Module 8

1. Lap Joins
2. Notching
3. Default Join Type settings
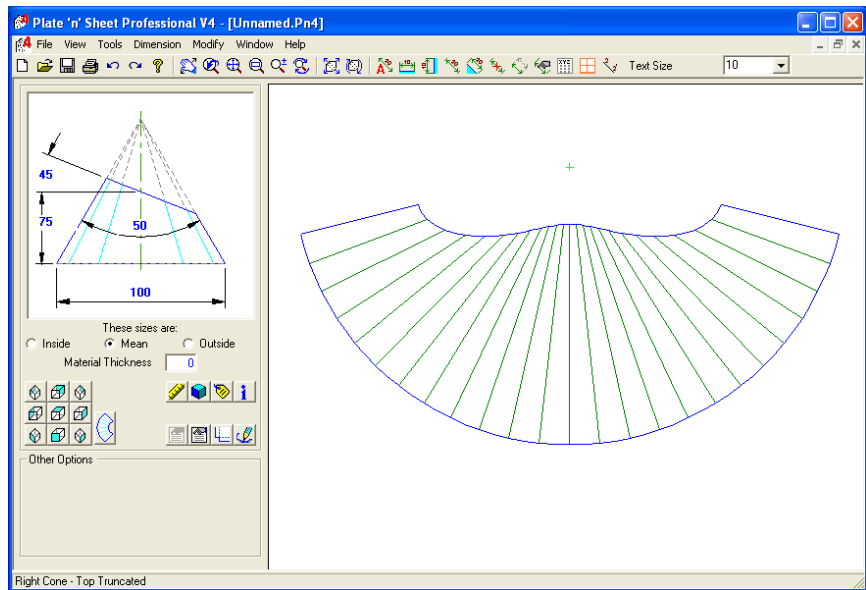
Table of Contents

⊡ Join Type

The join type setting is used to set the type and configuration of any seams and overlaps.

Overview

There are **TWO** main types:

1 Butt:

No allowance on any side. This may be used when both sides of the join "butt" up against each other as is usually the case when fabricating from plate.
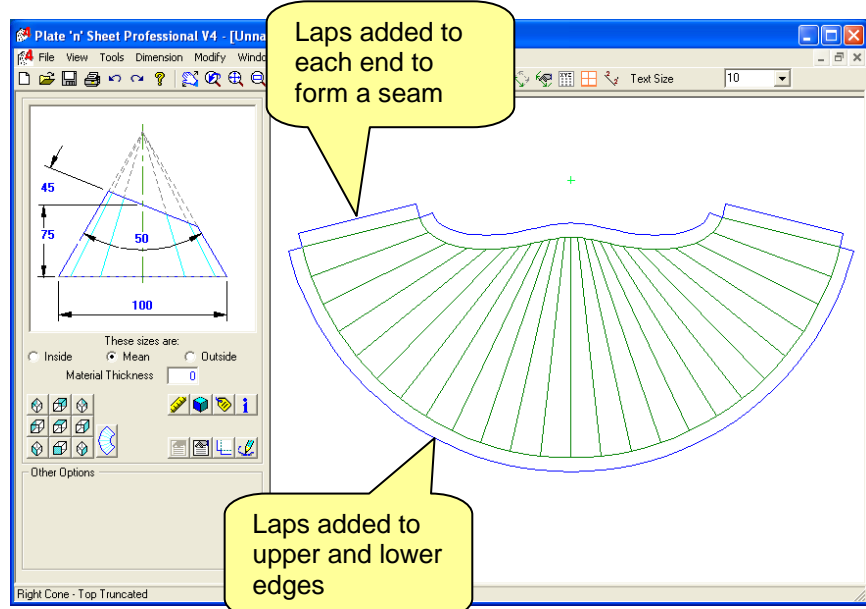

2 Lap

Additional material is added so that edges overlap to allow for brazing, soldering or riveting.
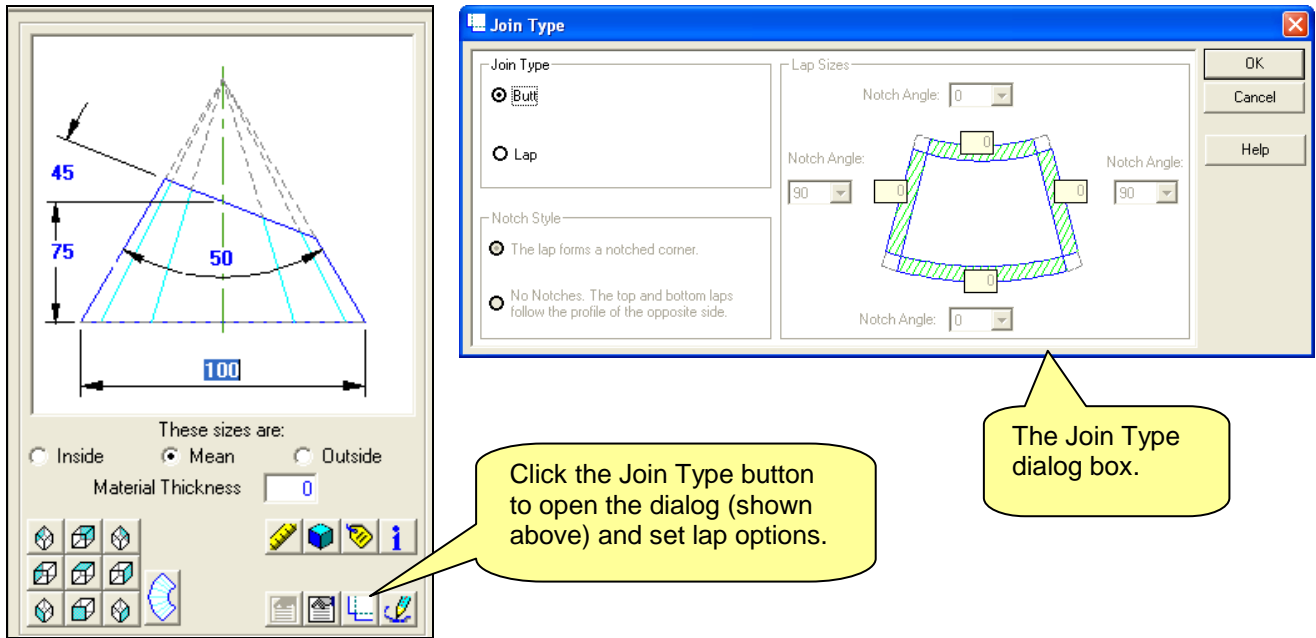
Laps may be applied to the upper and lower edges to allow joining to adjacent parts.

