

Kevin Hao &
Taylor Janke
Boca Raton
Community High
C-17

Master Arm Actuators		
Label	Function	Type
M1	Base Servo	HS-805MG
M2	Shoulder Servo	HS-805MG
M3	Elbow Servo	HSB-9370TH
M4	Vertical Servo	HSR-2645CR
M5	Yaw Servo	HS-645MG
M6	Roll Servo	HS-645MG
M7	Claw Servo	HSB-9370TH

Autonomous Controls		
Label	Function	Type
E1	Yaw	Encoder
E2	Elbow	Encoder

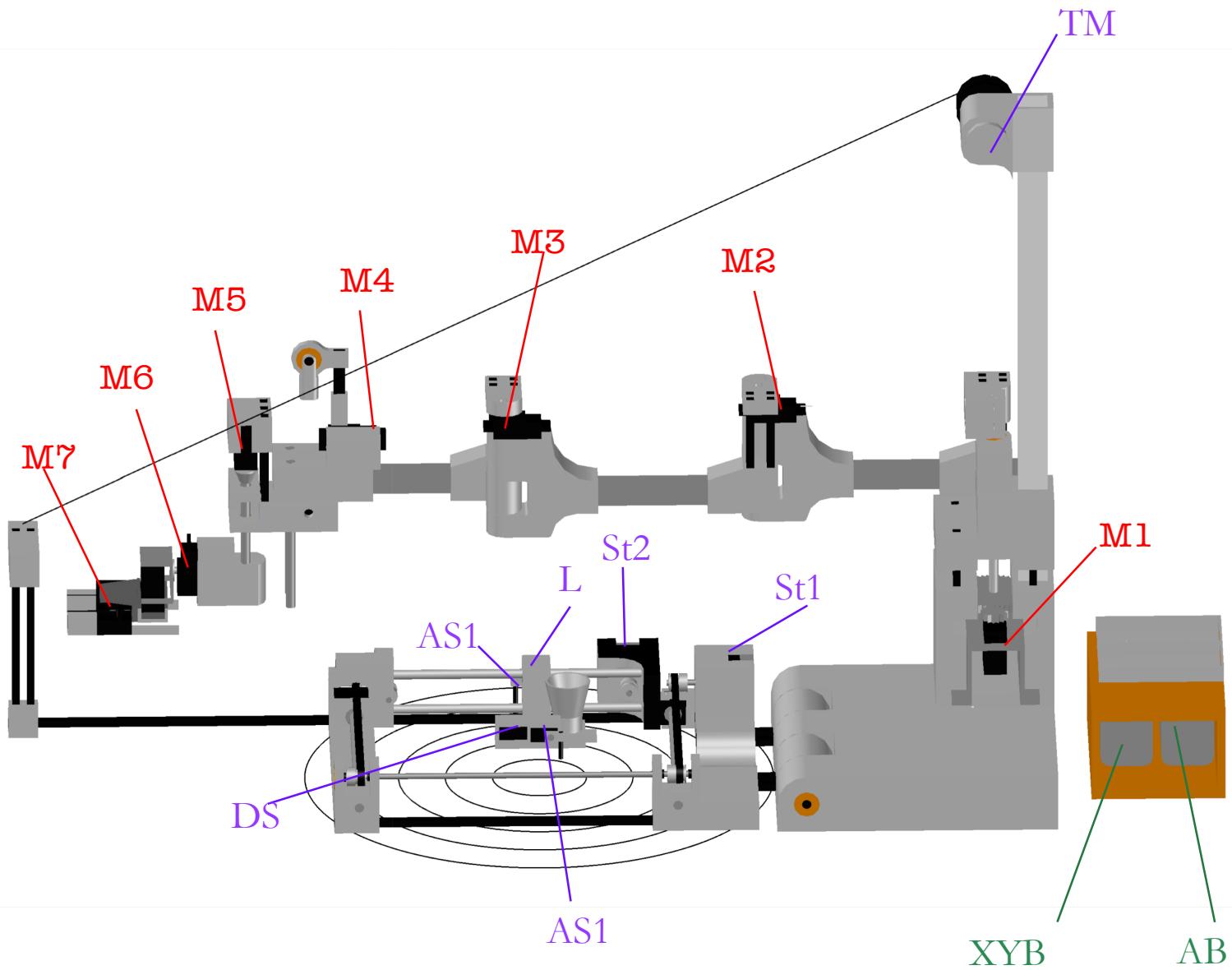
Control Box			
Battery	Label	Voltage	Type
Arm Battery	AB	12	NIMH
Keypad Battery	KB	9	Alkaline
Tower Battery	TB	7.2	NIMH
XY Table Battery	XYB	7.2	NIMH

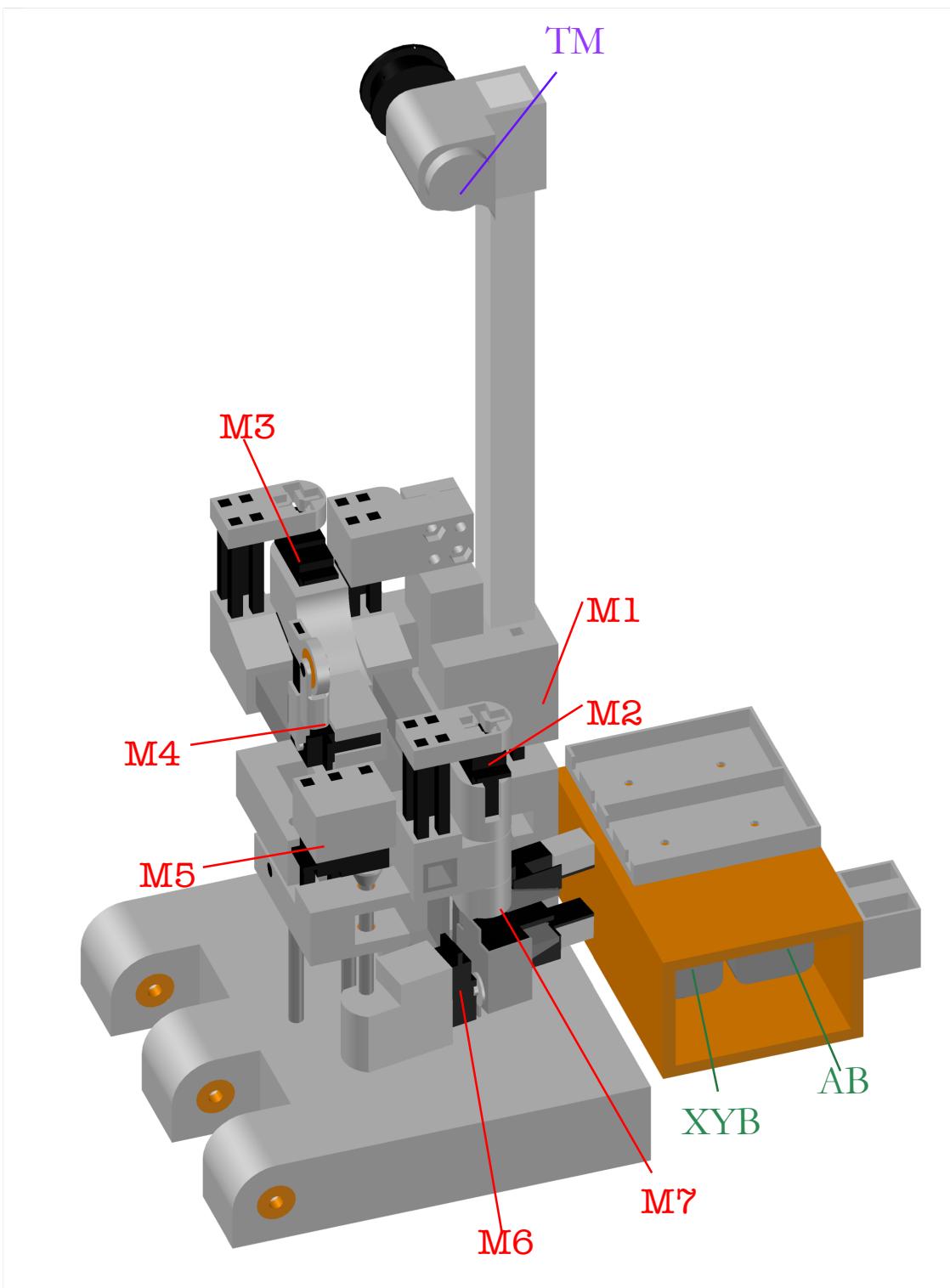
XY Table Actuators

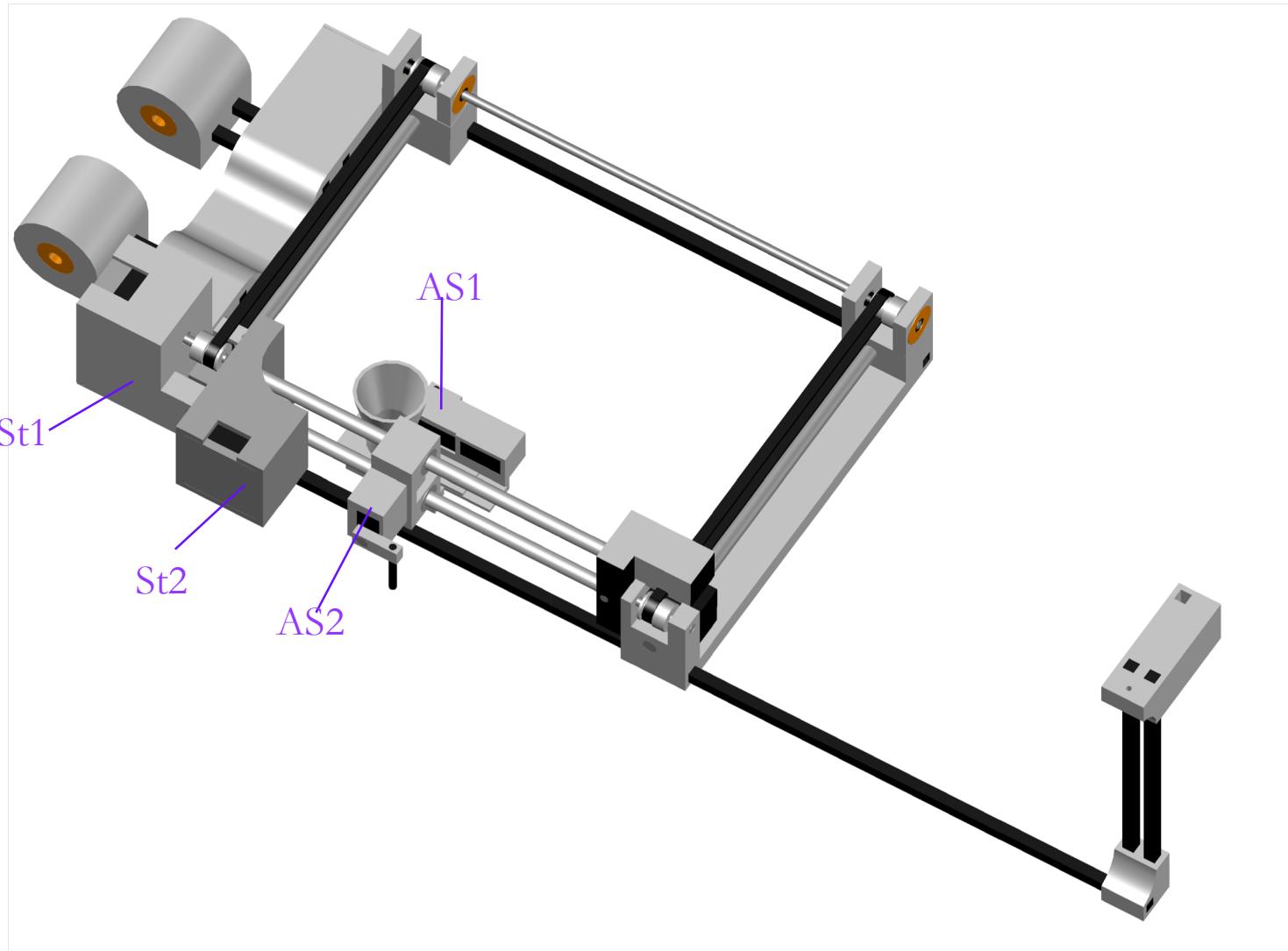
Label	Function	Type
St1	X Stepper	NEMA 23 Stepper Motor
St2	Y Stepper	NEMA 17 Stepper Motor
DS	Dispenser Servo	Generic Mini Servo
AS1	Mini Arm Servo 1	Generic Mini Servo
AS2	Mini Arm Servo 2	Generic Mini Servo
TM	Motor	Generic 12 V DC Motor
L	Laser	5 V Laser Diode

XY Table Controls

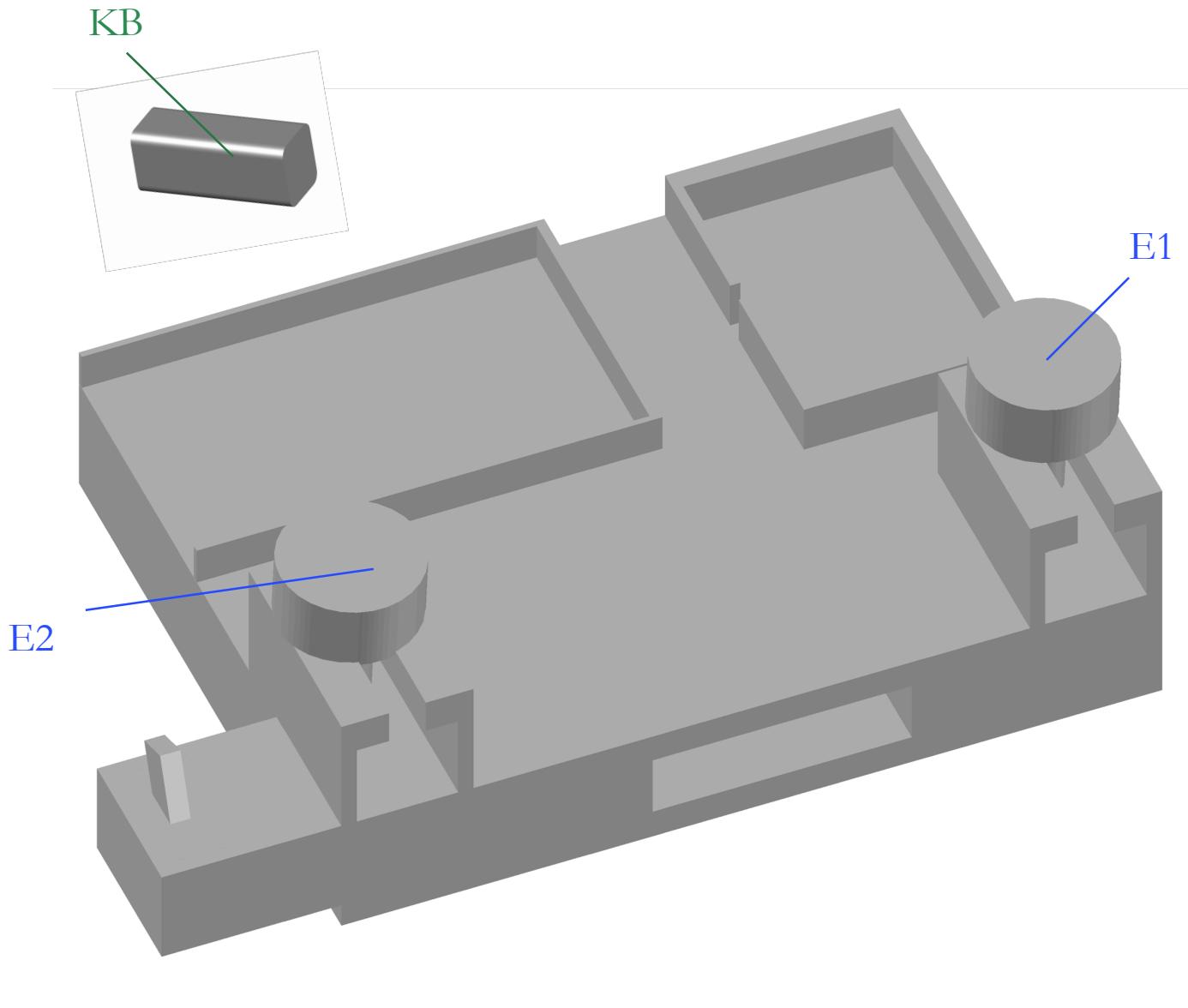
Label	Function	Type
XS	X Stepper	Encoder
YS	Y Stepper	Encoder
AS1/2	Mini Arm Servo	Potentiometer
SW1	Multi-Purpose	Switch
SP	XY Speed	Slide Potentiometer
SW2	Rotation Direction	Switch
SW3	Motor	Switch
LS	Laser	Switch



