MISTRAL

SOLID SURFACE WORKTOPS

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Getting started

When working with any product you will always want to start by getting a good understanding of the fundamentals. This guide contains information about core topics including health and safety, storage and handling, tooling and equipment, design considerations, and advice on preparing for installations.

Before undertaking any installation or fabrication work on MISTRAL products, please make sure you have read and fully understood all installation advice as well as carrying out all important product checks.

All our latest product information is available on our website where you can find installation guides, videos and useful links for tooling and much more. Please visit mistralworktops.co.uk.

If you require any technical advice, please get in touch through our website or call us on 0345 6580 333 and our Product Support Team will be happy to help.

Health & safety

Please conform to all necessary safety requirements including health and safety guidelines in accordance with all relevant health and safety legislation. It is your sole responsibility to ensure the health and safety of yourself, anyone working with you and anyone in the vicinity of the operations to be carried out.

KARONIA Solid Surface material is non-toxic and there are no known hazards associated with it. However, the processes involved during fabrication and installation produce dust from the material which is classed as nuisance dust. When machining the material there will be a detectable odour. This is methyl methacrylate vapour which is also present when using the adhesive.

Any adverse effects that occur as a result of excessive exposure can be abated by ensuring that:

- The area in which work is to take place is well ventilated.
- You employ a dust extraction system to remove the material debris created during processing.
- You use the appropriate personal protective equipment.

Emergency first aid

If an individual is exposed to excessive vapour, remove them from the area and get them to fresh air. Monitor their condition and if problems persist, consult a medical professional.

If any adhesive or catalyst comes into contact with your skin, wash for 15 minutes with soap and water. If the contact is with your eyes, immediately wash thoroughly for 15 minutes and seek immediate medical assistance.

For more information please contact your distributor, or visit our website for the Material Safety Data Sheets (MSDS).

Safety equipment

It is your responsibility to consider all the tasks that you will be required to perform as part of the installation process and to assess the specific risks for each of these processes. We strongly recommend the appropriate personal protective equipment (PPE) is used.

Always use dust masks, eye protection and ear protection while performing any machining tasks on the material.

When using adhesive, catalyst and isopropyl alcohol, always wear protective gloves and eye protection as these components may cause irritation to the skin.

Always wash your hands after use and dispose of all waste responsibly including gloves, spent cartridges, expelled/part-mixed and unused adhesive.

Storage & handling

It is important that all MISTRAL products are stored in the prescribed manner to ensure that they are kept in the best condition for the benefit of both the installer and the consumer.

Storing worktops & sheets

Ensure that all MISTRAL Products are stored horizontal and flat and that the weight is evenly supported along their entire length and width.

Never store MISTRAL products vertically or horizontally on their edge as this can cause bowing.

When stacking, make sure nothing gets trapped between the worktops that may cause damage.

Always store worktops indoors and ensure the area is dry, well-ventilated and not subject to large variations in temperature.

Storing adhesives

Keep upright in storage and employ a first in first out (FIFO) stock management policy. The adhesive should ideally be stored at a temperature of approximately 5°c which will ensure the shelf life of the product for up to 12 months from the fill date which is printed on the side of the cartridge and on the box.

Handling advice

When carrying MISTRAL worktops use good safe lifting practices and ensure you take notice of the product weights. Make sure you allocate sufficient manpower as all worktop and sheet materials require a minimum two man lift. All worktop and sheet materials should only be carried singularly and kept vertical up on their long edge so as to avoid any damage and to best maintain control whilst carrying them.

As with all solid surface products, MISTRAL worktops and sheet materials are more susceptible to damage in colder temperatures; so in these conditions make sure to take extra care when handling.

If you perform any cut-out operations prior to transport and delivery, clamp plywood boards to either side of the worktop to support the cut-out in transit.

Tooling & equipment

MISTRAL has the practicality of hardwood in that the tooling used for hardwood is adequate for use with our solid surfacing materials. Whilst MISTRAL products are harder than wood they do not require specialist tooling such as Granite, Quartz or Marble.

Consideration should always be given to any special requirements of the particular installation site or appliances to be installed that may necessitate additional tooling.

Recommended onsite tooling

Extraction

Used to effectively remove dust and material debris during processing tasks to ensure a clean and comfortable working environment. Your extraction system should be independent of the equipment you are using. Clip-on dust bags or vacuum cleaners are not suitable.

Extraction should always be used when using any power tools and is critical when sanding and finishing.

Router and Router Cutters

Used to perform cutting, smoothing and trimming operations for joint preparation, cut-outs, shaping, edge profiling, and other detailing tasks such as drainer grooves.

- Minimum 1600 watt power output.
- Ensure that the bearings on the router are sound to prevent router chatter.
- Only use high quality tungsten carbide cutters.
- Ensure that the router bits you use are sharp and chip-free.

We recommend the use of our spiral router cutters, as they are designed to apply the router's power more evenly, to create a smoother result, and their up-cut action aids effective extraction.

Here a list of the router cutters you would need and the tasks they would perform:

Spiral Face Cutter - Used to trim and finish edges, joints and cut-outs.

Spiral Aperture Cutter - Used to create a full depth single pass cut-out for hobs and sinks.

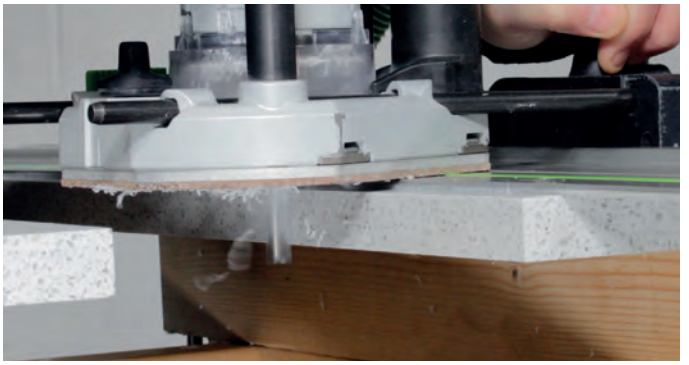
Drainer Groove Cutter - Used to create drainer grooves into a sink cut-out.

Edge Profiling Cutter - 3mm/6mm radius & 45° angle used to create a finished decorative edge on perimeter edges and cut-outs.

Flush Sink Profile Cutter - Used to create a flush finish between worktop and solid surface undermount sinks.

Flush Face Cutter - Used to create a flush finish between worktop end and vertical end panels.

Rebate Cutter (26mm Diameter) - Used to create a rebate when jointing vertical end panels.



Random Orbital Sander

Used with sanding discs and abrasive pads for Joint smoothing, Finishing and Polishing.

- 600 watt minimum power (for 150mm sander).
- Speed requirement of 6,000–10,000rpm.
- Ideally the sander should have a 3-5mm orbit.

Circular Saw

Used for sizing worktops and sheet products on site, but should not be used to create a finished edge.

Use a good quality Circular Saw with 1200 watt minimum power.

