

Tool Description

This tool cuts mortises in the manner of a biscuit joiner. A drill-like rotating cutter cuts a round-ended mortise. Each plunge creates a mortise that is sized to accept a Domino loose tenon, creating joints in stock.



General Tool Safety

PPE

- **Always wear eye protection.**
- **Wear a dust mask where appropriate.**
- **Wear hearing protection.**
- **DO NOT wear gloves.**
- **If you are in doubt, ask a technician.**

Safe working area

- **Do not wear loose clothing.**
- **Remove Jewellery.**
- **Keep hair tied up.**

Consider those working around you, inform them before starting the equipment so they can use relevant PPE, ensure there are no trip hazards and reassess the area once all cables and extraction hoses are connected.

Do not use a power tool while tired or rushed. A moment of inattention and incorrect use of PPE while operating power tools may result in serious personal injury and or death.

Power Tool Use and Care

Do not put the power tool under undue force. It should be easy to cut into the material. Check you are using the correct settings and ask a technician for help if needed.

Do not use the power tool if it makes a loud or irregular noise.

Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be brought to the attention of a technician before further use.

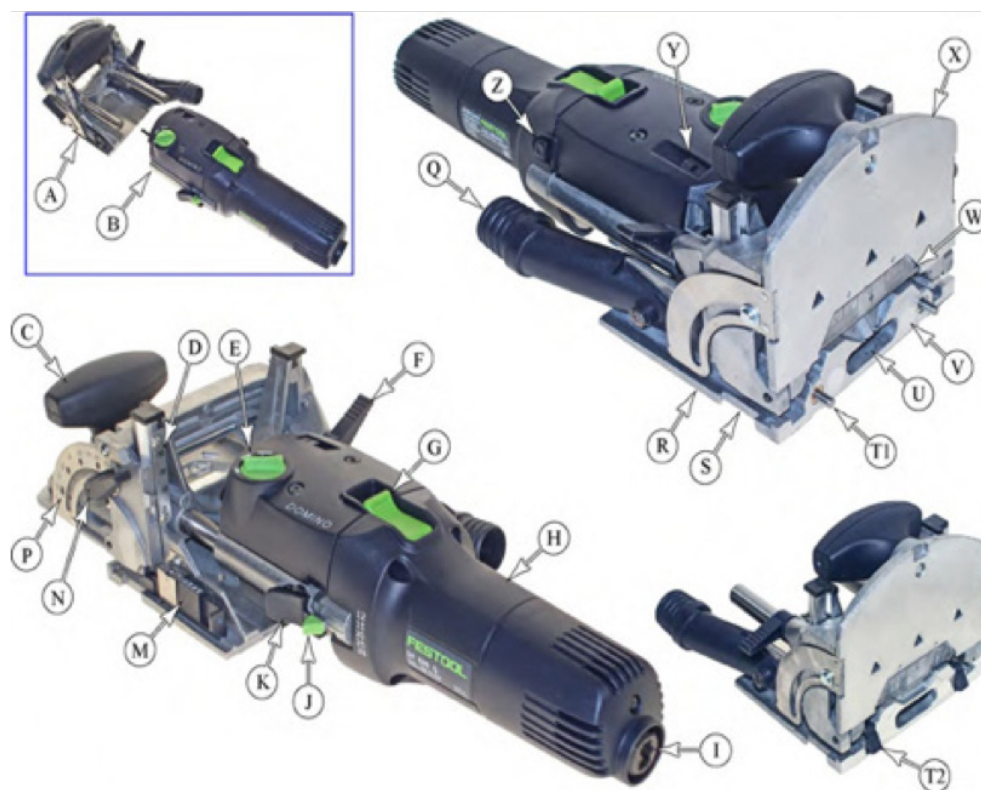
Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool. This will reduce the risk of starting the tool accidentally.

