

# HONED TUBE



Honingcraft is one of the largest honed tube suppliers in South Africa. We stock cold-drawn seamless hydraulic steel tubes sourced from the best suppliers locally and internationally.

Our tubing is available in honed or Roller burnished variations, in popular metric and imperial sizes from 2 to 8 inches and 40 to 270 mm.

If you cannot find a standard size to suit your needs, we'll manufacture a custom tube to suit your needs.

## MAIN MATERIAL:

**St52 BK+S (E355 SR)**

After cold drawing, the Honed Tubes are heat treated to relieve stress.

## WE OFFER 2 TYPES OF PRODUCTION:

**01**  
**HONED TUBES:**  
ID tolerance -0,2 mm -0,3 mm

**02**  
**ROLLER BURNISHING TUBES:**  
ID tolerance -0,6 mm -0,9 mm

Honed Tubes are cold drawn, heat treated and straightened (1/1000).

Stock changes hourly so please contact Honingcraft to confirm price and availability.



# HONED TUBE

## HYDRAULIC CYLINDER TUBES, INSIDE HONED OR SKIVED AND ROLLER BURNISHED

Honed Tube is suitable for manufacturing a variety of hydraulic cylinders, where tight tolerances and smooth surface finishing is critical. The inside surface of Honed Tube is finished to the finest tolerance.

### STEEL GRADES CORRESPONDENTS

EN	Werkstoff	DIN	B.S.	UNI	JIS	GOST	AISI / SAE / ASTM
E355	1.0580	St52	CFS5	Fe510	STKM19A	St6sp	1524 / 1024

### CHEMICAL COMPOSITION - IN % BY WEIGHT

Steel grade	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	N
E355	max. 0.22	max. 0.55	max. 1.60	max. 0.025	max. 0.025	-	-	-	-	-	-

\* Cr+Mo+Ni = max. 0.63

### MECHANICAL PROPERTIES

Steel grade	Tensile strength R <sub>m</sub> , N/mm <sup>2</sup>	Yield point R <sub>p0.2</sub> , N/mm <sup>2</sup>	Elongation A <sub>5</sub> , %	Impact energy KV <sub>2</sub> , J	Hardness* Brinell N/mm <sup>2</sup>	Norm
E355+C	min. 640	min. 540	min. 4	-	min. 185	EN 10305-2

C = cold drawn

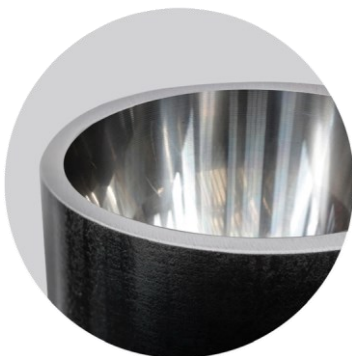
\* Wall thickness ≤ 12 mm

Outside diameter - OD	Ø50-400mm
Inside diameter - ID	Ø40-300mm
Inside tolerance - ID	ISO H8
Outside tolerance - OD	according to EN 10305-1
Roundness - ID	within the limits of diameter tolerances
Standard lengths	cut to lengths pieces, max. 6,600mm
Surface roughness - ID	Ra: max. 0.30 µm for skived and roller burnished surface Ra: max. 0.40 µm for honed surface
Straightness local deviation	max. 1 mm / 1000 mm
Straightness total deviation	max. 3.5 mm for tubes with length up to 6000 mm

## TABLE OF DIMENSIONS TOLERANCE

Diameter, mm	ISO H8, µm
30 < Ø ≤ 50	0 / +39
50 < Ø ≤ 80	0 / +46
80 < Ø ≤ 120	0 / +54
120 < Ø ≤ 180	0 / +63
180 < Ø ≤ 120	0 / +72

Larger sizes available upon request.



The skiving and roller burnishing production technique refers to a process consisting in micro-finishing metallic internal tube surfaces. The resulted effect is a mirror surface finish with technical roughness advantages.



Producing cylinder tubes by honing, results in having a crossgrinding pattern. The tubes in this case present an improved inside straightness. The very precise and smooth surface reduces negative effects of friction and extends the life of the cylinder's components.



