

Furniture Manufacturer Apprenticeship Standard

Foam Converter and Upholstery Cushion Interior Manufacturer Modules of Assessment

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Introduction

It is recognised that a Furniture Manufacturer is likely to work in a variety of different roles and the standard allows for the apprentice to demonstrate a full range of skills across a variety of businesses. This document covers the requirements for Foam Convertor and Upholstery Cushion Interior Manufacturers.

The role of a Furniture Manufacturer will enable the apprentice to demonstrate competencies in the following core requirements;

Knowledge

- Industry
- Organisation
- Materials
- Customers
- Quality Standards
- Health, Safety and Environment

Skills

- Maintain Tools & Equipment
- Problem Solving
- Achieve quality and output targets
- Health & Safety

Behaviours

- Adaptability
- Collaboration
- Time management
- Pride in the workplace
- Positive Attitude
- Attention to detail

The requirements for the core components are covered with the Core Assessment Modules.

The employer, apprentice and training provider should undertake a programme that will meet the Standard Criteria to ensure all areas of the outcomes are covered in the apprentices' job role.

Training providers should be evaluated and approved by the Assessment Organisation using appropriate methods.

Requirements

A Foam Convertor and Cushion Manufacturer produces cushioning products using a wide range of conversion equipment. This includes setting up, operating and maintaining processing and cutting equipment. This equipment can range from small manually operated machines to large automated CNC profiling and shaping equipment. They are involved in the conversion of large polyurethane blocks and other filling materials into padding and cushioning components for the production of upholstered furniture and bedding.

In order to ensure sufficient flexibility to meet the needs of the industry whilst maintaining the rigour of every single apprenticeship within it, Foam Converter and Cushion Manufacturers will be able to undertake all mandatory requirements and 4 optional requirements.

Mandatory

YOU WILL KNOW HOW TO AND BE ABLE TO

Preparation	Raw materials	Identify and Describe characteristics of raw materials.
	Product Specifications	Understand product specification instructions and diagrams
	Production Process & Flow Requirements	Prepare, arrange and coordinate material flow through identified work stations following required production route
Finishing	Rectification / Rework	Identify faulty products and undertake rectification process
	Safe Handling and Storage	Pack and label products in the required format according to customer specification

Optional

YOU WILL KNOW HOW TO AND BE ABLE TO

Sewn Case Production	Lay Up, Measure & Mark Out	Operate manual and / or automatic fabric spreading equipment using safe systems of work.
	Cut Shapes	Cut shapes using manual hand held cutting equipment and / or CNC fabric cutter according to safe systems of work
	Prepare Cut Parts & Sew Components	Prepare cut components ready for sewing and sew by hand through use of sewing machinery.
Production of filled product	Prepare Cases	Prepare cases in line with filling requirements
	Fill Cases	Fill cases through use of manual and / or automated filling methods
	Finishing	Close filling opening to required standards through use of closing machinery to prevent filling migration
Foam Cutting	Operate CNC Machinery	Prepare, set up and operate foam CNC & profiling machinery using safe systems of work.
	Operate Large Cutting Machinery	Prepare, set up and operate vertical and horizontal cutting machines using safe systems of work.
	Operate Small Cutting Machinery	Operate small cutting and shaping machinery using templates and jigs to ensure repeatability and accuracy of component parts
Foam assembly	Prepare Components	Prepare all cut components along with required drawings ready for assembly
	Automated Fabrication	Operate automated fabrication line to required operating procedures.
	Manual Fabrication	Assemble cut parts through correct use of sprayed adhesive equipment and assembly techniques to the required tolerances and quality standards

Assessment

On Programme

The suggested training and assessment for the apprenticeship is based on the 'Furniture Manufacturer Assessment Modules,' which detail the training modules that should be completed for the core requirements and each occupational area.

On-going reviews will be completed by the provider and employer during the apprenticeship but will not contribute to the end point assessment.

End Point Assessment

The independent assessment organisation is responsible for carrying out the end point assessment. When the apprentice, employer and provider have determined that the apprentice is ready to complete the apprenticeship they will hold a final review to go through the portfolio of work. The apprentice will need to have completed the Level 1 Functional Skills in English and Maths and taken the test for the Level 2. This will act as a gateway to the end point assessment.

