



WOOL
HARVESTING
NOTE

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STEEL TUBE FOR USE IN SHEEP YARDS

The strength, durability, smooth finish, versatility and ease of working make steel tube one of the commonest products for use in sheep yards.

The tube may be circular, square or rectangular in cross section. It can be obtained in a variety of surface finishes such as black, primer painted or galvanised. Black tube has been treated with a temporary rust preventative, and is the usual finish for tube unless otherwise specified.

Where necessary, one size of tube can be fitted inside a larger size with a range of clearances to suit particular applications.

CIRCULAR PIPE

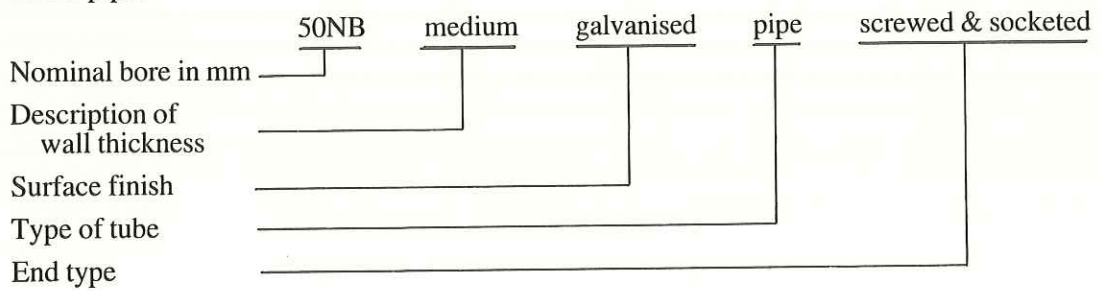
This is often advertised as water pipe and as structural grade pipe. The products are dimensionally the same, but they are specified in different ways.

Water pipe is specified by giving the nominal bore (NB) and a description of the wall thickness. The commonest descriptions of wall thickness for water pipe are "medium" and "heavy". The actual dimension for the wall thickness varies with the pipe diameter. When there are different wall thicknesses for a given pipe, it is the outside diameter which remains fixed, and so the nominal bore varies according to the wall thickness. Water pipe is supplied with plain ends, or with ends screwed and socketed.

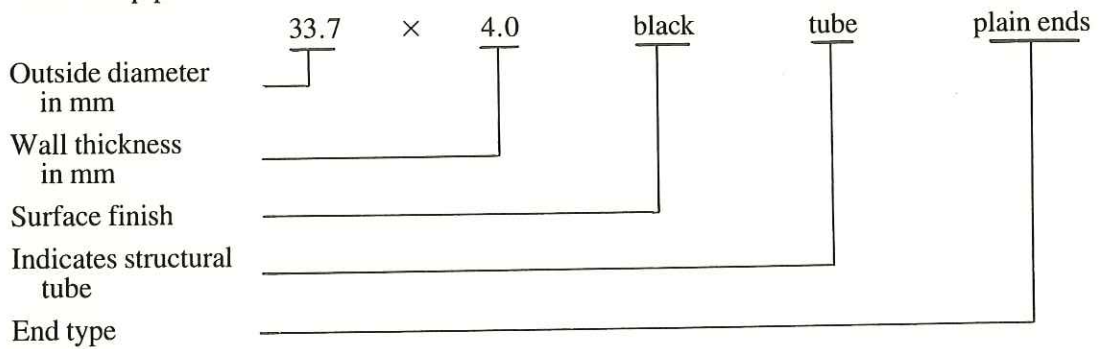
Structural pipe is specified by giving the outside diameter and the actual wall thickness in millimetres. It can be obtained with black or galvanised surface finish, and normally has plain ends.

Typical specifications for circular tube products are given below.

(a) Water pipe:

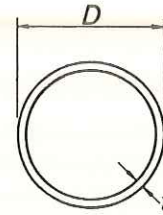


(b) Structural pipe:



A summary of the important information on these products is given in Table 1.

TABLE 1
Data for Circular Tube



Nominal Bore mm	Outside Diameter D mm	Wall Thickness t			
		Light mm	Medium mm	Heavy mm	Extra Heavy mm
15	21.3	-	2.6	3.2	3.6
20	26.9	2.3	2.6	3.2	4.0
25	33.7	2.6	3.2	4.0	4.5
32	42.4	2.6	3.2	4.0	4.9
40	48.3	2.9	3.2	4.0	5.4
50	60.3	2.9	3.6	4.5	5.4
65	76.1	3.2	3.6	4.5	5.9
80	88.9	3.2	4.0	4.9	5.9
Surface Options		Black or Galvanised			Black
End type		Plain end	Plain end or screwed & socketed		Plain end
Standard length m		6.5			

