

MINIMACH



trend[®]
routing technology

Dear Customer

Thank you for purchasing this MINIMACH.

The MINIMACH is a self adjusting, lightweight vacuum clamping bed, that grips itself to your worksurface and is powered by your workshop or domestic cylinder vacuum cleaner. The MINIMACH enables you to hold workpieces for handheld machining processes, leaving the top surface clamp free. The MINIMACH is dependent on two simple but essential items, a cylinder vacuum cleaner and a flat work surface.

The MINIMACH can be used to hold a component whilst:

- n Routing
- n Sanding
- n Circular sawing
- n Hand planing

Your cylinder vacuum cleaner should be:

- n Minimum 500 watts.
- n Fitted with a detachable nozzle and hose. (Size 27mm-34mm internal diameter).
- n Fitted with a clean dust bag.



IMPORTANT!

The MINIMACH is not suitable for use with Cyclone cleaners such as a Dyson[®].

Your work surface should be:

- n Flat enough for the MINIMACH to grip to.
- n Free of bench dog holes, screw heads etc.
- n Free of dust and debris.
- n Non-porous and rigid.

The MINIMACH will not hold rough sawn timber or material which is severely cupped or twisted.

Please read the operating instructions carefully and keep them together with your MINIMACH.

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If after reading these instructions you have any problems please contact our Technical Support Department.

For accessories and a copy of the latest Trend Routing Catalogue please contact your nearest stockist.

We hope you enjoy many years of creative and productive use of this product.

Please remember to return your guarantee card within 14 days of purchase.



The following symbol is used throughout this manual:



IMPORTANT!

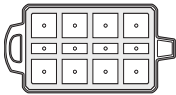
Please take note of comments.



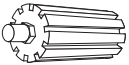
If you require further technical information or spare parts, please call our technical support department on 0044 (0) 1923 224681.

ITEMS ENCLOSED

Carefully remove the MINIMACH from the box, ensuring that the jig is removed complete with the inner card to prevent damage to the rubber gasket.
Contact your supplier immediately should this product not reach you in perfect condition.
This carton should contain:



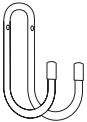
1 x MINIMACH



1 x Tapered Adaptor



1 x Rubber Repair Patch



1 x Hanging Hook



Hanging hook fixing kit comprising of:
2 x No.8 Woodscrews
2 x Wall Plugs



1 x Gasket Seal



1 x Instruction Manual



1 x Guarantee Card

Specification

Dimensions _____ 610mm x 320mm x 80mm
Min. material possible _____ 95mm x 95mm
Max. material possible _ 1220mm x 1220mm

DESCRIPTION OF PARTS

Upper rubber gasket

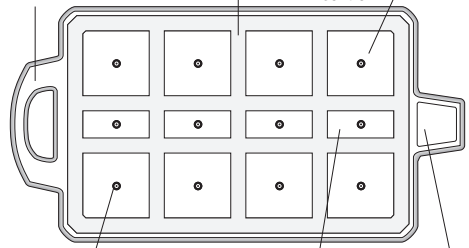
Provides the seal between the workpiece and the MINIMACH.

Handle

For portability and storage using the hanging hook supplied.

Large cell

Large area within gasket with air valve in centre.



Air valve

Steel ball and spring which activates vacuum supply, when workpiece is pushed onto it.

Small cell

Small area within gasket with air valve in centre.

Platen

Lower rubber gasket

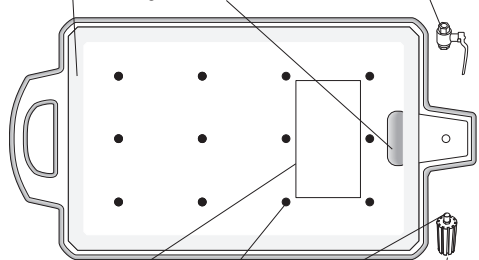
Provides the seal between the bench and the MINIMACH.

Vacuum control tap

For turning on and off vacuum supply to MINIMACH.

Vacuum port

Supplies vacuum to lower gasket and upper gasket via air valves.



Instruction label

Adaptor thread

Threads into Vacuum Control Tap assembly.

Air way

Each air way connects the vacuum to the air valves in the top surface.

Tapered adaptor

Connects MINIMACH to vacuum cleaner hose. Tapered design ensures a range of hose sizes will fit.

