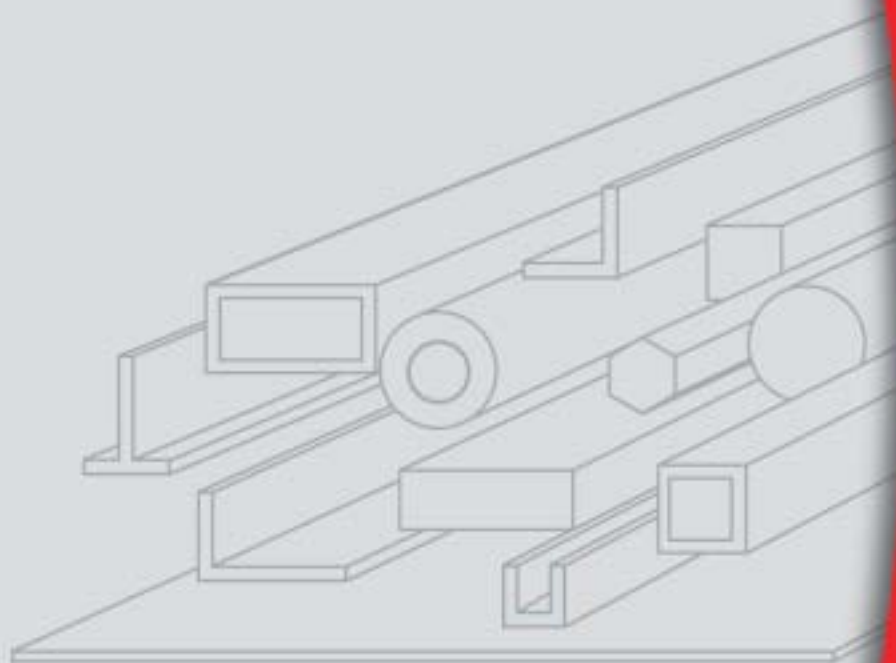




MAESTRI METALLI



Ottone

LEGHE RAME - ZINCO - PIOMBO

Norme di riferimento EN	Lega		Composizione in % (m/m)								
	Simbolo	Numero		Cu	Al	Fe	Ni	Pb	Sn	Zn	Altri elem. tot.
12164 - 12167	CuZn36Pb3	CW603N	min. max	60,0 62,0	- 0,05	- 0,3	- 0,3	2,5 0,2	- 0,2	resto -	- 0,2
12164 - 12167	CuZn38Pb1	CW607N	min. max	60,0 61,0	- 0,05	- 0,2	- 0,3	0,8 1,6	- 0,2	resto -	- 0,2
12164 - 12167	CuZn38Pb2	CW608N	min. max	60,0 61,0	- 0,05	- 0,2	- 0,3	1,6 2,5	- 0,2	resto -	- 0,2
12164 - 12167	CuZn39Pb1	CW611N	min. max	59,0 60,0	- 0,05	- 0,2	- 0,3	0,8 1,6	- 0,2	resto -	- 0,2
12164 - 12167	CuZn39Pb2	CW612N	min. max	59,0 60,0	- 0,05	- 0,3	- 0,3	1,6 2,5	- 0,3	resto -	- 0,2
12164 - 12167	CuZn39Pb3	CW614N	min. max	57,0 59,0	- 0,05	- 0,3	- 0,3	2,5 3,5	- 0,3	resto -	- 0,2
12164 - 12167	CuZn40Pb2	CW617N	min. max	57,0 59,0	- 0,05	- 0,3	- 0,3	1,6 2,5	- 0,3	resto -	- 0,2
12167	CuZn40Pb2Al	CW618N	min. max	57,0 59,0	0,05 0,5	- 0,3	- 0,3	1,6 3,0	- 0,3	resto -	- 0,2
12167	CuZn43Pb2Al	CW624N	min. max	55,0 57,0	0,05 0,5	- 0,3	- 0,3	1,6 3,0	- 0,3	resto -	- 0,2

LEGHE COMPLESSE RAME - ZINCO

Norme di riferimento UNI EN	Lega		Composizione in % (m/m)										
	Simbolo	Numero		Cu	Al	Fe	Mn	Ni	Pb	Si	Sn	Zn	Altri elem. tot.
12167	CuZn35Ni3Mn2AlPb	CW710R	min. max	58,0 60,0	0,3 1,3	- 0,5	1,5 2,5	2,0 3,0	0,2 0,8	- 0,1	- 0,5	resto -	- 0,3
12164 - 12167	CuZn40Mn1Pb1AlFeSn	CW721R	min. max	57,0 59,0	0,3 1,3	0,2 1,2	0,8 1,8	- 0,3	0,8 1,6	- -	0,2 1,0	resto -	- 0,3
12164 - 12167	CuZn40Mn1Pb1FeSn	CW722R	min. max	56,5 58,5	- 0,3	0,2 1,2	0,8 1,8	- 0,3	0,8 1,6	- -	0,2 1,0	resto -	- 0,3
12167	CuZn40Mn2Fe1	CW723R	min. max	56,5 58,5	- 0,3	0,5 1,5	1,0 2,0	- 0,6	- 0,5	- 0,1	- 0,3	resto -	- 0,4

NUOVE NORME EUROPEE RELATIVE AI MATERIALI DI OTTONE
AL PIOMBO IN BARRE, FILI E PROFILATI

Il Comitato Europeo di Normazione EN con il proprio Organo Tecnico per il rame e sue leghe CEN/TC 133 e l'Ente Italiano corrispondente UNI, hanno definitivamente approvato le seguenti norme europee per i materiali cui in oggetto:

UNI EN 12163	Rame e leghe di rame Barre per usi generali
UNI EN 12164	Rame e leghe di rame Barre per torneria
UNI EN 12165	Rame e leghe di rame Prodotti per fucinatura-stampaggio, semilavorati e grezzi
UNI EN 12166	Rame e leghe di rame Fili per usi generali
UNI EN 12167	Rame e leghe di rame Profilati e barre rettangolari per usi generali
UNI EN 12168	Rame e leghe di rame Barre forate per torneria
UNI EN 1652	Rame e leghe di rame Piastre, lastre, nastri e dischi per usi generali

