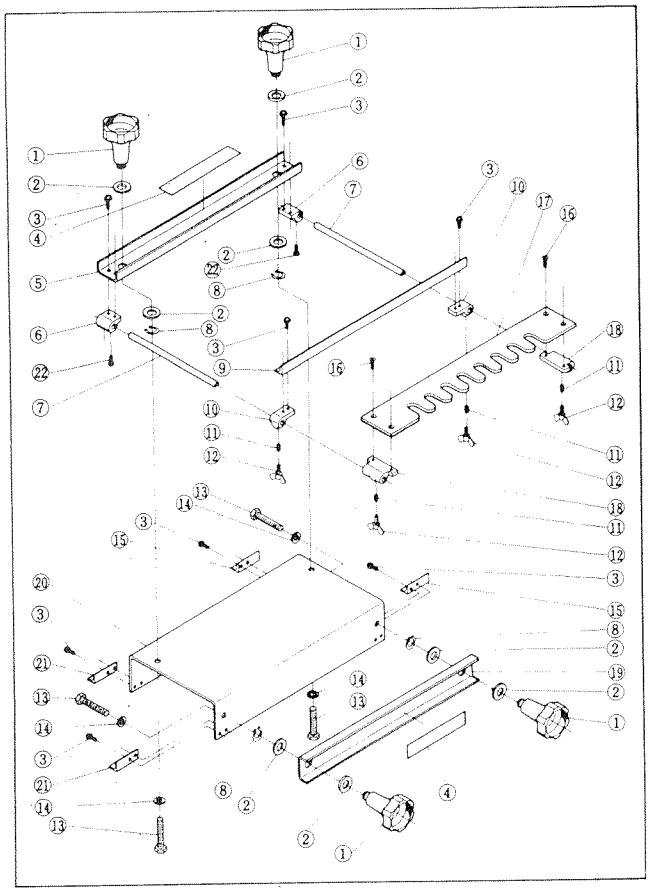
AC-KMORO01

OWNER'S OPERATING MANUAL

RYOBI

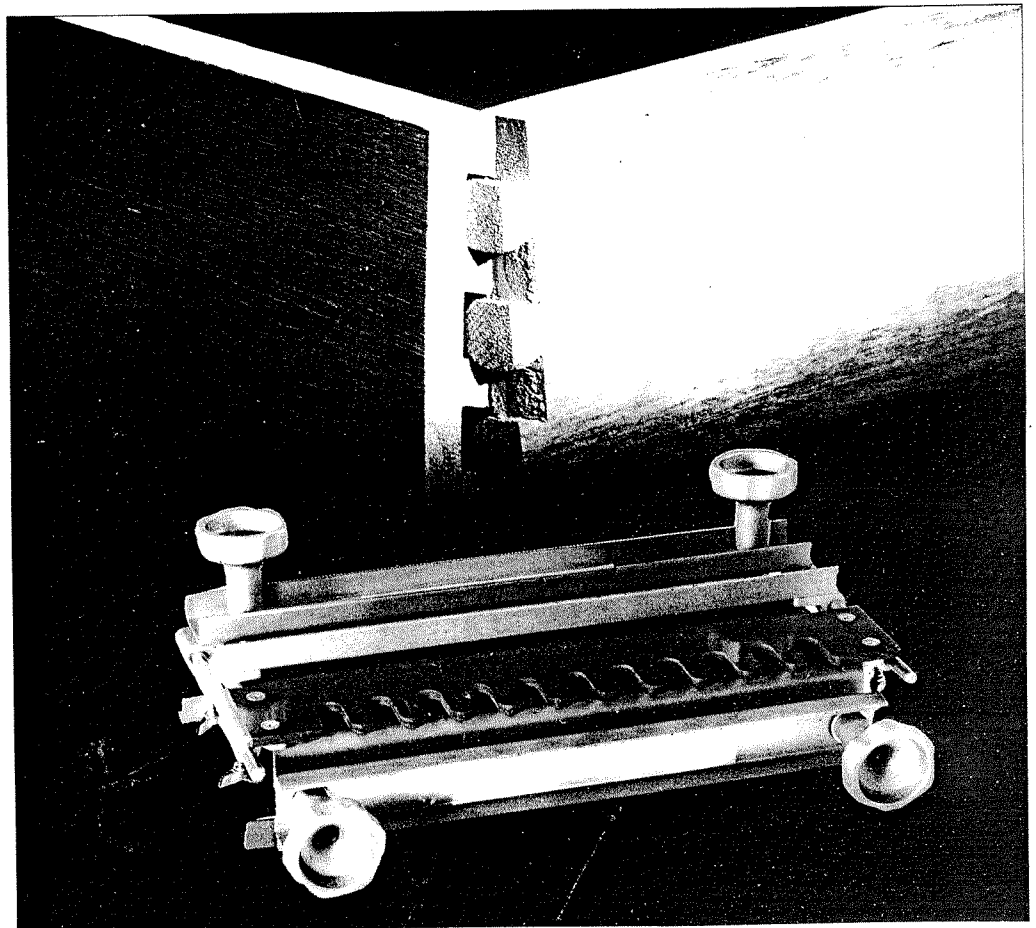
DOVETAIL KIT/DT-330

EXPLODED VIEW OF MODEL DT-330



PARTS LIST

Ref. No.	DESCRIPTION
1	Tightening Knob
2	Washer M14
3	Phil. Pan Screw M5×12
4	Name Plate
5	Clamp Plate (A)
6	Bracket
7	Guide Bar
8	Retaining Ring (C) S-15
9	Scale
10	Scale Holder
11	Set Spring
12	Wing Bolt M6×15
13	Hex. Head Bolt M10×55
14	Spring Washer M10
15	Fixing Plate (A)
16	Phil. Flat Screw M5×10
17	Dovetail Gauge Plate
18	Gauge Holder
19	Clamp Plate (B)
20	Base Plate
21	Fixing Plate (B)
22	Phil. Pan Screw M5×12



