Series index · Section data · Commercial terms

Aluminium extrusion product range

T-slot strut profiles, architectural sections, angles, connectors and finishing — with the section data a buyer needs before an RFQ.

204	30	6063-T5
published product pages	indexed categories	standard alloy

Document GP-Product-Range-r1-2026-11
Scope Section data taken from published product pages on grownparts.com
Status Overview. Full section data and individual DXF files are supplied on request.
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Before you quote

How to read this catalogue

This document is a selection aid, not a substitute for a drawing. It tells you which series exists, what geometry each section carries, and which commercial terms apply before an RFQ.

Where the numbers come from

Every section row on pages 5–7 is taken from the corresponding published product page. Where a field says `approx.` or a range, that is how the source page states it — we have not tightened or rounded it here.

Item	What it means
`Section`	Nominal envelope of the extruded cross-section
`Slot spec`	Groove width, mouth opening and pitch as stated on the product page
`Weight`	Kilograms per metre; ranges reflect wall variants
`Alloy`	Alloy and temper for the standard offer
`Tolerance`	The standard and limits quoted on the product page

> **Not in this issue.** Certificate numbers, certificate scans and DXF geometry are not included — they are supplied per project against a drawing. Nothing in this document should be read as a certified test report.

One decision this document is meant to shorten

Whether a standard section will do, or whether your assembly needs a custom die. If the tables on pages 5–7 contain a section that fits, no tooling is needed. If they do not, send a cross-section drawing and we will check feasibility before quoting a die.

Index 01

Series index and category map

Series	Published	Typical use
15 / 20 series	2 / 13 published sections	Light frames, guards, small enclosures
30 series	17 published sections	Machine frames, workstations, light guarding
40 series	42 published sections	The standard structural range; widest fastener choice
45 series	36 published sections	Heavier frames, 45 mm slot pitch
50 / 60 series	7 / 3 published sections	Large structural members

Categories · A to L

Name	Slug
15 Series Aluminium Profiles	15-series-aluminium-profiles
20 Series Aluminium Profiles	20-series-aluminium-profiles
30 Series Aluminium Profiles	30-series-aluminium-profiles
40 Series Aluminium Profiles	40-series-aluminium-profiles
45 Series Aluminium Profiles	45-series-aluminium-profiles
50 Series Aluminium Profiles	50-series-aluminium-profiles
60 Series Aluminium Profiles	60-series-aluminium-profiles
Aluminium Angle Profiles	angle-profiles
Aluminium Conduit Profiles	conduit-profiles
Aluminium Profile Hinges	hinges
Aluminium Sections	aluminium-sections
Aluminum Profiles	aluminum-profiles
Anchor Connectors	anchor-connectors
Angle Profile Brackets	angle-profile-brackets
Anodised Aluminium Profiles	anodised-aluminium-profiles

Categories · L to P

Name	Slug
CNC Machining	cnc-machining
Connecting Elements	connecting-elements
Die-Cast Brackets	die-cast-brackets
Door and Window Elements	door-and-window-elements
Fastening Elements	fastening-elements
Floor Elements	floor-elements
Joining Plates	joining-plates
Lean Pipe Profiles	lean-pipe-profiles
Levelling Feet	levelling-feet
Other Connecting Elements	other-connecting-elements
Panel Installation Elements	panel-installation-elements
Pipe and Joint Systems	pipe-and-joint-systems
Profile Accessories	profile-accessories
Stairway and Platform Systems	stairway-and-platform-systems
Strut Profiles	strut-profiles

Slugs are the live /c/ paths on grownparts.com. The full, filterable index is at /products/.

Index 02

Alloys, tempers and the standards we quote to

Alloy / temper	Where it is used	Note
6063-T5	Standard for T-slot, architectural and general sections	Best extrudability and surface finish
6061-T6	Higher strength requirements, on request	Slower press speed; more conservative die bearings
6005-T5	Structural sections where specified	Subject to billet availability

Execution standards, not certifications

These are the dimensional and material standards a section is made and checked to. They are sometimes listed alongside a quality-system certificate, but they are not certificates themselves.