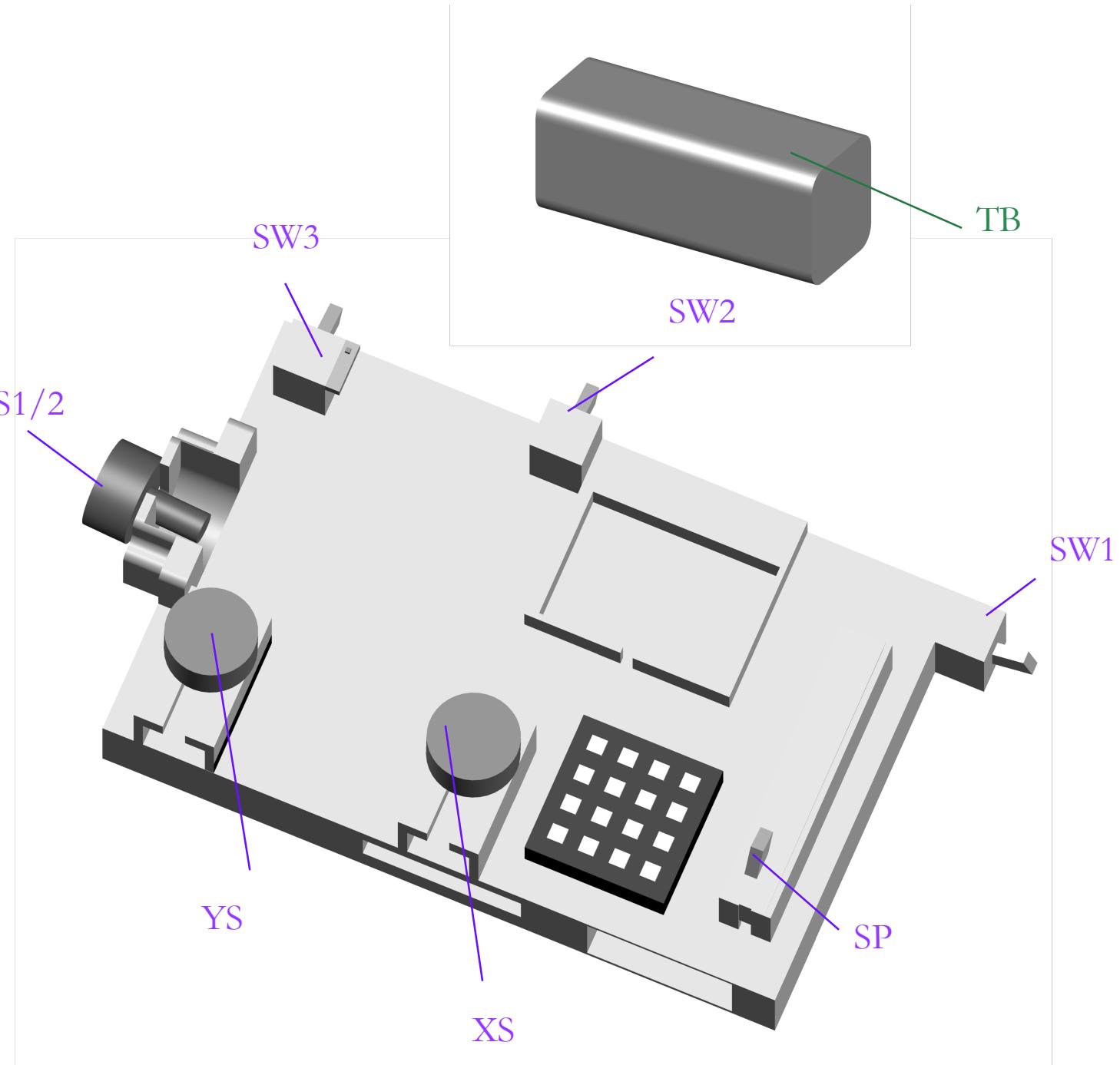




Autonomous Controls



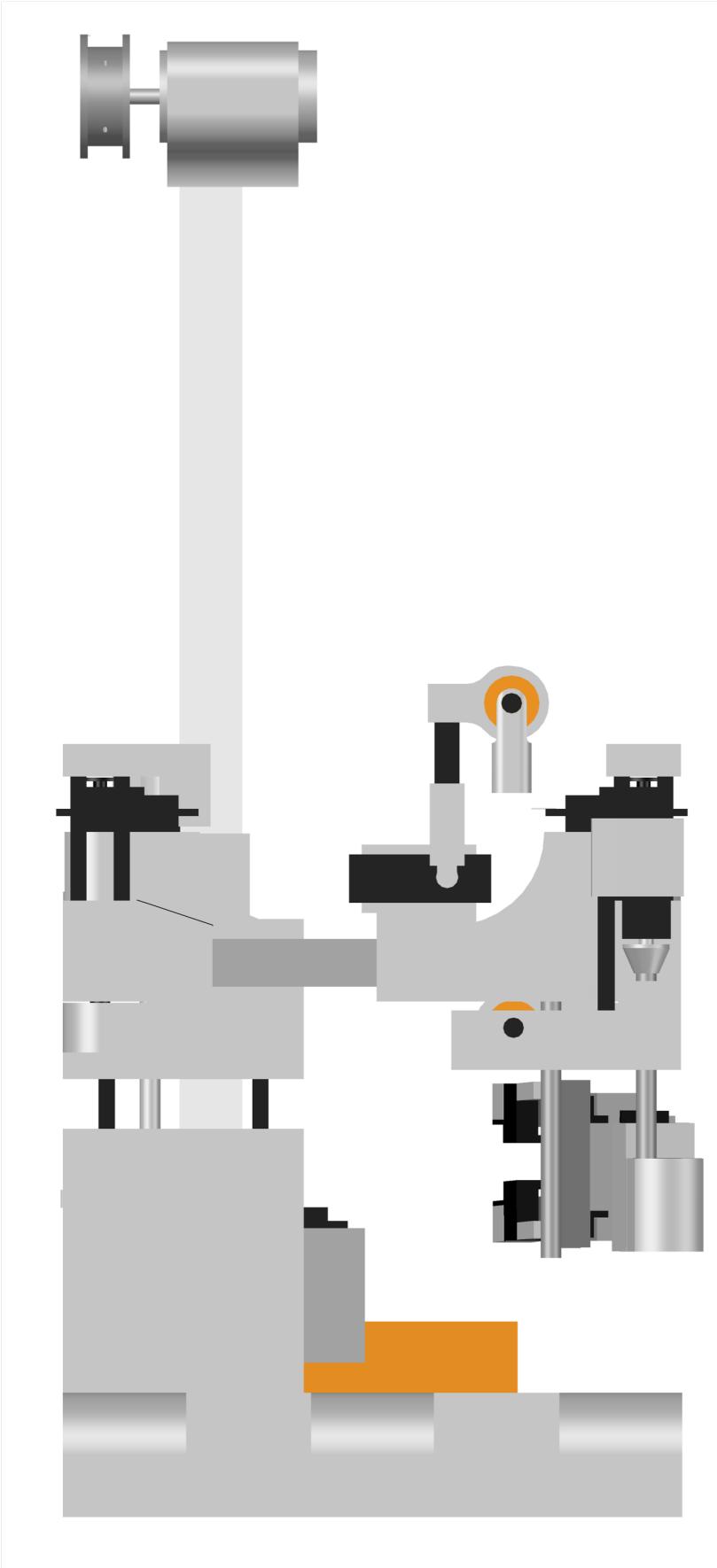
XY Table Controls



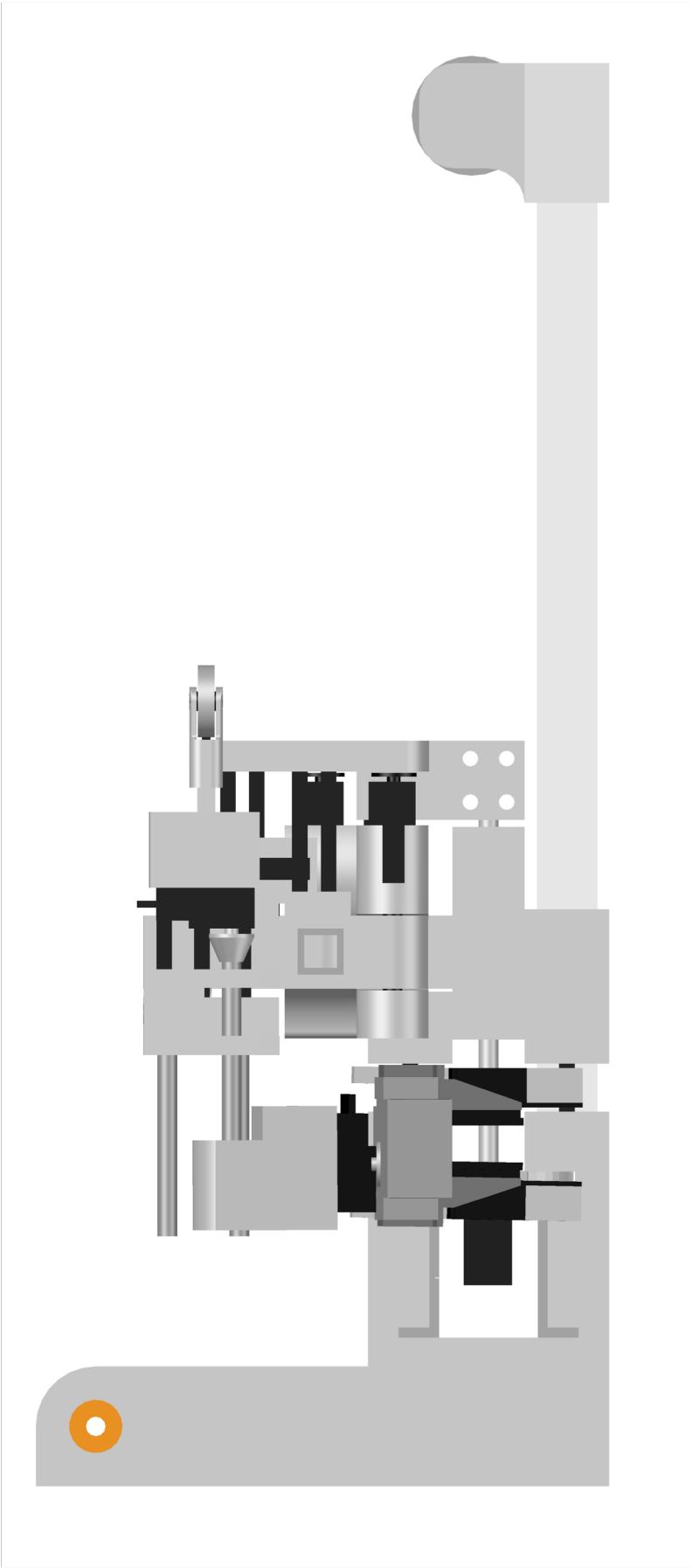
Plan of Movement

Movement No.	Master Arm	Penny Distributer
1		Lower distributer and align laser with target
2		Raise distributer in drop position
3		Lower distributer so arm can get out
4	Pick up south penny stack	Raise distributer
5		Lower distributer
6	Deposit in dispenser	
7	Pick up east penny stack and deposit in dispenser	Deposit pennies 1-10
8	Pick up southwest penny stack and deposit in dispenser	Deposit pennies 11-20
9	Pick up west penny stack and deposit in dispenser	Deposit pennies 21-30
10	Pick up north penny stack and deposit in dispenser	Deposit pennies 31-40
11	Return to starting position	Deposit pennies 41-50
12		Adjust misplaced pennies
13		Raise dispenser
14		Return to start position

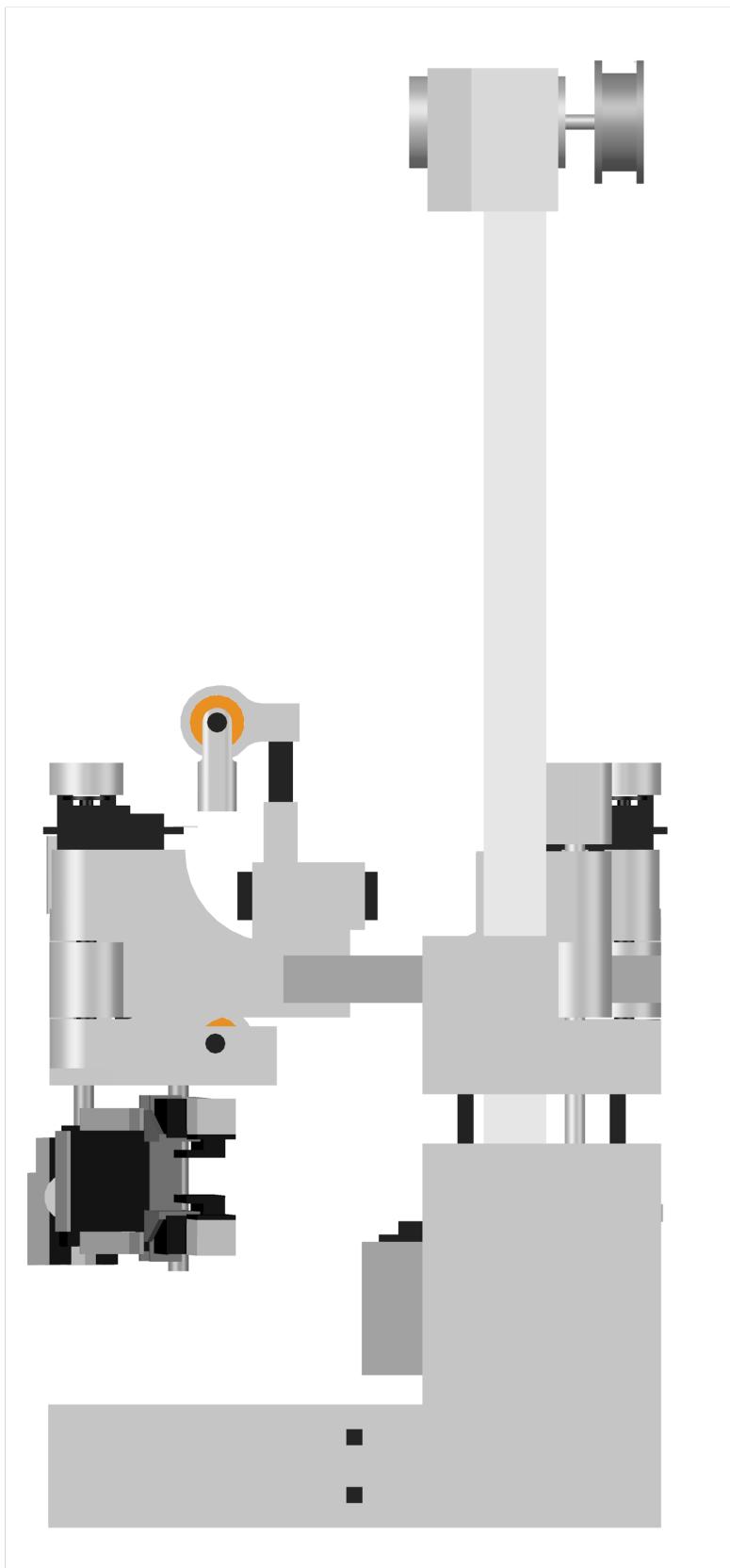
Robot Arm Practice Log			
Trial No.	Parameter 1: Time	Parameter 2: Score	Parameter 3: Number of XY Table Mistakes
1	3:13.87	980	7
2	3:04.75	960	4
3	3:07.67	905	5
4	2:40.96	790	10
5	3:08.54	1020	4
6	3:03.94	910	5
7	2:98.48	1080	1
8	3:02.39	1060	1
9	2:96.19	1040	2
10	3:03.79	980	3



