



**T.A.L.
Holland**

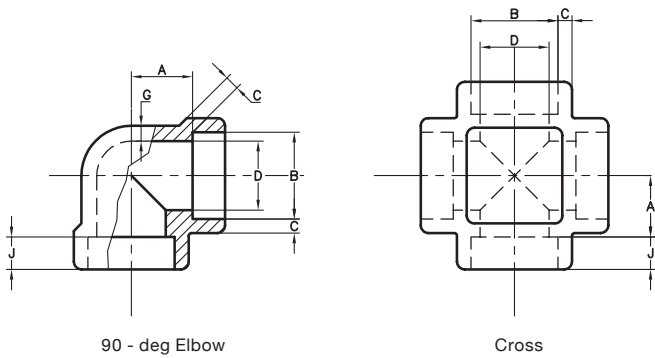
***“ALL YOUR PIPING MATERIALS
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ASME B16.11

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ASME B16.11

Socket-welding fittings



Nominal pipe size (NPS)	Socket bore diameter, B (note 1)	Bore diameter of fittings, D (note 1)			Socket wall thickness, C (note 2)					
					Class designation					
		Class designation								
		3000	6000	9000	Avg.	Min.	Avg.	Min.	Avg.	Min.
1/8	11,2	7,6	4,8	---	3,18	3,18	3,96	3,43	---	---
	10,8	6,1	3,2	---						
1/4	14,6	10	7,1	---	3,78	3,3	4,6	4,01	---	---
	14,2	8,5	5,6	---						
3/8	18	13,3	9,9	---	4,01	3,5	5,03	4,37	---	---
	17,6	11,8	8,4	---						
1/2	22,2	16,6	12,5	7,2	4,67	4,09	5,97	5,18	9,35	8,18
	21,8	15	11	5,6						
3/4	27,6	21,7	16,3	11,8	4,9	4,27	6,96	6,04	9,78	8,56
	27,2	20,2	14,8	10,3						
1	34,3	27,4	21,5	16	5,69	4,98	7,92	6,93	11,38	9,96
	33,9	25,9	19,9	14,4						
1 1/4	43,1	35,8	30,2	23,5	6,07	5,28	7,92	6,93	12,14	10,62
	42,7	34,3	28,7	22						
1 1/2	49,2	41,6	34,7	28,7	6,35	5,54	8,92	7,8	12,7	11,12
	48,8	40,1	33,2	27,2						
2	61,7	53,3	43,6	38,9	6,93	6,04	10,92	9,5	13,84	12,12
	61,2	51,7	42,1	37,4						
2 1/2	74,4	64,2	---	---	8,76	7,67	---	---	---	---
	73,9	61,2	---	---						
3	90,3	79,4	---	---	9,52	8,3	---	---	---	---
	89,8	76,4	---	---						
4	115,7	103,8	---	---	10,69	9,35	---	---	---	---
	115,2	100,7	---	---						

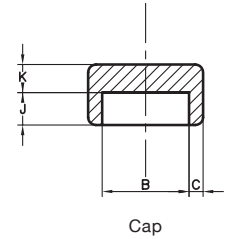
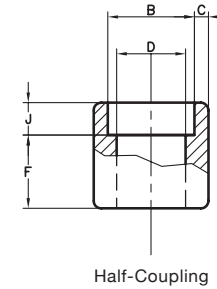
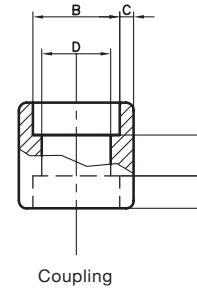
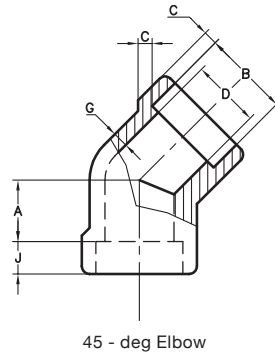
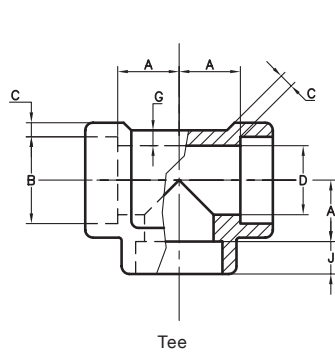
Note 1: Upper and lower values for each size are the respective maximum and minimum dimensions.

