



3D ROUTER CARVER

U.S. PAT. No. 5,146,965.



A Revolutionary Routing Concept!

THE CARB-I-TOOL '3D' ROUTER CARVER

The Carb-I-Tool '3D' Router Carver is a revolutionary new routing concept that creates variable depth intricate wood carvings at a cost that is economical for both the production shop and the handyman. By the simple combination of the '3D' Router Carver, a 1/2" or 1/4" plunge router and a series of computer designed templates and holding frames, complex and symmetrical wood carvings can be produced on any flat timber surface. The '3D' Router Carver consists of a 90° included angle vee groove router bit housed in a 45° cone shaped guide. The carvings are produced by the horizontal movement of the machine and guide along varying width slots in the template. The interaction of the slots, the '3D' Router Carver and the unlocked plunge mechanism on the machine allows the router bit to move vertically up or down as the slots narrow or widen, thus varying the depth and width of the cut.

HOW THE '3D' ROUTER CARVER WORKS

- By using the set up jig (supplied with the '3D' Router Carver), ensure the cutter tip is in the correct set up position. ie: The tip should be flush with the top of the jig. (Fig 1.)

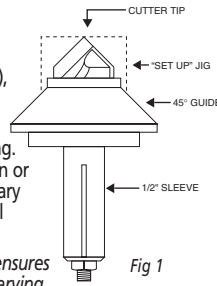
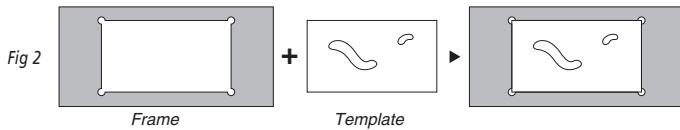


Fig 1

Adjustment may need to be made following each sharpening. Adjust by loosening the locking nut and turning the cutter in or out as required. (In extremely hard timbers it may be necessary to set the cutter for a shallow 1st cut and then set to normal position for finish cut.)

The set up jig simulates the thickness of the templates and ensures the cutting tip is just touching the workpiece to begin the carving.

- Insert the '3D' Router Carver into the machine and release the plunge mechanism - allowing free travel of the carver and machine along the plunge guides. Keep guides well lubricated.
- Select the required design templates and corresponding holding frame. Secure the holding frame to the workpiece ie: by clamping or tacking.
- Insert one of the templates into the holding frame (There maybe up to 4 templates per design). The templates are designed to fit tightly into the frame, and therefore NO separate clamping is required. (See fig 2)



- Start the machine and position over the widest part of a slot (where possible). Plunge down until the cone shaped guide comes into contact with both edges of the slot, then move to the end of the slot.

NB: By plunging down at the widest part of the slot - the risk of the cutter coming into contact and damaging the template is reduced.

- Make one pass through the entire length of the slot, - this removes the bulk of the material - follow up with a finishing pass. Repeat for all slots on the template.

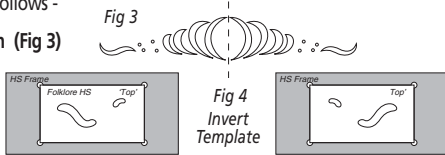
NB: Maintain a slight downward pressure on the machine as it moves along the slot. The depth and width of the cut will be automatically controlled by the combination of the template and the cone shaped guide.

- Once all cuts on the first side of the template have been completed, remove and realign the template as follows -

7.1 Two Way Symmetrical Design (Fig 3)

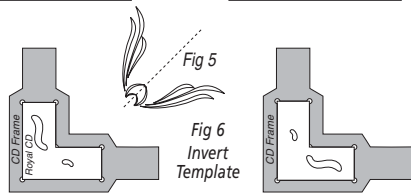
a) Rectangular Templates

- Invert Template (Keep "Top" Up) (Fig 4)
- Complete all cuts
- Repeat entire procedure for all templates in this design



b) Corner Design Templates (Fig 5.)