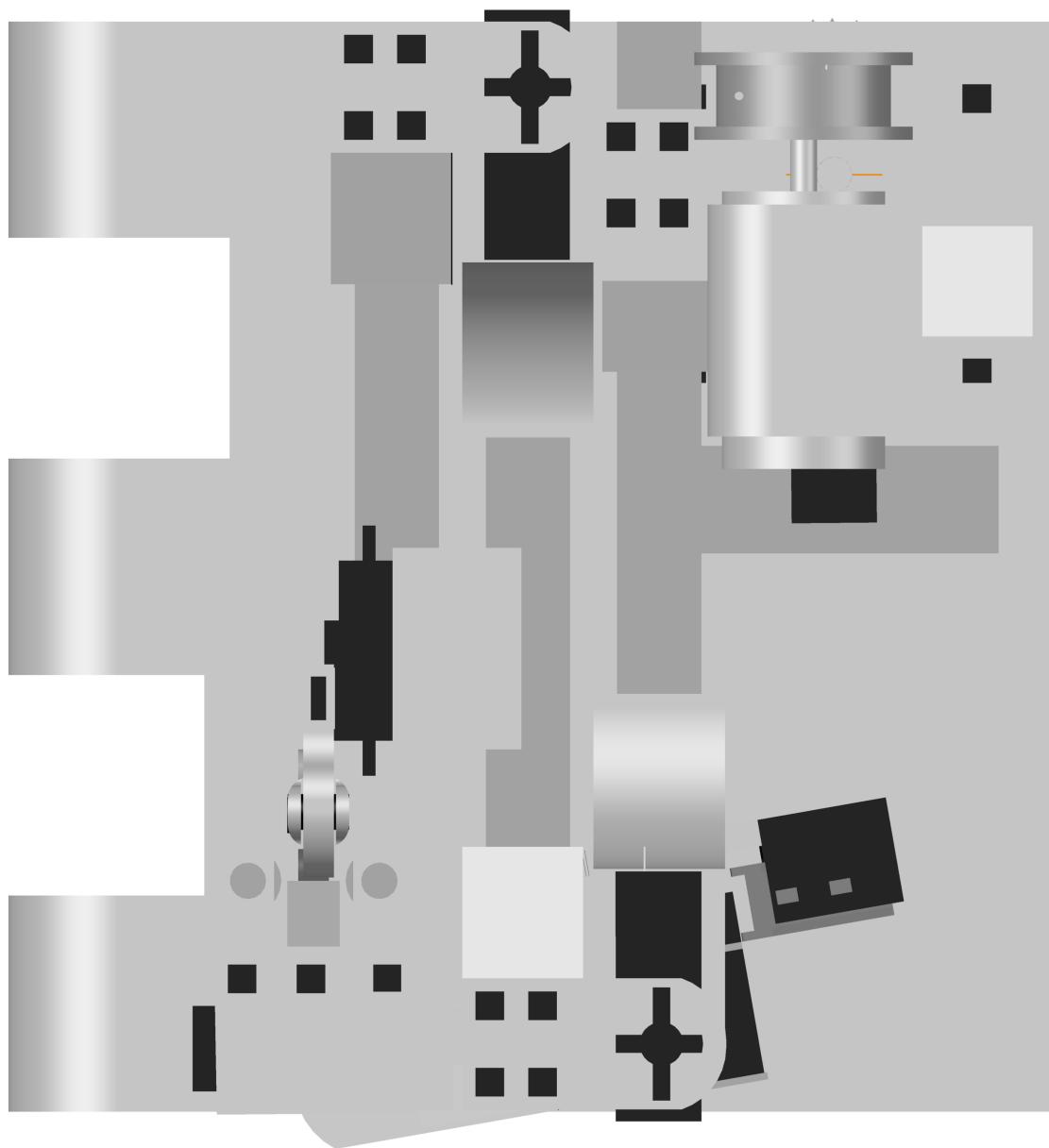
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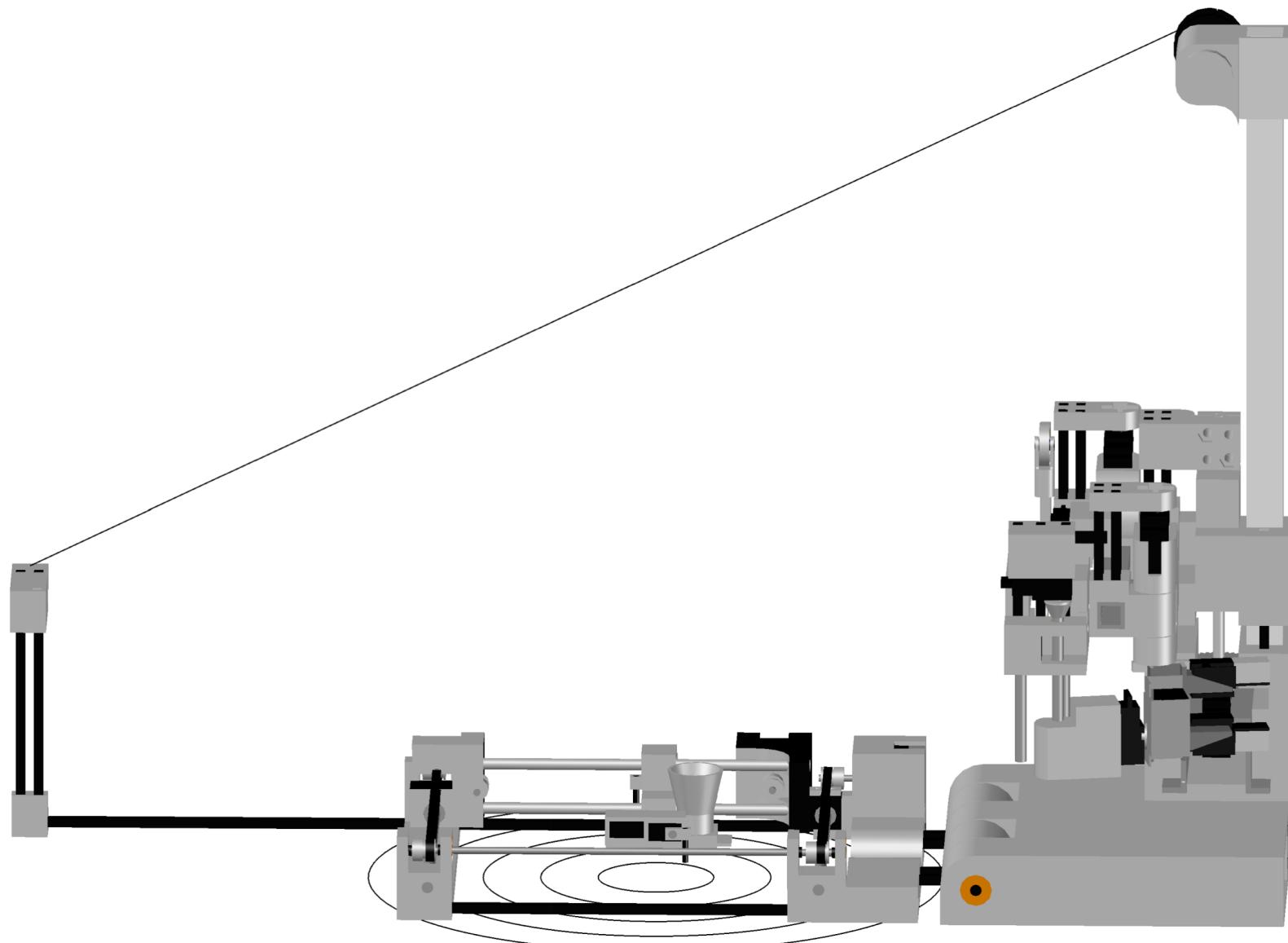
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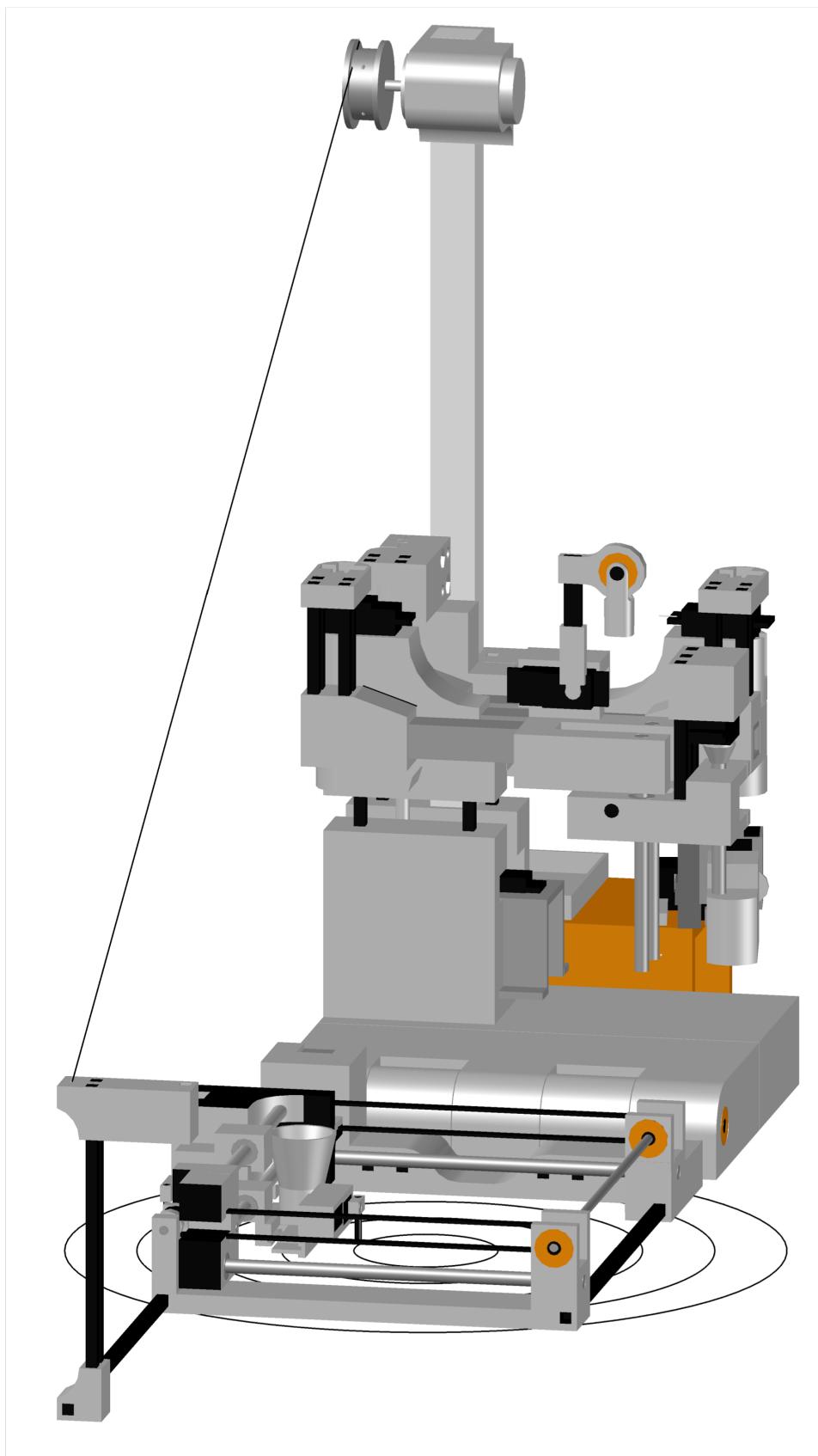
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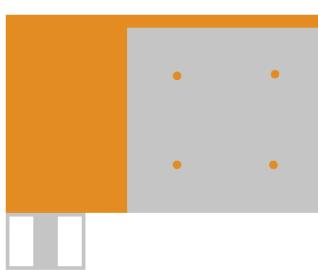
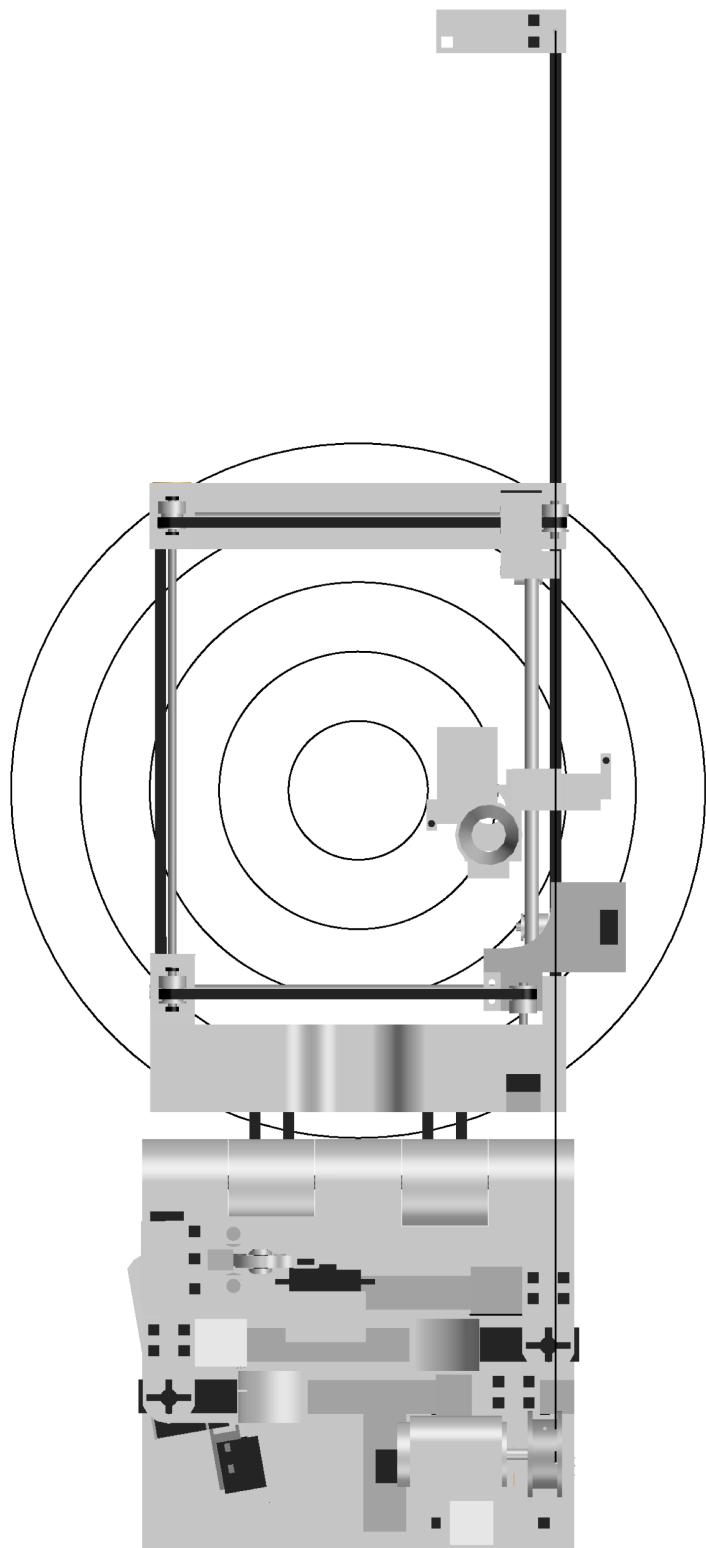
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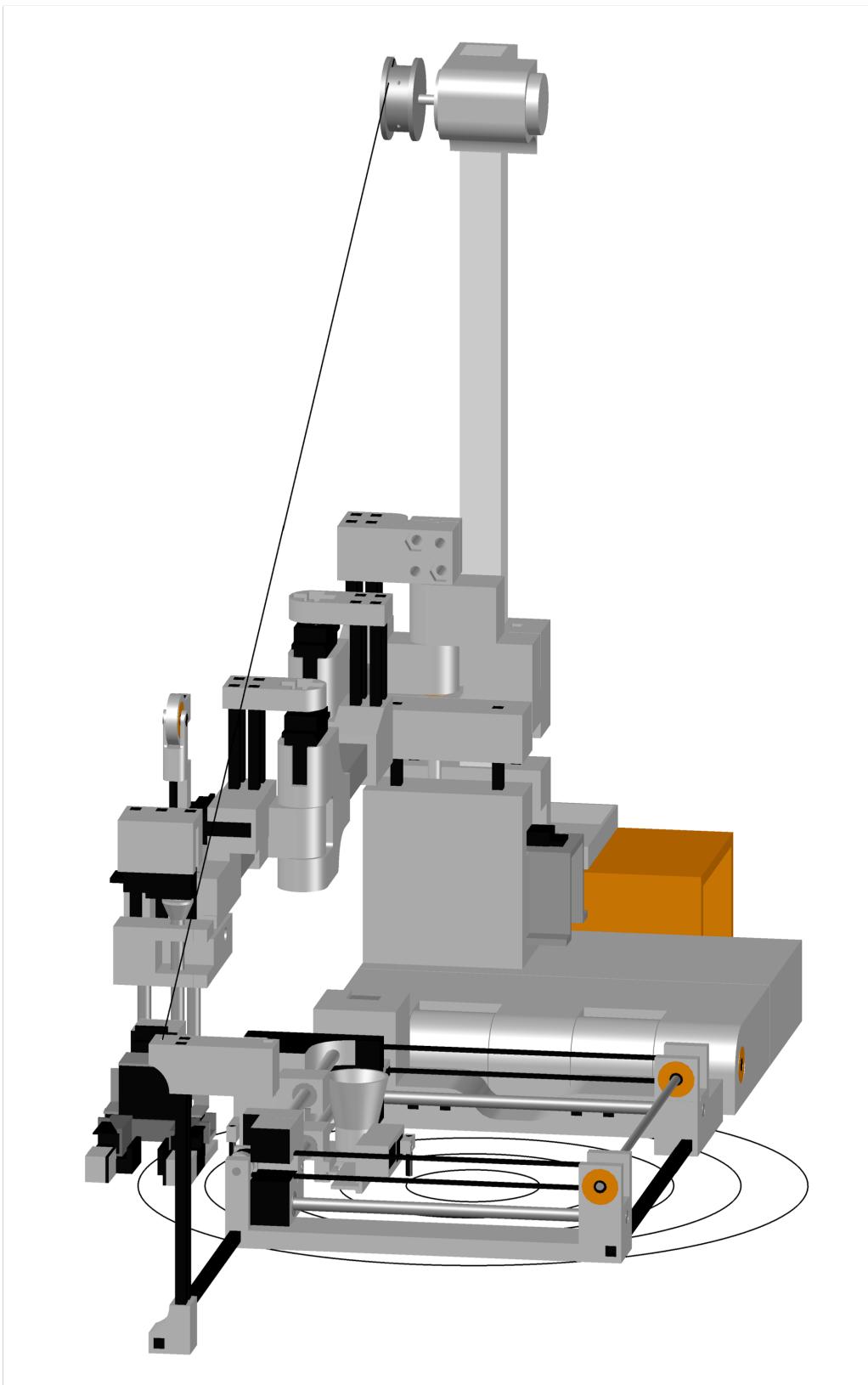
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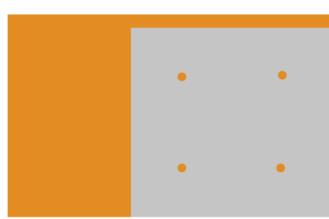
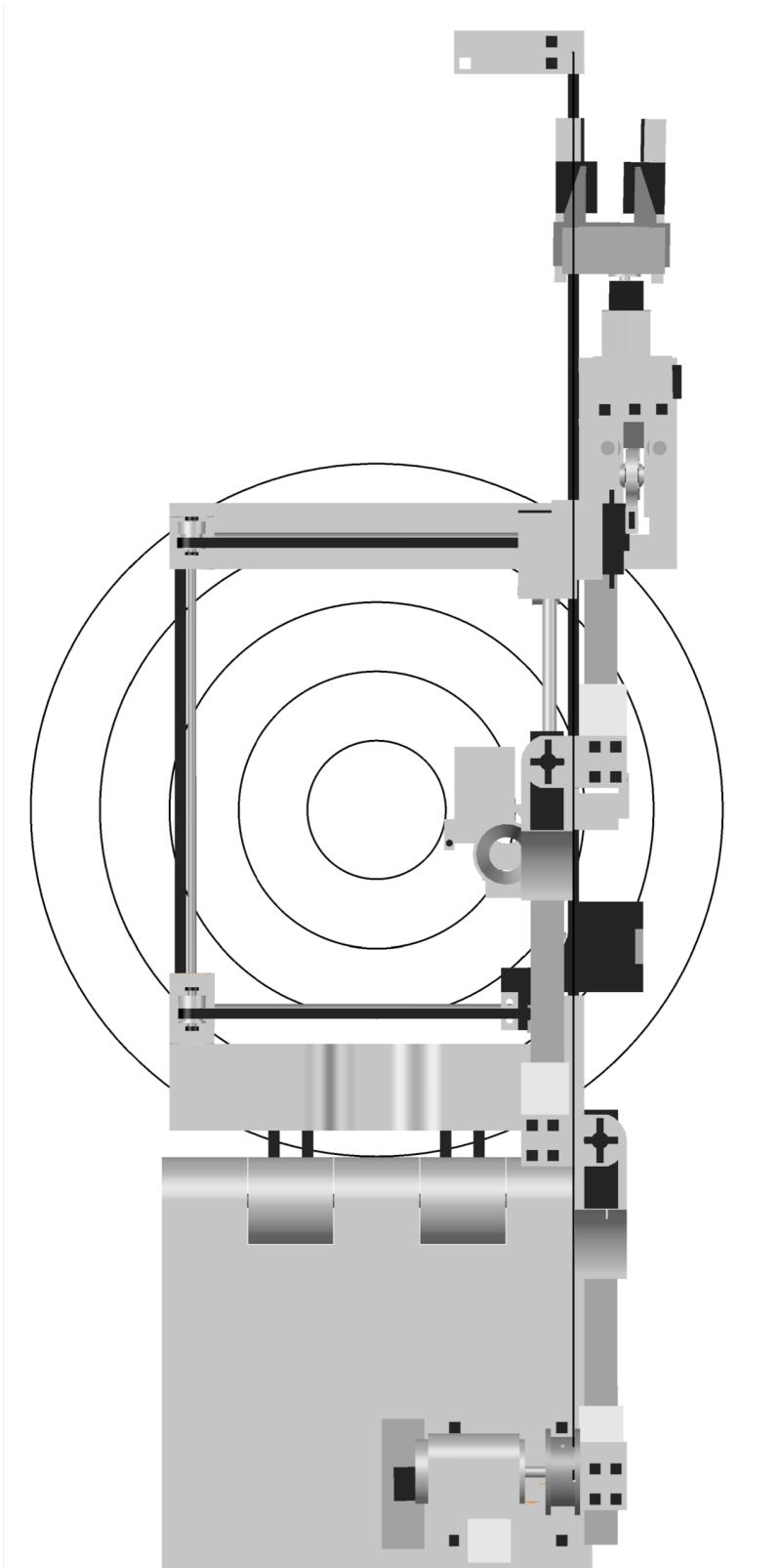
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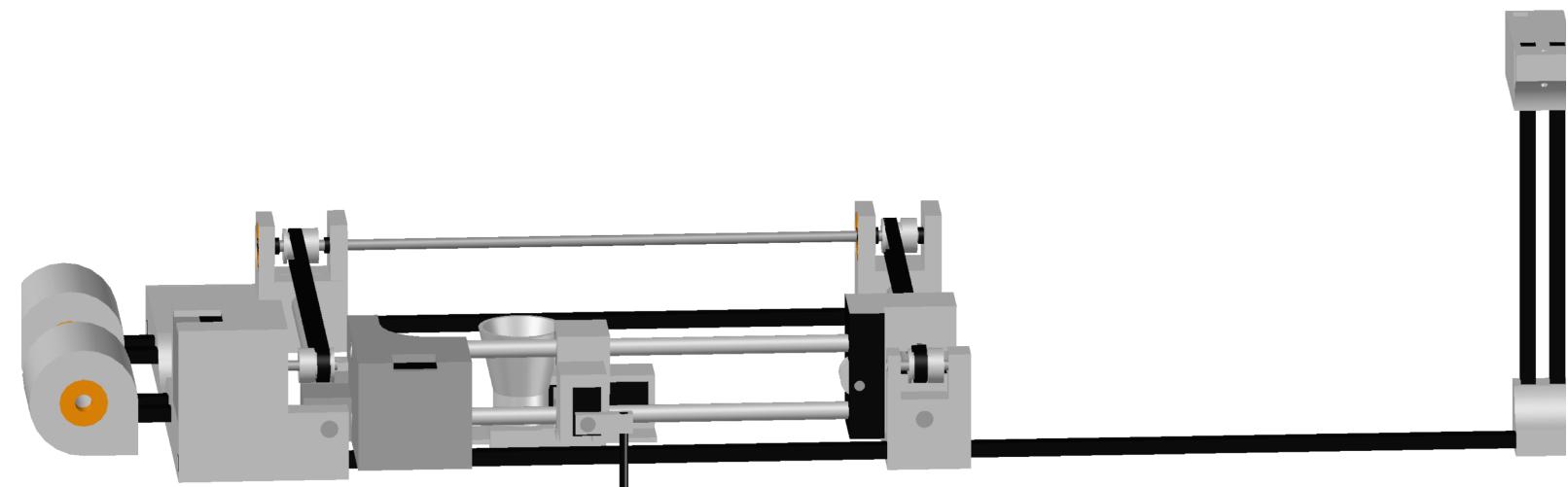
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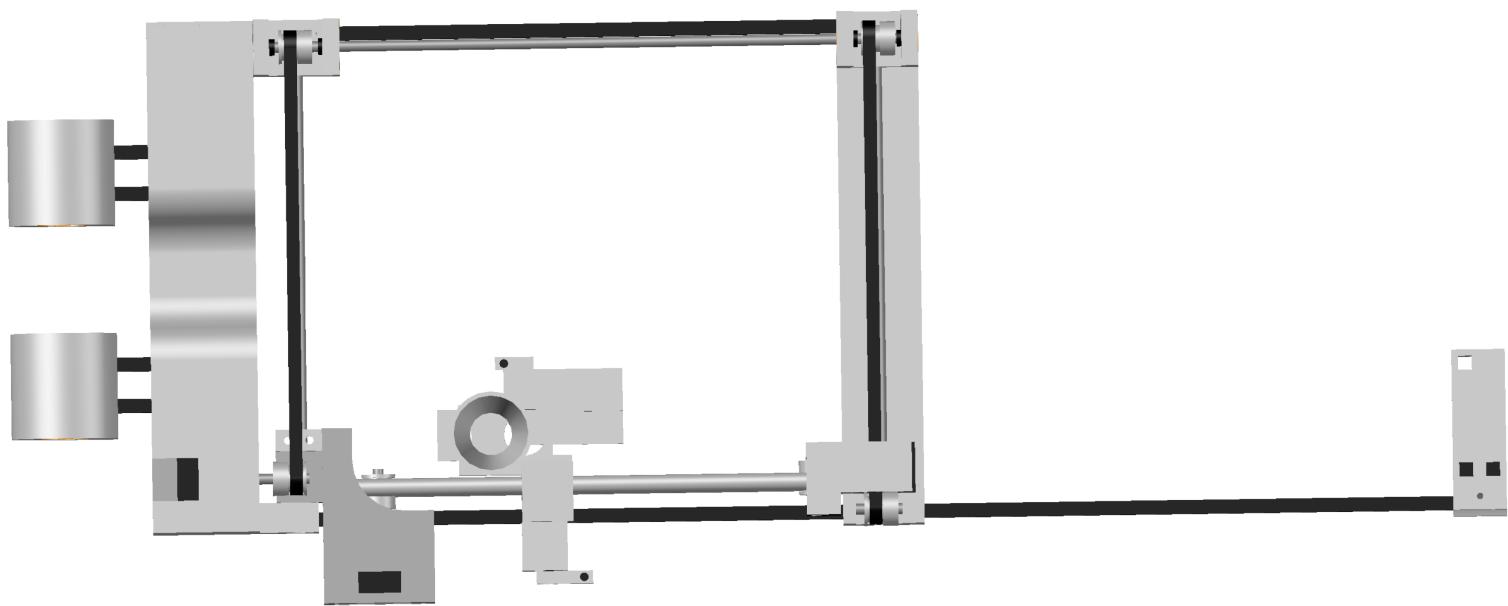
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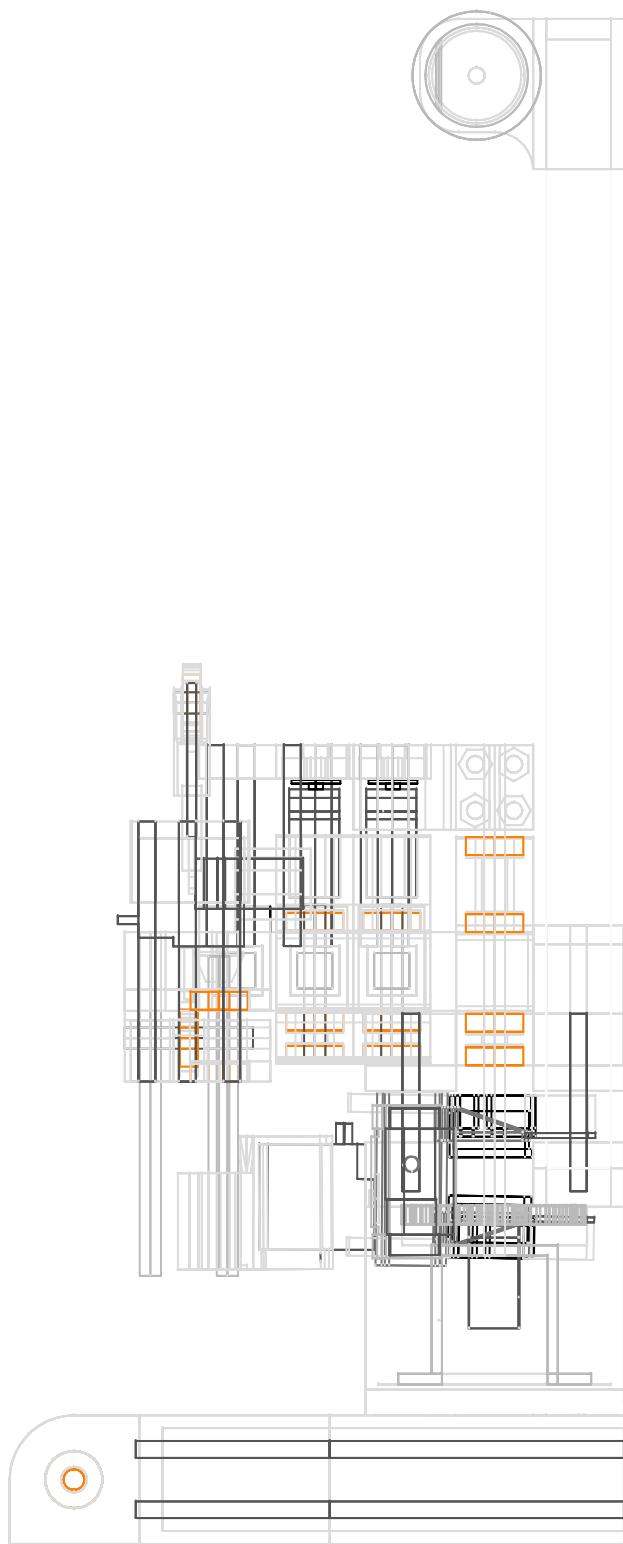