Note 2: Average of socket wall thickness around periphery shall be no less than listed values.

The minimum values are permitted in localized areas.

ASME B16.11

Socket-welding fittings

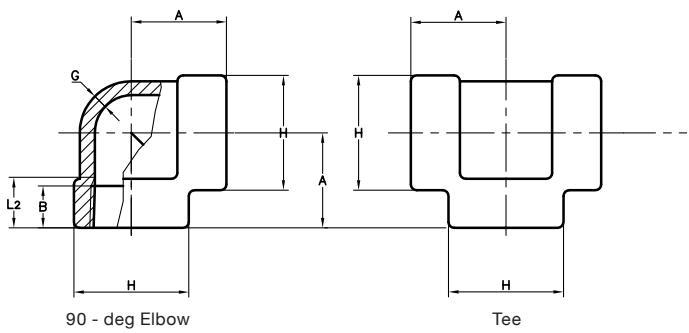


Body wall, G			Min. Depth of socket, J	Center to bottom of socket, A						Laying lengths		Tolerances			End wall thickness, K _{min}		
Class designation				90-Deg elbows, tees, and crosses			45-Deg elbows										
3000	6000	9000		Class designation													
Min.	Min.	Min.		3000	6000	9000	3000	6000	9000	Couplings, E	Half couplings, F	A	E	F	3000	6000	9000
2,41	3,15	---	9,5	11	11	---	8	8	---	6,5	16	1	1,5	1	4,8	6,4	---
3,02	3,68	---	9,5	11	13,5	---	8	8	---	6,5	16	1	1,5	1	4,8	6,4	---
3,2	4,01	---	9,5	13,5	15,5	---	8	11	---	6,5	17,5	1,5	3	1,5	4,8	6,4	---
3,73	4,78	7,47	9,5	15,5	19	25,5	11	12,5	15,5	9,5	22,5	1,5	3	1,5	6,4	7,9	11,2
3,91	5,56	7,82	12,5	19	22,5	28,5	13	14	19	9,5	24	1,5	3	1,5	6,4	7,9	12,7
4,55	6,35	9,09	12,5	22,5	27	32	14	17,5	20,5	12,5	28,5	2	4	2	9,6	11,2	14,2
4,85	6,35	9,7	12,5	27	32	35	17,5	20,5	22,5	12,5	30	2	4	2	9,6	11,2	14,2
5,08	7,14	10,15	12,5	32	38	38	20,5	25,5	25,5	12,5	32	2	4	2	11,2	12,7	15,7
5,54	8,74	11,07	16	38	41	54	25,5	28,5	28,5	19	41	2	4	2	12,7	15,7	19
7,01	---	---	16	41	---	---	28,5	---	---	19	43	2,5	5	2,5	15,7	19	---
7,62	---	---	16	57	---	---	32	---	---	19	44,5	2,5	5	2,5	19	22,4	---
8,56	---	---	16	66,5	---	---	41	---	---	19	48	2,5	5	2,5	22,4	28,4	---

The values, unless otherwise indicated, are to be considered in millimeters

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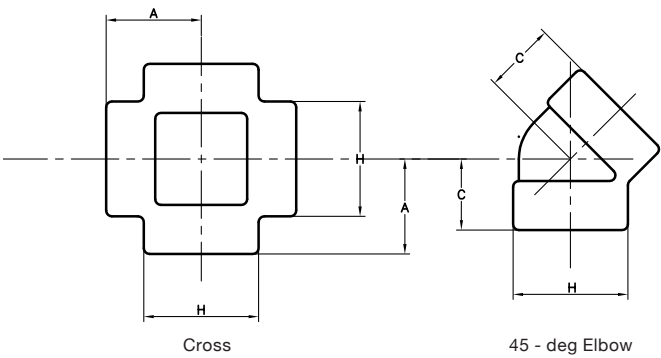
Forged threaded fittings



Nominal pipe size (NPS)	Center-to-end elbows, tees, crosses, A			Center-to-end 45-deg elbow, C		
	2000	3000	6000	2000	3000	6000
1/8	21	21	25	17	17	19
1/4	21	25	28	17	19	22
3/8	25	28	33	19	22	25
1/2	28	33	38	22	25	28
3/4	33	38	44	25	28	33
1	38	44	51	28	33	35
1 1/4	44	51	60	33	35	43
1 1/2	51	60	64	35	43	44
2	60	64	83	43	44	52
2 1/2	76	83	95	52	52	64
3	86	95	106	64	64	79
4	106	114	114	79	79	79

