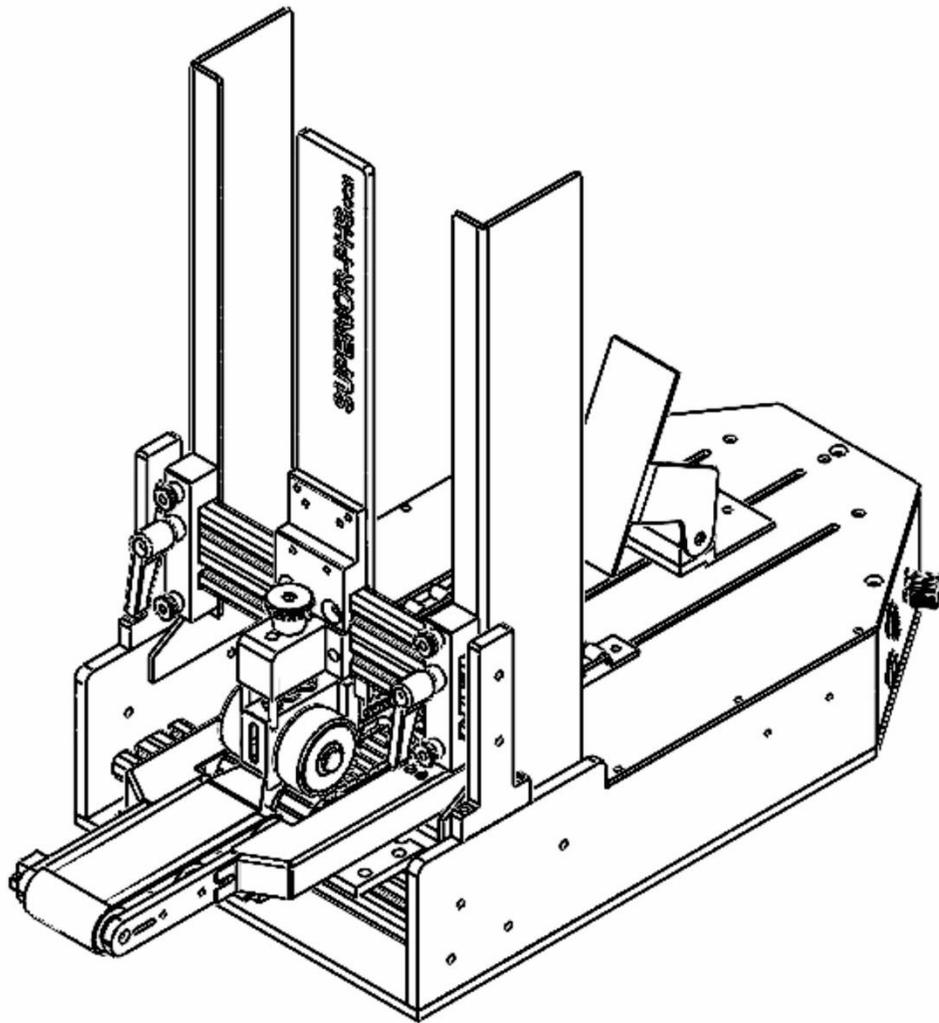


# USER MANUAL

## CX Friction Feeders

CX-9 [D]; Version PLC 1.0



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# Product Setup:

## New Product to Feeder:

1. *[If purchased with a Hold Down Spring Band, otherwise go to the next step.]*  
Loosen the adjustment screw to allow the Spring Band to float on the clear discharge belt. (Loosely)
2. Set the side guides to be the width of your product and lock them in place.
3. Set the back product wedge to the length of the product and lock it in place.
4. Raise the separator rollers by turning the knob CW.
5. Place a single sheet under the separator rollers and turn the knob CCW to bring the rollers down onto the product. Adjust so there is a small amount of resistance to the product as you try to pull it back.
6. *[If purchased with a Hold Down Spring Band, otherwise go to the next step.]*  
Place a single sheet under the spring band and apply slight finger pressure from the top as you tighten the adjustment screw.
7. Load a small stack into the hopper with the stack fanned at the nose. (This will allow the first few pieces not to block as they enter the separator assembly.)
8. Finish loading the hopper by placing square stacks of product into it.
9. Cycle the feeder so that one piece is in the discharge area.