Standard	Covers
EN 755-9	General-purpose extruded profile dimensional tolerances
EN 12020-2	Precision profiles in 6060 / 6063 — a tighter tolerance class
GB/T 6892	Chinese national standard for extruded aluminium profiles
ISO 7599	Anodizing of aluminium — general specification
Qualicoat / AAMA 2604	Powder coating performance class

Ask for the table, not a single number. A tolerance band depends on the nominal dimension and the class. We send the applicable table for your section with the quotation rather than a figure that would be wrong for half of them.

Index 03 · selection

Section data · 15 / 20 / 30 series

Light and medium structural sections. Codes are the product codes used on grownparts.com. A selection of 14 from 24 published sections in this group; full range at grownparts.com/products/.

Code	Section	Slot geometry	Weight / m	Alloy
GP-SP-1515-1S	15 x 15 mm	6.2 mm mouth, 6 mm groove, M4/M5 slot nut…	approx. 0.48 kg/m	6063-T5
GP-SP-9015-7S	90 x 15 mm	7 x 8.2 mm groove, 6 mm mouth, staggered,…	approx. 0.62 kg/m	6063-T5
GP-AP-2020-3	20 x 20 x 3 mm	Not applicable, this is a solid equal leg…	approx. 0.30 kg/m	6061-T6
GP-EA-2010-100	20 x 20 x 3 mm to 100 x 10…	Not applicable, this is a solid extruded…	0.30 kg/m (20x20x3) to…	6061-T6
GP-SP-2020-4C	20 x 20 mm	4 x 6.2 mm groove, 6 mm mouth, 20 mm pitc…	approx. 0.62 kg/m	6063-T5
GP-SP-2020-4L	20 x 20 mm	4 x 6.2 mm groove, 6 mm mouth, 20 mm pitc…	approx. 0.62 kg/m	6063-T5
GP-AP-3030-4	30 x 30 x 4 mm	Not applicable, this is a solid equal leg…	approx. 0.60 kg/m	6061-T6
GP-AP-3030-4W	30 x 30 x 4 mm	Solid equal leg L section with no slot; h…	approx. 0.60 kg/m	6061-T6
GP-SP-30120-10S	120 x 30 mm	10 x 8.2 mm groove, 6 mm mouth, 30 mm pit…	approx. 2.70 kg/m	6063-T5
GP-SP-30120-10S-…	120 x 30 mm, ten slots	10 x 8.2 mm groove, 6 mm mouth, 30 mm pit…	approx. 2.70 kg/m	6063-T5

All values as stated on the individual product pages. Ranges indicate wall or slot variants within one section family.

Index 03 · selection

Section data · 40 series

The widest part of the range. Wall variants share a code family and differ in weight per metre. A selection of 14 from 40 published sections in this group; full range at grownparts.com/products/.

Code	Section	Slot geometry	Weight / m	Alloy
GP-AE-4040-5	40 x 40 x 5 mm equal leg a…	Solid angle, no slot; assembles with 40 s…	approx. 1.01 kg/m	6061-T6
GP-AP-4040-5	40 x 40 x 5 mm	Not applicable, solid angle; drilled or s…	approx. 1.01 kg/m	6061-T6 (…
GP-AP-L4040-5	40 x 40 x 5 mm	Not applicable, this is a solid equal leg…	approx. 1.01 kg/m	6063-T5 f…
GP-CNC-SP4040	40 x 40 mm, four slots	M6 slot, 8 mm mouth, four faces, 30 mm pi…	1.30 - 2.35 kg/m depend…	6063-T5
GP-CP-4040	40 x 40 mm	Base has 3 x 3 mm mounting holes for T-sl…	approx. 0.62 kg/m	6063-T5
GP-CP-4080	40 x 80 mm	Base has 3 x 4 mm mounting holes for T-sl…	approx. 1.15 kg/m	6063-T5
GP-SD-40	40 x 40 mm leaf frame, 40…	8 mm slot, M6 T-nut fixing, four faces	leaf weight depends on…	6063-T5
GP-SP-2040-2S	40 x 20 mm	M6 slot, 6.2 mm mouth, 2 slots, 20 mm pit…	approx. 1.05 kg/m	6063-T5
GP-SP-40120-8H	120 x 40 mm	8 x 10.2 mm groove, 8 mm mouth, 40 mm pit…	approx. 5.40 kg/m	6063-T5
GP-SP-40120-8S	120 x 40 mm	8 x 10.2 mm groove, 8 mm mouth, 40 mm pit…	approx. 4.60 kg/m	6063-T5
GP-SP-40160-10H	160 x 40 mm	10 x 10.2 mm groove, 8 mm mouth, 40 mm pi…	approx. 6.60 kg/m	6063-T5
GP-SP-40160-10S	160 x 40 mm	10 x 10.2 mm groove, 8 mm mouth, 40 mm pi…	approx. 5.80 kg/m	6063-T5
GP-SP-4020-6S	40 x 20 mm rectangular, si…	6 x 6.2 mm groove, 6 mm mouth, 20 mm pitc…	approx. 0.80 kg/m	6063-T5
GP-SP-4040-1F	40 x 40 mm square, single…	1 x 10.2 mm groove, 8 mm mouth, one face…	approx. 2.10 kg/m	6063-T5