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Forged threaded fittings

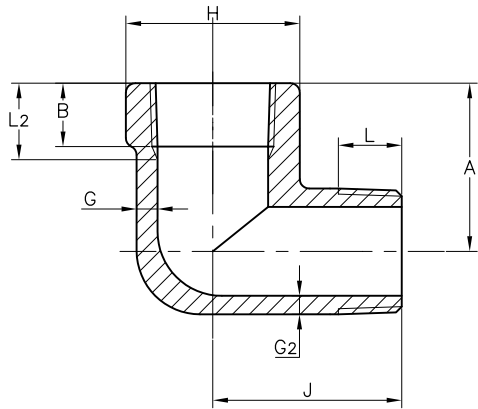


Outside diameter of band, H			Min. wall thickness, G			Min. length of thread	
2000	3000	6000	2000	3000	6000	B	L2
22	22	25	3,18	3,18	6,35	6,4	6,7
22	25	33	3,18	3,3	6,6	8,1	10,2
25	33	38	3,18	3,51	6,98	9,1	10,4
33	38	46	3,18	4,09	8,15	10,9	13,6
38	46	56	3,18	4,32	8,53	12,7	13,9
46	56	62	3,68	4,98	9,93	14,7	17,3
56	62	75	3,89	5,28	10,59	17	18
62	75	84	4,01	5,56	11,07	17,8	18,4
75	84	102	4,27	7,14	12,09	19	19,2
92	102	121	5,61	7,56	15,29	23,6	28,9
109	121	146	5,99	8,84	16,64	25,9	30,5
146	152	152	6,55	11,18	18,67	27,7	33

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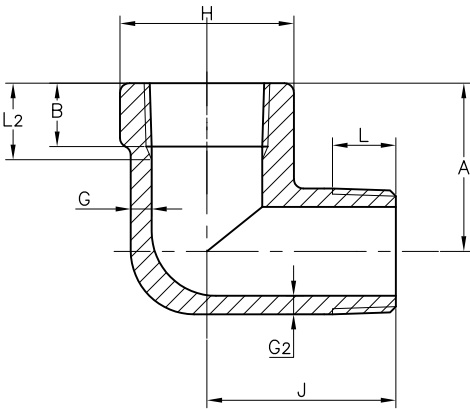
Forged threaded fittings - street elbows



Nominal pipe size (NPS)	Center-to-female end street ells, A		Center-to-male end street ells, J		Outside diameter of band, H	
	Class designation		Class designation		Class designation	
	3000	6000	3000	6000	3000	6000
1/8	19	22	25	32	19	25
1/4	22	25	32	38	25	32
3/8	25	28	38	41	32	38
1/2	28	35	41	48	38	44
3/4	35	44	48	57	44	51
1	44	51	57	66	51	62
1 1/4	51	54	66	71	62	70
1 1/2	54	64	71	84	70	84
2	64	83	84	105	84	102

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Forged threaded fittings - street elbows

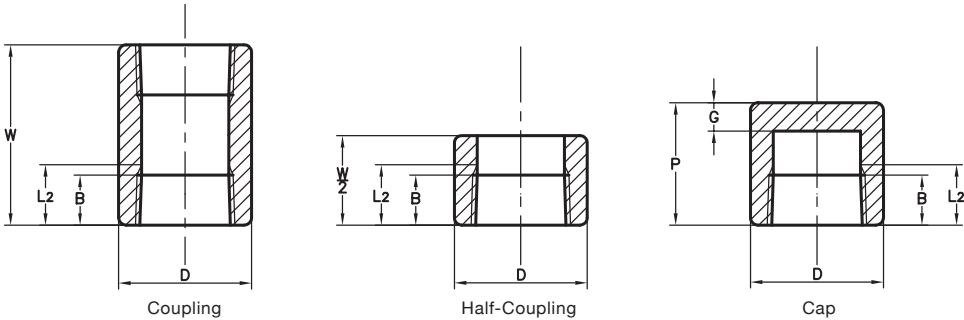


Min. wall thickness, G2		Min. wall thickness, G2		Min. length internal thread		Min. length male thread, L
Class designation		Class designation				
3000	6000	3000	6000	B	L2	
19	22	25	32	19	25	1/8
22	25	32	38	25	32	1/4
25	28	38	41	32	38	3/8
28	35	41	48	38	44	1/2
35	44	48	57	44	51	3/4
44	51	57	66	51	62	1
51	54	66	71	62	70	1 1/4
54	64	71	84	70	84	1 1/2
64	83	84	105	84	102	2

