Granite Worktop Installation & Maintenance Instructions





Granite Worktop Installation & Maintenance

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1. Introduction

This document gives specific information regarding the installation of Howdens Joinery Granite worktops

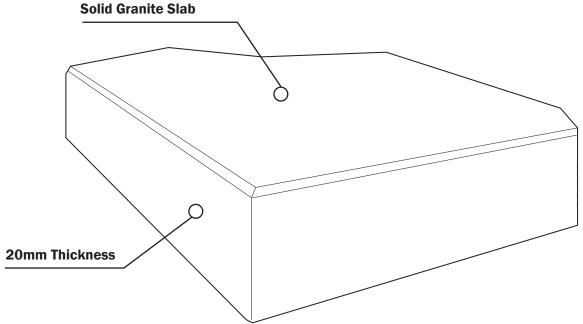
Whilst you may have installed many worktops in the past, please ensure you are familiar with the different elements required when handling, cutting and installing granite worktops, particularly relating to their weight and extraction of dust.

Specialist tools and accessories are required to ensure the worktops are cut and finished correctly and these are detailed within this manual.

In order to maintain the condition of the granite worktops please take time to read this manual before you begin the installation.

Worktop Material

The worktop is supplied as finished on 3 sides solid granite slab in modular sizes as detailed below.



Variations of Granite

Granite is a natural stone, therefore patterns and colours will vary. Depot samples are a representation of the Howdens granite supplied. If you are not happy with the granite match, please obtain a replacement worktop before any cutting has taken place.

Worktop Range

The granite worktop range includes:

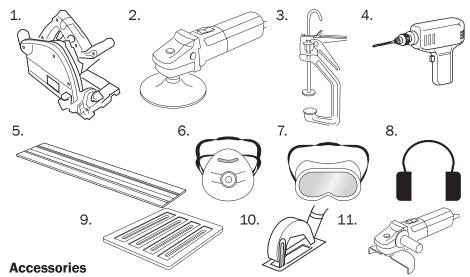
2.8m Worktop	(2800 x 620 x 20mm)
1.4m Worktop	(1400 x 620 x 20mm)
1.4m Upstand	(1400 x 100 x 20mm)
Window Board	(1400 x 320 x 20mm)

Additional Materials

Metal Worktop Support Bars (Used to support the worktop over wide spans exceeding 400mm). See 'Using the support bars' on page 8.

2. Tools required

To install the granite worktops the following tools will be required to achieve a high quality finish.



- 1. Plunge Saw
- Sander/Polisher (with extraction)
- 3. Clamps
- 4. Drill
- 5. Rail/Guide
- 6. Dust Mask (FFP3)
- 7. Protective Eye Wear
- 8. Hearing Protection
- 9. Drainer Groove Jig
- 10. Grinder Guide (with extraction)

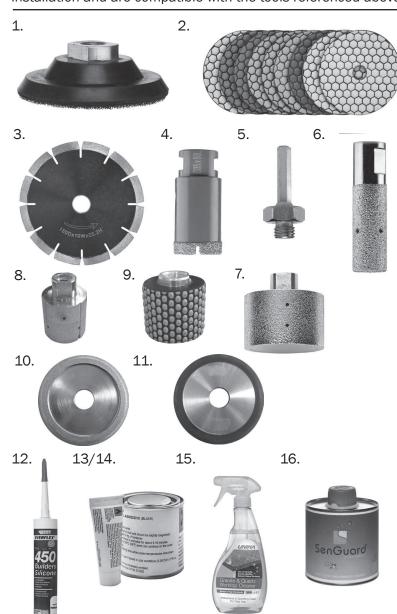
The accessories shown here

are to be used with the

sander/polisher

11. Grinder

The following installation accessories can be purchased from Howdens Joinery. These will be required for your installation and are compatible with the tools referenced above.



- 100mm Quick Release Backing Pad (M14)
- 2. 100mm Super Premium Dry Diamond Polishing Pads
 - 50 grit
 - 100 grit
 - 200 grit
 - 400 grit
 - 800 grit
 - 1500 grit
 - 3000 grit
 - Buff Pad (Black & White)
- 3. 150mm Diamond Granite Blade
- 4. 35mm Diamond Holesaw Bit
- 5. Drill Spindle Adapter
- 6. Vacuum Brazed Drum (20mm)
- 7. Vacuum Brazed Drum (75mm)
- 8. Vacuum Brazed Drum (50mm)
- 9. Diamond Polishing Drums x7
- 10. Vacuum Brazed Flute Wheel
- 11. Diamond Polishing Wheels x6
- 12. Clear Silicone Frame Sealant
- 13. Jointing Compound (White)
- 14. Jointing Compound (Black)
- 15. Granite Worktop Cleaner
- 16. Senguard Anti-Stain Protection

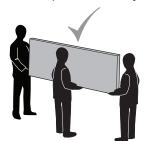
Note: Other miscellaneous equipment used for the various stages will be referenced at the appropriate installation points.

