

Caratteristiche della cromatura

Chrome layer characteristics

Caratteristiche tecniche

Technical characteristics

SPECIFICHE TECNICHE

TECHNICAL CHARACTERISTICS

DIAMETRI	TOLLERANZE ISO	RETLINERITÀ	RUGOSITÀ		OVALIZZAZIONE	MICRODUREZZA
			Ra MAX	Rt MAX		
< 20	17 h6 h7	1,0/1000mm	0,2µm	3,00µm	1/2 Tolleranza	> 900 HV _(0,05)
≥ 20	17 h6 h7	0,5/1000mm	0,2µm	3,00µm	1/2 Tollerance	> 900 HV _(0,05)
DIAMETERS	TOLERANCES ISO	STRAIGHTNESS	SURFACE ROUGHNESS		ROUNDNESS	CHROME LAYER HARDNESS

CARATTERISTICHE MECCANICHE

MECHANICAL PROPERTIES

ACCIAIO									
UNI	C45E		C55E	42CrMo4		20MnV6		38MnV56	UNI
	EN 10083		EN 10083	EN 10083		EN 10267		EN 10267	
mm	<Ø40	≥Ø40	4<Ø<100	<Ø120	≥Ø120	<Ø40	≥Ø40	1892±113	mm
Snervamento Re N/mm²	>430	>370	>340	>650	>500	>450		>520	Yield point Re N/mm²
Rottura Rm N/mm²	650-850	630-780	700-930	900-1200	800-930	650-780	600-680	800-930	Tensile strength Rm N/mm²
Allungamento A ₅ % min.	>14	>17	>14	>10	>13	>16	>18	>12	Allongation A ₅ % min.
Resilienza Kv min J -20°C	25			30	33	27			Resilience Kv min J -20°C
Durezza HB	207		229	241		207		255	Hardness HB
STEEL									

COMPOSIZIONE CHIMICA

CHEMICAL ANALYSIS

ACCIAIO	C%	NI%	Cr%	S%	SI%	Mn%	P%	Mo%
C45E	0,42-0,50	0,40	0,40	0,04	0,15-0,40	0,50-0,80	0,035	0,10
C55E	0,52-0,60	0,40	0,40	0,04	0,40	0,60-0,90	0,035	0,10
42CrMo4	0,38-0,45	-	0,90-1,20	0,035	0,40	0,60-0,90	0,035	0,15-0,30
38MnV56	0,34-0,41	-	max 0,3	0,02-0,06	0,15-0,80	1,20-1,60	0,025	
20MnV6	0,16-0,22	-	-	0,035	0,10-0,40	1,30-1,70	0,035	max 0,08
STEEL	C%	NI%	Cr%	S%	SI%	Mn%	P%	Mo%

CARATTERISTICHE DELLA TEMPRA AD INDUZIONE

INDUCTION HARDENED CHARACTERISTICS

ACCIAIO	DUREZZA DI TEMPRA	PROFONDITÀ DI TEMPERATURA
C45E	52 - 60 HRC	0,4 - 3,4 mm
C55E	60 - 64 HRC	0,4 - 3,4 mm
42CrMo4	52 - 58 HRC	0,4 - 3,4 mm
38MnV56	55 - 60 HRC	0,4 - 3,4 mm
20MnV6	40 - 46 HRC	0,4 - 3,4 mm
STEEL	SURFACE HARDNESS	HARDENING DEPTH