The values, unless otherwise indicated, are to be considered in millimeters

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Threaded fittings

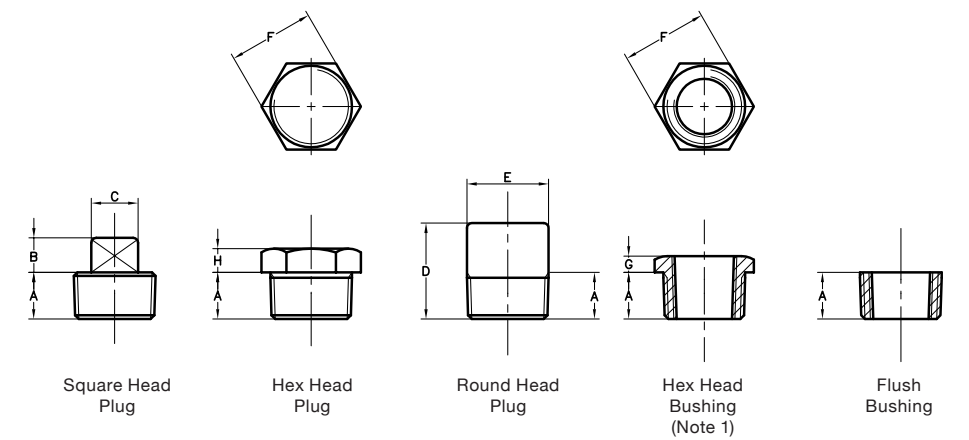


Nominal pipe size (NPS)	End-to-end couplings, W	End-to-end caps, P		Outside diameter, D		Min. end wall thickness, G		Min. length of thread	
	3000 AND 6000	3000	6000	3000	6000	3000	6000	B	L2
1/8	32	19	---	16	22	4,8	---	6,4	6,7
1/4	35	25	27	19	25	4,8	6,4	8,1	10,2
3/8	38	25	27	22	32	4,8	6,4	9,1	10,4
1/2	48	32	33	28	38	6,4	7,9	10,9	13,6
3/4	51	37	38	35	44	6,4	7,9	12,7	13,9
1	60	41	43	44	57	9,7	11,2	14,7	17,3
1 1/4	67	44	46	57	64	9,7	11,2	17	18
1 1/2	79	44	48	64	76	11,2	12,7	17,8	18,4
2	86	48	51	76	92	12,7	15,7	19	19,2
2 1/2	92	60	64	92	108	15,7	19	23,6	28,9
3	108	65	68	108	127	19	22,4	25,9	30,5
4	121	68	75	140	159	22,4	28,4	27,7	33

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Threaded fittings



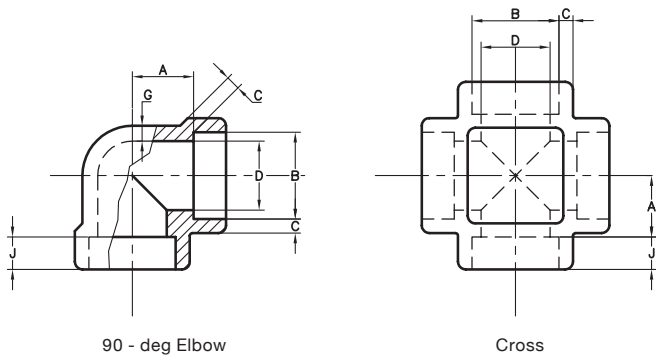
Nominal pipe size (NPS)	Min. Length, A	Square head plugs		Round head plugs		Hex plugs and bushings		
		Min. Square height, B	Min. Width flats, C	Nominal head diameter, E	Min. Length, D	Nominal width flats, E	Min. Hex height	
							Bushing, G	Plug, H
1/8	10	6	7	10	35	11	---	6
1/4	11	6	10	14	41	16	3	6
3/8	13	8	11	18	41	18	4	8
1/2	14	10	14	21	44	22	5	8
3/4	16	11	16	27	44	27	6	10
1	19	13	21	33	51	36	6	10
1 1/4	21	14	24	43	51	46	7	14
1 1/2	21	16	28	48	51	50	8	16
2	22	18	32	60	64	65	9	18
2 1/2	27	19	36	73	70	75	10	19
3	28	21	41	89	70	90	10	21
4	32	25	65	114	76	115	13	25

