

Food service countertops are exposed to much greater temperature stress than residential countertops. Use the following procedures, to prevent countertop cracking, warp and seam separation.

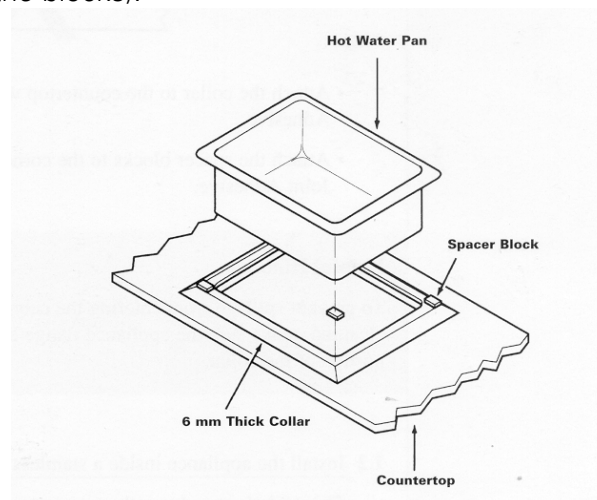
### 21.1. PREVENTING CRACKED CUT-OUTS

#### Preventing cracked cut-outs from heating or cooling appliances

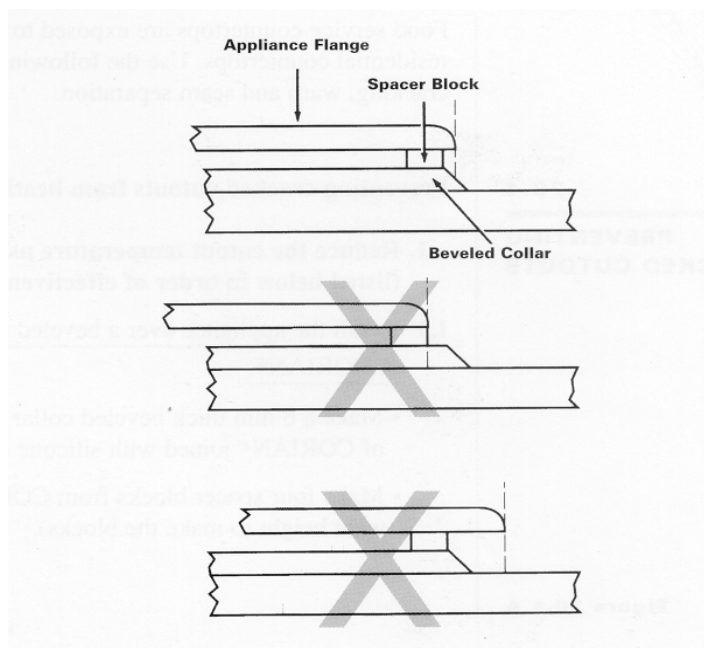
1. Reduce the cut-out temperature using technique 1.1, 1.2 or 1.3 (Listed below in order of effectiveness).

##### 1.1. Install the appliance over a bevelled collar and four spacer block of DuPont™ Corian®.

- Make a 6 mm thick bevelled collar from one routed sheet or four strips of DuPont™ Corian® joined with silicone adhesive or Joint Adhesive.
- Make four spacer blocks from DuPont™ Corian® (see the table below to determine what height to make the blocks).



Spacer Block Height	Cabinet	Countertop Temperature (°C) Reduction
3 mm	With fan	36
13 mm	With rear wall or with bottom vents	30
3 mm	With rear wall or with bottom vents	20