OTTONE IN TUBI – PRESSIONI MASSIME DI ESERCIZIO

Diam. ester. D mm	Spessore in mm													
	0,5	1	1,5	2	2,5	3	3,5	4	5	6	7	8	9	10
	kg/cm ² (atm)													
2	267													
3	189	332												
4	144	267												
5	116	222	308											
6	100	189	267											
7	85	165	238											
8	71	144	210	267										
9	62	128	189	245										
10	55	116	171	222										
11	50	110	160	208	251									
12	46	100	144	189	232									
13	41	91	133	179	218									
14	37	82	127	163	202									
15	35	76	116	155	189	222								
16	33	71	110	144	181	212								
17	31	66	105	138	171	202	229							
18	29	62	100	128	160	189	218							
19	27	59	94	122	155	181	208							
20	26	55	89	116	144	171	197	222						
21	25	52	84	110	138	163	189	212						
22	24	50	79	106	133	160	181	208						
23	22	49	75	105	127	150	171	197						
24	21	45	71	100	122	144	166	189	232					
25	20	44	69	95	116	138	160	181	222					
26	20	41	65	90	111	133	155	179	218					
27	19	40	62	86	108	128	150	171	208					
28	17	39	60	84	105	124	144	165	202	238				
29	17	37	57	80	101	138	140	160	197	232				
30	17	36	55	77	100	116	135	155	189	222				
35	15	30	46	65	82	100	136	133	165	197	222			
40	12	26	40	55	71	88	101	116	144	171	197			
45	11	22	35	49	61	76	92	105	128	155	179	202		
50	10	20	31	44	55	67	81	95	116	138	160	181	202	222
55		19	29	39	50	61	72	85	106	127	150	171	187	208
60		17	26	35	45	55	66	76	100	116	138	155	171	189
65		15	24	32	41	51	60	70	90	110	127	144	160	179
70		14	22	30	37	46	55	64	82	100	116	133	150	165
75		14	21	27	35	44	51	60	76	95	110	127	138	155
80		13	20	26	32	40	44	55	71	89	101	116	133	144
85			19	25	30	37	43	51	66	82	98	110	127	138
90			17	24	29	35	42	49	62	77	92	105	116	128
95			16	22	27	34	40	46	59	72	86	98	110	122
100	15	21	26	32	37	44	49	55	61	67	81	95	105	116
110	14	19	24	29	34	39	44	50	55	61	72	85	97	106
120	13	17	21	26	31	35	40	45	50	55	66	76	89	100
130		16	19	24	29	32	37	41	46	51	60	70	80	90
140		15	18	22	26	30	34	38	42	46	55	65	74	83
150		14	17	19	22	27	31	36	40	43	51	60	67	76
180		11	14	17	20	23	26	29	32	35	42	49	55	62
200		10	12	15	17	21	24	26	29	31	37	44	49	55
250			10	12	14	16	19	21	23	25	30	34	39	44
280				11	12	15	16	19	20	22	26	30	34	39
300				10	11	14	15	17	19	20	25	28	31	36
350					10	11	12	15	16	17	21	24	27	30

LASTRE OTTONE

CRUDO
LEGA OT63
CuZn37 UNI EN 1652
CW 508 L

Spessore m/m	Formato m/m	Kg/lastra
0,1	500 x 1340	0,569
0,15	500 x 1340	0,854
0,2	500 x 1340	1,139
0,3	670 x 1340	2,289
0,4	1000 x 2000	6,800
0,5	1000 x 2000	8,500
0,6	1000 x 2000	10,200
0,8	1000 x 2000	13,600
1	1000 x 2000	17,000
1,2	1000 x 2000	20,400
1,5	1000 x 2000	25,500
2	1000 x 2000	34,000
2,5	1000 x 2000	42,500
3	1000 x 2000	51,000
4	670 x 1340	30,525
4	1000 x 2000	68,000
5	1000 x 2000	85,000
6	1000 x 2000	102,000
8	1000 x 2000	136,000
10	1000 x 2000	170,000
12	1000 x 2000	204,000
15	1000 x 2000	255,000
20	1000 x 2000	340,000
25	1000 x 2000	425,000
30	1000 x 2000	510,000
40	1000 x 2000	680,000
50	1000 x 2000	850,000

LASTRE OTTONE

RICOTTO
LEGA OT63
CuZn37 UNI EN 1652
CW 508 L

Spessore m/m	Formato m/m	Kg/lastra
0,1	500 x 1340	0,569
0,15	500 x 1340	0,854
0,2	500 x 1340	1,139
0,3	670 x 1340	2,289
0,4	670 x 1340	3,052
0,4	1000 x 2000	6,800
0,5	1000 x 2000	8,500
0,6	1000 x 2000	10,200
0,8	1000 x 2000	13,600
1	1000 x 2000	17,000
1,2	1000 x 2000	20,400
1,5	1000 x 2000	25,500
2	1000 x 2000	34,000
2,5	1000 x 2000	42,500
3	1000 x 2000	51,000
4	670 x 1340	30,525
4	1000 x 2000	68,000
5	1000 x 2000	85,000
6	1000 x 2000	102,000

LASTRE OTTONE

OROLOGERIA
LEGA OT59
CuZn39Pb2 UNI EN 1652
CW 612 N

Spessore m/m	Formato m/m	Kg/lastra
0,3	670 x 1340	2,262
0,5	670 x 1340	3,770
0,8	670 x 1340	6,033
1	670 x 1340	7,541
1,2	670 x 1340	9,049
1,5	670 x 1340	11,312
2	670 x 1340	15,083
2,5	670 x 1340	18,853
3	670 x 1340	22,624
4	670 x 1340	30,166
5	670 x 1340	37,707
6	670 x 1340	45,249
8	670 x 1340	60,332
10	670 x 1340	75,415
15	670 x 1340	113,120

FILI OTTONE

LEGA OT63
CuZn37 UNI EN 12166

Diametro m/m	Kg/mt
0,3	0,601
0,5	1,670
0,8	4,270
1	6,680
1,2	9,680
1,5	15,000
2	26,700
2,5	41,700
3	60,100
4	107,000
5	167,000
6	240,300
10	668,000

NASTRI OTTONE

LEGA OT67
CuZn33 UNI EN 1652

Spessore x H m/m	Kg/mt
0,1x250	0,212
0,3x250	0,635
0,3x500	1,270
0,5x20	0,085
0,8x30	0,204
0,8x35	0,238
0,8x500	3,400
1x8	0,068
1x15	0,127
1x30	0,255

**BARRE QUADRE
OTTONE**

UNI EN 12164
CuZn39Pb3
CW 614 N



L x L m/m	Kg/mt
2 x 2	0,034
3 x 3	0,077
4 x 4	0,136
5 x 5	0,212
6 x 6	0,306
7 x 7	0,416
8 x 8	0,544
10 x 10	0,850
11 x 11	1,030
12 x 12	1,220
13 x 13	1,430
14 x 14	1,670
15 x 15	1,910
16 x 16	2,170
18 x 18	2,750
20 x 20	3,400
22 x 22	4,110
25 x 25	5,310
30 x 30	7,650
35 x 35	10,400
40 x 40	13,600
45 x 45	17,290
50 x 50	21,200
55 x 55	25,700
60 x 60	30,600
70 x 70	41,600
80 x 80	54,400
100 x 100	85,000
120 x 120	122,400