FEEDER IS READY TO RUN

## SETUP References:

The two best rules of thumb for achieving a good setup are:

1. Generate a slight overhang of one product to the next as they leave the separator feed rollers. The discharge belt will complete the product separation as this section runs faster than the feed belts.
2. The product back wedge should allow for a few pieces on the feed belts, ready to move into the separator, but then hold the rest of the stack off the feed belts in the hopper.

Various product thicknesses and coatings can change slightly the rules above.

Visit <https://www.superior-phs.com/set-up-videos> for assistance with different products.

(You can look at any feeder we sell, as all our feeders are friction-based.)

## Maintenance:

### Belts:

Periodically clean the two feeder belts with a 70% or higher isopropyl alcohol. We suggest dampening a cloth, and with your finger, apply pressure to the belts as it's running. Then, find a dry section and repeat the process.

### Rollers:

The CX feeders have one-way bearings inside the separator rollers. Periodically advance the rollers so you are not wearing the same roller area. (This will extend the life of the roller.)

### Machine:

Periodically blow the feeder off with compressed air. Paper dust should be clear so as not to impede the performance.

## Operating:

### READY/FAULT modes:

When first powered, the feeder will be in a NON-READY mode. (The red fault indicator is solid indicating a stopped condition. Only jog functions are active.) Hit the STOP/RESET button to make the feeder READY. The CYCLE button and External Cycle are active and no light is on the panel LED.

If a fault occurs during operation, the panel LED will light and the feeder will move to a FAULT mode. Only the jog function is active in FAULT mode. To reset the FAULT mode back to READY mode, correct the indicated fault, and push the STOP/RESET button.

### Faults:

The CX-9 [D] has two fault possibilities.

1. Miss Detect – If, while the feeder is attempting to dispense a single feed, a second cycle trigger is received, the feeder will fault and show on the indicator as a flashing ON/OFF every ¼ Sec.

2. Time Out Detect – Upon receiving a cycle start, the sheet sensor will be monitored over 24” of belt travel. If the sensor stays blocked or open during that distance, a time-out fault will be initiated and the indicator will flash ON/OFF every 1 Sec.

## Parts:

### Order Placing:

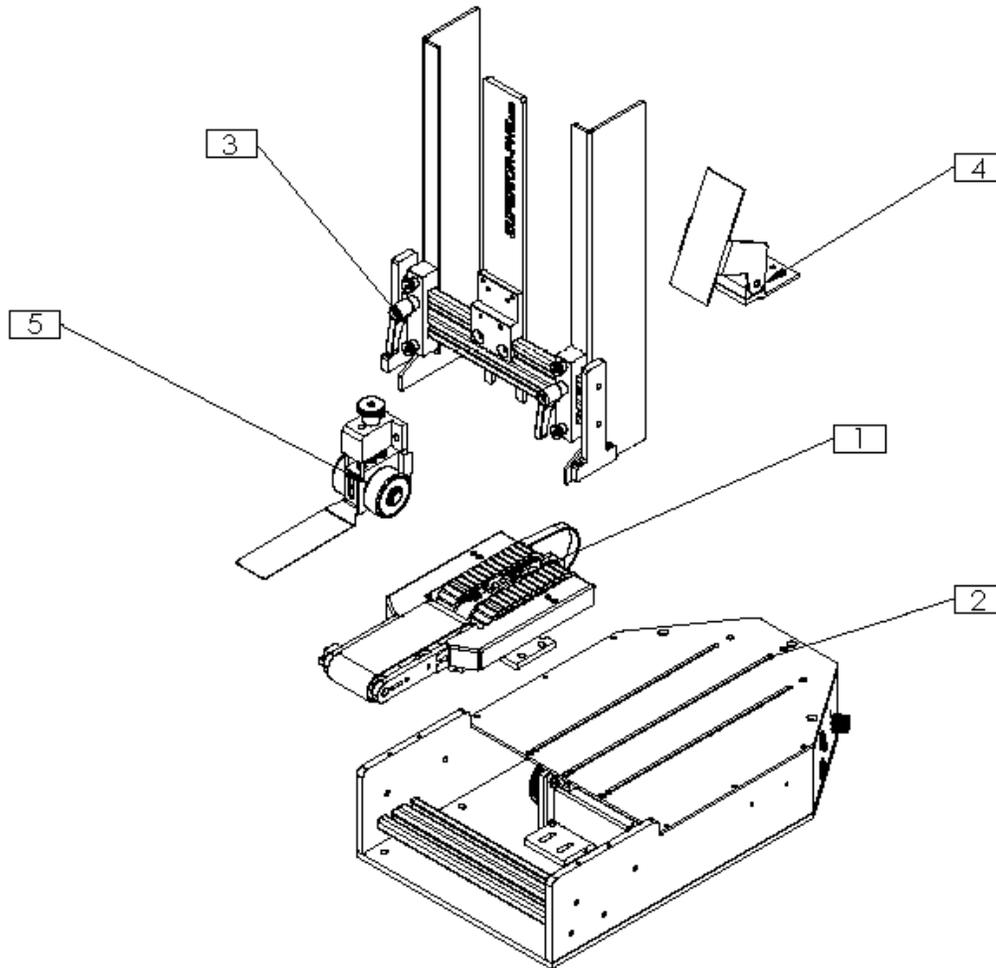
Contact Superior-PHS for all parts needed.

