

**Decoriel**<sup>®</sup>  
P R O F I L E S

# Installation guidelines



designed and manufactured by

**CLASHAL**<sup>®</sup>  
S Y S T E M S

Tool requirements .....	3
Use with specialised hinges and fittings.....	3
Cutting guidelines .....	4
Generating a panel cutting schedule .....	4
Grooving the panels .....	5
Cutting the profiles .....	5
Assembly.....	6
Fitting hinges .....	8
Removing profile sections .....	8

## Tool requirements

Surprisingly few tools are required to install Decoriel profiles and all but two are standard joinery workshop equipment. Decoriel profiles are therefore an extremely cost-effective product for cabinetmakers to begin working with.

### Tool list

- 3.0mm Router ball bearing race slot cutter bit. Bit must be capable of cutting to a depth of 11mm
- Aluminium cut-off blade, hollowface, negative rake for cutting the profiles
- Rubber mallet for driving the profiles into the panel
- Aliphatic resin glue
- High-speed manual feed drill press such as the Hettich Blue Max mini type 2 or similar or a properly adjusted hinge insertion machine (see below).
- Clashal Systems 35mm hinge cup drill bit



## Use with pneumatic hinge insertion machines

Decoriel profiles have been thoroughly tested on high speed manually-controlled presses where the rate of feed when drilling 35mm hinge holes is controlled by the operator.

Pneumatic hinge insertion machines have been designed for cutting wood, not aluminium. Thus when attempting to drill a hinge hole in a panel edged with Decoriel profiles, the rate of descent of the drill bit is too fast for the bit to properly cut the aluminium. Therefore if you intend to use a pneumatically controlled press/insertion machine for installing 35mm hinges, we strongly advise you consult with a service technician to establish whether your press can be adjusted to slow down the rate of descent of the cutting head. Most Blum machines, for example, can.

Alternatively, a hydraulic dampener kit developed by Clashal Systems can be attached to most hinge insertion machines which acts to slow down the last 20mm or so of head descent, allowing time for the bit to cut the aluminium.

*Failure to ensure the descent of the cutting head is appropriately controlled will result in the bit grabbing and most likely ruining the panel.*

## Use with specialised hinges and fittings

Decoriel profiles can be used with most hinges and fittings. Some fittings may require self tapping screws rather than wood screws.

When using metal drawer brackets, use screw-in rather than knock-down fittings.

Decoriel profiles are not compatible with piecut-type hinges.

## Cutting guidelines

When working with Decoriel profiles it's useful to reference all measurements to the finished panel dimensions.

In these guidelines we refer to PH (finished panel height) and PW (finished panel width) as shown in Fig. 1. Dimensions for Decoriel slimline profiles are shown in square brackets [ ].

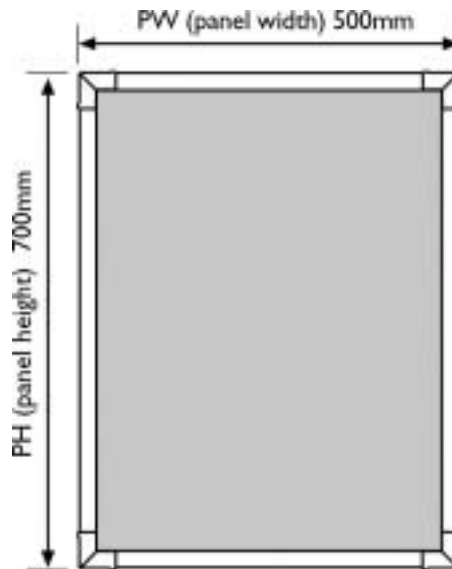


Fig. 1

## Generating a panel cutting schedule

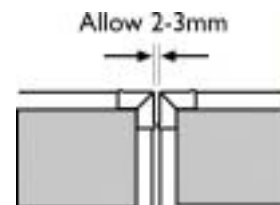
Decoriel profiles add 10mm [5mm for slimline] to each side of the panel. Therefore when planning a cutting schedule it's important to subtract 20mm [10mm] from height (PH less 20mm [or PH less 10mm for slimline]) and 20mm [10mm] from the width (PW less 20mm [10mm]) for every panel receiving a Decoriel profile.

