



R0015038 Bench Assemble V notch Datum Rollers

Instructions to bench assemble v notch datum rollers

 Difficulty **Medium**

 Duration **2 hour(s)**

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Comments

Introduction

Tools Required

Standard Hex key set

External circlip pliers

1 meter straight edge

Feeler gauges

Parts Required

B0000062 Circlip 20mm External x 13

B0000415 Ball Bearing 20 I/D 32 O/D 7 Long + shields (INA) x 26

B0001176 washer : bearing shim x 16

D0010060 Roller Shaft $\varnothing 20 \times 37.5 \times 7$

D0010061 Datum Roller $\varnothing 40 \times 20 \times 6$

D0010396 Datum Roller $\varnothing 40 \times 150 \text{mm} \times 7$

D0010397 Shaft 20mm: 195mm Autoflow Roller x 7

D0015214 Roller Support Bar - Short x 1

D0015217 Profile Support Pad x 2

D0015218 Roller Support Bar - Long x 1

D0015220 Outfeed Roller Bed Support Frame x 1

D0015221 Outfeed Roller Bed Mounting Plate x 1

D0015348 MC Outfeed Roller Mounting Plate x 1

Step 1 - Unless otherwise stated

Use loctite 243 on all fasteners

Use loctite 572 on all threaded pneumatic connection


Pen mark all fasteners to show finalised



Step 2 - Assemble maytec frame

1 Fit 8 off M0001006 Threaded insert M14/M8 30 long to indicated points . Secure with Loctite 290 once fitted


2 Attach to D0015221 Outfeed Roller Bed Mounting Plate using M8 socket caps long enough to fix into m8 insert in the profile

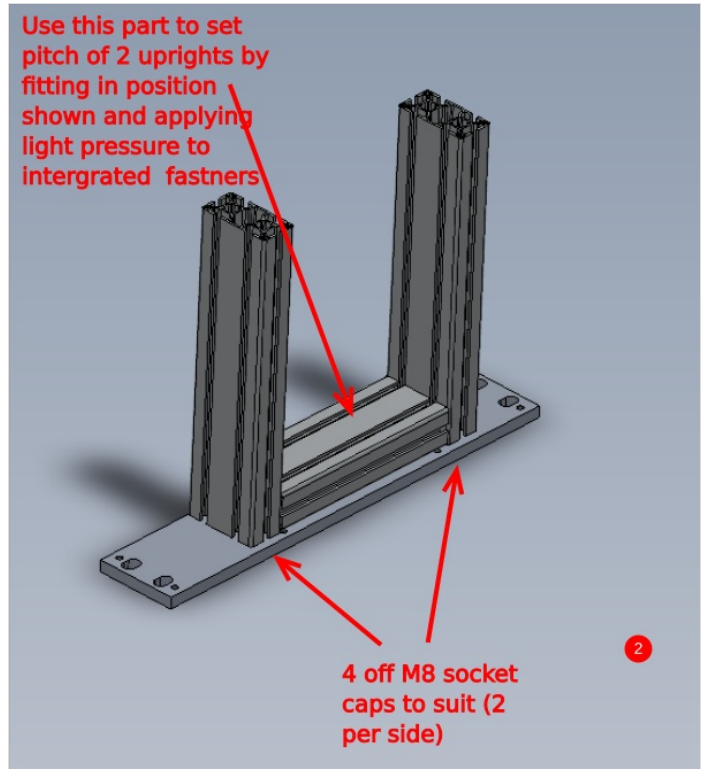
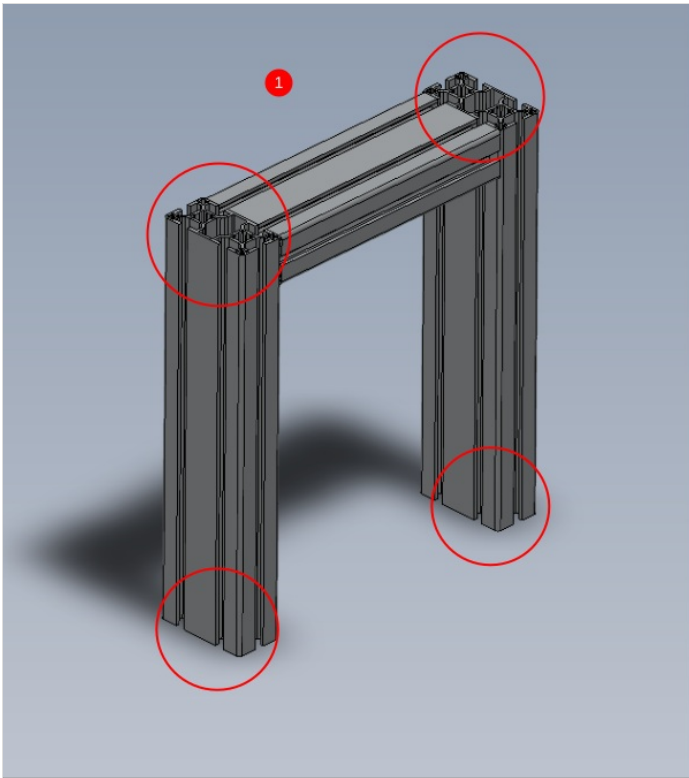
 ...Tapped thread depth is not consistent on these parts so correct bolt length needs to be calculated each time