3. Important hints & tips

The following information MUST be followed in order for a safe and successful installation.

VERY IMPORTANT:

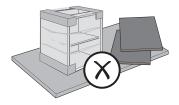
- A dust mask (FFP3 Filter compliant to EN149:2001) must be worn during the cutting and sanding/polishing process
- Eye protection must be worn compliant to EN166B
- Always try to perform cuts and sanding that produce dust in an area with good general ventilation, appropriate dust extraction must be in place wherever cutting, drilling or polishing activities take place
- Use equipment that has built in dust extraction to keep any dust out of the air
- Safety footwear should be worn with reinforced toe caps
- Worktops are very heavy and care must be taken when handling use appropriate levels of manpower
- Worktops must always be lifted on their side, never laying flat gloves should be worn for additional grip

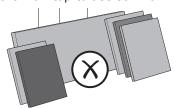


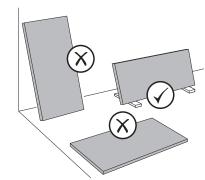




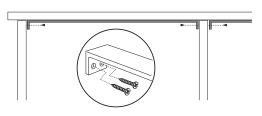
- Worktops must be stored on their side, with protection underneath
- Never stack other components onto or against the worktops
- Use support bearers under the worktop to assist when moving







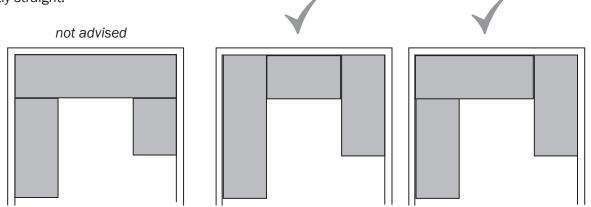
- Treat product with care when removing from the packaging
- Any exposed cut edges should be treated with the Senguard anti-stain protection before fitting the worktops (follow the manufacturers guidelines for application and drying times)
- The maximum unsupported overhang span of the worktop must never exceed 300mm
- The maximum unsupported span of the worktop must never exceed 400mm
- Cut-outs for hobs and sinks should never be closer than 100mm from the end edges of the worktop
- Never have a worktop join over an unsupported span, as this will weaken the strength of the worktop
- When using polishing pads, never exceed 2000rpm, as doing so will reduce the life of the polishing pads
- Only use the silicone sealer specified (GAR0117) to seal/secure the worktop. Support bearers must be used under the worktop when drilling/cutting
- Always cut the worktops from the front to the back to avoid damaging the front edge
- An upstand should always be used in any installation when the back of the worktop is against the wall
- Cabinet feet must be fitted correctly to the cabinet to ensure suitable support for the weight of the worktop
- Support rails/battens must be used to span unsupported areas at the rear of the worktop. Use a metal worktop support bar across unsupported areas such as over integrated & free-standing appliances. This should be positioned at the front and the back as required between the cabinets/decor ends



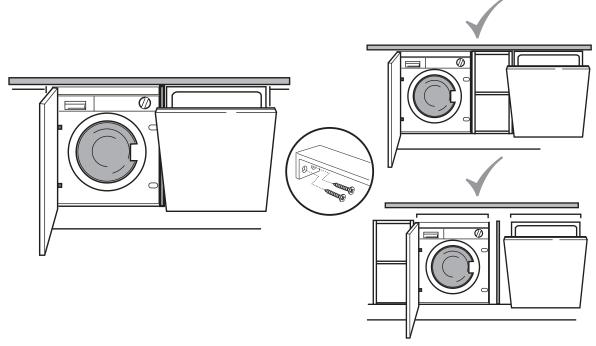
4. Planning recommendations

The below diagrams show some of the planning recommendations. Whilst the granite worktops can be used in all applications, certain planning considerations are required to ensure the worktops are installed correctly.

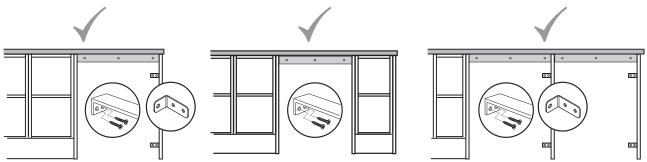
As best practice, never fit a worktop between two wall sections to avoid fitting issues with the walls not being perfectly straight.



When two appliances are to be positioned next to each other, a decor end and support rails should be used for additional support. Where possible a unit should be positioned between the appliances for increased support of the worktop. **Note:** Where appliances require securing to the underside of the worktop, a support batten should be fitted to the underside of the worktop using silicone to secure so appliance fixing can be achieved.



