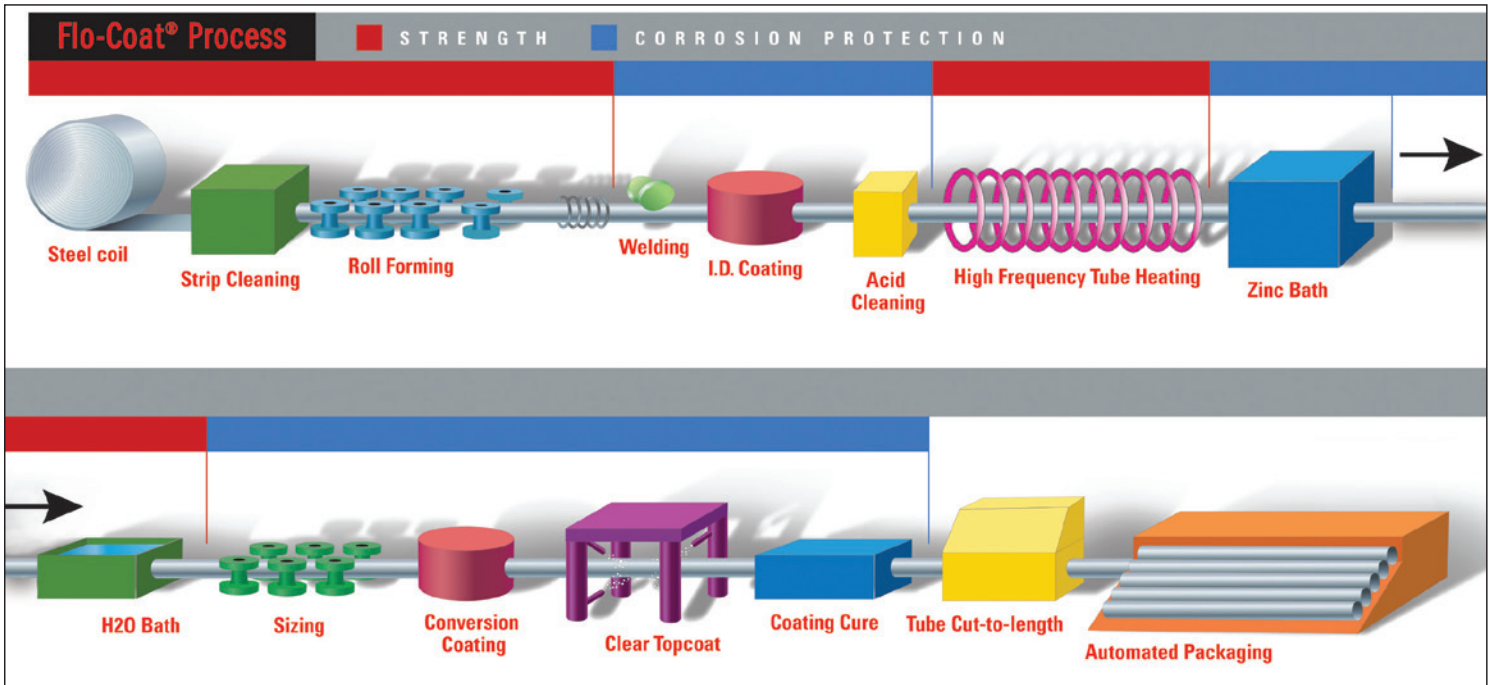
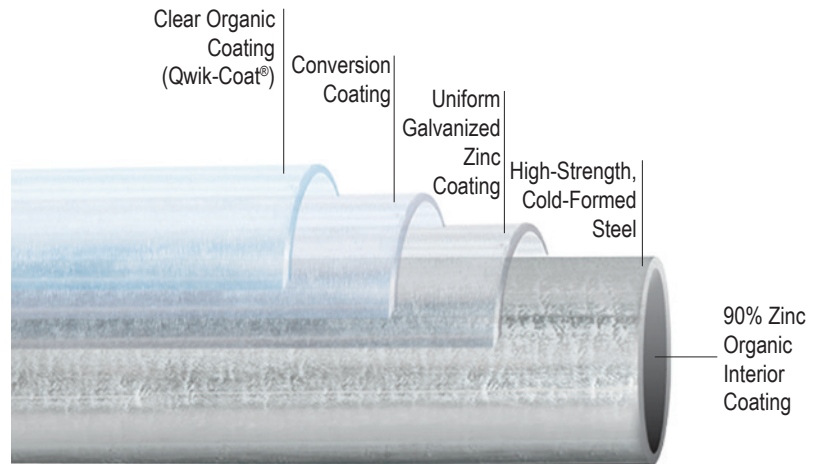
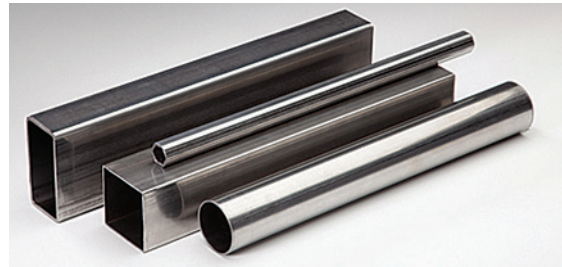


