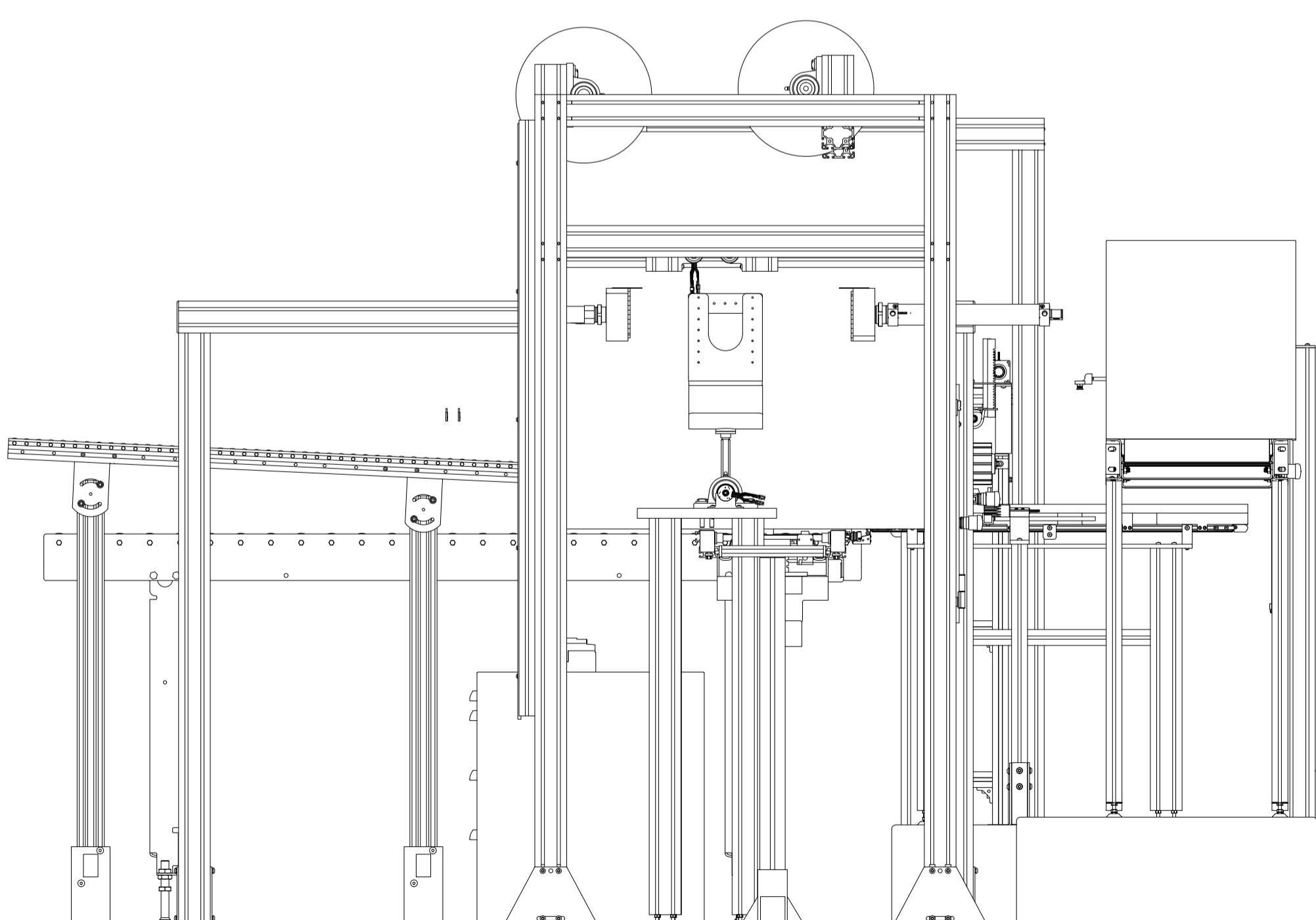
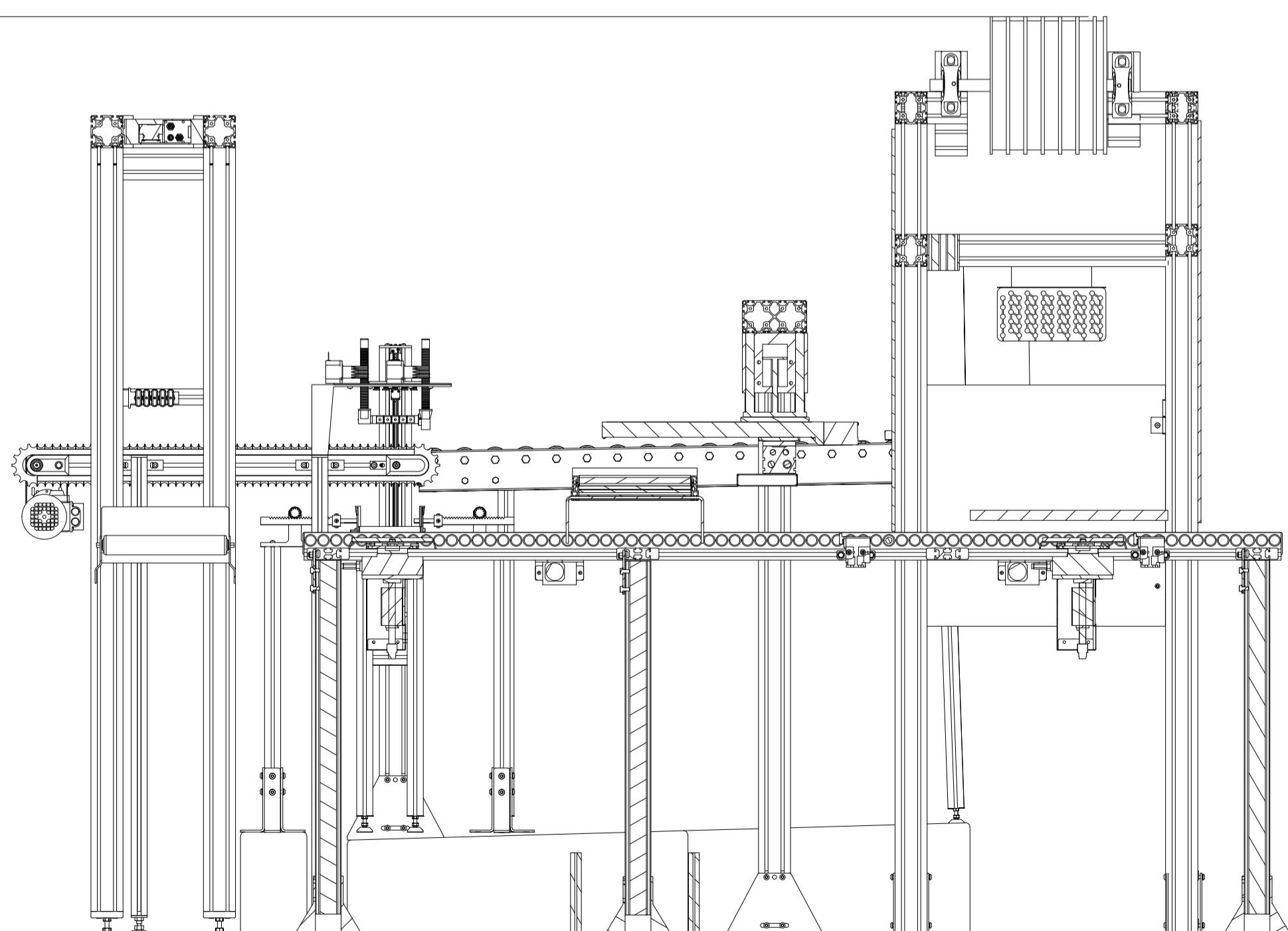


PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	0_01	Battery Extraction
2	1	0_02	Battery Insertion
3	1	0_03	Top Carrier Application
4	1	0_04	Copper Strip Application
5	1	0_05	ERT Conveyor



SectionB-B (1:12.5)

Note: Protective panels around Copper Strip Application removed for Drawing 61\_0 clarity.

6 5 4 3 2 1

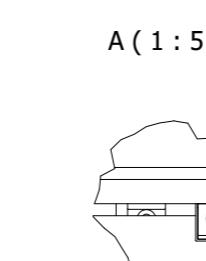
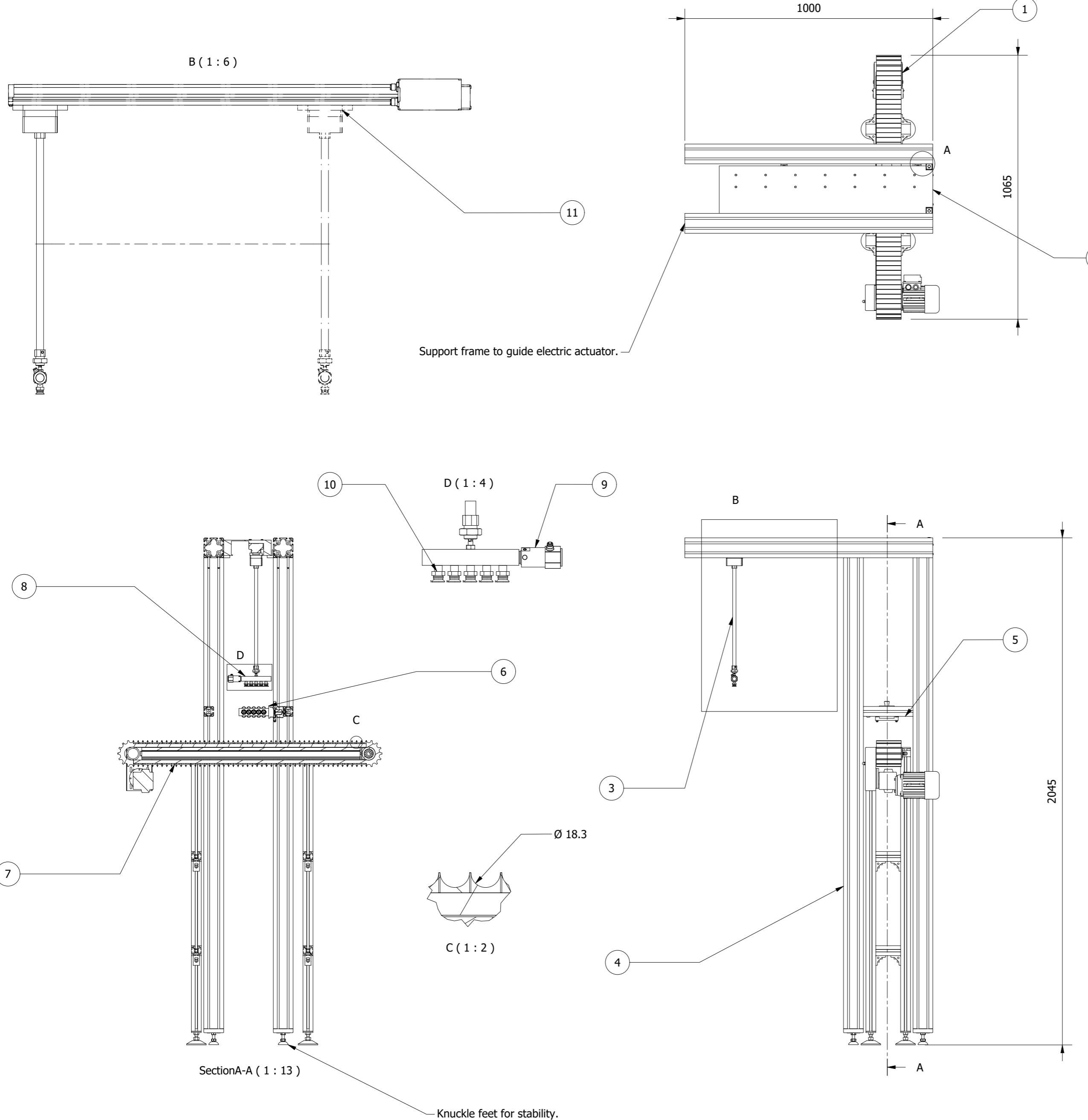
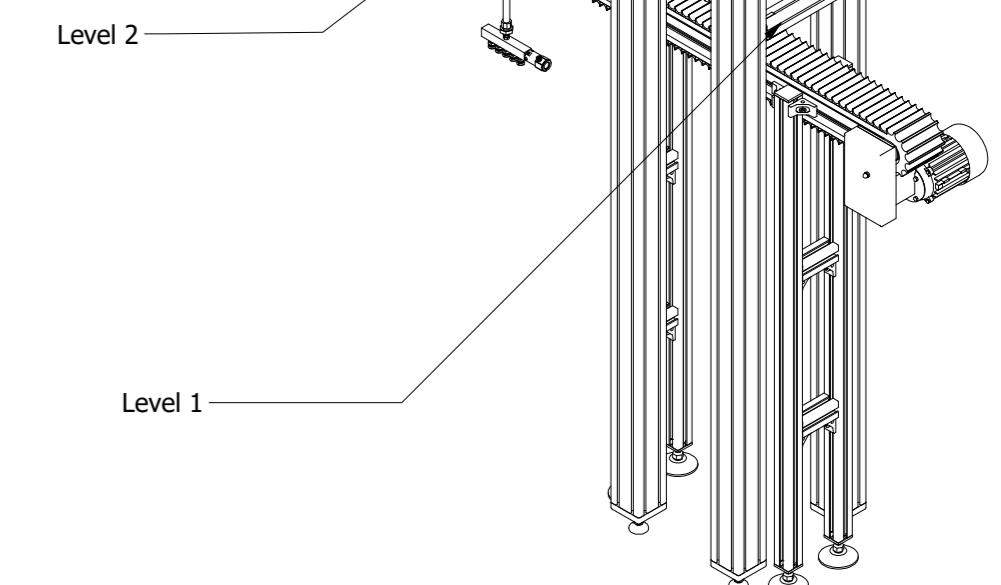
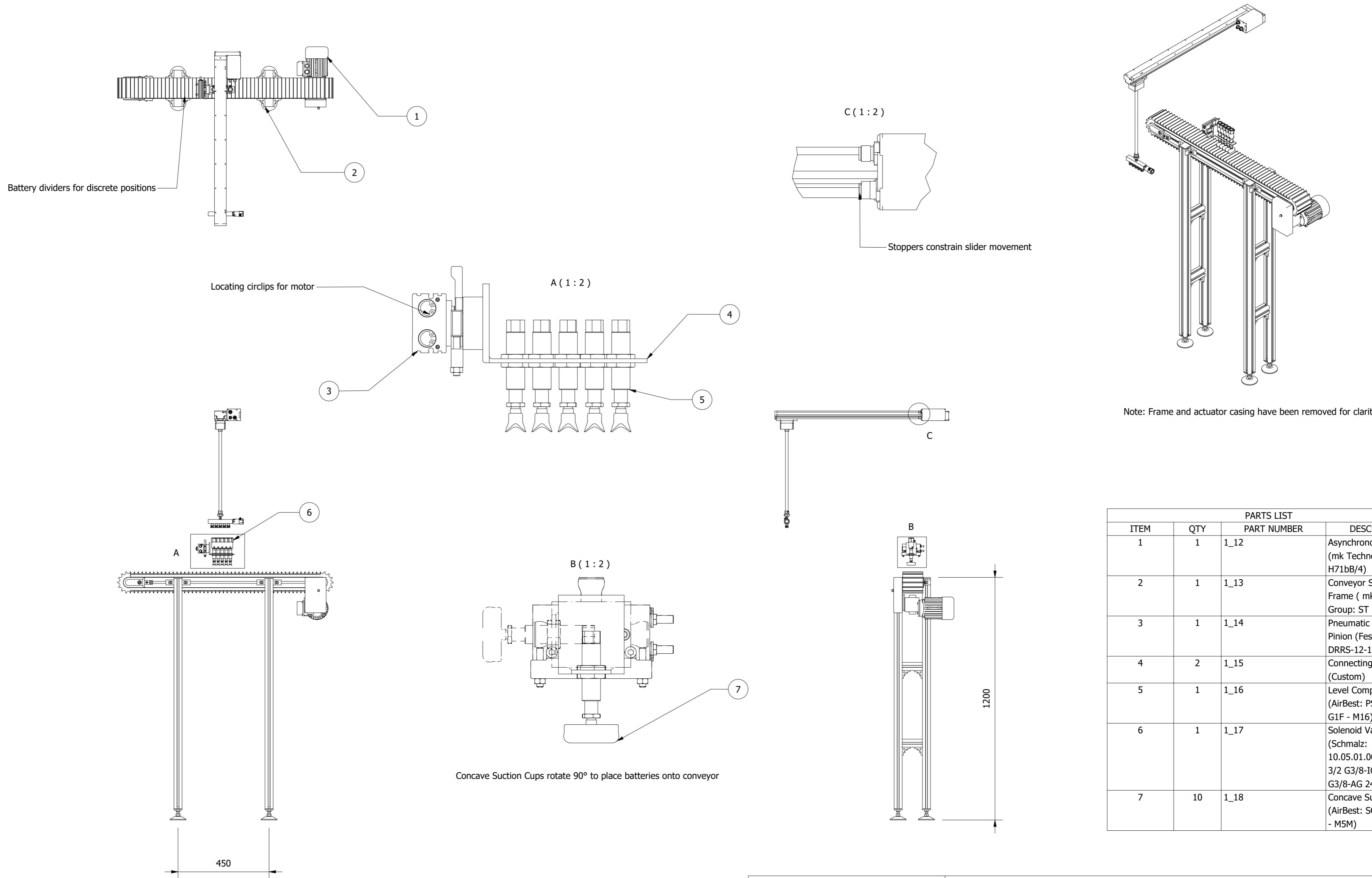


