

CT

Chrome plated steel tubes

Outside diameter - OD

Ø12 - 140 mm

Inside diameter - ID

see standard dimensions range

Outside tolerance - OD

ISO f7 / ISO f8
other, on request

Roundness - OD

max. 1/2 from diameter tolerance

Chrome layer thickness

Ø < 14 mm: min. 15 µm
Ø ≥ 14 mm: min. 20 µm
Ø ≥ 25 mm: min. 50 µm, on request

Chrome layer microhardness

min. 900 HV0.1

Surface roughness - OD

Ra: max. 0.20 µm

Standard indicative length

6400 / 7400 (-0/+200) mm
other, on request

Straightness

max. 0.25 mm / 1000 mm

Standard corrosion resistance

OD < 14 mm & Cr layer min. 15 µm:
NSS rating 10 after 120h, rating 9 after 200h
OD ≥ 14 mm & Cr layer min. 20 µm:
NSS rating 10 after 120h, rating 9 after 200h

High corrosion resistance

OD ≥ 14 mm & Cr layer min. 20 µm:
NSS rating 10 after 250h, rating 9 after 500h
OD ≥ 25 mm & Cr layer min. 50 µm:
NSS rating 10 after 500h, rating 9 after 1000h

Salt spray test NSS / AASS: ISO 9227
Evaluation: ISO 10289

Chemical composition - in % by weight

Steel grade	C	Si	Mn	P	S	Cr	Mo	Ni	V	Cu	N
E355	max. 0.22	max. 0.55	max. 1.60	max. 0.025	max. 0.025	-	-	-	-	-	-
P460N	max. 0.20	max. 0.60	1.00 ÷ 1.70	max. 0.025	max. 0.020	max. 0.30	max. 0.10	max 0.80	max. 0.20	max. 0.70	max. 0.020
20MnV6	0.16 ÷ 0.22	0.10 ÷ 0.50	1.30 ÷ 1.70	max. 0.035	max. 0.035	-	-	-	0.08 ÷ 0.20	-	-

Mechanical properties

Steel grade	Tensile strength	Yield point	Elongation (longitudinal)	Impact energy ⁽²⁾ (longitudinal direction)	Hardness ⁽³⁾
	R _m N/mm ²	R _{p0.2} N/mm ²	A ₅ %	KV ₂ J	Brinell N/mm ²
E355+SR	min. 580	min. 450	min. 10	min. 27J / -20°C	min. 175
E355+N	490 - 630	min. 355 ⁽⁴⁾	min. 22	min. 27J / -20°C	155 - 194
P460N+N	560 - 730	min. 460 ⁽¹⁾	min. 19	min. 40J / -20°C	170 - 220
20MnV6+N	550 - 800	min. 450	min. 20	min. 27J / -20°C	165 - 240

SR = stress-relieved, N = normalized

(1) Wall thickness ≤ 12 mm

(2) On request

(3) The hardness values is for information only

(4) The Yield Point value is for information only

Standard dimensions range

Outside diameter mm	12	16	20	25	28	30	32	35	40	45	50	55	60	63	65	70	75	80	85	90	100	110	120	140		
Inside diameter mm	-	8	10	14	15	16	15	16	20	25	20	25	30	35	40	43	45	50	55	60	65	70	80	90	100	120
Wall thickness mm	-	-	-	15	18	-	20	20	20	25	30	35	40	45	53	50	55	60	65	75	75	85	95	-	-	
Wall thickness mm	2	3	3	5	6	7.5	8	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Wall thickness mm	-	-	2.5	3.5	-	5	6	7.5	7.5	7.5	7.5	7.5	7.5	5	7.5	7.5	7.5	7.5	7.5	5	7.5	7.5	7.5	-	-	
Wall thickness mm	-	-	-	2.5	-	-	-	-	5	5	5	5	5	-	5	5	5	5	5	-	5	5	-	-	-	