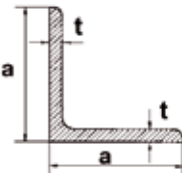
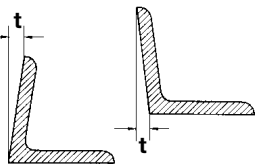
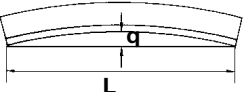


ROLLED IRON SHEETS

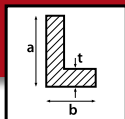
ROLLED IRON SHEETS





TOLERANCES (Dimensions in mm)					
1. Section		$a \leq 5$		$50 < a \leq 100$	
		$\pm 1,0$		$\pm 2,0$	
		$100 < a \leq 150$		$150 < a \leq 200$	
		$\pm 3,0$		$\pm 4,0$	
		$200 < a$			
		$-4,0 / +6,0$			
2. Thickness t	$t \leq 5$	$5 < t \leq 10$	$10 < t \leq 15$	$15 < t$	
	$\pm 0,50$	$\pm 0,75$	$\pm 1,00$	$\pm 1,20$	
3. Displacement t		NOMINAL DIMENSIONS		TOLERANCES	
		$a \leq 100$		$t \leq 1$	
		$100 < a$		$t \leq 1,5$	
4. Length L	<p>L corresponds to the maximum usable length of the bar, with the ends square squared cut. Upon ordering, specify the type of chosen tolerance. By agreement upon ordering, the tolerances can be accepted all above or all below the nominal dimension.</p>			TOLERANCES	
				CURRENT TOLERANCES:	± 100
					± 50
				LIMIT TOLERANCES:	± 25
		± 10			
5. Straight line q		NORMAL STRAIGHTENING: ARROW Q IS MEASURED ON THE TOTAL LENGTH OF BAR L .			
		NOMINAL DIMENSIONS		TOLERANCES	
		$50 < a \leq 150$		$q \leq 0,4\% \text{ di } L$	
		$100 < a \leq 200$		$q \leq 0,2\% \text{ di } L$	
6. *Mass	(Applicable only on fixed ordered lengths)		NOMINAL DIMENSIONS		
			TOLERANCES		
			$e \leq 4$		$\pm 8\%$
			$4 < e \leq 6$		$\pm 5\%$
		$6 < e$		$\pm 4\%$	
<p>The offset on the mass of the bars is the difference between the supplied mass and the theoretical mass. The theoretical mass is determined by the product of the theoretical mass per metre for a number of provided metres. The above mass tolerances are applicable only to batches which mass is equal or greater than 5 ton. For batches with lower mass than 5 ton, the tonnes must be increased by a third.</p>					

*) New prescriptions being studied

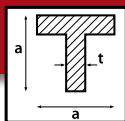


"L" SHARP EDGES UNI 6762-70

DESIGNATION mm	WEIGHT Kg/m
20 x 12 x 4	0,88
25 x 15 x 4,5	1,25
30 x 17,5 x 5	1,67
35 x 20 x 5,5	2,14
40 x 22 x 6	2,64
30 x 30 x 6,5	3,50
50 x 30 x 6	3,49
50 x 30 x 7	4,01

TOLERANCES			
THICKNESS mm.			
a,b	± 1,0	t	± 0,5

*) New prescriptions being studied

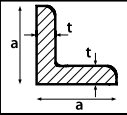


SHARP EDGES "T" PROFILED UNI 5681-73

DESIGNATION mm	WEIGHT Kg/m
20 x 20 x 4	1,13
25 x 25 x 4,5	1,61
30 x 30 x 5	2,16
35 x 35 x 5,5	2,78
40 x 40 x 6	3,49
45 x 45 x 6,5	4,26
50 x 50 x 7	5,11
60 x 60 x 7	6,23
60 x 60 x 8	7,03
70 x 70 x 8	8,32
70 x 70 x 9	9,26
80 x 80 x 9	10,70
80 x 80 x 10	11,90
100 x 100 x 11	16,40
120 x 120 x 13	23,20

TOLERANCES		
THICKNESS mm.		
	20 ≤ a ≤ 50	60 ≤ a ≤ 100
a	± 1,0	± 1,5
t	± 0,5	± 0,75

ROUND EDGE ANGULARS UNI 5783-73



THICKNESS mm.