Our contact information can be found at: [www.superior-phs.com](http://www.superior-phs.com)

### Illustrated parts breakout:

See the following pages:

# CX-9



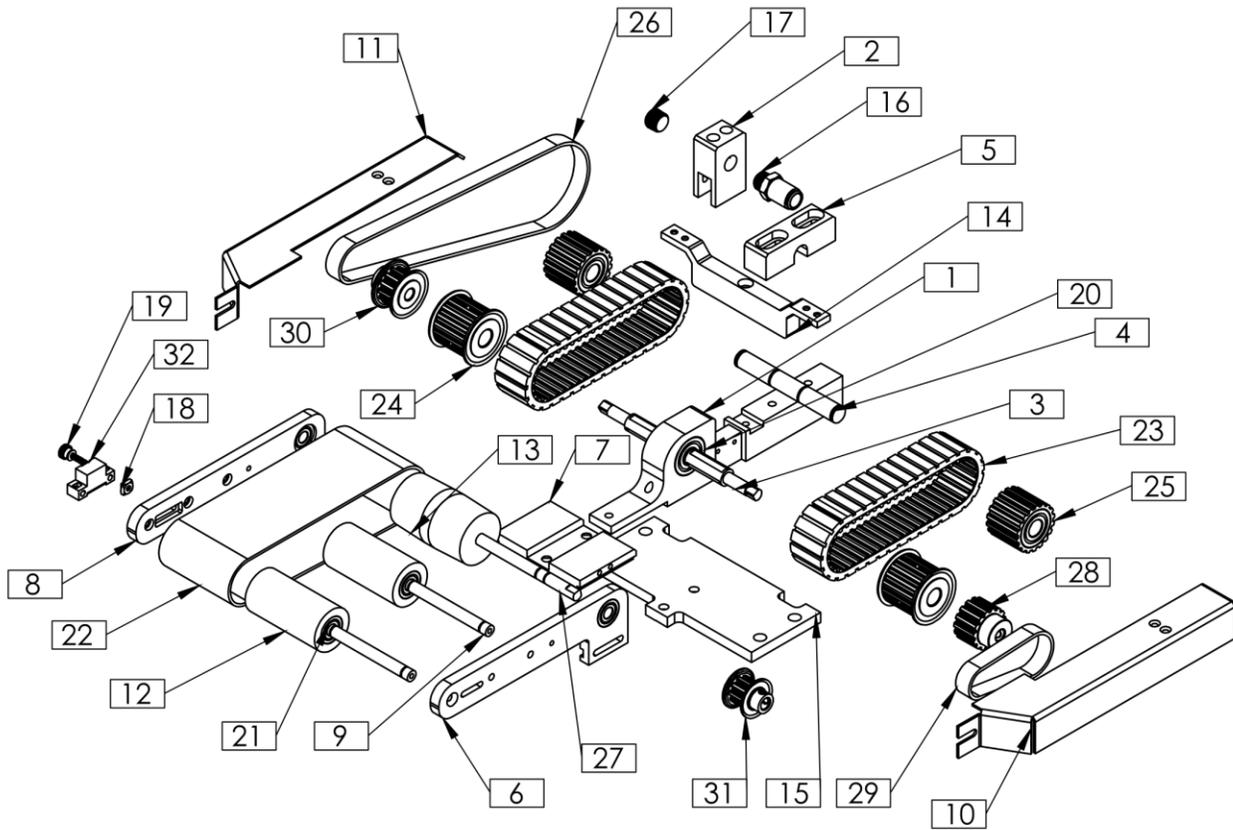
ITEM	PART	DESCRIPTION	QTY
1	400690	CARRIAGE	1
2	400691	CX-9 CHASSIS	1
3	400692	CX9 Hopper Frame	1
4	400693	CX9 Wedge	1
5	400686	SEPARATOR	1

