

blades may be used.

Circular Blade Saw Operation

To minimize both chipping and overheating tendencies, circular saw blades should protrude approximately 1/2 inch more than the thickness of the Acrylic sheet. The work must be held firmly against the fence, which must be parallel to the saw blade.

Several sheets of Acrylic can be cut at one time by stacking one on top of another. Suitably designed holding fixtures must be used when stacks of sheets are to be cut to close tolerances.

When unmasked sheets of Acrylic are cut, it is necessary to take care to avoid scratching the surface of the sheet. Working surfaces should be covered with some soft material such as medium-density felt. The surface should be kept free of dirt and chips.

Sawdust and chips remaining on the surface of the Acrylic sheet after cutting may be removed by blowing with compressed air. Wiping the surface of the sheet with a damp cloth will remove sawdust that clings to the material because of static electricity. The damp cloth will also dissipate the static charge.

When cutting Acrylic sheet on a table saw, a cutting board should be used for cutting stacked/clamped material or making a cut not parallel to another edge (angle cut). Figure 2 shows a suitable cutting board. The Acrylic sheet lies stationary on the board while the board moves across the saw table.

When cutting stacked Acrylic sheet to final dimensions with a panel saw, hold-down clamps should be used when feasible. This

procedure will also help reduce chipping. The manual feed rate should be 3 to 4 inches per second (15 to 20 feet per minute) and should be uniform. The saw should be allowed to cut freely while maintaining the rated speed of the motor. Coolants are not required for most sawing operations, although if exceptionally smooth cuts in thick sheet are needed, a fine spray mist of detergent in water or 10 percent soluble oil, compatible with Acrylic sheet, in water can be directed against the saw blade.

For extruded acrylic sheet, circular saws should operate at speeds of approximately 3,450 rpm and the material feed rate should be about 4 inches per second. The saw blade should be set at a height only slightly greater than the thickness of the material being cut, to assure a smooth, chip-free edge on either single or stacked cutting of sheets. Elimination of gumming or welding of the sheets during stack cutting can be reduced by applying compressed air or an approved liquid coolant to the saw blade and material to reduce heat buildup.

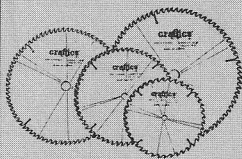
Clamp the stack if possible. Make sure that the saw arbor runs true and the blade plate is flat to prevent rubbing.

Band Saws

Band saws should be used when curves are cut in flat sheets or when formed parts are rough trimmed. They are also used for making straight cuts in thick pieces of Acrylic sheet. For production work, large saws with a 30-to-36-inch throat are best, although smaller band saws are satisfactory for small work. The blade should run at a speed of 2,300 to 7,500 feet per minute. As a general rule, as the thickness of the Acrylic sheet increases, the number of

CRAFTICS NO MELT TRIPLE CHIP CARBIDE SAW BLADES

The professional's choice for accurate feeds, clean cuts and lower sharpening costs. Blades cut single or multiple stacked sheets where melting or chipping can be a problem.



| Size | Teeth | Arbor | Stock No. | Re-sharpening Costs |
|------|-------|-------|-----------|---------------------|
| 8" | 60 | 5/8" | 1106094 | \$30.00 |
| 10" | 80 | 5/8" | 1106095 | \$35.00 |
| 12" | 100 | 1" | 1106096 | \$35.00 |
| 14" | 100 | 1" | 1106098 | \$40.00 |