The values, unless otherwise indicated, are to be considered in millimeters

The data reported in this catalogue are for reference purpose only
T.A.L. Group reserves the right to modify without notice the information here contained
The technical department is at your disposal for any further technical and regulatory clarification.

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Socket-welding fittings



Nominal pipe size (NPS)	Socket bore diameter, B (note 1)	Bore diameter of fittings, D (note 1)			Socket wall thickness, C (note 2)					
					Class designation					
		Class designation								
		3000	6000	9000	Avg.	Min.	Avg.	Min.	Avg.	Min.
1/8	11,2	7,6	4,8	---	3,18	3,18	3,96	3,43	---	---
	10,8	6,1	3,2	---						
1/4	14,6	10	7,1	---	3,78	3,3	4,6	4,01	---	---
	14,2	8,5	5,6	---						
3/8	18	13,3	9,9	---	4,01	3,5	5,03	4,37	---	---
	17,6	11,8	8,4	---						
1/2	22,2	16,6	12,5	7,2	4,67	4,09	5,97	5,18	9,35	8,18
	21,8	15	11	5,6						
3/4	27,6	21,7	16,3	11,8	4,9	4,27	6,96	6,04	9,78	8,56
	27,2	20,2	14,8	10,3						
1	34,3	27,4	21,5	16	5,69	4,98	7,92	6,93	11,38	9,96
	33,9	25,9	19,9	14,4						
1 1/4	43,1	35,8	30,2	23,5	6,07	5,28	7,92	6,93	12,14	10,62
	42,7	34,3	28,7	22						
1 1/2	49,2	41,6	34,7	28,7	6,35	5,54	8,92	7,8	12,7	11,12
	48,8	40,1	33,2	27,2						
2	61,7	53,3	43,6	38,9	6,93	6,04	10,92	9,5	13,84	12,12
	61,2	51,7	42,1	37,4						
2 1/2	74,4	64,2	---	---	8,76	7,67	---	---	---	---
	73,9	61,2	---	---						
3	90,3	79,4	---	---	9,52	8,3	---	---	---	---
	89,8	76,4	---	---						
4	115,7	103,8	---	---	10,69	9,35	---	---	---	---
	115,2	100,7	---	---						

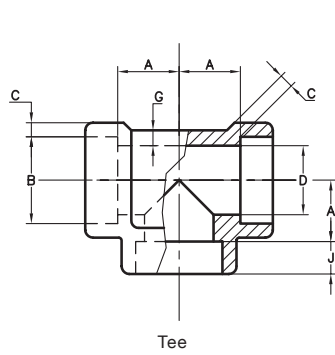
Note 1: Upper and lower values for each size are the respective maximum and minimum dimensions.

Note 2: Average of socket wall thickness around periphery shall be no less than listed values.

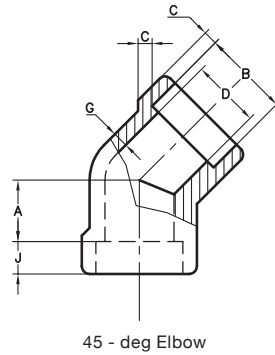
The minimum values are permitted in localized areas.