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Assembly Number:  
**500050**

# CARRIAGE



ITEM	PART	DESCRIPTION	QTY
1	303300	CARRIAGE RAIL	1
2	303301	VACUUM BLOCK	1
3	303302	DRIVE SHAFT	1
4	303303	IDLER SHAFT	1
5	303304	IDLER TENSION BLOCK	1
6	303305	LT DISCHARGE RAIL	1
7	303306	DISCHARGE RAIL BASE	1
8	303307	RT DISCHARGE RAIL	1
9	303308	DISCHARGE IDLER SHAFT	2
10	303309	LT CARRIAGE COVER	1
11	303311	RT CARRIAGE COVER	1
12	303313	DISCHARGE IDLER ROLLER	2
13	303314	DISCHARGE DRIVE ROLLER	1
14	303315	COVER SUPPORT	1
15	303316	CARRIAGE MOUNT PLATE	1
16	350802	VACUUM INLET	1

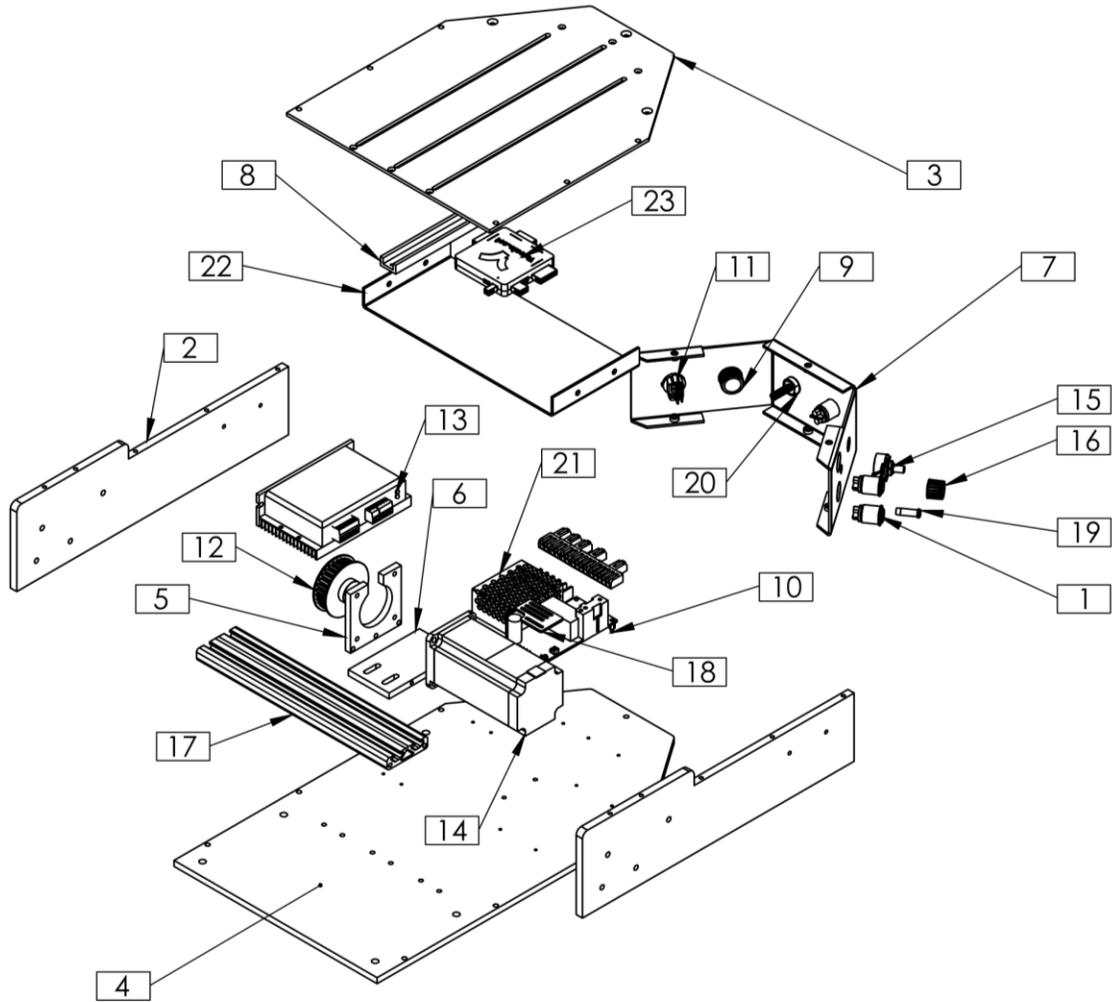
ITEM	PART	DESCRIPTION	QTY
17	350803	PLUG	1
18	350804	NUT	1
19	350805	KNURLED THUMB SCREW	1
20	100135	BEARING	6
21	100683	BEARING	6
22	350902	CLEAR BELT	1
23	311029	FEED BELT	2
24	350800	PULLEY	2
25	350801	IDLER PULLEY	2
26	100196	TIMING BELT	1
27	303312	DISCHARGE DRIVE SHAFT	1
28	350806	TIMING PULLEY	1
29	350807	TIMING BELT	1
30	350808	TIMING PULLEY	1
31	350809	TIMING PULLEY	1
32	350872	SHEET SENSOR	1

