

CHEVRON GLASS PTY LTD

PROCESSING & TREATMENT SERVICES

Chevron Glass can provide a wide range of processing and treatment services which includes the following:

ARRISSED EDGE

BEVELLED EDGE (including shaped bevelling)

BLUNT (TIPPED) CORNERS

CLEAN CUT EDGE

CUT OUTS (corner, side, centre)

FINGER GRIPS

FLAT POLISHED EDGE

FLAT SMOOTH (GROUND) EDGE

HEAT SOAKING

HEAT STRENGTHENING

HOLES (including countersunk & fan holes)

MITRED EDGE

NOTCHES (corner, side, centre)

RADIUS CORNERS

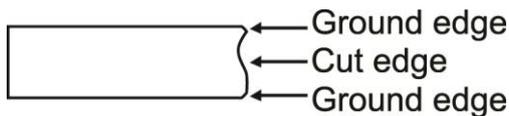
SHAPE CUTTING (definitions & shapes)

SPLASHBACK MULTI-PROCESSED PANELS

SPEAK HOLES AND PAY SLOTS

TEMPLATES

ARRISSED EDGE



This edge treatment is produced on an automatic vertical arrisser which leaves a white arris edge. This is the minimum edgework for toughened glass.

BEVELLED EDGE



Straight line and shaped bevelling is done on automatic machines which produce a polished bevel on the face of the glass. The bevel width can be varied and is dependent on glass thickness. Bevelled glass has a clean cut edge as standard but flat polished edges are also an option.

BLUNT CORNERS

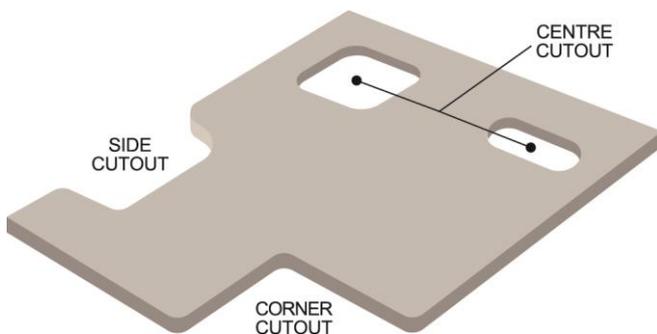
Blunt or tipped corners can be provided where the only requirement is to remove a sharp corner. The finish will be white and basic.

CLEAN CUT EDGE



Edges are as the glass was cut and are sharp.

CUT OUTS



Cut outs are processed by Waterjet Cutter and supplied with flat smooth (ground) and arris edges.

Cut outs are defined as having any one dimension greater than 200mm.

FINGER GRIPS

Standard finger grips (slots) are 13mm wide. Length and depth depend on the glass thickness.

FLAT POLISHED EDGE



This is the standard machine polished finish to the edge and arris of the glass.

FLAT SMOOTH (GROUND) EDGE



This is a machine flat finish which leaves a smooth, unpolished edge and arris.

HEAT SOAKING

Heat soaking involves heating toughened glass in an oven for a period of time to induce breakage that may be caused by any inclusions or contaminants in the glass. The process substantially reduces the likelihood of breakage after installation due to any inclusions or contaminants. The process is strongly recommended for balustrades, pool surrounds and toughened glass assemblies.

In most circumstances, where glass is to be glazed vertically 5.0 metres above ground or floor level, and in the case of sloped overhead glazing 3.0 metres above ground or floor level, it is mandatory for the glass to be heat soaked.

HEAT STRENGTHENING

The heat strengthening process parallels the process of toughening, except that the cooling cycle is less rapid, thereby creating surface compression levels less than that of fully toughened glass.

Heat strengthened glass is not a safety glass but has approximately twice the mechanical and thermal strength of annealed glass of equal thickness. Heat strengthened glass normally has a break pattern of large pieces similar to a break pattern of annealed glass.