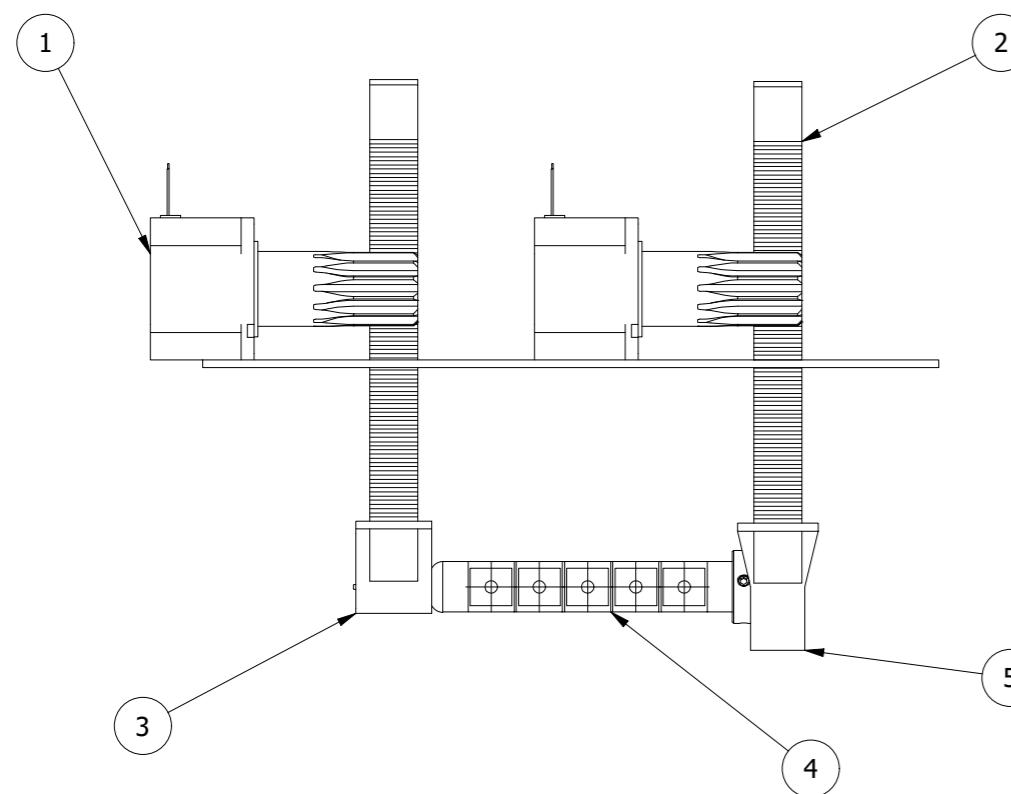
Table top fastener secures actuator casing in place.



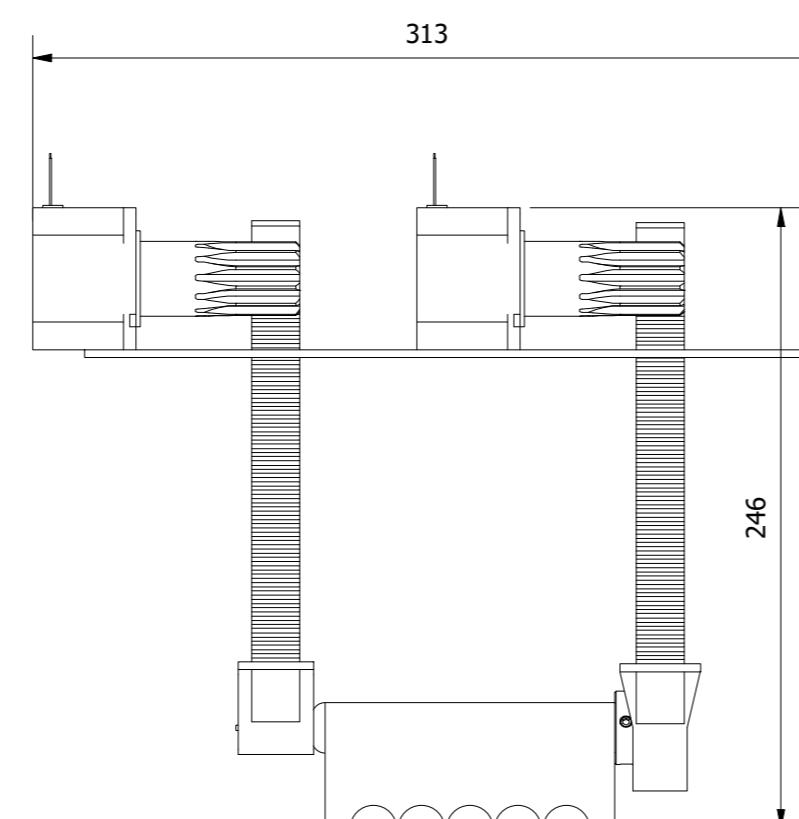
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	1_01	Battery Conveyor (mk Technology Group: GUF-P 2000 AG/1000/100)
2	1	1_02	Actuator Casing (Custom)
3	1	1_03	Pneumatic Linear Actuator (SMC: 25A-C85Y12-367)
4	6	1_04	Support Frame (item24: 80 x80x 1900 aluminium extrusions)
5	3	1_05	Support Frame (item24: 40 x 40 x 200 aluminium extrusions)
6	1	1_06	Battery Rotation (SMC: EQFS25LHH-700-B6(0_0))
7	1	1_07	Cleated Belt (Custom)
8	1	1_08	Vacuum Filter (Custom)
9	1	1_09	Solenoid valve (Schmalz: 10.05.01.000172 IV 3 3/2 G3/8-IG G3/8-AG 24V-DC)
10	5	1_10	Suction cups (Schmalz: PFYN 15 NBR-55 G1/8-AG)
11	1	1_11	Electric slider (SMC: EQFS 25 LHH-700-B6)



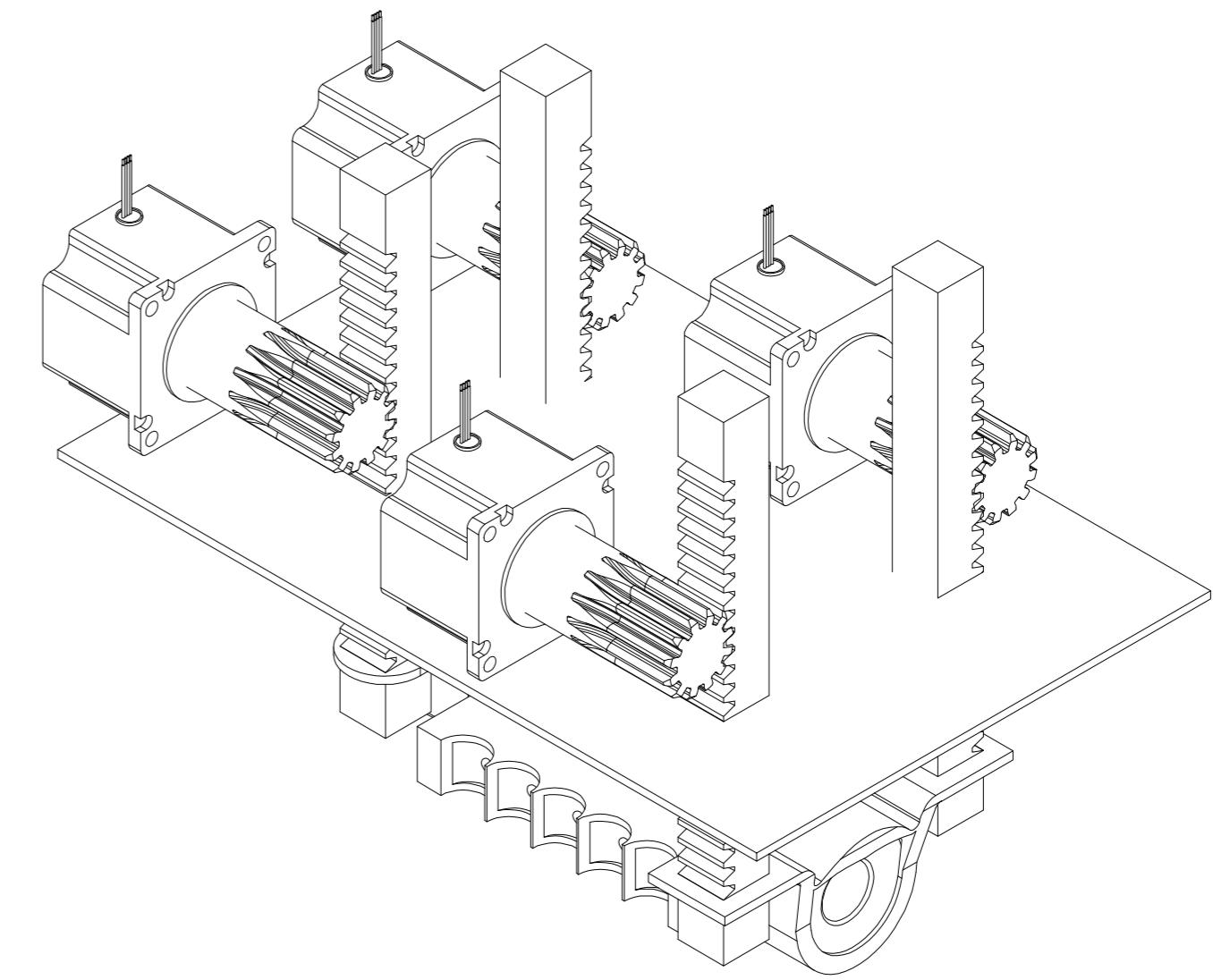
6 5 4 3 2 1



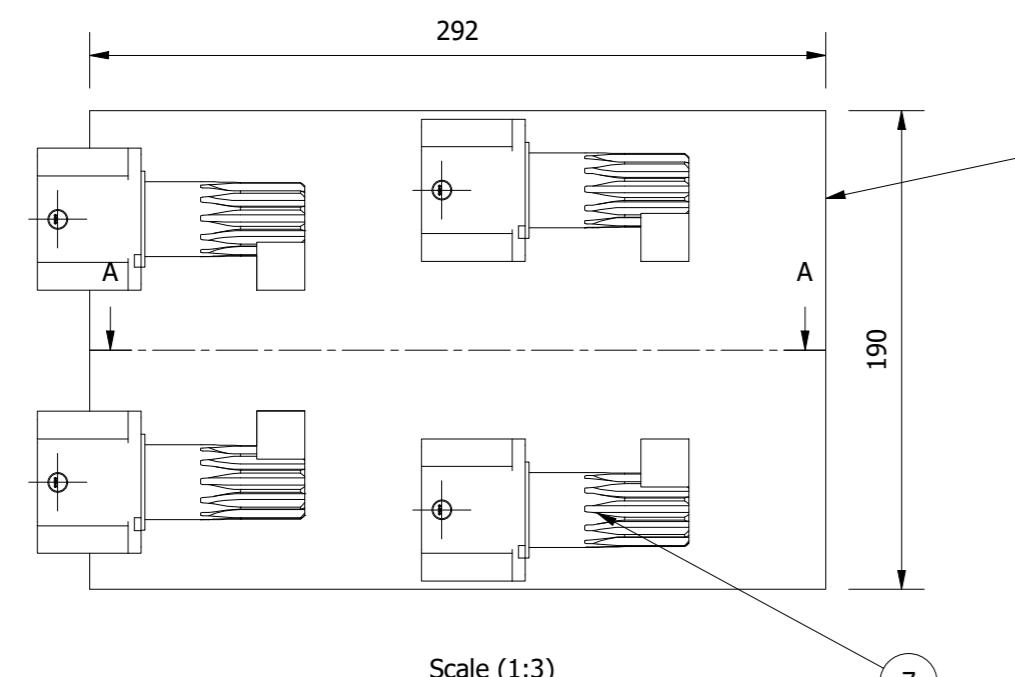
Scale (1:3)  
Front view of subassembly in position for batteries to be extracted