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Assembly Number:  
**400690**

# CHASSIS



ITEM	PART	DESCRIPTION	QTY
1	301381	PUSH BUTTON	3
2	303322	SIDE FRAME	2
3	303324	BACK BASE PLATE	1
4	303333	BOTTOM PLATE	1
5	303334	MOTOR PLATE UPRIGHT	1
6	303335	MOTOR MOUNT BASE	1
7	303336	OPERATOR PANEL	1
8	303360	SLOT CATCH	1
9	350773	CORD GRIP	1
10	350811	STANDOFF	4
11	350812	SWITCH	1
12	350813	TIMING PULLEY	1

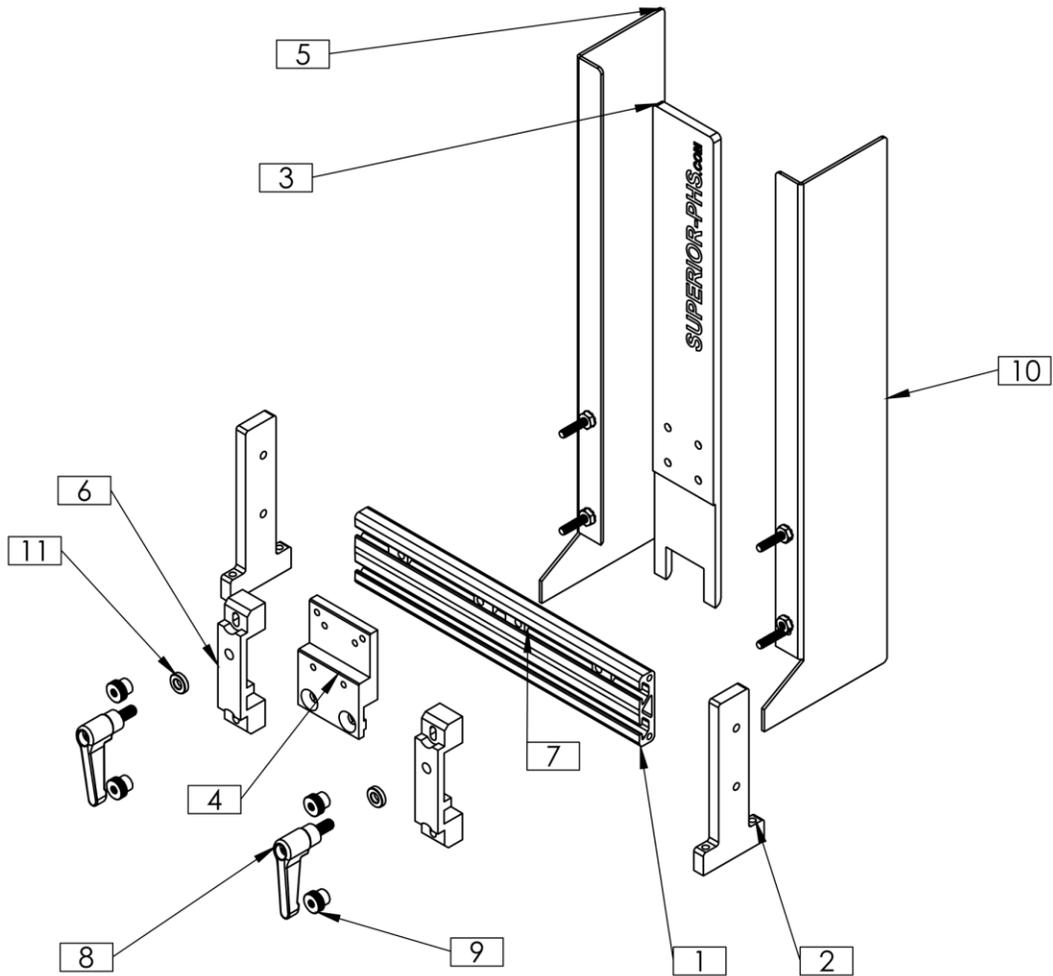
ITEM	PART	DESCRIPTION	QTY
13	350826	MOTOR DRIVE	1
14	350825	MOTOR	1
15	350833	POTENTIOMETER	1
16	350835	KNOB	1
17	350837-9.375	EXTRUSION BAR	1
18	350884	POWER SUPPLY	1
19	350885	FAULT INDICATOR	1
20	350816	M12 BULKHEAD	1
21	350764	POWER SUPPLY	1
22	303299	PAN	1
23	350903	PLC	1

