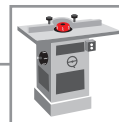


UC900 Raised Panel Door System

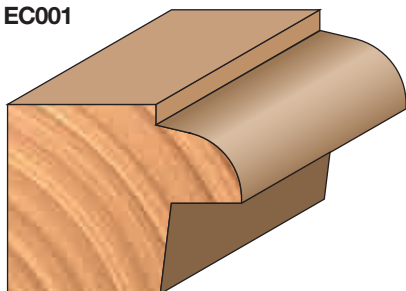


This one box contains all the cutters needed to make raised panel doors on a 3/4" shaper. Included is a set of male and female rail and stile door cutters for making door frames, a door lip cutter for inset doors, a glue joint cutter for gluing up panels, and a 2+2 raised panel cutter with our most popular profile. All the cutters come packaged in a wooden storage case with necessary shims included.

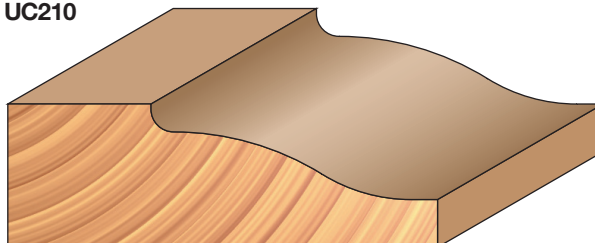
Cutter Type	Item Number	Overall Diameter	Cut Depth	Carbide Height	Tenon Thickness	Page Number
Door Lip Cutter	EC001	2-7/8"	29/64"	1-1/4"	—	284
Rev. Glue Joint	EC031	2-7/8"	5/32"	1-17/64"	—	279
Raised Panel	UC210	4-15/16"	—	23/32"	15/64"	306
Stile & Rail*	EC260	2-7/16"	15/64"	1"	15/64"	292

*Tenon Length = 7/16"

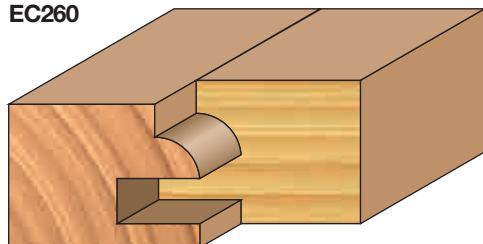
EC001



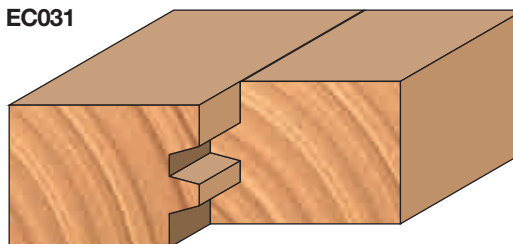
UC210



EC260



EC031





Futura 2000 Custom Door Shop Cutter Set

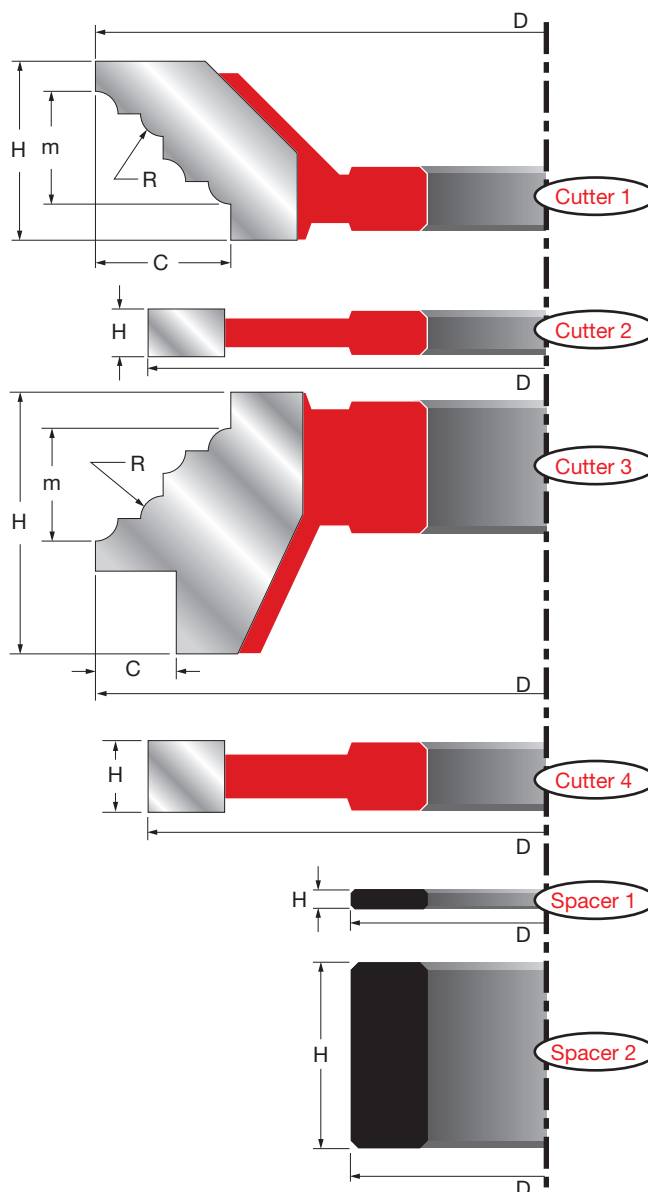


This set of cutters can shape doors from a wide range of stock. Stock from 5/8" to 2-1/8" can easily be shaped with the Futura 2000.

