# Module 2

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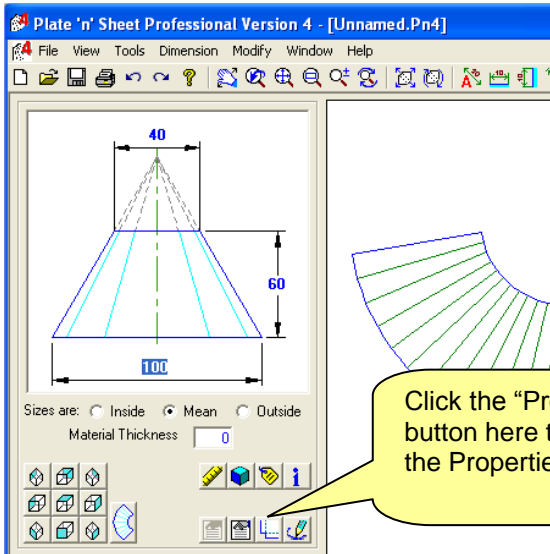
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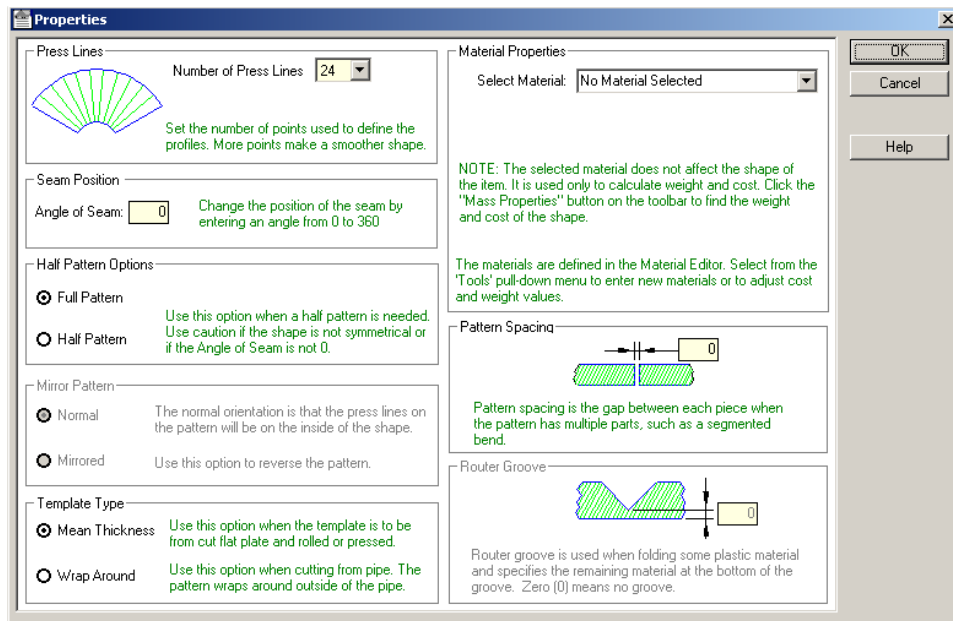Mackay QLD AUSTRALIA

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# Shape Properties

There are various settings that can be applied to the shape. The "Properties" dialog is used to modify these settings.

Not all of the settings are applicable to every shape. When a setting is not relevant that setting will be "grayed out".

Click the "Properties" button here to access the Properties dialog.

Each setting and its purpose are discussed below. See expanded views below.

## *Number of Press Lines*

Sets the number of Press lines (also known as "True Length Lines") used to generate the shape.
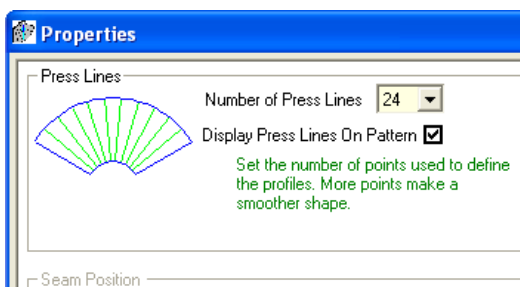
Generally speaking, a greater number of bend lines results in a more accurate pattern, particularly for transitional shapes (for example Rectangle to Round). However, a large number of lines may also slow down the generation of the views and pattern. The default value of 24 is sufficient for most shapes based on the cone and cylinder.
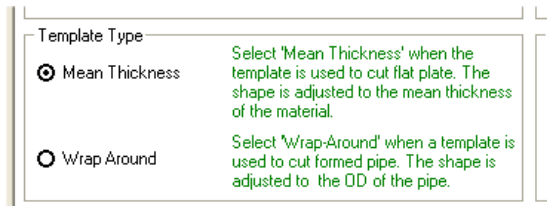
## Angle of the Seam