**BARRE ESAGONALI
OTTONE**

UNI EN 12164
CuZn39Pb3
CW 614 N

Chiave m/m	Kg/mt
3	0,066
4	0,117
5	0,183
6	0,265
7	0,361
8	0,471
9	0,596
10	0,743
11	0,900
12	1,070
13	1,240
14	1,460
15	1,650
16	1,880
17	2,150
18	2,380
19	2,670
20	2,940
21	3,250
22	3,610
23	3,900
24	4,290
25	4,600
26	4,970
27	5,430
28	5,750
29	6,190
30	6,700
32	7,630
34	8,510
36	9,590
37	10,000
38	10,600
40	11,700
41	12,360
42	12,970
45	14,890
46	15,560
50	18,600
55	22,500
60	26,800
65	31,300
70	36,000
80	47,100



**BARRE TONDE
OTTONE**

UNI EN 12164
CuZn39Pb3
CW 614 N

Diametro m/m	Kg/mt	Diametro m/m	Kg/mt
1,5	0,015	50	16,900
2	0,027	55	20,200
2,5	0,042	60	24,000
3	0,060	65	28,200
3,5	0,082	70	32,700
4	0,107	75	37,500
4,5	0,135	80	42,700
5	0,167	85	48,200
5,5	0,202	90	54,000
6	0,240	95	60,200
7	0,327	100	66,700
8	0,427	110	80,780
9	0,541	120	96,130
10	0,668	130	112,830
11	0,808	140	130,850
12	0,961	150	150,210
13	1,130	160	170,800
14	1,310	180	216,000
15	1,500	200	266,800
16	1,710	220	323,120
17	1,930	225	338,023
18	2,160	250	417,920
19	2,410	300	600,000
20	2,670		
21	2,940		
22	3,230		
23	3,530		
24	3,850		
25	4,170		
26	4,510		
27	4,870		
28	5,230		
29	5,610		
30	6,010		
32	6,840		
35	8,180		
36	8,650		
37	9,140		
38	9,640		
40	10,700		
41	11,220		
42	11,760		
45	13,520		
48	15,380		



**BARRE PIATTE
OTTONE**

UNI EN 12167
CuZn39Pb3
CW 614 N

L x Spessore m/m	Kg/mt	L x Spessore m/m	Kg/mt	L x Spessore m/m	Kg/mt
5 x 2	0,085	25 x 5	1,062	45 x 6,5	2,524
6 x 2	0,102	25 x 6	1,275	45 x 8	3,060
7 x 5	0,297	25 x 8	1,700	45 x 10	3,825
8 x 2	0,136	25 x 10	2,125	45 x 12	4,600
8 x 2,5	0,170	25 x 12	2,550	45 x 15	5,739
8 x 3	0,204	25 x 15	3,187	45 x 20	7,650
8 x 4	0,272	25 x 20	4,250	45 x 25	9,563
8 x 5	0,340	30 x 2	0,510	45 x 30	11,475
10 x 2	0,170	30 x 3	0,765	50 x 2	0,850
10 x 2,5	0,212	30 x 4	1,020	50 x 3	1,275
10 x 3	0,255	30 x 5	1,275	50 x 4	1,700
10 x 4	0,340	30 x 6	1,530	50 x 5	2,125
10 x 5	0,425	30 x 8	2,040	50 x 6	2,550
10 x 6	0,510	30 x 10	2,550	50 x 8	3,400
10 x 8	0,681	30 x 12	3,060	50 x 10	4,250
12 x 2	0,204	30 x 15	3,825	50 x 12	5,100
12 x 2,5	0,255	30 x 20	5,100	50 x 15	6,375
12 x 3	0,306	30 x 25	6,375	50 x 20	8,500
12 x 4	0,408	35 x 2	0,595	50 x 25	10,624
12 x 5	0,510	35 x 3	0,893	50 x 30	12,748
12 x 8	0,816	35 x 4	1,190	50 x 35	14,874
12 x 10	1,020	35 x 5	1,488	50 x 40	17,000
15 x 2	0,255	35 x 6	1,785	55 x 3	1,403
15 x 2,5	0,318	35 x 8	2,380	55 x 5	2,338
15 x 3	0,382	35 x 10	2,975	55 x 6	2,806
15 x 4	0,510	35 x 15	4,462	55 x 8	3,740
15 x 5	0,637	35 x 20	5,950	60 x 2	1,020
15 x 6	0,765	35 x 25	7,440	60 x 3	1,530
15 x 8	1,020	40 x 2	0,680	60 x 4	2,040
15 x 10	1,275	40 x 3	1,020	60 x 5	2,550
15 x 12	1,530	40 x 4	1,360	60 x 6	3,060
20 x 2	0,340	40 x 5	1,700	60 x 8	4,080
20 x 2,5	0,425	40 x 6	2,040	60 x 10	5,100
20 x 3	0,510	40 x 8	2,720	60 x 12	6,120
20 x 4	0,630	40 x 10	3,400	60 x 15	7,650
20 x 5	0,850	40 x 12	4,080	60 x 20	10,200
20 x 6	1,020	40 x 15	5,100	60 x 25	12,750
20 x 8	1,360	40 x 20	6,800	60 x 30	15,300
20 x 10	1,700	40 x 25	8,500	60 x 40	20,400
20 x 12	2,040	40 x 30	10,200	65 x 4	2,210
20 x 15	2,550	45 x 2	0,765	70 x 3	1,785
25 x 2	0,424	45 x 3	1,148	70 x 4	2,380
25 x 3	0,637	45 x 4	1,530	70 x 5	2,975
25 x 4	0,851	45 x 5	1,913	70 x 6	3,570
25 x 4 R.	0,851	45 x 6	2,295	70 x 8	4,760



**BARRE PIATTE
OTTONE**

UNI EN 12167
CuZn39Pb3
CW 614 N

L x Spessore m/m	Kg/mt	L x Spessore m/m	Kg/mt
70 x 10	5,950	120 x 20	20,400
70 x 12	7,140	120 x 25	25,500
70 x 15	8,925	120 x 40	40,800
70 x 20	11,900	120 x 50	51,000
70 x 25	14,875	130 x 15	16,575
70 x 30	17,850	130 x 20	22,100
70 x 40	23,800	150 x 10	12,750
80 x 2	1,360	150 x 12	15,300
80 x 3	2,040	150 x 15	19,125
80 x 4	2,720	150 x 20	25,500
80 x 5	3,400	150 x 25	31,875
80 x 6	4,080	150 x 30	38,250
80 x 8	5,440	150 x 50	63,750
80 x 10	6,800	240 x 20	40,800
80 x 12	8,160		
80 x 15	10,200		
80 x 20	13,600		
80 x 25	17,000		
80 x 30	20,400		
80 x 40	27,200		
80 x 50	34,000		
85 x 20	9,010		
90 x 4	3,060		
90 x 8	6,120		
90 x 10	7,650		
90 x 12	9,180		
90 x 25	19,125		
100 x 5	4,250		
100 x 6	5,100		
100 x 8	6,800		
100 x 10	8,500		
100 x 12	10,200		
100 x 15	12,750		
100 x 20	17,000		
100 x 25	21,250		
100 x 30	25,500		
100 x 40	34,000		
100 x 50	42,500		
100 x 60	51,000		
120 x 5	5,100		
120 x 6	6,120		
120 x 8	8,160		
120 x 10	10,200		
120 x 12	12,240		
120 x 15	15,300		