BE SURE TO READ THIS OWNER'S MANUAL THOROUGHLY BEFORE USING YOUR TOOL

PRODUCED BY

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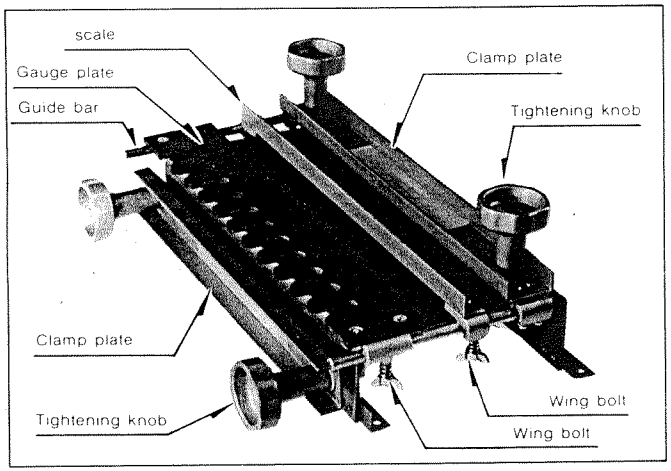
683099402002(M) Ⓐ

● OPERATING INSTRUCTIONS

1. DO read this manual thoroughly before using your tool.
2. DO be sure the working area is clean.
3. DO keep away children from working area.
4. DO put on proper workwear.
5. DO check your tool periodically for best maintenance.
6. DO use only specified replacement parts.
7. DO NOT allow children to operate your tool.
8. DO NOT force tool, allow tool to perform as it was designed.