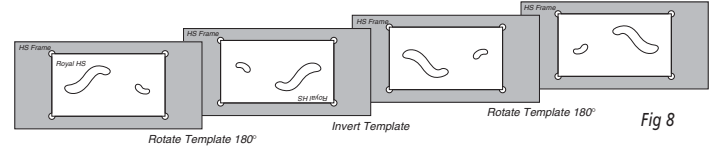
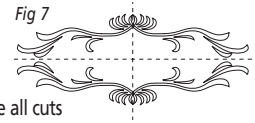
- Invert Template (See fig 6)
- Complete all cuts
- Repeat entire procedure for all templates in each design



In these designs, each slot is used twice.

7.2 Four Way Symmetrical Design (Fig 7)

- Rotate Template 180°
- Complete all cuts
- Remove and invert template
- Complete all cuts
- Remove and rotate template 180°
- Complete all cuts
- Repeat entire procedure for all templates in each design (Fig 8)

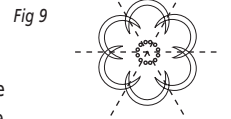


In these designs, each slot is used 4 times.

(Re points 7.1 & 7.2: After inverting the template, do not re-carve any individual cut that is bisected by the axis lines depicted in Figs. 3, 5 & 7.)

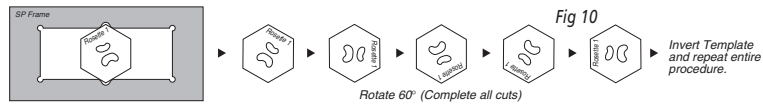
7.3 Six Way Symmetrical Design (Rosettes) (Fig 9)

- Rotate plate to the next corner ie: 60° (Fig 10)
- Complete all cuts
- Repeat for all corners on this surface of the template
- Invert the template and repeat the entire procedure



Rosette Designs can be used separately or added to some of the standard designs.

Rosettes 1, 2, 3, 4, can be used with LP, SP or KD frames. Rosettes 5, 6, 7, 8, can only be used with DR frame.



When adding Rosette designs to the standard designs, it is advisable to leave the holding frame in position, this allows for perfect alignment of the Rosette within the existing larger design. Rosette Templates can also be used with Rosette Frame (3F-R).

In these designs each slot is used 6 times on each side ie: each slot is used for 12 cuts.

NB: 1) All Templates and Frames are manufactured within acceptable tolerances.

However, it is possible that there may be some slight movement of the template within the holding frame. It is therefore advisable to select a corner of the frame as a datum and ensure the template is seated in that corner with each realignment of the template.

- Slight variations to the illustrated design drawings may occur.
- A MYRIAD OF DESIGN VARIATIONS ARE POSSIBLE by simply excluding "unwanted" cuts, ie: it is not necessary to use all the slots of a particular template. This results in a wide range of more open - less complicated designs.
- Ordering is simple (the '3D' Router Carver is supplied separately) e.g.:

For ordering Royal LP Design

- order 1 x LP Frame (3F-LP) (supplied in Kit 3F-LSP)
- 1 x Royal LP Template Pack (3TLP-R).

For Royal LP 1 Design

- order both of the components at left
- plus 1 x Rosette 1 Template Pack (3TR-15).

FOUR PANEL DOOR DESIGNS

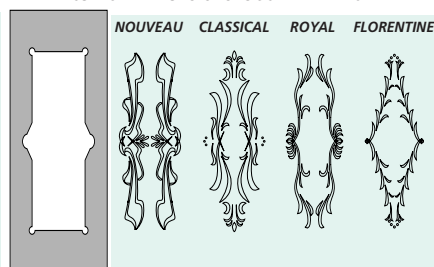
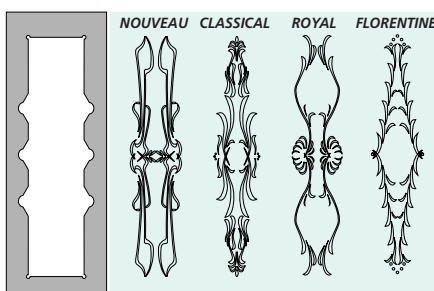
The 4 primary Designs ie Nouveau, Classical, Royal and Florentine continue through the entire range of applications. This provides a continuity of style encompassing either an entire house, room, or individual furniture piece. Royal LP/SP and Florentine LP/SP designs can also be enhanced by the addition of one of four rosette designs. See page 4. (It is advisable to leave the frame secured for both carving procedures so as to ensure perfect alignment).

