



WOOD PRODUCT MANUFACTURING OPERATIVE



Details of standard

Occupation summary

This occupation is found in the manufacturing sector, producing wood products for the construction and furniture industries. Wood product manufacturing is at the engineering end of woodworking and forms a critical part of the emerging pre-manufactured solutions sector, identified in the Farmer Review as key to the future of construction. It supplies products to the housing, commercial, public and building sectors. Employers range from small to large, with a prevalence in the medium to large end of the market. Specialism in single product type is particularly common in the larger end of the market. The broad purpose of the occupation is to produce high volume, repetitive, engineered products from timber. Presenting a wide and varied specification for both external and interior applications, products such as roofing components, windows, doors, door-sets, staircases and other timber construction items including trussed rafters, spandrel panels, metal web beams, and I-beams. As well as utilising traditional materials, they use engineered and modified timbers to support product design and delivery, for example Accoya and Thermowood. They cut, layout and assemble materials, working to a specification. Depending on the product, they may install fixtures and fittings, apply finishes and add glazing systems. Wood product manufacturing operatives typically work individually but can also form part of a larger production team and will report to the production supervisor/manager. Workplaces can be wide ranging from small workshops to large state of the art manufacturing facilities. In their daily work, an employee in this occupation interacts with customers, delivery personnel, design office, internal stores and suppliers, depending on the size of the organisation. An employee in this occupation will be responsible for completing their own work to specification, with minimal supervision, ensuring they meet set deadlines. They are responsible for meeting quality requirements and working in accordance with health and safety and environmental considerations.

Typical job titles include:

Cnc (computer numerically controlled) operative

Finishing operative/sprayer and assembler

Machinist

Occupation duties

DUTY**KSBS**

Duty 1 Prepare a range of machinery, tools and equipment for the manufacturing process

K6 K7 K11 K12

S1 S2 S3 S5 S6 S7 S8 S11 S12 S13

B1 B4 B5

Duty 2 Operate a range of machinery, tools and equipment to produce wood components and products to specification using a variety of raw materials

K3 K4 K6 K11 K12

S1 S2 S6 S11 S12 S13 S14 S15

B1 B4 B5

Duty 3 Identify defects with materials and machinery before and during the manufacturing process

K4 K5 K6 K8 K14 K15

S1 S2 S4 S9 S22

B1 B2 B4 B6

Duty 4 Prepare wood components for the assembly process including sanding, positioning and securing

K3 K5 K6 K7

S1 S2 S3 S4 S5 S7 S8 S11 S16 S17

B1 B4 B5 B6

Duty 5 Use a range of fixing techniques including joint assembly, installing mechanical fixings and applying appropriate adhesives to form products to the given specification

K3 K4 K5 K6 K7 K8 K16 K17 K18

S1 S2 S3 S16

B1 B4 B6

Duty 6 Apply stains, sealers and paints to wood products to comply with the specified product finish requirements

K3 K4 K5 K6 K21

S1 S2 S3 S6 S7 S18 S19 S20

B1 B4 B6

Duty 7 Install appropriate fixtures, fittings and glazing in accordance with the product specification, for example install glass to window or door

K4 K5 K6 K7 K8 K18

S1 S2 S3 S6 S7 S20

B1 B4 B6

Duty 8 Undertake glazing operations in accordance with the product specification

K3 K4 K5 K6 K7 K8 K22

S1 S2 S3 S6 S21

B1 B4 B6

Duty 9 Assess for post manufacture and assembly product defects and undertake appropriate rectification work	K2 K3 K5 K6 K7 K8 K14 K15 S1 S2 S3 S4 S9 S22 S23 B1 B2 B4 B6
Duty 10 Package and store products in accordance with organisational procedures	K3 K4 K5 K6 K9 K23 K24 S1 S2 S3 S7 S8 S10 S24 B1 B4 B6

KSBs

Knowledge

K1: The wood product manufacturing industry, its background and importance.

K2: Commercial operations and how they contribute; key functions involved in the wood product manufacturing process.

K3: Manufacturing processes used to produce the end-product, such as selecting and using the appropriate machinery to perform the task/operation required, sequence of the production process including finishing, packaging and storing products.

K4: Types of customers (for example supplier, client) and customer requirements in terms of product quality, packaging and delivery, for example satisfactory quality, fit for purpose and as described.

K5: Quality standards and product accreditation processes for wood product manufacture, for example ISO 9001:2, independent third-party accreditation.

K6: Health and safety, including the safe use of personal and respiratory protective equipment, local exhaust ventilation, compliance with the Health and Safety at Work Act, Provision and Use of Work Equipment Regulations (PUWER), Control of Substances Hazardous to Health (COSHH), organisational and statutory safe systems of work, controlling dust and manual handling.

