

AutoStream

Model M1 Product Guide



Thiele
Technologies
A Barry-Wehmler Company

Streamfeeder
®

Part Number: 00900491 (0307)

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Printed in the USA.

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Before You Begin

Who Should Read This Manual



The technical information in this manual is designed for qualified technicians only.

This manual was included with your new Streamfeeder AutoStream M1. It provides all the information you need to efficiently operate and maintain the product.

This manual is primarily intended for operators who will be using the AutoStream in their day-to-day operations. *Please read it thoroughly before you operate the machine.*

Qualified technicians should also be familiar with the information in this manual.

Message Conventions



DANGER signifies an operator action or specific equipment area that can result in serious injury or death if proper precautions are not taken.



WARNING signifies an operator action or specific equipment area that can result in personal injury if proper precautions are not taken.



CAUTION signifies an operator action or specific equipment area that can result in equipment damage if proper precautions are not taken.



ELECTRICAL DANGER signifies an operator action or specific equipment area that can result in personal injury or death from an electrical hazard if proper precautions are not taken.



TIP signifies information that is provided to help the operator minimize problems in the operation of the machine.



NOTE provides useful additional information that the operator should be aware of to perform a certain task.



CHECK signifies an action that should be reviewed by the operator before proceeding.



IMPORTANT signifies alerting the operator to actions that can potentially lead to operational problems or equipment damage if instructions are not followed properly.

Safety

Make sure you thoroughly read this Section until you become familiar with all the safety issues relating to the safe operation of this machine.

Please read all of the Warnings that follow to avoid possible injury. Although Streamfeeder has made every effort to incorporate safety features into the design of this machine, there are residual risks that do exist that an operator should be aware of to prevent personal injury.

Please read all of the Cautions that follow to prevent damage to the machine. The AutoStream is built with the highest quality materials. However, damage can occur if the machine is not operated and cared for within design guidelines as recommended by Streamfeeder.

Danger



- **Equipment interior contains incoming 110-VAC electrical power. Bodily contact with these high voltages can cause electrocution, which can result in serious injury or death.**

Warnings



- **When operating the system, always make sure the safety shields are in place (covering the belts and rollers). Failure to do so may expose your hands or fingers to moving parts which can cause serious injury.**
- **When performing service or maintenance on the system, always turn Off the main power switch, and disconnect the system from the electrical power source. Failure to do so may expose you to dangerous high voltage or moving parts which can cause serious injury.**
- **When performing initial adjustments prior to operation, always turn Off the main power switch, and disconnect the feeder from the electrical power source. Failure to do so may expose you to a potential start-up and moving parts which can cause serious injury.**
- **Make sure you always plug the machine into a 3-prong, properly grounded and fused electrical power source. Never remove or disable the grounding lug at the outlet. Failure to follow these warnings may expose you to dangerous high voltage which can cause serious injury.**

Warnings (cont.)



- Do not attempt to make any adjustments while the machine is running. Failure to follow this warning may expose you to moving parts which can cause serious injury.
 - Never attempt to clear a jam from the machine until you turn Off the main power switch and disconnect the machine from the electrical power source. Failure to do so may expose you to a potential start-up and moving parts which can cause serious injury.
 - Do not attempt to gain access to the inside of the feeder. Refer all questions to a qualified technician.
-

Cautions



- When replacing fuses in the feeder(s), always use the exact type supplied with the machine as shipped from the factory. **IMPORTANT:** Always make sure power module is replaced exactly as removed. Failure to follow this caution can result in damaged electrical parts.
- When performing routine cleaning of parts, only use those methods and cleaning solvents (isopropyl alcohol) which are specified by Streamfeeder. Failure to do so may cause unpredictable results and will cause damage to machine parts.
- Do not attempt to use the machine for any other purpose other than what was recommended by Streamfeeder. Failure to follow this caution may cause unpredictable performance, and/or damage to machine parts.
- Avoid leaving any loose cabling near any moving parts. Failure to follow this caution may result in damage to machine parts.
- Do not apply lubricants to any part of the machine.

Labeling

Streamfeeder has affixed safety labels to those areas of the system where potential operator hazards do exist (such as moving belts or rollers). Shown below are label examples, along with their respective locations.

Feed Belt Guards



Discharge



Electrical Noise

The air contains electromagnetic interference (EMI) fields and radio frequency interference (RFI), also known as “electrical noise.” Usually this noise is small enough in size (amplitude) to not be a problem. If intense enough, however, it can cause problems for other electrical equipment.

Streamfeeder has designed the feeder with noise immunity in mind. Even the sensors provided with the machine have a certain amount of noise immunity built-in. However, in extremely noisy environments, these design considerations are not necessarily immune to electrical noise and therefore, operational problems can occur. *If you suspect any such electrical noise problems, please report it to a qualified technician.*

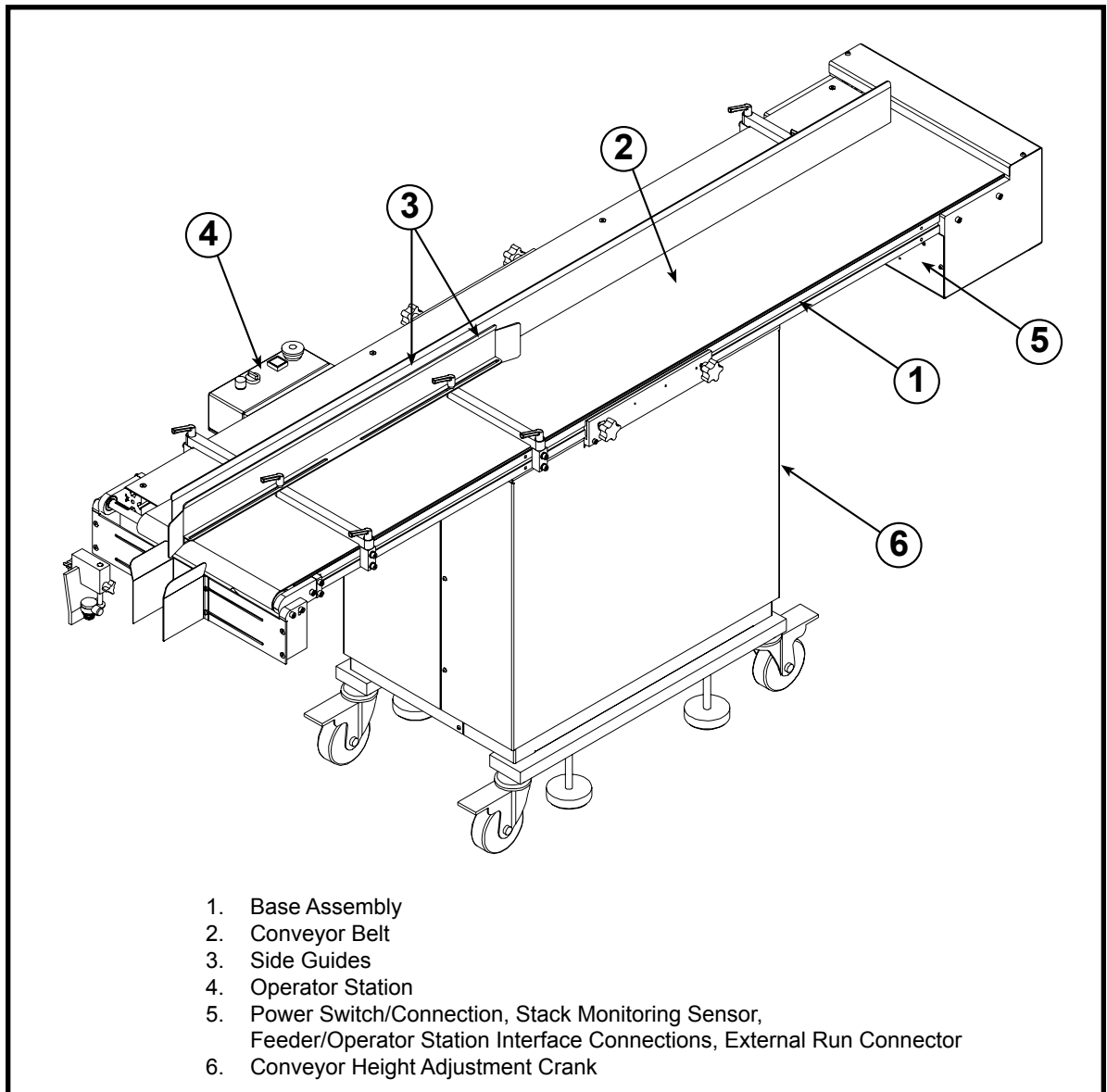
System Specifications

- Maximum Product Size:** 12 x 12 in (304 x 304 mm)
- Minimum Product Size:** 3.625 x 5 in (92 x 127 mm)
- Min./Max. Product Thickness:**003 x .75 in (.076 x 19 mm)
- Conveyor Belt Speed:** Variable up to 300 ft/min ((7620 mm/min)
- Electrical Requirements:** 115vac, 60Hz, 3A
- Fusing:** 2 qty - 5A 250V Slo-Blo 5 x 20 mm
- CAUTION:**
Double pole/neutral fusing. For continued protection against fire, replace only with same type and rating of fuse.
- Table Height (adjustable range):** 33-48 in (838-1219 mm)
- Warranty:** One-year limited

1 About the Machine

The AutoStream Model M1 is designed for reliability, flexibility, and ease of use. All parts required for setup, loading, feeding, sensing and easy operator control is combined into one compact unit. Review the main assemblies to become familiar with names and locations of feeder parts and adjustments. This will help to prepare you for initial setup.

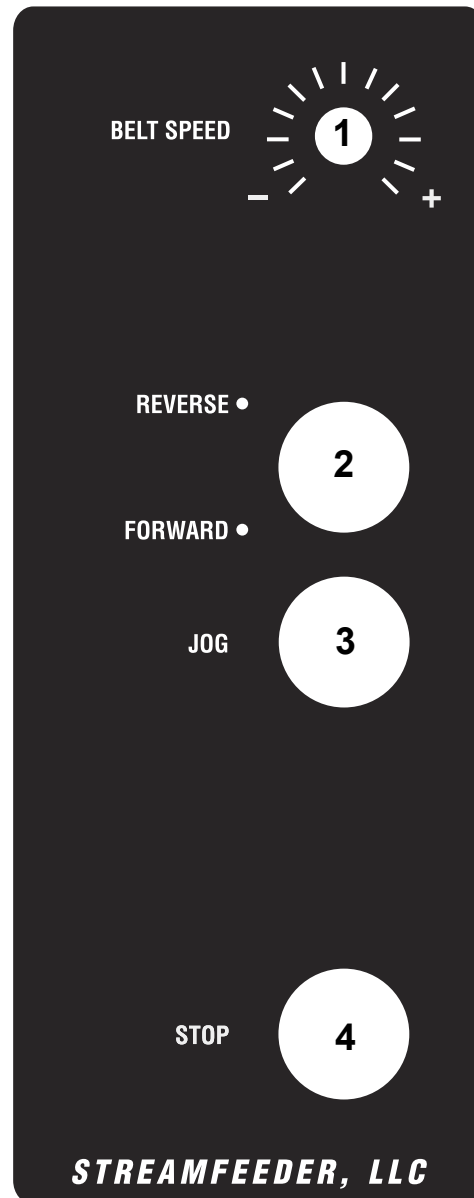
Main Assemblies



Operator Station

Operator Station

1. Belt Speed Control Knob: Turn clockwise to increase speed, counterclockwise to decrease speed.
2. Forward/Reverse Selector Switch: Selects conveyor direction.
3. Jog: Jogs the conveyor.
4. Stop Button: Stops all motors.



