



# Ecoline - Datum and MitreOffset Tests

How to set up datum position on Ecoline

 Difficulty **Medium**

 Duration **1 hour(s)**

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Comments

## Introduction

When an Ecoline is commissioned, the positional accuracy needs to be set up.

These are also useful tests to check if the machine is maintaining positional accuracy



...ALWAYS make sure you have consistent, repeatable results before making any parameter changes

## Step 1 - Prepare Square End Profile

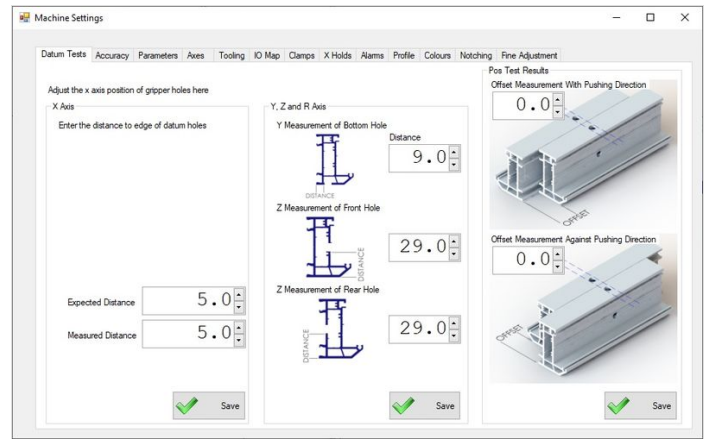
Cut 3 lengths of outerframe around 1000mm long



...Make sure the gripper end of the profile has a clean edge - ie no swarf and profile tape is not "flapping" over the end

## Step 2 - Run Datum Tests on Square-end profile

Run 3 tests on the same piece spaced apart by 20mm. Make sure the machine is reinitialised and redatumed between each run. This allows you to see if the position of the holes drifts along the bar. Aim to place the holes at least 400mm in from the bar end. See WinMulti - Datum Test for full instructions. End goal is to produce repeatable datum holes at the correct position from the end of the bar.



...The position needs to be consistent and repeatable before you can proceed to next step

...If the datum position is not consistent, check laser beam cleanliness and laser focus

See Training Laser on Ecoline

## Step 3 - Check Gripper positions in Flowops Database

All gripper positions should be greater than 20 and less than 55

## Step 4 - Choose 3 test profiles with different gripper positions

Usually -

A - Slim Outer frame

B - Large Outer Frame

C - Door Profile

Cut \ / pieces around 1000mm

...Make sure the gripper end of the profile has a clean edge - ie no swarf and profile tape is not "flapping" over the end

## Step 5 - Run datum tests on all 3 profiles

...Do not attempt this if the square end datum positions are not consistent

Run the test at the same position on all 3 profiles

## Step 6 - Check X position is the same on all 3 profiles

If the position is varying, this highlights a gripping / measuring problem

Check

- Laser focus and alignment
- G axis Datum position
- Y axis datum position
- Speed of infeed pull is steady and slow
- Gripper slipping (blunt)

...The position needs to be identical before you can proceed to next step

## Step 7 - Adjust Offset Parameter for mitres

The position can be adjusted with the parameter

ecoMitreAdjust

After adjustment, run the tests again



...Only make an adjustment if you have consistent, repeatable results

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## Step 8 - Run Datum Tests on Arrow head End Profile

Run the tests again with arrowhead end on the test pieces.

If the position is different to the square-end, the position can be adjusted with the parameter

ecoArrowAdjust