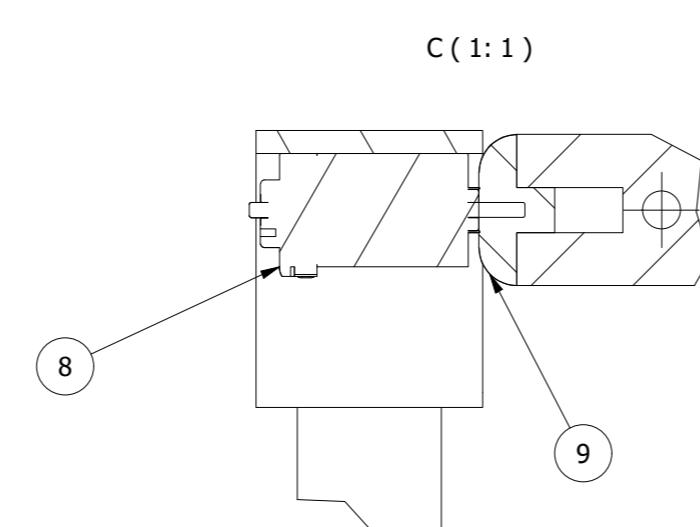
Scale (1:3)  
Subassembly in position for batteries to be grabbed



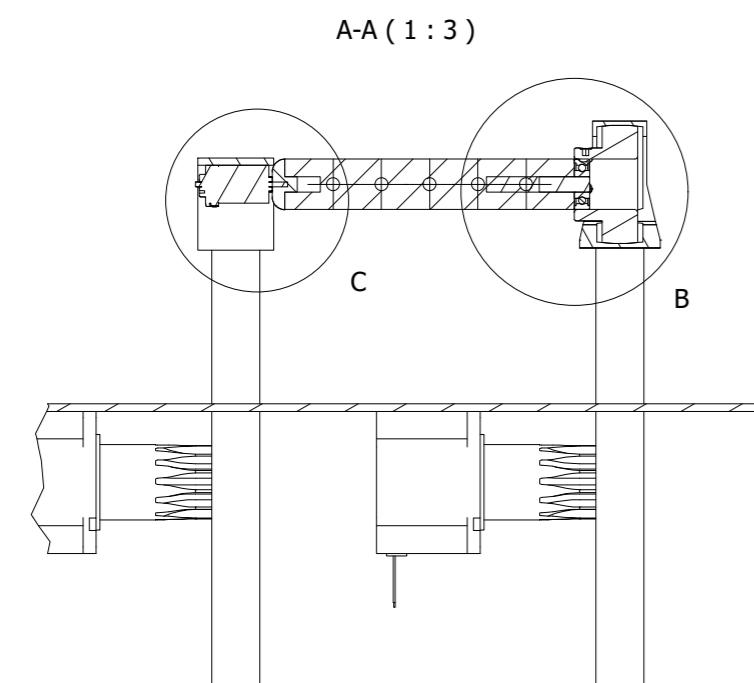
Scale 1:2  
Isometric view of sub-assembly



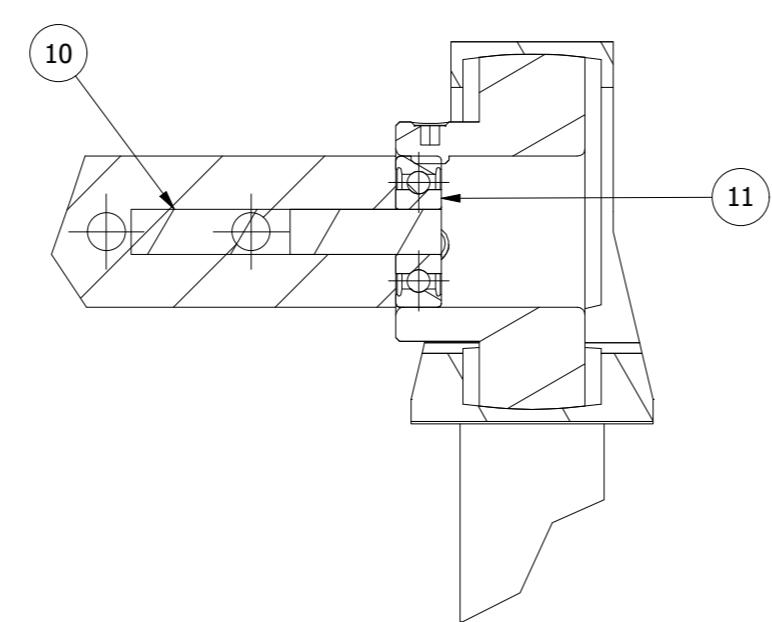
Scale (1:3)  
Plan view of subassembly



C (1:1)



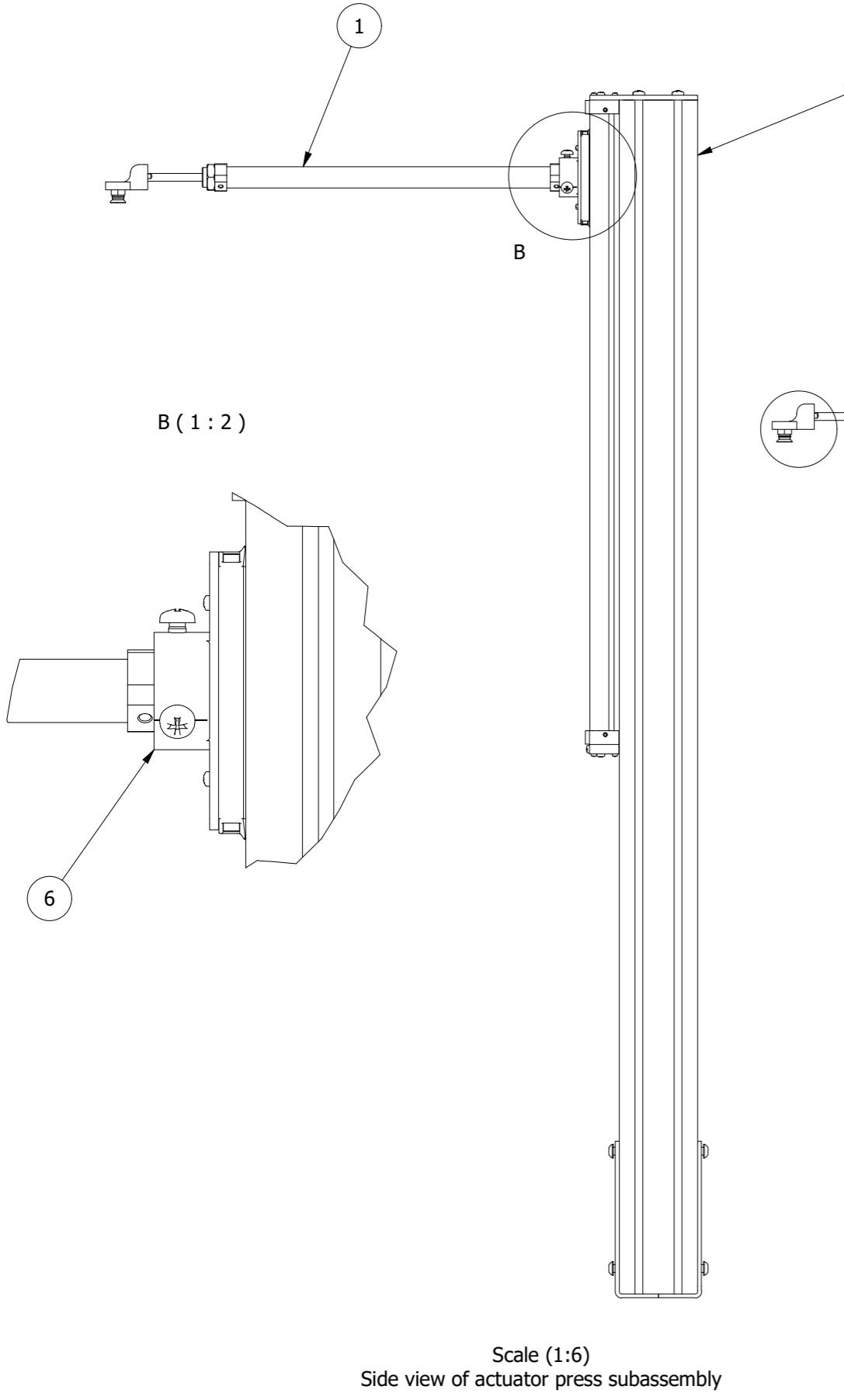
A-A (1 : 3)



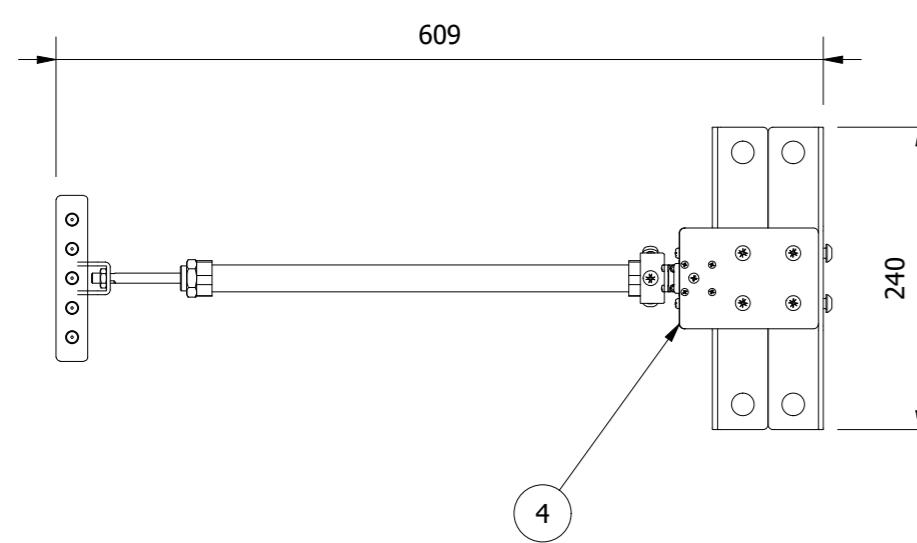
B (1:1)

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	2_01	ECXSP19L BL KL B STEC 36V motor to rotate pinion
2	4	2_02	RS182-7860 rack to move assembly vertically
3	1	2_03	Housing for motor (custom)
4	1	2_04	Assembly for suction of batteries from conveyor (custom)
5	1	2_05	NP20-RHP bearing housing
6	1	2_06	Base plate for assembly (custom)
7	4	2_07	RS182-7801 pinion gear for assembly
8	1	2_08	DCX10L EB SL 4.5V motor for rotate suction assembly
9	1	2_09	End cap of suction assembly (custom)
10	1	2_10	Rod to connect suction assembly to bearing (custom)
11	1	2_11	626-SKF bearing

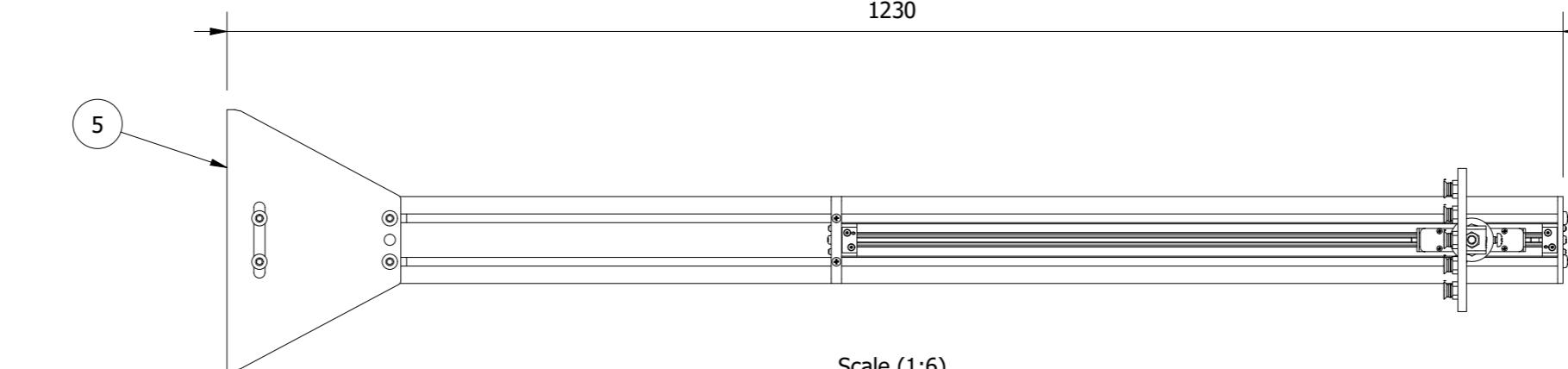
6 5 4 3 2 1



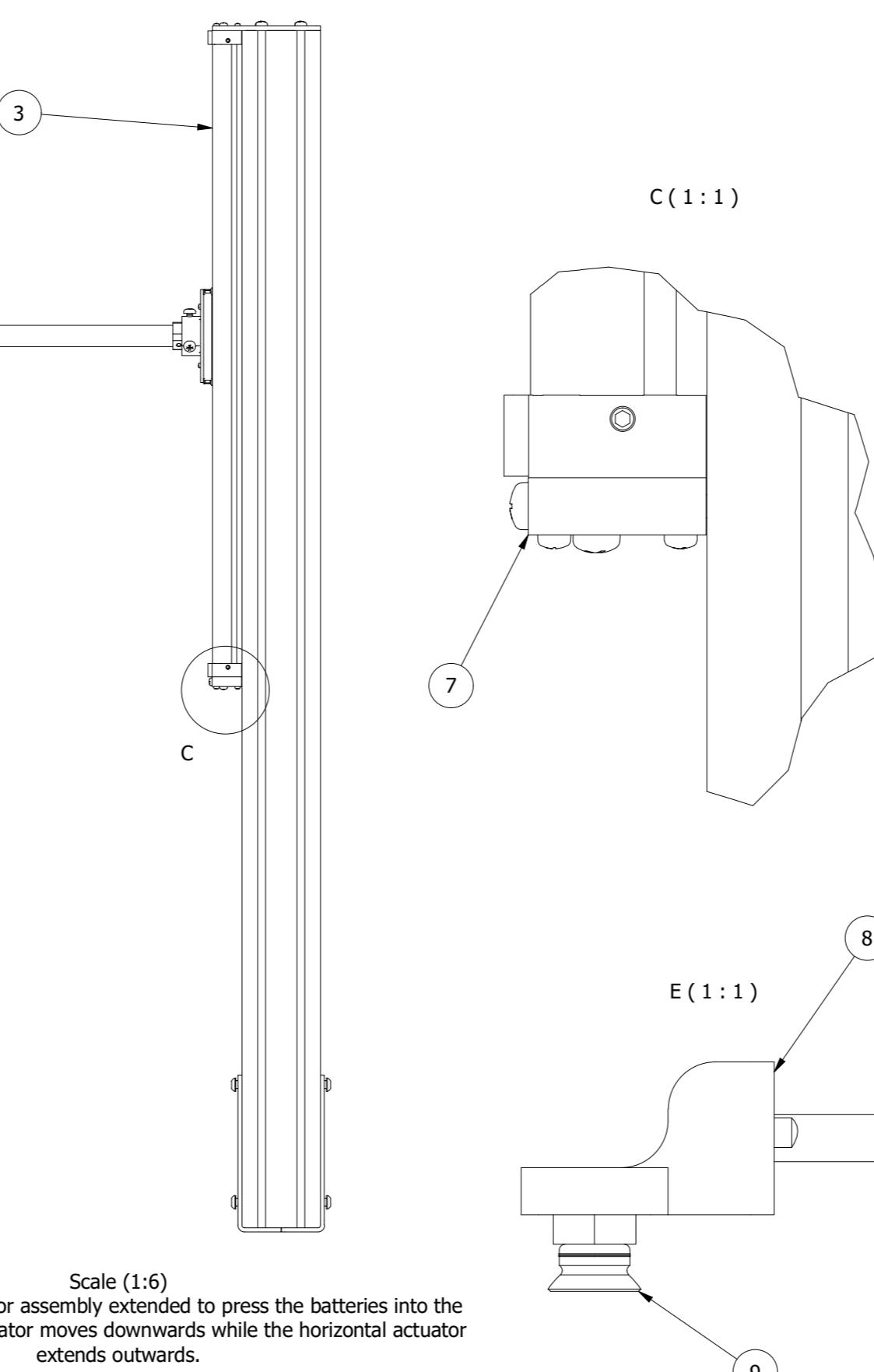
Scale (1:6)  
Side view of actuator press subassembly