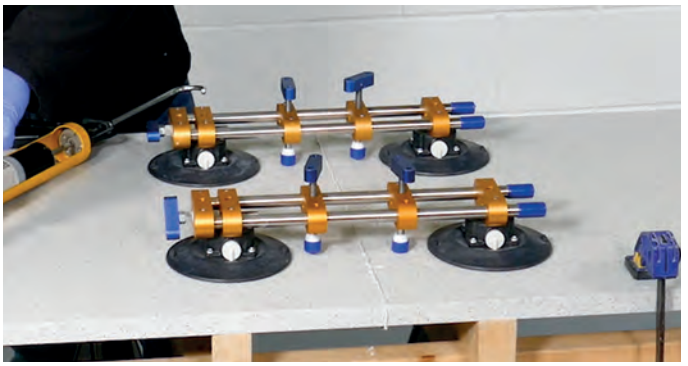
Only use high quality TCT triple chip Circular Saw blades (minimum 48 tooth). Some manufacturers produce blades that are designed for solid surface material which will have greater longevity.

Make sure it has a Minimum cut depth of 35mm.

Seaming Tools

Used to pull jointing faces together, level the top surfaces, and hold the worktops in place during the jointing procedure.

. It is recommended that you use the KARONIA Seaming Tool Kit.



. Alternatively, wood blocks can be hot melt glued to the surfaces either side of the joint and then the tops gently pulled together using Speed Clamps. In this case you would also need to use wooden bridging blocks with speed clamps to level the joint.

Jigsaw

Used to perform cut-outs for hobs and drop-in sinks, scribing to the wall and excess material removal for radius curves and shapes.

700 watt minimum power

Only use high quality blades. Some manufacturers have blades specified for solid surface material which will have greater longevity.

Alternatively we recommend blades designed for cutting 30/40mm timber worktops.

Additional Tooling and Accessories

Adhesive/Mastic Gun - Used with the black plastic adapter to express the adhesive from the adhesive cartridge through the mixer nozzle at a 10:1 ratio.

Clamps - Used to hold items in place while they are being machined and jointed such as built-up edges/downstands. Examples include Speed, Spring, Sash and F-Clamps.

Jigs & Guide Bushes - Used to guide the Router when performing tasks such as Sink and Hob cut outs, Radius Corners and Drainer Groves.

Straight Edge and Guide Rails - Used for cutting straight lines and machining joint faces ready for jointing.

Consumables - Items across a variety of installation tasks including isopropyl alcohol wipes, sanding discs, abrasive pads, heat reflective tape, fastening bolts and brass plug inserts.

Design & layout

Planning

When designing a worktop project, consideration must be given to the product quantities required and also to the positioning of worktop joints and cut-outs. This will ensure optimisation of product use, reducing waste and the related costs.

There are also certain guidelines, as detailed below, that must be followed to ensure you install the worktops and all appliances and accessories in the correct manner.

As long as these parameters are observed, designers and architects are free to utilise the potential that the flexibility of the MISTRAL worktop range offers.

Be sure to consider all layout optimisation options to ensure best product use and the simplest installation method.

Please note that the simplest installation option may not always give the most efficient use of the material.

Joint layouts & positioning

It is good practice to plan the location of all joints and cut-outs to obtain an appreciation of the requisite work needed to install the worktops, and any factors that may hinder the completion of this work. This may be due to positioning of other furniture within the room, or specific features that may affect design or layout decisions.

To ensure the integrity of any joints and the worktop itself, please ensure that the following points are observed:

- Never extend joints across any cut-outs such as hobs and sinks, or over unsupported areas.
- No joints are allowed within 100mm of any cut-out.

Thermal expansion

Test data indicates that the linear thermal expansion for KARONIA Solid Surface material is 1mm for every metre.

Correctly installed worktops should never come into direct contact with any fixed objects such as walls and tall oven housings etc.

If the installation is to have upstands, splashbacks or tiles fitted after the worktops have been installed, then larger expansion gaps can be left as long as the product being used on the vertical application will cover them.

(The greater the expansion gap, the less chance of any expansion issues)

If any materials are attached to the solid surface material then appreciation should be given to the differences in expansion rates and an elastic adhesive should be used.

When cutting internal corners into MISTRAL products for cut-outs or for shaping around pillars/boxing in etc., ensure all corners have a minimum radius of 10mm. These corners should not be cut square as they set up weak points that are then subjected to thermal expansion which may cause cracking. Additionally, edges of the worktop that have been cut with a circular saw or jigsaw should be sanded smooth to remove microfractures caused by the rough nature of the cutting action.

Fixing the worktop

To fix the worktops to the carcases, all that is required is a spot fix on the external corners of the units/framework using silicone.

Never screw and fix Mistral worktops directly to the carcases as this will restrict any expansion and can result in stress cracks and damage to the worktops.

If anything is to be fixed to the worktops for example breakfast bar legs, only use the fastening bolts and brass plug inserts.

Appliance considerations

Any heat-generating appliances, such as free standing range cookers that are adjacent to the worktop should be positioned a minimum of 5mm from the end unless the manufacturer's requirements recommend a greater distance.

Any hob cut-outs must have a double layer of aluminium heat reflect tape applied to all four edges and folded over the top and bottom.

There are no restrictions on the positioning of dishwashers as there is no danger of moisture ingress due to the fact that MISTRAL has no MDF or particleboard substrate.

Pre installation advice

Measurements & quantities

Prior to commencing installation, make sure that you have the necessary products to complete the job including all support products and accessories. Check that any pre-fabricated elements, such as hob or sink cut-outs are dimensionally accurate, and if any cut-outs are to be done on site, ensure that all measurements are correct against the related appliances.

Time management

When planning each installation, give full consideration to the effect of adhesive curing times on the project. Ensure that you have tasks that can be carried out while the adhesive is curing so that you maximise the efficiency of your installation programme.

Curing times may vary depending on room temperature but 30-40 minutes per joint should be sufficient.

Another key point to consider is that all tops are supplied with a P400 grit linear finish so when performing tasks such as joint smoothing, only finish below this level around the immediate area and not the whole of the worktop.

This economy of finishing will ensure that the job is completed in a shorter time.

Furniture preparation

Ensure that the fitting location is as expected and that there are no additional factors present that may affect the worktop installation. This includes factors such as the site dimensions, wall alignment and levels or any additional furniture.

Check that all appliances and furniture that need to be in place prior to worktop installation are positioned correctly. It is essential that the units on which the worktops are to be fitted have been properly levelled in both horizontal axis (side to side and front to back) and secured appropriately to each other and the wall.

It is also important to fit wall-hung worktop support battens throughout the full length of the worktop.

This will provide adequate support for an appliance space or base unit size up to 600mm. Any spans wider than this will require additional support for the worktop in order to prevent deviation. Similarly, unsupported overhangs should be a maximum of 300mm.

Check the levels thoroughly before installing the tops and correct any discrepancies.

Ensure that there is sufficient clearance between base units and any wall units for the installation of the worktops and splashbacks.

Check all service pipes, power cables and sockets are installed and that all appliances fit in their allocated positions.

Working environment conditions

Ensure that the site is dry, clean and secure that is to say that windows, doors etc. are all fitted.

Also consider the room temperature, so as to appreciate the possible effects on adhesive curing times. Remember that the colder the environmental temperature, the longer the curing times.

Also consider the temperature of the worktops themselves, If they are too cold when jointing they will pull all the heat out of the adhesive which has a exothermic reaction when mixed resulting in longer curing times and if too severe, not curing at all.

All MISTRAL products including adhesives should be given time to acclimatise to room temperature prior to installation. (The recommended acclimation time is 24 hours).

The ambient temperature should be at least 16°C to ensure a successful cure process and no greater than 26°C as the adhesive would cure too rapidly to use efficiently.

Site access

Check the access to the working environment is suitable in advance.