Each set contains four cutters: two two-wing profile cutters, one 1/4" four-wing grooving cutter, and one 3/8" four-wing grooving cutter. The profile cutters are reversed to cut the mating stile and rail profiles. The 1/4" and 3/8" groovers are stackable to cut mortises 1/4", 3/8", and 5/8" wide.

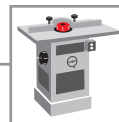
Also included are shims and spacers to adjust the cutters so they produce the precise tenon thickness desired to compensate for any change that occurs when the cutters are face ground.

The cutters come in a sturdy storage case. All cutters are 1-1/4" bore but may be bushed down for any spindle size down to 3/4".



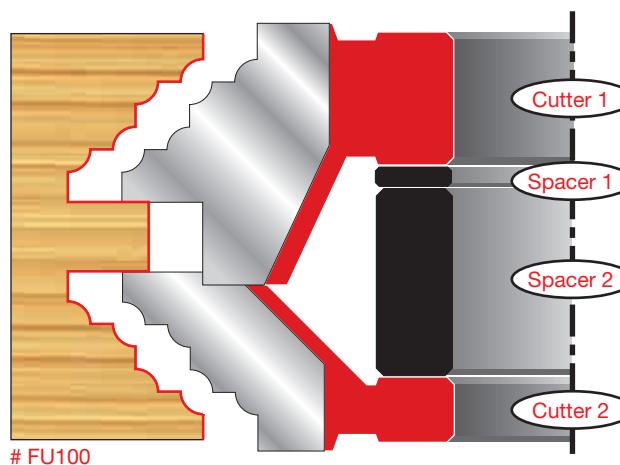
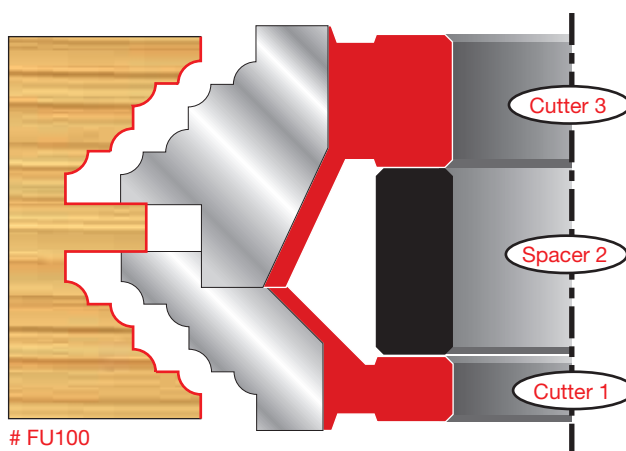
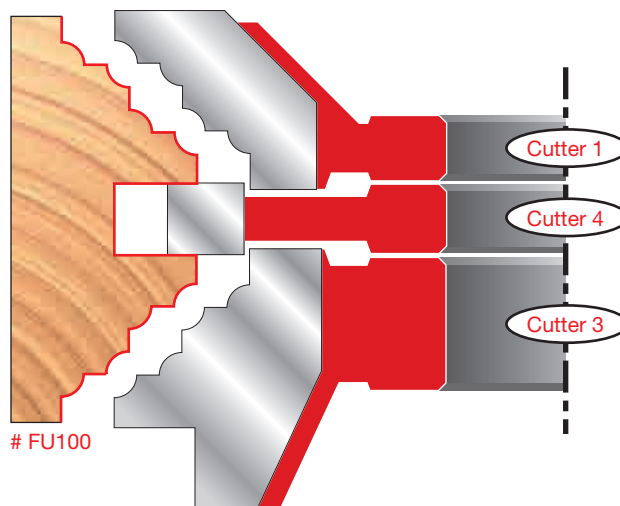
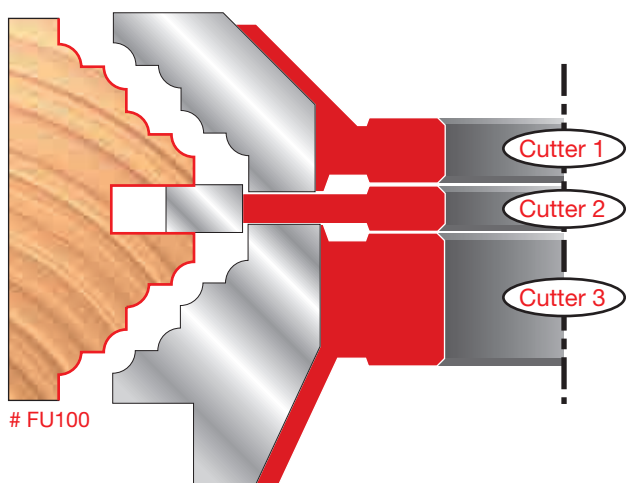
(Continued)

Futura 2000 Custom Door Shop Cutter Set



Item Number: FU100

Item Number	Overall Dia.(D)	Cut Depth(C)	Carbide Height(H)	Minor Height(m)	Tenon Length(L)	Large Radius(R1)	Number of Wings	Bore Dia.
Cutter 1	4-23/32"	45/64"	15/16"	19/32"	—	1/8"	2	1-1/4"
Cutter 2	4-11/16"	—	1/4"	—	—	—	4	1-1/4"
Cutter 3	4-23/32"	—	1-3/8"	19/32"	27/64"	1/8"	2	1-1/4"
Cutter 4	4-11/64"	—	3/8"	—	—	—	4	1-1/4"
Spacer 1	2-3/64"	—	1/8"	—	—	—	—	1-1/4"
Spacer 2	2-3/64"	—	63/64"	—	—	—	—	1-1/4"



Fixed Wing Cutters



313

SHAPER CUTTERS

freud®

Red Item Numbers Indicate 1-1/4" Bore

All Profile Drawings 1:1 Scale



Cassette 65



These cutters work together to produce over 65 different moldings including: beads, ogees, half rounds, corner rounds, rabbets, coves, grooves, crown molding, chair rail, and many more. By changing the height of the cutters, number of passes, and fence position, the number of possible moldings is endless. This set comes with three three-wing carbide tipped profile cutters, spacers and shims, all packed in a sturdy wooden storage case. For 3/4" bore order CS71MAA3, and for 1-1/4" bore order CS71MBA3.