● DOVETAIL KIT

The DOVETAIL KIT is designed to produce accurate dovetail joints commonly use in the making of drawer and boxes. Each pair of pieces that are to be jointed together are dovetailed at the same time, producing a perfect fit. The DOVETAIL KIT may be used with almost any Router, provided that the Router is capable of being fitted with a template guide with an outside diameter sufficient to allow it to be used with the gauge plate fitted to the kit, without damage to the template.
These instructions apply mainly to the RYOBI Routers, Models R-330, R-320, R-200, R-500, R-150, etc.,
The RYOBI designation for the DOVETAIL KIT is Model DT-330.



● SPECIFICATIONS

- Maximum width of work = 300mm (11-7/8")
- Maximum thickness of work = 9—40mm (3/8"—1-5/8")
- Net weight = 8.0kg (17.6 lbs)
- Groove pitch of Gauge Plate supplied = 12.5mm (1/2")

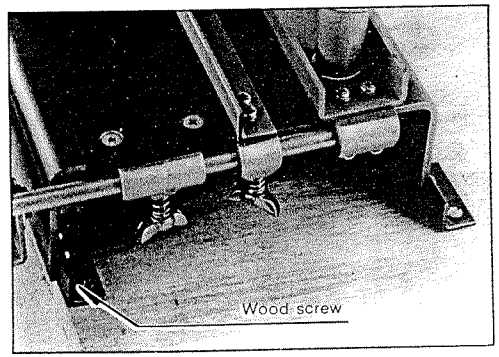
● SPECIAL ACCESSORIES

Dovetail Bits, Collet Chucks, Bit Adapters, Dovetail Gauge Plates, Template Guides are available separately in the following sizes of table.
When attaching the template guide, the template nut is necessary to attach it.
In case of models R-150 and R-500, add the dovetail guide attachment to mount the template guide and nut.

Dovetail Bit A × D × L mm	Collet Chuck B B mm			Bit Adapter A × B mm					Dovetail Gauge Plate A × B mm						Template Guide A × B mm					
	8.0	12.0	12.7	6.0 × 8.0	6.0 × 12.0	6.0 × 12.7	8.0 × 12.0	8.0 × 12.7	8.0 × 28	9.5 × 30	12.5 × 40	16.0 × 36	17.0 × 38	19.0 × 39	6.5 × 7.8	6.5 × 9.3	9.6 × 12.2	13 × 15.8	13 × 16.8	13 × 18.8
6 × 10 × 5.8	●	●	○	●	●	○			● ○						● ○					
6 × 12 × 8.8	●	●	○	●	●	○				● ○						● ○				
8 × 15 × 9.0	●	●	○				●	○			● ○						● ○			
8 × 15 × 10.5	●	●	○				●	○			● ○						● ○			
8 × 15 × 13.0	●	●	○				●	○			● ○						● ○			
12 × 20 × 12.3		●										●	●					●	●	
12 × 25 × 16.5		●												●						●

● MOUNTING THE KIT

The metal base of the kit should be permanently attached to the workbench or to a piece of plywood. Four holes are provided in the base of the kit for easy mounting with wood screws (or bolts & nuts). The front overhanging apron of the kit base should butt against the front edge of the workbench or plywood before fastening.



● PREPARING THE WORK

(Note : To ensure the following adjustments are correct, it is best to first make a trial cut on two pieces of scrap timber of the same wood that is to be used.)

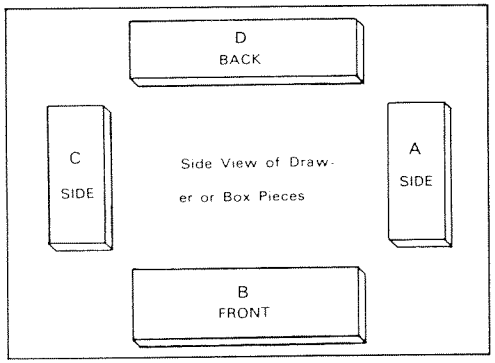
To make drawers or boxes with flush, flonts, with all four corners dovetailed, proceed as follows:-

