

# ALUMINIUM STANDARD PROFILES

Alloy 5000-6000 Series



**DEMSAS®**  
ALUMINIUM PROFILES EXTRUSION

## COMPANY INFORMATION

## BUILDING PHYSICS

## PROFILES

### I. COMPANY HISTORY

Demsaş Metal Inc. was established as a member of Çokyasar Group – one of Turkey's well-established companies, in 1984 with its 15.000 sqm production area and over 170 employees.

Our company working in the field of aluminum profile production and contributing to our country's economy with its exports to more than 20 countries, has achieved to become one of the rare fully integrated aluminum plants in its sector during the period since its establishment.

### II. SERVICES

- Hosting all the production levels such as:
  - drawing stage
  - extrusion mold design
  - production of extrusion molds
  - profile extrusion
  - surface treatments as:
    - a) Powder Coating
    - b) Anodising (Polished or Mat)
    - c) Brushed effects
  - Mechanical treatment
- Professional support, consultation and adequate technical advices ensured by our engineering team with wide experience in profile extrusion.
- Reliable customer care support training and technical support.
- Production of Non – Standard length profiles and non-standard processing high quality powder coating and anodising.

### III. BASIC VALUES

#### ● VISION

Our aim is to be a leader in the market by providing added value to our customers, shareholders, employees, business partners and society with innovative and creative solutions and to produce according to international standards with an environment- friendly approach. In addition, we aim to create high-performance human resources that are open to learning, development and sharing, adopting all corporate values, thus using all of our capabilities as our capital, creating an environment that promotes long-term relationships.

#### ● MISSION

Demsaş has a mission of establishing direct and transparent communication with its employees, empowering them in line with their capabilities and in a way that they can demonstrate their skills in an efficient manner, take initiatives and produce innovations and create a trust-based working environment. Our company, without compromising its core values, aims to approach its employees and customers from a business ethics, honesty, quality and solution-oriented perspective and thus become the preferred business and solution partner in the market.

### ● **CORPORATE VALUES**

Our company's principle values:

- Being an honest, confident and transparent company
- Contribute to the success of our customers
- Believe in innovative and dynamic development
- Social responsibility and environmental awareness
- Believe in teamwork
- To prioritize quality in production and marketing stage

### ● **QUALITY POLICY**

Our quality policy consists of:

- To ensure customer satisfaction
- Maintaining quality and customer satisfaction in all production, marketing, sales and after sales support stages from raw material supply to shipment
- Respect for the environment, our employees, our solution partners, our shareholders and our customers
- To be the best in the sector with managers and employees who adopt continuous improvement oriented values such as education, research and development

### ● **QUALITY AND ENVIRONMENTAL POLICY**

Demsaş Metal operates under the principles of 'Total Quality Management'

- All our production processes are carried out according to the principles of TSE (Turkish Standard Institution) and **ISO 9001: 2008 Quality Management System.**
- Our company exhibits a meticulous attitude to comply with international standards in our products and services.
- Improvements in processes that ensure efficiency and reduction of costs are implemented regularly and systematically.

In accordance with its environmental policy, Demsaş Metal has adopted a sensitive attitude to protect the external environment and natural resources.

Our company, employees and solution partners to raise awareness about social responsibility and environmental policy and environmental pollution prevention is adopted as a principle to take measures.

# ALUMINIUM AS MATERIAL

ALUMINIUM IS VERY YOUNG METAL, EXTRACTED FOR THE FIRST TIME IN 1854. COMMERCIALLY PRODUCED AS A PRECIOUS METAL FROM 1886, ITS INDUSTRIAL PRODUCTION FOR CIVIL APPLICATIONS ONLY ACHIEVED WIDE USE IN THE 1950'S.

NOW ALUMINIUM PLAYS A KEY ROLE FOR THE SUSTAINABILITY OF NEW BUILDINGS AND THE RENOVATION OF EXISTING ONES. THANKS TO ITS PERFORMANCE, SAFETY AND COMFORT OF NEW BUILDINGS.