2 Operation

Overview

IMPORTANT

CONDITION OF INSTALLMENT:

Warning decals must be visible to machine operator.

Preparing for operation is based on the material you are going to run. The following are basic guidelines. Additional adjustments will be necessary in order to properly feed product. After all the adjustments have been made, be sure to test run to verify the settings.

STEP 1: Connecting Power



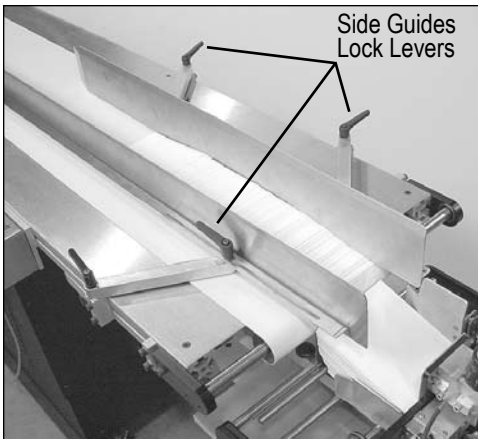
The AutoStream must only be connected to a 110-120VAC source, and the power entry module must be set for 115V.

1. Before powering on, make sure the 115V tag is showing through the window in the power entry module. If the 220V tag is showing, the module must be opened and the switch block must be removed, turned 180 degrees and re-inserted so the 115V tag shows through the window when the receptacle is closed.
2. The AutoStream is protected by two 5A/250V fuses. These fuses are located inside the power entry module. To replace/inspect the line fuses, open the module and remove the switch block. In each side of the switch block is a 5A/250V fuse. If the fuse has blown, it will normally show discoloration. Replace the blown fuse with a new fuse of the same type and rating. Re-insert the switch block, making sure the 115V tag shows through the window when the module is closed.
3. Make sure the power switch is set to the OFF position.
4. Connect the power cord to the AC socket in the power entry module. Connect the other end of the power cord to an earth grounded 110-120VAC outlet.

STEP 2: Height Adjustment

The discharge of the conveyor must be set slightly higher than the component it is feeding. Loosen the lock lever, then turn the height adjustment crank to set the height.

STEP 3: Conveyor Set Up



Procedure

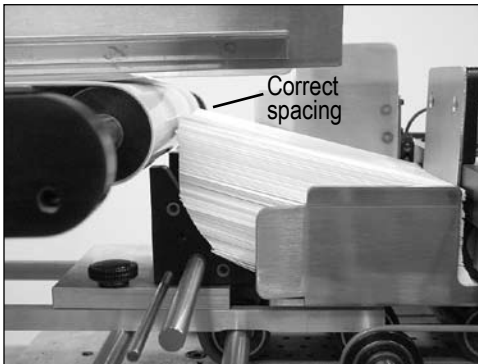
The conveyor side guides are adjustable to accommodate the varying sizes of products. To adjust, loosen the levers and slide the side guides open to allow for wider material or closed to allow for narrower material.

Place shingled product between the guides. Press the conveyor jog button to advance product toward the feeder.

Place product into the hopper of the feeder below the level of the feeder side guides.

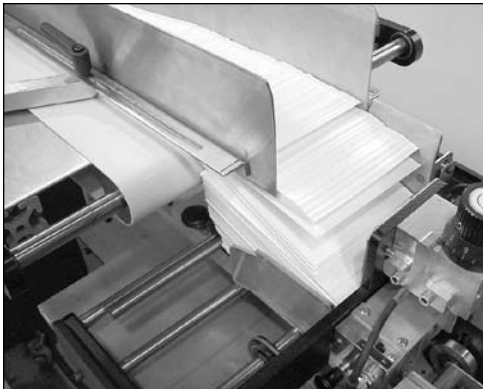


The conveyor belt will continue to advance even if the speed control is turned all the way down. To stop all motors, press the STOP button.



The discharge of the conveyor must be set above the feeder to allow product to fall into the hopper. Release the docking plate by loosening the lock knobs and lever. Then turn the conveyor height adjustment crank to set the height of the conveyor.

The front edge of the conveyor belt must be set approximately 1/16 in (depending upon product type) from the product in the feeder hopper. This keeps product that rests above the feeder back wedge from slipping back towards the conveyor. With the docking lock lever tightened, loosen the 2 conveyor base adjust lock knobs to move the conveyor base forward or backward.

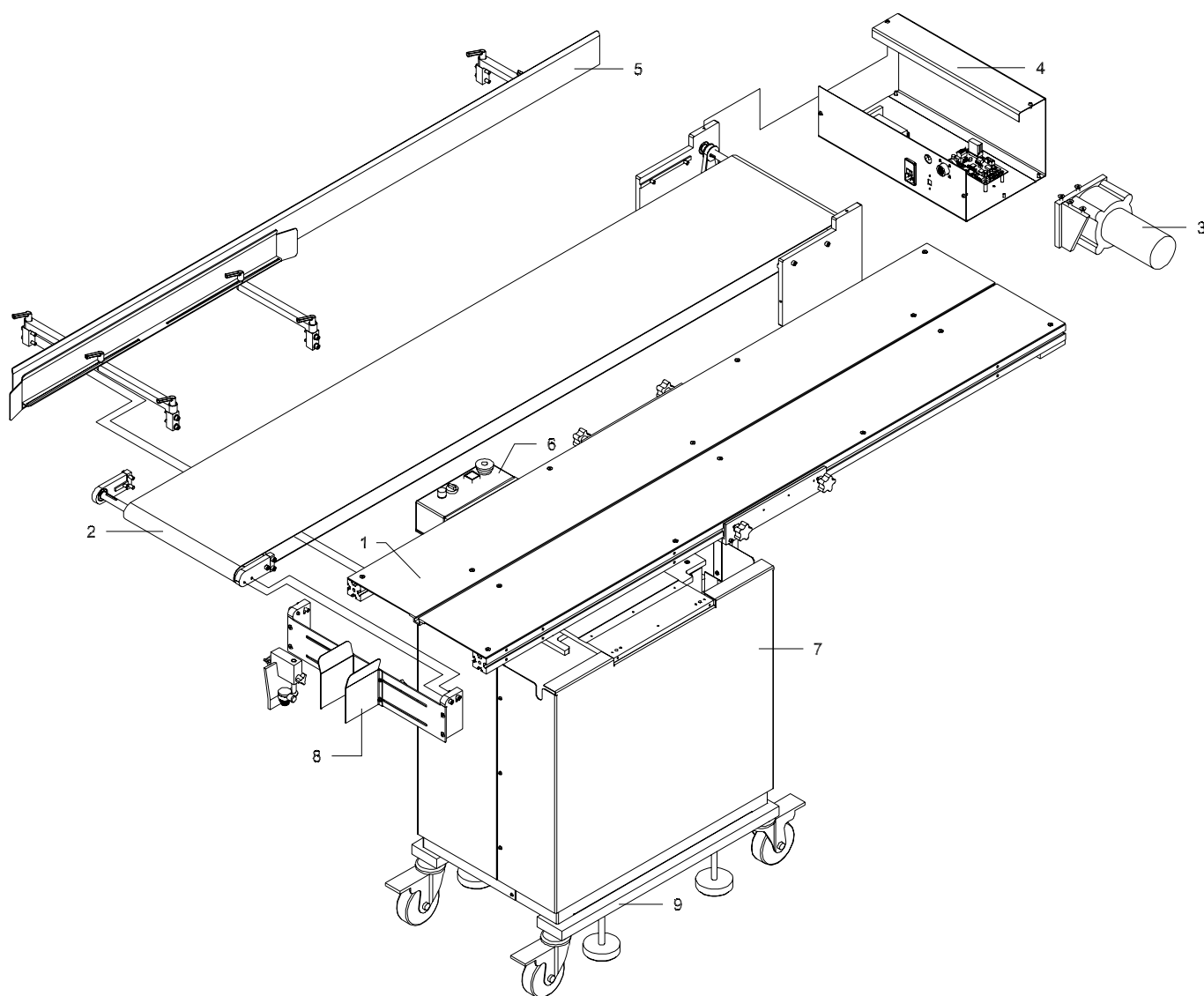


Product evenly dropping into hopper

Start the feeder and conveyor at slow speed to test. Product discharged from the conveyor must be set at a speed sufficient to strike the feeder's gate plate and fall evenly into the hopper. Adjust the speed controls until the conveyor drops a constant, even level of product into the feeder hopper.

