



Sanitary & Plumbing

Pharmaceuticals

Sugar

& Many More

Automobile

Railway Coaches

Furniture

Fabrication

Sanitary & Plumbing

Hospital Equipments

Instrumentations

Automobile

Dairy & Food

Kitchenware

Pharmaceuticals

Railway Coaches

## Industries Served

Our products are used in various industries like: **Railway Coaches, Kitchenware, Sanitary & Plumbing, Automobiles, Pharmaceuticals, Sugar, Furniture, Fabrications (Machines / Vessels), Dairy & Food, Hospital Equipments, Instrumentations & many more...**

TIG Welding Size

## Stainless Steel Round Tubing Series



OD/ Thickness (mm)	Weight / Thickness												
	0.8	1.0	1.2	1.5	1.6	2.0	2.3	2.5	2.6	3.0	3.2	3.5	4.0
08.00	0.145	0.175	0.202	--	--	--	--	--	--	--	--	--	--
10.00	0.183	0.225	0.262	0.316	0.333	--	--	--	--	--	--	--	--
12.00	0.222	0.273	0.322	0.391	0.413	0.498	--	--	--	--	--	--	--
12.70	0.236	0.290	0.342	0.417	0.440	0.530	--	--	--	--	--	--	--
15.00	0.284	0.315	0.415	0.507	0.532	0.646	--	--	--	--	--	--	--
16.00	0.304	0.376	0.445	0.545	0.577	0.701	--	--	--	--	--	--	--
19.05	0.366	0.452	0.536	0.669	0.699	0.854	0.956	1.026	--	--	--	--	--
22.00	0.425	0.526	0.625	0.77	0.817	1.002	1.124	1.208	--	--	--	--	--
23.00	0.455	0.551	0.655	0.808	0.857	1.052	1.18	1.271	--	--	--	--	--
25.00	0.485	0.601	0.715	0.883	0.937	1.152	1.307	1.409	1.458	1.637	--	--	--
25.40	0.493	0.611	0.727	0.898	0.954	1.172	1.33	1.434	1.484	1.667	--	--	--
28.00	0.545	0.676	0.805	0.995	1.058	1.302	1.48	1.596	1.658	1.86	--	--	--
30.00	0.588	0.728	0.869	1.07	1.138	1.402	1.595	1.722	1.784	2.028	--	--	--
31.80	0.621	0.771	0.919	1.138	1.21	1.492	1.699	1.834	1.901	2.163	--	--	--
32.00	0.625	0.778	0.925	1.146	1.218	1.502	1.71	1.847	1.914	2.178	--	--	--
33.00	0.645	0.801	0.958	1.183	1.258	1.552	1.768	1.908	1.979	2.254	2.388	--	--
34.00	0.665	0.826	0.986	1.221	1.296	1.603	1.825	1.972	2.044	2.329	2.468	--	--
35.00	0.685	0.851	1.018	1.258	1.338	1.653	1.883	2.035	2.109	2.404	2.548	--	--
38.00	0.745	0.926	1.106	1.371	1.458	1.803	2.056	2.222	2.305	2.629	2.788	--	--
40.00	0.785	0.977	1.168	1.446	1.538	1.903	2.171	2.348	2.435	2.779	2.948	--	--
41.00	0.805	1.002	1.196	1.484	1.579	1.953	2.229	2.41	2.5	2.855	3.029	--	--
44.50	0.875	1.089	1.301	1.615	1.719	2.128	2.43	2.629	2.728	3.117	3.308	3.687	--
45.00	0.885	1.102	1.316	1.634	1.739	2.153	2.459	2.661	2.76	3.155	3.349	3.732	--
50.00	0.986	1.227	1.466	1.822	1.939	2.404	2.747	2.974	3.086	3.531	3.75	4.183	--
50.80	1.002	1.247	1.49	1.852	1.971	2.444	2.793	3.024	3.138	3.591	3.814	4.255	--
54.00	--	1.327	1.587	1.972	2.099	2.604	2.978	3.224	3.346	3.831	4.071	4.543	--
57.00	--	1.402	1.677	2.085	2.22	2.754	3.15	3.412	3.542	4.056	4.311	4.814	--
63.50	--	--	1.872	2.329	2.48	3.09	3.525	3.819	3.965	4.545	4.832	5.4	5.903
76.10	--	--	2.251	2.802	2.985	3.711	4.25	4.607	4.785	5.491	5.841	6.535	7.222
90.00	--	--	2.635	3.283	3.498	4.352	4.987	5.409	5.618	6.453	6.867	7.689	8.504