Use sharp and clean cutters. If the cutting tool looks blunt, worn or chipped, bring this to the attention of a technician before continuing. Properly maintained tools with sharp cutting edges are less likely to bind (get stuck) and are easier to control.

Check material condition before cutting. Remove any foreign objects such as nails or screws from the material to prevent damaging the tool and its cutters. Do not use green or wet wood as the water and sap content can damage the tool and its cutters.

Functional Description

A Domino Joiner is used to cut mortises in wood for floating tenon joinery. Mortise and tenon joinery is one of the oldest and strongest methods of joining pieces of wood together. A rotating and oscillating cutter sweeps across the workpiece to quickly and effortlessly cut a uniform mortise, in which a Domino floating tenon is inserted with wood glue.



| Item | Name or Description |
|------|----------------------------|
| A | Fence Body |
| B | Motor Housing |
| C | Auxiliary Handle |
| D | Fence Height Gauge |
| E | Mortise Width Dial |
| F | Fence Height Locking Lever |
| G | Power Switch |
| H | Main Handle (barrel grip) |
| I | Plug It® Power Inlet |
| J | Depth Adjust Lever |
| K | Depth Adjust Lock |
| M | Board Thickness Gauge |

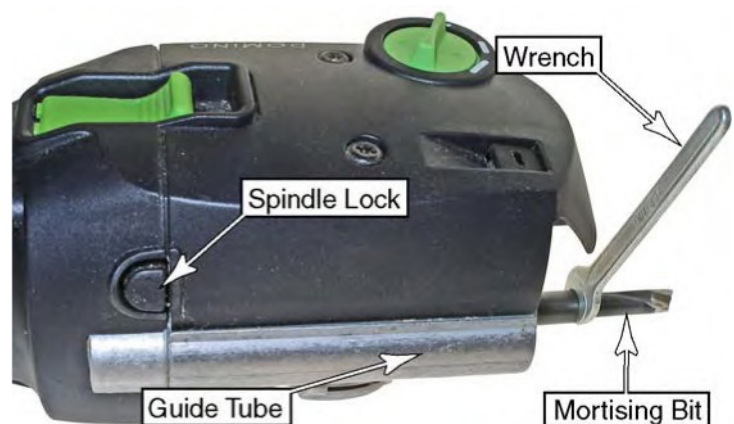
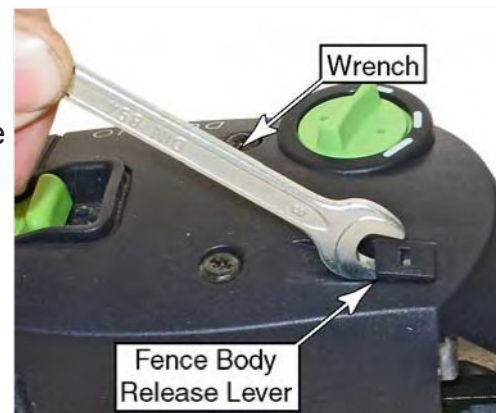
| Item | Name or Description |
|------|------------------------------|
| N | Fence Angle Locking Lever |
| P | Fence Angle Gauge |
| Q | Dust Extraction Port |
| R | Baseplate |
| S | Outrigger Mounting Slot |
| T1 | Locating Pins (qty. 2) |
| T2 | Edge Stop Dogs (qty. 2) |
| U | Mortising Bit Throat Opening |
| V | Friction Pads (qty. 2) |
| W | Horizontal Position Gauge |
| X | Adjustable Fence Face |
| Y | Fence Body Release Lever |
| Z | Spindle Lock |

Changing the Mortising Bit

Different mortising bits are available for a variety of Domino tenon sizes.



