The Global Source For Quality Steel Products



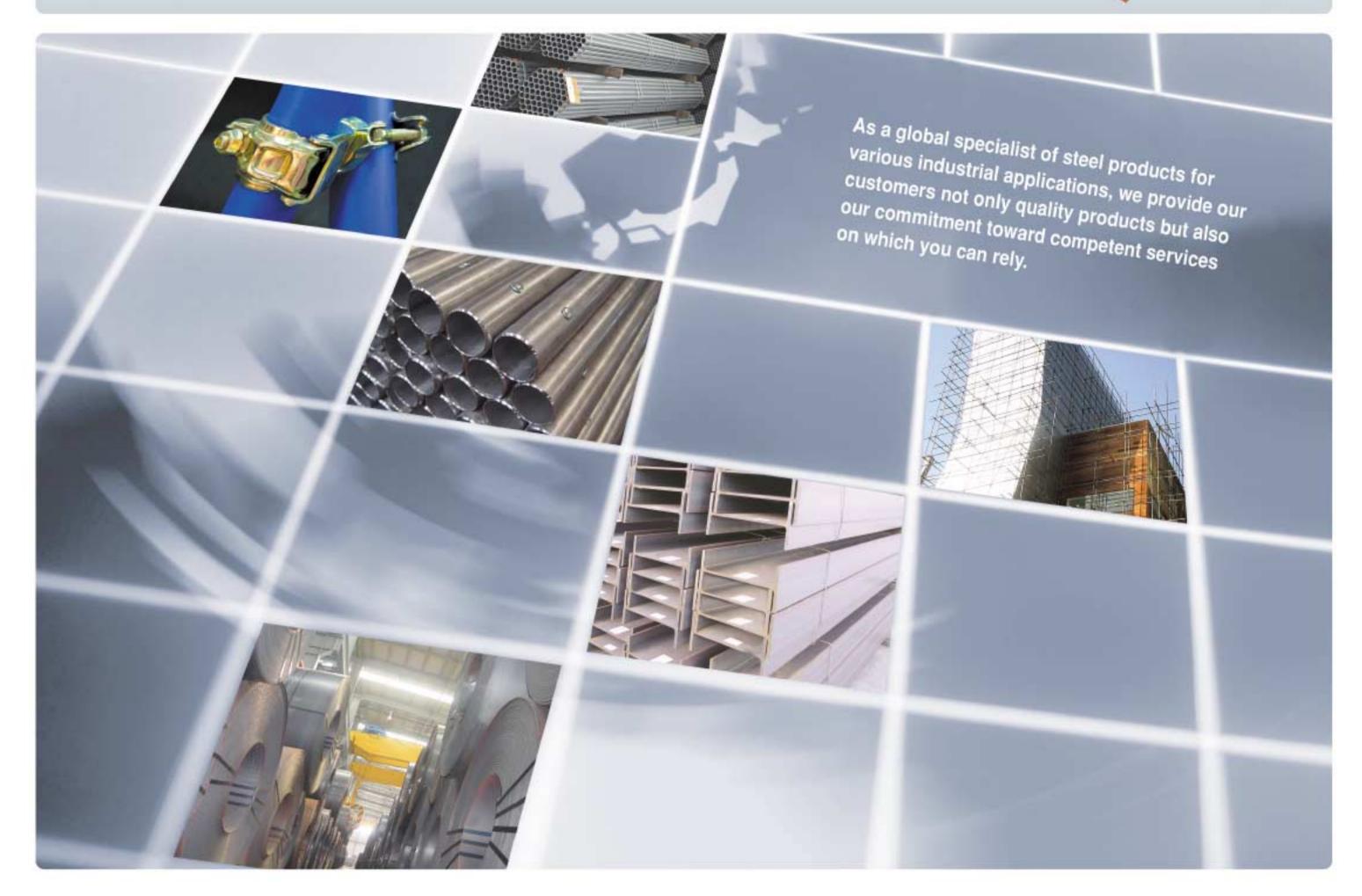
WANJOO METAL INC.

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4 ERW Carbon Steel Pipes

We provide electric resistance welded(ERW) pipe widely known throughout the industry for its high quality and consistent performance in the field of high temperature & pressure steel pipes for general plants, oil transmission, ship building, industrial plumbing, structural pipes for commercial & residential buildings, mechanical structures, automobile and scaffolding pipes.

ERW pipes are available with square ends or beveled for welding, threaded and coupled, Victaulic grooved. Surface finishes are available in black or bare, or with protective coatings of customer's requirements.

Ordinary Purpose

Suitable for transmitting relatively low pressure vapor, air, water or oil. Supposed to be operated under 350 °C. Available to use in industrial piping or irrigation water or oil transmission.



Size	Out	dia.		Thicknes	5	Kg/Ft	pcs/ lift
Size	Inch	mm	Inch	mm	Kgs	pcs	pcs
1/2 "	0.840	21.3	40	0.109	2.77	0.39	120
3/4 "	1.050	26.7	40	0.113	2.87	0.51	84
1 "	1.315	33.4	40	0.133	3.38	0.76	60
1	1.313	33.4	80	0.179	4.55	0.99	60
			10	0.109	2.77	0.82	42
1 1/4 "	1.660	42.2	40	0.140	3.56	1.03	42
			80	0.191	4.85	1.36	42
			10	0.109	2.77	0.95	36
1 1/2 "	1.900	48.3	40	0.145	3.68	1.23	36
			80	0.200	5.08	1.65	36
			10	0.109	2.77	1.20	26
2 "	2.375	60.3	40	0.154	3.91	1.66	26
			80	0.218	5.54	2.28	26
2 1/2 "	2.875	73.0	10	0.120	3.05	1.60	18
2 1/2 "	2.073	/3.0	40	0.203	5.16	2.63	18
			10	0.120	3.05	1.97	14
3 ″	3.500	88.9	40	0.216	5.49	3.44	14
			80	0.300	7.62	4.65	14
3 1/2 "	4.000	101.6	40	0.226	5.74	4.13	12
			10	0.120	3.05	2.55	10
4 "	4.500	114.3	40	0.237	6.02	4.89	10
			80	0.337	8.56	6.79	10
5 ″	5.563	141.3	10	0.134	3.41	3.54	7
o "	5.563	141.3	40	0.258	6.55	6.63	7
		1/00	10	0.134	3.41	4.23	7
6 "	6.625	168.3	40	0.280	7.11	8.60	7

Threaded & Coupling : Black / Galvanized (BTC/GTC)

Size	Out	dia.	1	Thicknes	5	Kg/Ft	pcs/ lift
Size	Inch	mm	Inch	mm	Kgs	pcs	pcs
1/2 "	0.840	21.3	40	0.109	2.77	0.39	120
3/4 "	1.050	26.7	40	0.113	2.87	0.51	84
1 "	1.315	33.4	40	0.133	3.38	0.76	60
1 1/4 "	1.660	42.2	40	0.140	3.56	1.03	42
1 1/2 "	1.900	48.3	40	0.145	3.68	1.24	36
2 ″	2.375	60.3	40	0.154	3.91	1.67	26
2 1/2 "	2.875	73.0	40	0.203	5.16	2.64	18
3 ″	3.500	88.9	40	0.216	5.49	3.46	14
3 1/2 "	4.000	101.6	40	0.226	5.74	4.17	12
4 "	4.500	114.3	40	0.237	6.02	4.94	10

Structural Fence Pipes to BS1387 Light with Plain End

Plain End: Black / Galvanized (BPE/GPE)

Size	Out	dia.	Thick	cness	Kg/Ft	pcs/ lift
3126	Inch	mm	Inch	mm	Kgs	pcs
1 ″	1.315	33.4	0.104	2.64	0.611	91
1 1/4 "	1.660	42.2	0.104	2.64	0.785	61
1 1/2 "	1.900	48.3	0.116	2.95	1.006	61
2 "	2.375	60.3	0.116	2.95	1.272	37
2 1/2 "	2.875	73.0	0.110	2.79	1.473	19
2 1/2 "	2.875	73.0	0.128	3.25	1.704	19

Scaffolding Pipe (PGI/Hot-Dip Galvanized) Both Ends Rivetted and Pinned (Optional)

Size	Out	dia.	Thick	ness	Kg/Ft	Kg/M	pcs/ lift
Size	Inch	mm	Inch	mm	Kgs	Kgs	pcs
1 1/2 "	1.913	48.6	0.094	2.4	0.834	2.735	100



WANJOO METAL INC. 5

Structural Purpose

Recommended to use in civil engineering, commercial/ residential buildings, load bearing working towers, railing / fencing application.