LARGE PANEL FRAME (3F - LP) (LP Frame)

External Dimensions: 1170mm x 395mm.
Internal Dimensions: 900mm x 220mm.

SMALL PANEL FRAME (3F - SP) (SP Frame)

External Dimensions: 850mm x 395mm.
Internal Dimensions: 580mm x 220mm.



FOUR PANEL DOOR DESIGN	Carving Size (mm)	No. of Templates
Nouveau LP (3TLP - N)	740 x 155	2
Classical LP (3TLP - C)	780 x 145	2
Royal LP (3TLP - R)	715 x 150	2
Florentine LP (3TLP - F)	770 x 165	2
Nouveau SP (3TSP - N)	445 x 150	2
Classical SP (3TSP - C)	435 x 150	2
Royal SP (3TSP - R)	420 x 160	2
Florentine SP (3TSP - F)	425 x 150	2

N.B. LP & SP Frames are supplied together as 4 panel Door Frame Kit. (3F-LSP).

All LP and SP Designs are four way symmetrical with a maximum depth of cut of 7mm. Royal and Florentine LP and SP Designs can also have Rosettes 1, 2, 3, and 4 added. (see page 4).

Approximate carving time:
LP Designs 8 min
SP Designs 5 min



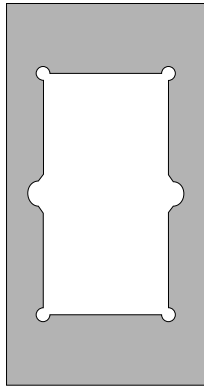
It's a BIT better with CARB-I-TOOL

KITCHEN DOOR DESIGNS

KITCHEN DOOR FRAME (3F – KD) (KD Frame)

External Dimensions: 850mm x 395mm. Internal Dimensions: 500mm x 250mm.
NB: KD, HS & CD Frames are supplied together as a cabinet frame kit (3F–HCK).

