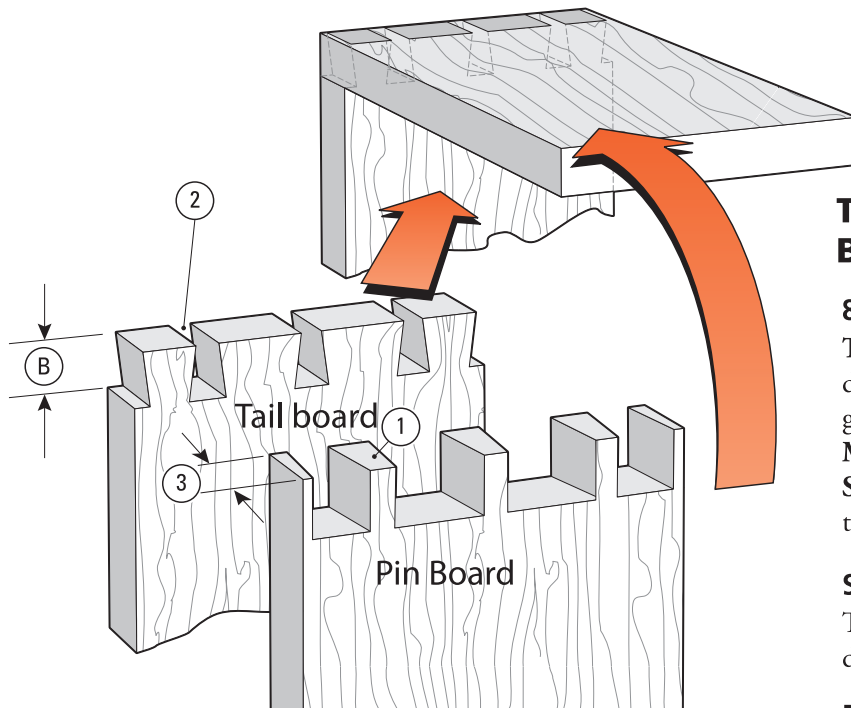


D4R Pro - Appendix II

Bit Selection

Optional router bits for variably spaced through and half-blind dovetails.



Through Dovetail Bit Selection

8° Dovetail Bit for Tails

The pins ① must fit into the pin sockets ②. Therefore the dovetail bit's depth of cut ③ must be equal to or a little greater than the pin board thickness ③.

Measure the pin board thickness ③

Select the dovetail bit with the correct depth of cut ③ from the following pages (bits must be 8° for through dovetails).

Straight Bit for Pins

The matching straight bit is listed on the charts with the dovetail bit.

Dovetail Bit Angle

All through dovetail bits must be 8°. This angle matches the D4R Pro guide finger pin angle. If you try to use a different angle of dovetail bit, there will be a mismatch between the pins routed at 8°.

