JOHN BOOS ULTRA-PREMIUM BUTCHER BLOCK COUNTER TOPS
Installation Guide

Correct installation of JOHN BOOS BUTCHER BLOCK COUNTER TOPS is vital for optimum performance.

The moisture content of butcher block will vary due to the movement of moisture into and out of the wood. Natural humidity (dry and wet), air conditioning, machines that dispel heat or moisture (eg. Dishwashers, cooking appliances, etc.) will affect the moisture content of the wood. As moisture in the air increases it is absorbed by the butcher block, and the wood will expand. The butcher block contracts as moisture in the air decreases.

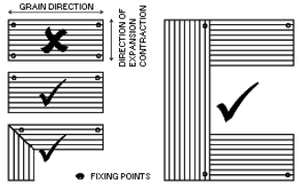
BUTCHER BLOCK, being a natural wood product, will expand and contract across the grain with these changes in humidity. This movement is quite normal. It is usually only minimal and can be allowed for in the installation (see Figure 3).

SEALING

Good sealing is essential to prevent an abrupt and excessive moisture movement to and from the wood. BUTCHER BLOCK must be envelope sealed, ie: top, bottom, edges and ends. Pay particular attention to the inside of cutouts, especially the end grain. **If you cut on site – reseal the cut area with at least four (4) coats of sealer**.

FIXING POSITIONS

Minimal fixing only is required as the piece will be held down by self weight, plumbing, etc. Ideally, fix into the same strip of wood. Slotting or oversized holes will also help. The diagrams at right show examples of correct or incorrect fixing.



SERVICE CONDITIONS

John Boos tops are suitable for interior use only.

Dishwashers, floor mounted vents and hot water systems.
Where appliances have heat acting on the bench top, polystyrene or similar insulation should be installed to cut down heat transference. Provide adequate ventilation.

Sinks, cooktops, cutouts for posts, etc.
The fitting of sinks, basins, cooktops, etc. must not restrict the bench top from expanding and contracting. Ensure that there is at least one quarter inch (1/4") clearance all around the appliance. Insulation should be installed around cooktops. Rubberized joint sealant should be used in sink and basin applications.

Vegetable storage.
Where vegetables or other material that are likely to give off moisture are stored under the counter, insulation should be installed and adequate ventilation provided.

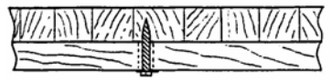
Ventilation.
Particle board or MDF tops fixed to cabinets should be removed or have large holes cut into them to assist with even and adequate ventilation. Do not attach directly on top of a solid underlayment. Butcher block needs adequate ventilation.

Brick walls.
A moisture barrier, such as plastic, should be utilized in situations where "BUTCHER BLOCK" is located adjacent to brickwork or rendered walls to prevent moisture transference. A slight air gap should also be left.

Overhangs.
If overhangs exceed eight inches (8"), then some form of bracketing should be used for support.

SCREW HOLES

Fixing through framework into the underside of bench should be via a 7/16" clearance hole and a #10 gauge screw with washer, allowing movement between fixing points. Holes should be predrilled.



NOTE: Ensure screw is centralized within clearance hole.

"BUTCHER BLOCK" TOPS SHOULD NEVER BE GLUED DOWN.

To ensure optimum performance, BUTCHER BLOCK requires protection from the environment by means of seal coatings. Sunlight breaks down most coatings, exposing the timber and allowing moisture, humidity and heat to act

STORAGE and HANDLING BUYER PROTECTION

Being a natural product, your tops are subject to changes in atmospheric conditions, and therefore require some care in handling and storage.

JOHN BOOS BUTCHER BLOCK COUNTER TOPS are warranted free from manufacturing defects, and the performance of the product is guaranteed, providing the conditions relating to handling and storage are adhered to and that fabrication and installation has been performed to John Boos recommendations.

Natural wood features and variations in color and texture of the wood and/or laminates are not considered defects.

FABRICATION RECOMMENDATIONS

1. **CORNER JOINTS**
   All edges to be joined together must be dressed true (exact). The recommended corner joints are MITER joints or full BUTT joints. With miter joints on boards of unequal width, a true miter usually gives the best result as any movement is equalized, and the laminates will be close to matching at the joint.

   1.1: Biscuit or tongue the joint. Joints should have "Lamella" biscuits or plywood slip tongues fitted.

   1.2: Bolt clamp the joint. Do not use dowels. Fit bolt clamps (miter bolts) to the underside of all joints; 4" from the front, 6" from the back of miters and 1-1/2" from both sides of butt joints. On wide joints fit an extra clamp midway between the others.

   1.3: Butt joints with opposing grain direction are never to be glued, instead use silicon.

   1.4: Miter joints and butt joints with grain running in the same direction should be glued.

