



MODEL H7789 MORTISING KIT INSTRUCTION SHEET

For questions or help with this product contact Tech Support at (570) 546-9663 or techsupport@grizzly.com

Introduction

The Model H7789 Mortising Kit features a quick and easy way to produce mortises with your drill press. The kit supplies everything you need to mount the kit and produce mortises.

Fits drill presses with the following quill flange/collar diameters: 2.95" (75mm), 2.60" (66mm), 2.36" (60mm), 2.17" (55mm), 2.00" (50mm), 1.89" (48mm), 1.57" (40mm).

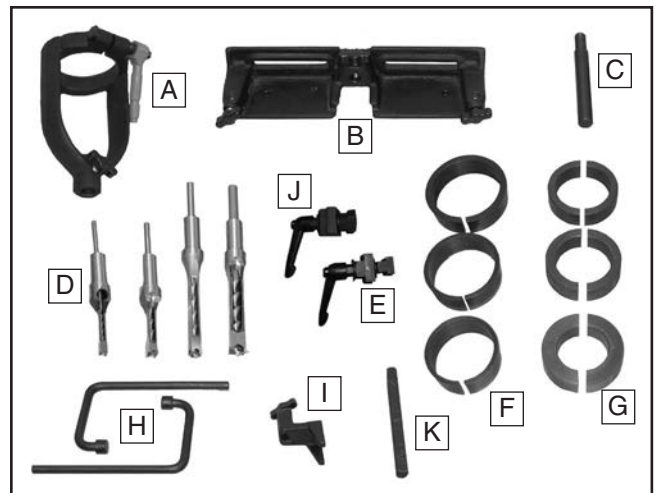
Note: Not intended to be used with small or "baby" type drill presses.



H7789 installed on a drill press.

Inventory

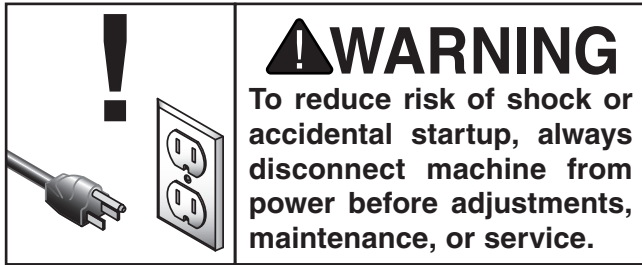
- A. Cone..... 1
- B. Fence Assembly..... 1
- C. Alignment Tool 1
- D. Mortising Chisels..... 4
- E. T-Nuts M6-1 4
- F. Mounting Sleeves:
 - #1 Sleeve 2.95" OD x 2.60" (66mm) ID..... 1
 - #2 Sleeve 2.60" OD x 2.36" (60mm) ID 1
 - #3 Sleeve 2.36" OD x 2.17" (55mm) ID..... 1
- G. Mounting Bushings:
 - "A" Bushing 2.60" OD x 1.57" (40mm) ID... 1
 - "B" Bushing 2.60" OD x 1.89" (48mm) ID... 1
 - "C" Bushing 2.60" OD x 2.00" (51mm) ID... 1
- H. Hold Down Rods 2
- I. Hold Down..... 1
- J. Adjustable Handle M6-1 X 25 2
- K. Fence Rod..... 1



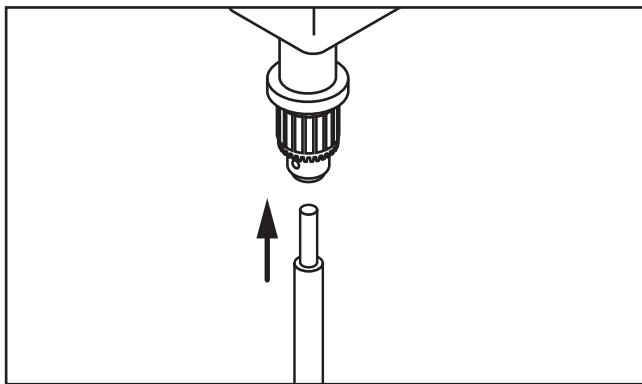
H7789 inventory components.

Mounting Cone

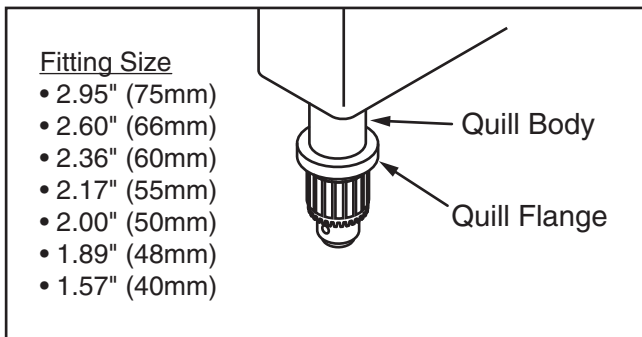
1. DISCONNECT DRILL PRESS FROM POWER!