## ADVANTAGES

### DESIGN FLEXIBILITY

The extrusion process offers an almost infinite range of forms and sections, allowing designers to integrate numerous functions into one profile.

### LONG SERVICE LIFE

Aluminium building products are made from alloys that are weatherproof, corrosion-resistant and immune to the harmful effects of UV rays, ensuring optimal performance over a very long period of time.

### HIGH STRENGTH-TO-WEIGHT RATIO

Thanks to the metal's inherent strength and stiffness, aluminium window and curtain wall frames can be very narrow. Material's light weight makes it easier to transport and handle on-site, reducing the risk of work-related injury.

### HIGH-REFLECTIVITY

This characteristic feature makes aluminium a very efficient material for light management. Aluminium shading devices can be used to reduce the need for air conditioning in summer.

### FIRE SAFETY

Aluminium does not burn and therefore is classified as a non-combustible construction material (European Fire Class A1). Aluminium alloys will nevertheless melt at around 6500 C, but without releasing harmful gases.

### NO RELEASE OF DANGEROUS SUBSTANCES

Several studies have proved that aluminium building products do not present a hazard to occupants or the surrounding environment. Aluminium building products have no negative impact, either on indoor air quality or on soil, surface and groundwater.

### OPTIMAL SECURITY

Where high security is required, specially designed, strengthened aluminium frames can be used. While the glass for such applications may well be heavy, the overall weight of the structure remains manageable thanks to the light weight of the aluminium frames.

## ALLOYS

Aluminium in its pure form is a very soft metal. Thanks to the addition of alloying elements such as copper, manganese, magnesium, zinc, etc. and thanks to suitable production processes, the physical and mechanical properties can be varied in a wide range to satisfy the requirements of a large number of different applications.

DEMSAŞ profiles are extruded from the following alloys:

- EN AW-1050 (Al 99.5)**
- EN AW-6060 (Al Mg Si)**
- EN AW-6063 (Al Mg0,7 Si)**
- EN AW-6061 (Al Mg1 Si Cu)**
- EN AW-6005 (Al Si Mg)**
- EN AW-6082 (Al Si1 Mg Mn)**

The most common aluminium alloy which is used by DEMSAŞ is EN AW 6063. Here are the properties of this alloy:

### MATERIAL PROPERTIES

Aluminium alloy	EN AW 6063 F22
Ultimate tensile strength	Rm = 210 N/mm <sup>2</sup>
Yield strength	R <sub>p0.2</sub> = 160 N/mm <sup>2</sup>
Modulus of elasticity	Eal = 70 000 N/mm <sup>2</sup> = 7.10 <sup>9</sup> kg/m <sup>2</sup>
Coefficient of thermal expansion	a = 0.023 mm/m .K (up to 1.2 mm/m for difference up to 50°C)

## EXTRUSION PROCESS

DEMSAŞ profiles are obtained through extrusion process, which consists of pushing a hot cylindrical bullet of aluminium through a shaped die. The extrusion process offers almost infinite range of forms and sections, allowing our designers to integrate numerous functions into one single profile.

### ANODIZING

It is an electrochemical process whereby to reinforce the natural oxide film on the aluminium surface increasing hardness, corrosion and abrasion resistance. Anodizing gives a very decorative silver matt surface finish, and colored can also be obtained by sealing metallic dyes into the anodized layer.

## FINISHING

### POWDER COATING

It is a type pf paint that is applied as a dry powder. Coating is applied on DEMSAŞ profiles electrostatically and then is cured under heat to allow it to flow and form a "skin".

DEMSAŞ is authorized to use the quality sign QUALICOAT for powder coatings on aluminium for architectural applications. A wide range of colors and gloss levels can be achieved.

DEMSAŞ also offers timber imitations painting, in addition to all RAL colors. The technology EZY provides the following colors: Golden Oak, Acero, Betulla, Mogano, Verde Scuro, Wenge, Noce Fiammato, Noce Chiaro, Ciliegio Rosso, Acacia Scuro, Ciliegio Antico, Noce Reale, Ciliegio Reale.