3 Mechanical Components

AUTOSTREAM M1

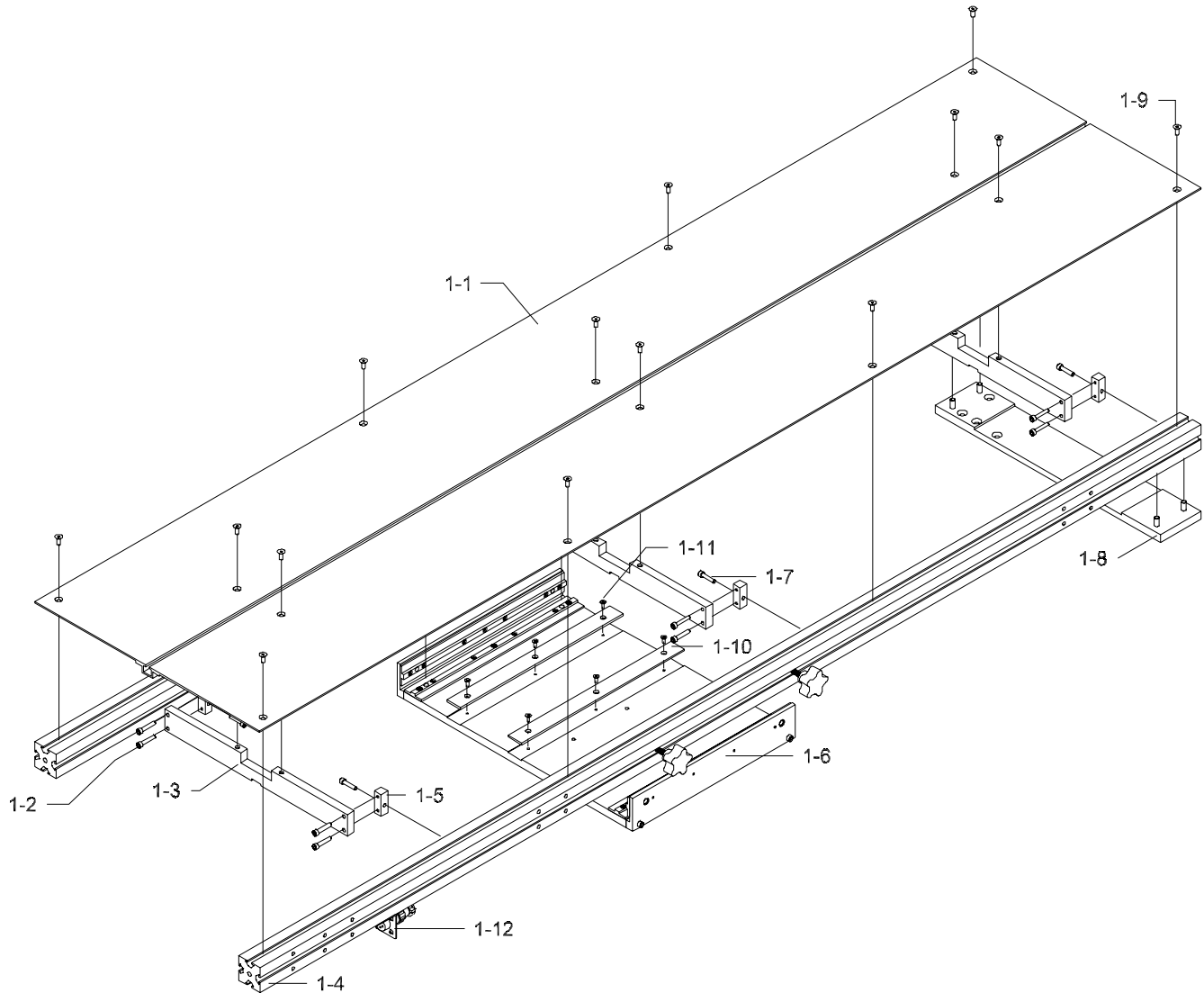


AUTOSTREAM M1

Diagram Number	Description	Part Number
1	OPTIONAL M1 BASE ASSEMBLY	14971101
2	BELT ASSEMBLY	14971102
3	MOTOR ASSEMBLY	14971103
4	MOTOR ENCLOSURE ASSEMBLY	16311124
5	SIDE GUIDE ASSEMBLY	14971104
6	REMOTE BOX ASSEMBLY	14971132
7	OPTIONAL STAND SHELL ASSEMBLY	14971106
8	MECHANICAL FEEDER INTERFACE	14971107
9	STAND ASSEMBLY	51021034
NS	OPTIONAL DOCKING STATION HEAVY DUTY ASSEMBLY	14971114
NS	OPTIONAL DOCKING STATION STANDARD ASSEMBLY	14971113

NS = NOT SHOWN

OPTIONAL M1 BASE ASSEMBLY
Assembly # : 14971101

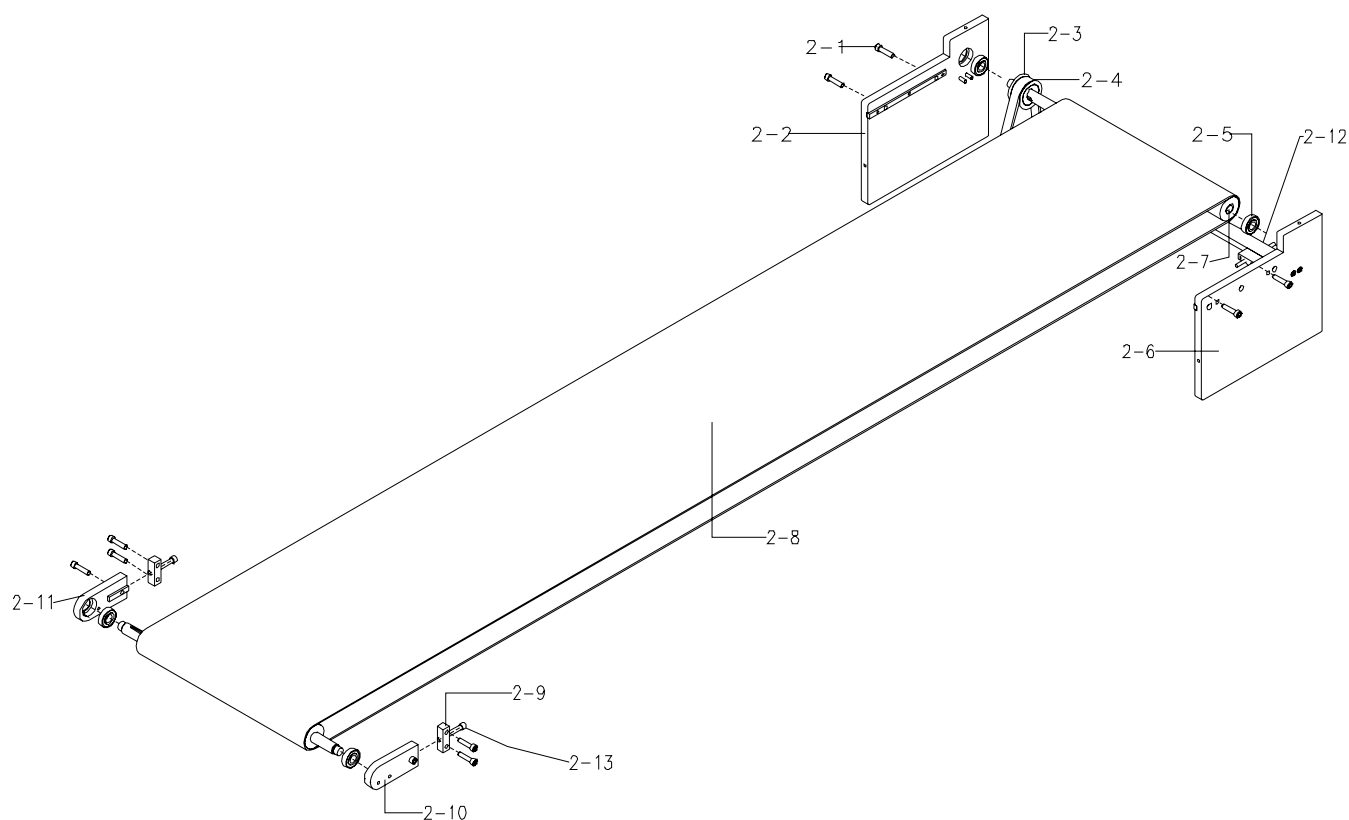


OPTIONAL M1 BASE ASSEMBLY

Assembly # : 14971101

Diagram Number	Qty	Description	Part Number
1-1	1	Panel Top	51497015
1-2	12	SHCS 10-32 X 1	00002335
1-3	3	Support Deck	51497024
1-4	2	Rail	51497011
1-5	6	Mount Deck Support	51497025
1-6	1	Support Stand	51497009
	4	SHCS 10-32 X 7/8	00003302
	8	BHCS 6-32 X 3/8	00003314
	2	Slide Mount	51631009
	4	SHCS 1/4-20 X 1	00002390
	4	Washer	00002605
	4	Side Rail Mount	51497066
	6	FHSHCS 6-32 X 3/8	00002235
	4	5 Lobe Knob	44947121
	4	Set Screw 1/4-20 X 1-1/2	00003399
1-7	6	SHCS 10-32 X 7/8	00003302
1-8	1	Bracket Motor Mount	51497027
	4	SHCS 1/4-20 X 1	00002390
1-9	14	FHSHCS 10-32 X 1/2	00002830
1-10	3	Block Belt Support	51497060
1-11	9	FHSHCS 6-32 X 3/8	00002235
1-12	1	Bracket Harness Extension	51497070
	1	BHCS 10-32 X 1/2	00002334
	1	Harness Sensor Extension	14971121
	4	BHCS 6-32 X 1/4	00003305
NS	16	Nut T-Slot 1/4-20	51208214
NS	15	Nut T-Slot 10-32	51390108
NS	1	Sensor Assembly	63011038

