

FORGED  
FITTING



YOUNG CHANG Tech Co.,Ltd.

45° 90° ELBOW

TEE

CROSS

COUPLING

CAP

BOSS

UNION

MALE CONNECTOR

REDUCING INSERT

PLUG

NIPPLE

BUSHING

WELDOLET/THREADOLET/SOCKOLET



# I N D E X

## SOCKET WELDING

PAGE

■ 45 ° 90 ° ELBOW.....	06
■ TEE/CROSS.....	07
■ FULL/HALF COUPLING.....	08
■ CAP/BOSS.....	09
■ UNION.....	10
■ MALE CONNECTOR.....	11
■ REDUCING INSERT.....	12
■ REDUCING COUPLING/BOSS TYPE R.....	13

## THREADED FITTING

■ 45 ° 90 ° ELBOW.....	14
■ TEE/CROSS.....	15
■ FULL/HALF COUPLING.....	16
■ CAP.....	16
■ HEX HEAD/SQURE/ROUND PLUG.....	17
■ REDUCING COUPLING.....	17
■ HEX/REDUCING NIPPLE.....	18
■ HEX SOCKET.....	18
■ HEX BUSHING/BOSS.....	19
■ UNION.....	20
■ WELDOLET.....	21
■ SOCKOLET/THREDOLET.....	22
■ SWAGE NIPPLE.....	23

## SOCKET WELDING & THREADED FITTINGS

### 1. Pressure Ratings

These fittings shall be designated as pressure class 2000, 3000 And 6000 fittings for threading and pressure class 3000,6000 and 9000 for socket-welding. This designation identifies the fittings with their ratings as shown as follow, Table 1.

Table 1:Correlation of Fittings Class With Schedule Number of Wall Designation of Pipe for Calculation of Ratings.

Pressure Class Designation of Fitting	Type of Fitting	Pipe Used for Rating Basic	
		Schedule No.	Wall Designation
2000 lb	Threaded	80	X-S
3000 lb	Threaded	160	-
6000 lb	Threaded	-	XX-S
3000 lb	Socket-Welding	80	X-S
6000 lb	Socket-Welding	160	-
9000 lb	Socket-Welding	-	XX-S

\*This table is not intended to restrict the use of pipe of thinner or thicker wall with fittings.

Pipe actually used may be thinner or thicker in nominal wall than that shown in Table 1.

When tinner pipe is used its strength may govern the rating.

When thicker pipe is used (e.g., for mechanical strength) the strength of the fitting governs the rating.

Table 2:Nominal wall thickness of Schedule 160 and Double Extra Strong Pipe.

NPS.	Schedule 160		XX-S	
	in	mm	in	mm
½	0.124	3.15	0.190	4.83
¾	0.145	3.68	0.230	6.05
1	0.158	4.01	0.252	6.40

# FORGED FITTING

Table 3: Pressure/Temperature Ratings

Non-shock Working Pressure in Pounds per Square Inch

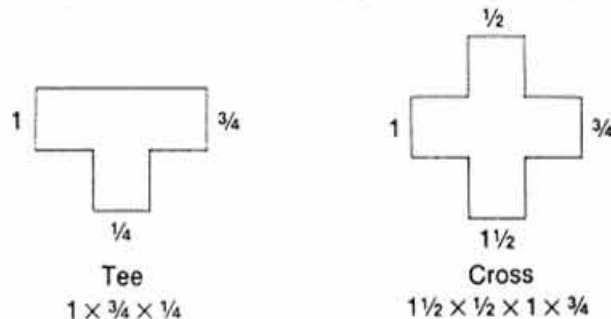
Service Temperature Degree °F	2000lb Threaded Fittings					3000lb Socket Welding and Threaded Fittings					6000lb Socket Welding and Threaded Fittings				
	Carbon steel	F304	F316	F22	F5	Carbon steel	F304	F316	F22	F5	Carbon steel	F304	F316	F22	F5
100	2000	1715	2000	2000	2000	3000	2570	3000	3000	3000	6000	5145	6000	6000	6000
150	1970	1615	1970	1970	1970	2950	2425	2950	2950	2950	5915	4855	5915	5915	5915
200	1940	1520	1940	1940	1940	2915	2280	2915	2915	2915	5830	4565	5830	5830	5830
250	1915	1445	1915	1915	1915	2875	2170	2975	2975	2975	5750	4340	5750	5750	5750
300	1975	1370	1896	1895	1895	2845	2055	2845	2845	2845	5690	4115	5690	5690	5690
350	1875	1310	1875	1875	1875	2810	1965	2810	2810	2810	5625	3930	5690	5625	5625
400	1850	1245	1850	1850	1850	2775	1870	2775	2775	2775	5550	3745	5550	5550	5550
450	1810	1195	1810	1710	1810	2715	1790	2715	2715	2715	5430	3585	5430	5430	5430
500	1735	1140	1735	1635	1735	2605	1715	2605	2605	2605	5210	3430	5210	5210	5210
550	1640	1100	1640	1540	1640	2460	1650	2460	2460	2460	4925	3305	4925	4925	4925
600	1540	1060	1540	1440	1540	2310	1590	2310	2310	2310	4620	3180	4620	4620	4620
650	1430	1020	1430	1330	1430	2150	1535	2150	2150	2150	4300	3070	4300	4300	4300
700	1305	985	1370	1240	1340	1960	1480	2055	2010	2010	3920	2960	4110	4025	4025
750	1180	950	1305	1145	1245	1775	1425	1960	1870	1870	3550	2850	3920	3745	3745
800	1015	915	1240	1055	1155	1525	1370	1865	1735	1735	3050	2745	3730	3470	3470
850	830	880	1180	1060	1060	1250	1330	1770	1595	1595	2500	2660	3540	3190	3190
900	615	860	1115	970	970	925	1290	1675	1455	1455	1885	2580	3350	2915	2915
950	425	845	1055	880	880	640	1270	1580	1320	1320	1295	2540	3165	2640	2640
1000	235	830	990	740	695	350	1250	1485	1115	1240	715	2500	2975	2230	2085

## 2. Size Identification

The size of a fitting is identified by the nominal pipe size.

For reducing fittings, the size of the largest run opening is to be given first, followed by the size of the opening opposite of the same run. The branch size of a Tee is given last.

Where the case is a Cross, the largest side-outlet is thirdly given, then the opening opposite.



## 3. Threads

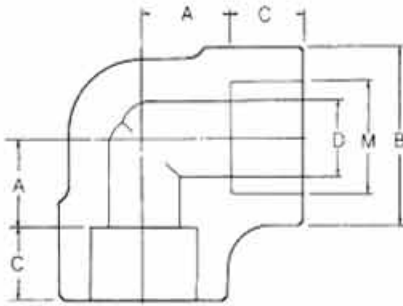
Unless otherwise specified in inquiry, all threaded fittings are supplied with NPT threads (ANSI B2.1 American Standard Taper Pipe Thread) for reference, other available threads are:

- ISO/R7, Pipe Threads for Gas List Tubes and Screwed Fittings where Pressure-tight Joints are made on the threads (BS 2.1 & JIS B0203PT Thread).
- API 5B, Line Pipe Threads.
- KSB0222 Taper Pipe Threads

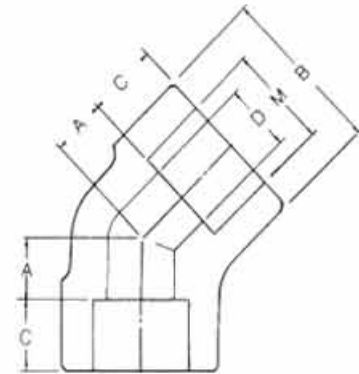
YOUNG CHANG TECH

# SOCKET WELDING FITTINGS

3000lb, 6000lb, 9000lb



90° ELBOW



45° ELBOW

Size	M	B	D	A	C	Unit Weight (kg)
<b>3000lb</b>						
1/4	See Note (1) To be specified by purchaser	26.5	9.4	11.1	10	0.133
3/8		26.5	12.7	13.4	10	0.113
1/2		34.0	16.1	16.0	13	0.226
3/4		38.5	21.2	20.0	16	0.312
1		46.5	27.0	23.0	16	0.596
1 1/4		56.5	35.4	28.0	18	0.710
1 1/2		63.5	41.2	33.0	20	0.850
2		76.0	52.7	40.0	22	1.474
2 1/2		92.0	62.7	42.0	24	2.461
3		110.0	78.0	57.1	31.5	4.650
4	146.0	102.0	70.0	45	9.410	
<b>6000lb</b>						
1/2	See Note (1)	38.5	12.0	20.0	16	0.425
3/4		46.5	15.8	23.0	16	0.652
1		56.5	21.0	28.0	18	1.020
1 1/4		63.5	29.7	33.0	20	1.446
1 1/2		76.0	34.2	40.0	22	2.380
2		92.0	43.1	42.0	24	3.760
2 1/2		110.0	54.0	57.1	24	6.120
3		121.0	67.7	66.0	31.5	8.760
4		152.0	87.0	70.0	45	14.300
<b>9000lb</b>						
1/2	See Note (1)	46.5	6.4	23.0	16	0.510
3/4		56.5	11.0	28.0	16	0.782
1		63.5	15.2	33.0	18	1.224
1 1/4		76.0	22.7	40.0	20	1.807
1 1/2		92.0	27.9	42.0	22	2.975
2		110.0	38.1	54.0	24	4.700
2 1/2		121.0	45.0	66.0	24	10.512
3		146.0	58.4	70.0	31.5	13.020

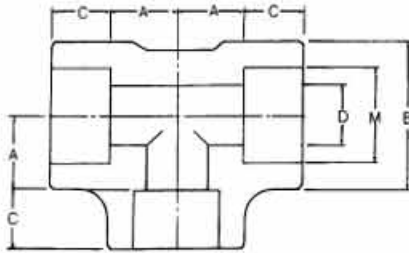
Size	M	B	D	A	C	Unit Weight (kg)
<b>3000lb</b>						
1/4	See Note (1) To be specified by purchaser	26.5	9.4	7.9	10	0.094
3/8		26.5	12.7	7.9	10	0.142
1/2		34.0	16.1	13.0	13	0.264
3/4		38.5	21.2	13.0	14	0.397
1		46.5	27.0	14.0	16	0.624
1 1/4		56.5	35.4	18.0	18	0.907
1 1/2		63.5	41.2	22.0	20	0.782
2		76.0	52.7	24.0	22	1.265
2 1/2		92.0	62.7	29.0	24	3.062
3		110.0	78.0	34.0	31.5	4.764
4	146.0	102.0	42.0	45	8.250	
<b>6000lb</b>						
1/2	See Note (1)	38.5	12.0	13	16	0.397
3/4		46.5	15.8	14	16	0.595
1		56.5	21.0	22	18	0.935
1 1/4		63.5	29.7	22	20	1.157
1 1/2		76.0	34.2	24	22	1.982
2		92.0	43.1	29	24	4.000
2 1/2		110.0	54.0	34	24	5.875
3		121.0	67.7	34	31.5	6.509
4		152.0	87.0	42	45	12.360
<b>9000lb</b>						
1/2	See Note (1)	46.5	6.4	14	16	0.875
3/4		56.5	11.0	22	16	1.370
1		63.5	15.2	22	18	1.725
1 1/4		76.0	22.7	24	20	2.931
1 1/2		92.0	27.9	29	22	5.062
2		110.0	38.1	34	24	6.400
2 1/2		121.0	45.0	34	24	7.925
3		146.0	58.4	42	31.5	11.569

- Note
- (1) For the 'Bore'(M) other than standard pipe outside diameter.
- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

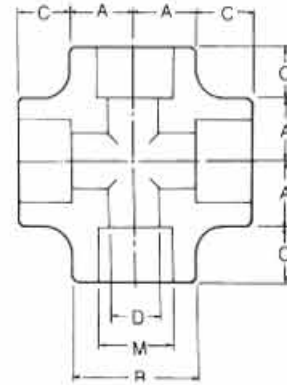
YOUNG CHANG TECH

# SOCKET WELDING FITTINGS

3000lb, 6000lb, 9000lb



TEE



CROSS

Size	M	B	D	A	C	Unit Weight (kg)
------	---	---	---	---	---	------------------

3000lb

1/4	See Note (1) To be specified by purchaser	26.5	9.4	11.1	10	0.161
3/8		26.5	12.7	13.4	10	0.142
1/2		34.0	16.1	16.0	13	0.170
3/4		38.5	21.2	20.0	16	0.397
1		46.5	27.0	23.0	16	0.624
1 1/4		56.5	35.4	28.0	18	0.907
1 1/2		63.5	41.2	33.0	20	1.133
2		76.0	52.7	40.0	22	1.700
2 1/2		92.0	62.7	42.0	24	3.424
3		110.0	78.0	57.1	31.5	5.670
4	146.0	102.0	70.0	45	12.247	

6000lb

1/2	See Note (1)	38.5	12.0	20.0	16	0.623
3/4		46.5	15.8	23.0	16	0.907
1		56.5	21.0	28.0	18	1.503
1 1/4		63.5	29.7	33.0	20	1.701
1 1/2		76.0	34.2	40.0	22	2.948
2		92.0	43.1	42.0	24	3.702
2 1/2		110.0	54.0	57.1	24	8.723
3		121.0	67.7	66.0	31.5	10.661
4		152.0	87.0	70.0	45	19.020

9000lb

1/2	See Note (1)	46.5	6.4	23.0	16	0.779
3/4		56.5	11.0	28.0	16	1.333
1		63.5	15.2	33.0	18	1.879
1 1/4		76.0	22.7	40.0	20	2.127
1 1/2		92.0	27.9	42.0	22	3.685
2		110.0	38.1	54.0	24	4.627
2 1/2		121.0	45.0	66.0	24	10.903
3		146.0	58.4	70.0	31.5	13.325

Size	M	B	D	A	C	Unit Weight (kg)
------	---	---	---	---	---	------------------

3000lb

1/4	See Note (1) To be specified by purchaser	26.5	9.4	11.1	10	0.182
3/8		26.5	12.7	13.4	10	0.170
1/2		34.0	16.1	16.0	13	0.368
3/4		38.5	21.2	20.0	16	0.520
1		46.5	27.0	23.0	16	0.680
1 1/4		56.5	35.4	28.0	18	1.020
1 1/2		63.5	41.2	33.0	20	1.389
2		76.0	52.7	40.0	22	2.326
2 1/2		92.0	62.7	42.0	24	7.484
3		110.0	78.0	57.1	31.5	10.432
4	146.0	102.0	70.0	45	18.144	