Scale (1:6)  
Plan view of actuator press subassembly

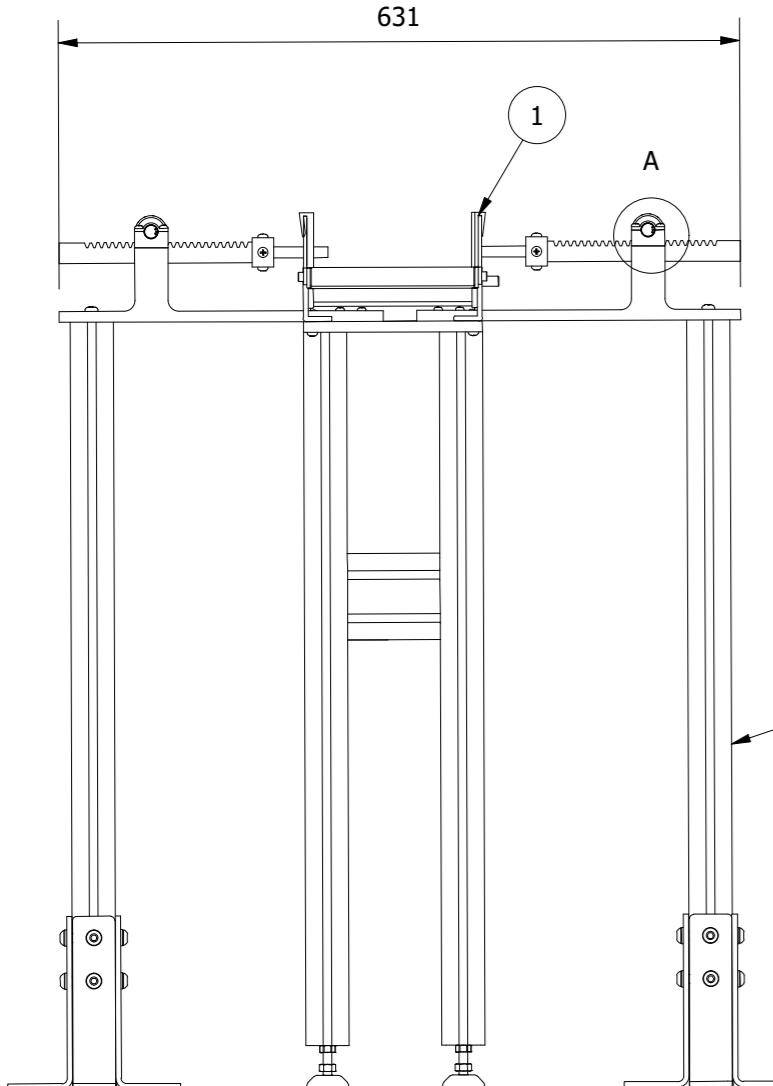


Scale (1:6)  
Front view of actuator press subassembly

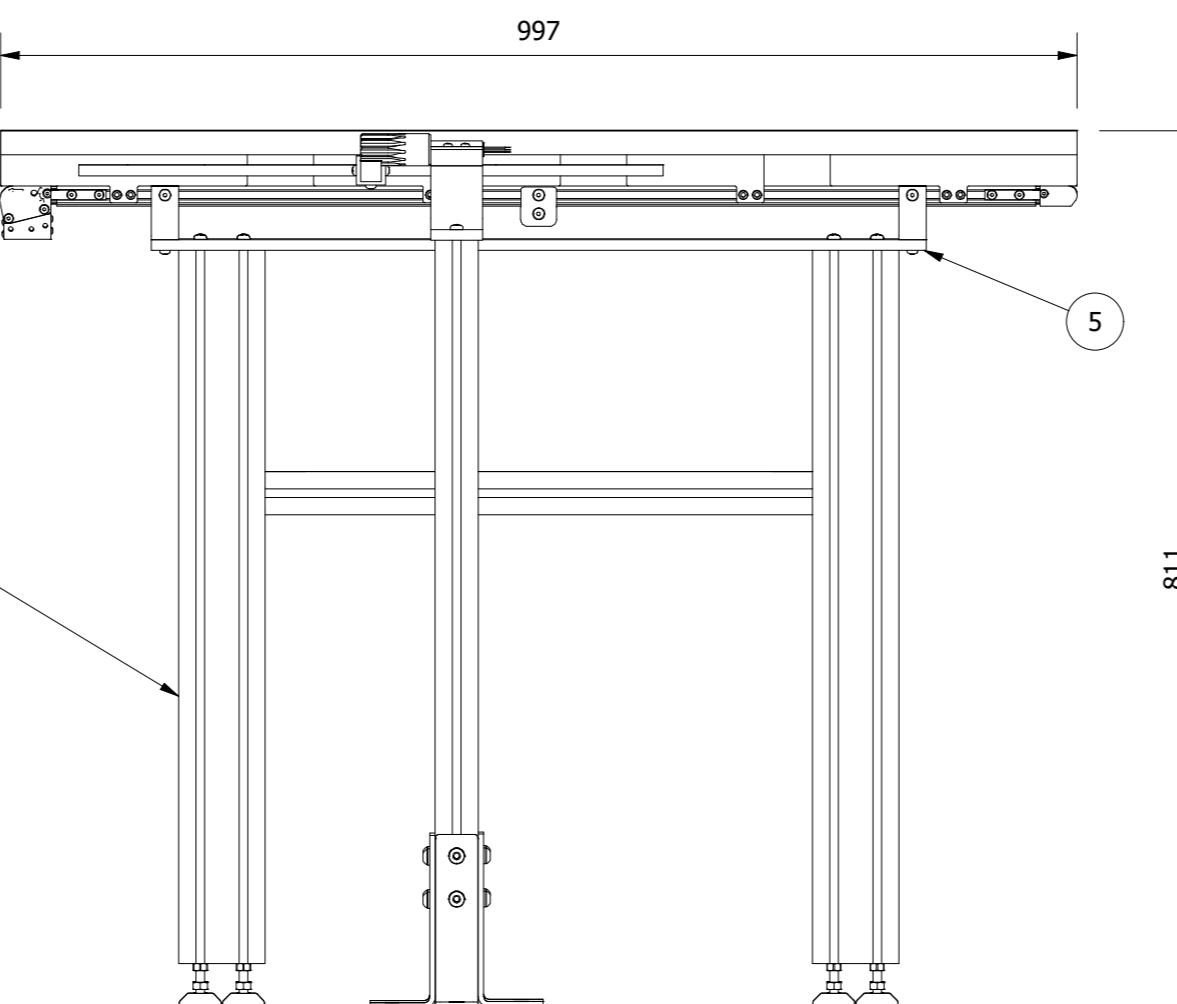


Scale (1:6)  
Isometric view of actuator press subassembly

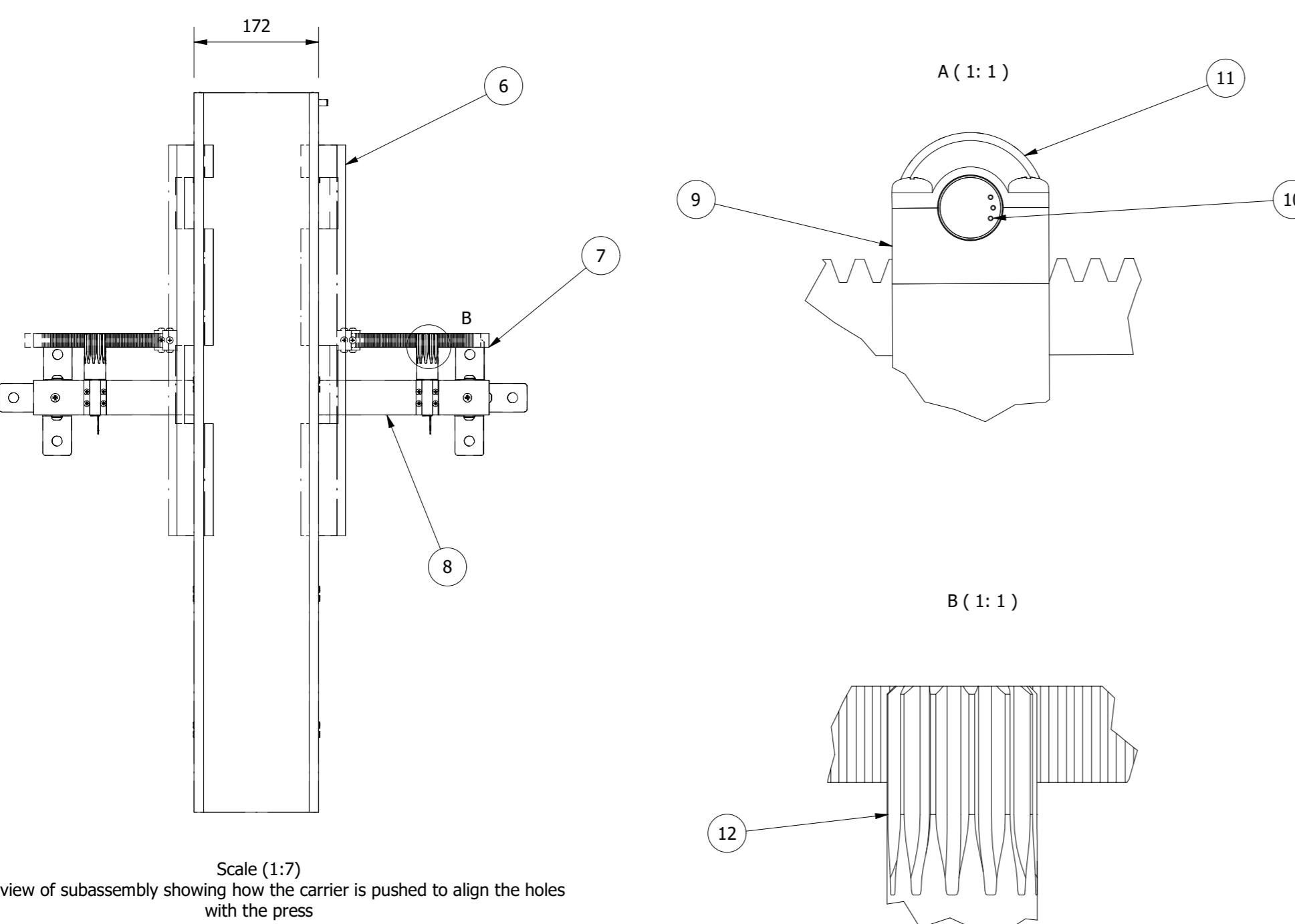
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	2_12	SMCCM3B20-200 linear actuator
2	1	2_13	0.0452.35 from item 24 as a support frame
3	1	2_14	MotionControlProducts3600-4 222 tolomatic rodless linear actuator
4	1	2_15	Support for top of subassembly (custom)
5	1	2_16	0.0492.47 from item 24 to provide a connection to the floor
6	1	2_17	Support for extending actuator (custom)
7	1	2_18	Lower support for actuator (custom)
8	1	2_19	Housing for suction cups (custom)
9	1	2_20	PFY15 NBR-ESD-55 G1/8-AG Schmalz suction cup to lift/place batteries



