

Aluminium Extrusion RFQ Checklist

P&A International — custom aluminium extrusions, finishing & fabrication · www.pa-international.com.au

Share as much of this as you can and we will return a proposed profile, die strategy and indicative pricing, typically within 48 hours. A cross-section drawing (DXF/PDF) or sample is ideal.

1. Profile & alloy

- Cross-section drawing or DXF (or a sample to reverse-engineer)
- Alloy & temper if known (6063, 6061, 6005); default 6063-T5 for general work
- Profile envelope: max width across the section, wall thickness, overall length
- Solid, hollow or semi-hollow section

2. Tolerances & quantity

- Critical dimensions and tolerances (and any that can be open)
- Straightness, twist and flatness requirements
- Estimated annual weight or length, and order/call-off pattern
- New die or run from an existing die

3. Finishing & fabrication

- Finish: mill, clear / colour anodise, powder coat, brushed, polished
- Cut-to-length, CNC machining, drilling, tapping, mitre cuts
- Bending / forming, assembly, thermal-break insertion

4. Project & commercial

- Application and environment (frame, enclosure, heatsink, rail, trim...)
- Target unit cost and annual volume
- Sample quantity — free off-tool samples before mass production
- Compliance / test: RoHS, REACH, finish & dimensional reports

Email this checklist with your drawing to support@pa-international.com.au or use the quote form on the page. One dedicated engineer reviews every enquiry.

Aluminium Extrusion Selection — Quick Reference

Alloy, section and finish at a glance

Alloy & temper

Alloy	Strengths	Typical use
6063-T5/T6	Best surface finish & extrudability; good for anodising	General profiles, frames, trim, heatsinks
6061-T6	Higher strength, good machinability	Structural & load-bearing extrusions
6005 / 6082	Higher strength than 6063 with reasonable finish	Heavier-duty structural sections

Section & finish factors

Decision	Rule of thumb
Wall thickness	Keep walls as uniform as possible; thin/uneven walls distort on quench and raise scrap.
Hollow vs solid	Hollow sections need a porthole/bridge die — higher die cost but huge stiffness-per-weight gains.
Circumscribing circle	The section size sets the press and die; larger envelopes need a bigger press and cost more.
Anodising	Anodise-grade alloys (6063) give the cleanest cosmetic finish; flag cosmetic faces in your drawing.
Tolerances	Quote to standard extrusion tolerances; reserve tight tolerances for post-extrusion CNC.

How we work: P&A International is an engineering-led contract manufacturer. One dedicated engineer designs your part, free off-tool samples with quality-assessment reports are provided before mass production, and volume is produced through our vetted partner-factory network — every supplier is ISO 9000 certified or better.

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