

Marking Out and Cutting Tenons

Introduction

Mortice and tenon joints are often used in wooden frame structures such as tables and chairs. They are one solution to the problem of joining two pieces of wood at right angles without gluing to end grain.

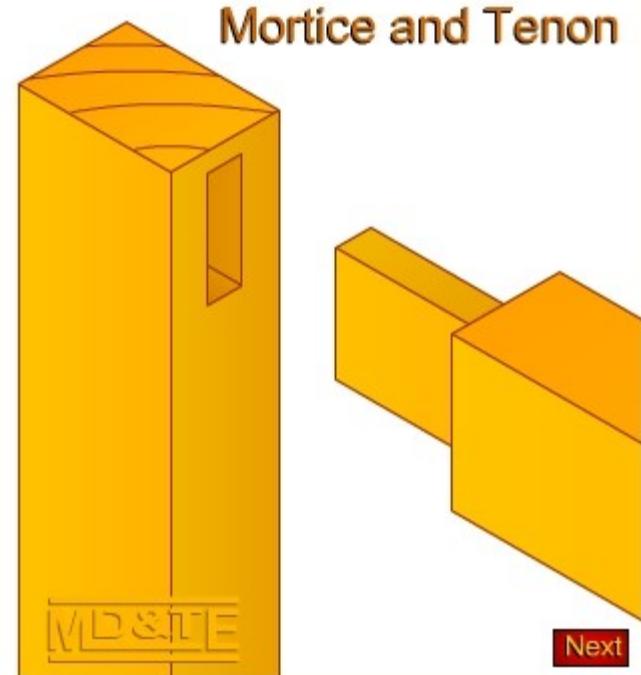
Exercise

Describe how two pieces of wood may be joined at right angles using mortice and tenon joints.

Size of wood: 450 x 50 x 30

This exercise will have three parts.

1. describing how to mark out a tenon joint
2. describing how to cut a tenon joint
3. describing how to cut 50 identical tenon joints on the ends of 50 identical pieces of wood.



Describe how to mark out a tenon joint

- Use notes and sketches to illustrate how a tenon should be marked out. Add dimensions to your drawing. You may use isometric or 2 point perspective drawing techniques.
- Describe the stages in marking out the tenon and name the tools that should be used for each stage.

Describe how to cut a tenon joint

- Describe how a tenon should be cut.
- Describe how the timber should be held when cutting across the grain and how the timber should be held when cutting along the grain.
- Name the tools that you would use and describe how you would use them. Use notes and sketches to illustrate your written answer.

Describe how 50 identical tenon joints may be cut quickly and accurately

The only quick way of cutting 50 identical tenons is to use a machine tool.

- List the machines that could be used to cut tenons on the ends of 50 lengths of timber.
- Choose the machine that you think would be the most suitable for the job.
- Explain the reason for your choice.
- Use notes and sketches to illustrate how the machine would be used.
- Use notes and sketches to illustrate any special jigs, templates or any other arrangements that would be used to cut the tenons quickly and accurately.
- Describe any hazards involved and the precautions you would take to minimise or remove the risks to the machine operator.