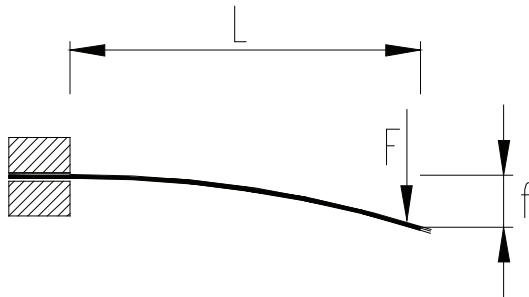
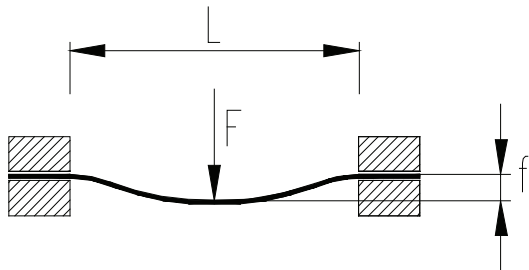


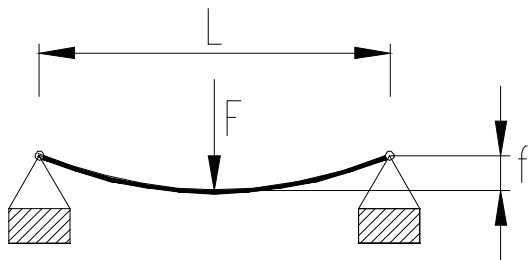
Useful formulas



$$\sigma = \frac{F \cdot L}{W} \leq K \quad f = \frac{F \cdot L^3}{E \cdot I \cdot 3}$$



$$\sigma = \frac{F \cdot L}{8 \cdot W} \leq K \quad f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$



$$\sigma = \frac{F \cdot L}{4 \cdot W} \leq K \quad f = \frac{F \cdot L^3}{E \cdot I \cdot 48}$$

σ [N/mm ²]	f [mm]	W [mm ³]	F [N]	I [mm ⁴]	K [N/mm ²]	E [N/mm ²]
Bending tension	Slack	Moment of resistance	Force	Moment of inertia	Max. bending tension	Elasticity module

[10³mm³=cm³]

[10⁴mm⁴=cm⁴]

	[N/mm ²] 100	[N/mm ²] 40	[N/mm ²] 30
K typical	Constant load	Pulsating load	Alternating load

Specifications for modular profiles

Al Mg Si EN AW-6060	Rm = 195 N/mm ²	Rp 0.2 = 145 N/mm ²
Material marking and label according to the ISO-standard	Tensile strength	Yield stress

E = 70.000 N/mm ²	T5	15µm	UNI – EN 755
Elasticity module	Physical condition	Anodising – layer thickness	Dimensional tolerance

