

Title	Cut aluminium extrusions for the manufacture of non-standard aluminium joinery products		
Level	4	Credits	8

Purpose	<p>This unit standard is for experienced people employed in the aluminium joinery industry.</p> <p>A person credited with this unit standard is able to:</p> <ul style="list-style-type: none"> • prepare to cut aluminium extrusions for non-standard aluminium joinery products; • prepare tools, machinery, and work area for safe operation; • cut the aluminium extrusions; and • care for tools, machinery, and equipment.
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Classification	Joinery > Architectural Aluminium Joinery
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Available grade	Achieved
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Guidance Information

- 1 Legislation and standards relevant to this unit standard include – Building Act 2004, Health and Safety at Work Act 2015, Resource Management Act 1991, New Zealand Building Code Compliance Documents and Handbooks. Wellington: Department of Building and Housing, 2008, available at <http://www.dbh.govt.nz/building-code-compliance-documents>, New Zealand Standard (NZS) 4211:2008 *Specification for the performance of windows*, and NZS 3504:1979 *Specification for aluminium windows*, available at <http://www.standards.co.nz>.
- 2 Definitions

Company procedures – the documents and procedures that include company rules, codes and practices; machine and equipment operating instructions; quality and conformance checks; and health and safety requirements.

Non-standard aluminium joinery products – unique designs or ‘one-off’ products characterised by unusual or non-standard angles and dimensions. They include – windows (arch, bay, bow, faceted, raked, internal and external corners, double hung, greenhouse), doors (arch, raked, internal/external in plan corners).

Unusual angles – any angles that are not 45 or 90 degrees, or those not common to the company’s products.
- 3 Range

Evidence is required for three non-standard items, one of which must include one or more non standard corners, produced in the candidate’s workplace.

Outcomes and performance criteria

Outcome 1

Prepare to cut aluminium extrusions for non-standard aluminium joinery products.

Performance criteria

- 1.1 Product or job specifications, and quality requirements, are verified in accordance with company procedures.

Range specifications include – drawings (computerised, by hand), job sheets, site measurements, templates.
- 1.2 Template or lay-out are checked for compliance with the job specifications and working drawings.
- 1.3 Cutting angles are calculated, measured, and verified against the job specifications, template, or site measurements.
- 1.4 The cutting system is interpreted and verified in accordance with company procedures.
- 1.5 Extrusions are selected and prepared in accordance with the job specifications and company procedures.

Outcome 2

Prepare tools, machinery, and work area for safe operation.

Performance criteria

- 2.1 Work area is cleared of debris and abrasive material in accordance with company procedures.
- 2.2 Personal protective equipment is selected and worn in accordance with company procedures.

Range personal protective equipment may include – safety glasses, dust masks, protective footwear, ear protection.
- 2.3 Tools, machinery, and equipment are selected and checked to meet the requirements of the job in accordance with company procedures.

2.4 Machines are set to angle required to accept work safely and without damage to extrusion or machine, or injury to personnel, in accordance with company procedures.

Range machines may include – drop saws, band saws, vertical mitre saws, double mitre saws, twin mitre saws, mitre saws, profile support blocks, bench stops, stop systems, cutting lubricant, tape calibration.

2.5 Accessories and workholding fixtures are selected and installed on machines in accordance with manufacturers' instructions and company procedures.

Range accessories and workholding fixtures may include – cutting saddles, clamps.

Outcome 3

Cut the aluminium extrusions.

Performance criteria

3.1 Extrusion is safely and securely positioned for cutting, and lengths are precision cut, in accordance with the job specifications.

3.2 Extrusions are checked for compliance with the job specifications and company quality requirements.

Range specifications may include – correct angles and other dimensions, type of cut.

3.3 Cut lengths are labelled for identification in accordance with company procedures.

Range labelling includes – job number, unit number.

Outcome 4

Care for tools, machinery, and equipment.

Performance criteria

4.1 Tools, machinery, and equipment are cleaned, lubricated, and maintained in accordance with manufacturer's specifications and company procedures.

4.2 Work area is cleaned, surplus materials are stored, and waste materials are disposed of in accordance with company procedures.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	20 June 2008	31 December 2012
Rollover and Revision	2	20 May 2011	31 December 2017
Review	3	21 May 2015	31 December 2025
Review	4	26 May 2022	N/A

Consent and Moderation Requirements (CMR) reference	0048
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.