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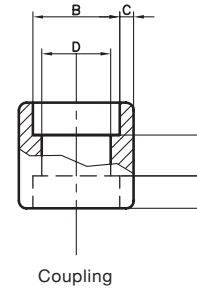
Socket-welding fittings



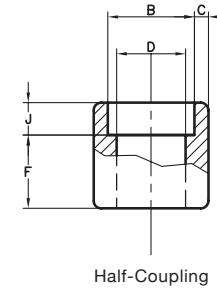
Tee



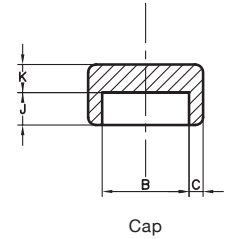
45 - deg Elbow



Coupling



Half-Coupling



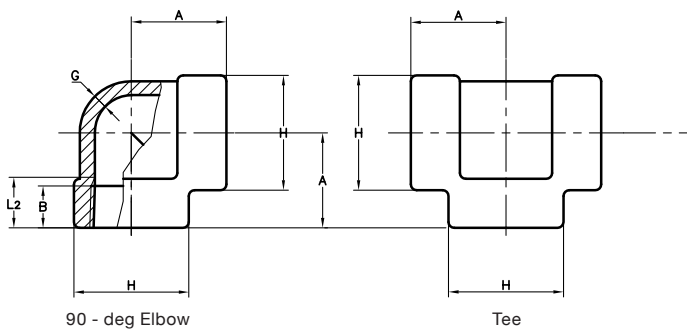
Cap

Body wall, G			Min. Depth of socket, J	Center to bottom of socket, A						Laying lengths		Tolerances			End wall thickness, K _{min}		
Class designation				90-Deg elbows, tees, and crosses			45-Deg elbows										
3000	6000	9000		Class designation													
Min.	Min.	Min.		3000	6000	9000	3000	6000	9000	Couplings, E	Half couplings, F	A	E	F	3000	6000	9000
2,41	3,15	---	9,5	11	11	---	8	8	---	6,5	16	1	1,5	1	4,8	6,4	---
3,02	3,68	---	9,5	11	13,5	---	8	8	---	6,5	16	1	1,5	1	4,8	6,4	---
3,2	4,01	---	9,5	13,5	15,5	---	8	11	---	6,5	17,5	1,5	3	1,5	4,8	6,4	---
3,73	4,78	7,47	9,5	15,5	19	25,5	11	12,5	15,5	9,5	22,5	1,5	3	1,5	6,4	7,9	11,2
3,91	5,56	7,82	12,5	19	22,5	28,5	13	14	19	9,5	24	1,5	3	1,5	6,4	7,9	12,7
4,55	6,35	9,09	12,5	22,5	27	32	14	17,5	20,5	12,5	28,5	2	4	2	9,6	11,2	14,2
4,85	6,35	9,7	12,5	27	32	35	17,5	20,5	22,5	12,5	30	2	4	2	9,6	11,2	14,2
5,08	7,14	10,15	12,5	32	38	38	20,5	25,5	25,5	12,5	32	2	4	2	11,2	12,7	15,7
5,54	8,74	11,07	16	38	41	54	25,5	28,5	28,5	19	41	2	4	2	12,7	15,7	19
7,01	---	---	16	41	---	---	28,5	---	---	19	43	2,5	5	2,5	15,7	19	---
7,62	---	---	16	57	---	---	32	---	---	19	44,5	2,5	5	2,5	19	22,4	---
8,56	---	---	16	66,5	---	---	41	---	---	19	48	2,5	5	2,5	22,4	28,4	---

The values, unless otherwise indicated, are to be considered in millimeters

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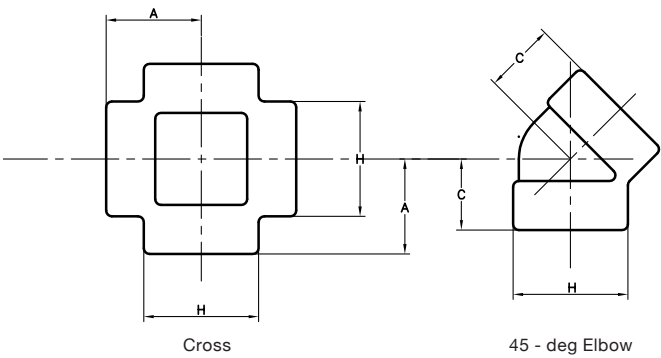
Forged threaded fittings



Nominal pipe size (NPS)	Center-to-end elbows, tees, crosses, A			Center-to-end 45-deg elbow, C		
	2000	3000	6000	2000	3000	6000
1/8	21	21	25	17	17	19
1/4	21	25	28	17	19	22
3/8	25	28	33	19	22	25
1/2	28	33	38	22	25	28
3/4	33	38	44	25	28	33
1	38	44	51	28	33	35
1 1/4	44	51	60	33	35	43
1 1/2	51	60	64	35	43	44
2	60	64	83	43	44	52
2 1/2	76	83	95	52	52	64
3	86	95	106	64	64	79
4	106	114	114	79	79	79