6000lb

1/2	See Note (1)	38.5	12.0	20.0	16	0.660
3/4		46.5	15.8	23.0	16	1.120
1		56.5	21.0	28.0	18	1.730
1 1/4		63.5	29.7	33.0	20	2.380
1 1/2		76.0	34.2	40.0	22	3.750
2		92.0	43.1	42.0	24	7.860
2 1/2		110.0	54.0	57.1	24	10.600
3		121.0	67.7	66.0	31.5	13.600
4		152.0	87.0	70.0	45	26.000

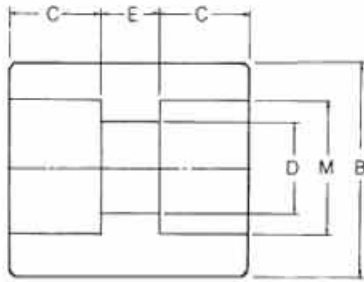
9000lb

1/2	See Note (1)	46.5	6.4	23.0	16	1.615
3/4		56.5	11.0	28.0	16	2.113
1		63.5	15.2	33.0	18	3.896
1 1/4		76.0	22.7	40.0	20	6.298
1 1/2		92.0	27.9	42.0	22	9.280
2		110.0	38.1	54.0	24	18.740
2 1/2		121.0	45.0	66.0	24	25.702
3		146.0	58.4	70.0	31.5	33.761

- Note
- (1) For the 'Bore'(M) other than standard pipe outside diameter.
- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

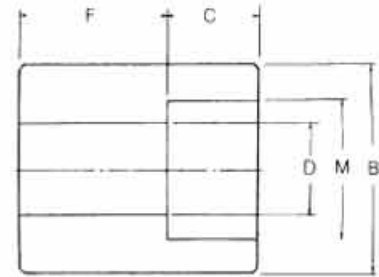
# SOCKET WELDING FITTINGS

3000lb, 6000lb, 9000lb



## FULL COUPLING

Size	M	B	D	C	E	Unit Weight (kg)
<b>3000lb</b>						
1/2	See Note (1) To be specified by purchaser	21.0	9.4	10	6.4	0.05
3/4		25.0	12.7	10	6.4	0.12
1		31.0	16.1	10	9.6	0.12
1 1/4		36.3	21.2	13	9.6	0.18
1 1/2		44.5	27.0	13	12.7	0.26
2		54.0	35.4	13	12.7	0.35
2 1/2		60.3	41.2	13	12.7	0.47
3		73.5	52.7	16	19.1	0.83
4		92.5	65.3	16	19.1	1.25
4		106.8	78.0	16	19.1	1.53
4	140.0	102.0	19	19.1	2.91	
<b>6000lb</b>						
1/2	See Note (1)	32.6	12.0	10	9.6	0.170
3/4		40.0	15.8	13	9.6	0.250
1		48.5	21.0	13	12.7	0.420
1 1/4		57.2	29.7	13	12.7	0.525
1 1/2		64.7	34.2	13	12.7	0.666
2		80.3	43.1	16	19.1	1.240
2 1/2		98.0	54.0	16	19.1	1.640
3		114.3	67.7	16	19.1	2.746
4		160.0	87.0	19	19.1	4.679
<b>9000lb</b>						
1/2	See Note (1)	40.4	6.4	10	9.6	0.270
3/4		45.5	11.0	13	9.6	0.327
1		55.0	15.2	13	12.7	0.518
1 1/4		66.5	22.7	13	12.7	0.813
1 1/2		73.0	27.9	13	12.7	0.940
2		88.0	38.1	16	19.1	1.553
2 1/2		108.0	45.0	16	19.1	2.430
3		127.0	58.5	16	19.1	3.721
4		160.0	80.3	19	19.1	5.137



## HALF COUPLING

Size	M	B	D	C	F	Unit Weight (kg)
<b>3000lb</b>						
1/2	See Note (1) To be specified by purchaser	21.0	9.4	10	15.7	0.058
3/4		25.0	12.7	10	17.5	0.073
1		31.0	16.1	10	22.4	0.138
1 1/4		36.3	21.2	13	23.9	0.202
1 1/2		44.5	27.0	13	28.4	0.313
2		54.0	35.4	13	30.2	0.432
2 1/2		60.3	41.2	13	31.8	0.593
3		73.5	52.7	16	41.1	1.280
4		92.5	62.7	16	42.9	1.490
4		106.8	78.0	16	44.5	2.202
4	140.0	102.0	19	47.7	4.250	
<b>6000lb</b>						
1/2	See Note (1)	32.6	12.0	10	22.4	0.193
3/4		40.0	15.8	13	23.9	0.284
1		48.5	21.0	13	28.4	0.488
1 1/4		57.2	29.7	13	30.2	0.584
1 1/2		64.7	34.2	13	31.8	0.640
2		80.3	43.1	16	41.1	1.726
2 1/2		98.0	54.0	16	42.9	2.247
3		114.3	67.7	16	44.5	3.413
4		160.0	87.0	19	47.7	5.730
<b>9000lb</b>						
1/2	See Note (1)	40.4	6.4	10	22.4	0.312
3/4		45.5	11.0	13	23.9	0.389
1		55.0	15.2	13	28.4	0.641
1 1/4		66.5	22.7	13	30.2	0.980
1 1/2		73.0	27.9	13	31.8	1.179
2		88.0	38.1	16	41.1	1.994
2 1/2		108.0	45.0	16	42.9	3.210
3		127.0	58.5	16	44.5	4.597
4		160.0	80.3	19	47.7	7.610

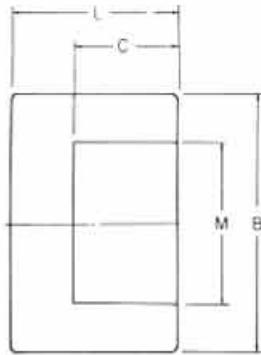
- Note
- (1) For the 'Bore'(M) other than standard pipe outside diameter.
- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

YOUNG CHANG TECH

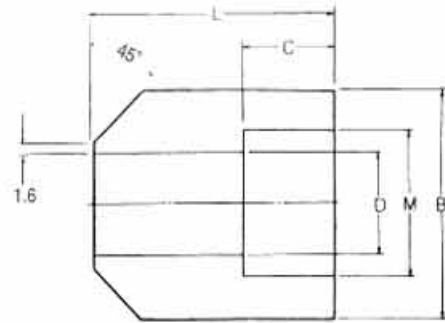


# SOCKET WELDING FITTINGS

3000lb, 6000lb, 9000lb



**CAP**



**BOSS**

Size	M	B	C	L	Unit Weight (kg)
------	---	---	---	---	------------------

3000lb

1/4	See Note (1) To be specified by purchaser	21.0	10	20	0.048
3/8		25.0	10	20	0.076
1/2		31.0	10	20	0.100
3/4		36.3	13	25	0.182
1		44.5	13	27	0.241
1 1/4		54.0	13	30	0.350
1 1/2		60.3	13	30	0.612
2		73.5	16	36	0.880
2 1/2		92.5	16	42	1.520
3		106.8	16	46	2.208
4	140.0	19	55	4.418	

6000lb

1/2	See Note (1)	32.6	10	26	0.055
3/4		40.0	13	27	0.223
1		48.5	13	30	0.382
1 1/4		57.2	13	35	0.510
1 1/2		64.7	13	36	0.735
2		80.3	16	39	1.289
2 1/2		98.0	16	45	2.056
3		114.3	16	52	3.364

9000lb

1/2	See Note (1)	40.4	10	30	0.262
3/4		45.5	13	30	0.320
1		55.0	13	33	0.520
1 1/4		66.5	13	40	1.256
1 1/2		73.0	13	40	1.440
2		88.0	16	43	1.686
2 1/2		108.0	16	50	2.986
3		127.0	16	58	4.666

Size	M	B	D	C	L	Unit Weight (kg)
------	---	---	---	---	---	------------------

3000lb

1/4	See Note (1)	22.0	9.4	10	30	0.09
3/8		25.9	12.7	10	30	0.14
1/2		34.0	16.1	10	33	0.23
3/4		39.1	21.2	13	35	0.28
1		48.0	27.0	13	43	0.41
1 1/4		55.1	35.4	13	46	0.44
1 1/2		65.0	41.2	13	50	0.63
2		80.0	52.7	16	57	1.09

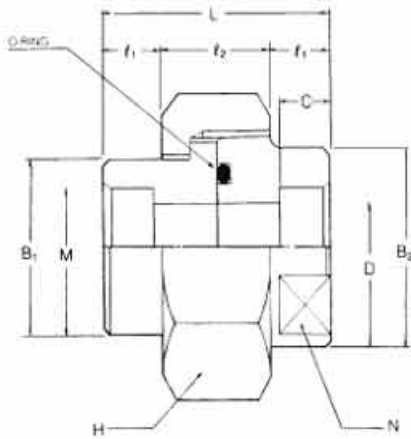
6000lb

1/2	See Note (1)	12.0	12.0	10	33	0.45
3/4		49.0	15.8	13	35	0.52
1		59.9	21.0	13	43	0.73
1 1/4		65.0	29.7	13	46	0.77
1 1/2		80.0	34.2	13	50	0.12
2		95.0	43.1	16	57	1.82

- Note
- (1) For the 'Bore'(M) other than standard pipe outside diameter.
- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

# SOCKET WELDING FITTINGS

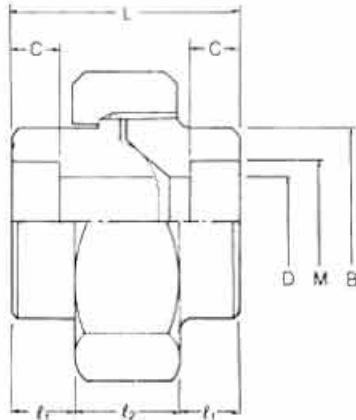
3000lb, 6000lb



O-RING UNION

Size	M	B <sub>1</sub>	B <sub>2</sub>	D	C	ℓ <sub>1</sub>	ℓ <sub>2</sub>	L	N	H	O-Ring	Unit Weight (kg)	
3000lb													
½		22	24	10	10	10	18	38	21	35	HEX	P18	0.160
¾		27	30	12	10	10	18	38	26	41	HEX	P20	0.228
1	See Note (1)	32	35	16	10	12	20	44	32	46	HEX	G25	0.328
1¼		38	42	20	13	12	26	50	38	54	HEX	G30	0.535
1½		47	52	25	13	15	26	56	46	63	HEX	G35	0.786
2		56	60	32	13	15	30	60	54	77	HEX	G45	1.104
2½		63	68	38	13	18	36	72	63	80	OCT	G50	1.542
3		76	82	48	17	18	36	72	77	95	OCT	G65	2.080

Size	M	B	ℓ <sub>1</sub>	ℓ <sub>2</sub>	L	C	D	H	Unit Weight (kg)	
3000lb										
¼		21.0	11.5	18	41	10.0	9.4	35	HEX	0.187
⅜		25.0	14.0	18	46	10.0	12.7	40	HEX	0.245
½		32.0	15.0	21	51	10.0	16.1	46	HEX	0.430
¾	See Note (1) To be specified by purchaser	40.0	17.0	23	57	13.0	21.2	58	HEX	0.620
1		48.0	19.5	25	64	13.0	27.0	65	HEX	1.030
1¼		55.0	22.5	27	72	13.0	35.4	76	OCT	1.150
1½		63.5	24.0	30	78	13.0	41.2	83	OCT	1.532
2		76.0	26.0	36	88	16.0	52.7	103	OCT	3.050
2½		95.0	34.0	42	110	18.0	62.7	124	OCT	5.140
3		116.0	37.5	45	120	22.5	78.0	142	OCT	7.120
4	148.0	45.0	50	140	25.0	102.0	176	OCT	12.400	



R.J UNION

6000lb										
½		40.0	17.0	23	57	13	12.0	56	HEX	0.62
¾		44.5	19.5	25	64	13	15.8	65	HEX	0.94
1	See Note (1)	51.0	22.5	27	72	13	21.0	74	OCT	1.98
1¼		57.2	24.0	30	78	16	29.7	83	OCT	1.41
1½		71.5	26.0	36	88	16	34.2	103	OCT	2.75
2		90.0	34.0	42	110	16	43.1	124	OCT	5.05
2½		105.0	35.0	45	120	18	54.0	150	OCT	6.87
3		125.0	45.0	50	140	22	67.7	176	OCT	10.85

• Note

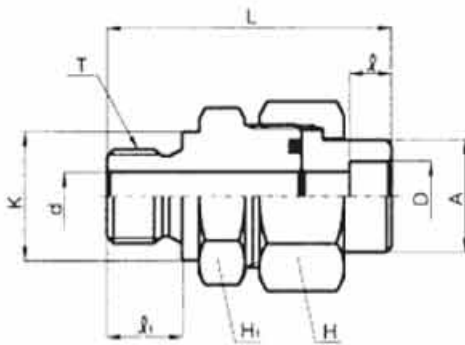
- (1) For the 'Bore'(M) other than standard pipe outside diameter.
- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

Y  
O  
U  
N  
G  
C  
H  
A  
N  
G  
T  
E  
C  
H

# SOCKET WELDING FITTINGS

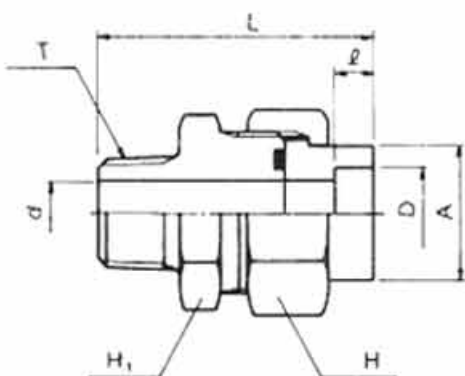
## MALE CONNECTOR

G-TYPE



Size	D	ℓ	d	K	A	ℓ <sub>1</sub>	L	H	H <sub>1</sub>	T (PT)	O-Ring
¼	14.3	10	7	18	22	12	54	HEX 36	HEX 30	¼	P18
¼	14.3	10	9	21.5	22	12	54	HEX 36	HEX 30	⅜	P18
⅜	17.8	10	9	21.5	27	12	55	HEX 41	HEX 36	⅜	P20
⅜	17.8	10	12	25.5	27	14	57	HEX 41	HEX 36	½	P20
½	22.2	10	12	25.5	32	14	61	HEX 46	HEX 41	½	G25
½	22.2	10	16	31.5	32	16	63	HEX 46	HEX 41	¾	G25
¾	27.7	13	16	31.5	37	16	69	HEX 55	HEX 46	¾	G30
¾	27.7	13	20	38	37	18	73	HEX 55	HEX 46	1	G30
1	34.5	13	20	38	44	18	78	HEX 60	HEX 55	1	G35
1	34.5	13	25	48.5	44	20	80	HEX 60	HEX 55	1¼	G35
1¼	43.2	13	25	48.5	54	20	84	OCT 75	OCT 65	1¼	G45
1¼	43.2	13	32	53.5	54	22	86	OCT 75	OCT 65	1½	G45
1½	49.1	13	32	53.5	63	22	98	OCT 85	OCT 75	1½	G50
1½	49.1	13	38	66	63	24	99	OCT 85	OCT 75	2	G50
2	61.1	16	38	66	76	24	103	OCT100	OCT 90	2	G65