1. Using the provided 8mm wrench, pry up on the fence body release lever, and slide the fence body off the motor housing.
2. Press and hold the spindle lock button. This stops the spindle from turning while you loosen the mortising bit.
3. Loosen the mortising bit by turning it counter-clockwise (standard right-hand thread).
4. Insert a new mortising bit and start the threads by hand to avoid cross-threading.
5. Press in on the spindle lock while tightening the bit. Do not over tighten the bit.
6. Carefully reinstall the fence body onto the motor housing and push the fence body in until the latch clicks. Make sure there is no sawdust inside the guide tubes (hollow tubes) before inserting the fence body.

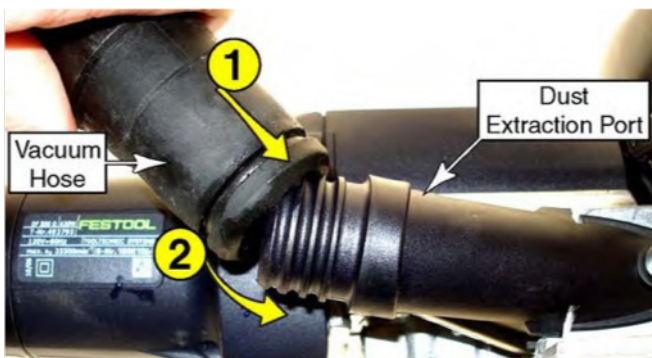


Dust Extraction

The Domino joiner is intended to be used with a dust extraction system. Using the machine without dust extraction will cause it to clog with wood chips.

When installing a Festool dust extraction hose onto the dust port of the machine, it is easiest to insert the hose at an angle and then push it on the rest of the way, as shown in the photo.

Plug the power tool cable into the front of the extractor and set to full suction and Auto. If you need to make further adjustments to the tool, ensure the extraction is not plugged in so the tool cannot accidentally start.



Fence Adjustment

Fence Height. The height of the fence needs to be adjusted depending on the type of joint being made and the thickness of the material being joined.

There are two features available for setting the fence height; the height gauge and the board thickness gauge.

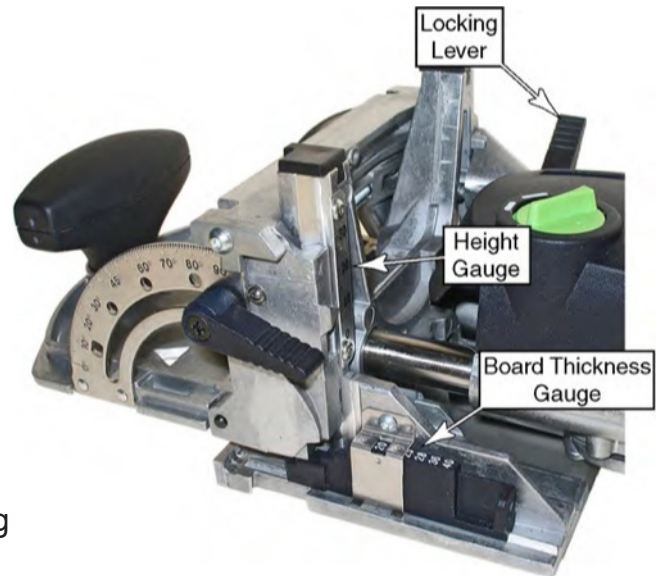
The Height Gauge shows the distance between the bottom of the fence face and the centre line of the mortising bit. Use this gauge to set the mortise height relative to the surface of the workpiece.

The Board Thickness Gauge numbers printed on the gauge represent the thickness of the workpiece (in mm) and the mortise height will be centred in the workpiece. Use this gauge for setting the fence height based on the thickness of the workpiece without needing to calculate the centre distance.

1. Loosen the fence height locking lever by turning it ¼-turn counter clockwise.

2. To use the board thickness gauge:
- Raise the fence above the board thickness gauge.
 - Slide the gauge in or out until the thickness of the workpiece (in mm) is shown in the window.
 - Lower the fence down until it touches the gauge.
 - Tighten the locking lever.