Barre cromate hard chrome plated bars

Barre cromate Hard chrome plated bars

GAMMA DIMENSIONALE

DIMENSIONAL RANGE

DIAMETRI		Kg/m	C40 - C45	20MnV6	42CrMo4 BONIFICATO	C45 TEMPRATO	42CrMo4 BONIFICATO TEMPRATO
FOLLICI	MILLIMETRI						
	4	0,10	X				
	5	0,15	X				
	6	0,22	X				
	8	0,39	X				
	10	0,62	X				
	12	0,89	X		X	X	
1/2	12,7	0,99	X				
	14	1,21	X		X		
	15	1,39	X				
	16	1,58	X		X	X	
	18	2,00	X		X		
	20	2,47	X	X	X	X	X
	22	2,98	X	X			
	24	3,55	X	X			
	25	3,85	X	X	X	X	X
1	25,4	3,98	X		X	X	X
	28	4,83	X	X	X	X	X
	30	5,55	X	X	X	X	X
	32	6,31	X	X	X	X	X
	35	7,55	X	X	X	X	X
	36	7,99	X	X	X	X	X
	38	8,90	X	X			
	40	9,86	X	X	X	X	X
	42	10,88	X	X			
	45	12,48	X	X	X	X	X
	50	15,41	X	X	X	X	X
2	50,8	15,90	X	X	X	X	X
	55	18,85	X	X	X	X	X
	56	19,33	X	X	X	X	X
	60	22,19	X	X	X	X	X
	63	24,47	X	X	X	X	X
	65	26,05	X	X	X	X	X
	70	30,21	X	X	X	X	X
	75	34,66	X	X	X	X	X
3	76,2	35,78	X	X	X	X	X
	80	39,46	X	X	X	X	X
	85	44,54	X	X	X	X	X
	90	49,94	X	X	X	X	X
	95	55,61	X	X	X		
	100	61,65	X	X	X	X	X
4	101,60	63,61	X			X	X
	110	74,60	X	X	X	X	X
	115	83,00	X				
	120	88,78	X	X	X	X	X
	125	96,25	X				
	130	104,19	X	X			
	140	120,83	X	X	X	X	X
	150	139,00	X				
	160	158,00	X				
	170	178,02	X				
	180	200,00	X				
	200	246,40	X				
INCH DIAMETERS	mm	Kg/m	C40 - C45	20MnV6	42CrMo4 QUENCHED	C45 L.H.	42CrMo4 QUENCHED L.H.

Barre nichelate cromate

Nickel chrome plated bars

QUALITÀ ACCIAIO	C (%)	S (%)	Mn (%)	SI (%)	Cr (%)	P (%)	Cr (%)	Mo (%)	V (%)
20MnV6	0,15+0,23	max 0,035	1,3+1,75	0,1+0,50	-	Max 0,035	-	-	0,1+0,20
STEEL	C (%)	S (%)	Min (%)	SI (%)	Cr (%)	P (%)	Cr (%)	Mo (%)	V (%)

CARATTERISTICHE MECCANICHE		MECHANICAL PROPERTIES		
DIMENSIONI	ROTTURA Rm	SNERVAMENTO Rp0.2	ALLUNGAMENTO A _g	RESILIENZA
(mm)	N/mm2	N/mm2	% min	KV, J
Ø≤25	Min. 580	Min. 450	18	Min. 27-20°C
25<Ø<100	Min. 550	Min. 430	18	Min. 27-20°C
Ø≥100	Min. 560	Min. 275	16	Min. 27-20°C
DIMENSION	TENSILE STRENGTH Rm	YELD POINT Rp0.2	ALLUNGATION A _g	RESILIENCE

Alberi temprati per lo scorrimento lineare

Induction hardened for linear motion shafts

GAMMA DIMENSIONALE		DIMENSIONAL RANGE					
Ø	Kg/m	C55 TEMPRATO RETIFICATO h6	C55 TEMPRATO CROMATO RETIFICATO h7	X90CrMoV18 INOX TEMPRATO RETIFICATO	X46Cr13 INOX TEMPRATO RETIFICATO	C55-60 TUBO TEMPRATO RETIFICATO Ø1	C55-60 TUBO TEMPRATO CROMATO Ø1
4	0,10	X	X	X	X		
5	0,15	X	X	X	X		
6	0,22	X	X	X	X		
8	0,39	X	X	X	X		
10	0,62	X	X	X	X		
12	0,89	X	X	X	X	4,0	4,0
16	1,21	X	X	X	X	7,0	7,0
20	1,39	X	X	X	X	14,0	14,0
25	1,58	X	X	X	X	15,6	15,6
30	2,47	X	X	X	X	18,3	18,3
32	2,98	X	X				
35	3,55	X	X				
40	3,85	X	X	X	X	28,0	28,0
45	4,83	X	X				
50	5,55	X	X	X	X	29,7	29,7
55	6,31	X	X				
60	7,55	X	X	X	X	36,0	36,0
65	7,99	X	X				
70	9,86	X	X				
80	12,48	X	X				
90	15,41	X	X				
100	18,85	X	X				
Ø	Kg/m	HARDENED AND GROUND STEEL SHAFTS	HARDENED, HARD CHROME PLATED STEEL SHAFTS	HARDENED AND GROUND STAINLESS STEEL SHAFTS	HARDENED AND GROUND STAINLESS STEEL SHAFTS	HARDENED AND GROUND HOLLOW SHAFTS	HARDENED AND HARD CHROME PLATED HOLLOW SHAFTS
		CF53	CF53	X90CrMoV18	X46Cr13	C55-60	C55-60