R-TYPE



Size	D	ℓ	d	A	L	H	H <sub>1</sub>	T (PT)	O-Ring
¼	14.3	10	7	22	54	HEX 36	HEX 30	¼	P18
¼	14.3	10	9	22	55	HEX 36	HEX 30	⅜	P18
⅜	17.8	10	9	27	56	HEX 41	HEX 36	⅜	P20
⅜	17.8	10	12	27	56	HEX 41	HEX 36	½	P20
½	22.2	10	12	32	60	HEX 46	HEX 41	½	G25
½	22.2	10	16	32	66	HEX 46	HEX 41	¾	G25
¾	27.7	13	16	37	72	HEX 55	HEX 46	¾	G30
¾	27.7	13	20	37	75	HEX 55	HEX 46	1	G30
1	34.5	13	20	44	82	HEX 60	HEX 55	1	G35
1	34.5	13	25	44	84	HEX 60	HEX 55	1¼	G35
1¼	43.2	13	25	54	90	OCT 75	OCT 65	1¼	G45
1¼	43.2	13	32	54	91	OCT 75	OCT 65	1½	G45
1½	49.1	13	32	63	99	OCT 85	OCT 75	1½	G50
1½	49.1	13	38	63	103	OCT 85	OCT 75	2	G50
2	61.1	16	38	76	103	OCT100	OCT 90	2	G65

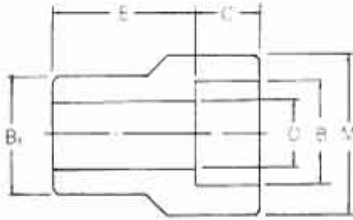
YOUNG CHANG TECH

# SOCKET WELDING FITTINGS

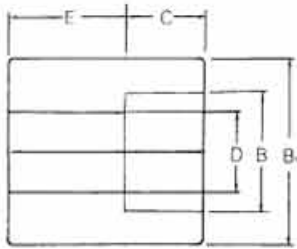
3000lb, 6000lb

Y  
O  
U  
N  
G  
C  
H  
A  
N  
G  
T  
E  
C  
H

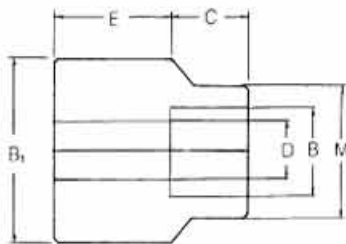
## TYPE1



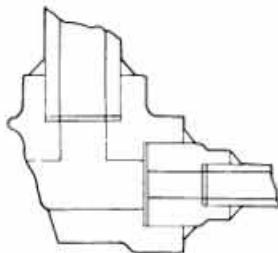
## TYPE2



## TYPE3



## Application of Reducer Insert

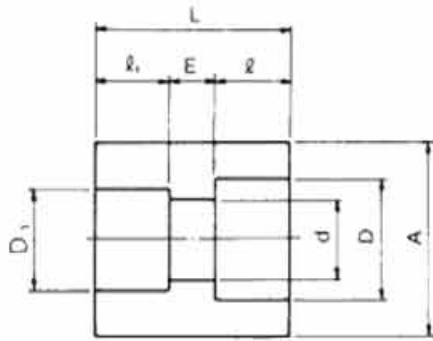


Size	Type	M	B <sub>1</sub>	B	C(Min.)	E	L	D	Unit Weight (kg)
<b>3000lb</b>									
3/8 x 1/4	1	22.2				9.6	21	16	9.4 0.051
1/2 x 1/4	2	-				9.6	15	-	9.4 0.052
1/2 x 3/8	1	25.4				9.6	24	20	12.7 0.087
3/4 x 1/4	3	-				9.6	19	7	9.4 0.109
3/4 x 3/8	2	-				9.6	19	-	12.7 0.697
3/4 x 1/2	1	31.8				9.6	26	22	16.1 0.146
1 x 3/8	3	25.4				9.6	22	7	12.7 0.161
1 x 1/2	2	-				9.6	22	-	16.1 0.183
1 x 3/4	1	38.1				12.7	29	23	21.4 0.208
1 1/4 x 1/2	3	31.8				9.6	24	7	16.1 0.273
1 1/4 x 3/4	2	-				12.7	24	-	21.4 0.286
1 1/4 x 1	1	46.0				12.7	32	24.5	27.2 0.436
1 1/2 x 3/4	3	38.1				12.7	26	8	21.4 0.348
1 1/2 x 1	2	-				12.7	26	-	27.2 0.384
1 1/2 x 1 1/4	1	55.0				12.7	35	27	35.5 0.463
2 x 1	3	46.0				12.7	29	8	27.2 0.616
2 x 1 1/4	2	-				12.7	29	-	35.5 0.647
2 x 1 1/2	1	65.0				12.7	37	29	41.2 0.661
2 1/2 x 1 1/4	3	55.0				12.7	35	8	35.5 1.183
2 1/2 x 1 1/2	3	65.0				12.7	35	8	41.2 1.107
2 1/2 x 2	1	76.0				15.9	39	30	52.7 1.200
3 x 1 1/2	3	65.0				12.7	39	8	41.2 1.715
3 x 2	3	75.0				15.9	39	10	52.7 1.542
3 x 2 1/2	1	95.0				15.9	51	33.5	65.9 1.825
<b>6000lb</b>									
3/4 x 1/2	1	38.1				12.3	39	23	12.3 0.318
1 x 1/2	1	38.1				12.3	38	24	12.3 0.354
1 x 3/4	1	46.0				16.2	43	26	16.2 0.527
1 1/4 x 1/2	2	-				12.3	29	-	12.3 0.415
1 1/4 x 3/4	1	46.0				16.2	40	28	16.2 0.557
1 1/4 x 1	1	55.0				21.2	45	28	21.2 0.765
1 1/2 x 3/4	2	-				16.2	35	-	16.2 0.618
1 1/2 x 1	1	55.0				21.2	38	28	21.2 0.723
1 1/2 x 1 1/4	1	62.0				29.9	52	32	29.9 0.957
2 x 1	3	-				21.2	43	8	21.2 1.025
2 x 1 1/4	1	62.0				29.9	54	34	29.9 1.137
2 x 1 1/2	1	75.0				34.4	63	34	34.4 0.911
2 1/2 x 1 1/4	3	62.0				29.9	46	8	29.9 1.478
2 1/2 x 1 1/2	2	-				34.4	46	-	34.4 1.880
2 1/2 x 2	1	95.0				43.1	73	36	43.1 2.918
3 x 1 1/2	3	75.0				34.4	50	8	34.4 2.370
3 x 2	2	95.0				43.1	70	-	43.1 3.313
3 x 2 1/2	1	110.0				57.3	83	38	57.3 3.562

- Note
- (1) For the 'Bore'(M) other than standard pipe outside diameter.
- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

# SOCKET WELDING FITTINGS

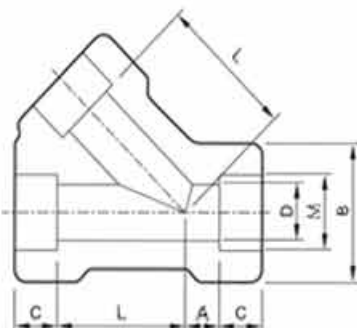
## PIPE FITTINGS



REDUCING COUPLING

Size	D	D <sub>1</sub>	ℓ	ℓ <sub>1</sub>	d	A	E	L
<b>3000lb</b>								
3/8 × 1/4	17.8	14.3	10	10	9.4	26	6.4	26.4
1/2 × 1/4	22.2	14.3	10	10	9.4	32	9.5	29.5
1/2 × 3/8	22.2	17.8	10	10	12.7	32	9.5	29.5
3/4 × 1/4	27.7	14.3	13	10	9.4	38	9.5	32.5
3/4 × 3/8	27.7	17.8	13	10	12.7	38	9.5	32.5
3/4 × 1/2	27.7	22.2	13	10	16.1	38	9.5	32.5
1 × 3/8	34.5	17.8	13	10	12.7	46	12.7	35.7
1 × 1/2	34.5	22.2	13	10	16.1	46	12.7	35.7
1 × 3/4	34.5	27.2	13	13	21.4	46	12.7	38.7
1 1/4 × 1/2	43.2	22.2	13	10	16.1	55	12.7	35.7
1 1/4 × 3/4	43.2	27.7	13	13	21.4	55	12.7	38.7
1 1/4 × 1	43.2	34.5	13	13	27.2	55	12.7	38.7
1 1/2 × 3/4	49.1	27.7	13	13	21.4	63	12.7	38.7
1 1/2 × 1	49.1	34.5	13	13	27.2	63	12.7	38.7
1 1/2 × 1 1/4	49.1	43.2	13	13	35.5	63	12.7	38.7
2 × 1	61.1	34.5	16	13	27.2	75	19.1	48.1
2 × 1 1/4	61.1	43.2	16	13	35.5	75	19.1	48.1
2 × 1 1/2	61.1	49.1	16	13	41.2	75	19.1	48.1

Size	D	D <sub>1</sub>	ℓ	ℓ <sub>1</sub>	d	A	E	L
<b>6000lb</b>								
3/4 × 1/2	27.7	22.2	13	13	12.3	42	9.5	35.5
1 × 1/2	34.5	22.2	13	13	12.3	52	12.7	38.7
1 × 3/4	34.5	27.7	13	13	16.2	52	12.7	38.7
1 1/4 × 1/2	43.2	22.2	13	13	12.3	60	12.7	38.7
1 1/4 × 3/4	43.2	27.7	13	13	16.2	60	12.7	38.7
1 1/4 × 1	43.2	34.5	13	13	21.2	60	12.7	38.7
1 1/2 × 3/4	49.1	27.7	16	13	16.2	68	12.7	41.7
1 1/2 × 1	49.1	34.5	16	13	21.2	68	12.7	41.7
1 1/2 × 1 1/4	49.1	43.2	16	13	29.9	68	12.7	41.7
2 × 1	61.1	34.5	16	13	21.2	85	19.1	48.1
2 × 1 1/4	61.1	43.2	16	13	29.9	85	19.1	48.1
2 × 1 1/2	61.1	49.1	16	16	34.4	85	19.1	51.1

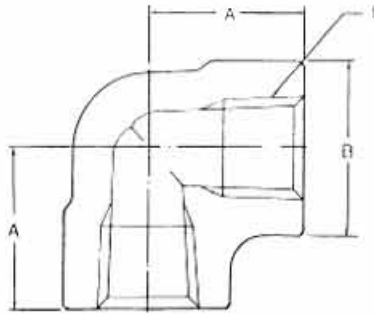


LATERAL

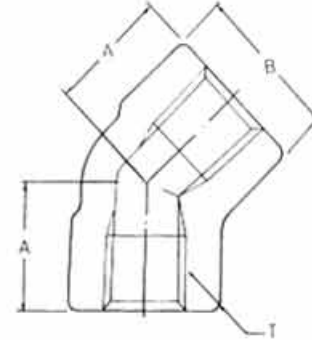
Size	L	A	M	D	B	C
1/4	31.8	7.9	14.3	9.4	20.6	9.6
3/8	36.5	7.9	17.8	12.7	24.8	9.6
1/2	41.3	11.1	22.2	16.1	30.4	9.6
3/4	50.8	12.7	27.7	21.4	36.3	12.7
1	60.3	14.3	34.5	27.2	44.5	12.7
1 1/4	71.4	17.5	43.2	35.5	54.0	12.7
1 1/2	81.0	20.6	49.1	41.2	60.3	12.7
2	98.4	25.4	61.1	52.7	73.3	15.9

# THREADED FITTINGS

2000lb, 3000lb, 6000lb



90° ELBOW



45° ELBOW

Size T	B	A	Unit Weight (kg)
<b>2000lb</b>			
3/8	26.5	25.4	0.13
1/2	26.5	25.4	0.12
3/4	34.0	28.5	0.23
1	38.5	33.5	0.36
1 1/4	46.5	38.1	0.55
1 1/2	56.5	44.5	0.95
2	63.5	50.8	1.13
2 1/2	76.0	60.5	1.96
3	92.0	76.0	3.25
3 1/2	110.0	86.0	5.66
4	121.0	95.5	6.92
4	146.0	106.5	10.43
<b>3000lb</b>			
3/8	26.5	25.4	0.120
1/2	34.0	28.5	0.235
3/4	38.5	33.5	0.390
1	46.5	38.1	0.570
1 1/4	56.5	44.5	0.990
1 1/2	63.5	50.8	1.260
2	76.0	60.5	2.125
2 1/2	84.0	64.0	3.520
3	110.0	83.0	5.460
3 1/2	121.0	95.5	8.000
4	146.0	106.5	11.230
4	152.0	114.3	13.500
<b>6000lb</b>			
3/8	38.5	33.5	0.40
1/2	46.5	38.5	0.68
3/4	56.5	44.5	1.13
1	63.5	50.8	1.59
1 1/4	76.0	60.5	2.60
1 1/2	84.0	64.0	4.32
2	110.0	85.0	7.33
2 1/2	121.0	95.5	9.25
3	146.0	106.5	12.05
3 1/2	152.0	114.3	14.30
4	152.0	114.3	14.10

