# Y Notch Adjustment ZX5

Adjustment of Y notches on ZX5 Machine or Sawing centre fitted with "Y-Drive" on saw clamping

## Contents

# Introduction

The Saw "Y-Drive" is a modification to the standard saw clamping / centralising system. It provides a means for the centralising point of the saw blade to be automatically offset. This allows a Y notch type cut to be carried out on the saw side of the machine. This is more accurate and reliable than cutting the angle part of the Y notch on the machining head, then the square cut on the saw head.
the depth of the Y notch is taken directly from the Tool code - eg YFL290 will create a left Y notch 29.0mm deep in the front

# Setting Up Procedure

> ⚠️  ...Always ensure you measure the profile width accurately (0.1mm) before these tests, and update the profile width in the settings accordingly. The depth of the Y notch works from the centreline of the profile, so if the profile is the wrong width, the depth will also be wrong

> ✋  ...Avoid using Z section profiles for the initial test, as they are difficult to measure

if you need to measure a Z transom accurately, follow this procedure Z Transom Width Measurement

| | Step |
|---|---|
| 1 | Ensure SY axis is datumed correctly by adjusting SY datum to achieve perfect arrow heads |
| 2 | Ensure bladeoffset/ and bladeoffset\ parameters are correctly set to achive [ /, \ ] and \ / cuts without Y notches |
| 3 | Test cut front y notches. Depth should not need a great deal of adjustment. If there is a big discrepancy, this would point to a larger mechanical problem<br>Depth can be offset for a particular profile in the fine tuning parameters |
| 4 | Check cut lengths of Y notched pieces vs non-Y notched [ /, \ ] pieces - adjust with bladeCenAdjust parameter |

# bladeCenAdjust Parameter

There are two "modes" for the sawing head clamping position, "fixed" and "centralised".

In the "**fixed**"position, the saw rotation point is a fixed distance from the backfence (normally around 65mm). This enables accurate cutting of mitres because and width variation in the profile does not affect the outer dimension of the cut piece

In the "**centralised**" position, the saw blade centralises around the profile. This allows accurate arrow head cutting, as any variance of width is compensated for. If mitres are cut in this mode, inconsistencies in the width of the bar will influence the cut length.

The saw is unable to switch between these modes during cutting - the mode is selected at the start of the bar.

When cutting Y notches, the mode has to be "centralised". This means a different calculation is used when cutting a mitre cut. This can sometimes lead to a discrepancy in cut lengths between [ / and \ ].

The bladeCenAdjust parameter allows a fine tune to get Y notched and non-Y notched pieces to the exact same size. The parameter can be + or -

⚠️ ...If the parameter needs to be greater then +/- 1.5mm, this would probably mean a mechanical alignment issue with the clamping

ℹ️ ...The root cause of the need for a bladeCenAdjust parameter is usually the pivot point of the saw blade 45 / 90 / 135 rotation - it may not precisely line up with the blade centreline

# Deep Y notching

The "Y-Drive" system has mechanical limitations on the depth of notch it can produce.
See TB0434 Setting Up Deep Y notches on ZX5