

RTJ400 OPERATION

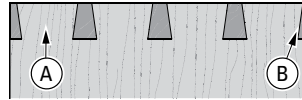
CHAPTER 16

Quick Reference

Board Width Selection for Dovetails

Through Dovetails (Full Pitch)

Board widths are based on the number of full tails (A) in your design. Board edges should always end in a half-pin (B).



Board Width Selection for Through Dovetails											
No. of Tails	1	2	3	4	5	6	7	8	9	10	
Inches	Min	1 7/16"	3"	4 9/16"	6 1/8"	7 11/16"	9 1/4"	10 13/16"	12 3/8"	13 15/16"	15 1/2"
	Exact	1 1/16"	3 1/8"	4 11/16"	6 1/4"	7 13/16"	9 3/8"	10 15/16"	12 1/2"	14 1/16"	15 5/8"
	Max	1 15/16"	3 1/2"	5 1/16"	6 3/8"	8 3/16"	9 3/4"	11 5/16"	12 7/8"	14 7/16"	16"
Millimeters	Min	37	76	116	156	196	235	275	315	355	394
	Exact	40	80	119	159	199	239	278	318	358	398
	Max	49	89	129	169	208	248	288	328	367	407

Half-Pitch Through Dovetails

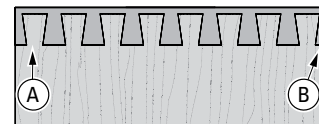
Board widths are based on the number of full tails (A) in your design. Board edges should always end in a half-pin (B).



Board Width Selection for Half Pitch Through Dovetails																					
No. of Tails	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Inches	Min	2 3/32"	1 1/2"	2 7/32"	3 1/16"	3 27/32"	4 3/8"	5 11/32"	6 3/16"	6 31/32"	7 3/4"	8 17/32"	9 3/16"	10 3/32"	10 7/8"	11 21/32"	12 7/16"	13 7/32"	14"	14 29/32"	15 9/16"
	Exact	2 5/32"	1 9/16"	2 11/32"	3 1/8"	3 29/32"	4 11/16"	5 15/32"	6 1/4"	7 1/32"	7 13/16"	8 19/32"	9 3/8"	10 5/32"	10 15/16"	11 23/32"	12 1/2"	13 3/32"	14 1/16"	14 27/32"	15 5/8"
	Max	2 9/32"	1 11/16"	2 15/32"	3 1/4"	4 1/32"	4 13/16"	5 19/32"	6 3/8"	7 5/32"	7 15/16"	8 23/32"	9 1/2"	10 9/32"	11 1/16"	11 27/32"	12 5/8"	13 13/32"	14 3/16"	14 31/32"	15 3/4"
Millimeters	Min	18	38	58	77	97	117	137	156	176	196	216	235	255	275	295	314	334	354	374	393
	Exact	20	40	59	79	99	119	138	158	178	198	217	237	257	277	296	316	336	356	375	395
	Max	23	43	62	82	102	122	141	161	181	201	220	240	260	280	299	319	339	359	378	398

Half-Blind Dovetails

Board widths are based on the number of full tails (A) in the joint design. Board edges always end with a half pin (B). Board widths in the chart below may be increased by 1/4" [6mm] or decreased by 1/8" [3mm] if required.

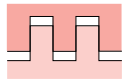


Board Width Selection for Half-Blind Dovetails																					
No. of Tails	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Inches	Min	2 1/32"	1 7/16"	2 7/32"	3"	3 29/32"	4 9/16"	5 11/32"	6 1/8"	6 29/32"	7 11/16"	8 15/32"	9 1/4"	10 1/32"	10 13/16"	11 19/32"	12 3/8"	13 3/32"	13 15/16"	14 23/32"	15 1/2"
	Exact	2 5/32"	1 9/16"	2 11/32"	3 1/8"	3 29/32"	4 11/16"	5 15/32"	6 1/4"	7 1/32"	7 13/16"	8 19/32"	9 3/8"	10 5/32"	10 15/16"	11 23/32"	12 1/2"	13 3/32"	14 1/16"	14 27/32"	15 5/8"
	Max	1 1/32"	1 13/16"	2 19/32"	3 3/8"	4 3/32"	4 13/16"	5 23/32"	6 1/2"	7 3/32"	8 1/16"	8 27/32"	9 3/8"	10 13/32"	11 3/16"	11 31/32"	12 3/4"	13 17/32"	14 3/16"	15 3/32"	15 7/8"
Millimeters	Min	17	37	56	76	96	116	136	155	175	195	215	234	254	274	294	313	333	353	373	392
	Exact	20	40	60	79	99	119	139	158	178	198	217	237	257	277	297	316	336	356	376	395
	Max	26	45	65	85	105	124	144	164	184	203	223	243	263	282	302	322	342	361	381	401