In the example above, a door with PH=700mm and PW =500mm would need to be cut:

$$\begin{aligned} \text{PH less 20mm} &= 680\text{mm} \quad [\text{PH less 10mm} = 690\text{mm}] \\ \text{PW less 20mm} &= 480\text{mm} \quad [\text{PW less 10mm} = 490\text{mm}] \end{aligned}$$

Allow 2-3mm clearance between facing doors as shown in Fig. 2.

It's extremely important that panels are cut accurately. It's also extremely important that the cut edges are straight and square. Decoriel profiles act as a straight edge when applied to the edges of a panel. They are therefore unforgiving of poorly formed edges.



## Grooving the panels

Decoriel profiles utilise a centrally located barbed tang to secure the profile to the edge of the panel. Therefore a groove needs to be cut around the perimeter of the panel using a router to receive the tang.

The tang width is typically 3.5mm and the length of the tang is 10mm. (Fig. 3)

The recommended groove width is 3.0mm for fitting anodised profiles. Recommended depth is 11mm.

Decoriel profiles are 18.5mm high to allow for a nominal thickness of 18mm +/- 0.5mm for the majority of pre-finished panels.

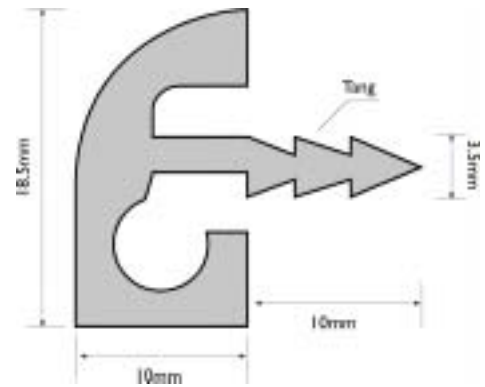


Fig. 3

The groove must be centred along the edge of the panel.

There may be a small lip present on one face of the panel once a profile is installed. This is due to variance in the manufacture of the panel. Install the profiles so the lip is on the inside of the panel. We recommend conducting test cuts on off-cuts from the panels you intend fitting Decoriel profiles to in order to test for lippage.

## Cutting the profiles

Use the following cutting guide to cut the profiles:

Side sections	PH less 40mm [PH less 30mm]
Top and bottom sections	PW less 40mm [PW less 30mm]

Thus, in the previous example, the profiles would need to be cut to 660mm [670mm] and 460mm [470mm] respectively to achieve a 700mm x 500mm finished panel as shown in Fig 4.



DO NOT cut the profiles longer than PH or PW less 40mm [30mm] as adjacent profiles will not fit properly into the panel.

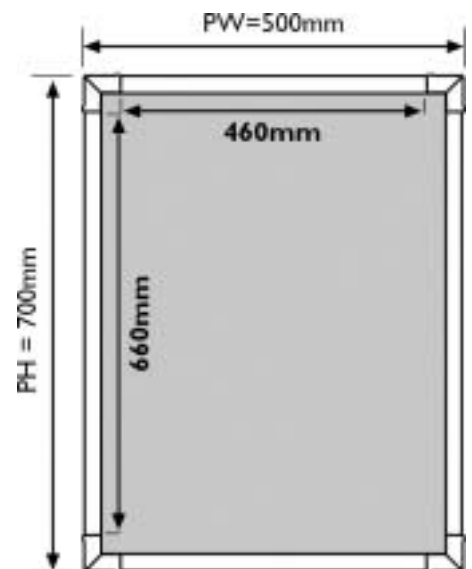


Fig. 4

## Assembly

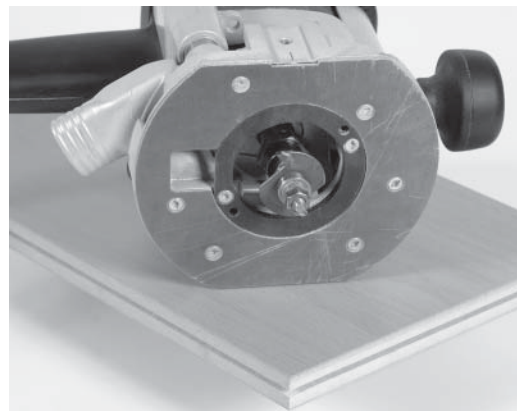
### Step 1

Carefully cut the panel following the guidelines on page 4. Check measurements prior to routing the groove.