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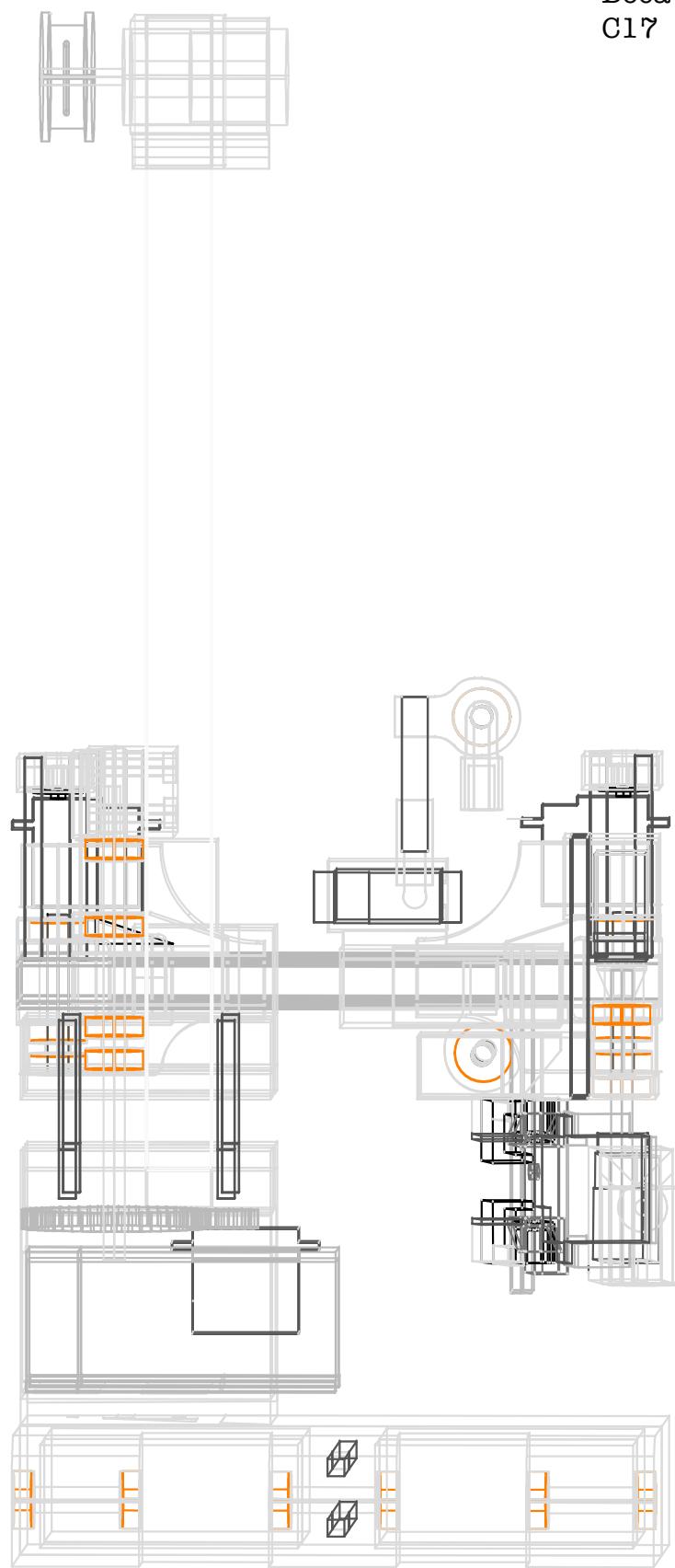
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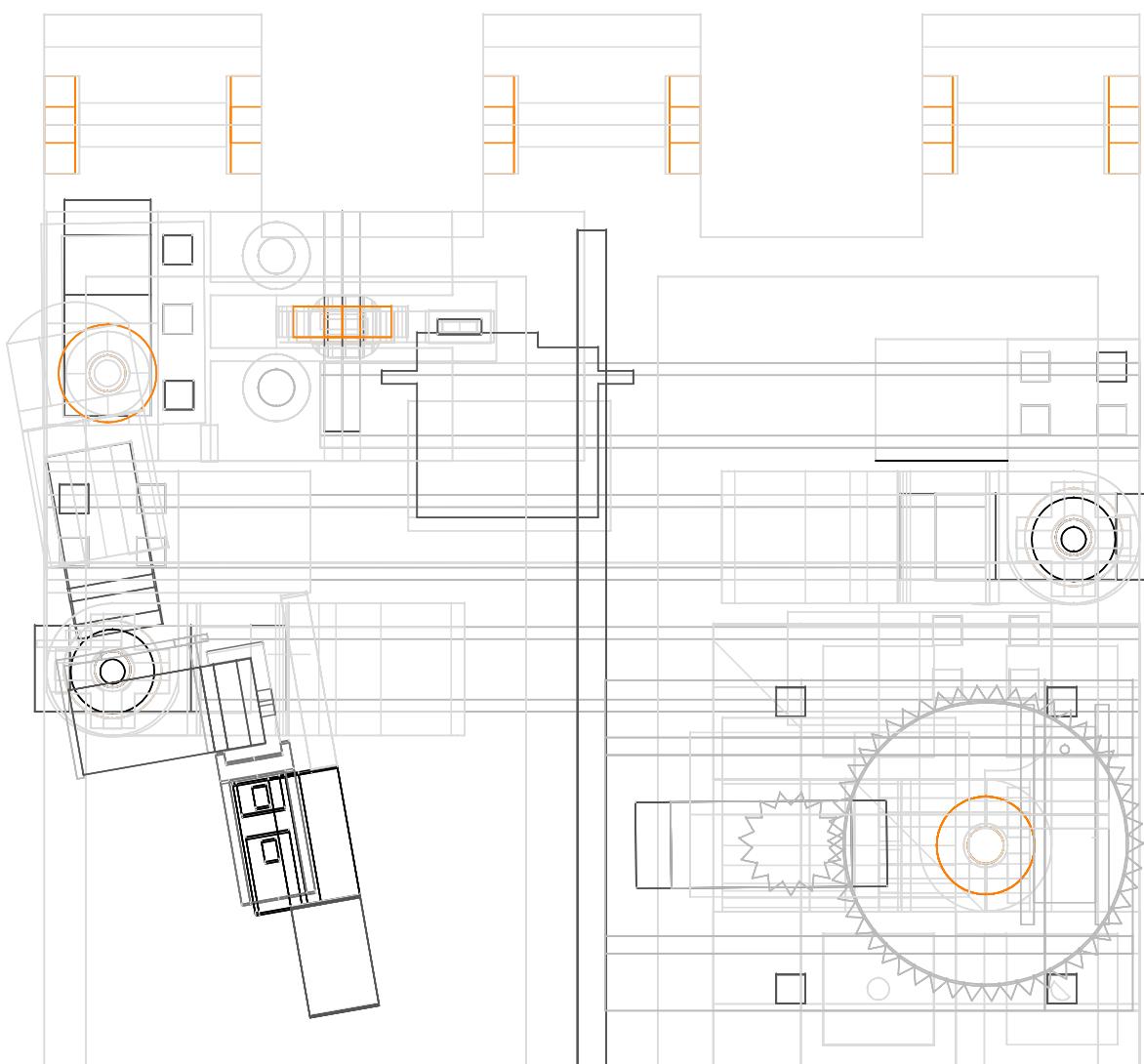
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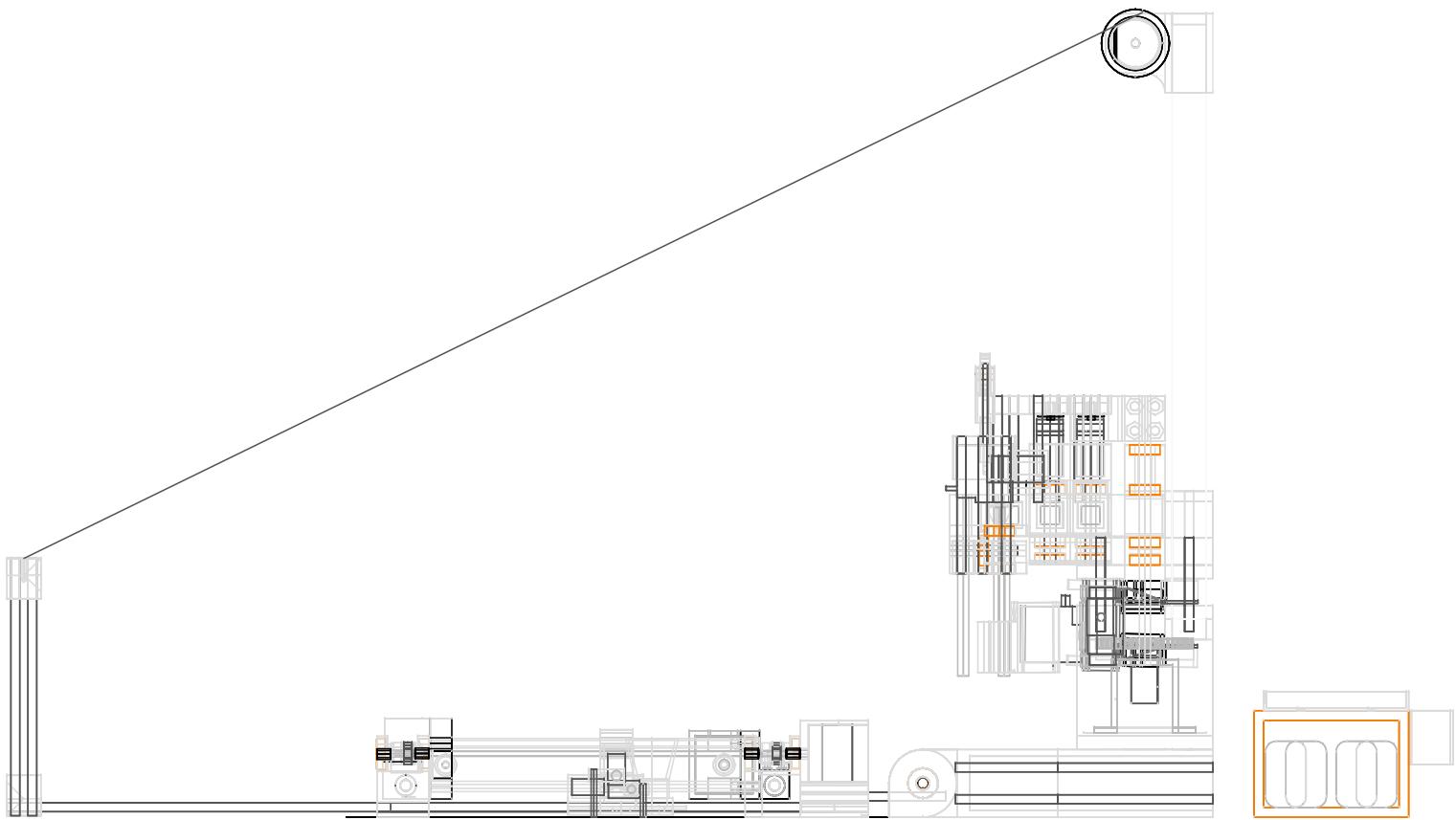
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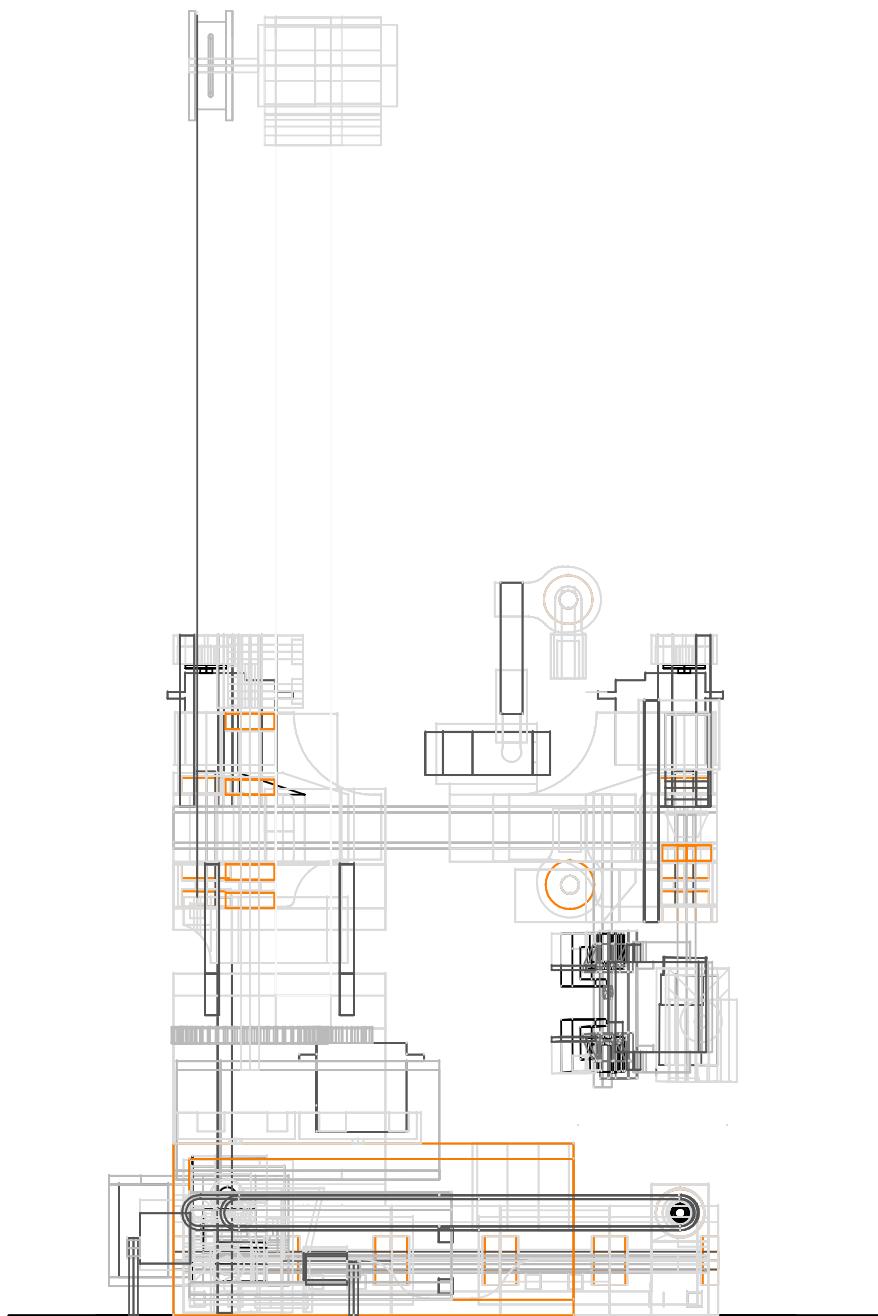
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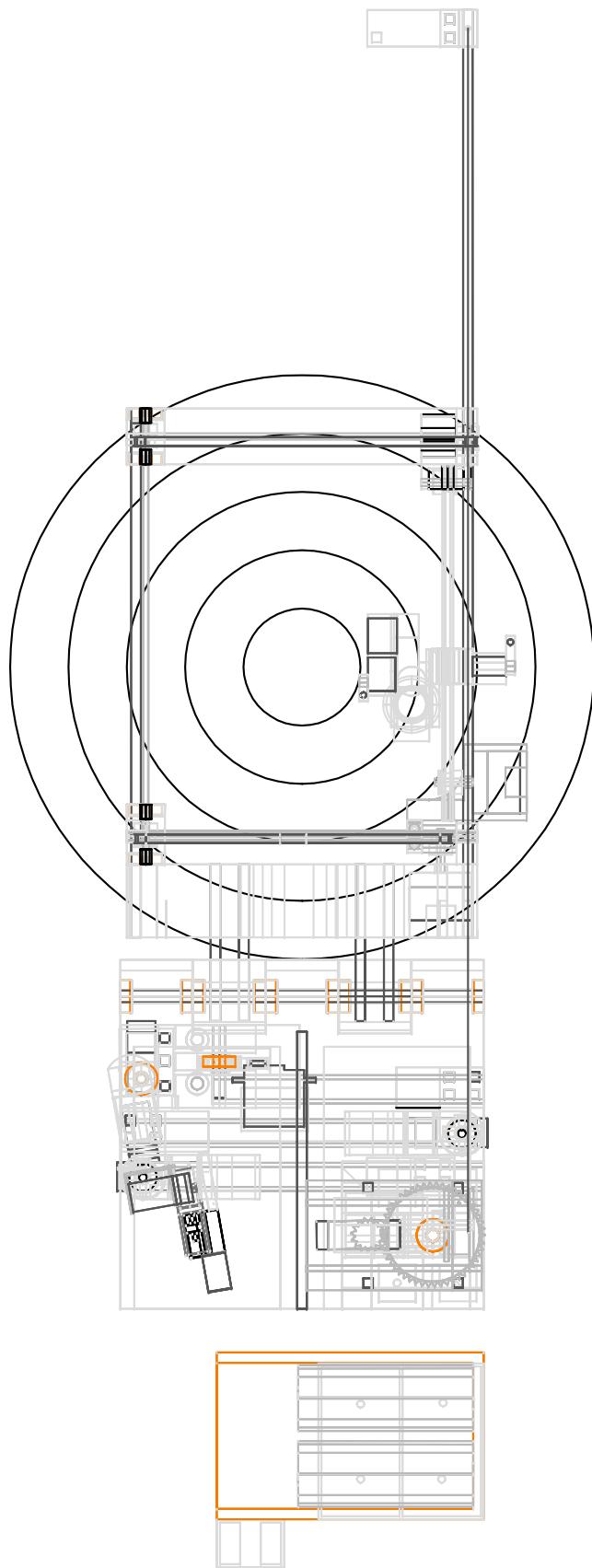
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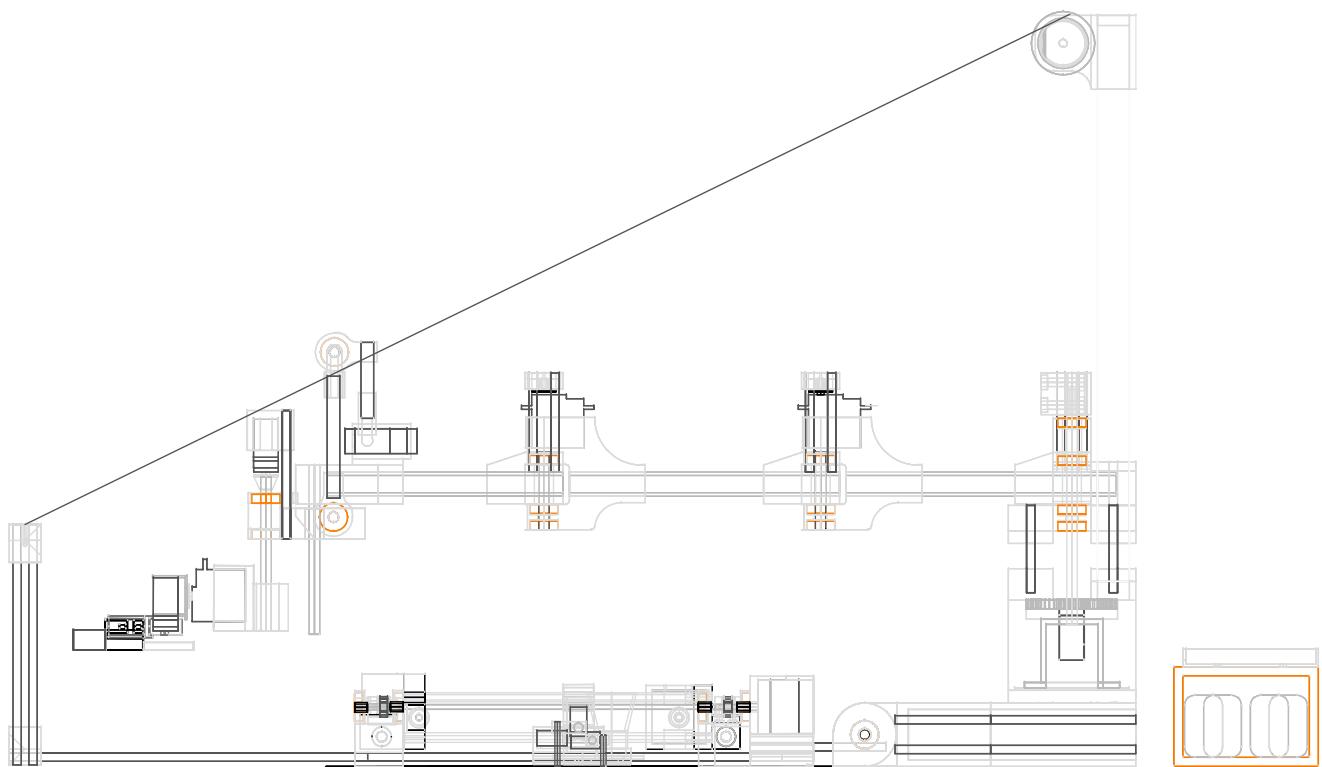
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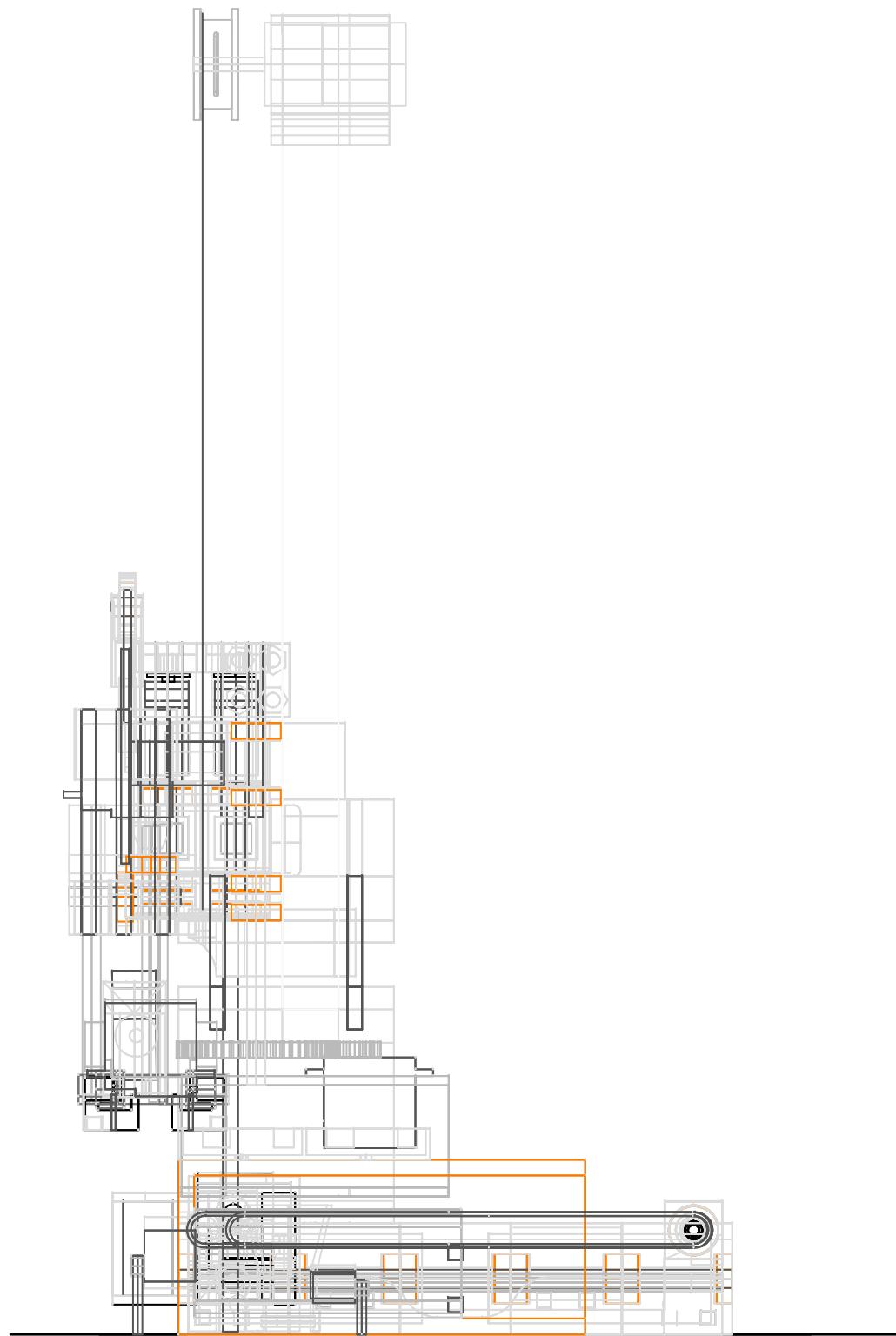
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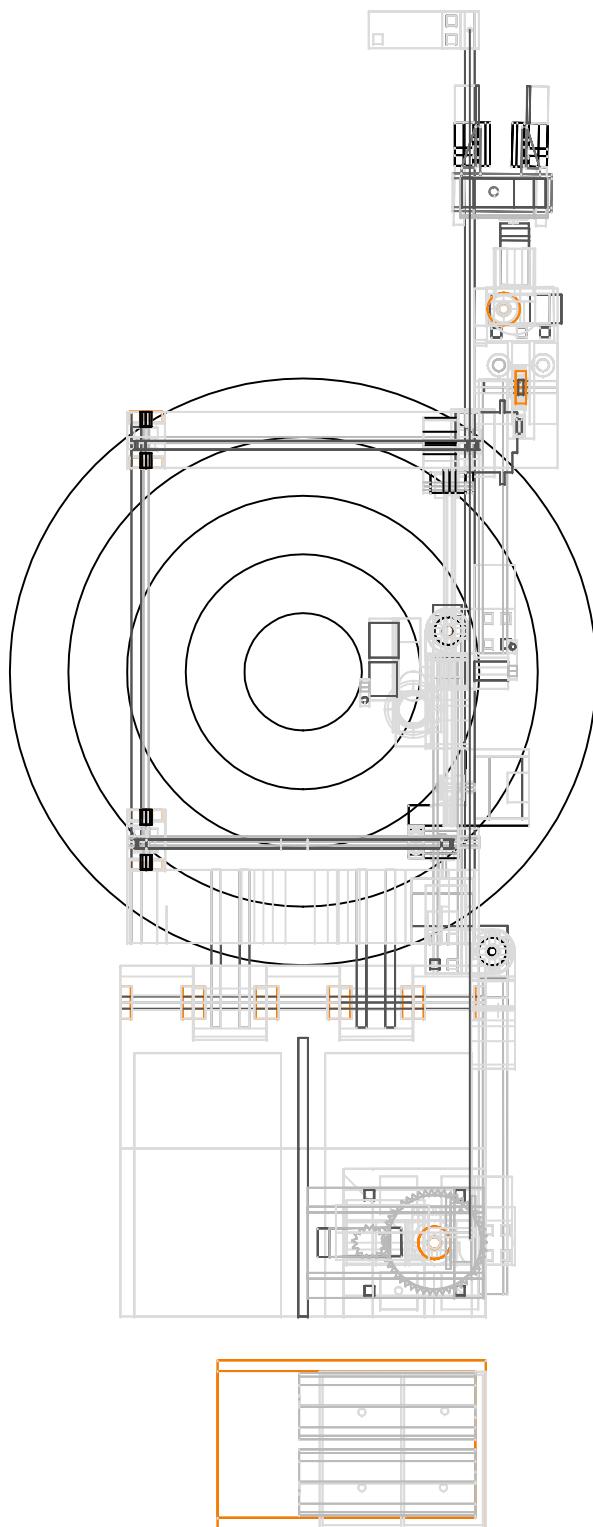
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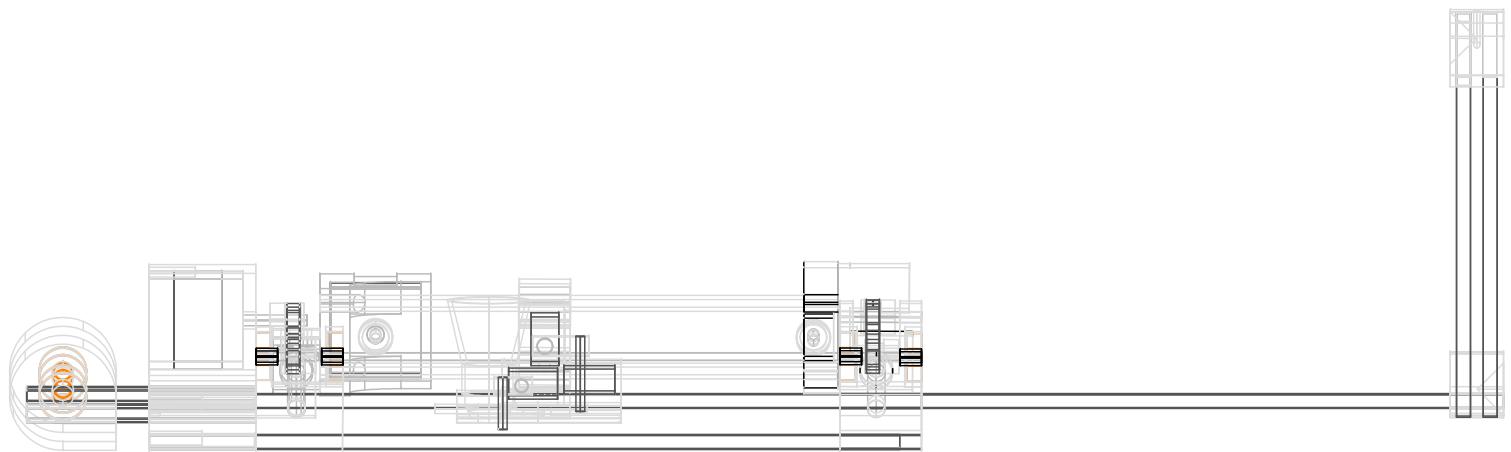