Mechanical Purpose

Used in various mechanical parts of automobile, bicycle, machinery, furniture or house appliances.

Hot Dip Galvanized Pipes

Hot dip galvanized pipes have excellent surface appearance and provide superior corrosion resistance. Ultimate service life may depend on coating thickness and the severity of the environment.

BS Class A-1/A-2 Pipes with Plain End

Light : BPE/GPE

		Out	dia.		Thick	ness	Kg/Ft	pcs/ lift
Size	M	ах	М	in	THICK	liess	Ky/Ft	pcs/ tilt
	Inch	mm	Inch	mm	Inch	mm	Kgs	pcs
1/2 "	0.841	21.4	0.825	21.0	0.080	2.03	0.290	200
3/4 "	1.059	26.9	1.041	26.4	0.092	2.34	0.430	140
1 ″	1.328	33.8	1.309	33.2	0.104	2.64	0.613	90
1/4 "	1.670	42.5	1.650	41.9	0.104	2.64	0.786	60
1/2 "	1.903	48.4	1.882	47.8	0.116	2.95	0.991	60
2 "	2.370	60.2	2.347	59.6	0.116	2.95	1.253	40
2 1/2 "	2.991	76.0	2.960	75.2	0.128	3.25	1.768	30
3 ″	3.491	88.7	3.460	87.9	0.128	3.25	2.076	19
4 "	4.481	113.9	4.450	113	0.144	3.66	3.014	14

Medium : BPE/GPE

		Out	dia.		Thick	ness	Kg/Ft	pcs/ lift
Size	M	ах	М	in	THICK	liess	Ky/Ft	pcs/ tilt
	Inch	mm	Inch	mm	Inch	mm	Kgs	pcs
1/2 "	0.856	21.7	0.831	21.1	0.104	2.64	0.372	200
3/4 "	1.072	27.2	1.047	26.6	0.104	2.64	0.482	140
1 "	1.346	34.2	1.316	33.4	0.128	3.25	0.744	90
1 1/4 "	1.687	42.9	1.657	42.1	0.128	3.25	0.957	60
1 1/2 "	1.919	48.8	1.889	48.0	0.128	3.25	1.100	60
2 "	2.394	60.8	2.354	59.8	0.144	3.66	1.554	40
2 1/2 "	3.014	76.6	2.969	75.4	0.144	3.66	1.984	30
3 ″	3.524	89.5	3.469	88.1	0.160	4.06	2.582	19
4 "	4.524	114.9	4.459	113.3	0.176	4.47	3.698	14
5 ″	5.534	140.6	5.459	138.7	0.192	4.88	4.938	10
6 "	6.539	166.1	6.459	164.1	0.192	4.88	5.852	10

Heavy : BPE/GPE

		Out	dia.		Thick	ness	Kg/Ft	pcs/ lift
Size	M	ах	М	in	Tiller	licaa	Rg/I t	pcs/ tilt
	Inch	mm	Inch	mm	Inch	mm	Kgs	pcs
1/2 "	0.856	21.7	0.831	21.1	0.128	3.25	0.442	200
3/4 "	1.072	27.2	1.047	26.6	0.128	3.25	0.579	140
1 ″	1.346	34.2	1.316	33.4	0.160	4.06	0.905	90
1 1/4 "	1.687	42.9	1.657	42.1	0.160	4.06	1.170	60
1 1/2 "	1.919	48.8	1.889	48.0	0.160	4.06	1.350	60
2 ″	2.394	60.8	2.354	59.8	0.176	4.47	1.881	40
2 1/2 "	3.014	76.6	2.969	75.4	0.176	4.47	2.408	30
3 ″	3.524	89.5	3.469	88.1	0.192	4.88	3.078	19
4 "	4.524	114.9	4.459	113.3	0.212	5.38	4.389	14
5 ″	5.534	140.6	5.459	138.7	0.212	5.38	5.425	10
6 "	6.539	166.1	6.459	164.1	0.212	5.38	6.462	10

Pre-Galvanized Fence Tube

PG: Plain End

Size	Out	dia.	Thick	ness	Kg/Ft	pcs/ lift
3126	Inch	mm	Inch	mm	Kgs	pcs
1 ″	1.315	33.4	0.065	1.65	0.394	91
1 1/4 "	1.660	42.2	0.065	1.65	0.503	61
1 1/4	1.000	42.2	0.085	2.16	0.650	61
1 1/2 "	1.900	48.3	0.065	1.65	0.579	61
1 1/2	1.700	40.3	0.090	2.29	0.792	61
2 "	2.375	/0.2	0.065	1.65	0.728	37
2	2.375	60.3	0.095	2.41	1.049	37

PGI: Swaged End

Size	Out	dia.	Thick	ness	Kg/Ft	pcs/ lift
3126	Inch	mm	Inch	mm	Kgs	pcs
1 ″	1.315	33.4	0.065	1.65	0.394	91
1 1/4 "	1.660	42.2	0.065	1.65	0.503	61
1 1/4	1.000	42.2	0.085	2.16	0.650	61



6 Carbon Steel Pipes

API 5L

Welded and Seamless pipe suitable for use in primarily conveying gas, water and oil in both oil and natural gas industries. Offering a wide range of line pipe in different sizes, grades, wall thickness, pressure class, coatings and accessories, We provides pipelines with a comprehensive choice for demanding applications.

Size Range

■ Outside Diameter : 21.3mm ~ 1,524mm■ Wall Thicknesses : Sch.10 ~ Sch.80

■ Grade: A, B X42, X46, X52, X56, X60, X70, X80

API 5CT

It covers steel casing, tubing, and liners in the designations and wall thicknesses applicable to 41/2"~20" for casing and 1.050"~41/2" for tubing. This specification also covers pump joints, connectors, couplings, and thread protection.

Size Range

■ Outside Diameter : 26.7mm ~ 508.0mm■ Wall Thicknesses : 2.87mm ~ 12.7mm

■ Grade : H-40, J-55 & K-55

Spiral Pipe

The spiral steel pipes are twisted in spiral type at the welded part. The SAW (Submerged ARC Welding) welding method is applied. Arc welded carbon steel pipes of construction is convenient with easy splicing and end cutting. Pipe coating is available internal and external coatings.

Size Range

Outside Diameter : 406.4mm ~ 2000.0mmWall Thicknesses : 9.0mm ~ 25.0mm

 Specification: ASTM A252, A500, A134 A B4, A139, JIS A5525, JIS A3444, JIS G3457, JIS A5530

Square & Rectangular Pipes

Square & rectangular pipes are types of metal profiles with a hollow tubular cross section widely applied in furniture industry & domestic applications, bus body, construction of heavy & light duty industries.

■ Square: 25mm x 25mm ~ 150mm x 150mm
■ Rectangular: 30mm x 20mm ~ 200mm x 200mm

■ Specification : ASTM A500

☆ Please consult with us for grade & sizes not listed here.