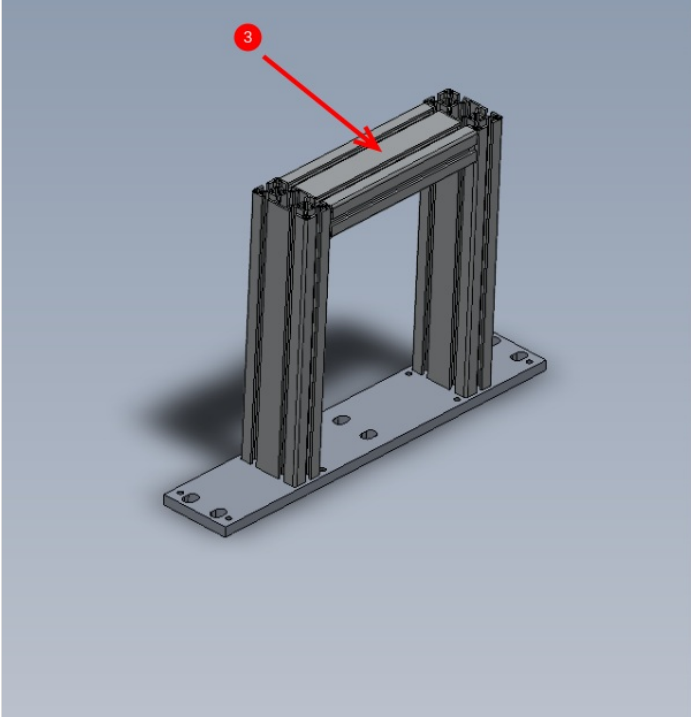
3 Move piece indicated to top position and apply light pressure to integrated fixings