DESIGNATION mm	3	4	5	6	6,5	7	8	9	10	11	12
WEIGHT Kg/m											
15 x 15	0,63	-	-	-	-	-	-	-	-	-	-
20 x 20	0,88	1,14	-	-	-	-	-	-	-	-	-
25 x 25	1,12	1,46	1,78	-	-	-	-	-	-	-	-
30 x 30	1,36	1,78	2,15	2,58	-	-	-	-	-	-	-
35 x 35	1,60	2,09	2,57	3,04	-	-	-	-	-	-	-
40 x 40	1,84	2,42	1,97	3,52	-	-	-	-	-	-	-
45 x 45	2,09	2,74	3,38	4,00	-	4,60	-	-	-	-	-
50 x 50	2,35	3,06	3,77	4,47	-	5,15	5,82	-	7,50	-	-
55 x 55	-	3,35	4,16	4,95	-	5,70	6,46	-	-	-	-
60 x 60	-	3,70	4,57	5,42	-	6,24	7,09	-	8,69	-	-
65 x 65	-	4,02	4,96	5,91	-	6,83	7,73	-	-	-	-
70 x 70	-	4,35	5,37	6,38	-	7,38	8,36	9,34	10,30	11,20	12,10
75 x 75	-	4,72	5,78	6,87	-	7,94	9,04	-	11,10	-	13,10
80 x 80	-	5,02	6,04	7,34	-	8,49	9,63	-	11,90	-	14,00
90 x 90	-	-	6,87	8,20	-	9,58	10,90	12,20	13,40	14,70	15,90
100 x 100	-	-	7,65	9,22	-	10,80	12,20	13,60	15,10	16,40	17,80
110 x 110	-	-	-	11,20	-	13,00	13,50	-	16,60	-	19,70
120 x 120	-	-	-	11,20	-	-	14,75	-	18,20	19,90	21,60
130 x 130	-	-	-	-	12,90	13,90	15,95	17,85	19,80	21,60	23,60
140 x 140	-	-	-	-	-	-	-	-	-	-	-
150 x 150	-	-	-	-	-	-	-	-	-	-	-
160 x 160	-	-	-	-	-	-	-	-	-	-	-
200 x 200	-	-	-	-	-	-	-	-	-	-	-

TOLERANCES

THICKNESS mm.

a	a ≤ 50	50 < a ≤ 100	100 < a ≤ 150	150 < a ≤ 200	200 < a
		± 1,0	± 2,0	± 3,0	± 4,0

ROUND EDGE ANGULARS UNI 5783-73

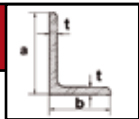
THICKNESS mm.

13	14	15	16	17	18	20	21	22	24	25	DESIGNATION mm
WEIGHT Kg/m											
-	-	-	-	-	-	-	-	-	-	-	15 x 15
-	-	-	-	-	-	-	-	-	-	-	20 x 20
-	-	-	-	-	-	-	-	-	-	-	25 x 25
-	-	-	-	-	-	-	-	-	-	-	30 x 30
-	-	-	-	-	-	-	-	-	-	-	35 x 35
-	-	-	-	-	-	-	-	-	-	-	40 x 40
-	-	-	-	-	-	-	-	-	-	-	45 x 45
-	-	-	-	-	-	-	-	-	-	-	50 x 50
-	-	-	-	-	-	-	-	-	-	-	55 x 55
-	-	-	-	-	-	-	-	-	-	-	60 x 60
-	-	-	-	-	-	-	-	-	-	-	65 x 65
-	-	-	-	-	-	-	-	-	-	-	70 x 70
-	-	-	-	-	-	-	-	-	-	-	75 x 75
-	-	-	-	-	-	-	-	-	-	-	80 x 80
-	-	19,50	-	-	-	-	-	-	-	-	90 x 90
19,20	20,60	21,90	23,20	-	-	-	-	-	-	-	100 x 100
21,20	22,80	24,30	25,70	-	-	-	-	-	-	-	110 x 110
23,30	25,0	26,60	28,30	29,90	31,50	-	-	-	-	-	120 x 120
25,40	27,20	25,90	30,80	32,60	34,40	-	-	-	-	-	130 x 130
27,40	27,70	31,40	33,30	35,30	37,20	-	-	-	-	-	140 x 140
29,50	31,60	33,80	35,90	38,0	40,10	44,20	-	-	-	-	150 x 150
-	-	40,90	43,50	46,0	48,60	53,70	56,20	58,60	63,60	66,0	160 x 160
-	-	45,60	48,50	51,40	54,30	59,90	62,80	65,60	71,10	73,90	200 x 200

TOLERANCES

THICKNESS mm.

t	t ≤ 5	5 < t ≤ 10	10 < t ≤ 15	15 < t
		± 0,50	± 0,75	± 1,0



ROUND EDGES "T" PROFILED EN10056-1 - EN10056-2

THICKNESS mm.