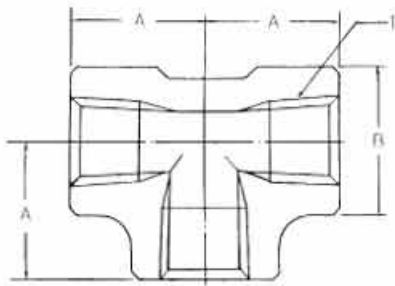
Size T	B	A	Unit Weight (kg)
<b>2000lb</b>			
3/8	26.5	19.1	0.16
1/2	26.5	19.1	0.13
3/4	34.0	26.0	0.25
1	38.5	28.6	0.32
1 1/4	46.5	30.0	0.43
1 1/2	56.5	33.3	0.75
2	63.5	42.0	1.06
2 1/2	76.0	46.0	1.49
3	92.0	53.0	2.45
3 1/2	110.0	64.0	4.00
4	121.0	64.0	5.12
4	146.0	80.0	8.68
<b>3000lb</b>			
3/8	26.5	19.1	0.16
1/2	34.0	26.0	0.28
3/4	38.5	28.6	0.38
1	46.5	30.0	0.51
1 1/4	56.5	33.3	1.03
1 1/2	63.5	42.0	1.22
2	76.0	46.0	2.36
2 1/2	84.0	53.0	3.66
3	110.0	64.0	6.12
3 1/2	121.0	64.0	6.12
4	146.0	80.0	8.40
4	152.0	80.0	11.30
<b>6000lb</b>			
3/8	38.5	28.6	0.45
1/2	46.5	30.0	0.72
3/4	56.5	33.3	1.00
1	63.5	42.0	1.56
1 1/4	76.0	46.0	2.29
1 1/2	84.0	53.0	3.80
2	110.0	64.0	5.76
2 1/2	121.0	64.0	7.20
3	146.0	80.0	11.30
3 1/2	152.0	80.0	13.20
4	152.0	80.0	11.80

- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

YOUNG CHANG TECH

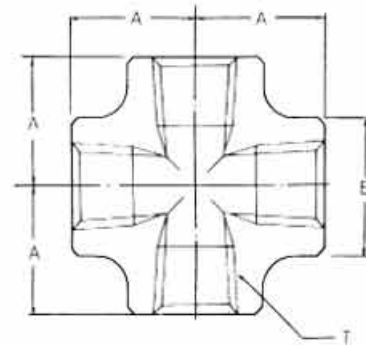
# THREADED FITTINGS

2000lb, 3000lb, 6000lb



**TEE**

Size T	B	A	Unit Weight (kg)
<b>2000lb</b>			
¼	26.5	25.4	0.18
⅜	26.5	25.4	0.14
½	34.0	28.5	0.26
¾	38.5	33.5	0.43
1	46.5	38.1	0.66
1¼	56.5	44.5	0.91
1½	63.5	50.8	1.25
2	76.0	60.5	2.10
2½	92.0	76.0	3.95
3	110.0	86.0	5.98
3½	121.0	95.5	7.41
4	146.0	106.5	12.38
<b>3000lb</b>			
¼	26.5	25.4	0.18
⅜	34.0	28.5	0.32
½	38.5	33.5	0.52
¾	46.5	38.1	0.72
1	56.5	44.5	1.26
1¼	63.5	50.8	1.65
1½	76.0	60.5	2.81
2	84.0	64.0	4.35
2½	110.0	83.0	6.26
3	121.0	95.5	10.05
3½	146.0	106.5	14.62
4	152.0	114.3	16.50
<b>6000lb</b>			
¾	38.5	33.5	0.59
½	46.5	38.5	0.96
¾	56.5	44.5	1.50
1	63.5	50.8	2.10
1¼	76.0	60.5	3.30
1½	84.0	64.0	5.72
2	110.0	85.0	9.64
2½	121.0	95.5	13.40
3	146.0	106.5	16.15
3½	152.0	114.3	18.23
4	152.0	114.3	16.70



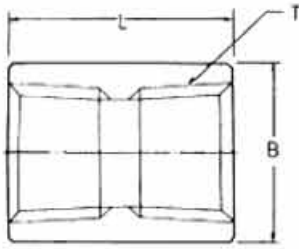
**CROSS**

Size T	B	A	Unit Weight (kg)
<b>2000lb</b>			
¼	26.5	25.4	0.14
⅜	26.5	25.4	0.22
½	34.0	28.5	0.37
¾	38.5	33.5	0.52
1	46.5	38.1	0.79
1¼	56.5	44.5	1.28
1½	63.5	50.8	1.65
2	76.0	60.5	2.62
2½	92.0	67.0	4.66
3	110.0	85.0	7.10
3½	121.0	95.5	8.85
4	146.0	106.5	14.83
<b>3000lb</b>			
¼	26.5	25.4	0.23
⅜	34.0	28.5	0.40
½	28.5	33.5	0.62
¾	46.5	38.1	0.93
1	56.5	44.5	1.47
1¼	63.5	50.8	1.78
1½	76.0	60.5	3.42
2	92.0	67.0	5.50
2½	110.0	85.0	7.66
3	121.0	95.5	11.21
3½	146.0	106.5	16.72
4	152.0	114.3	19.00
<b>6000lb</b>			
¾	38.5	33.5	0.67
½	46.5	38.1	1.12
¾	56.5	44.5	1.90
1	63.5	50.8	2.90
1¼	76.0	60.5	4.20
1½	92.0	67.0	6.65
2	110.0	85.0	10.00
2½	121.0	95.5	16.00
3	146.0	106.5	19.87
3½	152.0	114.3	28.10
4	152.0	114.3	24.60

- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

# THREADED FITTINGS

2000lb, 3000lb, 6000lb



**FULL COUPLING**

Size T	B	L	Unit Weight (kg)
--------	---	---	------------------

2000lb

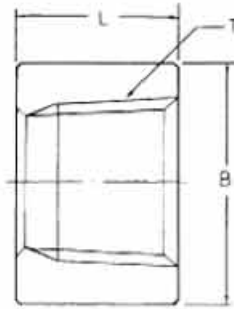
¼	19.0	35.0	0.050
⅜	22.0	38.0	0.061
½	28.5	48.0	0.142
¾	35.0	51.0	0.218
1	44.5	61.0	0.418
1¼	57.0	67.0	0.720
1½	63.5	80.0	1.065
2	76.0	86.0	1.400
2½	92.0	92.0	2.550
3	108.0	108.0	3.830
3½	127.0	114.3	5.720
4	140.0	121.0	6.350

3000lb

¼	19.0	35.1	0.050
⅜	22.0	38.1	0.061
½	28.5	48.0	0.142
¾	35.0	51.0	0.218
1	44.5	61.0	0.418
1¼	57.0	67.0	0.720
1½	63.5	80.0	1.065
2	76.0	86.0	1.400
2½	92.0	92.0	2.550
3	108.0	108.0	3.830
3½	127.0	114.3	5.720
4	140.0	121.0	6.350

6000lb

¼	25.4	35.0	0.120
⅜	31.8	38.0	0.180
½	38.1	48.0	0.282
¾	44.5	51.0	0.450
1	57.0	61.0	0.800
1¼	63.5	67.0	1.400
1½	76.0	80.0	1.950
2	92.0	86.0	2.800
2½	108.0	92.0	3.800
3	127.0	108.0	6.010
3½	140.0	114.3	8.250
4	160.0	121.0	10.700



**HALF COUPLING**

Size T	B	L	Unit Weight (kg)
--------	---	---	------------------

2000lb

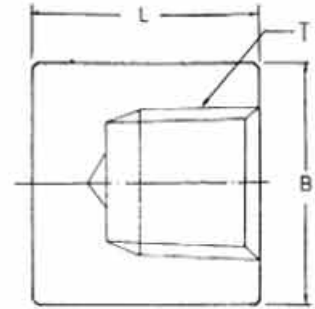
¼	19.0	17.5	0.025
⅜	22.0	19.0	0.030
½	28.5	24.0	0.070
¾	35.0	25.5	0.100
1	44.5	30.5	0.210
1¼	57.0	33.5	0.365
1½	63.5	40.0	0.520
2	76.0	43.0	0.690
2½	92.0	46.0	1.250
3	108.0	54.0	1.840
3½	127.5	57.5	2.860
4	140.0	60.5	2.510

3000lb

¼	19.0	17.5	0.025
⅜	22.0	19.0	0.030
½	28.5	24.0	0.070
¾	35.0	25.5	0.100
1	44.5	30.5	0.210
1¼	57.0	33.5	0.365
1½	63.5	40.0	0.520
2	76.0	43.0	0.690
2½	92.0	46.0	1.250
3	108.0	54.0	1.840
3½	127.0	57.5	2.863
4	140.0	60.5	3.510

6000lb

¼	25.4	17.5	0.06
⅜	31.8	19.0	0.09
½	38.1	24.0	0.14
¾	44.5	25.5	0.23
1	57.0	30.5	0.37
1¼	63.5	33.5	0.70
1½	76.0	40.0	0.90
2	92.0	43.0	1.22
2½	108.0	46.0	1.85
3	127.0	54.0	2.95
3½	140.0	57.5	4.12
4	160.0	60.5	5.40



**CAP**

Size T	B	L	Unit Weight (kg)
--------	---	---	------------------

2000lb

¼	19.0	25	0.05
⅜	22.0	25	0.08
½	28.5	32	0.12
¾	35.0	37	0.20
1	44.5	41	0.31
1¼	57.0	44	0.60
1½	63.5	44	0.74
2	76.0	48	1.05
2½	92.0	60	2.27
3	108.0	65	3.83
3½	127.0	68	4.52
4	140.0	68	6.35

3000lb

¼	19.0	25	0.05
⅜	22.0	25	0.08
½	28.5	32	0.12
¾	35.0	37	0.20
1	44.5	41	0.31
1¼	57.0	44	0.60
1½	63.5	44	0.73
2	76.0	48	1.05
2½	92.0	60	2.27
3	108.0	65	3.83
3½	127.0	68	4.52
4	140.0	68	6.35

6000lb

¼	25.4	27	0.09
⅜	31.8	27	0.14
½	38.1	33	0.25
¾	44.5	38	0.36
1	57.0	43	0.70
1¼	63.5	46	0.80
1½	76.0	48	1.28
2	92.0	51	2.16
2½	108.0	64	2.72
3	127.0	68	4.95
3½	140.0	70	6.84
4	160.0	75	9.21

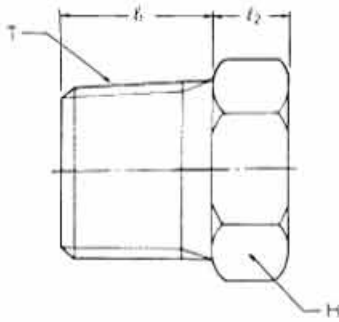
- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

Y  
O  
U  
N  
G  
C  
H  
A  
N  
G  
I  
N  
G  
T  
E  
C  
H



# THREADED FITTINGS

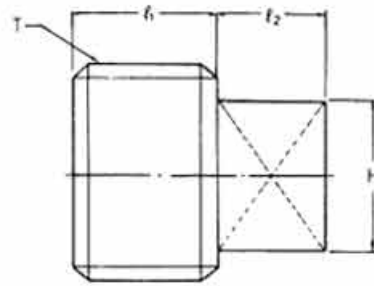
3000lb



HEX HEAD PULG

Size T	l <sub>1</sub>	l <sub>2</sub>	L	Unit Weight (kg)
--------	----------------	----------------	---	------------------

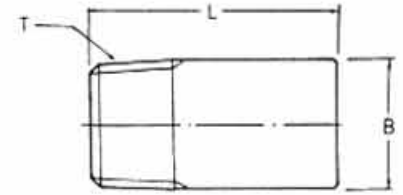
3/8	11	6.3	11.0	0.03
1/4	13	6.3	16.0	0.03
3/8	14	8.0	18.0	0.06
1/2	18	8.0	22.0	0.08
3/4	19	10.0	27.0	0.14
1	21	10.0	35.0	0.22
1 1/4	22	14.0	44.0	0.53
1 1/2	24	16.0	51.0	0.62
2	25	18.0	63.5	1.02
2 1/2	32	19.0	76.2	1.76
3	40	21.0	99.0	2.66
3 1/2	41	22.0	103.0	3.72
4	42	32.0	117.0	5.90



SQURE PULG

Size T	l <sub>1</sub>	l <sub>2</sub>	L	Unit Weight (kg)
--------	----------------	----------------	---	------------------

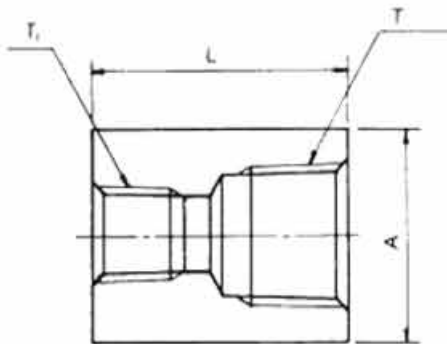
3/8	9.9	6.6	7.0	0.007
1/4	13.0	6.6	9.5	0.014
3/8	13.0	7.9	11.0	0.028
1/2	15.0	9.9	14.5	0.057
3/4	16.0	11.0	16.0	0.085
1	20.1	13.0	21.0	0.140
1 1/4	21.1	15.0	24.0	0.255
1 1/2	21.1	16.0	28.5	0.397
2	23.1	18.0	33.5	0.680
2 1/2	27.0	20.0	38.1	1.020
3	29.0	21.0	42.9	1.300
3 1/2	30.0	22.2	47.6	2.050
4	32.0	25.0	63.5	3.257



ROUND PULG

Size T	B	L	Unit Weight (kg)
--------	---	---	------------------

3/8	10.3	35.0	0.057
1/4	13.5	41.3	0.057
3/8	17.5	41.3	0.085
1/2	21.4	44.5	0.170
3/4	27.0	44.5	0.170
1	33.4	50.8	0.340
1 1/4	42.9	50.8	0.340
1 1/2	48.4	50.8	0.710
2	60.3	63.5	1.361
2 1/2	73.0	70.0	2.156
3	88.9	70.0	3.456
3 1/2	101.6	76.2	4.216
4	114.3	76.2	5.838