**MECHANICAL TUBE**



Page 1 of 4

PROJECT INFORMATION:		APPROVAL STAMP:
Project:		
Date:	Phone:	
Architect / Engineer:		
Contractor:		
Address:		
Notes 1:		

## Flo-Coat® Galvanized Steel Tubing

- The ORIGINAL in-line galvanized tube
- High Strength
- Triple Coat Protection
- Fabrication Friendly
- Ideal for paint or powder coat

## Gatorshield® Galvanized Steel Tubing

- High Strength
  - Advanced Corrosion Protection
  - Double zinc levels
  - Fabrication Friendly
- Ideal for highly corrosive outdoor conditions



The preferred choice for OEM applications, our tubing has literally been designed to meet customer needs. We offer the most complete range of standard sizes available and are ready to work with you to develop custom applications. We can create tubing solutions that offer better coatings, decreased weight, longer-term corrosion resistance on interiors, and various tube strength options.

We can provide you with the CUSTOMIZED tubing you require. Whether you need your tubing CUT to length, PUNCHED, or SWEDGED, we have the ability to deliver you a customized product.

## Mechanical Tube Specifications

### All steel tube products...

are manufactured per ASTM-A500 dimensions. Inquire as to compliance to specific grades. Please inquire about our ability to meet ASTM-A513 and other tube specifications.

Tolerances:			
Round	Tolerance	Length	Tolerance
0.500 thru 1.510	±.005	Under 5**	± 1/16"
1.625 thru 2.000	±.010	5' - 15'	± 1/8"
2.197 thru 4.500	±.015	16' - 19'	± 1/4"
5.000	±.020	20' - 40**	± 1/2"
Square & Rectangle	±.010	*Must be cut off-line.	
<b>Except:</b>		Closer length tolerances available upon request	
1x1 & Smaller	±.005	**sizes 2.875 – 5.000 can be run up to 40' long	
1.500 x 3.000	±.020		
2.000 x 3.000	±.015		
2.000 x 4.000	±.015		
2.000 x 5.000	±.030		
2.360 x 4.720	±.030		
3.000 x 3.000	±.015		
3.000 x 4.000	±.030		
4.000 x 4.000	±.020		
Oval Sizes	±.015		

## Carbon Steel Typical Chemistry:

	1008 Steel (16 gauge and lighter)	1010 Steel (15 gauge and heavier)	1015 Steel (15 gauge and heavier)	"1022 Steel (15 gauge and heavier)"
Carbon max. %	0.10	0.13	0.18	0.23
Manganese max. %	0.50	0.60	0.60	1.00
Phosphorus max. %	0.030	0.030	0.030	0.030
Sulphur max. %	0.035	0.035	0.035	0.035