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Forged threaded fittings

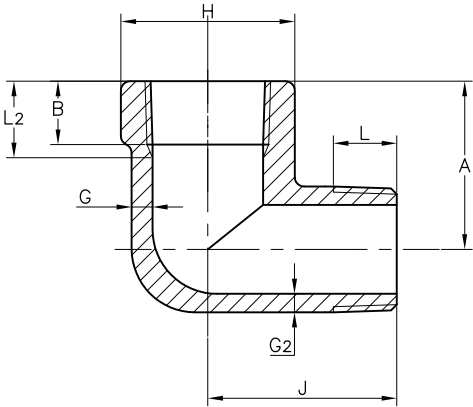


Outside diameter of band, H			Min. wall thickness, G			Min. length of thread	
2000	3000	6000	2000	3000	6000	B	L2
22	22	25	3,18	3,18	6,35	6,4	6,7
22	25	33	3,18	3,3	6,6	8,1	10,2
25	33	38	3,18	3,51	6,98	9,1	10,4
33	38	46	3,18	4,09	8,15	10,9	13,6
38	46	56	3,18	4,32	8,53	12,7	13,9
46	56	62	3,68	4,98	9,93	14,7	17,3
56	62	75	3,89	5,28	10,59	17	18
62	75	84	4,01	5,56	11,07	17,8	18,4
75	84	102	4,27	7,14	12,09	19	19,2
92	102	121	5,61	7,56	15,29	23,6	28,9
109	121	146	5,99	8,84	16,64	25,9	30,5
146	152	152	6,55	11,18	18,67	27,7	33

The values, unless otherwise indicated, are to be considered in millimeters

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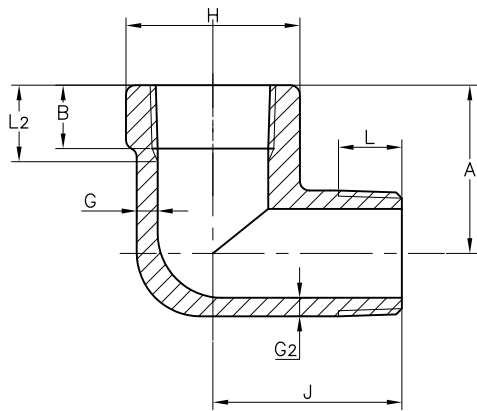
Forged threaded fittings - street elbows



Nominal pipe size (NPS)	Center-to-female end street ells, A		Center-to-male end street ells, J		Outside diameter of band, H	
	Class designation		Class designation		Class designation	
	3000	6000	3000	6000	3000	6000
1/8	19	22	25	32	19	25
1/4	22	25	32	38	25	32
3/8	25	28	38	41	32	38
1/2	28	35	41	48	38	44
3/4	35	44	48	57	44	51
1	44	51	57	66	51	62
1 1/4	51	54	66	71	62	70
1 1/2	54	64	71	84	70	84
2	64	83	84	105	84	102

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Forged threaded fittings - street elbows

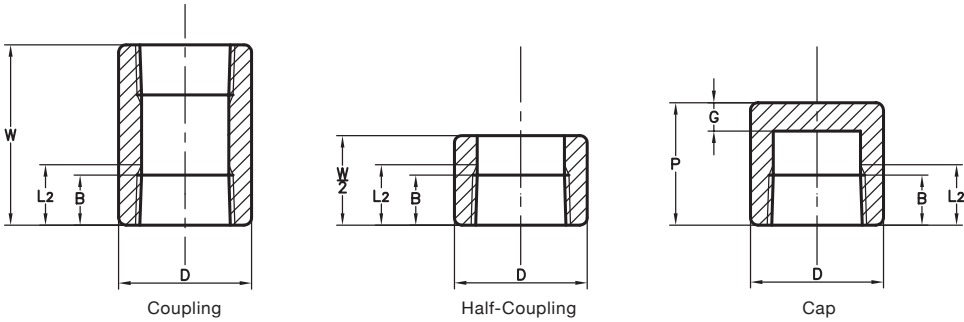


Min. wall thickness, G2		Min. wall thickness, G2		Min. length internal thread		Min. length male thread, L
Class designation		Class designation				
3000	6000	3000	6000	B	L2	
19	22	25	32	19	25	1/8
22	25	32	38	25	32	1/4
25	28	38	41	32	38	3/8
28	35	41	48	38	44	1/2
35	44	48	57	44	51	3/4
44	51	57	66	51	62	1
51	54	66	71	62	70	1 1/4
54	64	71	84	70	84	1 1/2
64	83	84	105	84	102	2