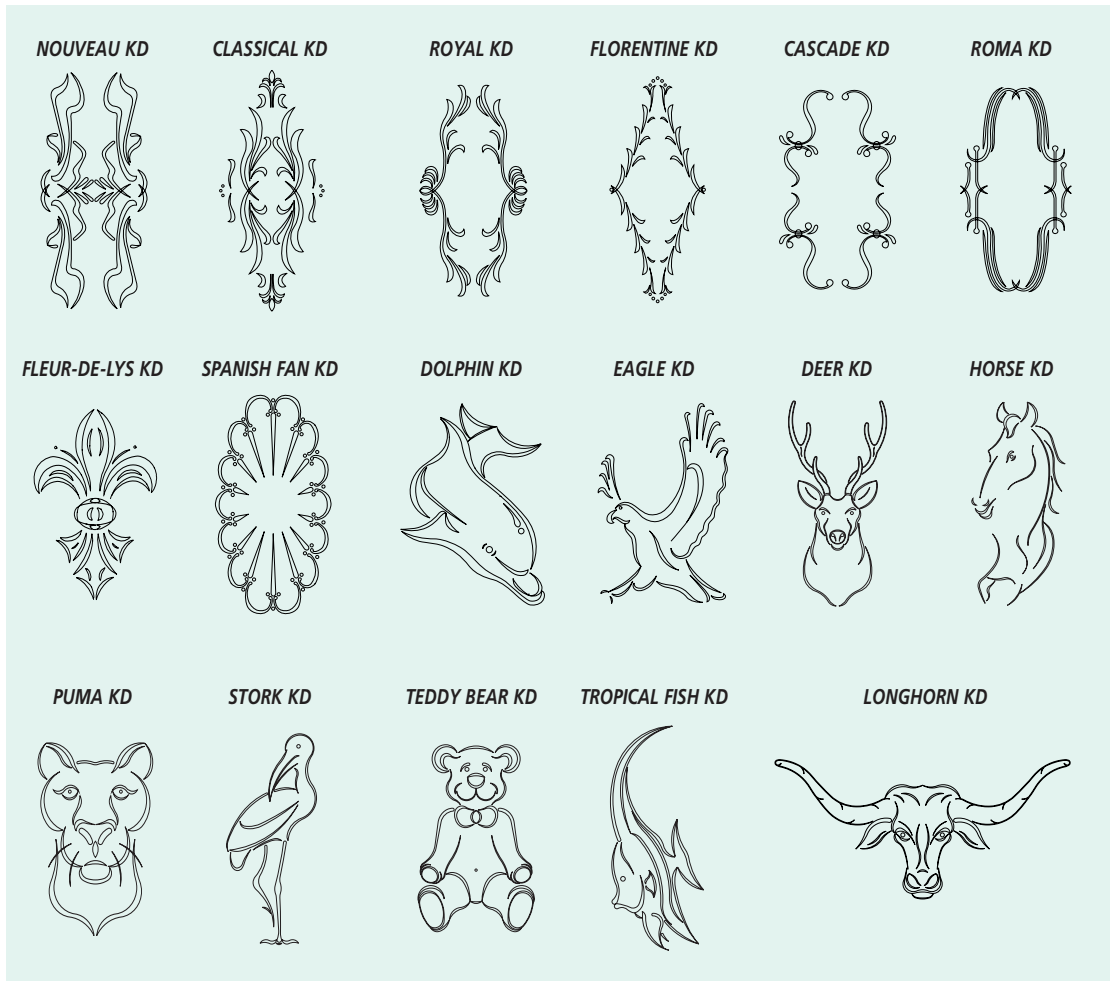
These designs can enhance a range of flat timber surfaces eg. Nursery Furniture, Bedheads, Cupboard Doors, Coat Racks, etc. (These designs use the KD frame)



KD Designs:
maximum depth of cut of 7mm.
Approximate carving time:
KD Designs 5 min



The Dolphin, Eagle, Horse, Stork and Tropical Fish designs can be applied as either right or left hand presentation

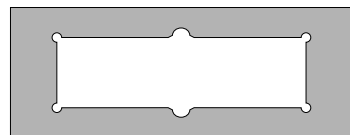


KITCHEN DOOR DESIGN	CARVING SIZE	No. OF TEMPLATES
Nouveau KD (3TKD-N)	430mm x 190mm	2
Classical KD (3TKD-C)	440mm x 185mm	2
Royal KD (3TKD-R)	385mm x 190mm	2
Florentine KD (3TKD-F)	415mm x 170mm	2
Cascade KD (3TKD-CC)	365mm x 210mm	1
Roma KD (3TKD-RM)	375mm x 200mm	1
Fleur-De-Lys KD (3TKD-FDL)	180mm x 250mm	4
Spanish Fan KD (3TKD-SF)	200mm x 380mm	2

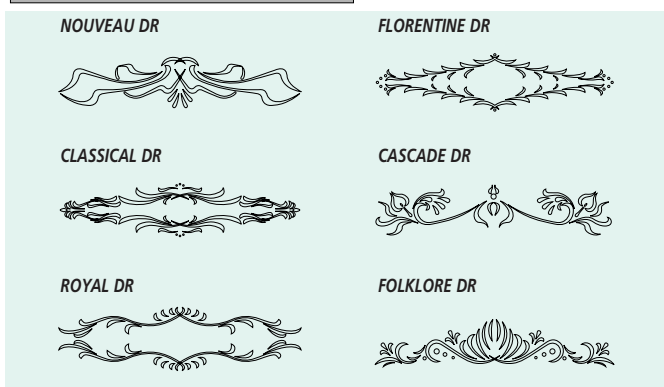
Royal KD, Florentine KD, Cascade KD, and Roma KD Designs can also be enhanced by the addition of one of four Rosette Designs. See page 4.