K7: Different materials used to manufacture wood products and components, including different species and types of wood, composite panels (for example, Medium Density Fibreboard (MDF), plywood), adhesives, glass, ironmongery, fixings; their properties, characteristics, how they interrelate and the use of appropriate joining methods.

K8: How different products, for example doors, door-sets, windows, staircases and interior joinery are expected to perform, and how they interact with the wider built environment.

K9: Procedures for the safe handling and storage of wood components, products and glazing systems.

K10: Environmental and sustainability considerations, regulations and good practice, for example the appropriate disposal of waste, recycling of materials and efficient use of resources.

K11: Machines, equipment and tools used in wood product manufacturing including static machinery, portable powered tools and hand tools, what they are used for and their capabilities, correct set-up, use and storage, checks and adjustments, start-up and shut-down procedures.

K12: Principles and uses of Computer Numerically Controlled (CNC) machinery in wood product manufacturing, their programming requirements and associated tooling.

K13: Work and product specifications, what they are and how to use them.

K14: Checking and clarifying work requirements, including what needs checking and why.

K15: Types of faults and errors that do occur, investigation and rectification techniques.

K16: Techniques for measuring and cutting components and products.

K17: Assembly methods, how a product is assembled using prepared components from the manufacturing process, appropriate jointing and fixing methods to use and why (mortice and tenonning, butt jointing, screws, dowels, glues etc).

K18: Techniques for installing fixtures and fittings to wood products, for example ironmongery, seals, ancillary metal work and fixings, nail plates and staples, glazing.

K19: Different grit sizes and the sequence of sanding for full finish paint and stain systems.

K20: Different types of adhesives, and processes for their use including application methods.

K21: Techniques for applying specified finishes to components and products.

K22: Requirements for glazing wood products, for example, windows, door leaves, balustrading.

K23: Processes for handover to other manufacturing process functions, for example component production to assembly.

K24: Documentation requirements; written and verbal communication techniques.

Skills

S1: Comply with health, safety and environmental requirements, for example safe use of personal and respiratory protective equipment, local exhaust ventilation, statutory regulations and industry standards/codes of practice.

S2: Identify risks and hazards in the workplace and apply appropriate control measures.

S3: Comply with organisational and statutory environmental and sustainability considerations, for example disposal of waste, recycling of materials and efficient use of resources.

S4: Communicate - verbal and/or written, for example with colleagues and/or customers.

S5: Plan work to undertake wood product manufacturing operations.

S6: Read and interpret specifications, diagrams and work instructions, and following these instructions.

S7: Select the correct type and quantity of components and materials.

S8: Prepare the work area before undertaking the work.

S9: Identify faults and issues, for example incorrect or defective wood, defective machinery; and applying solutions.

S10: Pack and store products and components.

S11: Select, set up and operate machinery, tools and equipment used to produce wood components.

S12: Prepare and operate Computer Numerically Controlled (CNC) equipment.

S13: Use and maintain jigs and templates for wood product manufacturing operations.

S14: Position wood components and apply manual and mechanical cramps to ensure products are secured and in accordance with the work specification.

S15: Assemble wood components to the work specification and given tolerances.

S16: Sand materials and de-nib.

S17: Apply adhesives to wood components.

S18: Apply finishes to wood products, for example stains, sealers, basecoats and paint finishes.

S19: Instal fixtures and fittings to wood products, for example ironmongery, seals, ancillary metal work and fixings, nail plates and staples.

S20: Carry out glazing operations, for example install glass to window or door.

S21: Check and inspect work to ensure it meets the work specification; undertake rectification or rework where necessary

S22: Report work outcomes and/or problems.

S23: Complete the handover process to other manufacturing process functions/teams.

S24: Complete work documentation, for example job sheets, time cards.

Behaviours

B1: Safety first attitude, for example applies a safety-first attitude when undertaking the work.

B2: Adaptable, for example willing to accept changing priorities and working requirements.

B3: Collaborates, for example works with others.

B4: Pride in the workplace, for example organises work space efficiently and effectively.

B5: Self-motivated, for example manages own time effectively.

B6: Quality workmanship, for example works to agreed quality targets and standards.

Qualifications

English & Maths

English and maths qualifications form a mandatory part of all apprenticeships and must be completed before an apprentice can pass through gateway. The requirements are detailed in the current version of the [apprenticeship funding rules](https://www.gov.uk/guidance/apprenticeship-funding-rules).

Additional details

Occupational Level:

2

Duration (months):

24

Review

This apprenticeship standard will be reviewed after three years

Version log

VERSION	CHANGE DETAIL	EARLIEST START DATE	LATEST START DATE	LATEST END DATE
1.0	Approved for delivery	03/07/2019	Not set	Not set

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