Make sure that consideration is given to the following:

- Check the distance between the delivery vehicle and the installation area to determine whether any handling equipment is necessary or further labour is required.
- Ensure there are no obstacles on your route from the delivery vehicle to the installation area.
- Check the entrance size and internal ceiling heights to ensure there will be no handling issues.

Important checks & tasks

Unpacking the products

When you receive your MISTRAL products, always check the packaging for any signs of damage.

When unpacking, hold the cardboard away from the product where possible and run a small bladed knife along all taped edges. Take care not to scratch the underside of the product just in case the reverse side needs to be visible in the finished application.

Ensure to make a note of the batch numbers from the packaging and the product for later reference as they are required as part of the warranty registration information.

Top Tip: Use your smartphone to photograph the details.

Retain the packaging if you are required to cover the worktops once you have completed the installation. This may be necessary when other tradesmen are required to complete follow on tasks.

Once unpacked, check all products thoroughly to ensure you are happy with them before commencing with any fabrication / installation work.

If you identify any damage that cannot be removed when trimming or cutting to size, contact your supplier immediately and arrange to get the product swapped

Items that have been worked on will not be exchanged if a visual check would have identified an issue.

Colour consistency checks

KARONIA Solid Surface Products are thoroughly checked to ensure colour consistency. However, the very nature of how solid surface materials are manufactured means that no two products are guaranteed to be exactly the same; this is despite having matching batch numbers.

The batch number on the product's packaging and underside is solely for distributors' guidance to best manage their stock levels and rotations. It is not to be used by retailers, fitters or consumers as a guaranteed colour match.

When joining two or more products together, it is essential that the worktops have the same batch number and shade letter.

It is the installer's responsibility to check the colour consistency of the products which are to be jointed prior to any fabrication/installation work commencing.

To do this, place the products side by side lengthways and peel back the protective film on each corner of both products.

Lightly sand across them with a P400 grit abrasive pad and wipe them down with the alcohol wipes from the MISTRAL Installation Kit. This will give the most accurate basis for comparison.

Check from several angles and distances and if any discrepancy is apparent, please contact your supplier immediately and have the product exchanged.

For The Unique Collection Colours:

The nature of these colours means that there is variation within each product as part of the intended 'effect', so the usual colour consistency process is not applicable. When two worktops are brought together to make a joint, it is not possible for them to match in the same way as standard MISTRAL colours do.

A visual check should be carried out to confirm that the overall appearance of the products is similar and that they are compatible for use together but, at the point they meet, the pattern will vary as it does in the rest of the worktop. (Please see our further advice on how the visibility of the joint can be minimised).

As a result, it is not necessary that worktops being joined together have the same batch number and shade letter.

The exception to this is where a large joint is being made to create a feature such as a kitchen island. The length of the joint needed is much longer than a usual joint so it has more of each worktop viewed against the other. Also, these feature pieces tend to be in more prominent positions in the room with the highest light levels, so are subject to greater visibility/scrutiny.

In this case, we would recommend that the products have the same batch number and shade letter in order to give the best chance of reducing how apparent the joint is, particularly if the products are the same type (ie. two worktops or two breakfast bars).

Protective film removal & defect checks

Once you are happy with the colour consistency, remove all the protective film. Check the surface in its entirety for any defects and discrepancies. If any are found which will interfere with the end result, contact your supplier immediately and get the product swapped.

Be aware that the protective film may leave residual adhesive on the product's surface. To remove this, use a household cleaner such as Cif Powerspray.

Apply the cleaner to the surface, spread with a damp cloth and leave for 1 minute. Wipe off the resultant residue and dry the surface completely.

Run your hand over the surface to check no adhesive is still present. By removing all residual adhesive there can be no interference with tool travel during any installation and finishing processes.

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Cutting and shaping

MISTRAL is easy to craft to the needs of every project as our enhanced acrylic solid surface material can be machined with standard wood-working tools. Here is a guide to sizing and scribing as well as adding angles and curves to the worktops ready for installation.

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Cutting to length

Tools & equipment

- P.P.E. – (Dust Masks / Safety Glasses / Ear defenders)
- Trestles / Bench
- Support Blocks
- Pencil
- Tape Measure
- Straight edge / Guide Rail
- Clamps
- Circular Saw
- TCT Triple Chip Blade
- Extraction Unit and Hose

Setting up

Make sure that the worktop to be cut is flat, level and fully supported underneath either on a bench or on trestles with a length of board providing a bench surface.

Sit the worktop on support blocks spaced at regular intervals. Ensure you have adequate space between the underside of the worktop and the bench surface for the Circular Saw to pass freely.

Using the pencil, transfer the dimensions from the plans onto the worktop and mark out where the worktop is to be cut.

When carrying out this procedure make sure you oversize each piece so that the saw cut/cuts can be trimmed to a final length with a router and Spiral Face Cutter afterwards as a circular saw cut will not provide a finished edge suitable for jointing.

It is vital that you use a straight edge when cutting to size as this will ensure that the cut is accurate and square/perpendicular to the front edge of the worktop.

Once all the pieces have been cut and trimmed to their final size, you need to make sure you have sufficient expansion gaps around all fixed objects as none of the pieces should come into direct contact with the walls.

The correct expansion is a minimum of 3mm around all the walls and a minimum of 1mm for every linear metre along the length. (e.g. 3m length = minimum 3mm expansion gap).

Performing the operation

Clamp the straight edge to the worktop with the most appropriate clamps making sure all pieces including off-cuts are adequately supported. Clamp the worktop and support blocks to the bench to make sure there is no movement during the cutting process.

Place the saw against the straight edge/guide rail so that the blade is clear of the front edge of the worktop and set the blade depth so it extends 10mm below the worktop. Make sure that the cut path underneath the worktop is clear for the blade to pass freely.

Before using the circular saw, make sure the TCT blade you are using is sharp, chip-free and that the extraction hose from the extractor unit is attached.

If using a slow or soft start circular saw, make sure you obtain full speed before starting. Perform the cut at a slow and even pace until the back of the blade has fully passed through the worktop.

Shaping

Tools & equipment

- P.P.E. – (Dust Masks / Safety Glasses /Ear defenders)
- Trestles / Bench
- Support Blocks
- Clamps
- 12mm MDF Jigs
- Offset Scribe Pencil (Trend M/KWS01)
- Jigsaw
- Open tooth Jigsaw blade (Designed for cutting 30/40mm timber worktops)
- Router
- Extraction Unit and Hose
- Spiral Face Cutter
- 30mm Guide Bush

Setting up

Make sure that the section of worktop to be cut is flat, level and fully supported underneath, either on a bench or on trestles with a length of board providing a bench surface

Sit the worktops on support blocks spaced at regular intervels. Ensure you have adequate space between the underside of the worktop and the bench surface for the jigsaw to pass freely.

Small off-cuts can be supported by hand when performing the cutting process as clamping and supporting them can be difficult and obtrusive.

If the section of work top to be removed is large and heavy, make sure all pieces including the off-cuts are adequately supported, securely clamped and that there is no movement during the cutting process. If not, the last part of the cut can snap off under weight and damage the worktop.

When cutting a shape or radius corner you will need to position your jig on the worktop and mark the outline of your shape by running an offset scribe pencil (e.g. Trend M/KWS01) around the jig.

Also mark the position of the jig itself so that it can be repositioned accurately. Once complete, remove the jig from the worktop.

