

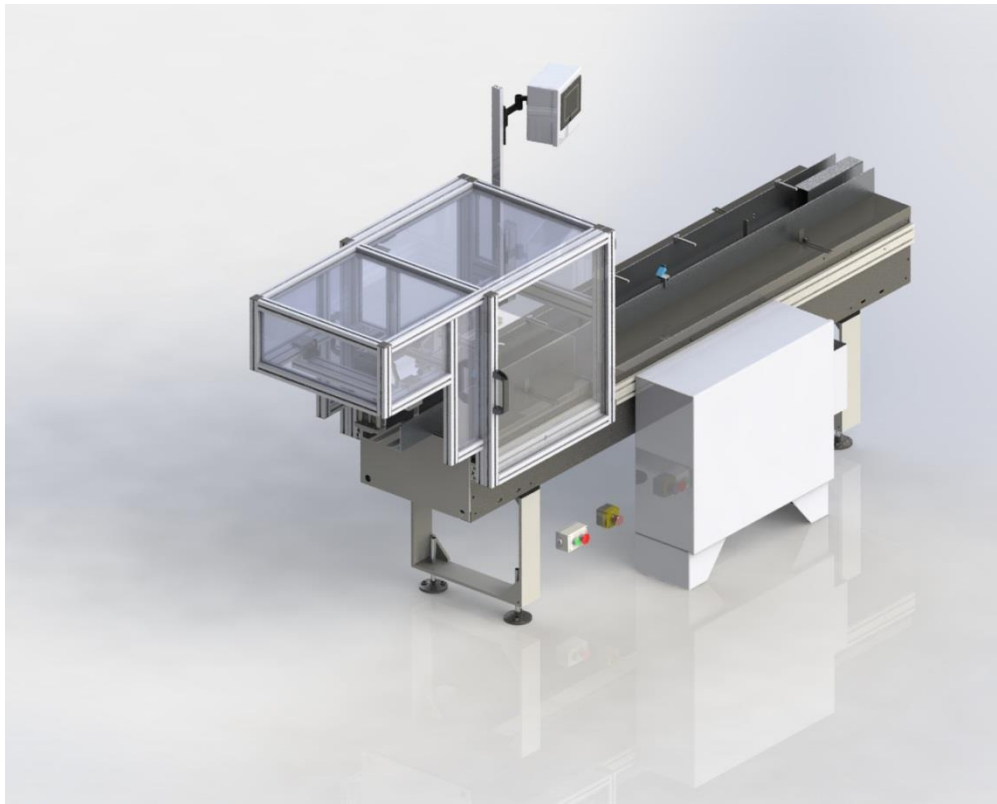


System Operator's Manual

Model: Band Sweep Conveyor

600004

PATENT PENDING



Illustrations are for reference only and may not depict the exact assembly ordered

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OPERATION:



To start the system, first ensure no faults are displayed in red. If a fault is active, perform the corrective action that is noted in the corrective actions section of this document, then tap **“START”** to resume operation.

The current active recipe is displayed at the top of the screen, to change the recipe tap the **“RECIPE”** button in the bottom right.

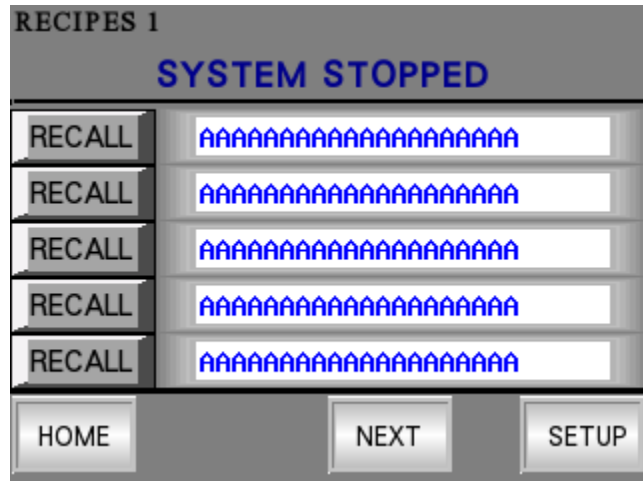
At any time, the first feeder can be enabled to feed or disabled to clear product from the conveyor by tapping **“FEEDING DISABLED/FEEDING ENABLED”**. The second feeder will only feed if product is present.

Tap the **“STOP”** or **“PAUSE”** button on the screen to stop the conveyor. The screen will display **“PAUSED”** while the system is paused. To resume depress the green **“START”** button.

To access maintenance related operations, press the **“MAINT”** button in the bottom right and refer to the maintenance section for further details.

The current product per minute rate of the system is displayed at the bottom.

RECIPE SELECTION:



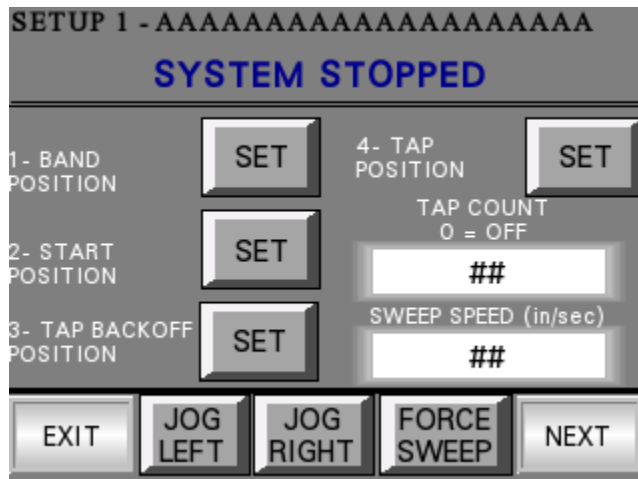
The default password to access the recipe selection screen is 612. An alternate password can be setup in maintenance.

To change the active recipe simply tap the **“RECALL”** button next to the name of the recipe you wish to activate. A recipe can only be recalled when the system is stopped or in paused. To edit a recipe press **“SETUP”** in the bottom right and refer to the recipe setup section for further details.

To change the name of a recipe, tap the name to bring up a touch keyboard.

RECIPE SETUP:

Setup 1 screen



The default password to access the recipe setup screen is 651. An alternate password can be setup in maintenance.

NOTE: Before performing the setup ensure no system faults exist and the system is in “STOPPED” or “PAUSED” mode. The current system status and faults can be monitored at the top of the setup screens.

Utilize the “JOG LEFT”, “JOG RIGHT” push buttons to move the sweep to the desired position then press “SET” to capture and store that position.

There are four sweep positions that can be set for each recipe.

1. **“BAND POSITION”** – Controls where the sweep stops when transferring product into the bander.
NOTE: Ideally the product would be transferred to be centered with the band, but must also clear the Sweep Position Photo Eye (PE3).
2. **“START POSITION”** – Controls where the sweep returns to after completing a band or tap cycle.
CAUTION: The sweep start position should be clear of product underneath the sweep on completion of a conveyor cycle to avoid crashing the sweep on its down stroke.
3. **“TAP BACKOFF POSITION”** – Controls where the sweep begins a tap cycle and where the sweep will back away in between taps.
4. **“TAP POSITION”** – Controls where the sweep will move to while tapping the product.
NOTE: This position should be set in such a way the product is straightened but not damaged by squeezing the product against the conveyor flight.

The number of taps performed to straighten the product can be controlled by setting the **"TAP COUNT"**.
A value of zero will disable the tap.

