

# R0015255 Mount Assemblies to Main Frame

Instructions to mount pre built assemblies to main frame

 Difficulty **Medium**

 Duration **8 hour(s)**

## Contents

Introduction

Step 1 - Unless otherwise stated

Step 2 - Mount pre built R0015007 Bench Assemble Roller Tables

Step 3 - Mount pre built R0015004 Bench Assemble Gripper

Step 4 - Mount Energy chain angle brackets Lower

Step 5 - Mount short upper chain angle brackets

Step 6 - Fit lower chain trays

Step 7 - Fit Carriage bracket

Step 8 - Attach pre built R0015251 energy chain

Step 9 - Adjust lower trays to suit energy chain

Step 10 - Adjust lower tray height

Step 11 - Quality check

Step 12 - Finalise fixings

Step 13 - Mount Datum flag

Step 14 - Mount R0015096 Bench Assemble Transfer Drive Assembly

Step 15 - Add drive chain.

Comments

## Introduction

### Tools Required

Standard Hex key set

Standard spanner set

300 mm rule

1000mm rule

### Parts Required

D0015291 Datum Flag x 1

D0015717 Energy Chain Angle Bracket Lower x 5

D0015718 Energy Chain Angle Bracket Upper x 5

D0015720 Carriage Bracket x 1

D0015721 Energy Chain Tray Deep Long x 2

D0015722 Energy Chain Tray Shallow Long x 1

D0015861 Energy Chain Cable Support x 1

R0015007 Bench Assemble Roller Tables

R0015096 Bench Assemble Transfer Drive Assembly

R0015251 Bench Assemble X axis components and energy chain

## Step 1 - Unless otherwise stated

Use loctite 243 on all fasteners

Use Loctite 572 on all threaded pneumatic connections

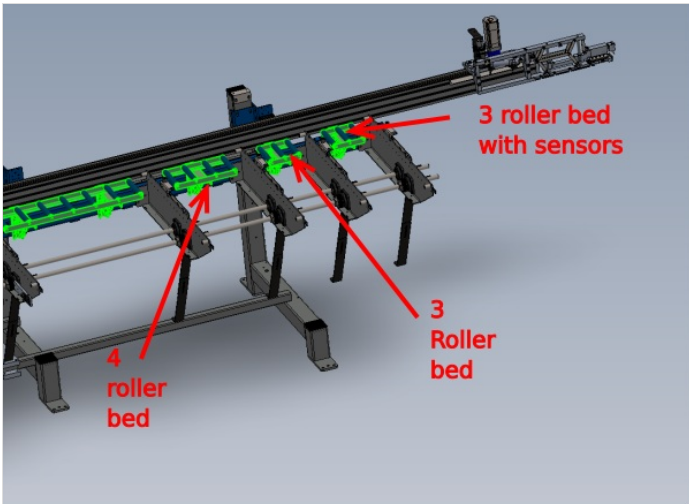
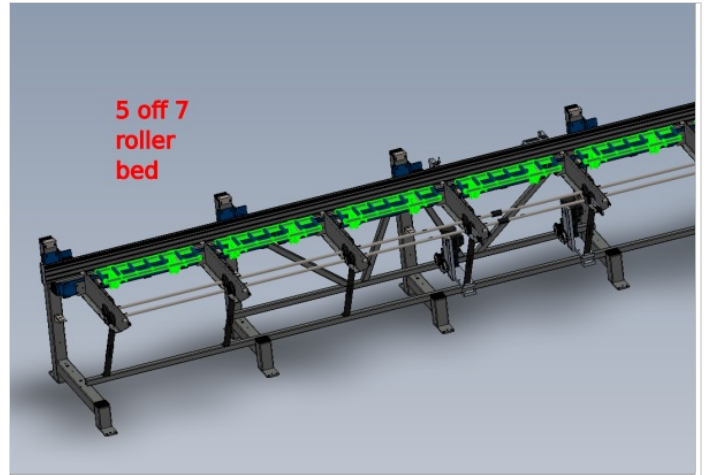
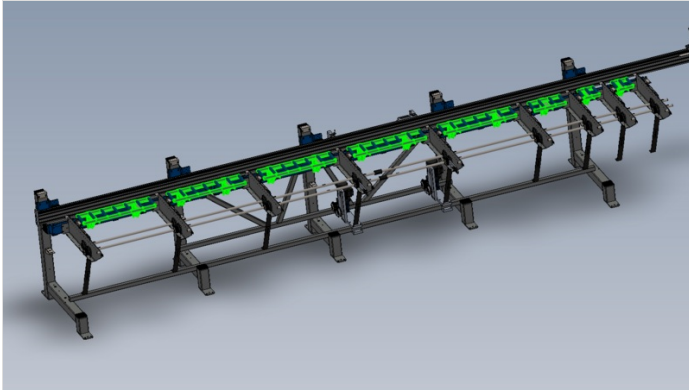
Pen mark all fasteners to show finalised



## Step 2 - Mount pre built R0015007 Bench Assemble Roller Tables

Mount roller beds as indicated , using M8 x 30 socket caps and heavy M8 washers.

