

Hand Tools

Hand Tools - Hand Saw

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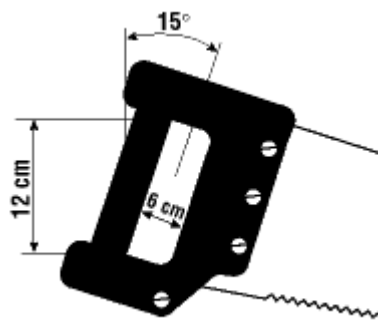
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What should I know about hand saws?

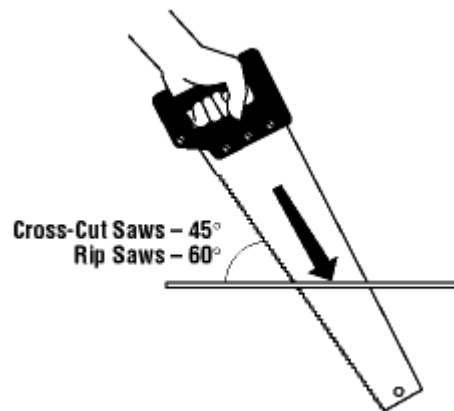
Saws are made in various shapes and sizes and for many uses. Use the correct saw for the job.

- Wear safety glasses or goggles, or a face shield (with safety glasses or goggles).
- Select a saw of proper shape and size for stock being used.
- Select a saw with the number of teeth per inch (TPI) in order to get the desired finish. For example: a coarse tooth blade (e.g., 2 or 3 TPI) should be used for thicker stock. 18 to 32 TPI should be used on thinner metals or plastic (0.5 cm or 1/4 inch). General wood cutting typically requires about 4 TPI.
- Choose a saw handle that keeps wrist in a natural position in the horizontal plane.
- Choose saw with a handle opening of at least 12 cm (5 in.) long and 6 cm (2.5 in.) wide and slanted at a 15° angle.



- Check the stock being cut for nails, knots, and other objects that may damage or buckle saw.

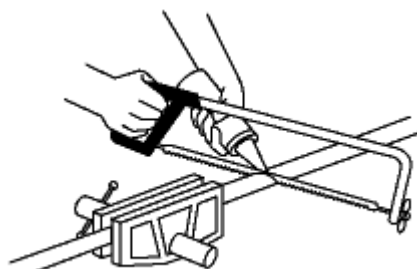
- Start the cut by placing your hand beside the cut mark with your thumb upright and pressing against blade. Start cut carefully and slowly to prevent blade from jumping. Pull upward until blade bites. Start with partial cut, then set saw at proper angle.
- Apply pressure on downstroke only.



- Hold stock being cut firmly in place.
- Use a helper, a supporting bench or vise to support long stock if required.
- Keep teeth and blades properly set.
- Protect teeth of saw when not in use.
- Keep saw blades clean.

What should I know about using a hacksaw?

- Select correct blade for material being cut.
- Secure blade with the teeth pointing forward. Tighten the nut until the blade is under tension.
- Keep blade rigid, and frame properly aligned.
- Cut using steady strokes, directed away from you.
- Use entire length of blade in each cutting stroke.
- Use light machine oil on the blade to keep it from overheating and breaking.



- Cut harder materials more slowly than soft materials.
- Clamp thin, flat pieces requiring edge cutting.
- Keep saw blades clean and lightly oiled.
- Do not apply too much pressure on the blade as the blade may break.
- Do not twist when applying pressure.
- Do not use when the blade becomes loose in the frame.

Refer to OSH Answers [General Hand Tool Operation](#) for more tips.

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