2. Secure small end of alignment tool in drill chuck.



3. Measure quill flange and quill body on your drill press to determine which one is closest to the fitting sizes listed below.

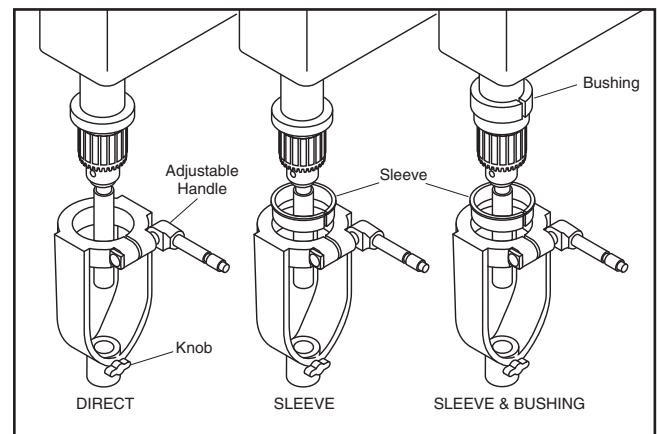


Note: If the quill flange or quill body do not match the fitting sizes shown, then this kit will not properly mount to your drill press with the components included.

4. Use table below to determine required components for installing cone on your drill press.

Fitting Size	Use
2.95" (75mm)	Direct Fit, No Bushings/Sleeves Needed
2.60" (66mm)	#1 Sleeve
2.36" (60mm)	#1 Sleeve, #2 Sleeve
2.17" (55mm)	#1 Sleeve, #2 Sleeve, #3 Sleeve
2.00" (50mm)	#1 Sleeve, "C" Bushing
1.89" (48mm)	#1 Sleeve, "B" Bushing
1.57" (40mm)	#1 Sleeve, "A" Bushing

5. Slide cone over alignment tool and quill mounting surface. Tighten adjustable handle to secure cone to quill.



6. Loosen drill chuck and remove alignment tool.

Mounting Fence

1. Position fence on top of drill press table and align holes on ends with slots in table.
2. Secure fence in place using adjustable handles and appropriate T-nuts for your table.



Making a Mortise

Proper alignment of the workpiece and chisel is essential to making good mortise and tenon joints. The instructions below describe one method of creating square joints with an evenly spaced mortise. Place a spoil board on top of the drill press table if a through-mortise is to be made.

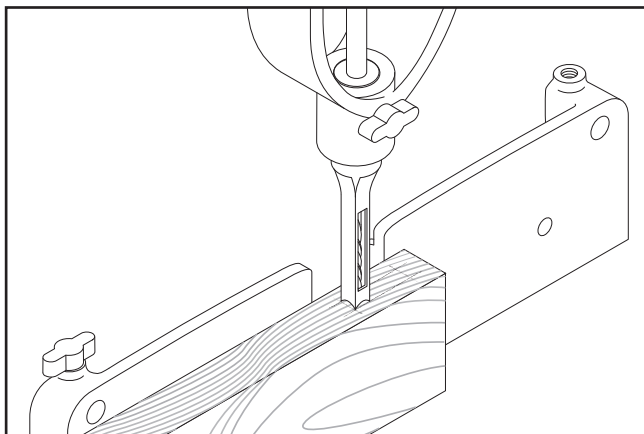
1. Install chisel into cone, rotate it so opening is positioned toward operator, and secure it with the knob.
2. Secure drill bit into drill chuck. Slide the drill bit into the chisel as far as it will go and then allow it to drop back down $\frac{1}{32}$ " - $\frac{1}{16}$ ". If this is not done, wood chips generated by the cutting action will have no place to go, resulting in excessive heat and damage to the tool.
3. Measure the surface of the workpiece that is to have the mortise. Subtract the size of the mortise chisel and divide this number in half.

Workpiece = .75"

Chisel = .375"

$$.375" \div 2 = .1875"$$

4. Mark the workpiece where you want the mortise and clamp it to the fence.
5. Loosen the adjustable handles on the fence. Lower the chisel with the spider handles on the drill press and make adjustments to the fence until the marks on the workpiece are aligned with the chisel as shown in the figure below. Tighten the adjustable handles. If the fence cannot be adjusted close enough, adjust the table on the drill press until the chisel and marks are aligned.

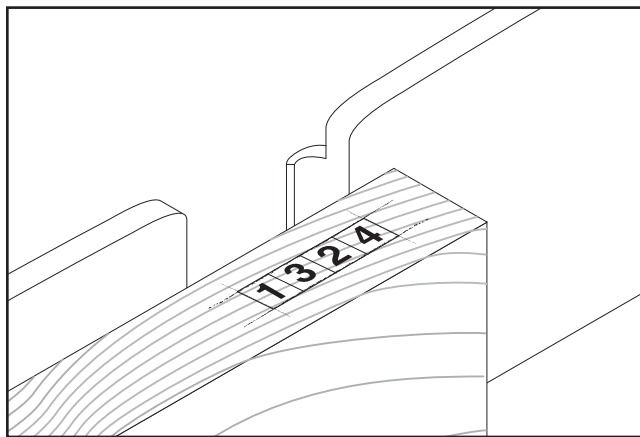


Aligning the chisel and marks.