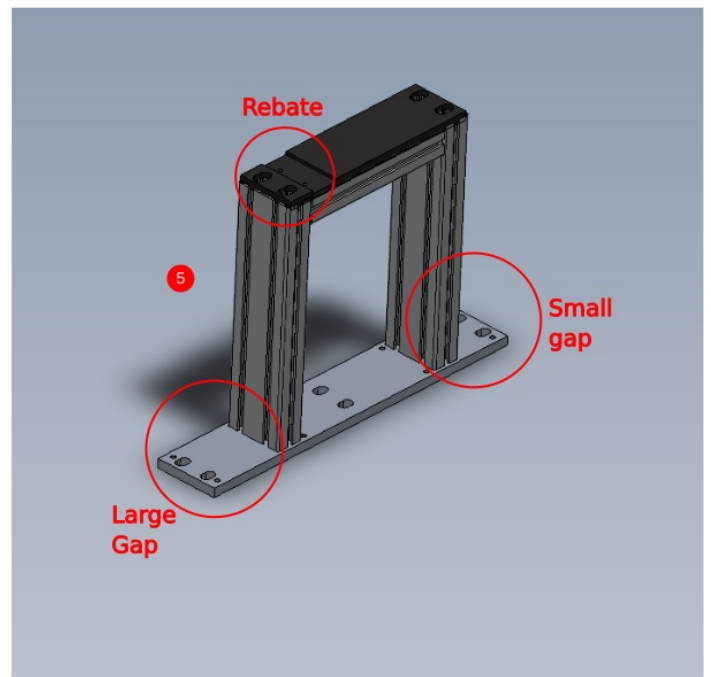
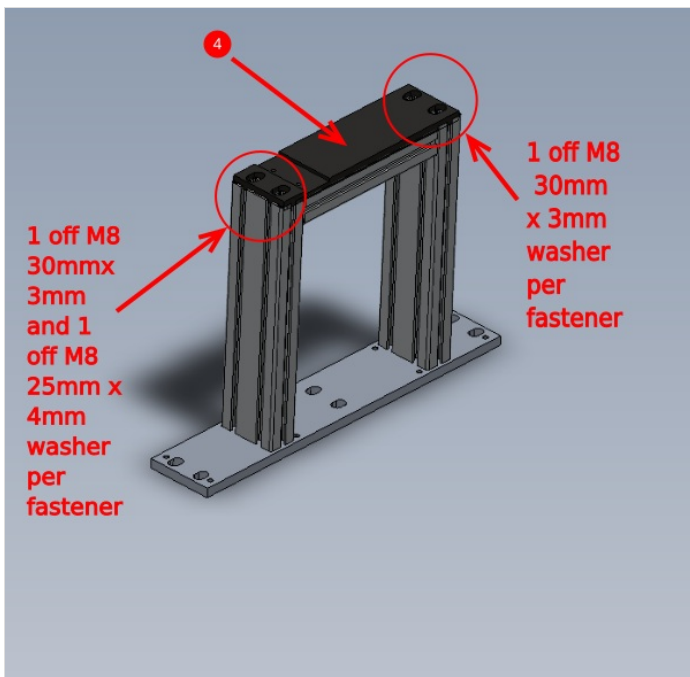
4 Attach D0015348 MC Outfeed Roller Mounting Plate again calculating correct M8 socket cap length . See picture for details of washers.
Do not use adhesive on these bolts

5

 ...Note orientation of top plate in relation to bottom plate







Step 3 - Bearing fitment

Ensure bearing fit is checked when assembling parts . Minimal resistance should be required to fit these bearings into their respective rollers . Bearing should have enough contact on outer race that it will not rotate in the roller when turned

If fit is to tight inspect roller bore size

If fit is too loose, inspect to see within tolerance and if so , degrease and use bearing retaining compound



Step 4 - Warning

excessive use of bearing fit can lead to bearing failure.

Ensure only 2 matchhead size drops are used per bearing and smeared around shaft before fitting bearing

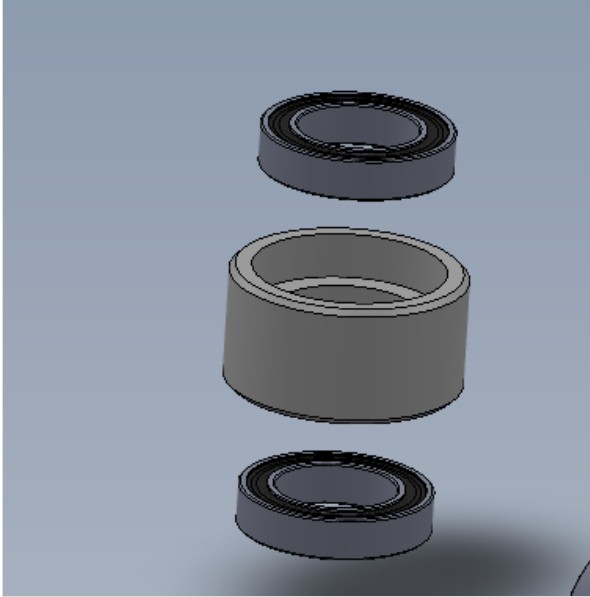


Step 5 - Fit bearings to low rollers

6 off

Fit 2 off B0000415 bearing into D0010061 Datum Roller $\text{\O}40 \times 20$

Ensure bearings are pressed in far enough to be seated correctly on the shoulder below