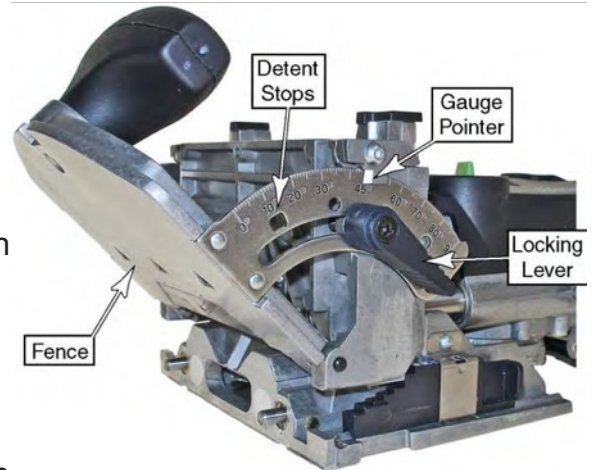
3. To use the height gauge:
- Make sure the board thickness gauge is retracted out of the way.
 - Raise or lower the fence until the pointer is pointing to the desired height on the gauge.
 - Tighten the locking lever.



Setting the Fence Angle.

Some joints require the fence to be set to an angle from the mortising bit. The most common application is for making a mitered joint.

- Loosen the fence angle locking lever by rotating it counter clockwise about a ¼-turn.
- Rotate the fence face to the desired angle and tighten the locking lever.
- The fence has detent stops at 22½, 45, 67½, and 90 degrees.
- Use the gauge pointer for setting the fence to angles other than the ones listed above.
- For greater stability, the locking lever clamps down on both the right and the left sides of the fence.



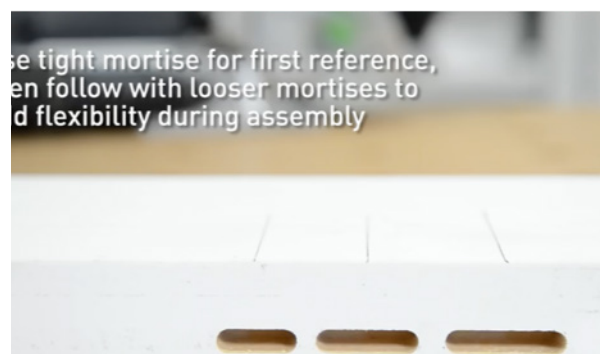
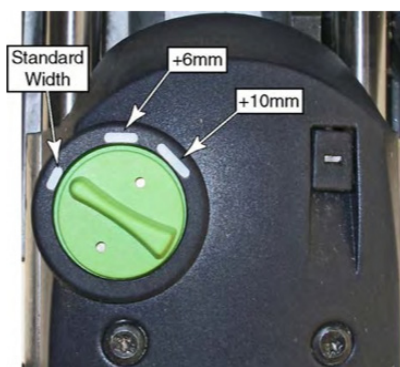
The table below provides some common mitre angles for easy reference.

| Number of Equal Sides | Mitre saw Angle | Domino Angle | Number of Equal Sides | Mitre saw Angle | Domino Angle |
|-----------------------|-----------------|--------------|-----------------------|-----------------|--------------|
| 3- Triangle | 60 | 30 | 6 – Hexagon | 30 | 60 |
| 4 – Square | 45 | 45 | 7 – Heptagon | 25.7 | 64.3 |
| 5 – Pentagon | 36 | 54 | 8 – Octagon | 22.5 | 67.5 |