SAFETY PRECAUTIONS

- n Always switch off the power and unplug the router when changing cutters or when making adjustments.
- n Always wear protective goggles when routing.
- n Wear sound protective ear muffs when routing for long periods of time.
- n Always wear a dust mask or respirator. Use dust extraction equipment whenever possible.
- n Do not wear loose clothing. Make sure baggy sleeves are rolled up and ties are removed.
- n Always remove spanners and hex keys from the workpiece before switching router on.
- n Keep hands well clear of the router cutter when routing.
- n Avoid accidental starting of the router. Make sure the power switch is in the 'Off' position before plugging in and connecting to the electrical supply.
- n Never leave the router unattended when running. Always wait until the router comes to a complete stop before making any adjustments.
- n Do not switch the router on with the cutter touching the workpiece.
- n Periodically check all nuts and bolts to make sure they are tight and secure.
- n Use dust extraction equipment.

Cutter Care

- n Do not drop cutters or knock them against hard objects.
- n Cutters should be kept clean. Resin build-up should be removed at regular intervals with Resin Cleaner[®]. The use of a dry lubricant will act as a preventative such as Trendicote[®] PTFE spray.
- n Cutter shanks should be inserted into the collet at least $\frac{3}{4}$ of shank length to prevent distortion. A distorted collet should be discarded, as it can cause vibration and damage the shank.
- n Do not overtighten collet as this will score the shank and create a weakness there.

- n It is also advisable to periodically check the router collet nut for wear.

Useful Advice

- n Judge your feed rate by the sound of the motor. In time, the operator will acquire a 'feel' for the router, and a feed speed relative to the work will come naturally. Too slow a feed will result in burning.
- n Apply the normal precautions as with any electric power tool.
- n The main abuse of routing machines is the inclination for operators to overload them. The motto is 'Keep the revs up'. The drop in revolutions should not exceed, if possible, more than 20% of full running speed.
- n The motor of a router is susceptible to the accumulation of sawdust and wood chips, and should be blown out, or 'vacuumed', frequently to prevent interference with normal motor ventilation.
- n Refer to the Instruction Manual supplied with your router for full details of it's features and safety information.
- n Trial cuts should be made on waste material before starting any project.

ASSEMBLY

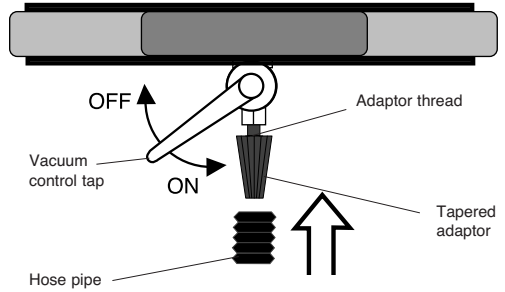
Fit the tapered adaptor by screwing the adaptor thread into the socket in the vacuum control tap. Ensure the pipe is tight.

Your MINIMACH is now ready to be used.

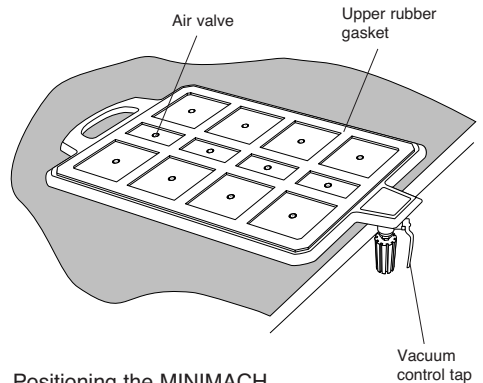
- n Place your MINIMACH with the lower gasket sitting fully on your work surface with the air valves facing up and with the vacuum control tap overhanging one end of the surface. The MINIMACH can be mounted for either left or right handed users.

- n Check the vacuum control tap is in the 'OFF' position - at right angles to the tapered adaptor.

- n Gently push the open hose end of the vacuum cleaner onto the tapered adaptor. If it does not fit, use one of the extension pipes that comes with the cleaner which should have an appropriate sized bore (27-34mm). Ensure that the tapered adaptor is kept clean and clear of dust and debris. Failure to do so can lead to the overheating and damaging of your vacuum cleaner.



Fitting the tapered adaptor and vacuum cleaner hose



Positioning the MINIMACH

Rubber Gasket Repair

A rubber repair patch is included to allow you to repair the rubber gasket if it is damaged. Cut out a section of the rubber repair patch that is larger than the damaged area. Do not remove the backing yet. Lay the patch over the damaged area then, using a modelling knife, carefully cut either side of the patch using it as a template. This ensures that the patch is an identical size and shape to the section you are about to remove. Peel the damaged section away and replace it with the patch.