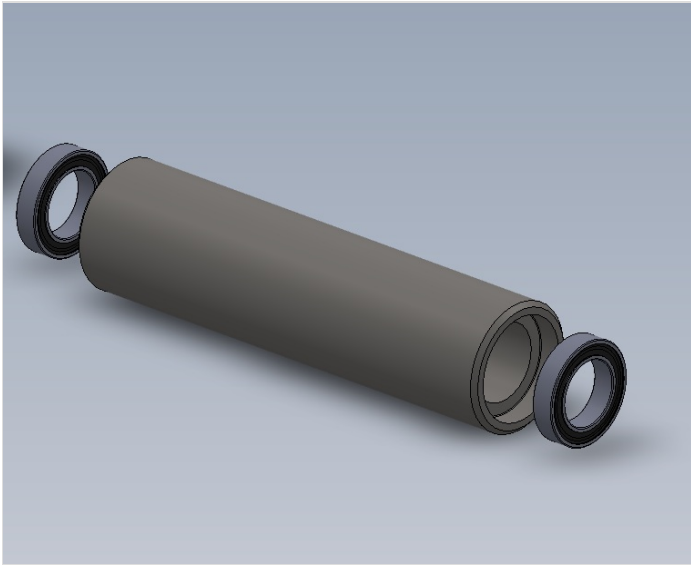


Step 6 - Fit bearings to long rollers

7 off

Fit 2 off B0000415 bearing into D0010396 Datum Roller $\text{\O}40 \times 150\text{mm}$

Ensure bearings are pressed in far enough to be seated correctly on the shoulder below



Step 7 - Check fit of shafts in bearings

Check fit of following parts .

Shafts should pass through bearings with only slight resistance . All inner bearing faces should have contact to shaft and rotate when the shaft is turned

Proceed to step 8 if fit is correct

If shafts are tight check drawing and inspect size of shaft .