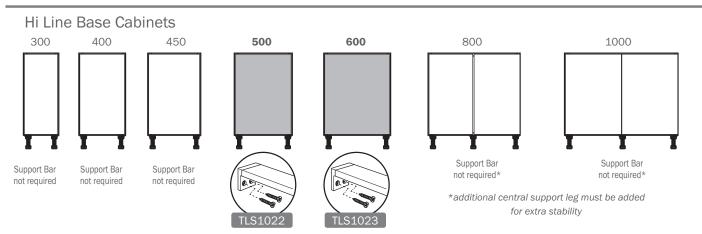
Always try to finish a run with a supporting unit. Where a single panel is used, this will need to have the additional support of a wooden batten at the back and the metal support bar at the front. In addition to this the decor end panel should be secured to the wall using metal brackets.



5. Using the support bars

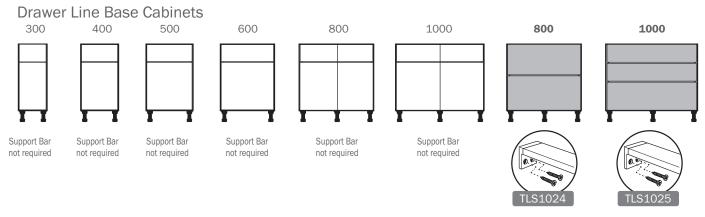
Metal support bars should be used over unsupported spans of the granite worktop. Follow the diagrams below for where support bars are required.

Note: Cut-outs for a sink or hob in the granite top must be supported by the cabinet front rail and/or support bar.

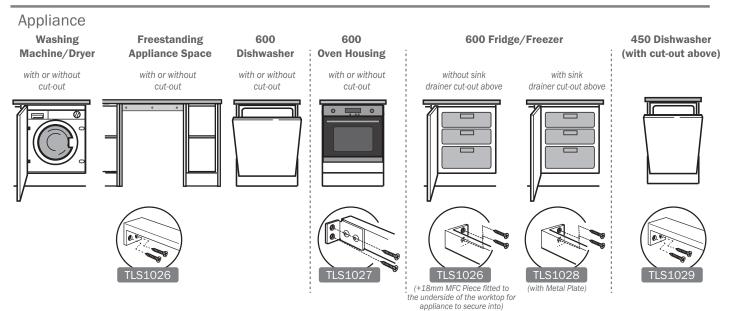


With Cut-out above

Note: The 800 & 1000 units do not need a support bar if the front rail & centre upright of the cabinet remains in place. If this has been removed the use of a support bar (TLS1024 or TLS1025) will be required



Note: For use on large drawer units where there is no centre upright or with a cut-out above



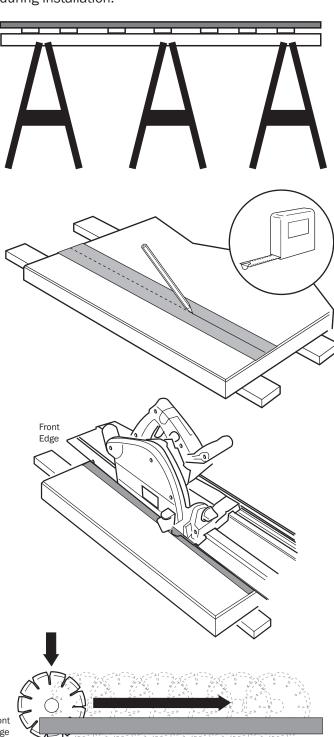
6. Cutting

The following tools and equipment are required to complete this operation

- Circular Saw with Diamond Granite Blade (150mm)
- Clamps
- Square
- Rail/Guide
- Masking Tape
- Tape Measure & Pencil



Note: Make sure care is taken with the finished surface of the worktop. Never lay tools onto the worktop during installation.



Make sure measurements are checked before cutting takes place. Where corners are not a perfect 90° angle, the worktop cut edge may require cutting at a slight angle.

Place the worktop on the bench ensuring it is supported with wooden battens. Make sure there is plenty of room around the product to work. **Note:** If using 'A' frames to support the worktop while cutting, ensure the frames are sturdy enough to support the weight.

Note: Masking tape should be applied to the worktop at the point where it is going to be cut.

Using a tape measure and pencil, mark the worktop at the required length.

Use a rail/guide clamped to the top as a square edge for the saw to run against.

Use a plunge saw with diamond blade to make the cut in the worktop. There are two recommended sawing processes:

1. For finished edges - 3 Passes

(3mm cut - plunge cut*- finishing pass)

2. Unfinished edges (against a wall) - 1 Pass (Plunge cut*)

*plunging the blade completely through the worktop then steadily along the cut line.