**TUBI TONDI
OTTONE**

LEGA OT63
UNI EN 12449 CuZn37
CW 508 L

Diametro x Spessore m/m	Kg/mt	Diametro x Spessore m/m	Kg/mt	Diametro x Spessore m/m	Kg/mt
2 x 0,5	0,020	13 x 2	0,587	22 x 3	1,522
2,5 x 0,5	0,026	14 x 0,5	0,180	23 x 0,5	0,300
3 x 0,5	0,0344	14 x 1	0,347	23 x 1	0,587
3 x 1	0,0534	14 x 1,5	0,501	24 x 1	0,614
3,5 x 0,5	0,0400	14 x 2	0,641	24 x 1,5	0,901
4 x 0,5	0,0467	14 x 3	0,883	24 x 2	1,175
4 x 1	0,0801	15 x 0,5	0,194	25 x 0,5	0,327
5 x 0,5	0,0601	15 x 1	0,374	25 x 1	0,641
5 x 1	0,1070	15 x 1,5	0,541	25 x 1,5	0,961
5 x 1,5	0,1400	15 x 1,5 ric.	0,541	25 x 2	1,228
6 x 0,5	0,0734	15 x 2	0,694	25 x 2 ric.	1,228
6 x 1	0,1330	15 x 2,5	0,834	25 x 2,5	1,502
6 x 1,5	0,1800	15 x 3	0,961	25 x 3	1,762
7 x 0,5	0,0868	16 x 0,5	0,207	25 x 5	2,670
7 x 1	0,160	16 x 1	0,400	26 x 0,5	0,340
7 x 1,5	0,220	16 x 1,5	0,581	26 x 1	0,668
8 x 0,5	0,100	16 x 2	0,748	26 x 1,5	0,981
8 x 1	0,187	16 x 2,5	0,901	26 x 2	1,282
8 x 1 ric.	0,187	16 x 3	1,050	26 x 4	2,349
8 x 1,5	0,260	17 x 0,5	0,220	27 x 1	0,694
8 x 2	0,320	17 x 1	0,427	27 x 2,5	1,635
9 x 0,5	0,113	17 x 1,5	0,620	28 x 0,5	0,367
9 x 1	0,214	18 x 0,5	0,234	28 x 1	0,721
9 x 1,5	0,300	18 x 1	0,454	28 x 1,5	1,061
10 x 0,5	0,127	18 x 1,5	0,662	28 x 2	1,389
10 x 1 semicr.	0,240	18 x 2	0,854	28 x 2,5	1,702
10 x 1	0,240	18 x 2,5	1,034	29 x 1	0,748
10 x 1 ric.	0,240	18 x 3	1,202	30 x 0,5	0,394
10 x 1,5	0,340	19 x 1	0,481	30 x 1	0,774
10 x 1,5 ric.	0,340	20 x 0,5	0,260	30 x 1,5	1,140
10 x 2	0,427	20 x 1	0,507	30 x 2	1,495
10 x 2,5	0,500	20 x 1 ric.	0,507	30 x 2,5	1,835
11 x 0,5	0,140	20 x 1,5	0,741	30 x 3	2,162
11 x 1	0,267	20 x 2	0,961	30 x 3,5	2,477
12 x 0,5	0,153	20 x 2,5	1,168	30 x 4	2,777
12 x 1	0,294	20 x 3	1,362	30 x 5	3,338
12 x 1 ric.	0,294	20 x 4	1,709	31 x 1	0,801
12 x 1,5	0,420	20 x 5	2,000	32 x 0,5	0,420
12 x 1,5 ric.	0,420	21 x 0,5	0,274	32 x 1	0,827
12 x 2	0,534	21 x 1	0,534	32 x 1,5	1,221
12 x 2,5	0,634	22 x 0,5	0,287	32 x 2	1,601
12 x 3	0,721	22 x 1	0,561	32 x 2,5	1,970
13 x 0,5	0,167	22 x 1,5	0,821	33 x 1	0,854
13 x 1	0,320	22 x 2	1,068	33 x 1,5	1,261
13 x 1,5	0,461	22 x 2,5	1,300	34 x 1	0,880




**TUBI TONDI
OTTONE**
LEGA OT63
UNI EN 12449 CuZn37
CW 508 L

Diametro x Spessore m/m	Kg/mt	Diametro x Spessore m/m	Kg/mt	Diametro x Spessore m/m	Kg/mt
35 x 0,5	0,461	52 x 1	1,361	90 x 2,5	5,841
35 x 1	0,908	52 x 2	2,670	90 x 7,5	16,520
35 x 1,5	1,342	54 x 1	1,414	90 x 10	21,360
35 x 2	1,762	55 x 1	1,442	95 x 2	4,967
35 x 2,5	2,170	55 x 1,5	2,143	95 x 2,5	6,174
35 x 3	2,563	55 x 2	2,830	95 x 10	22,695
35 x 3,5	2,943	55 x 2,5	3,504	100 x 2	5,233
35 x 4	3,311	55 x 5	6,680	100 x 4	10,253
36 x 1	0,934	57 x 1	1,494	100 x 5	12,684
38 x 0,5	0,500	57 x 2	2,937	100 x 10	24,030
38 x 1	0,987	58 x 1	1,521	105 x 1	2,777
38 x 1,5	1,461	58 x 2,5	3,703	105 x 2,5	6,839
39 x 1	1,014	58 x 3	4,405	108 x 4	11,107
40 x 1	1,041	60 x 1	1,575	110 x 2,5	7,175
40 x 1,5	1,542	60 x 1,5	2,343	110 x 5	14,017
40 x 2	2,029	60 x 2	3,097	120 x 2,5	7,843
40 x 2,5	2,503	60 x 2,5	3,839	120 x 5	15,352
40 x 3	2,964	60 x 3	4,566	120 x 7,5	22,518
40 x 4	3,844	60 x 5	7,343	120 x 10	29,370
40 x 5	4,672	61 x 2,5	3,904	120 x 15	42,052
40 x 10	8,010	62 x 1	1,628	125 x 5	16,014
41 x 0,5	0,540	63 x 1	1,681	130 x 2,5	8,517
41 x 1	1,067	65 x 1	1,709	140 x 5	18,000
42 x 0,5	0,554	65 x 2	3,364	145 x 5	18,690
42 x 1	1,094	65 x 2,5	4,173	150 x 2,5	9,845
42 x 2	2,136	65 x 5	8,000	150 x 5	19,357
43 x 1	1,120	70 x 1	1,842	170 x 5	22,027
43 x 2,5	2,703	70 x 2	3,630	180 x 10	45,390
44 x 1	1,148	70 x 2,5	4,505	190 x 3	14,978
45 x 1	1,175	70 x 5	8,678	190 x 5	24,697
45 x 1,5	1,742	70 x 10	16,022	200 x 5	26,035
45 x 2	2,301	75 x 1	1,980		
45 x 2,5	2,837	75 x 2,5	4,840		
45 x 3	3,364	75 x 3	5,768		
45 x 4	4,379	75 x 5	9,345		
45 x 5	5,340	75 x 10	17,357		
46 x 1	1,201	80 x 1	2,108		
47 x 1	1,227	80 x 1,5	3,140		
48 x 1	1,250	80 x 2	4,166		
50 x 1	1,309	80 x 2,5	5,174		
50 x 1,5	1,943	80 x 5	10,014		
50 x 2	2,564	85 x 2,5	5,508		
50 x 2,5	3,170	85 x 5	10,700		
50 x 3	3,765	90 x 1	2,375		
50 x 5	6,009	90 x 2	4,700		