Mortise size setting

Setting the mortise width

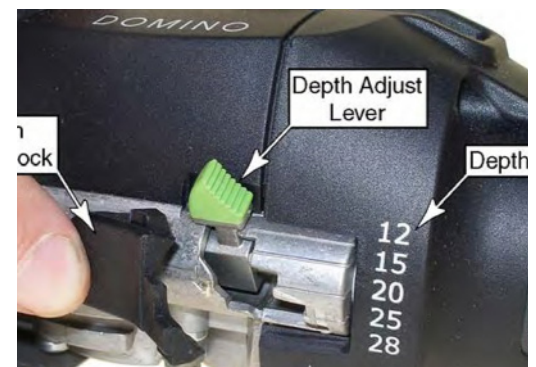
The width of the mortise slot can be increased to permit some side-to-side flexibility in the tenon position. The mortise width dial has three positions. In the standard (smallest) position, the Domino tenon will fit snugly into the mortise slot. In the middle position, the mortise slot will be 6 mm wider than the Domino tenon. In the widest position the mortise slot will be 10 mm wider than the Domino tenon.



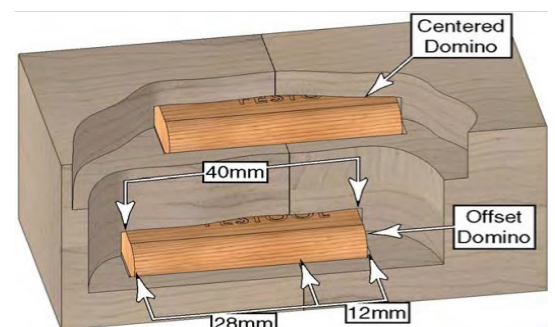
Setting the Mortise Depth

The mortising depth determines how deep into the workpiece the mortising bit penetrates. This needs to be adjusted for different sized tenons. In most cases, the tenon should be centred across the joint, and the depth of the mortise should be $\frac{1}{2}$ the length of the tenon.

1. Press in on the depth adjust lock.
2. Move the depth adjust lever to the stepped position of the desired depth.
3. Release the depth adjust lock.



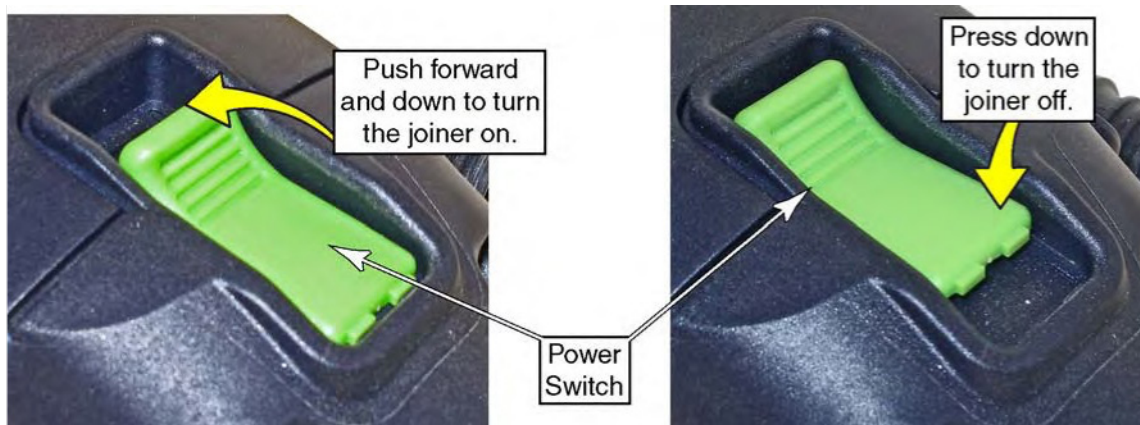
However, in some cases you may want to have more of the tenon in one piece than the other (lower Domino tenon pictured below). In this case, the sum of the two depths must equal the length of the tenon. (In the offset tenon example below, the Domino tenon is 40 mm long, the left mortise is 28 mm deep, and the right mortise is 12 mm deep.)



Turning On & Off

The power switch for the Domino joiner locks into the “On” position when activated. When working with the tool for the first time, it is recommended that you become familiar with the operation of the switch before you plug the tool into a power outlet.

To turn the joiner on, push forward and down on the power switch. To turn the joiner off, press down on the back of the power switch to release the latch.