## STORAGE AND HANDLING RECOMMENDATIONS

- Keep the products stored in dry and covered spaces.
- Do not expose the bars or tubes to the sunlight or to very low temperatures for a long time.
- For storage, it is preferable to use rubber supports or wood lined supports; direct contact with the floor and steel supports that are not lined with soft materials must be avoided.
- Whenever possible, use a crane to load or unload the bundles; when you use a fork lift avoid direct contact between the forks and the products.
- Always lift the bundles using textile slings. Don't use metal slings when handling bundles.
- Keep protective plastic or cardboard on the products while they are in storage.

## TUBES METRIC

SIZE	KG / MT
40 x 50	5.55
40 x 55	8.79
45 x 55	6.17
50 x 60	6.78
50 x 62	8.29
50 x 65	10.63
55 x 65	8.72
55 x 70	11.56
60 x 72	9.77
60 x 75	12.48
63 x 75	10.21
63 x 78	13.04
65 x 80	13.41
70 x 82	11.24
70 x 85	14.33
70 x 90	19.73

SIZE	KG / MT
75 x 85	9.86
75 x 90	15.26
75 x 95	20.96
80 x 92	12.72
80 x 95	16.18
80 x 100	22.19
80 x 105	28.51
80 x 110	35.14
85 x 100	17.11
90 x 105	18.03
90 x 110	24.66
95 x 108	16.27
95 x 120	33.14
100 x 110	12.95
100 x 115	19.88
100 x 120	27.13

SIZE	KG / MT
100 x 125	34.68
100 x 130	42.54
105 x 120	20.81
110 x 125	21.73
110 x 130	29.59
110 x 140	46.24
115 x 130	29.08
115 x 140	39.03
120 x 140	32.06
120 x 145	33.29
120 x 146	42.64
125 x 140	24.51
125 x 145	33.29
125 x 150	42.38
130 x 150	34.52
135 x 160	45.47



## TUBES METRIC

SIZE	KG / MT
140 x 160	36.99
140 x 170	57.33
150 x 170	39.46
150 x 180	61.03
160 x 180	41.92
160 x 185	53.17
160 x 190	64.73
165 x 185	43.16
165 x 190	55.68
170 x 200	68.43
180 x 210	72.13
180 x 200	46.85
190 x 215	63.63
200 x 215	38.38
200 x 220	51.79
200 x 230	79.53
200 x 235	93.86
200 x 240	108.50
200 x 245	123.45
210 x 235	68.59
210 x 267	167.652
215 x 267	154.52
220 x 268	144.41
220 x 270	151.04
250 x 300	169.54
300 x 400	431.55

## TUBES IMPERIAL

SIZE	KG / MT
2 x 2.5	8.95
2.25 x 2.75	9.94
2.5 x 2.75	5.22
2.5 x 3	10.94
2.75 x 3.25	11.93
2.75 x 3.5	18.64
3 x 3.5	12.93
3 x 3.75	20.14
3.25 x 3.75	13.92
3.25 x 3.87	17.71
3.25 x 4	21.63
3.5 x 4	14.92
3.5 x 4.25	23.12
3.5 x 4.5	31.82
3.75 x 4.25	15.91
4 x 4.5	16.9
4 x 4.75	26.1
4.25 x 5	27.59
4.25 x 5.25	37.79
4.5 x 5	18.89
4.5 x 5.5	39.77
4.5 x 5.25	29.08
4.75 x 5.5	30.58
4.75 x 5.75	42.64
5 x 5.5	20.88
5 x 5.75	32.07

SIZE	KG / MT
5 x 6	43.75
5.25 x 6.25	45.74
5.5 x 6.25	35.05
5.5 x 6.5	47.73
6 x 6.75	60.9
6 x 6.5	24.86
6 x 6.75	38.03
6 x 7	51.71
6.25 x 7.25	53.7
6.5 x 7.25	41.02
6.5 x 7.5	55.68
7 x 8	59.66
7.5 x 8.5	63.64
8 x 8.5	32.81
8 x 9	67.62