Steel Pipe Dimensions & Weights Table



	Outside D	Diameter.	Wall Th	ickness		Weight	Weight
NPS	In.	mm	ln.	mm	Sched	kg/Mtr	Lb/ft
1/2 "	0.840	21	0.109	2.769	40 STD	1.268	0.851
			0.147	3.734	80 STD	1.621	1.088
3/4 "	1.050	27	0.113	2.870	40 STD	1.684	1.131
			0.154	3.912	80 STD	2.195	1.474
1 ″	1.315	33	0.133	3.378	40 STD	2.501	1.679
			0.179	4.547	80 STD	3.235	2.172
1 1/4 "	1.660	42	0.140	3.556	40 STD	3.385	2.273
			0.191	4.851	80 STD	4.464	2.997
1 1/2 "	1.900	48	0.145	3.683	40 STD	4.048	2.718
			0.200	5.080	80 STD	5.409	3.631
2 "	2.375	60	0.154	3.912	40 STD	5.441	3.653
			0.218	5.537	80 STD	7.480	5.022
2 1/2 "	2.875	73	0.203	5.156	40 STD	8.629	5.793
			0.276	7.010	80 STD	11.411	7.661
3 ″	3.500	89	0.216	5.486	40 STD	11.284	7.576
			0.300	7.620	80 STD	15.272	10.253
4 ″	4.500	114	0.237	6.020		16.073	10.790
			0.337	8.560		22.318	14.983
6 "	6.625	168	0.188	4.775		19.252	12.924
			0.203	5.156		20.739	13.923
			0.219	5.563		22.318	14.983
			0.250	6.350		25.354	17.021
			0.280	7.112	40 STD	28.263	18.974
			0.312	7.925		31.334	21.036
			0.375	9.525		37.285	25.031
			0.432	10.973	80 XHY	42.561	28.573
			0.500	12.700		48.719	32.708
8 "	8.625	219	0.188	4.775		25.233	16.940
			0.203	5.156		27.198	18.259
			0.219	5.563		29.286	19.661
			0.250	6.350	20	33.308	22.361
			0.277	7.036	30	36.786	24.696
			0.322	8.179	40	42.532	28.554
			0.375	9.525		49.216	33.041
			0.406	10.312	60	53.085	35.638
	40.750		0.500	12.700	80 XHY	64.627	43.388
10 ″	10.750	273	0.188	4.775		31.588	21.207
			0.219	5.563		36.689	24.631
			0.250	6.350	20	41.759	28.035
			0.307	7.798	30	51.002	34.240
			0.344	8.738	/0.075	56.946	38.231
			0.365	9.271	40 STD	60.301	40.483
			0.438	11.125	(0.20.2)	71.852	48.238
			0.500	12.700	60 XHY	81.53	54.735
10 "	10.750	227	0.594	15.088	80	95.969	64.429
12 "	12.750	324	0.188	4.775		37.57	25.222
			0.219	5.563	20	43.657	29.309
			0.250	6.350	20	49.713	33.375
			0.281	7.137		55.739	37.420
			0.312	7.925	CTD	61.735	41.445
			0.375 0.406	9.525 10.312	STD 40	73.824	49.562 53.525
				12.700	XHY	97.438	
			0.500 0.562	14.275	60	108.966	65.415 73.154
14 "	14.000	356	0.562	4.775	00	41.308	27.732
14	14.000	330					
			0.219	5.563	10	48.012	32.233
			0.250	6.350	10	54.685	36.713
			0.281	7.137 7.925	20	61.327	41.172 45.611
						81.281	
			0.375	9.525	30 STD		54.568
			0.438	11.125 12.700	40 XHY	94.498	72.090
					AITI		
			0.625	15.875		132.983	89.278

NPS	Outside D	iameter.	Wall Th	ickness	Sched	Weight	Weight
NFS	In.	mm	ln.	mm	Scheu	kg/Mtr	Lb/ft
16 "	16.000	406	0.188	4.775		47.290	31.748
			0.219	5.563		54.980	36.910
			0.250	6.350	10	62.639	42.053
			0.281	7.137		70.268	47.174
			0.312	7.925	20	77.866	52.275
			0.344	8.738	30 STD	85.677	57.519
			0.375 0.438	9.525 11.125	30 510	93.213	62.578 72.797
			0.500	12.700	40 XHY	123.289	82.770
18 "	18.000	457	0.219	5.563	40 XIII	61.948	41.588
	10.000		0.250	6.350		70.593	47.393
			0.281	7.137		79.208	53.176
			0.312	7.925	20	87.792	58.939
			0.375	9.525	STD	105.144	70.588
			0.438	11.125	30	122.369	82.152
			0.500	12.700	XHY	139.198	93.450
			0.562	14.275	40	155.904	104.666
			0.625	15.875		172.754	115.978
20 "	20.000	508	0.250	6.350		78.547	52.733
			0.282	7.163		88.458	59.386
			0.312	7.925	20 CTD	97.719	65.604
			0.375 0.438	9.525 11.125	20 STD	117.075 136.305	78.598 91.508
			0.438	12.700	30 XHY	155.106	104.130
			0.594	15.088	40	183.378	123.110
			0.625	15.875	40	192.640	129.328
			0.688	17.475		211.368	141.901
24 "	24.000	610	0.250	6.350		94.456	63.413
			0.281	7.137		106.209	71.183
			0.312	7.925		117.573	78.932
			0.375	9.525	20 STD	140.938	94.618
			0.438	11.125		164.176	110.219
			0.500	12.700	XHY	186.923	125.490
			0.625	15.875		232.410	156.028
			0.688	17.475	40	255.148	171.293
30 "	30.000	762	0.750 0.250	19.050 6.350		277.401 118.318	186.233 79.433
- 30	30.000	702	0.230	7.137		132.851	89.189
			0.312	7.925	10	147.353	98.925
			0.375	9.525	STD	176.731	118.648
			0.438	11.125		205.983	138.286
			0.500	12.700	20 XHY	234.647	157.530
			0.625	15.875	30	292.066	196.078
			0.688	17.475		320.817	215.380
			0.750	19.050		348.988	234.293
36 "	36.000	914	0.250	6.350		142.180	95.453
			0.281	7.137	10	159.672	107.196
			0.312	7.925	10 CTD	177.133	118.918
			0.375 0.438	9.525 11.125	STD	212.525	142.678 166.353
			0.500	12.700	20 XHY	282.372	189.570
			0.625	15.875	30	351.723	236.128
			0.688	17.475		386.487	259.467
			0.750	19.050	40	420.576	282.353
42 "	42.000	1067	0.312	7.925		206.914	138.911
			0.375	9.525	STD	248.319	166.708
			0.500	12.700	XHY	330.097	221.610
			0.750	19.050		492.163	330.413
48 "	48.000	1219	0.375	9.525	STD	284.112	190.738
			0.438	11.125		331.404	222.487
			0.500	12.700	XHY	377.822	253.650
			0.750	19.050		563.750	378.473
			0.875	22.225		655.969	440.383

Pipe fittings are prepared from Carbon Steel, Stainless Steel, Alloy Steel, and Duplex. We are only dealing with pipe fittings from selective sources who have been recognized as qualified manufacturer in Korea. We can assure you that our pipe fittings are to meet or even exceed the requirements of domestic as well as international standards of various applications.

Major Applications

- equipment piping for water,
- gas to maintain the line system of buildings,
- transportation piping for fluid, slurries, crude oil,
- petroleum and so on.

