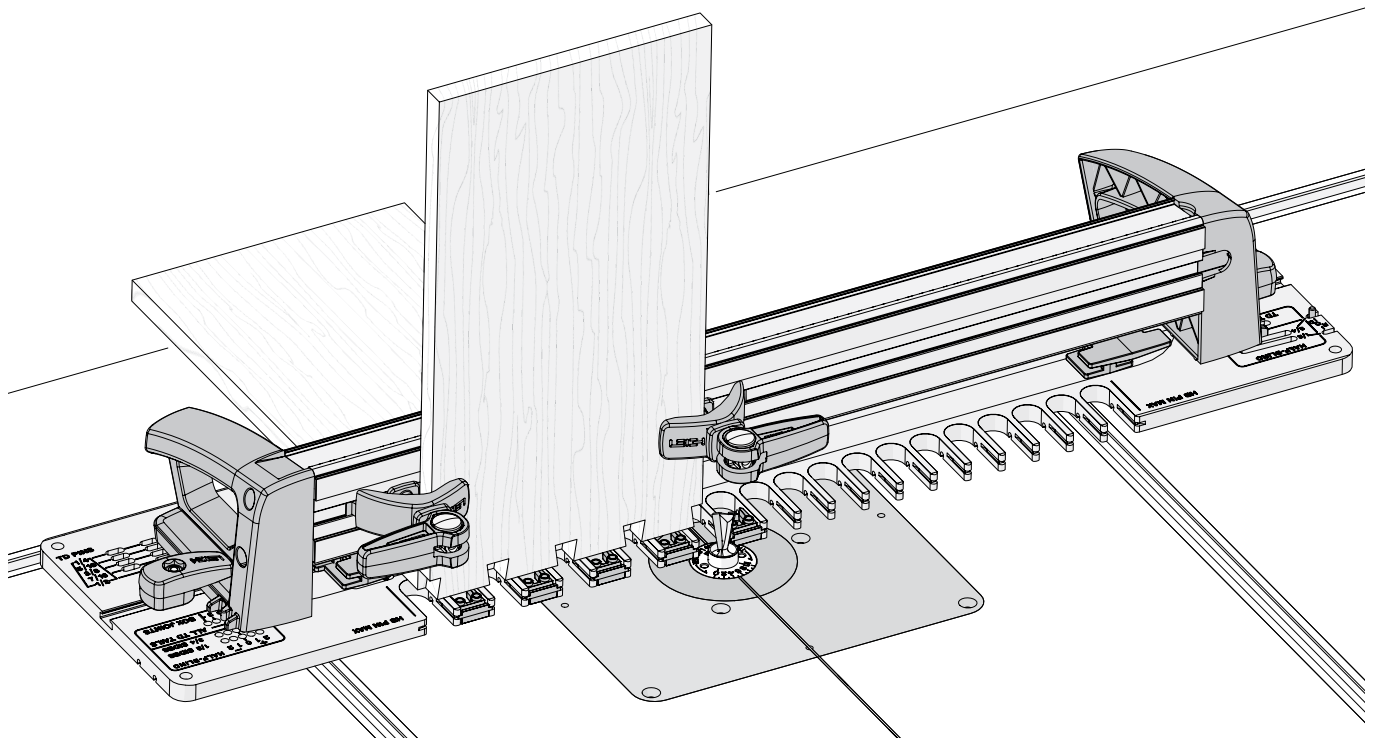


Leigh RTJ400

16" (400mm) Router Table Dovetail Jig

User Guide



See page 73 for customer support

800-663-8932


LEIGH® Leightools.com

Watch the Online Instructional Videos
in the Support Section at Leightools.com




Introduction

Dedicated Customer Support
1-800-663-8932



Watch the Online Instructional Video



Scan QR Code

Reduce your learning time dramatically! Stream to your smart phone or tablet to use in your workshop while you're working. See Instructional Videos section in Support menu at leightools.com or scan QR code for instant video.