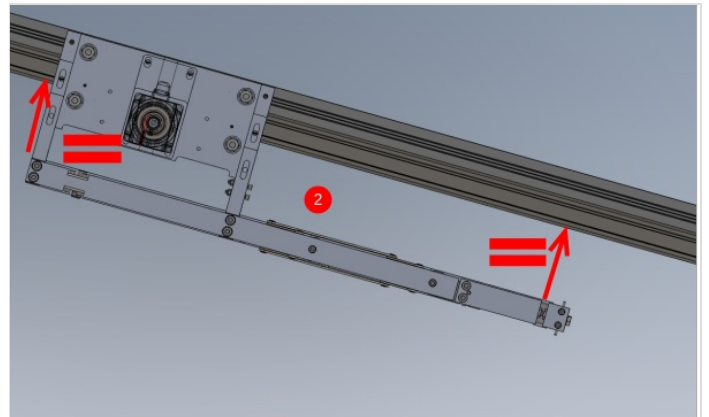
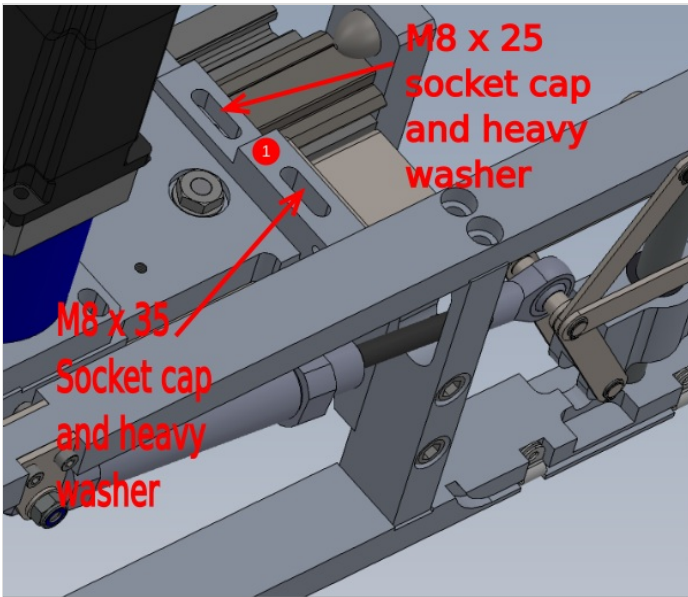
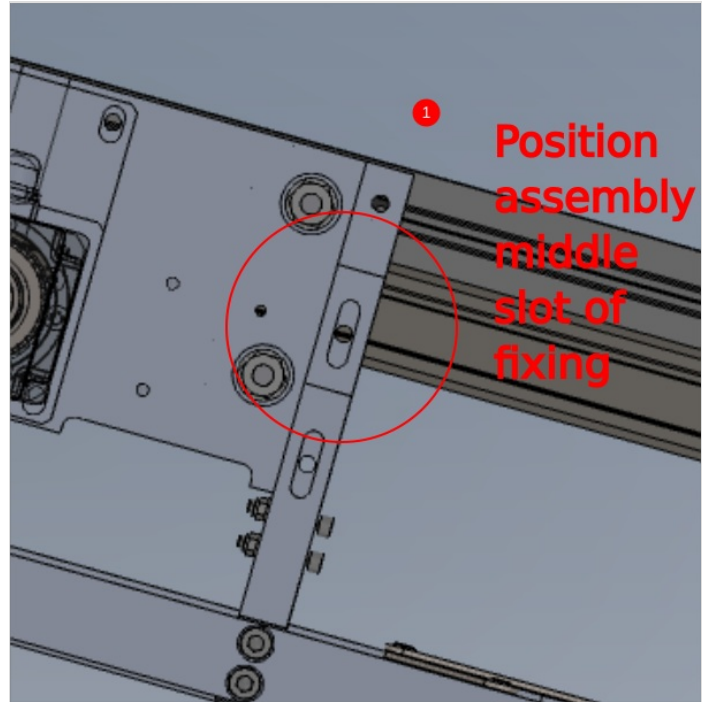
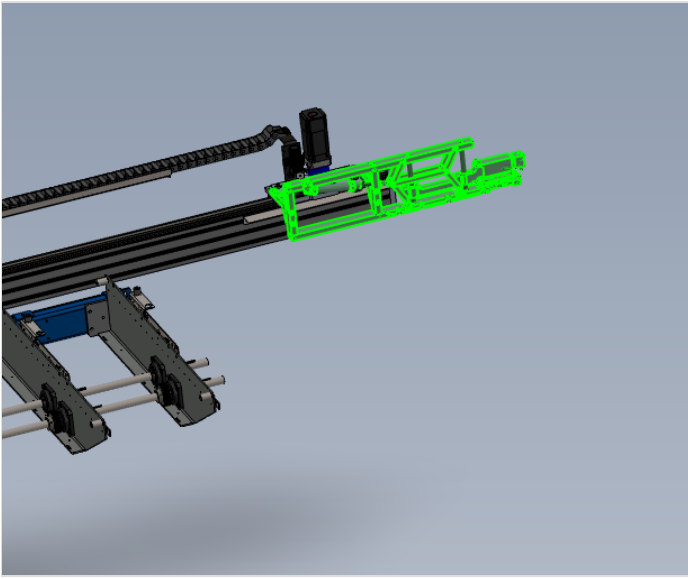
Do not apply adhesive to fasteners and only apply holding tension to fasteners