Performing the operation

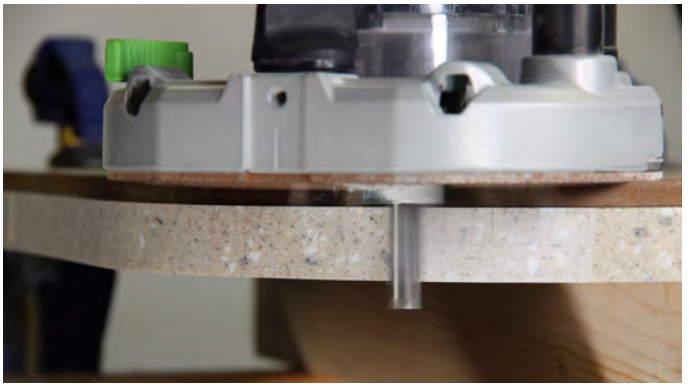
Using a jigsaw with an open tooth blade, carefully remove the excess material by cutting 2mm outside the pencil line on the waste side so that the edge can be trimmed with a router and Spiral Face Cutter later.

To finish the shape or radius, clamp the jig back into position making sure the clamps do not interfere with any router travel whilst trimming.

Make sure the router collar is clean and free from dust and insert the Spiral Face Cutter and tighten into place. Attach the 30mm Guide Bush, Base Plate and Extraction Hose to the router.

Now position the router onto the Jig so that the guide bush sits comfortably against the edge of the Jig and set the plunge depth to 30mm. Once the router is at full speed, slowly push down on top of the router until the plunge depth is achieved.

Top Tip: Never push too hard, always allow the tool to do the work



At a slow and constant pace, push the router along the jig and remove the 2mm excess material making sure the guide bush maintains full contact with the edge of the jig.

Once complete, the shape or radius should be smooth, chip-free, and ready for any bearing guided profile cutters to perform a final edge profile.

Scribing to a wall

Tools & equipment

- P.P.E. – (Dust Masks / Safety Glasses / Ear defenders)
- Scribe Pencil with clip on base wheel (Trend M/PB01) (Alternatively a block of wood & pencil)
- Straight edge / Guide Rail (Straight cuts only)
- Circular Saw (Straight cuts only)
- Jigsaw
- Open tooth Jigsaw blade (Designed for cutting 30/40mm timber worktops)
- P240 Grit Sanding Disc (Installation Kit)
- Extraction Unit an Hose

Setting up

Place the cut worktop into its position on the base units and push it up to the back wall.Before you mark out any scribe lines to the back edge, make sure you take into consideration when measuring how much overhang on the front edge will be required to accommodate the doors and any extra overhang.

If the line is straight between the wall and the back edge of the worktop then you can mark out how much of the back edge needs to be cut and remove this using the circular saw and extraction unit in the same way you would when cutting to length. If not, the cut will have to be performed using a jigsaw with an open tooth blade.

Performing the operation

Using a pencil, mark out the required cut line on the back edge of the worktop. This can be achieved using a Scribing Pencil such as (Trend M/PB01). Attach the right size wheel and run it along the wall with the pencil tip on the worktop surface. This will scribe a line onto the worktop mirroring the shape of the wall.

Alternatively, this can be done by running a small block along the wall with a pencil placed on the front edge.

Remember you have a margin for error when carrying out this process depending on whether or not an upstand, splashback or tiles are to be used above the worktop.

It is important that you sand the top and bottom edges of the cut using the P240 grit sanding disc as this will remove any small chips and fractures created by the rough cutting action.

Once you have made the cut, place the worktop back on the unit and offer it into position checking that it matches the shape of the wall and that you have a minimum 3mm expansion gap between the wall and worktop.

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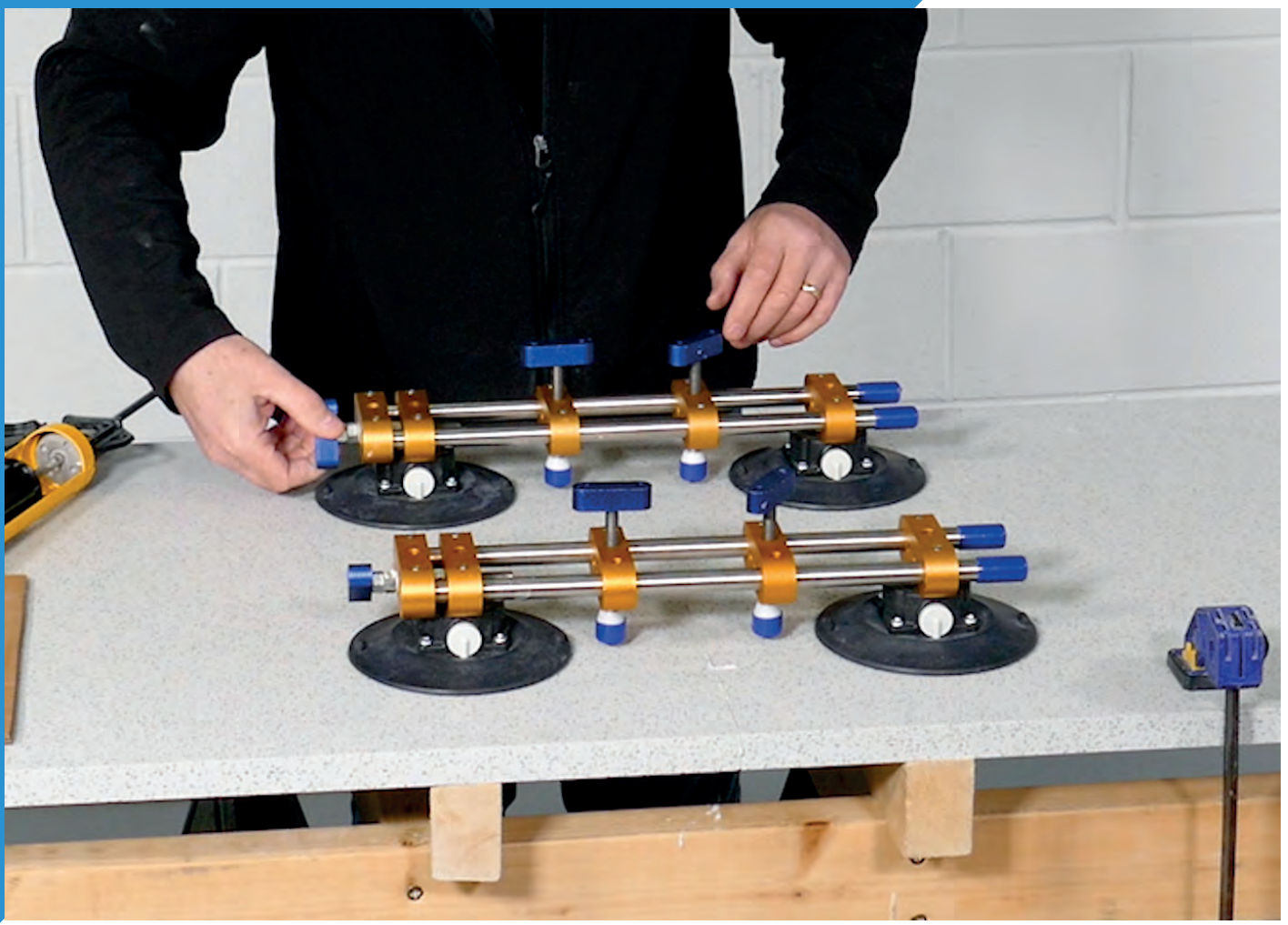

Jointing

Seamless, smooth and inconspicuous joints are the hallmark of every MISTRAL installation. Here is a step by step guide to forming them effectively and efficiently every time.