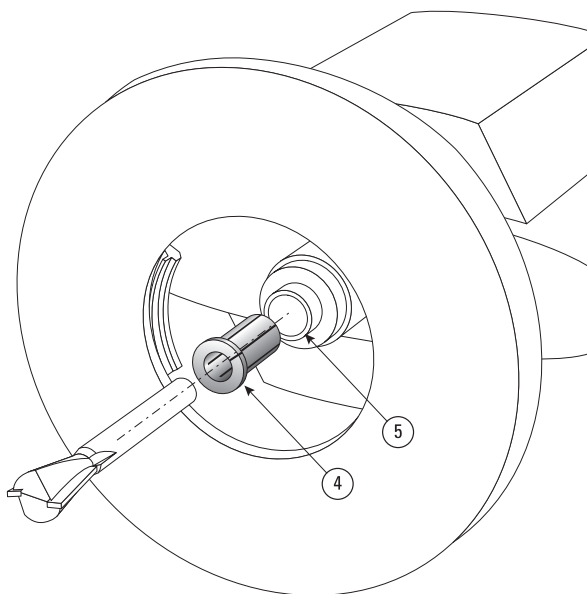
Guidebush

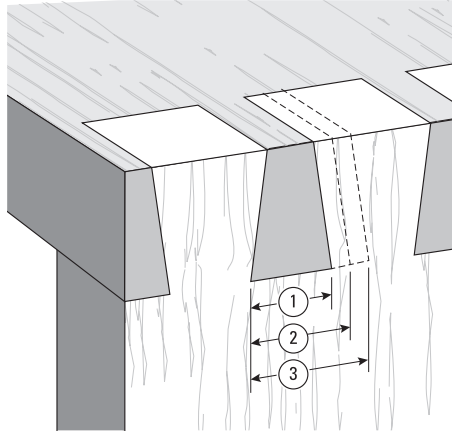
All 8mm shank through dovetail bits listed in this appendix work with the e7-Bush (7/16" OD [11,1mm]) supplied with your Leigh jig, or any 7/16" OD [11,1mm] guidebush. The optional Leigh 716C guidebush or standard 5/8" OD [15,9mm] guidebush is used with 1/2" [12,7mm] shank bits. No other guidebush sizes can be used for through dovetails. *See page 70.*

Shank Selection

The Leigh D4R Pro comes with one through dovetail bit and one straight bit, with 8mm shanks, plus a 1/2" [12,7mm] to 8mm collet reducer. The reducer ④ simply slides into the 1/2" [12,7mm] collet ⑤ of your router and the 8mm shank bit is inserted into the collet reducer. The collet is tightened as normal. The collet reducer is not required with 1/2" [12,7mm] shank bits.

Note: ④ is a collet reducer, not a collet ⑤. The reducer does not replace the collet, it slides directly into your collet.





Note that some of the dovetail bits' depths of cut overlap. For example:
 No.70-8 bit (B) : 1/4"–1/2" [6 - 13mm]
 No.75-8 bit (B) : 3/8"–5/8" [9,5 - 16mm]
 No.80-8 bit (B) : 1/2"–13/16" [12 - 20mm]

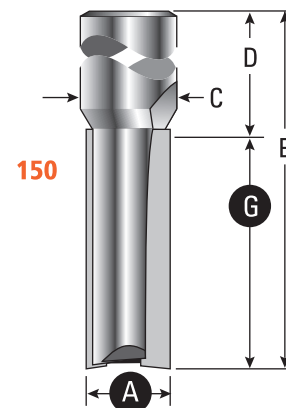
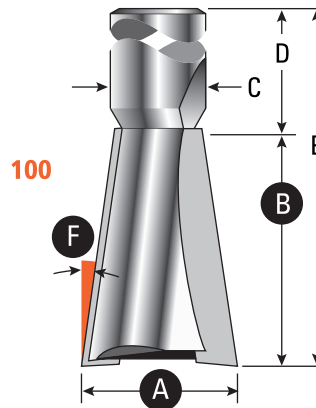
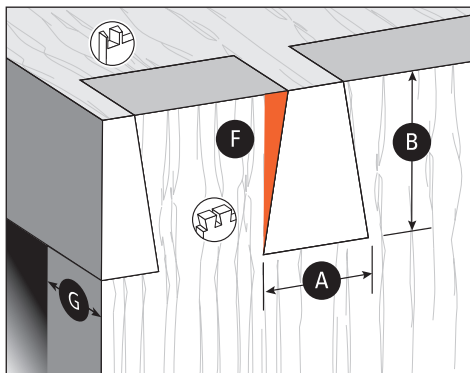
This means all three bits are capable of routing boards 1/2" [12,7mm] thick using one of the following combinations: No.80-8 and 140-8, No.75-8 and 140-8, or No.70-8 and 140-8.

The three bit combinations will produce slightly different-looking joints because each dovetail bit produces a different size diameter of pin:
 No.70-8 (1) : 3/8"
 No.75-8 (2) : 7/16"
 No.80-8 (3) : 1/2"

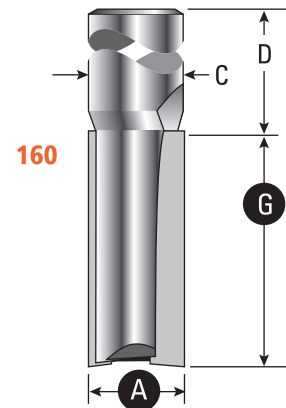
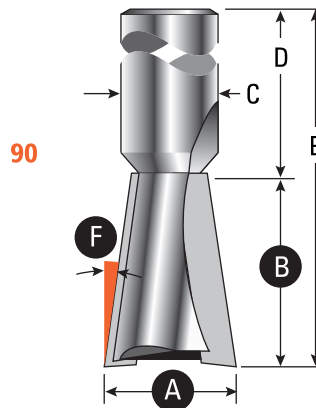
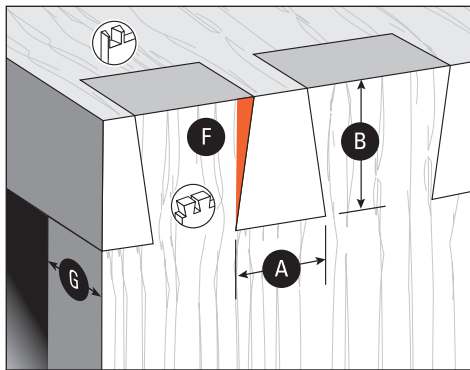
⚠ Do not attempt to rout dovetails at less than the minimum depth of cut specified, as the bit can hit the guide fingers or guide bushing.