## Step 3 - Mount pre built R0015004 Bench Assemble Gripper

1 Mount Gripper assembly to carriage using 2 off M8 x 35 socket caps 2 off M8 x 25 socket caps and heavy M8 washers

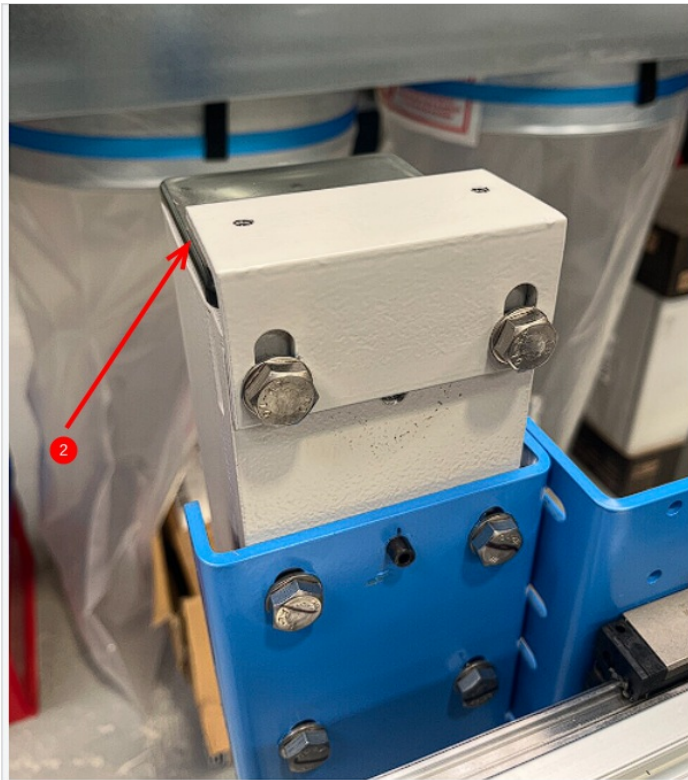
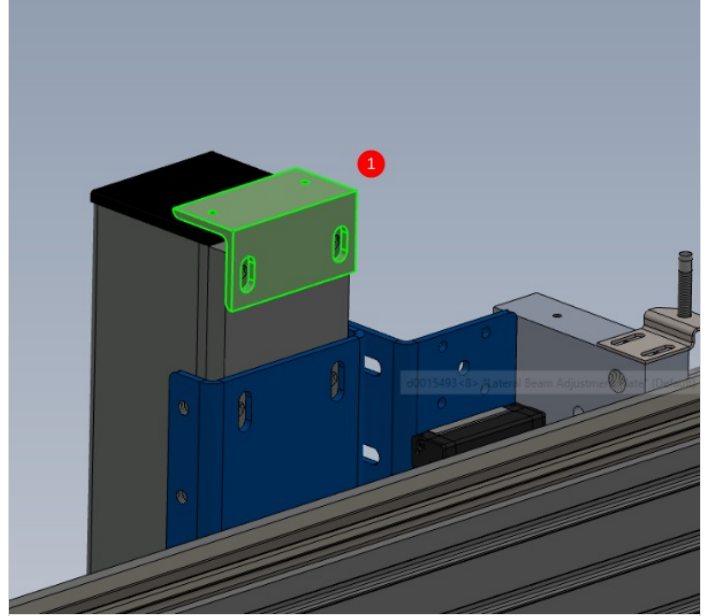
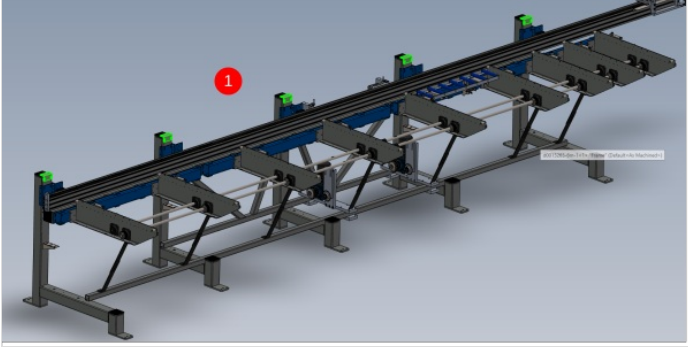
2 Check and adjust parallel to ensure gripper is true to hepcos beam both indicated measurements should be identical



## Step 4 - Mount Energy chain angle brackets Lower

1 Mount 5 off D0015717 Lower mounting angle with 2 off M10 x 25 set bolts and A form washers per bracket . Do not apply adhesive at this point

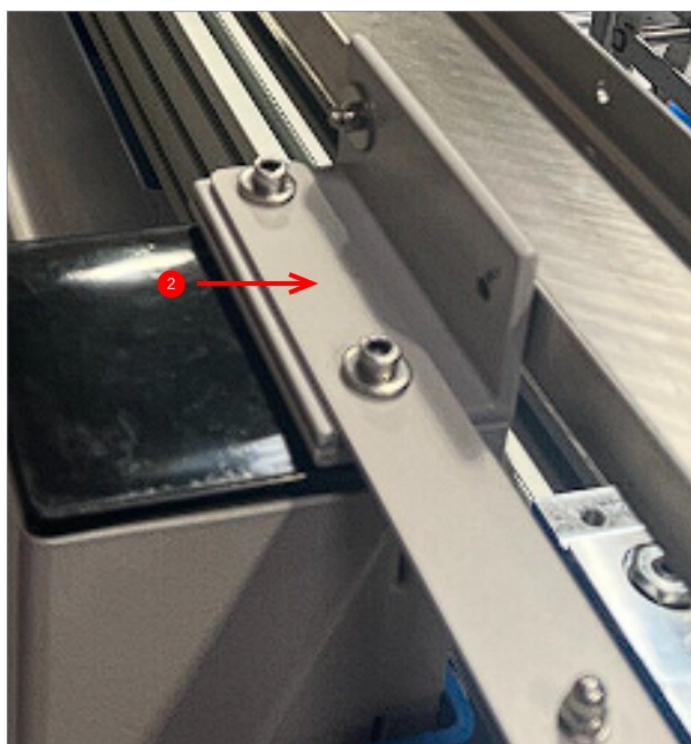
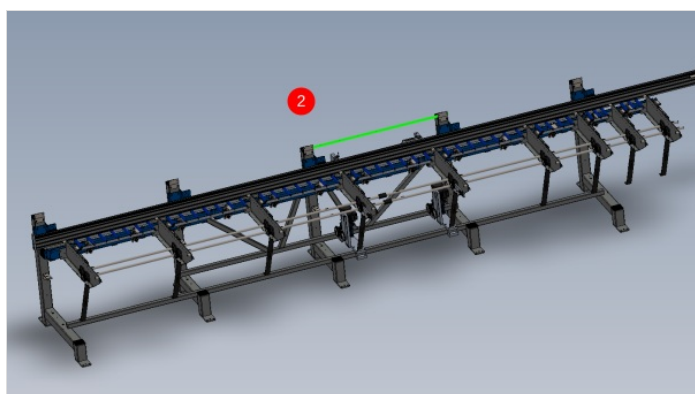
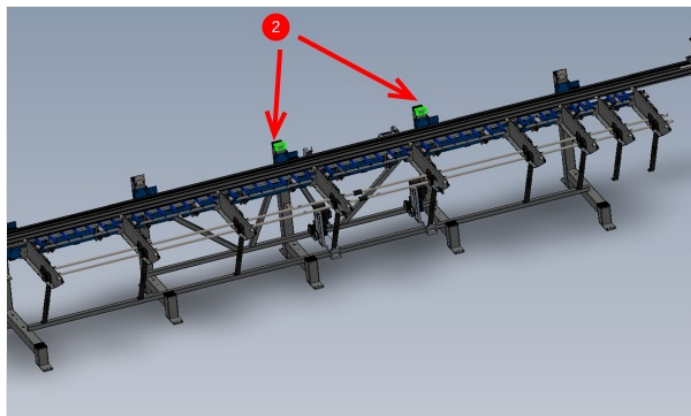
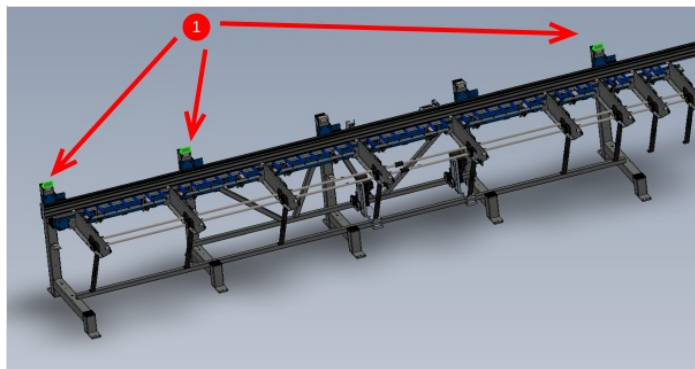
2 Set height to just clear plastic frame cap and set bracket level