Make sure the blade is followed completely through the cut to avoid breaking and chipping.

Important:

- Always cut the worktop from front to back as this will avoid damage to the front edge
- To prevent splintering it is recommended not to push too hard when cutting. This will also preserve the lifespan of the blade
- Always use suitable dust extraction
- Always use a dust mask (FFP3) and safety eye wear whilst cutting
- Always use appropriate ear protection

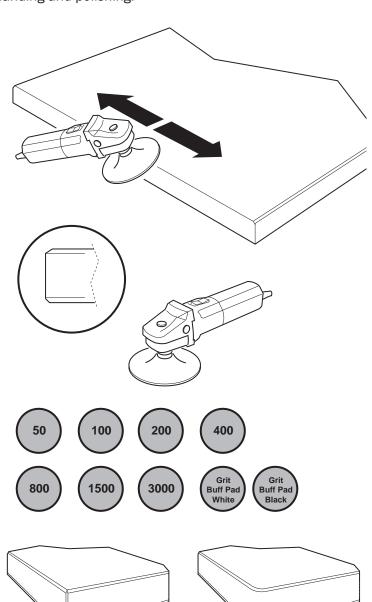
7. Sanding & polishing

The following tools and equipment are required to complete this operation

- 100mm Quick Release Backing Pad
- 100mm Super Premium Dry Diamond Polishing Pads
 - 50 grit
 - 100 grit
 - 200 grit
 - 400 grit
 - 800 grit
 - 1500 grit
 - 3000 grit
 - Buff Pad (Black & White)
- Sander/Polisher



Note: Make sure care is taken with the finished surface of the worktop. Never lay tools onto the worktop during sanding and polishing.



Apply the quick release backed sanding pads to the sander.

Using a sander and the sanding pads, sand the cut edge making a chamfer along the top and bottom edges.

Note: The chamfer should replicate the chamfer along the front edge. If applying a radius to the corner carefully implement this with the sanding pads.

Work through the sequence of pads in stages as shown, applying even pressure. The last sanding application will be the 3000 grit pad.

Finally, use the buff pad to finish off the worktop edging.

Important:

- Always use suitable dust extraction
- Always use a dust mask (FFP3) and safety eye wear whilst cutting
- 2/3 passes along the edge per pad is sufficient.
- Clean away any dust particles after each sanding application has taken place
- When using polishing pads, never exceed 2000rpm, as doing so will reduce the life of the polishing pads
- Always use appropriate ear protection
- Senguard protection will need to be applied to exposed cut edges

8. Fitting & joining

The following tools and equipment are required to complete this operation

- Silicone (GAR0117 see note on page 11)
- 2 Part Adhesive Glue & Hardener
- Spatula
- Masking Tape

Note: Worktops should never be walked/stood on during installation

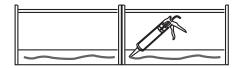
Note: Do not leave the adhesive too long before trimming back. Once the adhesive starts to harden the excess should be removed.

IMPORTANT SILICONE INFORMATION

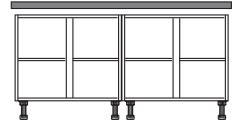
Only use the Clear Silicone Frame Sealant GAR0117 when fitting the granite worktops.

Other silicones can react with the granite during the curing/hardening process and can cause discolouration which may become visible on the finished surface over a period of time.

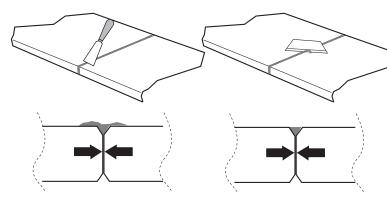
Silicone along front edge only



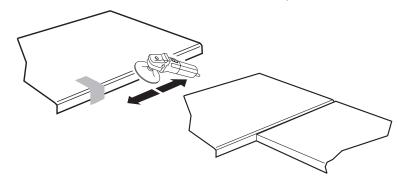
Position worktops



Apply adhesive



Sand chamfer so adhesive bonds correctly



DRY FIT THE WORKTOPS AND UPSTAND BEFORE SECURING IN POSITION.

With the worktops cut to length and polished, they can be joined together to an adjoining side or front edge (in a corner application) using the 2 part adhesive.

Apply silicone to the front rails of the cabinets, then carefully position the worktops onto the cabinets. The worktops should be placed in their final positions.

Note: When joining the worktop to a finished edge, use a 50 grit sanding pad to run along the chamfer where it meets the cut edge.

Apply the 2 part adhesive with a spatula to the top edge (V Groove made by the chamfers) of the worktops. Ensure the worktops are firmly pushed together. The adhesive should be sitting on the top of the v groove.