## Mechanical Tube Specifications (cont.)

ROUND (in inches) Nominal decimal for ordering gauge																
Outside Diameter	Equiv. Sizes	22	20	19	18	17	16	15	14	13	12	11	10	9	8	7
		0.028	0.035	0.042	0.049	0.058	0.065	0.072	0.083	0.095	0.109	0.120	0.134	0.148	0.165	0.180
0.500		0.1413	0.1740	0.2056	0.2362	0.2740	0.3023									
0.625		0.1787	0.2207	0.2618	0.3017	0.3516	0.3891									
0.706	½" EMT	0.2029	0.2511	0.2981	0.3441	0.4018	0.4454									
0.750		0.2161	0.2675	0.3179	0.3672	0.4291	0.4760	0.5218								
0.815	½" IMC	0.2356	0.2918	0.3471	0.4012	0.4694	0.5211	0.5719	0.6495							
0.870		0.2520	0.3124	0.3718	0.4300	0.5035	0.5594	0.6142								
0.875		0.2535	0.3143	0.3740	0.4327	0.5066	0.5628	0.6181								
0.922	¾" EMT	0.2676	0.3319	0.3951	0.4573	0.5357	0.5955	0.6542	0.7444							
0.980		0.2850	0.3535	0.4211	0.4877	0.5717	0.6358	0.6989	0.7959							
0.995		0.2894	0.3592	0.4279	0.4955	0.5810	0.6462	0.7104	0.8092							
1.000		0.2909	0.3611	0.4301	0.4981	0.5841	0.6497	0.7143	0.8136							
1.029		0.2996	0.3719	0.4431	0.5133	0.6020	0.6698	0.7366	0.8394							
1.125		0.3284	0.4078	0.4862	0.5636	0.6616	0.7365	0.8105	0.9245							
1.163	1" EMT		0.4220	0.5033	0.5835	0.6851	0.7629	0.8397	0.9583							
1.187				0.5141	0.5961	0.7000	0.7796									
1.250			0.4546	0.5424	0.6291	0.7391	0.8234	0.9067	1.0354	1.1730	1.3295	1.4496	1.5986			
1.290	1" IMC			0.5603	0.6500	0.7639	0.8512	0.9375	1.0709	1.2136	1.3761	1.5009	1.6559			
1.315	1" NPS		0.4789	0.5716	0.6631	0.7794	0.8686	0.9567	1.0931	1.2390	1.4052	1.5329	1.6917			
1.375			0.5014	0.5985	0.6946	0.8166	0.9103	1.0029	1.1464							
1.500			0.5481	0.6546	0.7600	0.8941	0.9971	1.0991	1.2573	1.4268	1.6208	1.7703	1.9567			
1.510	1¼" EMT		0.5519	0.6591	0.7653	0.9003	1.0041	1.1068	1.2661	1.4370	1.6325	1.7831	1.9711			
1.625					0.8255	0.9716	1.0840	1.1953	1.3682	1.5538	1.7665	1.9306	2.1358			
1.638	1¼" IMC			0.7166	0.8323	0.9796	1.0930	1.2053	1.3797	1.5670	1.7816	1.9473	2.1544			