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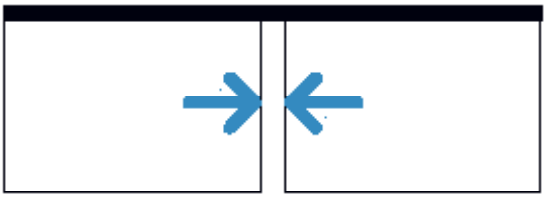
Before you start

All MISTRAL worktops are supplied square edged on all 4 sides, so they can simply be trimmed and butt jointed together. Only if the final installation requires a complex edge profile such as an ogee edge will you need to use a mason's mitre joint as you would for installing post-formed laminate worktops.

Below are the most commonly used joints used during installation, the use of which will be determined by the project configuration:

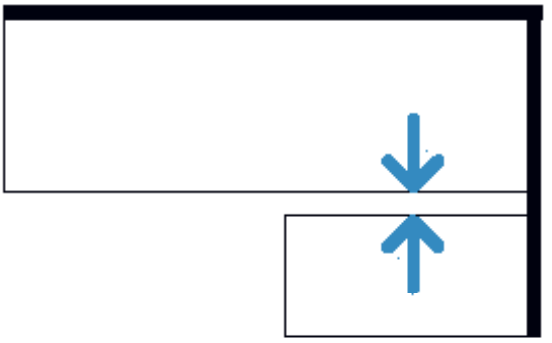
Straight joint

This joint layout is used to extend straight worktop runs. The trims required for this layout are to both short faces.



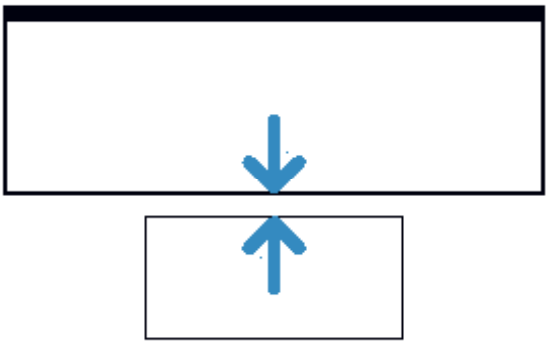
Corner joint

This joint, as the name suggests, is employed when two worktops meet at a corner. The trims required for this layout are to the long face of the worktop and the short face that butts up to it.



Peninsula joint

This particular layout is typically used where a worktop extends out from a perimeter worktop run. The trims required for this layout are to the short face of the worktop piece being used as the peninsula and the long face of the worktop that it butts up to.



Tools and equipment

- P.P.E. – (Dust Masks / Safety Glasses / Ear defenders)
- Trestles / Bench
- Support Blocks
- Straight edge / Guide Rail
- Block of wood
- Clamps
- Router
- Extraction Unit & Hose
- Spiral Face Cutter
- Seaming Tools
- Sanding Block
- Protective Gloves
- Alcohol Wipes (Installation Kit)
- Pre-prepared Adhesive & Mastic Gun
- Piece of waste Cardboard
- Spatula (Installation Kit)
- Knife
- Thin piece of card
- Random Orbital Sander & Hose
- P240 Sanding Disc (Installation Kit)
- P320 Sanding Disc (Installation Kit)
- Multi-Purpose Cloths (Installation Kit)

Preparing the jointing faces

Trim

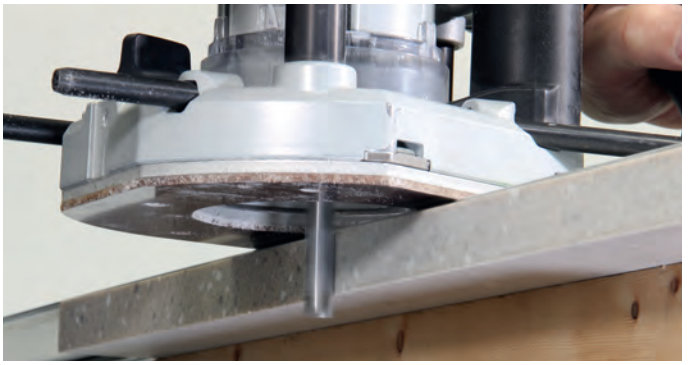
Here we are trimming the worktop faces with a spiral face cutter so they are ready for jointing. The aim is to remove any saw marks or slight chips, you should only need to remove approximately 1 mm of material.

Make sure that the worktop to be cut is flat, level and fully supported underneath either on a bench or on trestles with a length of board providing a bench surface.

Sit the worktop on support blocks at regular intervals. Ensure you have adequate space between the underside of the worktop and the bench surface for the spiral face cutter to pass freely.

Clamp the worktop and support blocks to the bench and then clamp the straight edge to the worktop. Ensure there is no movement during the machining process.

As you attach the spiral face cutter, set the plunge depth on the router to ensure it trims the complete edge. Don't forget your extraction and if possible use a chip catcher.



Starting at the front edge of the worktop, perform the trimming operation keeping the router running along the straight edge/guide rail throughout.

Inspect the edge to make sure it is smooth and chip free. If not, repeat the trimming process until you are satisfied with the finish. Now trim the opposing jointing face.

Dry fit

Dry fit the worktops together to check that they meet perfectly without any gaps between them. While doing so, take care not to chip or damage the jointing faces, particularly the top edges.

If trimmed correctly, the two faces should meet each other perfectly. If not they will need a further trim.

Make sure all pieces are accurately sized ready for jointing and that you have the appropriate expansion gaps required on all sides.

Key and clean

You will now need to gently key the joint faces prior to gluing by using a P240 grit sanding disc and sanding block. To protect the surface and to ensure a sharp top edge whilst keying, place a block of wood across the worktop so it overhangs the edge.

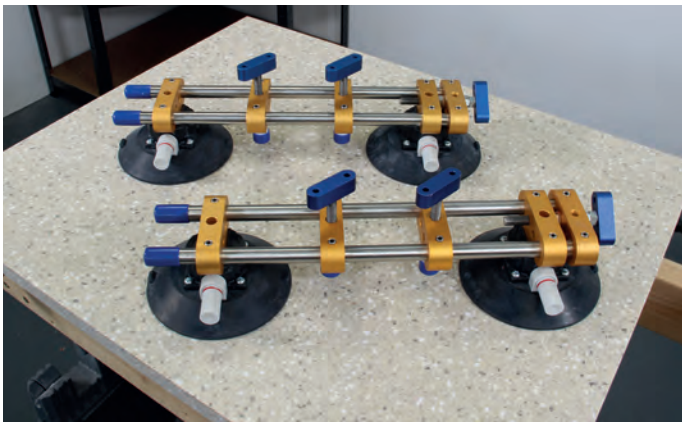
Check there is no print on the underside of the worktop near the edge to be jointed. If so, remove it by sanding with a P240 grit disc as it can contaminate the joint.

Thoroughly clean both joint faces with the alcohol wipes making sure to remove any traces of pencil, grease or dust that will contaminate the adhesive as it cures.

Making the joint

Seaming tool setup

Make sure the Mistral seaming tools are wound back so they are fully extended and check that the thumbscrews are positioned at their highest point.