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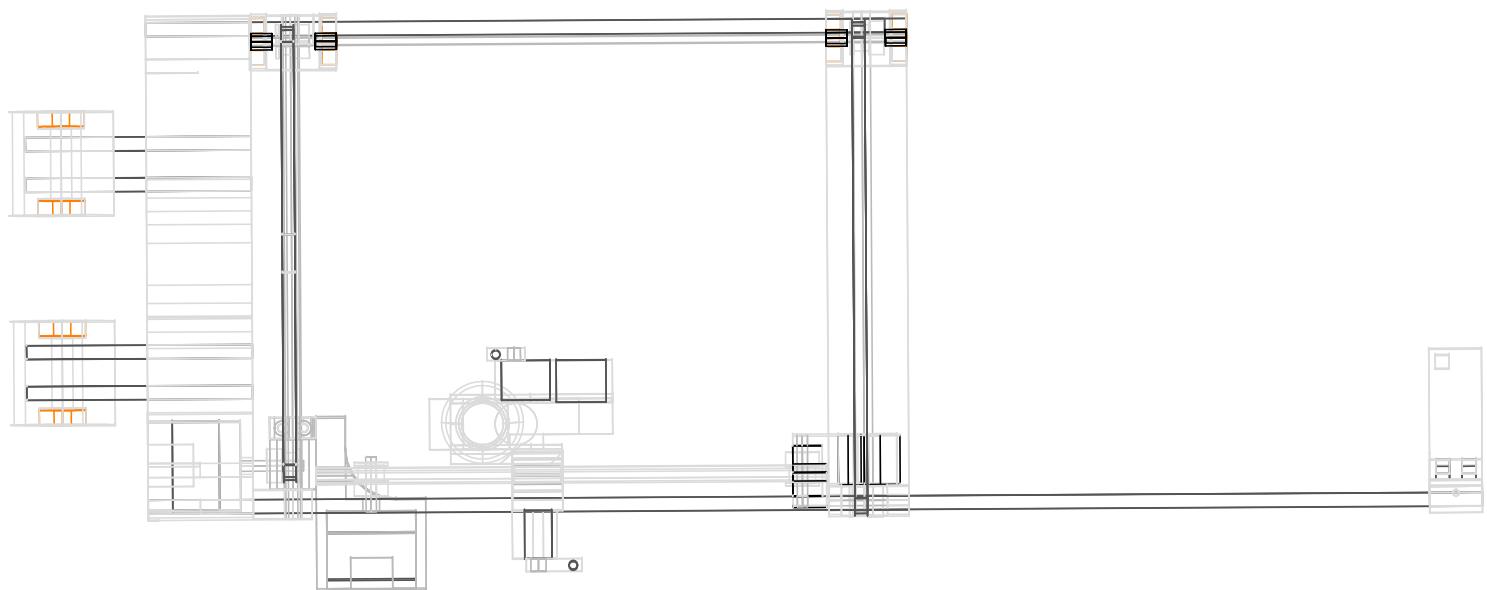
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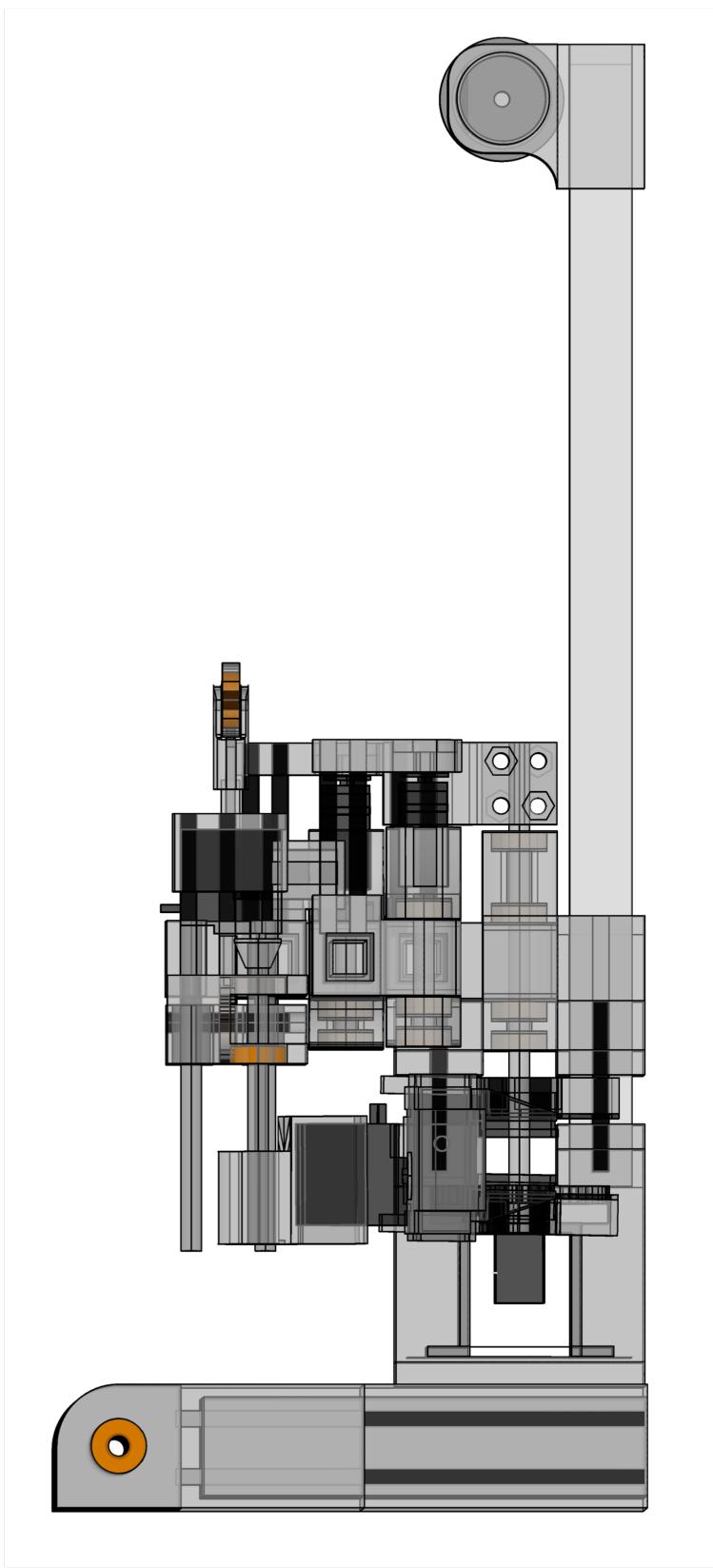
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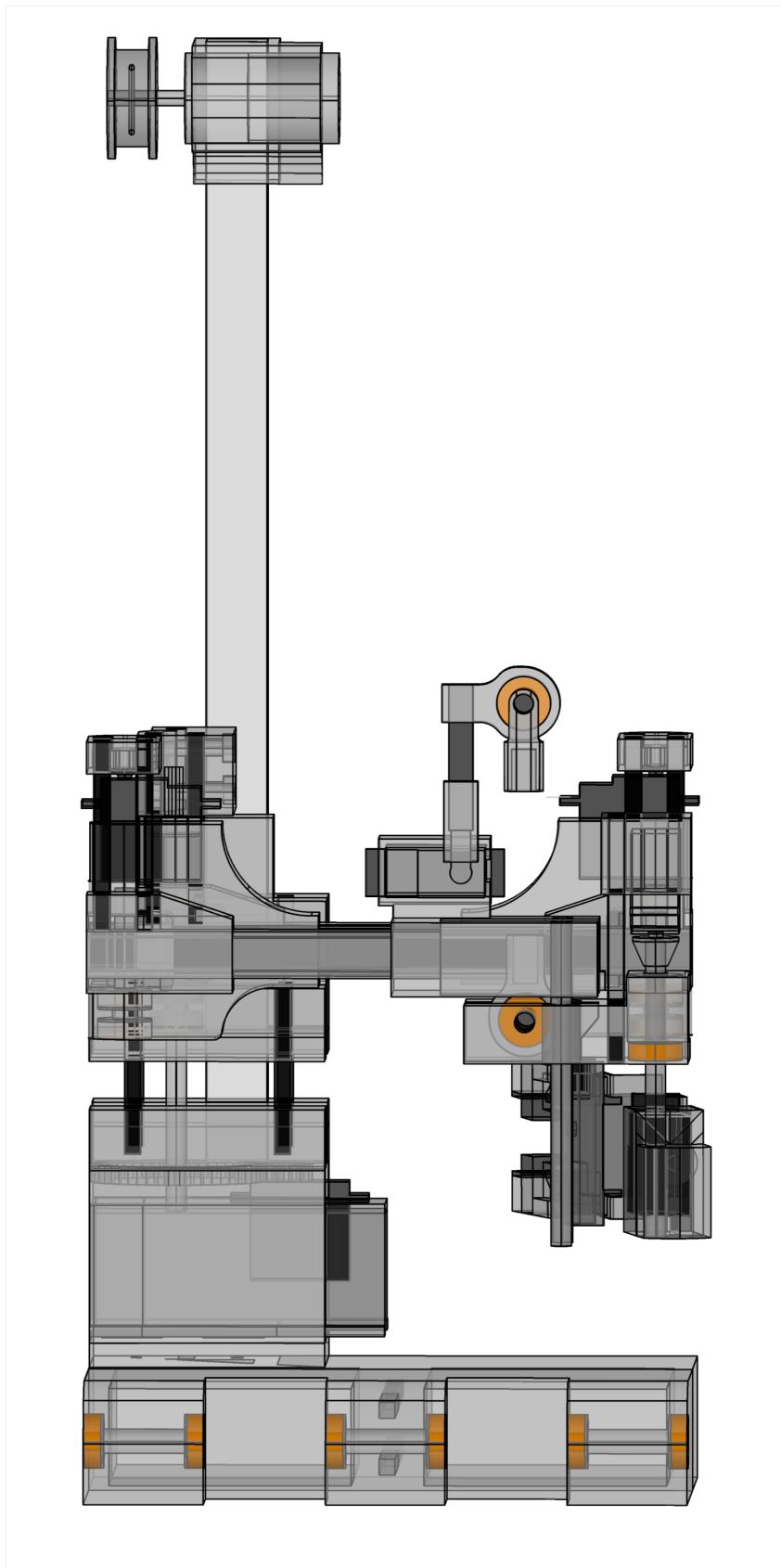
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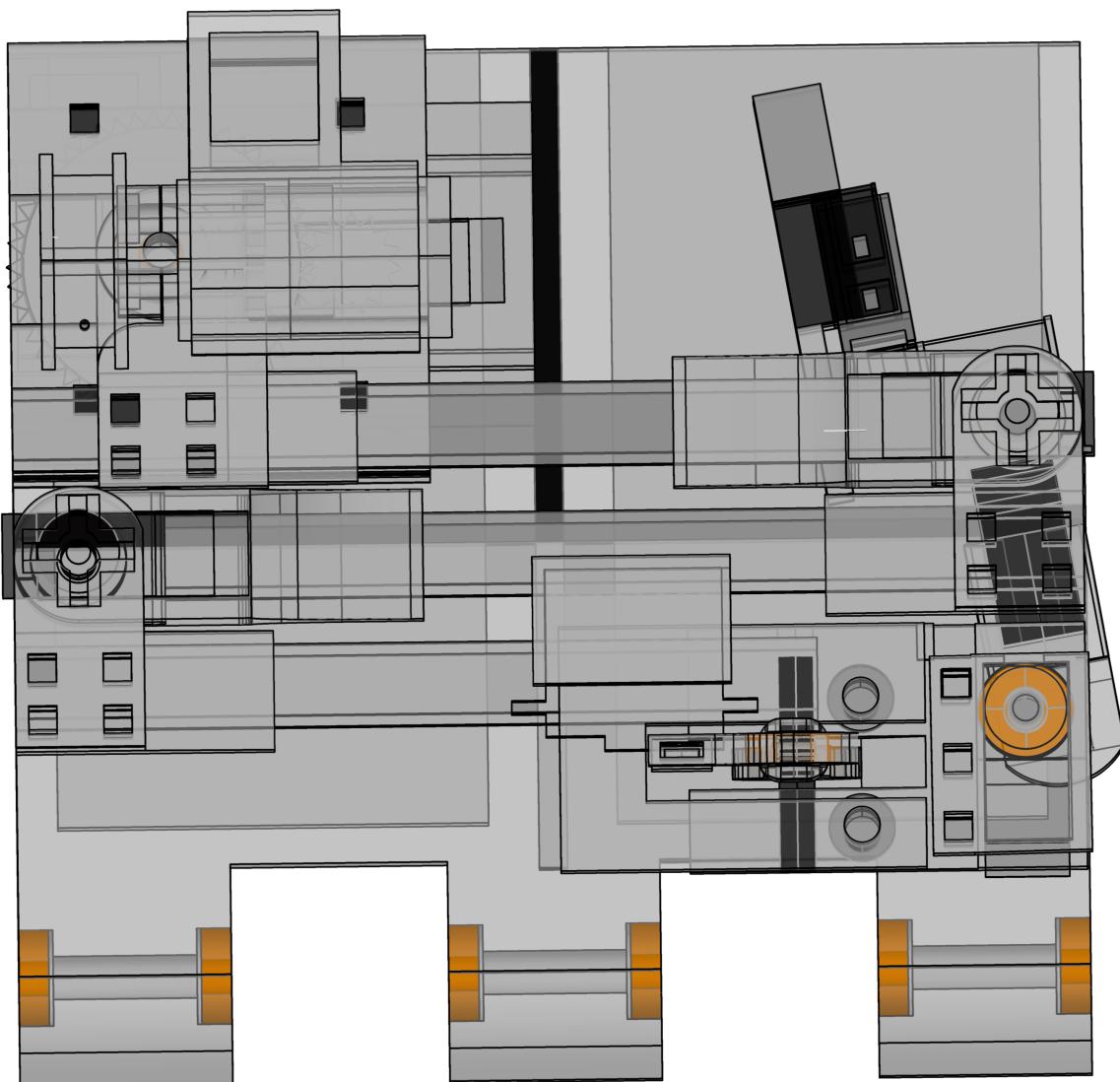
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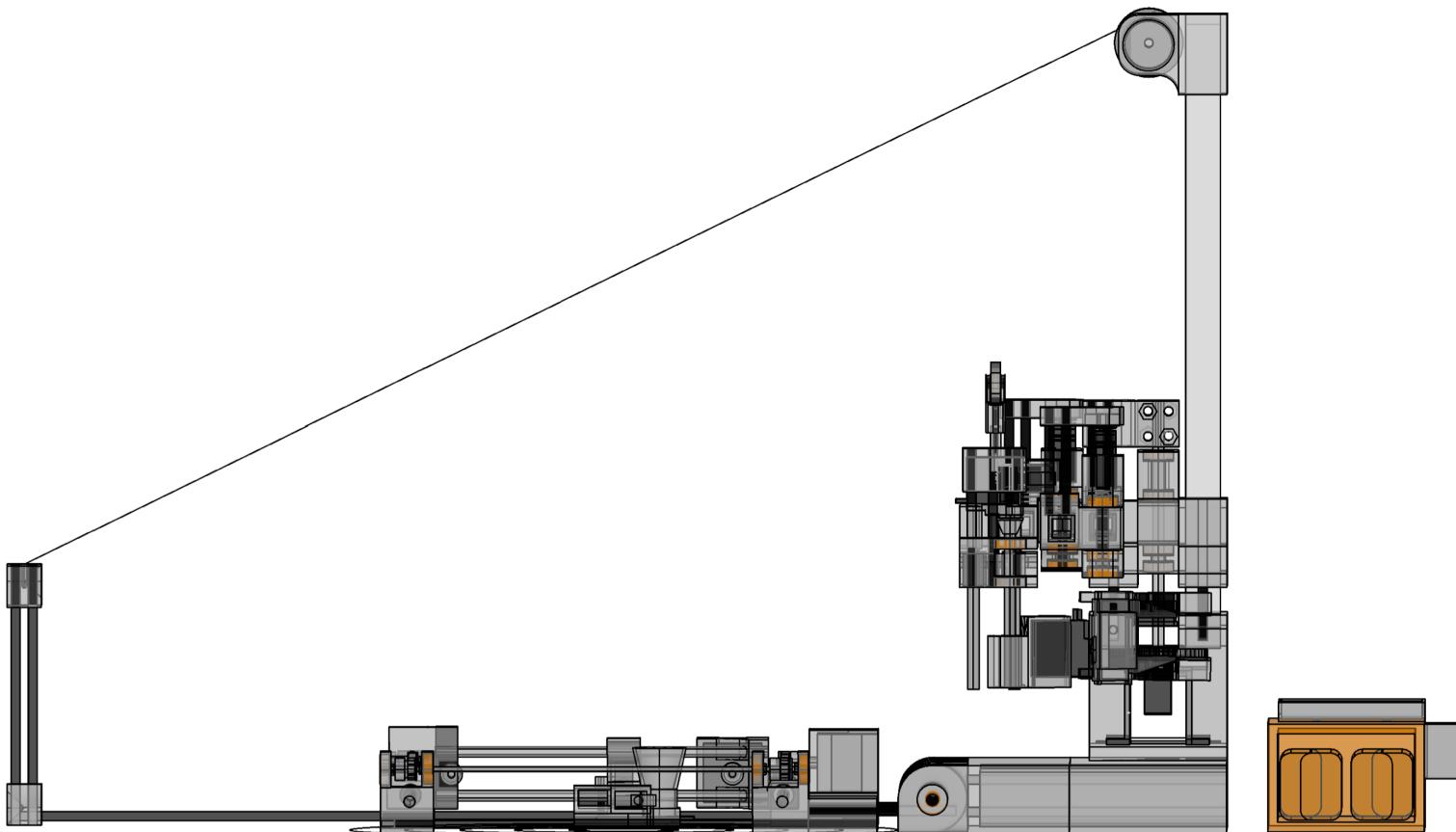
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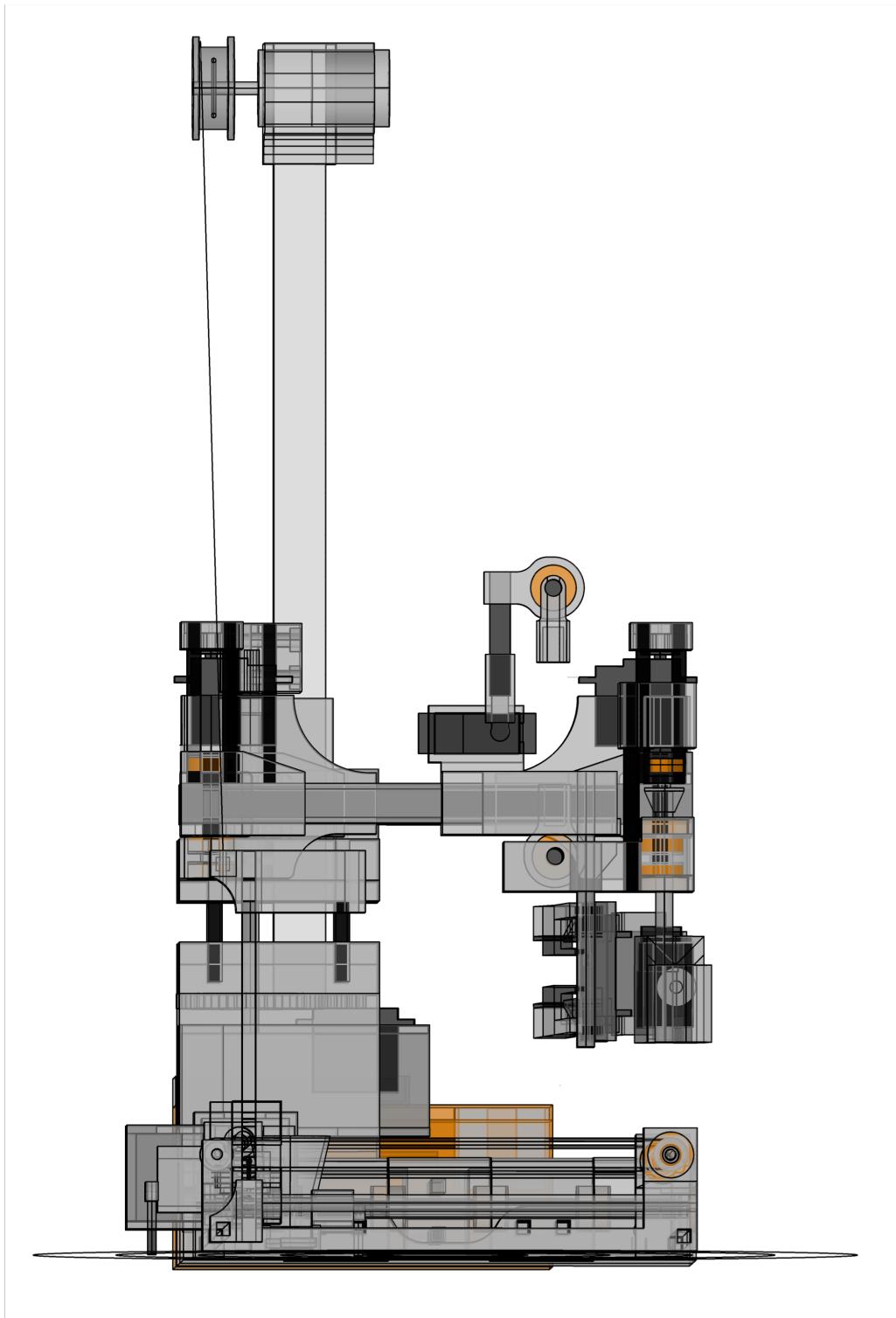
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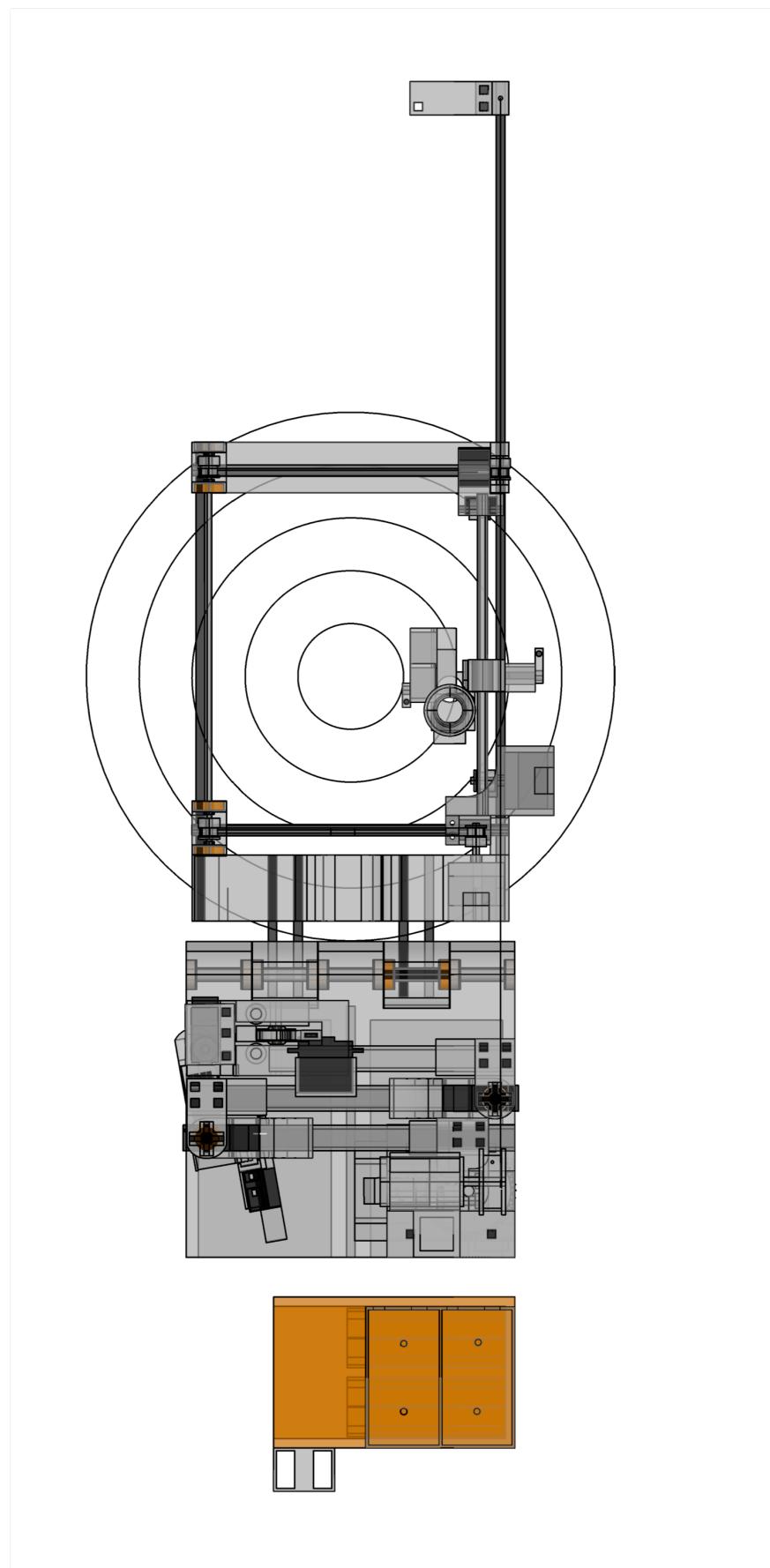
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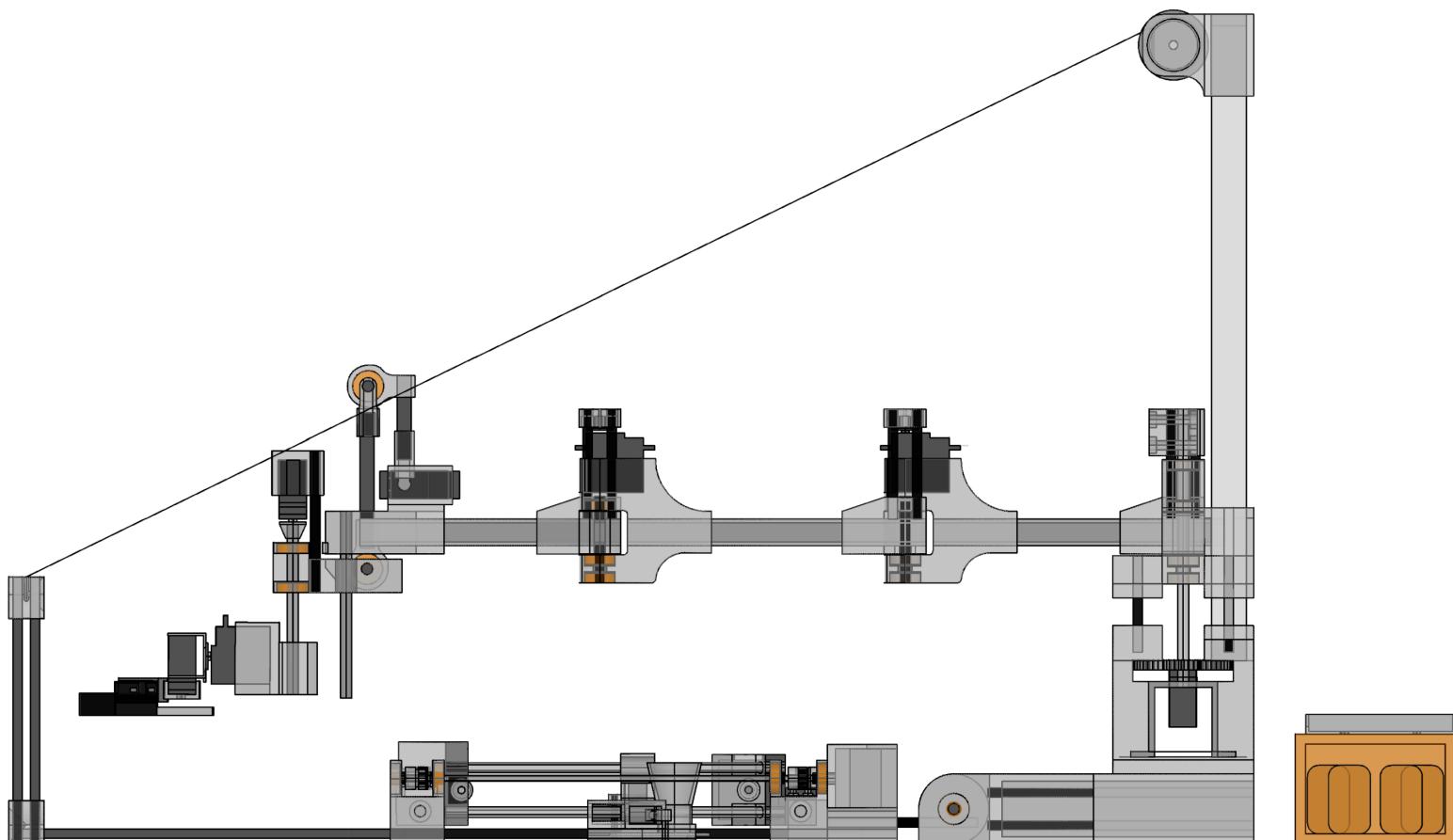
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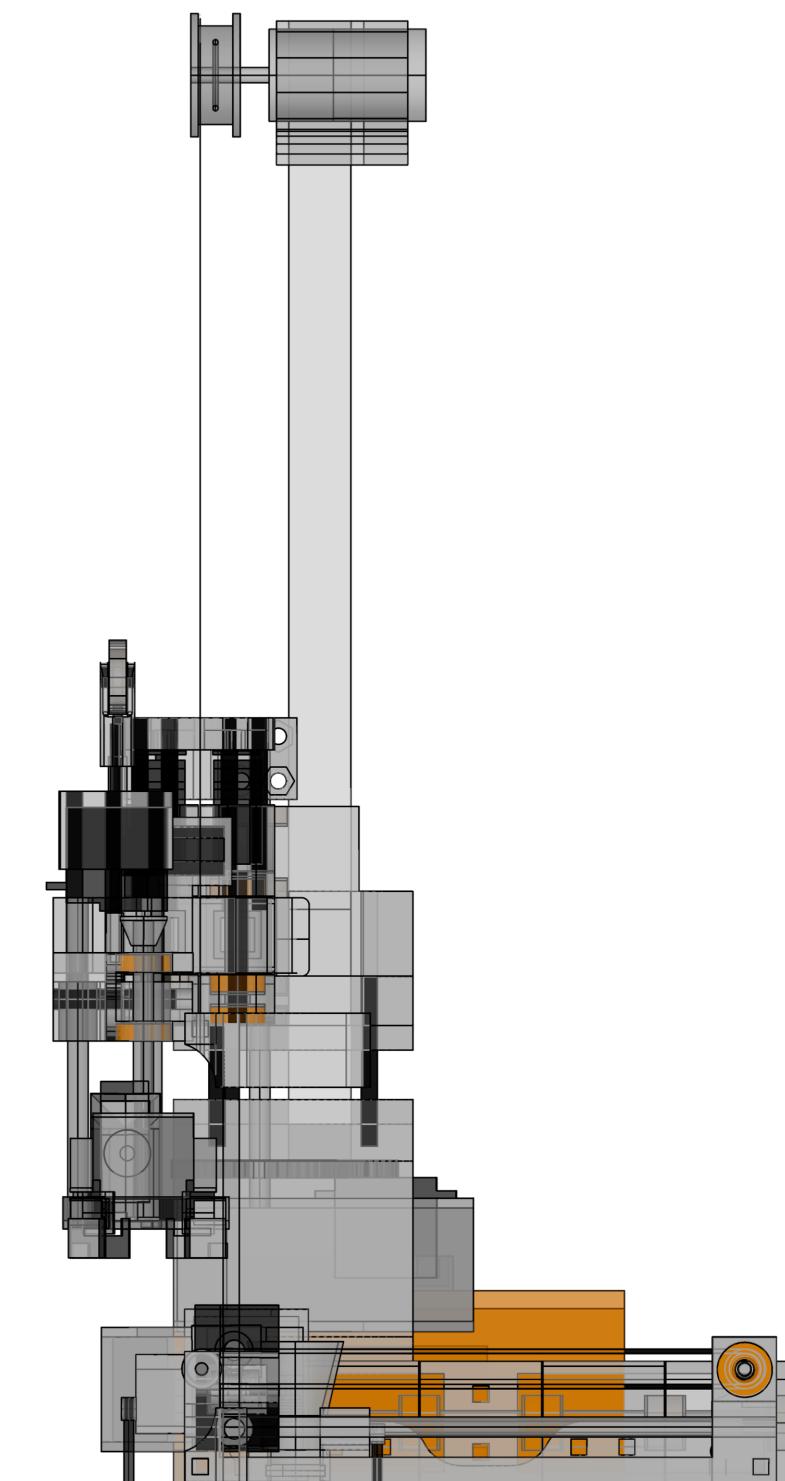


