

Aluminum Profiles

**b-Modular System, with Partially Closed Slots,
Profile Type Light**

SPECIFICATION

Profile type

- Type **N**: Light, 2 sides closed, offset by 90°

Aluminum

Anodized, natural color **N**

INFORMATION

Aluminum profiles GN 11b with partially closed slots are produced by extrusion molding. They can be used, for example, to easily construct protective enclosures, workplace equipment or partition walls, when an attractive appearance is required.

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.

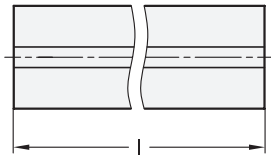
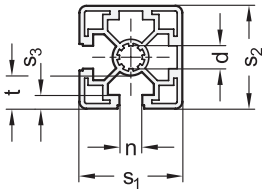
The closed profile sides facilitate cleaning. The profile type light is typically used for small loads or for weight-optimized constructions. Aluminum profiles are supplied in bundles. The table shows the quantity included in each bundle.

ACCESSORY

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

TECHNICAL INFORMATION

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



GN 11b

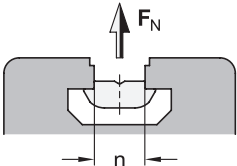
Description	s1	s2	n	Length l in m +1.5mm	Bundle Pieces	d	s3	t	Grid size	
GN 11b-454510N-N-2-4	45	45	10	2	4	10	6	14.5	45	13500
GN 11b-454510N-N-3-4	45	45	10	3	4	10	6	14.5	45	20500

Technical Data for GN 10b / 11b

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 $23,6 \times 10^{-6} 1/k$
 - Modulus of elasticity $E \approx 70,000 \text{ N/mm}^2$
 - Hardness $\approx 75\text{HB} - 2.5/187.5$

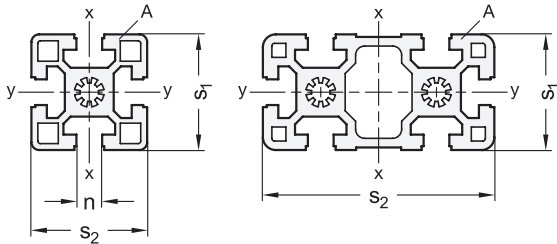
Permissible Tensile Load on the Slot



n	Grid size	Profile type	F _N * in N			
			With T-Nuts GN 50b Type V / F	Type S	With T-Slot Nuts GN 51b	With T-Slot Bolts GN 52b
8	30	Heavy	2500	6000	3000	3500
10	40	Light	7500	-	5500	9000
10	45	Light	7500	-	5500	9000
10	45	Heavy	8500	17500	7500	9000

* Depending on the thread size of the T-nut / T-slot nut / T-slot bolt

Cross-Section Properties



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

GN 10b-L Profile type light									
s1	s2	n	Grid size	Bending axis x-x		Bending axis y-y		A in cm²	m ≈ in kg/m
				I _x in cm⁴	W _x in cm³	I _y in cm⁴	W _y in cm³		
40	40	10	40	9.06	4.53	9.06	4.53	5.61	1.51
40	80	10	40	63.2	15.8	17.2	8.61	9.86	2.67
45	45	10	45	11.7	4.89	11.7	4.89	5.73	1.55
45	90	10	45	81.8	18.2	23.5	10.5	11.3	3.05
80	80	10	40	132.6	33.2	132.6	33.2	18.5	4.98
90	90	10	45	210.5	46.8	210.5	46.8	23.5	6.34

GN 10b-S Profile type heavy									
s1	s2	n	Grid size	Bending axis x-x		Bending axis y-y		A in cm²	m ≈ in kg/m
				I _x in cm⁴	W _x in cm³	I _y in cm⁴	W _y in cm³		
30	30	8	30	2.77	1.85	2.77	1.85	3.14	0.85
30	60	8	30	5.09	3.39	19.7	6.55	5.53	1.49
45	45	10	45	13.9	6.91	13.9	6.91	7.5	2.03
45	60	10	45	37.6	12.5	22.7	10.1	11.1	3.01
45	90	10	45	124.1	27.6	32.3	14.3	15.2	4.12
90	90	10	45	302.0	67.1	302.0	67.1	38.9	10.5

GN 11b-L Profile type light									
s1	s2	n	Grid size	Bending axis x-x		Bending axis y-y		A in cm²	m ≈ in kg/m
				I _x in cm⁴	W _x in cm³	I _y in cm⁴	W _y in cm³		
45	45	10	45	11.82	5.11	11.82	5.11	6.08	1.64