TIG Welding Size

## American Schedule Sizes Stainless Steel Piping Series



Nominal Inches	Diameter		Schedule 5 S		Schedule 10 S		Schedule 40 S	
	Ext.	Thickness (T)	Weight (W)	Thickness (T)	Weight (W)	Thickness (mm)	Weight (W)	
	inches   mm	inches   mm	kg/ft   kg/m	inches   mm	kg/ft   kg/m	inches   mm	kg/ft   kg/m	
1/8	0.840   21.34	0.065   1.650	0.247   0.812	0.083   2.110	0.308   1.013	0.109   2.770	0.391   1.285	
1/4	1.050   26.70	0.065   1.650	0.315   1.035	0.083   2.110	0.395   1.300	0.113   2.870	0.521   1.712	
1/2	1.315   33.40	0.085   1.850	0.389   1.311	0.109   2.770	0.640   2.123	0.133   3.380	0.773   2.540	
3/4	1.660   42.20	0.085   1.850	0.509   1.675	0.109   2.770	0.832   2.734	0.140   3.560	1.050   3.443	
1	1.900   48.30	0.085   1.850	0.588   1.928	0.109   2.770	0.980   3.160	0.145   3.680	1.252   4.110	
1.25	2.375   60.30	0.085   1.850	0.737   2.422	0.109   2.770	1.216   3.990	0.154   3.910	1.680   5.520	
1.5	2.875   73.03	0.083   2.110	1.130   3.710	0.120   3.050	1.610   5.270	--	--	
2	3.500   88.90	0.083   2.110	1.384   4.510	0.120   3.050	1.907   6.400	--	--	

## Stainless Steel Square Tubing Series



OD/ Thickness (mm)	Weight / Thickness						
	1.2	1.5	2.0	3.0	3.2	3.5	4.0
25x25	0.925	1.145	1.455	2.216	--	--	--
30x30	1.106	1.371	1.840	--	2.720	--	--
35x35	1.310	1.620	2.150	3.152	--	--	--
40x40	1.498	1.859	2.454	3.758	--	4.808	--
50x50	1.558	2.329	3.080	4.650	--	5.208	5.960
60x60	2.232	2.802	3.711	5.491	--	6.311	--



## Stainless Steel Rectangle Tubing Series



OD/ Thickness (mm)	Weight / Thickness					
	1.0	1.2	1.5	2.0	2.5	3.0
10x20	0.446	0.530	0.651	---	---	---
10x25	0.521	0.619	0.783	---	---	---
10x30	0.605	0.720	0.889	---	---	---
10x40	---	---	1.146	1.840	---	---
10x50	---	---	1.371	2.150	---	---
10x60	---	---	1.371	2.420	---	---
10x70	---	---	1.834	2.604	---	---
10x80	---	---	2.122	---	---	---
12.70x20	0.496	0.589	0.725	---	---	---
12.70x25	0.570	0.679	0.837	1.091	---	---
12.70x30	0.645	0.768	0.949	1.240	---	---
12.70x40	0.804	0.958	1.187	1.558	---	---
12.70x50	0.967	1.155	1.432	1.885	---	---
15x20	---	0.619	0.763	0.962	---	---
15x25	---	0.720	0.889	1.161	---	---
15x30	---	0.813	1.005	1.315	1.612	---
15x40	---	1.008	1.246	1.637	2.015	---
15x50	---	1.196	1.484	1.955	2.412	---
15x60	---	1.393	1.730	2.282	2.281	---
20x25	---	0.183	1.005	1.315	1.612	---
20x30	---	0.925	1.146	1.495	---	---

OD/ Thickness (mm)	Weight / Thickness					
	1.0	1.2	1.5	2.0	2.5	3.0
20x40	---	1.106	1.371	1.480	---	---
20x50	---	1.310	1.620	2.150	---	---
20x60	---	1.496	1.859	2.454	---	---
20x70	---	---	2.064	2.804	---	---
20x75	---	---	2.188	2.890	3.584	4.564
20x80	---	---	2.329	3.080	3.782	4.501
20x100	---	---	2.802	3.711	4.670	5.491
25x30	---	1.006	1.245	1.637	2.015	---
25x50	---	1.393	1.730	2.282	2.281	3.456
25x70	---	---	2.188	2.890	3.584	4.264
25x75	---	---	2.307	3.051	3.482	4.502
30x40	---	1.310	1.620	2.150	---	3.152
30x50	---	1.496	1.859	2.454	3.558	---
30x60	---	---	2.122	2.804	---	4.131
30x70	---	---	2.307	3.051	3.782	4.502
40x50	---	---	2.064	2.804	---	4.131
40x60	---	---	2.307	3.051	---	4.502
40x80	---	---	2.802	3.711	---	5.491
40x100	---	---	---	4.380	5.425	6.530
50x70	---	---	---	3.711	---	5.491
60x80	---	---	---	4.380	---	6.530