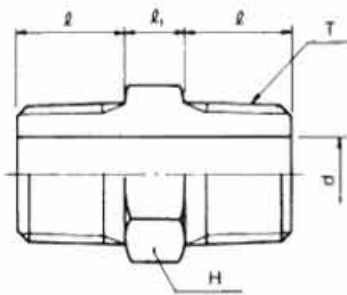


REDUCING COUPLING

T (PT) × T <sub>1</sub> (PT)	A	L
1/4 × 3/8	20	35.1
3/8 × 1/4	24	38.1
1/2 × 1/4	30	47.8
1/2 × 3/8	30	47.8
3/4 × 1/4	36	50.8
3/4 × 3/8	36	50.8
3/4 × 1/2	36	50.8
1 × 3/8	46	60.5
1 × 1/2	46	60.5
1 × 3/4	46	60.5
1 1/4 × 1/2	60	66.5
1 1/4 × 3/4	60	66.5
1 1/4 × 1	60	66.5
1 1/2 × 3/4	65	79.3
1 1/2 × 1	65	79.3
1 1/2 × 1 1/4	65	79.3
2 × 1	80	85.9
2 × 1 1/4	80	85.9

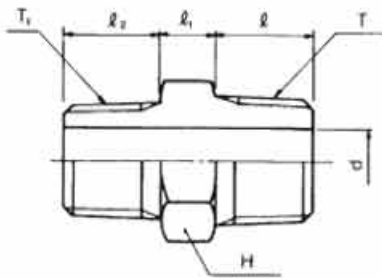
# THREADED FITTINGS

3000lb



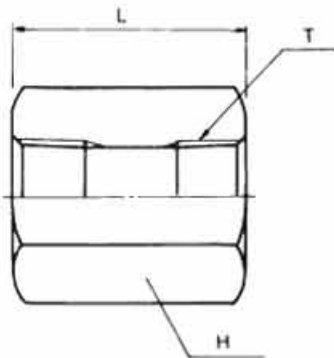
HEX NIPPLE

T (PT)	d	H	ℓ	ℓ <sub>1</sub>
3/8	4	HEX 12	10	6
1/2	7	HEX 17	14	8
3/4	9	HEX 19	15	8
1	12	HEX 22	19	9
1 1/4	16	HEX 27	21	10
1 1/2	20	HEX 36	24	11
2	28	HEX 46	27	12
2 1/2	32	HEX 50	27	14
3	40	HEX 65	31	16



REDUCING NIPPLE

T (PT) × T <sub>1</sub> (PT)	d	H	ℓ	ℓ <sub>1</sub>	L
3/8 × 3/8	4	HEX 17	14	8	10
3/8 × 1/2	7	HEX 19	15	8	14
1/2 × 1/2	7	HEX 22	19	9	14
1/2 × 3/4	9	HEX 22	19	9	15
3/4 × 3/4	7	HEX 27	21	10	14
3/4 × 1/2	9	HEX 27	21	10	15
1 × 3/8	12	HEX 27	21	10	19
1 × 1/2	9	HEX 36	24	11	15
1 × 3/4	12	HEX 36	24	11	19
1 1/4 × 1/2	16	HEX 36	24	11	21
1 1/4 × 3/4	12	HEX 46	27	12	19
1 1/4 × 1	16	HEX 46	27	12	21
1 1/2 × 3/4	20	HEX 46	27	12	24
1 1/2 × 1	16	HEX 50	27	14	21
1 1/2 × 1 1/4	20	HEX 50	27	14	24
2 × 1	28	HEX 50	27	14	27
2 × 1 1/4	20	HEX 65	31	16	24
2 × 1 1/2	28	HEX 65	31	16	27
2 1/2 × 1 1/2	32	HEX 65	31	16	27



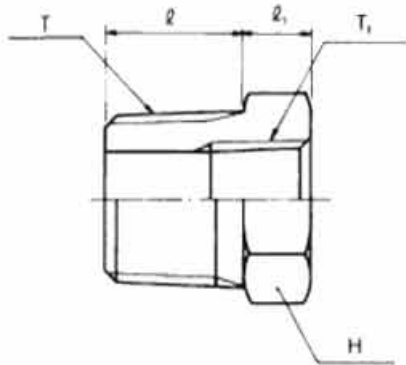
HEX SOCKET

T (PT)	H	L
3/8	HEX 19	30
1/2	HEX 22	30
3/4	HEX 24	30
1	HEX 32	40
1 1/4	HEX 36	42
1 1/2	HEX 46	50
2	HEX 55	55
2 1/2	HEX 65	55
3	HEX 75	64

Y  
O  
U  
N  
G  
C  
H  
A  
N  
G  
I  
N  
G  
T  
E  
C  
H

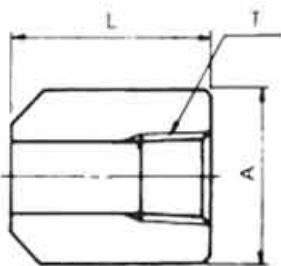
# THREADED FITTINGS

3000lb



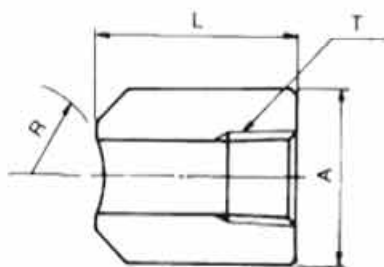
HEX BUSHING

T (PT) × T <sub>1</sub> (PT)	H	l	l <sub>1</sub>
1/4 × 1/8	HEX 17	14	8
3/8 × 1/4	HEX 19	15	8
1/2 × 1/4	HEX 24	19	9
1/2 × 3/8	HEX 24	19	9
3/4 × 1/4	HEX 30	21	10
3/4 × 3/8	HEX 30	21	10
3/4 × 1/2	HEX 30	21	10
1 × 1/4	HEX 36	24	11
1 × 3/8	HEX 36	24	11
1 × 1/2	HEX 36	24	11
1 × 3/4	HEX 36	24	11
1 1/4 × 1/2	HEX 46	27	12
1 1/4 × 3/4	HEX 46	27	12
1 1/4 × 1	HEX 46	27	12
1 1/2 × 1/2	HEX 50	27	14
1 1/2 × 3/4	HEX 50	27	14
1 1/2 × 1	HEX 50	27	14
1 1/2 × 1 1/4	HEX 50	27	14
2 × 3/4	HEX 65	31	16
2 × 1	HEX 65	31	16
2 × 1 1/4	HEX 65	31	16
2 × 1 1/2	HEX 65	31	16



BOSS TYPE A

T (PT)	A	L
1/4	22	40
3/8	26	50
1/2	32	50
3/4	38	50
1	46	50
1 1/4	55	50
1 1/2	65	50
2	75	60



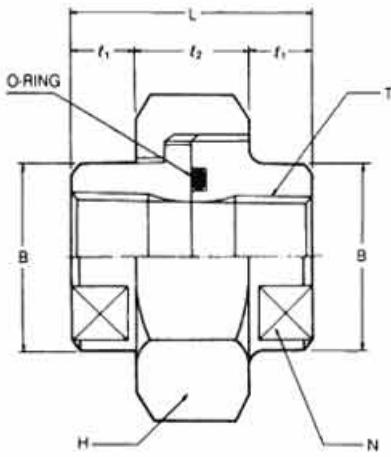
BOSS TYPE R

T (PT)	A	L	R
1/4	22	40	25
3/8	26	50	25
1/2	32	50	30
3/4	38	50	30
1	46	50	40
1 1/4	55	50	45
1 1/2	65	50	55
2	75	60	60

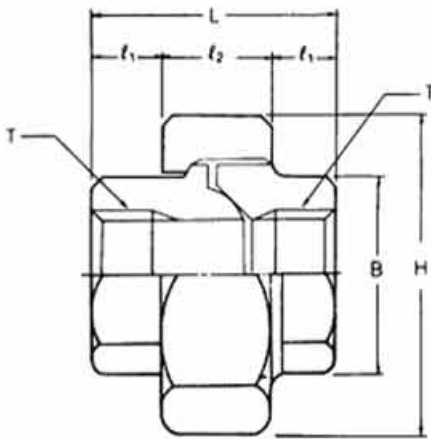
YOUNG CHANG TECH

# THREADED FITTINGS

3000lb, 6000lb



O-RING UNION



R.J. UNION

Size T	B	ℓ	ℓ <sub>1</sub>	L	N	H	O-Ring	Unit Weight (kg)
<b>3000lb</b>								
¼	22	10	18	38	21	35 HEX	P18	0.160
⅜	27	10	18	38	26	41 HEX	P20	0.215
½	32	12	20	44	32	46 HEX	G25	0.312
¾	38	12	26	50	38	54 HEX	G30	0.477
1	47	15	26	56	46	63 HEX	G35	0.764
1 ¼	56	15	30	60	54	77 HEX	G45	1.106
1 ½	63	18	36	72	63	80 OCT	G50	1.327
2	76	18	36	72	77	95 OCT	G65	1.856

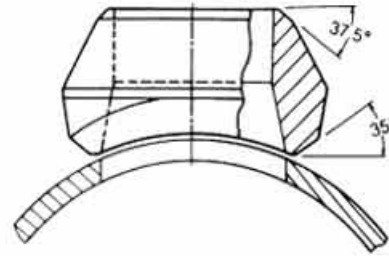
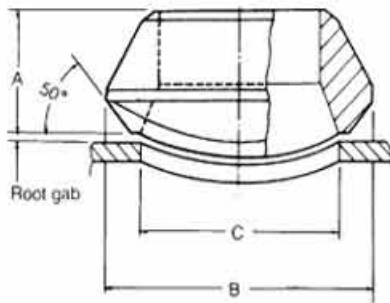
Size T	B	ℓ <sub>1</sub>	ℓ <sub>2</sub>	L	H	Unit Weight (kg)
<b>3000lb</b>						
¼	21.0	11.5	18	41	35 HEX	0.19
⅜	25.0	14.0	18	46	40 HEX	0.25
½	32.0	15.0	21	51	46 HEX	0.43
¾	40.0	17.0	23	57	58 HEX	0.62
1	48.0	19.5	25	64	65 HEX	1.03
1 ¼	55.5	22.5	27	72	76 OCT	1.15
1 ½	63.5	24.0	30	78	83 OCT	1.54
2	76.0	26.0	36	88	103 OCT	3.05
2 ½	95.0	34.0	42	110	124 OCT	5.14
3	116.0	37.0	45	120	150 OCT	7.12
4	148.0	45.0	50	140	180 OCT	12.40
<b>6000lb</b>						
¼	25.4	13.5	19	46	40 HEX	0.25
⅜	32.0	15.0	21	51	46 HEX	0.44
½	40.0	17.0	23	57	56 HEX	0.62
¾	44.5	19.5	25	64	65 HEX	0.94
1	51.0	22.5	27	72	74 OCT	1.08
1 ¼	57.2	24.0	30	78	83 OCT	1.41
1 ½	71.5	26.0	36	88	103 OCT	2.75
2	90.0	34.0	42	110	124 OCT	5.05
2 ½	105.0	37.5	45	120	150 OCT	6.87
3	125.0	45.0	50	140	180 OCT	10.85

- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

YOUNG CHANG TECH

# FORGED OUTLET FITTINGS

STD(Sch40), X-S(Sch80), Sch160, XX-S



## WELDOLET

### STD, X-S

Outlet Size	A		B		C		APP'Weight(kg)	
	STD	X-S	STD	X-S	STD	X-S	STD	X-S
1/2	19.1	19.1	34.9	34.9	23.8	23.8	0.08	0.09
3/4	22.2	22.2	44.5	44.5	30.2	30.2	0.11	0.14
1	27.0	27.0	54.0	54.0	36.5	36.5	0.23	0.21
1 1/4	31.8	31.8	65.1	65.1	44.5	44.5	0.36	0.41
1 1/2	33.3	33.3	73.0	73.0	50.8	50.8	0.45	0.50
2	38.1	38.1	88.9	88.9	65.1	65.1	0.80	0.80
2 1/2	41.3	41.3	103.2	103.2	76.2	76.2	1.14	1.20
3	44.5	44.5	122.2	122.2	93.7	93.7	1.82	1.90
4	50.8	50.8	152.4	152.4	120.7	120.7	2.86	2.90
5	57.2	57.2	179.4	179.4	141.3	141.3	4.66	4.70
6	60.3	77.8	215.9	225.4	169.9	169.9	6.45	10.50
8	69.9	98.5	263.5	292.1	220.7	220.7	10.68	16.80
10	77.8	93.7	322.3	323.9	274.7	265.1	17.73	20.90
12	85.7	103.2	377.8	397.4	325.4	317.5	26.82	27.70
14	88.9	100.0	409.6	431.8	357.2	350.8	30.00	31.80
16	93.7	106.4	463.6	466.7	408.0	403.2	34.10	46.40
18	96.8	111.1	520.7	523.9	458.8	455.6	44.10	59.10
20	101.6	119.1	571.5	582.6	508.0	509.6	53.60	71.80
24	115.9	139.7	689.0	708.0	614.4	638.2	100.00	131.80

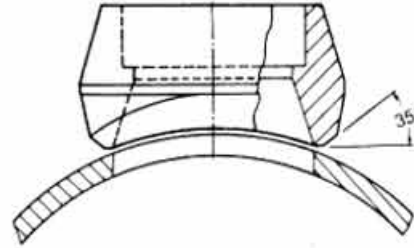
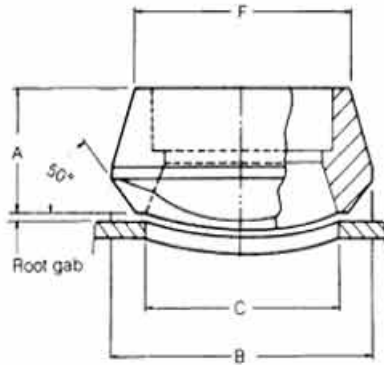
### Sch160, XX-S

Outlet Size	A		B		C		APP'Weight(kg)	
	Sch 160	XX-s	Sch 160	XX-s	Sch 160	XX-s	Sch 160	XX-s
1/2	28.6	28.6	34.9	34.9	14.3	14.3	0.11	-
3/4	31.8	31.8	44.5	44.5	19.1	19.1	0.32	-
1	38.1	38.1	50.8	50.8	25.4	25.4	0.38	0.38
1 1/4	44.5	44.5	61.9	61.9	33.3	33.3	0.57	0.57
1 1/2	50.8	50.8	69.9	69.9	38.1	38.1	0.80	0.80
2	55.6	55.6	81.0	81.0	42.9	42.9	1.00	1.00
2 1/2	61.9	61.9	96.8	96.8	54.0	54.0	1.54	1.54
3	73.0	73.0	120.7	120.7	73.0	73.0	2.90	2.90
4	84.1	84.1	152.4	152.4	98.4	98.4	4.80	4.80
5	93.7	93.7	187.3	187.3	122.2	122.2	6.50	6.50
6	104.8	104.8	220.7	220.7	146.1	146.1	12.70	12.70
8	111.1	111.1	284.2	284.2	173.0	173.0	20.50	20.50
10	125.4	125.4	312.7	312.7	215.9	215.9	38.60	38.60