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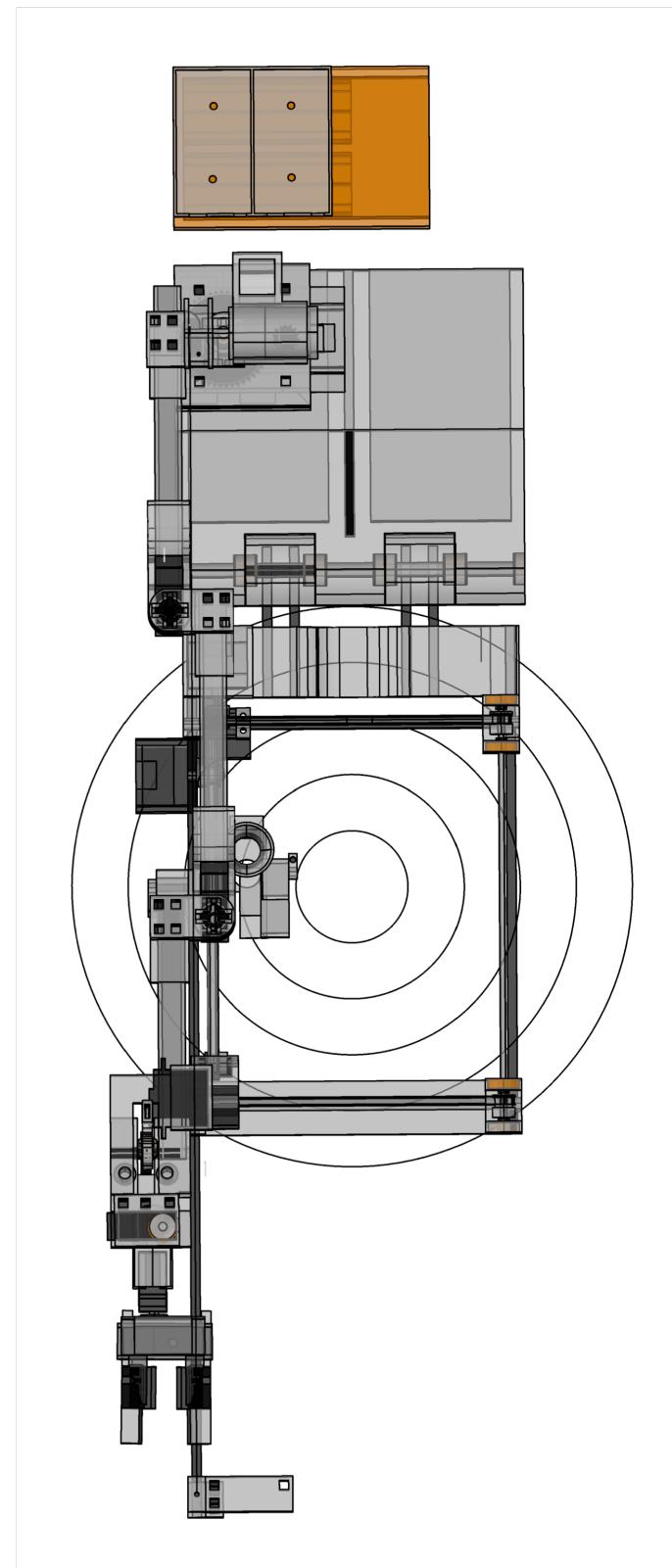