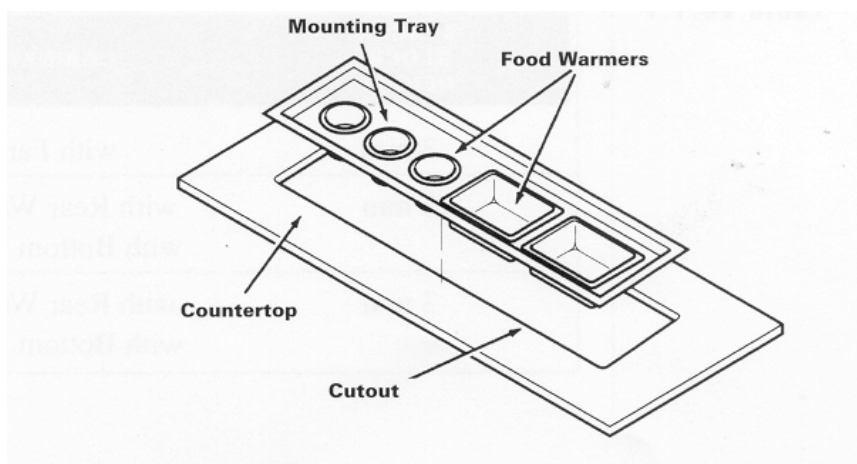
- Attach the collar to the countertop with silicone adhesive or Joint Adhesive.
- Attach the spacer blocks to the corners of the collar with silicone or Joint Adhesive.

#### Helpful Hints:

To prevent spillage from entering the cabinet and to facilitate countertop cleaning, make sure the appliance flange edge hangs over the bevelled portion of the collar.

### 1.2. Install the appliance inside a stainless steel mounting tray

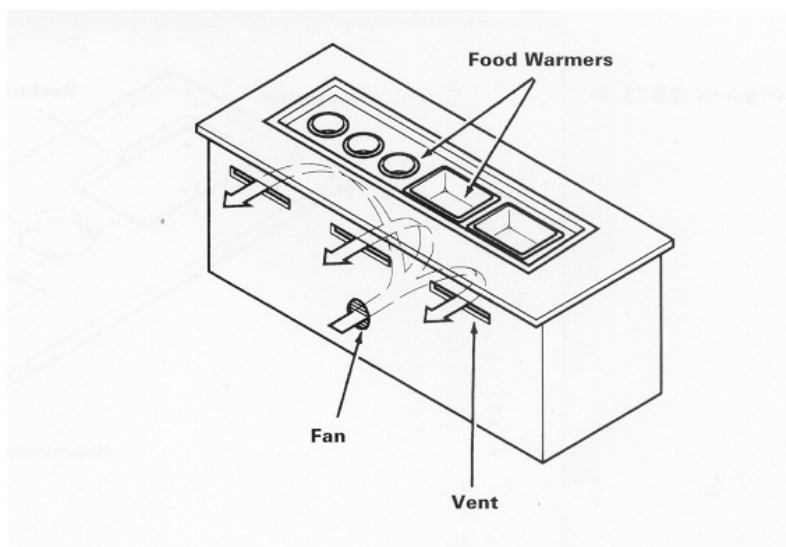
This technique reduces the countertop temperature by 22° C.



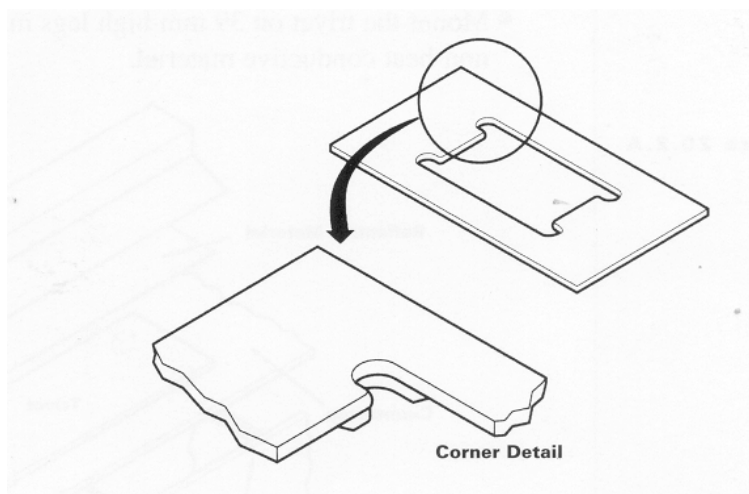
**1.3. Install a fan and vents in the cabinet**

This technique reduces the countertop temperature as 19° C.

- Install a fan near the bottom of the rear cabinet wall so that it blows air into the cabinet.
- Make vents in the top of the front and back cabinet walls.

