Autoflow Mk3 Infeed Measurements

Description of the important Autoflow Mk3 Measurements

Contents

Introduction

The Autoflow Mk4 brought about some improvements to the measuring system, however these improvements need additional parameters and accurate measurements made of existing parameters on the infeed table

infeedToZeroX

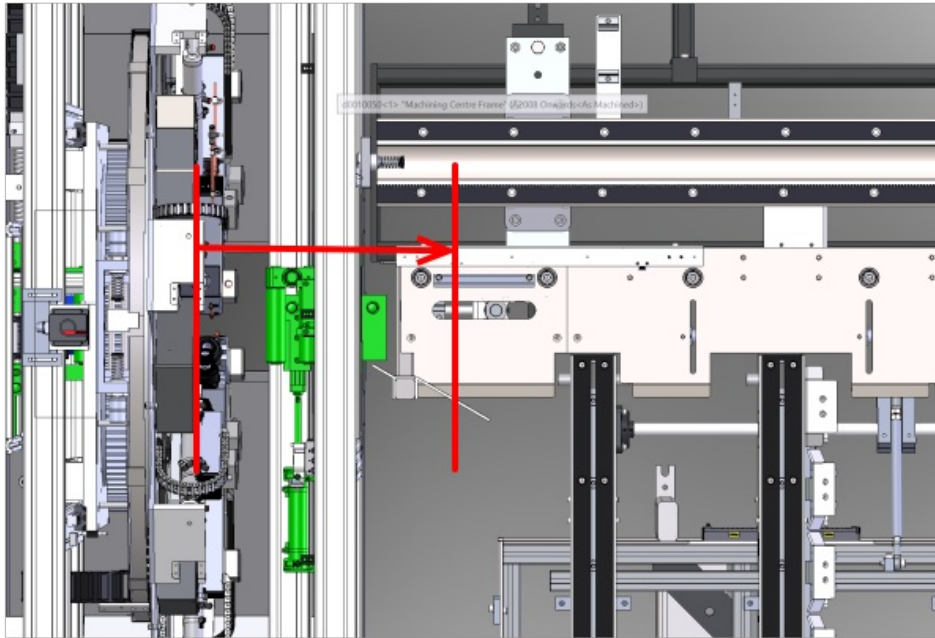Distance from spindle centreline to the loading side of the profile end stop
Normally around 605mm on an autoflow, but may vary depending on installation
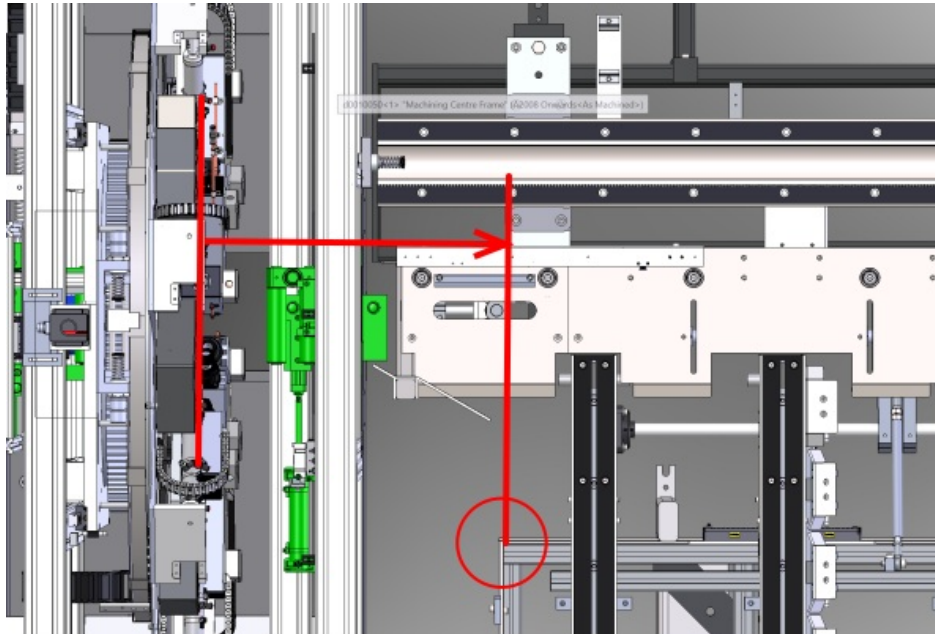
stopCylinderToZeroX