### MAINTENANCE

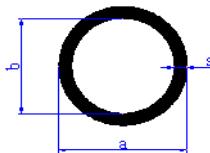
Appart from routine cleaning for aesthetic reasons, DEMSAŞ aluminium profiles do not require any maintenance which translates into a major cost and ecological advantage over lifetime of the product.

### RECYCLING

Aluminium scrap can be repeatedly recycled without any loss of value or properties. In many instances, aluminium is combined with other materials such as steel or plastics, which are most frequently mechanically separated from aluminium before being molten.

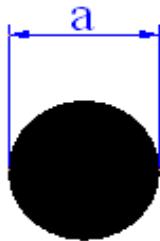
# **PROFILES**

**STANDARD PROFILLER / STANDARD PROFILES**

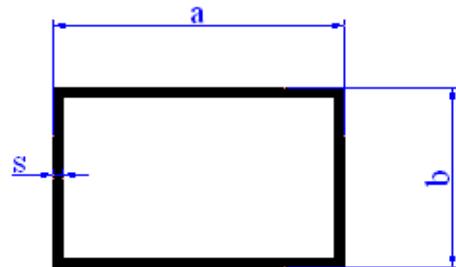


BORU PROFILLER			
PROFIL NO	a	b	s
3896	7	5	1
4766	8	6	1
6521	9	7	1
3734	9,3	4	2,65
5384	9,7	7,7	1
6415	9,9	7,5	1,2
4669	10	3,5	3,25
4100	10	5	2,5
5159	10	8	1
7013	12	8	2
5451	12	9,2	1,4
4130	12	10	1
5163	12	10,15	0,93
2160	13	11	1
1172	15	10	2,5
7052	15	13	1
4399	15,5	13,5	1
3686	15,8	12,2	1,8
2995	16	4,5	5,75
8345	16	5,2	5,4
2156	16	7,5	4,25
4465	16	8	4
2159	16	12,2	1,9
5884	16	13	1,5
5133	16	13,5	1,25
7053	18	16	1
4141	16	14	1
2122	19	16,2	1,4
2158	19	16,3	1,35
4692	19	16,6	1,2
2994	19,2	16,6	1,3
4264	19,5	7	6,25
2102	19,8	17	1,4
4099	20	14	3
4875	20	15,5	2,25
6146	20	16	2
1089	20	17,5	1,25
2116	20	17,7	1,15
7864	20	17,8	1,1
4680	20	18	1
3749	21,5	19	1,25
4046	21,6	18,8	1,4
1160	22	20	1
2147	23	20	1,5
2101	23	20,2	1,4
4536	23	21	1
4974	24	12	6
4758	24	18	3
8293	24	21,5	1,25
4403	24,5	17,5	3,5
1042	25	10	7,5
1048	25	20	2,5
6147	25	21	2
1288	25	22	1,5
2109	25	23	1
2157	26	10	8
1596	27	25	1

BORU PROFILLER			
PROFIL NO	a	b	s
3748	27,5	24,8	1,35
1406	28	22	3
3970	28	26	1
1565	29,5	25	2,25
2926	30	9,1	10,45
3094	30	14	8
3838	30	16,1	6,95
3747	30	20,2	4,9
1302	30	25	2,5
4096	30	26	2
1178	30	28	1
5325	32	29	1,5
5390	32	29,8	1,1
4327	33,7	30,5	1,6
4693	35	29	3
4915	35	30	2,5
4238	35	31,8	1,6
3729	36,5	34,1	1,2
1377	39	37	1
4097	40	30	5
4615	40	35	2,5
4691	40	36	2
4532	40	37	1,5
5170	40	37,6	1,2
4101	40,5	37,5	1,5
4326	44	40,8	1,6
3505	45	20,3	12,35
4119	45	40	2,5
4667	45	43	1
3093	50	42	4
1807	50	44	3
2993	50	45,2	2,4
4098	50	46	2
6523	50	46,4	1,8
3872	50	46,8	1,6
2066	50	47,2	1,4
2117	50	47,4	1,3
5731	50	47,6	1,2
2990	53,6	50,4	1,6
2998	55	50,4	2,3
1616	57	55	1
4610	60	20	20
2988	60	20,3	19,85
5117	60	55,2	2,4
5169	60	57,6	1,2
5515	60	58	1
3837	60,4	30,2	15,1
4073	63,5	59,5	2
6620	70	67,1	1,45
3836	70,4	40,7	14,85
5294	72	68	2
1134	73	66	3,5
3867	80	75,7	2,15
3835	80,4	50,2	15,1
7208	83,2	80,2	1,5
3866	92	75	8,5