## Step 5 - Mount short upper chain angle brackets

1 Mount 3 off D0015718 to indicated point using M6 x 16 socket caps and heavy M6 washers . Set faces flush as with previous step


2 Position 2 off D0015718 at indicated points and use M6 x 20 socket caps and heavy washer to fix in position combining part D0015861 as shown



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## Step 6 - Fit lower chain trays

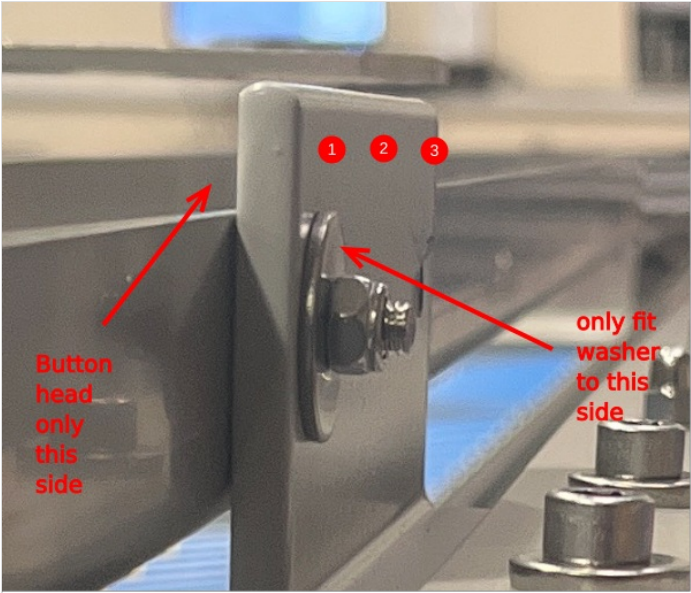
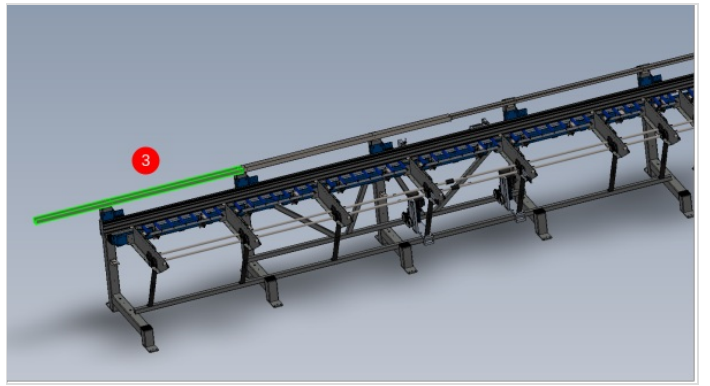
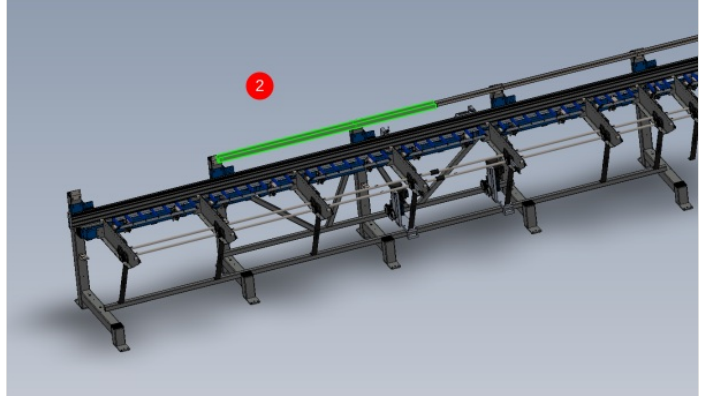
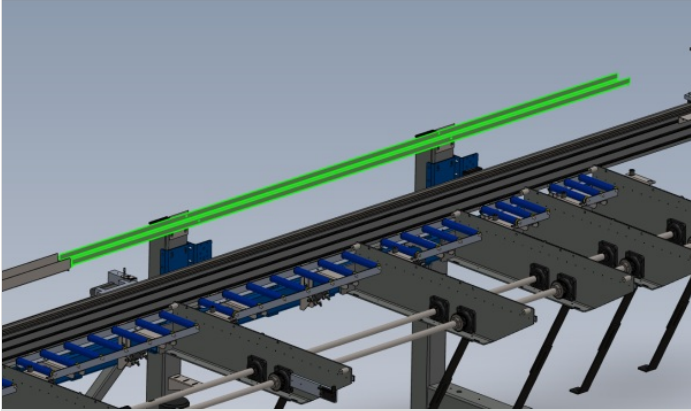
Lightly fix these parts, as adjustment will be required later

 ...Do not fit washers under the heads of button heads on all fitted energy chain trays