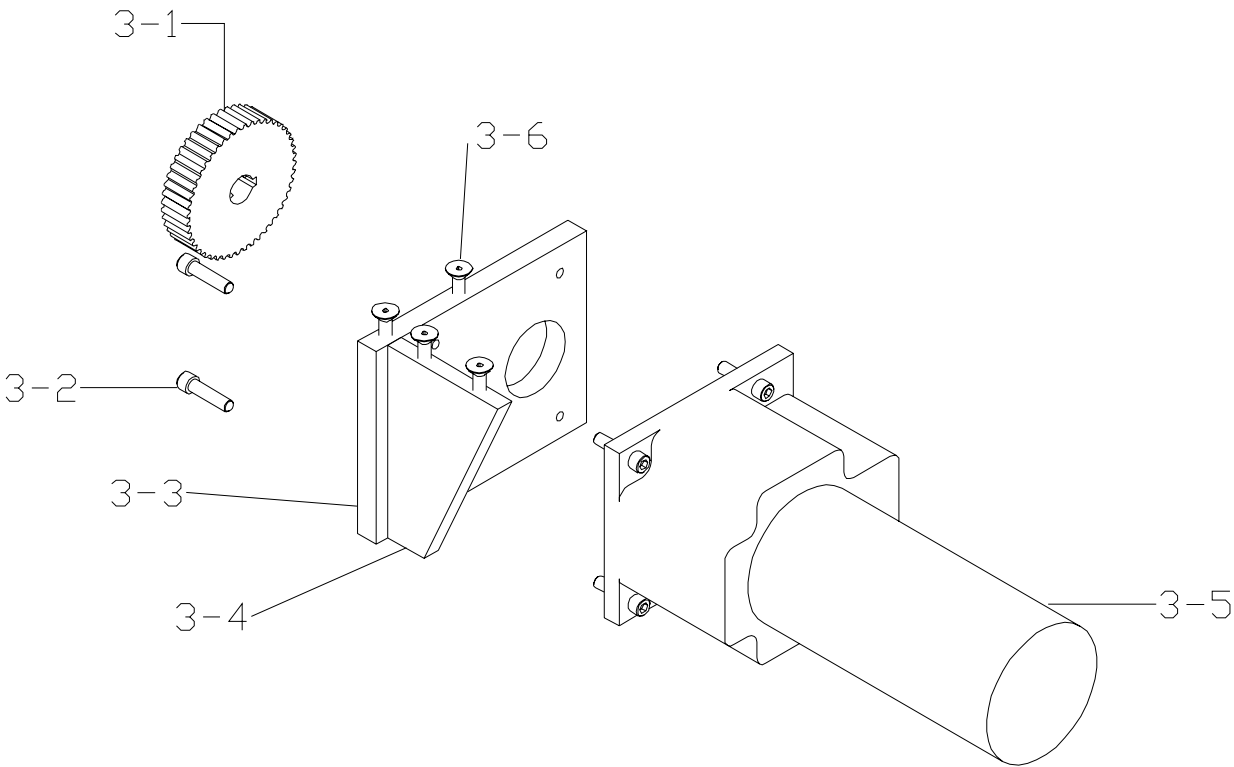
BELT ASSEMBLY
Assembly # : 14971102



BELT ASSEMBLY
Assembly # : 14971102

Diagram Number	Qty	Description	Part Number
2-1	10	SHCS 1/4-20 X 1	00002390
2-2	1	Shaft Mount Rear Right	51497062
	2	SHCS, 10-32 x 3/4	00003389
2-3	1	Timing Belt, 5MR375-15	51497144
2-4	1	Pulley Timing 24 Tooth	51497141
2-5	4	Bearing Ball R8	23500094
2-6	1	Shaft Mount Rear Left	51497063
	2	SHCS, 10-32 x 3/4	00002825
2-7	2	Shaft Drive	51497007
	2	Roller Drive	51497014
2-8	1	Belt Transport	51497016
2-9	2	Mount Side	51497012
2-10	1	Mount Driven Roller Right	51497017
2-11	1	Mount Driven Roller Left	51497018
2-12	1	Tensioner Bar	51497140
	2	Tensioner Spacer	51497143
	4	SHCS, 8-32 x 1	00002303
	2	SSSCPPT, 10-32 x 3	00003379
	2	Set Screw 10-32 X 1/8	00003352
2-13	2	SHCS 1/4-20 X 1 3/4	00002329
NS	4	Set Screw 1/4-20 X 1/4"	00002205
NS	1	Key Stock 3/16	44852021

MOTOR ASSEMBLY
Assembly # : 14971103

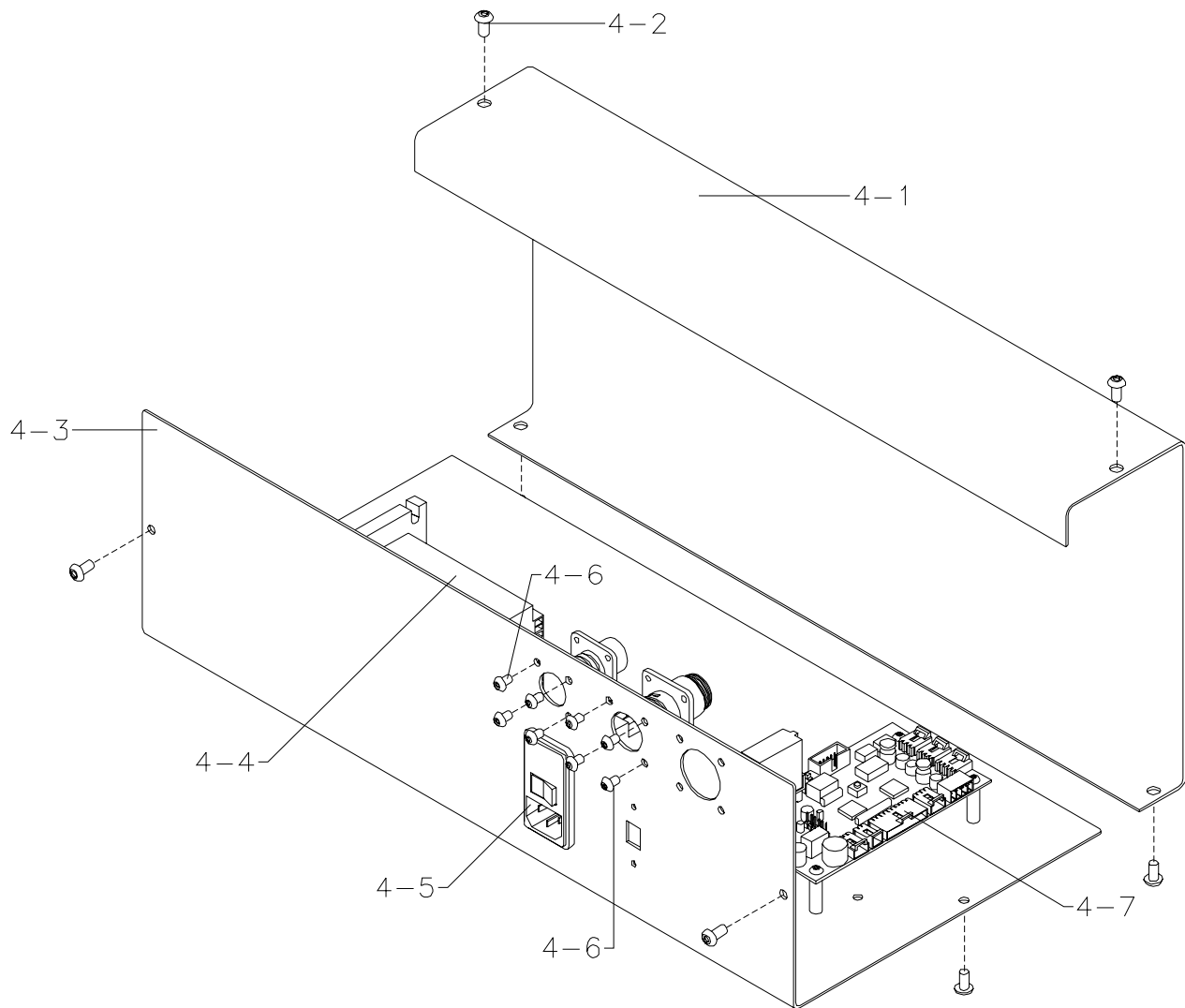


MOTOR ASSEMBLY
Assembly # : 14971103

Diagram Number	Qty	Description	Part Number
3-1	1	Pulley Timing 48 Tooth	51497142
3-2	10	SHCS 1/4-20 X 3/4	00002390
3-3	1	Mount Motor	51497028
3-4	1	Gusset	51497031
3-5	1	Motor	51497026
3-6	4	FHSHCS 1/4-20 X 3/4	00003395
NS	1	Plug 3 Pin	53500385
NS	3	Male Pin	53500386
NS	10"	Varflex	44649085

MOTOR ENCLOSURE ASSEMBLY

Assembly # : 14971124

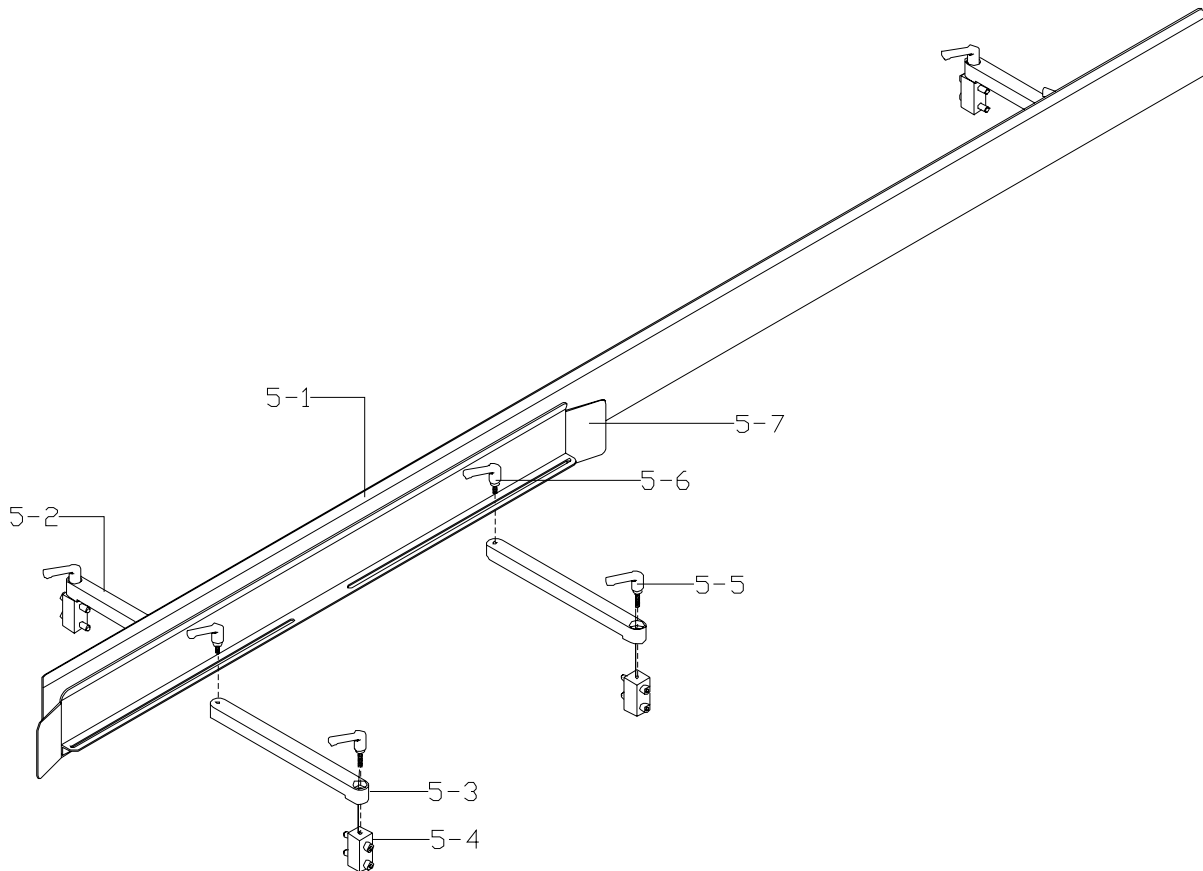


MOTOR ENCLOSURE ASSEMBLY

Assembly # : 14971124

Diagram Number	Qty	Description	Part Number
4-1	1	Cover Top	51497064
4-2	8	BHCS 10-32 X 3/8	00002805
4-3	1	Cover Back	51497061
4-4	1	DC Drive	51050252
4-5	1	Module Power AC	44649034
4-6	8	BHCS 6-32 X 1/4	00003305
4-7	4	BHCS 6-32 X 1/4	00003305
	4	Stand-Off	53500511
	1	PCB	44841015
	4	PHMSPH 6-32 X 3/8" W/Washer	00002450
NS	2	Fuse, 5A 250V Slo-Blo 5x20mm	53500558
NS	1	Cord Power 115VAC IEC 3-Prong	53500002
NS	1	Harness Inhibit	14971120
NS	1	Harness Power	14971118
NS	1	Harness Motor	14971116
NS	1	Harness Main	14971115
NS	2	Terminals	53500254
NS	4	Keps Nut	00002121
NS	1	Graphic Set	51497067