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Assembly Number:  
**400691**

# HOPPER



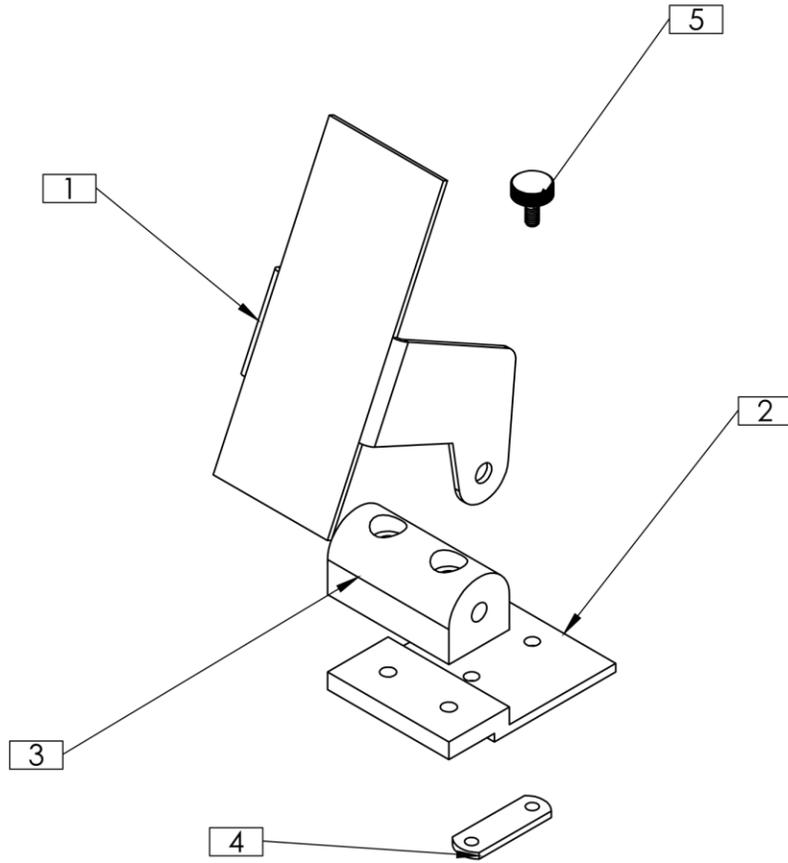
ITEM	PART	DESCRIPTION	QTY
1	350837-9.375	EXTRUSION BAR	1
2	303323	HOPPER SIDE FRAME	2
3	303320	CENTER GUIDE	1
4	303321	CENTER GUIDE MOUNT	1
5	303319	RT SIDE GUIDE	1
6	303331	ADJUSTMENT BLOCK	2
7	350836	DROP IN T-NUT	4
8	350855	THREADED HANDLE	2
9	350876	THUMB NUT	4
10	303318	LT SIDE GUIDE	1
11	HW	1/4 x .125 SPACER	2

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Assembly Number:  
**400692**