## HF Mill Production Range

Grade & Thickness as per customer requirement. 1.0 to 3.00mm

### FOR ROUND

OD/ Thickness (mm)	Weight / Thickness									
	1.0	1.2	1.5	1.6	2.0	2.3	2.5	2.6	3.0	
25.40	0.611	0.727	0.898	0.954	1.172	1.33	1.434	1.484	1.667	
28.70	0.687	0.818	1.012	1.075	1.324	1.506	1.625	1.683	1.912	
31.80	0.771	0.919	1.138	1.21	1.492	1.699	1.834	1.901	2.163	
38.10	0.920	1.096	1.362	1.448	1.791	2.042	2.207	2.289	2.612	
42.60	1.032	1.232	1.529	1.627	1.334	2.299	2.486	2.579	2.947	
48.30	1.173	1.402	1.741	1.853	2.297	2.624	2.840	2.947	3.371	
50.80	1.247	1.49	1.852	1.971	2.444	2.793	3.024	3.138	3.591	
57.10	1.391	1.654	2.059	2.202	2.733	3.126	3.386	3.513	4.026	
63.50	---	1.872	2.329	2.48	3.08	3.525	3.819	3.965	4.545	



### FOR SQUARE & RECTANGLE

OD/ Thickness (mm)	Weight / Thickness						
	1.2	1.5	2.0	3.0	3.2	3.5	4.0
20x20	0.727	0.898	0.954	1.667	---	---	---
25x25	0.925	1.145	1.495	2.218	---	---	---
20x40	1.108	1.371	1.480	---	---	---	---
30x30	1.108	1.371	1.840	---	2.720	---	---
25x50	1.293	1.730	2.282	3.458	---	---	---
40x40	1.486	1.859	2.454	3.708	---	4.808	---
50x50	1.558	2.329	3.080	4.680	---	5.208	5.960
40x60	---	2.307	3.051	4.502	---	---	---



## Chemical Composition

SPS AS PER ASTM	%C (Max)	%Mn (Max)	%P (Max)	%S (Max)	%Si (Max)	%Cr	%Ni	%N (Max)
Austenitic Cr-Mn*								
(201 0.3% Ni)	0.13	11.0	0.1	0.015	0.750	14.0 - 15.25	0.40	0.200
(201 1% Ni)	0.100	10.0	0.080	0.010	0.750	15.0 - 16.0	1.00 - 2.00	0.200
(202 3% Ni)	0.150	9.75 - 10.75	0.100	0.020	0.750	14.50 - 16.00	0.40 - 0.55	0.200
304	0.080	2.00	0.045	0.030	0.750	18.00 - 20.00	8.00 - 12.00	0.100
316L	0.030	2.00	0.045	0.030	0.750	16.00 - 18.00	10.00 - 14.00	0.100
409M	0.030	1.50	0.040	0.015	1.000	10.50 - 12.50	0.30 - 1.00	0.030
409L	0.030	1.00	0.040	0.020	1.000	10.50 - 11.70	0.50	0.030
438L	0.025	1.00	0.040	0.030	1.000	16.00 - 19.00	0.50	0.025
439	0.030	1.00	0.040	0.030	1.000	17.00 - 19.00	0.50	0.030
441	0.030	1.00	0.040	0.015	1.000	17.50 - 18.50	--	--

## ASTM Standards

Specification	Allowable Outside Dia. Variations (mm)			-Allowable Wall Thickness Variations		Exact Length Tolerances (mm)		Testing
	Nominal Dia.	Over	Under	Over %	Under %	Over	Under	
ASTM A - 270 Welded Sanitary Tubing	25.4	0.05	0.20	+12.5	-12.5	3.2	0	Reverse Flattening Test, 100% Hydrostatic Test, External Polish on all Tubes Refer to ASTM A - 270.
	38.1	0.05	0.20	+12.5	-12.5	3.2	0	
	50.8	0.05	0.28	+12.5	-12.5	3.2	0	
	53.8	0.05	0.28	+12.5	-12.5	3.2	0	
ASTM A - 312 Welded Pipe	13.7 - 48.3 incl	0.40	0.20	Minimum Wall 12.5% under nominal wall specified		8.4	0	Tensile Test, Flattening Test, 100% Hydrostatic Test, Refer to ASTM A - 270.
	48.3 - 114.3 incl	0.80	0.20			6.4	0 (Normally Random Lengths Ordered)	
ASTM A - 554 Welded Tube & Sanitary Tube	Under 25.4	0.25	0.25	+10	-10	4.80	0	Flattening Test, Flare Test, Hardness Test, More Tests as per customer's requirements Refer to ASTM A - 554.
	25.4-38.1	0.20	0.25	+10	-10	4.80	0	
	38.1-50.8 excl	0.25	0.20	+10	-10	4.80	0	
	50.8-63.5 incl	0.30	0.30	+10	-10	4.80	0	
	63.5-76.2 excl	0.36	0.36	+10	-10	4.80	0	
	76.2-88.9 incl	0.51	0.51	+10	-10	4.80	0	

## Finishes

There are two types of finishes we are doing :

**Matt Finish** : 180 , 220 , up to 400 Grits

**Mirror Finish** : 600 Grits & 8K

## Process Flow Chart

For High Frequency (HF) Pipe Manufacturing