1.660	1¼" NPS	0.4885	0.6080	0.7264	0.8439	0.9933	1.1083	1.2223	1.3992	1.5893	1.8072	1.9755	2.1859			
1.690							1.1291	1.2453	1.4258	1.6198	1.8422	2.0140	2.2289			
1.740	1½" EMT		0.6379	0.7624	0.8858	1.0429	1.1639	1.2838	1.4702							
1.750			0.6417	0.7669	0.8910	1.0491	1.1708	1.2915	1.4791							
1.764			0.6469	0.7731	0.8983	1.0578	1.1806	1.3023	1.4915							
1.875				0.8230	0.9565	1.1266	1.2577	1.3877	1.5900							
1.883	1½" IMC			0.8266	0.9607	1.1315	1.2632	1.3939	1.5971	1.8158	2.0671	2.2616	2.5054			
1.900	1½" NPS		0.6978	0.8342	0.9696	1.1421	1.2750	1.4070	1.6122	1.8331	2.0869	2.2834	2.5297	2.7719		
1.948			0.7157	0.8558	0.9947	1.1718	1.3084	1.4439	1.6548							
1.968	50 MM		0.7232	0.8647	1.0052	1.1842	1.3223	1.4593	1.6725							
2.000			0.7352	0.8791	1.0220	1.2041	1.3445	1.4839	1.7009	1.9346	2.2034	2.4117	2.6730	2.9301		
2.197	2" EMT						1.4814	1.6356	1.8757	2.1347	2.4330	2.6644	2.9552	3.2418		
2.360	2" IMC				1.2105	1.4273	1.5947	1.7610	2.0203	2.3002	2.6229	2.8735	3.1887	3.4996		
2.375	2" NPS			1.0475	1.2184	1.4366	1.6051	1.7726	2.0336	2.3155	2.6404	2.8927	3.2101	3.5234	3.8981	4.2236
2.500							1.6920	1.8688	2.1445	2.4424	2.7860	3.0531	3.3892	3.7211	4.1186	4.4610
2.857	2½" IMC							2.1436	2.4613	2.8049	3.2020	3.5110	3.9006	4.2860	4.7483	5.1511
2.875	2½" NPS							2.1574	2.4773	2.8232	3.2230	3.5341	3.9264	4.3144	4.7800	5.1857
3.000								2.2536	2.5882	2.9502	3.3686	3.6945	4.1054	4.5122	5.0005	5.4262
3.476	3" IMC							2.6200	3.0105	3.4336	3.9233	4.3051	4.7873	5.2653	5.8401	6.3422
3.500	3" NPS							2.6385	3.0318	3.4579	3.9512	4.3359	4.8217	5.3033	5.8824	6.3883
3.971	3½" IMC								3.4497	3.9363	4.5000	4.9401	5.4963	6.0484	6.7132	7.2946
4.000	3½" NPS								3.4754	3.9657	4.5338	4.9773	5.5379	6.0943	6.7644	7.3504
4.466	4" IMC							3.3820	3.8889	4.4390	5.0768	5.5750	6.2054	6.8316	7.5863	8.2471
4.500	4" NPS							3.4081	3.9191	4.4735	5.1164	5.6187	6.2541	6.8854	7.6463	8.3125
5.000	4½" NPS									4.9813	5.6990	6.2601	6.9704	7.6764	8.5282	9.2746

