.1 & 3.2  
IBR Test Certificate Form IIIC

### Copper & Nickel Alloys pipe

Size	: ½" NB to 10" NB
Standard	: 10S/40S/80S
Copper Nickel	: C70600 (90:10), C71500 (70:30), C71640
Nickel	: UNS N02200, N02201
Monel	: UNS N04400, N05500, Alloy 20
Inconel	: UNS N06600, N06601, N06625, N08800, N08810, N08825
Hastelloy	: UNS N10276, N06022, N10665, N06455

## Type

Round  
Square  
Rectangle  
Hydraulic





## Tubes

Size	: 6 mm OD to 219.08 mm OD
Thickness	: 0.6mm-10mm-Gauge : 22 SWG/BWG to 10 SWG/BWG
Form	: Round, Square, Rectangle, Coil, 'U' Shap
Length	: Standard Length & Cut Length
Stainless Steel Tube	: ASTM A-213, A-249, A269-TP 304/304H/304L, 316/316H/316L/316Ti, TP 309, 310, 317L, 321, 347, 904 L etc.
Low Alloy Steel Tube	: ASTM A 213 - T-11, T-12, T-22, T-5, T-9 etc.
Carbon Steel Tube	: BS 3059 Gr. 360 / 440, SA 179, SA / ASTM A210 Gr. A1
Copper Nickel Tube	: ASTM B111, C70600 (90:10), C71500 (70:30), C71640
Admiralty Brass Tube	: ASTM B 111 C44300, C44400, C44500, C68700
Copper & Brass Tube	: ASTM B 188 C11000, C12200, C26000, C27000, C28000
Nickel Alloy Tube	: Nickel, Monel, Inconel, Alloy 20 etc.
Specialize	: Capillary Tube, IBR Tubes, Copper Nickel Tube

## Test Certificate

Manufacturer Test Certification

En 3.1 & 3.2

IBR Test Certificate Form IIIC

## Type

Round  
Square  
Rectangle  
Hydraulic





**Surgical Pipes & Surgical Equipment**



**SURGICAL PIPES**

Size : 4 MM OD To 50 MM OD  
Thk : 0.6 MM to 20 MM  
Form : Round, Coil & U-Shape  
Length : Standard Length & Cut Length  
Stainless Steels Pipes & Tubes : ASTM A213, A249, A269 – TP304/304H/304L, 316/316H/316L/316Ti  
Specialize : Capillary Tubes & IBR Tubes  
TP304/304H/304L, 316/316H/316L/316Ti  
Specialize : Capillary Tubes & IBR Tubes

**Surgical Equipment**

**Trauma Implant**

Bone Screws like Cortex Screws, Cancellous Screws, Cannulated Cancellous Screws etc.  
Bone Plates like SCP (Small, Narrow & Broad), LC-SCP (Small, Narrow & Broad), T-Buttress Plates, L-Buttress Plates, Reconstruction Plates, Condylar Buttress Plates, etc.  
Hip Systems like SHS Screws, SHS Plates, SCS Plates, Austin More Endoprosthesis, Thompson Endoprosthesis, Bipolar Prosthesis etc.

**Test Certificate**

Manufacturer Test Certification  
En 3.1 & 3.2  
IBR Test Certificate Form IIIC

**Spinal Implant**

Spine System like Mono sacral Screw, Poly Sacral Screw, Reduction Screw, All Types of Hooks, Transverse Connector, Staple, Rod, Cage etc.  
Cervical System like Anterior Convergent Plate & Screws

**Nailing Systems**

Nailing Systems like Femur Nail, Tibia Nail, Humerus Nail, Recon Nail, Proximal Femur Nail ( Short & Long), Antigrade Femoral Nail ( Short & Long) Smart Femur & Tibia Nail, Multi-functional Femoral Nail, Leg Screws & Locking Screws etc.





## Bars and Shafts

Size	: 5 mm <sup>2</sup> to 500mm dia
Length	: 500 mm to 6000 mm long and in cut to size
Form	: Round, Square, Hex (A/F), Rectangle, Flat etc.
Stainless Steel Bar	: ASTM A-479, A 182 F 304/304H/304L, 316/316L/316Ti, 309, 310, 317L, 321, 347, 409, 410, 420, 430, 440 (A, B, C) 446, 904L, etc.
Other Grade Bar	: 17-4PH, 15.5 PH, 4122 etc.
Duplex Steel Bar	: A 182 F51, F53, F55
Carbon Steel Bar	: A 105, LF 2
Alloy Steel Bar	: ASTM A -182 F11, F12, F22, FF5, F9, F91
Cu-Ni Bar	: C70660 (90:10) C71500 (70:30), C71640
Nickel Bar	: UNS N02200, N02201
Monel Bar	: UNS N04400, N05500
Inconel Bar	: UNS N06600, N06601, N06625, N08800, N08810, UNS N08825
Hastelloy Bar	: UNS N10276, N06022, N10665, N06455