The values, unless otherwise indicated, are to be considered in millimeters

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Threaded fittings

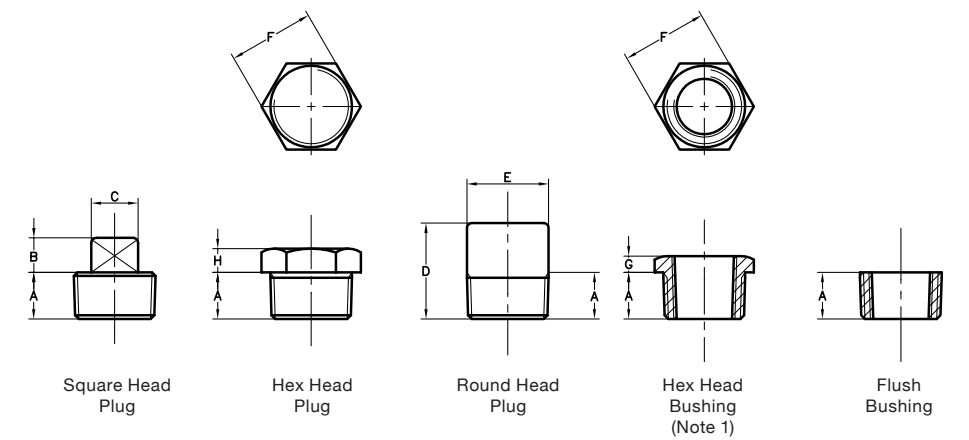


Nominal pipe size (NPS)	End-to-end couplings, W	End-to-end caps, P		Outside diameter, D		Min. end wall thickness, G		Min. length of thread	
	3000 AND 6000	3000	6000	3000	6000	3000	6000	B	L2
1/8	32	19	---	16	22	4,8	---	6,4	6,7
1/4	35	25	27	19	25	4,8	6,4	8,1	10,2
3/8	38	25	27	22	32	4,8	6,4	9,1	10,4
1/2	48	32	33	28	38	6,4	7,9	10,9	13,6
3/4	51	37	38	35	44	6,4	7,9	12,7	13,9
1	60	41	43	44	57	9,7	11,2	14,7	17,3
1 1/4	67	44	46	57	64	9,7	11,2	17	18
1 1/2	79	44	48	64	76	11,2	12,7	17,8	18,4
2	86	48	51	76	92	12,7	15,7	19	19,2
2 1/2	92	60	64	92	108	15,7	19	23,6	28,9
3	108	65	68	108	127	19	22,4	25,9	30,5
4	121	68	75	140	159	22,4	28,4	27,7	33

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Threaded fittings



Nominal pipe size (NPS)	Min. Length, A	Square head plugs		Round head plugs		Hex plugs and bushings		
		Min. Square height, B	Min. Width flats, C	Nominal head diameter, E	Min. Length, D	Nominal width flats, E	Min. Hex height	
							Bushing, G	Plug, H
1/8	10	6	7	10	35	11	---	6
1/4	11	6	10	14	41	16	3	6
3/8	13	8	11	18	41	18	4	8
1/2	14	10	14	21	44	22	5	8
3/4	16	11	16	27	44	27	6	10
1	19	13	21	33	51	36	6	10
1 1/4	21	14	24	43	51	46	7	14
1 1/2	21	16	28	48	51	50	8	16
2	22	18	32	60	64	65	9	18
2 1/2	27	19	36	73	70	75	10	19
3	28	21	41	89	70	90	10	21
4	32	25	65	114	76	115	13	25

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T.A.L. Group reserves the right to modify without notice the information here contained
The technical department is at your disposal for any further technical and regulatory clarification.