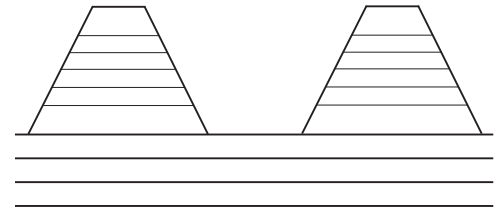
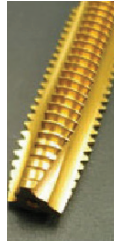
Name	Code	Moment of inertia I [cm ⁴]		Moment of resistance W [cm ³]		Surface area [mm ²]	Mass [kg/m]	Groove [mm]	Length [mm]
		x	y	x	y				
Al. profile meshes	10001	1.01	0.16	0.79	0.32	139.42	0.37	8/10	6 050
Al. profile 18.5 x 32	10002	2.76	1.16	1.97	1.26	288.80	0.77	8	6 050
Al. profile phi-28	14029	1.67	1.67	1.19	1.19	273	0.7	/	6 050
Al. profile phi-28 L	14028	1.33	1.33	0.95	0.95	178	0.49	/	6 050
Al. profile 30 x 30	10003	2.76	2.76	1.84	1.84	297.33	0.80	8	6 050
Al. profile 30 x 30 R	10004	2.48	2.48	1.43	1.43	298.48	0.80	8	6 050
Al. profile 30 x 60	10005	19.03	5.28	6.34	3.52	542.13	1.45	8	6 050
Al. profile 30 x 90	10006	59.48	7.58	13.22	5.23	682.94	1.83	8	6 050
Al. profile 40 x 40	10021	7.62	7.62	3.81	3.81	461.795	1.24	10	6 050
Al. profile 40 x 40 C1	10026	7.65	8.39	3.82	4.02	485.3	1.31	10	6 050
Al. profile 40 x 40 C2	10027	8.45	8.45	2.88	3.032	507.33	1.37	10	6 050
Al. profile 40 x 45	14001	8.02	9.38	4.21	4.69	425.64	1.14	8/10	6 050
Al. profile 40 x 80	10022	55.72	15.15	13.93	7.57	829.38	2.24	10	6 050
Al. profile duct cover 45 x 25	10024	1.90	5.03	0.27	0.86	104	0.28	/	6 050
Al. profile duct 45 x 25	10025	2.08	2.87	0.14	0.25	181	0.49	/	6 050
Al. profile 45 x 45 L	10007	11.46	11.46	5.10	5.10	604.85	1.63	10	6 050
Al. profile 45 x 45 H	10008	15.04	15.04	6.68	6.68	792.01	2.12	10	6 050
Al. profile 45 x 45 C1	10009	12.45	11.49	5.72	5.11	626.87	1.69	10	6 050
Al. profile 45 x 45 C2	10028	12.52	12.52	4.09	3.98	648.89	1.75	10	6 050
Al. profile 45 x 45 R	10010	9.14	9.14	3.53	3.53	516.84	1.38	10	6 050
Al. profile 45 x 60	10013	36.13	21.58	12.04	9.59	1,088.02	2.91	10	6 050
Al. profile 45 x 90 L	10011	87.15	22.27	19.37	9.90	1 059.88	2.84	10	6 050
Al. profile 45 x 90 H	10012	121.05	31.15	26.90	13.84	1 493.25	4.00	10	6 050
Al. profile 45 x 135	10014	376.27	45.32	55.74	20.14	2 125.83	5.69	10	6 050
Al. profile 45 x 180	10029	59.50	848.34	26.44	94.26	2 764.64	7.49	10	6 050
Al. Al. profile 60 x 60	10015	40.85	40.85	17.30	17.30	1 345.17	3.64	10	6 050
Al. profile 60 x 90	10016	202.42	90.32	44.98	30.11	2 533.36	6.78	10	6 050
Al. profile 80 x 80	10023	116.72	116.72	29.18	29.18	1 461.00	3.96	10	6 050
Al. profile 90 x 90 L	10017	195.39	195.39	43.42	43.42	2 091.97	5.60	10	6 050
Al. profile 90 x 90 H	10018	288.35	288.35	64.08	64.08	3 600.61	9.64	10	6 050
Al. profile 22.5 x 180	10019	897.06	11.83	66.34	10.81	2 210.48	5.92	8/10	6 050
Al. profile 90 x 80	10020	1 889.54	510.18	209.95	113.37	5 770.16	15.45	10	6 050



THREADS

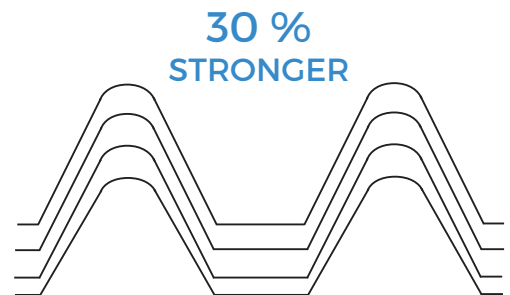
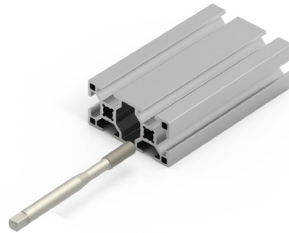
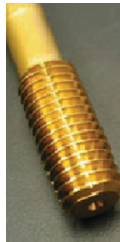
The thread rolling process is used for al. profiles and NOT cutting!!!

Drill for cutting threads



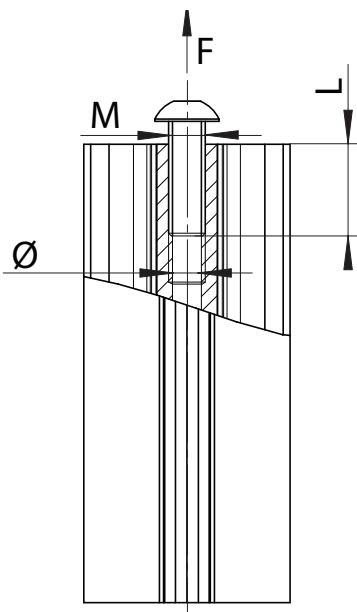
THREAD CUTTING

Drill for rolling threads



30 % STRONGER

ROLLING THREADS



Hole specified in advance		
M x L	\varnothing	F
M 8 x 20	$\varnothing 7.4$	7 000 N
M 10 x 20	$\varnothing 9.4$	8 000 N
M 12 x 20	$\varnothing 11.3$	10 000 N
M 16 x 20	$\varnothing 15$	12 000 N