## Test Certificate

Manufacturer Test Certification

En 3.1 & 3.2

IBR Test Certificate Form III C

## Type

Round  
Square  
Hex (A/F)  
Rectangle





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## Tube Fitting

Size	:	1/16" to 2"
Type	:	Union tee, Female tee, Branch tee, Run tee, Male connector, Female connector, Elbow, Bulk Head Union, Reducing Union, OD Cap, OD plug,.
SS Tube fittings	:	Gr. 304, 304H, 309, 310, 316, 316L, 317L, 321, 347, 904L
Duplex S S Tube Fittings	:	UNS N031803, N032750, N032760
CS Tube Fittings	:	A105
AS Tube Fittings	:	Gr. 5, Gr.9, Gr.11, Gr.12, Gr.22, Gr.91
Cu Ni Tube Fittings	:	C 70600 (90:10), C71500 (70:30)
Nickel	:	UNS N02200, N02201
Monel	:	UNS N04400, N05500, Alloy 20
Inconel	:	UNS N06600, N06601, N08800, N08810, N08825
Hastelloy	:	UNS N10276, N06022, N10665, N06455
Other Services	:	Silver Plating
Specialize	:	Double compression fitting, Ball Valve, Needle, Check.

## Test Certificate

Manufacturer Test Certification  
En 3.1 & 3.2  
IBR Test Certificate Form IIIC

## Type

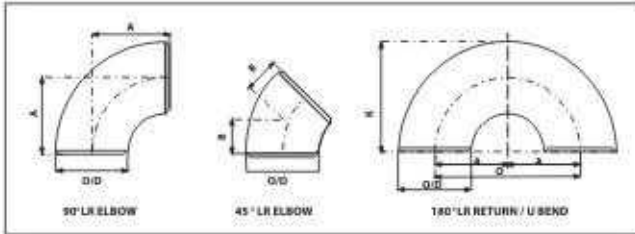
Union tee	Elbow
Female tee	Bulk head union
Branch tee	Reducing union
Run tee	OD cap
Male Connector	OD plug
Female Connector	



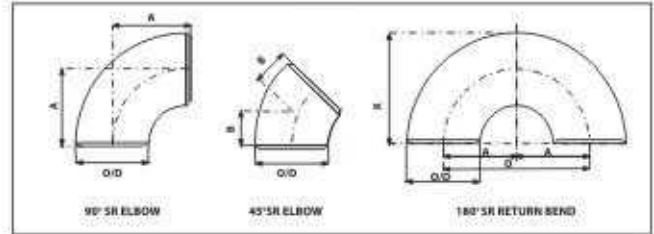


**L R & S R ( Elbow, Return, U Bend, Bend) Dimension Data Sheet**

**B16.9**



**B16.9 / B16.28**



**B16.9 LR ELBOW & LR RETURN / U BEND**

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)	Dimension A	Dimension B	Center to Center O	Back to Face K
1/2"	21.3	38	16	76	48
3/4"	26.7	38	19	76	51
1"	33.4	38	22	76	56
1.1/4"	42.2	48	25	95	70
1.1/2"	48.3	57	29	114	83
2"	60.3	76	35	152	106
2.1/2"	73.0	95	44	190	132
3"	88.9	114	51	229	159
3.1/2"	101.6	133	57	267	184
4"	114.3	152	64	305	210
5"	141.3	190	79	381	262
6"	168.3	229	95	457	313
8"	219.1	305	127	610	414
10"	273.0	381	159	762	518
12"	323.8	457	190	914	619
14"	355.6	533	222	1067	711
16"	406.4	610	254	1219	813
18"	457.0	686	286	1372	914
20"	508.0	762	318	1524	1016
22"	559.0	838	343	1676	1118
24"	610.0	914	381	1829	1219
26"	660.0	991	406	.....	.....
28"	711.0	1067	438	.....	.....
30"	762.0	1143	470	.....	.....
32"	813.0	1219	502	.....	.....
34"	864.0	1295	533	.....	.....
36"	914.0	1372	565	.....	.....