All values as stated on the individual product pages. Ranges indicate wall or slot variants within one section family.

Index 03 · selection

Section data · 45 / 50 / 60 series

Heavier members. 45 series uses a 45 mm slot pitch and takes M8 / M10 fasteners. A selection of 14 from 43 published sections in this group; full range at grownparts.com/products/.

Code	Section	Slot geometry	Weight / m	Alloy
GP-AG-4545	45 x 45 mm post, 45 x 60 a…	10 mm groove, M8 and M10 slot nuts, 45 mm…	post approx. 2.55 kg/m	6063-T5
GP-CV-4560	45 x 60 mm side rail, 45 x…	10 mm groove, M8 and M10 slot nuts, 45 mm…	side rail approx. 3.3 k…	6063-T5
GP-RC-4545	45 x 45 mm quarter round	8 x 8 mm fixing groove taking M10 T-slot…	approx. 1.15 kg/m	6063-T5
GP-SP-45180-10S	180 x 45 mm	10 x 10.2 mm groove, 10 mm mouth, 45 mm p…	approx. 6.20 kg/m	6063-T5
GP-BR-AP50	50 x 50 mm legs, suits 30…	Round holes to drawing, M6 or M8 typical	approx. 2.3 kg/m	6061-T6
GP-SP-50100-2SH	100 x 50 mm	6.8 x 6.8 mm groove, M8 slot nuts, two pa…	approx. 6.2 kg/m	6063-T5
GP-SP-50100-6S	100 x 50 mm	6 x 10.2 mm groove, 8 mm mouth, 50 mm pit…	approx. 5.40 kg/m	6063-T5
GP-SP-50100-6S-TB	50 x 100 mm, six slots	6 x 10.2 mm groove, 8 mm mouth, 50 mm pit…	approx. 5.40 kg/m	6063-T5
GP-CD-12060	120 x 60 mm	Base slot 10.2 mm groove, 8 mm mouth, 40…	approx. 1.75 kg/m	6063-T5
GP-SP-2060-8S	60 x 20 mm	8 x 6.2 mm groove, 6 mm mouth, 20 mm pitc…	approx. 0.48 kg/m	6063-T5
GP-SP-3060-6S	60 x 30 mm	6 x 8.2 mm groove, 6 mm mouth, 53 / 30 mm…	approx. 1.40 kg/m	6063-T5
GP-SP-60120-12S	120 x 60 mm	12 x 8.2 mm groove, 6 mm mouth, 30 mm pit…	approx. 5.20 kg/m	6063-T5

All values as stated on the individual product pages. Ranges indicate wall or slot variants within one section family.

Index 04

Slot geometry and fastener compatibility

The slot is the part of a T-slot profile that decides whether your brackets, nuts and panels fit. Three numbers matter, and they are on every product page.