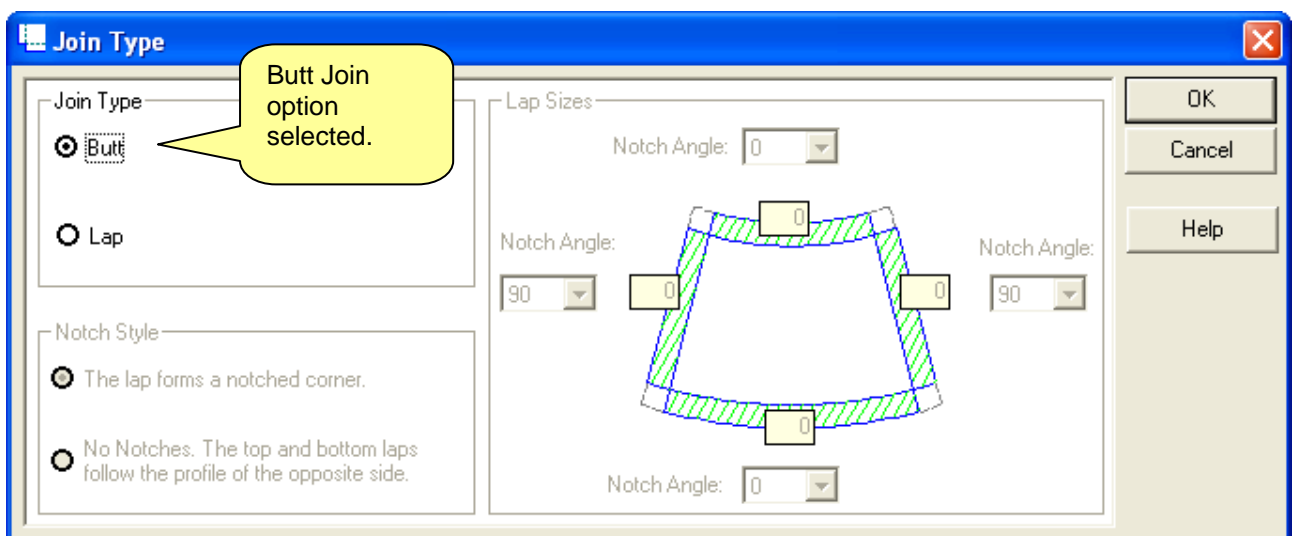A lap may also be added to each end of the pattern to form a joining seam.

Laps added to each end to form a seam

Laps added to upper and lower edges

Join Type Dialog Box

The join type and laps sizes are applied through the "**Join Type**" dialog, accessed by clicking the Join Type button.
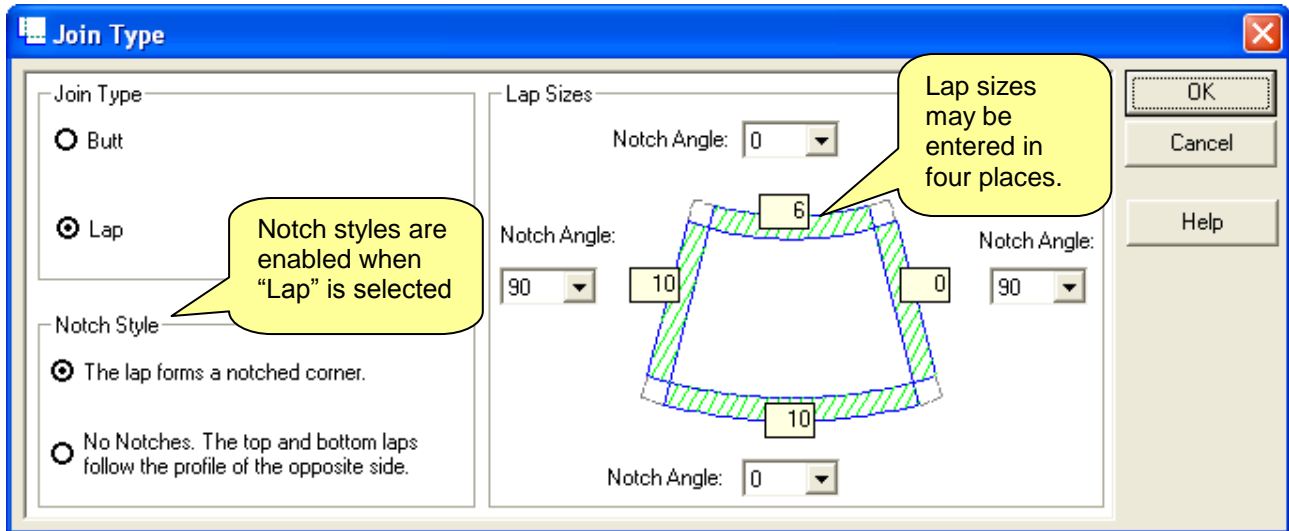

Click the Join Type button to open the dialog (shown above) and set lap options.

The Join Type dialog box.

