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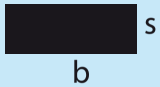
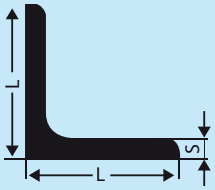


FLATS – WIDE FLATS – HOT-ROLLED / COLD-DRAWN

UNI 7209 - UNI EN 10163

TABLE OF THEORETICAL WEIGHTS in kg/rm – Thickness in mm

base mm	3	4	5	6	8	10	12	15	20	25	30	40	50	60
10	0,24	0,30	0,39	0,47	0,63	0,79	0,94							
12	0,28	0,36	0,47	0,57	0,75	0,94	1,13							
14	0,33	0,44	0,55	0,66	0,88	1,10	1,32							
15	0,35	0,47	0,59	0,71	0,94	1,16	1,41							
16	0,36	0,50	0,63	0,75	1,00	1,26	1,51							
18	0,42	0,57	0,71	0,85	1,13	1,41	1,70							
20	0,47	0,63	0,79	0,94	1,26	1,57	1,88	2,36						
25	0,59	0,79	0,98	1,16	1,57	1,96	2,36	2,94	3,93					
30	0,71	0,94	1,18	1,41	1,88	2,36	2,83	3,53	4,71	5,89				
35	0,82	1,10	1,37	1,65	2,20	2,75	3,30	4,12	5,50	6,87				
40	0,94	1,26	1,57	1,88	2,51	3,14	3,77	4,71	6,28	7,85	9,40			
45	1,06	1,41	1,77	2,12	2,83	3,53	4,24	5,30	7,07	8,83	10,60			
50	1,18	1,57	1,96	2,36	3,14	3,93	4,71	5,89	7,85	9,81	11,80	15,70		
60	1,41	1,88	2,36	2,83	3,77	4,71	5,65	7,07	9,42	11,76	14,10	18,8	23,60	
70	1,65	2,20	2,75	3,30	4,40	5,50	6,59	8,24	11,00	13,74	16,50	22,00	27,50	
80	1,88	2,51	3,14	3,77	5,02	6,26	7,54	9,42	12,56	15,70	18,80	25,10	31,40	37,70
90	2,12	2,83	3,53	4,24	5,65	7,07	8,48	10,60	14,13	17,66	21,20	28,30	35,30	42,40
100	2,36	3,14	3,93	4,71	6,28	7,85	9,42	11,78	15,70	19,63	23,60	31,40	39,30	47,10
110			4,32	5,18	6,91	8,64	10,36	12,95	17,27	21,59	25,90	34,50	43,20	51,80
120			4,71	5,65	7,54	9,42	11,30	14,13	18,84	23,55	28,30	37,70	47,10	56,50
130			5,10	6,12	8,16	10,21	12,25	15,31	20,41	25,51	30,60	40,80	51,00	61,20
140			5,50	6,59	8,79	10,99	13,19	16,49	21,96	27,48	33,00	44,00	55,00	65,90
150			5,89	7,07	9,42	11,78	14,13	17,66	23,55	29,44	35,30	47,10	58,90	70,70
160			6,28	7,54	10,05	12,56	15,07	18,81	25,12	31,40	37,68	50,24	62,80	75,35
180			7,07	8,48	11,30	14,13	16,96	21,20	28,3	35,33	42,39	56,52	70,65	84,78
200			7,85	9,42	12,56	15,70	18,84	23,55	31,40	39,25	47,10	62,80	78,50	94,20
220					13,82	17,27	20,72	25,91	34,54	43,18	51,81	69,1	86,35	103,62
250					15,70	19,63	23,55	29,44	39,25	49,06	58,88	78,50	98,13	117,75
300						23,55	28,26	35,33	47,10	58,88	70,65	94,20	117,75	141,30
400						31,40	37,68	47,10	62,80	78,50	94,20	125,60	157,00	188,40
500						39,25	47,10	58,88	78,50	98,13	117,75	157,00	196,25	235,50



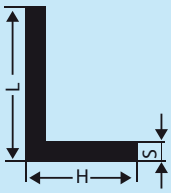
EQUAL LEG ANGLES WITH ROUNDED EDGES

UNI EN 10056

L mm	thickness mm																		
	3	4	5	6	6.5	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	weight kg/m																		
15	0.63																		
20	0.88	1.14																	
25	1.12	1.46	1.78																
30	1.36	1.78	2.18	2.58															
35	1.60	2.09	2.57	3.04															
40	1.84	2.42	2.97	3.52															
45	2.09	2.74	3.38	4.00		4.60													
50	2.35	3.06	3.77	4.47		5.15	5.82	6.17											
55		3.35	4.16	4.95		5.70	6.46												
60		3.70	4.57	5.42		6.24	7.09		8.69										
65		4.02	4.96	5.91		6.83	7.73												
70		4.35	5.37	6.38		7.38	8.36	9.34	10.30	11.20									
75		4.72	5.78	6.87		7.94	9.03		11.10		13.10								
80		5.02	6.04	7.34		8.49	9.63		11.90		14.00								
90			6.87	8.20		9.58	10.90	12.20	13.40	14.70	15.90			19.50					
100			7.65	9.22		10.80	12.20	13.60	15.10	16.40	17.80		20.60		24.20				
110				11.20		13.00	13.50		16.60		19.70		22.80						
120				11.20		13.00	14.75		18.20	19.90	21.60	23.30	25.00	26.60			31.50		
130					12.90	13.90	15.95	17.85	19.80	21.60	23.60		27.20		30.90				
140												27.50		31.40		35.30			
150											27.30		31.60	33.80	35.90		40.10		
160														36.20		40.70		45.10	
180															43.50		48.60		53.70
200															48.50		54.30		59.90

UNEQUAL LEG ANGLES WITH SHARP EDGES

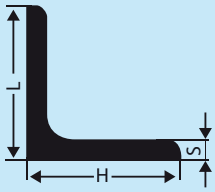
UNI 6762



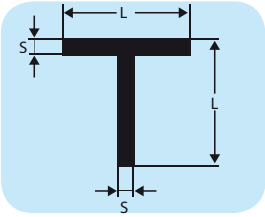
L mm	H mm	thickness mm						
		4	4.5	5	5.5	6	6.5	7
		weight kg/m						
20	12	0.88						
25	15		1.25					
30	17.5			1.67				
35	20				2.14			
40	22					2.64		
45	30						3.50	
50	30					3.49		4.01

EQUAL LEG ANGLES WITH ROUNDED EDGES

UNI EN 10056



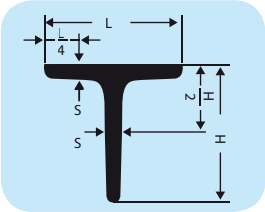
L mm	H mm	thickness mm											
		4	5	6	7	8	9	10	11	12	14	15	16
		weight kg/m											
30	20	1.46	1.78										
35	20	1.61	1.97										
40	20	1.77	2.17										
	25	1.93	2.37										
45	30	2.25	2.76	3.27									
50	30		2.96	3.51									
60	30		3.37	3.99	4.59								
	40		3.76	4.46	5.14								
75	50			5.65	6.53		8.22						
80	40			5.41	6.25	7.07							
	60			6.37	7.36	8.34		10.20					
100	50			6.85		8.99		11.10					
	65				8.77		11.10	12.30	13.40				
110	75					11.12		13.73					
120	60					10.90		13.40					
	80					12.20		15.00		17.80	20.50		
130	65					11.80		14.60		17.30			
150	100							19.30		22.60	26.10		
160	80						16.40			21.60	25.00		
200	90									26.30		32.50	
	100							23.00		27.30	31.60		35.90



T-SECTIONS WITH SHARP EDGES

UNI 5681 EN 10056

mm mm	thickness mm										
	4	4.5	5	5.5	6	6.5	7	8	9	10	11
	weight kg/m										
20	1.13										
25		1.61									
30			2.16								
35				2.78							
40					3.49						
45						4.26					
50							5.11				
60								7.03			
70									9.26		
80										11.90	
100											16.30



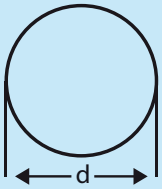
T-SECTIONS WITH ROUNDED EDGES

UNI EN 10056

L mm	H mm	thickness mm						
		5.5	7	8	9	11	13	1 5
		weight kg/m						
60	30	3.65						
	60		6.23					
70	70			8.23				
80	80				10.70			
100	100					16.40		
120	120						23.20	
140	140							

ROUND BARS

UNI EN 10025
UNI EN 10060



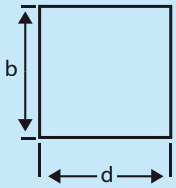
DIAMETER mm	WEIGHT kg/m
5	0,154
6	0,222
7	0,302
8	0,395
9	0,499
10	0,617
11	0,746
12	0,888
13	1,04
14	1,21
15	1,39
16	1,58
17	1,78
18	2,00
19	2,23
20	2,47
21	2,72
22	2,98
23	3,26
24	3,55
25	3,85
26	4,17
27	4,49
28	4,83
30	5,55
32	6,31
33	6,71
34	7,13
35	7,55
36	7,99
37	8,44
38	8,90
40	9,86
42	10,90
45	12,50
48	14,20
50	15,40
52	16,70
53	17,30

DIAMETER mm	WEIGHT kg/m
55	18,70
56	20,70
60	22,20
63	24,50
65	26,00
68	28,50
70	30,20
73	32,90
75	34,70
78	37,50
80	39,50
83	42,50
85	44,50
88	47,70
90	49,90
95	55,60
100	61,60
105	68,00
110	74,60
115	81,50
120	88,80
125	96,30
130	104
135	112
140	121
145	130
150	139
155	148
160	158
170	178
180	200
190	223
200	247
220	289
230	326,19
240	355,16
250	385,38
300	554,88
400	980,31
500	1531,7

DIMENSIONAL TOLERANCES			
Nominal size d	8≤ d≤ 15	15<d≤ 25	25<d≤ 35
Tolerances d	±0,4	±0,5	±0,6

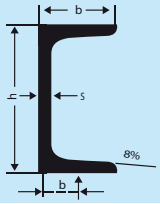
SQUARE BARS

UNI EN 10025
UNI EN 10059



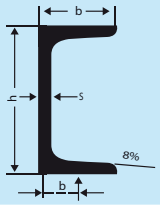
SIDE DIMENSION mm	WEIGHT kg/m
5	0,196
6	0,283
7	0,385
8	0,502
9	0,636
10	0,785
11	0,950
12	1,13
13	1,33
14	1,54
15	1,77
16	2,01
18	2,54
19	2,83
20	3,14
22	3,80
25	4,91
26	5,31
28	6,15
30	7,07
32	8,04
35	9,62
38	11,3
40	12,6
45	15,9
50	19,6
55	23,7
60	28,3
65	33,2
70	38,5
80	50,2
90	63,6
100	78,5
110	95,0
120	113
130	133
140	154
150	177

DIMENSIONAL TOLERANCES			
Section	8≤b≤14	14<b ≤25	25<b≤35
Section tolerances	±0,4	±0,5	±0,6
Corner radius r	8≤b≤20	12<b≤20	20<b≤30
Tolerances r	± 1	± 1,5	± 2



CHANNEL BARS STANDARD SERIES

h	b	a	e	r	section	weight	moment of inertia		section modulus		radius of gyration	
							Jx	Jy	Wx	Wy	Ix	Iy
mm	mm	mm	mm	mm	cm²	kg/m	cm⁴	cm⁴	cm³	cm³	cm	cm
30	33	5	7	7	5,44	4,27	6,39	5,33	4,26	2,68	1,08	0,99
40	35	5	7	7	6,21	4,87	14,10	6,68	7,05	3,08	1,50	1,04
50	38	5	7	7	7,12	5,59	26,40	9,12	10,60	3,75	1,92	1,13
65	42	5,5	7,5	7,5	9,03	7,09	57,50	14,10	17,70	5,07	2,52	1,25
80	45	6	8	8	11,0	8,65	106	19,4	26,5	6,36	3,10	1,33
100	50	6	8,5	8,5	13,5	10,6	205	29,1	41,1	8,45	3,91	1,47
120	55	7	9	9	17,0	13,3	364	43,1	60,7	11,1	4,63	1,59
140	60	7	10	10	20,4	16,0	605	62,5	86,4	14,7	5,45	1,75
160	65	7,5	10,5	10,5	24,0	18,9	925	85,1	116	18,2	6,21	1,88
180	70	8	11	11	28,0	22,0	1354	114	150	22,4	6,96	2,01
200	75	8,5	11,5	11,5	32,2	25,3	1911	148	191	26,9	7,71	2,14
220	80	9	12,5	12,5	37,4	29,4	2691	196	245	33,5	8,48	2,29
240	85	9,5	13	13	42,3	33,2	3599	247	300	39,5	9,22	2,42
260	90	10	14	14	48,3	37,9	4824	317	371	47,8	10,0	2,56
280	95	10	15	15	53,4	41,9	6276	398	448	57,2	10,8	2,73
300	100	10	16	16	58,8	46,1	8028	493	535	67,6	11,7	2,90



CHANNEL BARS SPECIAL SERIES

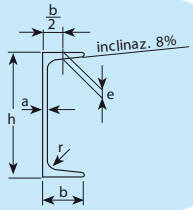
UNI EN 10279

h	b	a	e	r	section	weight	moment of inertia		section modulus		radius of gyration	
							Jx	Jy	Wx	Wy	Ix	Iy
mm	mm	mm	mm	mm	cm²	kg/m	cm⁴	cm⁴	cm³	cm³	cm	cm
*25	12	4	4	4	1,68	1.30						
30	15	4	4.5	4,5	2,21	1.98	2,53	0,38	1,69	0,39	1,07	0,42
		5	7	7	5,44	4.27	6,39	5,33	4,26	2,68	1,08	0,99
*35	17	5	5,5	5,5	3,27	2,52						
40	20	5	5.5	5	3,66	3,23	7,58	1,14	3,79	0,86	1,44	0,56
					6,21	4.87	14,10	6,68	7,05	3,08	1,50	1,04
50	25	5	6	6	4.92	4,15	16,80	2,49	6,73	1,48	1,85	0,71
					7,12	5,59	26,40	9,12	10,60	3,75	1,92	1,13
60	30	6	6	6	6,46	5,45	31,60	4,51	10,50	2,16	2,21	0,84
					9,03	7,09	57,50	14.10	17,70	5,07	2,52	1,25

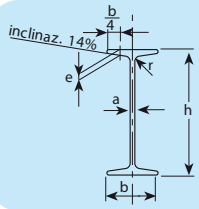
* non unificato

"UNP" CHANNELS – STANDARD SERIES

UNI EN 10279



Height	Wt	Surf.	Sect.	SIZE					Neutral axis x-x			Neutral axis y-y		
	Kg/m	m^2/t	cm^2	h mm	b mm	a mm	e mm	r mm	J_x cm^4	W_x cm^3	i_x cm	J_y cm^4	W_y cm^3	i_y cm
30	4,27	-	5,44	30	33	5	-	-	36,39	4,26	1,08	5,1	2,60	0,968
40	4,88	-	6,21	40	35	5	-	-	14,1	7,07	1,51	6,68	3,08	1,04
50	5,59	-	7,12	50	38	5	-	-	26,5	10,6	1,93	9,1	3,74	1,13
65	7,09	-	9,03	65	42	5,5	-	-	57,5	17,7	2,52	14,0	5,05	1,25
80	8,65	36,1	11,0	80	45	6	7,76	8	106	26,5	3,10	19,4	6,35	1,33
100	10,6	35,10	13,5	100	50	6	8,26	8,5	205	41,1	3,91	29,1	8,45	1,47
120	13,3	32,39	17,0	120	55	7	8,72	9	364	60,7	4,63	43,1	11,1	1,59
140	16,0	30,56	20,4	140	60	7	9,72	10	605	86,4	5,45	62,5	14,7	1,75
160	18,9	29,04	24,0	160	65	7,5	10,2	10,5	925	116	6,21	85,0	18,2	1,88
180	22,0	27,77	28,0	180	70	8	10,68	11	1354	150	6,96	113	22,4	2,01
200	25,3	26,13	32,2	200	75	8,5	11,16	11,5	1911	191	7,71	148	26,9	2,14
220	29,4	24,42	37,4	220	80	9	12,14	12,5	2691	245	8,48	196	33,5	2,29
240	33,2	23,34	42,3	240	85	9,5	12,62	13	3599	300	9,22	247	39,5	2,41
260	37,9	22,00	48,3	260	90	10	13,6	14	4824	371	10,0	317	47,8	2,56
280	41,9	21,29	53,4	280	95	10	14,6	15	6276	448	10,8	398	57,1	2,73
300	46,1	20,56	58,8	300	100	10	15,6	16	8,028	535	11,7	493	67,5	2,90
320	59,5	16,50	75,8	320	100	14	17,5	17,5	10870	679	12,10	597	80,6	2,81
350	60,6	17,28	77,3	350	100	14	16	16	12840	734	12,90	570	75	2,72
380	63,1	17,59	80,4	380	102	13,5	16	16	15760	829	14,00	615	78,7	2,77
400	71,8	16,46	91,5	400	110	14	18	18	20350	1020	14,90	846	102	3,04



"INP" BEAMS – STANDARD SERIES

UNI EN 10279

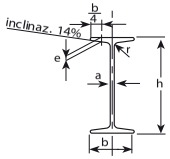
Height	Wt	Surf.	Sect.	SIZE					Neutral axis x-x			Neutral axis y-y		
	Kg/m	m^2/t	cm^2	h mm	b mm	a mm	e mm	r mm	J_x cm^4	W_x cm^3	i_x cm	J_y cm^4	W_y cm^3	i_y cm
80	5,95	51,18	7,58	80	42	3,9	5,76	3,9	77,8	19,5	3,20	6,29	3,00	0,91
100	8,32	44,36	10,6	100	50	4,5	6,64	4,5	171	34,2	4,01	12,2	4,88	1,07
120	11,20	39,55	14,2	120	58	5,1	7,52	5,1	328	54,7	4,81	21,5	7,41	1,23
140	14,40	35,10	18,3	140	66	5,7	8,40	5,7	573	81,9	5,61	35,2	10,7	1,40
160	17,90	32,12	22,8	160	74	6,3	9,28	6,3	935	117	6,40	54,7	14,8	1,55
180	21,9	29,22	27,9	180	82	6,9	10.16	6,9	1446	161	7,20	81,3	19,8	1,71
200	26,3	27,06	33,5	200	90	7,5	11,04	7,5	2142	214	8,00	117	26,0	1,87
220	31,1	24,92	39,6	220	98	8,1	11,92	8,1	3060	278	8,80	162	33,1	2,02
240	36,2	23,31	46,1	240	106	8,7	12,80	8,7	4246	354	9,59	221	41,7	2,20
260	41,9	21,62	53,4	260	113	9,4	13.77	9,4	5744	442	10,4	288	51,0	2,32
280	48,0	20,17	61,1	280	119	10,1	14,85	10,1	7587	542	11,1	364	61,2	2,45
300	54,2	19,00	69,1	300	125	10,8	15,82	10,8	9800	653	11,9	451	72,2	2,56
320	61,1	17,87	77,8	320	131	11,5	16,90	11,5	12510	782	12,7	555	84,7	2,67
340	68,1	16,91	86,8	340	137	12,2	17,87	12,2	15700	923	13,5	674	98,4	2,80
360	76,2	15,90	97,1	360	143	13	19,05	13	19610	1089	14,2	818	114	2,90
380	84,0	15,12	107	380	149	13,7	20,02	13,7	24010	1264	15,0	975	131	3,02
400	92,6	14,39	118	400	155	14,4	21,10	14,4	29210	1461	15,7	1158	149	3,13
450	115	12,87	147	450	170	16,2	24,3	16,2	45850	2040	17,7	1730	203	3,43
500	141	11,56	179	500	185	18	27	18	68740	2750	19,6	2480	268	3,72
550	166	10,84	212	550	200	19	30	19	99180	3610	21,6	3490	349	4,02

"INP" BEAMS

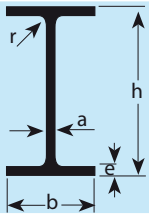
TABLE OF UNIFORMLY DISTRIBUTED NET LOADS in kg/m (sigma = 1600 kg/cm2)

	SECTION – thickness in mm					W.t	Sect.	Wx.	Jx.	DISTANCE BETWEEN SUPPORTS IN METRES													
NP	h	b	a	e	r	Kg/ml	cm^2	cm^3	cm^4	1	2	3	4	5	6	7	8	9	10	11	12	13	14
80	80	42	3,9	5,9	3,9	5,9	7,6	19,4	78	2477	1230	810	597	467									
100	100	50	4,5	6,8	4,5	8,3	10,6	34,1	170	4357	2166	1480	1058	831	678								
120	120	58	5,1	7,7	5,1	11,1	14,2	54,5	327	6965	3466	2292	1700	1340	1096	919							
140	140	66	5,7	8,6	5,7	14,3	18,2	81,8	572	10456	5207	3447	2560	2023	1659	1396	1194	1035					
160	160	74	6,3	9,5	6,3	17,9	22,8	117	934	14958	7452	4938	3672	2906	2389	2014	1729	1503	1319				
180	180	82	6,9	10,4	6,9	21,9	27,9	161	1444	20586	10260	6804	5064	4012	3303	2791	2401	2093	1842	1633			
200	200	90	7,5	11,3	7,5	26,2	33,4	214	2138	27366	13644	9052	6743	5347	4408	3730	3214	2808	2477	2202	1968		
220	220	98	8,1	12,2	8,1	31,0	39,5	278	3050	35553	17730	11768	8772	6962	5745	4866	4200	3675	3248	2894	2593	2334	
240	240	106	8,7	13,1	8,7	36,2	46,1	353	4239	45148	22520	14958	11151	8856	7313	6201	5358	4695	4156	3709	3331	3005	2721
260	260	113	9,4	14,1	9,4	41,9	53,3	441	5735	56406	28140	18690	13944	11080	9157	7771	6721	5895	5226	4671	4201	3797	3445
280	280	119	10,1	15,2	10,1	47,9	61,0	541	7575	69200	34528	22939	17120	13610	11254	9557	8273	7263	6446	5768	5196	4704	4276
300	300	125	10,8	16,2	10,8	54,2	69,0	652	9785	83402	41620	27656	20647	16420	13584	11543	9998	8785	7804	6991	6304	5715	5202
320	320	131	11,5	17,3	11,5	61,0	77,7	781	12490	99907	49862	33140	24748	19689	16295	13854	12008	10559	9387	8417	7599	6897	6287
340	340	137	12,2	18,3	12,2	68,0	86,7	922	15670	117948	58872	39135	29232	23263	19261	16383	14208	12501	11122	9981	9019	8194	7478
360	360	143	13,0	19,5	13,0	76,1	97	1087	19580	139060	69416	46150	34480	27447	22733	19344	16783	14775	13153	11812	10681	9713	8873
380	380	149	13,7	20,5	13,7	84	107	1262	23980	161452	80600	53593	40048	31887	26419	22489	19520	17192	15314	13761	12453	11334	10362
400	400	155	14,4	21,6	14,4	93	118	1461	29210	186916	93319	62059	46382	36939	30613	26068	22636	19946	17776	15983	14474	13183	12063
425	425	163	15,3	23,0	15,3	104	132	1738	36930	222360	111024	73843	55200	43973	36453	31053	26976	23782	21206	19080	17291	15761	14434
450	450	170	16,2	24,3	16,2	115	147	2035	45790	260365	130010	86482	64660	51521	42723	36406	31640	27907	24898	22415	20327	18542	16996
475	475	178	17,1	25,6	17,1	128	163	2375	56410	303872	151744	100949	75488	60160	49899	42533	36976	23626	29120	26228	23797	21721	19922
500	500	185	18,0	27,0	18,0	141	180	2746	68650	351347	175462	116740	87308	69593	57735	49226	42808	32626	33739	30402	27599	25205	23132
550	550	200	19,0	30,0	19,0	166	212	3598	98950	460378	229940	153017	114472	91279	75761	64630	56240	49678	44394	40042	36387	33268	30572
600	600	215	21,6	32,4	21,6	199	254	4626	138800	591929	295666	196779	147236	117431	97494	83197	72424	64001	57223	51641	46956	42961	39509
						Distance in metres			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

a b c



N. B.: The lines a b c represent deflection under load a=1/200; b=1/500; c=1/1000 of the distance between supports



"IPE" BEAMS WITH PARALLEL FLANGES

UNI EN 10034 UNI 5398

Height	Wt	Surf.	Sect.	SIZE					Neutral axis x-x			Neutral axis y-y		
	Kg/m	m^2/t	cm^2	h mm	b mm	a mm	e mm	r mm	J_x cm^4	W_x cm^3	i_x cm	J_y cm^4	W_y cm^3	i_y cm
80	6,00	54,67	7,64	80	46	3,8	5,2	5	80,1	20,0	3,24	8,49	3,69	1,05
100	8,10	49,38	10,3	100	55	4,1	5,7	7	171	34,2	4,07	15,9	5,79	1,24
120	10,4	45,67	13,2	120	64	4,4	6,3	7	318	53,0	4,90	27,7	8,65	1,45
140	12,9	42,71	16,4	140	73	4,7	6,9	7	541	77,3	5,74	44,9	12,3	1,65
160	15,8	39,43	20,1	160	82	5,0	7,4	9	869	109	6,58	68,3	16,7	1,84
180	18,8	37,13	23,9	180	91	5,3	8,0	9	1320	146	7,42	101	22,2	2,05
200	22,4	34,29	28,5	200	100	5,6	8,5	12	1940	194	8,26	142	28,5	2,24
220	26,2	32,37	33,4	220	110	5,9	9,2	12	2770	252	9,11	205	37,3	2,48
240	30,7	30,03	39,1	240	120	6,2	9,8	15	3890	324	9,97	284	47,3	2,69
270	36,1	28,81	45,9	270	135	6,6	10,2	15	5790	429	11,2	420	62,2	3,02
300	42,2	27,49	53,8	300	150	7,1	10,7	15	8360	557	12,5	604	80,5	3,35
330	49,1	25,46	62,6	330	160	7,5	11,5	18	11770	713	13,7	788	98,5	3,55
360	57,1	23,64	72,7	360	170	8,0	12,7	18	16270	904	15,0	1040	123	3,79
400	66,3	22,17	84,5	400	180	8,6	13,5	21	23130	1160	16,5	1320	14,6	3,95
450	77,6	20,75	98,8	450	190	9,4	14,6	21	33740	1500	18,5	1680	176	4,12
500	90,7	19,18	116	500	200	10,2	16,0	21	48200	1930	20,4	2140	214	4,31
550	106	17,74	134	550	210	11,1	17,2	24	67120	2440	22,3	2670	254	4,45
600	122	16,48	156	600	220	12,0	19,0	24	92080	3070	24,3	3390	308	4,66

"IPE" BEAMS UNDER COMPRESSION

pillars – steel with safety load OK=16 kg/mm²

UNI EN 10034 UNI 5398

mm	max load (kg) in relation to pillar length (m):											
	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	8
80	3574	2272	1583	1166								
100	6618	4291	2953	2177	1671							
120	10057	7489	5201	3784	2937	2323	1884					
140	14183	11359	8437	6116	4702	3727	3023	2503				
160	18917	156 11	127 11	9403	7210	5695	4614	3810	3203	2732		
180	24050	20670	17225	13755	10563	8367	6768	5607	4709	4021	3466	
200	30000	26205	22463	19079	15099	11875	9702	7985	6745	5728	4924	3781
220		32987	28886	24855	21461	17183	13916	11517	9608	8259	7059	5419
240		40623	35954	31595	27681	23696	19190	15878	1331 0	11353	9790	7483
270		50301	45614	41258	36537	32495	28355	23167	19689	16690	14513	111 10
300		61049	56631	51855	46782	42403	38088	33756	28503	24454	20944	16000
330			68136	62600	57234	51896	46586	41907	36688	31596	27217	20780
360			81342	75532	69652	63912	58452	52396	47477	41841	36236	27498
400			95886	89536	83456	76384	70051	63474	58528	53019	45521	34666
450				106093	99421	92444	85448	78646	71207	65593	57904	44280
500				128000	120519	111807	104269	96165	88380	80346	73359	56932
550					141052	132345	122514	112842	105615	96576	88962	70065
600					167516	156981	147692	137142	128000	117183	108995	89784