OPERATION

- n Switch on the vacuum cleaner. Check the position of the MINIMACH and turn the vacuum control tap ON - in line with the tapered adaptor. If your work surface is sufficiently flat the MINIMACH will grip on to it. Make sure your fingers are well clear of the handle before doing this. The MINIMACH is now ready to hold your work.
- n Your workpiece MUST:
 1. Be relatively flat and impermeable.
 2. Cover a minimum of one large cell completely (the holding capacity of the MINIMACH is directly determined by the capacity or strength of your vacuum cleaner).
 3. Cover the maximum number of cells completely.
- n Once in position, to secure your workpiece, gently press down on it. This action opens the ball valves and creates a vacuum just under your work.
- n Always check that your work is held firmly before you start work and that the holding force is appropriate for the operation you wish to undertake. The MINIMACH is capable of supporting the weight of an overhang (up to 1m depending on the weight and porosity of the board). However the

vacuum seal and therefore the grip may be broken by either lifting or pressing down on the overhang, so ensure that the MINIMACH is directly under the area of the workpiece you are currently working on.

- n To remove your workpiece, turn the vacuum control tap to OFF position. This will cut the supply of the vacuum and the board will be released. Remember this action will also break the vacuum seal between MINIMACH and the work surface. Particular care should be taken when releasing the vacuum if you are holding a piece of work with a large overhang.
- n Keep your MINIMACH free from dust and debris to optimise its performance.



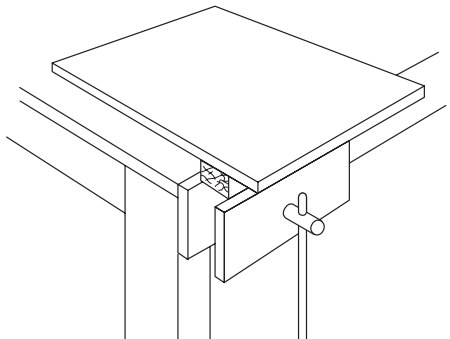
IMPORTANT!

Do not drag your workpiece from the MINIMACH as this can damage the Rubber Gasket.

- n Run your vacuum cleaner only when using the MINIMACH. We recommend a maximum continuous running time of 30 minutes with a 10 minute break to ensure the optimum life of your vacuum cleaner motor.

Mounting Board

If your bench is very uneven and your MINIMACH has trouble gripping it, a simple solution is to make a mounting board. Cut out a section (500mm x 330mm) of ply, MDF or chipboard at least 18mm thick. Screw and glue a cramping batten (50mm x 50mm x the length of your bench vice jaws) approximately 130mm in from one end of your panel. Cramp the batten in the vice and let the MINIMACH grip the mounting board. Alternatively you might want to resurface your bench.



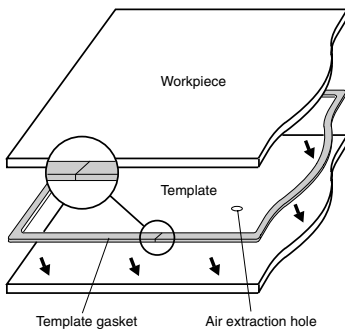
TEMPLATE SEAL/GASKET

How to template and shape copy with the MINIMACH

To repeat a shape or a component accurately is traditionally a very time consuming business. Usually this involves pinning the workpiece to the template or using double side. The two components then must be held down to the bench before routing. This method also involves unnecessary time spent cleaning up or even filling the holes in the component.

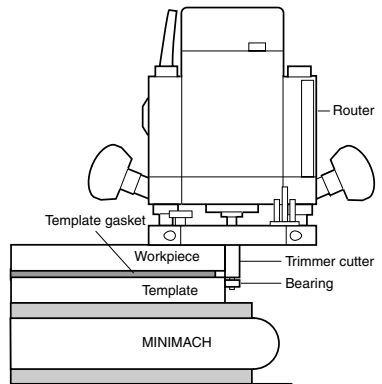
A process has been developed using the MINIMACH, which greatly simplifies this process. This is the MINIMACH template seal/gasket, which is 2.5 metres long x 10mm wide with a self-adhesive backed seal.