Item Number: CS71MAA3 (3/4" Bore)

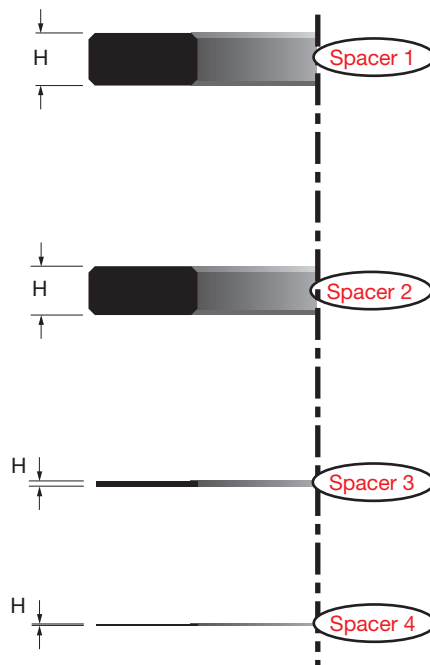
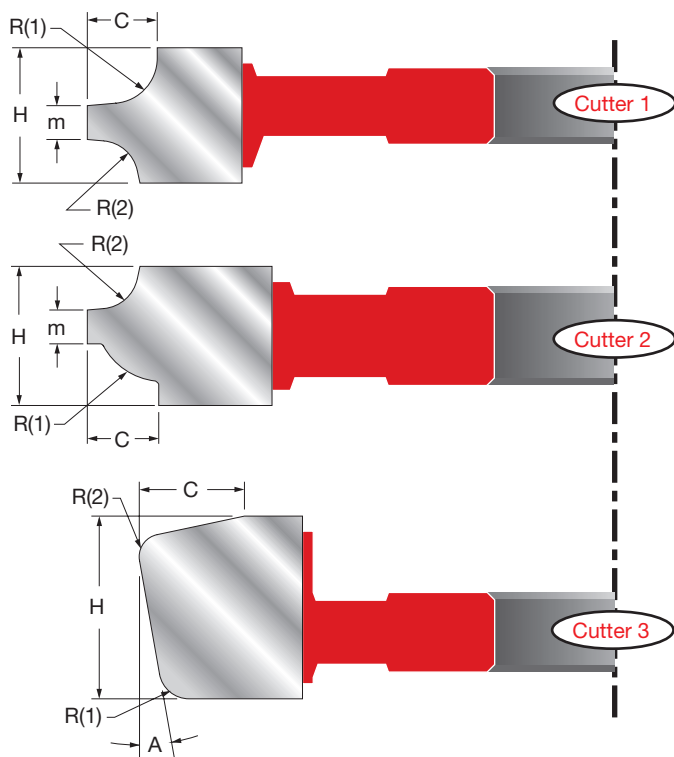
Item Number	Overall Dia.(D)	Cut Depth(C)	Carbide Height(H)	Minor Height(m)	Large Radius(R1)	Small Radius(R2)	Angle (A)
Cutter 1	3-15/16"	23/64"	45/64"	3/16"	15/64"	13/64"	—
Cutter 2	3-15/16"	3/8"	47/64"	3/16"	23/64"	13/64"	—
Cutter 3	3-13/32"	35/64"	61/64"	—	5/32"	1/8"	10°
Spacer 1	1-13/32"	—	19/64"	—	—	—	—
Spacer 2	1-13/32"	—	17/64"	—	—	—	—
Spacer 3	1-13/32"	—	3/64"	—	—	—	—
Spacer 4	1-13/32"	—	1/64"	—	—	—	—

Number of Wings = 3

Item Number: CS71MBA3 (1-1/4" Bore)

Item Number	Overall Dia.(D)	Cut Depth(C)	Carbide Height(H)	Minor Height(m)	Large Radius(R1)	Small Radius(R2)	Angle (A)
Cutter 1	5-1/2"	23/64"	45/64"	3/16"	15/64"	13/64"	—
Cutter 2	5-1/2"	3/8"	47/64"	3/16"	23/64"	13/64"	—
Cutter 3	4-31/32"	35/64"	61/64"	—	5/32"	1/8"	10°
Spacer 1	2-3/8"	—	19/64"	—	—	—	—
Spacer 2	2-3/8"	—	17/64"	—	—	—	—
Spacer 3	2-3/8"	—	3/64"	—	—	—	—
Spacer 4	2-3/8"	—	1/64"	—	—	—	—

Number of Wings = 3



(Continued)