Portfolio of Evidence – Guidance

Evidence should show that the apprentice can complete all of the learning outcomes for each core module and options taken.

Types of Evidence:

Evidence of performance should be demonstrated by activities and outcomes, and should be generated in the workplace only, unless indicated under potential sources of evidence (see below). Evidence of knowledge can be demonstrated through performance or by responding to questions.

Quantity of Evidence:

Evidence should show that the apprentice can meet the requirements of the modules in a way that demonstrates that the standards can be achieved consistently over an appropriate period of time.

Potential Sources and Types of Evidence:

The main source of evidence for each module will be observation of the learner's performance and knowledge demonstrated during the completion of the module. There must also be evidence of using questioning and examination of work products. The following can be used as supplementary physical or documentary evidence:

- Responses to oral or written questioning
- Professional discussion
- Personal statements/reflective accounts
- Assessment records
- Case studies
- Evidence of feedback given
- Products of learner's work

- Expert witness testimony
- Evidence of recognition of prior learning
- Assessment plans

Please Note that photocopied or downloaded documents are not normally acceptable evidence unless accompanied by a record of a professional discussion or assessor statement confirming learner knowledge of the subject.

Certification

Certification is claimed at the end of the apprenticeship when all components are complete. The relevant documents will then be required to be uploaded onto the ACE system for confirmation prior to the apprenticeship certificate being issued.

Appeals

In the event of an appeal against the grade awarded, the Assessment Organisation will carry out an independent review of the evidence to confirm or modify the grade.

Module 1 – Raw Materials

What is required

Identify and describe characteristics of key raw materials.

Learning Outcomes:

The learner can:

1. identify key raw materials used in the production process
2. describe basic characteristics and attributes of key raw materials
3. describe basic furniture industry fire safety regulations with regards to key raw materials.
4. describe health and safety issues involved in the manual handling of key raw materials prior to introduction to the production process.

Assessment:

Portfolio of evidence

Module 2 – Product Specifications

What is required

Understand product specification instructions and diagrams.

Learning Outcomes:

The learner can:

1. identify key raw materials used in specifications
2. describe the meaning of the terminology used in specifications
3. describe required production process and machinery used to manufacture products based on specifications
4. describe likely areas that could result in quality issues during the production processes
5. describe how finished products can be checked for compliance to specifications when completed
6. describe required labelling and packing requirements given specifications information

Assessment:

Portfolio of evidence

Module 3 – Production Process & Flow Requirements

What is required

Prepare, arrange and coordinate material flow through identified work stations following required production route. Understand the required production process based upon product type.

Learning Outcomes:

The learner can:

1. identify key product categories
2. describe production process required for each product category
3. identify individual work stations involved in the production of each product category
4. describe production planning control systems used
5. describe reporting process to monitor and report deviation from the production plan.

Assessment:

Portfolio of evidence

Module 4 – Rectification / Rework

What is required

Identify faulty products and undertake rectification process.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. identify faulty products following standard operating procedures
7. rectify faults identified following standard operating procedures
8. describe relevant health and safety responsibilities
9. describe the meaning of terms used in specifications and requirements list
10. describe how to check equipment is set up and is in good working order
11. describe how to check materials and the common faults that can occur
12. describe common faults that can occur and the process for correcting them
13. describe quality control procedures in place
14. describe consequences of faulty products reaching both direct and indirect customers
15. describe how to check product compliance to specifications
16. describe locations within production processes where faulty products should be identified
17. describe possible courses of action available to rectify faulty products
18. describe system for documenting and reporting rectification and rework processes

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Weighing Equipment Measuring Equipment Technical drawings / Specifications
Materials	Fabrics Foams Loose Fillings eg. Fibre / feather
Faults	Cutting faults

	Sewing faults Fabrication faults Labelling faults
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Assessment:

Practical Observed Assessment (End Test)

Module 5 – Safe Handling and Storage

What is required

Pack and store products and components following standard operating procedures. Understand and follow procedures for safe handling of products.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. handle products and materials in ways that prevents damage following standard operating procedures
7. pack products and materials to specification
8. store and mark products and materials to specification following standard operating procedures
9. store products and materials to ensure they are accessible to others to specification following standard operating procedures
10. use suitable handling equipment following standard operating procedures
11. describe relevant health and safety responsibilities
12. describe the meaning of terms used in specifications
13. describe how to check equipment is set up and is in good working order
14. describe how to check materials and the common faults that can occur
15. describe methods for storing different types of products and materials
16. describe who requires access to the products and materials
17. describe what consumables are stored, and where
18. describe equipment used when storing products and materials

Range/Scope:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info Work tickets
Machinery, Tools and Equipment	Handling equipment Marking equipment Packing equipment

	Weighing equipment Measuring equipment
Materials	Packaging Labelling/identification
Faults	Machinery, tools and equipment Materials

Assessment:

Observed Assessment.