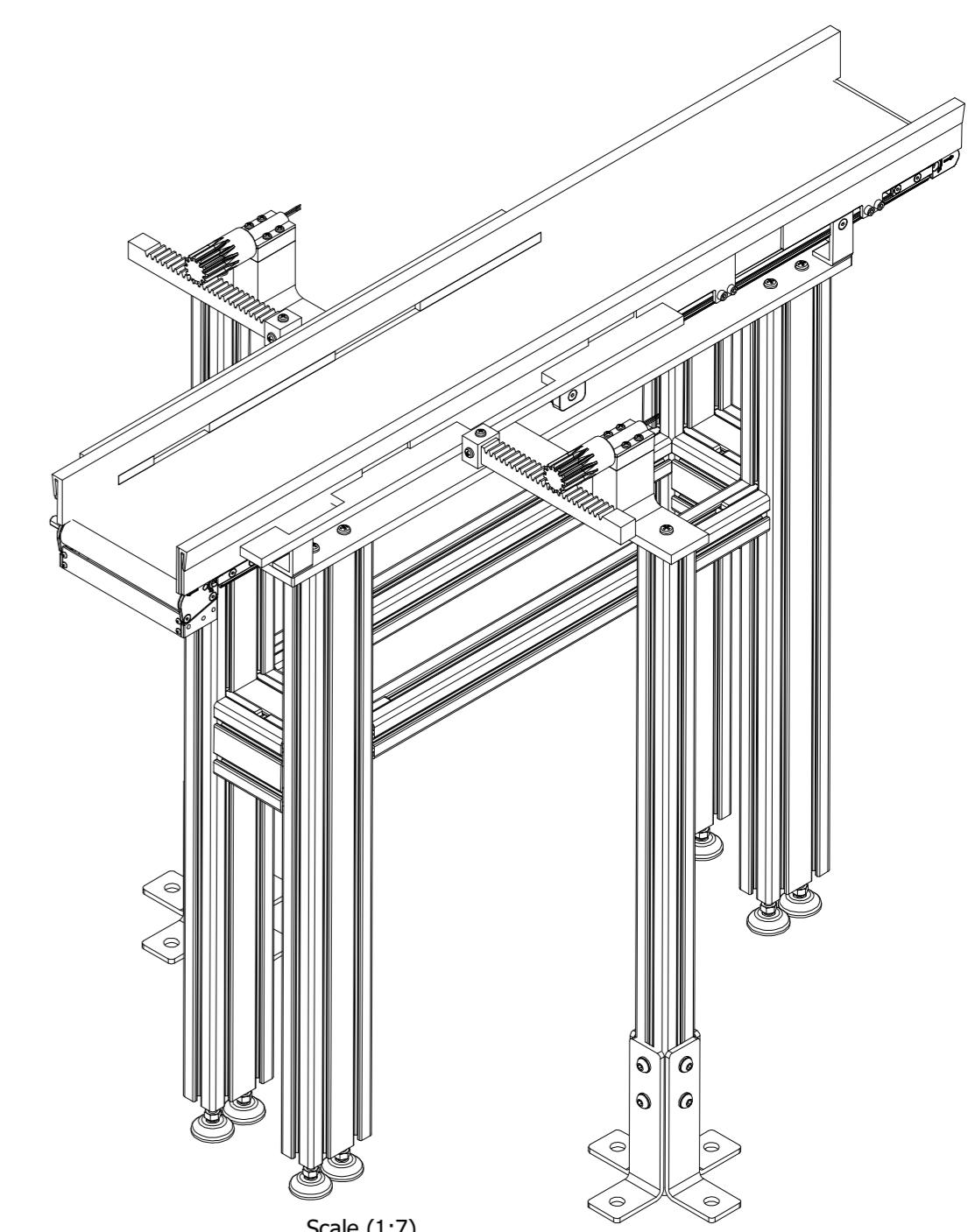
Scale (1:7)  
Front view of subassembly



Scale (1:7)  
Side view of subassembly



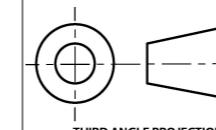
Scale (1:7)  
Plane view of subassembly showing how the carrier is pushed to align the holes with the press



Scale (1:7)  
Isometric view of subassembly

PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	2_21	0.0706.16 from item24 as the main conveyor
2	2	2_22	0.0452.65 from item24 as the supports for the motor extrusion
3	8	2_23	0.0666.50 from item24 to add some support from the floor
4	1	2_24	0.0452.35 from item24 to act as the main frame
5	1	2_25	Base of the conveyor to connect the frame to (custom)
6	2	2_26	Push surfaces to move the carrier so that the battery holes align with the press
7	2	2_27	RS182-7860 rack to move assembly vertically
8	2	2_28	Extrusions to support the motors (custom)
9	2	2_29	Lower housing for motor (custom)
10	2	2_30	ECXSP19L BL KL B STEC 36V motor to rotate pinion
11	2	2_31	Upper housing for motor (custom)
12	1	2_32	RS182-7801 pinion gear

DO NOT SCALE: IF IN DOUBT, PLEASE ASK.	TOLERANCES UNLESS OTHERWISE STATED: LINEAR 0dp ± 0.25mm ; 1dp ± 0.1mm; 2dp ± 0.05mm    ANGULAR ± 0.5° (30')		
ALL DIMS. IN MM SCALE: 1 : 6	Contact Details: avk39	Remove all sharp edges. Ro. 0.8 unless stated	Designed by Arav Kirtane
			Checked by Samuel Sabharwal
			Approved by 27/03/2025
		Date A2	Sheet size Date 27/03/2025
		PROJECT ME22007	



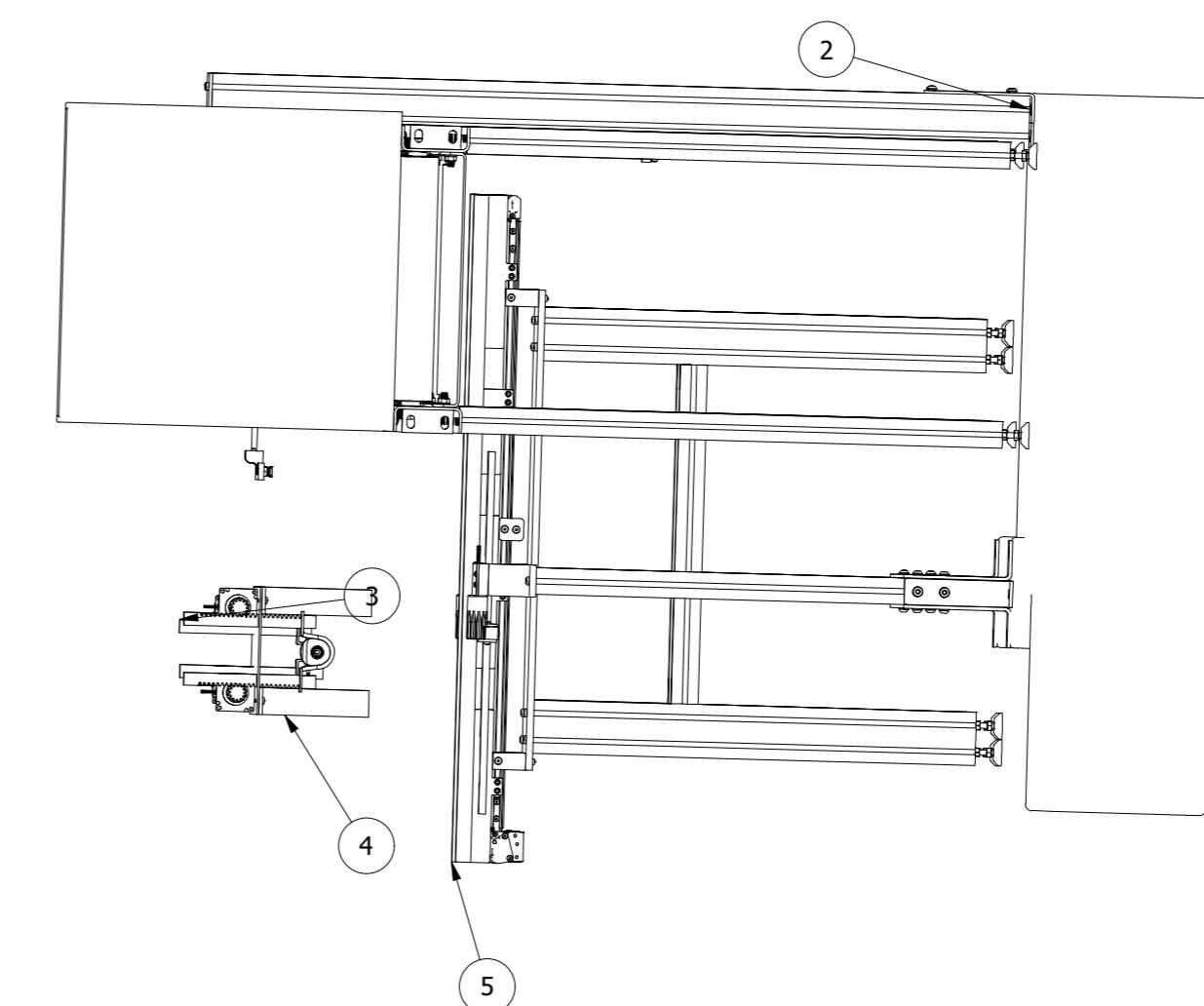
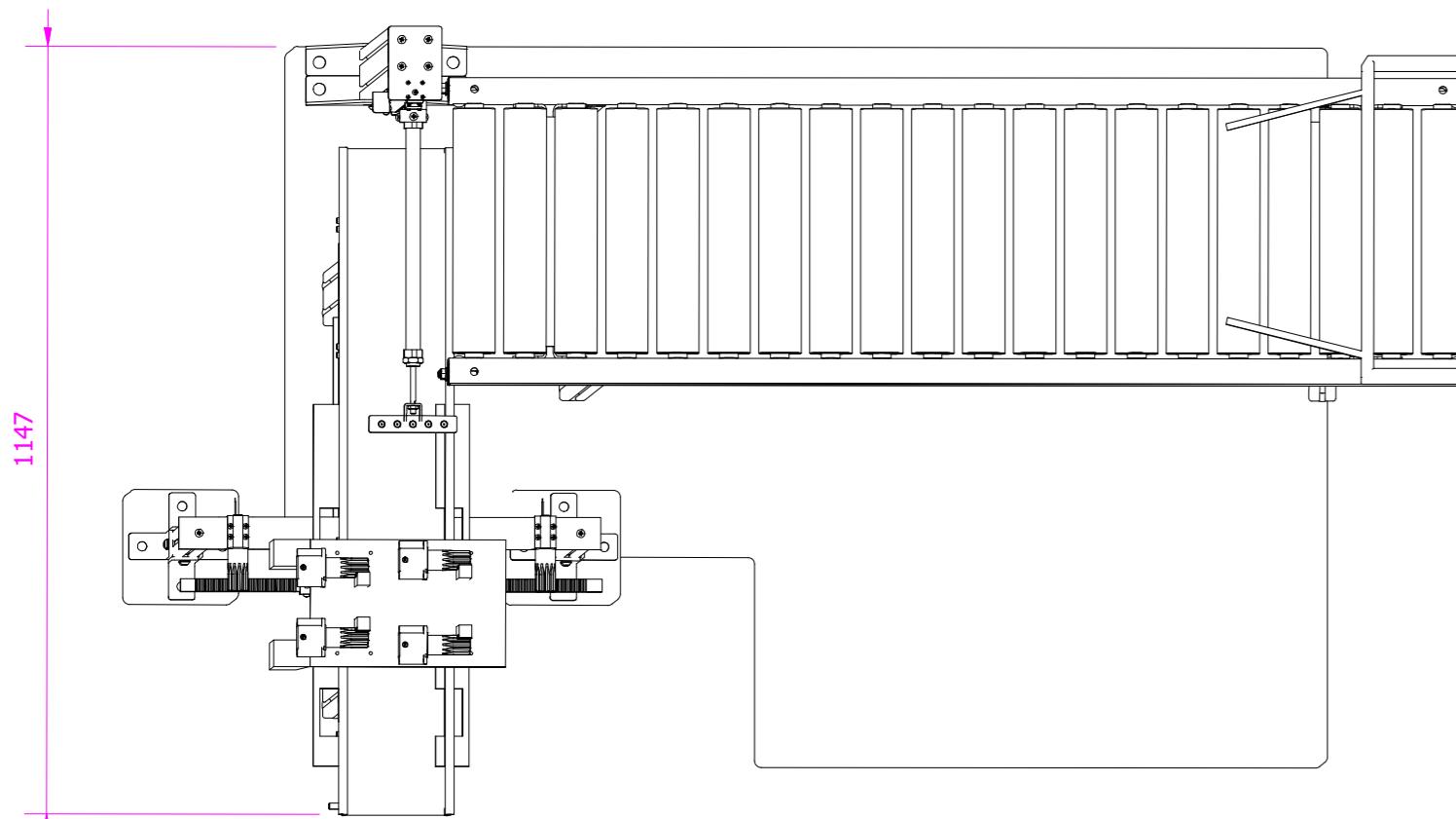
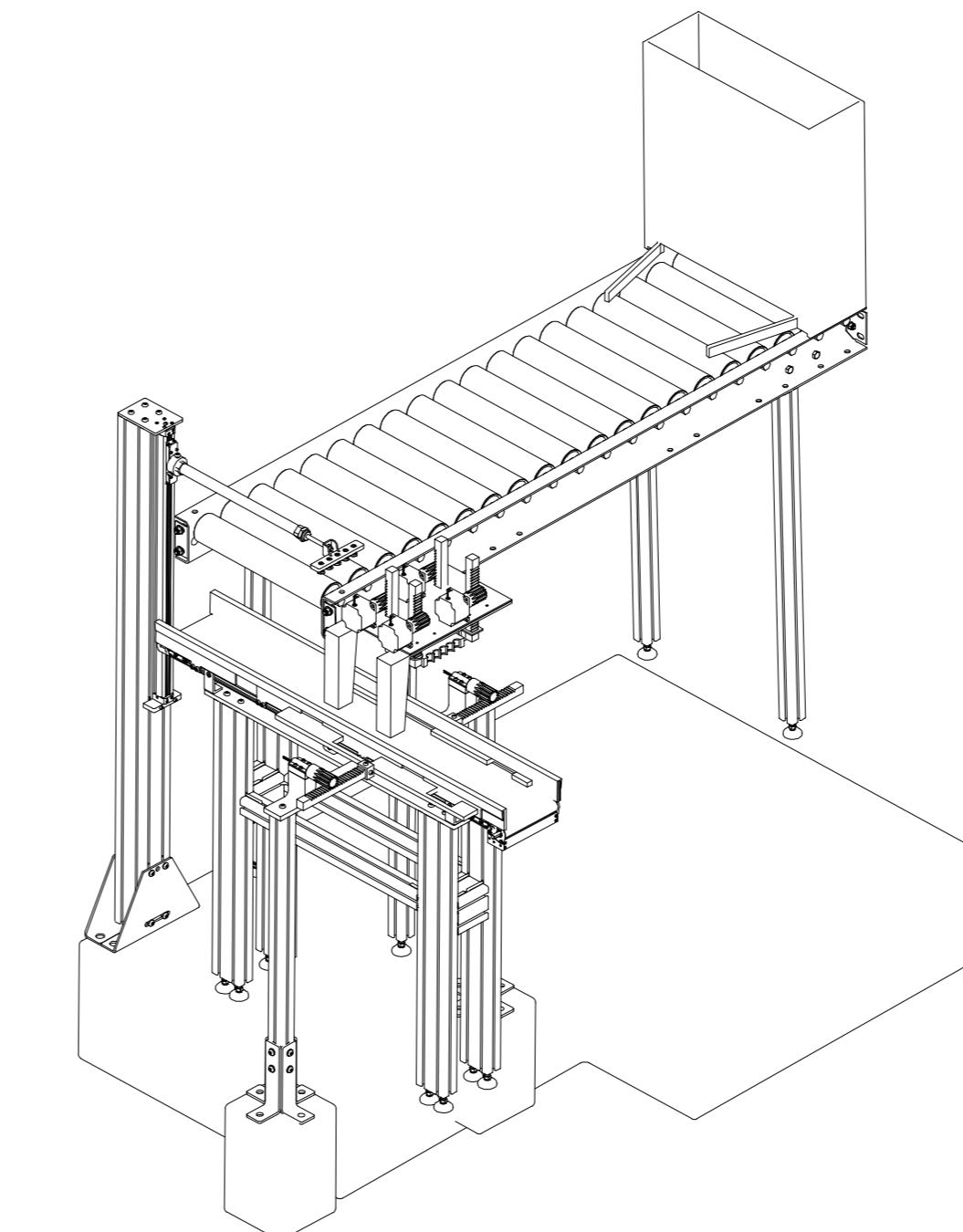
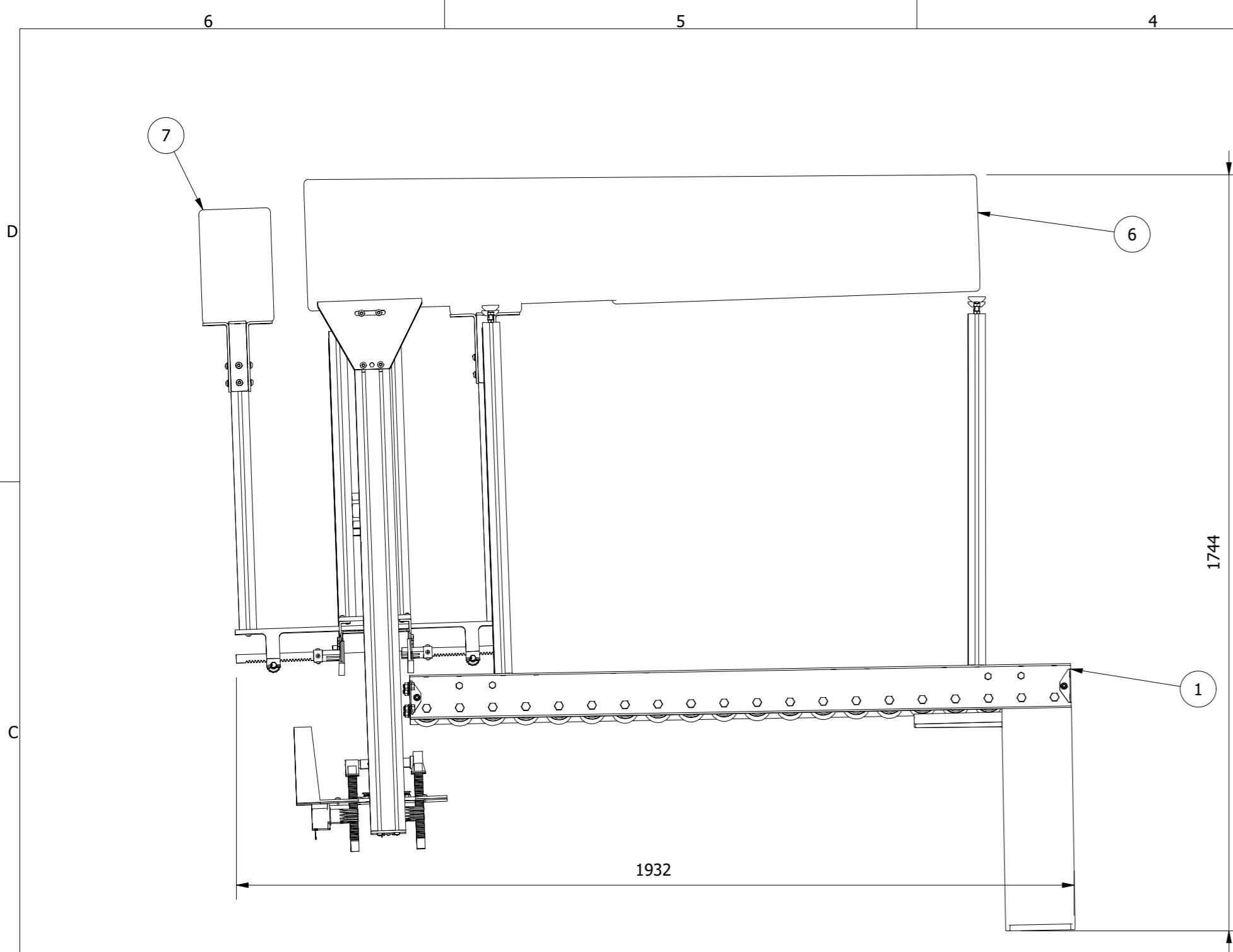
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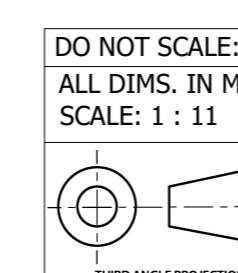
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TITLE: Source Conveyor  
PART No. 61\_2\_3  
Edition  
Sheet 1 / 1

