

SUBEC AB

Hesselmans Torg 5
SE-131 54 Nacka
Sweden
Tel.: +46 8 884633
info@subec.se
www.subecstore.com

Induction Hardened Hard Chromium Plated Rollers “HRX”

Average chemical analysis Cromax® TUBE

C %	Si %	Mn %	S %	V %	C.E. %(*)
0.19	0.35	1.50	0.02	0.11	0.55 max.

*C.E. = % C + % Mn / 6 + (% Cu + % Ni) / 15 + (% Cr + % Mo + % V) / 5

Corresponding standards

The table shows the closest equivalent standard for the steel in Cromax TUBE.

Cromax	EN	DIN	BS	AFNOR	ASTM
TUBE	20MnV6	20MnV6	55M	E420	A572

Mechanical properties

Yield stress, R _{eH} , N/mm ² , min.	Ultimate tensile stress, R _m , N/mm ²	Elongation, A ₅ , %, min.	Hardness, HB	Toughness, KV, Joule, min.
450	550 - 800	20	160 - 240	27 at - 20°C

Chrome layer

The chrome layer thickness is 20 µm min.

Surface roughness

The surface roughness (Ra) is always less than 0.2 µm and normally in the range 0.05-0.15 µm. Rt (ISO) is always less than 2.0 µm and normally in the range 0.5-1.5 µm.

Surface hardness

The chrome layer hardness is 850 HV_{0.1} min.

Straightness

The maximum deviation is 0.3 mm/1.0 m.

OD roundness

The out of roundness is maximised at 50% of the diameter tolerance interval.

OD tolerance

ISO f8 is standard.

Tolerance ranges for OD

Size, mm	upper	ISO f8, µm	lower
> 18 - 30	- 20		- 53
> 30 - 50	- 25		- 64
> 50 - 80	- 30		- 76
> 80 - 120	- 36		- 90
> 120 - 180	- 43		- 106

Typical dimensions

The table below shows dimensions, which are produced relatively frequently and which are often available from stock. Other dimensions can be supplied but delivery time will always be longer and a commitment to purchase a specified minimum quantity will normally be required.

OD x ID mm	kg/m	OD x ID mm	kg/m
30 x 16	3.97	60 x 40	12.33
30 x 20	3.08	63 x 32	18.16
32 x 16	4.73	70 x 42	19.33
35 x 20	5.09	70 x 49	15.41
40 x 20	7.40	75 x 50	19.27
40 x 24	6.31	80 x 56	20.12
40 x 28	5.03	90 x 60	27.74
45 x 25	8.63	100 x 70	31.44
45 x 29	7.30	110 x 71	43.52
50 x 28	10.58	125 x 87	49.66
50 x 34	8.29	140 x 101	57.94
55 x 35	11.10		
60 x 32	15.88	OD x ID, inch	kg/m
		3 x 2	19.89
		3 1/2 x 2 1/2	23.86

ID tolerance

This is determined by the tolerances for OD and wall thickness.

Wall tolerances

No guarantee can be given with respect to excentricity or wall thickness tolerance. Typical levels are ±5% for wall thickness and ±10% (of average wall thickness) for excentricity.