Housekeeping

Before starting any cleaning, disconnect the tool from the power supply.

You may need to intermittently stop operations to clean away dust build from the area of work and the tool.

The tool should be cleaned after every use. Use a vacuum with the brush attachment for the outside of the tool. For safe and proper working, always keep the machine and ventilation slots clean.

Never use compressed air to clean the tool. This will cause dust to be pushed into the atmosphere for you and others to breathe in as well as force dust into the motor and fixings of the tool.

Ensure the tool and accessories are placed back where they belong.

Do not leave tools out. If you are unsure where tools are stored, please speak to a technician.

Induction finished

Below is an insight into just some of the ways the Domino Joiner can be put to use. Familiarise yourself with the tool and ask a technician to assist you with your particular set up needs.

Use this link to see video set ups

<https://youtu.be/sD2QxrwuvJk>

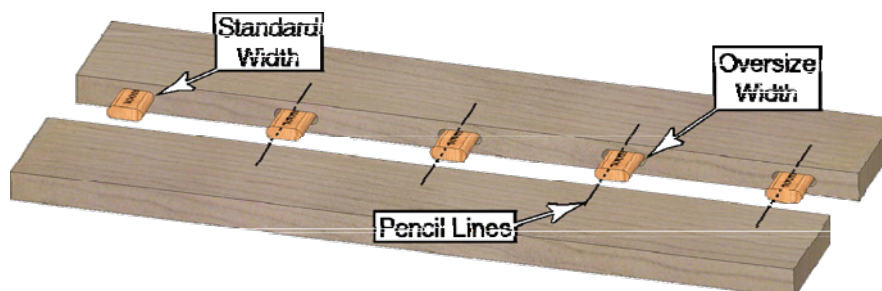
or type ‘Getting Started with the Festool Domino DF 500 Joiner’ into YouTube.

Edge joining boards

Edge joining boards is a common method for creating wide boards from a series of narrower boards. The Domino tenons add strength to the joint and help with aligning the boards to be flush.

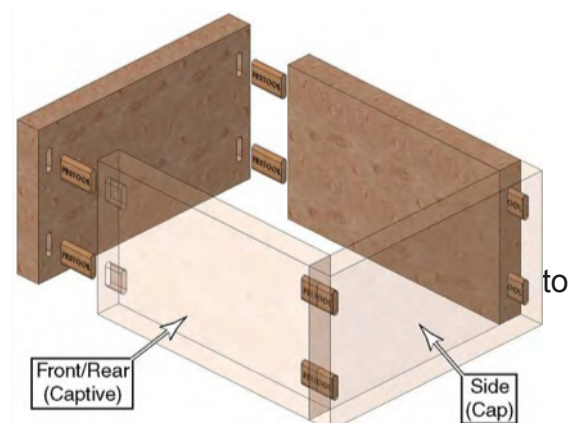
Butt the two pieces of wood together and mark with a pencil where a series of mortise holes can be made down the length of the wood.

The first tenon is used to register the two boards horizontally and is milled at standard width. The remaining tenons align the board flush and may be milled with an oversized width.



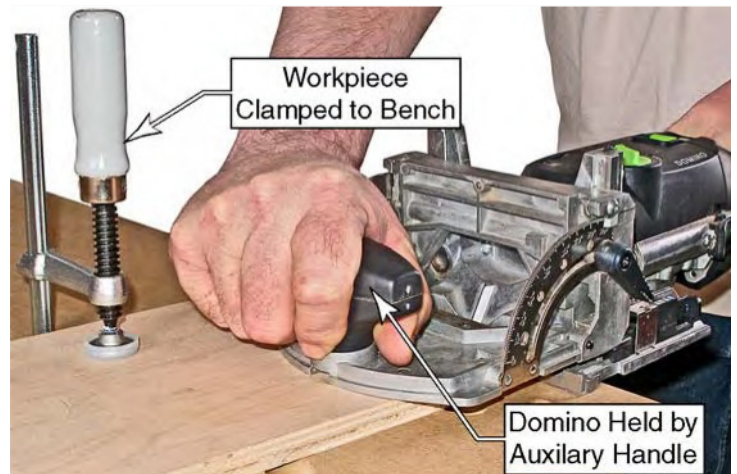
Mortise into the face of board material

Creating Butt Box Joints will require you to mill into the face of a board. Consider your plunge depth as not to fully penetrate the wood. You may need use the support bracket and reset the angle of the fence.

