Aluminum Profiles

i-Modular System, with Open Slots on All Sides, Profile Type Light / Heavy

SPECIFICATION

Profile types

- Type **L**: Light
- Type **S**: Heavy

Aluminum
Anodized, natural color **N**

INFORMATION

Aluminum profiles GN 10i are produced by extrusion molding. They can be used, for example, to easily construct protective enclosures, workplace equipment or jigs.
Aluminum profiles in combination with the removable and reusable accessories form a flexible modular system. Attachments can be fastened to either the slots or the end faces via the holes.
The profile type light is typically used for small loads or for weight-optimized constructions.
Aluminum profiles are supplied in bundles. The table shows the quantity included in each bundle.

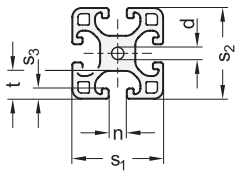
ACCESSORY

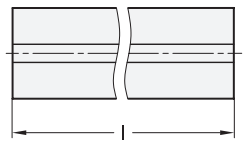
- T-Nuts GN 50i (see page)
- Cover Caps GN 60i (see page)
- Cover and Edging Profiles GN 70i (see page)
- Cover Profiles GN 71i (see page)
- Transport and Base Plates GN 80i (see page)

TECHNICAL INFORMATION

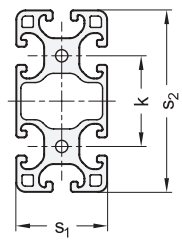
- Technical Data GN 10i / GN 11i (see page)

30x30 / 40x40

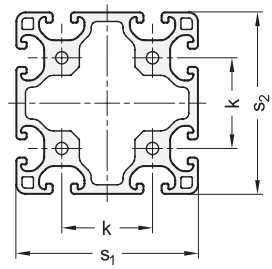




30x60 / 40x80

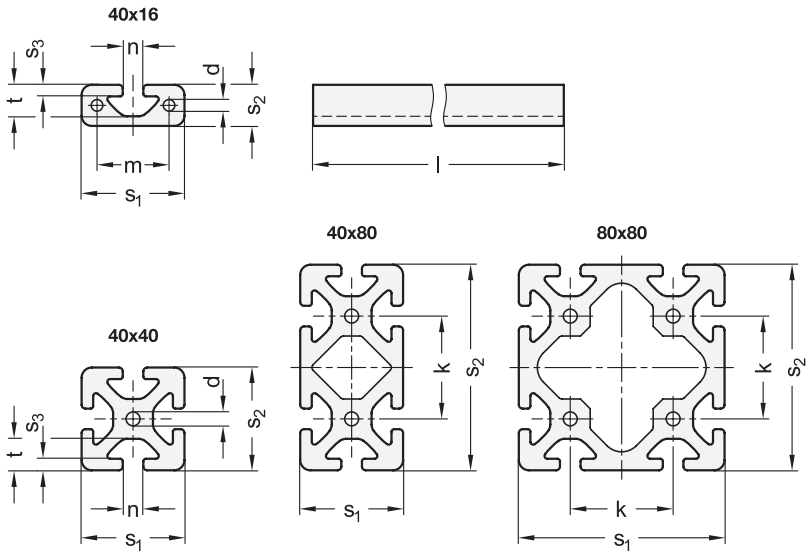


60x60 / 80x80



GN 10i-L

Description	s1	s2	n	Length l in m +1.5mm	Bundle Pieces	d	k	s3	t	Grid size	⚖
GN 10i-30306L-N-2-4	30	30	6	2	4	5	-	3	9.75	30	7440
GN 10i-30306L-N-3-4	30	30	6	3	4	5	-	3	9.75	30	11160
GN 10i-30606L-N-2-2	30	60	6	2	2	5	30	3	9.75	30	6600
GN 10i-30606L-N-3-2	30	60	6	3	2	5	30	3	9.75	30	9900
GN 10i-40408L-N-2-4	40	40	8	2	4	6.8	-	4.5	12.25	40	14000
GN 10i-40408L-N-3-4	40	40	8	3	4	6.8	-	4.5	12.25	40	21000
GN 10i-40808L-N-2-2	40	80	8	2	2	6.8	40	4.5	12.25	40	12320
GN 10i-40808L-N-3-2	40	80	8	3	2	6.8	40	4.5	12.25	40	18480
GN 10i-60606L-N-2-1	60	60	6	2	1	5	30	3	9.75	30	5400
GN 10i-60606L-N-3-1	60	60	6	3	1	5	30	3	9.75	30	8100
GN 10i-80808L-N-2-1	80	80	8	2	1	6.8	40	4.5	12.25	40	10340
GN 10i-80808L-N-3-1	80	80	8	3	1	6.8	40	4.5	12.25	40	15510