GAMMA DIMENSIONALE

SPESSORE	DIAMETRI	Kg / m
2	12 x 8	0,49
3	16 x 10	0,96
	20 x 14	1,26
	30 x 24	2,00
3,5	25 x 18	1,86
4	32 x 24	2,76
5	25 x 15	2,47
	30 x 20	3,09
	35 x 25	3,7
	40 x 30	4,32
	45 x 35	4,93
	50 x 40	5,55
	55 x 45	6,16
	60 x 50	6,78
	65 x 55	7,4
	70 x 60	8,01
	80 x 70	9,24
	90 x 80	10,48
	100 x 90	11,71
7,5	30 x 15	4,17
	35 x 20	5,09
THICKNESS	DIAMETERS	Kg / m

DIMENSIONAL RANGE

SPESSORE	DIAMETRI	Kg / m
	40 x 25	6,01
	45 x 30	6,93
	50 x 35	7,86
	55 x 40	8,79
	60 x 45	9,71
	65 x 50	10,63
	70 x 55	11,56
	80 x 65	13,41
	90 x 75	15,26
	100 x 85	17,11
10	40 x 20	7,4
	45 x 25	8,63
	50 x 30	9,86
	55 x 35	11,1
	60 x 40	12,33
	65 x 45	13,56
	70 x 50	14,8
	80 x 60	17,26
	90 x 70	19,73
	100 x 80	22,19
	120 x 100	27,13
THICKNESS	DIAMETERS	Kg / m

SPECIFICHE TECNICHE

ACCIAIO		TOLLERANZA	RETTILINEITÀ	RUGOSITÀ	
STEEL GRADE		TOLERANCE	STRAIGHTNESS	ROUGHNESS	
E355 + SR	EN10305-1	ISO 17	Max 1,0/1000 mm	Ra MAX 0,2µm	Rt MAX 3,00µm

TECHNICAL CHARACTERISTICS

A richiesta altre misure non presenti a catalogo.

On request we can supply not standard diameters.

Tubi cromati esterni
hard chrome
plated tubes

GAMMA DIMENSIONALE

DIMENSIONAL RANGE

Ø ESTERNO	Ø INTERNO	TOLLERANZA	SPESSORE	Kg/m	PRESSIONE bar
30	20	H9	5	3.08	773
35	25	H9	5	3.70	662
40	30	H9	5	4.32	563
40	32	H9	4	3.55	450
42	32	H9	5	4.56	524
45	35	H9	5	4.93	508
50	40	H9	5	5.55	465
55	45	H9	5	6.17	425
60	45	H9	7.5	9.71	680
60	50	H9	5	6.78	396
62	50	H9	6	8.29	452
65	50	H9	7.5	10.63	535
65	55	H9	5	7.40	370
70	55	H9	7.5	11.56	497
70	60	H9	5	8.01	343
72	60	H9	6	9.77	391
73	63	H9	5	8.38	337
75	60	H9	7.5	12.48	464
75	63	H9	6	10.21	383
75	65	H9	5	8.63	329
80	65	H9	7.5	13.41	435
80	70	H9	5	9.25	309
82	70	H9	6	11.24	349
85	70	H9	7.5	14.33	409
85	75	H9	5	9.86	295
90	75	H9	7.5	15.26	386
90	80	H9	5	10.48	274
92	80	H9	6	12.72	311
95	80	H9	7.5	16.18	366
95	85	H9	5	11.10	268
100	85	H9	7.5	17.11	348
100	90	H9	5	11.71	254
102	90	H9	6	14.20	285
105	90	H9	7.5	18.03	331
105	95	H9	5	12.33	254
110	95	H9	7.5	18.96	316
110	100	H9	5	12.95	254
115	100	H9	7.5	19.88	302
120	105	H9	7.5	20.81	290
125	110	H9	7.5	21.73	278
Ø EXTERNAL	Ø INTERNAL	TOLERANCE	THICKNESS	Kg/m	PRESSURE bar