Your New Leigh RTJ400 Router Table Dovetail Jig for Through Dovetails, Half-Blind Dovetails and Box Joints

The RTJ400 was designed for the ever increasing use of router tables in shops everywhere. The RTJ400 can produce sizes and types of joints not possible with typical template jigs, including through dovetails, half-blind dovetails and box joints (finger joints), and thanks to the patented Leigh eBush, perfect fitting joints are guaranteed every time.

Contents

| | | |
|------------|-------------------------------------|----|
| | Introduction | 2 |
| | Jig Features | 3 |
| | Bit Specifications | 4 |
| | Accessory Kit for the RTJ400 | 5 |
| | Router Table Requirements | 6 |
| Chapter 1 | Assembling the RTJ400 | 7 |
| Chapter 2 | Glossary of Symbols | 11 |
| Chapter 3 | Using your Jig Safely | 13 |
| Chapter 4 | Basic Jig Functions | 15 |
| Chapter 5 | Wood Preparation | 19 |
| Chapter 6 | The Leigh eBush | 21 |
| Chapter 7 | Through Dovetails | 23 |
| Chapter 8 | Half Pitch Through Dovetails | 29 |
| Chapter 9 | Half-Blind Dovetails | 35 |
| | Rabbeted Half-Blind Dovetails | 40 |
| Chapter 10 | 3/8" Box (Finger) Joints | 43 |
| | 3/8" Half-Blind Box Joints | 48 |
| Chapter 11 | 3/4" Box (Finger) Joints | 53 |
| Chapter 12 | 3/16" Box (Finger) Joints | 59 |
| Chapter 13 | 3/32" Box (Finger) Joints | 65 |
| Chapter 14 | Jig Parts | 71 |
| Chapter 15 | Customer Support | 73 |
| Chapter 16 | Quick Reference | 74 |
| | Board Width Selection | 74 |

Customer Support

If you have any questions not answered in this user guide, please call Leigh Customer Support: **1-800-663-8932** in North America or email: help@leightools.com. For support contacts in your country of purchase, see Customer Support, Chapter 15. Leigh user guides are updated as required. A downloadable pdf of the latest version can be found on the Support page at leightools.com.

Reminder: If at first you don't succeed, read the instructions!

Important! Inches and Millimeters

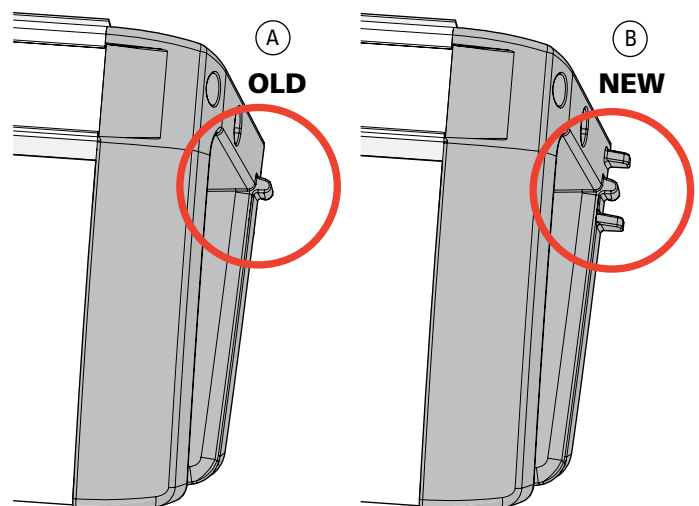
Text and illustrations in this English language user guide indicate dimensions in both inches and millimeters, where applicable, with "inches" first, followed by "millimeters" in square brackets, i.e. 1/2" x 2" [12mm x 50mm].

Do not be concerned that the inch/millimeter equivalents are not mathematically "correct". Just use the dimensions that apply to your guides and bits.