Cassette 65



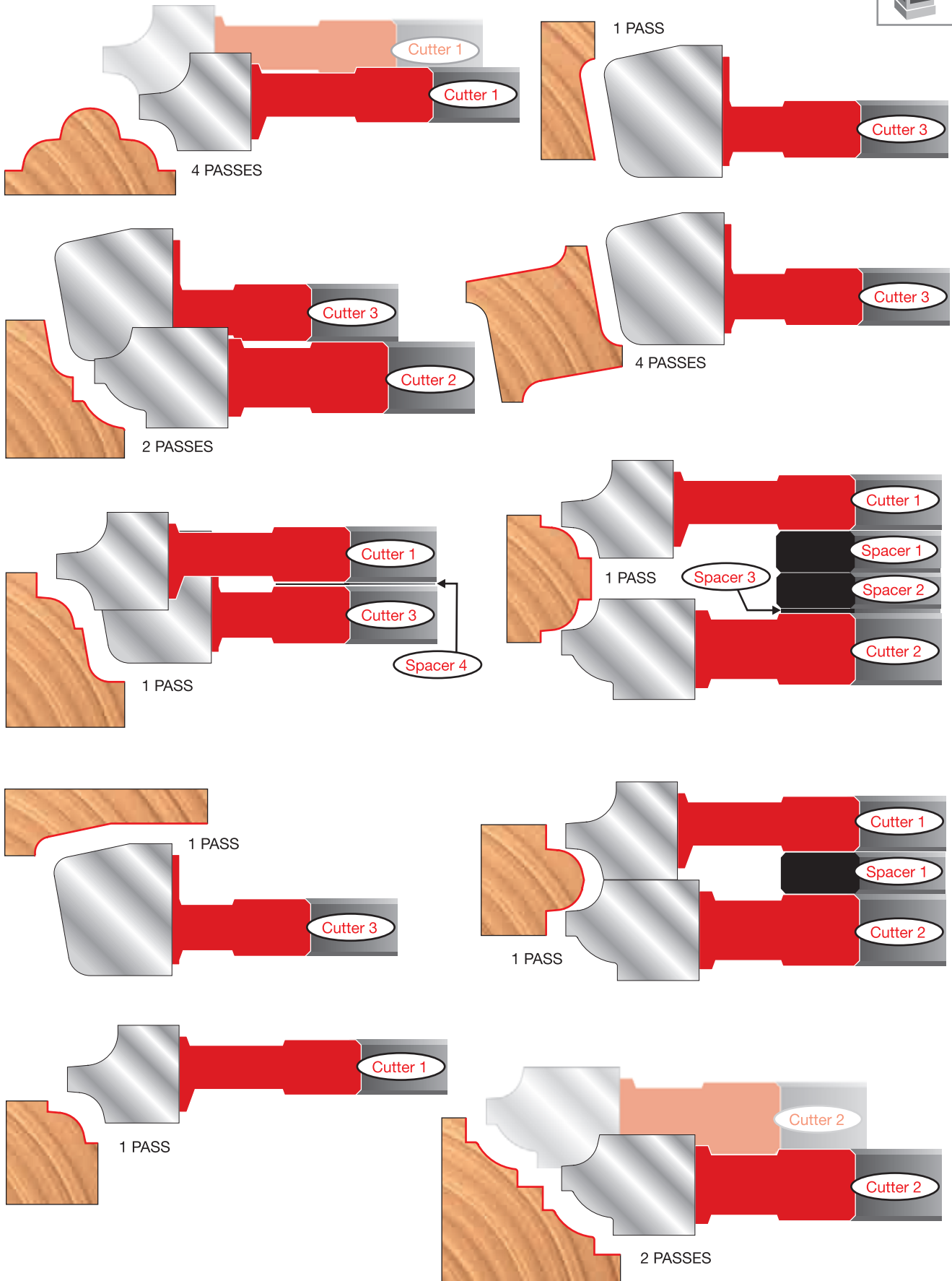
Fixed Wing Cutters



315

SHAPER CUTTERS

freud®



Red Item Numbers Indicate 1-1/4" Bore

All Profile Drawings 1:1 Scale



The Woodworking Box



These complete sets of four carbide tipped profile cutters will make many moldings and rails and stiles for raised panel doors. By combining different cutters, changing height and fence position, and making multiple passes the cutters can produce many different profiles. Profiles include: beads, ogees, half rounds, corner rounds, rabbets, coves, grooves, crown molding, chair rail, and many more. This set will also make rail and stile doors both in 3/4" stock and 1" stock with interlocking profiles.

This set is so versatile that it can make a complete raised panel door including the door lip. Set comes with four carbide tipped three-wing profile cutters, two spacers and an assortment of shims for precise cut adjustment. All of this comes in a sturdy wooden storage case.

Order WB101 for 3/4" bore, and WB102 for 1-1/4" bore.

Item Number: WB101 (3/4" Bore)