Using the alcohol wipes, thoroughly clean the suction cups on the seaming tools, and the surface where they will be placed and allow to air dry.

Avoid touching or handling the areas that have been cleaned due to the risk of contamination.

Top Tip: We recommend you test the suction cups on the prepared surface area to make sure a vacuum is achieved before using them for jointing.

Applying the adhesive

Wearing the protective gloves, gently squeeze the mastic gun trigger of the pre-prepared adhesive until adhesive and catalyst pass down the self-mixing nozzle.

Always run a waste bead of adhesive approximately 200-250mm out onto the waste piece of cardboard to ensure that the adhesive is thoroughly mixed with the catalyst before using.

Please Note: If it is not mixed properly, the joint can fail.

Make sure you carry out this process every time you apply a new nozzle to a new or used cartridge. If using a used cartridge, make sure the top of the cartridge where the catalyst and adhesive come out are clear of any debris before attaching a new nozzle.

Failure to do this can result in a blockage and the adhesive not curing correctly.

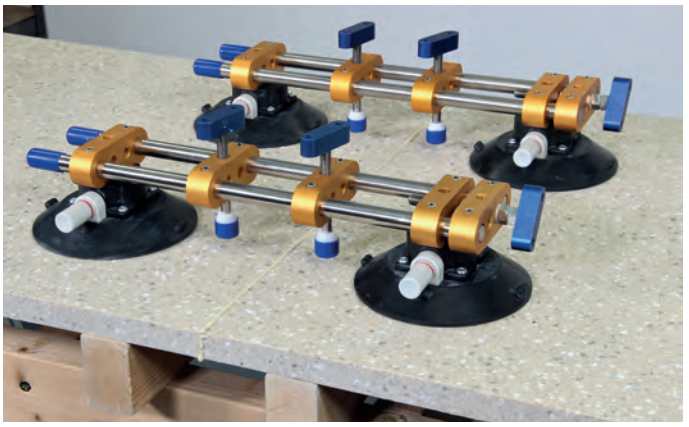
Apply a bead of adhesive across the full length of one of the joint faces keeping it close to the top edge.

Using the spatula, spread the adhesive so that you have a thin, flat film covering the entire joint face.

Repeat this process to the opposite face and carefully bring the two faces together.

Clamping and levelling

Place the seaming tools on the worktop positioning them evenly along and across the joint.



If you are jointing longer pieces you will need additional sets of seaming tools or sash clamps to ensure that the joint is sufficiently pulled together all the way along.

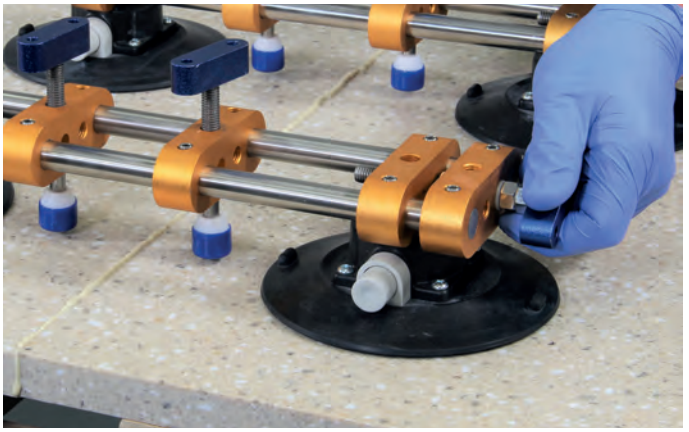
Gently press down on the seaming tool directly above the suckers to create a good seal between the worktop and the sucker.

Using the pumps on the side of the seaming tools, evacuate the remaining air until the red line around the pump disappears inside the pump chamber.

This will create a secure vacuum that won't move during the pulling together process.

Top Tip: When jointing short pieces, they have a tendency to "jack-knife" upwards when pulling the joint together. To prevent this, loosely clamp the short piece to the carcase top rail to prevent vertical movement but not the horizontal movement.

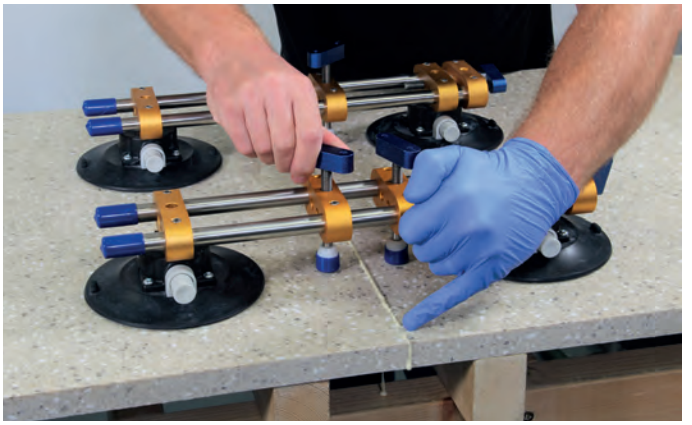
Turn the thumb screws on the end of the seaming tools a full half turn. This will start to ease the excess adhesive out of the joint and allow the joint faces to come together.



Make sure you have a continuous unbroken bead of adhesive throughout the entire joint on the surface, underside and front edge.

Position the levelling thumb screws on the bars approximately 50mm in on each side of the joint.

Using the spatula or your finger tip, check the levels of the worktops through the adhesive at the back, middle and front of the joint and slightly adjust the thumb screws to bring them level. Make sure when checking the levels with your finger that you are wearing clean protective gloves to prevent any joint contamination.



The worktops may have slight variations in thickness due to manufacturing tolerances so all you are doing is evening out the difference in levels to minimise the sanding that will be required.

Once everything is level, turn the thumb screws on the end of the seaming tools another half turn and check the levels again to make sure nothing has moved. If so, adjust accordingly and then apply another final half turn.

Top Tip: Do not over tighten the thumb screws as this will result in a lack of adhesive in the joint.

Any levelling thumb screws that are not touching the surface after levelling, will need to be lowered to just meet the surface to make sure nothing can slip or move during the curing process.

Under no circumstances should you remove the excess adhesive on the surface and underside before it has cured as this is required to feed any shrinkage.

If any excess adhesive on the underside is dangling down inside the cupboard, this can be flattened off using the spatula but not removed.

The adhesive on the vertical front edge of an internal corner joint should be removed whilst the adhesive is still wet as sanding and finishing this area will be difficult once the adhesive has cured.

To do this, cut a small 45 degree angle off the corner of a square piece of card and slowly run it up the internal corner to remove the excess adhesive.

To do this, simply cut a small 45° angle on a piece of 90° card and slowly drag up the internal joint removing the excess adhesive.

Any adhesive that was disturbed with your finger during the levelling process must be built back up with the adhesive and spatula whilst still wet.

When the worktops are clamped and level, leave the joint to cure for approximately 30/40 minutes depending on room temperature, or until it is not possible to scratch the adhesive with a finger nail.

If any adhesive is left over after use, unscrew the threaded cap, remove the used nozzle and replace the red stopper cap.

Make sure you wipe the thread of the cartridge and the stopper cap with the alcohol wipes before re-attaching the threaded cap.

Place the cartridge, black plunger and any unused nozzles back into the box and store in a cool dry place (Approx. 5°c) for future use.

After the joint has fully cured, the seaming tools can be removed ready for the sanding process.