**Note :** All Dimensions are in millimeters (mm) Dimension for 38" and above on request.

**B16.9 / B16.28 SR ELBOW & SR RETURN BEND**

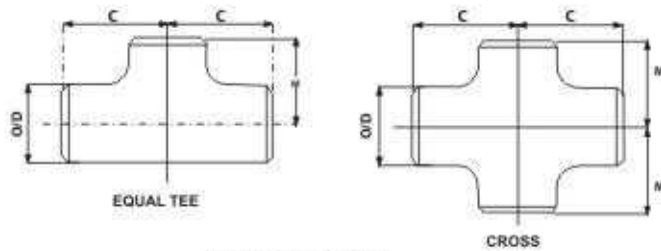
Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)	Dimension A	Dimension B	Center to Center O	Back to Face K
1/2"	21.3	.....	.....	.....	.....
3/4"	26.7	.....	.....	.....	.....
1"	33.4	25	.....	51	41
1.1/4"	42.2	32	.....	64	52
1.1/2"	48.3	38	.....	76	62
2"	60.3	51	.....	102	81
2.1/2"	73.0	64	.....	127	100
3"	88.9	76	31.6	152	121
3.1/2"	101.6	89	36.8	178	140
4"	114.3	102	42.1	203	159
5"	141.3	127	52.6	254	197
6"	168.3	152	63.4	305	237
8"	219.1	203	84.2	406	313
10"	273.0	254	105.2	508	391
12"	323.8	305	126.3	610	467
14"	355.6	356	147.3	711	533
16"	406.4	406	168.3	813	610
18"	457.0	457	189.4	914	686
20"	508.0	508	210.4	1016	762
22"	559.0	559	231.5	1118	838
24"	610.0	610	252.5	1219	914

**Note :** All Dimensions are in millimeters (mm)



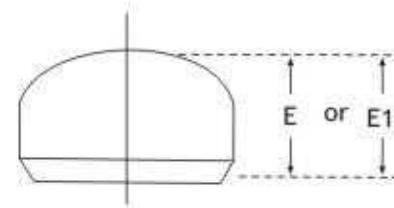


**Equal, Tee, Cross & Caps Dimension Data Sheet**



EQUAL TEE, CROSS

B16.9



CAPS

B16.9

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)	Run 'C'	Outlet 'M'
1/2"	21.3	25	25
3/4"	26.7	29	29
1"	33.4	38	38
1.1/4"	42.2	48	48
1.1/2"	48.3	57	57
2"	60.3	64	64
2.1/2"	73.0	76	76
3"	88.9	86	86
3.1/2"	101.6	95	95
4"	114.3	105	105
5"	141.3	124	124
6"	168.3	143	143
8"	219.1	178	178
10"	273.0	216	216
12"	323.8	254	254
14"	355.6	279	279
16"	406.4	305	305
18"	457.0	343	343
20"	508.0	381	381
22"	559.0	419	419
24"	610.0	432	432
26"	660.0	495	495
28"	711.0	521	521
30"	762.0	559	559
32"	813.0	597	597
34"	864.0	635	635
36"	914.0	673	673

**Note :** All Dimensions are in millimeters (mm)  
Dimension for 38" and above on request.

**NOTES :**

(1) Length E applies for thickness not exceeding that given in column "Limiting Wall Thickness for Length E".

Nominal Pipe Size (NPS)	Outside Diameter at Bevel D	Length (1) E	Limiting Wall Thickness for Length E	Length (2) E1
1/2	0.84	1.00	0.18	1.00
3/4	1.05	1.00	1.15	1.00
1	1.32	1.50	0.18	1.50
1.1/4	1.66	1.50	0.19	1.50
1.1/2	1.90	1.50	0.20	1.50
2	2.38	1.50	0.22	1.75
2.1/2	2.88	1.50	0.28	2.00
3	3.50	2.00	0.30	2.50
3.1/2	4.00	2.50	0.32	3.00
4	4.50	2.50	0.34	3.00
5	5.56	3.00	0.38	3.50
6	6.62	3.50	0.43	4.00
8	8.62	4.00	0.50	5.00
10	10.75	5.00	0.50	6.00
12	12.75	6.00	0.50	7.00
14	14.00	6.50	0.50	7.50
16	16.00	7.00	0.50	8.00
18	18.00	8.00	0.50	9.00
20	20.00	9.00	0.50	10.00
22	22.00	10.00	0.50	10.00
24	24.00	10.50	0.50	12.00
26	26.00	10.50	...	...
28	28.00	10.50	...	...
30	30.00	10.50	...	...
32	32.00	10.50	...	...
34	34.00	10.50	...	...
36	36.00	10.50	...	...
38	38.00	12.00	...	...
40	40.00	12.00	...	...
42	42.00	12.00	...	...
44	44.00	13.50	...	...
46	46.00	13.50	...	...
48	48.00	13.50	...	...