**2. Improve the cut-out strength by the high-strength cut-out method**

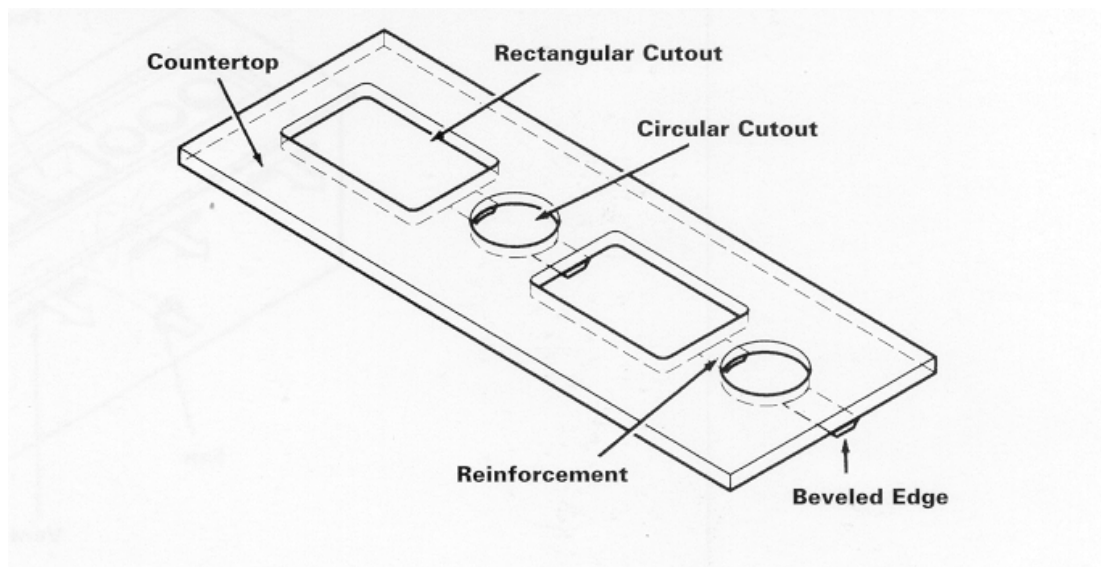
Fabricate a high-strength cut-out, following the procedure described in section 8.2.1.

**Helpful Hints:**

If you are using a collar to reduce cut-out temperature, consider it as an extension of the appliance's flange when choosing the paper pattern.

**Helpful Hints:**For circular cut-outs:

Using Joint Adhesive, glue reinforcement strips of DuPont™ Corian® to the underside of the countertop between the cut-outs and between circular cut-outs and countertop edges.

**3. Bain-Marie Instructions**

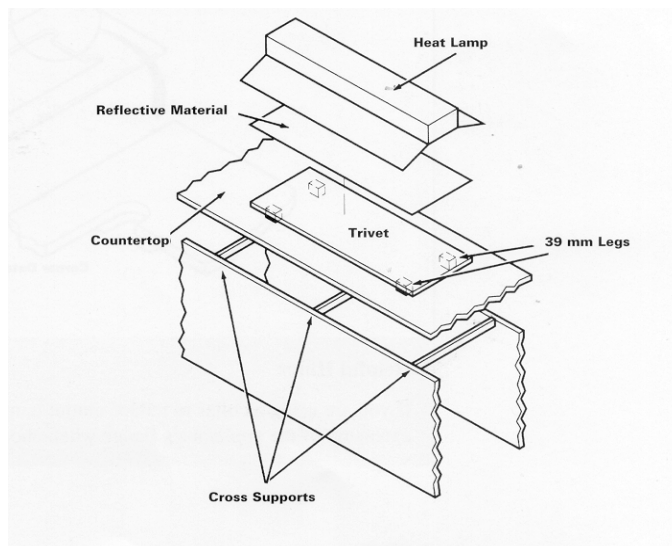
If a Bain-Marie is installed in a DuPont™ Corian® countertop, the Bain-Marie should be supported so that there is no flexing within the countertop. A stainless steel hob collar should be inserted next to the lip of the Bain-Marie to eliminate the possibility of cracks appearing in the countertop.

**21.2. PREVENTING COUNTERTOP CRACKING AND WARP**

Prevent countertop cracking and warp from heat lamps and portable heating appliances using the following techniques.

