



Carpentry NTQF Level II

Learning Guide #67

Unit of Competence: Install and Replace Windows and Doors

Module Title: Installing and Replacing Windows and Doors

LG Code: EIS CRP2 M14 LO4-LG-67

TTLM Code: EIS CRP2 M14 TTLM 0919v1

LO4: Prepare door opening, construct and fix jamb

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**Instruction Sheet****Learning Guide #67**

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics.

- Checking Door frame opening size
- Marking and cutting Jamb stiles to length
- Trenching Head
- Assembling, squaring and bracing Jamb frame
- Cleaning and finishing Joints and rebates

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- Check Door frame opening size
- Mark and cutting Jamb stiles to length
- Trench Head
- Assemble, squaring and bracing Jamb frame
- Clean and finish Joints and rebates

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Learning instruction

- ✓ Read the specific objectives of this Learning Guide.
 - ✓ Read the information written in the “Information Sheets 1”. Try to understand and familiarize what are being shown and discussed. Ask your teacher for assistance if you have hard time understanding them.
 - ✓ Accomplished and submit “Self-checks 1” for evaluation.
 - ✓ If you earned a satisfactory evaluation for "self-check 1" then proceed to “Operation Sheet 1”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Information Sheet 1.
 - ✓ Read the “Operation Sheet 1” and try to understand the procedures discussed.
 - ✓ Accomplish and submit “Operation Sheet 1” for evaluation.
 - ✓ If you earned a satisfactory evaluation for one "Operation Sheet 1" then proceed to the next “Information Sheet”. However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Operation Sheet where you get unsatisfactory evaluation.
 - ✓ Continue to the next “Information Sheet” and follow instruction for learning activities in “2-7”.
 - ✓ After all “Self Check” and “Operation Sheet” is accomplished and evaluated proceed to “LAP Test”.
- Your teacher will evaluate your output either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advice you on additional work. But if satisfactory you can proceed to the next topic.

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19.1 checking Door frame opening size

What is a standard door opening size?

Standard entry **door** measurements: **Height:** 80-inches (6-feet, 8-inches) Thickness: 1 3/4-inches. Width: 36-inches **standard**; 30- and 32-inches also available.

The width can vary from 12 to 48 inches. The width of a **door's** rough **opening** is the width of the **door** plus 2 inches. The 2 inches accounts for a 3/4-inch **jamb** board on each side plus 1/2-inch adjustment space. If you are using pre-hung **doors**, the **opening** should be 1 inch to 1 1/2 inch wider than the **door** and its jambs.

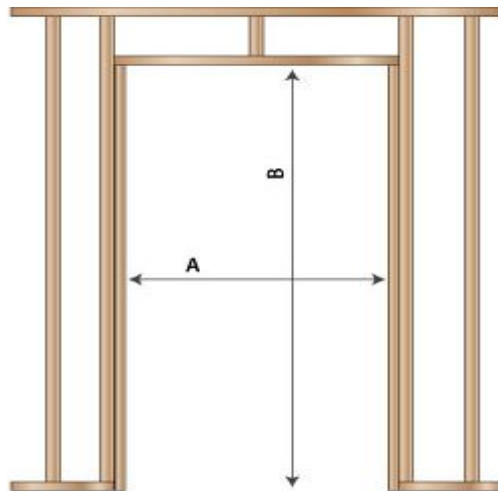


Figure 1 door opening size

interior Knockdown Frames that Wrap Wall

A = opening width + 2"

B = opening height + 1"

The rough opening would be 38" x 85"
for a 3'0" x 7'0" door & frame

Note: For fire rated openings, drywall must extend at least 1/2" into frame.

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✓ **Door Heights**

The height of common doors is 6 feet 8 inches. The standard height of the rough opening for a door is the door height plus 2 5/8 inches. The additional room allows for a 3/4-inch top jamb, a shim space above the door jamb and the thickness of underlayment and finish flooring. If you are using pre-hung doors the opening should be 1/2 to 3/4 inch taller than the door and its jamb plus the thickness of any underlayment and finish flooring.