- n Mark out and cut out the component or shape you wish to copy from a non-porous material i.e. melamine faced chipboard, blockboard, veneered/sealed M.D.F. or plywood. The ideal thickness is 18mm or 3/4".
- n Ensure the edge of your template is smooth as any irregularity will be copied onto your workpiece as the bearing of the cutter follows it. Time spent on preparation of your template is always a wise investment.
- n Apply a single strip of self adhesive gasket material round the edge of your template 3-5mm from the edge, cut the gasket ends at



a slant as this helps the two ends to meet and seal.

- n Drill an 8mm air extraction hole through the template.
- n Position the template on your workpiece, draw round your template and rough cut your workpiece to within 3-5mm of your template line. A band saw or jigsaw is ideal for this purpose.
- n Position the template on your MINIMACH covering as many complete cells as possible and ensuring that the air extraction hole is directly over an activated cell. This allows the MINIMACH (when switched on) to remove the air from between the workpiece and template, locking them together. (This grip may be stronger than the grip between the template and MINIMACH - this is entirely normal). Check that the workpiece position allows an even overhang running right round the template.



- n Turn the vacuum control tap on and press the two down together holding the 2 parts for 2-3 seconds, to allow the vacuum seal to form and the air to be drawn from between the components.
- n Prepare your router by fitting a bearing guided trimmer cutter and setting the depth stop to allow the bearing to run on the edge of the template edge.

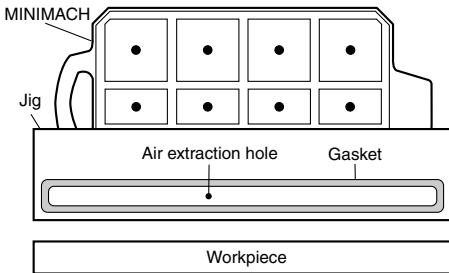
- n Before starting the cut check the template and workpiece are securely locked down.
- n Slowly route round the panel, a single cutting pass should be sufficient - only if the workpiece overhang exceeds 3mm might a second cutting pass be necessary.

Your copy should now be finished.

Holding work for a full depth edge mould

This method also allows work to be held exposing the full edge profile of the board for full edge moulding. Even work that could not be held directly onto the MINIMACH can now be secured.

The diagram below shows a jig made to hold 50mm (2") strip for moulding.



Holding framed doors

Any component that has a raised frame edge and that does not allow the central panel to contact and be gripped by the MINIMACH can be held via a jig - cut slightly smaller than the size of the central panel - gasketed and drilled like a template. When positioned, the jig will hold the panel in place keeping the frame off the MINIMACH.

Guarantee

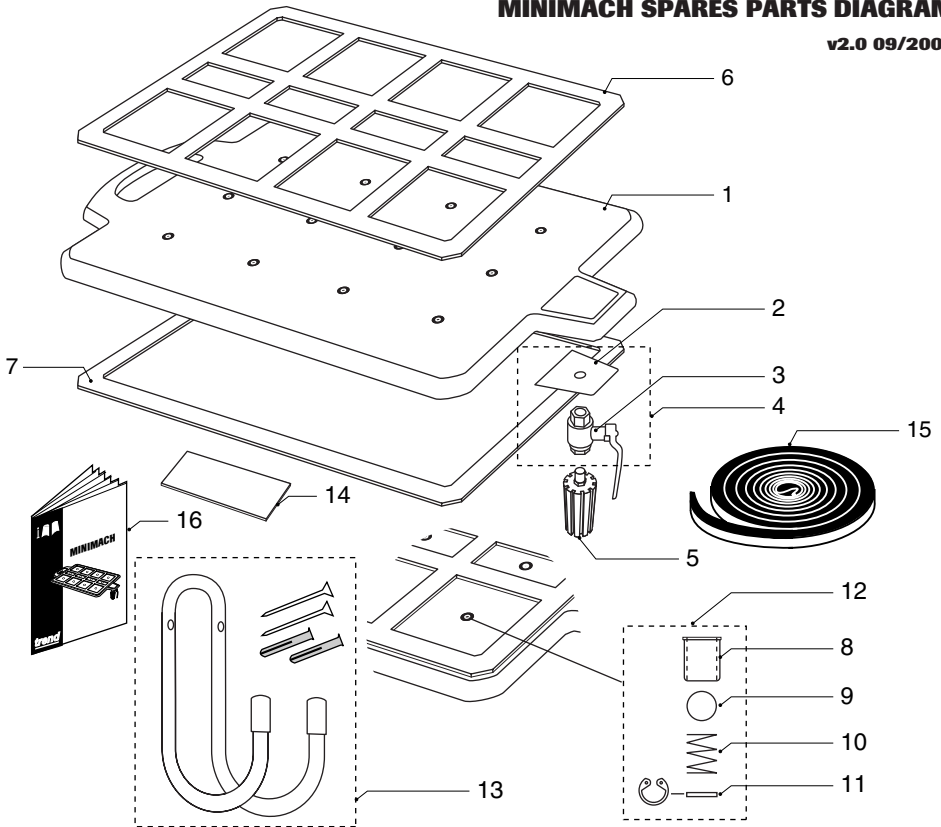
- n The jig carries a manufacturers guarantee in accordance with the conditions on the enclosed guarantee registration card.