Leigh Through Dovetail Bits

Note: Bit and joint drawings are about actual size.



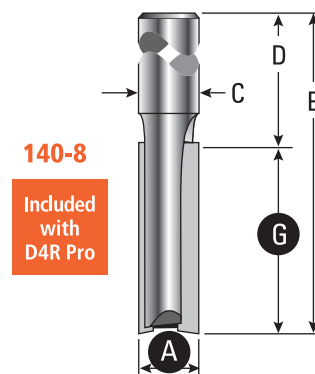
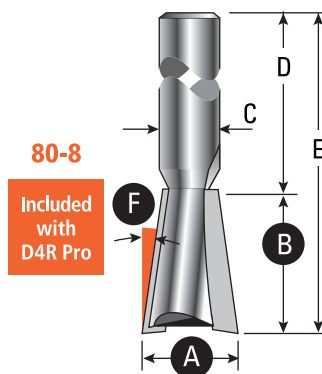
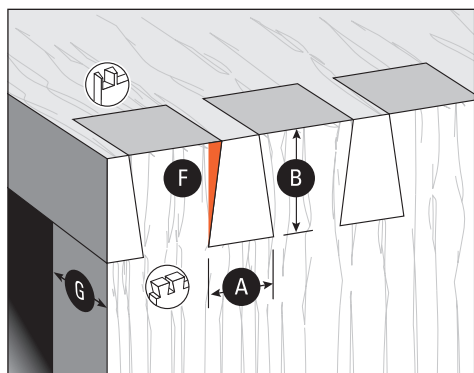
BITS	A Overall Diameter	B/G Cutting Depth Range	C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
No. 100	13/16" [20,6]	B 1" to 1-1/4"* [26,0-32,0*]	1/2" [12,7]	1-3/4" [45,0]	3" [76,0]	8°	716C or 5/8" [15,9]
No. 150	7/16" [11,1]	G 1/8" to 1-1/4"* [3,0-32,0*]	1/2" [12,7]	1-3/4" [45,0]	3" [76,0]	-	716C or 5/8" [15,9]



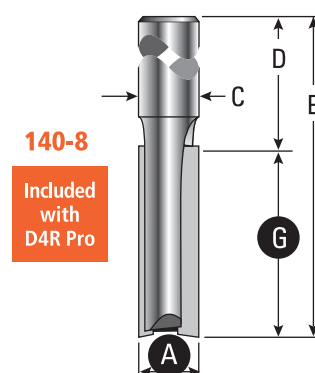
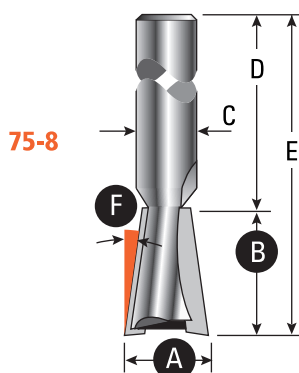
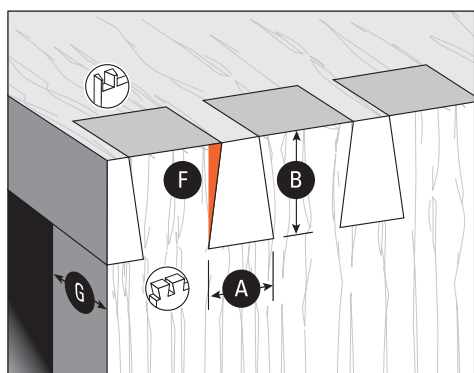
Bits	A Overall Diameter	B/G Cutting Depth Range	C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
No. 90	11/16" [17,5]	B 5/8" to 1" [16,0-26,0]	1/2" [12,7]	1-3/4" [45,0]	2-3/4" [70,0]	8°	716C or 5/8" [15,9]
No. 160	1/2" [12,7]	G 1/8" to 1-1/4"* [3,0-32,0*]	1/2" [12,7]	1-3/4" [45,0]	3" [76,0]	-	716C or 5/8" [15,9]