6 5 4 3 2 1



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	2_32	Dorner 7400 gravity roller to act as carrier source
2	1	61_2	Actuator press subassembly
3	1	61_2	Remove and rotate subassembly
4	1	2_33	Connection block to battery conveyor (custom)
5	1	61_2	Output conveyor subassembly
6	1	2_34	Large platform to raise assembly
7	1	2_35	Smaller platform for smaller struts



THIRD ANGLE PROJECTION

ALL DIMS. IN MM  
SCALE: 1 : 11

DO NOT SCALE: IF IN DOUBT, PLEASE ASK.  
Contact Details:  
avk39

TOLERANCES UNLESS OTHERWISE STATED: LINEAR  $0dp \pm 0.25mm$ ;  $1dp \pm 0.1mm$ ;  $2dp \pm 0.05mm$   
ANGULAR  $\pm 0.5^\circ (30')$   
Remove all sharp edges. Ro. 0.8 unless stated

Designed by  
Arav Kirtane  
Checked by  
Samuel Sabharwal  
Approved by  
Date  
27/03/2025

Date  
28/03/2025

Sheet size  
A2

Project  
ME22007

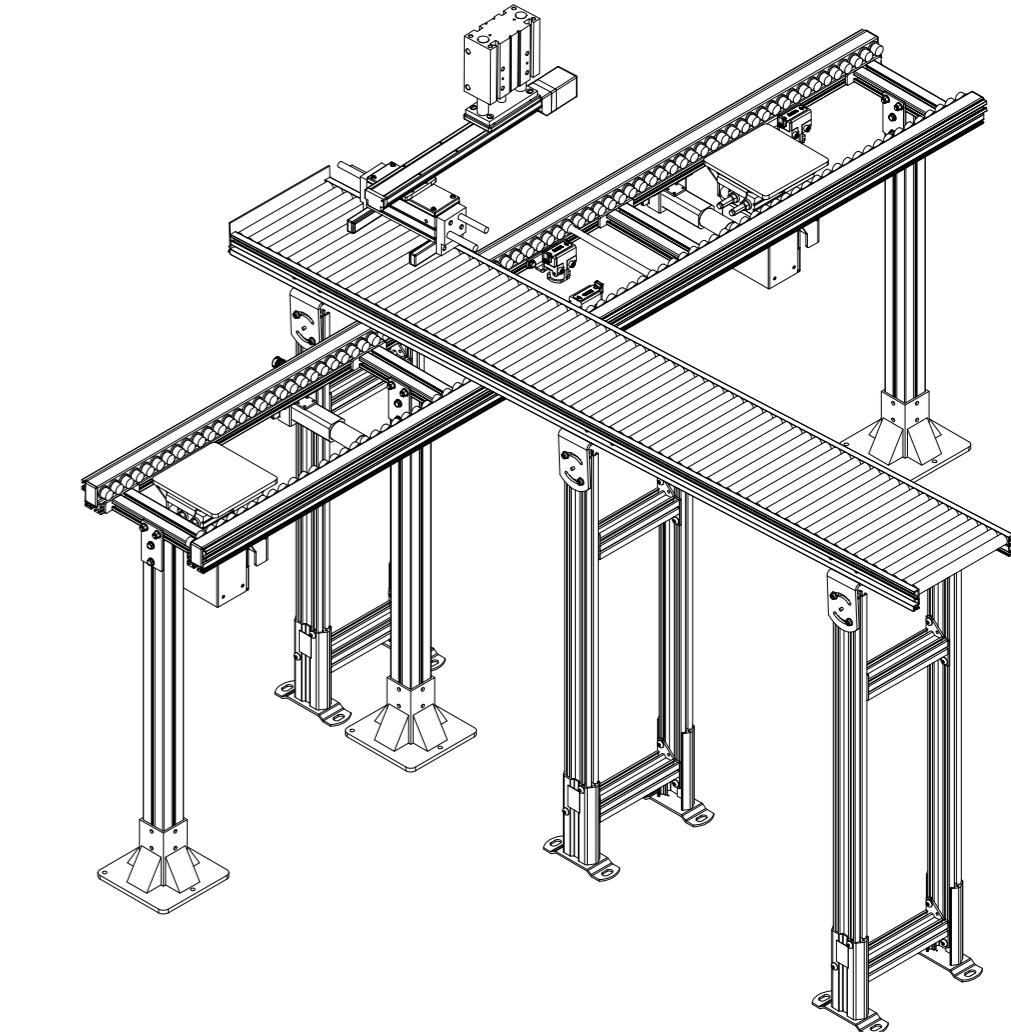
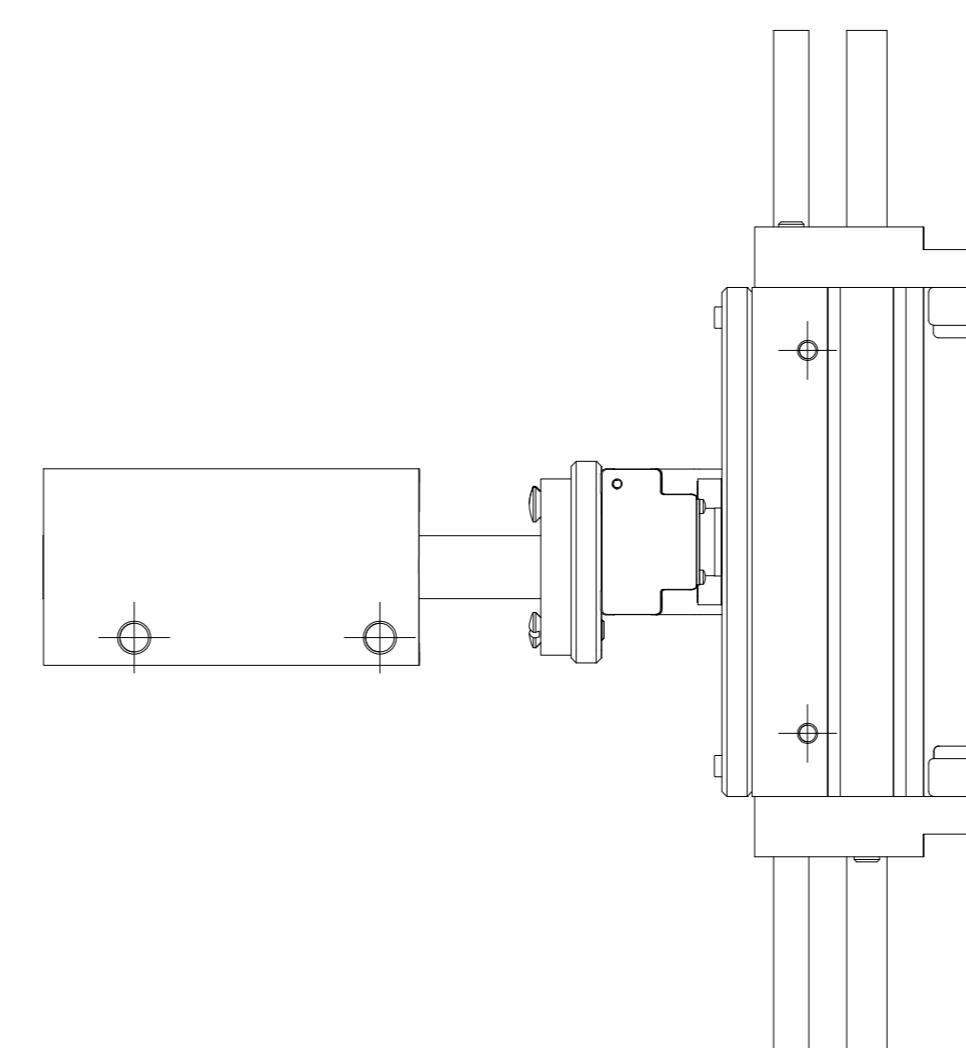
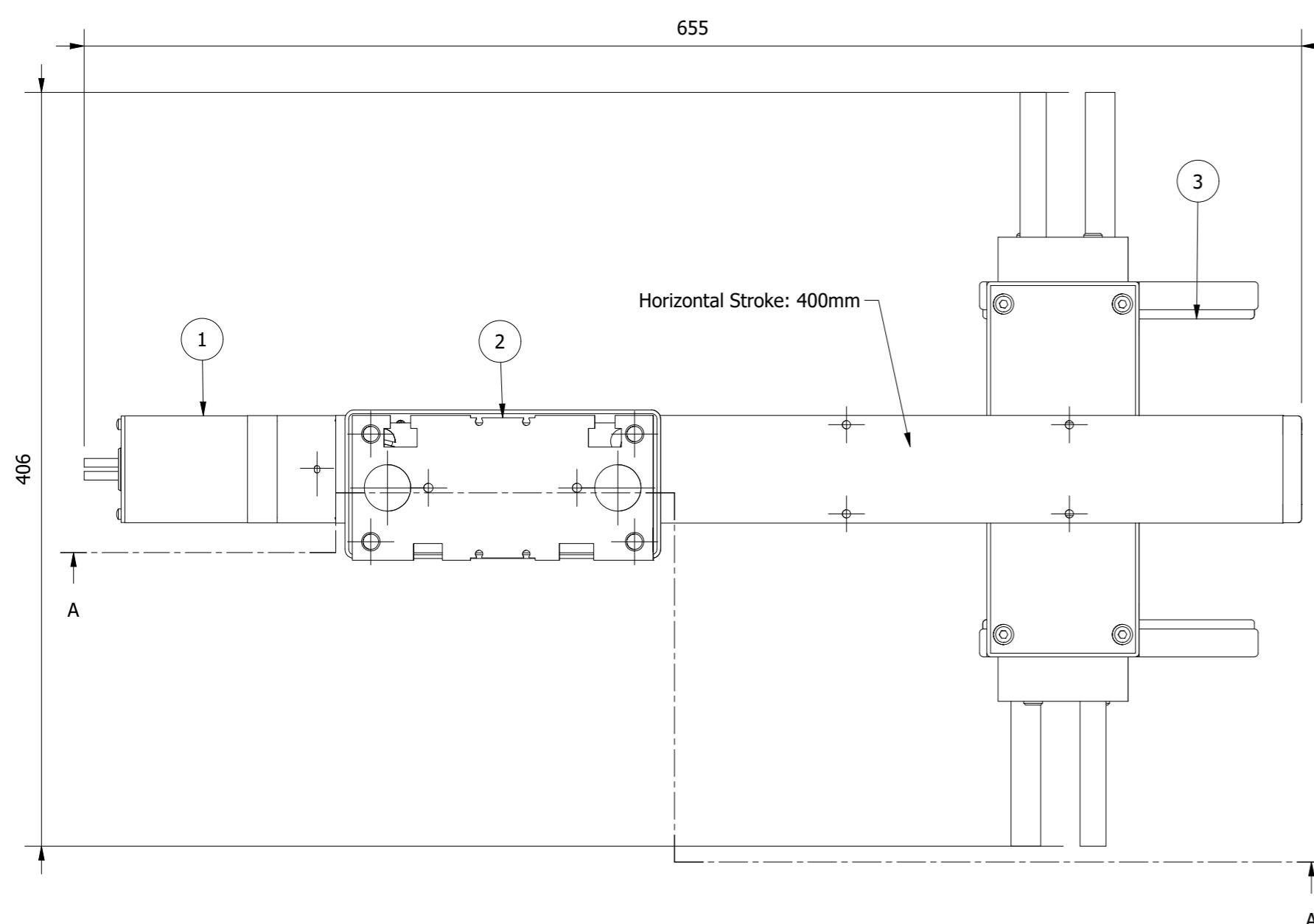
Title: Second production stage - Battery Insertion  
Part No. MD\_2  
Edition  
Sheet 1 / 1