DESIGNATION mm	4	5	6	7	8	9	10	11	12	14	16
WEIGHT Kg/m											
30 x 20	1,46	1,78	-	-	-	-	-	-	-	-	-
35 x 20	1,61	1,97	-	-	-	-	-	-	-	-	-
40 x 20	1,77	2,17	-	-	-	-	-	-	-	-	-
40 x 25	1,93	2,37	-	-	-	-	-	-	-	-	-
45 x 30	2,25	2,76	3,27	-	-	-	-	-	-	-	-
50 x 30	-	2,96	3,51	-	-	-	-	-	-	-	-
60 x 30	-	3,37	3,99	4,59	-	-	-	-	-	-	-
60 x 40	-	3,76	4,46	5,14	-	-	-	-	-	-	-
75 x 50	-	-	5,65	6,53	-	8,22	-	-	-	-	-
80 x 40	-	-	5,41	6,25	7,07	-	-	-	-	-	-
80 x 60	-	-	-	7,36	8,34	-	10,20	-	-	-	-
100 x 50	-	-	-	-	8,99	-	11,10	-	-	-	-
100 x 65	-	-	-	8,77	-	11,10	12,30	12,40	-	-	-
100 x 75	-	-	-	-	11,12	-	13,73	-	-	-	-
120 x 60	-	-	-	-	10,90	-	-	-	-	-	-
120 x 80	-	-	-	-	12,20	-	15,00	-	17,80	20,50	-
130 x 65	-	-	-	-	11,80	-	14,60	-	17,30	-	-
150 x 100	-	-	-	-	-	-	19,30	-	22,60	26,10	-
200 x 100	-	-	-	-	-	-	-	-	27,30	31,60	35,90

TOLERANCES

THICKNESS mm.

a, b	a ≤ 50	50 < a ≤ 100	100 < a ≤ 150	150 < a ≤ 200
	± 1,0	± 2,0	± 3,0	± 4,0
t	t ≤ 5	5 < t ≤ 10	10 < t ≤ 15	15 < t
	± 0,50	± 0,75	± 1,0	± 1,20

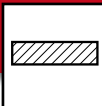


PLATES EN10058

WIDTH mm	THICKNESS mm														
	3	4	5	6	7	8	10	12	15	20	25	30	35	40	50
	WEIGHT Kg/ml														
10	0,236	0,314	0,392	0,471	0,550	0,628									
12	0,283	0,377	0,471	0,585	0,659	0,754	0,942								
14	0,330	0,440	0,550	0,659	0,769	0,879	1,10	1,32							
15	0,353	0,471	0,589	0,706	0,824	0,942	1,18	1,41							
16	0,377	0,502	0,628	0,754	0,879	1,00	1,26	1,51							
18	0,424	0,565	0,706	0,848	0,989	1,13	1,41	1,70	2,12						
20	0,471	0,628	0,785	0,942	1,10	1,26	1,57	1,88	2,38						
25	0,589	0,785	0,981	1,18	1,37	1,57	1,98	2,36	2,94	3,93					
30	0,707	0,942	1,18	1,41	1,65	1,88	2,36	2,83	3,53	4,71	5,89				
35	0,824	1,10	1,37	1,65	1,92	2,20	2,75	3,30	4,12	5,50	6,87	8,24			
40	0,942	1,26	1,57	1,88	2,20	2,51	3,14	3,77	4,71	6,28	7,85	9,42	10,99		
45	1,06	1,41	1,77	2,12	2,47	2,83	3,53	4,24	5,30	7,06	8,83	10,60	12,38	14,13	
50	1,18	1,57	1,96	2,36	2,75	3,14	3,92	4,71	5,89	7,85	9,81	11,78	13,74	15,70	
60	1,41	1,88	2,36	2,83	3,30	3,77	4,71	5,65	7,06	9,42	11,78	14,13	16,49	18,84	23,60
70	1,65	2,20	2,75	3,30	3,85	4,40	5,50	6,59	8,24	11,00	13,74	16,49	19,23	21,98	27,50
80	1,88	2,51	3,14	3,77	4,40	5,02	6,28	7,54	9,42	12,56	15,70	18,84	21,98	25,12	31,40
90	2,12	2,83	3,53	4,24	4,95	5,65	7,06	8,48	10,60	14,13	17,66	21,20	24,73	28,26	35,30
100	2,36	3,14	3,92	4,71	5,50	6,28	7,85	9,42	11,78	15,70	19,63	23,55	27,48	31,40	39,20
110	2,59	3,45	4,32	5,18	6,04	6,91	8,64	10,36	12,95	18,27	21,59	25,91	30,22	34,54	43,20
120	2,83	3,77	4,71	5,65	6,59	7,54	9,42	11,30	14,13	18,84	23,55	28,26	32,97	37,68	47,10
130	3,06	4,08	5,10	6,12	7,14	8,16	10,21	12,25	15,31	20,41	25,51	30,62	35,72	40,82	51,00
140	3,30	4,40	5,50	6,59	7,69	8,79	11,00	13,19	16,49	21,98	27,48	32,97	38,47	43,96	55,00
150	3,53	4,71	5,89	7,06	8,24	9,42	11,78	14,13	17,66	23,55	29,44	35,33	41,21	47,10	58,90