Numbers in brackets are millimeters *An extra step is required to rout joints with a cutting depth greater than 1"[26,0]

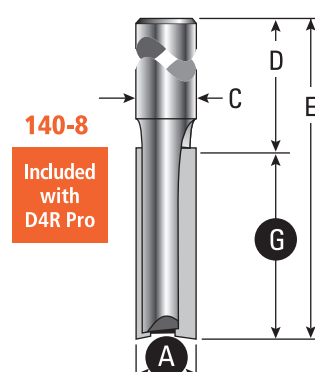
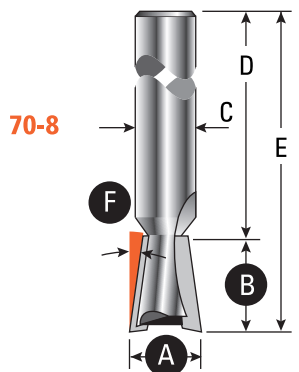
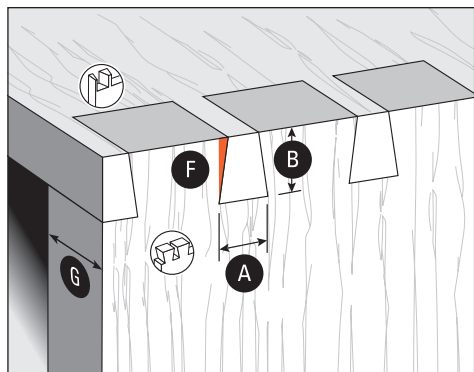
Note: Bit and joint drawings are about actual size.



BITS	A Overall Diameter	B / G Cutting Depth Range	C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
No. 80-8*	1/2" [12,7]	B 1/2" to 13/16" [13,0-20,6]	8mm (or 1/4")	1-3/4" [45,0]	2-9/16" [65,0]	8°	e7 or 7/16"[11,1]
No. 140-8*	5/16" [7,9]	G 1/8" to 1" [3,0-26,0]	8mm (or 1/4")	1-3/4" [45,0]	2-3/4" [70,0]	-	e7 or 7/16"[11,1]



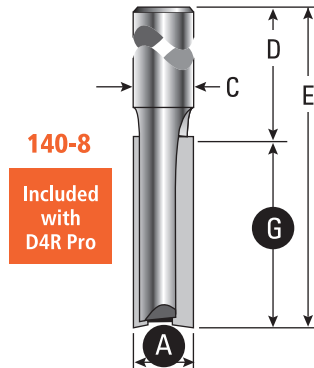
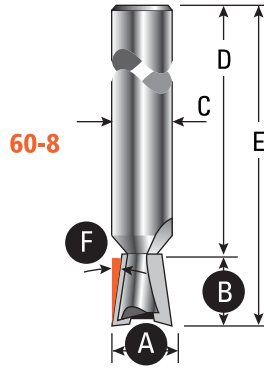
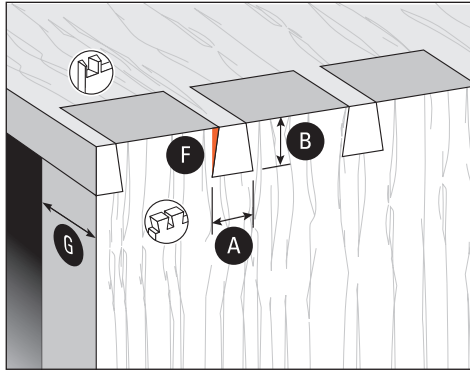
BITS	A Overall Diameter	B / G Cutting Depth Range	C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
No. 75-8	7/16" [11,1]	B 3/8" to 5/8" [9,5-16,0]	8mm (or 1/4")	1-3/4" [45,0]	2-3/8" [60,0]	8°	e7 or 7/16"[11,1]
No. 140-8*	5/16" [7,9]	G 1/8" to 1" [3,0-26,0]	8mm (or 1/4")	1-3/4" [45,0]	2-3/4" [70,0]	-	e7 or 7/16"[11,1]