1. Place a trivet on the countertop under the appliance and the heat lamp.
  - Make the trivet from 19 mm DuPont™ Corian®.

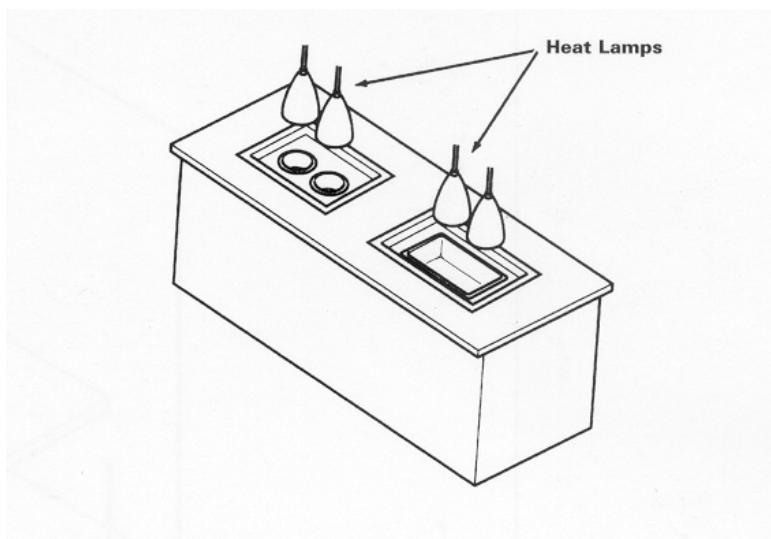
- Mount the trivet on 39 mm high legs made of DuPont™ Corian® or any other non-heat conductive material.



#### Helpful Hints:

As an option to further reduce countertop temperature, put reflective material, such as aluminium tape or high-gloss thin sheet metal, on top of the trivet.

2. Add cross supports to the top of the cabinet frame at 761 mm intervals or keep the countertop temperature below 65° C.
3. Lock heat lamps in position above the food pans so that they heat the food, not the countertop.



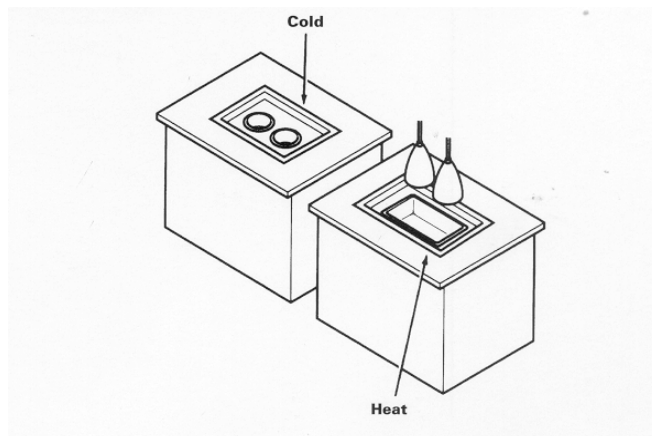


### 21.3. PREVENTING SEAM SEPARATION

Preventing seam separation from heat lamps or cooling appliances installed in the same countertop.

#### 1. Choose technique 1.1, 1.2 or 1.3 to prevent seam separation

##### 1.1. Make separate countertops for hot and cold food and avoid placing seams under heat lamps



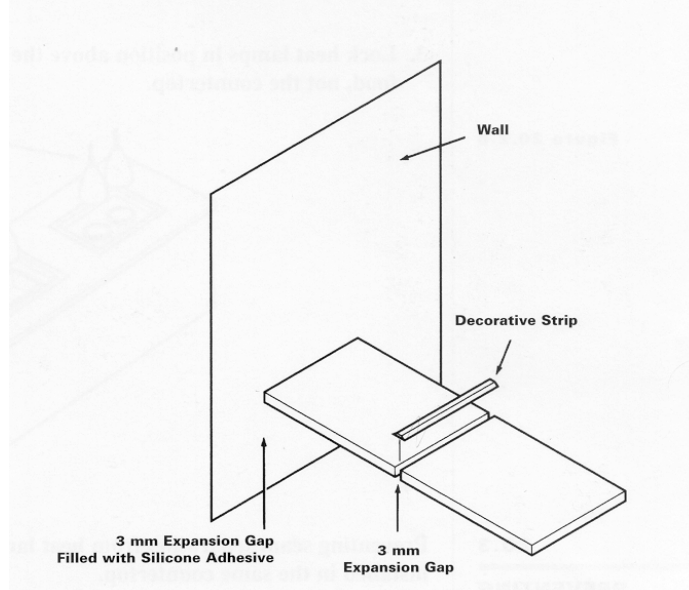
##### 1.2. Join the sheets with expansion-type seams.