The speed at which the product is transferred to the band position and tapped can be controlled by setting the **"SWEEP SPEED (in/sec)"** value.

Setup 2 screen

SETUP 2 - AAAAAAAAAAAAAAAAAAAAAA

SYSTEM STOPPED

SWEEP MOVE DELAY (SEC)	FEEDER 2 DELAY (SEC)
###	###
BAND COMPLETE DELAY (SEC)	CLAMP HOLD (SEC)
###	###

EXIT BACK

"SWEEP MOVE DELAY" – This value controls the delay of time for the sweep down cylinder to reach the bottom position before the sweep begins liner movement.

CAUTION: *Factors such as air pressure and air flow can affect the time the sweep down cylinder will take to reach the bottom position. To avoid crashing the sweep it is recommended to start with a long delay such as 1.0 then adjust the value by subtracting a value no greater than 0.1 at a time to achieve a faster cycle time.*

"FEEDER 2 DELAY" – This value controls the delay of time before Feeder 2 begins next feed.

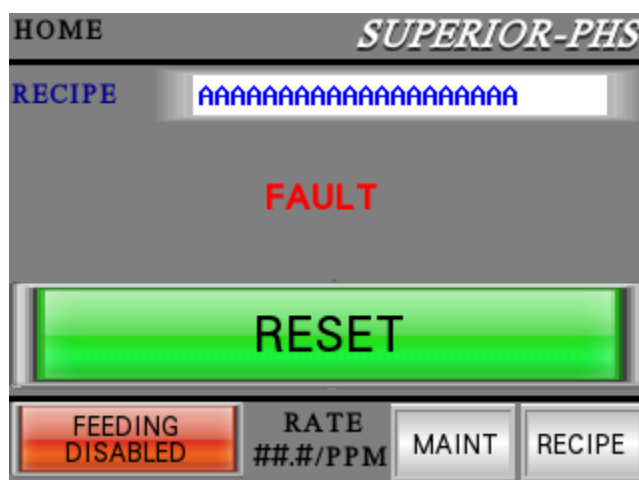
"BAND COMPLETE DELAY" – This value controls the amount of time the system will wait for the band to complete before indexing the conveyor.

CAUTION: *To avoid crashing product into the bander before it complete, it is recommended to start with a long delay such as 1.0 then adjust the value by subtracting a value no greater than 0.1 at a time to achieve a faster cycle time.*

"CLAMP HOLD" – This value controls the amount of time the band clamp cylinder is held down during a band cycle.

NOTE: *The value should be set no less than the amount of time the bander takes to complete a band.*

CORRECTIVE ACTIONS:



The status indicator located at the top of the screens displays in red any active faults. The following corrective actions should be performed when a corresponding fault exists.

“EMERGENCY STOP” – Ensure all red ESTOP buttons are in the out position and the safety door is closed, then press the green reset button on the enclosure located to the right of the operator screen.

“HOMING FAILED” – Ensure the sweep is clear of all obstructions and can move freely throughout the entire length of its cylinder. Then tap “RESET” to resume operation.

“CONVEYOR INDEX FAILED” – Ensure the conveyor is clear of all obstructions. Check that the trim pot for conveyor speed is set to desired speed. Then tap “RESET” to resume operation.

“SWEEP FAULT” – Ensure the sweep is clear of all obstructions, can move freely throughout the entire length of its actuator cylinder. Then tap “RESET” to resume operation.

“PROTECTION EYE BLOCKED” – Ensure the protection photo eye is not blocked by a fallen over stack of product. Then tap “RESET” to resume operation.

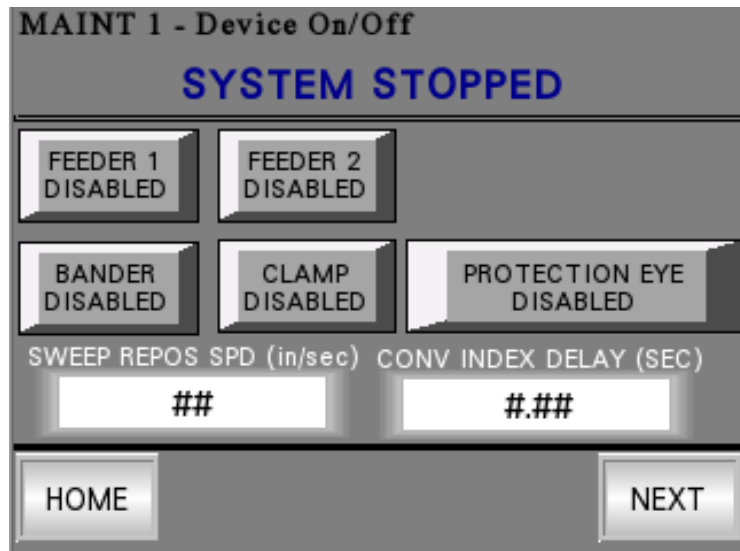
“BANDER FAULT” – Refer to bander operator interface and ensure the bander is in a ready state. Then tap “RESET” to resume operation.

“FEEDER FAULT” – Check feeders for faulted state and reset the feeders. Then tap “RESET” to resume operation.

“WAITING ON DOWNSTREAM EQUIPMENT” – Check that wires connected to external connector EXT pins 5 and 7 are operating correctly on downstream equipment. When wires are connected the system will fault and when disconnected the system will resume. Refer to the maintenance section for further details.

MAINTENANCE OPERATIONS:

Maint 1 screen



The default password to access the maintenance screen is 763. An alternate password can be setup in maintenance.

“FEEDER 1 DISABLED/ENABLED” – Enables and Disables feeder 1 while system is running.

“FEEDER 2 DISABLED/ENABLED” – Enables and Disables feeder 2 while system is running.

“CLAMP DISABLED/ENABLED” – Enables and Disables bander clamp cylinder while system is running.

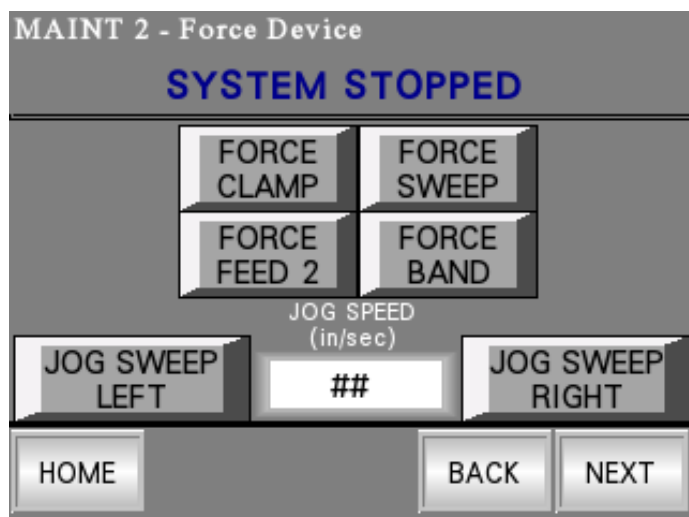
“BANDER DISABLED/ENABLED” – Enables and Disables bander while system is running.

“PROTECTION EYE DISABLED/ENABLED” – Enables and Disables protection photo eye mounted to conveyor.

“SWEEP REPOS SPD” – Sets sweep speed for movement between sweep position and tap position. Since the sweep will not be in contact with product during these movements a faster rate can be achieved by setting this value higher than the recipe sweep speed.

“CONV INDEX DELAY” – Sets the minimum delay between conveyor index.