1 Fit D0015722 to indicated point. Use M5 x 16 button hex bolt, M5 penny washer and M5 nyloc nut .

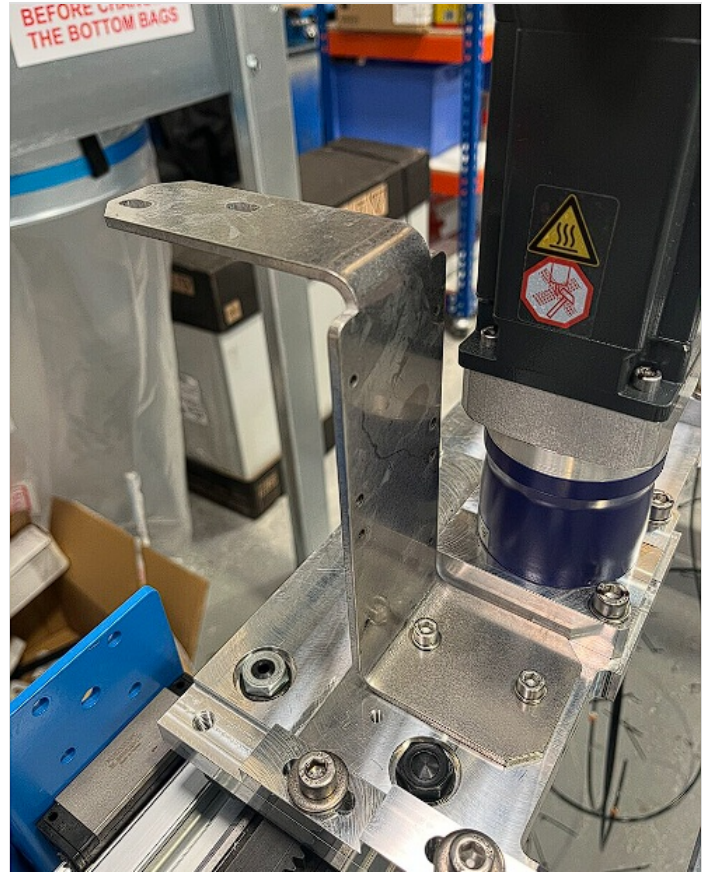
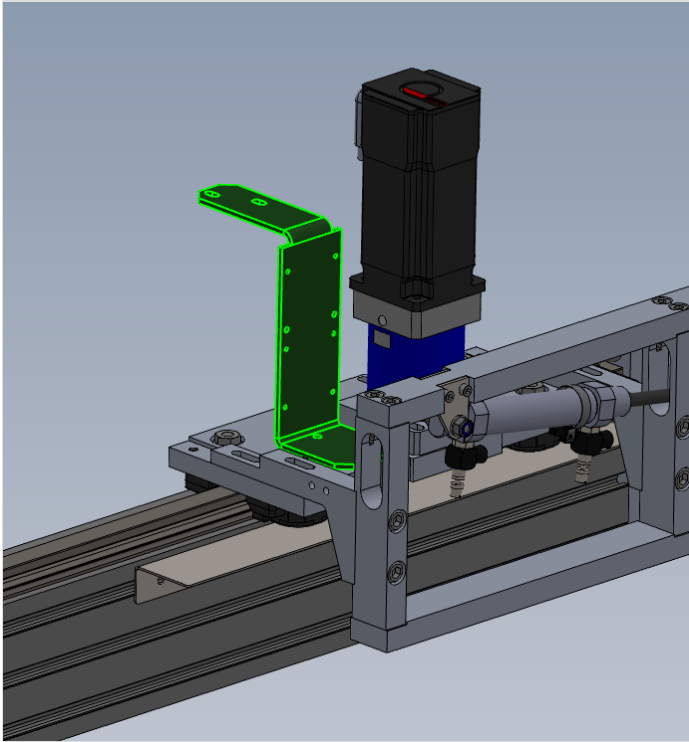
2 Fit D0015721 at indicated position with same fixings as above

3 Fit D0015721 to indicated point with same fixings as above



## Step 7 - Fit Carriage bracket

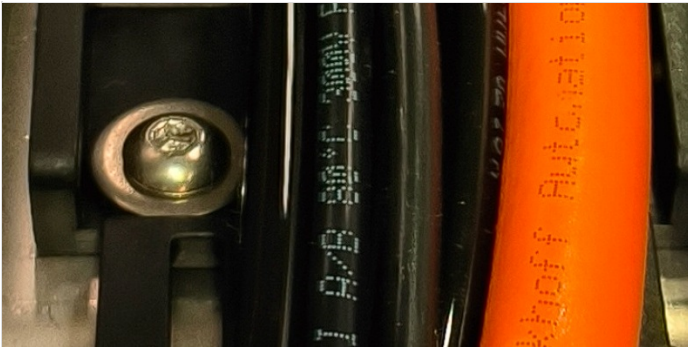
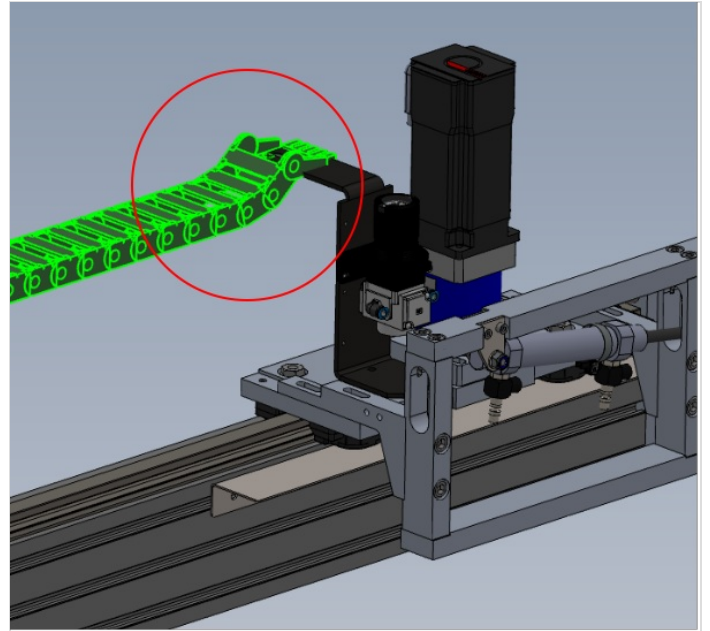
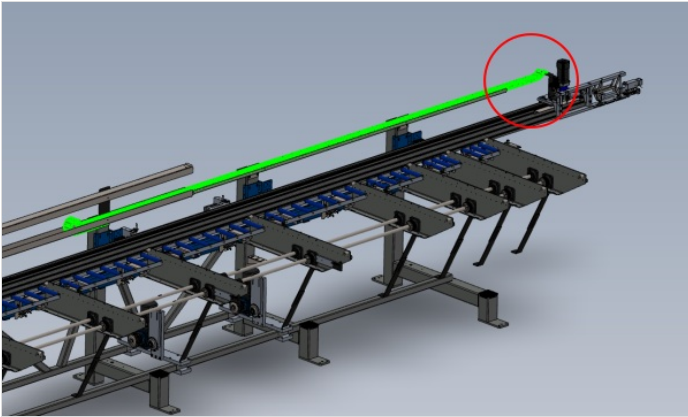
Fit D0015720 carriage bracket as shown using M6 x 12 socket caps and A form washers



