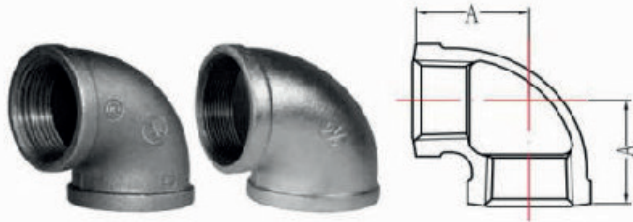


# Elbows

## 90° Elbow



Unit:mm

**90**

Size	In	1/4	3/8	1/2	3/4	1	1 1/4
	mm	8	10	15	20	25	32
A		20	24	27	32	37	44.5
Size	In	1 1/2	2	2 1/2	3	4	6
	mm	40	50	65	80	100	150
A		48.5	57	68.5	77.5	96.5	129

## 90° M&F Elbow



Unit:mm

**92**

Size	In	1/4	3/8	1/2	3/4	1	1 1/4
	mm	8	10	15	20	25	32
A		20	25	28	33	38	45
B		28	33	38	44	52	60
Size	In	1 1/2	2	2 1/2	3	4	-
	mm	40	50	65	80	100	-
A		50	58	69	77.5	96.5	-
B		65	74	90	100	120	-

## Elbow, Reducing



Unit:mm

**90R**

Size		A	B	Size		A	B
mm	In			mm	In		
15×10	1/2×3/8	25	25	65×25	2 1/2×1	47.5	59
20×15	3/4×1/2	29	30	65×32	2 1/2×1 1/4	51.5	61
25×10	1×3/8	29	31	65×40	2 1/2×1 1/2	54.5	61
25×15	1×1/2	31	33	65×50	2 1/2×2	59.5	64
25×20	1×3/4	34	35	80×15	3×1/2	42.5	64
32×10	1 1/4×3/8	31	36	80×20	3×3/4	45.5	65
32×15	1 1/4×1/2	34	37	80×25	3×1	49.5	67
32×20	1 1/4×3/4	36	40	80×32	3×1 1/4	54.5	69
32×25	1 1/4×1	40	41	80×40	3×1 1/2	57.5	71
40×15	1 1/2×1/2	35	41	80×50	3×2	61.5	71
40×20	1 1/2×3/4	37	43	80×65	3×2 1/2	71.5	74
40×25	1 1/2×1	41	45	100×15	4×1/2	49.5	78
40×32	1 1/2×1 1/4	45	47	100×20	4×3/4	53.5	79
50×15	2×1/2	37	47	100×25	4×1	56.5	82
50×20	2×3/4	40	49	100×32	4×1 1/4	60.5	85
50×25	2×1	43	51	100×40	4×1 1/2	62.5	85
50×32	2×1 1/4	47	53	100×50	4×2	68.5	86
50×40	2×1 1/2	51	54	100×65	4×2 1/2	77.5	89
65×15	2 1/2×1/2	40.5	56	100×80	4×3	82.5	90
65×20	2 1/2×3/4	43.5	57	-	-	-	-

## 45° Elbow



Unit:mm

**120**

Size	In	1/2	3/4	1	1 1/4	1 1/2	2
	mm	15	20	25	32	40	50
A		22	25	28	33	36	43
Size	In	2 1/2	3	4	6	-	-
	mm	65	80	100	150	-	-
A		48.5	53.5	64.5	129	-	-

Tee



Tee

130

Unit:mm

Size	In	1/4	3/8	1/2	3/4	1	1 1/4
	mm	8	10	15	20	25	32
A		20	24	27	32	37	44.5
Size	In	1 1/2	2	2 1/2	3	4	6
	mm	40	50	65	80	100	150
A		48.5	57	68.5	77.5	96.5	129

Tee,Reducing



130R

Unit:mm

Size	mm	15×20	15×25	20×25	20×32	25×32	25×40
	In	1/2×3/4	1/2×1	3/4×1	3/4×1 1/4	1×1 1/4	1×1 1/2
A		30	33	35	40	41	45
B		29	31	34	38	40	41
Size	mm	25×50	32×40	32×50	40×50	40×65	40×80
	In	1×2	1 1/4×1 1/2	1 1/4×2	1 1/2×2	1 1/2×2 1/2	1 1/2×3
A		51	47	53	54	61	71
B		43	45	47	51	54.5	57.5
Size	mm	50×65	50×80	65×80	80×100	-	-
	In	2×2 1/2	2×3	2 1/2×3	3×4	-	-
A		63	71	74	90	-	-
B		58	61.5	71.5	82.5	-	-

Union

Union, Taper Seat



340

Unit:mm

Size	In	1/2	3/4	1	1 1/4	1 1/2	2
	mm	15	20	25	32	40	50
L		47	51.5	57	65	71	79
Size	In	2 1/2	3	4	-	-	-
	mm	65	80	100	-	-	-
L		65.5	94.5	110.5	-	-	-

Coupling

Part Threaded Socket



220

Unit:mm

Size	In	1/4	3/8	1/2	3/4	1	1 1/4
	mm	8	10	15	20	25	32
L		26	29	35	38	44	49
Size	In	1 1/2	2	2 1/2	3	4	6
	mm	40	50	65	80	100	150
L		53	63	72	77	91	118