- Dimensions are in millimeters.
- Dimensional Tolerances See ANSI B16.11 or JIS B2316

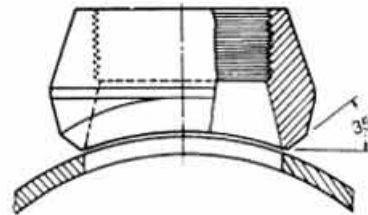
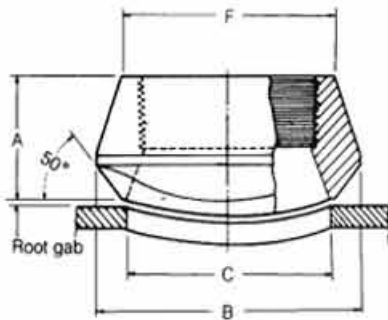
# FORGED OUTLET FITTINGS

3000#, 6000#



SOCKOLET

Outlet Size	A		B		C		F		APP'Weight(kg)	
	3000#	6000#	3000#	6000#	3000#	6000#	3000#	6000#	3000#	6000#
1/2	25.4	31.8	34.9	44.5	23.8	19.1	31.8	39.7	0.14	0.23
3/4	27.0	36.5	44.5	50.8	30.2	25.4	36.5	46.6	0.15	0.36
1	33.3	39.7	54.0	61.9	36.5	33.3	46.0	57.2	0.27	0.59
1 1/4	33.3	41.3	65.1	69.9	44.5	38.1	55.6	65.1	0.39	0.73
1 1/2	34.9	42.9	73.0	82.6	50.8	49.2	61.9	76.2	0.47	0.91
2	38.1	58.7	88.9	103.2	65.1	58.7	74.6	92.1	0.73	2.34
2 1/2	46.0	-	103.2	-	76.2	-	87.3	-	1.25	-
3	50.8	-	122.2	-	93.7	-	104.8	-	1.73	-
4	57.2	-	152.4	-	120.7	-	130.2	-	3.30	-



THREDOLET

Outlet Size	A		B		C		F		APP'Weight(kg)	
	3000#	6000#	3000#	6000#	3000#	6000#	3000#	6000#	3000#	6000#
1/2	25.4	31.8	34.9	44.5	23.8	19.1	31.8	39.7	0.11	0.20
3/4	27.0	36.5	44.5	50.8	30.2	25.4	36.5	46.6	0.16	0.34
1	33.3	39.7	54.0	61.9	36.5	33.3	46.0	57.2	0.28	0.56
1 1/4	33.3	41.3	65.1	69.9	44.5	38.1	55.6	65.1	0.41	0.71
1 1/2	34.9	42.9	73.0	82.6	50.8	49.2	61.9	76.2	0.45	0.89
2	38.1	52.4	88.9	103.2	65.1	69.9	74.6	92.1	0.80	2.31
2 1/2	46.0	-	103.2	-	76.2	-	87.3	-	1.36	-
3	50.8	-	122.2	-	93.7	-	104.8	-	1.98	-
4	57.2	-	152.4	-	120.7	-	130.2	-	3.23	-

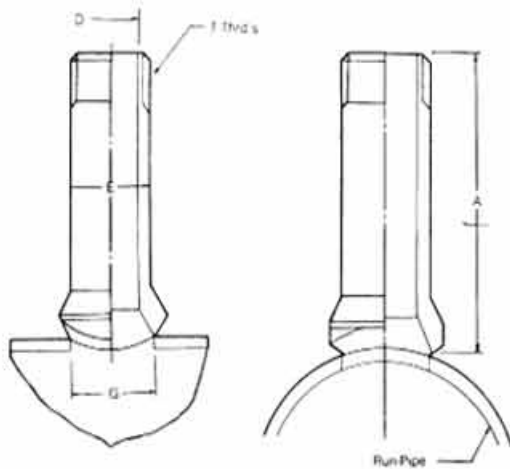
- Dimensions are in millimeters.
- Applicable Run Pipe Sizes are from Out-let Size to 36 inch
- For the 3000# and 6000# Sockolets and Thredolets, Inside Bore, Thread Socket Bore and Socket Depth Dimensions are According to ANSI B16.11.

YOUNG CHANG TECH

# FORGED OUTLET FITTINGS

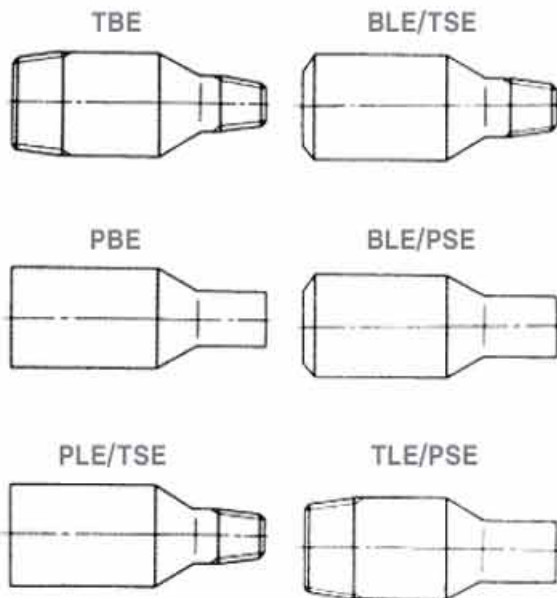
3000lb

## NIPPOLET



Run Pipe Size	Outlet Size T	A	G	D	E	Unit Weight (kg)
36- 3/4	1/2	88.9	23.9	14.0	21.3	0.36
36-1	3/4	88.9	30.2	18.8	26.7	0.56
36-1 1/4	1	88.9	36.6	24.4	33.3	0.84
36-1 1/2	1 1/4	88.9	44.5	32.5	42.2	1.22
36-2	1 1/2	88.9	50.8	38.1	48.3	2.00
36-2 1/2	2	88.9	65.0	49.3	60.5	3.12

## SWAGED NIPPLE



Large end Size	Small end Size	Length(mm)
1/2	3/8-1/8	70
3/4	1/2-1/8	76
1	3/4-1/8	89
1 1/4	1 - 1/8	102
1 1/2	1 1/2-1/8	114
2	1 1/2-1/8	165
2 1/2	2 - 1/8	178
3	2 1/2-1/8	203
3 1/2	3 - 1/8	203
4	3 1/2-1/8	229

• Swaged Nipples are made from Forged Steel or Pipe

TBE : Threaded both end  
 PBE : Plain both end  
 PLE/TSE : Plain large end-Threaded small end  
 BLE/TSE : Beveled large end Threaded small end  
 BLE/PSE : Beveled large end-Plain small end  
 TLE/PSE : Threaded large end-Plain small-end

YOUNG CHANG TECH

# TECHNICAL DATA

## 1. Forged Socket Welding, Threaded Fitting Bore

in millimeters.

	ANSI B16.11		JIS B2316	
	Socket Welding(M)	Threaded(T)	Socket Welding(M)	Threaded(T)
3/8"	10.90, 10.65	NPT 3/8	11.0	PT 3/8
1/2"	14.35, 14.10	NPT 1/2	14.3	PT 1/2
3/4"	17.80, 17.55	NPT 3/4	17.8	PT 3/4
1"	21.95, 21.70	NPT 1	22.2	PT 1
1 1/4"	27.30, 27.05	NPT 1 1/4	27.7	PT 1 1/4
1 1/2"	34.05, 33.80	NPT 1 1/2	34.5	PT 1 1/2
2"	42.80, 42.55	NPT 2	43.2	PT 2
2 1/2"	48.90, 48.65	NPT 2 1/2	49.1	PT 2 1/2
3"	61.35, 61.10	NPT 3	61.1	PT 3
3 1/2"	74.20, 73.80	NPT 3 1/2	77.1	PT 3 1/2
4"	90.15, 89.80	NPT 4	90.0	PT 4
4 1/2"	115.8, 115.45	NPT 4 1/2	115.4	PT 4 1/2

## 2. TOLERANCE

### Forged Socket Welding, Threaded Fitting (ANSI B16.11)

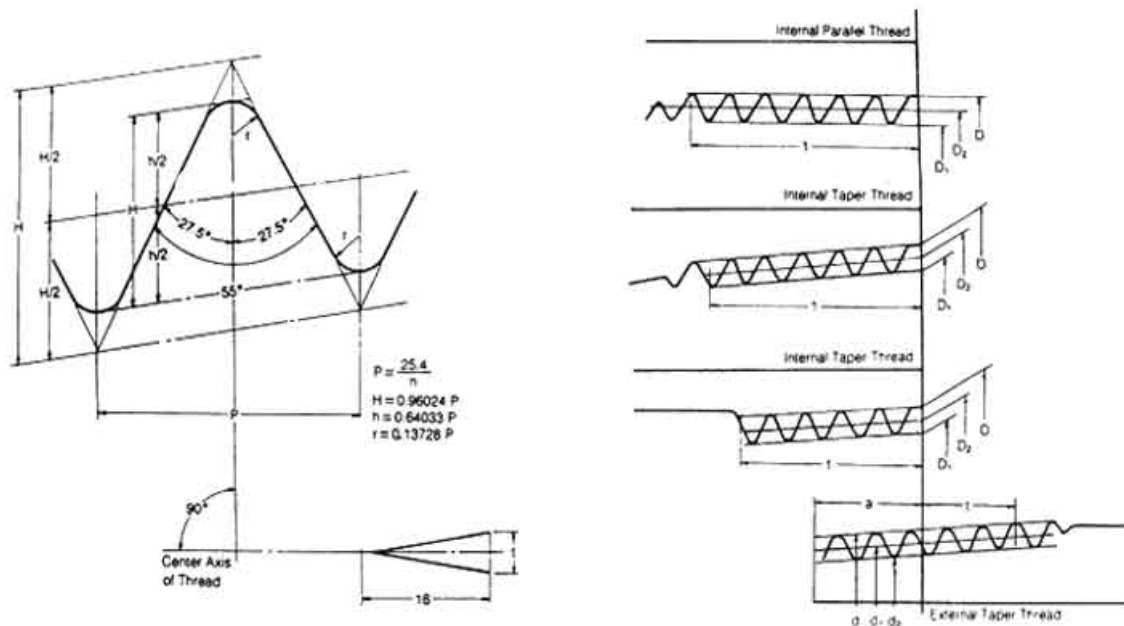
Nominal Pipe Size	All Fittings				Elbow, Tee, Cross	Coupling	Half Coupling
	Socket Bore Dia	Bore Dia. of Fitting	Concentricity of Bore	Concidence of Axis	Center to Bottom of Socket	Bottom to Bottom of Socket	Bottom of Socket to Opposite Face
1/8-1/2	+0.012 -0.000	±0.03	Socket and Fitting bores within ±0.03	Maximum variation in alignment of socket and fitting bores for 1/8 in 12	±0.03	±0.06	±0.03
3/8-3/4	+0.012 -0.000	±0.03			±0.06	±0.12	±0.06
1-2	+0.012 -0.000	±0.03			±0.08	±0.16	±0.08
2 1/2-3	+0.012 -0.000	±0.06			±0.10	±0.20	±0.10

Y  
O  
U  
N  
G  
  
C  
H  
A  
N  
G  
I  
N  
G  
  
T  
E  
C  
H



# TECHNICAL DATA

## 3. KS B0222 & JIS B0203 PIPE THREADS



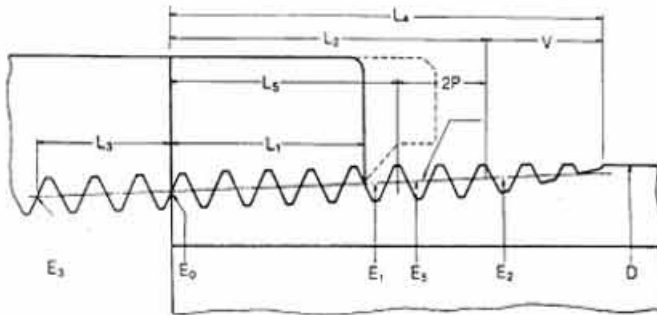
Basic Thread Data

• Dimensions are in millimeters.