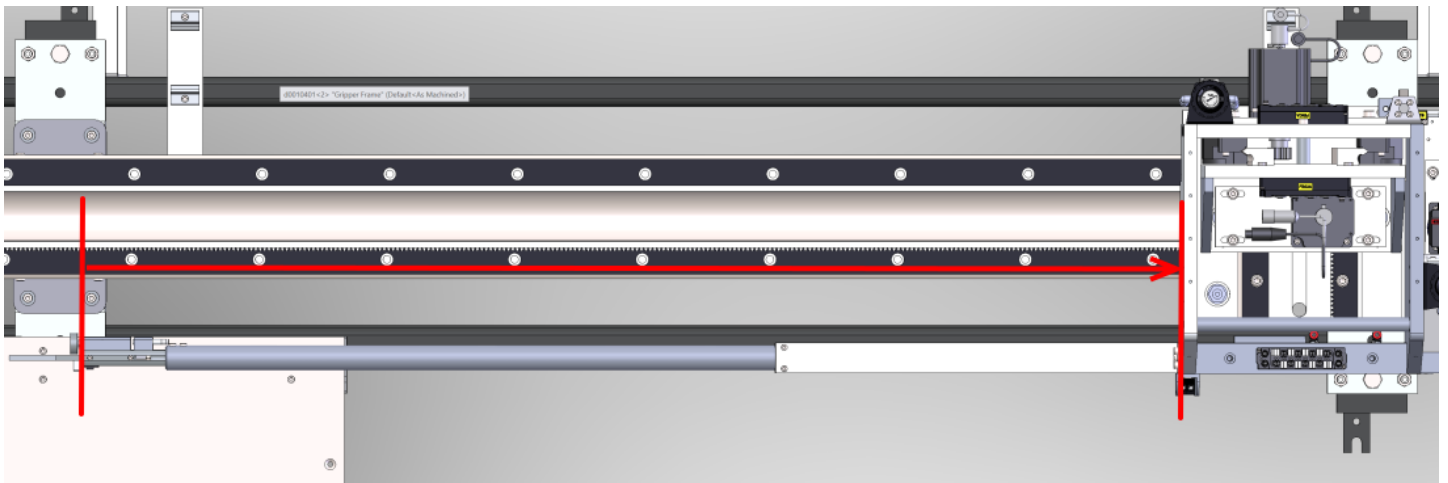Distance from spindle centreline to bottomed-out position of popup stop
Always less than infeedZeroToX, usually around 595, but may vary depending on installation

measureSensorPos1

Distance from grip switch button when depressed to the first infeed sensor
On Mk3 infeed, this is normally 1554mm

Sequence of Operation - Measuring

1. Move Gripper GX to MeasureStartPosX and GY, GZ to measurepos Y and Z for the bar loaded
2. Wait for bar to be delivered to measuring position
3. Move to max X axis position
4. Look for start sensor position - rising edge
5. Look for end sensor position - falling edge on sensor1, filtering out any off / on bursts of 250ms - store value *sensorEnd*
6. Calculate measured bar length - (*sensorEnd + measureSensorPos1-infeedToZeroX*)
7. Halt gripper once the x axis position > *infeedToZeroX+barLength+100*

Sequence of Operation - Gripping

1. Load bar to backfence
2. Move GY,GZ to gripper position
3. Move slowly to *barLength+stopCylinderToZeroX*
4. Stop pop up
5. Halt when stop sensor active and grip switch pressed
6. Grip Bar
7. Pull back 10mm to test bar is gripped
8. Popup down
9. Check Clamp home sensors

10. Push gently to clamping start position