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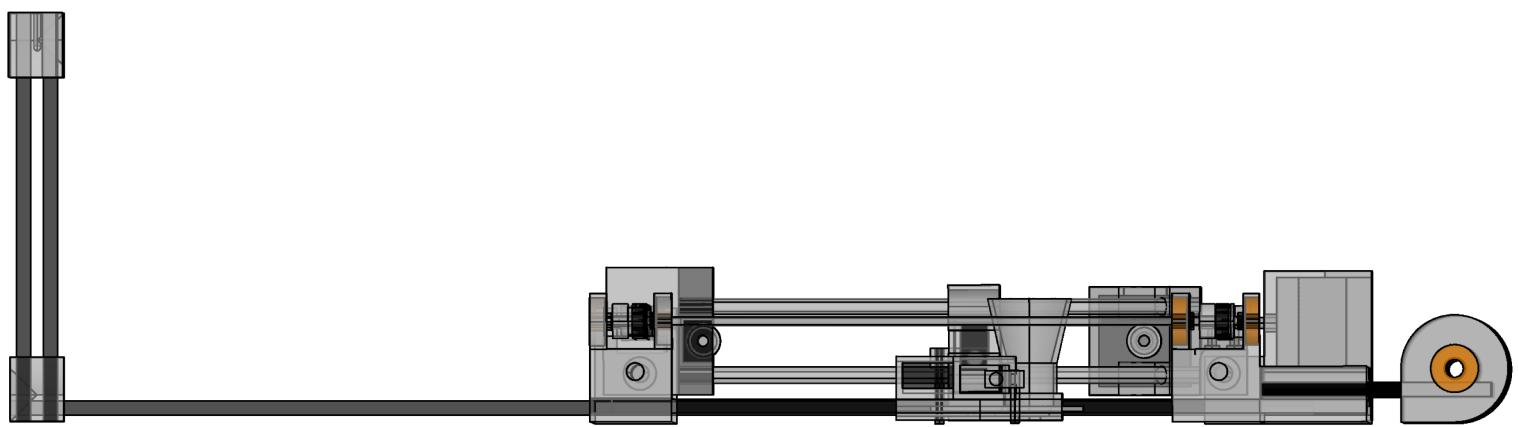