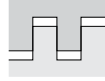
Board Width Selection for Box Joints

3/8" Box Joints

Board widths are determined by the total number of pins and sockets in the joint design and whether the joint is symmetrical or asymmetrical. Use this chart to determine board widths up to 16" [406mm].



Symmetrical Joints have a full pin at each board edge. The total number of pins and sockets is always an odd number.



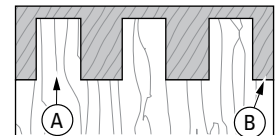
Asymmetrical joints have a full pin on one edge and a full socket on the other edge. The total number of pins and sockets is always an even number.

Symmetrical Board Width Chart for 3/8" Box Joints																				
Total Pins & Sockets	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41
Inches	1 1/32"	1 1/16"	2 23/32"	3 1/2"	4 9/32"	5 1/16"	5 27/32"	6 3/8"	7 13/32"	8 3/16"	8 31/32"	9 3/4"	10 17/32"	11 3/16"	12 3/32"	12 7/8"	13 21/32"	14 7/16"	15 7/32"	16
Millimeters	29	49	69	89	109	129	148	168	188	208	228	248	267	287	307	327	347	367	387	406

Asymmetrical Board Width Chart for 3/8" Box Joints																			
Total Pins & Sockets	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Inches	1 9/16"	2 11/32"	3 1/8"	3 29/32"	4 11/16"	5 15/32"	6 1/4"	7 1/32"	7 13/16"	8 19/32"	9 3/8"	10 5/32"	10 15/16"	11 23/32"	12 1/2"	13 3/32"	14 1/16"	14 27/32"	15 5/8"
Millimeters	40	60	79	99	119	139	159	179	198	218	238	258	279	298	318	337	357	377	397

3/8" Half-Blind Box Joints

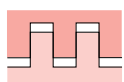
Board widths are based on the number of full tails (A) in the joint design. Board edges always end with a half pin (B). Board widths may be increased by 1/4" [6mm] or decreased by 1/8" [3mm] if required.



Board Width Selection for 3/8" Half-Blind Box Joints																					
No. of Tails	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Inches	Min	2 1/32"	1 7/16"	2 7/32"	3"	3 25/32"	4 9/16"	5 11/32"	6 1/8"	6 29/32"	7 11/16"	8 15/32"	9 1/4"	10 1/32"	10 13/16"	11 19/32"	12 3/8"	13 5/32"	13 15/16"	14 23/32"	15 1/2"
	Exact	2 5/32"	1 3/16"	2 11/32"	3 1/8"	3 29/32"	4 11/16"	5 15/32"	6 1/4"	7 1/32"	7 13/16"	8 19/32"	9 3/8"	10 5/32"	10 15/16"	11 23/32"	12 1/2"	13 9/32"	14 1/16"	14 27/32"	15 5/8"
	Max	1 1/32"	1 13/16"	2 19/32"	3 3/8"	4 3/32"	4 15/16"	5 23/32"	6 1/2"	7 3/32"	8 1/16"	8 27/32"	9 5/8"	10 13/32"	11 3/16"	11 31/32"	12 3/4"	13 17/32"	14 3/16"	15 3/32"	15 7/8"
No. of Tails	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Millimeters	Min	17	37	56	76	96	116	136	155	175	195	215	234	254	274	294	313	333	353	373	392
	Exact	20	40	60	79	99	119	139	158	178	198	217	237	257	277	297	316	336	356	376	395
	Max	26	45	65	85	105	124	144	164	184	203	223	243	263	282	302	322	342	361	381	401

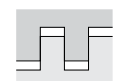
3/4" Box Joints

Board widths are determined by the total number of pins and sockets in the joint design and whether the joint is symmetrical or asymmetrical. Use this chart to determine board widths up to 15 5/8" [397mm].