Maint 2 screen



“FORCE SWEEP” – Engages a force of the sweep up/down cylinder.

“FORCE FEED 2” – Engages a force of the feed signal for feeder 2.

“FORCE CLAMP” – Engages a force of the band clamp cylinder.

“JOG SWEEP LEFT/RIGHT” – Jogs the sweep in the desired direction.

“JOG SPEED (in/sec)” – Sets sweep jog speed in in/sec.

Maint 3 screen

MAINT 3 - PASSWORDS

SYSTEM STOPPED

ALT MAINTENANCE
PASSWORD

####

DEFAULT - 763

ALT RECIPE SELECT
PASSWORD

####

DEFAULT - 612

ALT RECIPE SETUP
PASSWORD

####

DEFAULT - 651

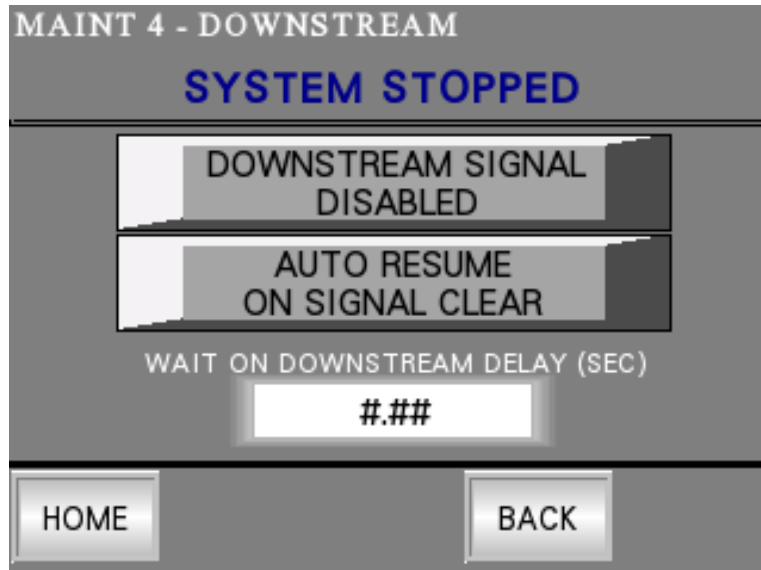
HOME BACK NEXT

“ALT MAINTENANCE PASSWORD” – Sets an alternate maintenance password to access the maintenance screens. Default is 763

“ALT RECIPE SELECT PASSWORD” – Sets an alternate recipe selection password to access the recipe selection screens. Default is 612

“ALT RECIPE SETUP PASSWORD” – Sets an alternate setup password to access the recipe setup screens. Default is 651

Maint 4 Screen

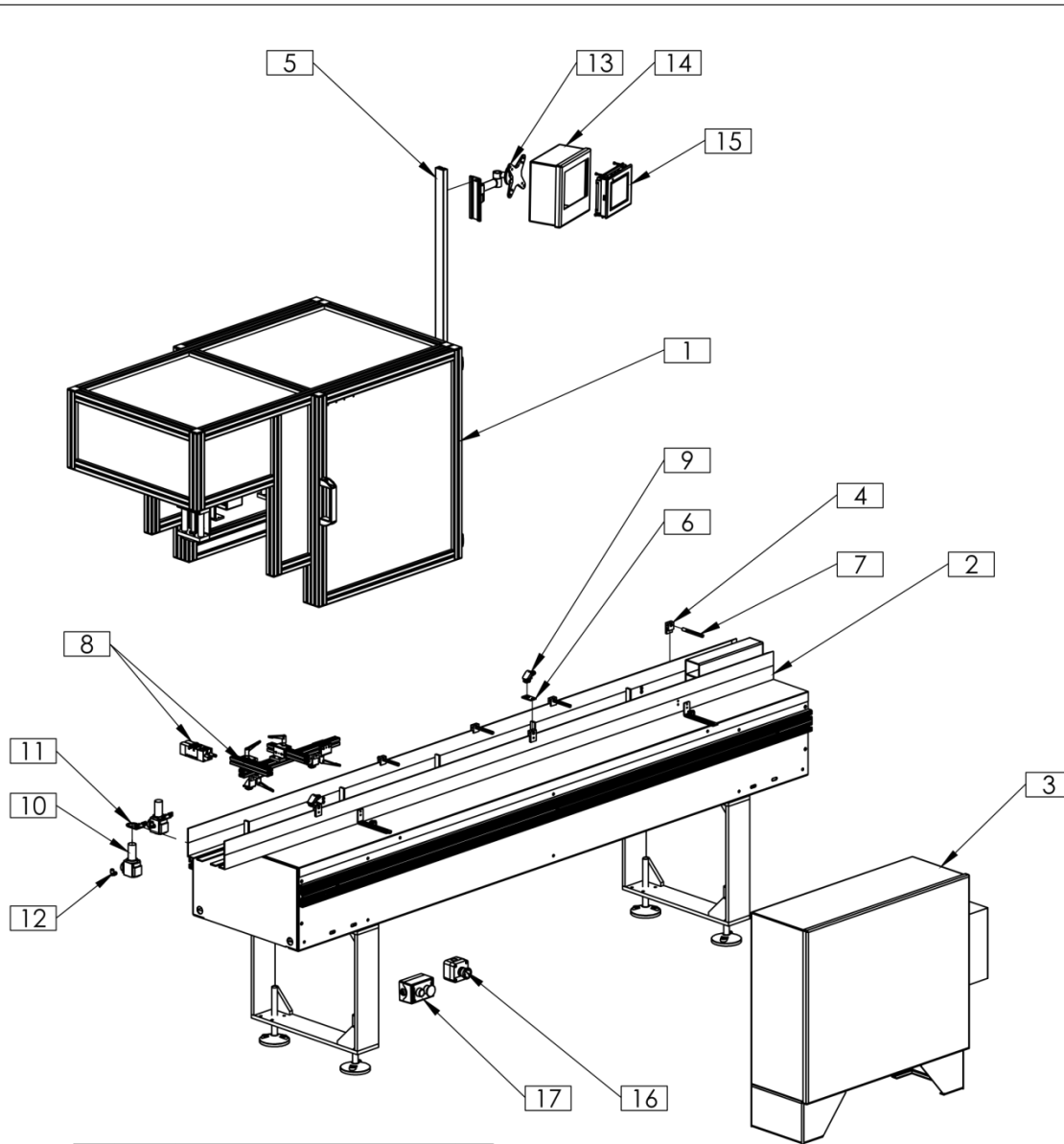


“DOWNSTREAM SIGNAL” – Enables and Disables wires connected to external connector EXT pins 5 and 7. These wires can be connected to downstream equipment to stop the conveyor on this system from indexing when the downstream equipment is not functioning. When the connection between these wires is open the system functions normally. When the connection between these wires is closed the system will display the downstream fault.

“AUTO RESUME” – For safety reasons we allow the down stream signal to pause the system instead of auto resuming when the downstream signal is cleared. To enabled this feature press the “AUTO RESUME” button to toggle into the “PAUSE SYSTEM ON SIGNAL CLEAR” mode.

“WAIT ON DOWNSTREAM DELAY” – Sets the delay for how long the external connector EXT pins 5 and 7 must be closed before shutting down the system.