Butt Join Option

While the "**Butt**" option is selected, lap allowances are set to 0 and notching options are "grayed out".
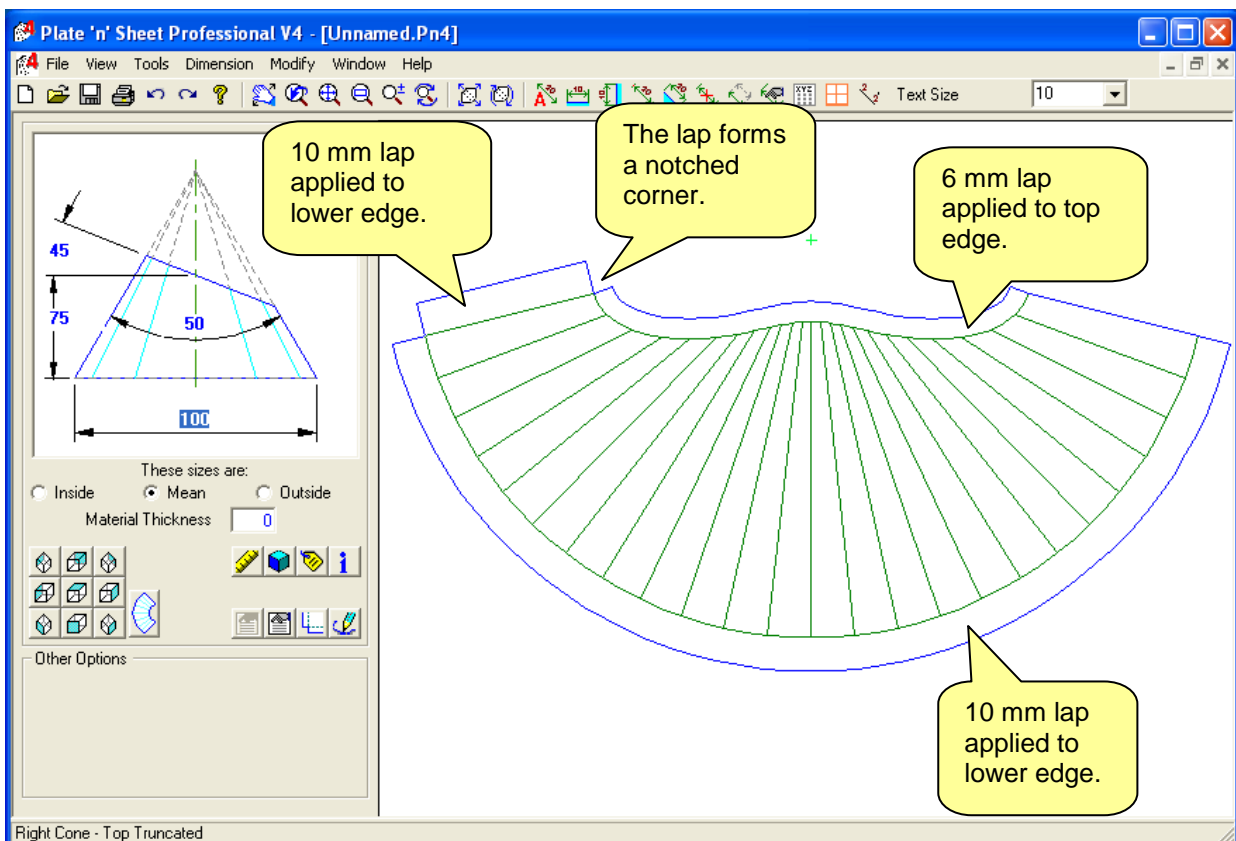

Butt Join option selected.

Lap Join Option

When the "Lap" option is selected the Lap sizes may be entered and the Notch style options are enabled.
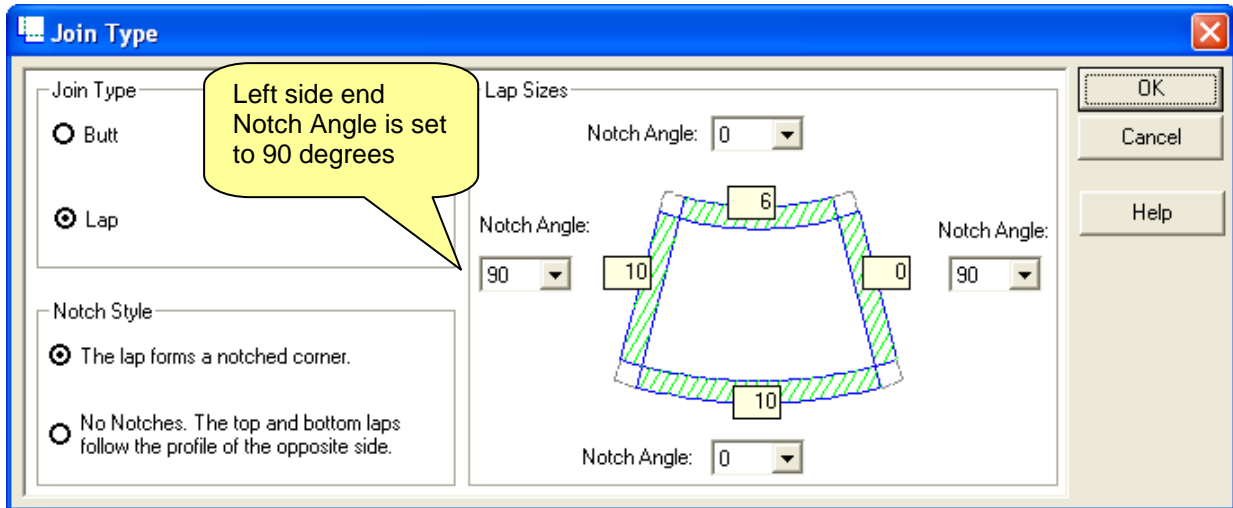