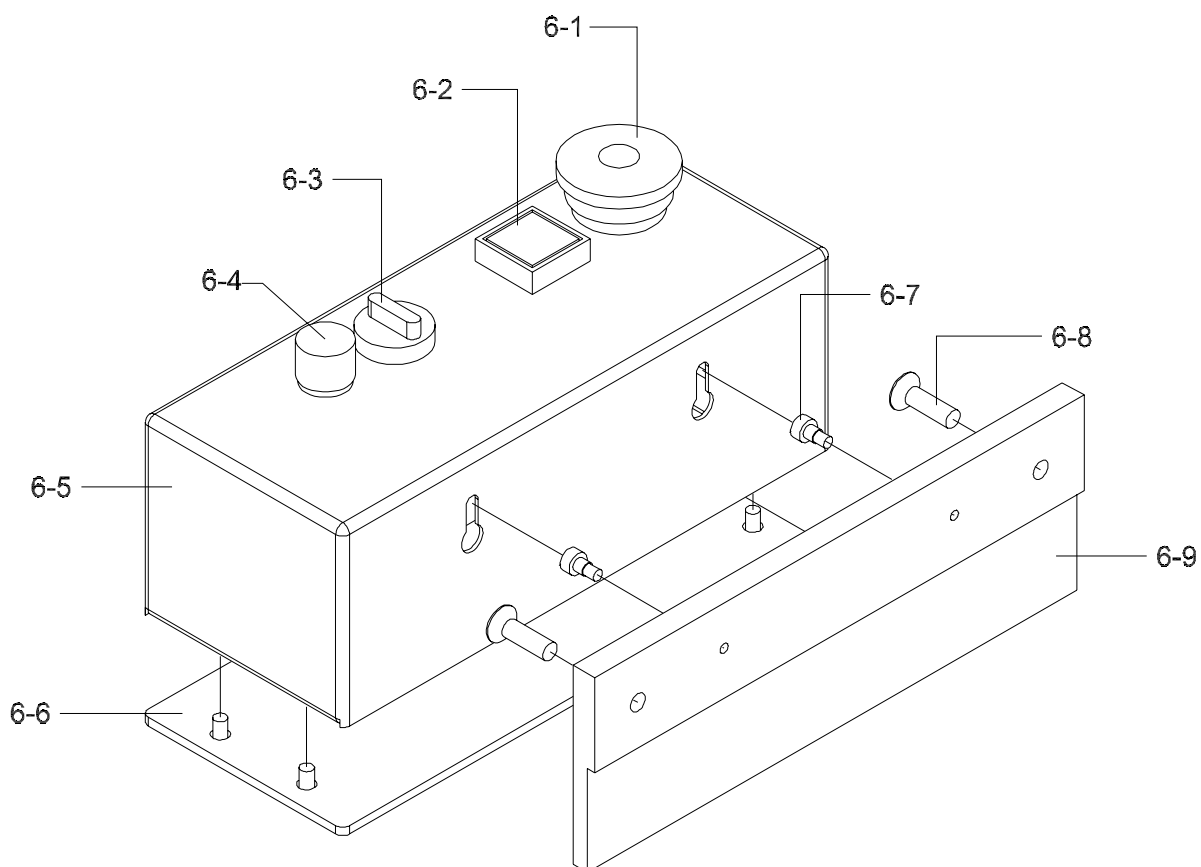
SIDE GUIDE ASSEMBLY
Assembly # : 14971104



SIDE GUIDE ASSEMBLY
Assembly # : 14971104

Diagram Number	Qty	Description	Part Number
5-1	1	Side Guide	51497019
5-2	2	Block Side Guide Adjust	51497022
5-3	2	Block Side Guide Adjust	51497128
5-4	4	Block Side Guide Mounting	51497023
	8	SHCS 1/4-20 X 1-1/4	00003372
5-5	4	Lever Adjustable Ratchet 10-32 X 3/4	43555098
5-6	4	Lever Adjustable Ratchet 10-32 X 1/2	43555097
5-7	1	Side Guide Front	51497020

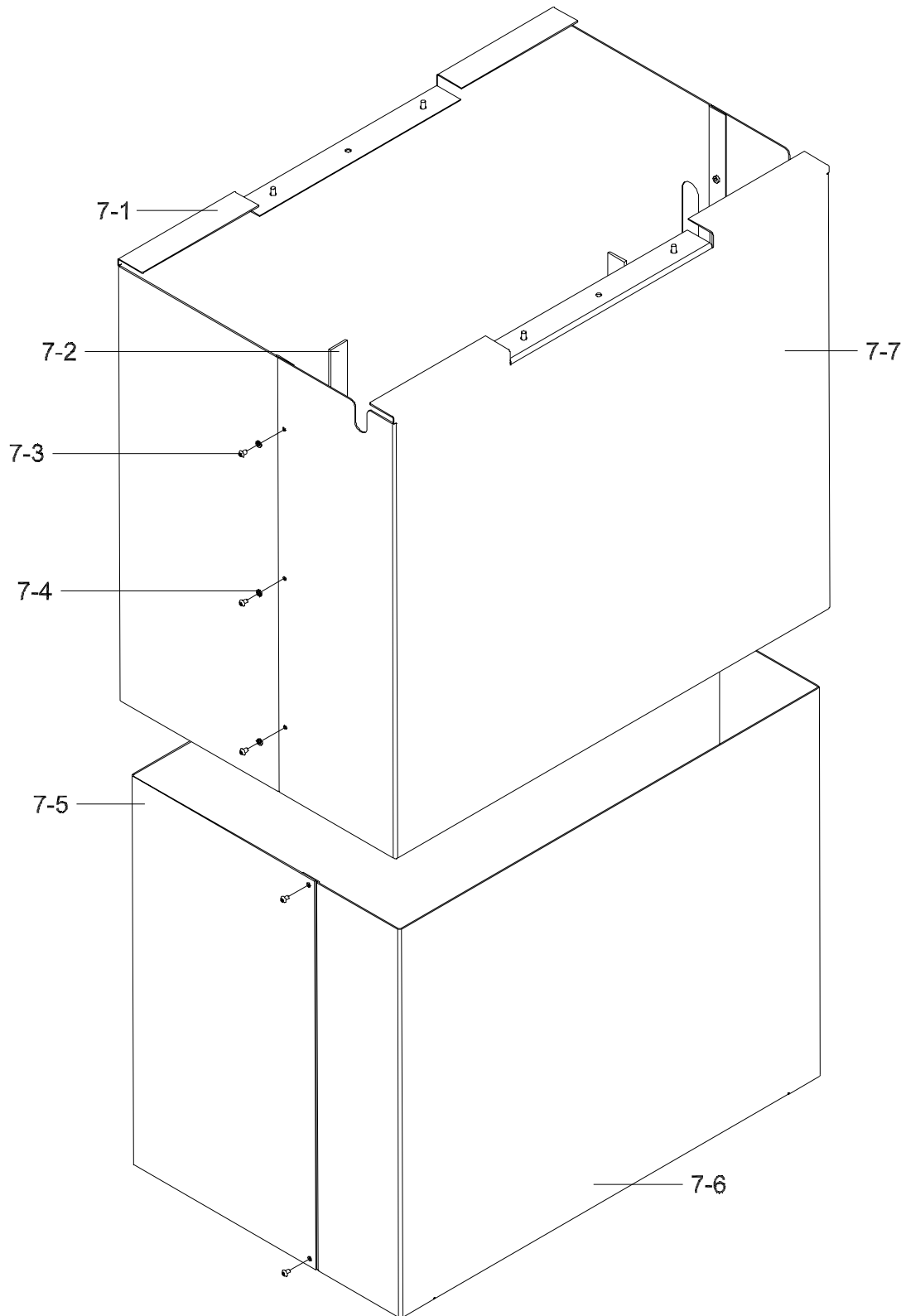
REMOTE BOX ASSEMBLY
Assembly # : 14971132



REMOTE BOX ASSEMBLY
Assembly # : 14971132

Diagram Number	Qty	Description	Part Number
6-1	1	E-Stop 22mm	53500552
	1	Contact Block NC	51327025
6-2	1	Blue Button	51379088
6-3	1	Selector 3 Position	51379085
6-4	1	Knob	44675030
6-5	1	Remote Operator Station Enclosure	51460097
6-6	1	Plate Base Operator Station	51460099
6-7	2	Shoulder Bolt	00003321
6-8	2	FHSHCS 1/4-20 X 3/4	00003395
6-9	1	Remote Box Mount	51497068
NS	1	Harness Potentiometer	14971117
NS	1	Harness Operator Switch	14971119
NS	4	BHCS/SS 10-32 X 3/8	00002805
NS	2	Cable Tie Mount	00003402
NS	2	Cable Tie Black	435SO263

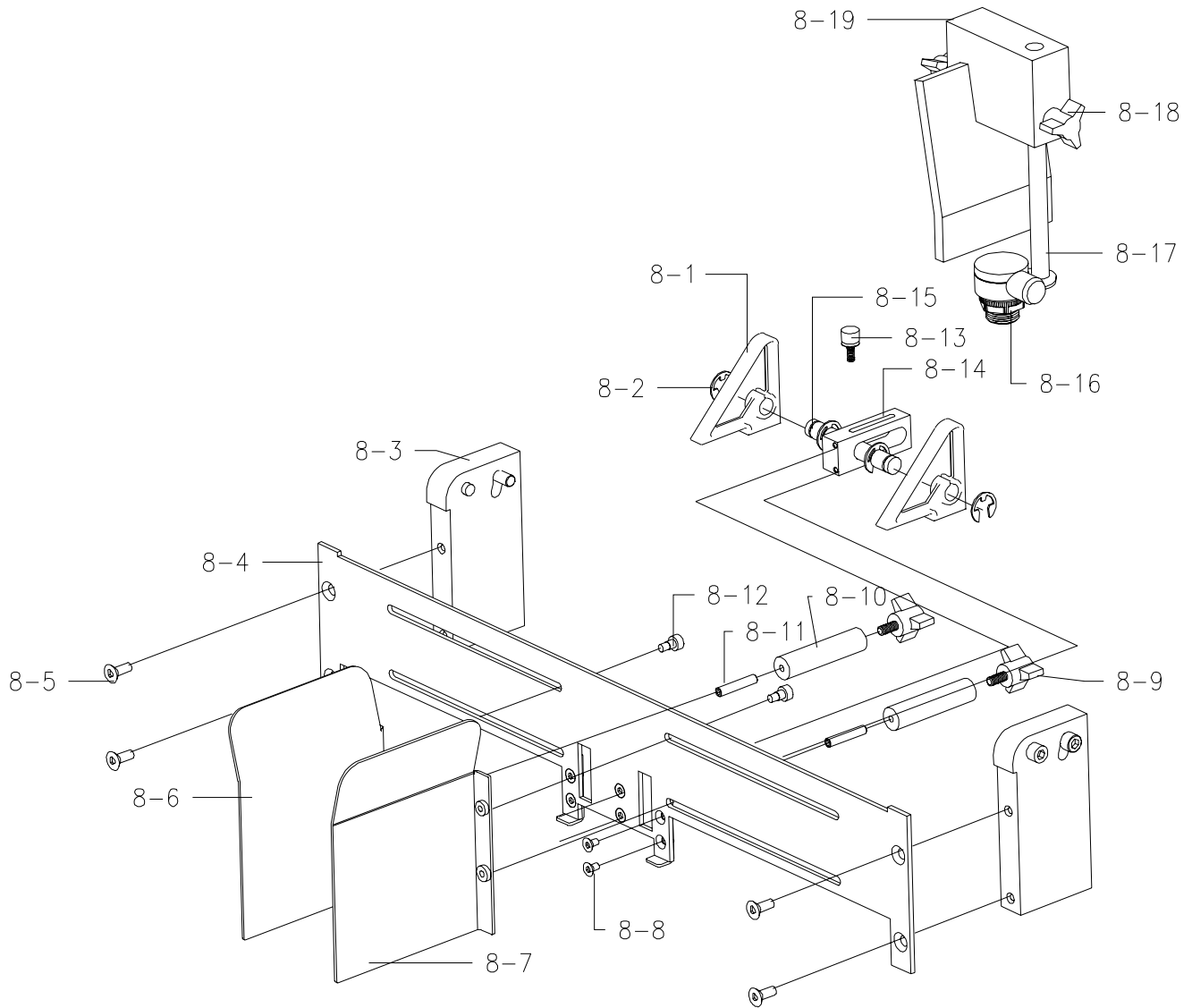
OPTIONAL STAND SHELL ASSEMBLY
Assembly # : 14971106