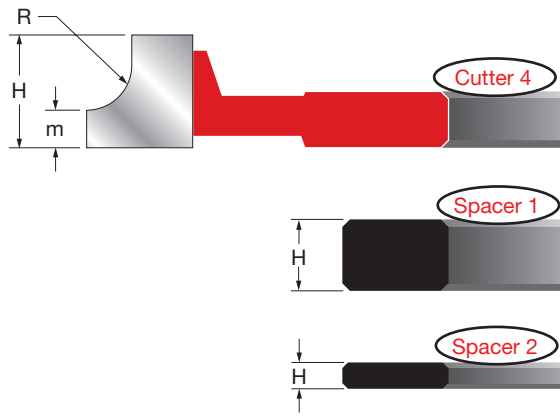
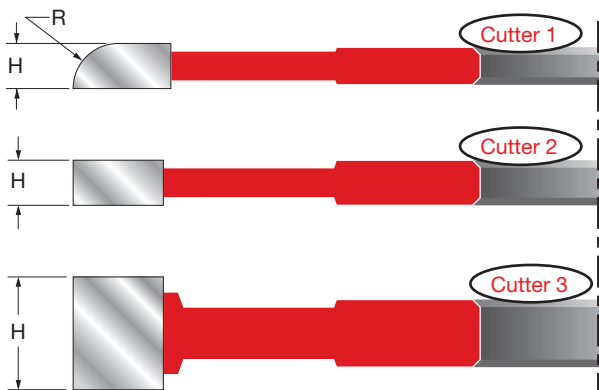
Item Number	Overall Dia.(D)	Carbide Height(H)	Minor Height(m)	Large Radius(R)	Rub Collar Number
Cutter 1	4-1/8"	15/64"	—	15/64"	RC601
Cutter 2	4-1/8"	15/64"	—	—	RC601
Cutter 3	4-1/8"	19/32"	—	—	RC601
Cutter 4	3-21/32"	19/32"	13/64"	15/64"	RC601
Spacer 1	1-37/64"	3/8"	—	—	RC601
Spacer 2	1-37/64"	9/64"	—	—	RC601

Number of Wings = 3

Item Number: WB102 (1-1/4" Bore)

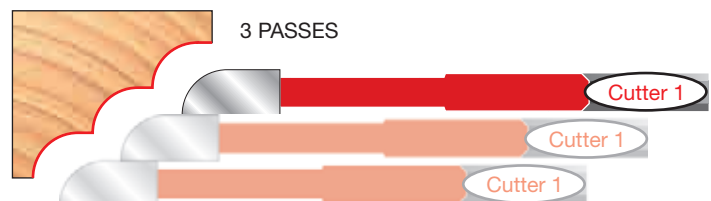
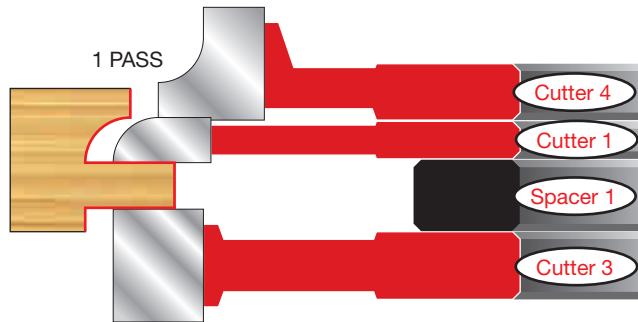
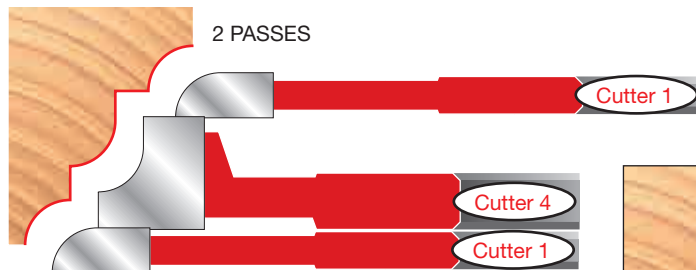
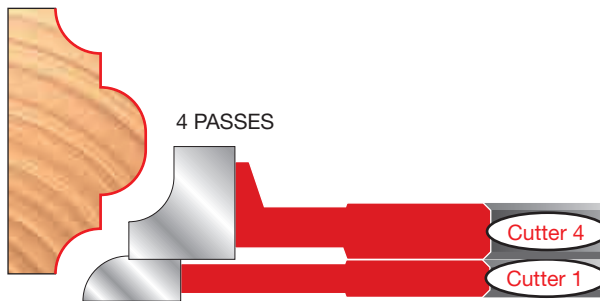
Item Number	Overall Dia.(D)	Carbide Height(H)	Minor Height(m)	Large Radius(R)	Rub Collar Number
Cutter 1	5-1/2"	15/64"	—	3/16"	RC701
Cutter 2	5-1/2"	15/64"	—	—	RC701
Cutter 3	5-1/2"	19/32"	—	—	RC701
Cutter 4	5-1/32"	19/32"	13/64"	15/64"	RC701
Spacer 1	2-3/8"	3/8"	—	—	RC701
Spacer 2	2-3/8"	9/64"	—	—	RC701

Number of Wings = 3



(Continued)

The Woodworking Box



Red Item Numbers Indicate 1-1/4" Bore

All Profile Drawings 1:1 Scale



Fixed Wing Cutters



SHAPER CUTTERS

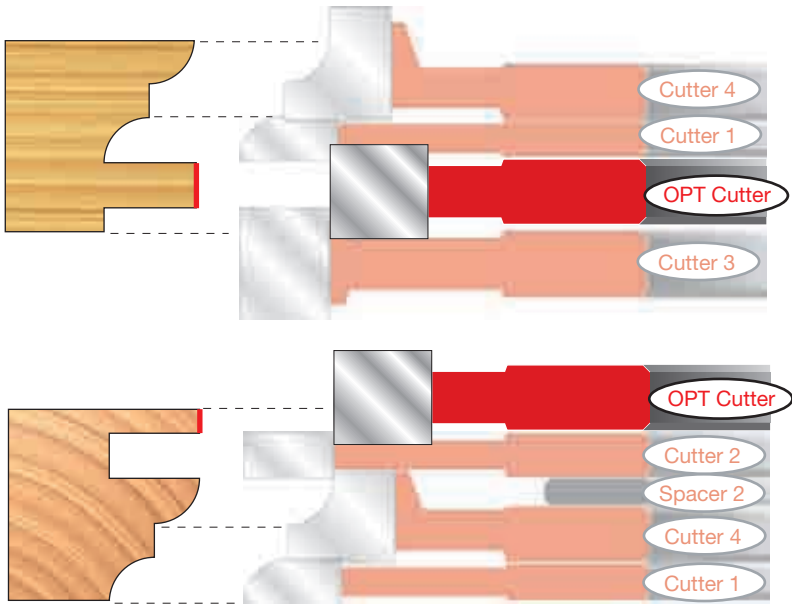
freud®



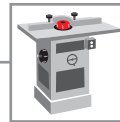
Optional Cutters For Woodworking Box

These optional cutters allow the Woodworking Box to be set up to fully clean the edge of the material while shaping. This eliminates the need for jointing the stock prior to shaping.