2. **APRONS/DROP-FRONTS/FACIAS.**
   Fitted to the front edges of bench tops. **Must not** be glued across the grain. If an apron is to run across the end of the bench top, it should be screwed with a fixing baton, allowing for movement, or "build up" the end grain by slicing off sections of the bench top end and gluing underneath.

ONSITE STORAGE

On receipt of your John Boos tops, it is essential that they are to be stored in a way that they are protected from the weather and areas that are subject to extreme changes in humidity. Store flat at least 8" off the floor to allow air to circulate. Do not leave boards leaning against brick or concrete walls as excess moisture pick up is inevitable.
It is essential that BUTCHER BLOCK is fully envelope sealed as soon as possible with at least four coats.

PROBLEM SOLVING

End Splitting: is common with unsealed boards. Repair by filling with Epoxy glue.

Minor Wood Defects: Natural to butcher block. Can be repaired with Wood Putty colored to suit.

3. **GLUES**
   Use full strength Epoxy glues for like grain directions and Silicon sealant wherever there is opposing grains.

4. **HOLES/CUTOUTS.**
   Must have a 3/16" clearance on all sides and corners should have a slight radius. The distance between the end of the bench top and a cutout or between cutouts should be at least 4-5". If this is not possible, reinforce the narrow cross grain section by recessing and bluing a piece of similar John Boos butcher block into the underside with the grain running in the same direction and position it so that the glue lines are offset to the glue lines on the bench top.

   A rubberized joint sealant should be used in all sink and basin applications. Holes must be properly sealed with at least four coats of polyurethane. Particular attention should be paid to the end grain.

5. **PREPARATION**
   Any grain checking, tear-out and similar butcher block blemishes should be filled and sanded (use a wood putty). Shakes, which have a tendency to lift, should be repaired with "5 minute" Epoxy colored to match the wood.

6. **SANDING**.
   Sand the surface and seen edges through a suitable range of papers.

REPAIR GUIDE

CUPPING

Butcher block can cup when it is in an unsealed and/or unbalanced state. Cupping is natural and occurs when there is an absorption or loss of atmospheric moisture on one side of the board and not the other, causing a moisture content imbalance. This imbalance is a temporary situation and is caused when there are changes in humidity or atmospheric conditions. Proper sealing prevents an imbalance occurring.

NATURAL WOOD BLEMISHES

Any grain checking, tear-out and similar wood blemishes can be filled with a matching wood putty and then sanded smooth. Shakes and similar blemishes, which have a tendency to lift, can be glued down, using a five minute Epoxy glue mixed with matching color sanding dust.

Alternatively, to make a blemish appear natural, apply "Plasticbond" colored with a very small amount of oxide of suitable color. Sand smooth when it has set. If filling as above is impractical because of aesthetics, a portion of the laminate can be removed with a router and replaced with a fillet (a strip of similar timber ripped to the matching width and thickness) glued in place with a full strength Epoxy glue, and then sanded.

SPLITS and SHAKES

Minor shakes and splits in wide slabs of butcher block are rare, but normal. They are usually caused by contraction of the top after installation as the bench top "normalizes" to the humidity of the site environment. They can be easily repaired at any time using the following method.

REPAIRING A SPLIT

1. Using a utility knife, remove any debris from the split.
2. Spray a light mist of Custom Bond Accelerator over/and into the slit. Allow to dry. This will help prepare the area for the Instant Adhesive.
3. Hairline splits can be filled with Instant Adhesive alone. Splits a 1/32nd or wider will require gluing-in wood wedges.
4. Apply a small bead of Instant Adhesive to both sides of the chisel end of a wood wedge. Apply a small bead of Instant Adhesive over the split.
5. Lightly tap wedge into split.
6. Spray glue line on both sides of wedge with Accelerator to cure glue line. You will see the glue craze or flash over in a few seconds. Glue should now be rock hard. If not, mist glue line again with Accelerator.
7. Using a sharp utility knife, score both sides of wood wedge just above the table surface. Keep scoring each side until wedge is cut off.
8. Sand glue line flush, starting with a piece of 100 grit sandpaper wrapped around the sanding block. Sand with the grain. When sanding, feather out the area around the repair so it blends in with the surrounding area so as not to create a "dip" or "depression" over the repair.
9. Finally, sand and blend with 150 grit sandpaper wrapped over the sanding block.
10. Remove excess sawdust from repaired area.
11. Wipe repaired area with tack cloth.
12. Follow directions on the EZ-DO can and finish repaired area.