Using a spatula, scrape away excess adhesive from the joint.

Before the 2 part adhesive has fully cured (no longer tacky to touch but not fully set), scrape away the excess adhesive from the top edge of the worktop using a knife blade.

Important: Under no circumstances should the finished face of the worktop be sanded.

Ensure the worktops are level before final fixing.

Note: Any exposed cut edges should be treated with the Senguard anti-stain protection before fitting the worktops.

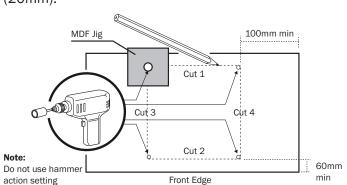
9. Hob & sink installation

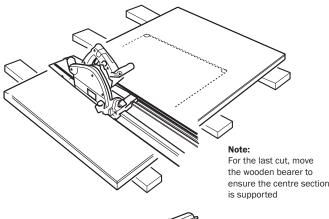
The following tools and equipment are required to complete this operation

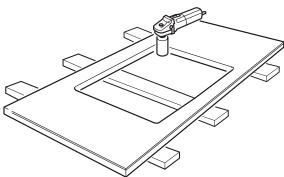
- Sink or Hob template/dimensions
- Drill
- Plunge Saw
- Sander/Polisher
- 150mm Diamond Granite Blade
- 35mm Diamond Holesaw Bit
- Drill Spindle Adapter
- Vacuum Brazed Drum (20mm)

Note: Cut-outs must be fully supported during the cutting process.

Where the cut marks join on the top, lines can occur. These must be removed using the vacuum brazed drum (20mm).







Important: When cutting out for a sink, the front rail of the cabinet will also require cutting. DO NOT remove more of the cabinet front rail than is required for the sink to fit, as the front rail supports the worksurface.



Note: We recommend the use of a drilling template when cutting out the four corner holes in the worktop. Use a piece of MDF and cut the hole to a diameter of 35mm.

Mark out the cutting area for the hob or sink using a tape measure, pencil and masking tape.

Use a 35mm diamond holesaw to create a hole in each of the 4 corners through the granite worktop.

Note: Make sure there are supporting wooden bearers under the hole positions for the drill to pass through into. Do not apply excess pressure when drilling and slightly rotate the drill.

Use a plunge saw to make the cut in the worktop between the holes, plunging the blade completely through the top then steadily along the cut line.

Important:

- To prevent splintering it is recommended not to push too hard when cutting. This will also preserve the lifespan of the blade
- Always use suitable dust extraction
- Always use a dust mask (FFP3) and safety eye wear whilst cutting
- Use the sander and vacuum brazed drum (20mm) to smooth off any internal burred edges or notches. This is very important to ensure there are no unnecessary stress points which could cause cracking.

Note: If fitting an undermount sink, the inside of the cut area will need to be finished as per the cut end of a worktop. Follow the information in section 11 for finishing instruction.

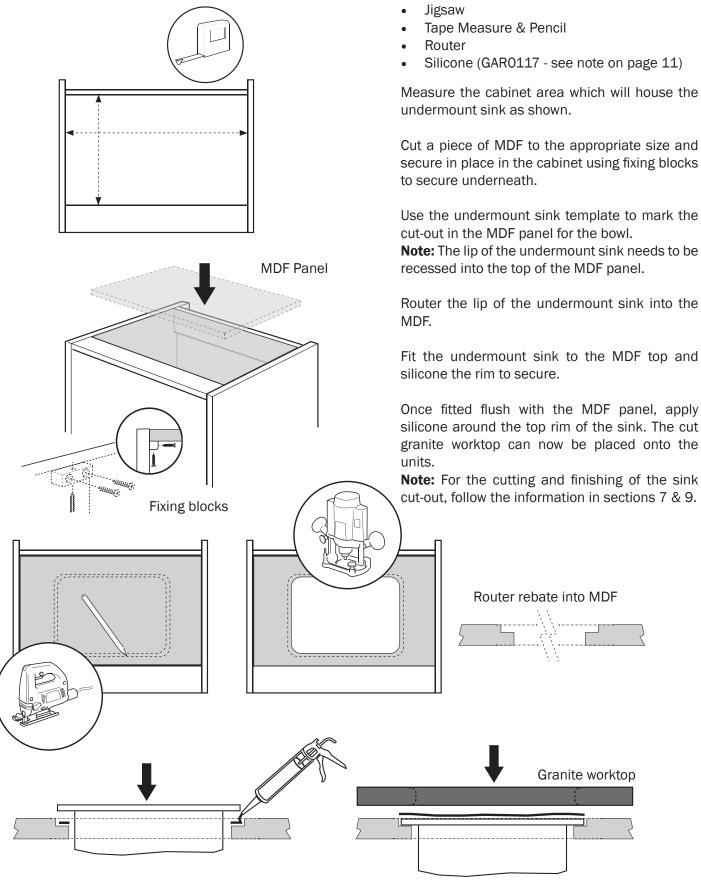
The sink /hob can now be fitted as in a normal worktop application. Do not silicone hobs in place.