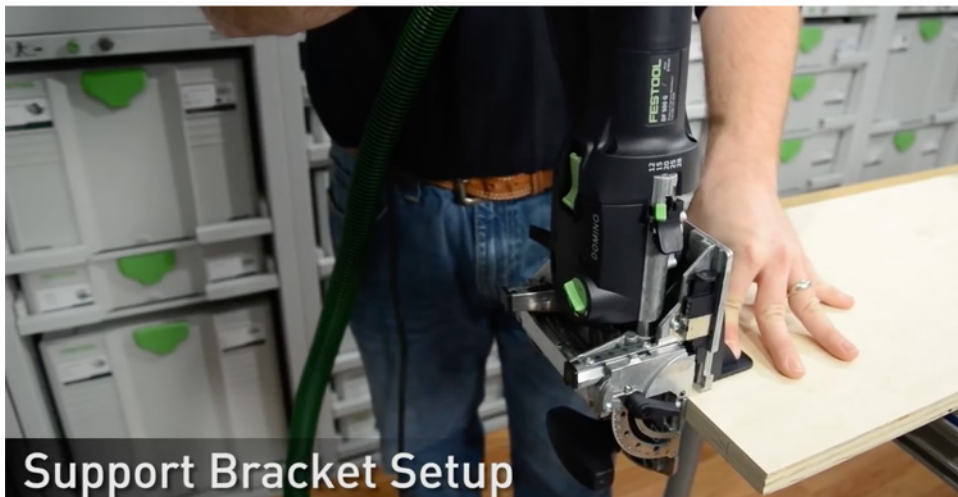
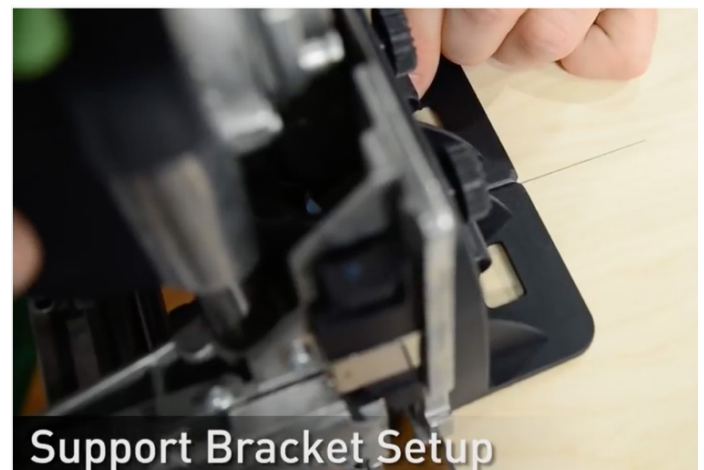


Machining Tenons**Machining the Captive-Side Tenons**

- Choose a Domino tenon size to be less than or equal to $\frac{1}{3}$ of the board's thickness.
- Set the height of the fence so the Domino tenons are in the centre of the board's thickness. Set the mortise depth.
- Clamp the Captive boards flat to your workbench.
- Grasp the Domino joiner by the auxiliary handle, hold it firmly down to the workpiece, and slowly plunge the cutter into its edge.

**Machining the Cap-Side Tenons**

- Don't change the fence height from the previous operation. It is used to register the mortise placement from the edge of the board.
- Install the Base Support Bracket
- If necessary, change the mortise depth setting.
- When plunging, hold it firmly against the face of the workpiece.