Heat strengthened glass is used in areas requiring added strength to the glass but a larger break pattern than that of toughened glass, so that in the event of breakage, the broken glass generally remains in the opening.

Heat strengthened glass, like toughened glass, cannot be further processed in any way after heat strengthening.

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HOLES

Holes can be drilled in all thicknesses of glass. Almost any diameter hole is available.

Holes can be countersunk to accommodate mechanical fixings.

Various standard polished speak holes are available and non standard available on request.

(Refer to separate section on Speak Holes).

Fan holes and holes for dog/cat doors are also available.

HOLES IN TOUGHENED GLASS

Holes must be drilled in glass before toughening.

Unusual hole configurations or large hole sizes should be referred for consideration before ordering.

- HOLE SIZE

Minimum Dimension

Hole diameters cannot be less than the thickness of the glass.

Maximum Dimension

The maximum dimension of any large circular or non-circular hole should not exceed half of the minimum width of the panel.

- EDGE FINISH

Holes will normally have a ground finish. Holes can be countersunk at 45° with ground edges on request.

Countersunk depth should not exceed 75% of glass thickness.

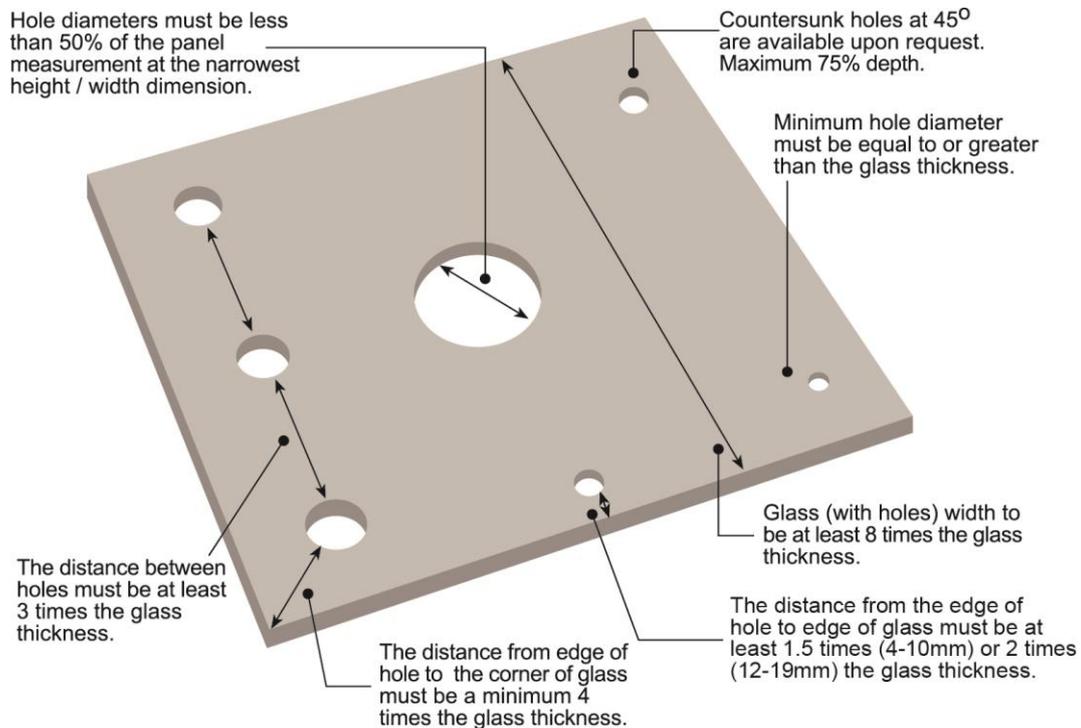
- TOLERANCES

Hole Diameter (mm)	Up to 70mm	Over 70mm
Size Tolerance (mm)	+1, -0	+1, -1
Distance between hole centres	+1, - 1	+1, -1
Distance between glass edge & hole centre	+1, -1	+1, -1

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- POSITION OF HOLES FROM EDGE

For holes up to 85mm diameter the distance between the edge of any hole and the edge of the glass must never be less than 1.5 times the thickness of the glass for glass up to 10mm thickness, and two times the thickness for 12 to 19mm thick panels.