OPTIONAL STAND SHELL ASSEMBLY
Assembly # : 14971106

Diagram Number	Qty	Description	Part Number
7-1	1	Stand Outer Side	51497129
	4	Block Stand Spacer	51497045
7-2	4	BHCS 8-32 X 1/4	00002210
	1	Inner Shell	51497132
7-3	1	Adjustable Stand 29"	51021001
7-4	1	Inner Shell	51497131
7-5	1	Outer Shell	51497130
	6	Number 8 Lock Washer	00003301
	6	BHCS 8-32 X 1/4	00002210
	4	SHCS 10-32 X 3/8	00002310
	1	Block Stand Spacer	51497045

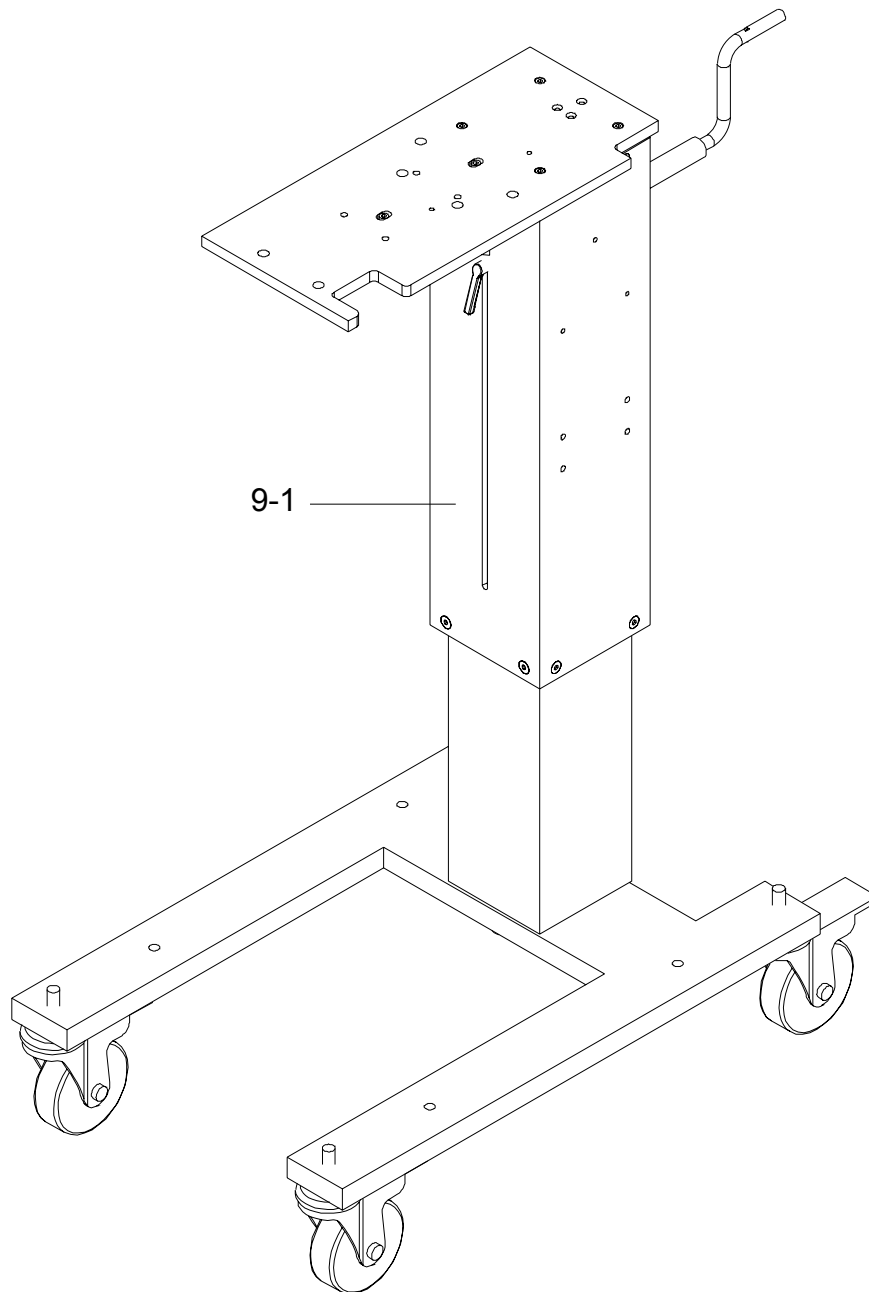
MECHANICAL FEEDER INTERFACE
Assembly # : 14971107



MECHANICAL FEEDER INTERFACE
Assembly # : 14971107

Diagram Number	Qty	Description	Part Number
8-1	2	Wedge Material Support	33560212
8-2	4	E-Clip 3/8"	00001150
8-3	2	Block Mounting Plate	44775519
	2	SHCS 1/4-20 X 3/4	00002328
	2	SHCS 1/4- X 1	00002390
8-4	1	Plate Mounting	51497032
	2	Finger Back Stop	44775526
8-5	4	FHCS 10-32 X 1/2	00002330
8-6	1	Guide Right Side	44775517
8-7	1	Guide Left Side	44775518
8-8	6	FHCS 6-32 X 1/4	00002229
8-9	2	Knob 3 Lobe	23500092
8-10	2	Shaft Spacer	44775523
8-11	2	SHSSS 10-32 X 1	00002201
8-12	2	Shoulder Bolt	00003321
8-13	1	Round Knob	435SO269
8-14	1	Block Wedge	44775521
8-15	1	Shaft Wedge	44775522
8-16	1	Harness Sensor Assembly	14971122
	1	Bracket Sensor	44775529
8-17	1	Shaft Sensor	23560217
8-18	2	3 Lobe Knob	44633033
8-19	1	Mount Sensor	44775527
NS	1	BHCS 10-32 X 3/8	00002305

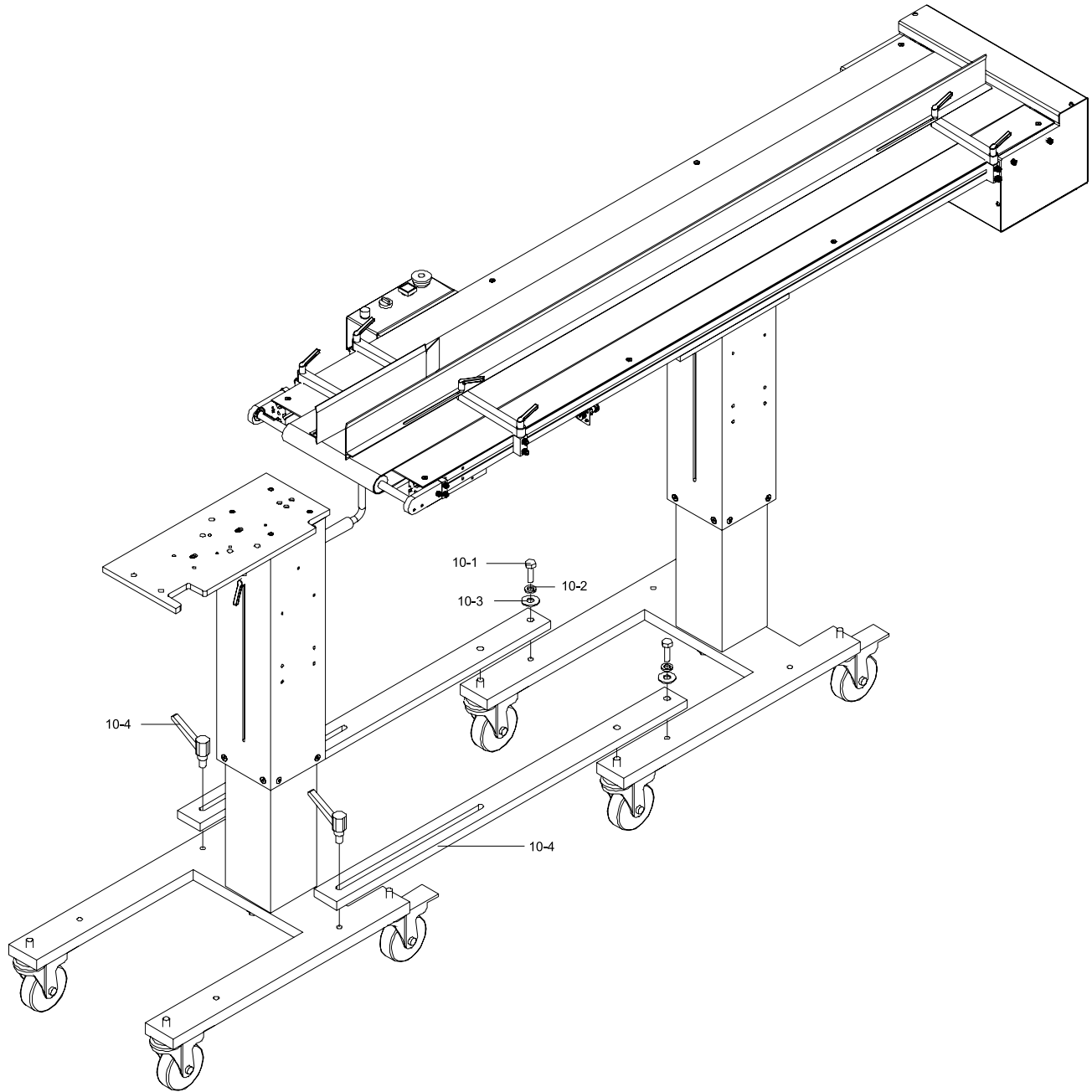
STAND ASSEMBLY
Assembly # : 51021034



STAND ASSEMBLY
Assembly # : 51021034

Diagram Number	Qty	Description	Part Number
9-1	1	Heavy Duty Stand 29" (Standard)	51021001
	1	Heavy Duty Stand 39" (Optional)	51021034