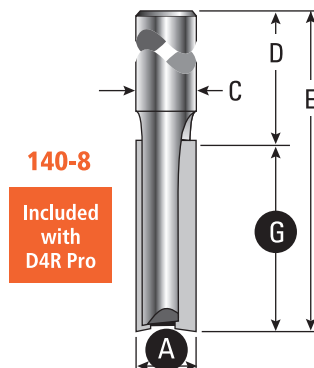
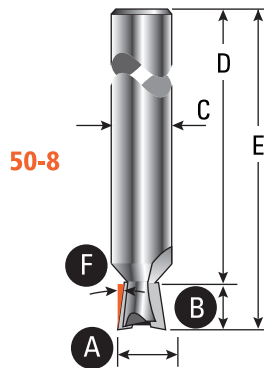
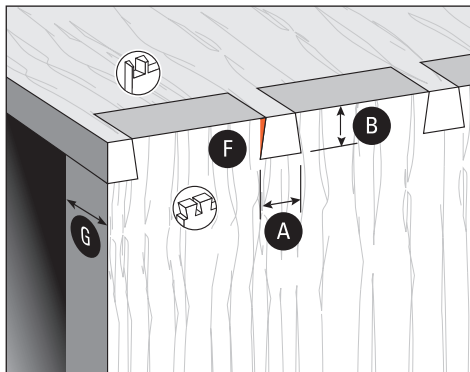
BITS	A Overall Diameter	B / G Cutting Depth Range	C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
No. 70-8	3/8" [9,5]	B 1/4" to 1/2" [6,0-13,0]	8mm (or 1/4")	1-3/4" [45,0]	2-1/4" [57,0]	8°	e7 or 7/16"[11,1]
No. 140-8*	5/16" [7,9]	G 1/8" to 1" [3,0-26,0]	8mm (or 1/4")	1-3/4" [45,0]	2-3/4" [70,0]	-	e7 or 7/16"[11,1]

Numbers in brackets are millimeters

* Bits 80-8, 120-8, and 140-8 come standard with the Leigh D4R Pro



Bits	A Overall Diameter	B/G Cutting Depth Range	C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
No. 60-8	5/16" [7,9]	B 1/8" to 3/8" [3,0-9,5]	8mm (or 1/4")	1-3/4" [45,0]	2-1/8" [54,0]	8°	e7 or 7/16"[11,1]
No. 140-8*	5/16" [7,9]	G 1/8" to 1" [3,0-26,0]	8mm (or 1/4")	1-3/4" [45,0]	2-3/4" [70,0]	-	e7 or 7/16"[11,1]



Bits	A Overall Diameter	B/G Cutting Depth Range	C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
No. 50-8	1/4" [6,35]	B 1/8" to 1/4" [3,0-6,35]	8mm (or 1/4")	1-3/4" [45,0]	2" [50,0]	8°	e7 or 7/16"[11,1]
No. 140-8*	5/16" [7,9]	G 1/8" to 1" [3,0-26,0]	8mm (or 1/4")	1-3/4" [45,0]	2-3/4" [70,0]	-	e7 or 7/16"[11,1]

Numbers in brackets are millimeters

* Bits 80-8, 120-8, and 140-8 come standard with the Leigh D4R Pro

Half-Blind Dovetail Bit Selection

Bits:

The same dovetail bit routs both parts of a half-blind dovetail.

Flush Drawers:

The dovetail bit's working depth of cut (B) must be less than the pin board thickness (1) for flush drawers by at least $\frac{1}{8}$ " [2mm].

Rabbeted Drawers:

The dovetail bit's working depth of cut (B) must be about $\frac{1}{16}$ " [1mm] less than the rabbet depth (2) for rabbeted drawer fronts.

Drawer Sides (Tail Board):

Minimum thickness is $\frac{1}{4}$ " [6mm]. Drawer side thickness (3) does not affect bit selection.

Note: (B) is the nominal working depth for half-blind dovetails, not the maximum depth. (B) must not be varied, except for minor adjustments for joint fit. See page 37.