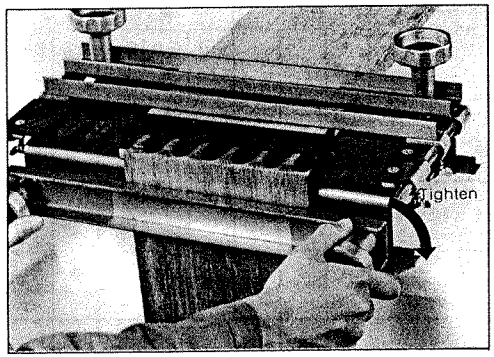
1. Mark the boards for the drawer or box on the inside. (The reverse sides of the board will be the outside of the finished drawer or box.) The outside of the boards are always clamped towards the attachment and all pieces are routed in an "inside-out" position. The wood for front (B) and back (D) should be the same size and should be cut to fit the opening neatly. The side pieces (A) and (C) should also be the same size, but should be shorter than the distance between the front and the back of the opening.

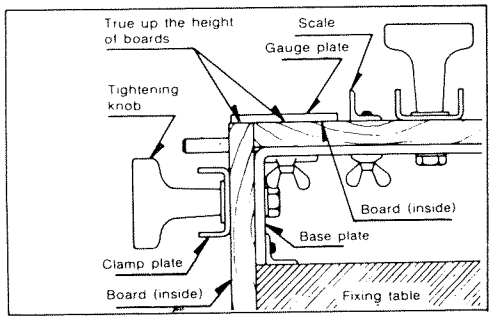
2. Temporarily clamp board (A) vertically to the left front of the fixture so that it extends above the base. This is done to properly position board (B).

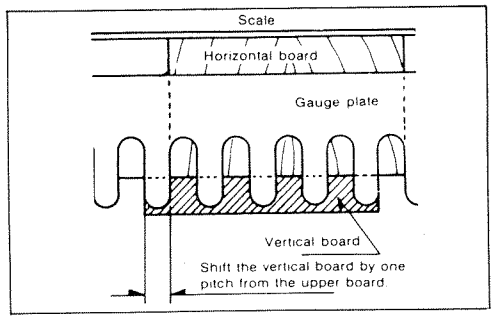
3. Position board (B) horizontally on top of the fixture so that it is hard up against the right side of the fixture, then clamp.

4. Re-locate board (A) so that it is positioned one pitch to the left of board (B) and also so that it is flush with the top of board (B), then clamp.









● ADJUSTING THE KIT

Determine the distance R so that there is B/2 max. and C−2mm max, then clamp with the two wing bolts, therefore generally α=2mm when the thickness of timber is 9mm~B/2, but α=2mm min. when it is over than B/2 in thickness.

Please determine the position of the scale plate by the following formula. Check finally with a rule, then fix with the two wing bolts.

● FORMULA : for models R-200, R-320, and R-330

$$(R\times2) + (78-A/2) = ß$$

● FORMULA : for model R-500

$$(R\times2) + (68-A/2) = ß$$

● FORMULA : for model R-150

$$(R\times2) + (55-A/2) = ß$$

A = The width of the gauge plate groove.
B = The depth of the gauge plate groove.
C = The thickness of the timber.
ß = The fixing position for the scale plate.