Sanding the joint smooth/flush

The excess adhesive on a joint should only be removed by sanding.

Never use tools such as block planes or chisels as these methods could seriously damage the worktops.

It is vital that you use good quality extraction when carrying out this operation.

Using the random orbital sander with extraction, and a P240 grit sanding disc, sand only the adhesive bead from back to front until the bead is flush with the surface. Make sure when sanding that the sander base is kept flat and that you apply even pressure.

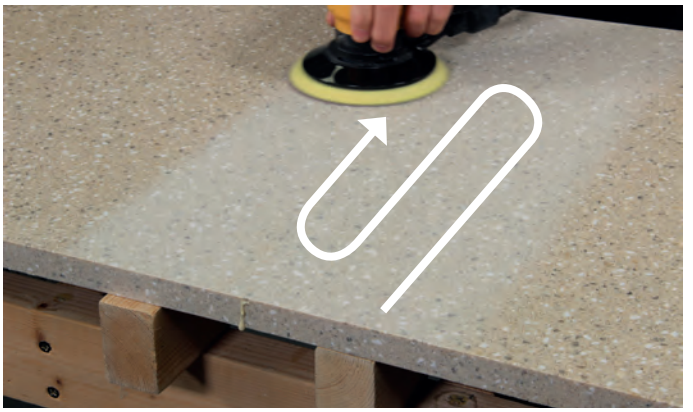
Never tilt the sander and use just the outside edge for quick removal. This can cause dips in the surface which are extremely difficult to remove.

Once complete, wipe the area with a multi-purpose cloth to remove any dust and debris.

Change the sanding disc to the P320 grit pad and sand the worktops an extra sanders width each side of the joint starting from the left hand side to the right.

Top Tip: When carrying out this procedure, take extra care not to sand a dip into the worktops

This needs to be performed firstly in a North-South sanding pattern across the width of the worktop making sure you overlap the previous pass by half the width of the sanding pad.



Wipe the surface clean and repeat this process in a West-East sanding pattern.

Repeat these processes until the adhesive bead is perfectly flush through the joint and into the worktops.

MISTRAL

SOLID SURFACE WORKTOPS

INSPIRE | IMAGINE | **CREATE**

Finishing

The depth of colour and lustre of every MISTRAL worktop is enhanced by the natural sheen that is added when the surface is sanded to a finish. Here is a guide to the equipment and techniques for achieving consistent and impressive results.

Before undertaking any installation or fabrication work on MISTRAL products, please make sure you have read and fully understood all installation advice as well as carrying out all important product checks.

All our latest product information is available on our website where you can find installation guides, videos and useful links for tooling and much more. Please visit mistralworktops.co.uk.

If you require any technical advice, please get in touch through our website or call us on 0345 6580 333 and our Product Support Team will be happy to help.

Before you start

Once you have completed other installation tasks such as jointing, creating cut-outs and adding edge profiles, the final step is to sand the worktop to a finish.

MISTRAL products are supplied with a P400 grit linear factory finish but will require sanding so it has a random orbital finish, so you will be applying the finishing process to the complete worksurface.

The standard finish level we recommend is a matte finish (P400 grit) as it gives a good surface sheen, requires minimal sanding and is the most forgiving in terms of maintenance.

In cases where an end user requests a higher level of finish, we would suggest a satin finish (P800 grit).

We suggest that you confirm the finish choice with the customer when you are first quoting for the project as a higher-level finish will require additional time and consumables.

Additionally, it is important that the consumer understands that a higher level of finish may show general wear and scuff marks more readily than a matte finish. This is because there will be a greater difference between the scuffed area compared to the rest of the worktop.

Finishing levels

Here is a table to illustrate how the finishing levels relate to the sanding stages that you will have to go through when creating your final finish:

	STAGE	MATTE	SATIN
FINISHING PROCESS	1	P400	P400
	2	Red Abrasive Pad	P600
	3		P800
	4		Grey Abrasive Pad

Tools & equipment

- P.P.E. – (Dust Masks / Safety Glasses / Ear defenders)
- Multi-Purpose Cloths (Installation Kit)
- Random Orbital Sander
- Extraction Unit & Hose
- P400 Sanding Disc (Installation Kit)
- P600 grit and upwards for higher sheen finishes **(www.karoniastore.com)**
- Red Abrasive Pad (Installation Kit)
- Finishing Sponge (Installation Kit)
- KARONIA Solid Surface Guard (Installation Kit)

The technique

When sanding MISTRAL worktops it is important to use the correct technique when going through each of the stages in the process to create a consistent overall finish.

A random orbital sander will always spin in a clockwise rotation so it is important to follow this rotation when sanding rather than against it.

Working against the rotation in an anti-clockwise motion can result in small pigtail scratches being visible especially with darker colours.

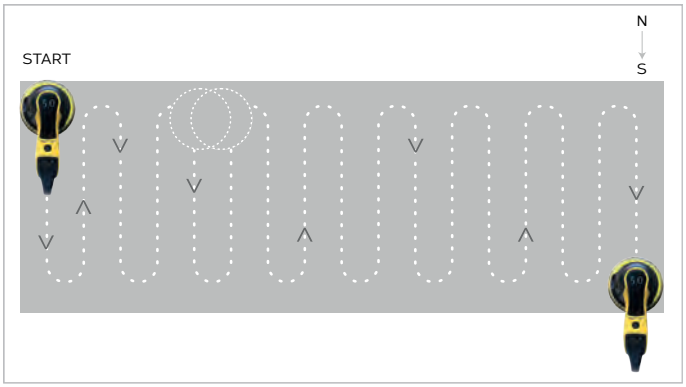
Also, good extraction is the key to keeping the finish consistent across the whole of the surface.

The fundamentals of good sanding technique are:

- Keep the sander flat and moving at all times.
- Do not press down too hard whilst sanding.
- Always let the sanding disc do all the work.
- Turn the rotational speed on the sander to its highest setting.

The pattern of sanding

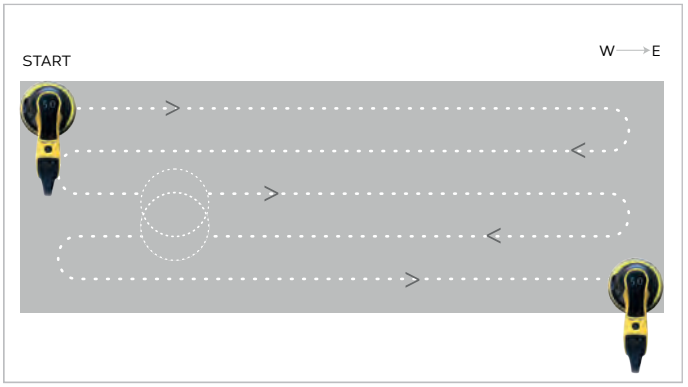
Place the sander at the top left-hand corner of the worktop and sand the entire section from North to South across the width of the worktop making sure you overlap the previous pass by half the sanding pad width as you go until you finish in the bottom right hand corner of the worktop.



Thoroughly wipe down the sanded area with a clean damp multi-purpose cloth and allow it to dry.

This must be carried out after each directional pass throughout every sanding process.

The next step is to go over the area with the same sanding disc starting again at the top left-hand corner, this time going West to East along the length of the worktop. Remember to make sure that you overlap by half the sanding pad as you go.



Once complete, thoroughly wipe down again and allow the surface to air dry.