Nominal Size	Number of Threads Per Inch	Screw Thread			Basic Diameter			Position of Basic Diameter			Tolerances on Basic Diameters of Internal Parallel Thread	Effective Thread Length (Min.)				Nominal Pipe Size (For Reference)	
		Pitch	Height of Thread	Rounding	External Thread			External Thread	Internal Thread	Fitting Allowance		Internal Thread					
					Major Diameter $d$	Pitch Diameter $d_2$	Minor Diameter $d_1$	From the Ena' of Pipe	The End of Pipe			When there is an incomplete thread or More	When There is on Incomplete Thread				
					Major Diameter	Pitch Diameter	Minor Diameter							Internal Taper Thread	Internal Parallel Thread		
		n	p	h	r	D	$D_2$	$D_1$	a	$\pm b$		$\pm C$	$\pm$	f	l		
PT 15( 1/2 )	14	1.8143	1.162	0.25	20.955	19.793	18.631	8.16	1.81	2.27	0.142	5.00	12.7	15.0	9.1	21.7	2.8
PT 20( 3/4 )	14	1.8143	1.162	0.25	26.441	25.279	24.117	9.53	1.81	2.27	0.142	5.60	14.1	16.3	10.2	27.2	2.8
PT 25( 1 )	11	2.3091	1.479	0.32	33.249	31.770	30.291	10.39	2.31	2.89	0.180	6.40	16.2	19.0	11.5	34.0	3.2
PT 32( 1 1/4 )	11	2.3091	1.479	0.32	41.910	40.431	38.952	12.70	2.31	2.89	0.180	6.40	18.5	21.4	13.4	42.7	3.5
PT 40( 1 1/2 )	11	2.3091	1.479	0.32	47.803	46.324	44.845	12.70	2.31	2.89	0.180	6.40	18.5	21.4	13.4	48.6	3.5
PT 50( 2 )	11	2.3091	1.479	0.32	59.614	58.135	56.656	15.88	2.31	2.89	0.180	7.50	22.8	25.7	16.9	60.5	3.8
PT 65( 2 1/2 )	11	2.3091	1.479	0.32	75.184	73.705	72.226	17.46	3.64	3.46	0.217	9.22	26.7	30.2	18.6	76.3	4.2
PT 80( 3 )	11	2.3091	1.479	0.32	87.884	86.405	84.926	20.64	3.64	3.46	0.217	9.22	29.9	33.3	21.1	89.1	4.2
PT 90( 3 1/2 )	11	2.3091	1.479	0.32	100.330	98.851	97.372	22.23	3.64	3.46	0.217	9.30	31.5	34.9	22.4	101.6	4.2
PT100( 4 )	11	2.3091	1.479	0.32	113.030	111.551	110.072	25.40	3.64	3.46	0.217	10.40	35.9	39.3	25.9	114.3	4.5
PT125( 5 )	11	2.3091	1.479	0.32	138.430	136.952	135.472	25.58	3.64	3.46	0.217	11.40	40.1	43.6	29.3	139.8	4.5
PT150( 6 )	11	2.3091	1.479	0.32	163.830	162.351	160.872	28.58	3.64	3.46	0.217	11.50	40.1	43.6	29.3	165.2	5.0

# TECHNICAL DATA

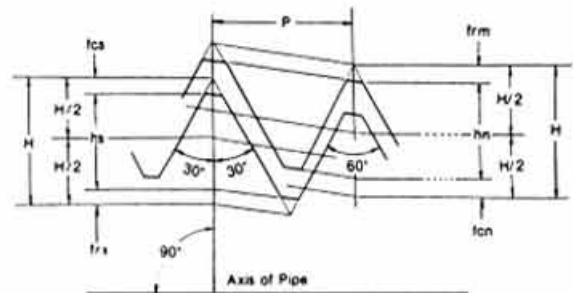
## 4. ANSI B2.1 TAPER PIPE THREADS. (Except Dryseal)



Taper 1 in 16 on Diameter  
(Shown Exaggerated in Diagram)

Thread Height Dimensions

Thread Element	27 Threads Per inch $p=$ 0.03704	18 Threads Per inch $p=$ 0.05556	14 Threads Per inch $p=$ 0.07143	11½ Threads Per inch $p=$ 0.08696	8 Threads Per inch $p=$ 0.12500
$H=0.866p$	0.0321	0.4810	0.0619	0.0753	0.1082
$hs=hh=0.760p$	0.0281	0.0422	0.0543	0.0661	0.0950
$frs=frn=0.033p$	0.0012	0.0088	0.0024	0.0029	0.0041
$fcs=fcn=0.073p$	0.0027	0.0041	0.0052	0.0063	0.0091



Basic Thread Data

Nominal Pipe Size (NPT)	Outside Diameter of Pipe D	Threads Per inch n	Pitch of Thread P	Pitch Diameter at beginning of External Thread	Handtight Engagement			Effective Thread, External		
					Length $L_1$		Dia $E_1$	Length $L_2$		Dia $E_2$
					In.	Thds.		In.	Thds.	
1	2	3	4	5	6	7	8	9	10	11
1/8	0.405	27.0	0.03704	0.36351	0.1615	4.36	0.37360	0.2639	7.12	0.38000
1/4	0.540	18.0	0.05556	0.47739	0.2278	4.10	0.49163	0.4018	7.23	0.50250
3/8	0.675	18.0	0.05556	0.61201	0.2400	4.32	0.62701	0.4078	7.43	0.63750
1/2	0.840	14.0	0.07143	0.75843	0.3200	4.48	0.77843	0.5337	7.47	0.79179
3/4	1.050	14.0	0.07143	0.96768	0.3390	4.75	0.98887	0.5457	7.64	1.00179
1	1.315	11.5	0.08696	1.21363	0.4000	4.60	1.23863	0.6828	7.85	1.25630
1 1/4	1.660	11.5	0.08696	1.55713	0.4200	4.83	1.58338	0.7068	8.13	1.60130
1 1/2	1.900	11.5	0.08696	1.79609	0.4200	4.83	1.82234	0.7235	8.32	1.84130
2	2.375	11.5	0.08696	2.26902	0.4360	5.01	2.29627	0.7565	8.70	2.31630
2 1/2	2.875	8.0	0.12500	2.71953	0.6820	5.46	2.76216	1.1375	9.10	2.79062
3	3.500	8.0	0.12500	3.34062	0.7660	6.13	3.38850	1.2000	9.60	3.41562
3 1/2	4.000	8.0	0.12500	3.83750	0.8210	6.57	3.88881	1.2500	10.00	3.91562
4	4.500	8.0	0.12500	4.33438	0.8440	6.75	4.38712	1.3000	10.40	4.41562

Nominal Pipe Size (NPT)	Wrench Makeup Length for External Thread $L_2 - L_1$		Wrench Makeup Length for External Thread			Vanish Thread V		Overall Length External Thread $L_4$	Nominal, Complet External Threads <sup>1</sup> Length $L_5$		Height of Thread h	Increase in Dia per Thread, 0.0625/n	Basic Minor Dia at Small End of Pipe, $K_a$
	In.	Thds.	Length $L_3$		Dia $E_3$	In.	Thds.		Length $L_5$	Dia $L_5$			
			In.	Thds.									
1	12	13	14	15	16	17	18	19	20	21	22	23	24
1/8	0.1024	2.76	0.1111	3	0.35656	0.1285	3.47	0.3924	0.1898	0.37537	0.02963	0.00231	0.3339
1/4	0.1740	3.13	0.1667	3	0.46697	0.1928	3.47	0.5946	0.2907	0.49556	0.04444	0.00347	0.4329
3/8	0.1678	3.02	0.1667	3	0.60160	0.1928	3.47	0.6006	0.2967	0.63056	0.04444	0.00347	0.5676
1/2	0.2137	2.99	0.2143	3	0.74504	0.2478	3.47	0.7815	0.3909	0.78286	0.05714	0.00446	0.7013
3/4	0.2067	2.89	0.2143	3	0.95429	0.2478	3.47	0.7935	0.4029	0.99286	0.05714	0.00446	0.9105
1	0.2828	3.25	0.2609	3	1.19733	0.3017	3.47	0.9845	0.5089	1.24543	0.06957	0.00543	1.1441
1 1/4	0.2868	3.30	0.2609	3	1.54083	0.3017	3.47	1.0085	0.5329	1.59043	0.06957	0.00543	1.4876
1 1/2	0.3035	3.49	0.2609	3	1.77978	0.3017	3.47	1.0252	0.5496	1.83043	0.06957	0.00543	1.7265
2	0.3205	3.69	0.2609	3	2.25272	0.3017	3.47	1.0582	0.5826	2.30543	0.06957	0.00543	2.1995
2 1/2	0.4555	3.64	0.2500	2	2.70391	0.4337	3.47	1.5712	0.8875	2.77500	0.10000	0.00781	2.6195
3	0.4340	3.47	0.2500	2	3.32500	0.4337	3.47	1.6337	0.9500	3.40000	0.10000	0.00781	3.2406
3 1/2	0.4290	3.43	0.2500	2	3.82188	0.4337	3.47	1.6837	1.0000	3.90000	0.10000	0.00781	3.7375
4	0.4560	3.65	0.2500	2	4.31875	0.4337	3.47	1.7337	1.0500	4.40000	0.10000	0.00781	4.2344

<sup>1</sup> Dimensions are in inches.

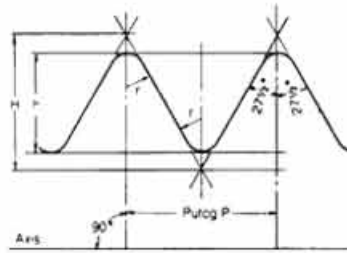
# TECHNICAL DATA

## 5. BS21-1973 British Standard Taper Pipe Threads. (Except Dryseal)

$$H=0.960237 \times P$$

$$h=0.460327 \times P$$

$$r=0.137278 \times P$$



Taper 1 in 16 on dia.  
(Sown exaggerated in diagram)

BSP Size (Nominal Bore of Pipe)	No of Threads per inch	Pitch		Depth of Thread		BASIC-Diameters at Gauge Plane						Gauge Length							
						Major (Gauge Diameter)		Effective		Minor		Basic		Tolerance Plus and Minus		Max.		Min.	
in.		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
1/2	14	0.07143	1.814	0.0457	1.162	0.825	20.955	0.7793	19.793	0.7336	18.631	0.3214	8.2	0.0714	1.8	0.3928	10.0	0.2500	6.4
3/4	14	0.07143	1.814	0.0457	1.162	1.041	24.441	0.9953	25.279	0.9496	24.117	0.3750	9.5	0.0714	1.8	0.4464	11.3	0.3036	7.7
1	11	0.09091	2.309	0.0582	1.479	1.309	33.249	1.2508	31.770	1.1926	30.291	0.4091	10.4	0.0909	2.3	0.5000	12.7	0.3182	8.1
1 1/4	11	0.09091	2.309	0.0582	1.479	1.650	41.910	1.5915	40.431	1.5335	38.952	0.5000	12.7	0.0909	2.3	0.5909	15.0	0.4091	10.4
1 1/2	11	0.09091	2.309	0.0582	1.479	1.882	47.803	1.8238	46.324	1.7656	44.845	0.5000	12.7	0.0909	2.3	0.5909	15.0	0.4091	10.4
2	11	0.09091	2.309	0.0582	1.479	2.347	59.614	2.2888	58.135	2.2306	56.656	0.6250	15.9	0.0909	2.3	0.7159	18.2	0.5341	13.6
2 1/2	11	0.09091	2.309	0.0582	1.479	2.960	75.184	2.9018	73.705	2.8436	72.226	0.6875	17.5	0.1364	3.5	0.8239	21.0	0.5511	14.0
3	11	0.09091	2.309	0.0582	1.479	3.460	87.884	3.4018	86.405	3.3436	84.926	0.8125	20.6	0.1364	3.5	0.9486	24.1	0.6761	17.1
4	11	0.09091	2.309	0.0582	1.479	4.450	113.030	4.3918	111.551	4.3336	110.072	1.0000	25.4	0.1364	3.5	1.1364	28.9	0.8636	21.9
5	11	0.09091	2.309	0.0582	1.479	5.450	138.430	5.3918	136.951	5.3336	135.472	1.1250	28.6	0.1364	3.5	1.2614	32.1	0.9886	25.1
6	11	0.09091	2.309	0.0582	1.479	6.450	162.351	6.3918	162.351	6.3336	160.872	1.1250	28.6	0.1364	3.5	1.2614	32.1	0.9886	25.1

BSP Size (Nominal Bore of Pipe)	No of Threads per inch	Effective Thread, External						Fitting Allowance	Wrenching Allowance	Tolerance of Position of Gauge Plane Relative to Face of internally Tapered Threads (Plus and Minus)		BSP Size (Nominal Bore of Pipe)		
		For Basic Gauge Length		For Max. Gauge Length		For Min. Gauge Length				in.	mm		in.	
in.		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.		
1/2	14	0.5178	13.2	0.5892	15.0	0.4464	11.4	0.1964	5.0	0.1071	2.7	0.0893	2.3	1/2
3/4	14	0.5714	14.5	0.6428	16.3	0.5000	12.7	0.1964	5.0	0.1071	2.7	0.0893	2.3	3/4
1	11	0.6591	16.8	0.7500	19.1	0.5682	14.5	0.2500	6.4	0.1364	3.5	0.1136	2.9	1
1 1/4	11	0.7500	19.1	0.8509	21.4	0.6591	16.8	0.2500	6.4	0.1364	3.5	0.1136	2.9	1 1/4
1 1/2	11	0.7200	19.1	0.8409	21.4	0.6591	16.8	0.2500	6.4	0.1364	3.5	0.1136	2.9	1 1/2
2	11	0.9204	23.4	1.0113	25.7	0.8259	21.1	0.2954	7.5	0.1818	4.6	0.1364	2.9	2
2 1/2	11	1.0511	26.7	1.1875	30.2	0.9247	23.2	0.3636	9.2	0.2273	5.8	0.1364	3.5	2 1/2
3	11	1.1761	29.8	1.3125	33.3	1.0397	26.3	0.3636	9.2	0.2273	5.8	0.1364	3.5	3
4	11	1.4091	35.8	1.5455	39.3	1.2727	32.3	0.4091	10.4	0.2727	6.9	0.1364	3.5	4
5	11	1.5795	40.1	1.7159	43.6	1.4431	36.6	0.4545	11.5	0.3182	8.1	0.1364	3.5	5
6	11	1.5795	40.1	1.7159	43.6	1.4431	36.6	0.4545	11.5	0.3182	8.1	0.1364	3.5	6