Item Number	Overall Dia.(D)	Carbide Height(H)	Number of Pieces	Number of Wings	Bore Diameter	Rub Collar Number
OPT101	3-3/16"	25/64"	1	3	3/4"	RC601
OPT102	4-9/16"	25/64"	1	3	1-1/4"	RC701



Bushing Selection



Freud Shaper Cutters can be fitted with bushings to allow the use of 1-1/4" bore cutters on spindles as small as 3/4". Single cutters require the use of a pair of flange bushings in the appropriate bore in order to lock the cutter onto the spindle. Multiple cutter stacks such as stile and rail cutter sets require flange bushings as well as center cutter bushings.

To determine which bushings are required, first determine the total thickness of the stacked cutter hubs, which is often equal to carbide height, and subtract the height of both flange bushings. The result is the maximum total height of center bushings required. Select bushing sizes that equal most nearly to this amount.

IMPORTANT: Never use center bushings that will equal or exceed the maximum total center bushing height.

Note that the Performance System® Stile and Rail cutter sets and Raised Panel cutter sets include center cutter bushings for 3/4" spindles and Freud 3/4" bore cutters include all necessary bushings for use on 1/2" spindles.

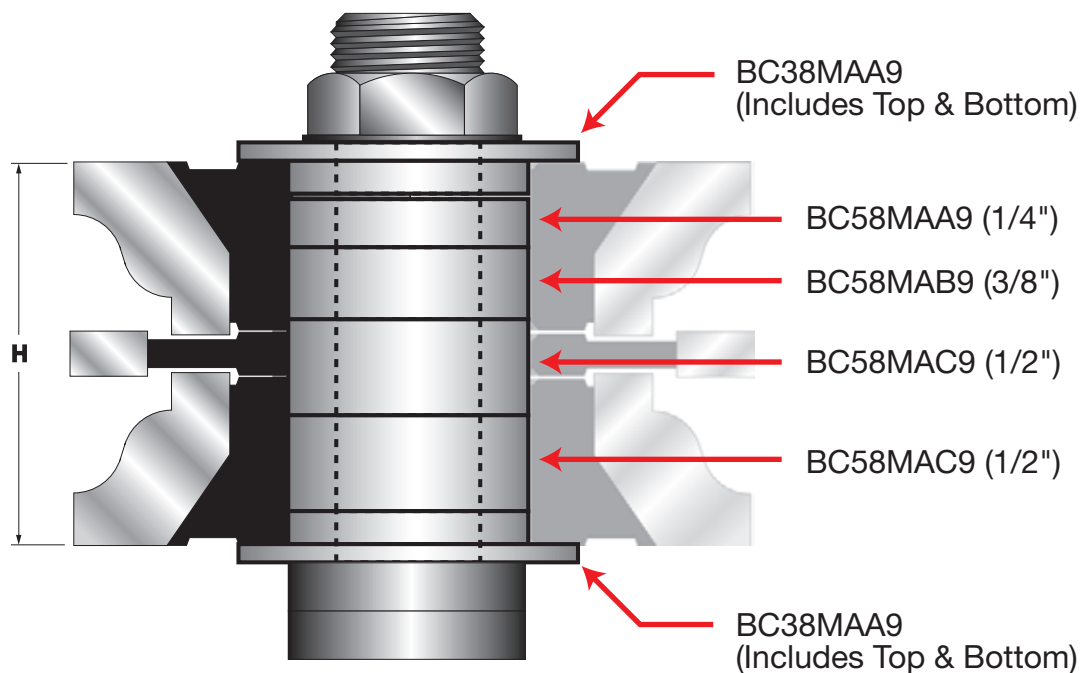
Example of Bushing UP275 to 3/4" Spindle:

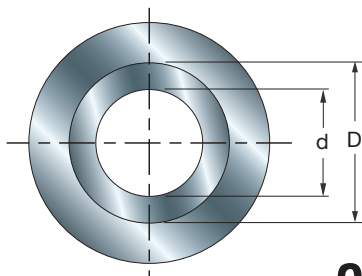
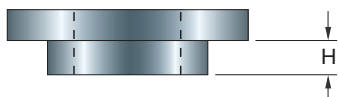
The carbide height of the UP275 is 23/64". After subtracting the height of the BC38MAA9 flange bushings, the maximum center bushing height is obtained:
 $23/64" - 11/64" - 11/64" = 145/64"$

By choosing one BC58MAA9, one BC58MAB9 and two BC58MAC9 center bushings the total center bushing height is:

$$1/4" + 3/8" + 1/2" + 1/2" = 15/8"$$

This will leave a space of only 1/16" and allow the cutters to be securely tightened on the spindle.