Typical Mechanical Properties Achieved For Galvanized Tube Products:

- = 40,000 psi yield/45,000 psi tensile
  - = 45,000 psi yield/48,000 psi tensile
  - = 50,000 psi yield/55,000 psi tensile
- Higher mechanical properties available on request

## Mechanical Tube Specifications (cont.)

SHAPES Square tubing is available as round-to-square (RTS), weld-in-corner (WIC) or both. Please inquire for details.																	
	Size	RTS	WIC	20	19	18	17	16	15	14	13	12	11	10	9	8	7
				0.035	0.042	0.049	0.058	0.065	0.072	0.083	0.095	0.109	0.120	0.134	0.148	0.165	0.180
Square	0.625	X		0.2810	0.3333	0.3841	0.4476	0.4954									
	0.709	X		0.3211	0.3813	0.4401											
	0.750	X		0.3406	0.4047	0.4675	0.5463	0.6060	0.6644	0.7535							
	0.813	X		0.3706	0.4407	0.5095	0.5960	0.6617	0.7261	0.8246							
	0.875	X		0.4001	0.4762	0.5509	0.6449	0.7166	0.7869	0.8947							
	0.975	X				0.6175	0.7239	0.8050	0.8849	1.0076							
	1.000	X		0.4597	0.5476	0.6342	0.7436	0.8271	0.9094	1.0359	1.1701	1.3218					
	1.250*	2	X	0.5788	0.6905	0.8009	0.9409	1.0483	1.1543	1.3183	1.4934	1.6927	1.8455				
	1.500*	X	X	0.6979	0.8334	0.9677	1.1383	1.2695	1.3993	1.6007	1.8166	2.0635	2.2538				
	1.625		X					1.3801	1.5218	1.7419	1.9782	2.2490	2.4580				
	1.750*		X					1.4906	1.6443	1.8831	2.1398	2.4344	2.6621				
	1.875		X									2.6198					
	2.000*	X	X					1.7118	1.8893	2.1655	2.4631	2.8053	3.0704	3.4031	3.7304	4.1208	4.4586
	2.188		X											3.7460			
	2.250*	X	X							2.1343	2.4479	2.7863	3.1762	3.4787	3.8590		
2.500*	X	X							2.3792	2.7303	3.1095	3.5470	3.8870	4.3150	4.7376	5.2436	
3.000	X							2.5964	2.8692	3.2951	3.7560	4.2888	4.7036	5.2268	5.7447	6.3664	6.9084
4.000	X									4.4248	5.0490	5.7723	6.3368	7.0506	7.7590	8.6121	9.3582
Flat Sided Oval	0.750 x 1.000			0.3319	0.3951	0.4573	0.5357	0.5955									
	1.500 x 1.000			0.4789	0.5716	0.6631	0.7794	0.8686									
	1.75 x 1.125			0.5519	0.6591	0.7653	0.9003	1.0041	1.1068	1.2661							
	2.000 x 1.094			0.6080	0.7264	0.8439	0.9933	1.1083									
	2.250 x 1.313			0.6978	0.8342	0.9696	1.1421	1.2750									
	2.375 x 1.625					1.1251	1.3262	1.4814									
Rectangle	0.625 x 1.125			0.4001	0.4762	0.5509	0.6449	0.7166									
	0.750 x 1.500			0.5192	0.6191	0.7176	0.8423	0.9377	1.0319	1.1771							
	0.750 x 2.250			0.6979													
	0.875 x 1.917			0.6483	0.7740	0.8983	1.0562	1.1775									
	1.000 x 1.750			0.6383	0.7620	0.8843	1.0396	1.1589									
	1.000 x 2.000			0.6979	0.8334	0.9677	1.1383	1.2695	1.3993	1.6007							
	1.500 x 2.000			0.8169	0.9763	1.1344	1.3356	1.4906	1.6443	1.8831	2.1398	2.4344	2.6621				
	1.500 x 2.500				1.1192	1.3011	1.5330	1.7118	1.8893	2.1655	2.4631	2.8053	3.0704	3.4031			
	1.500 x 3.000										2.7863	3.1762	3.4787				
	1.500 x 3.500					1.6345	1.9277	2.1541	2.3792	2.7303	3.1095	3.5470	3.8870	4.3150			
	1.540 x 3.110											3.2874					
	1.625 x 3.000									2.5185	2.8671	3.2689	3.5808				
	2.000 x 3.000							2.1541	2.3792	2.7303	3.1095	3.5470	3.8870	4.3150	4.7376	5.2436	5.6835
	2.000 x 4.000									3.2951	3.7560	4.2888	4.7036	5.2268	5.7447	6.3664	
	2.000 x 5.000									3.8599	4.4025	5.0305	5.5202	6.1387	6.7519	7.4892	
	2.360 x 4.720										4.4542	5.0899	5.5855	6.2117	6.8324		
3.000 x 4.000										4.4025	5.0305	5.5202	6.1387	6.7519	7.4892	8.1333	
Octagon	4.783											5.7505	6.3159	7.0316	7.7429	8.6006	

\* Also available as Square-F<sup>®</sup>