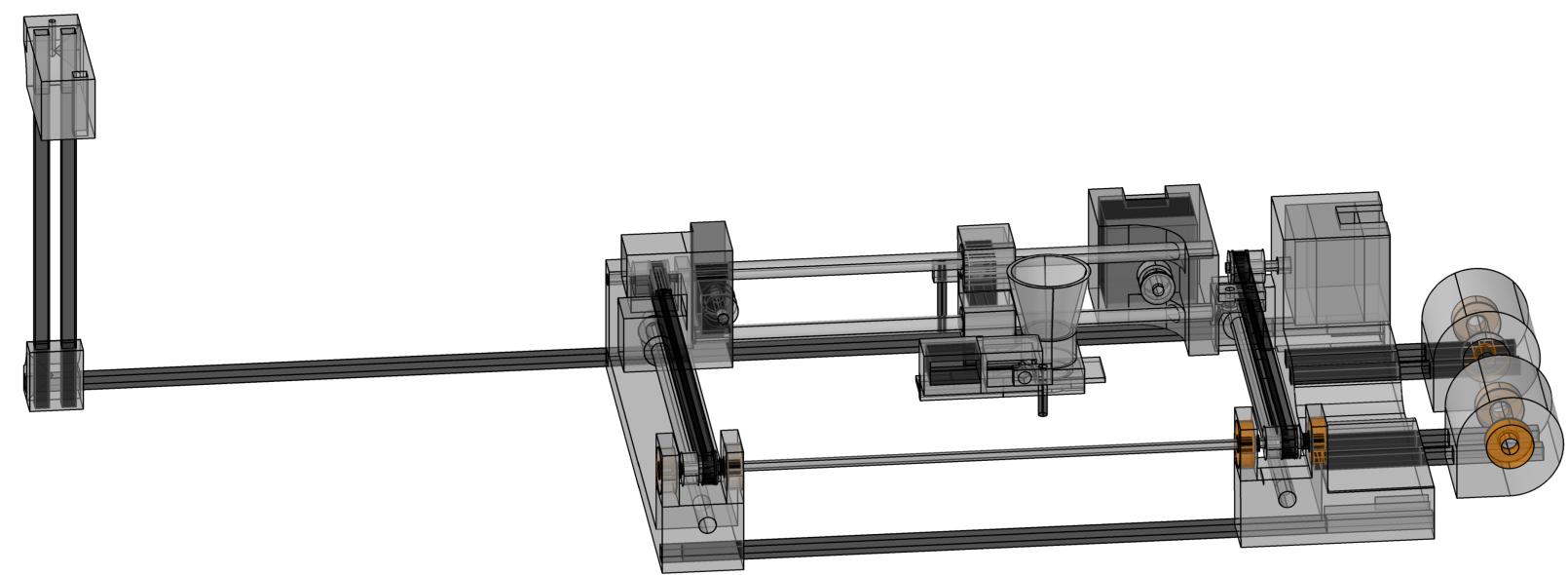
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