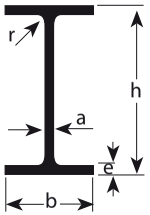
"IPE" BEAMS

UNI EN 10024

TABLE OF UNIFORMLY DISTRIBUTED NET LOADS in kg/m

	SECTION					Weight	sect.	Wx.	Jx.	DISTANCE BETWEEN SUPPORTS IN METRE													
IPE	h	b	a	e	r	Kg/ml	cm^2	cm^3	cm^4	1	2	3	4	5	6	7	8	9	10	11	12	13	14
80	80	46	3,8	5,2	5,0	6,0	7,6	20,0	80	2554	1268	835	616	482									
100	100	55	4,1	5,7	7,0	8,1	10,3	34,2	171	4370	2173	1435	1062	835	681								
120	120	64	4,4	6,3	7,0	10,4	13,2	53,0	318	6774	3371	2230	1654	1305	1068	896							
140	140	73	4,7	6,9	7,0	12,9	16,4	77,3	541	9882	4921	3259	2422	1914	1572	1323	1134						
160	160	82	5,0	7,4	9,0	15,8	20,1	109	869	13936	6944	4603	3425	2711	2231	1883	1618	1408					
180	180	91	5,3	8,0	9,0	18,8	23,9	146	1317	18669	9306	6173	4597	3644	3002	2538	2186	1907	1681	1492			
200	200	100	5,6	8,5	12,0	22,4	28,5	194	1943	24810	12371	8210	6118	4854	4004	3391	2925	2558	2259	2011	1801	1619	
220	220	110	5,9	9,2	12,0	26,2	33,4	252	2772	32230	16076	10673	7959	6320	5219	4425	3822	3348	2964	2644	2374	2141	1937
240	240	120	6,2	9,8	15,0	30,7	39,1	324	3892	41441	20675	13732	10245	8141	6728	5710	4938	4332	3840	3432	3088	2791	2532
270	270	135	6,6	10,2	15,0	36,1	45,9	429	5790	54876	27384	18196	13584	10802	8935	7592	6575	5776	5130	4595	4143	3755	3417
300	300	150	7,1	10,7	15,0	42,2	53,8	557	8356	71254	35564	23639	17655	14048	11629	9890	8574	7542	6708	6017	5435	4936	4502
330	330	160	7,5	11,5	18,0	49,1	62,6	713	11770	91215	45534	30274	22620	18007	14916	12694	11015	9699	8635	7757	7016	6382	5831
360	360	170	8,0	12,7	18,0	57,1	72,7	904	16270	115655	57742	38399	28700	22857	18943	16131	14007	12343	11000	9891	8957	8159	7466
400	400	180	8,6	13,5	21,0	66,3	84,5	1160	23130	148414	74107	49294	36855	29365	24349	20747	18030	15901	14185	12769	11578	10560	9678
450	450	190	9,4	14,6	21,0	77,6	98,8	1500	33740	191922	95845	63767	47690	38012	31534	26885	23379	20635	18424	16601	15069	13760	12628
500	500	200	10,2	16,0	21,0	91	116,6	1930	48200	246949	123339	82075	61397	48955	40629	34657	30154	26633	23797	21460	19498	17824	16376
550	550	210	11,1	17,2	24,0	106	134	2440	67120	312214	155948	103789	77656	61934	51417	43875	38192	33748	30172	27227	24755	22647	20825
600	600	220	12,0	19,0	24,0	122	156	3070	92080	392838	196236	130621	97752	77982	64761	55283	48144	42564	38076	34382	31283	28642	26361
						Distance in metres				0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

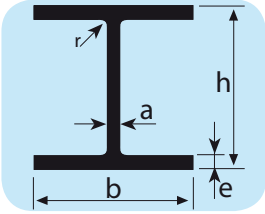
a b c



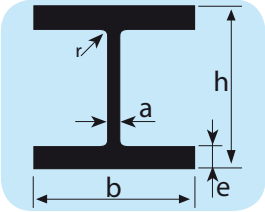
N. B.: The lines a b c represent deflection under load a=1/200; b=1/500; c=1/1000 of the distance between supports

"HEA" PARALLEL BROAD-FLANGED BEAMS

light series UNI 5397



Height	Wt	Surf.	Sect.	SIZE					Neutral axis x-x				y-y		
	g/m	m^2/t	cm^2	h mm	b mm	a mm	e mm	r mm	J_x cm^4	W_x cm^3	i_x cm	J_y cm^4	W_y cm^3	i_y cm
100	16,7	33,59	21,2	96	100	5	8	12	349	72,8	4,06	134	26,8	2,51
120	19,9	34,02	25,3	114	120	5	8	12	606	106	4,89	231	38,5	3,02
140	24,7	32,15	31,4	133	140	5,5	8,5	12	1030	155	5,73	389	55,6	3,52
160	30,4	29,80	38,8	152	160	6	9	15	1670	220	6,57	616	76,9	3,98
180	35,5	28,73	45,3	171	180	6	9,5	15	2510	294	7,45	925	103	4,52
200	42,3	26,95	53,8	190	200	6,5	10	18	3690	389	8,28	1340	134	4,98
220	50,5	24,95	64,3	210	220	7	11	18	5410	515	9,17	1950	178	5,51
240	60,3	22,72	76,8	230	240	7,5	12	21	7760	675	10,1	2770	231	6,00
260	68,2	21,70	86,8	250	260	7,5	12,5	24	10450	836	11,0	3670	282	6,50
280	76,4	20,94	97,3	270	280	8	13	24	13670	1010	11,9	4760	340	7,00
300	88,3	19,48	113	290	300	8,5	14	27	18260	1260	12,7	6310	421	7,49
320	97,6	18,03	124	310	300	9	15,5	27	22930	1480	13,6	6990	466	7,49
340	105	17,05	133	330	300	9,5	16,5	27	27690	1680	14,4	7440	496	7,46
360	112	16,34	143	350	300	10	17,5	27	33090	1890	15,2	7890	526	7,43
400	125	15,28	159	390	300	11	19	27	45070	2310	16,8	8560	571	7,34
450	140	14,36	178	440	300	11,5	21	27	63720	2900	18,9	9470	631	7,29
500	155	13,61	198	490	300	12	23	27	86970	3550	21,0	10370	691	7,24
550	166	13,31	212	540	300	12,5	24	27	111900	4150	23,0	10820	721	7,15
600	178	12,98	226	590	300	13	25	27	141200	4790	25,0	11270	751	7,05
650	190	12,68	242	640	300	13,5	26	27	175200	5470	26,9	11720	782	6,97
700	204	12,25	260	690	300	14,5	27	27	215300	6240	28,8	12180	812	6,84
800	224	12,05	286	790	300	15	28	30	303400	7680	32,6	12640	843	6,65
900	252	11,51	321	890	300	16	30	30	422100	9480	36,3	16550	903	6,50
1000	272	11,40	347	990	300	16,5	31	30	553800	11190	40,0	14000	934	6,35



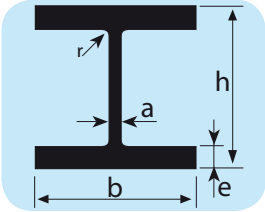
"HEB"
PARALLEL BROAD-FLANGED BEAMS
standard series

UNI 5397

Height	t Kg/m	Surf. m²/t	Sect. cm²	SIZE h mm	b mm	a mm	e mm	r mm	Neutral axis x-x J_x cm⁴	W_x cm³	i_x cm	y-y J_y cm⁴	W_y cm³	i_y cm
100	20,4	27,79	26,0	100	100	6	10	12	450	89,9	4,16	167	33,5	2,53
120	26,7	25,69	34,0	120	120	6,5	11	12	864	144	5,04	318	52,9	3,06
140	33,7	23,89	43,0	140	140	7	12	12	1510	216	5,93	550	78,5	3,58
160	42,6	21,55	54,3	160	160	8	13	15	2490	311	6,78	889	111	4,05
180	51,2	20,31	65,3	180	180	8,5	14	15	3830	426	7,66	1360	151	4,57
200	61,3	18,76	78,1	200	200	9	15	18	5700	570	8,54	2000	200	5,07
220	71,5	17,76	91,0	220	220	9,5	16	18	8090	736	9,43	2840	258	5,59
240	83,2	16,59	106	240	240	10	17	21	11260	938	10,3	3920	327	6,08
260	93,0	16,13	118	260	260	10	17,5	24	14920	1150	11,2	5130	395	6,58
280	103	15,73	131	280	280	10,5	18	24	19270	1380	12,1	6590	471	7,09
300	117	14,79	149	300	300	11	19	27	25170	1680	13,0	8560	571	7,58
320	127	13,94	161	320	300	11,5	20,5	27	30800	1930	13,8	9240	616	7,57
340	134	13,51	171	340	300	12	21,5	27	36660	2160	14,6	9690	646	7,53
360	142	13,03	181	360	300	12,5	22,5	27	43190	2400	15,5	10140	676	7,49
400	155	12,45	198	400	300	13,5	24	27	57680	2880	17,1	10820	721	7,40
450	171	11,87	218	450	300	14	26	27	79890	3550	19,1	11720	781	7,33
500	187	11,34	239	500	300	14,5	28	27	107200	4290	21,2	12620	842	7,27
550	199	11,16	254	550	300	15	29	27	136700	4970	23,2	13080	872	7,17
600	212	10,94	270	600	300	15,5	30	27	171000	5700	25,2	13500	902	7,08
650	225	10,76	286	650	300	16	31	27	210600	6480	27,1	13980	932	6,99
700	241	10,46	306	700	300	17	32	27	256900	7340	29,0	14440	963	6,87
800	262	10,34	334	800	300	17,5	33	30	359100	8980	32,8	14900	994	6,68
900	291	10,00	371	900	300	18,5	35	30	494100	10980	36,5	15820	1050	6,53
1000	314	9,90	400	1000	300	19	36	30	644700	12890	40,1	6280	1090	6,38

"HEM"
PARALLEL BROAD-FLANGED BEAMS
reinforced series

UNI 10034



Height	Wt	Surf.	Sect.	SIZE					Neutral axis x-x				y-y		
		m^2/t	cm^2	h mm	b mm	a mm	e mm	r mm	J_x cm^4	W_x cm^3	i_x cm	J_y cm^4	W_y cm^3	i_y cm
100	41,8	14,81	53,2	120	106	12	20	12	1140	190	4,63	399	75,3	2,74
120	52,1	14,17	66,4	140	126	12,5	21	12	2020	288	5,51	703	112	3,25
140	63,2	13,56	80,6	160	146	13	22	12	3290	411	6,39	1140	157	3,77
160	76,2	12,73	97,1	180	166	14	23	15	5100	566	7,25	1760	212	4,26
180	88,9	12,26	113	200	186	14,5	24	15	7480	748	8,13	2580	277	4,77
200	103	11,65	131	220	206	15	25	18	10640	967	9,00	3650	354	5,27
220	117	11,28	149	240	226	15,5	26	18	14600	1220	9,89	5010	444	5,79
240	157	9,23	200	270	248	18	32	21	24290	1800	11,0	8150	657	6,39
260	172	9,13	220	290	268	18	32,5	24	31310	2160	11,9	10450	780	6,90
280	189	8,94	240	310	288	18,5	33	24	39550	2550	12,8	13160	914	7,40
300	238	7,69	303	340	310	21	39	27	59200	3480	14,0	19400	1250	8,00
320	245	7,63	312	359	309	21	40	27	68130	3800	14,8	19710	1280	7,95
340	248	7,66	316	377	309	21	40	27	76370	4050	15,6	19710	1280	7,90
360	250	7,72	319	395	308	21	40	27	84870	4300	16,3	19520	1270	7,83
400	256	7,81	326	432	307	21	40	27	104100	4820	17,9	19340	1260	7,70
450	263	7,98	335	478	307	21	40	27	131500	5500	19,8	19340	1260	7,59
500	270	8,07	344	524	306	21	40	27	161900	6180	21,7	19150	1250	7,46
550	278	8,20	354	572	306	21	40	27	198000	6920	23,6	19160	1250	7,35
600	285	8,32	364	620	305	21	40	27	237400	7660	25,6	18980	1240	7,22
650	293	8,43	374	668	305	21	40	27	281700	8430	27,5	18980	1240	7,13
700	301	8,50	383	716	304	21	40	27	329300	9200	29,3	18860	1240	7,01
800	317	8,68	404	814	303	21	40	30	442600	10870	33,1	18630	1230	6,79
900	333	8,80	424	910	302	21	40	30	570400	12540	36,7	18450	1220	6,60
1000	349	8,97	444	1008	302	21	40	30	722300	14330	40,3	18460	1220	6,45

"HE" BEAMS UNDER COMPRESSION

pillars – steel with safety load OK=16 kg/mm²

UNI EN 10034

mm		max load (kg) in relation to pillar length (m):											
		2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	8
100	A	23555	21068	18434	15924	13732	11084	9093	7521	6304			
	B	29090	26000	22857	19809	16979	13774	11304	9327	7834			
	M	61237	55633	49777	44109	38342	33380	26851	22166	18873			
120	A	29985	27726	25142	22741	20139	17911	15629	12769	10852	9200		
	B	40296	37517	34000	30734	27336	24285	21501	17770	15027	12680		
	M	79879	74816	69987	62863	56812	50590	44827	39494	33096	28105		
140	A	38646	36405	33718	31304	28384	26031	23367	21020	18402	15651	13469	
	B	53333	50218	46802	43270	39540	35833	32300	29029	26060	22122	19005	
	M	100750	95525	89555	83740	77221	70086	64159	58090	52636	45730	39558	
160	A	49269	46676	44028	41112	38559	35474	32333	29561	26874	24537	21333	
	B	68952	65323	61617	57920	54300	49931	46459	42174	38442	35170	30808	
	M	124288	119507	113401	106410	100232	93029	85834	79671	72260	66393	60295	
180	A	58926	56186	53688	51042	48000	45019	42385	39178	36059	33095	30582	24404
	B	84943	81625	77392	73577	69653	65300	61099	56782	52502	48147	44649	35903
	M	148590	141625	136300	130417	123319	116954	109204	101842	94416	88000	80928	68666
200	A	71140	68317	65709	62832	59777	56631	53465	50339	46782	43474	40413	34850
	B	103272	99174	96123	91882	87384	82754	78100	73505	68659	64082	59504	51850
	M	175066	168064	161600	154470	148990	140990	135585	126554	118689	112342	104517	90943
220	A	86453	82967	80375	76776	74014	70951	67241	63900	60517	56522	53305	46342
	B	122352	118378	113750	190473	105507	101111	95789	91000	85153	81796	75883	67096
	M	202576	195934	180220	182473	175764	168338	160429	152254	144000	136599	129210	113828
240	A	105025	100721	97523	94523	90352	87148	84164	80313	76322	72282	67889	61134
	B	144957	139016	134603	130461	124629	120283	116164	111578	106000	100353	95280	85226
	M	275310	166133	255488	249500	240120	233109	223328	214335	206038	197135	186760	166333
260	A	119724	115733	112000	108500	104421	102117	97802	94476	90181	86260	82177	74267
	B	163310	157866	152774	148000	142436	139294	134354	128870	123816	118400	112094	102400
	M	305530	295260	288000	276661	270276	260266	252776	244000	234240	226683	216888	197393

"HE" BEAMS UNDER COMPRESSION

pillars – steel with safety load OK=16 kg/mm²

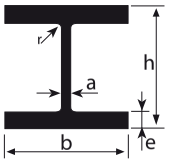
UNI EN 10034

mm		max load (kg) in relation to pillar length (m):											
		2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	8
280	A	135373	130823	127606	123555	119753	116179	112811	108867	104483	101090	96695	87954
	B	182817	176670	172327	166857	161723	158075	152459	148056	143020	137411	131400	120137
	M	384320	325694	317619	307456	300250	288962	282589	272567	265048	254516	247948	226070
300	A		153846	148760	144000	140625	157404	132352	129496	125000	120000	116883	106508
	B		203897	197157	192387	186375	182106	176711	171625	166825	160107	154909	142850
	M		418068	407529	394276	384888	375937	364631	356588	343943	334455	232306	301217
320	A			164495	159232	155500	151938	146352	143194	138222	132683	129246	117775
	B			213289	208129	201625	197007	191170	185669	179272	173208	167584	154538
	M			419495	405835	396190	384000	375438	367058	354042	344275	330596	310062
340	A			176528	170880	166875	163053	157058	151489	148333	142400	137806	126390
	B			225983	218752	213625	208732	201058	196719	187287	183516	177558	163736
	M			421066	410796	401015	288676	379909	368817	358354	346082	334622	311901
360	A				182784	178500	174412	168000	162042	157572	152320	147406	135195
	B				231168	225750	220580	212470	207884	200666	192640	187636	170982
	M				414699	401637	392369	380656	372321	359211	349369	335578	303139
400	A				203520	198750	191278	187058	180425	175448	168476	162038	149647
	B				253184	247250	237954	232705	224453	218262	209589	204180	186164
	M				420387	410456	400984	389014	377739	364531	354612	340705	314024
450	A					222500	214135	209411	201985	195068	188609	181401	166549
	B					272500	262255	256470	247375	240551	230993	222165	205116
	M					419250	409648	397511	386071	375272	360161	348467	321341
500	A					244961	237593	232352	224113	216438	207894	198742	184795
	B					295937	287037	280705	270751	261479	251157	243159	223251
	M					430575	420519	405058	390695	382255	367253	355406	325964
600	A					278769	270447	262608	253426	243221	235324	225093	207085
	B					392384	322388	315328	304225	243877	282352	270000	246857
	M					451100	437533	424759	412709	398575	382842	365987	334436

"HE/A" BEAMS

TABLE OF UNIFORMLY DISTRIBUTED NET LOADS in kg/m

SECTION – thickness in mm						Wt	sect.	Wx.	Jx.	DISTANCE BETWEEN SUPPORTS IN METRES													
HEA	h	b	a	e	r	Kg/ml	cm^2	cm^3	cm^4	1	2	3	4	5	6	7	8	9	10	11	12	13	14
100	96	100	5,0	8,0	12,0	16,7	21,2	73	349	9327	4639	3065	2269	1785	1457								
120	114	120	5,0	8,0	12,0	19,9	25,3	106	606	13548	6744	4463	3312	2614	2142	1799							
140	133	140	5,5	8,5	12,0	24,7	31,4	155	1033	19815	9871	6539	4861	3845	3158	2661	2282						
160	152	160	6,0	9,0	15,0	30,4	38,8	220	1673	28130	14019	9295	6918	5480	4511	3810	3277	2855	2512				
180	171	180	6,0	9,5	15,0	35,5	45,3	294	2510	37597	18745	12438	9266	7349	6059	5128	4420	3862	3408	3031			
200	190	200	6,5	10,0	18,0	42,3	53,8	389	3692	49750	24811	16470	12279	9747	8045	6817	5886	5152	4556	4061	3642		
220	210	220	7,0	11,0	18,0	50,5	64,3	515	5410	65870	32859	21822	16278	12932	10684	9064	7836	6870	6087	5437	4887	4414	
240	230	240	7,5	12,0	21,0	60,3	76,8	675	7763	86340	43079	28619	21359	16979	14038	11921	10318	9057	8037	7191	6476	5862	5327
260	250	260	7,5	12,5	24,0	68,2	86,8	836	10455	106940	53368	35465	26479	21061	17425	14809	12830	11276	10019	8978	8099	7345	6689
280	270	280	8,0	13,0	24,0	76,4	97,3	1010	13673	129204	64487	42864	32014	25474	21088	17934	15549	13677	12164	10912	9857	8951	8165
300	290	300	8,5	14,0	27,0	88,3	112	1260	18263	161192	80463	53495	39967	31815	26350	22422	19454	17125	15245	13691	12380	11258	10284
320	310	300	9,0	15,5	27,0	97,6	124	1480	22928	189342	94525	62854	46970	37400	30988	26380	22899	20170	17968	16148	14615	13304	12165
340	330	300	9,5	16,5	27,0	105	133	1680	27693	214935	107310	71365	53340	42483	35210	29985	26040	22948	20454	18394	16660	15177	13890
360	350	300	10,0	17,5	27,0	112	143	1890	33090	241808	120736	80304	60032	47824	39648	33776	29344	25872	23072	20761	18816	17153	15712
400	390	300	11,0	19,0	27,0	125	159	2310	45069	295555	147590	98185	73420	58511	48530	41365	35960	31728	28318	25505	231340	21120	19370
450	440	300	11,5	21,0	27,0	140	178	2900	63722	371060	185320	123813	92240	73540	61027	52049	45280	39984	35720	32205	29253	26734	24554
500	490	300	12,0	23,0	27,0	155	197	3550	86975	454245	226890	151002	112980	90105	74803	63829	55560	49094	43890	39604	36007	32939	30287
550	540	300	12,5	24,0	27,0	166	212	4150	111932	531034	265268	176569	132136	105410	87537	74724	65072	57528	51460	46465	42275	38704	35619
600	590	300	13,0	25,0	27,0	178	226	4790	141203	612942	306204	203839	152568	121734	101119	86343	75216	66522	59532	53780	48957	44849	41302
650	640	300	13,5	26,0	27,0	190	241	5470	175178	69970	349700	232817	174280	139082	115553	98693	86000	76086	68116	61561	56067	51388	47351
700	690	300	14,5	27,0	27,0	204	260	6240	215301	798516	398952	265628	198864	158724	131896	112675	98208	86911	77832	70367	64112	58788	54195
800	790	300	15,0	28,0	30,0	224	286	7680	303442	982816	491072	327008	244864	195488	162496	138866	121088	107211	96064	86903	79232	72706	67081
900	890	300	16,0	30,0	30,0	252	320	9480	422075	1213188	606216	403724	302352	241428	200728	171585	149664	132559	118824	107511	98096	90066	83146
1000	990	300	16,5	31,0	30,0	272	347	11190	553846	1432048	715616	476624	356992	285104	237088	202713	176864	156699	140512	127219	116096	106642	98501
						Distance in metres			0	1	2	3	4	5	6	c 7	8	9	10	11	12	b 13	14



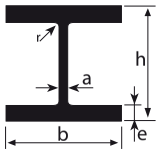
N. B.: The lines a b c represent deflection under load a=1/200; b=1/500; c=1/1000 of the distance between supports

"HE/B" BEAMS

TABLE OF UNIFORMLY DISTRIBUTED NET LOADS in kg/m

SECTION – thickness in mm						Wt	sect.	Wx.	Jx.	DISTANCE BETWEEN SUPPORTS IN METRES													
HEB	h	b	a	e	r	Kg/ml	cm^2	cm^3	cm^4	1	2	3	4	5	6	7	8	9	10	11	12	13	14
100	100	100	6,0	10,0	12,0	20,04	26,0	90	450	11500	5719	3779	2798	2202	1798								
120	120	120	6,5	11,0	12,0	26,7	34,0	144	864	18405	9163	6064	4501	3553	2912	2446							
140	140	140	7,0	12,0	12,0	33,7	43,0	216	1509	27614	13757	9115	6777	5361	4406	3714	3186						
160	160	160	8,0	13,0	15,0	42,6	54,3	311	2492	39765	19819	13142	9782	7749	6379	5389	4636	4040	3555				
180	180	180	8,5	14,0	15,0	51,2	65,3	426	3831	54477	27162	18022	13427	10650	8781	7431	6406	5598	4941	4394			
200	200	200	9,0	15,0	18,0	61,3	78,1	570	5696	72899	36357	24136	17995	14286	11792	9994	8630	7555	6683	5958	5344		
220	220	220	9,5	16,0	18,0	71,5	91,0	736	8091	94137	46961	31188	23266	18484	15272	12958	11204	9824	8706	7778	6993	6317	
240	240	240	10,0	17,0	21,0	83,2	106	938	11259	119981	59866	39772	29683	23597	19511	16570	14342	12592	11174	10000	9007	8154	7411
260	260	260	10,0	17,5	24,0	93,0	118	1150	14919	147107	73414	48788	36428	28975	23975	20378	17656	15519	13790	12359	11151	10114	9212
280	280	280	10,5	18,0	24,0	103	131	1380	19270	176537	88114	58571	43748	34813	28822	24513	21256	18700	16634	14925	13484	12249	11175
300	300	300	11,0	19,0	27,0	117	149	1680	25166	214923	107286	71329	53292	42423	35138	29901	25944	22840	20334	18262	16516	15021	13722
320	320	300	11,5	20,5	27,0	127	161	1930	30823	246913	123266	81966	61252	48773	40411	34402	29864	26306	23434	21061	19063	17352	15868
340	340	300	12,0	21,5	27,0	134	171	2160	36656	276346	137972	91758	68584	54626	45276	38559	33488	29514	26308	23661	21432	19526	17873
360	360	300	12,5	22,5	27,0	142	181	2400	43193	307058	153316	101974	76232	60730	50348	42892	37264	32855	29300	26365	23896	21785	19955
400	400	300	13,5	24,0	27,0	155	198	2880	57680	368485	184010	122415	91540	72953	60510	51578	44840	39565	35314	31808	28860	26342	24161
450	450	300	14,0	26,0	27,0	171	218	3550	79887	454229	226858	150954	112916	90025	74707	63717	55432	48950	43730	39428	35815	32731	30063 a
500	500	300	14,5	28,0	27,0	187	239	4290	107176	548933	274186	182479	136532	108889	90398	77137	67144	59330	53042	47863	43516	39809	36605
550	550	300	15,0	29,0	27,0	199	254	4970	136691	635961	317682	211456	158244	126237	104833	89487	77928	68893	61626	55644	50625	46348	42654
600	600	300	15,5	30,0	27,0	212	270	5700	171041	729388	364376	242564	181552	144860	120328	102745	89504	79159	70840	63995	58256	53367	49146
650	650	300	16,0	31,0	27,0	225	286	6480	210616	829215	414270	275805	206460	164763	136890	116916	101880	90135	80694	72929	66420	60878	56096
700	700	300	17,0	32,0	27,0	241	306	7340	256888	939279	469278	312450	233916	186699	155141	132530	115512	102222	91542	82760	75401	69138	63735
800	800	300	17,5	33,0	30,0	262	334	8980	359083	1149178	574196	382361	286312	228578	190001	162372	141584	125358	112324	101613	92643	85012	78435
900	900	300	18,5	35,0	30,0	291	371	10980	494065	1405149	702138	467607	350196	279633	282494	198740	173352	153541	137634	124506	113628	104238	96315
1000	1000	300	19,0	36,0	30,0	314	400	12890	644748	1649606	824332	549031	411224	328414	283103	233505	203728	180498	161852	146539	133725	122835	113455
						Distanza in metri			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

c b

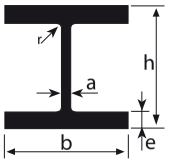


N. B.: The lines a b c represent deflection under load a=1/200; b=1/500; c=1/1000 of the distance between supports

"HE/M" BEAMS

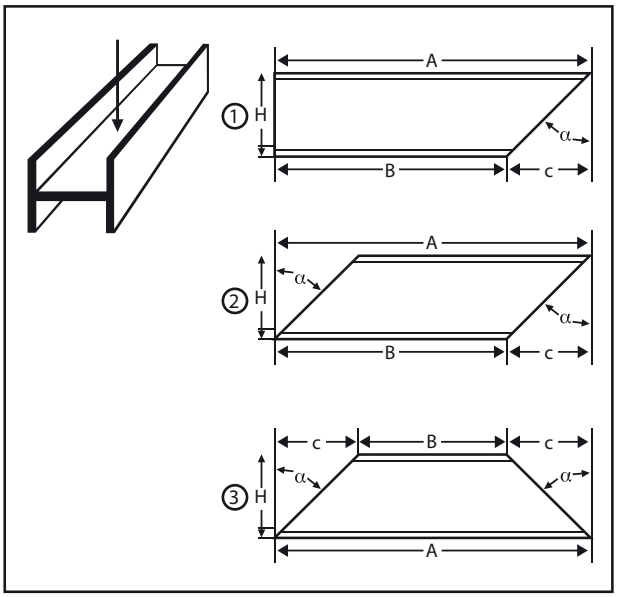
TABLE OF UNIFORMLY DISTRIBUTED NET LOADS in kg/m