KITCHEN DOOR DESIGN	CARVING SIZE	No. OF TEMPLATES
Dolphin KD (3TKD-D)	200mm x 290mm	4
Eagle KD (3TKD-E)	180mm x 300mm	4
Deer KD (3TKD-DER)	395mm x 190mm	4
Horse KD (3TKD-H)	445mm x 205mm	3
Puma KD (3TKD-P)	315mm x 210mm	3
Stork KD (3TKD-STK)	405mm x 170mm	4
Teddy Bear KD (3TKD-T)	330mm x 205mm	3
Tropical Fish KD (3TKD-TF)	395mm x 165mm	4
Longhorn KD (3TKD-LH)	420mm x 195mm	4

DOOR RAIL DESIGNS



DOOR RAIL FRAME (3F – DR) - supplied separately. (DR Frame)
External Dimensions: 900mm x 295mm.
Internal Dimensions: 650mm x 180mm.



KITCHEN DOOR DESIGN	CARVING SIZE	No. OF TEMPLATES
Nouveau DR (3TDR-N)	590mm x 120mm	3
Classical DR (3TDR-C)	550mm x 120mm	2
Royal DR (3TDR-R)	520mm x 135mm	2
Florentine DR (3TDR-F)	550mm x 130mm	2
Cascade DR (3TDR-CC)	530mm x 110mm	3
Folklore DR (3TDR-FK)	550mm x 110mm	3

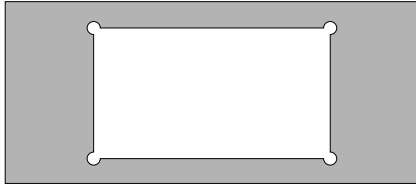
Royal DR and Florentine DR can be also enhanced by the addition of one of the four smaller Rosette Designs. These smaller Rosette Templates fit into the DR Frame, or can also be used with the Rosette Frame (See page 4).

HANDLE SURROUND DESIGNS

The diverse range of Handle Surround Designs allows for the utilization of a variety of cabinet and drawer handles. E.g.: knobs, "D" pulls, ring pulls, etc.

HANDLE SURROUND FRAME (3F - HS) (HS Frame)

External Dimensions: 570mm x 210mm.
Internal Dimensions: 280mm x 150mm.



NB:
HS, CD & KD Frames
are supplied together
as a cabinet frame kit
(3F - HCK).

NOUVEAU HS



CLASSICAL HS



ROYAL HS



FLORENTINE HS



CASCADE HS



FOLKLORE HS



ROMA HS



LUXURY HS



IMPERIAL HS



BLAZE HS



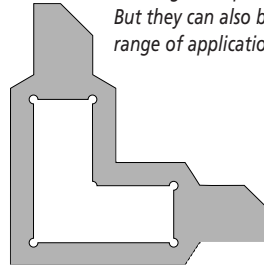
HANDLE SURROUND DESIGN	Carving Dia. (mm)	No. of Templates
Nouveau HS (3THS - N)	225 x 85	2
Classical HS (3THS - C)	210 x 70	2
Royal HS (3THS - R)	210 x 80	2
Florentine HS (3THS - F)	195 x 85	2
Cascade HS (3THS - CC)	250 x 65	1
Folklore HS (3THS - FK)	250 x 40	2
Roma HS (3THS - RM)	190 x 65	2
Luxury HS (3THS - L)	180 x 70	2
Imperial HS (3THS - I)	175 x 70	2
Blaze HS (3THS - B)	250 x 110	2

Approximate carving time:
HS Designs - 4 min

All Handle Surround Designs are four way symmetrical except for Folklore HS (two way symmetrical). Maximum depth of cut for HS Designs 5mm.