Symmetrical Joints have a full pin at each board edge. Total no. of pins and sockets is always an odd number.

Symmetrical Board Width Chart for 3/4" Box Joints									
Total Pins & Sockets	3	5	7	9	11	13	15	17	19
Inches	2 1/32"	3 29/32"	5 15/32"	7 1/32"	8 19/32"	10 5/32"	11 23/32"	13 3/32"	14 27/32"
Millimeters	60	99	139	179	218	258	298	337	377



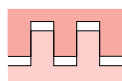
Asymmetrical joints have a full pin on one edge and a full socket on the other edge. Total no. of pins and sockets is always an even number.

Asymmetrical Board Width Chart for 3/4" Box Joints									
Total Pins & Sockets	4	6	8	10	12	14	16	18	20
Inches	3 1/8"	4 11/16"	6 1/4"	7 13/16"	9 3/8"	10 15/16"	12 1/2"	14 1/16"	15 5/8"
Millimeters	79	119	159	198	238	278	318	357	397

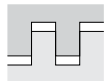
Board Width Selection for Box Joints cont.

3/16" Box Joints

Board widths are determined by the total number of pins and sockets in the joint design and whether the joint is symmetrical or asymmetrical. Use this chart to determine board widths up to 8" [203mm] for 3/16" joints. For wider boards, see leightools.com.



Symmetrical Joints have a full pin at each board edge. The total number of pins and sockets will always be an odd number.



Asymmetrical Joints have a full pin at one edge and a full socket at the other. The total number of pins and sockets will always be an even number.

Symmetrical Board Width Chart for 3/16" Box Joints

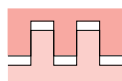
Total Pins & Sockets	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41
Inches	1/16"	3/32"	1 11/32"	1 3/4"	2 1/8"	2 17/32"	2 29/32"	3 3/16"	3 11/16"	4 3/32"	4 15/32"	4 7/8"	5 1/4"	5 21/32"	6 1/32"	6 7/16"	6 13/16"	7 7/32"	7 19/32"	8"
Millimeters	14	25	34	44	54	64	74	84	94	104	114	124	133	144	153	164	173	183	193	203

Asymmetrical Board Width Chart for 3/16" Box Joints

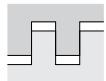
Total Pins & Sockets	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Inches	25/32"	1 1/32"	1 1/16"	1 13/16"	2 11/32"	2 23/32"	3 1/8"	3 1/2"	3 29/32"	4 9/32"	4 11/16"	5 1/16"	5 15/32"	5 27/32"	6 1/4"	6 3/8"	7 1/32"	7 13/32"	7 13/16"
Millimeters	20	29	40	49	60	69	79	89	99	109	119	129	139	148	159	168	179	188	198

3/32" Box Joints

Board widths are determined by the total number of pins and sockets in the joint design and whether the joint is symmetrical or asymmetrical. Use this chart to determine board widths up to 4" [102mm] for 3/32" joints. For wider boards, see leightools.com.



Symmetrical Joints have a full pin at each board edge. The total number of pins and sockets will always be an odd number.



Asymmetrical Joints have a full pin at one edge and a full socket at the other. The total number of pins and sockets will always be an even number.

Symmetrical Board Width Chart for 3/32" Box Joints

Total Pins & Sockets	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41
Inches	9/32"	15/32"	1 1/16"	7/8"	1 1/16"	1 1/4"	1 15/32"	1 21/32"	1 27/32"	2 1/32"	2 1/4"	2 7/16"	2 5/8"	2 13/16"	3 1/32"	3 7/32"	3 13/32"	3 19/32"	3 13/16"	4
Millimeters	7	12	17	22	27	32	37	42	47	52	57	62	67	71	77	82	87	91	97	102

Asymmetrical Board Width Chart for 3/32" Box Joints

Total Pins & Sockets	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Inches	3/8"	9/16"	25/32"	31/32"	1 1/32"	1 11/32"	1 1/16"	1 3/4"	1 15/16"	2 1/8"	2 11/32"	2 17/32"	2 23/32"	2 29/32"	3 1/8"	3 3/16"	3 1/2"	3 11/16"	3 29/32"
Millimeters	10	15	20	25	29	34	40	44	49	54	60	64	69	74	79	84	89	94	99

