Project Ideas & Information

Make A Fly Screen

Before purchasing tools, timber and materials, read every step thoroughly then talk to one of our experts

Flyscreens help you to relax, keeping out annoying flying insects and providing your home with a natural fresh-air feel.

Making your own screens is a relatively easy one that you can do yourself and you'll save money and get the job done when you need it.

Before You Start

You will need to decide which style of screen you want to make. Your choice will determine the height and width of your screen frame and how you fit it to the window frame.

For windows that open out you should mount the screen on the inside of the window; for horizontal or vertically opening windows, screens are normally mounted on the outside. Generally speaking you will need a 20mm wide flat surface all the way around the window recess if your screen is to be flush mounted; alternatively you can mount the screen flush against the window frame.

On timber framed windows you may have to build up some sections of the frame with small section timber to achieve a suitable base for the screen frame. Most aluminium window frames have a flyscreen channel incorporated into their design so it is usually easier to work with these.

You should also decide whether your screen is to be fixed, hinged, lift-out or sliding as you will need to purchase the appropriate hardware for each instance and to ensure that there is sufficient window frame surface to attach the hardware to. Consideration should also be given to access to any window opening mechanisms that may be present.

Choosing Materials

Whilst it is sometimes desirable to make timber framed screens, this project concentrates on aluminium framing which is the most common material used these days.

Basically aluminium framed screens are made up of the same 5 components:

Frame material, corner keys, insect screen, retainer spline, and mounting hardware.

The most common frame material is assembled with internal or external corners which are commonly plastic or stamped aluminium. External plastic corners require a 90 degree "square" cut and internal stamped aluminium require a 45 degree "mitre" cut.
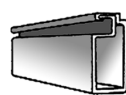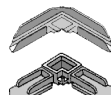
| Frame material | Internal & External Corners | Fabric & Spline | Mounting hardware |

Screen fabric, which is held in place by the retainer spline, is available in several materials including stainless steel, copper and bronze but the most common are fibreglass or aluminium. Fibreglass is the most popular because it is more economical and more resistant to pollution and sea spray although it is somewhat less robust than aluminium.

Of the colours available, black is the most popular because it reduces glare and is more "invisible" when installed. Common widths are 610mm, 760mm, 810mm, 910mm, 1220mm, 1520mm and1830mm although all materials are not available in all widths. Usually you can purchase screen fabric by the metre but if you have a lot of screens to make you might consider buying it by the roll

Step 1: Measuring Up

Measuring up is perhaps the most critical part of making flyscreens, so take extra care and double check all measurements.
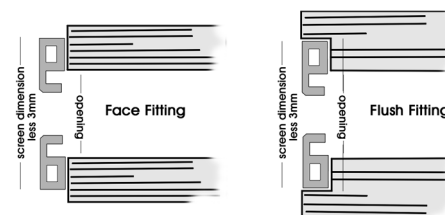
Always check that the window opening is square and true by taking multiple measurements and allowing for ally irregularities. If your screen is to be face mounted you must allow extra for overlap, i.e. the screen must be bigger than the opening. Conversely, if the screen is to fitted inside the frame you should deduct about 3mm from the window opening measurements for clearance on all sides.

Take into account that frame material will need to be cut properly for correct assembly dependent upon the corner style chosen. External corners requiring a 90 degree "square" cut and allowance for the exposed part of the corner should be made for when determining the actual length of the framing material. Internal corners require a 45 degree "mitre" cut and therefore no such allowance needs to be made.

Step 2: Getting Started

You will need a flat working surface larger than the screens you are building, a piece of 20mm plywood or similar placed on some sawhorses will work well.

Once your screen frame is assembled, you will use the 75mm x 75mm blocks and 20mm nails

Spline Roller

A tape measure, pencil, hacksaw, mitre box, utility knife, tin snips, hammer, screw driver, square and a spline roller are the tools you will need. Some timber blocks about 75mm x 75mm and 6mm thick and some 20mm nails to hold the blocks in place should also be made to square up the screen frame and hold it in place on your work surface..
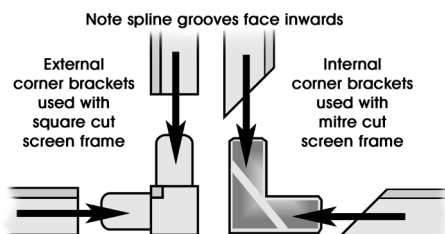
Step 2: Cutting The Frame

Before commencing any cutting ensure that the spline groove of the framing material always faces to the inside of the frame.