OPTIONAL DOCKING STATION HEAVY DUTY ASSEMBLY
Assembly # : 14971114

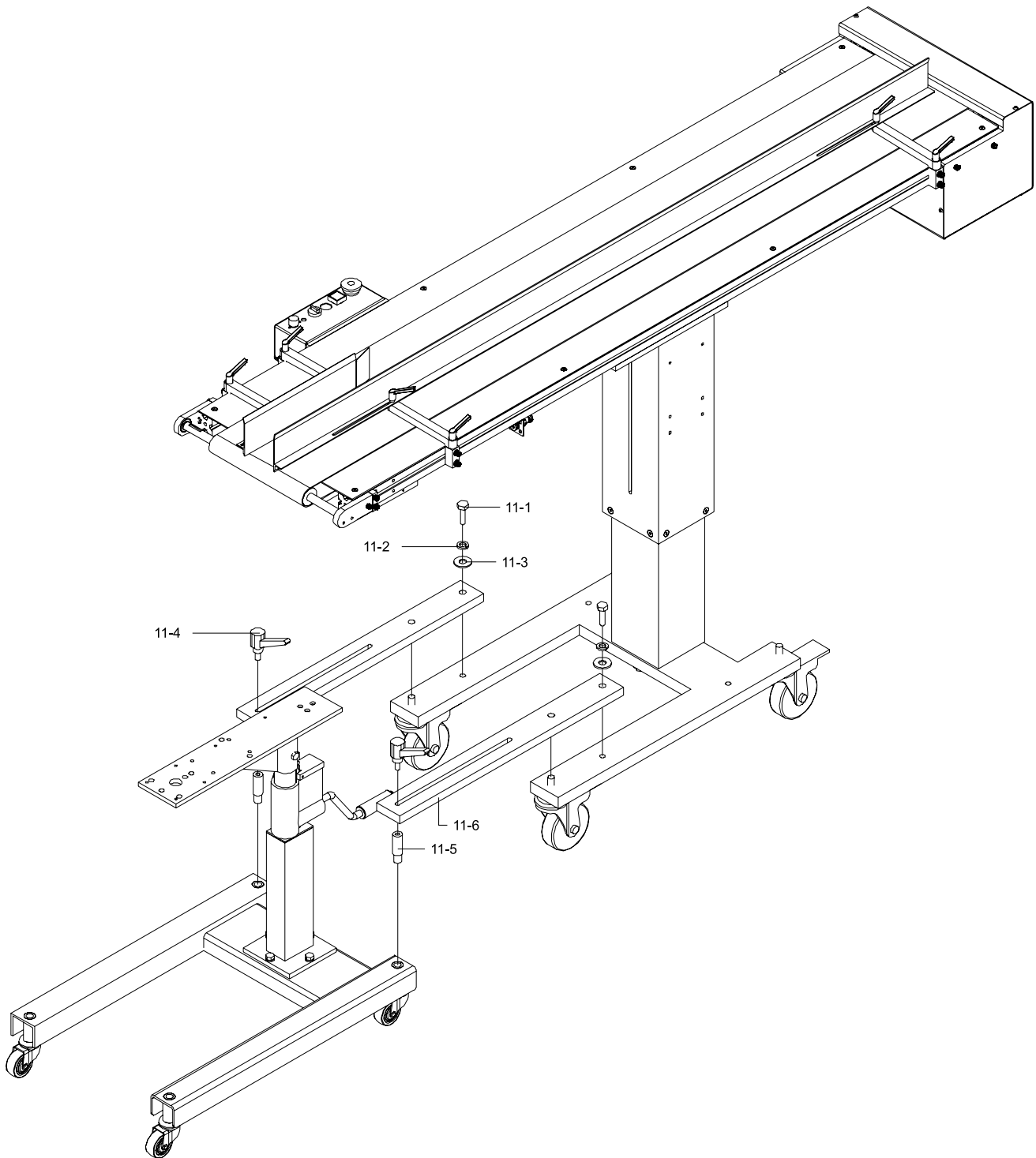


OPTIONAL DOCKING STATION HEAVY DUTY ASSEMBLY

Assembly # : 14971114

Diagram Number	Qty	Description	Part Number
10-1	2	Hex Head Bolt 1/2-13 X 1-1/2	00003461
10-2	2	Lock Washer 1/2	00003462
10-3	2	Washer 1/2	00003463
10-4	2	Ratchet Handle	51497073
10-5	2	Support Bar	51497072

OPTIONAL DOCKING STATION STANDARD ASSEMBLY
Assembly # : 14971113



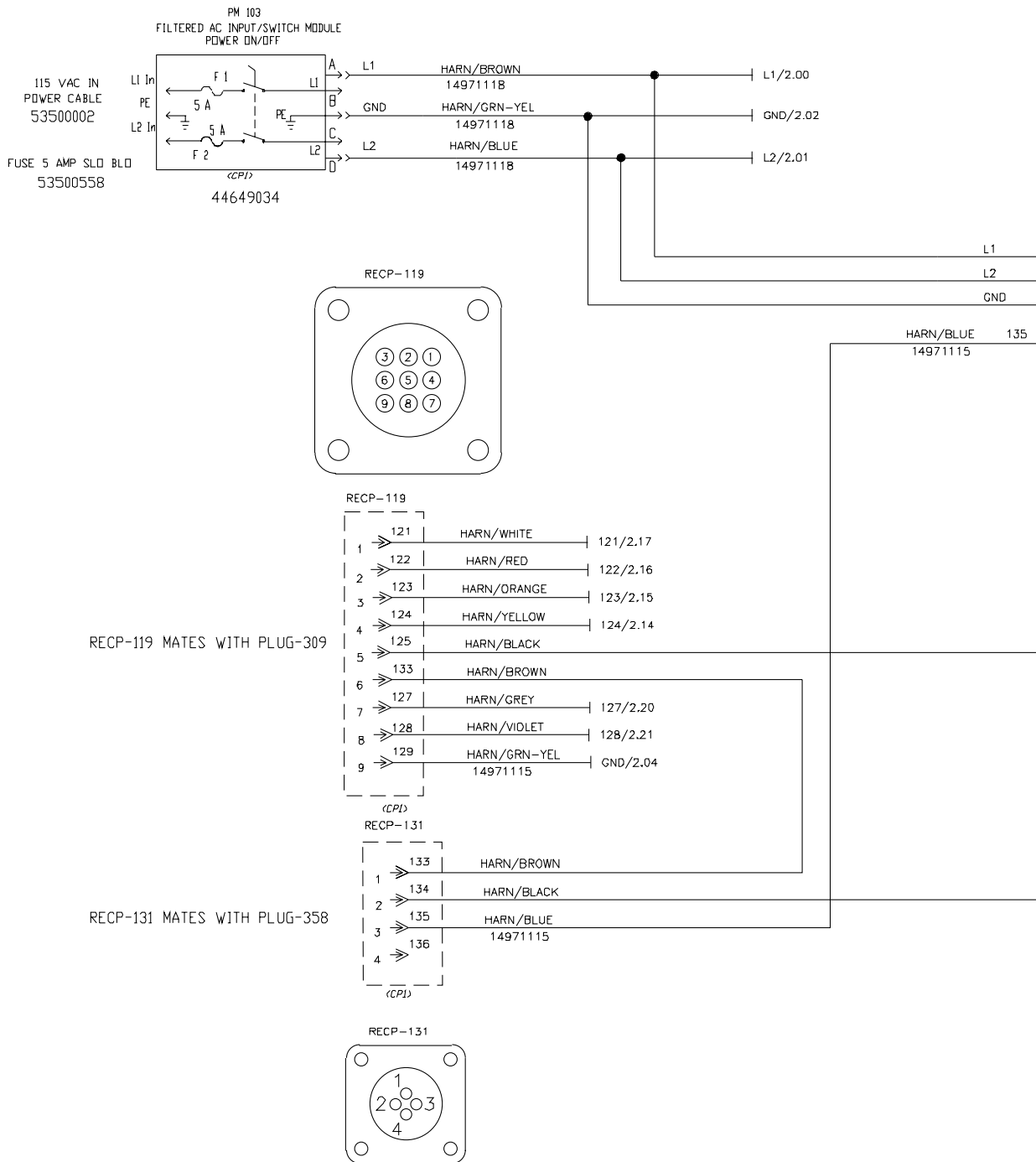
OPTIONAL DOCKING STATION STANDARD ASSEMBLY