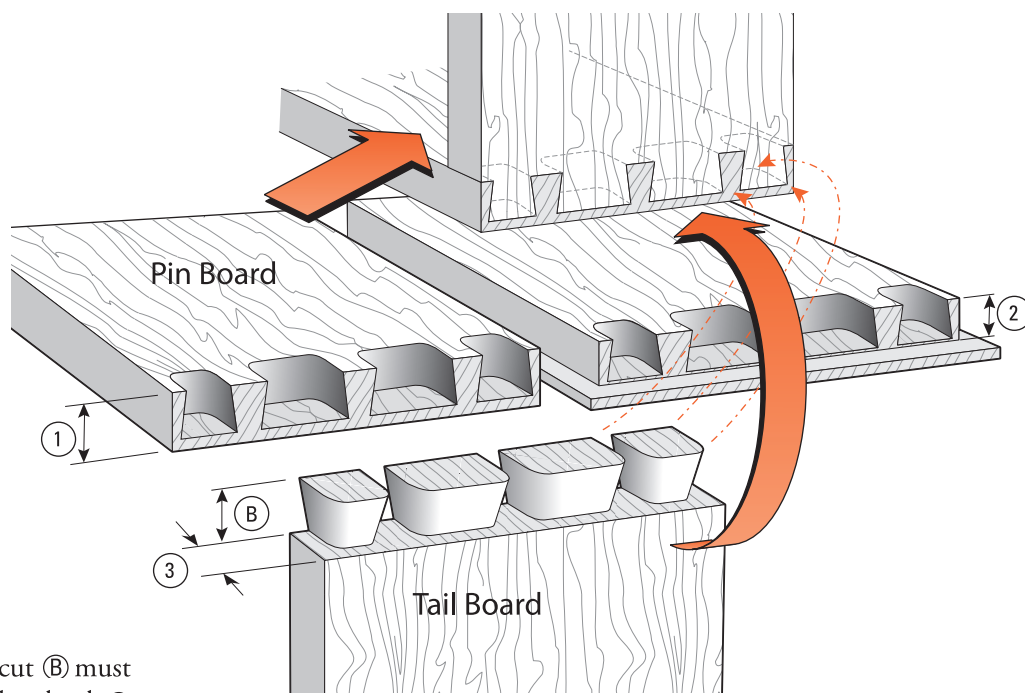
Selecting the Bit

Measure the drawer front thickness (minimum $\frac{1}{2}$ " [12mm]) (1) or rabbet depth (minimum $\frac{7}{16}$ " [11mm]) (2).

Select a bit with the appropriate depth of cut (B) from the following pages. *Can I use any dovetail bit?* No, all half-blind bits must be $\frac{1}{2}$ " [12,7mm] diameter. As the angle changes, so does the depth of cut. Using bits that are a different angle and diameter will result in joints that don't fit, and could damage the jig.

Guidebush

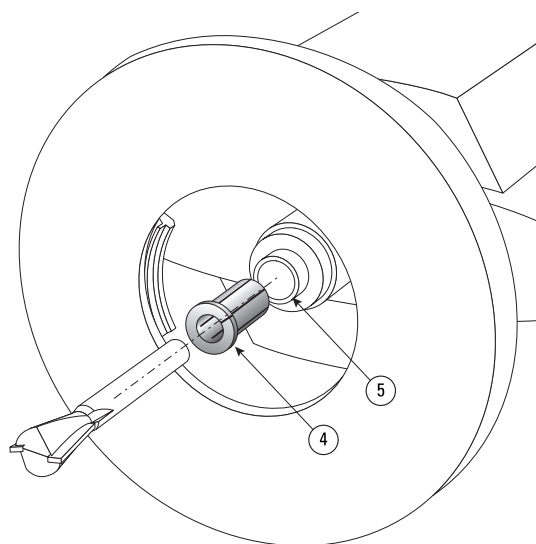
All 8mm shank half-blind dovetail bits listed in this appendix work with the e7-Bush ($\frac{7}{16}$ " OD [11,1mm]) supplied with your Leigh jig, or any $\frac{7}{16}$ " OD [11,1mm] guidebush. No other guidebush sizes can be used for half-blind dovetails. See page 70.