**STANDART PROFİLLER / STANDART PROFILES**


BORU ÇUBUKLAR		
PROFİL NO	a	Kg/m
1275	6	0,077
5293	6,9	0,101
7054	8	0,135
1250	8,5	0,154
1466	9	0,172
1301	10	0,213
6413	11	0,257
4668	12	0,306
7508	12,5	0,332
1251	13	0,360
4077	16,1	0,550
1409	18	0,688
3758	20	0,850
2152	23	1,122
2352	25	1,326
2353	30	1,910
1044	41	3,566
4573	45	4,295
1045	51	5,517
4682	57	6,890
1046	61	7,892
4681	67	9,520
1047	71	10,690
3504	80	13,575

**STANDART PROFİLLER / STANDART PROFILES**


KUTU PROFİLLER				
PROFİL NO	a	b	s	Kg/m
6440	10	10	1,00	0,097
3557	10	10	1,80	0,160
3772	14	14	0,80	0,114
1022	15	15	1,00	0,152
5893	15	15	1,50	0,219
7916	15	15	2,00	0,281
4313	18	18	1,20	0,218
6754	19,8	7,8	2,00	0,255
7058	20	10	1,00	0,151
7915	20	10	2,00	0,281
7142	20	10	2,10	0,293
7057	20	20	1,00	0,205
1138	20	20	1,20	0,244
5036	20	20	1,50	0,300
6499	20	20	2,00	0,389
1568	23,5	19	1,60	0,341
7011	25	15	1,00	0,205
4896	25	15	3,00	0,551
1642	25	17	1,00	0,216
1595	25	17	1,30	0,277
5549	25	25	1,50	0,381
6148	25	25	2,00	0,497
3576	25	25	2,50	0,608
6239	28	16	1,00	0,227
1599	29	29	1,00	0,303
1325	30	10	1,50	0,300
7059	30	15	1,00	0,232
1030	30	20	1,00	0,260
6799	30	20	1,65	0,417
1598	30	30	1,00	0,315
6442	30	30	2,00	0,605
7891	40	10	1,20	0,309
1651	40	20	1,00	0,314
1652	40	20	1,20	0,374
4325	40	20	1,40	0,433
5502	40	20	2,00	0,605
2003	40	40	1,00	0,422
4932	40	40	1,20	0,503
1276	40	40	1,50	0,625
5037	40	40	2,00	0,821
2153	40	40	2,50	1,013