Module 6 – Lay Up, Measure & Mark Out

What is required

Operate manual and / or automatic fabric spreading equipment using safe systems of work.
Identify required fabrics and lay out fabric either manually or using automatic laying equipment.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. check pattern and batch number of materials corresponds with specifications
7. colour match part rolls if required and integrate them into jobs following standard operating procedures
8. load required fabric onto spreading machine following standard operating procedures.
9. operate spreading equipment following standard operating procedures.
10. position and roll materials so they lie flat, square and true on cutting bench following standard operating procedures
11. check pattern of material is matched following standard operating procedures
12. mark material faults which are within specification limits following standard operating procedures
13. use templates to specification following standard operating procedures
14. handle templates in ways that protect them from damage following standard operating procedures
15. store completed templates under suitable conditions to keep them in good order following standard operating procedures
16. routinely templates for signs of damage following standard operating procedures
17. identify damage that affects use of templates following standard operating procedures
18. maintain templates using suitable methods and equipment following standard operating procedures
19. remove templates which are damaged beyond use following standard operating procedures
20. mark components using designated identification system following standard operating procedures
21. plan marking out and cutting of materials to minimise waste and take account of material type, width and pile following standard operating procedures
22. align marked components on materials, taking account of pattern matching following standard operating procedures
23. mark out components within acceptable tolerance limits taking account of material pattern, type, width and to company standards
24. describe relevant health and safety responsibilities

25. describe the meaning of terms used in specifications
26. describe how to check equipment is set up and is in good working order
27. describe how to check materials and the common faults that can occur
28. describe how to protect templates from damage
29. Describe why it is important to examine templates on a routine basis
30. describe damage that can occur to templates used
31. describe tolerance levels when assessing if templates are beyond use
32. describe handling and cutting characteristics of different types of materials used
33. describe rolling out characteristics of different fabrics used
34. describe why it is necessary to maintain cut components within the given tolerances
35. describe wastage levels that apply and why it is important to minimise waste
36. describe how to handle and store materials

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Laying machines Scissors Measuring equipment Templates
Materials	Fabrics
Faults	Fabrics– flaws, distortion, colour and pattern Wrong size/shape

Assessment:

Practical Observed Assessment (End Test)

Module 7 – Cut Shapes

What is required

Cut shapes using manual hand held cutting equipment and / or CNC fabric cutter according to safe systems of work.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. check pattern and batch number of materials corresponds with specifications
7. check marked components are free of major flaws and minor defects will not be visible when complete following standard operating procedures
8. cut components within size and shape tolerances following standard operating procedures
9. describe relevant health and safety responsibilities
10. describe the meaning of terms used in specifications and requirements list
11. describe how to check equipment is set up and is in good working order
12. describe how to check materials and the common faults that can occur
13. describe consequences of lubricants and debris being left on work surfaces, tools and equipment
14. describe handling and cutting characteristics of different types of materials used
15. describe why it is necessary to maintain cut components within the given tolerances
16. describe wastage levels that apply and why it is important to minimise waste
17. describe how to handle and store materials
18. describe when and why it is important to match the pattern
19. describe markers to use for different types of material
20. describe how and why components are marked and systems used

Range/Scope:

Machinery, Tools and Equipment	Hand tools Power hand tools Cutting machines Measuring equipment Patterns Templates
Materials	Fabrics
Faults	Fabric – flaws, distortion, colour and pattern Inaccurate measurements Misalignments

Cuts	Single Multi-ply Automated machines
Markers	Equipment used to mark Identification of markers
Storage	Marked Labeled Identified
Characteristics	Handling
Pattern and colour	Batch numbers Pattern reference book Samples Pattern repeat Colour match samples Nap Pile Face