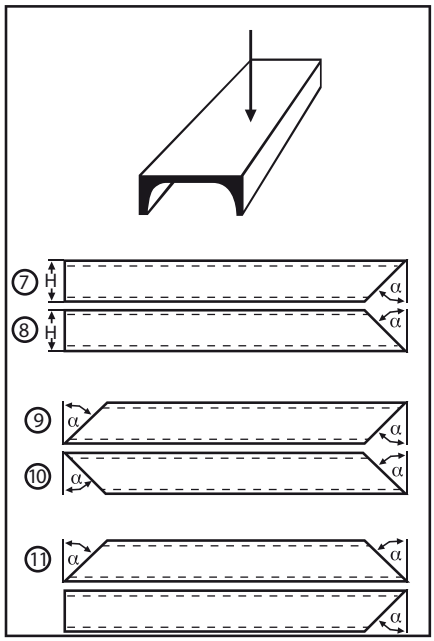
SECTION thickness in mm						Wt	sect.	Wx.	Jx.	DISTANZA FRA GLI APPOGGI IN METRI													
HEM	h	b	a	e	r	Kg/ml	cm^2	cm^3	cm^4	1	2	3	4	5	6	7	8	9	10	11	12	13	14
100	120	106	12,0	20,0	12,0	41,8	53,2	190	1143	24278	12076	7981	5913	4655	3803								
120	140	126	12,5	21,0	12,0	52,1	66,4	288	2018	36812	18328	12132	9008	7112	5831	4902							
140	160	146	13,0	22,0	12,0	63,2	80,6	411	3291	52545	26178	17346	12899	10206	8398	7073	6070						
160	180	166	14,0	23,0	15,0	76,2	97,1	566	5098	72372	36072	23921	17807	14109	11617	9816	8446	7364	6483				
180	200	186	14,5	24,0	15,0	88,9	113	748	7483	95655	47694	31648	23580	18704	15424	13055	11257	9838	8685	7726			
200	220	206	15,0	25,0	18,0	103	131	967	10642	123673	61682	40950	30532	24240	20011	16961	14648	12826	11348	10119	9079		
220	240	226	15,5	26,0	18,0	117	149	1220	14605	156043	77846	51702	38572	30647	25325	21490	18584	16298	14446	12909	11609	10491	
240	270	248	18,0	32,0	21,0	157	200	1800	24289	230243	114886	76329	56972	45295	37458	31815	27544	24187	21470	19218	17316	15682	14259
260	290	268	18,0	32,5	24,0	172	220	2160	31307	276308	137896	91644	68432	54436	45048	38293	33184	29172	25928	23243	20976	19032	17341
280	310	288	18,5	33,0	24,0	189	240	2550	39547	326211	162822	108233	80844	64335	53266	45306	39288	34566	30750	27594	24932	22651	20668
300	340	310	21,0	39,0	27,0	238	303	3480	59201	445202	222244	147766	110408	87898	72812	61968	53776	47351	42164	37877	34264	31171	28485
320	359	309	21,0	40,0	27,0	245	312	3800	68135	486155	242710	161398	120620	96055	79597	67771	58840	51839	46190	41523	37593	34230	31313
340	377	309	21,0	40,0	27,0	248	316	4050	76372	518152	258704	172056	128608	102440	84912	72321	62816	55368	49360	44399	40224	36653	33557
360	395	308	21,0	40,0	27,0	250	319	4300	84867	550150	274700	182717	136600	108830	90233	76879	66800	58906	52540	47286	42867	39088	35814
400	432	307	21,0	40,0	27,0	256	326	4820	104119	616704	307968	204885	153216	122112	101291	86345	75072	66247	59136	53271	48341	44130	40485
450	478	307	21,0	40,0	27,0	263	335	5500	131484	703737	351474	233878	174948	139485	115755	98730	85896	75855	67770	61107	55511	50735	46604
500	524	306	21,0	40,0	27,0	270	344	6180	161929	790770	394980	262870	196680	156858	130220	111116	96720	85463	76404	68943	62680	57339	52723
550	572	306	21,0	40,0	27,0	278	354	6920	197984	885482	442324	294419	220328	175762	145959	124591	108496	95916	85796	77466	70477	64521	59377
600	620	305	21,0	40,0	27,0	285	364	7660	237447	980195	489670	325972	243980	194671	161703	138074	120280	106377	95198	86000	78287	71717	66044
650	668	305	21,0	40,0	27,0	293	374	8430	281667	1078747	538934	358801	268588	214343	178082	152098	132536	117256	104974	94872	86404	79194	72972
700	716	304	21,0	40,0	27,0	301	383	9200	329278	1177299	588198	391630	293196	234015	194461	166122	144792	128135	114750	103744	94521	86672	79900
800	814	303	21,0	40,0	30,0	317	404	10870	442598	1391043	695046	462836	346572	276687	229991	196547	171384	151743	135966	123000	112143	102907	94945
900	910	302	21,0	40,0	30,0	333	424	12540	570434	1604787	801894	534041	399948	319359	265522	226972	197976	175350	157182	142257	129764	119142	109989
1000	1008	302	21,0	40,0	30,0	349	444	14330	722299	1833891	916422	610366	457164	365103	303613	259591	226488	200663	179934	162910	148665	136558	126131
						Distance in metres			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

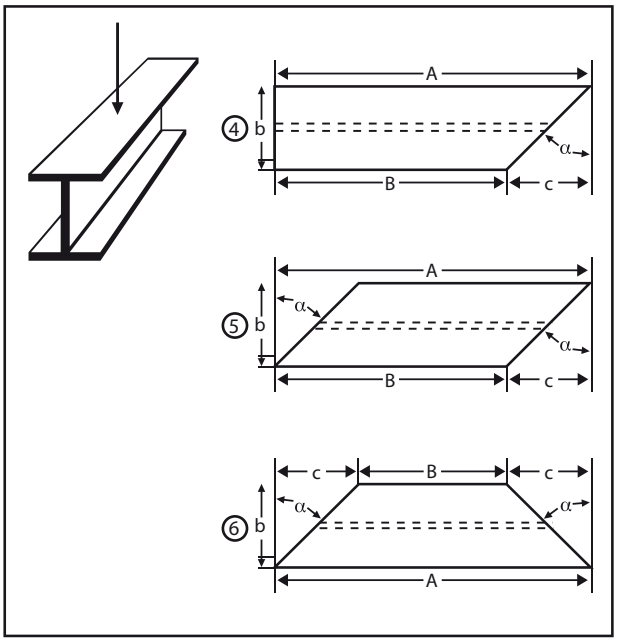


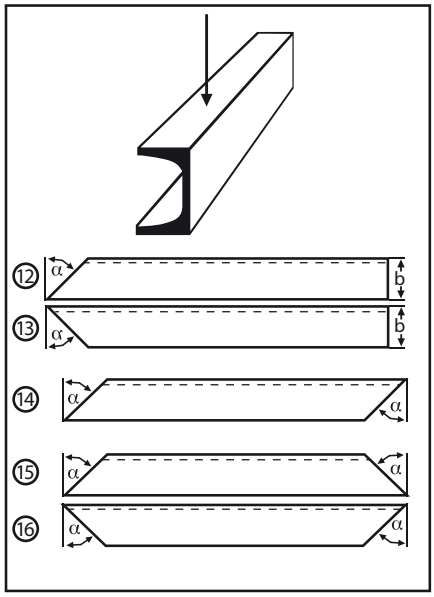
N. B.: The lines a b c represent deflection under load a=1/200; b=1/500; c=1/1000 of the distance between supports

CUTTING DIAGRAMS – BEAMS AND CHANNEL BARS









Dimensional field of application	Straight cutting		Inclined cutting (≤ 45°)	
	Length	A = 1 + 20 rm	Length	A = 1 + 20 m.
	Width of section	H = 80 + 1000 mm	Width of section	H = 80 + 1000 mm
			Height	H = 100 + 300 mm

DIMENSIONAL RANGE – HEAVY PLATES

PLATE THEORETICAL WEIGHT

THICKNESS mm	Wt kg/m²	SIZE (mm) – WEIGHT (kg) – SPECIFIC WEIGHT 7,85 Kg\m²						
		6000 x 2000	6000 x 2500	8000 x 2000	8000 x 2500	10000 x 2500	12000 x 2500	12000 x 3000
		12 m²	15 m²	16 m²	20 m²	25 m²	30 m²	36 m²
5	39,25	471	589	628	785	982	1178	1413
6	47,1	566	707	754	942	1178	1413	1696
7	54,95	660	825	880	1099	1374	1649	1978
8	62,8	754	942	1005	1256	1570	1884	2261
9	70,65	848	1060	1131	1413	1767	2120	2544
10	78,5	942	1178	1256	1570	1963	2355	2826
11	86,35	1037	1296	1382	1727	2159	2591	3109
12	94,2	1131	1413	1508	1884	2355	2825	3392
13	102,05	1225	1531	1633	2041	2552	3062	3674
14	109,9	1319	1649	1759	2198	2748	3297	3957
15	117,75	1413	1767	1884	2355	2944	3533	4239
16	125,6	1508	1884	2010	2512	3140	3768	4522
18	141,3	1696	2120	2261	2826	3533	4239	5087
20	157	1884	2355	2512	3140	3925	4710	5652
22	172,7	2073	2591	2764	3454	4318	5181	6218
25	196,25	2355	2944	3140	3925	4907	5888	7065
26	204,1	2450	3062	3266	4082	5103	6123	7348
28	219,8	2638	3297	3517	4396	5495	6594	7913
30	235,5	2826	3533	3768	4710	5888	7065	8478
35	274,75	3297	4122	4396	5495	6869	8243	9891
40	314	3768	4710	5024	6280	7850	9420	11304
45	353,25	4239	5299	5652	7065	8832	10598	12717
50	392,5	4710	5888	6280	7850	9813	11775	14130
55	431,75	5181	6477	6908	8635	10794	12953	15543
60	471	5652	7065	7536	9420	11775	14130	16956
65	510,25	6123	7654	8164	10205	12757	15308	18396
70	549,5	6594	8243	8792	10990	13738	16485	19782
75	598,75	7065	8832	9420	11775	14719	17663	21555
80	628	7536	9420	10048	12560	15700	18840	22608
85	667,25	8007	10009	10676	13345	16682	20018	24021
90	706,5	8478	10598	11304	14130	17663	21195	25434
95	745,75	8949	11187	11923	14915	18644	22373	26847
100	785	9420	11775	12560	15700	19625	23550	28260
110	863,5	10362	12953	13816	17270	21588	25905	-
120	942	11304	14130	15072	18840	23550	28260	-
125	981,25	11775	14719	15700	19625	24532	29438	-
130	1020,5	12246	15308	16328	20410	25513	30615	-
140	1099	13188	16485	17584	21980	27475	-	-
150	1177,5	14130	17663	18840	23550	29438	-	-

BLACK SHEETS

HOT-ROLLED S235JR +
UNI EN 10025
UNI EN 10143

thickness	weight	1000 x 2000	1250 x 2500	1500 x 3000	1500 x 6000	1800 x 6000	2000 x 6000
mm	kg/m²	weight (kg)					
1.5	11.8	23.6	36.7	53			
1.8	14.1	28.2	44.2	64			
2	15.7	31.4	49	71			
2.5	19.6	39.3	61	88	176.4		
3	23.6	47.1	73	106	212.4	254.8	280
3.5	27.5	55	85.9	123.6	247.3		329.7
4	31.4	62.8	98	141	282.6	339.12	376.8
5	39.2	78.5	123	176	352.8	423.3	472
6	47.1	94.2	147	212	423.9	508.6	566
7	55	110	172	247	495	594	660
8	62.8	126	196	282	565.2	678.2	754
9	70.6	141	221	318	635.4	762.4	848
10	78.5	157	245	353	706.5	847.8	942
12	94.2	188	294	424			1131
15	117.8	236	368	530			1416

COLD-ROLLED SHEETS

UNI EN 10130

thickness mm	weight kg/m²	1000 x 2000	1250 x 2500	1500 x 3000
		weight (kg)		
0.3	2.36	4.72		
0.35	2.75	5.51		
0.4	3.14	6.28		
0.45	3.53	7.06		
0.5	3.93	7.86		
0.6	4.71	9.42	14.7	
0.8	6.28	12.6	19.7	28.3
1	7.85	15.7	24.5	35
1.2	9.42	18.8	29.5	42
1.5	11.8	23.6	36.7	53
1.8	14.1	28.2	44.2	64
2	15.7	31.4	49	71
2.5	19.6	39.3	61	88
3	23.6	47.1	73	106

PICKLED SHEETS

UNI EN 10111

thickness mm	weight kg/m²	1000 x 2000	1250 x 2500	1500 x 3000
		weight (kg)		
1.5	11.8	23.6	36.7	53
1.8	14.1	28.2	44.2	64
2	15.7	31.4	49	71
2.5	19.6	39.3	61	88
3	23.6	47.1	73	106
3.5	27.5	55	85.9	123.6
4	31.4	62.8	98	141
5	39.2	78.5	123	176
6	47.1	94.2	147	212
7	55	110	172	247
8	62.8	126	196	282
9	70.6	141	221	318
10	78.5	157	245	353
12	94.2	188	294	424
15	117.8	236	368	530

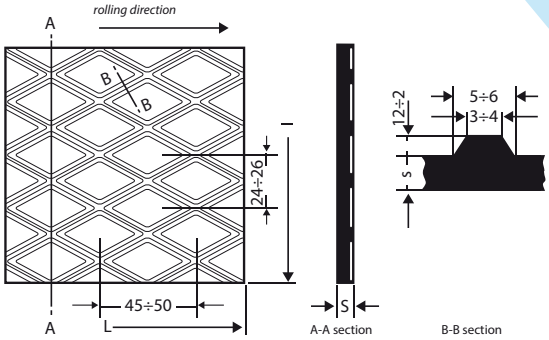
GALVANIZED SHEETS

UNI EN 10346

thickness mm	weight kg/m²	1000 x 2000	1250 x 2500	1500 x 3000
		weight (kg)		
0.3	2.36	4.72		
0.35	2.75	5.51		
0.4	3.14	6.28		
0.45	3.53	7.06		
0.5	3.93	7.86		
0.6	4.71	9.42	14.7	21.19
0.8	6.28	12.6	19.7	28.3
1	7.85	15.7	24.5	35
1.2	9.42	18.8	29.5	42
1.5	11.8	23.6	36.7	53
1.8	14.1	28.2	44.2	64
2	15.7	31.4	49	71
2.5	19.6	39.3	61	88
3	23.6	47.1	73	106
3.5	27.5	55	85.9	123.6
4	31.4	62.8	98	141
5	39.2	78.5	123	176

DIAMOND PATTERNED SHEETS
UNI 3151

h = diamond pattern height
For thickness < 3 mm: 1,00 < h < 2,00 mm
For thickness ≥ 3 mm: h according to standard
Raised surface: ≥ 30 %

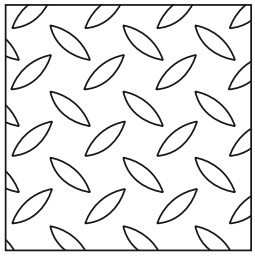


thickness	weight	size (mm)				
		1000 x 2000	1000 x 3000	1250 x 2500	1500 x 3000	1500 x 6000
mm	kg/m²	weight (kg)				
* 2.5	22.2	45		69	100	
3	28.6	57.2	85.8	89.4	128.7	257.4
4	36.5	73	109.5	114	164.3	328.5
5	44.3	88.6	132.9	138.5	199.4	398.7
6	52.1	104.2	156.3	163	234.5	486.9
8	67.8	135.6	203.4	211.9	305.1	610.2
10	83.6	167.2	250.8	261.2	376.2	752.4
12	99.1	198.2	297.3	309.7	446	891.9

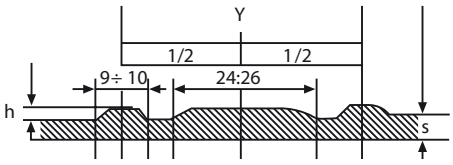
* non unificato

TEARDROP PATTERNED SHEETS
UNI 4630

h = teardrop pattern height
For thickness < 3 mm: 1,00 < h < 2,00 mm
For thickness ≥ 3 mm: h according to standard
Raised surface: ≥ 30 %



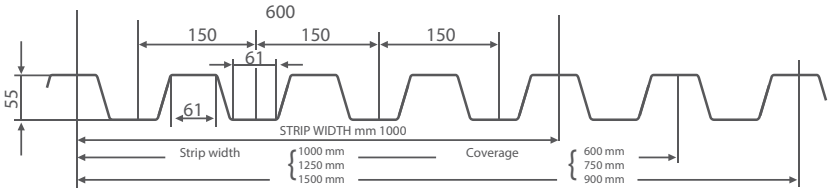
thickness	weight	size (mm)		
		1000 x 2000	2500 x 1250	3000 x 1500
mm	kg/m²	weight (kg)		
3	26.05	52.1	81.1	117
4	33.95	67.9	106	153
5	41.75	83.5	130.1	187.6
6	49.60	99.2	154	223
8	65.30	130.6	204	284
10	81.10	162.2	250	365



TRAPEZOIDAL SHEETS FOR FLOORS

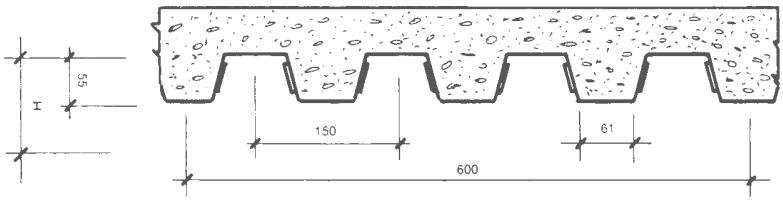
EGB 210

UNI EN 1993-1-3



length 6000

static characteristics							
thickness mm		0.6	0.7	0.8	1.0	1.2	1.5
weight kg/m²		7.85	9.15	10.46	13.08	15.70	19.62
weight k/rm	1000	4.71	5.49	6.28	7.85	9.42	11.77
	1250	5.88	6.86	7.85	9.81	11.77	14.17
	1500	7.06	8.24	9.42	11.77	14.13	17.66
J cm⁴/m		41.76	51.16	59.89	78.23	96.83	122.74
W cm³/m		14.37	18.06	21.59	27.66	33.31	41.31



EGB 210/D

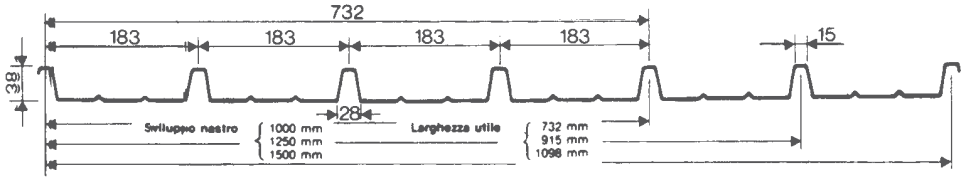
with collaborating sheet

static characteristics					
thickness m m	0.7	0.8	1.0	1.2	1.5
weight kg/m²	9.15	10.46	13.08	15.70	19.62
weight k/rm	5.49	6.28	7.85	9.42	11.77
J cm⁴/m	50.05	59.15	77.63	96.48	122.52
W cm³/m	15.38	18.52	25.00	31.81	41.22

length 6000

TRAPEZOIDAL SHEETS FOR WALLS AND ROOFS

EGB 401



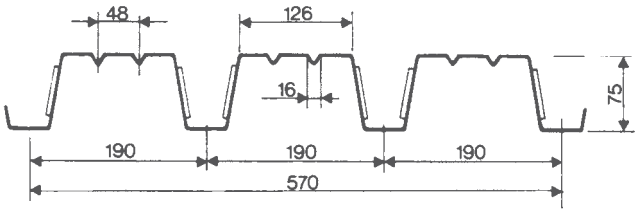
static characteristics					
thickness mm		0.6	0.7	0.8	1.0
weight kg/m²		6.42	7.49	8.57	10.72
weight k/rm	1000	4.71	5.49	6.28	7.85
	1250	5.88	6.86	7.85	9.81
	1500	7.06	8.24	9.42	11.77
J cm⁴/m		13.79	16.04	18.31	22.83
W cm³/m		4.75	5.55	6.36	7.98

length 2000 3000

TRAPEZOIDAL SHEETS FOR FLOORS WITH COLLABORATING SHEETS EGB 1200/D

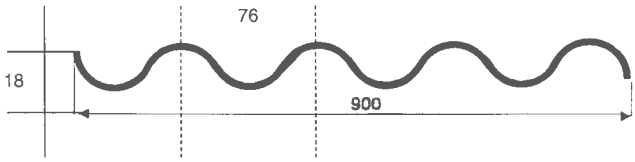
ONLY ON REQUEST

WITH COLLABORATING SHEET



static characteristics						
thickness m m	0.6	0.7	0.8	1.0	1.2	1.5
weight kg/m²	8.26	9.64	11.00	13.75	16.50	20.65
weight k/m	4.71	5.49	6.28	7.85	9.42	11.77
reduced Jx/m cm⁴/m	83.3	100.6	117.30	148.5	179.1	222.30
Wx top > cm³/m	29.5	37.1	44.1	57.5	70.2	87. 2
Wx bottom < cm⁴/m	17.8	21.0	24.2	30.2	36.2	44. 9

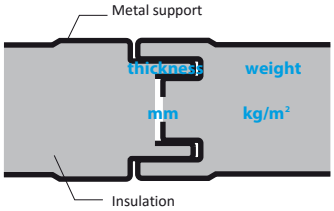
CORRUGATED GALVANIZED SHEETS



length 2000

thickness m m	0.25	0.30	0.40	0.50	0.60	0.80	1.00
weight kg/m²	2.14	2.73	3.52	4.30	5.10	6.65	8.25

MINERAL WOOL WALL PANELS

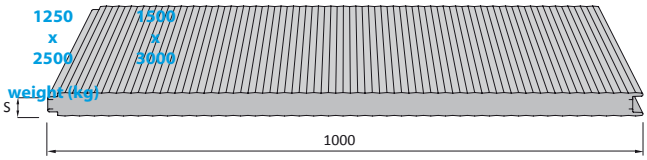


1000 x 2000

1250 x 2500

1500 x 3000

weight (kg)

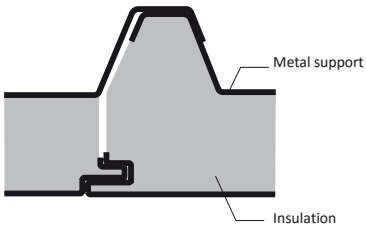


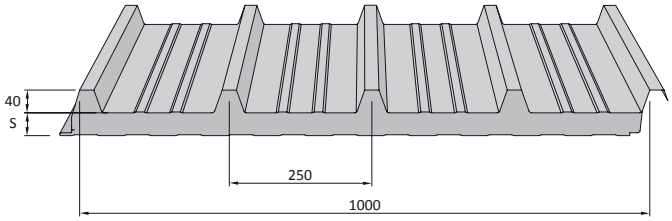
Thickness 50/80/100 mm
Deflection: F ≤ 1/200L

Mineral wool wall panels consist of two steel sheets enclosing in between an insulating mineral wool layer (100 kg/m^3), with orientated fibers and high density staggered joints.
Applicable to any sort of structural wall, either civil or industrial, they can be supplied with REI certification (mechanical resistance, gas tightness and thermal insulation).

Thickn	REI	Supp thickn	Wt	K	U	Uniformly distributed max load capacity (kg/m^2) steel															
						Support spacing (m)															
mm		mm	Kg/m^2	W/m^{2}K	W/m^{2}K	simple span								multiple spans							
						2	2,5	3	3,5	4	4,5	5	5,5	2	2,5	3	3,5	4	4,5	5	5,5	6
50	30	0,6 + 0,6	15,40	0,77	0,78	98	78	66	52	-	-	-	-	109	87	73	62	49	-	-	-	-
80	60	0,6 + 0,6	18,40	0,50	0,51	156	127	105	80	61	49	-	-	168	141	107	100	77	60	50	40	-
100	120	0,6 + 0,6	20,40	0,41	0,41	183	157	131	101	77	60	49	40	193	170	147	124	96	76	61	52	43

MINERAL WOOL ROOFING PANELS





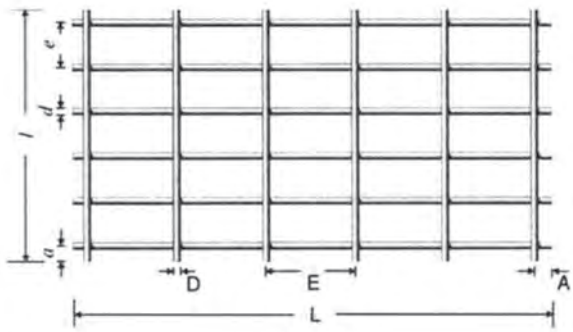
Thickness 50/80/100 mm
Deflection: F ≤ 1/200L

Mineral wool roofing panels consist of two steel sheets enclosing in between an insulating mineral wool layer (100 kg/m^3), with orientated fibers and high density staggered joints.
Applicable to any sort of structural wall, either civil or industrial, they can be supplied with REI certification (mechanical resistance, gas tightness and thermal insulation).

Thickn	REI	Supp. thickn	Wt	K	U	Uniformly distributed max load capacity (kg/m^2) steel															
						Support spacing (m)															
mm		mm	Kg/m^2	W/m^{2}K	W/m^{2}K	simple span								multiple spans							
						1,5	2	2,5	3	3,5	4	4,5	5	1,5	2	2,5	3	3,5	4	4,5	5	5,5
50	30	0,6 + 0,5	15,85	0,70	0,72	198	140	105	85	63	-	-	-	233	165	125	102	80	62	-	-	-
80	60	0,6 + 0,5	18,85	0,47	0,48	267	298	160	130	109	88	65	-	306	230	185	152	130	110	90	70	-
100	120	0,6 + 0,5	20,85	0,39	0,40	285	211	168	140	118	102	88	73	320	246	196	162	136	118	105	90	79

WELDED WIRE MESH

UNI 11229 - UNI 11243



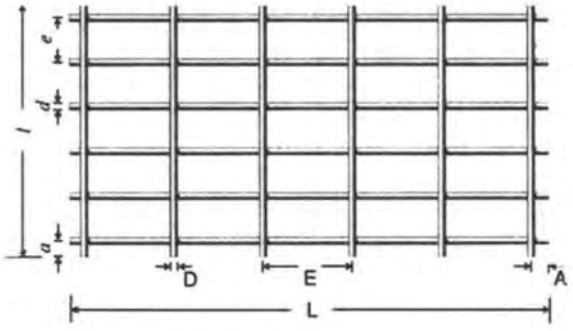
PANELS type "SERRURIER"

Finish	Mesh mm	Diameter mm	Size mm	Weight kg (theoretical)	Art. no.
Untreated	40 x 40	4	1600 x 2000	15,0	0700
Untreated	50 x 50	4	1600 x 2000	12,3	0013
Untreated	50 x 50	4	1600 x 2000	31,5	0029
Untreated	50 x 50	4	2000 x 2500	19,7	0215
Untreated	100 x 50	4	2000 x 2500	14,7	0152
Untreated	100 x 50	6	1000 x 2000	13,3	0018
Untreated	100 x 50	6	1600 x 2000	21,3	0014
Untreated	100 x 100	6	1600 x 2000	14,2	0028
Galvanized	50 x 50	4	1000 x 2000	7,8	0113
Galvanized	50 x 50	4	1600 x 2000	12,6	0030
Galvanized	50 x 50	4	1600 x 2000	31,5	0015
Galvanized	50 x 50	4	2000 x 2500	19,7	0216
Galvanized	100 x 50	4	2000 x 2500	14,7	0155
Galvanized	100 x 50	6	1600 x 2000	21,3	0034

TECHNICAL INFORMATION

D - Ø of weft wires
d - Ø of warp wires
E - longitudinal mesh
e - transversal mesh

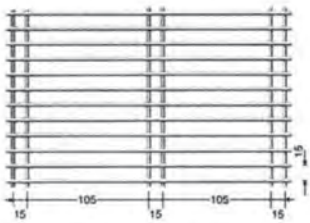
A - longitudinal projection
a - transversal projection
L - panel length
l - panel width



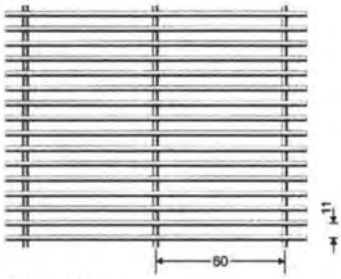
Upon request we manufacture mesh panels having wires, meshes and dimensions different from the above standards, up to the max size of mm 2000 x 6000.