Main Products

- Butt-welding fittings: (carbon steel, alloy steel and stainless steel) Item: elbow, tee, reducer, cap, stub-end(lap-joint)
- Forged fittings: (carbon steel, alloy steel and stainless steel) Item: elbow, tee, reducer, coupling, cross, cap, o-let(WOL, SOL, TOL, EOL), union, swaged nipple, plug, nipolets
- Flanges: (carbon steel, alloy steel and stainless steel)
 Item: welding neck, slip-on, socket welding, blind.



Material	Item	Producti	on Range	Capaci	ity(Ton)
Material	item	Mold Type	Fabrication Type	Monthly	Yearly
Carbon Steel Alloy Steel Stainless Steel	Elbow	~ 82"	~ 140"	3,250	39,000
Duplex Steel	Tee	~72"	~ 140"	1,650	19,800
	Reducer	~ 48"	~ 140"	800	9,600
Ni-Base Alloy Steel	Сар	~ 120" (Seamless Type)	~ 122" (Welded Type)	717	8,604
	Stub-end	~ 16"	~ 60"	75	900
Cu-ni Alloy Steel	Forged	_	4"	125	1,500
	Fittings		+	123	1,300
	Outlet		36"	50	600
	Fittings	~ `	50	JU	600

Standard steel billets for rolling mills and forging operation are provided in various international standards, including 3SP/PS, 5SP/PS, ASTM A 615 Grade 40, IS2830, JIS3101, SS400, ASTM 36, DIN17100 ST 37.2, BS 4360, BS 4449, Q237 and Q257.

Prime Steel Square Billets

■ Grade: 3sp/ps and/or 5sp/ps as per GOST 380-94

■ Sizes: 125x125, 130x130, 150x150

■ Length: 9.000, 11.700 mm

Packing/Marking: Export Standard Packing
 Tolerance: Tolerance of size: 4/-5mm
 Tolerance of length: 1/-200mm

■ Corner Radius : 15mm max.

■ Straightness : 15mm max. per running meter

■ Twist : Up to 12mm per meter



Steel quality		Chemical composition according to GOST					
Steet quality	С	Si	Mn	Cr	Ni	S	Р

GOST 380-94

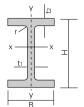
St0	0.23max					0.060max	0.070max
St1	0.06-0.12	0.15-0.30	0.25-0.50	0.30max	0.30max	0.050max	0.040max
St2	0.09-0.15	0.15-0.30	0.25-0.50	0.30max	0.30max	0.050max	0.040max
St3	0.14-0.22	0.15-0.30	0.40-0.65	0.30max	0.30max	0.050max	0.040max
St4	0.18-0.27	0.15-0.30	0.40-0.70	0.30max	0.30max	0.050max	0.040max
St5	0.28-0.37	0.15-0.30	0.50-0.80	0.30max	0.30max	0.050max	0.040max



10 H-Beam Wide Flanges

Nonimal Size	S	tandard S Dimens	sion		Sectional Area (cm²)	Unit Weight (kg/m)	Mome Inei (cn	rtia	Gyra	us of ation m)	of Se	ulus ction n³)
(mm)	HxB	t1	t²	r	Α	W	lx	ly	ix	iy	Zx	Zy
100 x 100	100 x 100	6	8	10	21.90	17.2	383	134	4.18	2.47	76.5	26.7
125 x 125	125 x 125	6.5	9	10	30.31	23.8	847	293	5.29	3.11	136	47.0
150 x 75	150 x 75	5	7	8	17.85	14.0	666	49.5	6.11	1.66	88.8	13.2
150 x 100	148 x 100	6	9	11	26.84	21.1	1,020	151	6.17	2.37	138	30.1
150 x 150	150 x 150	7	10	11	40.14	31.5	1,640	563	6.39	3.75	219	75.1
200 x 100	198 x 99	4.5	7	11	23.18	18.2	1,580	114	8.26	2.21	160	23.0
200 X 100	200 x 100	5.5	8	11	27.16	21.3	1,840	134	8.24	2.22	184	26.8
200 x 150	194 x 150	6	9	13	39.01	30.6	2,690	507	8.30	3.61	277	67.6
	200 x 200	8	12	13	63.53	49.9	4,720	1,600	8.62	5.02	472	160
200 x 200	200 x 204	12	12	13	71.53	56.2	4,980	1,700	8.35	4.88	498	167
	208 x 202	10	16	13	83.69	65.7	6,530	2,200	8.83	5.13	628	218
250 125	248 x 124	5	8	12	32.68	25.7	3,450	255	10.4	2.79	285	41.1
250 x 125	250 x 125	6	9	12	37.66	29.6	4,050	294	10.4	2.79	324	47.0
250 x 175	244 x 175	7	11	16	56.24	44.1	6,120	984	10.4	4.18	502	113
	244 x 252	11	11	16	82.06	64.4	8,790	2,940	10.3	5.98	720	233
250 250	248 x 249	8	13	16	84.70	66.5	9,930	3,350	10.8	6.29	801	269
250 x 250	250 x 250	9	14	16	92.18	72.4	10,800	3,650	10.8	6.29	867	292
	250 x 255	14	14	16	104.70	82.2	11,500	3,880	10.5	6.09	919	304
200 150	298 x 149	5.5	8	13	40.80	32.0	6,320	442	12.4	3.29	424	59.3
300 x 150	300 x 150	6.5	9	13	46.78	36.7	7,210	508	12.4	3.29	481	67.7
000 000	294 x 200	8	12	18	72.38	56.8	11,300	1,600	12.5	4.71	771	160
300 x 200	298 x 201	9	14	18	83.36	65.4	13,300	1,900	12.6	4.77	893	189
	294 x 302	12	12	18	107.7	84.5	16,900	5,520	12.5	7.16	1,150	365
	298 x 299	9	14	18	110.8	87.0	18,800	6,240	13.0	7.50	1,270	417
	300 x 300	10	15	18	119.8	94.0	20,400	6,750	13.1	7.51	1,360	450
300 x 300	300 x 305	15	15	18	134.8	106	21,500	7,100	12.6	7.26	1,440	466
	304 x 301	11	17	18	134.8	106	23,400	7,730	13.2	7.57	1,540	514
	310 x 305	15	20	18	165.3	130	28,150	9,460	13.2	7.60	1,810	620
	310 x 310	20	20	18	180.8	142	29,390	9,940	12.8	7.50	1,890	642
	346 x 174	6	7	14	52.68	41.4	11,100	792	14.5	3.88	641	91
350 x 175	350 x 175	7	11	14	63.14	49.6	13,600	984	14.7	3.95	775	112
	354 x 176	8	13	14	73.68	57.8	16,100	1,180	14.8	4.014	909	134
250 - 252	336 x 249	8	12	20	88.1	69.2	18,500	3,090	14.5	5.92	1,100	248
350 x 250	340 x 250	9	14	20	101.5	79.7	21,700	3,650	14.6	6.00	1,280	292
	344 x 348	10	16	20	146.0	115	33,300	11,200	15.1	8.78	1,940	646
050 050	344 x 354	16	16	20	166.6	131	35,300	11,800	14.6	8.43	2,050	669
350 x 350	350 x 350	12	19	20	173.9	137	40,300	13,600	15.2	8.84	2,300	776
	350 x 357	19	19	20	191.4	156	42,800	14,400	14.7	8.53	2,450	809

Wide flange H beam sections are widely used for the deep foundations of numerous structures such as industrial buildings, commercial & residential buildings, bridges as well as anchoring systems for quay walls





