SEAMLESS COLD DRAWN SKIVED AND ROLLER BURNISHED TUBES / *Tubi senza saldatura trafilati a freddo, alesati e rullati*

PROPERTIES / *PROPRIETÀ*

CHEMICAL COMPOSITION / *COMPOSIZIONE CHIMICA*

EN	W	DIN	C	Si	Mn	P	S	Al	V	Ti
10305-1			%	%	%	%	%	%	%	-
E355	1.0580	ST52	-	-	-	-	min 0.015	min 0.020	-	-
			max. 0.22	max. 0.55	max. 1.60	max. 0.025	max. 0.040	-	-	-
E410	1.0509	-	min. 0.16	min. 0.10	min. 1.30	-	-	min. 1.30	min. 0.08	-
				max 0.50	max 1.70	max 0.030	max 0.035	max 0.06	max 0.15	max. 0.05

MECHANICAL PROPERTIES / *PROPRIETÀ MECCANICHE*

STEEL GRADE / *ACCIAIO*		Delivery Condition / *Trattamento*	Tensile Strength / *Carico di rottura*	Yield Point / *Limite di snervamento*		
			Rm [MPa (Psi)]	Rp0.2 [MPa (Psi)]	A [%]	KV -20°C [J]
EN 10305-1			EN6892-1			ISO148-1
E355	1.0580	+SR	min. 620 (90000)	min. 520 (75000)	min. 15	min. 27
E410	1.0509	+SR	min. 690 (100000)	min. 590 (85500)	min. 12	min. 27

TECHNICAL SPECIFICATIONS / *SPECIFICHE TECNICHE*

MANUFACTURING STANDARD / *SPECIFICA DI FABBRICAZIONE*	EN 10305 -1 (ex-DIN2391)
STRAIGHTNESS / *RETTILINEITÀ*	1,0 mm/1000 mm
ECCENTRICITY (WALL THICKNESS TOLERANCE) / *ECCENTRICITÀ (TOLLERANZA SPESSORE)*	O.D ≥ 125 +/- 10% wall thickness/*dello spessore nominale* O.D < 125 +/- 7% wall thickness/*dello spessore nominale*
STANDARD I.D. TOLERANCE / *TOLLERANZA STANDARD D.I*	H8 (H9)
INSIDE SURFACE ROUGHNESS / *RUGOSITÀ SUPERFICIALE INTERNA*	Ra < 0,25 µm // Rt < 3 µm
INSIDE SURFACE HARDNESS / *DUREZZA SUPERFICIALE INTERNA*	HB 190 - 245
MANUFACTURING LENGTH / *LUNGHEZZA DI FABBRICAZIONE*	6-10 m

LENGTHS / *LUNGHEZZE*

Tubes iD ≤ 32 mm are supplied in random lengths 4000 - 6000 mm
Tubi con Dia. Interno ≤ 32mm sono forniti in lunghezze commerciali di 4000 - 6000 mm

Tubes iD ≥ 35 are supplied in random lengths 6000 - 9000 mm
Tubi con Dia. Interno ≥ 35mm sono forniti in lunghezze commerciali di 6000 - 9000 mm

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Tubi senza saldatura trafilati a freddo, alesati e rullati