WELDED WIRE MESH

UNI 11243



RETE TEC 15 + 105



RT 60 x 11

MAGLIA QUADRA

STANDARD PANELS

Finish	Mesh mm	Diameter mm	Size mm	Weight Kg	Art. no.
Untreated	25 x 25	3	1225 x 2000	10,8	0114
Untreated	30 x 30	3	1000 x 2000	7,3	0092
Untreated	30 x 30	3	1200 x 2400	10,6	0093
Untreated	30 x 30	3	1600 x 2400	13,9	0625
Untreated	40 x 40	4	1200 x 2400	14,1	0115
Untreated	40 x 40	4	1600 x 2400	19,0	0626
Untreated	50 x 50	3	1000 x 2000	4,4	0042
Untreated	50 x 50	3	1200 x 2400	6,4	0049
Untreated	50 x 50	3	16000 x 2000	7,0	0792
Untreated	50 x 50	3	1600 x 2000	10,6	0793
Untreated	50 x 50	4	1000 x 2000	7,6	0094
Untreated	50 x 50	4	1200 x 2400	11,3	0005
Untreated	50 x 50	4	1600 x 2000	12,6	0013
Untreated	50 x 50	4	1600 x 3000	18,0	0794
Untreated	50 x 50	4	1600 x 5000	31,5	0029
Untreated	50 x 50	4	2000 x 2500	19,7	0215
Untreated	50 x 50	5	1200 x 2400	17,7	0047
Untreated	50 x 50	5	1600 x 2000	19,7	0795
Untreated	50 x 50	5	1600 x 3000	29,6	0796
Untreated	50 x 50	5	2000 x 2500	30,8	0797
Untreated	50 x 30	4	1200 x 2400	14,5	0158
Untreated	100 x 100	4	1200 x 2400	5,6	0393
Untreated	100 x 100	5	1200 x 2400	8,8	0229
Untreated	100 x 100	6	1200 x 2400	12,7	0230
Galvanized	50 x 50	4	1000 x 2000	7,8	0113
Stainless steel	50 x 50	4	1200 x 2400	11,4	0083
Stainless steel	40 x 40	3	1000 x 2000	9,5	0073

SAFETY MESH PANELS

Finish	Mesh mm	Diameter mm	Size mm	Weight Kg	Art. no.
Untreated	TEC	3	1240 x 2400	13,4	0008
Untreated	TEC ROV	3	1000 x 2000	9,0	0006
Stainless steel	TEC	3	1240 x 2400	13,5	0290
Untreated	60 x 11 (RT)	3	1200 x 2400	16,6	0226

All panels are unfinished.
Galvanized or stainless steel panels only on request.

PERFORATED METAL MESH

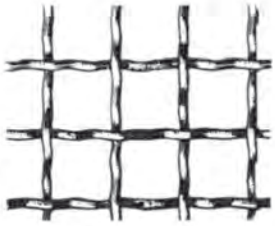
UNI 2333

Perforated metal sheets with hole Ø from 0,5 to 100 mm, size 1000 x 2000 mm, thickness from 1 to 10 mm, in iron and or stainless steel can be supplied on request.

hole Ø mm	pitch mm	thickness mm						
2	3,2	1	1,5					
3	5,2	1	1,5	2	3			
4	7,0	1	1,5	2	3			
5	8,0	1	1,5	2	3			
6	9,0	1	1,5	2	3			
8	12,0	1	1,5	2	3	4		
10	15,0	1	1,5	2	3	4	5	6
15	22,0	1	1,5	2	3			

hole Ø mm	pitch mm	thickness mm		
5 x 5	7,0	1	1,5	
8 x 8	10,0		1,5	
8 x 8	15,0		1,5	
10 x 10	12,0		1,5	
10 x 10	15,0		1,5	

SQUARE WOVEN WIRE MESH

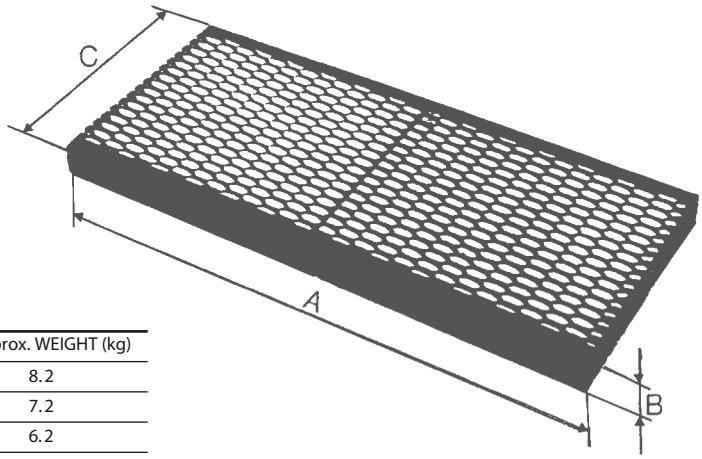


mesh	approx. weight kg/m²																						
	wire	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
mm	mm	1	1.1	1.2	1.3	1.4	1.5	1.6	1.8	2	2.2	2.4	2.7	3	3.4	3.9	4.4	4.9	5.4	5.9	6.4	7	7.6	8.2
8 x 8		1.54	1.87	2.22	2.59	3.03																		
10 x 10				1.87	2.19	2.55	2.92			4.50														
12 x 12					1.80	2.25	2.70	3.10	4.00	4.50														
15 x 15							1.97	2.25	2.84	3.5	4.25	5.00	6.40											
20 x 20									2.13	2.62	3.18	3.77	5.27	5.95										
25 x 25									1.72	2.15	2.57	3.05	3.86	4.80	6.10	8.50	10.3							
30 x 30										1.67	2.13	2.53	3.21	3.97	5.10	6.55	8.55	10.6						
35 x 35												2.18	2.67	3.48	4.40	5.78	7.38	9.10	11.0					
40 x 40												1.92	2.43	3.00	3.86	5.10	6.46	8.11	9.74	10.7	12.3			
50 x 50												1.70	1.92	2.43	3.10	4.12	5.23	6.49	7.90	8.90	10.5	12.5		
60 x 60														2.04	2.62	3.45	4.44	5.43	6.66	7.90	9.30	11.1	13.1	15.3
80 x 80														1.62	2.21	3.00	3.37	4.67	5.10	6.10	7.20	8.60	10.1	11.9
																1.83	2.33	2.88	3.50	4.18	4.92	5.88	6.94	8.10

Other heights are available on request.

READY-TO-USE LANDINGS AND STAIR TREADS

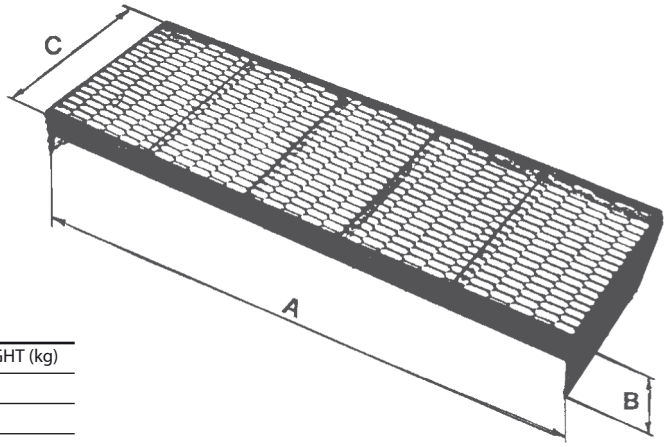
Model “INDUSTRIA”



most common sizes (mm)

A	B	C	approx. WEIGHT (kg)
1000	40	250	8.2
900	40	250	7.2
800	40	250	6.2
700	40	250	6.3
600	40	250	4.8
500	40	250	4.3

Model “GALAXI”
hot dip galvanized – must be mounted with bolts



most common sizes (mm)

A	B	C	approx. WEIGHT (kg)
1000	70	250	5.3
800	70	250	3.4
700	70	200	2.9
600	70	200	2.4
500	70	200	2.2

EXPANDED DIAMOND MESH
EXPANDED FLATTENED DIAMOND MESH

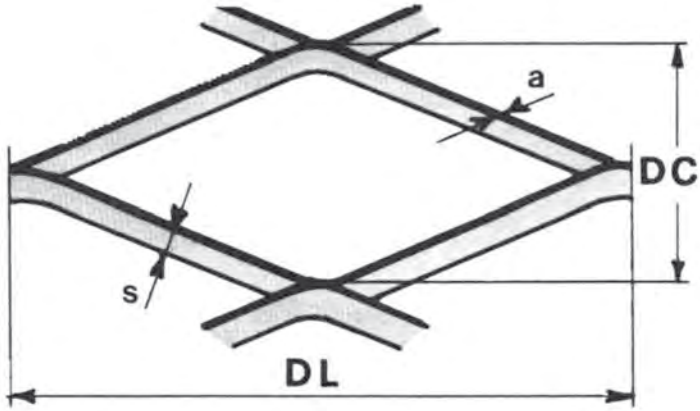
Commercial reference	Conventional designation			Weight per m²	Max size of rolls or sheets (mm)	
	LW mm	a - 1/10 mm	S - 1/10 mm	-Kg	Width	Length
9	200	45	30	2,9	1000 1250 1500 2000 2500	12000 10000 11000
8	200	60	30	3,9		
13	200	50	50	5,1		
44	200	45	30	3,6	1000 1250 1500 2000 2500	9000 7000 8000
45	200	60	30	4,7		
48	200	50	50	6,7		
24	110	30	30	3,6	1000 1250 1500 2000 2500	10000 6500 5000
21	110	45	30	5		
24/A	110	60	30	6,5		
3	60	30	10	1,95	1000 1250 1500 2000 2500	8000 5000
4	60	30	15	3	1000 1250 1500 2000 2500	8000 5000
20	60	30	20	4,2		
19	60	30	30	6,3	1000 1250 1500	6000 4500 3000
22	60	45	30	8,8		
40	60	60	30	12		
27	43	25	15	3,8	1000 1250 1500	6500 3200
41	43	50	30	15		
2	43	25	10	2,75	1000 1250 1500 2000 2500	5400 3400
17	43	25	15	4,2	1000 1250 1500 2000 2500	5400 3400
28	43	25	20	5,5		
36	28	20	6	1,5	1000 1250	3000 4000
29	28	20	10	2,5	1000 1250	3000 4000
31	238	20	15	3,5	1000 1250	5000
EXPANDED FLATTENED DIAMOND MESH						
S/3	60	30	10	1,8	1000 1250 1500	5000 6000 6000
S/4	60	30	15	2,8		
S/20	60	30	20	3,9		
S/27	43	25	15	3,6	1000 1250 1500	7000
S/2	43	25	10	2,5	1000 1250 1500	6000 7500 3600
S/17	43	25	15	3,9	1000 1250 1500	6000 6000
S/28	43	25	20	5,3		

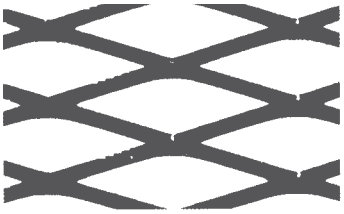
Conventional designation
It is made up of three figures denoting:
1st figure = long way (mm)
2nd figure = width (1/10 mm)
3rd figure = thickness (1/10 mm)

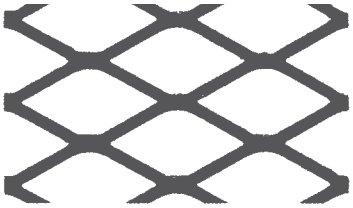
Example: 90-70-40
mesh with LW + 90 mm
width a = 7 mm
thickness s = 4 mm

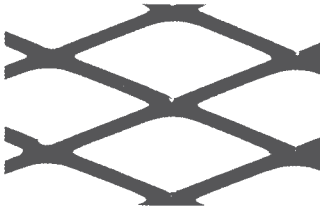
Mesh dimensions
s = strand thickness
a = strand width

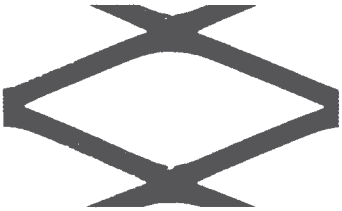
DL = LW = long way
DC = SW = short way

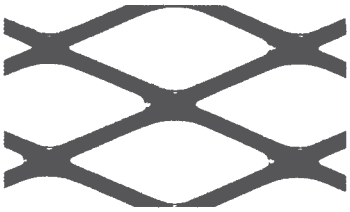


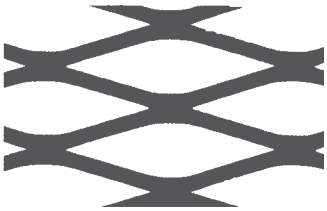

2-17-28 (10x43 mm)


36-29-31 (14x28 mm)


3-4-20-19-22-40 (20x60 mm)

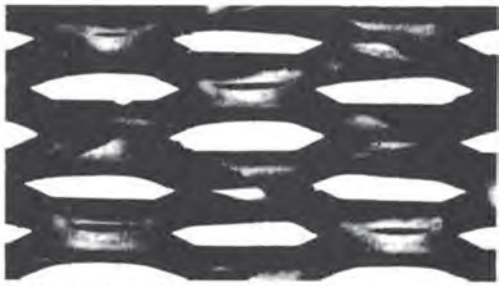

S3-S4-S20 (20x60 mm)


S27 (17x43 mm)

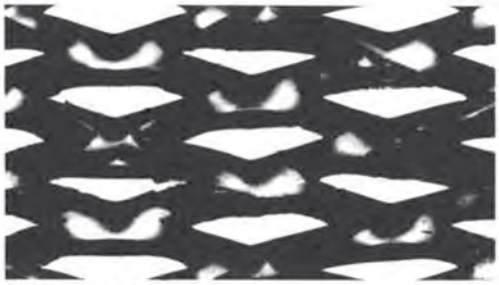

S2/S17-S28 (10x43 mm)

EXPANDED WALKWAY MESH

FILS 1S



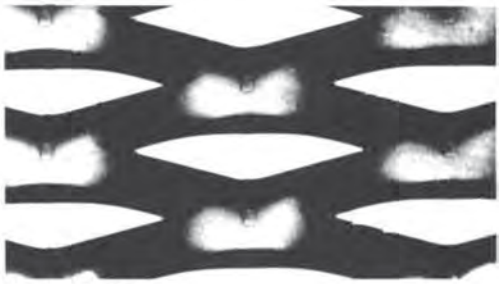
FILS 21S FILS 22S



FILS 15S FILS 16S

FILS 1 FILS 2 FILS 3

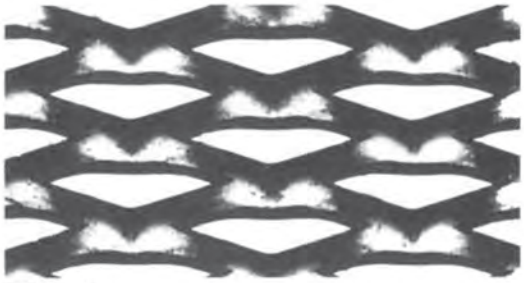
FILS 6 FILS 7 FILS 8



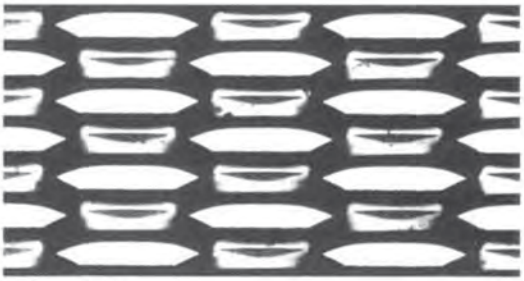
FILS 4 FILS 5

Commercial reference	Conventional designation			Weight per m²	Max size of rolls or sheets (mm)	
	LW mm	a - 1/10 mm	S1-/10 mm	- Kg	LW (long way)	SW (short way)
					1000	
FILS - 1S	110	70	40	21	1250	2600
					1500	
FILS - 21S	44	40	30	20	1000	
					1250	2000
FILS - 22S	44	40	40	26	1500	
FILS - 15S	43	40	30	21	1000	
					1250	2000
FILS - 16S	43	40	40	26	1500	
FILS - 1	110	70	40	17	2000	2600 circa
FILS - 2	110	80	40	19	2000	2400 circa
FILS - 3	110	70	50	22	1500	2600 circa
FILS - 6	90	70	40	21	2000	2350 circa
FILS - 7	90	80	40	23	2000	2200 circa
FILS - 8	90	70	50	25	1500	2350 circa
FILS - 4	60	70	40	23	1500	2000 circa
FILS - 5	60	700	30	18	2000	2000 circa

EXPANDED WALKWAY MESH

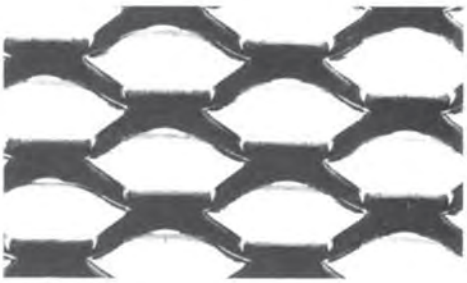


FILS 15 - 16



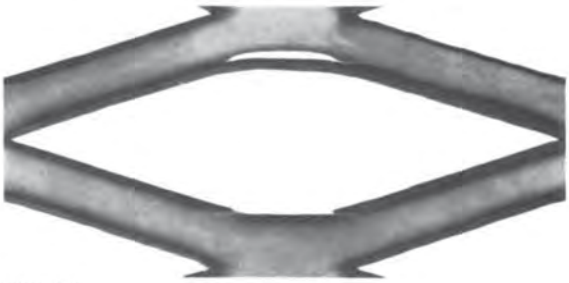
FILS 20 - 21 - 22

FILS 9



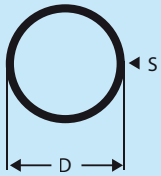
FILS E3 - E4

SP 2 - A SP 5 - A



SP 2 - SP 5

Commercial reference	Conventional designation			Weight per m²	Max size of rolls or sheets (mm)	
	DL mm.	a - 1/10 mm	S1 /10 mm	- Kg	Width	Length
FILS - 15	43	40	30	17	2000	2000
FILS - 16	43	40	40	23	1500	
FILS - 20	44	30	30	13,8	1000	2500
FILS - 21	44	40	30	20	1000	2000
FILS - 22	44	40	40	24	1500	
					1000	
FILS - 9	125	120	40	17	1250	2600
					1500	
E 3	44	40	30	11	1000	
					1250	3000
E 4	44	40	40	14	1500	
SP 2-A	110	95	40	15	1500	3000
SP 5-A	110	95	50	18,5		
SP 2	110	95	40	14	1500	3600
SP 5	110	95	50	17		



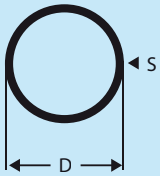
ROUND WELDED TUBES
from hot-rolled strip
UNI EN 10219

Ø D \ S	1,5	2	2,5	3	4	5	6	7	8	9	10
12	0,39										
14	0,46										
16	0,54	0,69									
18	0,61	0,79									
19	0,65	0,84									
20	0,68	0,89									
22	0,76	0,99									
25	0,87	1,13	1,39	1,63							
28	0,98	1,28	1,57	1,85							
30	1,05	1,38	1,70	2,00							
32	1,13	1,48	1,82	2,15							
35	1,24	1,63	2,00	2,37							
38	1,35	1,78	2,19	2,59	3,35						
40	1,42	1,87	2,31	2,74	3,55						
42	1,49	1,97	2,43	2,88	3,75						
45	1,61	2,12	2,62	3,11	4,04						
48	1,72	2,27	2,80	3,33	4,34	5,34					
50	1,79	2,37	2,93	3,48	4,54						
52	1,87	2,47	3,05	3,63	4,74						
55	1,98	2,61	3,24	3,85	5,03						
57	2,05	2,71	3,36	4,00	5,23						
60	2,16	2,86	3,56	4,21	5,52	6,78					
62	2,24	2,96	3,67	4,37	5,72	7,03					
63	2,27	3,01	3,73	4,44	5,82	7,17					
65	2,35	3,11	3,85	4,59	6,02	7,40					
70	2,53	3,35	4,16	4,96	6,51	8,01					
76	2,76	3,65	4,54	5,41	7,11	8,77	10,37				
80	2,90	3,85	4,78	5,70	7,50	9,25	10,95				
83	3,01	4,00	4,96	5,92	7,80	9,62	11,40				
89	3,23	4,29	5,33	6,36	8,38	10,35	12,27	14,14	15,96		
96		4,64	5,76	6,88	9,08	11,22	13,32	15,36			
102		4,90	6,13	7,32	9,67	11,96	14,21	16,40	18,47		
108		5,23	6.50	7,77	10,26	12,70	15,09	17,44			
114		5,52	6,87	8,21	10,90	13,44	15,99	18,48	20,97	23,37	25,72
121		5,87	7,31	8,73	11,45	14,31	17,02	19,69			
127		6,17	7,68	9,17	12,13	15,04	17,90	20,72	23,48	26,19	28,85
133			8,05	9,62	12,73	15,78	18,83	21,76			
139			8,42	10,06	13,32	16,53	19,69	22,80	25,98	29,01	31,99
152			9,22	11,05	14,64	18,18	21,66	25,10	28,49	31,83	35,12
159				11,54	15,69	18,99	22,64	26,24	29,79	33,29	36,75
168,3			10,23	12,23	16,21	20,14	24,02	27,85	31,63	35,36	39,04
177,8				12,93	17,14	21,31	25,42	29,49	35,50	37,47	41,38
193,7				14,11	18,71	23,27	27,77	32,23	36,64	40,99	45,30
219,1				15,99	21,22	25,40	31,53	36,61	41,65	46,63	51,57
244,5					23,72	29,53	35,29	41,00	46,66	52,27	57,83
273,0					26,54	33,05	39,51	45,92	52,28	58,60	64,86
323,9					31,56	39,32	47,04	54,71	62,32	69,89	77,41
339.7						41,27	49,38	57,43	65,44	73,40	81,31
355,6						43,23	51,73	60,18	68,58	76,93	85,23
406,4						49,50	59,25	68,95	78,60	88,20	97,76
457,2							66,76	77,72	88,62	99,48	110,29
508,0							74,28	86,49	98,65	110,75	122,81

TUBES FOR STRUCTURAL WORK

UNI EN 10219

** GALVANIZED TUBES FOR STRUCTURAL WORK*



Ø "D" inches	Ø "D" mm	thickness "S" mm	weight kg/m
3/8 *	16.7	1.8	0.68
1/2 *	21.2	2	0.95
3/4 *	26.7	2.5	1.49
1' *	33.5	2.65	2.02
1¼ *	42.2	2.8	2.87
1½ *	48.2	3	3.31

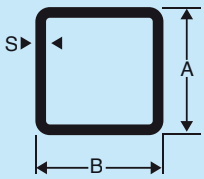
**Also available with galvanized finish*

Ø "D" inches	Ø "D" mm	thickness "S" mm	weight kg/m
* 2' *	60	3	4.19
2½	76	3	5.36
3'	89	3	6.32
3½	102	3	7.32
4'	114.3	3.2	8.21

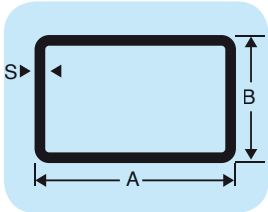
** Also available with galvanized finish*

SQUARE TUBES

UNI EN 10219



"A x B" mm	thickness mm									
	1.5	2	3	4	5	6	7	8	9	10
	weight kg/m									
10 x 10	0.40									
12 x 12	0.50									
15 x 15	0.64	0.88								
20 x 20	0.87	1.13	1.60							
25 x 25	1.11	1.44	2.07							
30 x 30	1.34	1.76	2.54	3.27						
35 x 35	1.58	2.07	3.01							
40 x 40	1.81	2.39	3.48	4.09						
45 x 45	2.05	2.70	3.96	4.72	5.61					
50 x 50	2.28	3.01	4.43	5.83	6.40					
60 x 60	2.75	3.64	5.37	7.03	7.97	10.34				
70 x 70	3.23	4.27	6.31	8.33	9.54	11.10	12.53			
80 x 80		4.90	7.25	9.55	11.11	12.99	14.72	16.36		21.20
90 x 90		5.50	8.20	10.80	12.68	14.87	16.92			
100 x 100		6.15	9.14	12.06	14.26	16.76	19.12	21.39	22.99	24.89
110 x 110			9.84	12.89	15.83	18.64	21.32	23.90	25.81	28.03
120 x 120			11.00	14.54	17.40	20.53	23.52	26.41	28.64	31.17
140 x 140			12.72	16.76	20.52	24.28	27.91	31.43	34.29	37.45
150 x 150			13.82	18.35	22.11	26.19	30.11	33.95	37.12	40.59
160 x 160			14.61	19.27	23.66	28.04	32.31	36.46	39.94	43.73
175 x 175			16.02	21.15	26.02	30.87	35.61	40.23	44.18	48.44
180 x 180				21.78	26.80	31.81	36.70	41.48	45.60	50.01
200 x 200				24.29	29.94	35.58	41.10	46.51	51.25	56.29
220 x 220				26.81	33.09	39.35	45.50	51.53	56.90	62.57
250 x 250				30.57	37.79	45.00	52.09	59.07	65.38	71.99
260 x 260				31.83	39.36	46.88	54.29	61.58	68.20	75.13
300 x 300					45.64	54.42	63.08	71.63	79.51	87.69
325 x 325					49.57	59.13	68.58	77.91	86.57	95.54



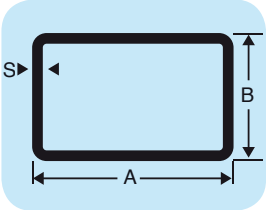
SQUARE TUBES

UNI EN 10219

"A x B" mm	thickness mm						
	1.5	2	3	4	5	6	7
	weigth kg/m						
15 x 10	0.52						
20 x 10	0.64	0.81					
20 x 15	0.75	0.97					
25 x 10	0.75	0.97					
25 x 15	0.87	1.13					
25 x 20	0.99	1.29					
30 x 10	0.87	1.13					
30 x 15	0.99	1.29	1.65				
30 x 20	1.11	1.44	2.07				
35 x 10	0.99	1.29					
35 x 15	1.11	1.44	2.07				
35 x 20	1.22	1.60	2.31				
40 x 10	1.11	1.44					
40 x 15	1.22	1.60	2.31				
40 x 20	1.34	1.76	2.54				
40 x 25	1.46	1.91	2.78				
40 x 30	1.58	2.07	3.01				
45 x 10	1.22	1.60	2.31				
45 x 15	1.34	1.76	2.54				
45 x 20	1.46	1.91	2.78				
45 x 30	1.69	2.23	3.25				
50 x 10	1.34	1.76	2.54				
50 x 15	1.46	1.92	2.78				
50 x 20	1.58	2.07	3.01				
50 x 25	1.69	2.23	3.25				
50 x 30	1.81	2.39	3.48	4.52			
50 x 40	2.05	2.70	3.95	5.15			
60 x 10	1.58	2.07	3.01				
60 x 15	1.69	2.23	3.25				
60 x 20	1.81	2.39	3.48				
60 x 25	1.93	2.54	3.74				
60 x 30	2.05	2.70	3.95	4.72			
60 x 40	2.28	3.01	4.43	5.35	7.01		
60 x 50	2.52	3.33	4.90	5.98	8.02		
70 x 20	2.05	2.70	3.95	5.23			
70 x 25	2.17	2.86	4.19				
70 x 30	2.28	3.01	4.43	5.35			
70 x 40	2.52	3.33	4.90	5.98			