Note: The granite surface cannot be screwed into. Packers/batons may be required under the top for the hob/sink clips to clamp onto. Some brackets may require modification.

10. Undermount sink

The following tools and equipment are required to complete this operation

The undermount sink will need to be fitted to the cabinet following the information below



11. Undermount sink - Finishing

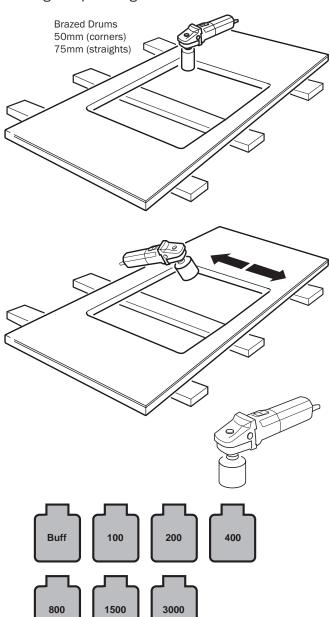
The following tools and equipment are required to complete this operation

To create smooth internal corners for your undermount sink, follow the finishing information below

- Vacuum Brazed Drum (50 grit) 50mm
- Vacuum Brazed Drum (50/60 grit) 75mm
- Dry Diamond Polishing Drums
 - Buff Drum
 - 100 grit
 - 200 grit
 - 400 grit
 - 800 grit
 - 1500 grit
 - 3000 grit
- · Sander/Polisher



Note: Make sure care is taken with the finished surface of the worktop. Never lay tools onto the worktop during sanding and polishing.



Using the undermount sink template as a guide, cut the worktop section following the hob & sink installation instructions in section 9.

Note: When cutting the worktop, cut just inside the pencil line to allow enough material to clean the inside edge.

Use the sander and vacuum brazed drums (50mm for corners & 75mm for straight edges) to smooth off the internal burred edges. This is very important to ensure there are no unnecessary stress points which could cause cracking.

Note: Make sure the lines are parallel into the corners as these will be visible edges.

Use the sander & vacuum brazed polishing drums to clean up the internal cut edges

Note: The chamfer on the top & bottom edges should replicate the chamfer along the front edge.

Work through the sequence of drums in stages as shown, applying even pressure. The last sanding application will be the 3000 grit drum.

Important:

- Always use suitable dust extraction
- Always use a dust mask (FFP3) and safety eye wear whilst cutting
- Clean away any dust particles after each sanding application has taken place
- When using polishing drums, never exceed
- 2000 rpm, as doing so will reduce the life of the drums
- Always use appropriate ear protection
- Senguard protection will need to be applied to exposed cut edges once finishing is complete

12. Drainer grooves

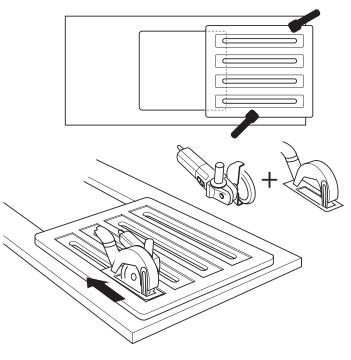
The following tools and equipment are required to complete this operation

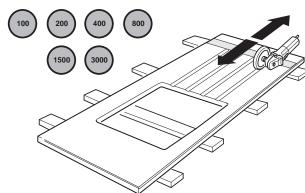
To create drainer grooves for your undermount sink, follow the information below and the instruction sheet supplied with the jig

- Vacuum Brazed Flute Wheel (50 grit) 50mm
- Diamond Resin Flute Polishing Wheels
 - 100 grit
 - 200 grit
 - 400 grit
 - 800 grit
 - 1500 grit
 - 3000 grit
- Sander/Polisher
- Grinder
- Grinder Guide
- Drainer Groove Jig



Note: Make sure care is taken with the finished surface of the worktop. Never lay tools onto the worktop during sanding and polishing.





Before applying drainer grooves ensure the sink cut-out is sanded and polished.

Decide on the location of the drainer grooves, i.e equal spacing from the front to back of the sink cut-out, or towards the front and the length of grooves.

Clamp the jig to the worktop making sure it is secure. **Important:** Follow the instruction leaflet supplied with the jig for positioning & setting up information.

Note: Check the position of the jig is in exactly the right place before applying the grooves.