6. Set the speed of the drill press between 900 and 1200 RPM.
7. Carefully inspect the alignment. When you are satisfied that the setup is worthy of being tested, replace the workpiece with a scrap piece of lumber that is the same size. Attach the hold down bracket and rod(s), then make a cut.
8. Watch the chips coming out of the slot on the shank of the chisel. If you don't see chips, or there is a lot of smoke, raise the chisel, turn off the drill press and lower the drill in the chisel. If burning still occurs, lower the drill press speed. Some burning may occur with certain species of wood regardless of the settings, but you should see wood chips while cutting mortises with this tool.
9. Check the placement of the cut and make any adjustments to the setup before cutting a valuable workpiece.

Cut Sequence

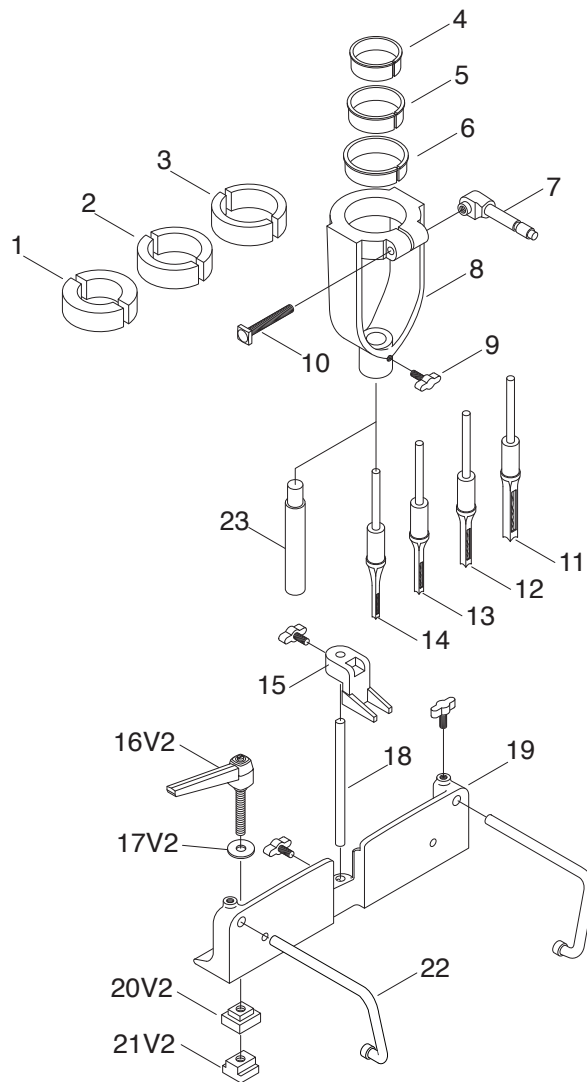
Cutting mortises that are wider than the chisel must be done in proper sequence for best results. Below is a diagram on one possible sequence that will produce good results.



Staggered cut sequence.



H7789 Parts Breakdown and List



REF PART #	DESCRIPTION
1	PH7789001 BUSHING PAIR 2.6" X 1.57"
2	PH7789002 BUSHING PAIR 2.6" X 1.88"
3	PH7789003 BUSHING PAIR 2.6" X 2.00"
4	PH7789004 SLEEVE 2.366" X 2.17"
5	PH7789005 SLEEVE 2.6" X 2.366"
6	PH7789006 SLEEVE 2.945" X 2.6"
7	PH7789007 ADJUSTABLE HANDLE
8	PH7789008 CONE
9	PH7789009 KNOB
10	PH7789010 SQUARE HD BOLT 5/16"-18 X 2"
11	PH7789011 MORTISING CHISEL 1/4"
12	PH7789012 MORTISING CHISEL 5/16"

REF PART #	DESCRIPTION
13	PH7789013 MORTISING CHISEL 3/8"
14	PH7789014 MORTISING CHISEL 1/2"
15	PH7789015 HOLD DOWN
16V2	PH7789016V2 ADJUSTABLE HANDLE M6-1 X 25 V2.10.15
17V2	PH7789017V2 FLAT WASHER 6MM
18	PH7789018 ROD
19	PH7789019 FENCE
20V2	PH7789020V2 T-NUT (SMALL) M6-1
21V2	PH7789021V2 T-NUT (LARGE) M6-1
22	PH7789022 HOLD DOWN ROD
23	PH7789023 ALIGNMENT TOOL

Please Note: We do our best to stock replacement parts whenever possible, but we cannot guarantee that all parts shown here are available for purchase. Call (800) 523-4777 or visit our online parts store at www.grizzly.com to check for availability.