# WEDGE



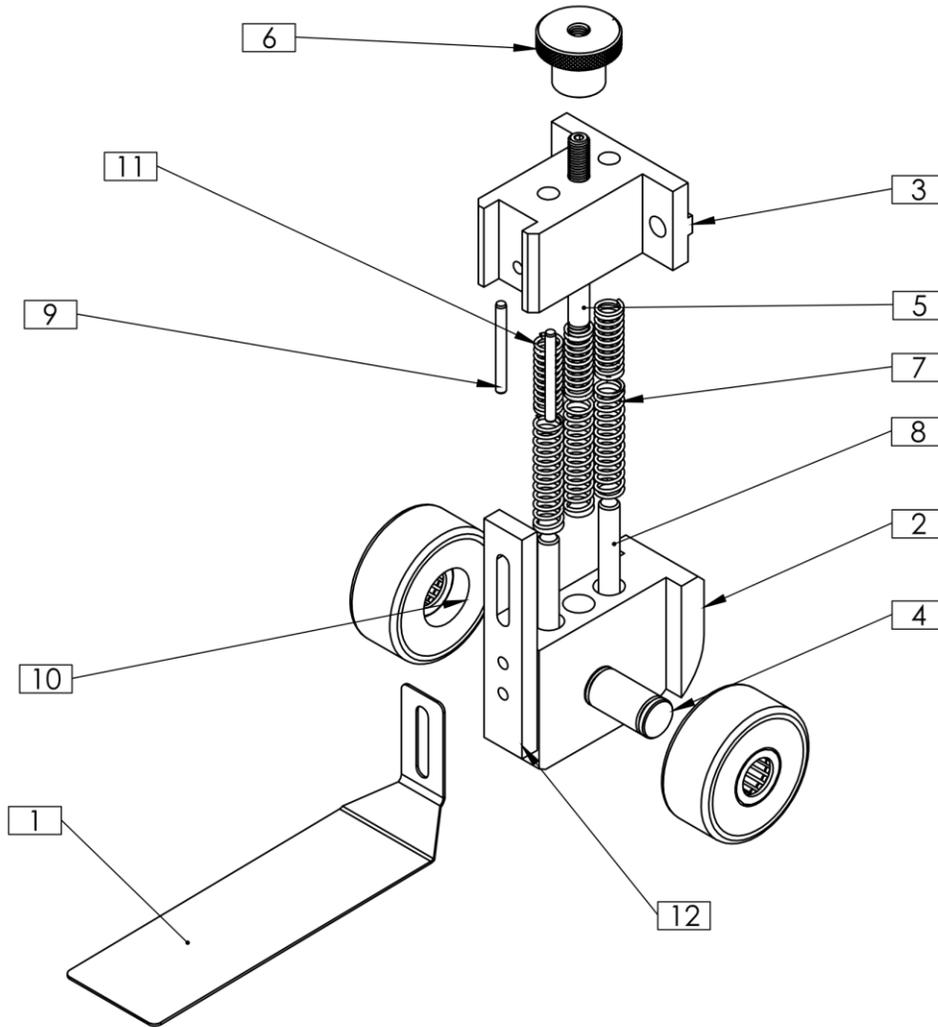
ITEM	PART	DESCRIPTION	QTY
1	302974	WEDGE PLATE	1
2	303330	WEDGE ADJUSTMENT BLOCK	1
3	350675	WEDGE NUB	1
4	350827	T-NUT	1
5	HW	8-32 x .375 THUMBSCREW	1

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Assembly Number:  
**400693**

# SEPARATOR



ITEM	PART	DESCRIPTION	QTY
1	303325	DISCHARGE BAND HOLDOWN (STD)	1
2	303327	SEPARATOR ROLLER BLOCK	1
3	303328	SEPERATOR MOUNT	1
4	303329	SEPARATOR ROLLER SHAFT	1
5	350815	THREADED ROD	1
6	350818	KNURLED KNOB	1
7	350819	SPRING	3
8	350820	PIN	2
9	350821	PIN	2
10	100172D	SEPARATOR ROLLER	2
11	100687	SPRING	3
12	303489	DISCHARGE ADJ MOUNT	1

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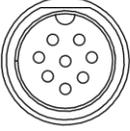
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Assembly Number:  
**400686**

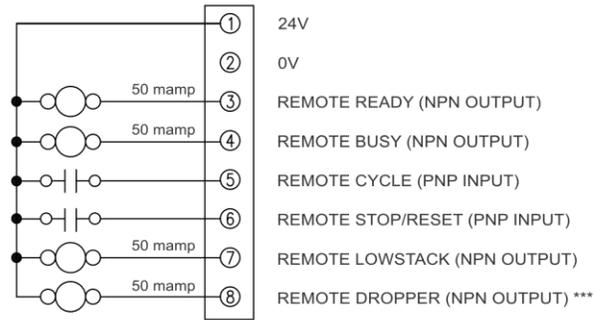
# I/O Connection:

## CX-9D,CX-9BC I/O CONNECTOR

[973] I/O CABLE MARKER

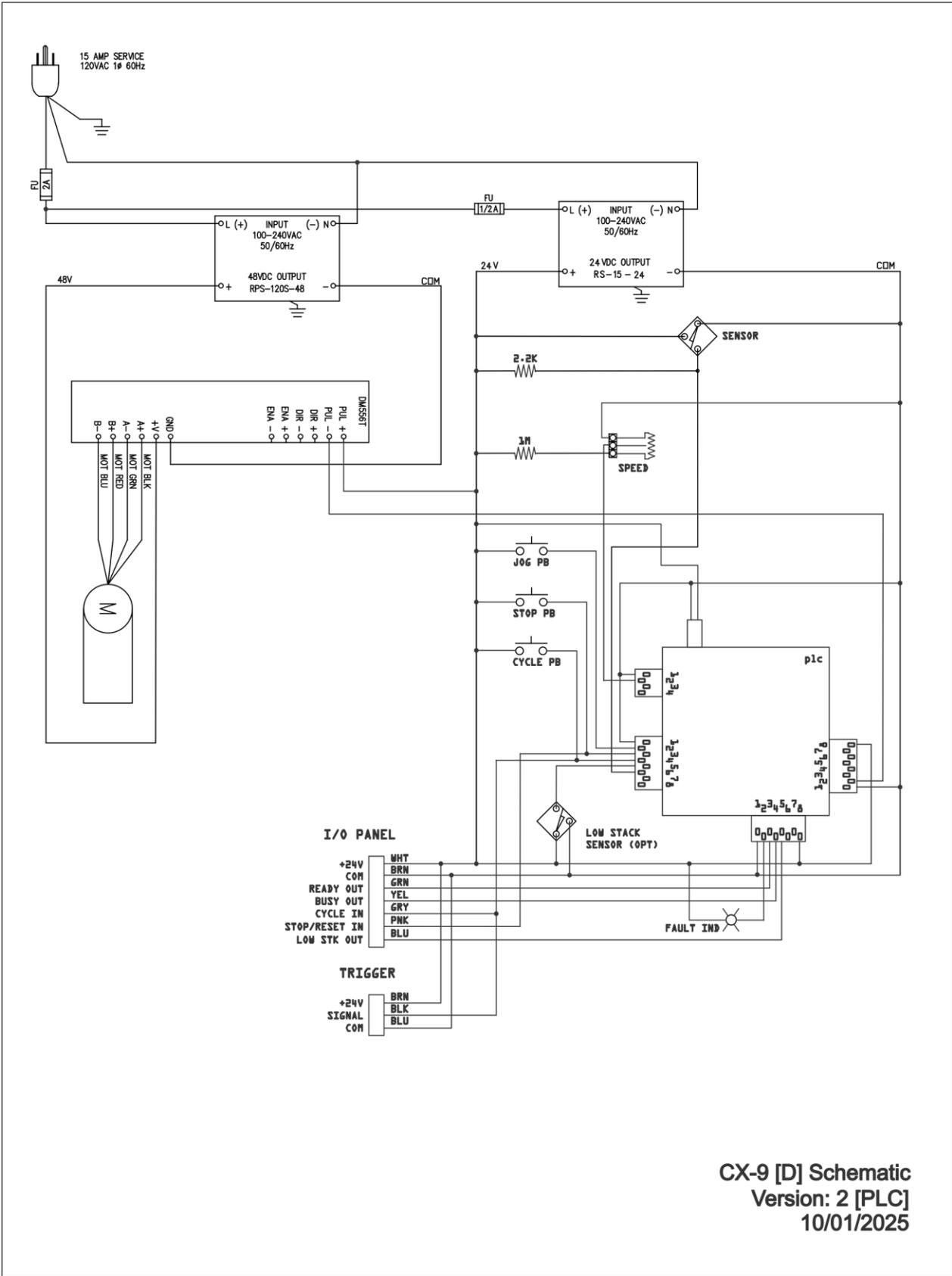
I/O			
	1	WHT	24V
	2	BRN	0V
	3	GRN	REMOTE READY (NPN OUTPUT)
	4	YEL	REMOTE BUSY (NPN OUTPUT)
	5	GRY	REMOTE CYCLE (PNP INPUT)
	6	PNK	REMOTE STOP/RESET (PNP INPUT)
	7	BLU	REMOTE LOWSTACK (NPN OUTPUT)
	8	RED	REMOTE DROPPER (NPN OUTPUT) ***

### EXTERNAL I/O



\*\*\* CX-9BC FEEDER ONLY

# Schematic:



CX-9 [D] Schematic  
Version: 2 [PLC]  
10/01/2025