By default, the Notch Style "**Lap forms a notched corner**" is enabled. The diagram below shows the result of the settings applied in the dialog above. A lap of 10 is applied to the left end of the pattern, a lap of 6 is applied to the top edge and a lap of 10 is also applied to the lower edge.
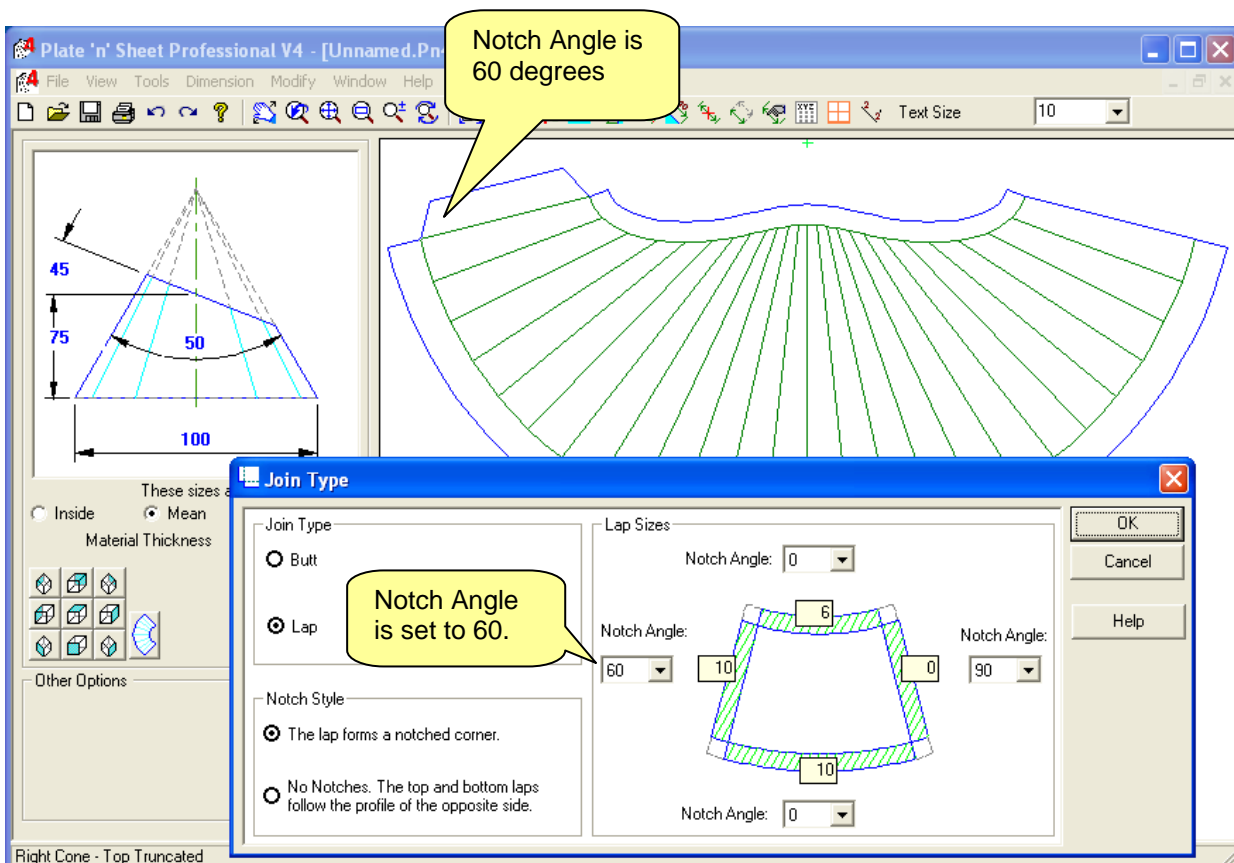
Notch Style Options

There are two Notch Style options: '**Notched Corner**' and '**No Notches**' that may be applied in several ways.
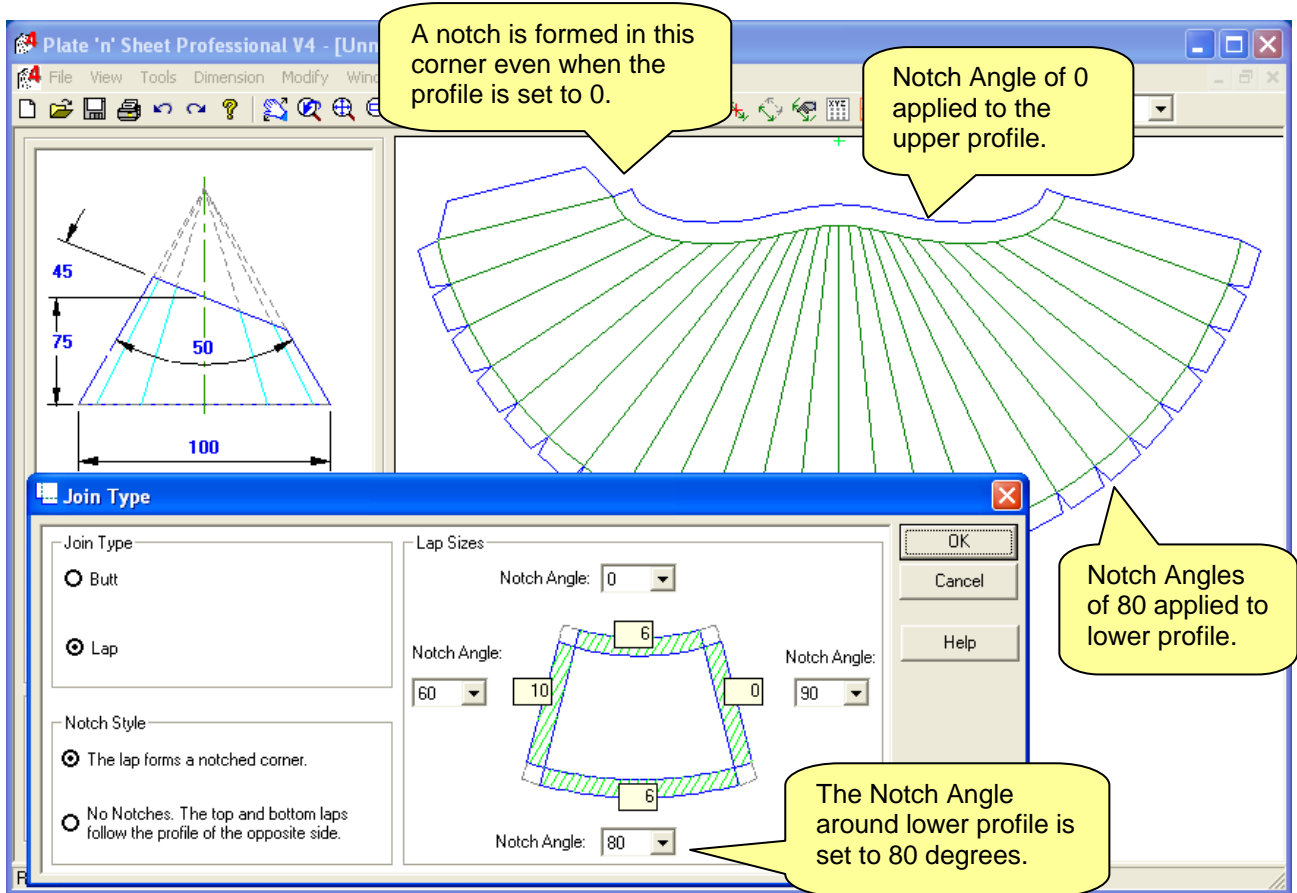
Notched Corner