✓ **Door Opening Width**

The width can vary from 12 to 48 inches. The width of a door's rough opening is the width of the door plus 2 inches. The 2 inches accounts for a 3/4-inch jamb board on each side plus 1/2-inch adjustment space. If you are using pre-hung doors, the opening should be 1 inch to 1 1/2 inch wider than the door and its jambs.

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**Self-Check -1****Written Test**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Which one of the following is the height of common door?
 - A. 6feet 8 inches
 - B. 5feet 7inches
 - C. 8feet 6inches
 - D. None

2. The width of a door's rough opening is the width of the door plus ----
-----inches.
 - A. 3 inches
 - B. 2 inches
 - C. 1inches
 - D. None

Note: Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

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Information Sheet 20	Marking and cutting Jamb stiles to length
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20.1 Marking and cutting Jamb stiles to length

- ✓ **Stiles** are the upright or vertical outside members of a **door**, which at Eggers is a veneered construction. Sticking holds the panels and/or glass in place. ... Panels are made of solid wood, plywood, or composite material and they fill the frame formed by the **stiles** and rails of a **door**.

Stiles are the main vertical members in the framework of a sash, found at the sides of a **window**. 4. Glazing (Or Lights) Glazing is a term used for the process of mounting glass into **windows** and doors and also refers to the glass or plastic panes themselves.

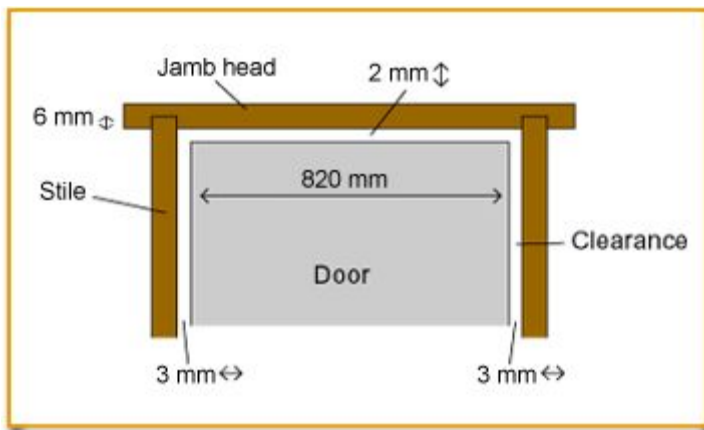


Figure 2 door jamb

Place the **door** into the **frame** and see if it fits. Remember there should be a gap of 2mm (about the width of a nickel) around the sides and top and a gap of 8mm on the bottom. An easy way to check the top and bottom is to sit the **door** on the floor. The gap at the top should now be 10mm (2mm top+8mm bottom).

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✓ Door trim should be mitered at a 45-degree angle at the top; when measuring door trim, always take this into consideration.

1. Measure from the floor to the top of the door jamb on the inside. ...
2. Make a mark on the trim piece at 80 1/4 inches. ...
3. Set a miter saw at 45 degrees. ...
4. Measure across the top of the door jamb.

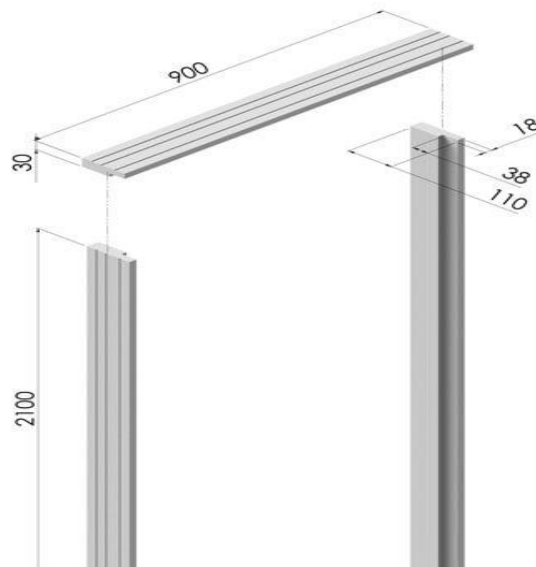


Figure 3 rebated door jamb

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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. ----- are the main vertical members in the framework of a sash, found at the sides of a **window**.
 - A. Slides
 - B. Stiles
 - C. Head
 - D. None