The hacksaw and mitre box are used to cut the frame. If you are using external corners your cuts will be square (90°). If you are using internal corners, your cuts will be mitred (45°).

Use the old philosophy that it is more materially efficient and less labour intensive to measure twice and cut once. After each side is cut, re-measure it to be sure it is the correct length. Mistakes do happen so cut the long sides first and then if you happen to make a mistake, you can use the miss-cut length to make at least one of the short sides.

Step 3: Assembling The Frame

Having cut all four sides to size, insert a corner brace into each end of one of the pieces and attach two more sides so you have a "U" shape.

Note spline grooves face inwards

External corner brackets used with square cut screen frame

Internal corner brackets used with mitre cut screen frame

Insert the remaining 2 corner braces into the last side and attach to the frame. The corner stakes are designed to fit snugly, so it may be necessary to tap them in gently using a hammer and a scrap piece of timber to protect the finish. Before proceeding test your new screen on the window to ensure correct size.

centre bar if required

nail in place 75 x 75 x 6mm blocks as shown
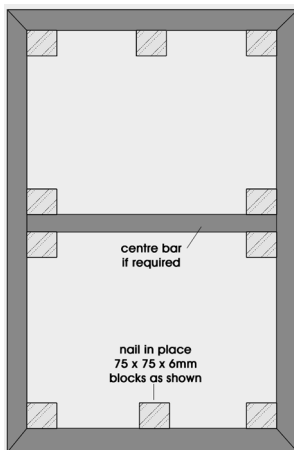
Now is the time to block the screen frame in place on your work table. Failure to do this could mean that the sides may be pulled out of square and possibly be bowed in during the screening process.

Place the screen frame in position on your work table with the spline side up and using your square make sure the corners are at 90 degrees. Start at one corner and set up the blocks as in the diagram using the 20mm nails to hold them in position.

For screens that have one of their dimensions longer than 1200mm it is advisable to install a centre bar to avoid the long sides bowing in under the tension of the screen material.

If your screen will not have a centre bar, you will still need to block the middle of the screen to keep the sides from bowing in during screening.

Step 4: The Screening Procedure

The screening procedure is a little different for fibreglass screening as opposed to metal screening.

Procedure for Fibreglass Screening

1. Lay screen material on frame, align edge of screen with spline groove on two sides. Allow screen to overlap spline groove by at least 3mm. Cut the starting corner at a 45° angle.

2. Using a concave screen roller, start at the corner and roll in both the screen and the spline at the same time. Keep screen material straight with the edge of the frame while rolling in. Continue rolling procedure around all four sides. If wrinkles or

bulges appear in screen, you may remove the spline and re-roll. Small wrinkles should tighten up as you near the starting corner.

3. When the rolling is complete, use a very sharp utility knife to cut off the excess. To avoid accidentally cutting into your complete work, angle the blade outward and move slowly and steadily.

Procedure for Aluminium Screening

1. Lay screen material on frame, align edge of screen with spline groove on two sides. Allow the screen to overlap spline groove by approximately 3mm. Cut the starting corner at 45° angle.

2. Using the round (convex) end of your screen rolling tool, roll screening down into spline groove. Work slowly, holding material straight with your other hand. Hold roller at a 45° angle pointing toward outside of frame to avoid cutting screen.

3. Next use the concave end of the screen rolling tool to roll spline into groove over screen material. Use your other hand to hold spline in line with groove. Avoid stretching the spline.

Unlike fibreglass, aluminium screen is first rolled into the groove and then the spline is rolled
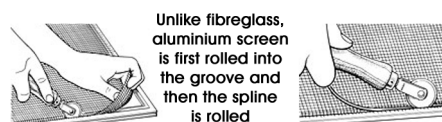
4. Cut the screen on 45° angle at corner..

5. Move around corner to next side and repeat steps 2 and 3, rolling in screen material with the round end of the roller and next using the concave roller to roll in the retaining spline.

6. Trim screen in line with spline groove on other two sides allowing screening to overlap the spline groove by approximately 3mm. Cut screening at corners to 45° angle. Repeat rolling procedures, being sure to pull tension into the screen as rolling is accomplished. Roll in retaining spline on final two sides.

Flyscreen Hints

- With regular maintenance, your screens can last for years. Screens should be vacuumed periodically to remove dust and may be washed safely with any mild soap or detergent and rinsed with clear water.

- If you are making more than one screen and one is larger than another, do the large one first. Then if you accidentally cut the screen when rolling it in place, you can roll out some new material for a second try, and save the damaged piece for the smaller screen.

- Copper, bronze and brass materials should not be installed in aluminium screen frames; where the two metals touch, they will corrode.

With Compliments