- POSITION OF HOLES FROM CORNER

The distance from the edge of hole to the corner of glass must be a minimum four times the glass thickness.

- SPACING OF HOLES

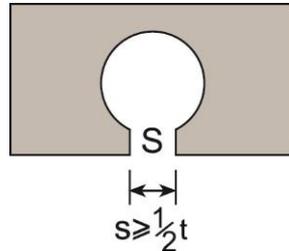
The minimum distance between the edges of adjacent holes cannot be less than three times the glass thickness. Where there are more than four holes in a group the minimum distance cannot be less than six times the glass thickness.

- HOLES OTHER THAN CIRCULAR

All non-circular holes must have radius corners with the internal radius not less than the thickness of the glass.

SLOTTED HOLES

The diameter of slotted holes must not be less than the thickness of the glass (t). The width of the slot (S) must be at least equal to half of the thickness of the glass (t).



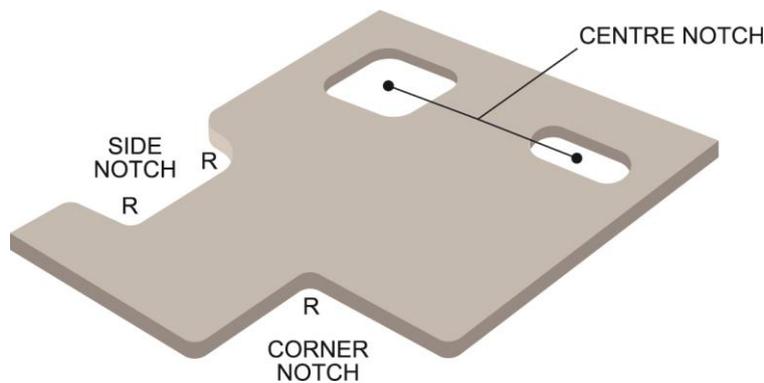
MITRED EDGE



A mitre is a machine edge finish that can be a smooth (ground) finish suitable for angled butt glazing or a polished edge if required.

The nominated mitre is the angle of the glass edge remaining.

NOTCHES



The inside of notches must have radius corners at least equal to the thickness of the glass.

- **EDGE FINISH**

Edges will have a flat smooth (ground) finish with arris.

Polished notches are available on request. Limitations apply.

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- DIMENSIONS

The height / width of a notch must be greater than the thickness of the glass.
The depth of a notch cannot be greater than half the width of the glass.

- TOLERANCES

The tolerance on notch location in relation to the edge of the glass is ± 2.0 mm

- CORNER NOTCHES

Defined as having maximum dimensions of 200mm x 200mm.

Must have an internal radius corner (R) at least equal to the glass thickness.

Notches are generally supplied with a flat smooth edge.

- SIDE NOTCHES

Defined as having maximum dimensions of 200m x 200mm.

The minimum distance from a corner should be 75mm. External corners on notches must be rounded. Notches are generally supplied with a flat smooth edge.

- CENTRE NOTCHES

All centre notches must have radius corners equal to or greater than the glass thickness.

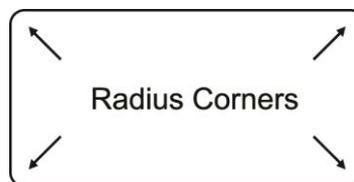
The distance between the edge of the centre notch and the glass edge must be at least four times the glass thickness, with a minimum of 25mm for 4-6mm glass and 100mm for 8-19mm glass.

The interior width of a centre notch must be equal to or greater than the glass thickness.

The distance between centre notches must be at least four times the glass thickness.

The notch height and width must be less than 50% of the glass height / width. Centre notches are generally processed by Waterjet Cutter then arrissed.

RADIUS CORNERS



Standard size radius corners are 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60 and 70mm.