● EXAMPLE : for model R-330

A=12.5mm, B=40mm, C=20mm

and assuming R=18mm

therefore,

ß=(18×2)+(78−12.5/2)=107.75mm

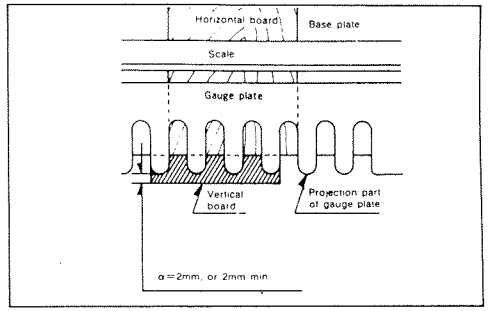
● EXAMPLE : for model R-500

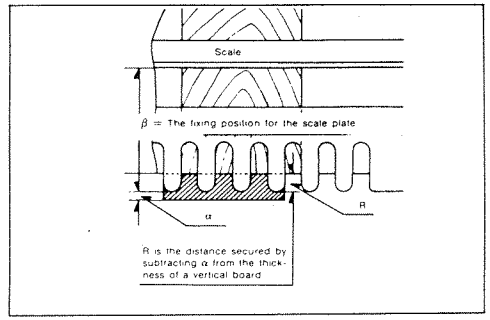
A=12.5mm, B=40mm, C=20mm

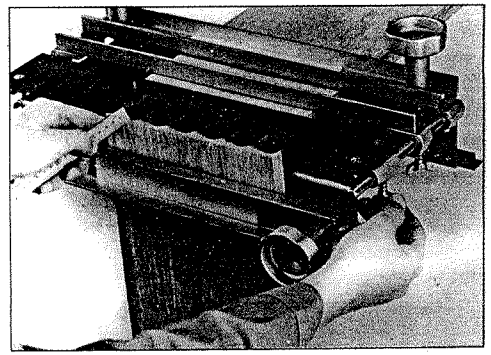
and assuming R=18mm

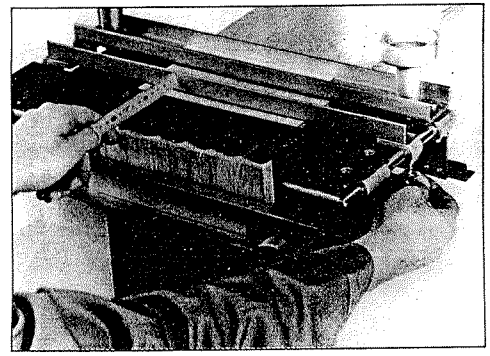
therefore,

ß=(18×2)+(68−12.5/2)=97.75mm









● PREPARING THE ROUTER

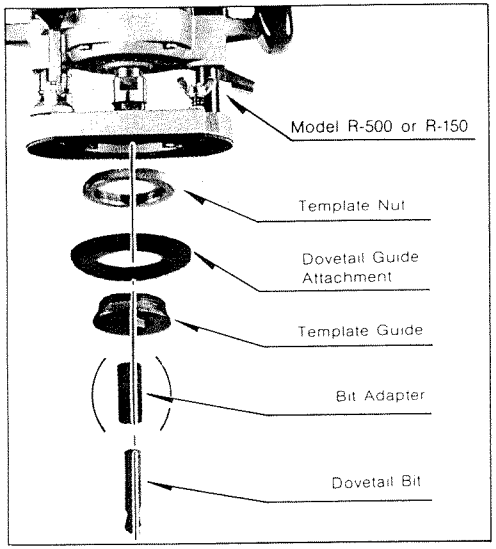
1. One of the critical settings is obviously that of the projection of the bit from the router base. This will determine whether the joint is tight or loose. The usual thing is to set up by a trial and error method in the first instance and then set the router depth gauge. Initially set the bit so that it protrudes from the base of the router as shown in table, then adjust longer or shorter in necessary. When the joint is too tight, shorten the depth of the bit ----- if too loose, lengthen it.

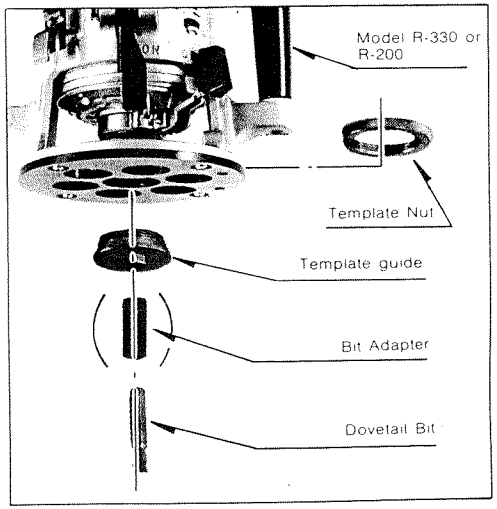
2. Another setting which is critical is that of the gauge plate itself, which can be brought towards or away from the operator by adjusting the two wing bolts. The ideal setting will leave the dovetail pins just slightly proud so that they can be trimmed with a block plane, or sanded after the joint is assembled.