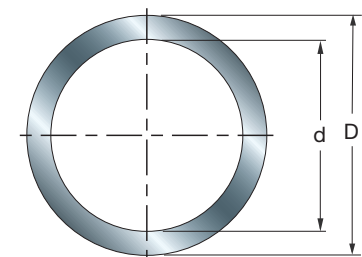




Flange Bushings

Freud's Standard Flange Bushings are manufactured to the highest precision to ensure a cut equal to that of the cutter without the bushing. Be sure to clean the cutter, bushing, and spindle prior to assembly.

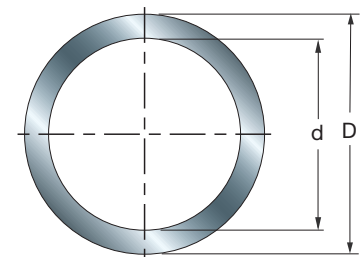
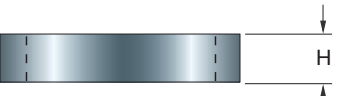
Item Number	Outside Dia.(D)	Height (H)	Bore Diameter(d)
BC20MAA9	1-1/4"	11/64"	20mm
BC30MAA9	1-1/4"	11/64"	30mm
BC36MAA9	1-1/4"	13/64"	1-1/8"
BC37MAA9	1-1/4"	15/64"	1"
BC38MAA9	1-1/4"	11/64"	3/4"
EC000	3/4"	3/16"	1/2"



Center Cutter Bushings

Freud's Center Cutter Bushings are manufactured to the highest precision to ensure a cut equal to that of the cutter without the bushing. These are designed for the center cutters of the male and female rail and stile sets. Be sure to clean the cutter, bushing, and spindle prior to assembly.

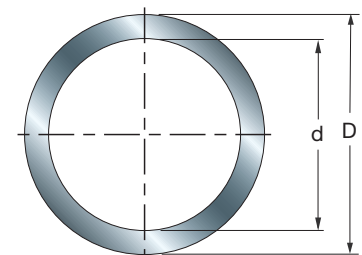
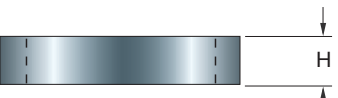
Item Number	Outside Dia.(D)	Height (H)	Bore Diameter(d)
BC56MAA9	1-1/4"	1/4"	1-1/8"
BC56MAB9	1-1/4"	3/8"	1-1/8"
BC56MAC9	1-1/4"	1/2"	1-1/8"
BC57MAA9	1-1/4"	1/4"	1"
BC57MAB9	1-1/4"	3/8"	1"
BC57MAC9	1-1/4"	1/2"	1"
BC58MAA9	1-1/4"	1/4"	3/4"
BC58MAB9	1-1/4"	3/8"	3/4"
BC58MAC9	1-1/4"	1/2"	3/4"



Cassette 65 Bushings

Use these bushings sets with the Cassette 65 Cutter Set. Be sure to clean the cutter, bushing, and spindle prior to assembly.

Item Number	Outside Dia.(D)	Height (H)	Number of Pieces	Bore Dia.(d)
BS71MAA9	1-1/4"	15/64", 9/32", & 3/8"	3	1-1/8"
BS71MAB9	1-1/4"	15/64", 9/32", & 3/8"	3	1"
BS71MBA9	3/4"	15/64", 9/32", & 3/8"	3	5/8"
BS71MBB9	3/4"	15/64", 9/32", & 3/8"	3	1/2"
BS71M030	1-1/4"	15/64", 9/32", & 3/8"	3	30mm

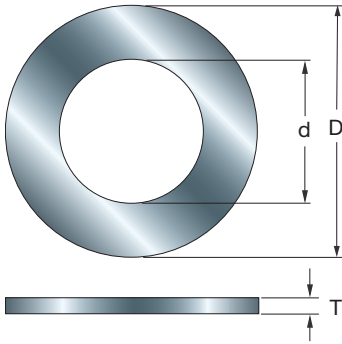


Woodworking Box Bushings

These bushings sets are designed for use with the Woodworking Box Cutter Set. Be sure to clean the cutter, bushing, and spindle prior to assembling.

Item Number	Outside Dia.(D)	Height (H)	Bore Diameter(d)
BS20MAA9	1-1/4"	3/16" (2), 15/64", 9/32", & 11/32"	20mm
BS30MAA9	1-1/4"	3/16" (2), 15/64", 9/32", & 11/32"	30mm
BS72MAA9	1-1/4"	3/16" (2), 15/64", 9/32", & 11/32"	1-1/8"
BS72MAB9	1-1/4"	3/16" (2), 15/64", 9/32", & 11/32"	1"
BS72MBA9	3/4"	3/16" (2), 15/64", 9/32", & 11/32"	5/8"
BS72MBB9	3/4"	3/16" (2), 15/64", 9/32", & 11/32"	1/2"