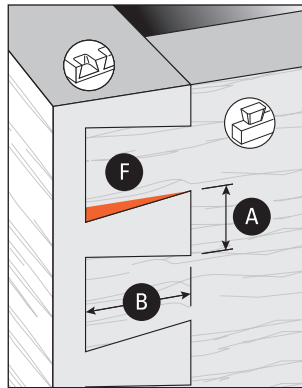
Shank Selection

The Leigh D4R Pro comes with two half-blind bits with 8mm shanks, plus a $\frac{1}{2}$ " [12,7mm] to 8mm collet reducer. The reducer (4) simply slides into the $\frac{1}{2}$ " [12,7mm] collet (5) of your router, and the 8mm shank bit is inserted into the collet reducer. The collet is tightened as normal. The collet reducer is not required with $\frac{1}{2}$ " [12,7mm] shank bits. For a $\frac{1}{2}$ " [12,7mm] collet you will require the included $\frac{1}{2}$ " [12,7mm] to 8mm collet reducer, No.172-8.

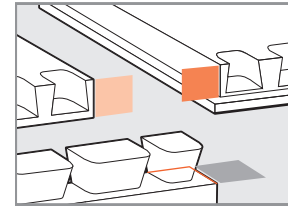
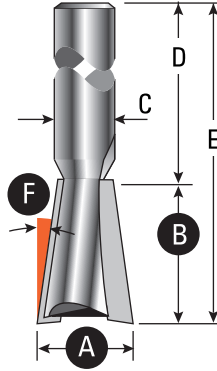
Note: (4) is a collet reducer, not a collet (5). The reducer does not replace the collet, it slides directly into your collet.



Leigh Half-Blind Dovetail Bits

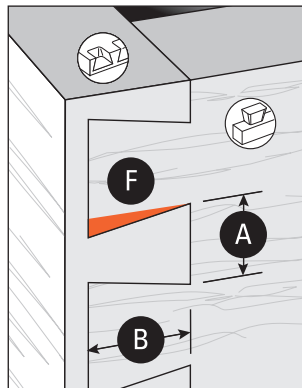


80-8
Included with D4R Pro

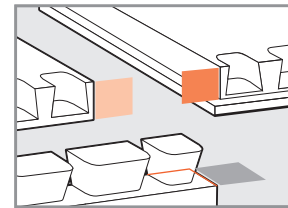
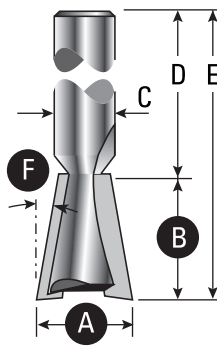


Pin board Flush Drawer Front	Pin board Rabbeted Drawer Front	Tail board Drawer Side
Min Thickness	Min Rabbet Depth	Min Thickness
HB Variable: 7/8" [22mm]	13/16" [20,5mm]	1/4" [6,5mm]
HB Single Pass: 35/64" [14mm]		

Bits	A Overall Diameter	B Working Depth		C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
		HB Variable	HB Single Pass					
No. 80-8*	1/2" [12,7]	~3/4" [19]	~27/64" [11]	8mm (or 1/4")	1-3/4" [44,0]	2-9/16" [65,0]	8°	e7 or 7/16" [11,1]

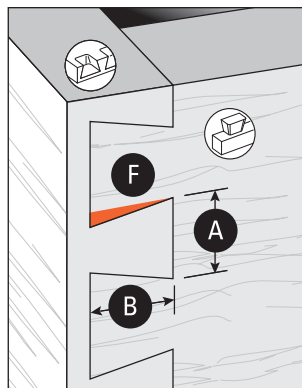


101-8

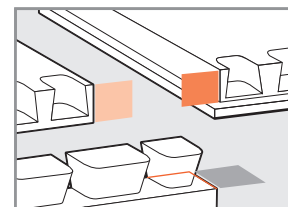
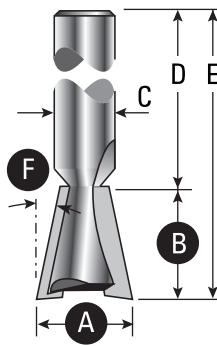


Pin board Flush Drawer Front	Pin board Rabbeted Drawer Front	Tail board Drawer Side
Min Thickness	Min Rabbet Depth	Min Thickness
HB Variable: 3/4" [19mm]	11/16" [17,5mm]	1/4" [6,5mm]
HB Single Pass: 31/64" [12,3mm]		

Bits	A Overall Diameter	B Working Depth		C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
		HB Variable	HB Single Pass					
No. 101-8	1/2" [12,7]	~5/8" [15,9]	~23/64" [9]	8mm (or 1/4")	1-3/4" [44,0]	2-3/8" [60,0]	10°	e7 or 7/16" [11,1]