Recycling

- n Jig, accessories and packaging should be sorted for environmentally friendly recycling.

MINIMACH SPARES PARTS DIAGRAM

v2.0 09/2000



MINIMACH SPARE PARTS LIST

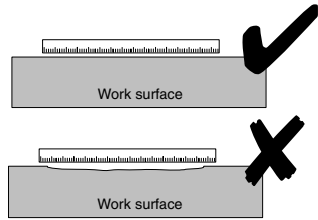
V2.0 9/2000

Item	Qty	Description	Ref.
1	1	Platen Body	WP-MMACH/01
2	1	Vacuum Control Tap Plate	WP-MMACH/02
3	1	Vacuum Control Tap	WP-MMACH/03
4	1	Vacuum Control Tap Assembly Complete	WP-MMACH/04
5	1	Tapered Adaptor	WP-MMACH/05
6	1	Upper Rubber Gasket	WP-MMACH/06
7	1	Lower Rubber Gasket	WP-MMACH/07
8	12	Ball Valve Body	WP-MMACH/08
9	12	Ball	WP-MMACH/09
10	12	Spring	WP-MMACH/10
11	12	Circlip	WP-MMACH/11
12	12	Ball Valve Assembly Complete	WP-MMACH/12
13	1	Hanging Hook Set Complete	WP-MMACH/13
14	1	Gasket Repair Patch	WP-MMACH/14
15	1	MINIMACH Template Seal 2.5mm x 10mm	MMACH/SEAL/1
16	1	Manual	MANU/MMACH

TROUBLE SHOOTING

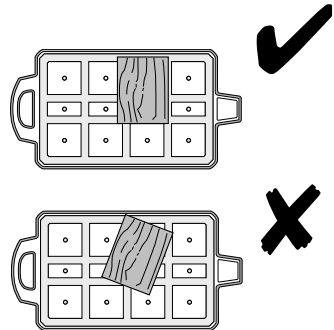
The MINIMACH does not grip the surface

- n Check your work surface is flat - check with a straight edge in both directions from back to back and side to side.
- n Check your surface is not porous or has holes in it - MDF is porous, seal the area with paint, varnish or Danish oil.
- n Check your vacuum cleaner bag is not full or that the hose is not blocked.
- n Check the MINIMACH lower gasket is level all round and undamaged.



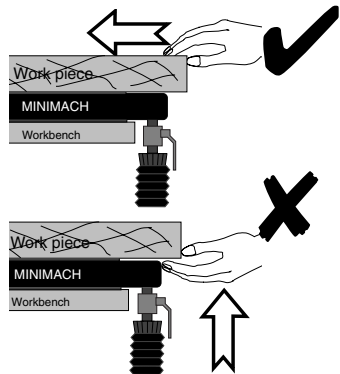
The MINIMACH grips surface but will not hold the work

- n Check the work covers as many cells completely.
- n Check that your work is flat by resting it on a known flat surface, if it rocks from corner to corner, it may not form a seal to the MINIMACH rubber gasket.



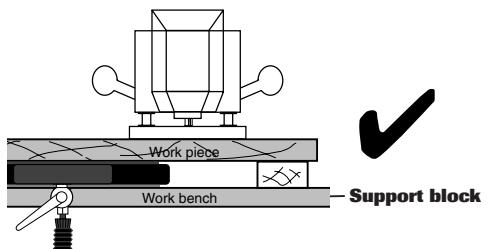
How do I know it is working?

- n Always check the work piece is secure before starting to machine it. Push against it to test it is held firm.
- n Do not lift the work as this will break the vacuum seal.



Working with large workpieces

- n Always support the workpiece when it overhangs the MINIMACH. This will prevent the weight of the machine tipping the workpiece and breaking the vacuum seal.



MANUMMACH v2.0



RECYCLABLE

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