## Sockets

Reducing Socket



Unit:mm

240

Size	mm	10×8	15×8	15×10	20×15	25×10	25×15
	In	3/8×1/4	1/2×1/4	1/2×3/8	3/4×1/2	1×3/8	1×1/2
A		29	35	36	38	44	44
Size	mm	32×15	32×20	32×25	40×15	40×20	40×25
	In	1¼×1/2	1¼×3/4	1¼×1	1½×1/2	1½×3/4	1½×1
A		49	49	49	53	53	53
Size	mm	40×32	50×15	50×20	50×25	50×32	50×40
	In	1½×1¼	2×1/2	2×3/4	2×1	2×1¼	2×1½
A		53	63	63	63	63	63
Size	mm	65×15	65×20	65×25	65×32	65×40	65×50
	In	2½×1/2	2½×3/4	2½×1	2½×1¼	2½×1½	2½×2
A		72	72	72	72	72	72
Size	mm	80×15	80×20	80×25	80×32	80×40	80×50
	In	3×1/2	3×3/4	3×1	3×1¼	3×1½	3×2
A		71	71	71	71	71	71
Size	mm	80×65	100×15	100×20	100×25	100×32	100×40
	In	3×2½	4×1/2	4×3/4	4×1	4×1¼	4×1½
A		71	84	84	84	84	84
Size	mm	100×50	100×65	100×80	25×20	-	-
	In	4×2	4×2½	4×3	1×3/4	-	-
A		84	84	84	44	-	-

## Cross

Cross Female



Unit:mm

180

Size	In	1/2	3/4	1	1¼	1½	2
	mm	15	20	25	32	40	50
A		27	32	37	44.5	48.5	57
Size	In	2½	3	4	-	-	-
	mm	65	80	100	-	-	-
A		68.5	77.5	96.5	-	-	-

## Bushing

Bushing



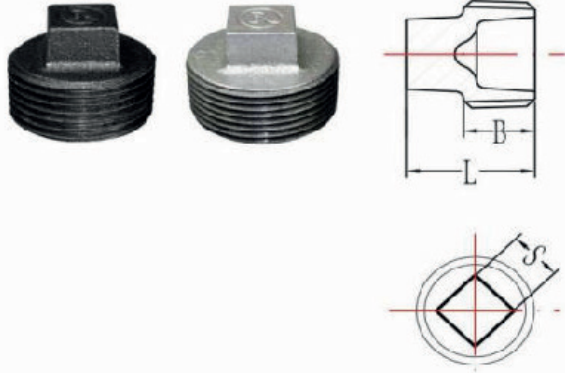
Unit:mm

241

Size	In	3/8×1/4	1/2×1/4	1/2×3/8	3/4×3/8	3/4×1/2	1×1/2
	mm	10×8	15×8	15×10	20×10	20×15	25×15
L		18.5	22.5	22.5	24.5	24.5	28
H		6	6	6	6	6	6.5
S		18.4	22	22	29.6	29.6	37.4

## Plug/Caps

Plain Plug



Unit:mm

291

Size	In	1/4	3/8	1/2	3/4	1	1 1/4
	mm	8	10	15	20	25	32
L		15.5	17	22.5	24	27	30
B		10	10	13	14	16.5	20
S		6	7	10	12	15	18
Size	In	1 1/2	2	2 1/2	3	4	-
	mm	40	50	65	80	100	-
L		31	36	40.5	45.5	57	-
B		21	25	26.5	29.5	38	-
S		22	26	30	34	44	-

Round Cap



Unit:mm

301

Size	In	3/8	1/2	3/4	1	1 1/4	1 1/2
	mm	10	15	20	25	32	40
A		17	19	22	24	27	28
Size	In	2	2 1/2	3	4	-	-
	mm	50	65	80	100	-	-
A		32	36	39	46	-	-

## Others

Backnut



Unit:mm

310

Size	In	1/2	3/4	1	1 1/4	1 1/2	2
	mm	15	20	25	32	40	50
A		9	10	11	11	12	13
S		29	36	45	56	63	77
Size	In	2 1/2	3	4	-	-	-
	mm	65	80	100	-	-	-
A		15	18	21	-	-	-
S		93	109	137	-	-	-

Round Flange, With 4 Bolt Holes



Unit:mm

329

Size	In	1 1/4	1 1/2	2	2 1/2	3	4
	mm	32	40	50	65	80	100
L		24	26	29	33	34	39
B		105	110	125	145	160	180
N-C		4-18	4-18	4-18	4-18	8-18	8-18
Size	In	6	-	-	-	-	-
	mm	150	-	-	-	-	-
L		42	-	-	-	-	-
B		240	-	-	-	-	-
N-C		8-22	-	-	-	-	-



Side Outlet Elbow

1221



Unit:mm

Size	In	1/2	3/4	1
	mm	15	20	25
A	27	32	37	

Lateral Y Branch,45°

165



Unit:mm

Size	In	1/2	3/4	1	1¼	1½	2	2½	3	4
	mm	15	20	25	32	40	50	65	80	100
A	42	-	62	75	82	-	-	140	-	
B	18	-	23	28	30	-	-	45	-	