RECTANGULAR TUBES

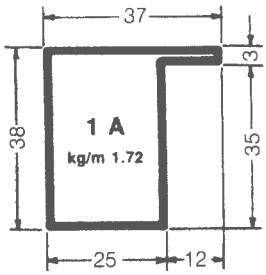
UNI EN 10219

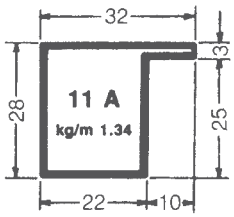


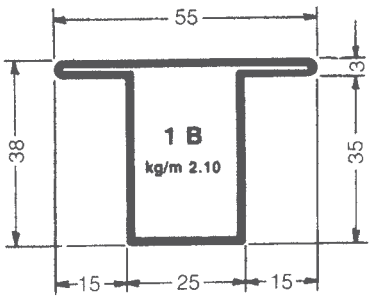
"A x B" mm	thickness mm									
	1.5	2	3	4	5	6	7	8	9	10
	weigth kg/m									
70 x 50	2.76	3.64	5.37	7.05	7.97	9.21	10.34			
80 x 15	2.16	2.86								
80 x 20	2.28	3.01	4.43							
80 x 30	2.52	3.33	4.90	5.98						
80 x 40	2.76	3.64	5.37	7.05	7.97	9.21	10.34			
80 x 50	2.99	3.96	5.84	7.66	8.75					
80 x 60	3.23	4.27	6.31	7.86	9.54	11.10	12.54	15.57		
90 x 30	2.76	3.64	5.37	7.10						
90 x 40	2.99	3.96	5.84	7.66						
90 x 50	3.23	4.27	6.31	7.86	9.53	11.09	13.85	15.57		
100 x 20	2.76	3.64	5.37							
100 x 30	3.00	3.95	5.84	7.66						
100 x 40	3.22	4.27	6.31	7.86	9.54	11.10	12.54			
100 x 50	3.46	4.58	6.78	8.92	11.40	12.04	13.64	16.83		
100 x 60		4.90	7.25	9.55	11.77	12.98	14.74	18.09		
100 x 70		5.21	7.72	10.17	12.56	13.93				
100 x 80		5.53	8.19	10.80	13.35	14.87	16.94	20.40		
110 x 50		4.90	7.25	9.55	11.77	12.98	14.74			
120 x 30		4.59	6.81	8.98						
120 x 40		4.90	7.25	9.55	11.77	12.98	14.74			
120 x 50		5.36	7.77	10.26	12.30	15.10				
120 x 60		5.53	8.19	10.80	13.35	14.87	16.94			
120 x 80		6.15	9.14	12.06	14.91	16.76	19.14	21.39		
130 x 50		5.50	8.20	10.80	13.35	14.87				
140 x 50		5.84	8.67	11.43						
140 x 60		6.15	9.14	12.06	14.91	16.76	19.14			
140 x 70		6.47	9.61	12.27	15.04	17.70				
140 x 80			10. 11	13.39	16.53	19.69	21.32	23.90		
150 x 30		5.45	8.01	10.48						
150 x 40		5.87	8.73	11.43	15.04	17.70				
150 x 50		6.07	9.14	12.06	14.91	16.76	19.14	23.10		
150 x 100			11.49	15.20	18.84	21.47	24.90	27.67		35.70
160 x 60			10.06	13.02	16.50					
160 x 80			11.02	14.57	18.05	20.53	23.80	26.41		
180 x 60			11.02	14.57	18.05	20.53	23.80			
180 x 80			11.78	15.50	18.95	22.39	25.71	28.92		
200 x 100			13.67	18.01	22.09	26.16	30. 11	33.95	37.12	40.59
200 x 150			16.02	21.16	26.01	30.90	35.65	40.23	44.78	48.44
250 x 100			16.02	21.16	26.01	30.90	35.65	40.23	44.18	48.44
250 x 150				24.29	29.94	35.58	41.10	46.51	51.25	56.29
300 x 100				24.29	30.01	35.68		46.68		57.23
300 x 150				27.43	33.87	40.29	46.60	52.79		
300 x 200				30.57	37.75	45.00	52.09	59.07		72.93
400 x 200					45.64	54.42	63.08	71.63		88.63
400 x 250					49.57	59.13	68.58	77.91		

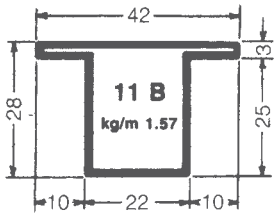
TUBES FOR WINDOWS AND DOOR FRAMES

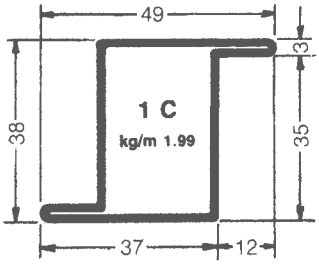
UNI EN 10305

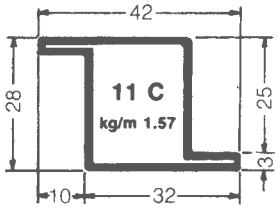








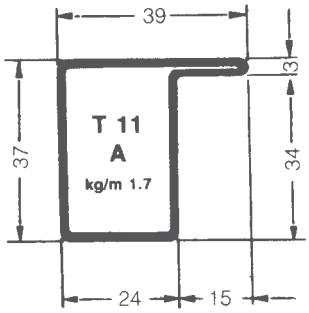


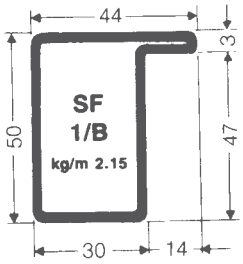


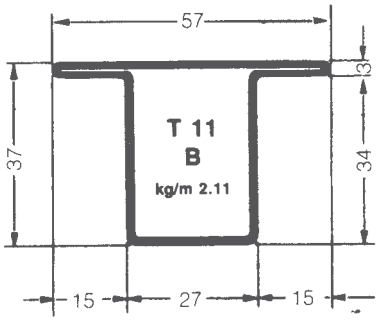
1A – 1B – 1C series: also available with galvanized finish

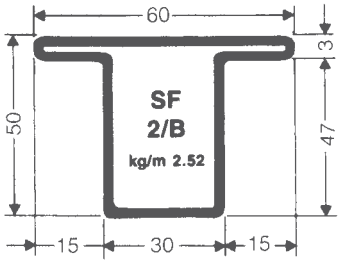
TUBES FOR WINDOWS AND DOOR FRAMES

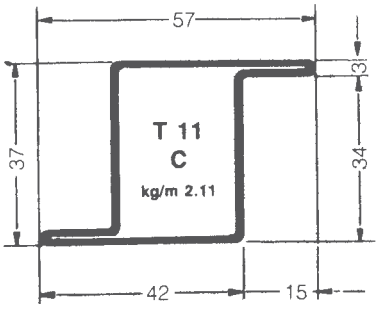
UNI EN 10305

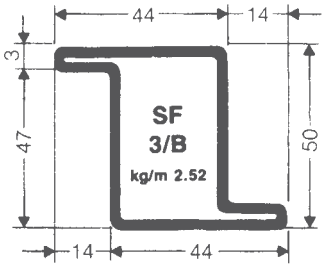






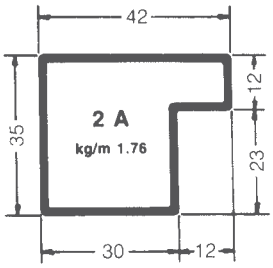


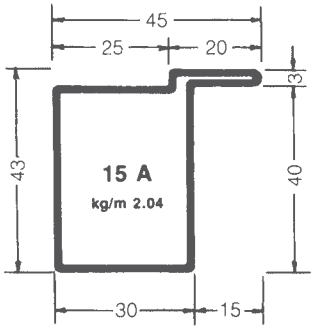


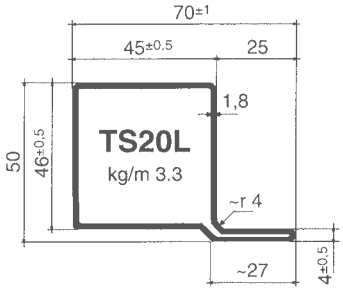


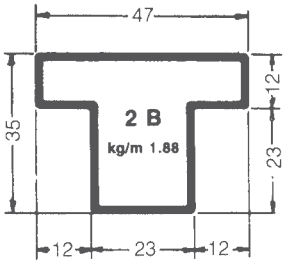
TUBES FOR WINDOWS AND DOOR FRAMES

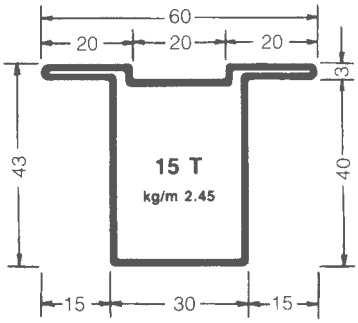
UNI EN 10305

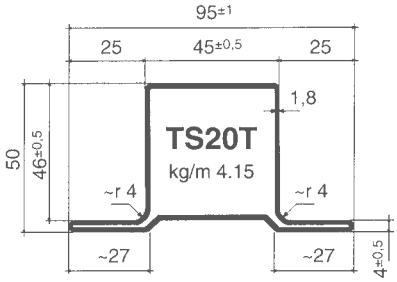


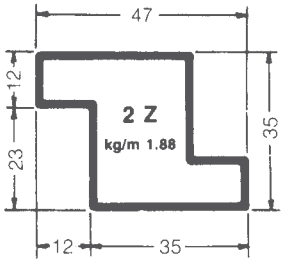


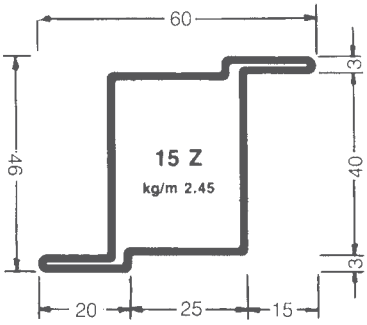


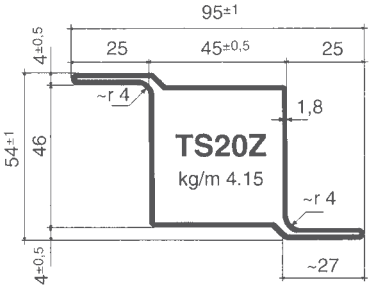






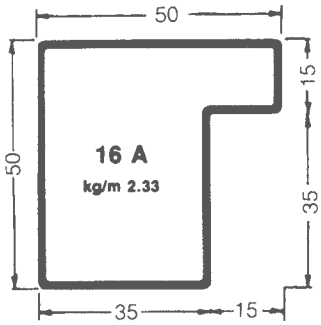


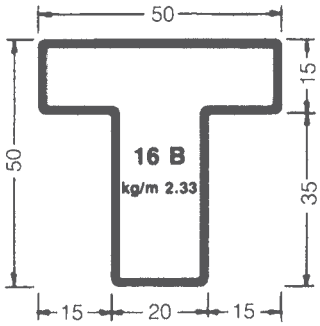


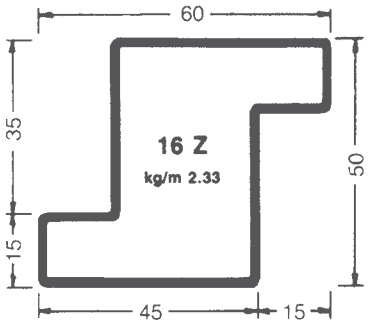


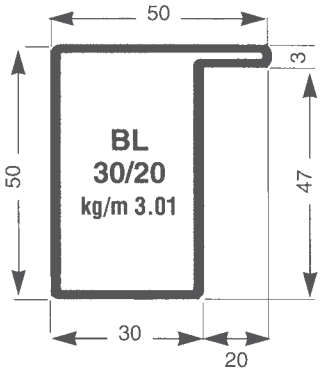
TUBES FOR DOORS

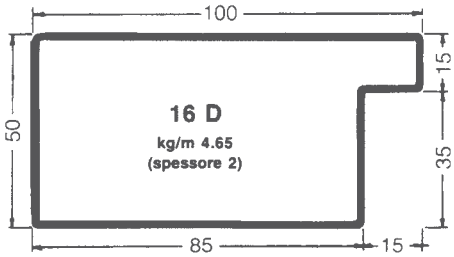
UNI EN 10305

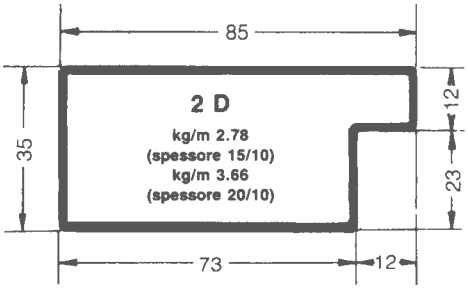






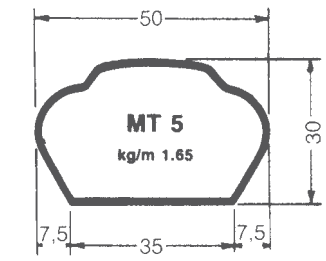


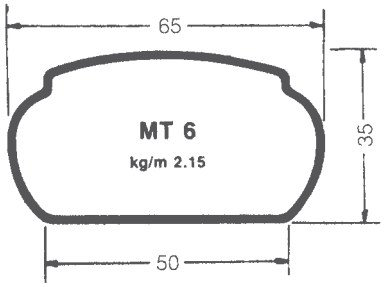


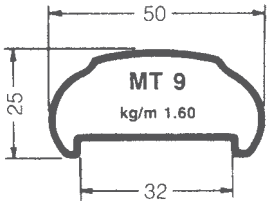


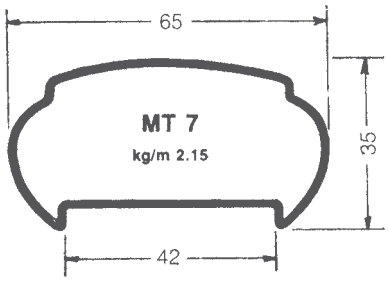
HANDRAILS

UNI EN 10305



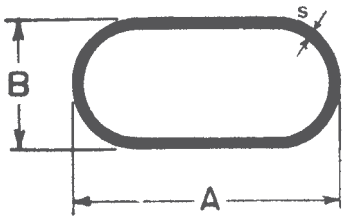






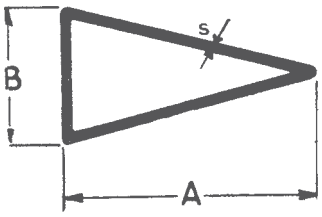
OVAL

"A x B" mm	thickness "S" mm	
	1,5	2
	weight in kg/mt	
30 x 15	0,86	1,13
40 x 20	1,12	1,47
50 x 25	1,50	1,95
60 x 30	1,79	2,37

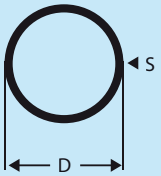


TRIANGULAR

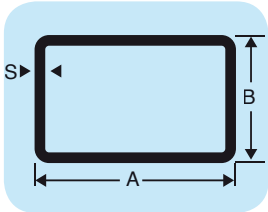
"A x B" mm	thickness mm	
	1,5	2
	weight in kg/mt	
30 x 15	0,86	1,13
40 x 20	1,24	1,63



TUBES FOR THE FURNITURE INDUSTRY
from cold-rolled strip
UNI EN 10305



weight kg/m	thickness mm								
D	0,6	0,7	0,8	0,9	1	1,2	1,5	2	2,5
8	0,11 0	0,126	0,14 2	0,158	0,17 3	0,201	0,240		
9	0,12 4	0,143	0,16 2	0,180	0,19 7	0,231	0,277		
9, 5	0,13 2	0,152	0,17 2	0,191	0,21 0	0,246	0,296		
10	0,13 9	0,161	0,18 2	0,202	0,22 2	0,260	0,314		
11	0,15 4	0,178	0,20 1	0,224	0,24 7	0,290	0,351		
12	0,16 9	0,195	0,22 1	0,246	0,27 1	0,320	0,388		
13		0,21 2	0,241	0,26 9	0,296	0,34 9	0,425		
14	0,19 8	0,230	0,26 0	0,291	0,32 1	0,379	0,46 2	0,592	
15	0,21 3	0,247	0,28 0	0,313	0,34 5	0,408	0,49 9	0,641	
16	0,22 8	0,264	0,30 0	0,335	0,37 0	0,438	0,53 6	0,691	
17	0,24 3	0,281	0,32 0	0,357	0,39 5	0,468	0,57 3	0,740	
18	0,25 7	0,299	0,33 9	0,380	0,41 9	0,497	0,61 0	0,789	
19			0,35 9	0,402	0,44 4	0,527	0,64 7	0,838	
20	0,28 7	0,333	0,37 9	0,424	0,46 9	0,556	0,68 4	0,888	
21					0,49 3	0,586	0,72 1	0,937	
22	0,31 7	0,368	0,41 8	0,468	0,51 8	0,616	0,75 8	0,986	1,202
22, 2			0,42 2	0,473	0,52 3	0,622	0,76 6	0,996	
23, 4					0,55 2	0,657	0,81 3	1,056	
24	0,34 6		0,458	0,51 3	0,567	0,67 5	0,832	1,085	
25		0,41 9	0,477	0,53 5	0,592	0,70 4	0,869	1,13 4	1,387
25, 4					0,60 2	0,716	0,88 4	1,154	
26		0,43 7	0,497	0,55 7	0,617	0,73 4	0,906	1,184	
27					0,64 1	0,764	0,94 3	1,233	
28		0,47 1	0,537	0,60 1	0,666	0,79 3	0,980	1,28 2	1,572
28, 6					0,68 1	0,811	1,00 3	1,312	
30		0,50 6	0,576	0,64 6	0,715	0,85 2	1,054	1,38 1	1,695
31, 7					0,75 7	0,903	1,11 7	1,465	
32		0,54 0	0,616	0,69 0	0,764	0,91 1	1,128	1,48 0	1,819
33					0,78 9	0,941	1,16 5	1,529	1,880
35		0,59 2	0,675	0,75 7	0,838	1,00 0	1,239	1,62 8	2,004
38			0,73 4	0,823	0,91 2	1,089	1,35 0	1,776	2,189
40				0,86 8	0,962	1,14 8	1,424	1,87 4	2,312
41					0,98 6	1,179	1,46 1	1,924	2,374
42					1,01 1	1,207	1,49 6	1,973	2,435
43					1,03 6	1,237	1,53 5	2,022	2,497
45					1,08 5	1,296	1,60 9	2,121	2,620
48					1,16 0	1,380	1,72 0	2,270	2,800
50				1,10 7	1,210	1,44 4	1,794	2,36 8	2,929
60					1,45 5	1,740	2,16 4	2,860	3,540



COLD-FORMED RECTANGULAR TUBES
from cold-rolled strip

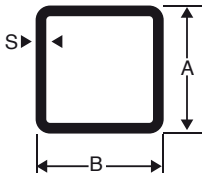
UNI EN 10305

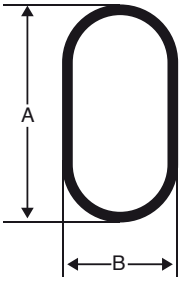
weightkg/m	thickness mm								
A x B	0,6	0,7	0,8	0,9	1	1,2	1,5	2	2,5
10 x 7			0,20 1	0,224	0,24 7	0,290	0,351		
15 x 10			0,30 0	0,335	0,37 0	0,438	0,536		
18 x 5			0,26 0	0,291	0,32 1	0,379	0,462		
20 x 10			0,36 1	0,402	0,44 0	0,520	0,63 6	0,838	
20 x 15			0,42 2	0,453	0,52 5	0,615	0,76 0	0,986	
24 x 18			0,51 0	0,570	0,63 0	0,750	0,930		
25 x 10			0,42 2	0,453	0,52 5	0,615	0,76 0	0,986	
25 x 15			0,48 2	0,541	0,60 0	0,708	0,87 1	1,154	
25 x 20			0,55 0	0,620	0,68 0	0,810	1,000		
30 x 10			0,48 2	0,541	0,60 0	0,708	0,871		
30 x 15			0,55 1	0,612	0,67 5	0,803	0,99 0	1,310	
30 x 20			0,58 2	0,663	0,75 4	0,900	1,10 8	1,480	
30 x 25			0,68 5	0,765	0,85 0	1,010	1,255		
35 x 10			0,55 0	0,620	0,68 0	0,810	1,000		
35 x 11			0,57 6	0,646	0,71 5	0,852	1,054		
35 x 15			0,62 3	0,700	0,77 5	0,925	1,145		
35 x 20			0,68 0	0,765	0,84 5	1,010	1,250		
35 x 25			0,74 0	0,830	0,91 5	1,095	1,355		
35 x 30			0,81 3	0,912	1,01 1	1,207	1,498		
40 x 10					0,75 4	0,900	1,10 8	1,444	
40 x 11					0,78 9	0,941	1,16 5	1,529	
40 x 15					0,85 0	1,010	1,25 5	1,640	
40 x 20					0,91 0	1,085	1,34 2	1,760	
40 x 25					1,01 1	1,207	1,49 8	1,973	
40 x 30					1,06 8	1,274	1,57 8	2,072	
45 x 10					0,85 0	1,010	1,25 5	1,640	
45 x 11					0,85 5	1,020	1,26 5	1,660	
45 x 15					0,91 5	1,090	1,35 5	1,780	
45 x 20					1,01 1	1,207	1,49 8	1,973	
45 x 25					1,09 0	1,305	1,62 0	2,140	
45 x 30					1,16 0	1,380	1,72 0	2,270	
50 x 10					0,91 0	1,085	1,34 2	1,760	
50 x 11					0,92 4	1,100	1,35 9	1,779	
50 x 15					1,01 1	1,207	1,49 8	1,973	
50 x 20					1,06 8	1,274	1,57 8	2,072	
50 x 25					1,16 0	1,368	1,69 6	2,230	
50 x 30					1,21 0	1,440	1,79 0	2,370	
60 x 20					1,21 0	1,440	1,79 0	2,370	

COLD-FORMED SQUARE TUBES
from cold-rolled strip

UNI EN 10219

weight kg/m	thickness mm							
A x B	0,6	0,7	0,8	0,9	1	1,2	1,5	2
10 x 10			0,23 8	0,265	0,29 0	0,345	0,420	
12 x 12			0,29 0	0,321	0,35 0	0,412	0,536	
14 x 14			0,34 1	0,381	0,40 8	0,482	0,610	
15 x 15			0,36 2	0,402	0,44 0	0,520	0,636	
16 x 16			0,37 0	0,421	0,47 1	0,558	0,683	
18 x 18			0,44 1	0,482	0,53 4	0,633	0,777	
20 x 20			0,51 1	0,543	0,59 7	0,702	0,87 1	1,154
22 x 22			0,53 7	0,601	0,66 6	0,793	0,98 0	1,282
24 x 24			0,57 6	0,646	0,71 5	0,852	1,05 4	1,381
25 x 25			0,61 6	0,690	0,76 4	0,987	1,10 7	1,444
25,4 x 25,4					0,77 8	0,912	1,12 3	1,460
28 x 28					0,83 8	1,000	1,23 9	1,628
30 x 30					0,91 1	1,085	1,34 2	1,758
35 x 35					1,06 8	1,274	1,57 8	2,072
40 x 40					1,21 0	1,440	1,79 0	2,370



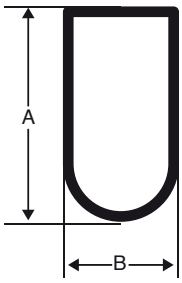


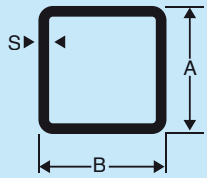
COLD-FORMED OVAL TUBES
from cold-rolled strip

weight kg/m	thickness mm							
A x B	0,6	0,7	0,8	0,9	1	1,2	1,5	2
20 x 10			0,34 0	0,382	0,42 3	0,504	0,615	
22,5 x 12,5					0,44 4	0,527	0,647	
25 x 10			0,36 1	0,403	0,44 1	0,532	0,651	
30 x 10			0,43 0	0,480	0,53 3	0,634	0,780	
33 x 10			0,47 5	0,532	0,59 0	0,700	0,86 5	1,130
25 x 15			0,42 8	0,470	0,52 0	0,620	0,760	
30 x 15			0,47 1	0,542	0,59 2	0,704	0,86 9	1,134
36 x 18					0,71 5	0,852	1,05 4	1,381
40 x 20					0,76 4	0,911	1,12 7	1,480
50 x 25						1,17 7	1,458	1,925
	60 x 20					1,29 6	1,609	2,121

COLD-FORMED SEMIOVAL TUBES
from cold-rolled strip

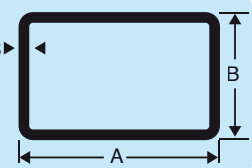
weightkg/m	thickness mm							
A x B	0,6	0,7	0,8	0,9	11	,2	1,52	
30 x 15			0,50 7	0,568	0,62 9	0,749	0,92 5	1,208
30 x 20			0,62 0	0,700	0,77 0	0,920	1,14 0	1,500
40 x 20			0,67 5	0,757	0,83 8	1,000	1,23 9	1,628
40 x 25					0,91 2	1,089	1,35 0	1,776





SQUARE TUBES
in AISI 304 stainless steel

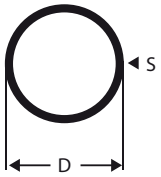
dimensions mm	thickness mm				
	1.0	1.2	1.5	2.0	3.0
A x B	weight kg/m				
15 x 15	0.45 3	0.538	0.661		
20 x 20	0.61 0	0.724	0.89 0	1.159	
25 x 25	0.77 1	0.917	1.12 9	1.475	
30 x 30	0.93 1	1.108	1.37 1	1.795	2.643
35 x 35	1.08 1	1.302	1.61 2	2.115	3.124
40 x 40	1.25 1	1.494	1.85 2	2.434	3.562
45 x 45		1.68 7	2.090	2.75 6	4.040
50 x 50		1.82 2	2.332	3.07 8	4.533
60 x 60			2.81 5	3.724	5.494
80 x 80			3.79 8	5.040	7.484
100 x 100			4.81 9	6.400	9.525



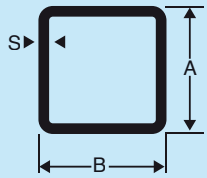
RECTANGULAR TUBES
in AISI 304 stainless steel

dimensions mm	thickness mm				
	1.0	1.2	1.5	2.0	3.0
A x B	weight kg/m				
20 x 10	0.45 3	0.538	0.661		
25 x 15	0.61 0	0.724	0.890		
30 x 10	0.61 0	0.724	0.890		
30 x 15	0.68 9	0.820	1.010		
30 x 20	0.77 1	0.917	1.12 9	1.475	
35 x 15	0.77 1	0.917	1.12 9	1.475	
40 x 20	0.93 1	1.108	1.37 1	1.795	2.643
40 x 30	1.08 1	1.302	1.61 2	2.115	3.124
50 x 20	1.08 1	1.302	1.61 2	2.115	3.124
50 x 25	1.17 0	1.398	1.73 4	2.275	3.363
50 x 30		1.49 4	1.852	2.43 4	3.562
50 x 40		1.68 7	2.090	2.75 6	4.040
60 x 30		1.68 7	2.090	2.75 6	4.040
60 x 40		1.88 2	2.332	3.07 8	4.533
70 x 30		1.88 2	2.332	3.07 8	4.533
80 x 40			2.81 5	3.724	5.494
80 x 60			3.30 3	4.379	6.494
100 x 40			3.30 3	4.379	6.494
100 x 50			3.53 2	4.684	6.952
100 x 60			3.78 3	5.019	7.454