DIMENSIONAL RANGE / *GAMMA DIMENSIONALE*

OD *DIA. ESTERNO* (MM)	OD *DIA. ESTERNO* (INCH)	ID *DIA. INTERNO* (MM)	ID *DIA. INTERNO* (INCH)	WT *SPESSORE* (MM)	WEIGHT *PESO* (KG/M)	ID TOLERANCE *TOLLERANZA DIA. INTERNO*
35		25		5,000	3,70	H8
40		30		5,000	4,31	H8
40		32		4,000	3,55	H8
42		32		5,000	4,56	H8
45		35		5,000	4,93	H8
47,6	1 7/8"	38,1	1 1/2"	4,750	5,02	H8
50		35		7,500	7,86	H8
50		40		5,000	5,55	H8
50,8	2	38,1	1 1/2"	6,350	6,96	H8
52		40		6,000	6,80	H8
55		40		7,500	8,78	H8
55		45		5,000	6,16	H8
60		40		10,000	12,32	H8
60		45		7,500	9,71	H8
60		50		5,000	6,78	H8
60,3	2 3/8"	50,8	2"	4,763	6,52	H8
62		50		6,000	8,28	H8
63,5	2 1/2"	50,8	2"	6,350	8,95	H8
65		45		10,000	13,56	H8
65		50		7,500	10,63	H8
65		55		5,000	7,39	H8
69,85	2 3/4"	57,15	2 1/4"	6,350	9,94	H8
70		50		10,000	14,79	H8
70		55		7,500	11,55	H8
70		60		5,000	8,01	H8
72		60		6,000	9,76	H8
73		63		5,000	8,38	H8
73,025	2 7/8"	63,5	2.1/2"	4,763	8,01	H8
75		50		12,500	19,26	H8
75		55		10,000	16,02	H8
75		60		7,500	12,48	H8
75		63		6,000	10,20	H8
75		65		5,000	8,63	H8
76,2	3"	63,5	2 1/2"	6,350	10,93	H8
78		63		7,500	13,03	H8
80		60		10,000	17,25	H8
80		63		8,500	14,98	H8
80		65		7,500	13,40	H8
80		70		5,000	9,24	H8
82		70		6,000	11,24	H8
82,55	3 1/4"	63,5	2 1/2"	9,525	17,14	H8
82,55	3 1/4"	69,85	2 3/4	6,350	11,93	H8
83		63		10,000	17,99	H8
85		65		10,000	18,49	H8
85		70		7,500	14,33	H8
85		75		5,000	9,86	H8
85,725	3 1/4"	76,2	3"	4,763	9,50	H8
88,9	3 1/2"	76,2	3"	6,350	12,92	H8
90		60		15,000	27,73	H8
90		70		10,000	19,72	H8
90		75		7,500	15,25	H8
90		80		5,000	10,48	H8
92		80		6,000	12,72	H8
95		70		12,500	25,42	H8
95		75		10,000	20,95	H8
95		80		7,500	16,18	H8

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DIMENSIONAL RANGE / *GAMMA DIMENSIONALE*

OD *DIA. ESTERNO* (MM)	OD *DIA. ESTERNO* (INCH)	ID *DIA. INTERNO* (MM)	ID *DIA. INTERNO* (INCH)	WT *SPESSORE* (MM)	WEIGHT *PESO* (KG/M)	ID TOLERANCE *TOLLERANZA DIA. INTERNO*
95		85		5,000	11,09	H8
95,25	3 3/4"	76,2	3"	9,525	20,13	H8
95,25	3 3/4"	82,55	3 1/4"	6,350	13,91	H8
98,425	3 7/8"	88,9	3 1/2"	4,763	11,00	H8
100		70		15,000	31,43	H8
100		80		10,000	22,18	H8
100		85		7,500	17,10	H8
100		90		5,000	11,71	H8
101,6	4"	76,2	3"	12,700	27,83	H8
101,6	4"	82,55	3 1/4"	9,525	21,62	H8
101,6	4"	88,9	3 1/2"	6,350	14,91	H8
102		90		6,000	14,20	H8
105		70		17,500	37,74	H8
105		75		15,000	33,28	H8
105		80		12,500	28,50	H8
105		85		10,000	23,42	H8
105		90		7,500	18,02	H8
105		95		5,000	12,32	H8
107,95	4 1/4"	88,9	3 1/2"	9,525	23,11	H8
107,95	4 1/4"	95,25	3 3/4"	6,350	15,90	H8
110		80		15,000	35,12	H8
110		90		10,000	24,65	H8
110		95		7,500	18,95	H8
110		100		5,000	12,94	H8
112		100		6,000	15,68	H8
114,3	4 1/2"	88,9	3 1/2"	12,700	31,81	H8
114,3	4 1/2"	101,6	4"	6,350	16,90	H8
115		85		15,000	36,97	H8
115		90		12,500	31,58	H8
115		95		10,000	25,88	H8
115		100		7,500	19,87	H8
120		90		15,000	38,82	H8
120		95		12,500	33,12	H8
120		100		10,000	27,11	H8
120		105		7,500	20,80	H8
120		110		5,000	14,17	H8
120,65	4 3/4"	101,6	4"	9,525	26,09	H8
120,65	4 3/4"	107,95	4 1/4"	6,350	17,89	H8
125		100		12,500	34,66	H8
125		105		10,000	28,35	H8
125		110		7,500	21,72	H8
127	5"	101,6	4"	12,700	35,78	H8
127	5"	107,95	4.1/4"	9,525	27,58	H8
127	5"	114,3	4 1/2"	6,350	18,88	H8
130		100		15,000	42,52	H8
130		110		10,000	29,58	H8
130		115		7,500	22,65	H8
130		120		5,000	15,41	H8
133,35	5 1/4"	114,3	4 1/2"	9,525	29,07	H8
135		110		12,500	37,74	H8
135		115		10,000	30,81	H8
135		120		7,500	23,57	H8
135		125		5,000	16,02	H8
139,7	5 1/2"	114,3	4 1/2"	12,700	39,76	H8
139,7	5 1/2"	120,65	4 3/4"	9,525	30,56	H8
139,7	5 1/2"	127	5"	6,350	20,87	H8