In the above example the Notch Angle of the left side end lap is set to 90. The notch angle is measured from the end line of the pattern. Changing the notch angle to 60 would give the following result:
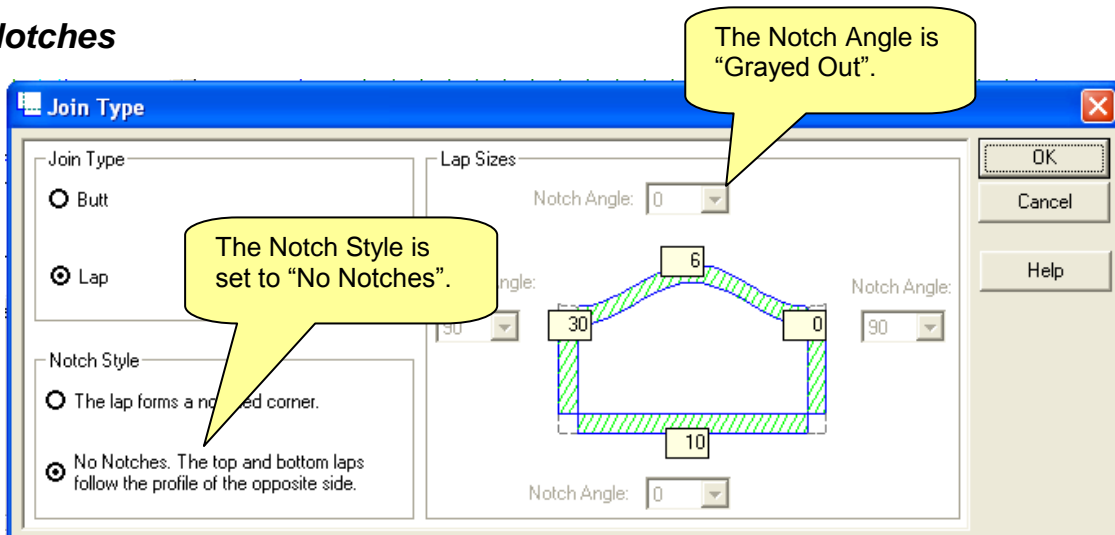
When a Notch Angle is applied to the **upper or lower lap**, notches are cut at each press line. The nominated notch angle from the last segment measured around the profile. The diagram below shows a notch angle of 80 degrees applied to the lower profile.

A notch is formed in this corner even when the profile is set to 0.

Notch Angle of 0 applied to the upper profile.

Notch Angles of 80 applied to lower profile.