Feature	Typical values in this range	Why it matters
Groove width	6.2 mm / 8.2 mm / 10.2 mm	Sets the T-nut or slider size
Mouth opening	6 mm / 8 mm / 10 mm	Sets bolt shank clearance and panel retention
Slot pitch	20 / 30 / 40 / 45 / 50 / 60 mm	Sets where holes and joints can land
Fastener	M6 / M8 / M10	Decides the connector family
Centre bore	Present on many structural sections	Allows end tapping without a separate insert

Two things buyers get wrong

- **Cross-brand fit.** A nominal "40 series" from two suppliers is not automatically interchangeable. Groove width, mouth and pitch have to be compared, not the series name.
- **Fastener vs slot.** An M8 bolt through an 8 mm mouth has no clearance. Check the mouth and the T-nut together before ordering connectors.

> If your assembly uses another brand's connectors, send the connector drawing. We will confirm the groove and mouth geometry in writing before you commit.

Index 05

Tolerances and inspection

Characteristic	What we hold to	How it is checked
Section dimensions	EN 755-9 as standard; EN 12020-2 when the drawing says precision	Profile projector on the first two metres
Wall thickness	Band set by the nominal dimension and class	Eight points on the first article
Cut to length	±0.5 mm	Saw stop, per batch
Machined features	±0.1 mm standard; ±0.05 mm on request	CMM report when specified
Thread	M3–M12	Go / no-go gauging
Coating thickness	Powder 60–120 µm; anodize 10–25 µm	Eddy current, five points per length

Documents issued with a shipment

- **Material certificate** — alloy, temper and chemical composition to EN 573
- **First-article report** — dimensional check on the first two metres
- **Coating report** — thickness and colour against the approved sample
- **Batch release** — dated sign-off before packing; records retained three years

> Salt spray and accelerated weathering are run at an accredited third-party laboratory, not in-house. Reports are issued under the laboratory's name, per project.

Index 06

Finishing and secondary operations

Finish	Film	Standard	Use
Mill finish	None	—	Parts machined or finished by the customer
Powder coat	60–120 µm (80 nominal)	Qualicoat Class 1 / AAMA 2604	Colour-critical exterior and interior
Anodize, Type II	10–25 µm (15 nominal)	AAMA 611 / ISO 7599	Clear, bronze, champagne, black
Wood grain	80–120 µm	Qualicoat base	Interior decoration; UV fading limits exterior use

Sequence: machine before finishing, unless a face must stay bare

Machining after anodizing leaves bright bare aluminium at every cut, which fails a salt-spray review. Machining before it traps burrs under the coating. Where a thread or a contact face has to stay conductive, it is masked or plugged — this is a per-feature decision, agreed at quotation.

What the finish adds to a dimension

Finish	Effect on a machined fit
Anodize 15 µm	Grows roughly 7.5 µm outward per surface
Powder 80 µm	Sits on top; a coated groove narrows by up to twice the film

> Tolerance-critical bores and grooves should say on the drawing whether the dimension applies before or after coating.

Index 07

Commercial terms

Written for a purchasing file: the terms a buyer needs in order to build a comparison sheet.

Term	Position
Minimum order	500 kg per custom profile
Tooling	One-time die charge, invoiced separately from the unit price
Die ownership	Transfers to the buyer on payment; held and maintained by us, released on request
Tooling credit	Refundable against an agreed cumulative volume
Unit price	Quoted per metre at the stated quantity
Samples	First-article sample with dimensional report before production release
Lead time	First article 7–10 working days for 6063 soft alloy; production 10–15 days after approval
Trade terms	FOB; other Incoterms on request
Payment	Terms confirmed per order in the pro forma invoice

What this page deliberately does not do. It does not publish a price list. Section price depends on press envelope, wall uniformity, alloy and annual volume — a table of numbers without those assumptions would be misleading.

Index 08

Send this with your RFQ

Six items answer almost every feasibility question. Send them together and you get a written feasibility reply in one working day.

#	Item	Why we need it
01	Cross-section drawing	CAD, dimensioned PDF, or a hand sketch with numbers
02	Alloy and temper	Defaults to 6063-T5 if not specified
03	Estimated annual quantity	Decides whether tooling is a real cost per ton
04	Finish requirement	Mill, anodize or powder; colour reference
05	Tolerance class and critical faces	EN 755-9 or EN 12020-2, and which dimensions are fit-critical
06	Length, machining and packing	Any cut, drill, tap or assembly after extrusion

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