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Choosing The Correct Metric Tube Size and Finish

Pipeline Products for all Industries

Carbon Steel metric hydraulic tubing is chosen by specifying the outside diameter of the tube and the wall thickness to accommodate the required working pressure. The relevant DIN standard for normal tubes is DIN 2391/c st 37.4

For Example
Tube size 25mm OD X 2mm Wall will have a normal maximum static load working pressure of 226 bar
Tube size 25mm OD X 4mm Wall will have a normal maximum static load working pressure of 394 bar

The figures quoted are a good general working guideline
Actual recommended working pressures vary according to manufacturers alternative calculation methods.
The above figures are a general guide and based upon the DIN standard scope of application 111
and shown below and rated : A = Static load b = Pulsating load. *Where necessary, consult your supplier for more help.*

Material Finish
*DIN 2391/c st 37.4 Standard tube is supplied in a **phosphate finish*****
Alternatively tubes can be supplied with Chromium 6 Free plating or as Bright bar, lightly oiled

****The chemical processes involved in the Phosphating process are quite complex but in brief terms the phosphating process converts the surface layer of certain metals into strong, adherent, insoluble metal phosphates. These can either be crystalline or amorphous in structure. Phosphating forms both a rust resisting layer in itself and also gives an excellent key to a subsequent paint coating. If scratched, the underlying metal surface does not corrode as rapidly as it would without the phosphate layer.

Precaution *Support Sleeves are advised for thin wall tubes subject to stress.

Tube Size OD X Tube Wall	Working Pressure (Bar) A	Working Pressure (Bar) B	Tube Size OD X Tube Wall	Working Pressure (Bar) A	Working Pressure (Bar) B
4 x 1	522	500	20 x 2	297	221
6 x 1	389	372	20 x 2.5	353	303
6 x 1.5	549	526	20 x 3	373	357
8 x 1	333	288	20 x 4	478	458
8 x 1.5	431	412	22 x 1.5*	188	140
8 x 2	549	526	22 x 2	256	227
10 x 1	282	248	22 x 3	343	328
10 x 1.5	373	357	25 x 2*	226	201
10 x 2	478	458	25 x 3	338	292
12 x 1*	235	209	25 x 4	394	378
12 x 1.5	353	303	28 x 2*	201	181
12 x 2	409	391	28 x 3	302	264
14 x 2	341	326	30 x 3	282	248
15 x 1.5	282	248	30 x 4	336	321
15 x 2	336	321	30 x 5	409	391
16 x 1.5	275	207	35 x 3	242	215
16 x 2	353	303	38 x 3	226	169
16 x 2.5	386	370	38 x 4	297	260
16 x 3	452	433	38 x 5	332	318
18 x 1.5*	235	209	38 x 6	390	373
18 x 2	313	273	42 x 3	201	181