Fit the vacuum brazed flute wheel to the grinder and router the drainer grooves using a grinder guide. Guide the wheel down the channels in the jig starting at the end furthest away from the bowl (where groove is shallowest).

Note: We recommend 2 passes to achieve a full cut of each groove.

Remove the jig and carefully polish the grooves working through the polishing wheels.

Note: Before polishing begins, starting with masking tape, apply 5 strips alternating between masking tape and multi-purpose tape behind the cut drainer grooves. This is to stop the polishing wheels jumping out at the end of the groove and damaging the worktop.

The polishing wheels should be used to get the grooves to the finished look of the top.

Important:

- Always use suitable dust extraction
- Always use a dust mask (FFP3) and safety eye wear whilst cutting
- Clean away any dust particles after each sanding application has taken place
- Always use appropriate ear protection
- Senguard protection will need to be applied to exposed cut edges once finishing is complete

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13. Creating curves

The following tools and equipment are required to complete this operation

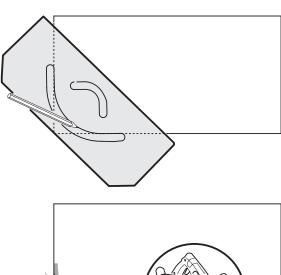
- Plunge Saw & Diamond Granite Blade (150mm)
- Clamps
- Square
- Rail/Guide
- Masking Tape
- Tape Measure & Pencil
- Sander/Polisher & Pads
- Vacuum Brazed Drum (75mm)
- Worktop Curved Jig
- · Curved Edge Buffer

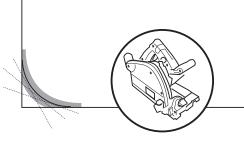


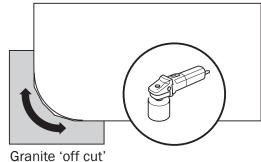


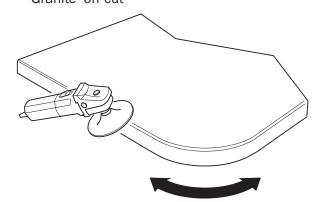


Note: Make sure care is taken with the finished surface of the worktop. Never lay tools onto the worktop during installation.









If an off-cut of granite is available (from the hob or sink cut out), turn this over and use as your worksurface under the curve being created. A piece of MDF can also be used for this application.

Apply masking tape over the area you are making into the curve. Use the curved worktop jig placing it against the corner of the worktop being cut. Draw a pencil line around the curve onto the masking tape.

Using the plunge saw cut straight sections of the worktop away as close to the line as possible.

Once most of the corner is cut away, lay the top onto the off-cut of granite and use the sander with a vacuum brazed drum (75mm) fitted, to smooth the curve.

Finally, use the grit pads to finish the edge and apply the chamfer. Follow the sanding and polishing section for information.

Important: Ensure effective dust extraction is maintained throughout the cutting and finishing process.

Note: Any exposed cut edges should be treated with the Senguard anti-stain protection before fitting the worktops.

14. Upstand installation

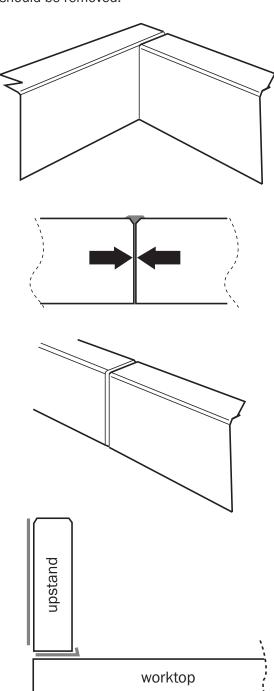
The following tools and equipment are required to complete this operation

- Silicone (GAR0117 see note on page 11)
- Masking Tape

- Circular Saw
- Clamps
- Square
- Rail/Guide
- Tape Measure & Pencil



Note: Do not leave the adhesive too long before trimming back. Once the adhesive starts to harden the excess should be removed.



DRY FIT THE UPSTAND SECTIONS BEFORE SECURING IN POSITION.

Use a pencil and tape measure to mark where the upstand needs to be cut.

Use a square and straight edge to make the line across the upstand.

Cut the upstand using a plunge saw. Once this has been completed, use the sander and pads to smooth the edges of the upstand, as previously advised in the cutting/sanding sections.

Apply silicone to the rear of the upstand and worktop then fit into place. Spray a small amount of soapy water onto the silicone, then wait until a thin skin layer forms.

Remove any excess sealant before it fully sets.

Important: Under no circumstances should the finished face of the upstand be sanded.