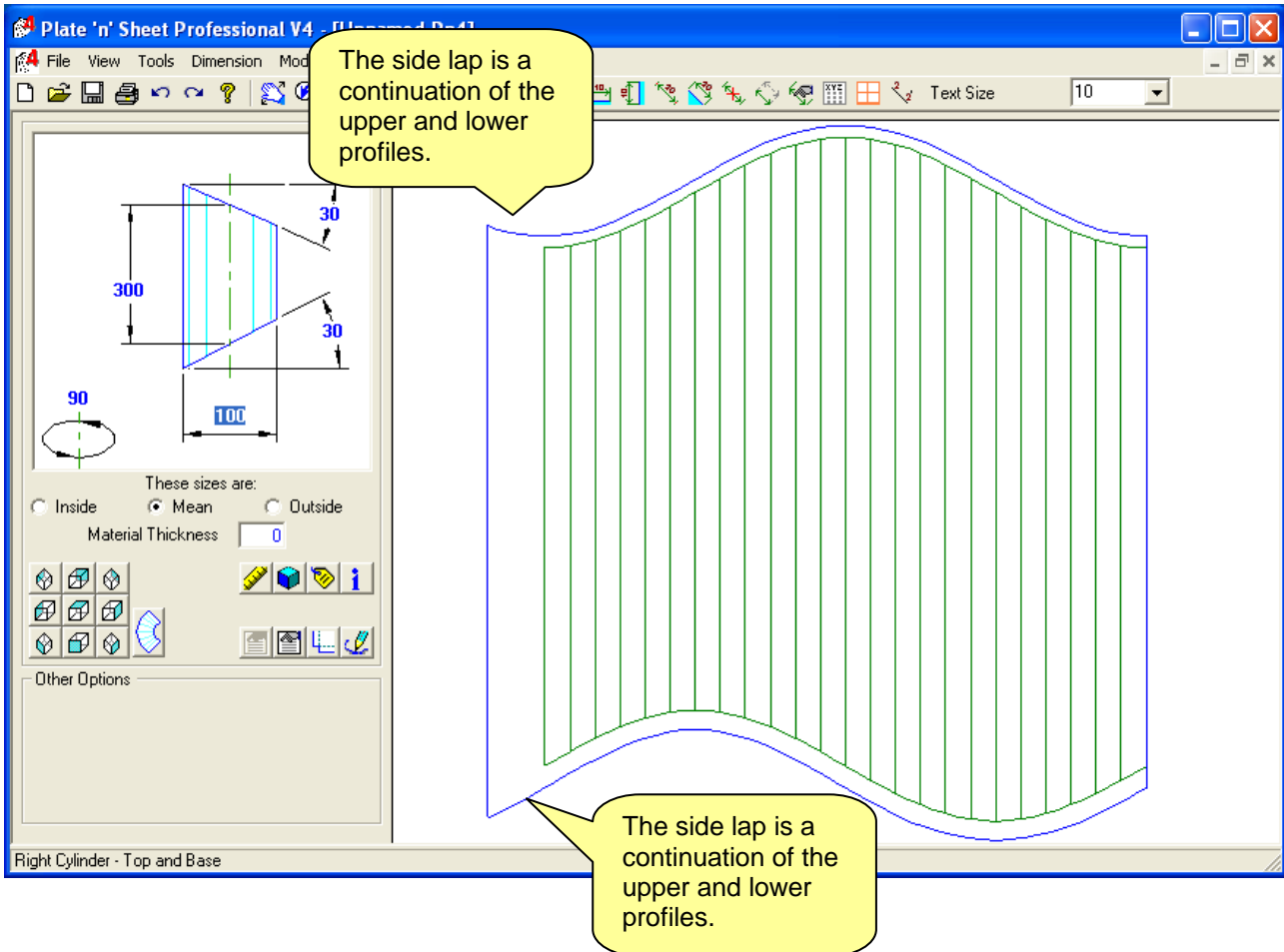*The Notch Angle around lower profile is set to 80 degrees.*

NOTE: A notch angle of 0 on the upper and lower edges means that no notches are applied around the profile, other than the notch in the "corner" formed between the end lap and the upper or lower profiles.

No Notches

The Notch Angle is "Grayed Out".

The Notch Style is set to "No Notches".

When the '**Notch Style**' option is set to '**No Notches**', no corner notch is formed and the profile is continued around the end laps. When this option is selected, the Notch Angle options are "grayed out" and ignored.
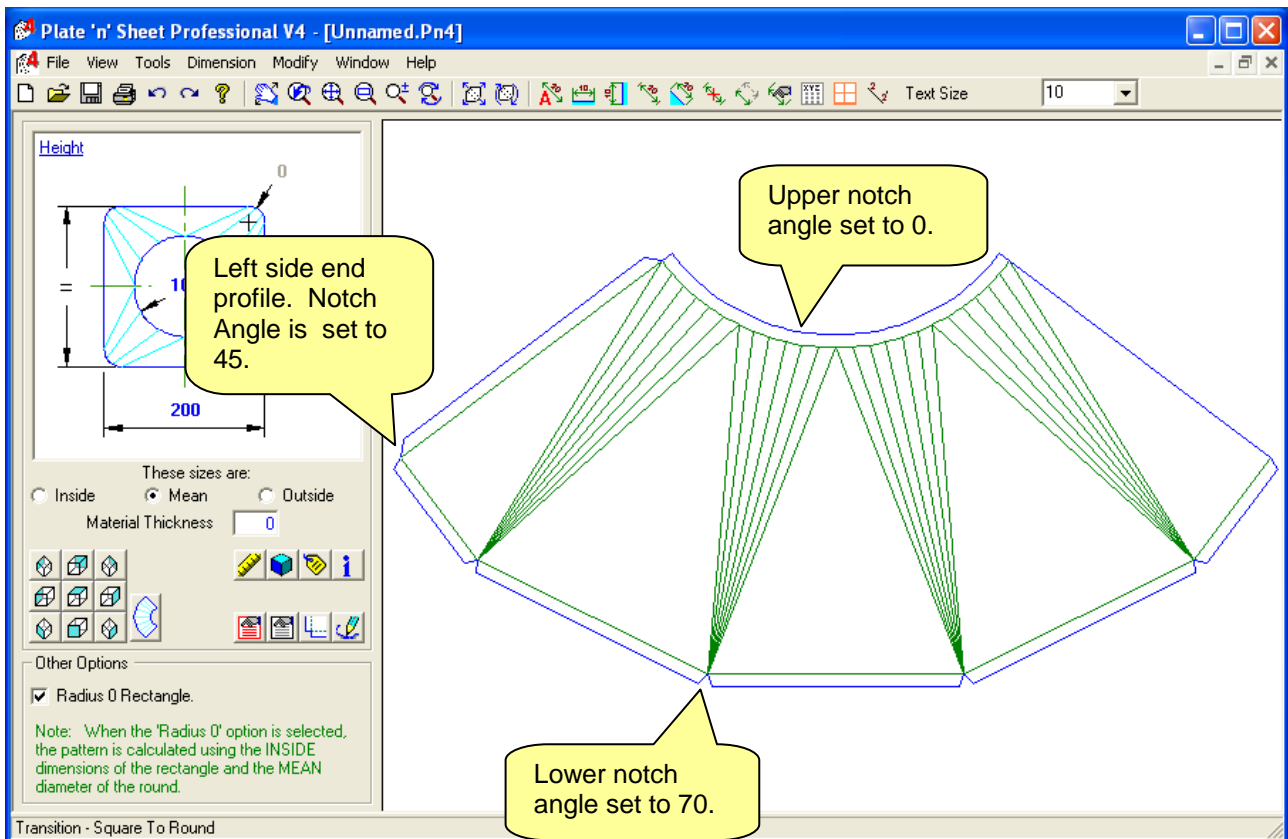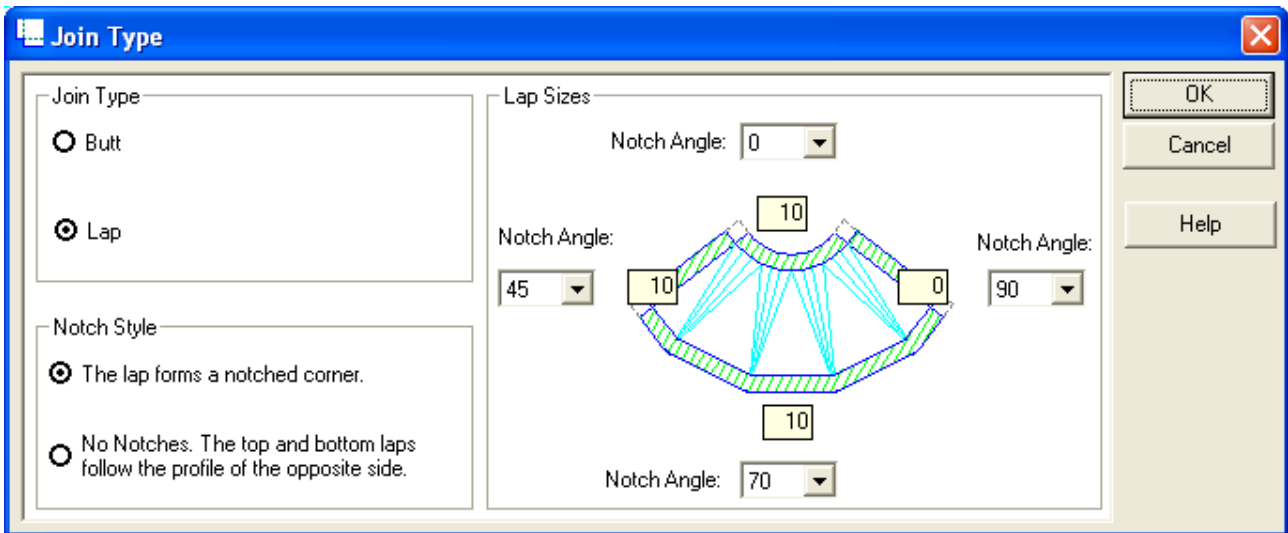