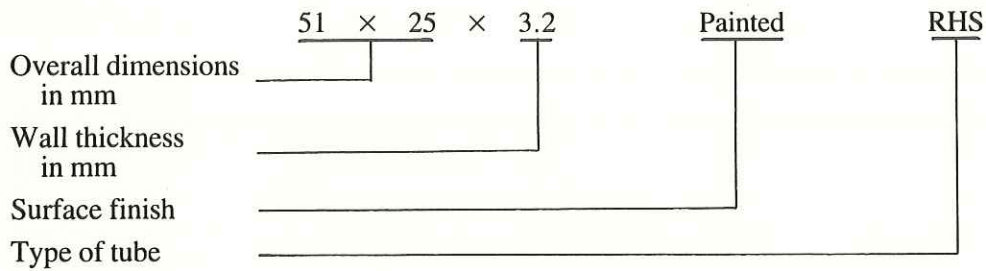
Ref. Tubemakers of Australia Ltd. Steel Pipe Division.

RECTANGULAR HOLLOW SECTIONS (RHS)

These are steel tubes with both square and rectangular cross sections with a high strength to mass ratio. The flat surfaces of these sections make fitting and welding simpler, and allow changes in direction to be made with ease. The rounded edges make them functionally suitable for products in contact with animals as well as human operators.

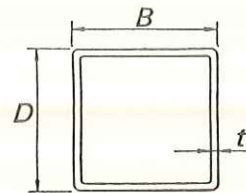
These tubes are available in black, primer painted, galvanised, and a completely untreated no-oil-or-paint (N.O.P.) finish.

Tubes in this category are specified by stating the overall dimensions together with the wall thickness and other data as follows:



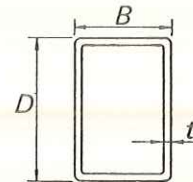
A summary of dimensional information for products of this type suitable for use in sheep yards is given in Table 2 and Table 3.

TABLE 2
Data for Square Tube



Size Designation	Actual Dimensions D x B mm	Wall Thickness t mm	Mass kg/m	Standard Length m
25 x 25	25.4 x 25.4	1.6	1.14	6.5
		2.0	1.39	6.5
		2.6	1.72	6.5
		3.2	1.95	6.5
32 x 32	31.8 x 31.8	1.6	1.47	6.5
		2.0	1.79	6.5
		2.6	2.25	6.5
38 x 38	38.1 x 38.1	1.6	1.78	8.0
		2.0	2.19	8.0
		2.6	2.76	8.0
		3.2	3.23	8.0
		4.0	3.85	8.0
51 x 51	50.8 x 50.8	2.0	2.98	8.0
		2.6	3.80	8.0
		3.2	4.51	8.0
		4.0	5.45	8.0
		4.9	6.42	8.0
64 x 64	63.5 x 63.5	2.0	3.78	8.0
		2.6	4.84	8.0
		3.2	5.78	8.0
		4.0	7.04	8.0
		4.9	8.37	8.0
		6.3	10.2	8.0
76 x 76	76.2 x 76.2	2.0	4.58	8.0
		2.6	5.87	8.0
		3.2	7.06	8.0
		4.0	8.64	8.0
		4.9	10.3	8.0
		6.3	12.8	8.0

TABLE 3
Data for Rectangular Tube



Size Designation	Actual Dimensions D x B mm	Wall Thickness t mm	Mass kg/m	Standard Length m
38 x 19	38.1 x 19.1	2.0	1.59	6.5
38 x 25	38.1 x 25.4	2.0	1.79	6.5
		2.6	2.24	6.5
51 x 25	50.8 x 25.4	1.6	1.78	8.0
		2.0	2.19	8.0
		2.6	2.76	8.0
		3.2	3.23	8.0
64 x 38	63.5 x 38.1	2.0	2.98	8.0
		2.6	3.80	8.0
		3.2	4.51	8.0
		4.0	5.45	8.0
76 x 38	76.2 x 38.1	2.0	3.38	8.0
		2.6	4.32	8.0
		3.2	5.14	8.0
		4.0	6.24	8.0
76 x 51	76.2 x 50.8	2.0	3.78	8.0
		2.6	4.84	8.0
		3.2	5.78	8.0
		4.0	7.04	8.0
		4.9	8.37	8.0
		6.3	10.2	8.0
102 x 51	101.6 x 50.8	2.0	4.58	8.0
		2.6	5.87	8.0
		3.2	7.06	8.0
		4.0	8.64	8.0
		4.9	10.3	8.0
		6.3	12.8	8.0

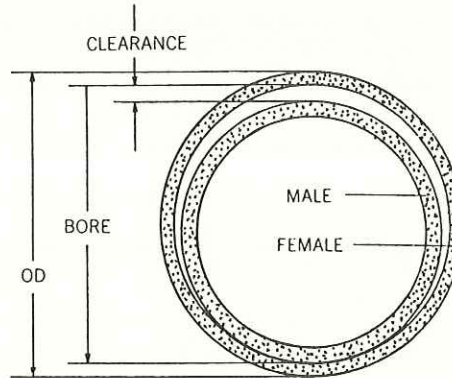
TELESCOPING STEEL TUBES

When it is required to use one tube inside another of the same type, the following tables provide information on useful combinations.

