

APPLICATION DETAILS

CNC MACHINING - Beaded door system

This system is for producing cock beaded framed door sets on your CNC router.

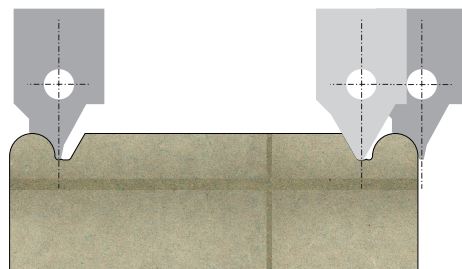
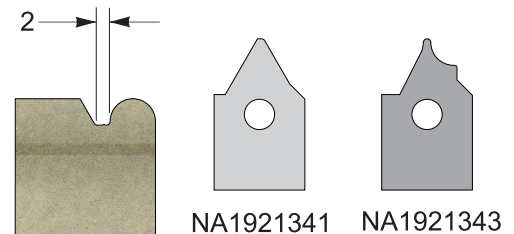
This set of cutters creates an in-frame door and cock beaded frame from one piece of mdf on a 3-axis CNC machine.

The single flute 3mm compression cutter allows for a 3mm gap around the door. It will cut to depth in 6mm passes and is capable of creating the gap for up to 22mm doors and frames.



TOOLING LIST

- Tool holder (NA1921316)
- Radius knife (NA1921343)
- Chamfer knife (NA1921341)
- Single flute compression (TGC031230)



TOOL PATHS

The system has been developed so that the tool paths can be created by drawing the minimum number of lines. Of course, if you prefer you can draw all the lines.

Here are the offsets and depths of cut. Please note the V part of the program does require inside and outside perimeters in order to V-carve the sharp corners.

Start by drawing the door size required. All cuts are performed on the outside.

- Door round over = door + 0.60
- Inside aperture round over = door (if 2 door multiply by 2 and add door gap) +2.20
- Aperture to create cock bead = door +9.20
- Inside perimeter of V-carve = door +9.95
- Outside perimeter of V-carve = above +5.73
- Door/frame gap = door +0.10
- Cut depths are all 3mm except door gap

Please note that these are dimensions that work on our test set-up and should be optimised for your particular requirements.

For simplicity program with a 3mm End Mill in V-Carve

CNC Beaded Face Frames

Vcarve pro design guide 22mm board

Note – Zero machine from board face

- 1) Draw rectangle total size of face frame
 - a) For kitchens the height is –
 - i) 40mm greater than carcass when a skirting is being applied
 - ii) 10mm greater than carcass when a kick panel is being applied
 - b) Wardrobes subject to design
- 2) Create door reveal
 - a) For kitchens –
 - i) From the top 36mm down
 - ii) From the bottom 60mm up
 - iii) Sides to leave 1mm overhang into cabinet
 - iv) This can be amended on special occasions i.e appliances sink units etc.
 - b) For wardrobes –
 - i) Generally, 1mm overhang into cabinet subject to design
- 3) Offset in from door reveal 3mm for door gap creating door outer perimeter
 - a) TOOLPATH
 - i) Outside this line with 3mm compression TOOL – 33
 - ii) 22.4mm deeper than material thickness
 - iii) Ramp plunge
- 4) Delete first rectangle created (door reveal)
- 5) Offset outwards .5mm (door round over)
 - a) TOOLPATH
 - i) On this line (centred) with R3 cock bead round over TOOL – 7
 - ii) 3mm deep
 - iii) Ramp plunge
- 6) Offset outwards 2.7mm (FF round over 1 / bead 1)
 - a) TOOLPATH
 - i) On this line (centred) with R3 cock bead round over TOOL – 7
 - ii) 3mm deep
 - iii) Ramp plunge

- 7) Offset outwards 9.5mm (FF round over 2 / bead 2)
 - a) TOOLPATH
 - i) On this line (centred) with R3 cock bead round over TOOL – 7
 - ii) 3mm deep
 - iii) Ramp plunge
- 8) Offset outwards 10.41mm (FF outer chamfer)
 - a) TOOLPATH
 - i) On this line (centred) with 30° V Bit TOOL – 4
 - ii) 3mm deep
 - iii) Ramp plunge
- 9) Select door outer perimeter line
- 10) Offset inwards 60mm (door rebate)
 - a) TOOLPATH
 - i) Inside this line with 6mm compression TOOL – 36
 - ii) 14mm deep
 - iii) Ramp plunge
 - iv) Create 2nd toolpath offset 5mm inwards
 - v) 14mm deep
 - vi) Ramp plunge
- 11) Offset inwards from door outer perimeter 70mm
 - a) TOOLPATH
 - i) Inside this line with 6mm compression TOOL – 36
 - ii) 22.4mm deep
 - iii) Ramp plunge
- 12) Hinge holes
 - a) Create 35.4mm circle
 - i) Position 5mm in from door edge
 - ii) For kitchen base units centre of hinge 80mm from door top / bottom
 - b) TOOLPATH
 - i) Inside this line with 8mm compression TOOL – 38
 - ii) 12mm deep
 - iii) Ramp plunge