REPAIRING A WINDSHAKE

1. Using a utility knife, scrape any debris away from the windshake.
2. Spray a light mist of Accelerator over and into the windshake. Allow to dry. This will help prepare the area for the Instant Adhesive.
3. Carefully slide edge of utility knife under edge of windshake and gently lift up. Take care not to break off the windshake.
4. Squirt a small bead of Instant Adhesive into and over the windshake.
5. Using a wood wedge, apply pressure to the top of the windshake to "clamp" it down.
6. While still applying pressure (clamping) to the windshake, mist the glue with Accelerator to quick cure the glue.
7 .Follow steps 8 thru 12 from above section "Repairing a Split".

MINOR DENTS

A small dent can be easily fixed by recovering the crushed wood cells with an application of steam. To achieve this, place a very damp rag over the dent and sit a hot iron on the damp rag. Allow the wet heat to penetrate the wood. The time for it to recover will vary according to the severity of the dent and the density of the wood. Check on progress after a minute or two, and if necessary, repeat. Finish with a light sand, particularly if the wood fibers have been broken or damaged. This process can also be done over a finish, but takes longer.

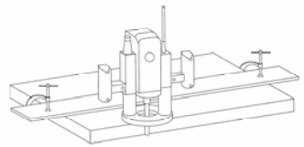
FABRICATION OF TOPS

Whatever John Boos item is being made, the sequence of construction and finishing processes remain the same. Remember, wood works easily, and common sense and care are your best tools. In general this is what you will need to do.

1. SHOOTING THE EDGE

Edges need to be dressed true (shot), as they will not necessarily be straight enough for follow operations (joining for width, corner joints, splashbacks, aprons, etc.)

Shooting can be achieved on a jointer or spindle, but if neither are available, a router and straight edge can be used (see drawing at right).



Run the router anti-clockwise against the straight edge; this helps prevent chipping out. Don't try and cut the full depth off in one pass: take 1/8" to 3/16" at a time.

2. JOINING to make a wider board

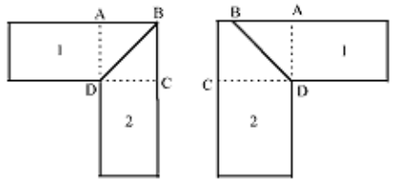
i) Shoot straight the two edges which go together (see section 1).

3. CORNER JOINTS

Recommended corner joints are MITERS or full BUTT joints. Mason's miters are not recommended. For miter joints on boards of unequal width, (see fig. 7.2) a true miter normally gives the best result as any movement is equalized, and the laminates will be close to matching.

i) **Cutting the joint**.

Cut on a panel saw; if unavailable use the router and straight edge method (see diagram at right). Cut one board from the top and its mate from the bottom. This ensures any slight discrepancies are averaged. For out of square corners, make a template of the corner and increase the width of one bench top leg, and then rip it back to match the template.

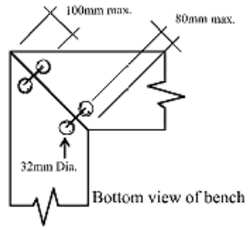


ii) **Biscuit or tongue the joint.**

All corner joints should be "Lamella" biscuits or plywood slip tongues fitted (see Section 2). Do not use dowels.

iii) **Bolt clamp the joint.**

Bolt clamp (miter bolts) (see diagram at right) should be fitted to the underside of all joints. 4" from the front, 6" from the back of miters and 1-1/2" in from both sides of Butt Joints with bolt clamps spaced on 9" to 12" centers.



iv) **Machine** and insert "Lamella" type joining biscuits or groove with a router and insert 7/32" thick plywood slip tongues, each about 4" long.

v) **Apply** a Type II woodworkers glue to both edges, as well as the joining biscuits/slip tongues and insert them.

vi) **Bring** the two boards together and clamp in place with bar or pipe clamps spaced about 18" apart. Bolt clamps (see section 7.3) can be used, but be careful that boards remain in the same plane (ie: flat).

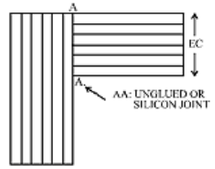
4. RIPPING THE WIDTH

Rip all boards to the required width. In calculating the finished width allow for the thickness of aprons, splashbacks, etc. Also, check if there are any out of square corners that require extra width for trimming (see Section 7.)

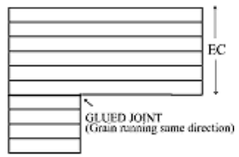
vii) **Assemble the joint.**

Dry assemble the joint, check level and fit and adjust, if necessary. Sand the top to even out any variation in thickness.

Butt joints with **opposing grain** direction (see diagram at right) are **NEVER TO BE GLUED.**



For a butt joint where the grain runs in the same direction (see diagram at right); this is the same as widening a board and should be glued.



Miter joints can now be glued unless they are to be left "open" to facilitate transport, access and handling. Open miter joints should be glued on site.