3. The template guide is fitted to the router together with the appropriate bit and a few trial joints made before going ahead with the project so that any necessary adjustments can be made.
   a) If necessary, insert appropriate size bit adapter into the router chuck.
   b) Insert appropriate size template guide (usually 12.5mm) into router. (For models R-500 and R-150, dovetail guide attachment is necessary to attach template guide.)
   c) Insert appropriate size dovetail bit through template guide and into router chuck.

4. Another setting which is critical is that of the scale plate which can be brought toward or away from the operator by loosening and tightening the two wing bolts.
   When the cut is too deep, move the scale plate towards you until you are satisfied with the depth of the cut.
   Do the converse if the cut is too shallow.

Bit size A×D×L(mm)	The Width of the gauge plate groove (mm)	The projection of the bit (mm)
6×10×5.8	8	11.8
6×12×8.3	9.5	13.3
8×15×9.0	12.5	12.4
8×15×10.5	12.5	13.5
8×15×13	12.5	15.3
12×20×12.3	16	18.3
	17	15.2
12×25×16.5	19	21.2





● MAKING DOVETAILS

1. Place the router with its base resting flat on the gauge plate so that the template guide engages along the edge of board (A). Switch on the router and make a cut from right to left across board (A). This is done to prevent chipping the wood when the router is moved in and out of the fingers of the gauge plate.

2. Cut the dovetail joint, feeding the router from left to right until the complete edge is machined.
   IMPORTANT NOTE :
   When the dovetail is completely cut, turn off the current to the router and wait until the bit stops revolving before removing the router. This prevents damage to the finger template. When removing the router, it should not be lifted, but should be moved towards the operator.

3. Place board (C) in the right side of the fixture and position with the outer edge of the board (B) then follow the same procedure as was done in making to first dovetail cut.

● MAKING ADJUSTMENTS

1. If the joint is too tight, raise the bit very slightly to make the cut more shallow.

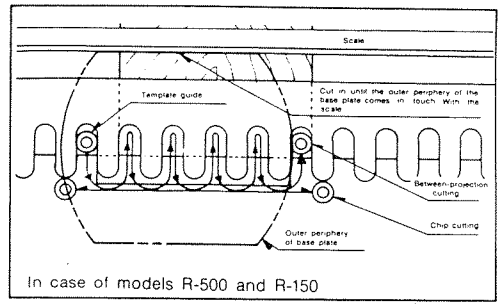
2. If the joint is too loose, lower the bit very slightly, to make the cut deeper.

3. If the fit is too deep, bring the scale plate towards the operator.

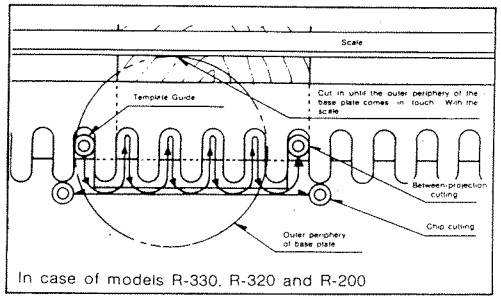
4. If the fit is too shallow, move the scale plate away from the operator.

When all adjustments are properly made, they should not be changed until all dovetails are cut.

Note : Ensure that the scale plate is moved levelly --- use a rule to check before tightening wing bolts.



In case of models R-500 and R-150



In case of models R-330, R-320 and R-200