Stuertz Infeed - Setting Measuring Sensor

Notes on Setting the measuring sensors on the Autoflow Mk4 Stuertz Infeed Table

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Components Used

The sensor used on the Mk4 infeed is an E0001526 diffuse sensor, fitted with an E0001064 plug.

E0001526	E0001064
Note, this is NOT an E0000498. The E0001526 hs a more diffuse spot on it and is found to be more suitable for colour and edge detection reliablity	

Plug fitting instructions can be found here

Measure Start Positions

Parameter	Description	Example Value (dependent on installation)	Notes
measureStartPosX	Start position in X axis for measure sensors	-970	Should be slightly to machining centre side of profile end stop
measureStartPosY	Default Gripper Y position for measuring This can be changed from the default value for specific profiles in the parameter table	30	Will only make a difference if the measure sensor is angled
measureStartPosZ	Default Gripper height for measuring This can be changed from the default value for specific profiles in the parameter table	6	Needs to go as low as possible because the profile sits lower down to the gripper (due to the lifting roller system) Minimum GZ position on A2027 was 6mm,

General Procedure for Sensor Setting

1. Ensure the laser is not angled down - the beam should be horizontal, unless there is an absolute need to angle it downwards for a very low profile.

> ℹ️ ...Angling the laser downwards may seem a great solution to reach lower profiles, but this will make it very difficult to set up a whole range of profiles. There is an adjustment for the measuring height in the software, but this is unusable if the sensor is angled down

1. Ensure the Correct sensor is used - Ensure the Sensor is fitted with the adjustment screw at the top (this will mean the cable exit is at the bottom)
2. Ensure the minimum GZ position is reached and the head is at this position (normally 7-8mm)
3. Ensure the profile indexer has been set up . Stuertz Conveyor Motor and Indexing Setup

> ℹ️ ...This ensures that the profile is in the correct present position for the measuring routine

1. Using the narrowest, darkest coloured profile you can find, place it at the frontmost edge of the conveyor slots (closest to you).
2. Load the bar using the index button
3. Place a white outer frame bar in the 2nd slot behind it, move it to the backfence side of its slot so it is as close to the backfence as possible
4. Move the GX axis via Drives tab to the measuring position (around -970mm).
5. Disable the axis by pressing estop
6. Adjust the sensor sensitivity so that it sees the coloured profile, but switches off when you move it out of the way.
7. Adjust the sensitivity up until it see the white outer frame in the second slot, then turn down sensitivity gradually until the sensor goes off.
8. Check it works by sliding the coloured profile back and forth to see the sensor light go on and off

Finally, make sure the cabling is cable tied out of the way and there are no loops to catch on stray profile, etc

> ⚠️ ...All measurement positions are referenced from the datum position of the GX axis. Therefore they are completely dependent on it being correct. If you have to reset the GX datum or scaling by a considerable amount, it will affect this position and it may need to be changed. The zero position should be the centreline of the spindles