A template is not required for standard size radius corners.

Radius corners can be supplied as clean cut or with polished edges.

SHAPE CUTTING

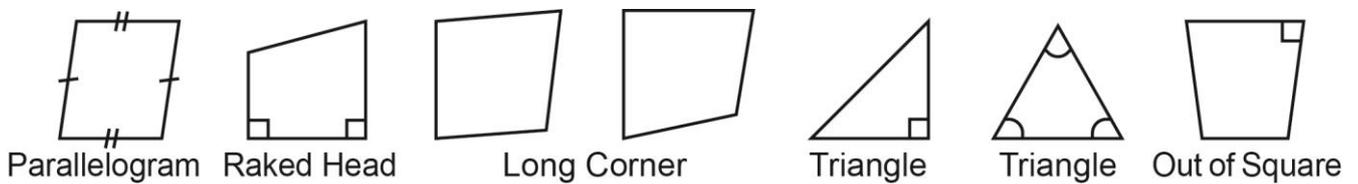
Squares and rectangles with radius or cut off corners are not regarded as irregular shapes. Glass defined as irregular shapes can fit into three possible categories described below with examples.

• **STRAIGHT LINE SHAPES**

Description: Straight line shapes with a maximum of 4 sides.

Includes: Long corners, out of square parallelograms, raked heads, triangles.

Dimensions must be clearly defined with all necessary measurements.



• **REGULAR SHAPES**

Description: Common shapes with a maximum of 6 straight sides.

Includes: Arch tops, circles, hexagons, quadrants, semi circles.

Dimensions must be clearly defined with a template or CAD drawing supplied.



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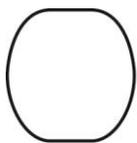
- COMPLEX SHAPES

Description: Irregular shapes with more than 6 sides, non-straight edges or curved shapes.

Includes: Barrels, elbows, concave shapes, "D" ends, heptagons, octagons, ovals, pentagons, Queen Anne tops, abstract shapes and any other shapes not previously covered.

Dimensions must be clearly defined and a CAD drawing or template supplied.

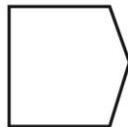
Templates must comply with the Chevron Glass Template Specification Sheet.



Barrel



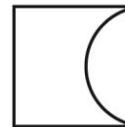
Elbow



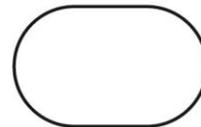
Elbow



Elbow



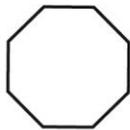
Concave
Shape



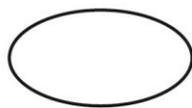
"D" End



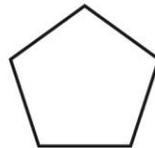
Heptagon
(7sides)



Octagon
(8 sides)



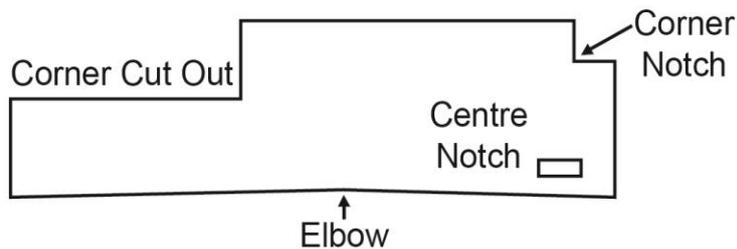
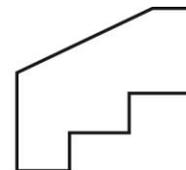
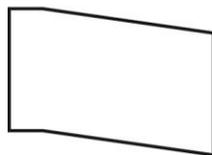
Oval



Pentagon
(5 sides)



QA Top



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SPLASHBACK MULTI-PROCESSED PANELS

DEFINITION

Any glass panel incorporating any or all of the following:

- Processed glass panel with any combination of four or more cut outs, notches or hole configurations.
- Any panels with polished internal cut outs.
- Processed panels with multiple hole configurations for typical tap set-ups.