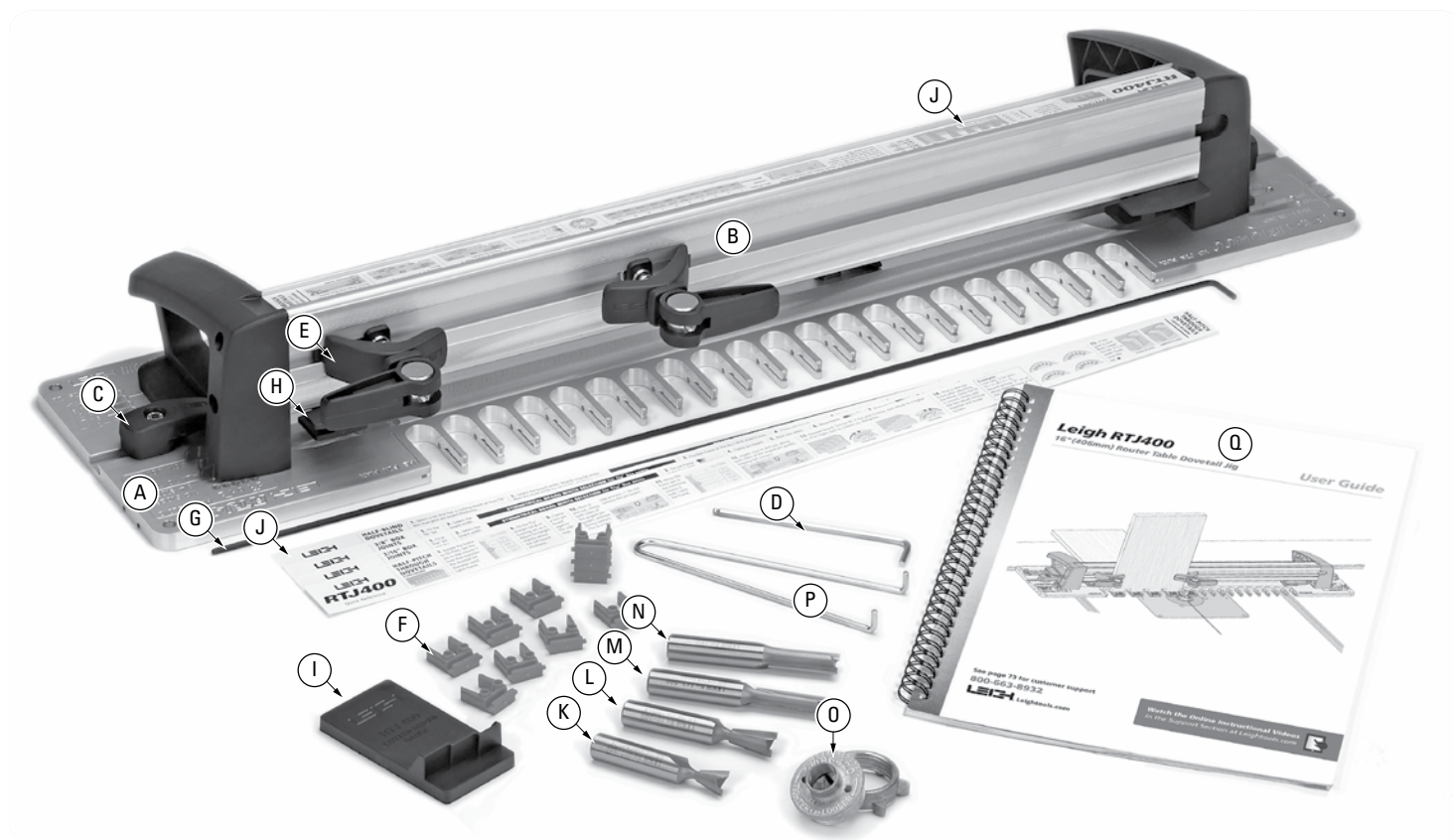
The RTJ400 is covered by the following patent: U.S. Patent No. 8,534,329
Patents for all Leigh elliptical guide bushings: U.S. 8,256,475 UK GB2443974

IMPORTANT Jig Design Update

The drawings in this user guide show an earlier version of the jig handles (A). The handles now have two protrusions to protect the pin (B). The functionality remains the same.