Note: Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

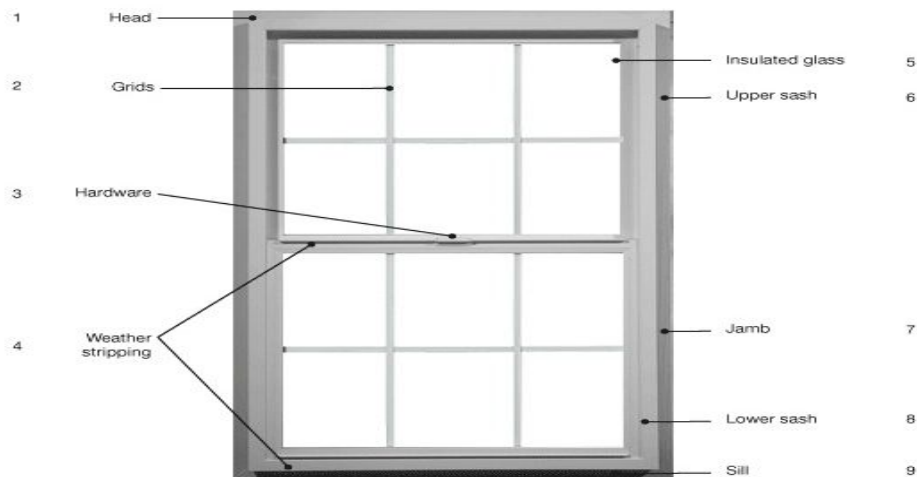
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21.1 Trenching Head

- ✓ A **trench** is defined as a narrow underground excavation that is deeper than it is wide, and is no wider than 15 feet (4.5 meters).
- ✓ Also it is the molding process of the head part of window or door

Double Hung Windows



1. **Head** – The main horizontal member which forms the top of the window frame.
2. **Grids** – Exterior and interior grid options are available with some windows to better simulate real divided lites.
3. **Hardware** – Window locks and operating handles.
4. **Weather-stripping** – Weather-stripping is essential to ensure efficient, weather tight seals for your windows.



5. **Insulated Glass** – A combination of two or more panes of glass with a hermetically sealed air space between them.
6. **Upper Sash** – A single assembly of stiles (sides) and rails (top and bottom) made into a frame for holding insulated glass. The top sash is known as the Upper sash.
7. **Jamb** – The window frame sections forming the top, sides and bottom of a window frame.
8. **Lower Sash** – A single assembly of stiles (sides) and rails (top and bottom) made into a frame for holding insulated glass. The bottom sash is known as the Lower sash.
9. **Sill** – The horizontal section (ledge) forming the bottom of the window frame.

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Self-Check -3

Written Test

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. The main horizontal member which forms the top of the window frame is
 - A. Jamb
 - B. Head
 - C. Grid
 - D. None

2. The horizontal section (ledge) forming the bottom of the window frame is
 - A. Head
 - B. Sill
 - C. Lower sash
 - D. All

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Note: Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

Information Sheet 22	Assembling, squaring and bracing Jamb frame
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22.1 Assembling, squaring and bracing Jamb frame

- ✓ A jamb (from French jambe, "leg"), in architecture, is the side-post or lining of a doorway or other aperture. The jambs of a window outside the frame are called "reveals."... A doorjamb, door jamb (also sometimes doorpost) is the vertical portion of the door frame onto which a door is secured.

What is door jamb size?