ILLUSTRATED PARTS:



ITEM NO.	PartNo	DESCRIPTION	QTY.
1	400391	BAND SWEEP MODULE	1
2	500057	BAND SWEEP	1
3	400390	ELECTRICAL PANEL	1
4	301471	MOUNT BLOCK	6
5	350268	DISPLAY MOUNT	1
6	301986	SENSOR BRACKET	2
7	301485	SHAFT	4
8	400393	BAND SWEEP CAB SENSOR	1
9	350263	SENSOR	2

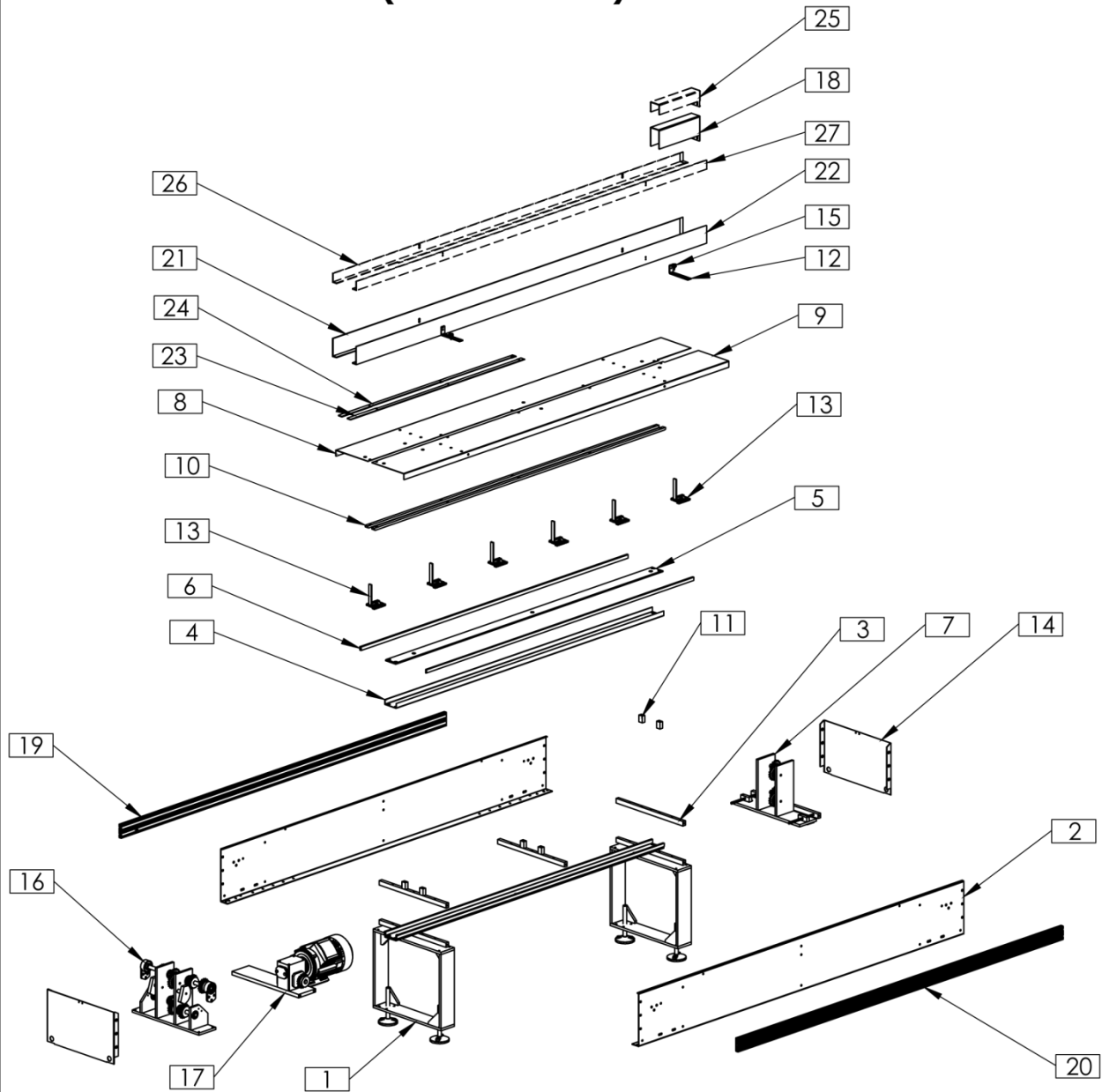
ITEM NO.	PartNo	DESCRIPTION	QTY.
10	350192	AIR LINE REGULATOR	2
11	350193	REGULATOR BRACKET	2
12	350251	AIR CONNECT	3
13	350252	TV MOUNT	1
14	350250	DISPLAY ENCLOSURE	1
15	300464	DISPLAY	1
16	350253	ONE BUTTON E STOP	1
17	350254	TWO BUTTON E STOP	1

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Superior
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Assembly Number:
600004

500057 8' CHAMPION L-16 CONVEYOR (BAND SWEEP)