Tubi saldati trafilati a freddo lucidi internamente H9

Welded and cold drawn tubes h9

GAMMA DIMENSIONALE

Ø INTERNO	Ø ESTERNO	SPESSORE	Kg/m
25	35	5,0	3,70
30	40	5,0	4,32
30	45	7,3	6,94
32	40	4,0	3,55
32	42	5,0	4,36
35	45	5,0	4,93
35	50	7,3	7,86
40	50	5,0	5,55
40	52	6,0	6,81
40	55	7,3	8,79
40	60	10,0	12,33
45	55	5,0	6,17
45	60	7,3	9,71
45	65	10,0	13,56
50	60	5,0	6,78
50	62	6,0	8,29
50	65	7,3	10,63
50	70	10,0	14,80
55	65	5,0	7,40
55	70	7,3	11,56
55	75	10,0	16,03
60	70	5,0	8,01
60	72	6,0	9,77
60	75	7,3	12,48
60	80	10,0	17,26
63	73	5,0	8,38
63	75	6,0	10,21
63	78	7,3	13,04
63	83	10,0	18,00
65	75	5,0	8,63
65	80	7,3	13,41
65	85	10,0	18,50
70	80	5,0	9,25
70	82	6,0	11,24
70	85	7,3	14,33
70	90	10,0	19,73
75	85	5,0	9,86
75	90	7,3	15,26
75	95	10,0	20,96
80	90	5,0	10,48
80	92	6,0	12,72
80	95	7,3	16,18
80	100	10,0	22,19
80	105	12,5	28,51
80	110	15,0	35,14
85	95	5,0	11,10
85	100	7,3	17,11
85	105	10,0	23,43
90	100	5,0	11,71
90	102	6,0	14,20
90	105	7,3	18,03
90	110	10,0	24,66
90	115	12,5	31,60
95	110	7,3	18,96
95	115	10,0	25,89
100	110	5,0	12,95
100	112	6,0	15,68
100	115	7,3	19,88
Ø INTERNAL	Ø EXTERNAL	THICKNESS	Kg/m

DIMENSIONAL RANGE

Ø INTERNO	Ø ESTERNO	SPESSORE	Kg/m
100	120	10,0	27,13
100	125	12,5	34,68
100	130	15,0	42,54
105	120	7,5	20,81
105	125	10,0	28,36
110	120	5,0	14,18
110	125	7,5	21,73
110	130	10,0	29,59
110	140	15,0	46,24
115	130	7,5	22,66
115	135	10,0	30,83
115	140	12,5	39,30
120	130	5,0	15,41
120	135	7,5	23,58
120	140	10,0	32,06
120	145	12,5	40,84
120	150	15,0	49,94
120	160	20,0	69,05
125	140	7,5	24,51
125	145	10,0	33,29
125	150	12,5	42,38
125	155	15,0	51,79
130	140	5	16,65
130	145	7,5	25,43
130	150	10	34,52
130	155	12,5	43,93
130	160	15,0	53,64
135	150	7,5	26,36
135	160	12,5	45,47
140	150	5,0	17,88
140	155	7,5	27,28
140	160	10,0	36,99
140	165	12,5	47,01
140	170	15,0	57,33
140	180	20,0	78,91
145	160	7,5	28,20
145	165	10,0	38,22
150	160	5,0	19,11
150	165	7,5	29,13
150	170	10,0	39,46
150	175	12,5	50,09
150	180	15,0	61,03
160	170	5,0	20,34
160	180	10,0	41,92
160	185	12,5	53,17
160	190	15,0	64,73
160	200	20,0	88,78
170	190	10,0	44,39
170	200	15,0	68,43
180	200	10,0	46,85
180	210	15,0	72,13
180	220	20,0	98,64
190	220	15,0	75,83
200	220	10,0	51,79
200	225	12,5	65,30
200	230	15,0	79,53
200	240	20,0	108,50
200	245	22,5	123,45
Ø INTERNAL	Ø EXTERNAL	THICKNESS	Kg/m