SPECIFICATIONS

- Large size panels will be considered subject to W.H.&S. and manufacturing considerations, up to a maximum size for any panel of 4000 x 1500mm.
An additional charge may apply for these panels.
This charge would be in addition to standard edgework charges, shape cutting charges and template handling charge.

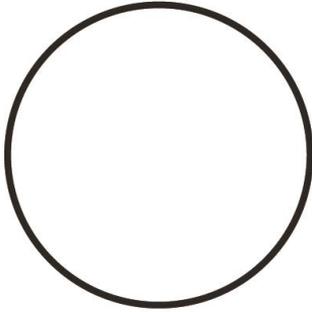
TOLERANCES

- Glass supplied by Chevron Glass is manufactured to comply with AS 4667.
Therefore, standard visual and surface tolerances will apply.
- Finished tolerances are ± 2.0 mm on all overall dimensions, cut outs and hole positions.

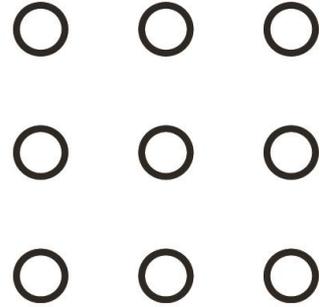
STANDARD POLISHED SPEAK HOLES & PAY SLOTS

Standard polished speak holes and pay slots are available as shown.
Non standard configurations may be available on request.

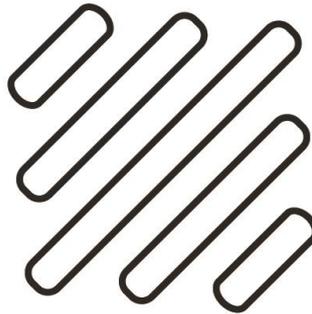
S3



S4



S5



SL1



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TEMPLATES

TEMPLATE SPECIFICATION SHEET

Chevron Glass processes customer supplied templates using a process known as Virtual Digitising. This process involves taking a photo of the template against a reference point background, using a digital camera with a calibrated lens.

This photo is then imported into a program allowing us to “replicate” the individual template shape, including holes, cut-outs and notches, which is then converted into our various processing machinery.

The following specifications are intended to reduce any lost time due to an unacceptable template with the main consideration being that the quality of the template will largely affect the outcome of the finished product.

- CAD or similar computerised drawings are acceptable and **preferred** to actual templates.
- A template handling charge will apply in addition to other charges for all orders to template.
- All templates must be of a sturdy material, such as timber, ply, MDF, Coreflute, Perspex or metal. Coreflute is preferred due to it being a lightweight, waterproof material.
- Templates must be actual FULL SIZE with finished sizes marked on the face if possible.
- Templates that can be stretched or shrunk, such as paper or plastic, will not be accepted.
- Templates made of glass are not desirable, due to potential breakage & WH&S concerns.
- All templates must have customer's name and order number clearly marked, attached or followed up with a faxed or emailed order.
- Templates for products with coated, mirror or patterned glass must clearly show the coated, mirror or smooth face.
- Templates made with multiple thicknesses may distort the actual size during processing.
- Templates to be returned to the customer must be labelled accordingly.
- Templates for toughened glass must clearly show where the Standards logo is to be located.
- Templates for toughened glass must comply with Chevron Toughened Glass Specifications covering sizes, notches, holes etc. for toughened glass.
- Templates with added or subtracted measurements will not be accepted.
- Multi-dimensional templates will not be accepted, i.e. one template must refer to one glass panel.
- Broken or damaged templates may not be accepted.
- Standard size radius corners (i.e. 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60 and 70mm) do not require a template.
- Radius corners drawn on orders and faxed will not be accepted as a template unless an accompanying specified dimension is included.
- Hole positions on templates should be clearly marked with a cross to identify centre point or supplied with required hole sizes drilled in the template.