TUBI QUADRI OTTONE
UNI EN 12449
CuZn37
CW 508 L

L x L x Spessore m/m	Kg/mt
5 x 5 x 1	0,136
6 x 6 x 1	0,170
7 x 7 x 1	0,204
8 x 8 x 1	0,238
10 x 10 x 1	0,305
12 x 12 x 1	0,375
12 x 12 x 1,5	0,562
14 x 14 x 1	0,442
15 x 15 x 1	0,475
15 x 15 x 1,5	0,715
18 x 18 x 1	0,580
20 x 20 x 1	0,645
20 x 20 x 1,5	0,967
20 x 20 x 2	1,290
25 x 25 x 1	0,815
25 x 25 x 1,5	1,222
25 x 25 x 2	1,630
30 x 30 x 1	0,985
30 x 30 x 1,5	1,530
30 x 30 x 2	1,970
35 x 35 x 1,5	1,725
40 x 40 x 1	1,325
40 x 40 x 1,5	2,030
40 x 40 x 2	2,650
45 x 45 x 1,5	2,218
50 x 50 x 1,5	2,497
55 x 55 x 1,5	2,765
60 x 60 x 1,5	3,060
70 x 70 x 1,5	3,530
80 x 80 x 1,5	4,003



TUBI RETTANGOLARI OTTONE
UNI EN 12449
CuZn37
CW 508 L

B x H x Spessore m/m	Kg/mt
15 x 7 x 1,5	0,517
20 x 10 x 1	0,479
20 x 10 x 1,5	0,718
20 x 15 x 1,5	0,877
25 x 10 x 1	0,555
25 x 10 x 1,5	0,832
25 x 12 x 1,5	0,908
25 x 15 x 1,5	0,990
30 x 10 x 1	0,660
30 x 10 x 1,5	0,990
30 x 15 x 1,5	1,110
30 x 20 x 1	0,825
30 x 20 x 1,5	1,237
35 x 10 x 1	0,735
40 x 10 x 1,5	1,215
40 x 20 x 1,5	1,495
50 x 20 x 1,5	1,749
50 x 20 x 2	2,244



ANGOLARI OTTONE
UNI EN 12167
CuZn40Pb2Al
CW 618 N

L x L x Spessore m/m	Kg/mt
10 x 10 x 1,5	0,235
10 x 10 x 2	0,306
12 x 12 x 1	0,187
15 x 10 x 1,5	0,209
15 x 10 x 2	0,391
15 x 15 x 2	0,476
15 x 15 x 3	0,688
20 x 10 x 2	0,476
20 x 10 x 3	0,688
20 x 15 x 2	0,561
20 x 15 x 3	0,816
20 x 20 x 2	0,646
20 x 20 x 3	0,943
20 x 20 x 5	1,592
25 x 10 x 2	0,561
25 x 15 x 2	0,646
25 x 15 x 3	0,943
25 x 25 x 2	0,816
25 x 25 x 3	1,198
25 x 25 x 4	1,564
25 x 25 x 5	1,912
30 x 10 x 2	0,646
30 x 15 x 2	0,731
30 x 15 x 3	1,071
30 x 20 x 2	0,816
30 x 20 x 3	1,198
30 x 20 x 4	1,564
30 x 20 x 5	1,912
30 x 30 x 2	0,986
30 x 30 x 3	1,453
30 x 30 x 4	1,904
30 x 30 x 5	2,337
35 x 15 x 2	0,816
35 x 35 x 2	1,156
35 x 35 x 3	1,708
35 x 35 x 5	2,762
40 x 10 x 2	0,816
40 x 15 x 2	0,901
40 x 20 x 2	0,986
40 x 20 x 3	1,453
40 x 20 x 4	1,904
40 x 40 x 2	1,326
40 x 40 x 3	1,963
40 x 40 x 4	2,584
40 x 40 x 5	3,187



ANGOLARI OTTONE

UNI EN 12167
CuZn40Pb2Al
CW 618 N

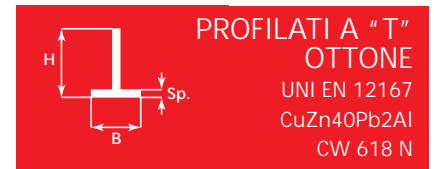
L x L x Spessore m/m	Kg/mt
45 x 45 x 2	1,496
45 x 45 x 3	2,218
45 x 45 x 5	3,612
50 x 20 x 2	1,156
50 x 20 x 3	1,708
50 x 25 x 2	1,241
50 x 30 x 2	1,326
50 x 30 x 5	3,187
50 x 50 x 2	1,666
50 x 50 x 3	2,473
50 x 50 x 4	3,264
50 x 50 x 5	4,037
60 x 20 x 2	1,326



CANALINI A "U" OTTONE

UNI EN 12167
CuZn43Pb2Al
CW 624 N

B x H x Spessore m/m	Kg/mt
8 x 8 x 1	0,187
10 x 10 x 1,5	0,344
10 x 15 x 1,5	0,471
10 x 20 x 1,5	0,599
12 x 12 x 1,5	0,420
15 x 15 x 2	0,697
15 x 20 x 2	0,867
20 x 15 x 2	0,782
20 x 15 x 3	1,200
20 x 20 x 2	0,952
20 x 20 x 3	1,452
25 x 15 x 2	0,867
25 x 25 x 2	1,207
30 x 15 x 2	0,952
30 x 15 x 3	1,452
30 x 20 x 2	1,122
30 x 30 x 2	1,462
35 x 15 x 2	1,037
40 x 20 x 2	1,292
50 x 20 x 2	1,394
50 x 20 x 3	2,142

