

Title	Make a vacuum holding jig for a Computer Numerical Controlled machine used in furniture making		
Level	4	Credits	6

Purpose	People credited with this unit standard are able to: prepare to make a vacuum holding jig; and make a vacuum holding jig, for a Computer Numerical Controlled (CNC) machine used in furniture making.
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Classification	Furniture > Furniture and Cabinet Making
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Available grade	Achieved
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Guidance Information

- 1 **Assessment information**
This unit standard must be assessed against on-job.
All activities and performance criteria must be carried out in accordance with worksite policies and procedures.
- 2 **Range**
Competence may be demonstrated for a jig to be used with either a full vacuum table or adjustable pods.
- 3 **Personal protective equipment, appropriate to job requirements, must be selected and used in accordance with manufacturer's instructions.**
- 4 **Definitions**
Manufacturer's instructions are instructions provided by manufacturers of substances, equipment, and machinery used in furniture making. These instructions may include details on safe and correct handling, use and storage of substances and/or details on substance properties. Examples are labels on substance containers, product data sheets, and operator's manuals.
Worksite policies and procedures refer to documented policies and to documented or other directions provided to staff. These may include, but are not limited to, ways of managing health and safety, environmental considerations, quality, and production, and must conform to legislation. Examples include standard operating procedures, company health and safety plans, on-site briefings, and supervisor's instructions.

Outcomes and performance criteria

Outcome 1

Prepare to make a vacuum holding jig for a CNC machine used in furniture making.

Performance criteria

- 1.1 Job specifications are obtained and interpreted.
- Range component size and shape, number of cycle runs, component program, material type.
- 1.2 Jig material is selected in accordance with job specifications.
- 1.3 Jigs' construction is designed and sketched in accordance with job specifications.
- Range position of suction cups in relation to holes, closed-cell foam tape, jig dimensions.

Outcome 2

Make a vacuum holding jig for a CNC machine used in furniture making.

Performance criteria

- 2.1 Jig base panel is positioned on the machine table in accordance with job specifications.
- 2.2 Component program is selected, and the Z axis is offset to allow for jig base panel thickness.
- 2.3 Machine is operated to rout the component shape in jig base panel.
- Range 2-3 mm depth.
- 2.4 Closed-cell foam tape is applied inside the routed tool path to form a vacuum seal and maximise vacuum holding area.
- Range 2-3 mm inside of tool path, no gaps between ends of tape.
- 2.5 Suction holes are drilled in jig base panel ensuring no damage to vacuum cups.
- 2.6 Vacuum cups are positioned to allow suction into vacuum area.
- 2.7 Test piece is run in accordance with job specifications. Suction prevents movement of component.
- 2.8 Jig is named and labelled in accordance with job specifications, and instructions for using jig are written.
- 2.9 Jig is stored safely and securely.
- 2.10 Machines and work area are made clean, clear, and safe.

Replacement information	This unit standard and unit standard 25549 replaced unit standard 18902.
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Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 June 2009	31 December 2018
Review	2	19 March 2015	N/A
Review	3	10 December 2020	N/A

Consent and Moderation Requirements (CMR) reference	0173
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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 Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.