This setting, when applicable, determines the position of the join or seam.
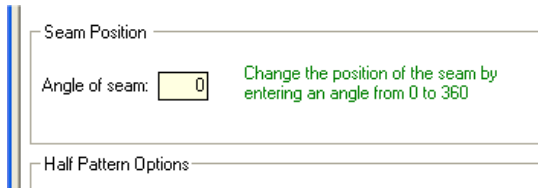
It is not applicable to all shapes, as some must have the seam on a particular side or position (branches, for example). If it cannot be applied to a particular shape it will be greyed out.

## Template Type

This setting can be applied only to *cylindrical* shapes. It has two options:

**Mean Thickness**:  Use this setting when the pattern is to be cut from flat material and then pressed or rolled to shape. As discussed in the topic on **Material Thickness** the pattern is recalculated on the mean thickness of the material.

**Wrap Around**:  Use this setting when you are using stock pipes or pre-formed cylinders. This option is used to create a thin template that wraps around the pipe. The true lengths are as measured at the mean thickness but are transferred to the circumference of the outside of the cylinder.

## Pattern Spacing

This applies when multiple parts are nested in a single sheet (for example, the Elbow or Segmented Bend).
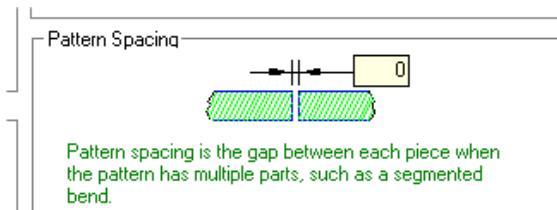
In such cases this option will be visible and allows the user to *set a gap* between each component to allow for the thickness of the cut or to separate the shapes for clarity of dimensioning.

## Router Groove

Router groove is used when folding some plastic material and specifies the *remaining material at the bottom of the groove*.  Zero (0) means no groove.
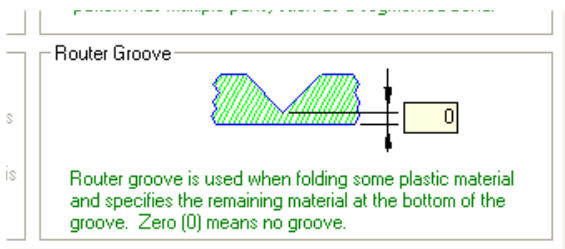
This option is only available if there is a value in "Material Thickness". The Router Groove value must also be less than the Material Thickness.

Router Groove Symbol is enabled in Auto Dimension Options.
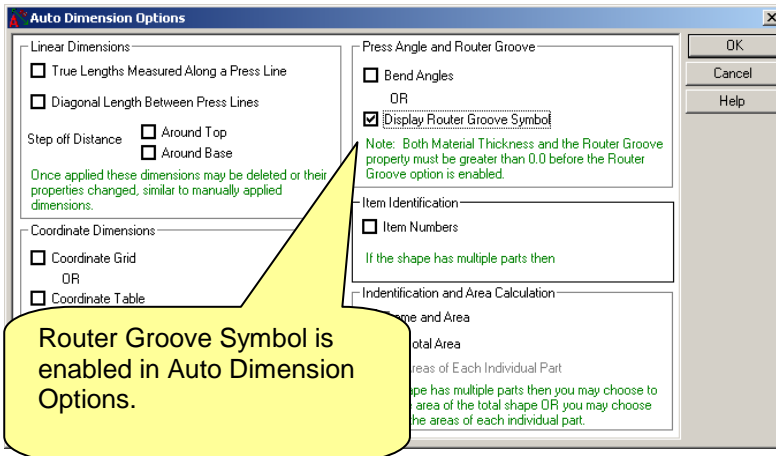
When there is a value in Router Groove, the "Display Router Groove" option in Auto Dimension Options is enabled and allows the Router Groove Symbol to be shown on the press lines (see Auto Dimension Options for further details).

## *General Note regarding Properties*

All the properties settings are specific to the pattern being produced. For example, if you are working on more than one pattern at a time and set the number of Press Lines to 48, this value is applied only to the current pattern and other patterns that are currently open may have a different value applied to them.