Assembly # : 14971113

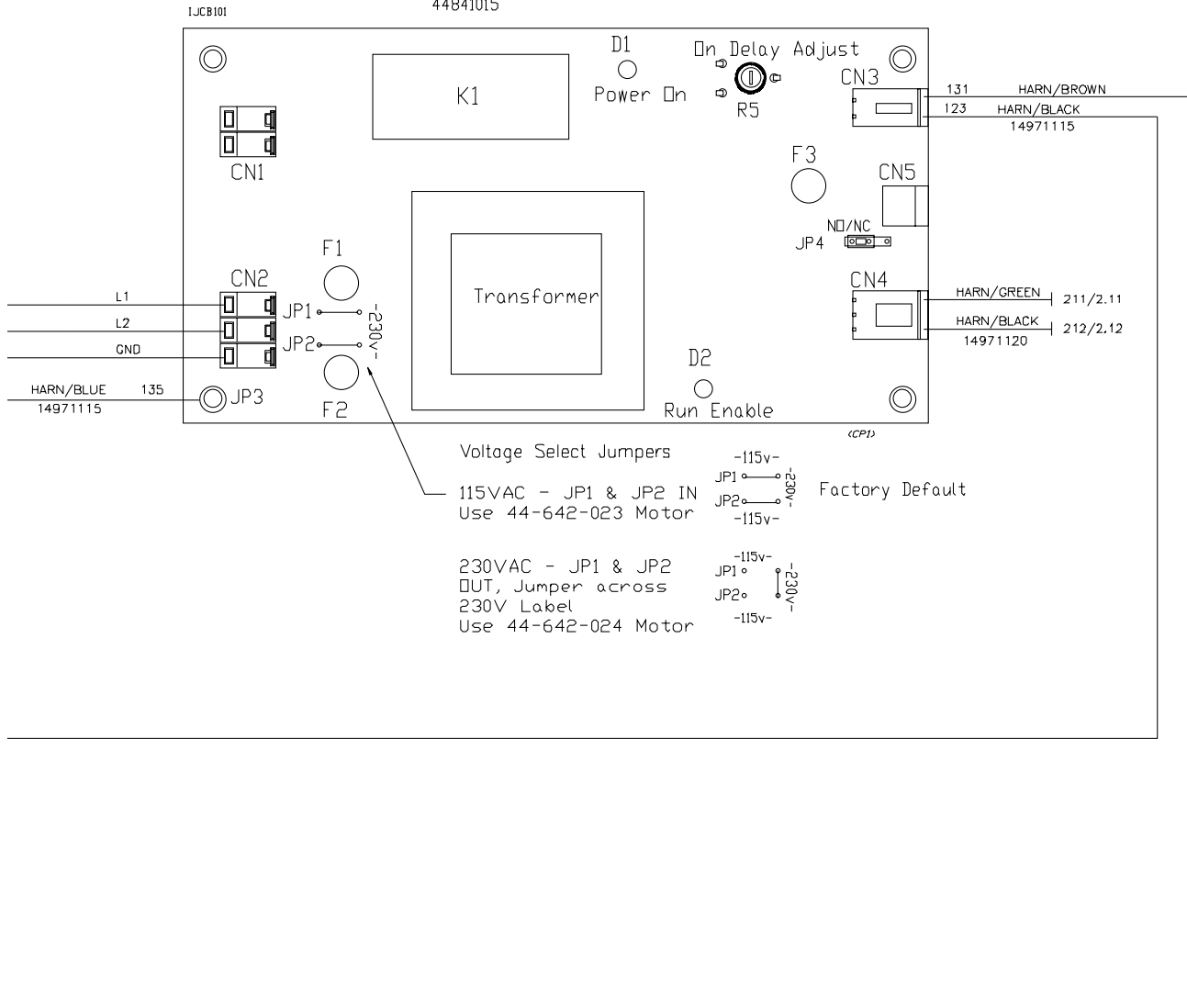
Diagram Number	Qty	Description	Part Number
11-1	2	Hex Head Bolt 1/2-13 X 1-1/2	00003461
11-2	2	Lock Washer 1/2	00003462
11-3	2	Washer 1/2	00003463
11-4	2	Ratchet Handle	44775507
11-5	2	Docking Standoff	51497071
11-6	2	Support Bar	51497069

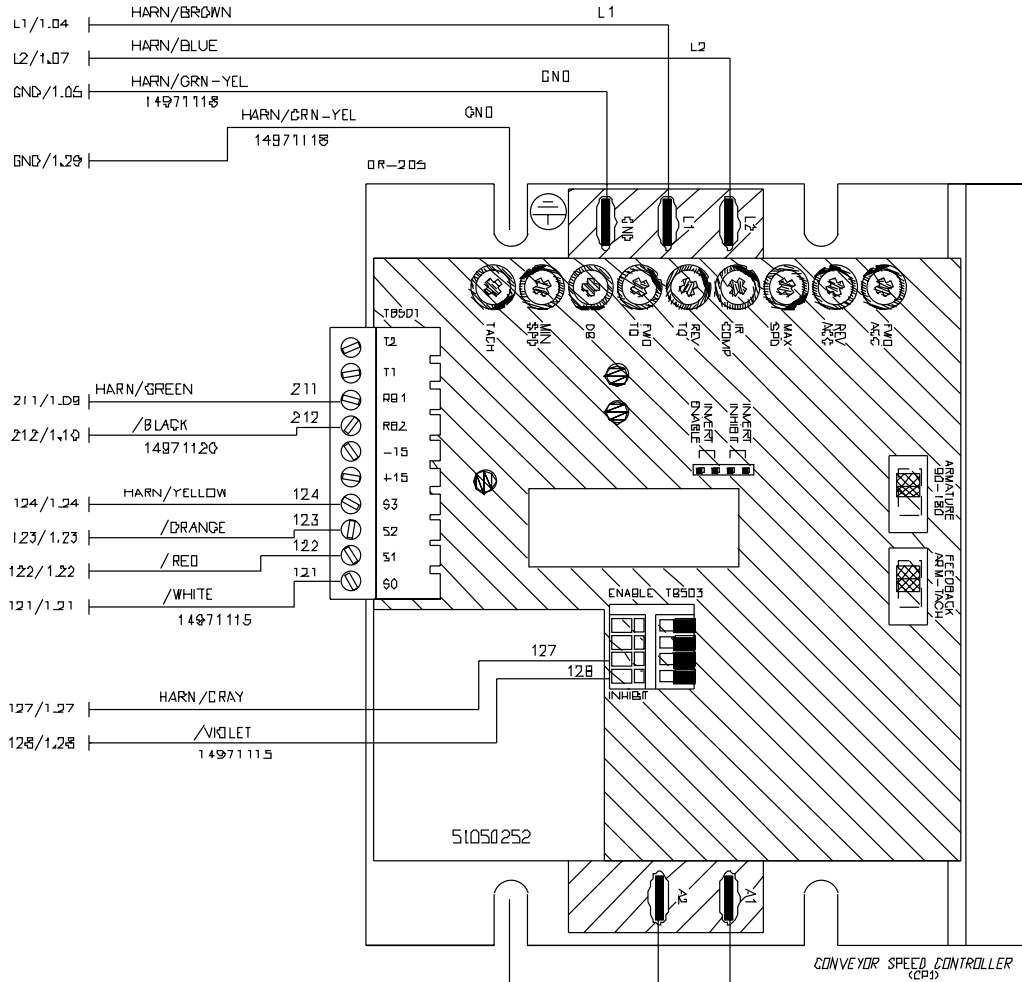
4 Electrical Schematics

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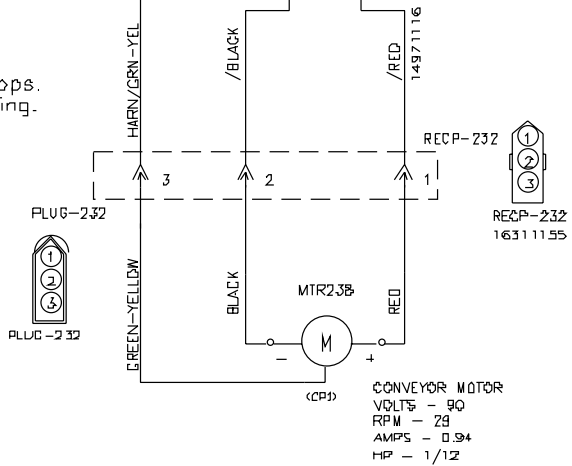


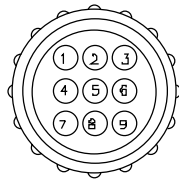
Board, V710 IJ Control
44841015





Notes:
 Set pots as shown,
 adjust "MIN SPD" until conveyor stops.
 adjust "MAX SPD" for 90 volt reading.





PLUG-309
14971132

PLUG-309 MATES WITH RECP-119

Remote Operator Station

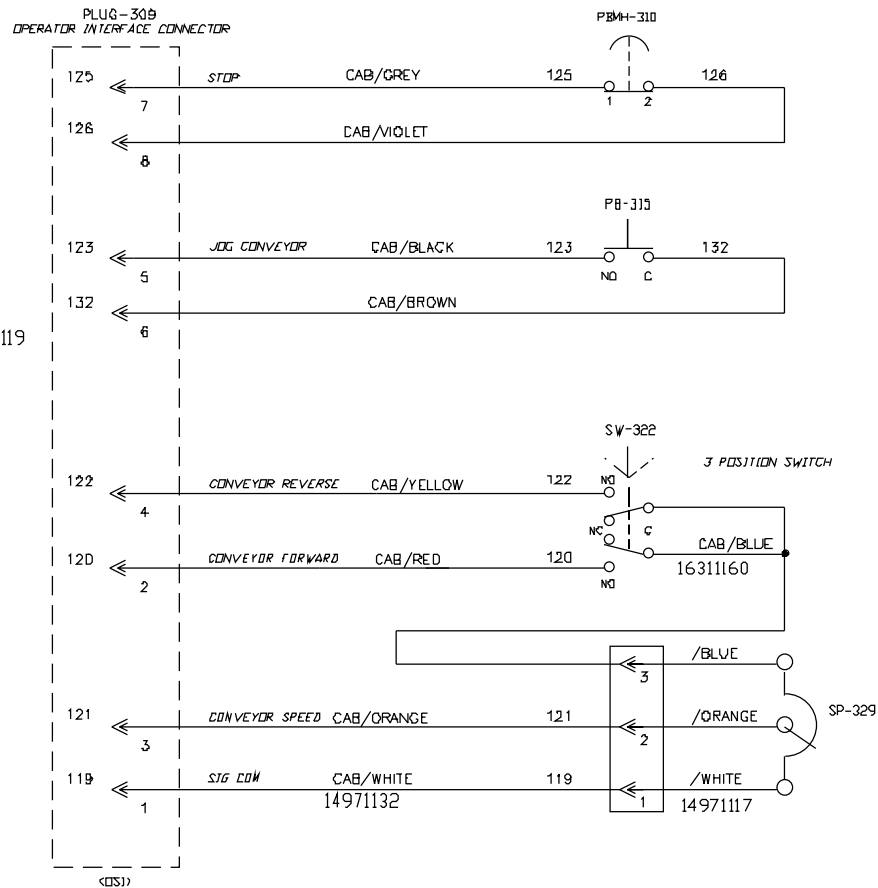
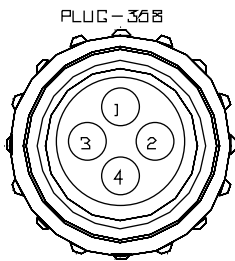
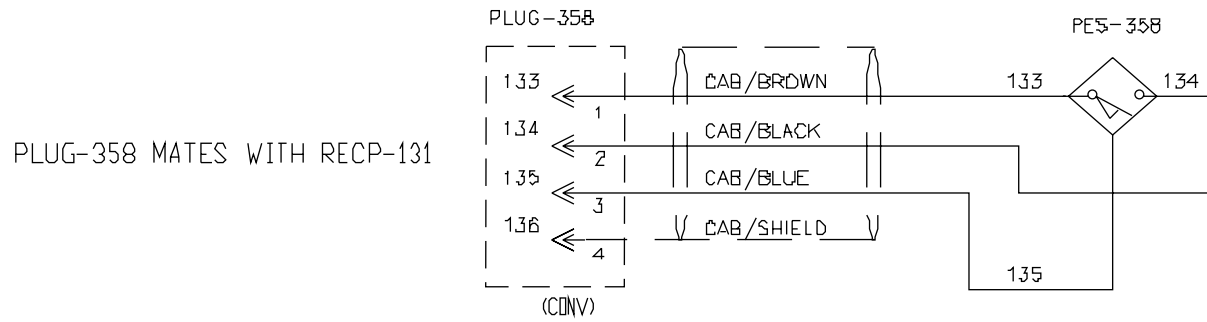


PHOTO EYE SENSOR





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