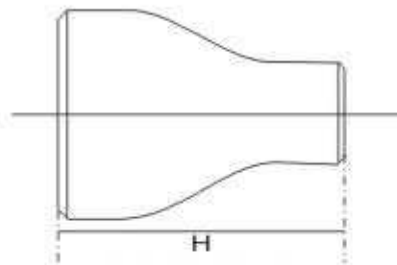
**GENERAL NOTE :**

(a) Dimensions are in inches.  
(b) The shape of these caps shall be ellipsoidal and shall conform to the shape requirements as given in the ASME Boiler and Pressure Vessel Code

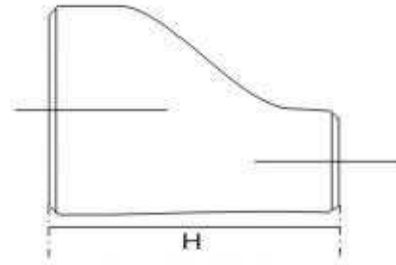
(2) Length E1 applies for thickness greater than that given in column "Limiting Wall Thickness" for NPS 24 and smaller For NPS 26 and larger, length E1 shall be by agreement between manufacturer and purchaser.



**Reducer, Concentric & Eccentric Dimension Data Sheet**



**CONCENTRIC REDUCER**



**ECCENTRIC REDUCER**

**B16.9**

Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)		End-to-End	Nominal Pipe Size (NPS)	Outside Diameter at Bevel (O/D)		End-to-End
	Run	Outlet	H		Run	Outlet	H
3/4" x 1/2" 3/4" x 3/8"	26.7 26.7	21.3 17.3	38 38	12" x 10" 12" x 8"	323.8 323.8	273.0 219.1	203 203
1" x 3/4" 1" x 1/2"	33.4 33.4	26.7 21.3	51 51	12" x 6" 12" x 5"	323.8 323.8	168.3 141.3	203 203
1.1/4" x 1" 1.1/4" x 3/4" 1.1/4" x 1/2"	42.2 42.2 42.2	33.4 26.7 21.3	51 51 51	14" x 12" 14" x 10" 14" x 8"	355.6 355.6 355.6	323.8 273.0 219.1	330 330 330
1.1/2" x 1.1/4" 1.1/2" x 1" 1.1/2" x 3/4" 1.1/2" x 1/2"	48.3 48.3 48.3 46.3	42.2 33.4 26.7 21.3	64 64 64 64	14" x 6" 16" x 14" 16" x 12" 16" x 10"	355.6 406.4 406.4 406.4	168.3 355.6 323.8 273.0	330 356 356 356
2" x 1.1/2" 2" x 1.1/4" 2" x 1" 2" x 3/4"	60.3 60.3 60.3 60.3	48.3 42.2 33.4 26.7	76 76 76 76	16" x 8" 18" x 16" 18" x 14" 18" x 12"	406.4 457.0 457.0 457.0	219.1 406.4 356.6 323.8	356 381 381 381
2.1/2" x 2" 2.1/2" x 1.1/2" 2.1/2" x 1.1/4" 2.1/2" x 1"	73.0 73.0 73.0 73.0	60.3 48.3 42.2 33.4	89 89 89 89	18" x 10" 20" x 18" 20" x 16" 20" x 14"	457.0 508.0 508.0 508.0	273.0 457.0 406.4 355.6	381 508 508 508
3" x 2.1/2" 3" x 2" 3" x 1.1/2" 3" x 1.1/4"	88.9 88.9 88.9 88.9	73.0 60.3 48.3 42.2	89 89 89 89	20" x 12" 22" x 20" 22" x 18" 22" x 16"	508.0 559.0 559.0 559.0	323.8 508.0 457.0 406.4	508 508 508 508
3.1/2" x 3" 3.1/2" x 2.1/2" 3.1/2" x 2" 3.1/2" x 1.1/2"	101.6 101.6 101.6 101.6	88.9 73.0 60.3 48.3	102 102 102 102	22" x 14" 24" x 22" 24" x 20" 24" x 18"	559.0 610.0 610.0 610.0	355.6 559.0 508.0 457.0	508 508 508 508
4" x 3.1/2" 4" x 3" 4" x 2.1/2" 4" x 2" 4" x 1.1/2"	114.3 114.3 114.3 114.3 114.3	101.6 88.9 73.0 60.3 48.3	102 102 102 102 102	24" x 16" 26" x 24" 26" x 22" 26" x 20" 26" x 18"	610.0 660.0 660.0 660.0 660.0	559.0 610.0 559.0 508.0 457.0	508 610 610 610 610
5" x 4" 5" x 3.1/2" 5" x 3" 5" x 2.1/2" 5" x 2"	141.3 141.3 141.3 141.3 141.3	114.3 101.6 88.9 73.0 60.3	127 127 127 127 127	28" x 26" 28" x 24" 28" x 20" 28" x 18"	711.0 711.0 711.0 711.0	660.0 610.0 508.0 457.0	610 610 610 610
6" x 5" 6" x 4" 6" x 3.1/2" 6" x 3" 6" x 2.1/2"	168.3 168.3 168.3 168.3 168.3	141.3 114.3 101.6 88.9 73.0	140 140 140 140 140	30" x 28" 30" x 26" 30" x 24" 30" x 20"	762.0 762.0 762.0 762.0	711.0 660.0 610.0 508.0	610 610 610 610
8" x 6" 8" x 5" 8" x 4" 8" x 3.1/2"	219.1 219.1 219.1 219.1	168.3 141.3 114.3 101.6	152 152 152 152	32" x 30" 32" x 28" 32" x 26" 32" x 24"	813.0 813.0 813.0 813.0	762.0 711.0 660.0 610.0	610 610 610 610
10" x 8" 10" x 6" 10" x 5" 10" x 4"	273.0 273.0 273.0 273.0	219.1 168.3 141.3 114.3	178 178 178 178	34" x 32" 34" x 30" 34" x 26" 34" x 24"	864.0 864.0 864.0 864.0	813.0 762.0 660.0 610.0	610 610 610 610