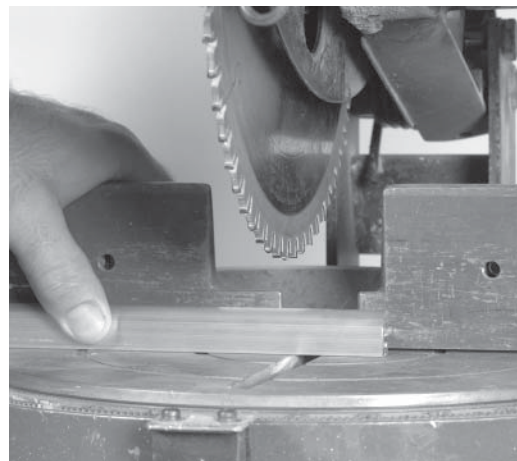
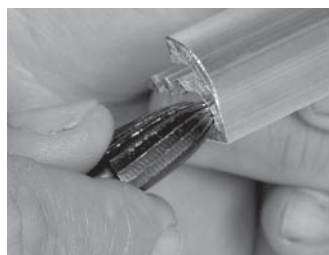
### Step 2

Rout the perimeter of the panel to receive the profile, checking that the correct slot cutter bit is used for the profile finish. Ensure the groove is clear of waste and that the groove is of sufficient depth.



### Step 3

Cut the profiles to length referring to the cutting guide on page 5. Ensure the profile is held securely during cutting to achieve a smooth cut surface. Check the cut surface and if necessary remove any bur from the dowel cavities using a reamer.



Note: safety guard has been removed for illustrative purposes only.

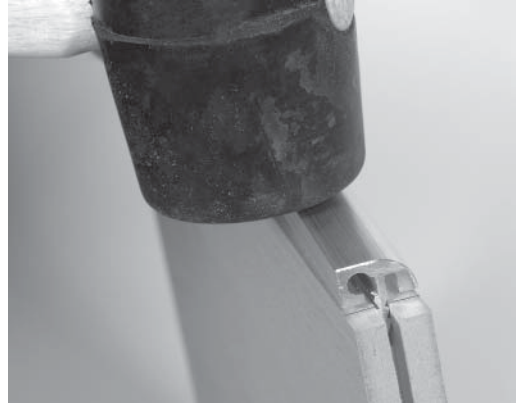
### Step 4

Apply a *thin* bead of aliphatic resin glue into the groove in the panel starting in approximately 50mm from either end of the panel. **DO NOT** flood the groove with glue. Applying too much glue will result in excess glue being forced out once the profile is driven in.



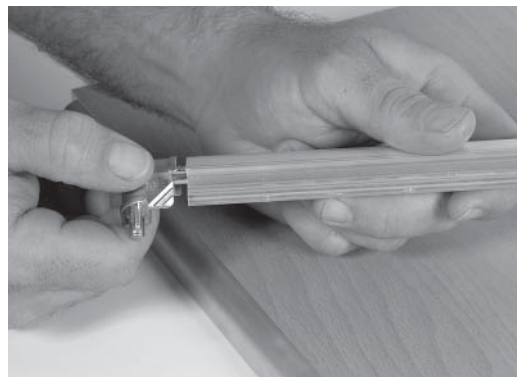
### Step 5

Position the profile approximately 10mm in from the end of the panel. Tap the profile evenly along its length to drive it into the groove using a rubber mallet. Repeat Steps 4-5 for the opposite side profile. Be careful to ensure the sides are fitted with the profiles facing the correct way up relative to each other.