ROUND WELDED TUBES in AISI 304 stainless steel



Diameter	thickness mm				
mm	1.0	1.2	1.5	2.0	3.0
Ø	weight kg/m				
10	0.22 5	0.325	0.39 4	0.500	
12	0.27 7	0.326	0.396		
14	0.32 7	0.387	0.472		
15	0.35 2	0.417	0.510		
16	0.37 8	0.447	0.548		
17.2	0.40 8	0.484	0.59 3	0.766	
18	0.42 8	0.508	0.62 3	0.806	
20	0.47 8	0.568	0.69 9	0.907	
21.3	0.51 2	0.608	0.74 8	0.973	
22	0.52 9	0.628	0.77 4	1.008	
25	0.60 4	0.719	0.88 8	1.159	
26.9	0.65 3	0.777	0.96 0	1.255	1.806
28	0.68 0	0.810	1.00 1	1.310	1.890
30	0.73 0	0.870	1.07 7	1.414	2.041
32	0.78 1	0.931	1.15 2	1.512	2.192
33	0.80 6	0.961	1.19 0	1.562	2.268
33.7	0.82 4	0.938	1.21 7	1.598	2.321
35	0.85 6	1.022	1.26 6	1.663	2.419
38	0.93 2	1.112	1.37 9	1.814	2.646
40	0.98 2	1.173	1.45 5	1.915	2.797
42	1.03 3	1.233	1.53 0	2.016	2.948
42.4	1.04 3	1.236	1.54 6	2.036	2.979
45	1.10 8	1.324	1.64 4	2.166	3.175
48.3	1.19 1	1.424	1.76 9	2.833	3.424
50	1.23 4	1.475	1.83 3	2.419	3.553
51	1.26 0	1.505	1.87 1	2.469	3.628
52	1.28 5	1.536	1.90 8	2.520	3.704
53		1.56 6	1.946	2.57 0	3.780
54		1.59 6	1.984	2.62 0	3.855
57		1.68 7	2.097	2.77 2	4.082
60.3		1.78 7	2.222	2.93 8	4.331
63.5		1.88 3	2.343	3.09 9	4.573
64		1.89 9	2.362	3.12 4	4.611
70		2.08 0	2.589	3.42 7	5.065
73		2.17 1	2.702	3.57 8	5.292
76.1		2.26 4	2.819	3.73 4	5.526
83			3.08 0	4.082	6.048
88.9			3.30 3	4.379	6.494
101.6			3.78 3	5.019	7.454
114.3			4.26 3	5.659	8.414
129			4.81 9	6.400	9.525
139.7			5.22 3	6.940	10.334
153			5.72 6	7.610	11.340
154			5.76 4	7.660	11.415
168.3			6.30 5	8.381	12.496
203			7.616	10.130	15.120
219.1			8.225	10.936	16.329
254			9.544	12.700	18.975
273			10.262	13.658	20.412
303			11.396	15.170	22.680
323.9				16.223	24.260
355.6					26.656



STRUCTURAL SQUARE TUBES
hot finished hollow sections

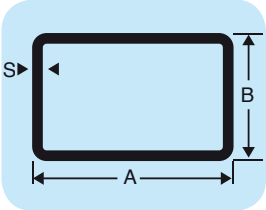
UNI EN 10210 - Grade S275JOH - Grade S355J2H

Dimens.	thickness											
BxA	2	3	4	5	6	7	8	10	12	14	16	20
20x20	1,10	-	-	-	-	-	-	-	-	-	-	-
25x25	1,41	2,00	2,50	2,93	-	-	-	-	-	-	-	-
30x30	1,72	2,47	3.13	3,71	4,22	-	-	-	-	-	-	-
35x35	2,04	2,94	3,76	4,50	5,16	-	-	-	-	-	-	-
40x40	2,35	3,41	4,39	5,28	6,10	6,84	7,50	-	-	-	-	-
45x45	2,67	3,88	5,01	6,07	7,04	7,94	8,76	-	-	-	-	-
50x50	2,98	4,35	5,64	6,85	7,99	9,04	10,00	11,70	-	-	-	-
60x60	3,61	5,29	6,90	8,42	9,87	11,20	12,50	14,90	-	-	-	-
70x70	4,24	6,24	8,15	9,99	11,80	13,40	15,00	18,00	20,60	-	-	-
80x80	4,86	7,18	9,41	11,60	13,60	15,60	17,50	21,10	24,40	-	-	-
90x90	5,49	8,12	10,70	13,10	15,50	17,80	20,10	24,30	28,20	-	-	-
100x100	6,12	9,06	11,90	14,70	17,40	20,00	22,60	27,40	31,90	36,20	-	-
110x110	-	10,00	13,20	16,30	19,30	22,20	25,10	30,60	35,70	-	-	-
120x120	-	10,90	14,40	17,80	21,20	24,40	27,60	33,70	39,50	-	-	-
130x130	-	11,90	15,70	19,40	23,10	26,60	30,10	36,80	43,20	-	-	-
140x140	-	12,80	16,90	21,00	24,90	28,80	32,60	40,00	47,00	53,70	60,10	-
150x150	-	13,80	18,20	22,60	26,80	31,00	35,10	43,10	50,80	58,10	65,20	-
160x160	-	14,70	19,50	24,10	28,70	33,20	37,60	46,30	54,60	62,50	70,20	-
175x175	-	16,10	21,30	26,50	31,50	36,50	41,40	51,00	-	-	-	-
180x180	-	-	22,00	27,30	32,50	37,60	42,70	52,50	62,10	71,30	80,20	-
200x200	-	-	24,50	30,40	36,20	42,00	47,70	58,80	69,60	80,10	90,30	-
220x220	-	-	27,00	33,50	40,00	46,40	52,70	65,10	77,20	88,90	100,00	-
250x250	-	-	30,80	38,30	45,70	53,00	60,30	74,50	88,50	102,00	115,00	-
260x260	-	-	32,00	39,80	47,60	55,20	62,80	77,70	92,20	106,00	-	-
300x300	-	-	-	46,10	55,10	64,00	72,80	90,20	107,00	124,00	141,00	-
325x325	-	-	-	50,00	59,80	69,50	79,10	98,10	-	-	-	-
350x350	-	-	-	-	64,50	-	85,40	106,00	126	146,00	166,00	-
400x400	-	-	-	-	-	-	97,90	122,00	145,00	168,00	191,00	235,00

Other dimensions and thickness on request

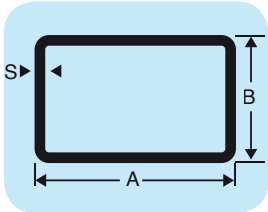
STRUCTURAL RECTANGULAR TUBES
hot finished hollow sections

UNI EN 10210 - Grade S275JOH - Grade S355J2H



Dimens.	thickness										
AxB	2	3	4	5	6	7	8	10	12	14	16
40x30	2,04	2,94	3,76	4,50	5,16	-	-	-	-	-	-
50x30	2,35	3,41	4,39	5,28	6,10	-	-	-	-	-	-
40	2,67	3,88	5,01	6,07	7,04	7,94	8,76	-	-	-	-
60x30	2,67	3,88	5,01	6,07	7,04	-	-	-	-	-	-
40	2,98	4,35	5,64	6,85	7,99	9,04	10,00	-	-	-	-
50	3,29	4,82	6,27	7,64	8,93	10,10	11,30	-	-	-	-
65x45	-	-	-	-	8,93	-	-	-	-	-	-
70x30	2,98	4,35	5,64	6,85	7,99	9,04	10,00	-	-	-	-
40	3,29	4,82	6,27	7,64	8,93	10,10	11,30	13,30	-	-	-
50	3,61	5,29	6,90	8,42	9,07	11,20	12,50	14,90	-	-	-
60	-	5,76	7,93	9,21	10,80	12,30	13,80	16,40	-	-	-
80x30	3,29	4,82	6,27	-	-	-	-	-	-	-	-
40	3,61	5,29	6,90	8,42	9,87	11,20	12,50	14,90	-	-	-
50	3,92	5,76	7,53	9,21	10,80	12,30	13,80	16,40	-	-	-
60	4,24	6,24	8,15	9,99	11,80	13,40	15,00	18,00	-	-	-
90x30	3,61	5,29	6,90	-	-	-	-	-	-	-	-
40	3,92	5,76	7,53	-	-	-	-	-	-	-	-
50	4,24	6,24	8,15	9,99	11,80	13,40	15,00	18,00	-	-	-
60	4,55	6,71	8,78	-	12,70	-	-	-	-	-	-
100x30	3,92	5,76	7,53	9,21	10,80	12,30	13,80	16,40	-	-	-
40	4,24	6,24	8,15	9,99	11,80	13,40	15,00	18,00	-	-	-
50	4,55	6,71	8,78	10,80	12,70	14,50	16,30	19,60	-	-	-
60	4,86	7,18	9,41	11,60	13,60	15,60	17,50	21,10	-	-	-
70	5,18	7,65	10,00	12,30	14,60	16,70	18,80	22,70	-	-	-
80	5,49	8,12	10,70	12,10	15,50	17,80	20,10	24,30	28,20	-	-
90	-	8,59	11,30	13,90	16,50	18,90	21,30	25,80	30,10	-	

Other dimensions and thickness on request



STRUCTURAL RECTANGULAR TUBES
hot finished hollow sections

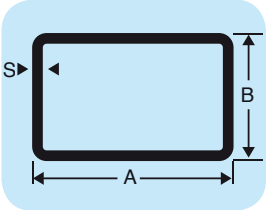
UNI EN 10210 - Grade S275JOH - Grade S355J2H

Dimens.	thickness										
AxB	2	3	4	5	6	7	8	10	12	14	16
110x50	4,86	7,18	9,41	11,60	13,60	15,60	-	-	-	-	-
60	-	7,65	10,00	12,30	14,60	16,70	18,80	22,70	-	-	-
70	-	8,12	10,70	13,10	15,50	17,80	20,10	24,30	-	-	-
80	-	8,59	11,30	13,90	16,50	18,90	21,30	25,80	30,10	-	-
120x30	4,55	6,71	8,78	-	-	-	-	-	-	-	-
40	4,86	7,18	9,41	11,60	13,60	15,60	17,50	21,10	-	-	-
50	-	7,65	10,00	12,30	14,60	16,70	18,80	22,70	-	-	-
60	5,49	8,12	10,70	13,10	15,50	17,80	20,10	24,30	-	-	-
70	-	8,59	11,30	13,90	16,50	18,90	21,30	25,80	-	-	-
80	6,12	9,06	11,90	14,70	17,40	20,00	22,10	27,40	31,90	-	-
100	-	10,00	13,20	16,30	19,30	22,20	25,10	30,60	35,70	-	-
130x50	54,9	8,12	10,70	13,10	15,50	-	-	-	-	-	-
60	5,81	8,59	11,30	-	-	-	-	-	-	-	-
140x40	5,49	8,12	10,70	13,10	15,50	17,80	20,10	24,30	-	-	-
50	5,81	8,59	11,30	-	-	-	-	-	-	-	-
60	6,12	9,06	11,90	14,70	17,40	20,00	22,60	27,40	-	-	-
70	-	9,53	12,60	15,50	18,30	21,10	23,80	29,00	33,80	-	-
80	-	10,00	13,20	16,30	19,30	22,20	25,10	30,60	35,70	-	-
90	-	10,50	13,80	17,10	20,20	23,30	26,30	32,10	37,60	-	-
150x30	5,49	8,12	10,70	-	-	-	-	-	-	-	-
40	5,81	8,59	11,30	-	-	-	-	-	-	-	-
50	6,12	9,06	11,90	14,70	17,40	20,00	22,00	27,40	-	-	-
60	-	9,53	12,60	15,50	18,30	21,10	23,80	29,00	-	-	-
75	-	-	-	16,70	19,80	22,80	25,70	31,30	-	-	-
80	7,06	10,50	-	-	-	-	-	-	-	-	-
100	-	11,40	15,10	18,60	22,10	25,50	28,90	35,30	41,40	-	-

Other dimensions and thickness on request

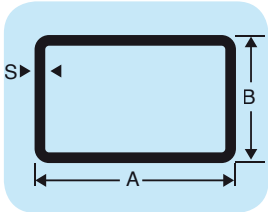
STRUCTURAL RECTANGULAR TUBES
hot finished hollow sections

UNI EN 10210 - Grade S275JOH - Grade S355J2H



Dimens.	thickness										
AxB	2	3	4	5	6	7	8	10	12	14	16
160x50	-	9,53	12,60	15,50	18,30	-	-	-	-	-	-
60	-	10,00	13,20	16,30	19,30	22,20	25,10	30,60	-	-	-
80	-	10,90	14,40	17,80	21,20	24,40	27,60	33,70	39,50	-	-
90	-	11,40	15,10	18,60	22,10	25,50	28,90	35,30	41,40	-	-
120	-	-	-	-	24,90	-	32,60	-	-	-	-
180x60	-	10,90	14,40	17,80	21,20	24,40	27,60	33,70	39,50	-	-
70	-	11,40	15,10	18,60	22,10	25,50	28,90	35,30	41,40	-	-
80	-	11,90	15,70	19,40	23,10	26,60	30,10	36,80	43,20	-	-
100	-	-	16,90	21,00	24,90	28,80	32,60	40,00	47,00	53,70	60,10
120	-	-	18,20	22,60	26,80	-	35,10	43,10	-	-	-
140	-	-	19,50	24,10	28,70	-	37,60	46,30	-	-	-
200x100	-	13,80	18,20	22,60	26,80	31,00	35,10	43,10	50,80	58,10	65,20
120	-	-	19,50	24,10	28,70	33,20	37,60	46,30	54,60	62,50	70,20
150	-	16,10	21,30	26,50	31,50	36,50	41,40	51,00	60,20	-	-
220x80	-	-	18,20	22,60	26,80	-	35,10	43,10	-	-	-
100	-	-	-	24,10	28,70	-	37,60	46,30	-	-	-
120	-	-	-	25,70	30,60	35,40	40,20	49,40	58,30	66,90	75,20
140	-	-	-	27,30	32,50	37,60	42,70	52,50	62,10	-	-
250x100	-	16,10	21,30	26,50	31,50	36,50	41,40	51,00	60,20	-	-
150	-	-	24,50	30,40	36,20	42,00	47,70	58,80	69,60	80,10	90,30
260x140	-	-	-	30,40	36,20	-	47,70	58,80	69,60	80,10	90,30
180	-	-	-	33,50	40,00	-	52,70	65,10	77,20	88,90	100,00
300x100	-	-	24,50	30,40	36,20	42,00	47,70	58,80	69,60	-	-
150	-	-	27,60	34,30	41,00	47,50	54,00	66,70	79,00	91,10	-
200	-	-	30,80	38,30	45,70	53,00	60,30	74,50	88,50	102,00	115,00
350x150	-	-	-	38,30	45,70	-	60,30	74,50	88,50	-	-

Other dimensions and thickness on request



STRUCTURAL RECTANGULAR TUBES
hot finished hollow sections

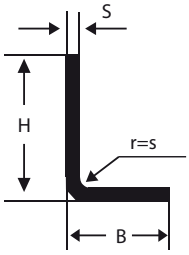
UNI EN 10210 - Grade S275JOH - Grade S355J2H

Dimens.	thickness										
AxB	2	3	4	5	6	7	8	10	12	14	16
250	-	-	-	-	55,10	-	72,80	90,20	107,00	124,00	-
400x100	-	-	-	38,30	45,70	-	60,30	74,50	88,50	-	-
200	-	-	-	46,10	55,10	64,00	72,80	90,20	107,00	124,00	141,00
250	-	-	-	50,00	59,80	69,50	79,10	-	-	-	-
300	-	-	-	-	64,50	-	85,40	106,00	126,00	146,00	-
450x250	-	-	-	-	64,50	-	85,40	106,00	126,00	146,00	166,00
500x200	-	-	-	-	-	-	85,40	106,00	126,00	-	-
300	-	-	-	-	-	-	97,90	122,00	145,00	-	191,00

Other dimensions and thickness on request

UNEQUAL LEG ANGLES

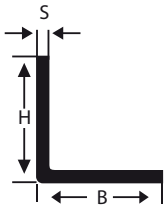
dimensions	thickness mm							
	1,5	2	2,5	3	4	5	6	7
B x H	weight kg/m							
10 x 20	0,33							
12 x 25	0,42	0,55						
15 x 25	0,45	0,59						
15 x 30	0,51	0,66	0,83	0,99				
15 x 40		0,83	1,03	1,22				
20 x 25		0,66	0,83	0,99				
20 x 30		0,75	0,93	1,10				
20 x 25		0,83	1,03	1,22				
20 x 40		0,94	1,14	1,34				
20 x 45		0,99	1,22	1,46				
20 x 50		1,06	1,32	1,56				
20 x 60		1,22	1,52	1,81				
25 x 30		0,83	1,03	1,22				
25 x 40		0,99	1,22	1,46				
25 x 50		1,14	1,42	1,70				
30 x 40		1,06	1,32	1,56				
30 x 50		1,22	1,52	1,81				
30 x 60			1,72	2,04				
30 x 80				2,52	3,33			
40 x 60				2,28	3,01			
40 x 80				2,75	3,64			
40 x 100				3,22	4,27			

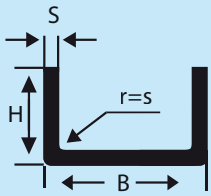


EQUAL LEG ANGLES

UNI 7211

dimensions	thickness mm							
	1,5	2	2,5	3	4	5	6	7
B x H	weight kg/m							
10 x 10	0,20							
15 x 15	0,31	0,40						
20 x 20	0,43	0,56	0,69					
25 x 25	0,55	0,72	0,90	1,03				
30 x 30	0,67	0,88	1,10	1,25				
35 x 35		1,03	1,30	1,53				
40 x 40		1,20	1,45	1,75				
45 x 45		1,35	1,69	2,00	2,63			
50 x 50		1,51	1,87	2,20	2,95	3,65		
60 x 60			2,27	2,70	3,50	4,40	5,22	
70 x 70				3,15	4,15	5,22	6,68	
80 x 80				3,65	4,76	6,75	7,16	
90 x 90				4,12	5,46	6,80	8,10	
100 x 100				4,60	6,00	7,45	8,85	10,22
120 x 120					7,34	9,00	10,70	12,40
150 x 150						11,40	13,55	15,70





"U" SECTIONS – EQUAL FLANGES

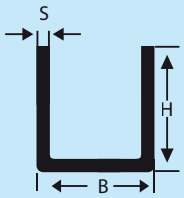
UNI EN 10279

dimensions	thickness mm		
	1.5	2	3
B x H	weight kg/m		
8 x 10			
8 x 12			
8 x 15	0.39		
11 x 14	0.40		
15 x 10	0.35		
15 x 20	0.59	0.77	
20 x 10	0.41	0.54	
22 x 15	0.56	0.72	
22 x 18	0.64	0.84	
22 x 20	0.68	0.90	
22 x 30	0.91	1.19	
23 x 30	0.92	1.20	
24 x 30	0.93	1.22	1.76
24 x 35	1.05	1.35	2.00
25 x 12	0.52	0.68	
25 x 30	0.95	1.24	1.76
25 x 40	1.18	1.55	2.24
28 x 40	1.22	1.60	2.33
30 x 10	0.52		
30 x 15	0.64	0.85	
30 x 20	0.77	1.00	1.43
30 x 25	0.89	1.16	1.67

dimensions	thickness mm			
	2	3	4	5
B x H	weight kg/m			
30 x 35	1.40	2.00		
30 x 40	1.64	2.43	3.18	
35 x 17	0.99			
35 x 20	1.08	1.53		
35 x 30	1.40	2.00		
35 x 40	1.71	2.50		
40 x 20	1.16	1.67		
40 x 30	1.47	2.14		
40 x 35	1.64	2.43	3.18	
50 x 20	1.33	1.96		
50 x 25	1.47	2.14		
50 x 30	1.64	2.43	3.18	
50 x 40	1.94	2.85	3.70	
55 x 30	1.71	2.50	3.23	
60 x 20	1.47	2.14		
60 x 30	1.87	2.61	3.39	4.12
60 x 40	2.10	3.08	4.01	4.90
65 x 50	2.41	3.58	4.73	5.84
70 x 30	1.94	2.85	3.70	
70 x 35	2.10	3.08	4.01	4.90
70 x 45	2.41	3.58	4.73	5.84
80 x 40	2.41	3.58	4.73	5.84
80 x 50	2.73	4.02	5.27	6.47
80 x 60	3.04	4.50	5.90	7.26
90 x 40	2.57	3.80	4.96	6.08
90 x 45	2.73	4.02	5.27	6.47
100 x 30	2.41	3.58	4.73	5.84
100 x 40	2.73	4.02	5.27	6.47
100 x 50	3.04	4.50	5.90	7.26
100 x 60	3.36	4.96	6.53	8.04
120 x 50		4.96	6.53	8.04
120 x 55		5.20	6.84	8.43
120 x 60		5.44	7.15	8.83
140 x 60		5.91	7.78	9.61
160 x 65		6.55	8.61	10.00

"U" SECTIONS – EQUAL SIDES

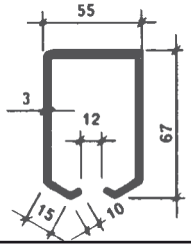
UNI EN 10279



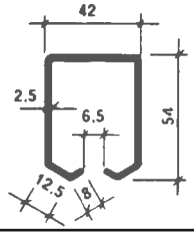
dimensions	thickness mm									
	0.8	1	1.2	1.5	2	2.5	3	3.5	4	5
B x H	weight kg/m									
8 x 8	0.13	0.16	0.20							
10 x 10	0.17	0.21	0.24	0.29						
12 x 12	0.20	0.26	0.30	0.37						
15 x 15	0.26	0.32	0.38	0.47	0.60					
20 x 20	0.36	0.45	0.53	0.65	0.85					
22 x 22			0.59	0.72	0.94					
25 x 25			0.67	0.83	1.07	1.31	1.53			
26 x 26		0.58	0.69	0.85	1.10	1.35	1.60			
28 x 28			0.76	0.94	1.23	1.51	1.77			
30 x 30			0.81	1.00	1.31	1.61	1.89			
35 x 35				1.20	1.56	1.92	2.25			
40 x 40					1.82	2.21	2.61	2.98	3.35	
45 x 45					2.02	2.52	2.96	3.40	3.82	
50 x 50					2.26	2.79	3.32	3.80	4.29	5.24

STANDARD PRODUCTION – MONORAIL BLACK, PICKLED, GALVANIZED

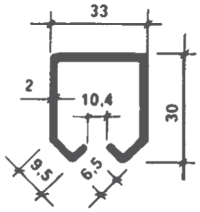
Type A
Weight kg/rm 5,00



Type B
Weight kg/rm 3,18

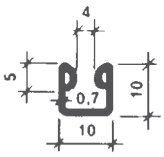


Type C
Weight kg/rm 1,77

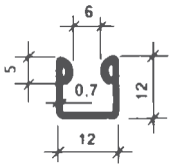


STANDARD PRODUCTION – GLASS SNAP CATCHES

GALVANIZED
Weight kg/rm 0,20

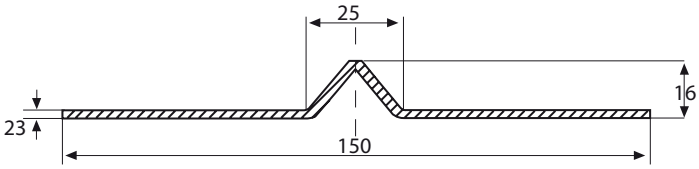


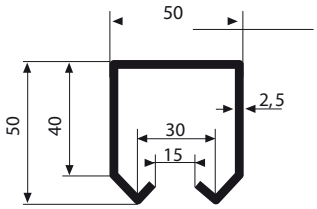
GALVANIZED
Weight kg/rm 0,23



TOE-PLATE

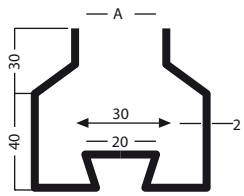
MR4





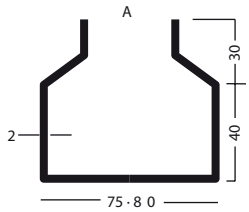
Weight Kg/m 3,12

GALVANIZED PROFILES FOR POLYURETHANE PANELS



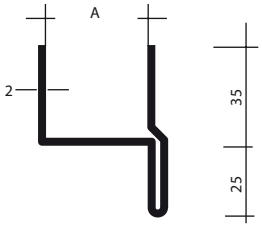
Panel support profile

A mm	Weight Kg/m
41	3,66



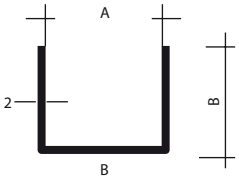
Panel support profile

A mm	Weight Kg/m
36	3,51
41	3,59



Panel support profile

A mm	Weight Kg/m
36	2,34
41	2,42

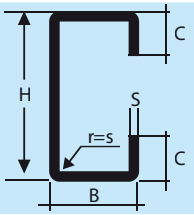


Panel support profile

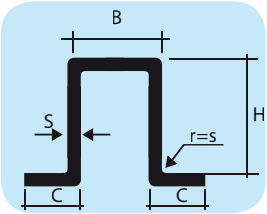
A mm	B mm	Weight Kg/m
26	30	1,30
36	40	1,78
41	45	1,86
51	55	2,00

"C" SECTIONS

UNI EN 10219

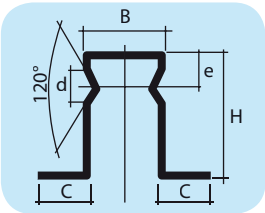


dimensions			thickness mm				
			1,5	2	2,5	3	3,5
H	B	C	weight kg/m				
25	15	7,5	0,74				
25	25	7,5	0,99				
30	15	7,5	0,81				
30	30	10	1,22	1,60	1,96	2,38	
30	40	10	1,46	1,92	2,36		
35	35	10	1,34	1,72	2,25	2,66	
40	20	10	1,11	1,33			
40	30	15	1,46	1,79			
40	40	10	1,58	2,07			
40	40	15	1,63	2,23	2,75	3,25	
40	50	15	1,87	2,54	3,14	3,44	
45	45	15	1,81	2,34	2,85	3,33	
50	30	15	1,58	2,07			
50	30	20	1,63	2,17	2,56	2,97	
50	40	15	1,81	2,39	2,75	3,21	
50	40	20		2,42	2,95	3,44	
50	50	15		2,58	3,14	3,68	
60	30	15		2,11	2,55	2,97	
60	40	20		2,58	3,15	3,69	
60	50	20		2,89	3,54	4,16	
60	60	20		3,21	3,93	4,63	
70	30	20		2,42	2,95	3,44	
70	40	12		2,50	3,03	3,54	
70	50	12		2,80	3,42	4,01	
80	40	20		2,89	3,59	4,16	
80	50	25		3,36	4,13	4,86	5,56
80	60	15		3,36	4,13	4,86	5,56
80	80	30		4,46	5,50	6,51	7,49
100	50	25		3,68	4,52	5,33	6,10
100	60	30				6,03	6,94
100	70	35				6,74	7,76
100	100	30				7,92	9,13
120	30	12		2,96			
120	60	30		4,46	5,50	6,51	7,49
130	60	30				6,74	7,75
140	50	25				6,27	7,21
140	70	35				7,68	8,87
150	50	25				6,50	7,48
150	70	35				7,93	9,14
180	60	30				7,93	9,14
200	50	25				7,68	8,87



SYMMETRIC "OMEGA" SECTIONS

dimensions			thickness mm			
			1,5	2	2,5	3
B	H	C		weight kg/m		
30	50	20	1.93	2.54	3.14	
40	60	25		3.17	3.92	4.66
40	80	25		3.80	4.71	5.60
50	100	30		4.74	5.88	7.01
60	120	30			6.86	8.20
80	150	45				10.78