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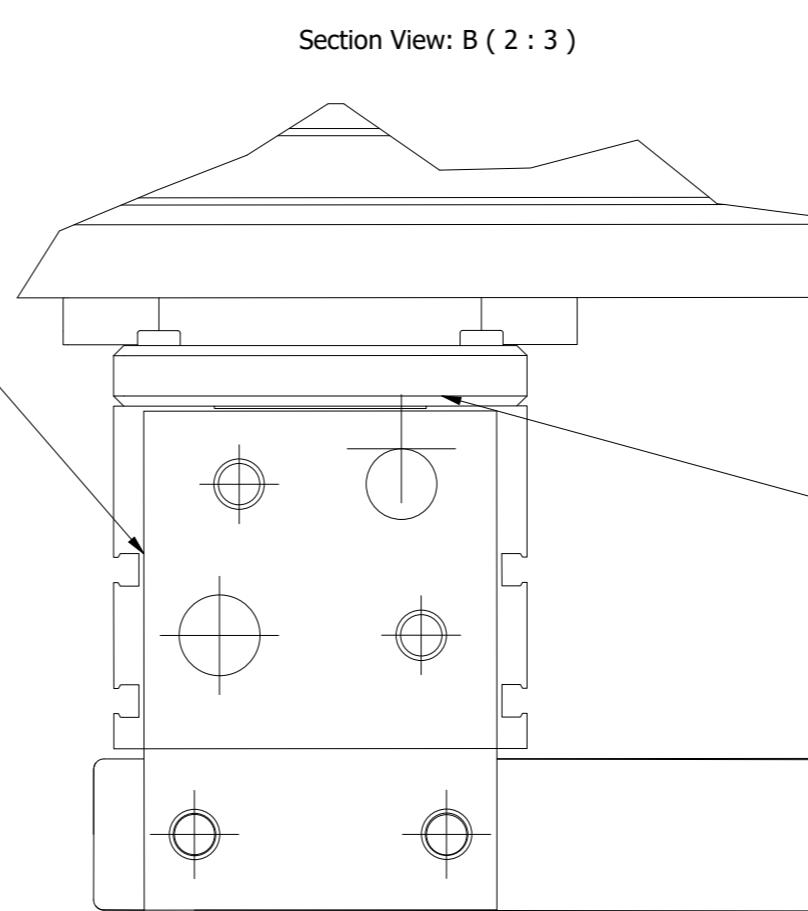
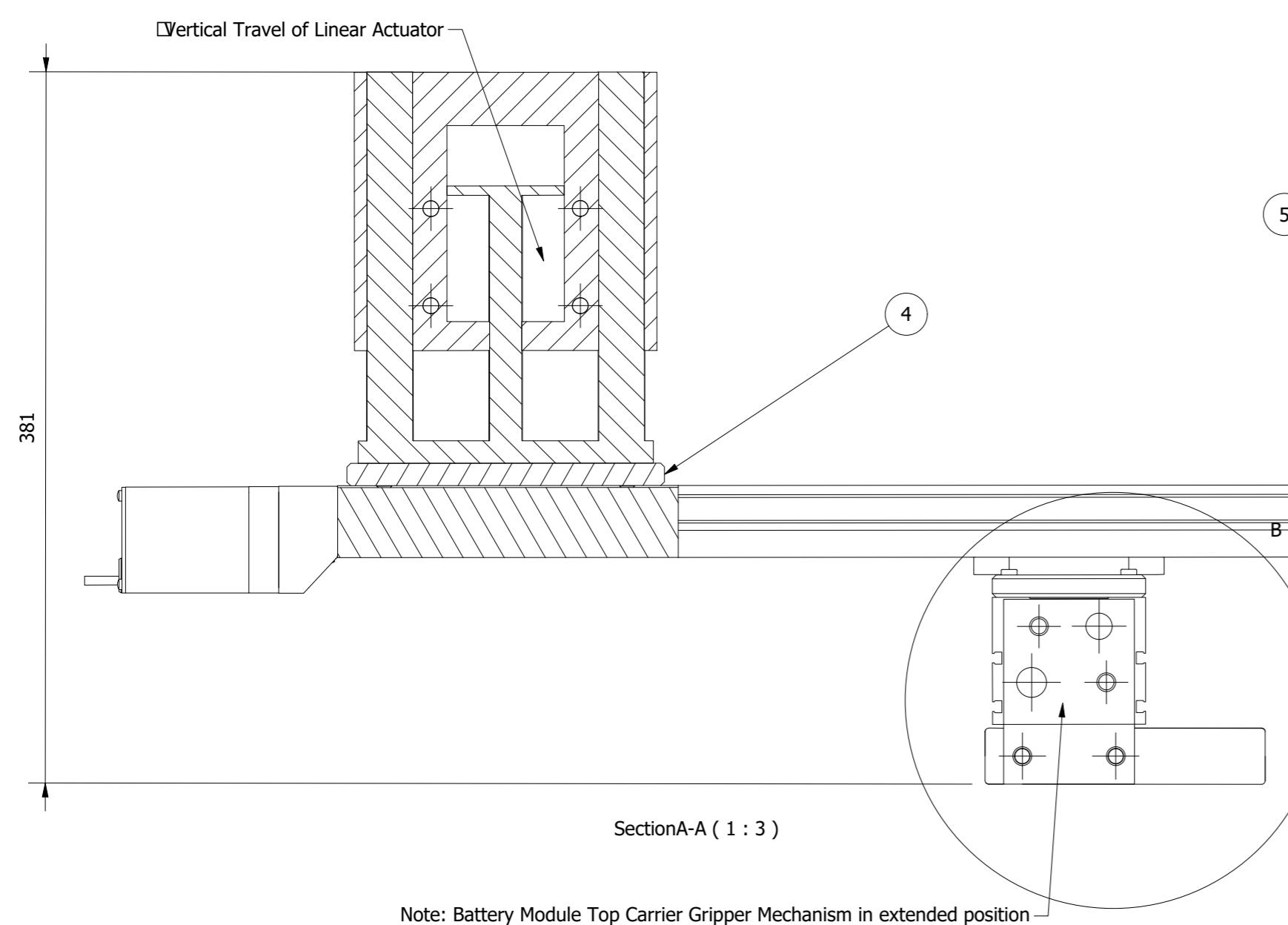
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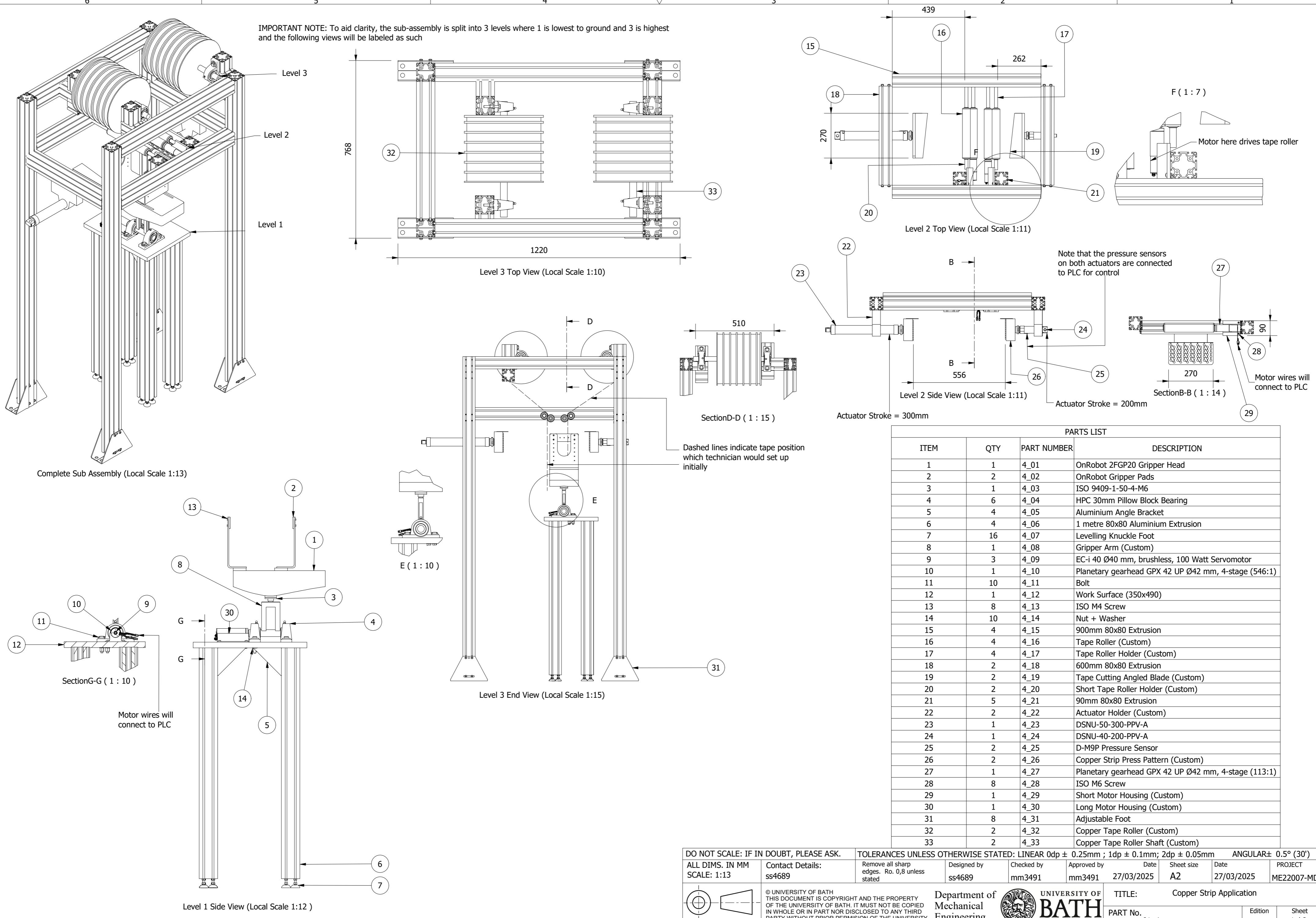


Note: Conveyors have been removed for clarity and description of Top Carrier Pressing Mechanism

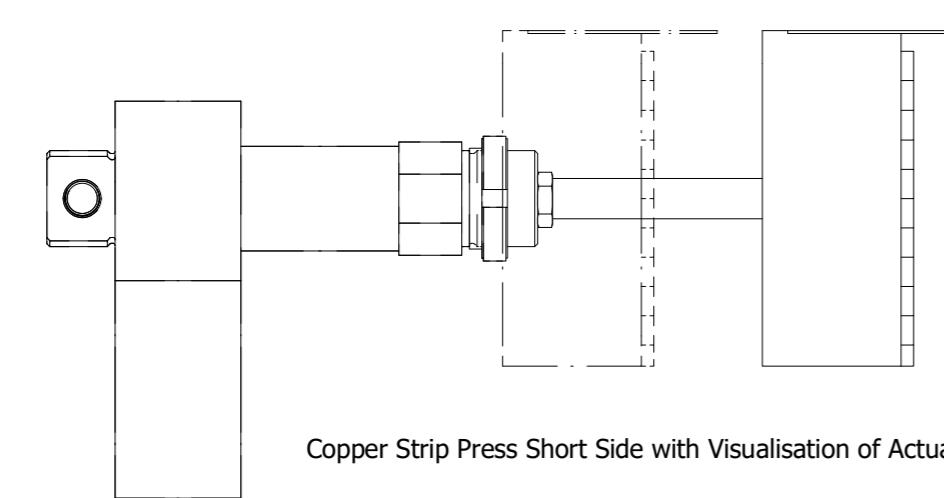


PARTS LIST					
ITEM	QTY	PART NUMBER	DESCRIPTION		
1	1	61_3_01	Horizontal Electric Actuator (LEFS25GA-400N-R3C6H83)		
2	1	61_3_02	Vertical Pneumatic Actuator (MGP63-100(0))		
3	2	61_3_03	Gripper Attachment with Rubber Contact (Custom)		
4	1	61_3_04	Vertical to Horizontal Actuator Connecting Plate (Custom)		
5	2	61_3_05	2 Finger Parallel Gripper (MHL2-32D2(0))		
6	1	61_3_06	Horizontal to 2 Finger Gripper Connecting Plate (Custom)		

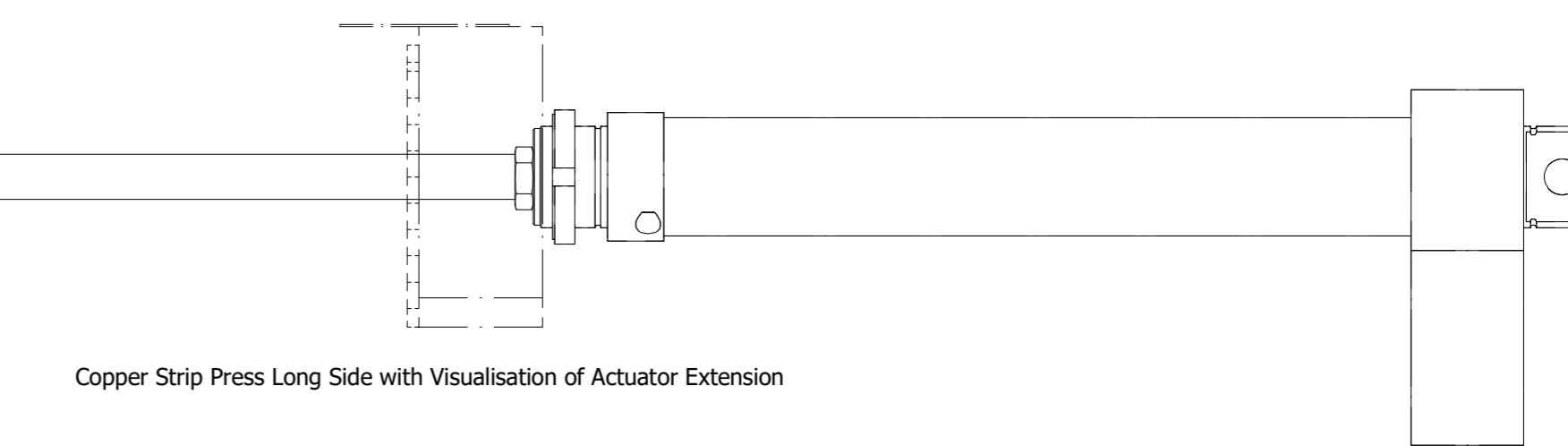
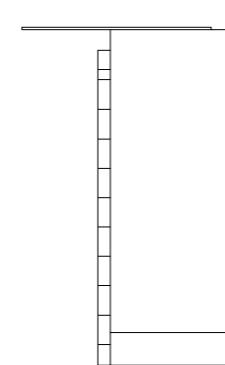
Note: Battery Module Top Carrier Gripper Mechanism in extended position