KUTU PROFİLLER				
PROFİL NO	a	b	s	Kg/m
4074	43	18	1,00	0,320
5219	44	27,5	1,20	0,448
4235	45	30	1,00	0,395
6870	50	18	1,50	0,527
4129	50	30	1,50	0,624
7674	50	30	5,00	1,890
2004	50	40	1,00	0,476
4118	50	40	2,00	0,930
4565	50	50	1,50	0,786
5516	50	50	2,00	1,037
5675	60	17	1,20	0,484
2197	60	20	1,10	0,463
6541	60	20	2,00	0,821
2006	60	40	1,50	0,787
2018	60	40	1,80	0,938
6354	60	40	3,00	1,523
4078	60	60	1,30	0,825
2017	60	60	1,50	0,948
4131	64	24	0,70	0,328
2000	70	30	1,00	0,531
2002	75	32	1,10	0,623
6900	75	32	1,35	0,761
4047	80	20	1,30	0,685
2015	80	40	1,50	0,948
5501	80	40	2,00	1,253
4282	80	65	1,65	1,264
2010	90	50	1,40	1,038
2011	95	50	1,50	1,151
4427	100	20	1,30	0,825
4226	100	25	1,60	1,053
7624	100	50	1,50	1,191
6365	100	50	3,00	2,334
4281	100	65	1,80	1,570
6989	100	100	2,00	2,117
2012	120	60	1,80	1,715
4201	120	65	2,00	1,955
8466	125	125	3,00	3,953
5837	150	50	1,50	1,596
6366	150	50	3,00	3,144
6901	200	50	2,50	3,308

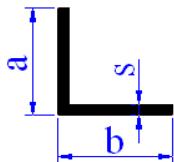
**STANDART PROFİLLER / STANDART PROFILES**



KARE ÇUBUKLAR		
PROFİL NO	a	Kg/m
7248	4,65	0,059
1463	5	0,068
1727	8	0,173
1133	10	0,271

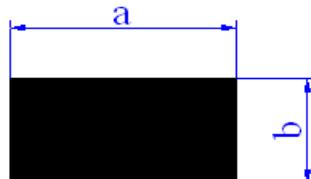
**STANDART PROFİLLER / STANDART PROFILES**

aluminium system profiles



KÖŞEBENT PROFİLLER				
PROFİL NO	a	b	s	Kg/m
7060	10	10	1	0,051
1291	10	10	1,1	0,057
5889	10	10	1,25	0,063
7466	11,5	11,5	1	0,059
7062	15	10	1	0,065
1292	15	10	1,2	0,078
5679	15	15	1	0,079
6149	15	15	1,2	0,093
1021	15	15	1,6	0,123
5894	15	15	2	0,151
3821	16,3	14	7	0,442
7063	20	10	1	0,078
1295	20	10	1,5	0,116
5888	20	10	2	0,151
5175	20	15	1,3	0,119
1400	20	15	4	0,336
1650	20	20	1	0,106
5477	20	20	1,8	0,186
1298	20	20	1,5	0,157
5883	20	20	2	0,205
6877	21	21	3	0,316
3859	22	14	2,4	0,219
5332	22	22	1,8	0,206
4205	25	8	1	0,087
1243	25	10	2	0,179
1323	25	15	3	0,300
5178	25	20,2	1,15	0,137
1637	25	25	1	0,133
1297	25	25	1,5	0,197
1240	25	25	2	0,260
1322	25	25	2,7	0,346
4767	25,1	21,1	8	0,825
3542	30	10	1,2	0,126
1040	30	11,5	1,4	0,152
5004	30	15	1	0,119
4268	30	15	1,1	0,131
4466	30	15	2	0,233
5005	30	20	1	0,133
4300	30	20	1,2	0,160
6798	30	20	1,8	0,235
1636	30	30	1	0,160
7061	30	30	1,5	0,237
5890	30	30	2	0,313
1242	30	30	2,5	0,390