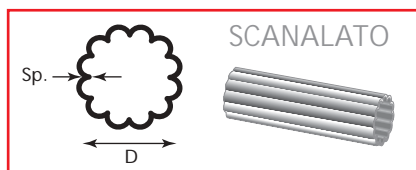


PROFILATI A "T" OTTONE

UNI EN 12167
CuZn40Pb2Al
CW 618 N

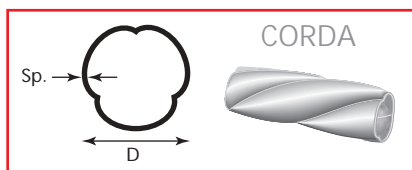
B x H x Spessore m/m	Kg/mt
10 x 10 x 2	0,306
15 x 15 x 2	0,476
20 x 20 x 2	0,646
25 x 25 x 2	0,816
25 x 25 x 3	1,198
30 x 30 x 2	0,986
30 x 30 x 3	1,453
30 x 30 x 5	2,337
40 x 40 x 2	1,326
40 x 40 x 5	3,187
50 x 50 x 3	2,473
50 x 50 x 5	4,037

TUBI OTTONE SAGOMATI OT63 UNI EN 12449 - CuZn37



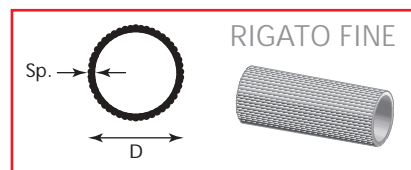
SCANALATO

Diametro x Spessore m/m	Peso/mt	Passo
20 x 1	0,507	12
25 x 1	0,641	12
30 x 1	0,774	12
35 x 1	0,908	12
40 x 1	1,041	12
50 x 1	1,309	12



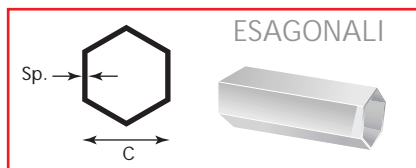
CORDA

Diametro x Spessore m/m	Peso/mt
8 x 1	0,150
10 x 1	0,210
12 x 1	0,270
15 x 1	0,360
16 x 1	0,390
18 x 1	0,450
20 x 1	0,510
22 x 1	0,570
25 x 1	0,660
28 x 1	0,750
30 x 1	0,810
35 x 1	0,960
40 x 1	1,100
50 x 1	1,180



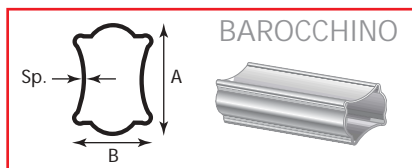
RIGATO FINE

Diametro x Spessore m/m	Peso/mt	n. rigature
8 x 1	0,187	16
10 x 1	0,240	20
12 x 1	0,294	24
13 x 1	0,320	26
15 x 1	0,374	30
16 x 1	0,400	32
18 x 1	0,454	36
20 x 1	0,507	40
22 x 1	0,561	49
25 x 1	0,641	49
28 x 1	0,721	56
30 x 1	0,774	60
35 x 1	0,908	60
40 x 1	1,041	70
50 x 1	1,309	80



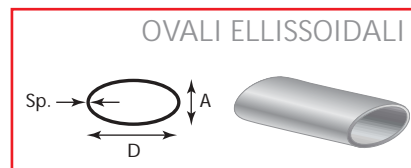
ESAGONALI

Chiave x Spessore m/m	Peso/mt
10 x 1	0,215
12 x 1	0,334
15 x 1	0,410
20 x 1	0,560
25 x 1	0,700
30 x 1	0,900
35 x 1	1,000
40 x 1	1,100
50 x 1	1,400



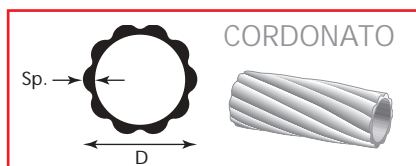
BAROCCHINO

A x B x Spessore m/m	Peso/mt
14 x 9 x 1	0,395



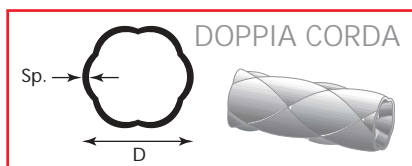
OVALI ELLISSOIDALI

A x D x Spessore m/m	Peso/mt
7 x 13 x 1	0,305
7 x 15 x 1	0,335
8 x 15 x 1	0,345
8 x 18 x 1	0,380
8 x 30 x 1	0,620
10 x 20 x 1	0,430
10 x 25 x 1	0,520
15 x 30 x 1	0,620
20 x 40 x 1	0,975
25 x 50 x 1	1,000



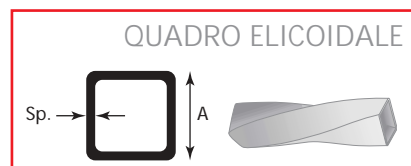
CORDONATO

Diametro x Spessore m/m	Peso/mt
8 x 1	0,180
10 x 1	0,220
20 x 1	0,507
25 x 1	0,641
30 x 1	0,774
40 x 1	1,041



DOPPIA CORDA

Diametro x Spessore m/m	Peso/mt
8 x 1	0,150
10 x 1	0,210

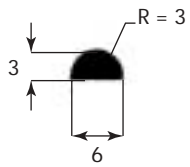


QUADRO ELICOIDALE

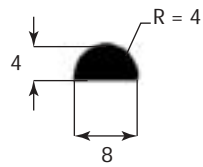
A x Spessore m/m	Peso/mt
8 x 1	0,240
10 x 1	0,309
12 x 1	0,386
20 x 1	0,645

