

## Hand turn wood for furniture using spindle turning techniques

**Level** 3

**Credits** 5

**Purpose** This unit standard covers the knowledge and skills used to spindle turn solid wood furniture components such as legs, stretcher rails, and back spindles.

People credited with this unit standard are able to: prepare to hand turn wood; hand turn stock into cylinders; and hand turn wooden cylinders into shaped wooden furniture components, using spindle turning techniques.

**Subfield** Furniture

**Domain** Furniture Making

**Status** Registered

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**Entry information** Open.

**Accreditation** Evaluation of documentation and visit by NZQA and industry.

**Standard setting body (SSB)** Forest Industries Training and Education Council (FITEC)

**Accreditation and Moderation Action Plan (AMAP) reference** 0173

This AMAP can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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### Special notes

- 1 This unit standard may be assessed against off-job or on-job.
- 2 All performance criteria in this unit standard should comply with the *Safety Rules for Operators of Spindle Moulders*, Department of Labour (Wellington: Occupational Safety and Health Service, 1988). Available at: [www.osh.dol.govt.nz](http://www.osh.dol.govt.nz).
- 3 Personal protective equipment, appropriate to job requirements, is to be selected and used in accordance with worksite policies and procedures and 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.

*Safe operating instructions* (SOIs) are documented instructions attached to machines which detail requirements for safe operation of the particular machine

*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. For the purposes of this unit standard worksite policies and procedures may also refer to the policies and procedures of an off-job training site.

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### Elements and performance criteria

#### Element 1

Prepare to hand turn wood using spindle turning techniques.

#### Performance criteria

1.1 Job specifications are obtained and explained in accordance with worksite policies and procedures.

Range stock, component dimensions, number of components, shape or template.

1.2 Materials are selected in accordance with job specifications.

1.3 Turning tools are selected and their use is explained in accordance with manufacturer's instructions.

Range roughing gouge, spindle gouges, parting tool, skew.

1.4 Turning tools are sharpened in accordance with worksite policies and procedures.

Range gouge, skew, parting tool.

1.5 Marking and measuring tools are selected and their use is explained in accordance with worksite policies and procedures.

Range compass, callipers, sizing tool, dividers.

1.6 The purpose and safe use of parts of the lathe are explained in accordance with manufacturer's instructions.

Range head stock, lathe bed, tail stock, tool rest.

- 1.7 Environmental and safety requirements are met in accordance with worksite policies and procedures.

Range electrical power, lighting, ventilation, dust extraction.

## Element 2

Hand turn stock into cylinders using spindle turning techniques.

### Performance criteria

- 2.1 Ends of stock are marked and securely mounted between the centres of the lathe in accordance with job specifications and manufacturer's instructions.

- 2.2 Machine parts are set to accommodate stock in accordance with manufacturer's instructions.

Range tool rest, tail stock and centre, drive centre.

- 2.3 Speed is selected in accordance with the diameter of the stock.

- 2.4 Machine is operated in accordance with SOIs and rough stock turned into a cylinder shape in accordance with job specifications.

Range natural solid wood.

- 2.5 Materials that do not conform to specifications are identified and disposed of in accordance with worksite policies and procedures.

## Element 3

Hand turn wooden cylinders into shaped wooden furniture components using spindle turning techniques.

### Performance criteria

- 3.1 Tools are manipulated to shape wood in accordance with job specifications.

Range chisels, gouges, parting tools.

- 3.2 Dimensions of output are monitored during the process using measuring instruments in accordance with job specifications.

Range callipers, template, sizing tools.

- 3.3 Surface of turned component is smoothed using tools and abrasive paper in accordance with job specifications.

- 3.4 Adjustments are made to rectify any out of specification components in accordance with job specifications.

- 3.5 Machine and work area are made clean, clear, and safe in accordance with worksite policies and procedures.

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**Please note**

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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**Comments on this unit standard**

Please contact the Forest Industries Training and Education Council (FITEC) [info@fitec.org.nz](mailto:info@fitec.org.nz) if you wish to suggest changes to the content of this unit standard.