Important Note

The '**No Notch**' option explained above can only be applied when the pattern is a *full pattern*. If '**Half Pattern**' is set in '**Properties**' or using the '**Special Properties**' options, the 'No Notch' option in the Join Type dialog is disabled.

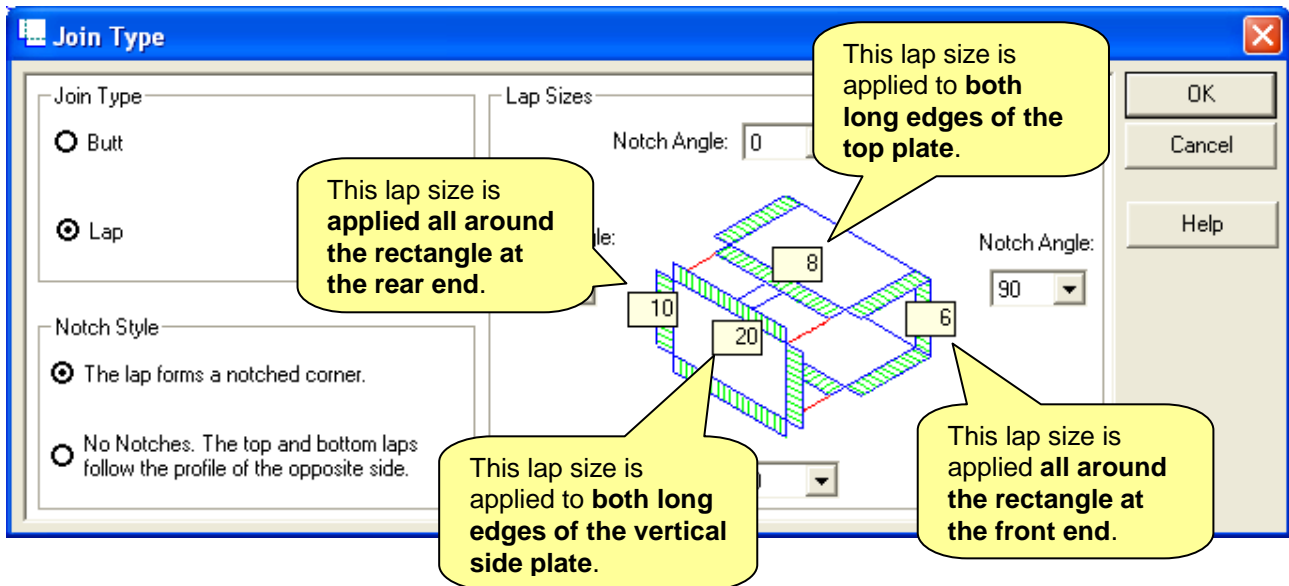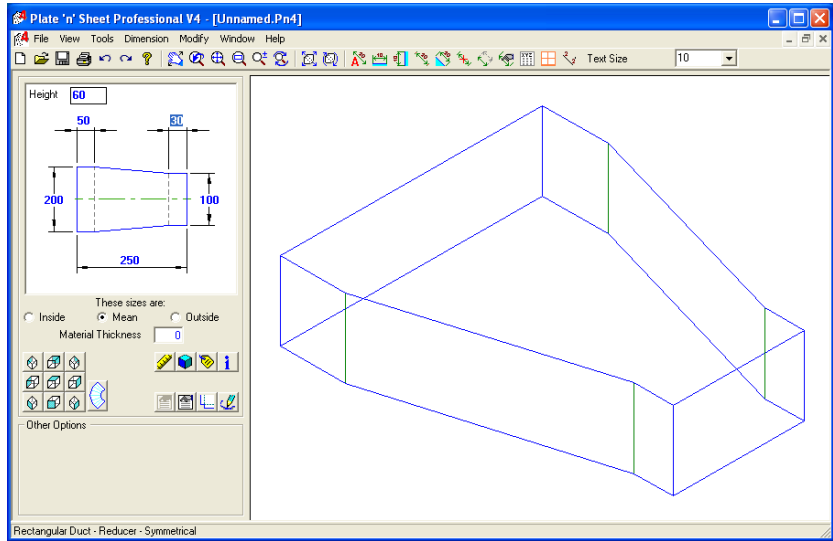## *Some Special Cases*