The combinations range from very loose fits to those where zero clearance may be shown, and in the latter case some small external force may be required.

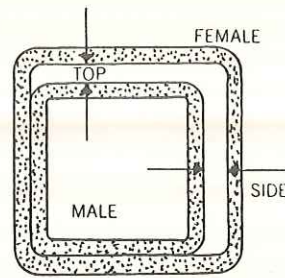
When long lengths of tube are being telescoped, the clearance may need to be larger to allow for variations in straightness of the two tubes.

TABLE 4
Telescoping Pipes



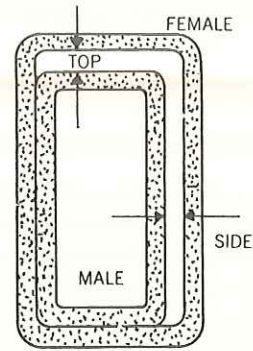
Female (Outer)		Minimum Clearance mm	Male (Inner)
NB	Wall Thickness		NB Any Thickness
25	Light	1.0	20
	Medium	5.3	15
	Heavy	3.7	15
	Extra Heavy	2.7	15
32	Light	2.7	25
	Medium	1.5	25
	Heavy	6.9	20
	Extra Heavy	5.1	20
40	Light	8.0	25
	Medium	7.4	25
	Heavy	5.8	25
	Extra Heavy	3.0	25
50	Light	5.2	40
	Medium	3.8	40
	Heavy	2.0	40
	Extra Heavy	0.2	40
65	Light	8.2	50
	Medium	7.4	50
	Heavy	5.6	50
	Extra Heavy	2.8	50
80	Light	5.1	65
	Medium	3.5	65
	Heavy	1.7	65
	Extra Heavy	15.5	50

TABLE 5
Telescoping Squares



Female (Outer) mm	Nominal Clearance mm	Male (Inner) mm
Size	Top x Side	Any Thickness
32 x 32 x 1.6	3.2 x 3.2	25 x 25
2.0	2.4 x 2.4	25 x 25
2.6	1.2 x 1.2	25 x 25
38 x 38 x 1.6	2.9 x 2.9	32 x 32
2.0	2.1 x 2.1	32 x 32
2.6	1.1 x 1.1	32 x 32
3.2	0 x 0	32 x 32
3.2	6.3 x 6.3	25 x 25
4.0	4.7 x 4.7	25 x 25
51 x 51 x 2.0	8.7 x 8.7	38 x 38
2.6	7.5 x 7.5	38 x 38
3.2	6.3 x 6.3	38 x 38
4.0	4.7 x 4.7	38 x 38
4.9	2.9 x 2.9	38 x 38
64 x 64 x 2.0	8.7 x 8.7	51 x 51
2.6	7.5 x 7.5	51 x 51
3.2	6.3 x 6.3	51 x 51
4.0	4.7 x 4.7	51 x 51
4.9	2.9 x 2.9	51 x 51
6.3	0 x 0	51 x 51
76 x 76 x 2.0	8.7 x 8.7	64 x 64
2.6	7.5 x 7.5	64 x 64
3.2	6.3 x 6.3	64 x 64
4.0	4.7 x 4.7	64 x 64
4.9	2.9 x 2.9	64 x 64
6.3	0 x 0	64 x 64

TABLE 6
Telescoping Rectangles



Female (Outer) mm	Nominal Clearance mm	Male (Inner) mm
Size	Top x Side	Any Thickness
51 x 25 x 1.6	9.5 x 3.1	38 x 19
2.0	8.7 x 2.3	38 x 19
2.6	7.5 x 1.1	38 x 19
3.2	6.3 x 0	38 x 19
64 x 38 x 2.0	8.7 x 8.7	51 x 25
2.6	7.5 x 7.5	51 x 25
3.2	6.3 x 6.3	51 x 25
4.0	4.7 x 4.7	51 x 25
76 x 38 x 2.0	21.4 x 8.7	51 x 25
2.6	20.2 x 7.5	51 x 25
3.2	19.0 x 6.3	51 x 25
4.0	17.4 x 4.7	51 x 25
76 x 51 x 2.0	8.7 x 8.7	64 x 38
2.6	7.5 x 7.5	64 x 38
3.2	6.3 x 6.3	64 x 38
4.0	4.7 x 4.7	64 x 38
4.9	2.9 x 2.9	64 x 38
6.3	0 x 0	64 x 38
102 x 51 x 2.0	21.4 x 8.7	76 x 38
2.6	20.2 x 7.5	76 x 38
3.2	19.0 x 6.3	76 x 38
4.0	17.4 x 4.7	76 x 38
4.9	15.6 x 2.9	76 x 38
6.3	12.7 x 0	76 x 38