For heat lamps:

Fill the seams with flexible material or cover them with decorative strips made of DuPont™ Corian® or stainless steel.

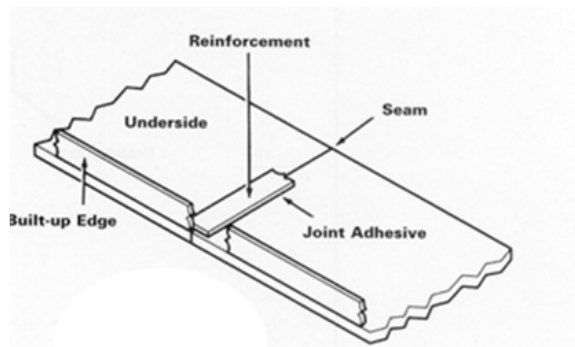
For heating and cooling appliances:

Follow the procedure above, positioning the seams between the hot and cold sections.



1.3 Reinforce the seams.

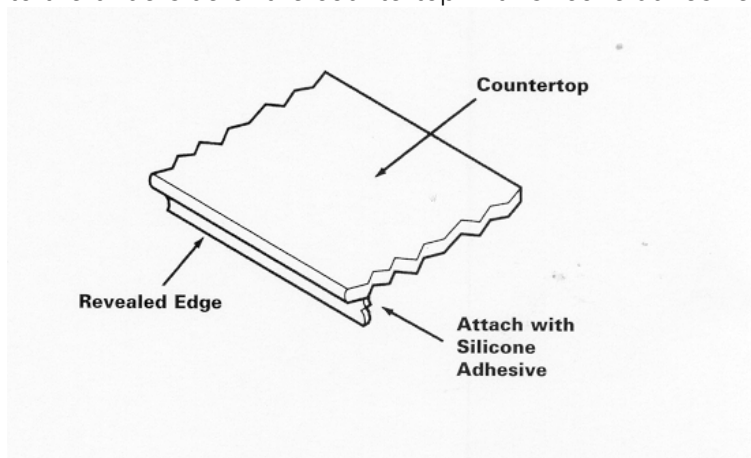
- Make reinforcing strips from DuPont™ Corian®, as described in Section 11.3.
- Attach the strips with Joint Adhesive, using enough adhesive to prevent any voids or dry spots.



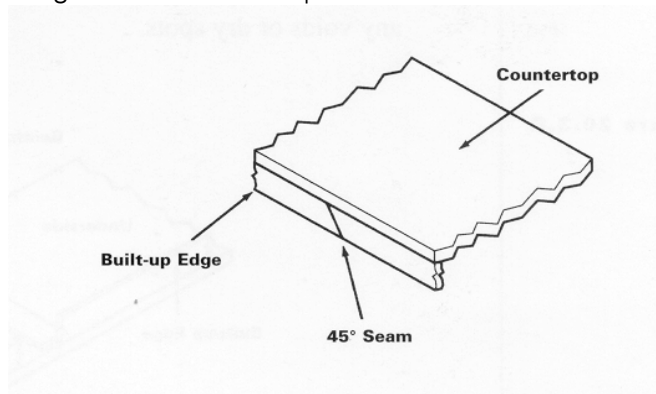
## 2. Fabricate a downturn edge, choosing method 2.1 or 2.2.

2.1 Make a revealed-type edge whenever possible.

Attach the edge to the underside of the countertop with silicone adhesive.