### Step 6

Fit the corner sections to the top profile as shown. Apply a thin bead of glue to the groove, again starting in 50mm from either end. It is unnecessary to apply glue in the corner – the dowels and tang well and truly lock the corner section into place.



### Step 7

Align the dowels on the corner sections with the corresponding cavities in the side profiles. Tap along the length of the top profile to drive it into the groove using the rubber mallet. Repeat Steps 6 and 7 for the bottom section.



### Step 8

Check that all profile sections are firmly bedded into the panel and that there are no gaps.



## Fitting hinges

Before drilling 35mm holes for fitting hinges, ensure the correct bit is in the press. Clashal Systems have designed a specialised bit for cutting Decoriel profiles.



### DO NOT USE STANDARD 35mm WOOD BITS DO NOT USE LIP AND SPUR BITS

The tip on the specialised bit is not designed for cutting metal. Therefore it must not come into contact with the embedded profiles tang. To prevent this happening the hinge-cup must be drilled NO LESS THAN 5MM from the edge of the profile as shown in Fig. 5. If the corners are in contact with the press fence, you will need to also allow 0.7mm for the edge of the flange (Fig. 5).

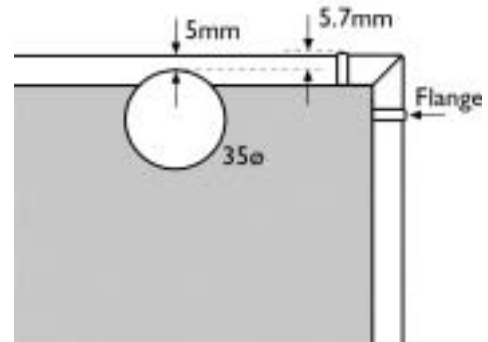


Fig. 5

When used with the correct bit Decoriel profiles cut cleanly and accurately. However cabinetmakers need to allow for the fact that they are drilling metal, not wood. Therefore carefully observe the following points:

1. Lubrication is unnecessary.
2. Clamping is not usually necessary provided the panel is held firmly against a fence or a stop. However always clamp very large or very small panels.



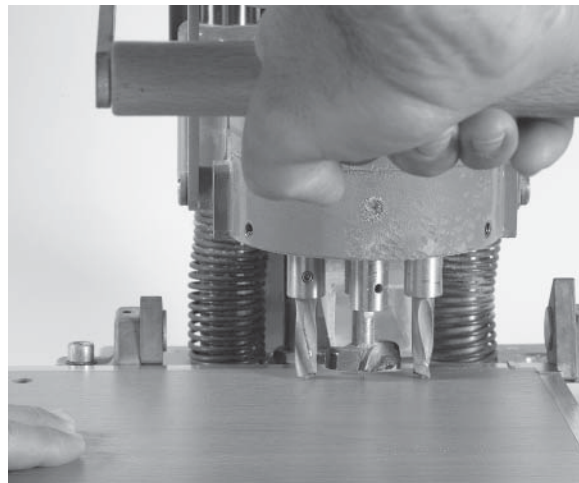
3. Feed the bit SLOWLY into the panel. The rate of feed is extremely important as the bit must be given time to cut the aluminium.

Never plunge the bit into the panel.

Drill a number of test holes to get a feel for the product.

4. We recommend dowel-type hinges rather than screw-in. This requires the use of a press with a three-bit gearbox resulting in greater control when drilling.

5. We recommend attaching a vacuum hose to the press to remove swarf and minimise the possibility of damage to the surface of the panel.



Note: safety guard has been removed for illustrative purposes only.

## Removing profile sections

Once the glue has set it is virtually impossible to remove a profile from the panel. However if a profile section is incorrectly installed it can be removed before the glue has a chance to set. This is best accomplished by sliding the profile out of the groove rather than by trying to lever it out.

To do this protect the end of the profile with a small block of wood and tap the end with a hammer to slide the profile out. Clean up any surplus glue and if necessary reapply a small amount into the groove prior to reinstalling the profile.