# TECHNICAL DATA

## 6. Wall Thickness Schedules.

Nominal Pipe Size		Outside Diameter		Nominal Wall Thickness								
A	B	JIS	ANSI	Sch5S	Sch10S	Sch20S	GS	Sch10	LG(7.9)	Sch20	Sch30	STD
8	¼	13.8	13.7	1.2	1.65	2.0	2.3	-	-	-	-	(2.2)
10	⅜	17.3	17.1	1.2	1.65	2.0	2.3	-	-	-	-	(2.3)
15	½	21.7	21.3	1.65	2.1	2.5	2.8	-	-	-	-	(2.8)
20	¾	27.2	26.7	1.65	2.1	2.5	2.8	-	-	-	-	(2.9)
25	1	34.0	33.4	1.65	2.8	3.0	3.2	-	-	-	-	(3.4)
32	1-¼	42.7	42.2	1.65	2.8	3.0	3.5	-	-	-	-	(3.6)
40	1-½	48.6	48.3	1.65	2.8	3.0	3.5	-	-	-	-	(3.7)
50	2	60.5	60.3	1.65	2.8	3.5	3.8	-	-	-	-	(3.9)
65	2-½	76.3	73.0	2.1	3.0	3.5	4.2	-	-	-	-	(5.2)
80	3	89.1	88.9	2.1	3.0	4.0	4.2	-	-	-	-	(5.5)
90	3-½	101.6	101.6	2.1	3.0	4.0	4.2	-	-	-	-	(5.7)
100	4	114.3	114.3	2.1	3.0	4.0	4.5	-	-	-	-	(6.0)
125	5	139.8	141.3	2.8	3.4	5.0	4.5	-	-	-	-	(6.6)
150	6	165.2	168.3	2.8	3.4	5.0	5.0	-	5.0	-	-	(7.1)
175	7	190.7	-	-	-	-	5.3	-	-	-	-	-
200	8	216.3	219.1	2.8	3.8	6.5	5.8	-	5.8	6.4	7.0	(8.2)
225	9	241.8	-	-	-	-	6.2	-	-	-	-	-
250	10	267.4	273.1	3.4	4.2	6.5	6.6	-	6.6	6.4	7.8	(9.3)
300	12	318.5	323.9	4.0	4.6	6.5	6.9	-	6.9	6.4	8.4	9.5
350	14	355.6	355.6	4.0	4.8	7.9	7.9	6.4	7.9	7.9	9.5	9.5
400	16	406.4	406.4	4.2	4.8	7.9	7.9	6.4	7.9	7.9	9.5	9.5
450	18	457.2	457.2	4.2	4.8	7.9	7.9	6.4	7.9	7.9	11.1	9.5
500	20	508.0	508.0	4.8	5.5	7.9	7.9	6.4	7.9	9.5	12.7	9.5
550	22	558.8	558.8	4.8	5.5	-	-	6.4	7.9	9.5	12.7	9.5
600	24	609.6	609.6	5.5	6.4	-	-	6.4	7.9	9.5	14.3	9.5
650	26	660.4	660.4	-	-	-	-	7.9	7.9	12.7	-	9.5
700	28	711.2	711.2	-	-	-	-	7.9	7.9	12.7	15.9	9.5
750	30	762.0	762.0	6.4	7.9	-	-	7.9	7.9	12.7	15.9	9.5
800	32	812.8	812.8	-	-	-	-	7.9	7.9	12.7	15.9	9.5
850	34	863.6	863.6	-	-	-	-	7.9	7.9	12.7	15.9	9.5
900	36	914.4	914.4	-	-	-	-	7.9	7.9	12.7	15.9	9.5
950	38	965.2	965.2	-	-	-	-	-	7.9	-	-	9.5
1000	40	1016.0	1016.0	-	-	-	-	-	7.9	-	-	9.5
1050	42	1066.8	1066.8	-	-	-	-	-	7.9	-	-	9.5
1100	44	1117.6	1117.6	-	-	-	-	-	7.9	-	-	9.5
1150	46	1168.4	1168.4	-	-	-	-	-	7.9	-	-	9.5
1200	48	1219.2	1219.2	-	-	-	-	-	7.9	-	-	9.5
1250	50	1270.0	1270.0	-	-	-	-	-	7.9	-	-	9.5
1300	52	1320.8	1320.8	-	-	-	-	-	7.9	-	-	9.5
1350	54	1371.6	1371.6	-	-	-	-	-	7.9	-	-	9.5
1400	56	1422.4	1422.4	-	-	-	-	-	7.9	-	-	9.5
1450	58	1473.2	1473.2	-	-	-	-	-	7.9	-	-	9.5
1500	60	1524.0	1524.0	-	-	-	-	-	7.9	-	-	9.5

Y  
O  
U  
N  
G  
C  
H  
A  
N  
G  
T  
E  
C  
H

# TECHNICAL DATA

JIS G3448 ANSI B36.10M  
 JIS G3454 ANSI B36.19M  
 JIS G3455  
 JIS G3459

(in mm)

Nominal Wall Thickness									Outside Diameter		Nominal Pipe Size	
Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS	JIS	ANSI	A	B
2.2	2.4	( 3.0)	3.0	-	-	-	-	-	13.8	13.7	8	¼
2.3	2.8	( 3.2)	3.2	-	-	-	-	-	17.3	17.1	10	⅜
2.8	3.2	( 3.7)	3.7	-	-	-	4.7	7.5	21.7	21.3	15	½
2.9	3.4	( 3.9)	3.9	-	-	-	5.5	7.8	27.2	26.7	20	¾
3.4	3.9	( 4.5)	4.5	-	-	-	6.4	9.1	34.0	33.5	25	1
3.6	4.5	( 4.9)	4.9	-	-	-	6.4	9.7	42.7	42.2	32	1-¼
3.7	4.5	( 5.1)	5.1	-	-	-	7.1	10.2	48.6	48.3	40	1-½
3.9	4.9	( 5.5)	5.5	-	-	-	8.7	11.1	60.5	60.3	50	2
5.2	6.0	( 7.0)	7.0	-	-	-	9.5	14.0	76.3	73.0	65	2-½
5.5	6.6	( 7.6)	7.6	-	-	-	11.1	15.2	89.1	88.9	80	3
5.7	7.0	( 8.1)	8.1	-	-	-	12.7	-	101.6	101.6	90	3-½
6.0	7.1	( 8.6)	8.6	-	11.1	-	13.5	17.1	114.3	114.3	100	4
6.6	8.1	( 9.5)	9.5	-	12.7	-	15.9	19.0	139.8	141.3	125	5
7.1	9.3	(11.0)	11.0	-	14.3	-	18.2	21.9	165.2	168.3	150	6
-	-	-	-	-	-	-	-	-	190.7	-	175	7
8.2	10.3	(12.7)	12.7	15.1	18.2	20.6	23.0	22.2	216.3	219.1	200	8
-	-	-	-	-	-	-	-	-	241.8	-	225	9
9.3	12.7	12.7	15.1	18.3	21.4	25.4	28.6	25.4	267.4	273.1	250	10
10.3	14.3	12.7	17.4	21.4	25.4	28.6	33.3	25.4	318.5	323.9	300	12
11.1	15.1	12.7	19.0	23.8	27.8	31.8	35.7	-	355.6	355.6	350	14
12.7	16.7	12.7	21.4	26.2	30.9	36.5	40.5	-	406.4	406.4	400	16
14.3	19.0	12.7	23.8	29.4	34.9	39.7	45.2	-	457.2	457.2	450	18
15.1	20.6	12.7	26.2	32.5	38.1	44.4	50.0	-	508.0	508.0	500	20
-	22.2	12.7	28.6	34.9	41.3	47.6	54.0	-	558.8	558.8	550	22
17.5	24.6	12.7	31.0	38.9	46.0	52.4	59.5	-	609.6	609.6	600	24
-	-	12.7	-	-	-	-	-	-	660.4	660.4	650	26
-	-	12.7	-	-	-	-	-	-	711.2	711.2	700	28
-	-	12.7	-	-	-	-	-	-	762.0	762.0	750	30
17.5	-	12.7	-	-	-	-	-	-	812.8	812.8	800	32
17.5	-	12.7	-	-	-	-	-	-	863.6	863.6	850	34
19.1	-	12.7	-	-	-	-	-	-	914.4	914.4	900	36
-	-	12.7	-	-	-	-	-	-	965.2	965.2	950	38
-	-	12.7	-	-	-	-	-	-	1016.0	1016.0	1000	40
-	-	12.7	-	-	-	-	-	-	1066.8	1066.8	1050	42
-	-	12.7	-	-	-	-	-	-	1117.6	1117.6	1100	44
-	-	12.7	-	-	-	-	-	-	1168.4	1168.4	1150	46
-	-	12.7	-	-	-	-	-	-	1219.2	1219.2	1200	48
-	-	12.7	-	-	-	-	-	-	1270.0	1270.0	1250	50
-	-	12.7	-	-	-	-	-	-	1320.8	1320.8	1300	52
-	-	12.7	-	-	-	-	-	-	1371.6	1371.6	1350	54
-	-	12.7	-	-	-	-	-	-	1422.4	1422.4	1400	56
-	-	12.7	-	-	-	-	-	-	1473.2	1473.2	1450	58
-	-	12.7	-	-	-	-	-	-	1524.0	1524.0	1500	60

Y  
O  
U  
N  
G  
C  
H  
A  
N  
G  
I  
N  
G  
T  
E  
C  
H

# TECHNICAL DATA

## 7. Material Specifications

ASTM STANDARD

ASTM	Grade	Classifi- cation	Chemical Composition								Mechanical Properties				
			C %	Mn %	P Max. %	S Max. %	Si %	Ni %	Cr %	Mo %	T.S. Min. psi (kg/ml)	Y.S. Min. psi (kg/ml)	EL Min. %	Red. Min. %	HB
A-105*		Carbon Steel	MAX 0.35	0.60~ 1.05	0.040	0.050	MAX 0.35	MAX 0.40	MAX 0.30	MAX 0.12	70,000 (49.2)	36,000 (25.3)	22	30	MAX 187
A-181* 60		Carbon Steel	MAX 0.35	MAX 0.90	0.050	0.050	MAX (0.35)				60,000 (42.2)	30,000 (21.1)	22	35	
A-181 70		Carbon Steel	MAX 0.35	MAX 0.90	0.050	0.050	MAX (0.35)				70,000 (49.2)	36,000 (25.3)	18	24	
A-182 F1		½ Mo	MAX 0.28	0.60~ 0.90	0.045	0.045	0.15~ 0.35			0.44~ 0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~ 192
A-182 F5		5Cr-½ Mo	MAX 0.15	0.30~ 0.60	0.030	0.030	MAX 0.50	MAX 0.50	4.00~ 6.00	0.44~ 0.65	70,000 (49.2)	40,000 (28.1)	20	35	143~ 217
A-182 F5a		5Cr-½ Mo	MAX 0.25	MAX 0.60	0.040	0.030	MAX 0.50	MAX 0.50	4.00~ 6.00	0.44~ 0.65	90,000 (63.3)	65,000 (45.7)	22	50	187~ 248
A-182 F11-1		1¼Cr-½ Mo	0.05~ 0.15	0.30~ 0.60	0.030	0.030	0.50~ 1.00		1.00~ 1.50	0.44~ 0.65	60,000 (42.2)	30,000 (21.1)	20	45	121~ 174
A-182 F11-2		1¼Cr-½ Mo	0.10~ 0.20	0.30~ 0.80	0.040	0.040	0.50~ 1.00		1.00~ 1.50	0.44~ 0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~ 207
A-182 F11-3		1¼Cr-½ Mo	0.10~ 0.20	0.30~ 0.80	0.040	0.040	0.50~ 1.00		1.00~ 1.50	0.44~ 0.65	75,000 (52.7)	45,000 (31.6)	20	30	156~ 207
A-182 F12-1		1Cr-½ Mo	0.05~ 0.15	0.30~ 0.60	0.045	0.045	MAX 0.50		0.80~ 1.25	0.44~ 0.65	60,000 (42.2)	30,000 (21.1)	20	45	121~ 174
A-182 F12-2		1Cr-½ Mo	0.10~ 0.20	0.30~ 0.80	0.040	0.040	0.10~ 0.60		0.80~ 1.25	0.44~ 0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~ 174
A-182 F11		1¼Cr-½ Mo	0.10~ 0.20	0.30~ 0.60	0.040	0.040	0.50~ 1.00		1.00~ 1.50	0.44~ 0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~ 207
A-182 F12		1Cr-½ Mo	0.10~ 0.20	0.30~ 0.80	0.040	0.040	0.10~ 0.60		0.80~ 1.25	0.44~ 0.65	70,000 (49.2)	40,000 (28.1)	20	30	143~ 207
A-182 F22		2¼Cr-1 Mo	MAX 0.15	0.30~ 0.60	0.040	0.040	MAX 0.50		2.00~ 2.50	0.87~ 1.13	75,000 (52.7)	45,000 (31.6)	20	30	156~ 207
A-182 F304		18Cr-8 Ni	MAX 0.08	MAX 2.00	0.040	0.030	MAX 1.00	8.00~ 11.00	18.00~ 20.00		75,000 (52.7)	30,000 (21.1)	30	50	
A-182 F304L		18Cr-8 Low Ni	MAX 0.035	MAX 2.00	0.040	0.030	MAX 1.00	8.00~ 13.00	18.00~ 20.00		75,000 (49.2)	25,000 (17.6)	30	50	
A-182 F316		18Cr-8 Mo Ni	MAX 0.08	MAX 2.00	0.040	0.030	MAX 1.00	10.00~ 14.00	16.00~ 18.00	2.00~ 3.00	75,000 (52.7)	30,000 (21.7)	30	50	
A-182 F316L		18Cr-8 Mo-Low Ni	MAX 0.035	MAX 2.00	0.040	0.030	MAX 1.00	10.00~ 15.00	16.00~ 18.00	2.00~ 3.00	65,000 (45.7)	25,000 (17.6)	30	50	
A-182 F321		18Cr-8 Ti Ni	MAX 0.08	MAX 2.00	0.030	0.030	MAX 1.00	9.00~ 12.00	Min 17.00		75,000 (52.7)	30,000 (21.1)	30	50	
A-182 F347		18Cr-8 Cb Ni	MAX 0.08	MAX 2.00	0.030	0.030	MAX 1.00	9.00~ 13.00	17.00~ 20.00		75,000 (52.7)	30,000 (21.1)	30	50	
A-350* LF1		Carbon Steel	MAX 0.30	0.75~ 1.05	0.035	0.040	0.15~ 0.30	MAX 0.40	MAX 0.30	MAX 0.12	60,000~ 85,000 (42.2-59.7)	30,000 (21.1)	25	38	
A-350* LF2		Carbon Steel	MAX 0.30	MAX 1.35	0.035	0.040	0.15~ 0.30	MAX 0.40	MAX 0.30	MAX 0.12	70,000~ 95,000 (49.2-66.8)	36,000 (25.3)	22	30	
A-350* LF3		3½ Ni	MAX 0.20	MAX 0.90	0.035	0.040	0.20~ 0.35	3.25~ 3.75	MAX 0.30	MAX 0.12	70,000~ 95,000 (49.2-66.8)	37,500 (26.4)	22	35	

- OTHER ELEMENTS : copper (0.40% MAX.), Vanadium, (0.03% MAX.), Columbium (0.02% MAX.)
- The sum of Cu, Ni, Cr and Mo Shall not be exceed 1.00%
- The sum of Cr and Mo shall not be exceed 0.32%

YOUNG CHANG TECH





**YOUNG CHANG Tech Co.,Ltd.**  
#306-1, Yongdeck Ri, Hanlim-Myeon,  
Kimhae, KyeongNam, Korea  
TEL. +82-55-342-4382-5  
FAX. +82-55-342-4380,4387  
[www.yckorea.net](http://www.yckorea.net)