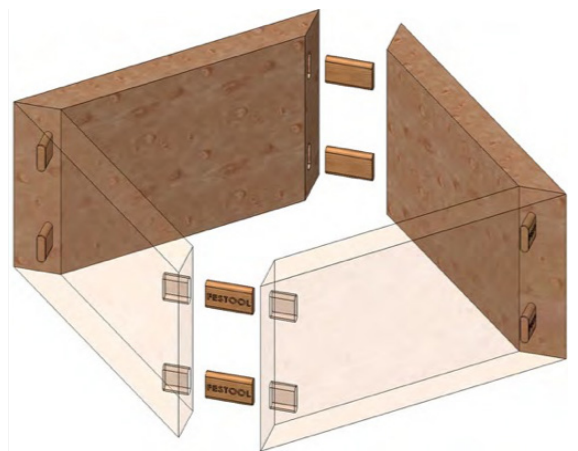
Mitre Box Joints

Generally, mitre box joints are fairly weak because the joint is predominately end grain to end grain. Tenons significantly increase the strength of the joint and make it easier to assemble and clamp the pieces.

For thinner materials, keep the mortise close to the inside corner. This minimizes the chances of boring all the way through the workpiece.

For very thin materials, it may be necessary to shorten the Domino tenon length.

For thicker materials, stacked mortises can be used as shown in the picture below.



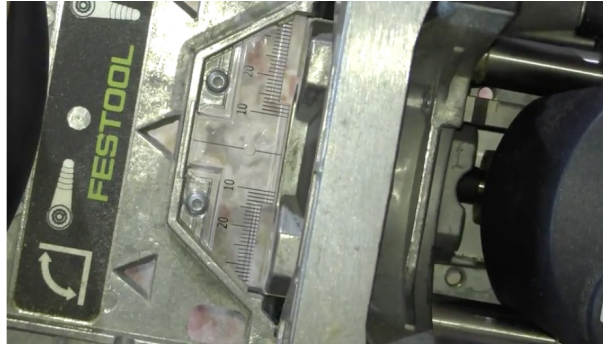
Setup and Machining

- Tilt the fence to the appropriate angle.
- Lower the fence to the desired height. Note that the mortise should be close to the inside corner to avoid penetrating through the workpiece.
- Tip: Before milling the mortise, double check your depth settings to ensure you don't cut all the way through.
- Plunge the joiner as shown below.
- The stacked mortises are used for thicker stock.
- Grasp the joiner by the auxiliary handle for best control.

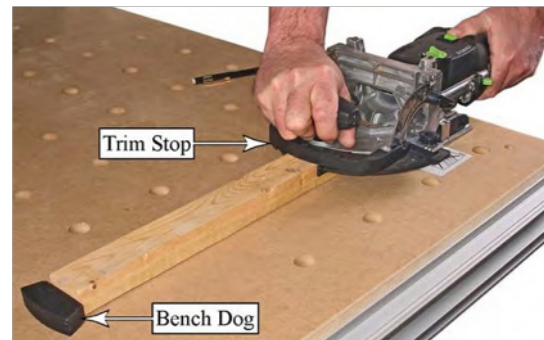


Frame Joints

Domino tenons can be used to quickly fabricate reinforced frames of all types. When making butt joint frames, such as cabinet face frames, use pencil lines to lay out the position of the tenons. Use the sight gauge on the joiner's fence to position the joiner over the pencil line.



For narrow frame stock, the optional narrow frame fence (also called the trim stop) can be used to securely hold the workpiece.



Mitered Frames

When making mitered frames, position the tenon closer to the inside corner. This reduces the likelihood of cutting the mortise all the way through the workpiece.

Make sure to securely clamp the workpiece to the bench when mortising a mitered joint. You will need to remove the Trim Stop when working on a mitered joint.