## Step 8 - Attach pre built R0015251 energy chain

Fit pre built energy chain from assembly R0015251 and attach using M5 x 16 button heads, medium washers and M5 nyloc nuts as shown

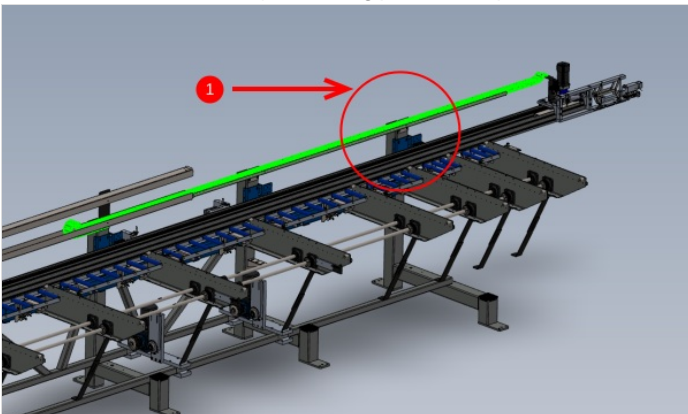
- ⚠ ...Ensure reversed links are fitted to the gripper assembly connection end Ensure energy chain brackets are fixed so the energy chain runs parallel to the trays



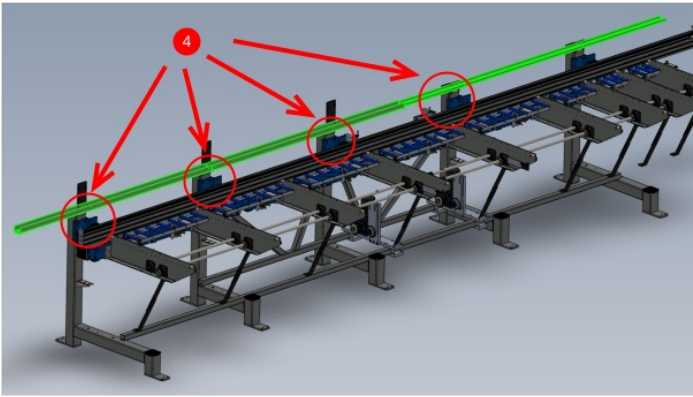
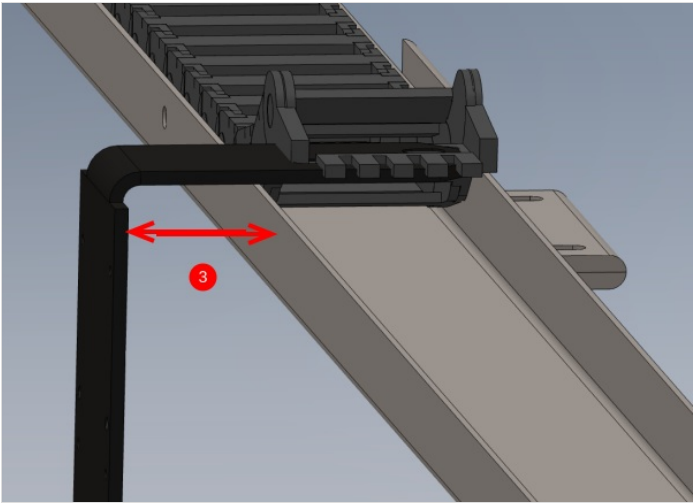
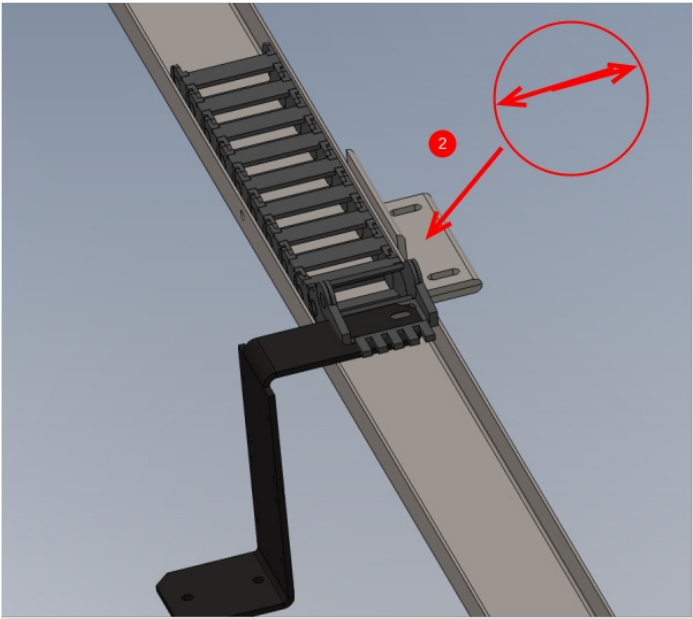
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## Step 9 - Adjust lower trays to suit energy chain

- 1 Move gripper with energy chain attached to point indicated
- 2 Adjust bracket in indicated direction so that energy chain sits central in the tray
- 3 Measure indicated distance S
- 4 Set the next 4 lower tray mounting points to replicate this measurement using the same method of adjustment with the angled bracket



