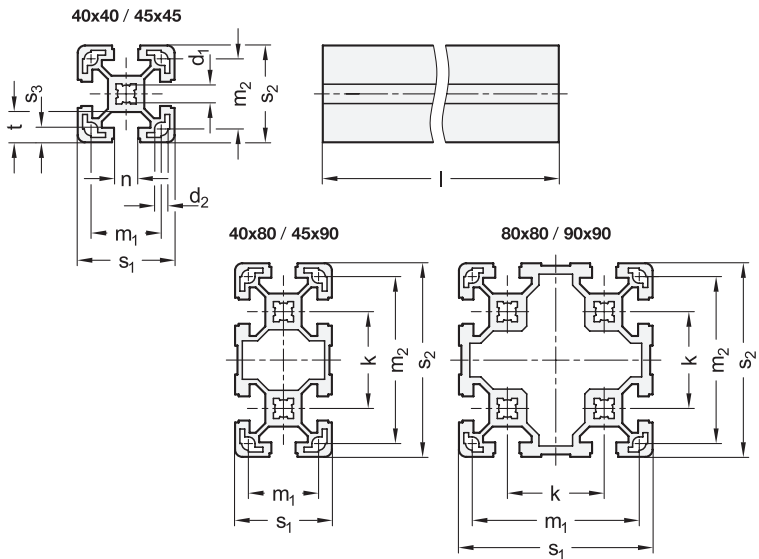




Metric



4 Profile type

L Light

Metric table

Dimensions in: millimeters / inches												
1 s ₁	2 s ₂	3 n	6 Length l +1.5mm in meters	7 Bundle Pieces	d ₁	d ₂ *	k	m ₁	m ₂	s ₃	t	Grid size
40 1.57	40 1.57	10 0.39	2	4	10 0.39	5.5 0.22	-	29 1.14	29 1.14	6 0.24	12.5 0.49	40 1.57
40 1.57	80 3.15	10 0.39	2	2	10 0.39	5.5 0.22	40 1.57	29 1.14	69 2.72	6 0.24	12.5 0.49	40 1.57
45 1.77	45 1.77	10 0.39	2	4	10 0.39	-	-	-	-	6 0.24	14.5 0.57	45 1.77
45 1.77	90 3.54	10 0.39	2	2	10 0.39	-	45 1.77	-	-	6 0.24	14.5 0.57	45 1.77
80 3.15	80 3.15	10 0.39	2	1	10 0.39	5.5 0.22	40 1.57	69 2.72	69 2.72	6 0.24	12.5 0.49	40 1.57
90 3.54	90 3.54	10 0.39	2	1	10 0.39	-	45 1.77	-	-	6 0.24	13 0.51	45 1.77

* Bores on grid size = 40 only

Specification

Aluminum

Anodized finish, natural color

N

RoHS

Accessory

GN 50b T-Nuts	QVX
GN 51b T-Slot Nuts	QVX
GN 52b T-Slot Bolts	QVX
GN 60b Cover Caps	QVX
GN 70b Cover and Edging Profiles	QVX
GN 71b Cover Profiles	QVX
GN 80b Support / Base Plates	QVX

Aluminum profiles GN 10b 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.

Technical Information

Technical Data

Page

QVX

How to order

- 1** Profile width s₁
- 2** Profile height s₂
- 3** Slot width n
- 4** Profile type
- 5** Finish
- 6** Length l (in meters)
- 7** Bundle

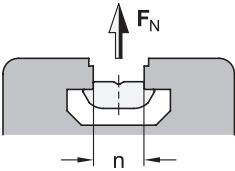
GN 10b-45 45 10L-N-2-4

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 23.6×10^{-6} 1/k
 - Modulus of elasticity $E \approx 70.000$ N/mm²
 - Hardness $\approx 75HB -2.5/187.5$

Permissible Tensile Load on the Slot

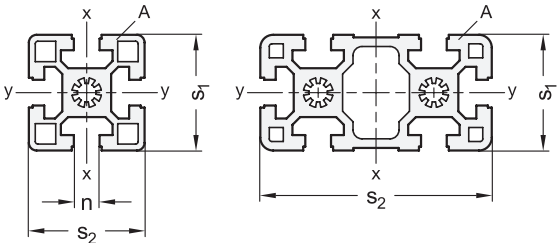
Dimensions in: millimeters / inches



n	Grid size	Profile type	F_N^*			
			With T-nuts GN 50b		With T-slot nuts GN 51b	With T-slot bolts GN 52b
			Type V / F	Type S		
8 0.31	30 1.18	heavy	562 lbf 2500 N	1349 lbf 6000 N	674 lbf 3000 N	787 lbf 3500 N
10 0.39	40 1.57	light	1686 lbf 7500 N	-	1236 lbf 5500 N	2023 lbf 9000 N
10 0.39	45 1.77	light	1686 lbf 7500 N	-	1236 lbf 5500 N	2023 lbf 9000 N
10 0.39	45 1.77	heavy	1911 lbf 8500 N	3934 lbf 17500 N	1686 lbf 7500 N	2023 lbf 9000 N

* 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 Profile type light									
s ₁	s ₂	n	Grid size	Bending axis x-x		Bending axis y-y		A in cm ²	m ≈ in kg/m
				I _x in cm ⁴	W _x in cm ³	I _y in cm ⁴	W _y in cm ³		
40 1.57	40 1.57	10 0.39	40 1.57	9.06	4.53	9.06	4.53	5.61	1.51
40 1.57	80 3.15	10 0.39	40 1.57	63.2	15.8	17.2	8.61	9.86	2.67
45 1.77	45 1.77	10 0.39	45 1.77	11.7	4.89	11.7	4.89	5.73	1.55
45 1.77	90 3.54	10 0.39	45 1.77	81.8	18.2	23.5	10.5	11.3	3.05
80 3.15	80 3.15	10 0.39	40 1.57	132.6	33.2	132.6	33.2	18.5	4.98
90 3.54	90 3.54	10 0.39	45 1.77	210.5	46.8	210.5	46.8	23.5	6.34

GN 10b Profile type heavy									
s ₁	s ₂	n	Grid size	Bending axis x-x		Bending axis y-y		A in cm ²	m ≈ in kg/m
				I _x in cm ⁴	W _x in cm ³	I _y in cm ⁴	W _y in cm ³		
30 1.18	30 1.18	8 0.31	30 1.18	2.77	1.85	2.77	1.85	3.14	0.85
30 1.18	60 2.36	8 0.31	30 1.18	5.09	3.39	19.7	6.55	5.53	1.49
45 1.77	45 1.77	10 0.39	45 1.77	13.9	6.91	13.9	6.91	7.5	2.03
45 1.77	60 2.36	10 0.39	45 1.77	37.6	12.5	22.7	10.1	11.1	3.01
45 1.77	90 3.54	10 0.39	45 1.77	124.1	27.6	32.3	14.3	15.2	4.12
90 3.54	90 3.54	10 0.39	45 1.77	302.0	67.1	302.0	67.1	38.9	10.5