PROFILATI SPECIALI

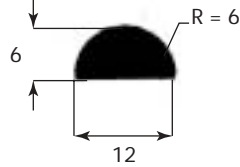
Art. 504 124 gr/mt



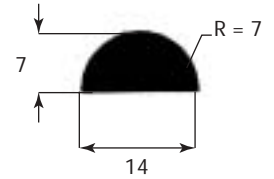
Art. 505 215 gr/mt



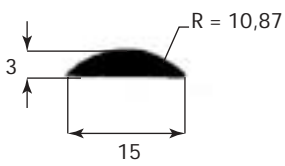
Art. 509 480 gr/mt



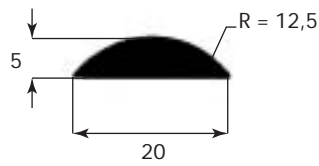
Art. 513 640 gr/mt



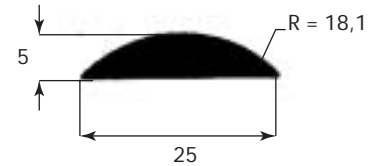
Art. 523 341 gr/mt



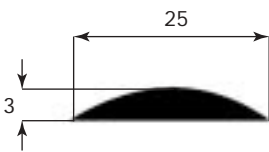
Art. 526 675 gr/mt



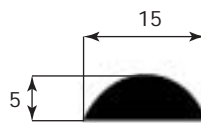
Art. 535 950 gr/mt



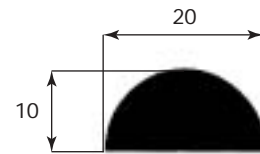
Art. 1808 426 gr/mt



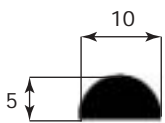
Art. 543 450 gr/mt



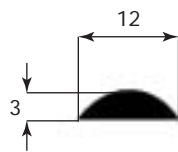
Art. 581 1325 gr/mt



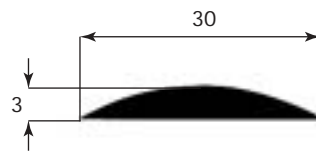
Art. 556 335 gr/mt



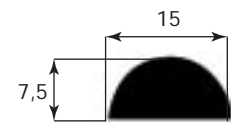
Art. 557 235 gr/mt



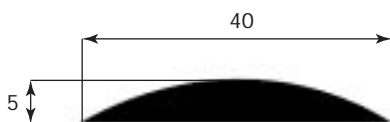
Art. 580 640 gr/mt



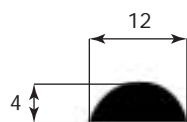
Art. 572 715 gr/mt



Art. 547 1327 gr/mt



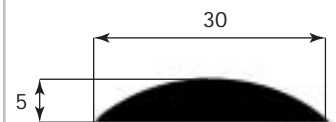
Art. 551 430 gr/mt



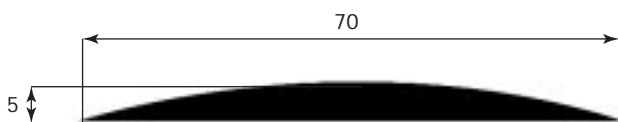
Art. 552 685 gr/mt



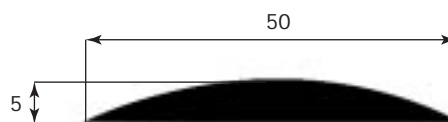
Art. 553 940 gr/mt



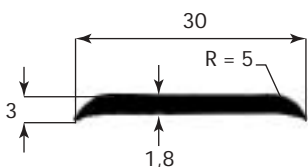
Art. 565 2100 gr/mt



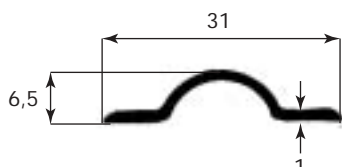
Art. 589 1268 gr/mt



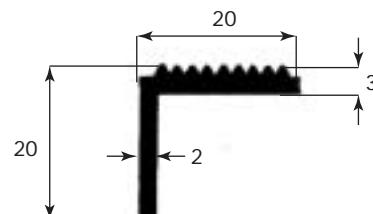
Art. 616 420 gr/mt



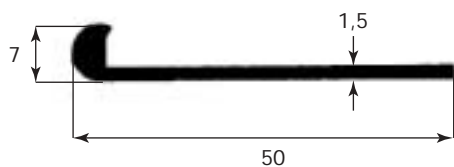
Art. 634 350 gr/mt



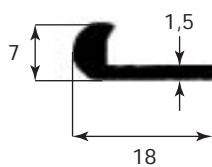
Art. 603 615 gr/mt



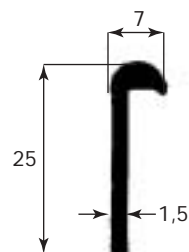
Art. 16 726 gr/mt



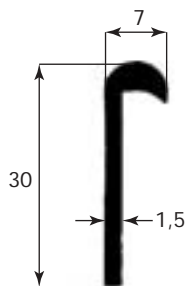
Art. 17 315 gr/mt



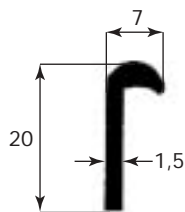
Art. 112 416 gr/mt



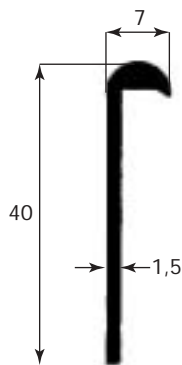
Art. 113 476 gr/mt



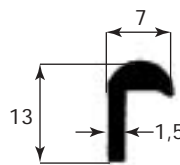
Art. 1176 328 gr/mt



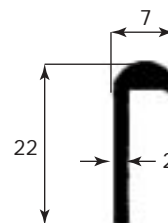
Art. 115 596 gr/mt



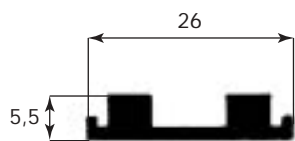
Art. 116 272 gr/mt



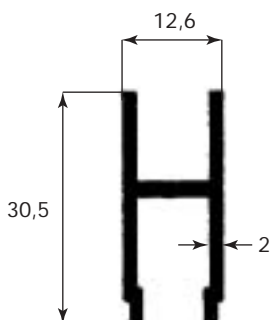
Art. 6 435 gr/mt



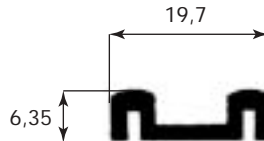
Art. 403 711 gr/mt



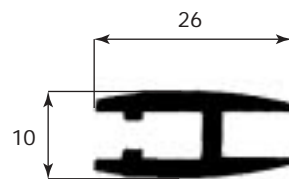
Art. 405 1236 gr/mt



Art. 424 450 gr/mt

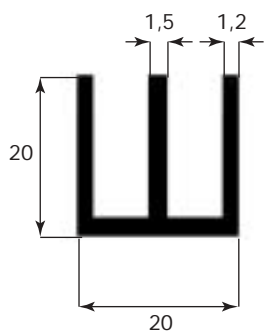


Art. 425 777 gr/mt

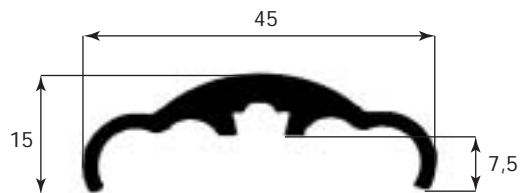


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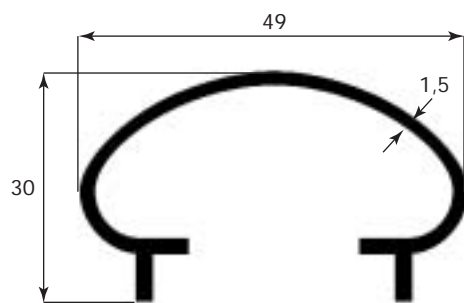
Art. 1217 656 gr/mt