A standard interior wall consists of a two-by-four frame with one layer of 1/2-inch-thick drywall on each side, for a total thickness of approximately 4 1/2 inches. The **depth** of a standard door jamb is 4 5/8 inches, which provides an extra 1/8 inch to account for slightly thicker walls due to stud **size** variation.

- ✓ What are the parts of a door frame?

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Door part names

- Door frame. The door frame is the entire framework supporting the door, including the sill, jamb and head. ...
- Sill. The door sill is the very bottom part of the door frame that rests on the floor.
- Jamb/door jam. ...
- Head. ...
- Panel. ...
- Astragal. ...
- Fixed panel. ...
- Door sweep.



Figure 4 Assembling, squaring and bracing Jamb frame

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Self-Check -4	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is door jamb size?



Note: Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

Information Sheet 23	Cleaning and finishing Joints and rebates
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23.1 Cleaning and finishing Joints and rebates

- ✓ A **rebate** is an amount paid by way of reduction, return, or refund on what has already been paid or contributed. It is a type of sales promotion that marketers use primarily as incentives or supplements to product sales. ... **Rebates** are offered by either the retailer or the manufacturer of the chosen product.

The **rebate joint** is similar to the **butt joint**. The big difference between the two is that one of the ends of the wood has a groove cut out creating a better holding strength.

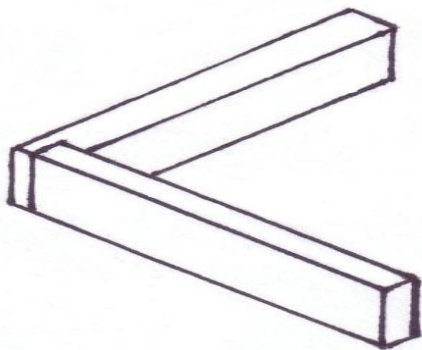
It is **used** most commonly when a simple **joint** is wanted but when strength is required. It is **used** commonly in cabinet making and other carpentry projects. In some cases dowels, screws, or nails **can** be added to increase the strength for load bearing **joints**.

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A rabbet or **rebate** is a recess or groove cut into the edge of a piece of machinable material, usually wood. When viewed in cross-section, a rabbet is two-sided and open to the edge or end of the surface into which it is cut. ... A rabbet can be used to form a **joint** with another piece of wood (often containing a dado).

✓ **Rebate Joint**



The rebate joint is a very similar woodwork joint to the butt joint but the big difference between the two is that one of the ends of the timber has a groove cut out of it to create much better holding strength.

Even with the extra strength the joint is still relatively easy to construct and its appearance is also more appealing compared to a regular butt joint making it a better joint for carpentry or cabinet making.

If more strength is still required you can also add nails, screws and dowel to the joint just

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like you would on a butt joint but no timber blocks should be needed in the corner because the rebate joint already has a large surface for adhesives to be applied.

Self-Check -4	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is the difference between rebate joint and butt joint?

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Note: Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

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The trainers prepare TTLM

No	Name	Region	Qualification level	TVET College	Phone number
Zeyede Tekle	B	Dire Dawa	DDPTC	0921153259	zedjesus22@gmail.com
Yibeltal Shitie	B	Amhara	MOTTA PTC	0912455288	yibecon2019@gmail.com
Mihiretu Hambisa	B	Oromia	NEKEMTIE PTC	0910195546	mihambi@gmail.com
Tariku W/Agegne	A	SNNP	DILAPTC	0916512167	mamush572@gmail.com
Fikrie Shiferaw	A	Somale	JIGjigaPTC	0913294412	shiferawufikre@yahoo.com

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Facilitator

No	Name	Region	TVET Bureau	Email & phone number	Phone no
1	Tilahun Tesfaye	Amhara	Amhara TVED Bureau	Tilahun tesfaye eewnetu@gmail.com	0940651823
2	Abere Dagnaw	Amhara	Amhara TVED Bureau	Aberedagnaw10@gmail.com	09 18 1 41 11
3	Abdulahi Muktare	Somale	Somalia TVET Bureau		0935635068



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