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Assembly Number:
500057

500057 8' CHAMPION L-16 CONVEYOR (BAND SWEEP) BOM

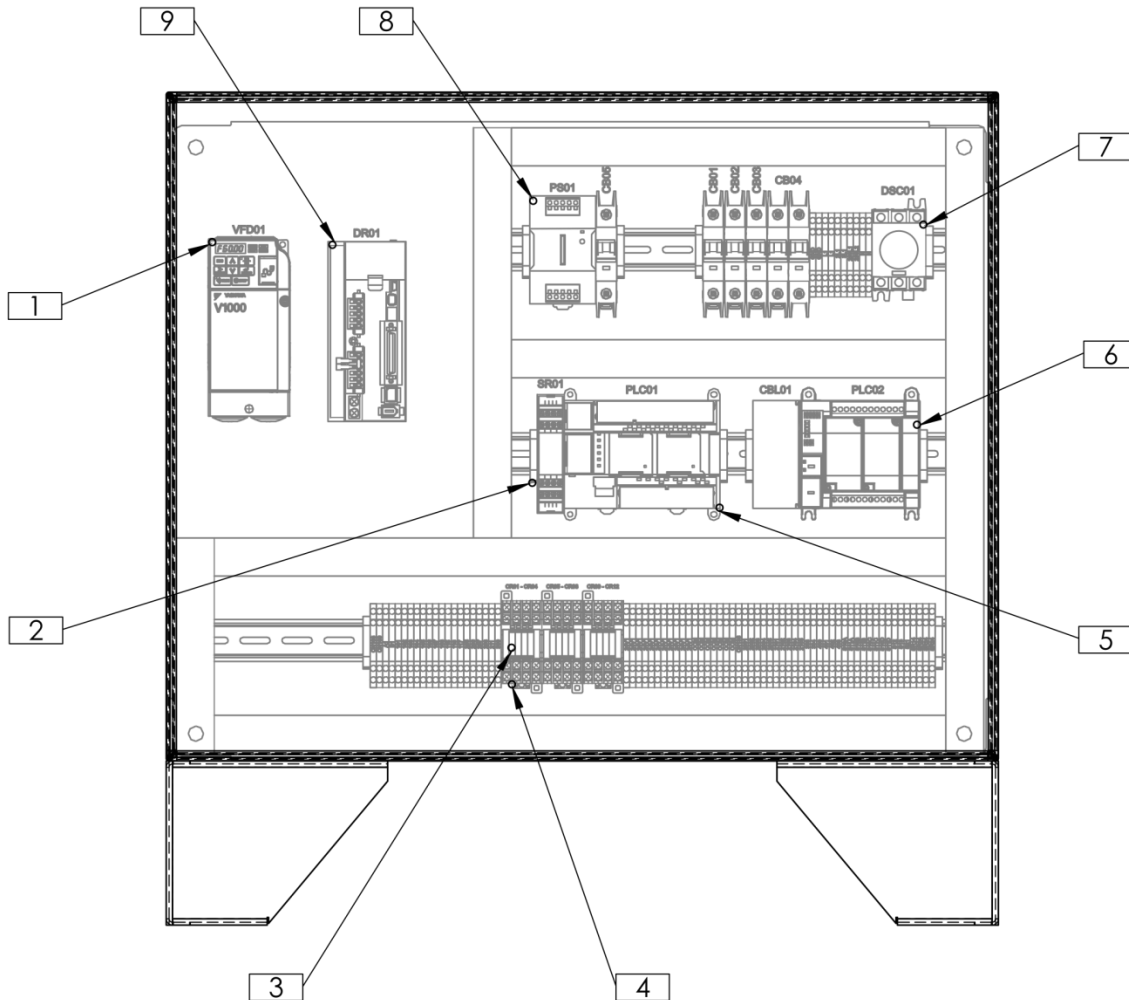
ITEM NO.	PartNo	DESCRIPTION	QTY.
1	400141	CONVEYOR LEG ASSEMBLY	2
2	101023A	UNIVERSAL SIDE PANEL	2
3	101050	CROSS BAR SUPPORT	5
4	101024	CHAIN RETURN TRAY	2
5	300922	FLAT UHMW	2
6	300921	J-LEG	4
7	400143	IDLER CONVEYOR	1
8	301302	TOP PLATE RIGHT	1
9	301303	TOP PLATE LEFT	1
10	300930	CHAIN WEAR BAR	2
11	101009	TOP PANEL SUPPORT	6
12	101087	PAPER MOUNT RAIL	4
13	400189	LUG ASSEMBLY	6
14	101005	END PANEL	2
15	100391	KNOB	4
16	400142	DUAL DRIVE ASSEMBLY	1
17	400221	MOTOR PLATE ASSEMBLY	1
18	301660	LUG COVER	1
19	301947	8FT EXTRUSION RT	1
20	301946	8FT EXTRUSION LT	1
21	301980	SIDE GUIDE - EXTENDED RT	1
22	301979	SIDE GUIDE - EXTENDED LT	1
23	301981	RISER	1
24	301982	RISER	1
25	301595	LUG COVER (OPTION)	1
26	301984	SIDE GUIDE - EXTENDED RT (OPTION)	1
27	301983	SIDE GUIDE - EXTENDED LT (OPTION)	1

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Assembly Number:
500057

ELECTRICAL PANEL



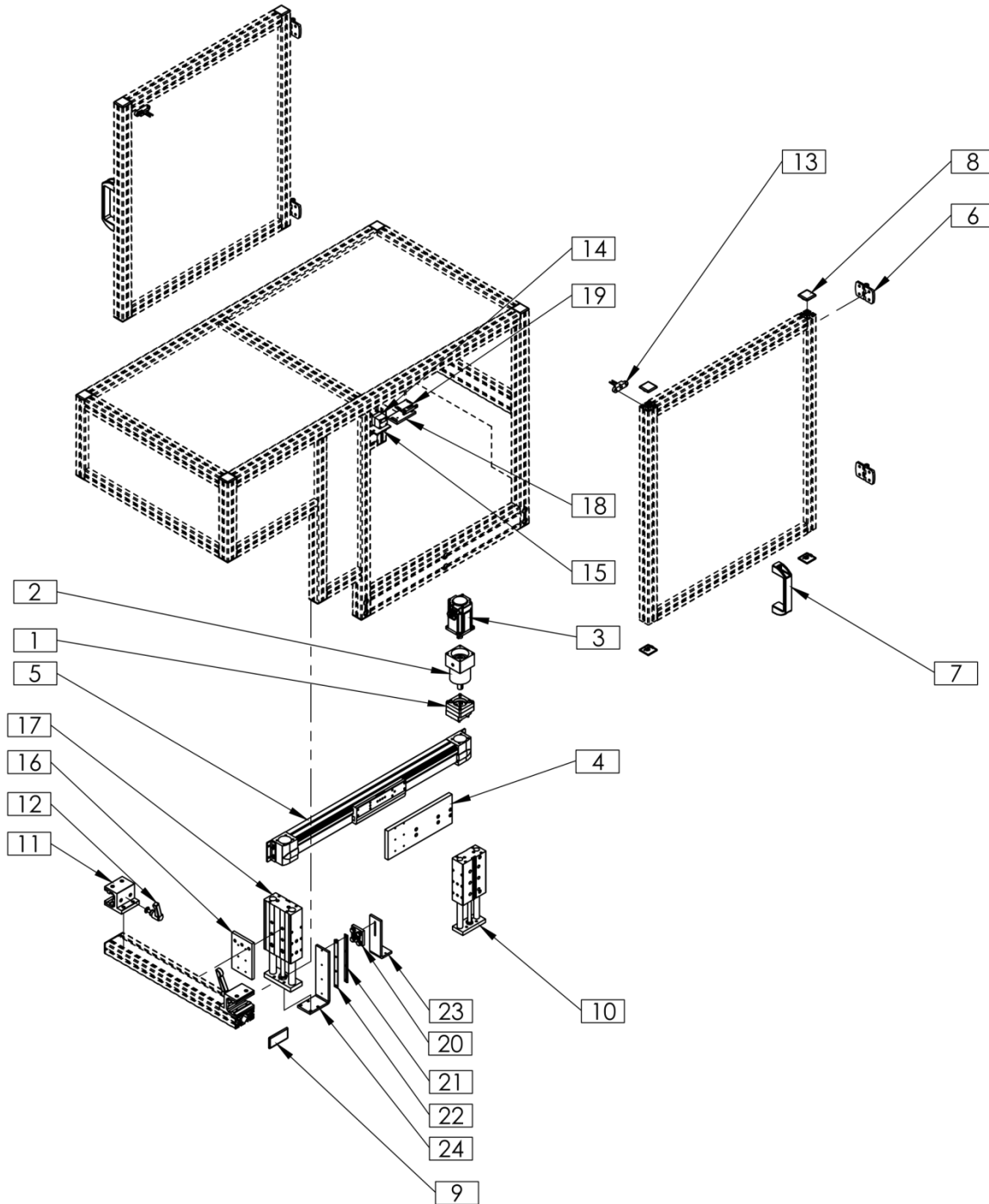
ITEM NO.	PartNo	DESCRIPTION	QTY.
1	350240	VFD	1
2	350241	SAFETY RELAY	1
3	350242	RELAY	1
4	350243	RELAY SOCKET	1
5	350244	PLC 1	1
6	350245	PLC 2	1
7	350246	DISCONNECT	1
8	350247	POWER SUPPLY	1
9	350248	MOTOR DRIVE	1