Nonimal Size	Sta	andard Se Dimen: (mm	sion		Sectional Area (cm²)	Unit Weight (kg/m)	Mome Inei (cn	rtia	Gyra	us of ation m)	of Se	ulus ction n³)
(mm)	HxB	t1	t²	r	Α	W	lx	ly	ix	iy	Zx	Zy
	396 x 199	7	11	16	72.16	56.6	20,000	1,450	16.7	4.48	1,010	145
400 x 200	400 x 200	8	13	16	84.12	66.0	23,700	1,740	16.8	4.54	1,190	174
	404 x 201	9	15	16	96.16	75.5	27,500	2,030	16.9	4.60	1,360	202
/00 ·· 200	386 x 299	9	14	22	120.1	94.3	33,700	6,240	16.7	7.81	1,740	418
400 x 300	390 x 300	10	16	22	136.0	107	38,700	7,210	16.9	7.28	1,980	481
	388 x 402	15	15	22	178.5	140	49,000	16,300	16.6	9.54	2,520	809
	394 x 398	11	18	22	186.8	147	56,100	18,900	17.3	10.10	2,850	951
	374 x 405	18	18	22	214.4	168	59,700	20,000	16.7	9.65	3,030	985
400 x 400	400 x 400	13	21	22	218.7	172	66,600	22,400	17.5	10.10	3,330	1,120
	400 x 408	21	21	22	250.7	197	70,900	23,800	16.8	9.75	3,540	1,170
	*406 x 403	16	24	22	254.9	200	78,000	26,200	17.5	10.10	3,840	1,300
*optional	*414 x 405	18	28	22	295.4	232	92,800	31,000	17.7	10.20	4,480	1,530
	*428 x 407	20	35	22	360.7	283	119,000	39,400	18.2	10.40	5,570	1,930
	*458 x 417	30	50	22	528.6	415	187,000	60,500	18.8	10.70	8,170	2,900
	*498 x 432	45	70	22	770.1	605	298,000	94,000	19.7	11.10	13,000	4,370
/F0 000	446 x 199	8	12	18	84.3	66.2	28,700	1,580	18.5	4.33	1,290	159
450 x 200	450 x 200	9	14	18	96.76	76.0	33,500	1,870	18.6	4.40	1,490	187
/F0 000	434 x 299	10	15	24	135.0	106	46,800	6,690	18.6	7.04	2,160	448
450 x 300	440 x 300	1	18	24	157.4	124	56,100	8,110	18.9	7.18	2,550	541
	496 x 199	9	14	20	101.3	79.5	41,900	1,840	20.3	4.27	1,690	185
500 x 200	500 x 200	10	16	20	114.2	89.6	47,800	2,140	20.5	4.33	1,910	214
	506 x 201	11	19	20	131.3	103	56,500	2,580	20.7	4.43	2,230	257
500 x 300	482 x 300	11	15	26	145.5	114	60,400	6,760	20.4	6.82	2,500	451
300 X 300	488 x 300	11	18	26	163.5	128	71,000	8,110	20.8	7.04	2,910	541
	596 x 199	10	15	22	120.5	94.6	68,700	1,980	23.9	4.05	2,310	199
600x200	600 x 200	11	17	22	134.4	106	77,600	2,280	24.0	4.12	2,590	228
000X200	606 x 201	12	20	22	152.5	120	90,400	2,720	24.3	4.22	2,980	271
	612 x 202	13	23	22	170.7	134	103,000	3,180	24.6	4.31	3,380	314
	582 x 300	12	17	28	174.5	137	103,000	7,670	24.3	6.63	3,530	511
600 x 300	588 x 300	12	20	28	192.5	151	118,000	9,020	24.8	6.85	4,020	601
	594 x 302	14	23	28	222.4	175	137,000	10,600	24.9	6.90	4,620	701
	692 x 300	13	20	28	211.5	166	172,000	9,020	28.6	6.53	4,980	602
700 x 300	700 x 300	13	24	28	235.5	185	201,000	10,800	29.3	6.78	5,760	722
	708 x 302	15	28	28	273.6	215	237,000	12,900	29.4	6.86	6,700	853
	792 x 300	14	22	28	234.4	191	254,000	9,930	32.3	6.39	6,410	662
800 x 300	800 x 300	14	26	28	267.4	210	292,000	11,700	33.0	6.62	7,290	782
	805 x 302	16	30	28	307.6	241	339,000	13,800	33.2	6.70	8,400	915
	890 x 299	15	23	28	270.9	213	345,000	10,300	35.7	6.16	7,760	688
000 v 200	900 x 300	16	28	28	309.8	243	411,000	12,600	36.4	6.39	9,140	843
900 x 300	912 x 302	18	34	28	364.0	286	498,000	15,700	37.0	6.56	10,900	1,040
	918 x 303	19	37	28	387.4	304	535,000	17,200	37.2	6.67	11,700	1,140

Available with various of international standards

KSD 3503, 3515 / 3502 JIS G3101, 3106 / 3192, A5526 ASTM A36 - 36M, 242, 283, 441, 572 / 6-6M, BS4360 / 4, DIN 17100 / 1025 IS 226 / 808 / 1852



12 Hot Rolled Steel Coils



Thickness & Width limits (in mm)

Product	Finishes	Thick	ness	Wi	dth
Froudct	Fillisties	Min	Max	Min	Max
Hot-rolled dry	Mill finish	2.00	12.00	1,219	1,540
Hot-rolled dry	Trimmed edges	2.00	12.00	1,219	1,540
Hot-rolled pickled	Pickled & oiled, Mill edge	1.50	6.00	1,219	1,540
Hot-rolled pickled	Pickled & oiled, trimmed edge	1.50	6.00	1,219	1,540

Inside diameter, mill finish	762mm
Inside diameter, pickled & trimmed	610mm standard, 762 mm on request
Tolerance on inside diameter	+0 / -50mm
Outside diameter	Max 10/7×width(limit 2100mm)

Stainless Steels



Stainless Steel is a common name for metal alloys that consist of a minimum of 11% Chromium (Cr) and more than 50% Iron (Fe). Although it is called "stainless", a better term for it is "highly stain resistant". We are providing all of commonly required forms of stainless steel including seamless / welded stainless steel pipes, coils, sheets, plates, butt weld fittings and flanges. When selecting manufacturing sources, we take great care to deal with only reliable partners. Furthermore our people who are knowledgeable and fully experienced in stainless steel industry will plan and coordinate all aspects of supply chain to ensure ontime delivery of quality products to your budget.

Pipes

Outside Diameters: 9.52mm to

2032.0mm

Wall thicknesses: 0.8mm to 20.0mm

Coils & Sheets

Thicknesses: 0.1mm to 8.0mm Width: up to 1,524mm



<u>Plates</u>

Thicknesses: over 9.0mm Width: up to 1,524mm

 $\stackrel{_{}_{\sim}}{\sim}$ Please consult with us for size not listed here

Material

Duplex (S31803)

Stainless Steels (316L, 304L, 310, 321, 430 etc)

Specifications

KS, JIS and ASTM

<u>Testings</u>

Rockwell Hardness Test Eddy Current Test PMI & Radiographic Test Hydrostatic Test

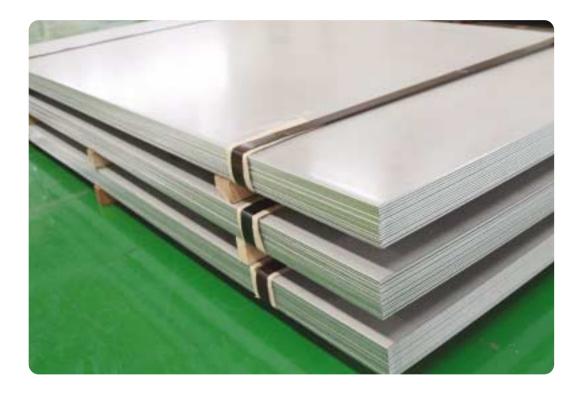
When you inquire about STS products, please specify the followings

- 1. Spec. & Grade:
- 2. Size & Q'ty:
- 3. Usage:
- 4. Condition of use: Temperature, Pressure, etc
- 5. Detail of process after purchasing: (Welding, Cutting, Bending)
- 6. End facing:
- 7. Surface finish:
- 8. Others:



A full range of pressure vessel, structural, quenched & tempered and chrome-moly steel plates are available only from renowned manufacturers in Korea. We have been trying to meet most demanding delivery schedules for both full-sheet and cut-to-size requirements, in sizes up to 10" thick, 120" wide and 480" long.