Rectangle to Round.

A typical application of notching is shown below. Set the notch angle of the upper profile to 0, and the notch angle of the lower profile (which forms the rectangle) to, say 70 degrees to form notches at each corner.

Rectangular Ducting

Rectangular ducting is used in the HVAC industry. The shape shown opposite is a typical reducer.
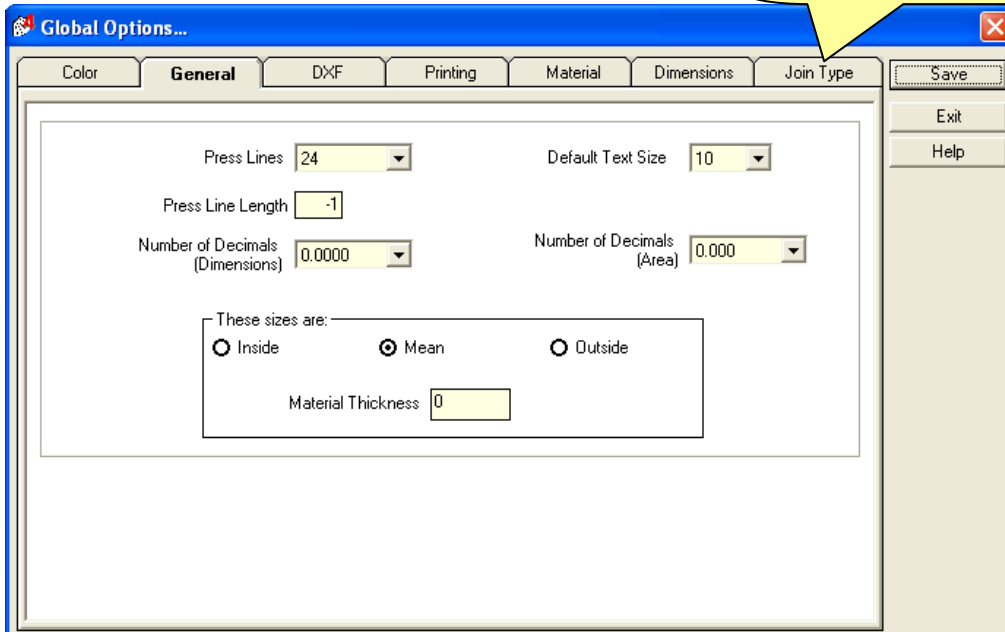
The 'Join Type' dialog appears a little different and is applied as shown below.
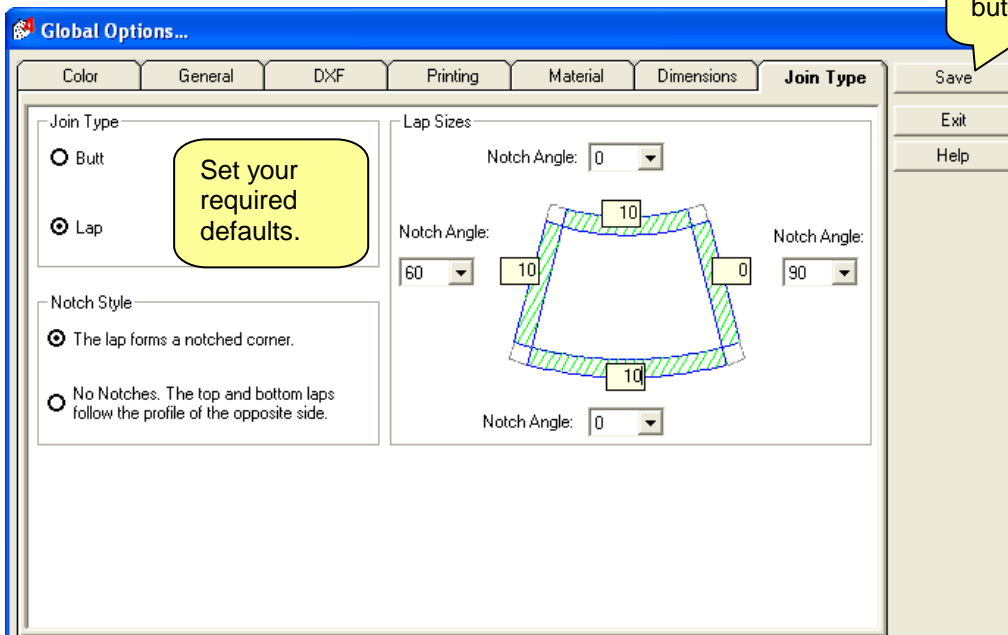
Setting Default Join Types

You may set default values for the Join Type dialog if you are making many shapes with the same lap configuration. To do this, select the "Tools" from the pull-down menus, and then select "**Global Options**". Next, select the 'Join Type' tab.

Select the 'Join Type' tab.

Set the lap settings for you most frequently used shapes and click the save button.

'Save' button

Now each time you access the Join Type dialog your default settings will be pre-loaded.