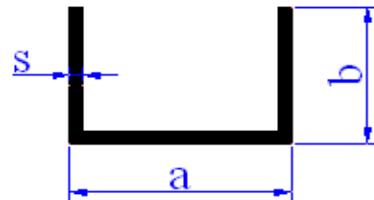
KÖŞEBENT PROFİLLER				
PROFİL NO	a	b	s	Kg/m
1149	30	30	3	0,462
3668	30	30	4	0,605
1763	35,5	6	1,5	0,163
4612	36,9	15,2	1,2	0,165
1638	40	20	1	0,160
1293	40	20	1,6	0,253
1241	40	20	2	0,314
1050	40	20	4	0,605
4690	40	30	1,1	0,205
4145	40	30	3	0,543
7574	40	40	1	0,214
2400	40	40	1,5	0,319
1296	40	40	2	0,422
1465	40	40	3	0,624
1361	40	40	4	0,822
5179	40,5	18,5	1,8	0,278
1148	45	30	4	0,768
5287	45	45	2	0,475
4820	45	45	2	0,476
1771	50	20	1	0,187
4063	50	30	5	1,013
6494	50	50	1,5	0,399
7431	50	50	2	0,529
3085	50	50	3	0,786
1403	50	50	4	1,038
4064	50	50	5	1,283
1194	60	10	2,2	0,403
1412	60	20	1	0,214
6806	60	60	1,3	0,417
6997	60	60	1,5	0,480
4065	60	60	6	1,847
5174	70	18	1,5	0,351
6933	80	20	1,1	0,294
3571	80	20	1,5	0,400
5286	80	50	3,15	1,079
4066	80	80	8	3,284
6392	96	80	10	4,482
5750	100	20	1,5	0,481
6497	100	30	2	0,692
7091	100	50	2	0,799
3670	100	100	10	5,130
6987	120	20	1,8	0,672
6988	150	20	2	0,908
5552	180	60	4	2,550

**STANDART PROFİLLER / STANDART PROFILES**


LAMA PROFİLLER			
PROFİL NO	a	b	Kg/m
5879	10	2	0,054
7056	12	2	0,065
6438	12	5	0,163
6375	12	10	0,324
4679	13	3	0,106
8385	13,5	10	0,365
5885	15	2	0,081
5045	15	2,5	0,102
3914	15	5	0,203
1032	16	2	0,087
1368	16	3	0,130
5113	16,9	10	0,457
6098	17	7	0,321
1103	18	5,5	0,268
3860	19,5	4,5	0,238
5876	20	2	0,108
1115	20	5	0,271
7362	20	8	0,432
1020	20	10	0,540
1248	21,5	5,5	0,320
5892	25	2	0,135
6905	25	5	0,338
1200	25	8,5	0,575
5891	30	2	0,162
1033	30	3	0,244
6151	30	5	0,405
5641	30	8	0,648
4584	30	10	0,810
4146	30	13	1,054
4502	30	20	1,620
1031	35	5	0,473

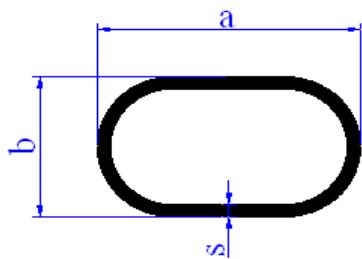
LAMA PROFİLLER			
PROFİL NO	a	b	Kg/m
4586	36	1,2	0,117
5447	40	1,5	0,162
7432	40	2	0,216
2201	40	4	0,432
1741	40	6	0,650
1035	40	10	1,080
4609	40	30	3,240
1098	42	10	1,135
4391	45	10	1,215
5987	45	30	3,645
8347	49,6	3	0,402
7433	50	2	0,270
1036	50	10	1,350
1387	52	2,5	0,352
4144	53	7,9	1,131
1392	57	2,5	0,386
7561	57	5	0,770
1386	58	1,5	0,235
7434	60	2	0,324
4520	60	3,6	0,584
6584	70	4,9	0,927
4829	80	1,5	0,324
1071	90	3	0,731
5519	95	1,5	0,385
5448	100	1,5	0,405
4227	100	2	0,540
1043	100	10	2,700
7581	130	10	3,510
5449	150	1,5	0,608
5450	200	2	1,080
3895	200	20	10,800