RECESSED GROOVE PURLIN

dimensions					thickness mm			
					2	2.5	3	3.5
H	B	c	e	d	weight kg/m			
50	35	28	22	24	3.02	3.75		
60	35	30	19.5	17	3.30	4.11		
75	35	30	19.5	17	3.76	4.70		
100	40	26.5	35	34		5.12	6.70	
100	60	30	35	34		6.13	7.33	
100	60	42	35	34		6.60	7.89	
105	60	42	35	34		6.80	8.12	
120	50	40	35	34		7.10	8.50	
120	60	30	35	34		6.91	8.27	
120	80	40	35	34		7.69	9.21	
150	80	43.5	47	40		9.03	10.78	12.51
150	82	42.5	47	40		9.03	10.78	12.51

SEAMLESS PIPES SUITABLE FOR PLUMBING INSTALLATIONS (BLACK AND GALVANIZED)

UNI 10255

DIAMETERS			THICKNESS mm	Thread and socket Kg/m	Plain ends Kg/m
D.N.	inches	outside mm			
6	1/8″	10, 2	1,80	0,372	0,369
8	1/4″	13, 5	2,00	0,577	0,573
10	3/8″	17, 2	2,00	0,753	0,747
15	1/2″	21, 3	2,35	1,11	1,10
20	3/4″	26, 9	2,35	1,42	1,41
25	1″	33, 7	2,90	2,23	2,21
32	1″ 1/4 ″	42, 4	2,90	2,87	2,84
40	1″ 1/2 ″	48, 3	2,90	3,30	3,26
50	2″	60, 3	3,25	4,63	4,56
70	2″ 1/2 ″	76, 1	3,25	5,93	5,81
80	3″	88, 9	3,65	7,82	7,65
100	4″	114, 3	4,05	11,30	11,00
125	5″	139, 7	4,85	16,70	16,20
150	6″	165, 1	4,85	19,80	19,20

WELDED PIPES SUITABLE FOR PLUMBING INSTALLATIONS - LIGHT SERIES

UNI 5745

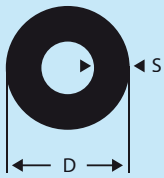
DIAMETERS			THICKNESS mm	Galvanized Thread and socket Kg/m	Black - Plain ends Kg/m
D.N.	inches	outside mm			
10	3/8″	17, 2	1,80	0,674	0,75
15	1/2″	21, 3	2,00	0,952	1,04
20	3/4″	26, 9	2,35	1,410	1,53
25	1″	33, 7	2,65	2,010	2,16
32	1″ 1/4 ″	42, 4	2,65	2,580	2,78
40	1″ 1/2 ″	48, 3	2,90	3,250	3,48
50	2″	60, 3	2,90	4,110	4,42
70	2″ 1/2 ″	76, 1	3,25	5,25	6,22
80	3″	88, 9	3,25	6,810	7,20

SEAMLESS PIPES FOR PRESSURE PURPOSES (BOILER TUBES) – LIGHT SERIES

UNI EN 10210 - UNI EN 10216

OUTSIDE DIAMETER mm	THICKNESS mm	WEIGHT mm
26, 9	2, 0	1,24
30	2, 3	1,59
33, 7	2, 3	1,79
38	2, 6	2,29
42, 4	2, 6	2,57
44, 5	2, 6	2,70
48, 3	2, 6	2,95
54	2, 6	3,32
57	2, 9	3,90
60, 3	2, 9	4,14
70	2, 9	4,84
76, 1	2, 9	5,28
88, 9	3, 2	6,81
101, 6	3, 6	8,76
108	3, 6	9,33

OUTSIDE DIAMETER mm	THICKNESS mm	WEIGHT mm
114, 3	3, 6	9,90
133	4, 0	12,80
139, 7	4, 0	13,50
159	4, 5	17,10
168, 3	4, 5	18,10
193, 7	5, 4	25,00
219, 1	5, 9	31,00
244, 5	6, 3	37,10
273	6, 3	41,60
323, 9	7, 1	55,60
355, 6	8, 0	68,30
368	8, 0	70,80
406, 4	8, 8	85,90
419	8, 8	88,70



TUBES FOR MECHANICAL PURPOSES

MATERIAL: FE 510 STEEL
UNI EN 10297

S = Thickness - mm

OUTSIDE D mm	6,3	7,1	8	8,8	10	11	12,5	14,2	16	17,5	20	22,2	25	28
44,5	5,9	6,5	7,2	7,7	8,5									
48,3	6,5	7,2	7,9	8,6	9,4	10,1	11,0							
51	6,9	7,7	8,4	9,1	10,1	10,9	11,9	12,9						
54	7,4	8,2	9,0	9,8	10,9	11,7	12,9	13,9						
57	7,9	8,8	9,6	10,4	11,6	12,5	13,8	15,0						
60,3	8,4	9,3	10,3	11,1	12,4	13,4	14,8	16,2	17,4					
63,5	8,9	9,9	10,9	11,8	13,2	14,3	15,8	17,3	18,7					
67	9,4	10,5	11,6	12,6	14,1	15,2	16,8	18,5	20,1	21,4				
70	9,9	11,0	12,2	13,2	14,8	16,0	17,8	19,6	21,2	22,6	24,7			
73	10,4	11,6	12,8	13,9	15,5	16,9	18,8	20,6	22,4	23,9	26,1			
76,1	10,9	12,1	13,4	14,6	16,3	17,7	19,7	21,7	23,7	25,3	27,7			
82,5	11,9	13,2	14,6	15,9	17,9	19,5	21,7	24,0	26,2	28,0	30,8	33,0	35,4	
88,9	12,9	14,4	15,9	17,3	19,5	21,2	23,7	26,2	28,7	30,7	34,0	36,5	39,4	
95	13,8	15,4	17,2	18,9	21,0	23,1	25,4	28,3	31,2	33,4	37,0	39,9	43,0	
101,6	14,9	16,6	18,4	20,1	22,6	24,7	27,6	30,7	33,7	36,2	40,2	43,5	47,5	50,8
108	15,8	17,7	19,6	21,4	24,2	26,4	29,6	32,9	36,2	39,0	43,4	47,0	51,4	55,2
114,3	16,8	18,8	20,9	22,8	25,7	28,1	31,6	35,1	38,6	41,7	46,5	50,4	55,3	59,3
121	17,8	19,9	22,3	24,7	27,4	30,2	33,4	37,4	41,4	44,7	49,8	54,1	59,2	64,2
127	18,8	21,0	23,4	25,5	28,9	31,6	35,5	39,6	43,6	47,2	52,8	57,4	63,2	68,3
133	19,8	22,1	24,6	26,9	30,3	33,3	37,4	41,8	46,1	49,9	55,7	60,8	67,1	72,5
139,7	20,8	23,3	25,9	28,3	32,0	35,1	39,5	44,0	48,6	52,7	59,0	64,3	71,1	77,0
146	21,7	24,3	27,2	29,8	33,5	36,6	41,2	46,2	51,3	55,5	62,1	67,8	74,6	81,5
152,4	22,8	25,5	28,4	31,0	35,1	38,5	43,4	48,5	53,6	58,1	65,3	71,3	79,0	85,8
159	23,8	26,6	29,6	32,4	36,7	40,3	45,4	50,8	56,2	60,9	68,6	74,8	83,0	90,3
168,3	25,3	28,3	31,5	34,5	39,0	42,9	48,4	54,1	59,9	65,0	73,1	80,0	88,9	96,7
177,8	26,7	30,0	33,4	36,5	41,4	45,4	51,3	57,4	63,6	69,1	77,8	85,2	94,8	103
193,77	29,2	32,8	36,5	40,0	45,3	49,8	56,2	63,0	69,8	75,9	85,7	93,9	105	114
203	30,6	34,3	38,5	42,7	47,6	52,8	58,7	66,1	73,8	80,1	90,3	99,0	110	121
219,1	33,2	37,2	41,5	45,4	51,6	56,7	64,1	71,9	79,8	86,9	98,2	108	120	132
229	34,5	38,8	43,6	47,7	54,0	59,1	66,7	75,2	84,0	91,2	103	113	125	138
244,5	37,1	41,7	46,5	50,9	57,8	63,6	72,0	80,8	89,8	97,8	111	122	136	149
254	38,5	43,2	48,5	53,9	60,2	66,8	74,4	84,0	93,9	102	115	127	141	156
267	40,6	45,6	50,9	55,8	63,4	69,7	79,0	88,7	98,6	107	122	134	150	165
273	41,6	46,7	52,1	57,1	64,8	71,4	80,9	90,9	101	110	125	137	154	169
298,5		51,1	57,1	62,6	71,1	78,3	88,8	99,8	111	121	137	151	170	187
305		52,1	58,5	64,2	72,7	79,7	90,1	101	113	124	140	154	173	191
323,9		55,6	62,1	68,1	77,4	85,3	96,7	109	121	132	150	165	186	204
330				69,6	78,8	86,5	97,8	110	123	134	152	168	187	208
343				72,5	82,0	90,0	102	115	128	140	159	175	195	217
355,6				74,9	85,2	93,9	107	120	133	146	166	183	205	226
368				77,9	88,2	96,9	109	123	138	151	171	189	211	234
381				80,7	91,5	101	114	129	144	158	178	197	220	243
394				83,5	96,8	103	117	132	149	162	184	203	227	252
406,4				85,9	97,8	108	122	138	153	168	191	210	237	261
419				88,7	101	111	126	142	158	173	197	217	245	270
431,8					104	114	129	146	164	179	203	224	251	279
445					107	117	133	150	169	184	209	231	258	287
457,2					110	122	138	156	173	189	216	238	268	296
470						124	140	159	179	195	221	245	274	305
482,6						130	145	164	184	201	228	252	282	314
508						135	154	173	193	211	241	266	300	331
521							156	177	199	217	246	272	305	340
530							159	181	203	221	252	278	311	347
558,8							170	191	213	233	266	294	331	366
584,2							176	200	224	246	278	308	345	384
609,6							185	209	233	255	291	322	363	401
635							192	217	244	266	303	335	376	419
660,4							201	227	253	277	316	349	395	436

30	35	40	45	50	55	60	65	70	75	80	85	90	100
52,9													
57,7													
62,3	68,5	73,3											
67,3	74,2	79,9											
71,7	79,3	85,8											
76,3	84,5	91,7											
81,1	90,3	98,3	105										
85,8	95,8	104,4	112										
90,5	101	112	119										
95,3	106	119	127										
102	115	126	137	146									
109	123	136	147	158									
121	136	151	167	179									
128	144	161	178	191	201	212							
140	158	176	196	211	223	235							
147	167	186	204	220	236	250							
159	180	201	224	243	257	273							
166	188	211	235	255	270	287							
175	200	223	250	271	287	306							
180	205	229	256	275	296	315							
198	227	255	285	306	335	353							
203	232	261	288	314	338	362							
217	249	280	313	338	370	390	415	438					
221	254	285	316	345	372	399	425	449					
231	265	298	330	361	390	418	446	471					
241	276	311	349	377	413	437	466	493					
249	287	323	358	391	424	455	485	514					
259	298	336	372	407	441	474	506	537					
269	309	349	387	423	459	493	527	559					
278	320	361	406	439	483	513	547	581					
288	331	373	421	455	500	531	567	603					
298	343	387	430	471	512	551	588	625	660	668			
306	353	399	443	486	528	569	609	647	684	720			
316	364	411	464	502	553	587	628	668	707	744			
325	375	423	471	517	562	606	649	690	731	769			
335	386	437	486	533	580	625	669	712	754	794			
353	408	461	521	565	614	663	710	756	801	844	887	928	1006
363	419	474	527	580	631	681	731	778	825	870	914	957	1038
370	427	483	538	592	644	695	745	794	842	888	933	976	1060
391	451	511	570	628	693	738	792	844	895	945	994	1041	1132
410	474	537	598	659	718	776	832	888	942	995	1046	1096	1194
428	495	561	626	691	763	814	874	932	989	1046	1101	1154	1258
448	518	587	654	721	787	851	914	975	1035	1094	1152	1209	1319
466	539	611	683	752	832	888	954	1019	1082	1144	1205	1265	1381

TOLERANCES ACCORDING TO DIN 1629.3

WALL THICKNESS

1 + 15%
– 10%

2 + 12,5%
– 10%

3 ± 9%

4 + 17,5%
– 12,5%

5 ± 12,5%

6 ± 10%

7 + 20%
– 15%

8 + 15%
– 12,5%

9 + 12,5%
– 10%

OUTSIDE DIAMETER
± 1% but not less than
± 0,5 mm

STRAIGHTNESS:
"Tubes must be straight sight"
(approximately equivalent to 1,5‰ of the total length).
Tolerances on ovality and eccentricity are allowed within the limits of those on outside diameter and thickness respectively.

SEAMLESS AND WELDED TUBES

DIMENSIONS ACCORDING TO UNI EN 10297

diameter				identification		
nominal inches	outside kg/rm	thickness kg/rm	plain tube weight kg/rm	acc. to API standards	standard X strong XX strong	schedule number
1/8	10.3	1.73	0.375	5L	STD	40
		2.41	0.462	5L	XS	80
1/4	13.7	2.24	0.626	5L	STD	40
		3.02	0.804	5L	XS	80
3/8	17.1	2.31	0.849	5L	STD	40
		3.20	1.10	5L	XS	80
1/2	21.3	2.77	1.27	5L	STD	40
		3.73	1.62	5L	XS	80
		4.78	1.95			160
3/4	26.7	2.87	1.68	5L	STD	40
		3.91	2.19	5L	XS	80
		5.56	2.89			160
1	33.4	3.38	2.50	5L	STD	40
		4.55	3.23	5L	XS	80
		6.35	4.23			160
1¼	42.2	3.56	3.38	5L	STD	40
		4.85	4.47	5L	XS	80
		6.35	5.60			160
1½	48.3	3.68	4.05	5L	STD	40
		5.08	5.41	5L	XS	80
		7.14	7.24			160
2	60.3	3.91	5.44	5L 5LX	STD	40
		5.54	7.48	5L 5LX	XS	80
		8.74	11.11			160
		11.07	13.45	5L 5LX	XXS	
2½	73.0	5.16	8.62	5L 5LX	STD	40
		7.01	11.41	5L SLX	XS	80
		9.52	14.91			160
		14.02	20.41	5L SLX	XXS	
3	88.9	5.49	11.29	5L SLX	STD	40
		7.62	15.27	5L SLX	XS	80
		11.13	21.33			160
		15.24	27.67	5L SLX	XXS	
3½	101.6	5.74	13.57	5L SLX	STD	40
		8.08	18.63	5L SLX	XS	80
4	114.3	6.02	16.07	5L SLX	STD	40
		8.56	22.31	5L SLX	XS	80
		11.13	28.30	5L SLX		120
		13.49	33.53	5L SLX		160
		17.12	41.02	5L SLX	XXS	

diameter				identification		
nominal inches	outside kg/rm	thickness kg/rm	plain tube weight kg/rm	acc. to API standards	standard X strong XX strong	schedule number
5	141.3	6.55	21.78	5L S	TD	40
		9.52	30.95	5L X	S	80
		12.70	40.28	5L		120
		15.88	49.09	5L		160
		19.05	57.42	5L	XXS	
6	168.3	7.11	28.26	5L 5LX	STD	40
		10.97	42.56	5L 5LX	XS	80
		14.27	54.20	5L 5LX		120
		18.26	67.55	5L 5LX		160
		21.95	79.18	5L	XXS	
8	219.1	6.35	33.31	5L 5LX		20
		7.04	36.79	5L 5LX		30
		8.18	42.53	5L 5LX	STD	40
		10.31	53.09			60
		12.70	64.63	5L 5LX	XS	80
10	273.0	6.35	41.77	5L 5LX		20
		7.80	51.00	5L 5LX		30
		9.27	60.29	5L 5LX	STD	40
		12.70	81.54	5L 5LX	XS	60
		15.09	95.97			80
		18.26	114.74	5L 5LX		100
12	323.8	6.35	49.72	5L 5LX		20
		8.35	65.20	5L 5LX		30
		9.52	73.82	5L 5LX	STD	
		12.70	97.44	5L 5LX	XS	
		14.27	108.96	5L 5LX		60
		17.48	132.01	5L 5LX		80
14	355.6	5.33	46.07	5L X		10
		7.92	67.94	5L 5LX		20
		9.52	81.28	5L SLX	STD	30
		12.70	107.38	5L SLX	XS	
		15.09	126.68			60
		19.05	158.08	5L 5LX		80
		23.83	194.90			100
16	406.4	6.35	62.63	5L 5LX		10
		7.92	77.86	5L 5LX		20
		9.52	93.21	5L 5LX	STD	30
		12.70	123.29	5L 5LX	XS	40
		16.66	160.12			60
		21.44	203.48			80
18	457.2	6.35	70.59	5L 5LX		10
		7.92	87.79	5L 5LX		20
		9.52	105.14	5L 5LX	STD	
		11.13	122.36	5L 5LX		30
		12.70	139.19	5L 5LX	XS	
		14.27	155.91	5L 5LX		40
		19.05	205.80	5L 5LX		60
		23.83	254.59			80

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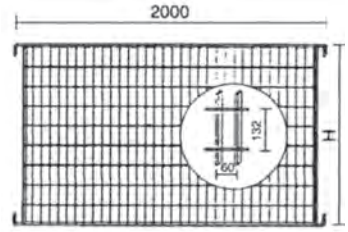
diameter				identification		
nominal inches	outside kg/rm	thickness kg/rm	plain tube weight kg/rm	acc. to API standards	standard X strong XX strong	schedule number
		6.35	78.54	5L 5LX		10
		9.52	117.07	5L 5LX	ST D	20
		12.70	155.10	5L 5LX	XS	30
20	508.0	15.09	183.37			40
		20.62	247.85	5L 5LX		60
		26.19	311.11			80
		6.35	86.50	5L 5LX		10
22	558.8	9.52	129.01	5L 5LX	ST D	20
		12.70	171.01	5L 5LX	XS	30
		22.22	294.04			60
		6.35	94.45	5L 5LX		10
		9.52	140.94	5L 5LX	ST D	20
		12.70	186.92	5L 5LX	XS	
24	609.6	14.27	209.54	5L 5LX		30
		17.48	255.14	5L 5LX		40
		24.61	355.02			60
		7.92	127.50	5L 5LX		10
26	660.4	9.52	152.87	5L 5LX	ST D	
		12.70	202.83	5L 5LX	XS	20
		7.92	137.42	5L 5LX		10
28	711.2	9.52	164.80	5L 5LX	ST D	
		12.70	218.73	5L 5LX	XS	20
		15.88	272.18	5L 5LX		30
		7.92	147.36	5L 5LX		10
30	762.0	9.52	176.73	5L 5LX	ST D	
		12.70	234.64	5L 5LX	XS	20
		15.88	292.06	5L 5LX		30
		7.92	157.28	5L 5LX		10
		9.52	188.66	5L 5LX	ST D	
32	812.8	12.70	250.55	5L 5LX	XS	20
		15.88	311.95	5L 5LX		30
		17.48	342.70	5L 5LX		40
		8.74	184.18	5L X		10
		9.52	200.59	5L 5LX	ST D	
34	812.8	12.70	266.46	5L 5LX	XS	20
		15.88	331.83	5L 5LX		30
		17.48	364.58	5L 5LX		40
		7.92	177.13	5L 5LX		10
		9.52	212.52	5L 5LX	ST D	
36	914.4	12.70	282.36	5L 5LX	XS	20
		15.88	351.72	5L 5LX		30
		19.05	420.58	5L 5LX		40



GALVANIZED FENCE PANELS framed with flat bar 25 x 6

Height (mm)	Distance between posts (mm)	Unit weight (kg)		
		mesh 62 x 132 2 5 x 2	mesh 62 x 132 25 x 3	mesh 60 x 65 25 x 3
930	2.000	21,5	28,2	30,6
1.200	2.000	26,0	34,7	37,8
1.330	2.000	28,3	37, 9	41,3
1.460	2.000	30,6	41, 2	44,9
1.720	2.000	32,5	44,7	48,9

GALVANIZED FENCE POSTS

FLAT BAR 6 x 8

HEIGHT: mm 1.200 for panel mm 930 high UNIT WEIGHT (kg) 4,8
HEIGHT: mm 1.500 for panel mm 1.200 high UNIT WEIGHT (kg) 6,0
HEIGHT: mm 1.600 for panel mm 1.330 high UNIT WEIGHT (kg) 6,4
HEIGHT: mm 1.800 for panel mm 1.460 high UNIT WEIGHT (kg) 7,2
HEIGHT: mm 2.000 for panel mm 1.720 high UNIT WEIGHT (kg) 7,6

NUTS AND BOLTS

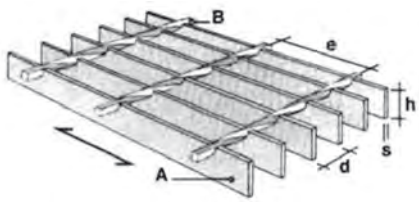
GALVANIZED HEXAGON HEAD mm 8 x 30
STAINLESS STEEL HEXAGON HEAD mm 8 x 30
STAINLESS STEEL ANTI-THEFT mm 8 x 30

GALVANIZED ANGLE BRACKETS WITH CLAMPS

SIZE mm 30 x 30 x 5 LENGTH mm 2.000
SIZE mm 35 x 35 x 5 LENGTH mm 2.000

GRATINGS

Mesh	Flat	Size	Untreated	Galvanized
15 x 76	25 x 2	1000 x 6100	28,1	29,4
25 x 76	25 x 2 25 x 3 30 x 3 40 x 3 50 x 4 60 x 4	1000 x 6100	17,1 25,8 30,6 40,3 67 78,8	19 27,3 32,4 42,6 71 88
25 x 25	25 x 2	1000 x 6100	20	22,6
34 x 38	25 x 2 25 x 3 30 x 3	1000 x 6100	15,2 21,1 24,6	16,3 23,4 27,2
34 x 76	25 x 2 25 x 3 30 x 3	1000 x 6100	13,5 20,1 23	14,5 21,3 25
60 x 132	25 x 2 25 x 3	1870 x 6100	8 11,4	



A = LOAD-BEARING FLAT
h = mm 20÷70
s = mm 2÷ 5

CROSS BAR
Round Ø 3÷6 mm

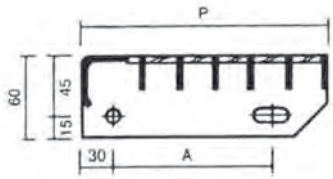
Twisted flat bar ⌀ 4÷6 mm

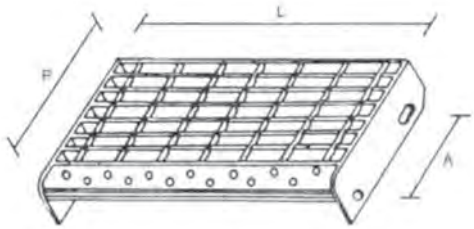
MESH d x e
d = distance between load-bearing flats mm 15/22/25/30/34/60 and multiples

e = distance between cross bars variable in steps from 25 to 500 mm

= load bearing direction

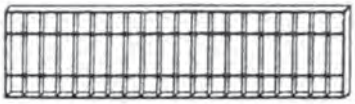
GALVANIZED STAIR TREADS
with perforated flange and louvered panel





Length L (mm)	Depth P (mm)	Distance between holes A (mm)	Grating (mesh)	Unit weight (galvanized) (kg)
600	205	115	25 x 76 25 x 2	3,4
700	255	180	25 x 76 25 x 2	
800	255	180	25 x 76 25 x 2	5,2
900	255	180	25 x 76 25 x 2	7,4
1.000	305	180	25 x 76 25 x 2	13,1
1.200	320	180	15 x 76 30 x 2	15,4

GALVANIZED FRAMED PANELS



Load (type)	Size (mm)	Unit weight (kg)	Grating (mesh)
TRAILER TRUCK	150 x 1.000	3,8	25 x 76 25 x 2
TRUCK	200 x 1.000	4,7	25 x 76 25 x 2
CAR	250 x 1.000	5,7	25 x 76 25 x 2
PEDESTRIAN	300 x 1.000	6,7	25 x 76 25 x 2
PEDESTRIAN	400 x 1.000	8,6	25 x 76 25 x 2
PEDESTRIAN	500 x 1.000	10,5	25 x 76 25 x 2
PEDESTRIAN	600 x 1.000	12,5	25 x 76 25 x 2
PEDESTRIAN	700 x 1.000	14,4	25 x 76 25 x 2
PEDESTRIAN	800 x 1.000	16,3	25 x 76 25 x 2
PEDESTRIAN	900 x 1.000	18,2	25 x 76 25 x 2
PEDESTRIAN	1.000 x 1.000	20,2	25 x 76 25 x 2
CAR	225 x .225	1,3	25 x 76 25 x 2
CAR	325 x .325	2,6	25 x 76 25 x 2
CAR	425 x .425	4,1	25 x 76 25 x 2
CAR	525 x .525	6,2	25 x 76 25 x 2
TRAILER TRUCK	250 x 1.000	12,5	25 x 76 40 x 3
TRAILER TRUCK	350 x 1.000	27,3	25 x 76 50 x 4
TRAILER TRUCK	450 x 1.000	34,4	25 x 76 50 x 4
TRAILER TRUCK	550 x 1.000	41,5	25 x 76 50 x 4

APPENDIX C (for reference purposes only)

List of previous equivalent national designations

Table CI - List of previous equivalent national designations *UNI EN 10020*

Designation		Previous equivalent designations										
According to EN 10027-1 and ECISS IC 10	According to EN 10027-2	According to EN 10025-1990	Germany	France	UK	Spain	Italy	Belgium	Sweden	Portugal	Austria	Norway
S 185	S 1.0035	Fe 3100	St 3 3	A 33		AJ10-0	Fe 320	A 320	1300-00	Fe 310-0	St 320	
S235JR	1.0037	Fe 360B	St 37-2	E 24-2			Fe 360B	AE 235-B	1311-00	Fe 360 B		Ns 12 120
S235URG1	1.0036	Fe 360 BU	USt 37-2			AE 235 B-FU					USI 360 B	NS 12 122
S235JRG2	1.0036	Fe 360 BN	RSt BFN		40B	AE 235 B-Fn			13 12-00		RSt 360 B	Ns 12 123
S235JO	1.01 14	Fe 360 C	St 37 - 3U	E 24-3	40C	AE 235 C	Fe 360-C	AE 235-C		Fe 360-C	St 360-C	NS 12 124
											St 360 CE	
S235J23	1.01 16	Fe 360 D1	St 37- 3N	E 24-4	40D	AE 235 D	Fe 360 D	AE 235-D		Fe 360-D	St 360 D	NS 12 124
S235J24	1.01 17	Fe 360 D2										
S275JR	1.0044	Fe 430B	St 44 - 2	E 28-2	43B	AE 275B	Fe 430B	Fe 430 B	14 12-00	Fe 430-B	St 430-B	NS 12 142
S275JO	1.0143	Fe 430C	St 44 - 3U	E 28-3	43C	AE 275C	Fe 430C	AE 255 C		Fe 430-C	St 430-C	Ns 12 143
S275J2G3	1.0144	Fe 430 01	St 44 - 3N	E 28-4	43D	AE 275D	Fe 430D	AE 255 D	14 14-00	Fe 430-D	St 430-D	NS 12 143
S275J2G4	1.0145	Fe 430 D2							14 14-01			
S355JR	1.0045	Fe 510B		E 35-2	50B	AE 355B	Fe 510B	AE 355-B		Fe 510-B		
S355JO	1.0553	Fe 510C	St 52 - 3U	E 35-3	50C	AE 355C	Fe 510C	AE 355-C		Fe 510-C	St 510-C	NS 12 153
S355J23	1.0570	Fe 510 Dt	St 52 - 3N		50D	AE 355D	Fe 510D	AE 355-D		Fe 510-D	St 510-D	NS 12 153
S355J24	1.0577	Fe 510 D2										
S355K23	1.0595	Fe 50 DD1		E 36-4	50 DD			AE 355-DD		Fe 510-DD		
S355K24	1.0596	Fe 510 DD2										
E295	1.0050	Fe 490- 2	S t 50-2	A 50- 2		A 490	Fe 490	A 490- 2	15 50-00 15 50-01	Fe 490- 2	St 490	
E335	1.0060	Fe 590- 2	St 60- 2	A 60- 2		A 590	Fe 590	A 590- 2	16 50-00 16 50-01	Fe 590- 2	St 590	
E360	1.0070	Fe 690- 2	St 70- 2	A 70- 2		A 690	Fe 690	16 55-00 16 55-00	Fe 690-2	St 600		