TOLERANCES

THICKNESS mm.					
b	10 ≤ b ≤ 40	40 < b ≤ 80	80 < b ≤ 100	100 < b ≤ 120	120 < b ≤ 150
	± 0,75	± 1,0	± 1,5	± 2,0	± 2,5
t	t ≤ 20	20 < t ≤ 40	40 < t ≤ 80		
	± 0,5	± 1,0	± 1,5		



LARGE PLATES UNI EU 91

DESIGNATION mm	35	40	45	50	60	65	70	80	90	100
Weight Kg/m										
160	44,0	50,2	-	-	-	-	87,9	100,5	113,0	-
170	46,7	53,4	-	-	-	-	93,4	106,8	120,1	-
180	49,5	56,5	-	-	-	-	98,9	113,0	127,2	-
190	52,2	59,7	-	-	-	-	-	-	-	-
200	55,0	62,8	70,7	78,5	94,2	102,1	109,9	125,6	141,3	157,0
210	57,7	65,9	74,2	82,4	98,9	107,2	115,4	131,9	148,4	164,9
220	60,4	69,1	77,7	86,4	103,6	112,3	120,9	138,2	155,4	172,7
230	63,2	72,2	81,2	90,3	108,3	117,4	126,4	144,4	162,5	180,6
240	65,9	75,4	84,8	94,2	113,0	122,5	131,9	150,7	169,6	188,4
250	68,7	78,5	88,3	98,1	117,8	127,6	137,4	157,0	176,6	196,3
260	71,4	81,6	91,8	102,1	122,5	132,7	142,9	163,3	183,7	204,1
270	74,2	84,8	95,4	106,0	127,2	137,8	148,4	169,6	190,8	212,0
280	76,9	87,9	98,9	109,9	131,9	142,9	153,9	175,8	197,8	219,8
300	82,4	94,2	106,0	117,8	141,3	153,1	164,9	188,4	212,0	235,5
320	87,9	100,5	113,0	125,6	150,7	163,3	175,8	201,0	226,1	251,2
330	90,7	103,6	116,6	129,5	155,4	168,4	181,3	207,2	233,1	259,1
340	93,4	106,8	120,1	133,5	160,1	173,5	186,8	213,5	240,2	266,9
350	96,2	109,9	123,6	137,4	164,9	178,6	192,3	219,8	247,3	274,8
360	98,9	113,0	127,2	141,3	169,6	183,7	197,8	226,1	254,3	282,6
370	101,7	116,2	130,7	145,2	174,3	188,8	203,3	232,4	261,4	290,5
400	109,9	125,6	141,3	157,0	188,4	204,1	219,8	251,2	282,6	314,0

TOLERANCES

THICKNESS mm.					
b	± 2 % b				
t	4 ≤ t ≤ 10	10 < t ≤ 20	20 < t ≤ 25	25 < t ≤ 30	30 < t ≤ 40
	± 0,5	± 0,6	± 0,7	± 0,8	± 0,9
	40 ≤ t ≤ 50	50 < t ≤ 60	60 < b ≤ 80	t ≥ 120	
	± 1,0	± 1,1	± 1,3	± 2,0	