To ensure long-term satisfaction, all plates from Korean manufacturers are clearly identified as to the heat and slab number and fully documented for traceability. From small quantities to large, we are truly global source for;



ASTM/ASME SA516 GRADE 70 PVQ PLATE(AS ROLLED or NORMALIZED)

Carbon steel plates intended primarily for service in welded pressure vessels where improved notch toughness is important.

ASME/SA36/ASTM A36 PLATE

Widely accepted general-purpose structural-quality steel offering a constant 36 KSI min yield point for all thicknesses of material. Typical applications include construction of buildings, bridges and other structures by means of welding, bolting and riveting.

CSA G40.21 44W PLATE

Meets specified strength requirements and is suitable for general welded construction where notch toughness at low temperatures is not a design requirement.

CSA G40.21 50W PLATE

In addition to the 44W, Quality Plates also stocks the higher strength steel plate in grade G40.21 50W, sometimes referred to by its metric designation of 350W. Suitable for general welded construction where notch toughness at low temperatures is not a design requirement.

Q & T 100/ASTM A514 PLATE

Used where high strength, good weldability, improved notch toughness and excellent formability are required. Typical applications include heavy construction and forestry equipment, off-highway vehicles and structural applications (bridges).

Q & T 400F PLATE

Used where abrasive resistance and good impact values are important. It has good wear resistance and weldability, provides longer wear life and reduces downtime. It is 4 times the strength and 8 times the abrasion resistance of regular mild steel. Typical applications include liner plates in hoppers, chutes and trucks for the mining, transportation and pulp and paper industries.

CSA G40.21 50 WT CAT 3 PLATE

Medium strength, low alloy plate specifically designed to provide strength and notch toughness at temperatures of .20° F. Typical applications include construction equipment and welded construction with specified design requirements as appropriate.

ASME SA387

Covers chromium-molybdenum alloy steel plates. This material is primarily intended for welded boilers and pressure vessels designed for elevated temperature service. Includes ASME SA387 GRADE 11 CL 2 N & T (1.25% CHROME, 0.5% MOLY) and ASME SA387 GRADE 22 CL 2 N & T (2.25% CHROME, 1% MOLY)

Available Size

thickness(mm) <2000	Managio Gizo	•												
6 ≤ T < 7 15 15 15 15 15 15 15 15 15 15 15 15 15	width(mm)	1500≤	2000≤	2200≤	2400≤	2600≤	2800≤	3000≤	3200≤	3500≤	3800≤	3800≤	3900≤	4000≤
7≤T < 8	thickness(mm)	<2000	<2200	<2400	<2600	<2800	<3000	<3200	<3500	<3600	<3800	<3900	<4000	<4100
8≤T<9 18 18 18 18 18 18 18 18 18 18 18 18 24 24 24 24 24 24 24 24 24 24 24 24 24	6≤T<7	15	15	15	15	15	15	15						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7≤T<8	18	18	18	18	18	18	18						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	8≤T<9	18	18	18	18	18	18	18						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	9≤T<10	24	24	24	24	24	24	24	24	24	24	24	24	24
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10≤T<12	24	24	24	24	24	24	24	24	24	24	24	24	24
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	12≤T<15	25	25	25	25	25	25	25	25	25	25	25	25	25
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	15≤T<20	25	25	25	25	25	25	25	25	25	25	25	25	25
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	20≤T<25	25	25	25	25	25	25	25	25	25	24	22	21	21
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	25≤T<30	25	25	25	25	25	25	23	21.5	20	19	17.5	16.5	16.5
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	30≤T<35	25	25	25	24	22	20.5	19	18	16.5	16	14.5	13.5	13.5
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	35≤T<40	25	24	22.5	20.5	19	17.5	16.5	15.5	14	13.5	12.5	12	11.5
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	40≤T<45	21	19	17	16	16.5	15	14	13	12	12	11	10.5	10
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	45≤T<50	21	19	17	16.5	14.5	13.5	12.5	12	11	10.5	9.5	9	9
$60 \le T < 65$	50≤T<55	17	15.5	14.5	13.5	12.5	11.5	11	10	10	9			
65≤T<70 13.5 12.5 11.5 10.5 10 9 8.5 8 8 7.5 75≤T<80 11.5 11 10 9 8.5 8 7.5 7 6.5 85≤T<90 10.5 9.5 9 8 7.5 7 6.5 6 5.5 100≤T<110 9.5 8.5 8 7.5 7 6.5 6 5.5 110≤T<110 8.5 8 7.5 7 6.5 6 5.5 5 110≤T<110 8.5 8 7.5 7 6.5 6 5.5 13.5 tons 13 tons	55≤T<60	15.5	14.5	13	12	11.5	10.5	10	9	9	8.5			
$70 \le T < 75$	60≤T<65	14.5	13	12	11.5	10.5	10	9.5	8.5	8.5				
75 \leq T $<$ 80 11.5 11 10 9 8.5 8 7.5 7 80 \leq T $<$ 80 \leq T $<$ 85 11 10 9.5 8.5 8 7.5 7 6.5 85 \leq T $<$ 90 10.5 9.5 9 8 7.5 7 6.5 6.5 90 \leq T $<$ 95 10 9 8.5 8 7.5 7 6.5 6 5.5 100 \leq T $<$ 100 9.5 8.5 8 7.5 7 6.5 6 5.5 100 \leq T $<$ 100 9.5 8.5 8 7.5 7 6.5 6 5.5 100 \leq T $<$ 110 8.5 8 7.5 7 6.5 6 5.5 105 \leq T $<$ 110 8.5 8 7.5 7 6.5 6 5.5 5 13.5 tons 13 tons	65≤T<70	13.5	12.5	11.5	10.5	10	9	8.5	8	8				
80 ≤ T < 85	70≤T<75	12.5	11.5	10.5	10	9	8.5	8	7.5					
85≤T<90 10.5 9.5 9 8 7.5 7 6.5 6.5 95≤T<100 9.5 8.5 8 7.5 7 6.5 6 5.5 100≤T<105 9 8 7.5 7 6.5 6 5.5 100≤T<106 9.5 8.5 8 7.5 7 6.5 6 5.5 100≤T<110 8.5 8 7.5 7 6.5 6 5.5 100≤T<110 8.5 8 7.5 7 6.5 6 5.5 5 13.5 tons 110≤T<115 8.5 7.5 7 6.5 6 5.5 5 13 tons	75≤T<80	11.5	11	10	9	8.5	8	7.5	7					
90 ≤ T < 95	80≤T<85	11	10	9.5	8.5	8	7.5	7	6.5					
95≤T<100	85≤T<90	10.5	9.5	9	8	7.5	7	6.5	6.5					
100 \leq T \leq 105 \rightarrow 7.5 7 6.5 6 6 5.5 13.5 tons 105 \leq T \leq 115 8.5 7.5 7 6.5 6 5.5 5 5 110 \leq T \leq 115 8.5 7.5 7 6.5 6 5.5 5.5 5 13 tons	90≤T<95	10	9	8.5	8	7.5	7	6.5	6					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	95≤T<100	9.5	8.5	8	7.5	7	6.5	6	5.5				rlæ	
110≤T<115 8.5 7.5 7 6.5 6 5.5 5.5 5 13 tons	100≤T<105	9	8	7.5	7	6.5	6	6	5.5]			
	105≤T<110	8.5	8	7.5	7	6.5	6	5.5	5			13.5	tons	
115 <t<120 12.8="" 5="" 5.5="" 6="" 6.5="" 7.5="" 8="" td="" tons<=""><td>110≤T<115</td><td>8.5</td><td>7.5</td><td>7</td><td>6.5</td><td>6</td><td>5.5</td><td>5.5</td><td>5</td><td></td><td></td><td>13</td><td>tons</td><td></td></t<120>	110≤T<115	8.5	7.5	7	6.5	6	5.5	5.5	5			13	tons	
1.5_1 1.5_2 7.5 0.5 0 0 0.5 0 0 0 12.0 tolis	115≤T<120	8	7.5	6.5	6	6	5.5	5	5			12.8	tons	