PHYSICAL PROPERTIES

Steel UNI EN 7070	Deoxidation rate	Chemical composition %							
		Ladle analysis				Product analysis			
		C max	N max	P max	S max	C max	N max	P max	S max
Fe 320				0,055	0,055			0,070	0,070
Fe 330 B	FU	0,17	0,007	0,045	0,045	0,22	0.009	0,060	0,060
	FN	0,17		0,045	0,045	0,21		0,055	0,055
Fe 330 C	FN	0,15		0,040	0,045	0,18		0,045	0,050
Fe 330 D	FF	0,15		0,045	0,045	0,17		0,045	0,045
Fe 330 B	FU	0,19	0,007	0,045	0,045	0,24	0,009	0,060	0,060
	FN	0,19		0,045	0,045	0,23		0,055	0,055
Fe 360 C	FN	0,17		0,040	0,045	0,20		0,045	0,050
Fe 360 D	FF	0,17		0,040	0,040	0,19		0,045	0,045
Fe 410 B	FN	0,20		0,045	0,045	0,24		0,055	0,055
Fe 410 C	FN	0,18		0,040	0,045	0,21		0,045	0,050
Fe 410 D	FF	0,18		0,040	0,040	0,20		0,045	0,045
Fe 430 B	FN	0,21		0,045	0,045	0,25		0,055	0,055
Fe 430 C	FN	0,19		0,040	0,045	0,22		0,045	0,050
Fe 430 D	FF	0,19		0,040	0,040	0,21		0,045	0,045
Fe 510 B	FN	0,22		0,045	0,045	0,26		0,055	0,055
Fe 510 C	FN	0,20		0,040	0,045	0,22		0,045	0,050
Fe 510 D	FF	0,20		0,040	0,040	0,22		0,045	0,045
Fe 510 DD	FF	0,20		0,040	0,040	0,22		0,045	0,045
Fe 490				0,050	0,050			0,060	0,060
Fe 590				0,050	0,050			0,060	0,060
Fe 690				0,045	0,050			0,055	0,060

MECHANICAL PROPERTIES

Steel UNI 7070	Tensile test									Bending test	Impact test		
	Tensile strength	Minimum yield strength R H min for thickness (mm)					Minimum elongation A min for thickness (mm)			Diameter othe mandrel D a=180°	Impact strength KV at test temperature of		
	R N/mm²	up to 16 N/mm²	over 16 up to 40 N/mm²	over 40 up to 63 N/mm²	over 63 up to 80 N/mm²	over 80 up to 100 N/mm²	up to 40 %	over 40 up to 63 %	over 63 up to 100 %		+20°C J	0°C J	-20°C J
Fe 320	320a510						18			3a			
Fe 330 B	360a490	235	225	215	205	205	28	27	26	a	27		
Fe 360 C	360a490	235	225	215	205	205	28	27	26	a		27	
Fe 360 D	360a490	235	225	215	205	205	28	27	26	a			27
Fe 430 B	430a560	275	265	255	245	235	24	23	22	a	27		
Fe 430 C	430a560	275	265	255	245	235	24	23	22	2a		27	
Fe 430 D	430a560	275	265	255	245	235	24	23	22	2a			27
Fe 510 B	510a65o	355	345	335	325	315	22	21	20	2,5a	27		
Fe 510 C	510a650	355	345	335	325	315	22	21	20	2,5a		27	
Fe 510 D	510a650	355	345	335	325	315	22	21	20	2,5a			27
Fe 490	490a630	295	285	275			20	19	18				
Fe 590	590a730	335	325	315			16	15	14				
Fe 690	690a840	365	355	345			11	10	9				

HOLLOW SECTIONS

UNI EN 10219

Dimensional tolerances with respect to nominal values

• Outside dimensions: ±1%

• Thickness: ±10% with a minimum of ±0,2 mm outside the welding zone

• Max straightness deviation on both sides: max 0,75% of side dimensions

• Outside corner radii: max 2,5 times the thickness

• Straightness: 0,2% of total length

• Squareness of side = 90°± 1°

• Twist V: 2 mm + 0,5 mm/m length

• Hollow sections are supplied with unfinished internal and external surfaces as they are at the end of the manufacturing process. The surface may present superficial signs due to normal processing and oxidation due to the natural weathering process of steel. They are accepted as long as they do not alter any chemical and mechanical properties.

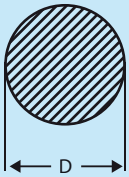
• Bars are supplied with unfinished ends, not butted, as they are after being cut by an in-line flying cutter.

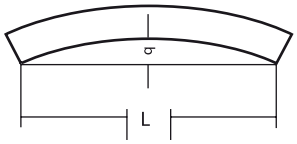
• The tolerance on the declared weight of the supply is ±3‰, as provided for by the relevant Primary Metrological Institute.

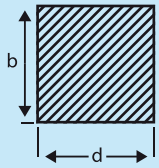
• On the ordinary total quantity of the supply a tolerance of ±10% is accepted.

HOT-ROLLED ROUND BARS FOR GENERAL PURPOSES

ACCORDING TO UNI EN 10060



TOLERANCES		
	Dimensions in mm	
	Nominal size	Tolerances
	8 ≤ d ≤ 15	± 0,4
	15 ≤ d ≤ 25	± 0,5
	25 ≤ d ≤ 35	± 0,6
	35 ≤ d ≤ 50	± 0,8
	50 ≤ d ≤ 80	± 1
	80 ≤ d ≤ 100	± 1,3
	100 ≤ d ≤ 120	± 1,5
	120 ≤ d ≤ 160	± 2
	160 ≤ d ≤ 200	± 2,5
STRAIGHTNESS q		
	**Straightness:** straightness deviation q is measured over the total length L of the bar	
	Nominal size	Tolerances
	40 ≤ d ≤ 80	q ≤ 0,4% of L
	80 < d	q ≤ 0,25% of L

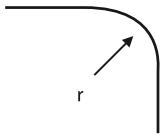


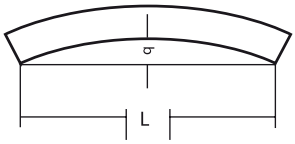
HOT-ROLLED SQUARE BARS FOR GENERAL PURPOSES

ACCORDING TO UNI EN 10059

TOLERANCES

SECTION	Dimensions in mm	
	Nominal size	**Tolerances**
	8 ≤ d ≤ 14	± 0,4
	14 ≤ d ≤ 25	± 0,5
	25 ≤ d ≤ 35	± 0,6
	35 ≤ d ≤ 50	± 0,8
	50 ≤ d ≤ 80	± 1
	80 ≤ d ≤ 100	± 1,3
	d = 120	± 1,5

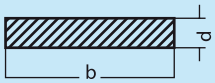
CORNER RADIUS r		
	Nominal size	**Tolerances**
	8 ≤ d ≤ 12	r ≤ 1
	12 < d ≤ 20	r ≤ 1,5
	20 < d ≤ 30	r ≤ 2
	30 < d ≤ 50	r ≤ 2,5
	50 < d ≤ 100	r ≤ 3
	d = 120	r ≤ 4

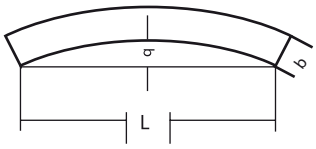
STRAIGHTNESS q		
	Straightness: straightness deviation q is measured over the total length L of the bar	
	**Nominal size**	**Tolerances**
	40 ≤ d ≤ 80	q ≤ 0,4% of L
	80 < d	q ≤ 0,25% of L

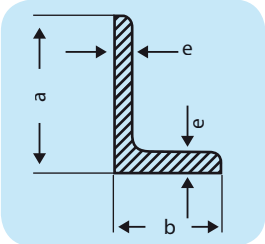
TWIST		
	Nominal size	**Tolerances**
	8 ≤ d ≤ 14	4°/m up to max 24°
	14 < d ≤ 50	3°/m up to max 18°
	50 < d	3°/m up to max 15°

HOT-ROLLED FLAT BARS FOR GENERAL PURPOSES

ACCORDING TO UNI EN 10058



TOLERANCES		
WIDTH b	**Dimensions in mm**	
	Nominal width	**Tolerances**
	$20 \le b \le 35$	± 0,75
	$40 < b \le 70$	± 1
	$80 < b \le 100$	± 1,5
	$b = 120$	± 2
	$b = 150$	± 2,5
THICKNESS d		
	Nominal thickness	**Tolerances**
	$d \le 20$	± 0,5
	$20 \le 40$	± 1
	$40 <$	± 1,5
STRAIGHTNESS q		
	**Straightness:** straightness deviation q is measured over the total length L of the bar	
	Nominal size	**Tolerances**
	$< 1000\ mm^2$	$q \le 0{,}4\%$ **of** L
	$\ge 1000\ mm^2$	$q \le 0{,}25\%$ **of** L

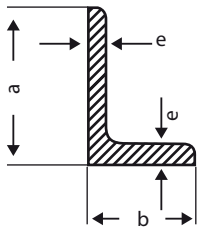


HOT-ROLLED UNEQUAL LEG ANGLES WITH ROUNDED EDGES

ACCORDING TO UNI EN 10056

TOLERANCES

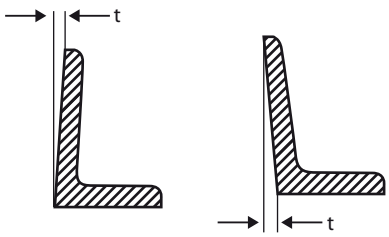
SECTION



Dimensions in mm

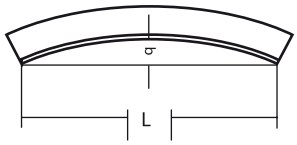
Nominal size	Tolerances on a,b	Tolerances on e
a ≤ 50	± 1	± 0,5
50 < a ≤ 100	± 1,5	± 0,75
100 < a ≤ 150	± 2	± 1
150 < a = 200	± 3	± 1,2

OUT-OF-SQUARE t



Nominal size	Tolerances
a e b ≤ 100	t ≤ 1
100 < a e b	t ≤ 1,5

STRAIGHTNESS q

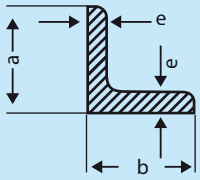


Straightness:
straightness deviation q is measured over the total length L of the bar

Nominal size	Tolerances
50 < a ≤ 150	q ≤ 0,4% of L
150 < a ≤ 200	q ≤ 0,25% of L

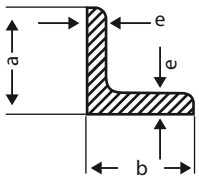
HOT-ROLLED EQUAL LEG ANGLES WITH ROUNDED EDGES

ACCORDING TO UNI EN 10056



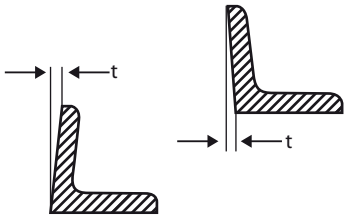
TOLERANCES

SECTION



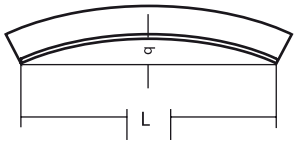
Dimensions in mm		
Nominal size	Tolerances on	
	a,b	e
a ≤ 50	± 1	± 0,5
50 < a ≤ 100	± 1,5	± 0,75
100 < a ≤ 150	± 2	± 1
150 < a = 200	± 3	± 1,2

OUT-OF-SQUARE t



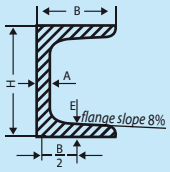
Nominal size	Tolerances
a ≤ 100	t ≤ 1
100 < a	t ≤ 1,5

STRAIGHTNESS q



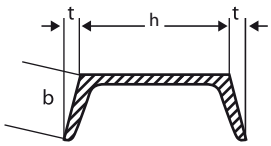
Normal straightening:
straightness deviation q is measured
over the total length L of the bar

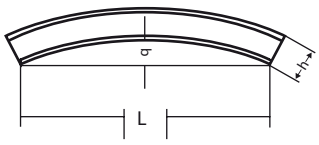
Nominal size	Tolerances
50 < a ≤ 150	q ≤ 0,4% of L
150 < a ≤ 200	q ≤ 0,25% of L



SMALL HOT-ROLLED STEEL CHANNEL BARS

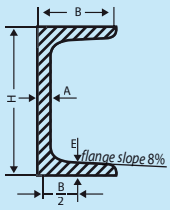
ACCORDING TO UNI EU 54

TOLERANCES	
	Dimensions in mm
Height h Height h is measured at the centre line of web	± 1,5
Width b	± 1,5
Web thickness a	± 0,5
Flange thickness e	± 0,5
Perpendicularity (out-of-square) t 	t ≤ 1
Web transversal straightness f 	f ≤ 0,5

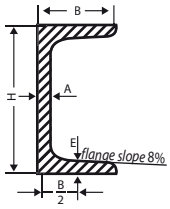
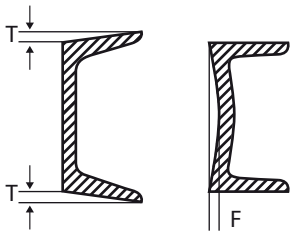
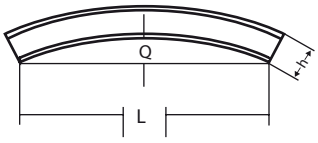
Web longitudinal straightness q 	**Normal straightening:** straightness deviation q is measured on the web plane but over the total length of the bar	
	Nominal size	**Tolerances q**
	30 < h ≤ 65	≤ 0,4 % of L
Mass: applicable to single bars	**Web thickness**	**Tolerances q**
	a ≤ d 4mm	- 7%
	4 < a ≤ 6 mm	- 6%

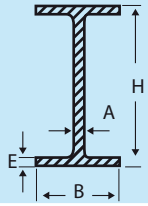
"UNP" CHANNELS

UNI EN 10279



TOLERANCES

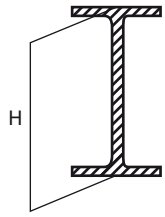
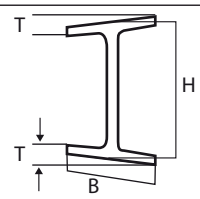
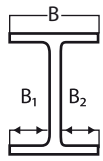
DESIGNATION	REPRESENTATION	Nominal size	LIMIT DEVIATIONS			
		H	H	B	A	E
Tolerances on section dimensions of "UNP" channels according to this standard are given on the table on the right.		from 80 to 140	± 2	± 1,5	± 0,5	± 0,5
		from 160 to 200	± 2	± 1,5	± 0,5	± 1
		from 220 to 300	± 3	± 2	± 0,5	± 1
Out-of-square T (see figure) must not exceed 1 mm.		Bending of web F (see figure) must comply with the following limits: H ≤ 100 mm — F≤0,5 mm 100 mm <H≤200mm — F≤1,0 mm H >200 mm — F≤1,5 mm				
Straightening deviation Q (see figure) must not exceed 0,0015 L. Q deviation must be measured on the web plane and over the total length L of the channel.		**WEIGHT TOLERANCES** **On single bars** — ± 6% **On the whole supply** — ± 4%				

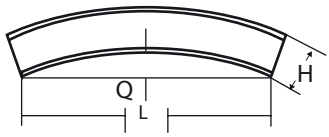
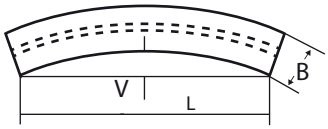


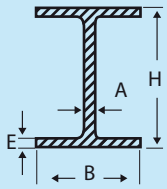
HOT ROLLED "IPE" BEAMS

UNI EN 10034

TOLERANCES

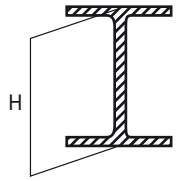
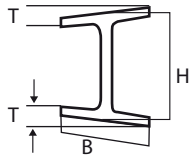
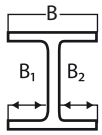
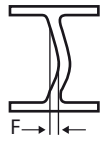
DESIGNATION	REPRESENTATION	DIMENSIONS	TOLERANCES
Height **H** Height **H** is measured at the centre line of web		80 < H ≤ 120 120 < H ≤ 180 180 < H ≤ 400 400 < H ≤ 500 500 < H ≤ 600	± 2 ± 3/-2 ± 3 ± 4 ± 5
Width **B**		80 < H ≤ 120 120 < H ≤ 180 180 < H ≤ 360 360 < H ≤ 600	± 2 ± 3/-2 ± 3 ± 4
Web thickness **A**		80 < H ≤ 120 120 < H ≤ 270 270 < H ≤ 600	± 0,5 ± 0,75 ± 1
Flange thickness **E**		80 < H ≤ 120 120 < H ≤ 270 270 < H ≤ 600	± 1 ± 1,5 ± 2
Out-of-square **T**		80 < H ≤ 120 120 < H ≤ 600	T ≤ 1 T ≤ 1,5% of B
Web off-centre **S** $S = \frac{B_1 - B_2}{2}$		80 < H ≤ 120 120 < H ≤ 600	
Bending of web **F**		80 < H ≤ 120 120 < H ≤ 270 270 < H ≤ 600	F ≤ 1,5 F ≤ 2 F ≤ 3

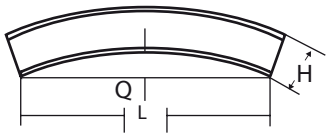
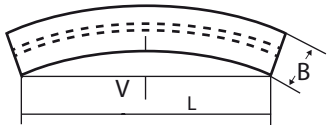
TOLERANCES			
DESIGNATION	**REPRESENTATION**	**DIMENSIONS**	**TOLERANCES**
Tolerance **Q** on web straightness on length **L**		**Normal straightening**	
		80 H ≤ 360 360 < H ≤ 600	Q ≤ 0,15% of L Q ≤ 0,10% of L
Tolerance **V** on edge straightness on length **L**			



PARALLEL BROAD-FLANGED BEAMS

UNI 5398

TOLERANCES				
DESIGNATION	**REPRESENTATION**	**DIMENSIONS**	**TOLERANCES**	
Height **H** Height **H** is measured at the centre line of web		H ≤ 160 160 < H ≤ 300 300< H ≤ 400 400 < H ≤ 500 500 < H ≤ 1000	+ 4 - 2 ± 3 ± 3 ± 3 ± 3	+ 4 - 2 ± 3 ± 4 ± 5 + 8 - 6
Width **B**			± 3	
Web thickness **A**		H ≤ 160 260 < H ≤ 700 700 < H ≤ 1000	± 1 ± 1,5 ± 2	
Flange thickness **E**		H ≤ 220 220 < H ≤ 300 300 < H ≤ 500 500 < H ≤ 1000	± 1,5 ± 2 ± 2 ± 2	± 2 ± 2 ± 2,5 ± 3
Out-of-square **T**		80 < H ≤ 120 120 < H ≤ 600	T ≤ 1% of B T ≤ 1,5% of B	
Web off-centre **S** $S = \frac{B_1 - B_2}{2}$		H ≤ 300 300 < H ≤ 500 500 < H ≤ 1000	S ≤ 2,5 S ≤ 3 S ≤ 3	S ≤ 2,5 S ≤ 3,5 S ≤ 5
Bending of web **F**		H ≤ 450 450 < H ≤ 700 700 < H ≤ 1000	F ≤ 1,5 F ≤ 2 F ≤ 3	

TOLERANCES			
DESIGNATION	**REPRESENTATION**	**DIMENSIONS**	**TOLERANCES**
Tolerance **Q** on web straightness on length **L**		**Normal straightening**	
		H ≤ 450 400 < H ≤ 1000	Q ≤ 0,15% of L Q ≤ 0,10% of L
Tolerance **V** on edge straightness on length **L**		B ≤ 300 V ≤ 0,003L B > 300 V ≤ 0,002L	

GENERAL TERMS AND CONDITIONS OF SALE

1. General provisions.
These Conditions, fully discussed and agreed upon by the Parties in respect of each clause contained therein, save where expressly provided otherwise in special terms specified in the single purchase proposal (hereinafter "order") accepted by the Seller and/or in any sale framework agreement signed by the Parties, govern all sales of products between the Seller and the Buyer, and prevail over any other conflicting provision in the Buyer's general terms and conditions of purchase, proposals (orders) or in other commercial documents. Any change to this agreement shall not be valid unless in writing and duly signed by both Parties.

2. Parties to the contract.
"Seller" refers to the company supplying the materials to be sold and which will issue an invoice for the same materials. "Buyer" refers to the Party to whom the invoices relating to the materials are addressed.

3. Term of validity and period of irrevocability of the Offer.
Unless otherwise stated in the invitation to order (hereinafter "offer"), the prices and conditions specified in the offer shall be valid for a period of fifteen days from the date of the same. Unless otherwise stated in the offer, the order shall be deemed irrevocable pursuant to Art. 1331 of the Italian Civil Code.

4. Order.
The order shall be complete in all parts and shall contain all necessary technical and administrative specifications, including any tax advantages.

5. Acceptance (hereinafter "order confirmation").
By sending the order the Buyer shall be bound to the prices and conditions specified in the Seller's offer. After receiving the order, the Seller shall send the order confirmation for acceptance and to finalise the order.
The Seller reserves the right to accept or reject, at his discretion, any changes to the order or part of them proposed by the Buyer after the order confirmation. Should the Buyer cancel the confirmed order, the Buyer shall have to pay the total amount relating to the materials and supplies already ordered to and already prepared by the Seller.

6. Contract with deferred order specification.
In the case of a contract with deferred order specification, the Seller undertakes to supply a given quantity of goods, while the Buyer is obliged to specify the details of the products within the time limit agreed by the Parties.
If the Buyer does not specify the whole consignment within the said time limit, the Seller shall be entitled to treat the contract in whole as terminated and claim damages, if any.

7. Time of delivery.
Any dates specified by the Seller in the order confirmations for delivery of the goods are intended to be an estimate and not legally binding. Therefore the Seller shall not be liable for any loss or damage, whether direct or consequential, arising from late delivery of the goods or non-delivery of the same, nor shall any delay entitle the Buyer to claim damages or terminate the supply contract. In any event, the delivery deadline shall be deemed met when the dispatch note is issued and communication is given to the Buyer that the goods are ready for dispatch. The Seller can thereby issue an invoice for the goods and require the payment as agreed to by the Parties.

8. Terms of delivery of the goods.
Unless otherwise agreed, the goods shall be delivered FCA Seller's premises or another place named in advance. This term, as well as any other term agreed to by the Parties, shall be governed by INCOTERMS ICC 2010.

9. Tolerances.
Dimensional tolerances are those specified by UNI-EN standards.
For the purpose of the execution of the order, a weight tolerance of 10% above or below the total quantity of the order is accepted. The total weight (mass) of each load is the only one to be taken into account. The weight (mass) is that certified by the Seller by his own means. If the difference in weight lies within the limit of 3 ‰ on the total load, the Buyer has no right to claim for shortages. Checks shall be carried out on public scales or equivalent and the costs shall be borne completely by the Buyer.

10. Payments.
Ownership of the goods shall pass to the Buyer only after the full payment of the invoice issued by the Seller and the Buyer shall also bear all the risks relating to the goods, including the risk of loss or damage for reasons not attributable to the Seller, at the time of delivery. The goods and any services supplied by the Seller shall be paid for in accordance with the provisions of Decree-Law No 231 of 9 October 2002. If any payment is not made when due then the Buyer shall pay interest in accordance with Articles 4 and 5 of Decree-Law No 231 of 9 October 2002, as well as any recovery costs in accordance with Article 6 of the same Decree-Law, unless otherwise agreed. Failure in payment, incorrect payment or delay in payment shall entitle the Seller to change the terms of payment for any further remaining deliveries as well as to suspend the supply contract or to terminate it for serious non-compliance by sending the Buyer the relevant communication by registered mail with return receipt or by fax. The Seller also reserves the right to claim damages. The ownership of the goods shall remain with the Seller also in the event of insolvency proceedings being opened against the Buyer.

11. Guarantee.
The Seller guarantees that all the goods comply with the relevant UNI - EN technical standards .

12. Duration of the guarantee.
The duration of the guarantee period starting from the delivery date, is fixed by the law. The guarantee is subject to a complaint being made by the Buyer as provided for by the law.

13. Extent of the guarantee.
The Seller guarantees that all the products supplied shall comply with the characteristics and satisfy the conditions specified in the order confirmation and/or transport document. In any event, the Seller disclaims any liability for the applications of and operations with the products at the Buyer's premises or at the premises of any third party, nor does the Seller provide any guarantee as to the marketability, quality and suitability of the products to specific uses. Any technical specifications required and/or guarantee claims made by the Buyer shall not be taken into consideration if they have not been expressly mentioned in the order confirmation.
Any claims for goods not conforming to the characteristics specified in the order confirmation shall be made in writing within 8 days from receipt of goods, under penalty of loss of any right, including that to replacement. This term is extended to 90 days in case of hidden defects. If the claim is timely submitted and justified according to the Seller's engineers, the Seller's obligation is limited to replacing the goods recognized as non-conforming to the order confirmation and to delivering them at the original place of delivery of the supply, after returning the goods to be replaced.
The Buyer cannot terminate the contract or claim a price reduction, damages or reimbursement of any expenses incurred. The Buyer loses the right to claim and therefore to the replacement of the goods, if the processing or use of the contested goods is not immediately stopped. Claims do not entitle the Buyer to suspend the payment of the invoice relating to the contested goods.

14. Tests and Trials.
Iron and steel products are supplied in compliance with the UNI - EN and international standards in force at the time of the conclusion of the contract. The tests and trials of the products shall be carried out by engineers of state or approved bodies or by subjects appointed by the Buyer.

15. Termination of contract.
The Seller shall also be entitled to terminate the contract without being obliged to pay any kind of compensation , if he learns of protested bills, initiation of legal proceedings (summary, ordinary, insolvency proceedings) or extrajudicial proceedings against the Buyer.

16. Applicable regulations.
All matters that are not expressly governed by these "General Terms and Conditions of Sale" shall be subject to the provisions on sale of the Italian Civil Code (Article 1470 and subsequent articles).

17. Applicable Law and Competent Court.
This contract is governed by the laws of Italy. Any dispute, controversy or claim arising out of or relating to this contract and/or these "General Terms and Conditions of Sale", including the interpretation, application, execution or termination thereof, shall be submitted exclusively to the Court having jurisdiction in the district where the Seller has his registered office, also in the event of joint proceedings.

Date and Place, _____ Signature _____

Pursuant to Articles 1341 and 1342 of the Italian Civil Code, we declare that we accept the clauses of these "General Terms and Conditions of Sale", in particular those referred to in the following articles:
Art. 7. (Time of delivery and limitation of liability)
Art. 10. (Suspension of supply contract)
Art. 13. (Extent of the guarantee and limitation of liability)
Art. 15. (Termination)
Art. 17. (Competent Court)

Date and Place, _____ Signature _____

IMPORTANT NOTICE

The information contained in this catalogue is for reference purposes only, and we do not assume any obligation or for it.
The weights given are theoretical as they are calculated on the basis of the nominal size of the products and on the weight of steel.
The actual weight may differ in accordance with the tolerances allowed by the regulations in force.
The products shown in the catalogue do not represent those actually available in stock. Some items may be out of stock. Please inquire for their availability.

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Sider Center brings together a group of companies that are leaders in the iron and steel sector, who cooperate closely, bound together by a common objective:
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Sider Center has a profound knowledge of the iron and steel sector and follows its trends closely through daily dialogue with the main producers in Italy and abroad and with its members.
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The centralised nature of the organisational structure for the management of purchasing provide essential support to the supply activity and allows extremely accurate monitoring of the purchasing market.