CORNER DESIGNS

These Designs are primarily for cabinet doors, picture frames, etc. But they can also be used either vertically or horizontally for a range of applications.



CORNER DESIGN FRAME (3F - CD) (CD Frame)

External Dimensions: 445mm x 445mm.
Internal Dimensions: 240mm x 100mm.
NB: CD, KD & HS Frames are supplied together as a cabinet frame kit (3F - HCK)

NOUVEAU CD



CASCADE CD



ROMA CD



CLASSICAL CD



FOLKLORE CD



LUXURY CD



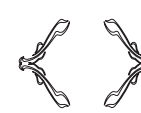
ROYAL CD



FLORENTINE CD



Alternative applications



Approximate carving time: CD Designs - 3 min

CORNER DESIGN	Carving Size (mm)	No. of Templates
Nouveau CD (3TCD - N)	185 x 45	3
Classical CD (3TCD - C)	155 x 40	3
Royal CD (3TCD - R)	175 x 40	2
Florentine CD (3TCD - F)	120 x 30	3
Cascade CD (3TCD - CC)	190 x 40	3
Folklore CD (3TCD - FK)	150 x 45	3
Roma CD (3TCD - RM)	150 x 40	3
Luxury CD (3TCD - L)	145 x 40	2

All Corner Designs are two way symmetrical with the exception of Luxury CD, which is asymmetrical. Luxury CD is created by routing both sides "A" or both sides "B" on the templates, depending on the orientation required. Maximum depth of cut for CD Designs 5mm.

ROSETTE DESIGNS

Royal LP and SP. Florentine LP and SP. Royal, Florentine, Cascade, Roma KD can all be enhanced by adding any one of the Rosettes 1, 2, 3, 4. These templates fit directly into the LP, SP, or KD frame. Royal and Florentine DR can be enhanced by adding any one of the Rosettes 5, 6, 7 or 8. These templates fit directly into the DR frame. All Rosettes 1 to 8 can be used with the rosette frames (3F - R)

ROSETTE 1 & 5



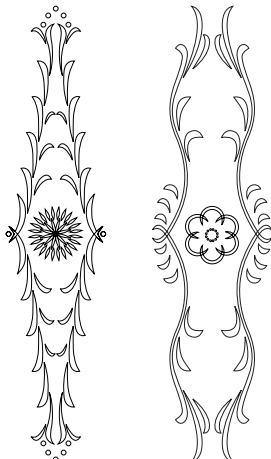
ROSETTE 2 & 6



ROSETTE 3 & 7

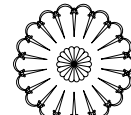


ROSETTE 4 & 8



ROSETTE DESIGN	Carving Dia. (mm)	No. of Templates
Rosette 1 & 5 (3TR - 15)	1/5 85 68	2 2
Rosette 2 & 6 (3TR - 26)	2/6 88 70	1 1
Rosette 3 & 7 (3TR - 37)	3/7 82 65	1 1
Rosette 4 & 8 (3TR - 48)	4/8 79 62	1 1
Spanish Fan Rosette - L (3TR-SFL)	400mm	1
Spanish Fan Rosette - S (3TR-SFS)	200mm	1
Rosette Frame (3F-R)		2 piece

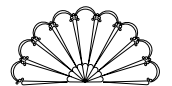
All Rosette Designs are six way symmetrical with a maximum depth cut of 3mm. Rosette Designs are supplied with corresponding smaller Rosette, e.g. 1&5, 2&6, 3&7, 4&8.



Spanish Fan Rosette

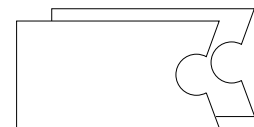


2/3 Spanish Fan Rosette



1/2 Spanish Fan Rosette

Part designs can be made with either the L or S Spanish Fan Rosette Templates.



Rosette Frame



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