# Special Properties

Some shapes will display an additional 'Special Properties' button as shown above. In this case the shape has additional settings if required. If this button is "greyed out'" then there are no special properties.

It is not necessary to select 'Special Properties' to obtain a full standard pattern however you may like to look at what options are available when the button is enabled.
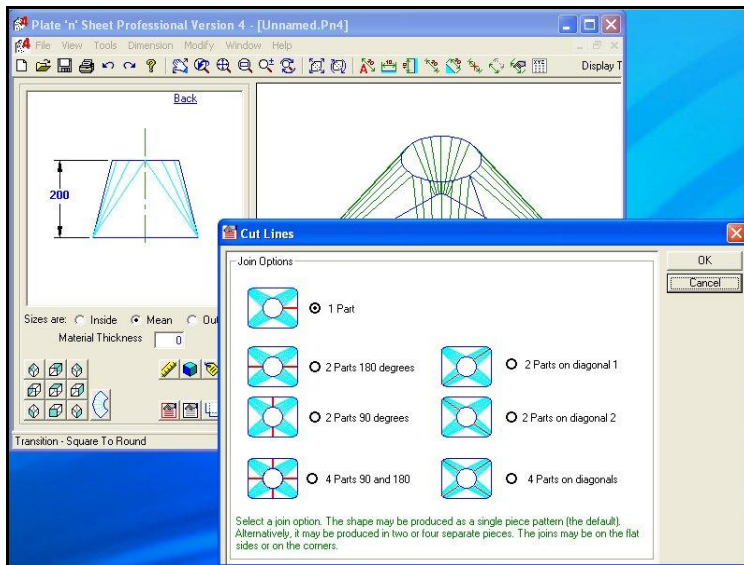


For example, using the "Special Properties" of the 'Rectangle to Round' transitions may be broken up by a variety of methods so that the join may be on the corners or on the flat, so that the pattern may be created as a single part, two parts or four parts.

Special properties may be applied to the following shapes:

> Branches
>
> Elbows
>
> Oval Cylinders
>
> Rectangular Chutes
>
> Segmented Bends
>
> Ovals

In most cases 'Special Properties' were added in response to users' requests. It is expected that more 'Special Properties' will be added over time.
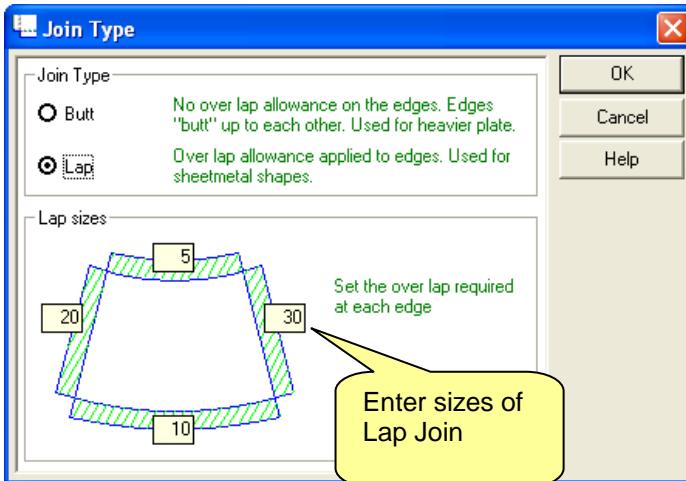
# Join Type

Click the Join Type button to nominate the type of join and allowances if required.
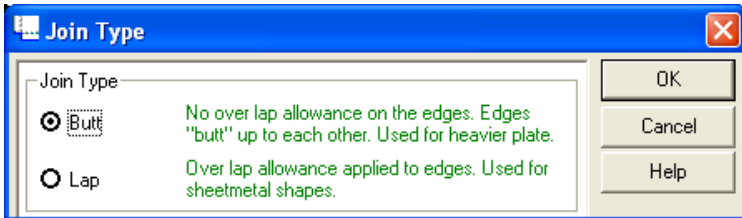


The default join type is a 'Butt' join where meeting edges of the shape butt against each other with no allowance for overlap.

Alternatively, if an overlap is required, click the "Lap" option button.



Enter sizes of Lap Join

Apply an overlap by placing a lap allowance against the corresponding edges in the Join Type dialog.

Sometimes, even though a butt join is required, laps may be used to ensure that there is "green" material at each end of the shape.



10 mm Lap Join applied

Join Type button location