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Assembly Number:
400390

BAND SWEEP MODULE



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Assembly Number:
400391

BAND SWEEP MODULE BOM

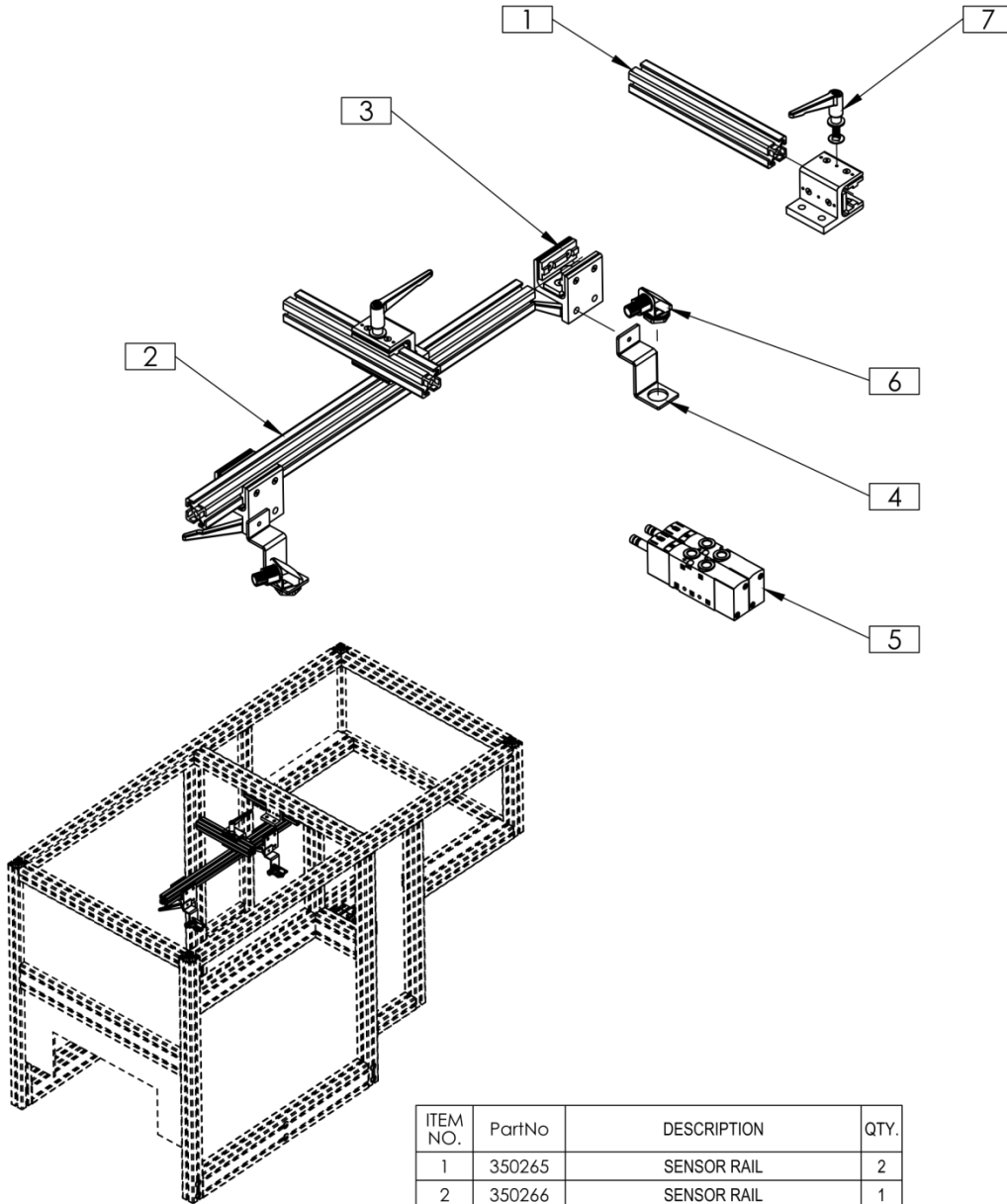
ITEM NO.	PartNo	DESCRIPTION	QTY.
1	350213	AXIAL KIT	1
2	350233	GEAR BOX	1
3	350125	MOTOR	1
4	301975	MOUNTING PLATE	1
5	350209	TOOTHED BELT AXIS	1
6	350234	DOOR HINGE	4
7	350208	HANDLE	2
8	350235	END CAP	22
9	350236	END CAP	3
10	350232	ACTUATOR	1
11	350229	EXTRUSION MOUNT	2
12	350230	HANDLE	2
13	350201	SAFETY DOOR SWITCH	2
14	350200	SAFETY DOOR SWITCH	2
15	302455	SWITCH PLATE	2
16	301974	GUIDE DRIVE MOUNT	1
17	350231	ACTUATOR	1
18	350205	DOOR CATCH MOUNT PLATE	2
19	350206	PULL FORCE CATCH & KEEPER	2
20	350260	TRACK ROLLER CARRIAGE	1
21	350261	TRACKER ROLLER GUIDE	1
22	350262	SUPPORT RAIL	1
23	302280	HOLD DOWN CLAMP	1
24	302281	HOLD DOWN BRACKET	1

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Assembly Number:
400391

SWEEP CABINET TRIGGER ASSEMBLY



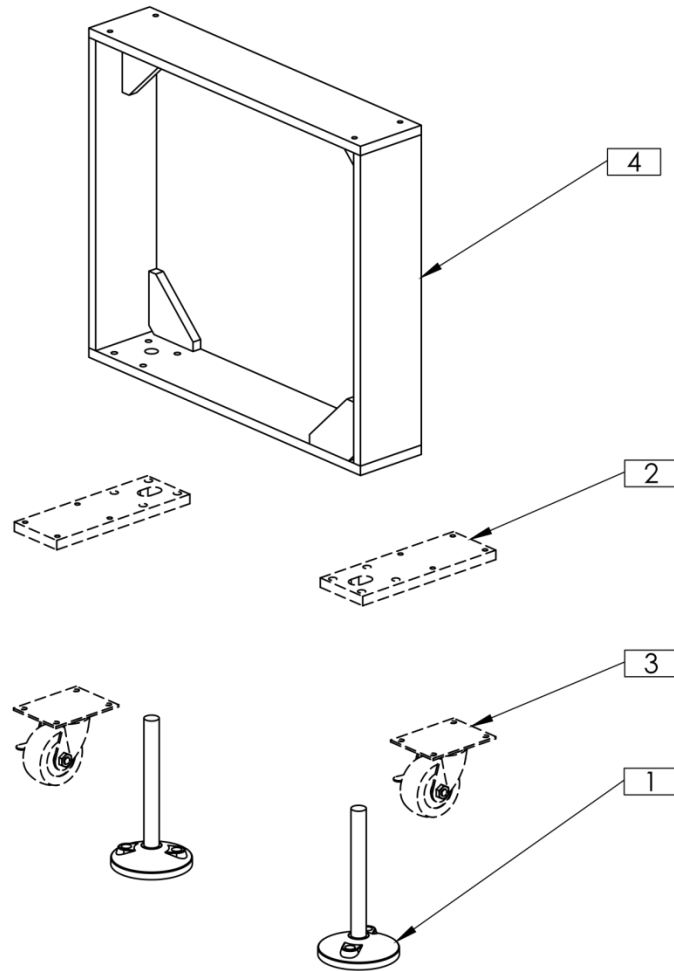
ITEM NO.	PartNo	DESCRIPTION	QTY.
1	350265	SENSOR RAIL	2
2	350266	SENSOR RAIL	1
3	350267	BRACKET	4
4	301985	SENSOR BRACKET	2
5	350249	SOLENIOD	2
6	350263	SENSOR	2
7	350237	HANDLE	4