16 Ferro Alloys

Our global sourcing strategy makes us to act as one of global sources of certain specialized Ferro alloys. Customer-oriented management team is committed to provide excellent services and high quality products to our valuable customers over the world. Positioning ourselves as one of the leading suppliers of specialized Ferro molybdenum and Molybdenum oxide, we will do our best to provide quality Ferro alloys to satisfy the requirements for a comprehensive range of industrial applications with reasonable prices.

Molybdenum is alloyed with steel making it stronger and more highly resistant to heat because molybdenum has such a high melting temperature. The iron and steel industries account for more than 75% of molybdenum consumption.

The two largest uses of molybdenum are as an alloy in stainless steels and in alloy steels. Stainless steels include the strength and corrosion-resistant requirements for water distribution systems, food handling equipment, chemical processing equipment, home, hospital, and laboratory requirements. Alloy steels include the stronger and tougher steels needed to make automotive parts, construction equipment and gas transmission pipes.

SPECIFICA	TION
M0 : 60% min	CU : 0.5 % MAX
S : 0.1 % MAX	P : 0.05 % MAX
C : 0.10 % MAX	C : 0.10 % MAX
SI : 1.0 % MAX	

Ferro molybdenum



PACKING: IN 250KG STEEL DRUM ON PALLETS

SIZE: 10-50MM, 90% MIN ORIGIN: CHINA

Applications

Ferro molybdenum is used mainly in production of alloys steel, such as structural steel, spring steel, bearing steel, tool steel, anti-acid stainless steel, heat-resistant steel and magnetic steel etc.

Molybdenum Oxide



PACKING: IN 250KG STEEL DRUM ON PALLETS OR 1MT P.P BAG

SIZE: 0-50MM 90% MIN

ORIGIN: CHINA

Package: Either drums or plastic woven bags. Drums 100kg or 250kg. Seal the cover with lead, pallet provided; Plastic woven bags 1000kg. Your special requests are always available.

Applications

It is powder and light-green mainly used in the field of smelting ferromoly, molybdenum chemical industry.

SPECIFICATION	1
Mo : 57% min or 51%min	C : 0.1% max
P: 0.05% max.	Cu : 0.50% max
S: 0.1% max	Si : 1.5% max

Aluminum Alloys



We supply diverse grades of Aluminum for various commercial applications. Our capacity range of 6082 specification is up to 3" Outside Diameter for bars which are mainly applicable to general engineering fields. In addition, wide range of different kind of Aluminum alloy product such as coils, sheets, plates and rods are available to serve our customers. We are also dealing with AA5083 for cryogenic applications in the field of petroleum and gas industries.

Grades

AA6082, AA5083, AA2024, AA1100 etc

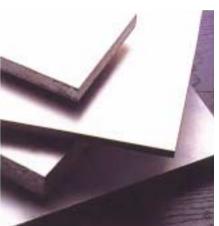
Applications

Structural sections and components, Offshore applications, High stress applications, Trusses, Bridges, Cranes, Transport applications, Ore skips, Beer barrels and so on.









Size Range

Coiled Sheet

Thickness: 0.2 ~ 4.0mm

Max. Width: 1,700mm / Max. Weight: 9,000Kg

Sheet & Plate

Thickness: 0.2 ~ 200mm

Max. Width: 1,700mm / Max. Length: 4,000mm

Circled Sheet

Thickness: 0.4 ~ 3.2mm Diameter: 200mm ~ 600mm

Rod & Bars

Outside Diameter : up to 76.2mm

Max. Length: 6,000mm

18 Scaffold Components



TUBE & COUPLER

The versatile scaffold consisting of tube & coupler provides access to unusual and unconventional shaped structures replacing or supplementing many system scaffolds. Since only four basic parts (steel tubes, double coupler, swivel coupler and base plate) are needed, it is extremely easy to erect and dismantle in any application.

Furthermore all components are manufactured to meet or exceed the highest level of international standards(BS; British Standard, JIS; Japanese Industrial Standard), our tube & coupler scaffold ensure exceptional durability and reliable performance while securing long - term safety of workers.

Major Applications

- Petrochemical
- Refinery
- Ship building
- Industrial Construction
- Building Construction
- Renovation
- Insulating
- Heat Exchangers
- Cooling Towers
- Painting
- Maintenance
- Furnaces
- Pressure Vessels and much more.

SCAFFOLD TUBES

High tensile scaffold tubes are designed for tube & coupler scaffolding. The tubes have hot-dipped galvanized surfaces finish so as to provide excellent appearance with sufficient durability in such applications where salty air or long-term weather exposures are inevitable.

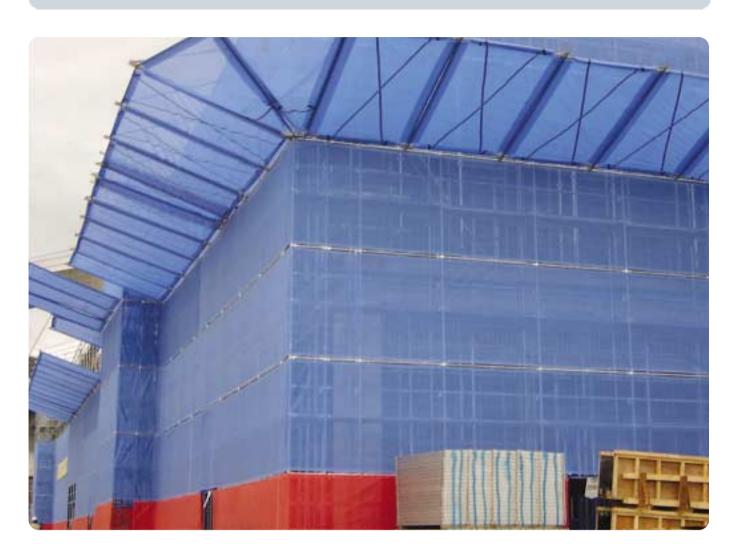
Safety I	Regulation	Korean Standard	British Standard(BS1139)	
Material	Standard No.	JIS G3444	JIS G3101	
Material	Code	STK500	SS400	
Specific	ation(mm)	48.6(0.D)×2.4(THK)×CTR	$48.3(0.D)\times4(THK)\times CTR$	
Galva	nization	Pre-Gal/Hot-Dip	Hot-Dip	
Unit	Weight	2.73kg/m	4.37kg/m	





Fall Protection Safety Net





A modern light weight collective safety netting system which is made of durable high tensile coated PVC provides highest quality safety solutions. It is designed to protect workers on site preventing fatalities and serious accidents when working at height. It is extremely easy to install / dismantle and also prevents a fall of debris that may result in property damage and personnel injury. With safety netting system, your workers move around freely and work safely at the job site.