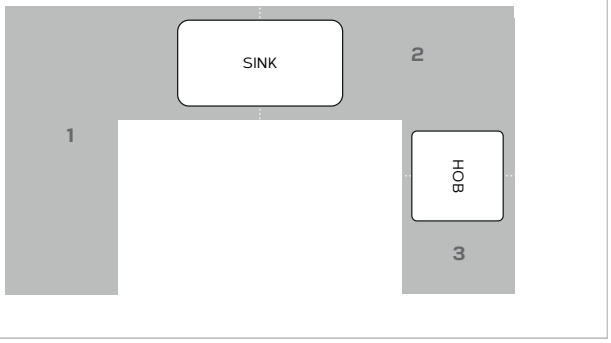
The process

We recommend breaking up the worktop area to be sanded into smaller more manageable sections.

This is done by dividing the areas at the point where a cut-out has been created for a sink or hob.

This allows you to blend the divided areas more easily at the narrowest point both at the front and back of the cut-out.

Do not blend areas in the middle of a section without a cut-out as this will result in an overlap of the sanding process and could affect the final visual appearance.



To begin place the P400 grit sanding disc to the base of the sander making sure the Extractor and Hose which is essential when sanding is attached.

Wipe the surface clean using the multi-purpose cloth and sand the worktops using the N-S/W-E sanding patterns as previously described making sure again to wipe the surface clean after each directional pass to remove any surface dust.

For a Matte Finish
You will now need to attach the red abrasive pad to the sander base and repeat the same sanding pattern procedure you did with the P400 grit sanding pad.

This process should then be repeated for a second time to ensure a consistent and even finish.

For a Satin Finish
After the use of the P400 grit sanding disc, you must repeat the same N-S / W-E process using each individual sanding disc making sure to wipe down along the way.

These sanding levels are P600 grit, P800 grit and then Grey Abrasive Pad.

Repeat your sanding process on all remaining sections of worktop and make sure that all edges and router detailing such as undermount sink cut-outs and drainer grooves are sanded to the same level of finish as the rest of the worktops.

Once complete, thoroughly wipe down the entire surface with a clean damp cloth and allow to dry ready for the final finish.

Final surface finish

To create the final finish we recommend the use of KARONIA Solid Surface Guard. This is applied to the surface using the yellow finishing sponge and works to remove the slight traces of dust that may still be visible.

The Surface Guard is then used by the homeowner as part of the product care routine.

Before using the KARONIA Solid Surface Guard, we would suggest that you shake the bottle vigorously to make sure its contents are properly mixed. When applying the Guard, hold the bottle approximately 300mm away from the surface and apply making sure it is evenly distributed.

Top Tip: Do no apply too much, all that is required is enough to lightly coat the surface.

Using the yellow finishing sponge by hand, spread the guard evenly making sure not to leave any dry spots.

Make sure that all edges and router detailing such as undermount sink cut-outs and drainer grooves receive the same application.

Now attach the finishing sponge to the base of the sander and turn the speed of the sander to a lower setting. Starting in the top left-hand corner, repeat the N-S / W-E sanding pattern.

Once complete, you should be left with a fine trace of guard on the surface.

The purpose of KARONIA Solid Surface Guard is to lift any final traces of residual dust still trapped in the grit marks from the sanding and flattening process. It is not to be used in abundance to hide poor finishing technique or to create a shinier finish.

A false finish will wear off over a short period of time in higher traffic areas and the worktops will begin to look dull and patchy.

After a couple of minutes, the surface should be buffed dry with a multi-purpose cloth to remove any final traces of surface guard sat on the surface.

Place the multi-purpose cloth flat on the surface. Detach the extraction hose from the extractor and turn the sander back up to its highest setting. Place the sander central to the cloth and repeat the N-S / W-E pattern until all the excess guard has been removed.

You may need to use the reverse of the cloth or change it to a fresh one depending on the size of the area.

If all the sanding and finishing stages have been carried out correctly, the overall surface finish of the worktops should now be a dry, smooth, blemish free finish.

The simplest way to check is to gently scratch the surface with the tip of your finger nails and if it has been done correctly you will not leave any track marks.

If you do leave track marks then there is still excess Solid Surface Guard on the surface that needs to be buffed dry.

Installation task: Adhesive set-up

MISTRAL seaming adhesives are specially formulated and individually colour matched to each design in order to create a seamless and inconspicuous transition when jointing. Here is a step-by-step guide on the preparation and set up of the adhesive ready for use.

Before undertaking any installation or fabrication work on MISTRAL products, please make sure you have read and fully understood all installation advice as well as carrying out all important product checks.

All our latest product information is available on our website where you can find installation guides, videos and useful links for tooling and much more. Please visit mistralworktops.co.uk.

If you require any technical advice, please get in touch through our website or call us on 0345 6580 333 and our Product Support Team will be happy to help.

Before you start

Each MISTRAL adhesive cartridge is designed to create approximately 5 x 625mm wide joints.

It is important that the adhesive has been stored correctly and it is being used within 12 months of the production date printed on the cartridge.

Make sure the adhesive has been acclimatised to bring it to a temperature between (16 - 26°c).

Make sure that the working environment is well ventilated before preparing the adhesive.

Only start to prepare the adhesive when you are confident that all the areas to be bonded have been prepared, cleaned and ready for bonding.

The average working time of the adhesive is approximately 5 minutes when working within these temperatures.

Top Tip - It is important to note that higher temperatures will result in quicker curing times and therefore less working time.

Use the cardboard wrapping from the worktops to protect any shelves, cupboards and flooring where the adhesive could drip when jointing.

Prepare a waste piece of cardboard for expelling the glue onto when making sure the adhesive is mixed correctly.

Tooling and equipment

- P.P.E. – (Safety Glasses)
- Adhesive (Boxed with 3 mixer nozzles and black plunger)
- Piece of waste Cardboard
- Small screwdriver
- Alcohol Wipes (Installation Kit)
- Mastic Gun

Setting up

Wearing safety glasses, unscrew the threaded cap of the cartridge and remove the red stopper cap and place it on the piece of waste cardboard.

If using a used adhesive with a new nozzle, always check for any hard bits in the openings at the top of the cartridge.

Do this on both the adhesive and catalyst sides to make sure there are no blockages that could cause problems.

To do this, use a small screwdriver (clean first with an alcohol wipe) to feel for and remove any debris.

Attach the nozzle to the end of the adhesive cartridge.

Pull the plunger rod of the mastic gun back to its full extent.

Insert the adhesive cartridge and the black plunger into the gun making sure the centre piece of the black plunger is correctly located into the centre part of the adhesive chamber.

When doing this make sure the collar of the adhesive cartridge sits securely in the shoulders of the mastic gun.

Place the threaded cap back over the self-mixing nozzle and lock the nozzle into place.

Do not cut the end of the nozzle as this will alter the mix ratio between the adhesive and the catalyst.

Gently pull the trigger of the mastic gun until the plunger rod sits firmly against the back of the black plastic plunger.

The adhesive is now set up and ready for use.

Storage

If any adhesive is left over after use, unscrew the threaded cap, remove the used nozzle and replace the red stopper cap.

Make sure you wipe the thread of the cartridge and the stopper cap with the alcohol wipes before re-attaching the threaded cap.

Place the cartridge, black plunger and any unused nozzles back into the box and store.

Adhesive should be stored in a cool dry place with the optimal storage temperature approximately 5°C.