ROUND – SQUARE - HEXAGON EN 10059 - EN 10060

DIAMETER KEY SIDE mm	WEIGHT Kg/ml			DIAMETER KEY SIDE mm	WEIGHT Kg/ml	
	ROUND	SQUARE	HEXAG.		ROUND	SQUARE
3	0,055	0,070		60	22,20	28,26
4	0,098	0,126		62	23,70	30,18
5	0,154	0,196		65	26,05	33,16
6	0,222	0,283		68	28,51	36,30
7	0,302	0,385		70	30,21	38,47
8	0,395	0,502		72	31,96	40,69
9	0,499	0,636	0,551	75	34,67	44,15
10	0,617	0,785	0,680	78	37,51	47,76
11	0,746	0,950	0,823	80	39,46	50,24
12	0,888	1,13	0,979	82	41,46	52,78
14	1,21	1,54	1,33	85	44,55	56,71
15	1,39	1,77	1,53	88	47,74	60,79
16	1,58	2,01	1,74	90	49,94	63,59
18	2,00	2,54	2,20	95	55,64	70,85
19	2,22	2,83	2,45	100	61,65	78,50
20	2,47	3,14	2,72	105	67,97	86,55
21	2,72	3,46	3,00	110	74,60	94,99
22	2,98	3,80	3,29	115	81,54	103,82
23	3,26	4,15	3,60	120	88,78	113,04
24	3,55	4,52	3,92	125	96,33	122,66
25	3,85	4,91	4,25	130	104,20	132,67
26	4,17	5,31	4,60	135	112,36	143,07
28	4,83	6,15	5,33	140	120,84	153,83
30	5,55	7,07	6,12	145	129,63	165,05
32	6,31	8,04	6,96	150	138,72	176,63
33	6,71	8,55	7,40	160	157,83	200,96
34	7,13	9,07	7,86	170	178,18	226,87
35	7,55	9,62	8,33	180	199,76	254,34
36	7,99	10,17	8,81	190	222,57	283,39
38	8,90	11,34	9,82	200	246,61	314,00
40	9,88	12,56	10,88	210	271,89	
42	10,88	13,85	11,99	220	298,40	
43	11,40	14,52	12,60	230	326,15	
45	12,48	15,90	13,76	240	355,13	
46	13,04	16,61	14,38	250	385,34	
48	14,21	18,09	15,70	260	416,78	
50	15,41	19,63	16,99	270	449,46	
52	16,67	21,23	18,33	280	483,37	
55	18,65	23,75	20,56	290	518,51	
58	20,74	26,41	22,90	300	554,88	

TOLERANCES QUADRI EN 10059

THICKNESS mm.

a	a ≤ 14	14 < a ≤ 25	25 < a ≤ 35	35 < a ≤ 50	50 < a ≤ 90
		± 0,4	± 0,5	± 0,6	± 0,8

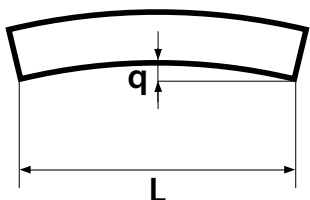
TOLERANCES TONDI EN 10060

Diameter (mm)	Normal tolerance (mm)	Diameter (mm)	Normal tolerance (mm)	Diameter (mm)	Normal tolerance (mm)	Diameter (mm)	Normal tolerance (mm)
10	± 0,4	30	± 0,6	70	± 1,0	140	± 2,0
12		32		73		145	
13		35		75		150	
14		36	80	155			
15		± 0,5	38	± 0,8	85	± 1,3	160
16	40		90		165		
18	42		95		170		
19	45		100		175		
20	48		105		180		
22	50		110	190			
24	52		115	200			
25	± 0,6	55	± 1,0	120	± 1,5	220	± 3,0
26		60		125		250	± 4,0
27		63		130		± 2,0	
28		65	135				

The diameter of a bar, measured at any point at least 100 mm from the ends, must be within the tolerances indicated in table.

Unless otherwise agreed, the shearing can deform the ends of the bars.

STRAIGHT LINE TOLERANCES FOR HOT LAMINATE BARS UNI EN 10060

Nominal diameter (mm)	Tolerance (mm)
	d ≤ 25 Not fixed
25 < d ≤ 80	q ≤ 0,4% di L
80 < d ≤ 250	q ≤ 0,25% di L

CIRCULAR TOLERANCES FOR UNI EN 10060 HOT LAMINATE BARS

The circular error is the difference between the larger and the smaller diameter of the section itself. It must be measured at least 100 mm from the ends of the bar and cannot exceed 75% of the tolerance on the diameter.