Overhead view of old and new handles.



RTJ400 Jig Features and Parts

See complete list of jig parts in Chapter 14.

If any of these parts are missing from your jig, please notify your supplier or Leigh immediately. See Chapter 15, Customer Support.

- Ⓐ **Jig Template**, CNC machined, with holes and slots to position the frame, and precision guides for routing tails, pins & sockets
- Ⓑ **Jig Frame**, CNC machined, with pins that fit into template holes & slots
- Ⓒ **Frame Latches**, 2, to secure jig frame to jig template
- Ⓓ **Hex Key**, 1/8" Ball End
- Ⓔ **Cam-Action Speed-Clamps**, 4, for mounting workpieces to jig
- Ⓕ **Blockers**, 10, inserted in template guide openings to prevent routing
- Ⓖ **Stop Rod**, inserted in template holes to limit cutting depth
- Ⓗ **Side stops**, 2, for mounting workpieces; adjustable for all joint types
- Ⓘ **Bit Depth Gauge**, for setting cutting depth on half-blind dovetails
- Ⓙ **Instruction Strips**, 5, for quick reference; inserted in jig top
- Ⓚ **Dovetail Bit 120-500**, 1/2" x 1/2" x 14°
- Ⓛ **Dovetail Bit 80-500**, 1/2" x 13/16" x 8°
- Ⓜ **Straight Bit 143-500**, 3/8" x 1-1/4"
- Ⓝ **Straight Bit 160**, 1/2" x 1-1/4"
- Ⓞ **Guide Bushing**, e10 Elliptical eBush, for perfect joint fit
- Ⓟ **Pin Wrench**, to adjust e10 eBush
- Ⓠ **User Guide**, Fully Illustrated

You will need:

- A router table that accepts standard size (1-3/8" OD) guide bushings

Note: See page 6 for instructions on fitting the Leigh eBush to your router table.

Accessory Kit for the RTJ400 (ACRTJ)

This optional kit offers great savings over individual prices, and opens up a world of possibilities. Available from leightools.com

The ACRTJ includes:

Through Dovetail Bits

Carbide tipped, 8°, 8mm shank, for through and half pitch through dovetail tails

50-8 1/4" bit

60-8 5/16" bit

70-8 3/8" bit

75-8 7/16" bit

Straight Bit for Half Pitch Dovetails

Carbide tipped, 8mm shank, for half pitch through dovetail pins

140-8 5/16" bit

Half-Blind Dovetail Bits

Carbide tipped, for half-blind dovetails

112-500 12° 1/2" bit

128-500 18° 1/2" bit

Straight Bits for Box Joints

High speed steel, for box joints

163 3/32" bit

166 3/16" bit (spiral upcut)

Collet Reducer

For 8mm shank bits

172-8 1/2" to 8mm, 1-1/4" long

Guide Bushing

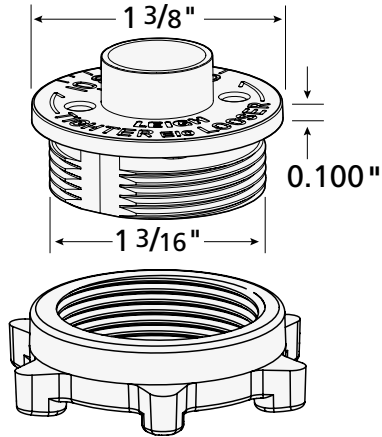
For half pitch through dovetail pins

e7 Leigh elliptical eBush



Router Table Requirements

Router tables are typically used with a bearing or fence, however, the Leigh RTJ400 is guided around a guide bushing mounted in the router table. Leigh eBushes (guide bushings) are designed around the decades-old Porter Cable/Black & Decker industry standard. Therefore, you will need an insert ring to fit the eBush to your router table or router plate. See specifications below. ■



Leigh eBush and Nut

To fit the eBush to your router table insert plate, you need a 1-3/8" diameter counter bore insert ring. Check with your router table or insert plate (router lift) manufacturer, as to what adaptation, if any, is required.