Assessment:

Practical Observed Assessment (End Test)

Module 8 – Prepare Cut Parts & Sew Components

What is required

Prepare cut components ready for sewing and sew by hand through use of sewing machinery.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. check marked components are free of major flaws and minor defects will not be visible when complete following standard operating procedures
7. mark components using designated identification system following standard operating procedures
8. check components are marked, packed and forward to next stage following standard operating procedures
9. sew cut items to specifications in sequence following standard operating procedures
10. check sewn products conforms to shape and size requirements following standard operating procedures
11. check sewn product meets specification in terms of opening and label positions
12. operate machinery following manufacturers' instructions
13. inspect sewn products against specification
14. process completed work to next stage following standard operating procedures
15. describe relevant health and safety responsibilities
16. describe the meaning of terms used in specifications and requirements list
17. describe how to check equipment is set up and is in good working order
18. describe how to check materials and the common faults that can occur
19. describe consequences of lubricants and debris being left on work surfaces, tools and equipment
20. describe handling and sewing characteristics of different types of materials used
21. describe why it is necessary to maintain cut components within the given tolerances
22. describe how to handle and store materials
23. describe how and why components are marked and systems used

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments
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	HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Marking Machines Labelling machines Scissors Sewing Machines
Materials	Threads Fabrics Labels
Faults	Fabrics– flaws, distortion, colour and pattern Wrong size/shape Check Square corners

Assessment:

Practical Observed Assessment (End Test)

Module 9 – Prepare Cases

What is required

Prepare sewn cases in line with filling requirements.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check the visual appearance, labelling and tensioning of the sewn case conforms to the specification following standard operating procedures
6. organise and pack cases ready for filling following standard operating procedures.
7. describe relevant health and safety responsibilities
8. describe the meaning of terms used in specifications and requirements list
9. describe how to check equipment is set up and is in good working order
10. describe how to check cases and the common faults that can occur
11. describe consequences of lubricants and debris being left on work surfaces, tools and equipment
12. describe processing characteristics of different types of fabrics used
13. describe wastage levels that apply and why it is important to minimise waste
14. describe how to handle and store materials

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Storage Equipment Handling Equipment Scissors Measuring equipment
Materials	Fabrics
Faults	Out of square corners Wrong fabrics Wrong labelling

	Correct quantity
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Assessment:

Practical Observed Assessment (End Test)

Module 10 – Fill Cases

What is required

Fill cases through use of manual and / or automated filling methods. Prepare, set up and operate filling lines for loose fill products.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. identify filling requirements using specifications and standard operating procedures
6. operate filling equipment following standard operating procedures and safe working practices
7. describe relevant health and safety responsibilities
8. describe the meaning of terms used in specifications and requirements list
9. describe how to check equipment is set up and is in good working order
10. describe the daily and weekly machine maintenance procedures
11. describe how to check raw materials and the common faults that can occur during the filling process
12. describe the key product quality checks required of the filled product using manual processes
13. describe consequences of not keeping a tidy working environment
14. describe filling characteristics of different types of materials used
15. describe why it is necessary to operate within the given tolerances
16. describe wastage levels that apply and why it is important to minimise waste
17. describe how to handle and store materials and the finished product

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Carding machinery Blowing machinery Auto filling machines

	Weigh scales
Materials	Loose filling materials eg. Fibre or feather
Faults	Poorly processed unopened material Incorrect fill weights Uneven distribution of filling material Feel & smell of filling

Assessment:

Practical Observed Assessment (End Test)

Module 11 – Finishing

What is required

Close filling opening to required standards through use of closing machinery to prevent filling migration and complete any additional finishing processes.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
4. operate closing / finishing machinery following standard operating procedures and safe working practices
5. Finish products to specification following standard operating procedures
6. describe relevant health and safety responsibilities
7. describe the meaning of terms used in specifications and requirements list
8. describe how to check equipment is set up and is in good working order
9. describe the daily and weekly machine maintenance procedures.
10. describe how to inspect quality and the common faults that can occur during the closing / finishing process.
11. describe consequences of not keeping a tidy working environment
12. describe why it is necessary to operate within the given tolerances
13. describe wastage levels that apply and why it is important to minimise waste
14. describe how to handle and store materials and the finished product