If shaft slides through easily, then follow step 7

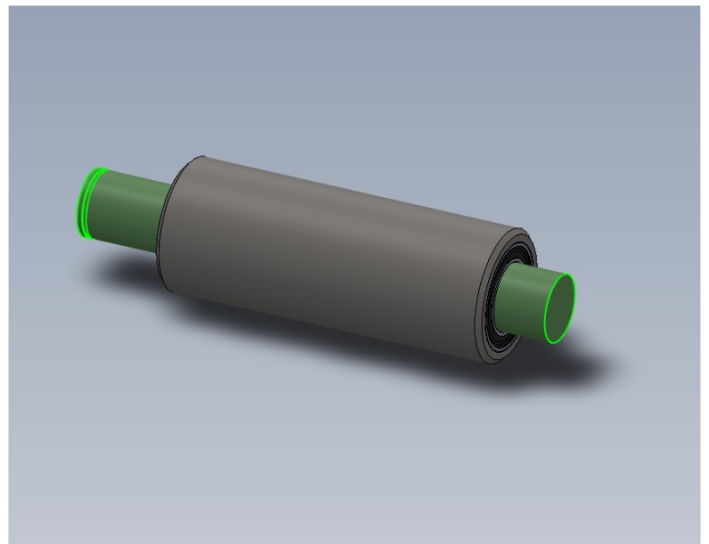
check these parts

D0010060 Roller Shaft $\text{Ø}20 \times 37.5 \times 7$

D0010061 Datum Roller $\text{Ø}40 \times 20 \times 7$

D0010396 Datum Roller $\text{Ø}40 \times 150\text{mm} \times 7$

D0010397 Shaft 20mm: 195mm Autoflow Roller x 7



Step 8 - Degrease and bearing fit

i ...only follow this step is bearing/shaft fit is loose

Thoroughly degrease all parts with FE10 solvent

1 Fit 20mm external circlip to shaft

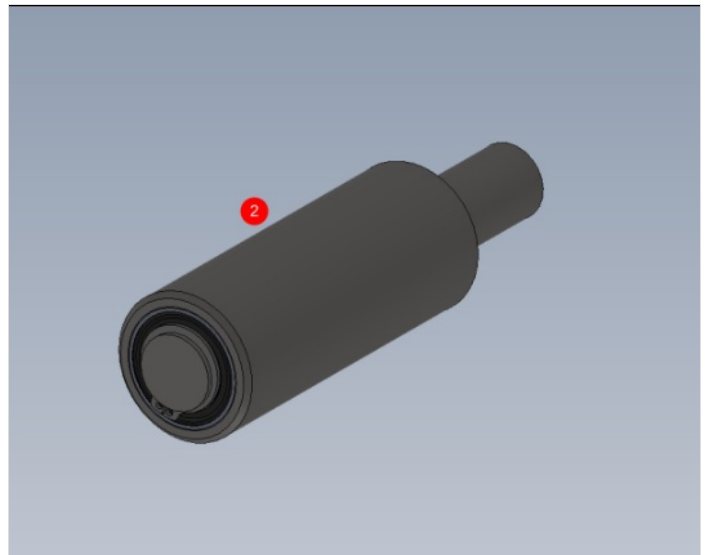
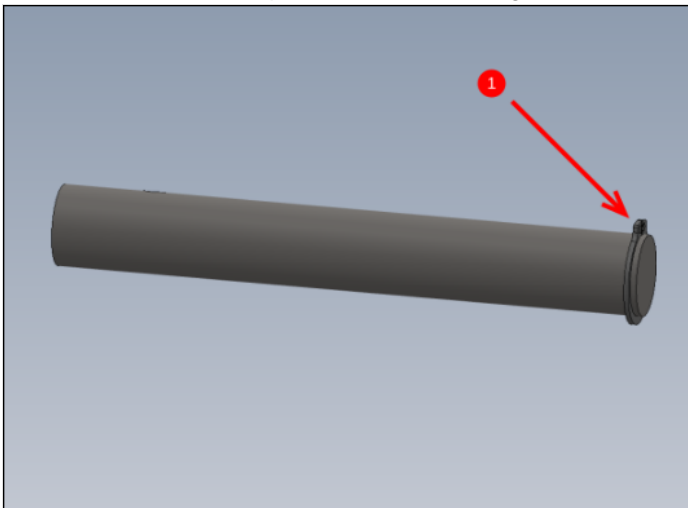
2 Fit roller to shaft

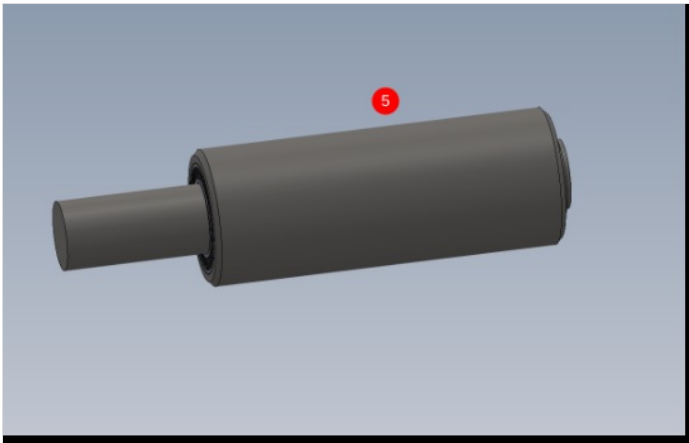
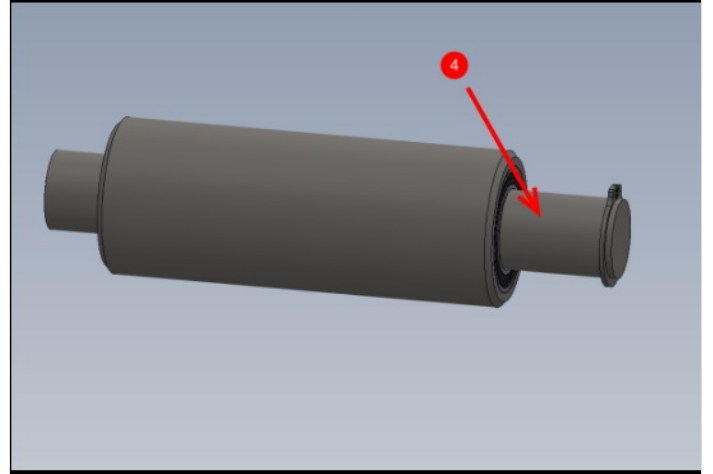
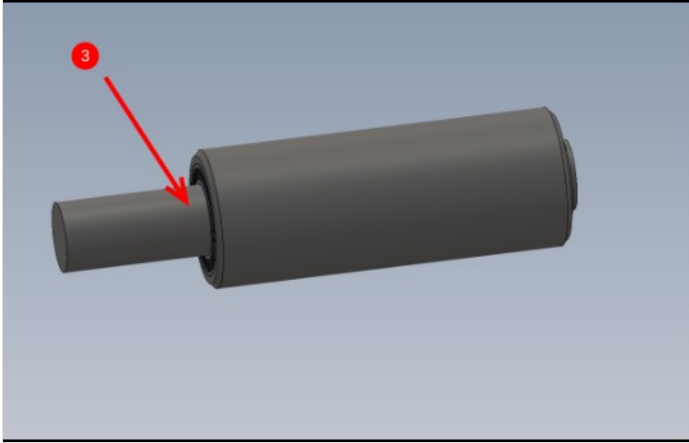
3 Add 3 drops of Loctite 641 bearing retainer to indicated area and smear around the shaft