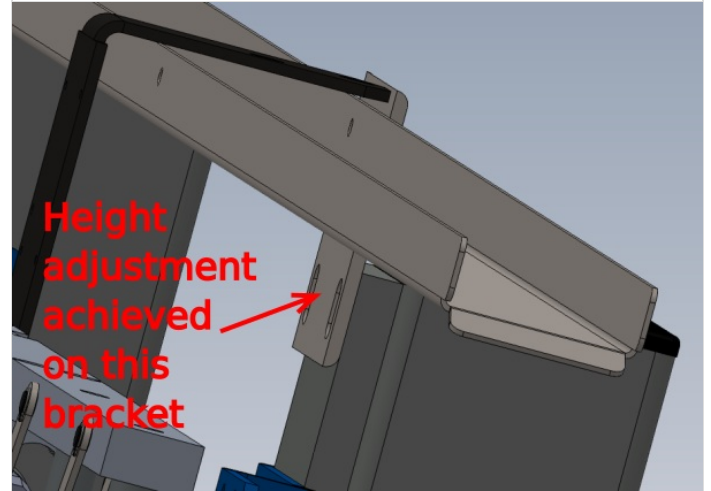
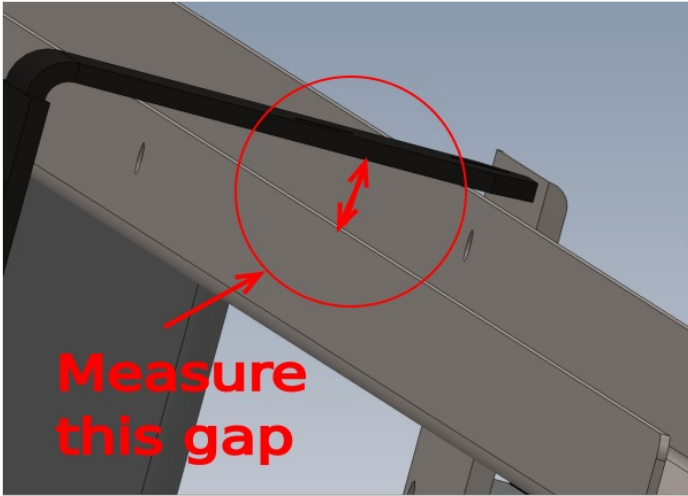




## Step 10 - Adjust lower tray height

Using the first point used to set the brackets, measure the gap indicated and replicate this measurement on the other 4 points. This is adjusted by moving the indicated bracket up or down.

**i** ...If enough adjustment isn't available on remaining positions, first position can be moved up and new measurement taken



## Step 11 - Quality check

Move Gripper carriage along the complete length of the hepco beam, and monitor the energy chain.

Check that there is no sideways pressure on the chain from misalignment

Check that no snags occur on fixings when energy chain is travelling



## Step 12 - Finalise fixings

Now aligned, ensure all fixings used to assemble the energy trays and brackets have adhesive applied and final tension added to fasteners and pen marked




## Step 13 - Mount Datum flag

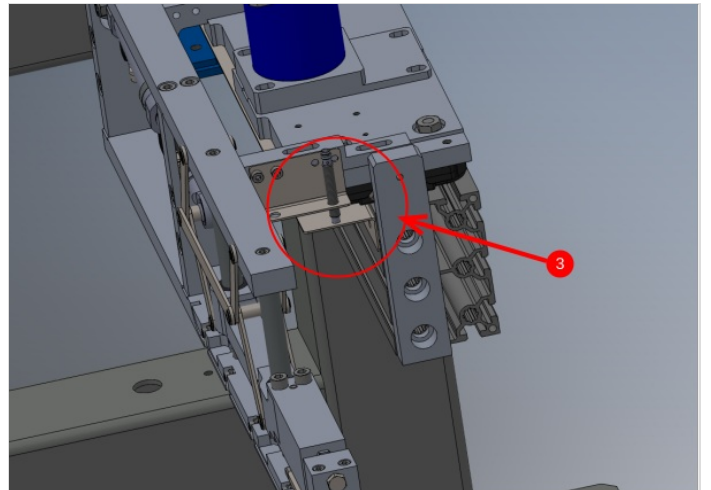
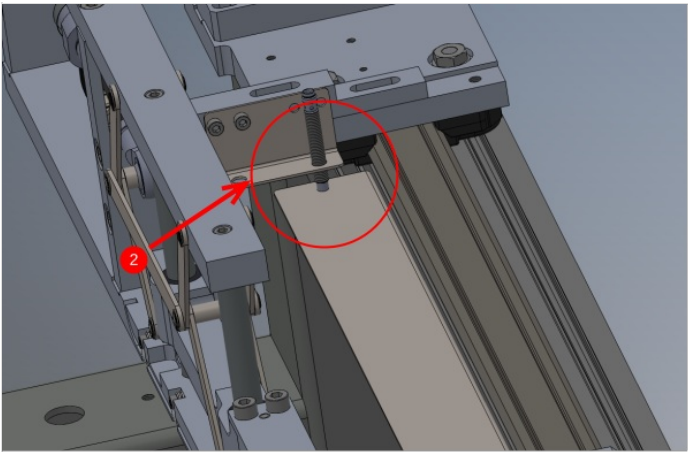
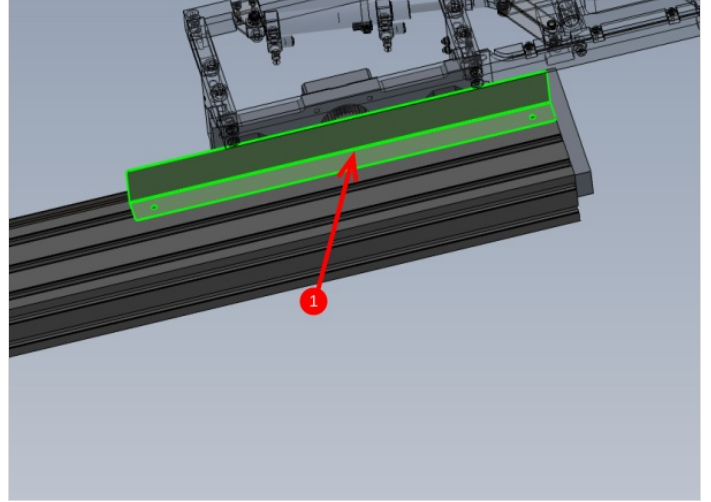
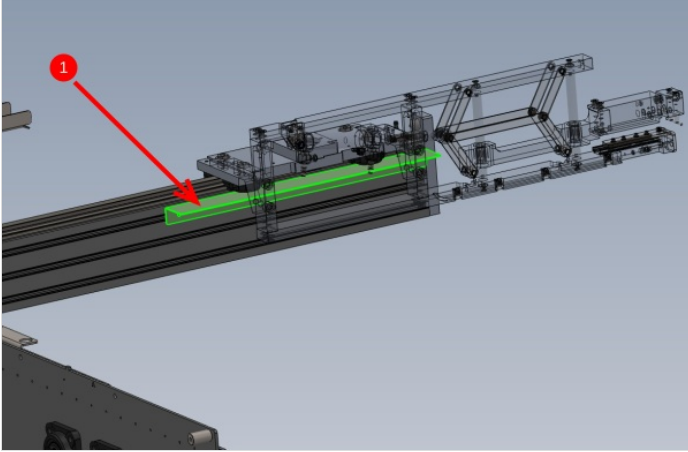
1 Mount D0015291 Datum Flag to hepco beam in position shown using M6 x 12 socket caps , A form washers and D nuts ( size type required )