Major Applications

- General Fall Protection
- High Rise Construction (Residential / Commercial)
- Bridge Construction and Repair
- Steel & Concrete Construction

Benifits and Advantages

- Comprehensive fall protection (Encompassing personnel & debris protection in one system)
- Extremely easy to install
- Keep the appearance of site in good order when used with PVC mesh scaffold enclosures





20 Scaffold Components





DOUBLE COUPLERS

Drop forged load bearing double couplers incorporating captive "T" bolts provide strong grip when connecting two 48.3mm outside diameter scaffold tubes at right angle.

Specification: 48.3 x 48.3mm (1 29 / 32 "29 / 32 ")

Material: Drop forged carbon steel

Standard: BS1139(1982 & 1991), En 74 Class A & B



Pressed load bearing double couplers provide sufficient grip when connecting two 48.3mm outside diameter scaffold tubes at right angle.

Specification: 48.3x48.3mm(1 29 / 32 " 29 / 32 ") Material: Hot rolled high strength steel sheet Standard: BS1139 (1982 & 1991), En 74 Class A & B



Pressed load bearing double couplers designed to fit two scaffold tubes at right angle.

Specification: 42.7~48.6mm

Material: Hot rolled high strength steel sheet

Standard: KS/JIS





SWIVEL COUPLERS

Drop forged load bearing swivel couplers incorporating captive "T" bolts provide strong grip when connecting two 48.3mm outside diameter scaffold tubes at any angle for diagonal bracing. Specification: 48.3 x 48.3mm(1 29/32 "1 29/32")

Material: Drop forged carbon steel

Standard: BS1139(1982 & 1991), En 74 Class A & B



Pressed load bearing swivel couplers provide sufficient grip when connecting two 48.3mm outside diameter scaffold tubes at any angle for diagonal bracing.

Specification: 48.3 x 48.3mm(1 29 / 32 " 1 29 / 32 ") Material: Hot rolled high strength steel sheet Standard: BS1139(1982 & 1991), En 74 Class A & B



Pressed load bearing swivel couplers designed to fit two scaffold tubes at any angle

for diagonal bracing.

Specification: 42.7~ 48.6mm

Material: Hot rolled high strength steel sheet

Standard: KS/JIS



















BASE PLATE

Secure footing of tube & coupler scaffolding is ensured, since it prevents lateral movements of vertical tubes. Specification: 41.9ø, 120 x 120mm

JOINT PIN

Used for vertical connection of two scaffold tubes.

Speciffication: 41.9ø x 212mm

BONE JOINT

Used for horizontal connection of two scaffold tubes.

Speciffication: 41.9ø x 212mm



HIGH STRENGTH STEEL PLANKS

Extremely sturdy steel planks has little tendency to sag under load. The safety of workers is enhanced since the top surface of plank has non-skid, raised dimple pattern to drain off water through it. Unlike conventional wood planks, steel planks provides fire resistance solutions to such applications as refineries and industrial plants.

Width: 210 / 250mm Height: 50mm Length: 4,000mm

Material: Pre-Galvanized SGCC steel(1.2mm THK)

22 Personal Protective Equipment

Personal protective equipment(PPE) is designed to protect workers from serious injuries or illnesses on site resulting from contact with chemical, radiological, physical, electrical, mechanical, or other occupational hazards. Besides face shields, safety glasses, hard hats, and safety shoes, PPE includes a variety of devices and garments such as goggles, coveralls, gloves, vests, earplugs, and respirators.



Hard Hat

- ABS or HDPE shell, anti-impact, anti-puncture
- Groove on the brim, could match with earmuff or face shield
- Liner: 1 pin lock (regular) plastic suspension, 2 pin lock (regular) nylon webbing suspension, 3 ratchet nylon webbing suspension, washable sweat band
- Shell color: red, blue, white, yellow, orange, green. Custom color is also available with logo
- Approval: tested by German TUV, meet CE/EN397 standard



Reflective Vests

- Material : polyester oxford or polyester knitted material
- Reflective material : PVC sheet or TC reflective tape
- Size: Standard S/M/L size available.
- Widely used in construction site, working place, cleaner, traffic policemen, working at night or under any special working environment.



Safety Shoes

Safety shoes protect workers where they are exposed to injury as a result of falling or rolling objects.

- Upper : Leather
- Steel toe cap
- Steel midsole
- PU/PU. PU/TPU or PU/NPU sole
- Certified to EN345 All steel toe shoes meet or exceed ASTM F2413-05 (formerly ANSI Z41 PT99) I/75 C/75 standards.



Safety Goggle

- Maximum panoramic and peripheral field of vision
- Large frame designed to fit over protective or prescription eyewear
- Soft, flexible PVC frame provides comfort, fit and seal
- Frame: environmental PVC, transparent and soft.
- Lens : PC or PVC, Clear lens with protection film.
- PC lens are treated with anti-fog on request from buyer
- Approval: tested by German TUV, meet CE/EN166 standard.

Cryogenic Insulation





Rigid Polyisocyanurate Foam Insulation CFC-free, blowing agent : HCFC141b

The PIRfoam140, CFC-free polyisocyanurate (PIR), is produced as a continuous foam bunstock with the ability to be fabricated into any shape and sizes such as sheets, pipe shells, tank and vessel coverings and custom parts for a variety of insulation, core material and carving applications. While retaining all of the benefits of rigid polyurethane insulation, PIRfoam140 offers greater dimensional stability over a wider service temperature range.

Physical Properties

Property		Test Method	Unit	Value
Nominal Density		ASTM D 1622	kg/ _{m³}	50+/-5
		ASTM C 518	W/m.K	Max. 0.019(Initial)
Thermal Conductivity		or		
		ASTM C 177	W/m.K	Max. 0.023(180 days)
Closed Cell Content		ASTM D 2856	%	Min. 90
Operating	Upper Limit		+120 ℃	(+248°F)
Temperature	Lower Limit		-170 ℃	(-274°F)
Compressive Strength		ASTM D 1621		
	X Direction		kg/cm² (kPa)	Min. 2.5 (245)
	Y Direction		kg/cm² (kPa)	Min. 2.5 (245)
	Z Direction		kg/cm² (kPa)	Min. 2.5 (245)
Tensile Strength		ASTM D 1623		
	X Direction		kg/cm² (kPa)	Min. 2.0 (196)
	Y Direction		kg/cm² (kPa)	Min. 2.0 (196)
	Z Direction		kg/cm² (kPa)	Min. 2.0 (196)
Linear Expansion Coeff	icient	ASTM E 228		
	X Direction		m/m.K	Max. 70 x 10-6
	Y Direction		m/m.K	Max. 70 x 10-6
	Z Direction		m/m.K	Max. 70 x 10-6
Safety Factor				
	X Direction		Min. 1.5	
	Y Direction		Min. 1.5	
	Z Direction		Min. 1.5	
Water Vapor Permeabil	ity	ASTM E 96	μg m/Ns	Max. 6 x 10-3
Fire Resistive Propertie	s			
Burning time		BS 4735 OR	sec	Max. 120
Burning Length of Fire		KS M 3809	mm	Max. 60
Flame Spread Index		ASTM E 84		Max. 25

Benefits and Advantages

- Closed cell structure enabling excellent moisture resistance
- Improved dimensional stability
- Outstanding insulating value
- Low thermal conductivity
- Rigid, lightweight and strong
- Easy to fabricate into virtually any shape & size
- Superior compatibility with polyester and epoxy resins



Major Applications

PIRfoam140 may be used for such applications operating within the temperature range -170 $^{\circ}$ C to +120 $^{\circ}$ C (-274 $^{\circ}$ F to +248 $^{\circ}$ F). It is designed for use in a wide range of applications including :

- Oil refinery & Petrochemical plant
- LPG / LNG Gas & Cryogenic Plant
- LPG / LNG Carrier
- LPG / LNG Receiving Terminals
- Ethylene /Ammonia Production Plant
- Cryogenic pipework and equipment
- Cold Storage & HVAC Applications