Shim Sets

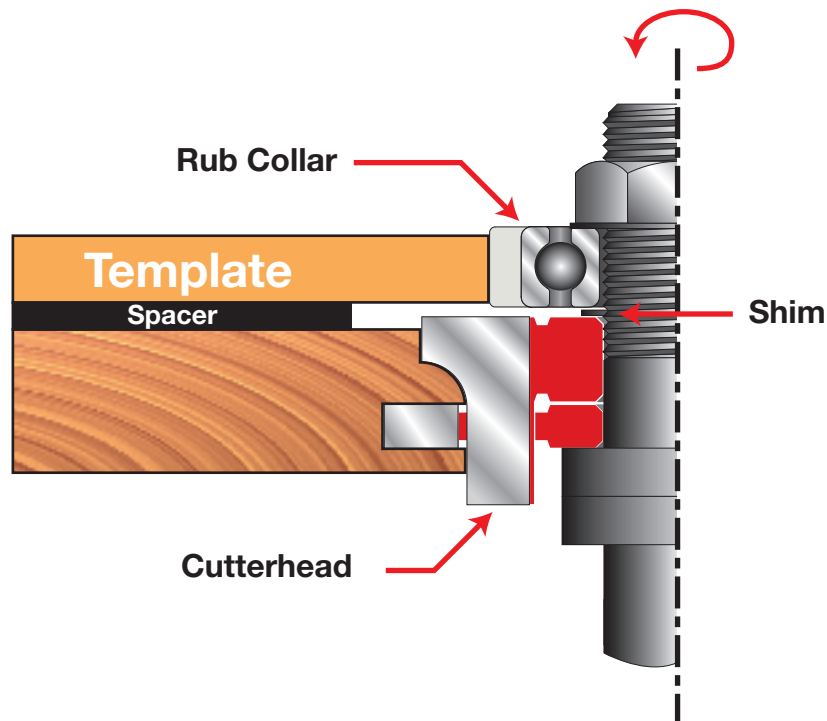


To adjust a cut for a precise fit, Freud's Precision Shim Set is a quick and easy solution. These shims allow adjustment of your cutter spacing by as little as .004" (1/250") up to .370".

Precision Shim Sets

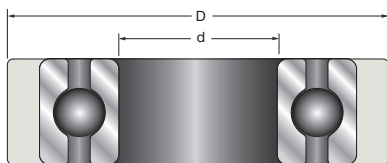
Item Number	Arbor	Outside Dia.(D)	Number of Each Thickness						
			.004	.008	.012	.020	.040	.142	.370
AN73MEA9	1-1/4"	1-7/8"	1	1	1	1	1	1	1
AN73MFA9	3/4"	1-5/16"	1	1	1	1	1	1	1

Rub Collar Setup & Selection Chart





Ball Bearing Rub Collars



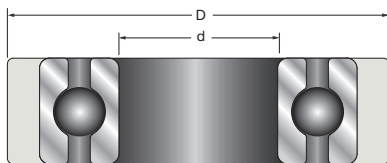
Freud's Ball Bearing Rub Collars are made using precision industrial ball bearings, and are ideal for doing template work or making cathedral doors.

Item Number	Outside Dia.(D)	Bore Dia.(d)
RC-001	48mm	3/4"
RC-002	1-3/4"	3/4"
RC-003	72mm	3/4"
RC101	2-1/4"	1-1/4"
RC102	2-1/4"	1-1/8"
RC105	2-1/4"	1/2"
RC201	2-1/2"	1-1/4"
RC202	2-1/2"	1-1/8"
RC205	2-1/2"	1/2"
RC301	2-3/4"	1-1/4"
RC302	2-3/4"	1-1/8"

Item Number	Outside Dia.(D)	Bore Dia.(d)
RC305	2-3/4"	1/2"
RC401	3"	1-1/4"
RC402	3"	1-1/8"
RC405	3"	1/2"
RC501	3-1/2"	1-1/4"
RC502	3-1/2"	1-1/8"
RC505	3-1/2"	1/2"
RC601	3-1/4"	3/4"
RC701	4-9/16"	1-1/4"
RSC-3	85mm	1-1/4"



Ball Bearing Rub Collars Reference Chart



Item Number	Rub Collar Number
EC091	RC-001
EC140	RC-003
EC141	RC-003
EC142	RC-003
EC143	RC-003
EC144	RC-003
EC146	RC-003
EC260	RC-001
EC266	RC-001
EC270	RC-001
EC274	RC-001
OPT101	RC601
OPT102	RC701
RP1000	RC10#
RP2000	RC10#
RS1000	RSC-#
RS2000	RSC-#
UC200	RC-002
UC201	RC-002
UC202	RC-002
UC203	RC-002
UC204	RC-002
UC207	RC-002
UC208	RC-002
UC209	RC-002
UC210	RC-002
UC211	RC-002
UC212	RC-002
UC213	RC-002
UC215	RC-002

Item Number	Rub Collar Number
UC221	RC-002
UC223	RC-002
UP016	RC10#
UP140	RC50#
UP141	RC50#
UP142	RC50#
UP143	RC50#
UP144	RC50#
UP145	RC50#
UP146	RC50#
UP147	RC50#
UP148	RC50#
UP149	RC50#
UP150	RC50#
UP151	RC50#
UP152	RC50#
UP153	RC50#
UP200	RC10#
UP201	RC10#
UP202	RC10#
UP203	RC10#
UP204	RC10#
UP205	RC10#
UP206	RC10#
UP207	RC10#
UP208	RC10#
UP209	RC10#
UP210	RC10#
UP211	RC10#
UP212	RC10#

Item Number	Rub Collar Number
UP213	RC10#
UP214	RC10#
UP215	RC10#
UP216	RC10#
UP217	RC10#
UP218	RC10#
UP219	RC10#
UP220	RC10#
UP221	RC10#
UP222	RC10#
UP223	RC10#
UP260	RC30#
UP261	RC30#
UP262	RC30#
UP263	RC30#
UP264	RC30#
UP265	RC30#
UP266	RC30#
UP267	RC30#
UP268	RC30#
UP269	RC20#
UP270	RC20#
UP272	RC20#
UP273	RC20#
UP274	RC20#
UP275	RC20#
WB101	RC601
WB102	RC701

See previous page for bore selection
"#" determines bore size