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Assembly Number:
400393

CONVEYOR LEG ASSEMBLY



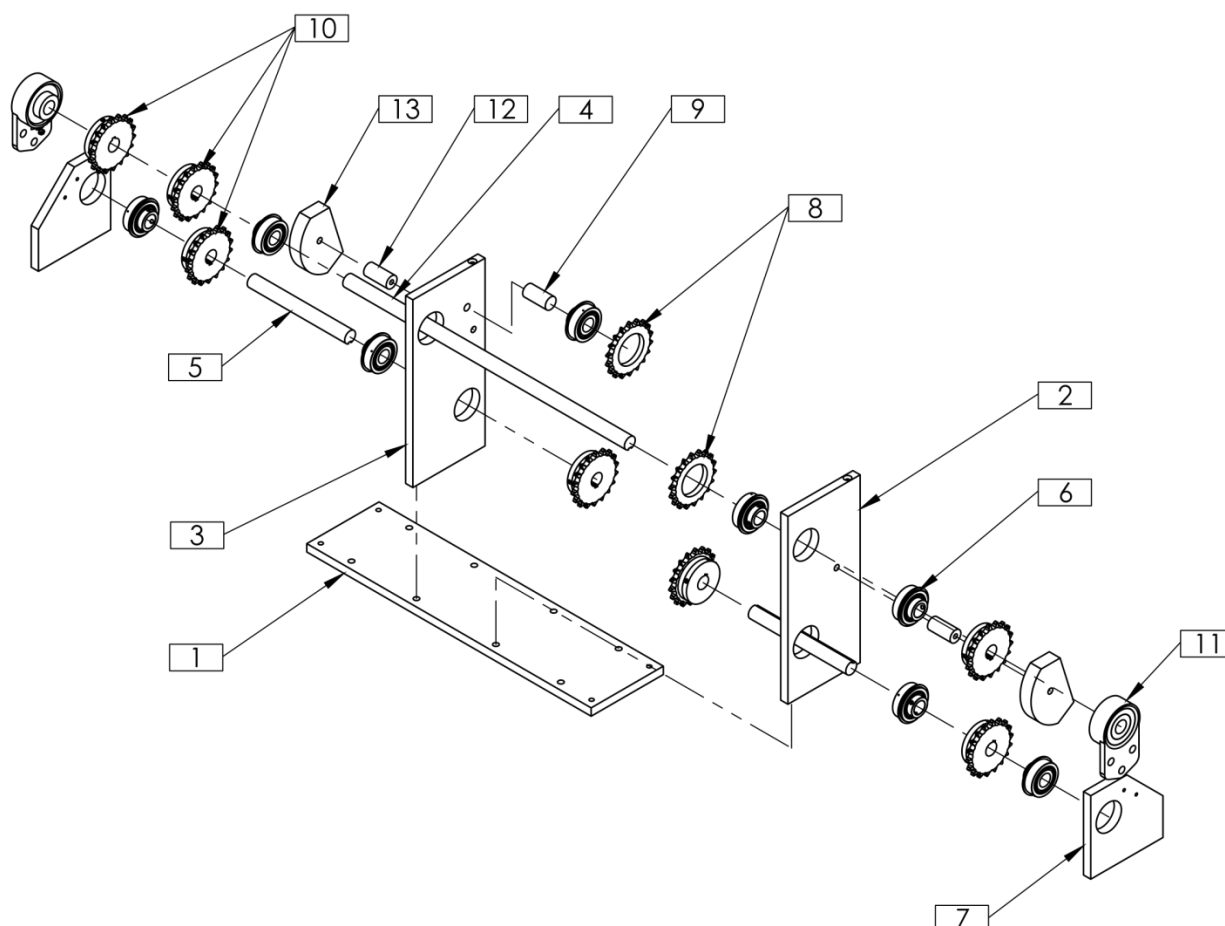
ITEM NO.	PartNo	DESCRIPTION	QTY.
1	101057	PEDESTAL FOOT	2
2	300919	CASTER MOUNT PLATE (OPTION)	2
3	101067	CASTER (OPTION)	2
4	400375	CONVEYOR LEG	1

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Assembly Number:
400141

DUAL DRIVE ASSEMBLY



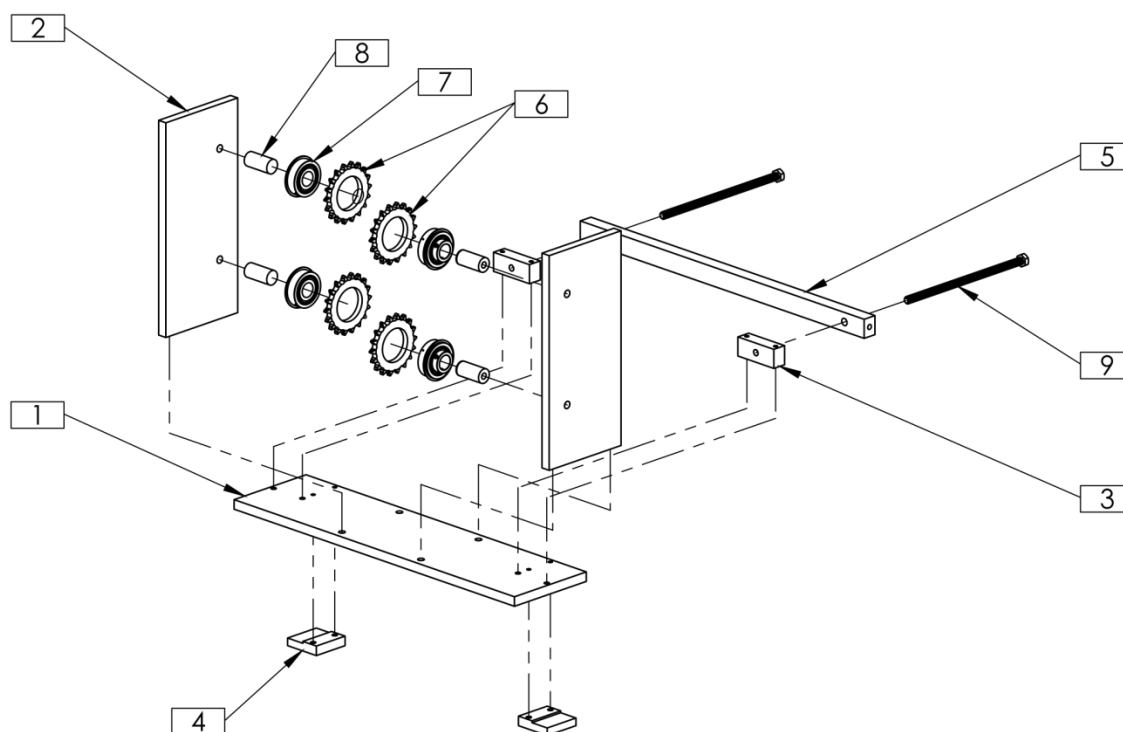
ITEM NO.	PartNo	DESCRIPTION	QTY.
1	101001	MOTOR MOUNT PLATE	1
2	300923	DRIVE PLATE RIGHT	1
3	300924	DRIVE PLATE LEFT	1
4	101008	DRIVE SHAFT	1
5	300685	JACK SHAFT	2
6	105031	BEARING	8
7	300925	SHAFT DRIVE PLATE	2
8	101061	SPROCKET IDLER	2
9	101052	IDLER SPROCKET POST	1
10	101055	SPROCKET	7
11	350122	BALL BEARING	2
12	301592	TENSION PUCK POST	2
13	301451	CHAIN TENSIONING PUCK	2