2 Adjust Datum sensor at point indicated to be less than 1mm above datum flag face . Use thread and nuts on sensor to adjust height

3 Move gripper to indicated point and adjust datum flag up or down to replicate gap set on previous side

 ...Do not adjust sensor


4 Move gripper back to previous point and check sensor gap is still acceptable



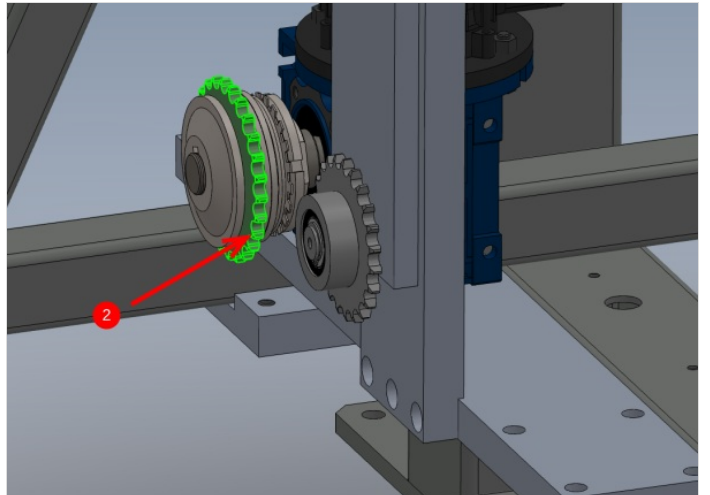
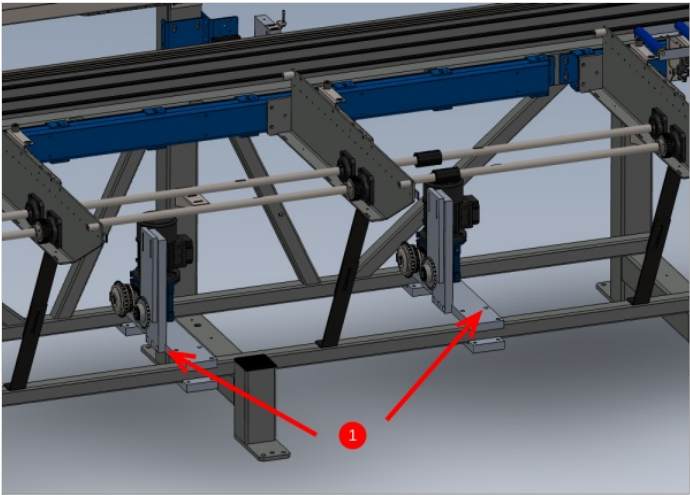
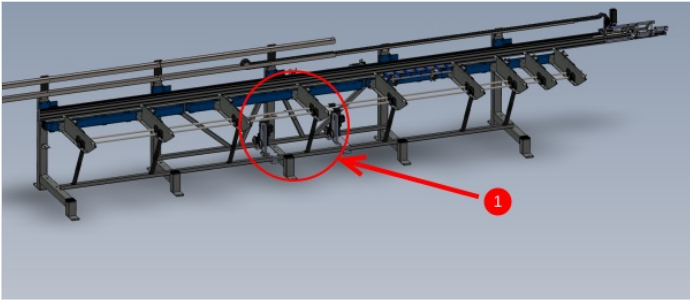
## Step 14 - Mount R0015096 Bench Assemble Transfer Drive Assembly

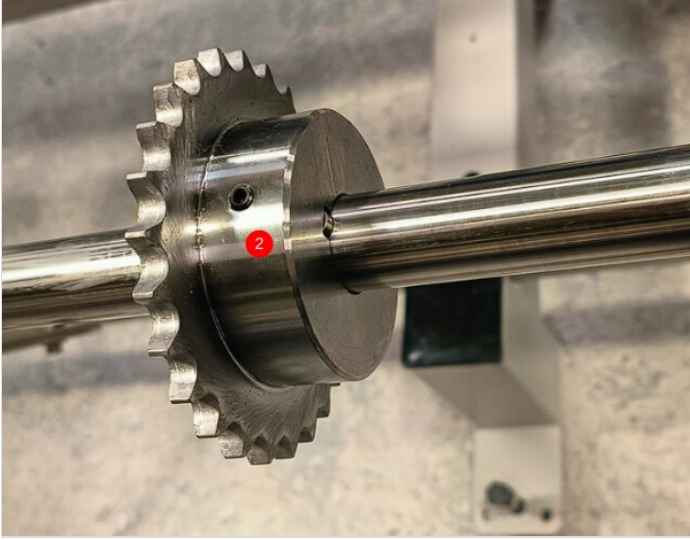
1 Position 2 off drive assemblies in the positions indicated using M12 x 100 set bolts and M12 A form washers

2 Use a 1000mm steel rule to align indicated sprocket with drive sprocket on drive shaft indicated

 ...Sprocket can be moved slightly along shaft but ensure key is always fully engaged into sprocket keyway. Motor assembly can be moved to aid alignment

Repeat for both motor assemblies





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## Step 15 - Add drive chain.

1 Fit drive chain to shaft sprocket and motor assembly.

2 Adjust tensioner to apply tension to chain

Repeat for both motor assemblies