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Sewing machine Scissors
Materials	Thread
Faults	Stiches / inch to specification 100% sealed opening No trapped filling material in seam

Assessment:

Practical Observed Assessment (End Test)

Module 12 – Operate CNC Machinery

What is required

Operate CNC/NC machinery and equipment to meet company requirements. Be able to prepare tools and equipment including tooling technology and calibration of measuring equipment.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is calibrated, set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. load programme to meet specification following manufacturer's instructions and standard operating procedures
7. prepare and set up machinery following manufacturers' instructions and standard operating procedures
8. conduct a simulation/test run to prove programme and rectify any problems following manufacturers' instructions and standard operating procedures
9. operate and monitor the machinery and quality of the finished product following standard operating procedures and manufacturers' instructions
10. maintain machinery following standard operating procedures and manufacturers' instructions within the limits of your responsibility
11. pass onto following stage following standard operating procedures
12. describe relevant health and safety responsibilities
13. describe the meaning of terms used in specifications
14. describe how to check equipment is set up and is in good working order
15. describe how to check materials and the common faults that can occur
16. describe how to load programmes
17. describe how to prepare and set up machines
18. describe how to conduct a simulation/test run to prove programmes
19. describe how to operate and monitor the machinery and quality of the finished products
20. describe how to maintain machinery and the limits of your responsibility
21. describe how to rectify any problems

Range:

Health and Safety	PPE Safe System of Work Risk Assessment Training documents / evidence
Specifications and requirements	Specification sheet Work to lists Job sheets

	Batch info Work tickets
Machinery, Tools and Equipment	CNC Cutters Blades Drill bits Cleaners Sharpeners
Materials	Fibre sheet materials Fabrics Foams
Faults	Incorrect programme Tooling Materials Electrical or mechanical machine faults Operator Positioning Bluntness Smell Tool damage Material damage

Assessment:

Observed Assessment.

Module 13 – Operate Large Cutting Machinery

What is required

Prepare, set up and operate vertical and horizontal cutting machines using safe systems of work.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer’s instructions
5. position raw material on to machine beds following standard operating procedures and any manufacturer’s instructions
6. operate cutting machinery following standard operating procedures and safe working procedures
7. cut components within size and shape tolerances following standard operating procedures
8. describe relevant health and safety responsibilities
9. describe the meaning of terms used in specifications and requirements list
10. describe how to check equipment is set up and is in good working order
11. describe the daily and weekly machine maintenance procedures.
12. describe how to check materials and the common faults that can occur
13. describe consequences of lubricants and debris being left on work surfaces, tools and equipment
14. describe handling and cutting characteristics of different types of materials used
15. describe why it is necessary to maintain cut components within the given tolerances
16. describe wastage levels that apply and why it is important to minimise waste
17. describe how to handle and store materials

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Vertical Band knife (Automatic & Manual) Horizontal Bandknife (Automatic & Manual)
Materials	Foam Sheet materials

Faults	Tooling Materials Electrical or mechanical machine faults Operator Positioning Bluntness Smell Tool damage Material damage
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Assessment:

Practical Observed Assessment (End Test)

Module 14 – Operate Small Cutting Machinery

What is required

Operate small cutting and shaping machinery using templates and jigs to ensure repeatability and accuracy of component parts.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. use templates and jigs in line with specification following standard operating procedures
6. handle templates in ways that protect them from damage following standard operating procedures
7. store completed templates under suitable conditions to keep them in good order following standard operating procedures
8. routinely check templates for signs of damage following standard operating procedures
9. identify damage that affects use of templates following standard operating procedures
10. maintain templates using suitable methods and equipment following standard operating procedures
11. remove templates which are damaged beyond use following standard operating procedures
12. operate cutting machinery following standard operating procedures and safe working practices
13. cut components within size and shape tolerances following standard operating procedures
14. describe relevant health and safety responsibilities
15. describe the meaning of terms used in specifications and requirements list
16. describe how to check equipment is set up and is in good working order
17. describe the daily and weekly machine maintenance procedures.
18. describe how to check materials and the common faults that can occur
19. describe consequences of lubricants and debris being left on work surfaces, tools and equipment
20. describe handling and cutting characteristics of different types of materials used
21. describe why it is necessary to maintain cut components within the given tolerances
22. describe wastage levels that apply and why it is important to minimise waste
23. describe how to handle and store materials