## STANDART PROFİLLER / STANDART PROFILES

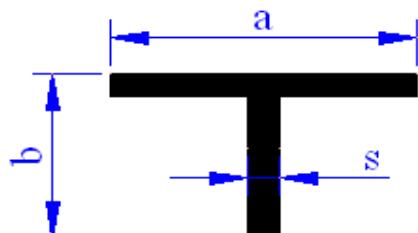


U PROFİLLER				
PROFİLNO:	a	b	s	Kg/m
7833	6	4	1,8	0,051
6256	6	6	1	0,043
5434	6,5	10,5	1	0,069
6255	8	8	1	0,059
5572	8,7	10	1,1	0,079
5809	9	9	2,5	0,148
6254	10	10	1	0,076
6152	10	10	1,25	0,093
7064	10	15	1	0,102
5637	10,7	20	1,2	0,157
1268	11,5	12	2	0,171
7065	12	12	1	0,092
7896	12,1	30	1,1	0,208
4909	12,2	20	2	0,261
1890	13	17	1	0,124
5877	15	15	2	0,221
1666	17	14,5	1	0,119
1634	17	16	1	0,127
1341	18	20	1	0,152
7571	18,4	14	1	0,120
1195	18,5	13	1,2	0,137
1344	19	20	1,15	0,177
7906	19,6	17,5	1,1	0,156

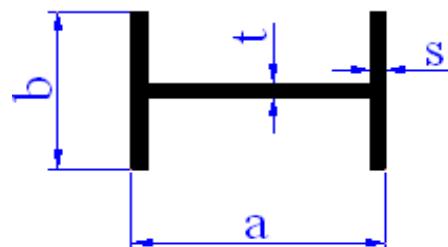
U PROFİLLER				
PROFİLNO:	a	b	s	Kg/m
5878	20	20	2	0,302
1431	20	25	1,4	0,255
7572	20,4	14	1	0,126
4289	20,4	18	1	0,147
5649	20,6	12	1,1	0,127
4434	21	20	1	0,160
1247	21	25	1,5	0,276
4140	23,2	16,1	1,1	0,160
5880	25	25	2	0,383
2177	26,5	30	2	0,447
6524	28	8	1	0,114
6448	30	10	1	0,130
6447	30	13	1	0,146
4631	30	15	1,1	0,172
1140	30	20	1	0,184
6446	37	8	1	0,138
6445	40	13	1	0,173
6495	40	15	1	0,184
7387	43,1	11,5	1,5	0,255
1128	65	10	1,5	0,333
6496	69	25	2	0,621
2161	79	30	2	0,730
4828	120	10	1,5	0,555

**STANDART PROFİLLER / STANDART PROFILES**


RADÜSLÜ KUTU PROFİLLER				
PROFİL NO	a	b	s	Kg/m
1337	25	10	1,5	0,230
1170	27	14	0,85	0,155
2552	27	15	1,45	0,261
5268	30	15	1,1	0,219
1533	38	20,5	1,05	0,274
1532	55	24,2	1	0,364
2550	85,4	54,4	11,7	6,198

**STANDART PROFİLLER / STANDART PROFILES**


T PROFİLLER				
PROFİL NO	a	b	s	Kg/m
1329	15	15	1,5	0,116
6154	15	15	2	0,151
1330	20	20	1,5	0,157
5887	20	20	2	0,205
1649	25	25	1,1	0,146
7055	25	25	1,5	0,196
1331	25	25	2	0,260
1383	25	25	4	0,498
1332	25	30	1,5	0,217
2606	30	10	1,1	0,116
5047	30	17	1	0,125
1639	30	30	1,1	0,176
1462	30	30	2	0,314
6155	30	30	3	0,462
1418	35	25	2,2	0,345
1023	50	50	5	1,284
5290	50	70	2,5	0,793
5289	70	50	2,5	0,793

**STANDART PROFİLLER / STANDART PROFILES**


H PROFİLLER					
PROFİL NO	a	b	s	t	Kg/m
1092	20	32	1	3	0,320
1117	56,5	21	2	2	0,512
1063	57	22	2	2	0,525
1064	68	22	2	2	0,585
1116	68,5	22	2	1,8	0,553
1065	75	22	2,5	2,5	0,770





**Produced by**