2.2 Join all edge sections with a 45° bevelled seam.

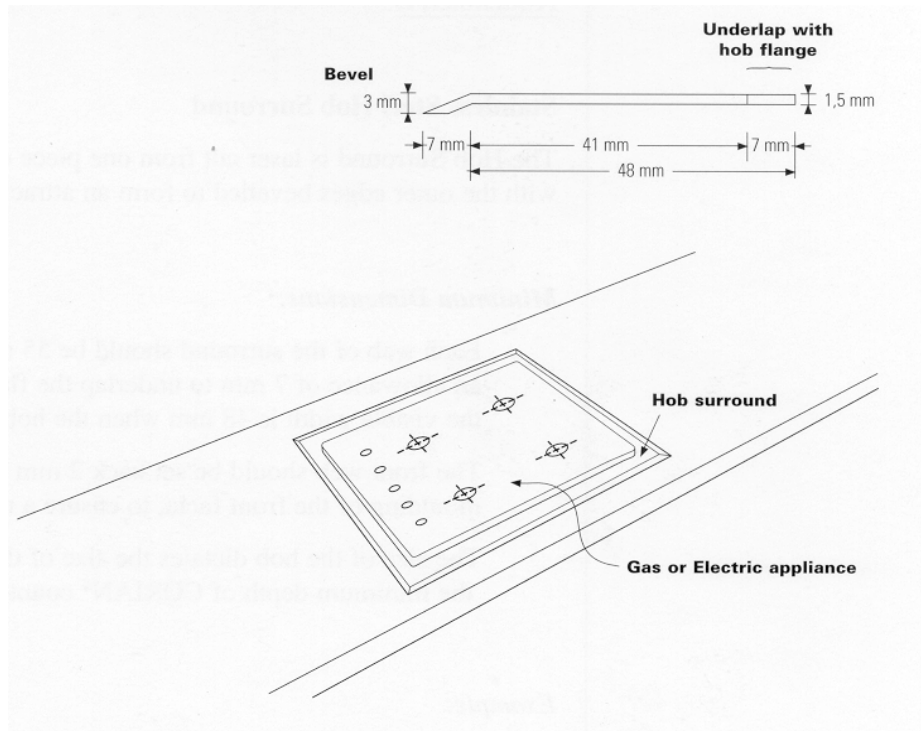
Attach the downturn edge to the countertop with Joint Adhesive.



#### 21.4. INSTALLING STAINLESS STEEL HOB SURROUND

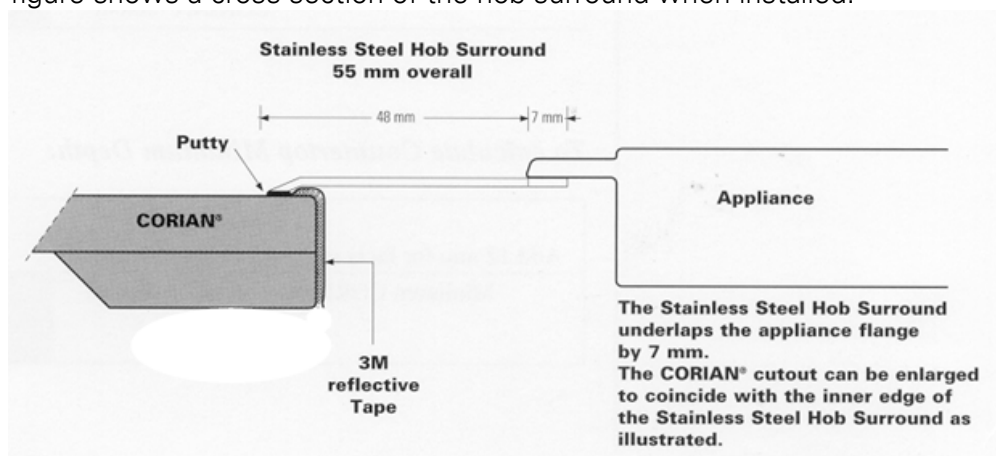
By using a specially designed stainless steel perimeter hob surround, the cooking appliance can be installed in a manner which will provide more space and provide greatly improved insulation from the appliance into DuPont™ Corian®.

The hob surround should be designed with the following dimensions and thickness - the overall size will be determined by the dimensions of the electrical appliance to be installed.



The hob surround enables the existing cut-out to be enlarged as the wider flange of the surround allows more working space.

The below figure shows a cross section of the hob surround when installed.