112-8



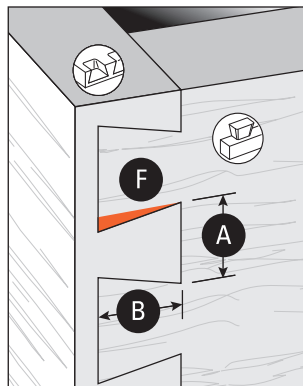
Pin board Flush Drawer Front	Pin board Rabbeted Drawer Front	Tail board Drawer Side
Min Thickness	Min Rabbet Depth	Min Thickness
HB Variable: 5/8" [15,9mm]	9/16" [14,5mm]	1/4" [6,5mm]
HB Single Pass: 27/64" [10,7mm]		

Bits	A Overall Diameter	B Working Depth		C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
		HB Variable	HB Single Pass					
No. 112-8	1/2" [12,7]	~1/2" [12,7]	~19/64" [7,5]	8mm (or 1/4")	1-3/4" [44,0]	2-21/64" [59,0]	12°	e7 or 7/16" [11,1]

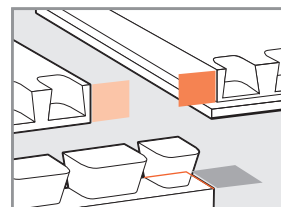
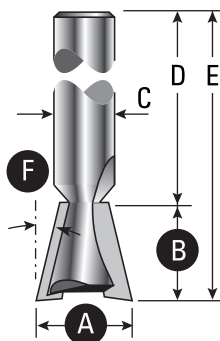
Numbers in brackets are millimeters

* Bits 80-8, 120-8, and 140-8 come standard with the Leigh D4R Pro

Note: Bit and joint drawings are about actual size.

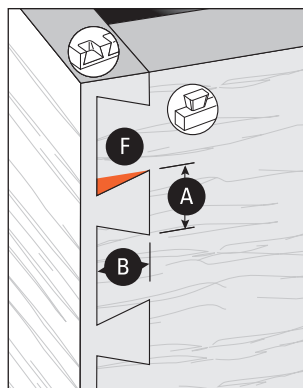


120-8
Included with D4R Pro

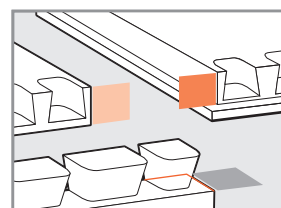
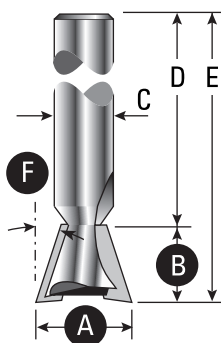


Pin board Flush Drawer Front	Pin board Rabbeted Drawer Front	Tail board Drawer Side
Min Thickness	Min Rabbet Depth	Min Thickness
HB Variable: 9/16" [14,5mm] HB Single Pass: 3/8" [10,3mm]	1/2" [12,7mm]	1/4" [6,5mm]

Bits	A Overall Diameter	B Working Depth		C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
		HB Variable	HB Single Pass					
No. 120-8*	1/2" [12,7]	~7/16" [11,0]	~1/4" [6,35]	8mm (or 1/4")	1-3/4" [44,0]	2-1/4" [57,0]	14°	e7 or 7/16" [11,1]



128-8



Pin board Flush Drawer Front	Pin board Rabbeted Drawer Front	Tail board Drawer Side
Min Thickness	Min Rabbet Depth	Min Thickness
HB Variable: 1/2" [12,7mm] HB Single Pass: 5/16" [8mm]	7/16" [11mm]	1/4" [6,5mm]

Bits	A Overall Diameter	B Working Depth		C Shank Diameters	D Shank Length	E Overall Length	F Angle	Guidebush Diameter
		HB Variable	HB Single Pass					
No. 128-8	1/2" [12,7]	~3/8" [9,5]	~3/16" [5]	8mm (or 1/4")	1-3/4" [44,0]	2-1/8" [54,0]	18°	e7 or 7/16" [11,1]

Numbers in brackets are millimeters

* Bits 80-8, 120-8, and 140-8 come standard with the Leigh D4R Pro