4 Move shaft to shown position and add 3 more drops of bearing fit to indicated face and smear around

5 Position roller against circlip and remove any excess bearing fit with rag

6 Leave roller in a vertical position to allow bearing fit to cure





Step 9 - Caution

It is vital that shaft dimples are correctly aligned for Fixing grub screws to locate properly

To check correct alignment

Insert shaft and visually align dimple through grub screw hole

Insert grub screw and fasten

Wind grub screw out 1/2 turn

Shaft should be able to move slightly, but not be retracted from bore.

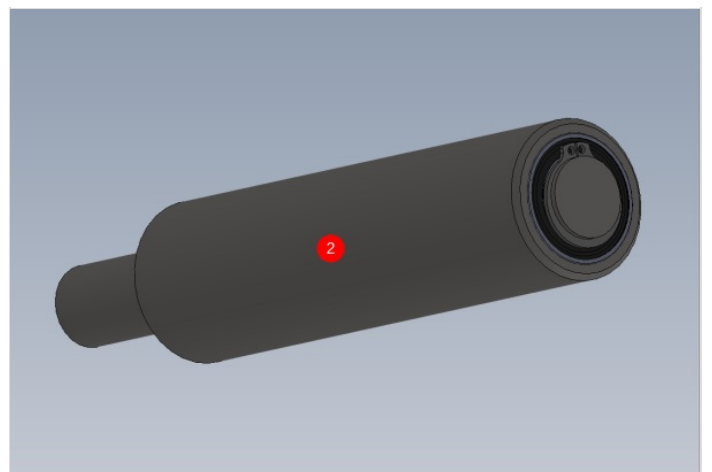
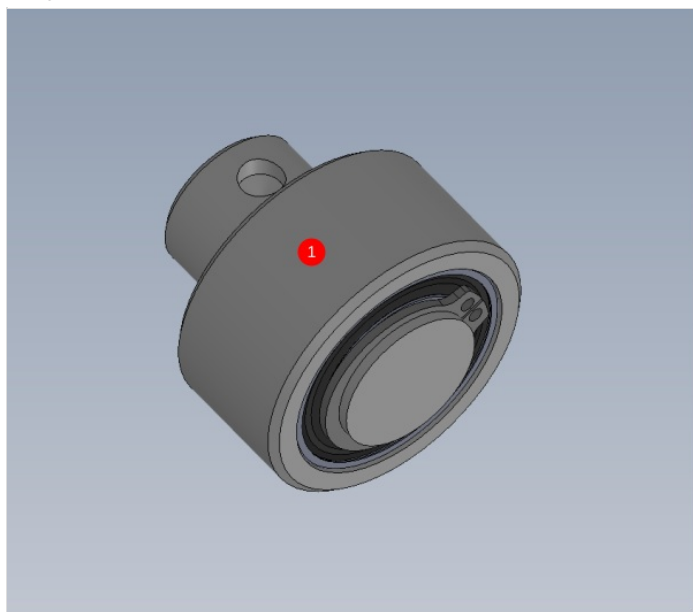
This will confirm grub screw and dimple are correctly aligned