Tests have shown that using a stainless steel hob surround has the desired effect of minimising heat input into the area around a DuPont™ Corian® cut-out, thus greatly reducing the likelihood of any further problems occurring.

This technique is also recommended for industrial cooking areas or when extensive cooking takes place.

## AVAILABILITY

### Stainless Steel Hob Surround

The Hob Surround is laser cut from one piece of brushed 18/10 stainless steel with the outer edges bevelled to form an attractive design detail.

#### Minimum Dimensions:

Each web of the surround should be 55 mm minimum which includes an allowance of 7 mm to under lap the flange of the hob. This means the visible width is 48 mm when the hob is installed. The front web should be set back 2 mm minimum from the start of the moulding of the front fascia, to ensure a neat appearance.

The size of the hob dictates the size of the surround and also influences the minimum depth of DuPont™ Corian® countertop.

#### Example:

	Width		Depth	
Overall hob size	560	x	490	
Overlap hob surround	-14		-14	7mm all round
Hob surround cut-out	546		476	(internal dimensions)
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Minimum web size	+110		+110	(55mm all round)
Overall surround size	656		586	(external dimensions)
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Overlap surround DuPont™ Corian®	-14		-14	7mm all round
	642		572	

#### To calculate Countertop Minimum Depth:

Surround Depth	=	586	
Add 12 mm for fascia mould + 2 mm tolerance		+14	
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Minimum DuPont™ Corian® countertop depth	600	for 560 x 490 hob, when the rear edge of the surround lines up with the back of the countertop	

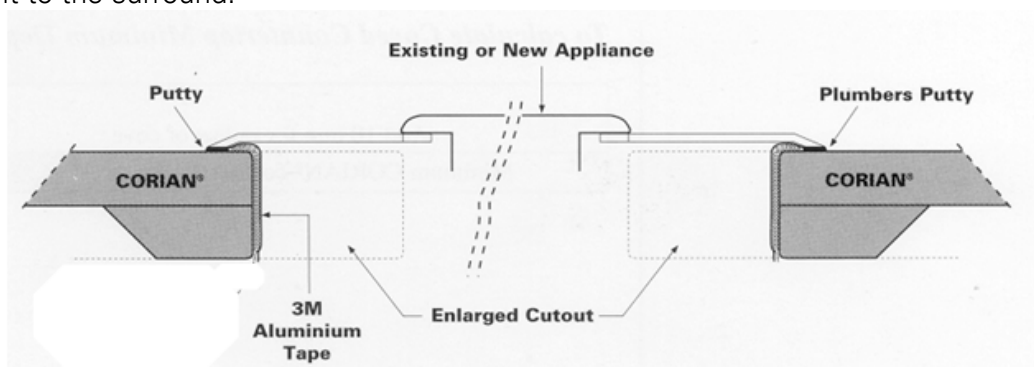
*To calculate Coved Countertop Minimum Depth:*

	600	
Add 10 mm for radius cove	+10	
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Minimum DuPont™ Corian® countertop depth	610	for 560 x 490 hob

## STEPS TO COMPLETION

### You will need:

- 3M™ Aluminium Reflective Tape
  - Plumbers mate
  - Acrylic Artists Paint => kneed together to obtain an acceptable colour match DuPont™ Corian®
  - Silicone Sealant
1. Check that the Hob flange overlaps the Hob Surround by 7 mm all round and that the cut-outs in the surround and countertop, are correct.
  2. Mark the location of the external edges of the surround onto the DuPont™ Corian® countertop.
  3. Fix insulation strips around the DuPont™ Corian® cut-out in the normal way so that the outer edges coincide with the surround location marks.  
Fix 3M Scotch™ Brand aluminium reflective tape over this.
  4. Knead a bed of plumbers mate into this 6 mm space - slightly overlapping the surround location marks and bed the surround onto it with even pressure all round. Trim off the excess.
  5. Fix the hob in place in the normal way. Apply dabs of Silicone to the corners of the hob flange to fix it to the surround.



(This technique can be used for repeat hob cut-out cracking situations and give an aesthetically pleasing and lasting solution.)

When a hob installation has failed for a second time after a replacement or a repair has been undertaken, it may be better to take the hob surround option to provide a lasting solution to the situation.