## Positional Views of Moving Parts

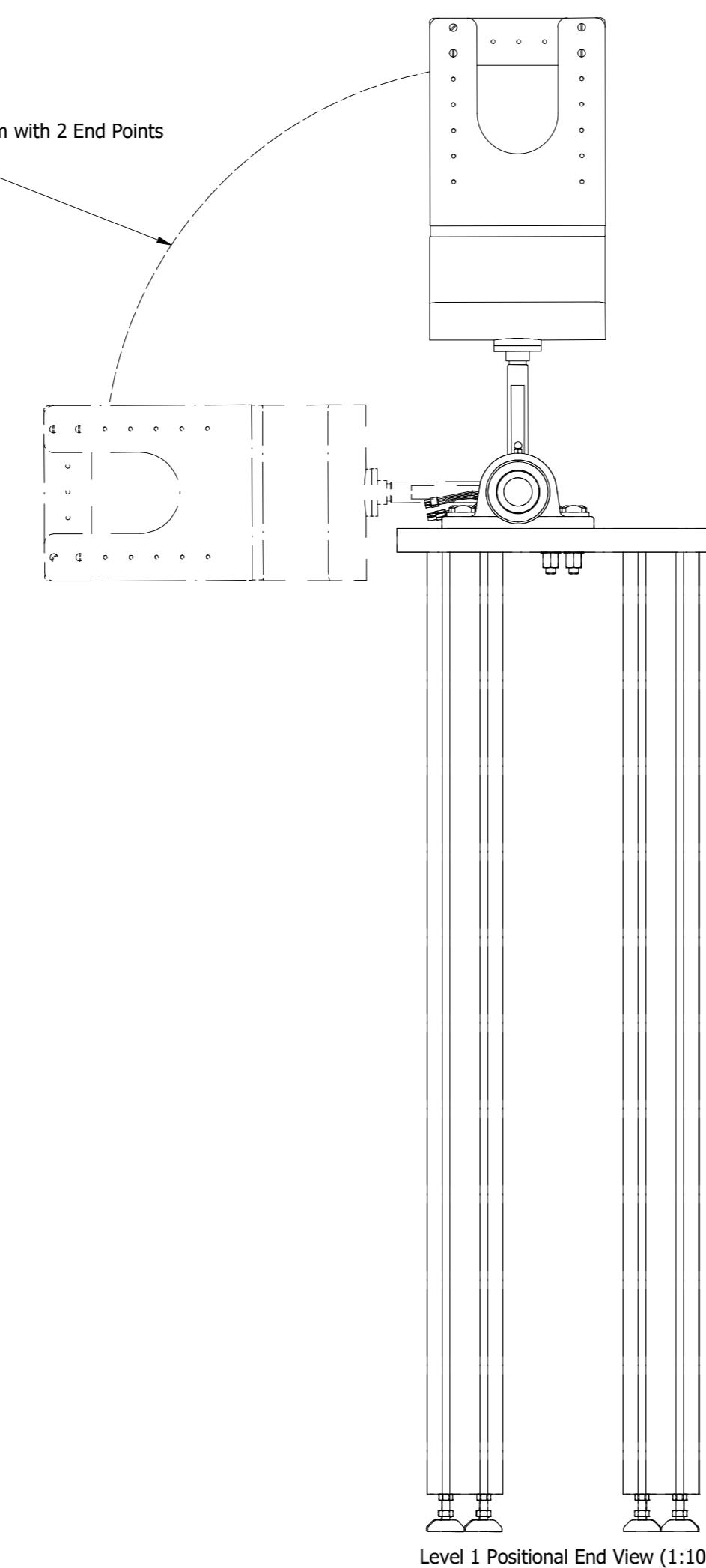


Copper Strip Press Short Side with Visualisation of Actuator Extension



Copper Strip Press Long Side with Visualisation of Actuator Extension

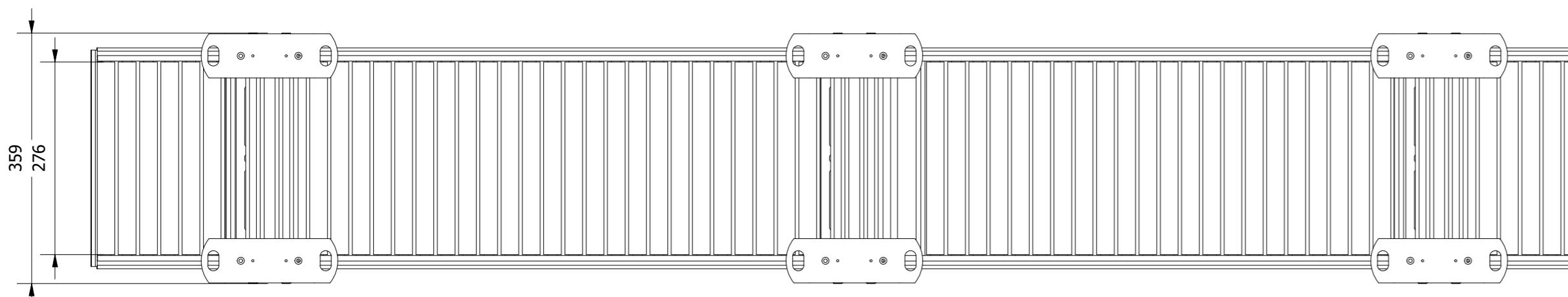
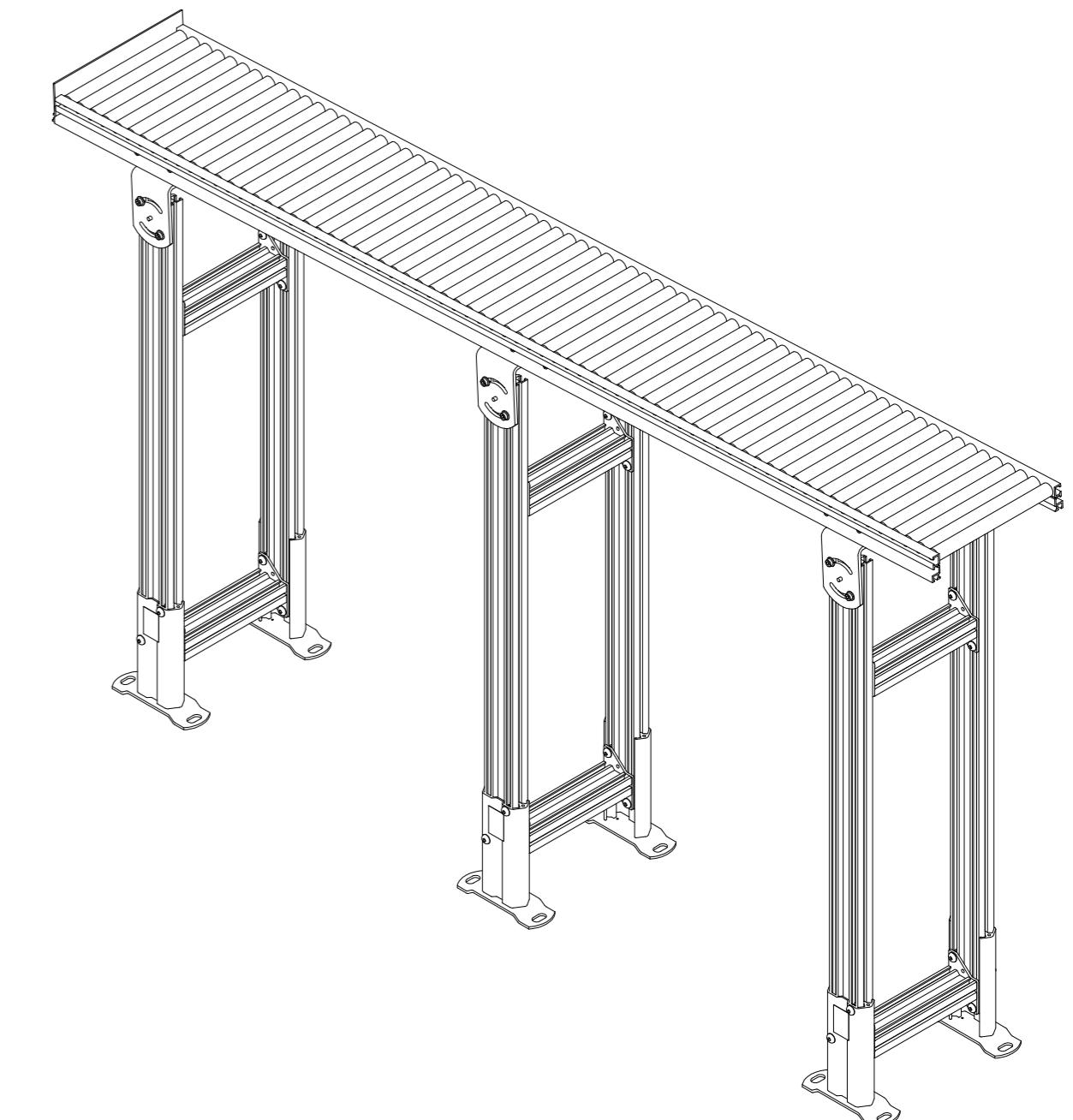
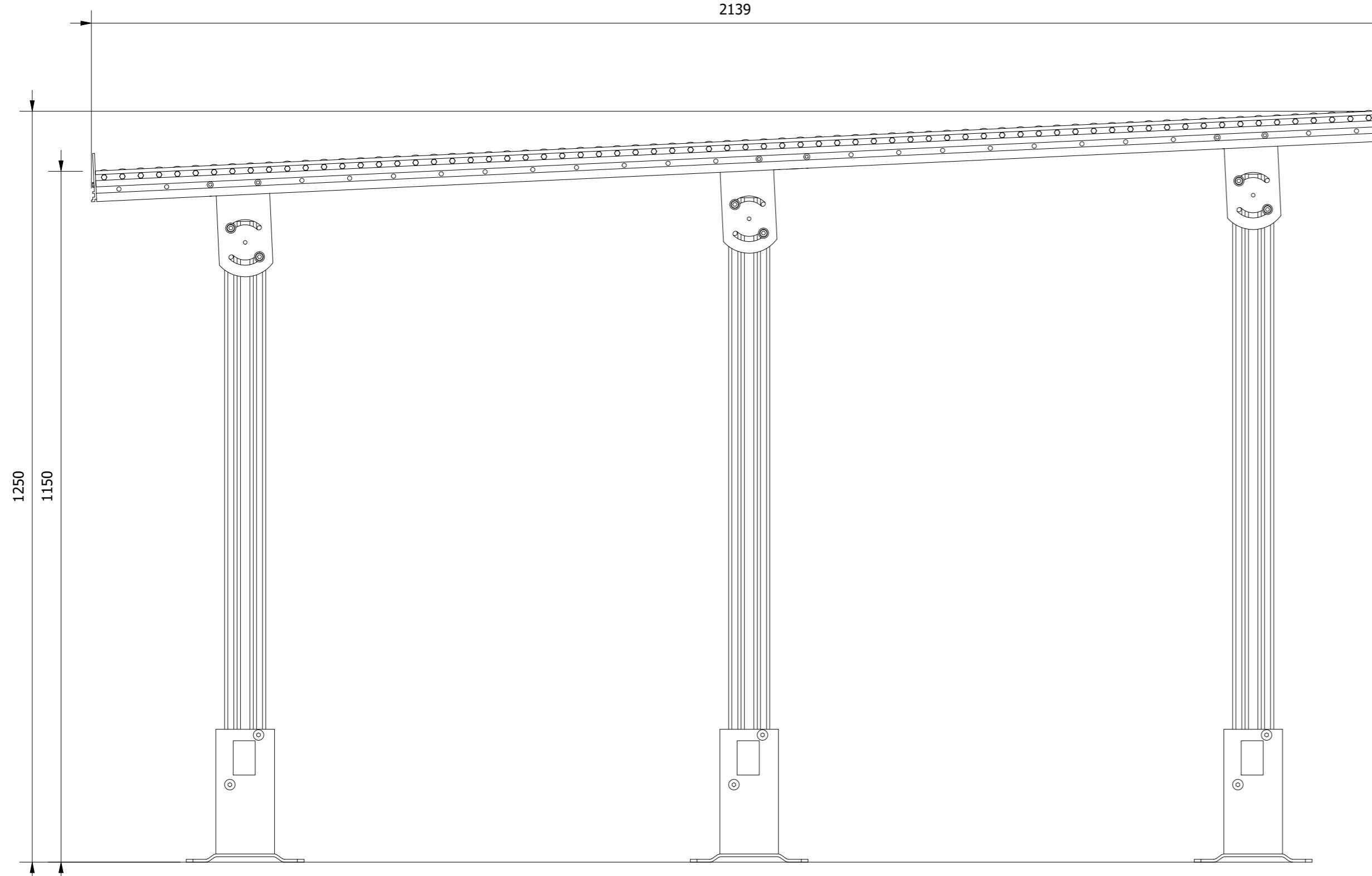
Side View Of Module Gripper Arm with 2 End Points and Rotational Arc



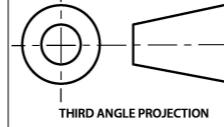
Level 1 Positional End View (1:10)

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6 5 4 ▽ 3 2 1



PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	61_5_01	Gravity Conveyor (2200GravityRoller-2025032720142761_1-1-Conveyor)

DO NOT SCALE: IF IN DOUBT, PLEASE ASK. ALL DIMS. IN MM SCALE: 0.09	TOLERANCES UNLESS OTHERWISE STATED: LINEAR 0dp ± 0.25mm ; 1dp ± 0.1mm; 2dp ± 0.05mm ANGULAR± 0.5° (30') Contact Details: MM3491  THIRD ANGLE PROJECTION	Remove all sharp edges. Ro. 0,8 unless stated	Designed by Motheo Masole	Checked by Elliot Routier	Approved by Elliot Routier	Date 3/27/2025	Sheet size A2	Date 3/27/2025	PROJECT ME22007-MD
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