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Assembly Number:
400142

IDLER CONVEYOR ASSEMBLY



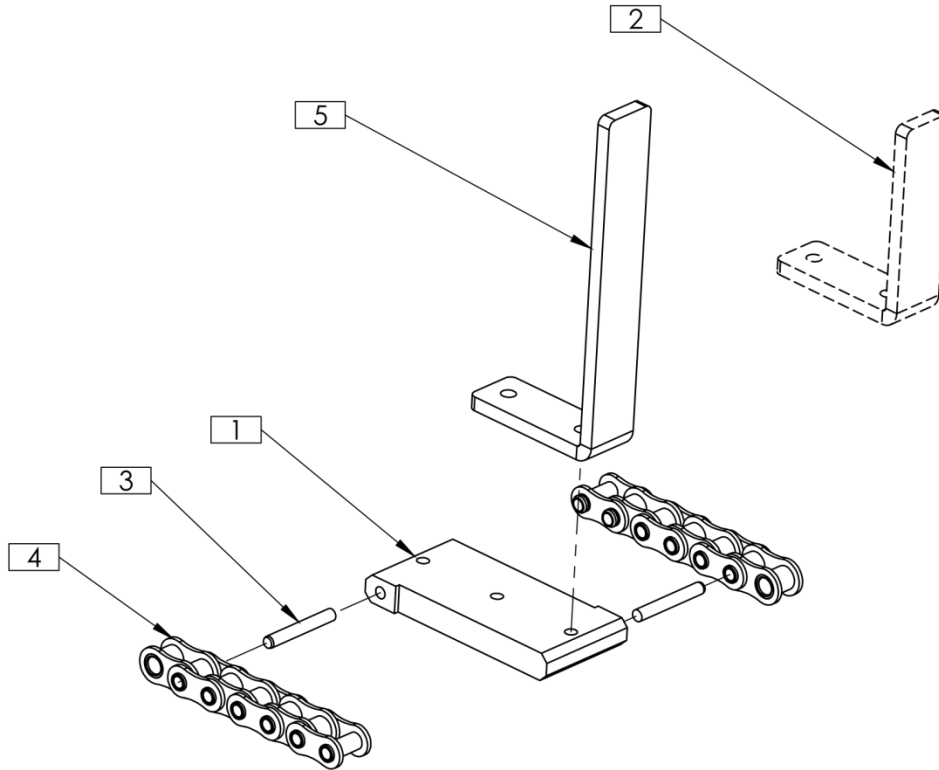
ITEM NO.	PartNo	DESCRIPTION	QTY.
1	101007	MOUNT PLATE	1
2	101046	ILDLER UPRIGHT PLATE	2
3	101044	TAKE UP BLOCK	2
4	101045	SLIDE CLAMP TAKE UP	2
5	101043	IDLER TAKE UP CROSS BAR	1
6	101061	SPROCKET IDLER	4
7	105031	BEARING	4
8	101052	IDLER SPROCKET POST	4
9	101060	TENSIONING BOLT	2

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Assembly Number:
400143

LUG ASSEMBLY (BAND SWEEP)



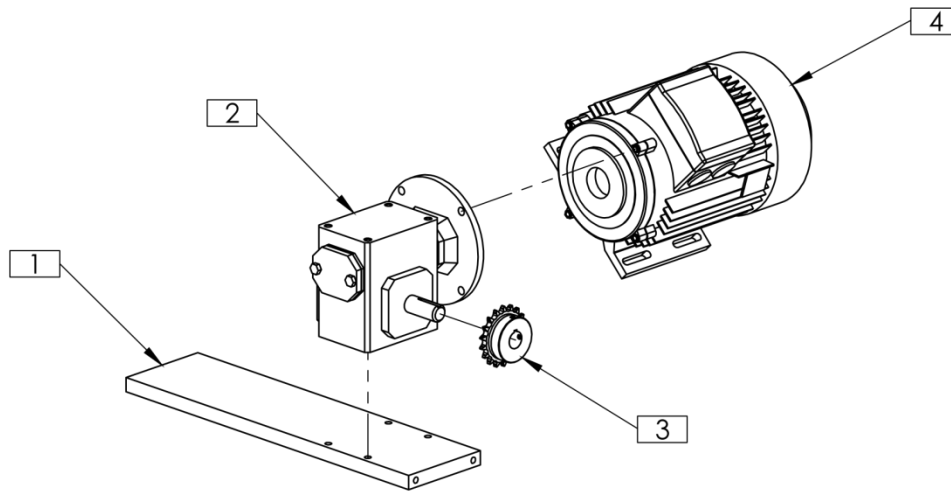
ITEM NO.	PartNo	DESCRIPTION	QTY.
1	300941	CARRIER	1
2	301202	2 INCH LUG (OPTION)	1
3	101062	PIN	2
4	101054	CHAIN	2
5	301815	4 INCH CONVEYOR LUG	1

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Superior
PAPER HANDLING SOLUTIONS

Assembly Number:
400189

MOTOR PLATE ASSEMBLY (BAND SWEEP)



ITEM NO.	PartNo	DESCRIPTION	QTY.
1	301372	MOTOR MOUNT PLATE	1
2	350216	GEAR BOX	1
3	350163	SPROCKET	1
4	350222	AC MOTOR 1/2 HP	1

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Superior
PAPER HANDLING SOLUTIONS

Assembly Number:
400221

WARRANTY:

SUPERIOR-PHS LIMITED WARRANTY

Superior Paper Handling Solutions, Inc. (Superior-PHS) warrants this product to be free from defect in materials and workmanship, when used under recommended operating conditions, for a period of one year from the date of original shipment.

If you discover a defect during the warranty period, please notify the distributor from whom you purchased this product, who will arrange for the replacement parts to be sent to you. Defective parts must be returned to Superior-PHS for credit on replacement parts. Shipping and labor costs are not included in this warranty. If the defect is not field repairable and if you return it to Superior-PHS during the warranty period, Superior-PHS will, at its sole option, repair or replace this product at no charge to you other than shipping charges to and from the facility in Minneapolis, MN.

If you return this product to Superior-PHS for warranty repair or replacement, please attach to the returned product your name and your company's name, address, telephone number and fax number; a description of the problem; and a copy of the bill of sale or invoice that shows the appropriate serial number for the product. All returns must be accompanied by an authorized Superior-PHS Returned Goods Authorization (RGA) number. An authorized RGA number can be obtained from the Superior-PHS distributor from whom you purchased this product.

This warranty applied only to products manufactured by Superior-PHS. This warranty does not apply if the product has been damaged by accident, abuse, misuse, neglect, improper maintenance, misapplication, or as a result of being modified with the written permission of Superior-PHS; or if the product's serial number has been removed or defaced. This warranty further does not apply to the failure of any rubber-based or consumable components including, but not limited to, rollers, bearings, belts, fuses, or bulbs.

ALL IMPLIED WARRANTIES INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND THE IMPLIED WARRANTY OF MERCHANTABILITY ARE HEREBY DISCLAIMED.

Superior-PHS is not responsible for special, incidental, or consequential damages resulting from any breach of warranty or under any other legal theory, including lost profits, downtime, goodwill, or damage to or replacement of equipment or property.

This warranty and the remedies set forth above are exclusive and are in lieu of all others, oral or written, express or implied. There are no warranties that extend beyond the description on the face hereof. No Superior-PHS employee, distributor, or agent is authorized to make any modification, extension, or addition to this warranty.

NOTES:

[illegible]