Step 10 - Add circlip and fit roller

1 6 off


2 7 off

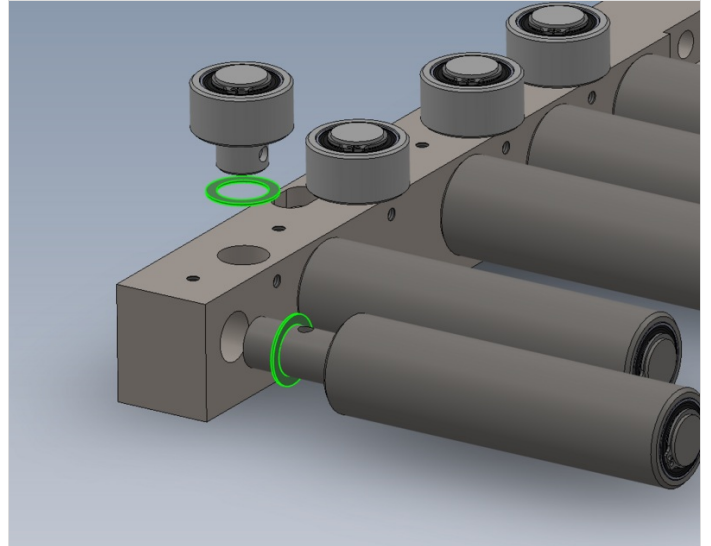
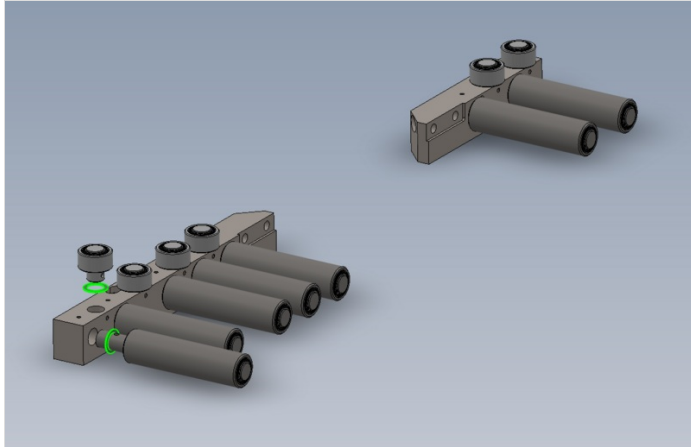


Step 11 - Mount rollers

mount rollers to bases as shown .

Secure with M6 x 10 kcp grubscrews

 ...Ensure B0001176 washer : bearing shim is fitted between each roller as indicated



Step 12 - Quality check rollers and position

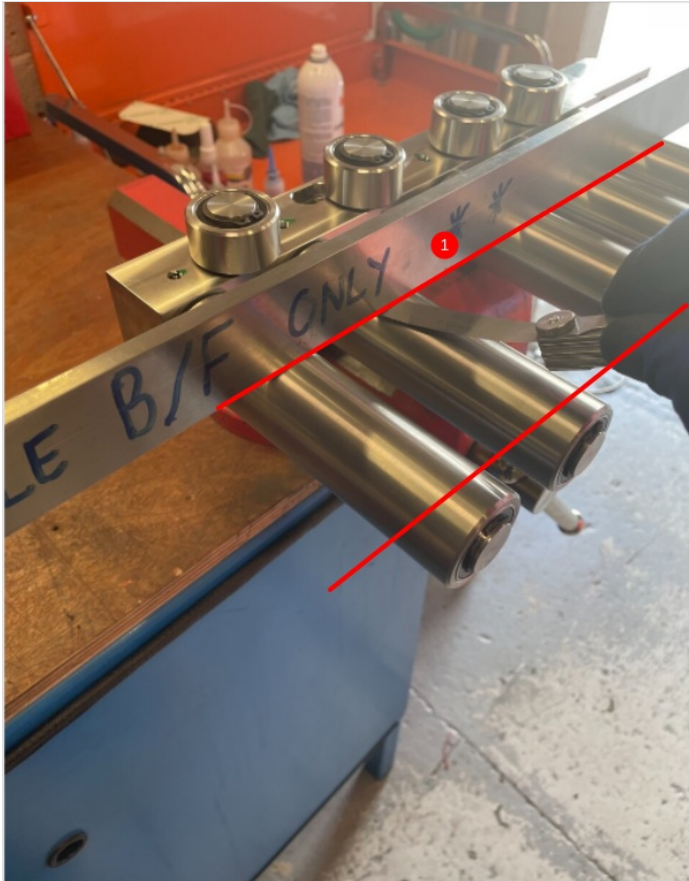
Check alignment of rollers as shown

1 Check with straight edge at both indicated points for roller alignment

Report any gaps bigger than 0.002" 0.05mm

2 Check with straight edge at indicated point for roller alignment

Report any gaps bigger than 0.002" 0.05mm



Step 13 - Mount Cut tables

Mount D0015217 Profile Support Pad x 2 as shown

Use 4 off M10 x 25 socket caps to secure

Use straight edge to set pads in line with rollers to 0.002" 0.05 mm or less . Report any discrepancies