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice
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	Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Small shaping equipment such as: <ul style="list-style-type: none"> • Band knife, • Angle knife • Bible edger • Buffer Hand Held equipment Templates Jigs
Materials	Foam Sheet materials
Faults	Tooling Materials Electrical or mechanical machine faults Operator Positioning Bluntness I Tool damage Material damage

Assessment:

Practical Observed Assessment (End Test)

Module 15 – Prepare Components

What is required

Prepare all cut components along with required drawings ready for assembly.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. check all components required are to specification and free from faults following standard operating procedures
4. mark components using designated identification system following standard operating procedures
5. describe relevant health and safety responsibilities
6. describe the meaning of terms used in specifications and requirements list
7. describe how to check equipment is set up and is in good working order
8. describe how to check materials and the common faults that can occur
9. describe consequences of lubricants and debris being left on work surfaces, tools and equipment
10. describe why it is necessary to maintain cut components within the given tolerances
11. describe how to handle and store materials
12. describe how and why components are marked and systems used

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Measuring equipment Handling equipment
Materials	Foam Fibre
Faults	Quantity Thickness Shape Grade

Assessment:

Practical Observed Assessment (End Test)

Module 16 – Automated Fabrication

What is required

Operate automated fabrication line to required operating procedures.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer’s instructions
5. position raw material on machinery following standard operating procedures and any manufacturer’s instructions
6. locate and load correct programmes following standard operating procedures and any manufacturer’s instructions
7. operate machinery following standard operating procedures and safe working practices
8. describe relevant health and safety responsibilities
9. describe the meaning of terms used in specifications and requirements list
10. describe how to check equipment is set up and is in good working order
11. describe the daily and weekly machine maintenance procedures.
12. describe how to check materials and the common faults that can occur
13. describe consequences of lubricants and debris being left on work surfaces, tools and equipment
14. describe handling and fabrication characteristics of different types of materials used
15. describe why it is necessary to maintain components within the given tolerances
16. describe wastage levels that apply and why it is important to minimise waste
17. describe how to handle and store materials

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info
Machinery, Tools and Equipment	Lamination line Handling equipment
Materials	Foam Fibre

	Adhesive
Faults	Misalignment Glue lines Overspray

Assessment:

Practical Observed Assessment (End Test)

Module 17 – Manual Fabrication

What is required

Assemble cut parts through correct use of sprayed adhesive equipment and assembly techniques to the required tolerances and quality standards.

Learning Outcomes:

The learner can:

1. comply with health and safety requirements and procedures at all times
2. obtain specifications and requirements of the items to be produced following standard operating procedures
3. obtain equipment and materials required to carry out the job following standard operating procedures
4. check equipment is set up correctly and in good working order following standard operating procedures and any manufacturer's instructions
5. check all materials required are to specification and free from faults following standard operating procedures
6. check marked components are free of major flaws and minor defects will not be visible when complete following standard operating procedures
7. apply adhesives using manual spray guns following standard operating procedures
8. check fabricated finished product conforms to shape and size requirements following standard operating procedures
9. check finished product meets specification in terms of opening and label positions
10. process completed work to next stage following standard operating procedures
11. describe relevant health and safety responsibilities
12. describe the meaning of terms used in specifications and requirements list
13. describe how to check equipment is set up and is in good working order
14. describe how to check materials and the common faults that can occur
15. describe consequences of lubricants and debris being left on work surfaces, tools and equipment
16. describe handling and fabrication characteristics of different types of materials used
17. describe why it is necessary to maintain components within the given tolerances
18. describe how to handle and store materials
19. describe how and why components are marked and systems used

Range/Scope:

Health & Safety	Evidence have been trained in this role PPE Safe Systems of Work Codes of Practice Risk Assessments HSE Approved Codes of Practice (ACOP)
Specifications and requirements	Specification sheet Work to lists Job sheets Batch info

Machinery, Tools and Equipment	Spray guns Jigs Cleaning equipment
Materials	Adhesives Foams Fibre Cleaning materials
Faults	Misalignment Hard Glue lines Overspray De lamination

Assessment:

Practical Observed Assessment (End Test)