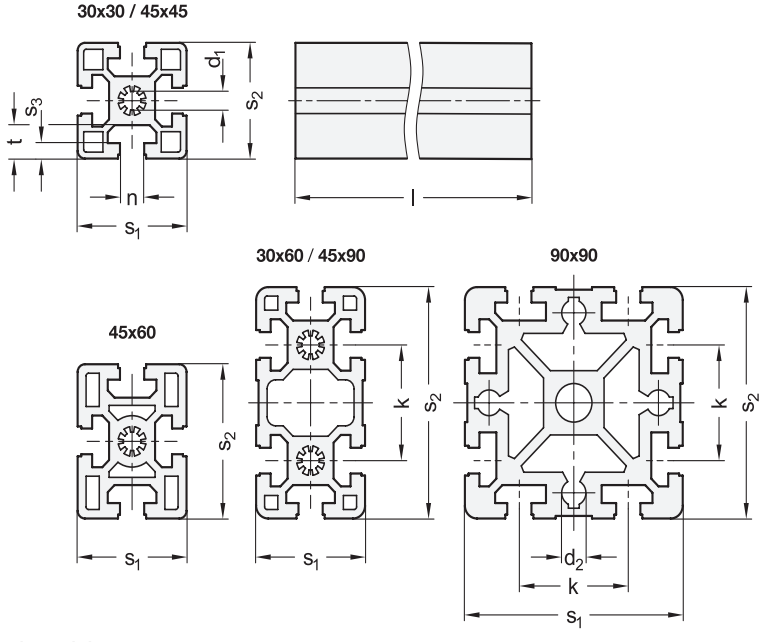
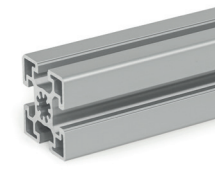
Aluminum Profiles

b-Modular System, with Open Slots on All Sides, Profile Type Heavy

JW WINCO® A Ganter Company



Metric



4 Profile type

S Heavy

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	s_3	t	Grid size
30 1.18	30 1.18	8 0.31	2	4	7.3 0.29	-	-	2.2 0.09	9 0.35	30 1.18
30 1.18	60 2.36	8 0.31	2	2	7.3 0.29	-	30 1.18	2.2 0.09	9 0.35	30 1.18
45 1.77	45 1.77	10 0.39	2	4	10 0.39	-	-	6 0.24	12.5 0.49	45 1.77
45 1.77	60 2.36	10 0.39	2	2	10 0.39	-	-	6 0.24	12.5 0.49	45 1.77
45 1.77	90 3.54	10 0.39	2	2	10 0.39	-	45 1.77	6 0.24	12.5 0.49	45 1.77
90 3.54	90 3.54	10 0.39	2	1	15 0.59	10 0.39	45 1.77	6 0.24	12.5 0.49	45 1.77

Specification

5

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.

Aluminum profiles are supplied in bundles. The table shows the quantity included in each bundle.

Technical Information	Page
Technical Data	QVX

How to order

1 2 3 4 5 6 7

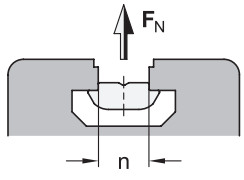
GN 10b-45 90 10 S-N-3-2

1	**Profile width s_1**
2	**Profile height s_2**
3	**Slot width n**
4	**Profile type**
5	**Finish**
6	**Length l (in meters)**
7	**Bundle**

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

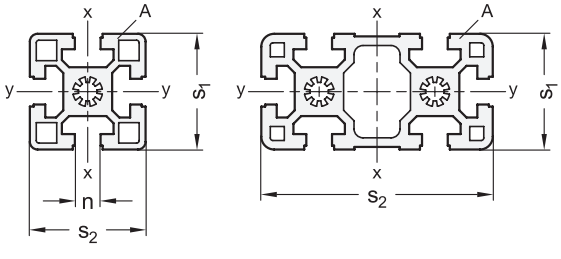


Dimensions in: millimeters / inches

n	Grid size	Profile type	F_N* With T-nuts GN 50b Type V / F	With T-nuts GN 50b Type S	With T-slot nuts GN 51b	With T-slot bolts GN 52b
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 I_x in cm⁴	W_x in cm³	Bending axis y-y I_y in cm⁴	W_y in cm³	A in cm²	m ≈ in kg/m
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 I_x in cm⁴	W_x in cm³	Bending axis y-y I_y in cm⁴	W_y in cm³	A in cm²	m ≈ in kg/m
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