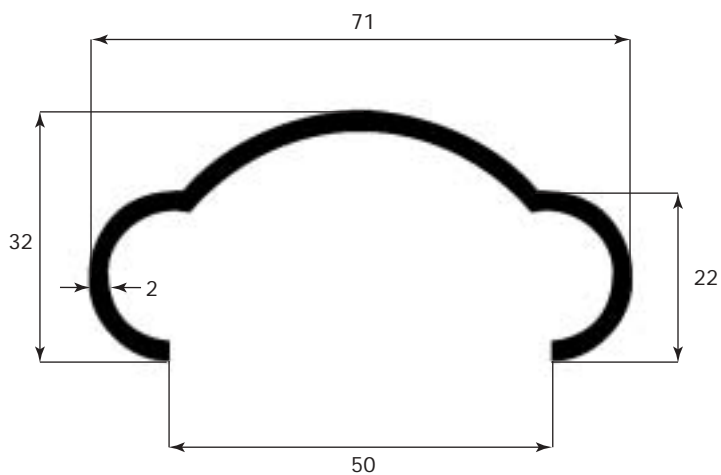
Art. 2588 1130 gr/mt



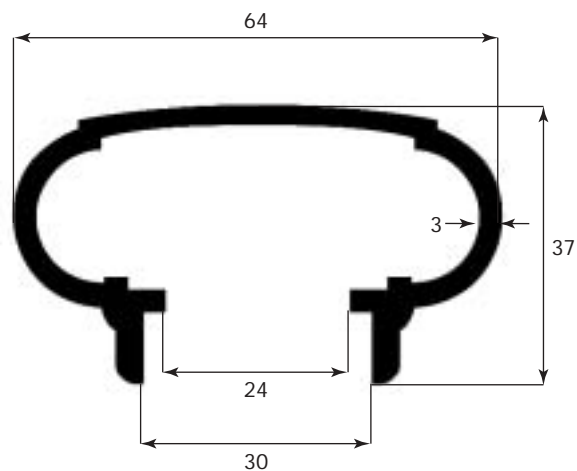
Art. 3057 1400 gr/mt



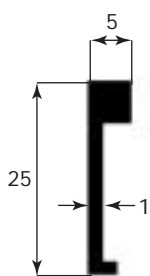
Art. 2592 2040 gr/mt



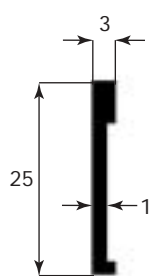
Art. 4849 4705 gr/mt



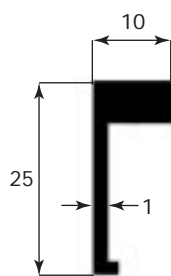
Art. 12698
395 gr/mt



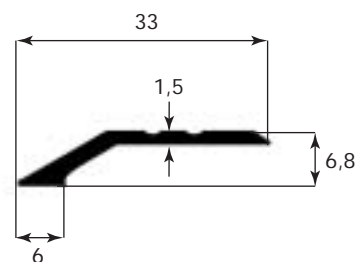
Art. 12696 311 gr/mt



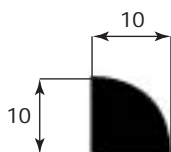
Art. 12703 605 gr/mt



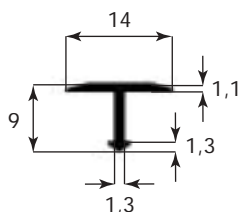
Art. 3769 460 gr/mt



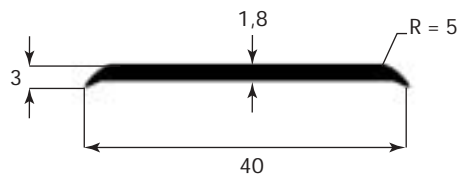
Profilo mattonella 10 x 10
667 gr/mt



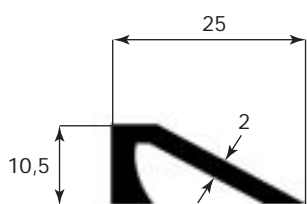
Art. 6701 229 gr/mt



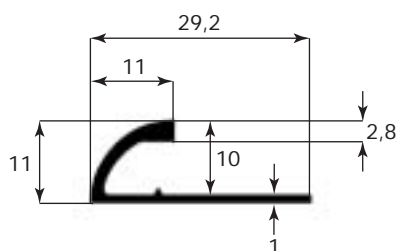
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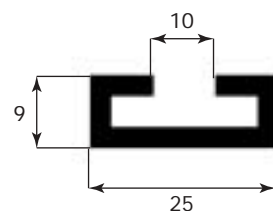
Art. 7124 680 gr/mt



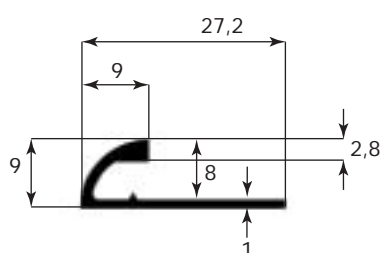
Art. 7511 526 gr/mt



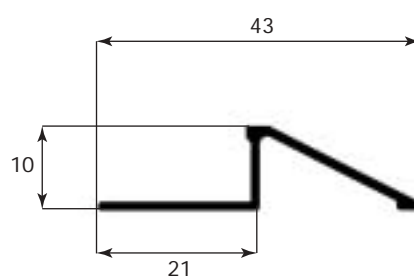
Art. 265 807 gr/mt



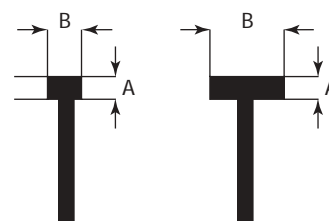
Art. 7510 445 gr/mt



Art. 7709 562 gr/mt



BANDELLE FORATE IN OTTONE PER PAVIMENTI



	mm 5 x 5 x 25 x 2000	mm 10 x 5 x 25 x 2000
Altezza del gradino (A)	mm 5	mm 5
Larghezza del gradino (B)	mm 5	mm 10
Altezza totale	mm 25	mm 25
Lunghezza aste	mm 2000	mm 2000
Peso	mt. gr. 290/300	mt. gr. 500