**Note :** All Dimensions are in millimeters (mm)  
Dimension for 36" and above on request.



**FORMULA OF CALCULATING WEIGHT**

- 1) **Weight of S.S. Pipe**  
O.D. (mm) - W. Thick (mm) x W. Thick (mm) x 0.0248 = Wt. Per Mtr.  
O.D. (mm) - W. Thick (mm) x W. Thick (mm) x 0.00756 = Wt. Per Feet.
- 2) **Weight of S.S. Round Bar**  
DIA (mm) x DIA (mm) x 0.00623 = Wt. Per Mtr.  
DIA (mm) x DIA (mm) x 0.0019 = Wt. Per Feet.
- 3) **Weight of S.S. Square Bar**  
DIA (mm) x DIA (mm) x 0.00788 = Wt. Per Mtr.  
DIA (mm) x DIA (mm) x 0.0024 = Wt. Per Feet.
- 4) **Weight of S.S. Hexagonal Bar**  
A/F (mm) x A/F (mm) x 0.00680 = Wt. Per Mtr.  
A/F (mm) x A/F (mm) x 0.002072 = Wt. Per Feet.
- 5) **Weight of S.S. Flat Bar**  
Width (mm) x Thick (mm) x 0.00798 = Wt. Per Mtr.  
Width (mm) x Thick (mm) x 0.00243 = Wt. Per Feet.
- 6) **Weight of S.S. Sheets & Plates**  
Length (Mtrs) x Width (Mtrs) X Thick (mm) x 8 = Kg. Per Sheet  
Length (Ft) x Width (Ft) x Thick (mm) x 3/4 = Kg. Per Sheet
- 7) **Weight of S. S. Circle**  
Dia (mm) x Dia (mm) x Thick (mm) ÷ 160 = Gms. Per PC  
Dia (mm) x Dia (mm) x Thick (mm) x 0.0000063 = Kg. Per PC
- 8) **Weight of Brass Pipe / Copper Pipe**  
O.D. (mm) - Thick (mm) x Thick (mm) x 0.0260 = Wt. Per Mtr.
- 9) **Weight of Lead Pipe**  
O.D. (mm) - Wt. (mm) x Wt. (mm) x 0.0345 = Wt. Per. Mtr.
- 10) **Weight of Aluminium Pipe**  
O.D. (mm) - Thick (mm) x Thick (mm) x 0.0083 = Wt. Per Mtr.
- 11) **Weight of Aluminium Sheet**  
Length (Mtr.) x Width (Mtr.) x Thick (mm) x 2.69 = Wt. Per PC
- 12) **Weight for Conversion of Mtr. To Feet**  
Weight of 1 Mtr. ÷ 3.2808 = Feet
- 13) **Formula for Calculating Width of Sheet for making Pipe**  
Outer DIA - Wall Thickness X 22/7 Width of Sheet
- 14) **Formula For Healthy Business**  
Honesty + Quality of Goods + Quick Service  
+ Reasonable rate = **Good Health of Business**





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