GN 10i-S

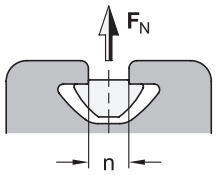
Description	s1	s2	n	Length l in m +1.5mm	Bundle Pieces	d	k	m	s3	t	Grid size	⚖
GN 10i-40168S-N-2-4	40	16	8	2	4	5	-	28	4.5	12.25	40	8960
GN 10i-40168S-N-3-4	40	16	8	3	4	5	-	28	4.5	12.25	40	13440
GN 10i-40408S-N-2-4	40	40	8	2	4	6.8	-	-	4.5	12.25	40	19600
GN 10i-40408S-N-3-4	40	40	8	3	4	6.8	-	-	4.5	12.25	40	29400
GN 10i-40808S-N-2-2	40	80	8	2	2	6.8	40	-	4.5	12.25	40	18040
GN 10i-40808S-N-3-2	40	80	8	3	2	6.8	40	-	4.5	12.25	40	27060
GN 10i-80808S-N-2-1	80	80	8	2	1	6.8	40	-	4.5	12.25	40	14400
GN 10i-80808S-N-3-1	80	80	8	3	1	6.8	40	-	4.5	12.25	40	21600

Technical Data

Mechanical Data (in Extrusion Direction)

- Material: Al Mg Si 0.5 F25 (EN AW – 6063)
- Delivery condition: Artificially aged
- Anodized coating: E6EV1 (natural color), layer thickness: 10 µm
- Dimensional deviations as per DIN EN 12020-2
- Tensile strength R_m min. 245 N/mm²
- Yield point $R_{p0.2}$ min. 195 N/mm²
- Density 2.7 kg/dm³
- Linear expansion coefficient 23,6x10^{-6} 1/k
- Modulus of elasticity E ≈ 70,000 N/mm²
- Hardness ≈ 75HB -2.5/187.5

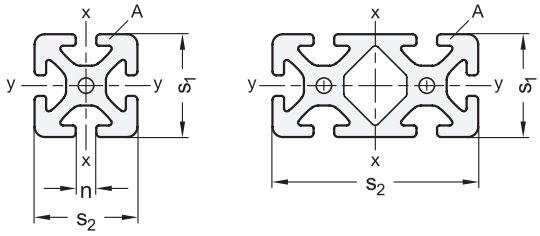
Permissible Tensile Load on the Slot



n	Grid size	Profile type	FN* in N With T-Nuts GN 50i		
			Type N	Type V	Type S
6	30	Light	3000	3000	-
8	40	Light	7500	5500	-
8	40	Heavy	15000	15000	19000

* Depending on the thread size of the T-nut

Cross-Section Properties



W_x, W_y = Axial resistance torque against bending
I_x, I_y = 2nd moment of area against bending
I_t = 2nd moment of area against torsion
A = Cross-section area
m = Length-related mass

GN 10i-L Profile type light

s1	s2	n	Grid size	Bending axis x-x		Bending axis y-y		It in cm⁴	A in cm²	m ≈ in kg/m
				Ix in cm⁴	Wx in cm³	Iy in cm⁴	Wy in cm³			
30	30	6	30	2.9	1.94	2.9	1.94	0.3	3.43	0.93
30	60	6	30	21.2	7.07	5.54	3.69	3.18	6.13	1.65
60	60	6	30	39.5	13.2	39.5	13.2	21.5	10.0	2.7
40	40	8	40	9.1	4.55	9.1	4.55	1.36	6.47	1.75
40	80	8	40	70.2	17.6	16.8	8.45	9.94	11.3	3.08
80	80	8	40	130.1	33.2	130.1	33.2	80.8	19.3	5.17

GN 10i-S Profile type heavy

s1	s2	n	Grid size	Bending axis x-x		Bending axis y-y		It in cm⁴	A in cm²	m ≈ in kg/m
				Ix in cm⁴	Wx in cm³	Iy in cm⁴	Wy in cm³			
40	16	8	40	1.06	1.25	6.75	3.37	0.97	4.15	1.12
40	40	8	40	13.9	6.95	13.9	6.95	1.88	9.05	2.45
40	80	8	40	101.0	25.2	26.7	13.4	18.8	16.5	4.51
80	80	8	40	187.8	46.9	187.8	46.9	128.4	26.7	7.2

GN 11i Profile type light

s1	s2	n	Grid size	Bending axis x-x		Bending axis y-y		It in cm⁴	A in cm²	m ≈ in kg/m
				Ix in cm⁴	Wx in cm³	Iy in cm⁴	Wy in cm³			
40	40	8	40	9.63	4.96	9.63	4.96	5.41	6.79	1.83