15. Care & maintenance

Important:

- Care should be taken whilst installing to avoid scratches to the surface of the worktop
- Joint adhesive can be re-applied if any pulls away from the joint when removing the excess
- Considerations on the squareness of the room should be taken into account when cutting the worktop, but minor wall undulations should be covered by the upstand
- Wipe worktops using soapy water. For stubborn marks use Howdens Joinery granite worktop cleaner (TLS1016)
- No abrasive cleaners should be used
- The granite worktop is scratch resistant but not scratch proof. We recommend the use of a chopping board when cutting. Do not cut directly onto the surface
- Do not leave spills on the worktop. Always wipe away immediately
- Never use bleach on the worktop
- Do not place excessive weight on unsupported lengths of worktop when fitted/fitting, such as standing on the worktop

Guarantee

- Stain protection has been applied on the granite modules and comes with a 10 year guarantee against staining
- Stain protection will need to be manually applied if the worktop is cut and leaves an exposed surface

Note: Stain treatment only penetrates 5mm of the surface. Senguard anti-stain protection needs to be applied to any edge which is cut and then exposed

16. Granite FAQs

Is Howdens granite solid?

Yes. It is a 20mm thick solid piece of stone

What grade is Howdens granite?

High quality (commercial grade)

What is different about lower grades of granite?

Lower grade granites have less abrasion resistance meaning it would be easily scratched, may change tone over time and stains would easily penetrate the material

Does it break easily?

Granite is a natural product that is very hard in compression, but is not in any way flexible and when being moved it must be treated as glass. If twisted or bent in any way it will snap, but moving with care should prevent issues. Once installed granite is a very robust material

Does it scratch?

Yes. Although it is unlikely that an ordinary steel knife will do this, high end knives with tungsten blades and some ceramic knives may cause scratches. Ceramics or other pieces of granite can also cause scratches. It is recommended that a chopping board is always used

Can it be repaired?

Yes. With care, scratches can be polished out using the polishing pads. Breakages will require a new piece of granite

Is it finished with an anti-stain protection?

Howdens granite comes protected on the top and 3 sides with Senguard anti-stain protection which comes with a 10 year manufacturer's guarantee. Senguard can also be purchased from your local Howdens depot and be applied to any unfinished surface cut as part of the installation

Is there a tolerance in the thickness of the granite?

Yes, 2mm (+/-)

How heavy is it?

A 2800mm length is approximately 95kg (packaged) and a 1400mm length is approximately 48kg

What equipment do I need to install granite?

A plunge saw and a variable speed polisher or drill (must be able to spin at 2000 RPM) plus the consumables we supply and appropriate extraction

Is it dry or wet cut?

Howdens granite can be cut dry using tools available from stock

What is the maximum overhang tolerance?

300mm

16. Granite FAQs

What sinks are compatible?

For the most up to date guidance please speak to your local depot and request a copy of the latest sink and appliance compatibility document

Can granite be used as a splashback?

Yes, a section of worktop can be used behind a hob

How many kitchens will the diamond blade fit?

Approximately 2-3 kitchens

How many kitchens will the holesaw fit?

Approximately 1 per kitchen installation

How many kitchens will the 20mm brazed drum fit?

Approximately 5 kitchens

How many kitchens will the 75mm brazed drum fit?

Approximately 10 kitchens

How many kitchens will the polishing pads fit?

Approximately 5-10 kitchens

How many kitchens will the undermount sink tools fit?

Approximately 4-6 kitchens

How many kitchens will the drainer grooves tools fit?

Approximately 4-6 kitchens

How many kitchens will the flute wheels fit?

Approximately 4-6 kitchens

What size is the fitting for the diamond blade, does it need a reducer?

The hole in the blade is 22.2mm centre bore. A reducing ring can be used to take this down to 20cm

Is there a reducer supplied with the blade?

Yes, pre-fitted in the blade although it can be easily removed

How long does it take to re-polish an edge?

This process normally takes between 20 and 25 minutes and can be reduced with practice

Can I use an angle grinder to polish?

Yes, the spin should be reduced below 2000rpm or you will burn out the polishing pads

16. Granite FAQs

How much longer does it take to fit granite compared to laminate?

This will vary. If you fit a laminate worktop using 3 toggle bolts and biscuit joints then granite will be quicker, but if you fit laminate using just 2 toggle and no biscuit joints then the granite will take slightly longer. Over 2 joins, the granite could take up to half an hour longer to fit

How long do I leave the compound before trimming a joint?

Approximately 7-10 minutes (this time will vary based on several factors; how much hardener is used, ambient air temperature, humidity etc.)

What happens if it breaks?

If you experience any quality issues with our products, please contact the depot you purchased the goods from for assistance. Contact details for all our depots can be found on our website www.howdens.com

Notes

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