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DIMENSIONAL RANGE / *GAMMA DIMENSIONALE*

OD *DIA. ESTERNO* (MM)	OD *DIA. ESTERNO* (INCH)	ID *DIA. INTERNO* (MM)	ID *DIA. INTERNO* (INCH)	WT *SPESSORE* (MM)	WEIGHT *PESO* (KG/M)	ID TOLERANCE *TOLLERANZA DIA. INTERNO*
140		100		20,000	59,16	H8
140		110		15,000	46,22	H8
140		115		12,500	39,28	H8
140		120		10,000	32,04	H8
140		125		7,500	24,49	H8
145		115		15,000	48,07	H8
145		120		12,500	40,82	H8
145		125		10,000	33,28	H8
145		130		7,500	25,42	H8
146,05	5 3/4"	127	5"	9,525	32,05	H8
150		120		15,000	49,91	H8
150		125		12,500	42,37	H8
150		130		10,000	34,51	H8
150		135		7,500	26,34	H8
152,4	6"	127	5"	12,700	43,73	H8
152,4	6"	139,7	5 1/2"	6,350	22,86	H8
155		125		15,000	51,76	H8
155		130		12,500	43,91	H8
155		135		10,000	35,74	H8
155		140		7,500	27,27	H8
158,75	6 1/4"	139,7	5 1/2"	9,525	35,04	H8
160		125		17,500	61,47	H8
160		130		15,000	53,61	H8
160		135		12,500	45,45	H8
160		140		10,000	36,97	H8
165		135		15,000	55,46	H8
165		140		12,500	46,99	H8
165		145		10,000	38,21	H8
165,1	6 1/2"	139,7	5 1/2"	12,700	47,71	H8
165,1	6/1"	152,4	6"	6,350	24,85	H9
170		140		15,000	57,31	H8
170		145		12,500	48,53	H8
170		150		10,000	39,44	H8
170		160		5,000	20,34	H9
171,45	6 3/4"	152,4	6"	9,525	38,02	H8
175		150		12,500	50,07	H8
177,8	7"	152,4	6"	12,700	51,68	H8
180		140		20,000	78,88	H8
180		150		15,000	61,01	H8
180		160		10,000	41,90	H8
184,15	7 1/4"	165,1	6 1/2"	9,525	41,00	H8
185		150		17,500	72,25	H8
185		160		12,500	53,15	H8
190		160		15,000	64,70	H8
190		165		12,500	54,69	H8
190		170		10,000	44,37	H8
190,5	7 1/2"	165,1	6 1/2"	12,700	55,66	H8
195		160		17,500	76,57	H8
195		165		15,000	66,55	H8
195		170		12,500	56,23	H8
200		160		20,000	88,74	H8
200		165		17,500	78,72	H8
200		170		15,000	68,40	H8
200		180		10,000	46,83	H8
203,2	8"	177,8	7"	12,700	59,63	H8
205		180		12,500	59,31	H8