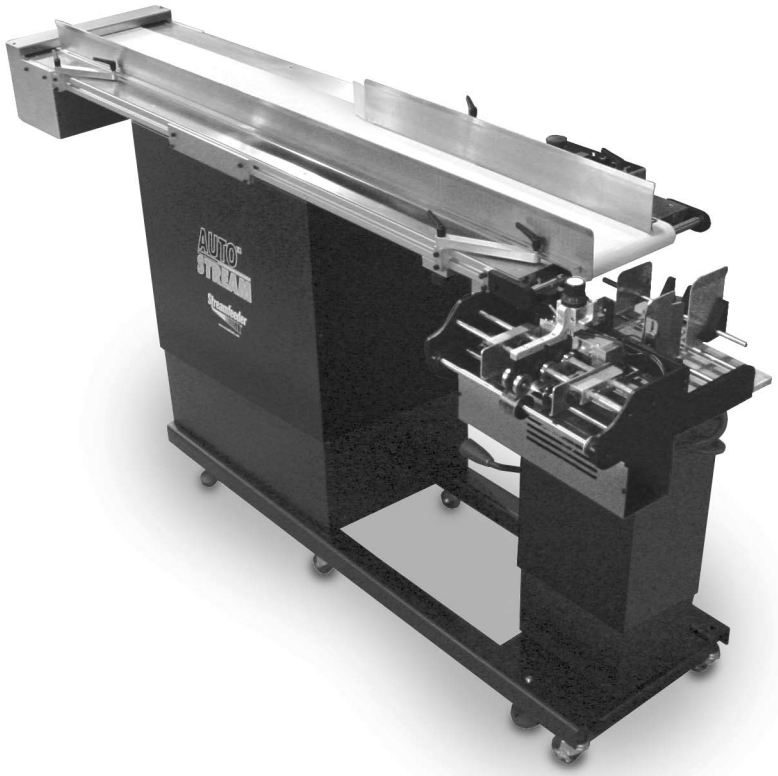
AUTO™ STREAM

Model M2

Product Guide



Streamfeeder®

Part Number: 00900477 (10/06)

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Contents

Before You Begin

Who Should Read This Manual

This manual was included with your new Streamfeeder AutoStream M2. 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.

NOTE

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

Message Conventions

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

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

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

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

TIP

TIP signifies information that is provided to help minimize problems in the installation or operation of the feeder.

NOTE

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

CHECK

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

IMPORTANT

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

WARNING LABELS affixed to this product signify an action or specific equipment area that can result in serious injury or death if proper precautions are not taken.

Before You Begin

Message Conventions

Avoid injury. Do not reach around guards.

Hazardous voltage. Contact will cause electric shock or burn. Turn off and lock out power before servicing.

Moving parts can crush and cut. Keep guards in place. Lock out power before servicing.

Pinch point. Keep hands and fingers clear.

Moving parts can crush and cut. Keep guards in place. Lock out power before servicing.

SAFETY

Make sure you thoroughly read this section to become familiar with all the safety issues relating to the safe operation of this product.

Please read all of the warnings that follow to avoid possible injury. Although Streamfeeder has made every effort to incorporate safety features in the design of this product, there are residual risks that an installer or operator should be aware of to prevent personal injury.

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

Danger

- **Equipment interior contains incoming 115 or 230VAC electrical power. Bodily contact with these high voltages can cause electrocution, which can result in serious injury or death.**

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)

Feeder Speed: ..... 4800 in/min (121,920 mm/min)

Electrical Requirements: 115vac, 60Hz, 6A

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): ..... 33-45 in (838-1143 mm)

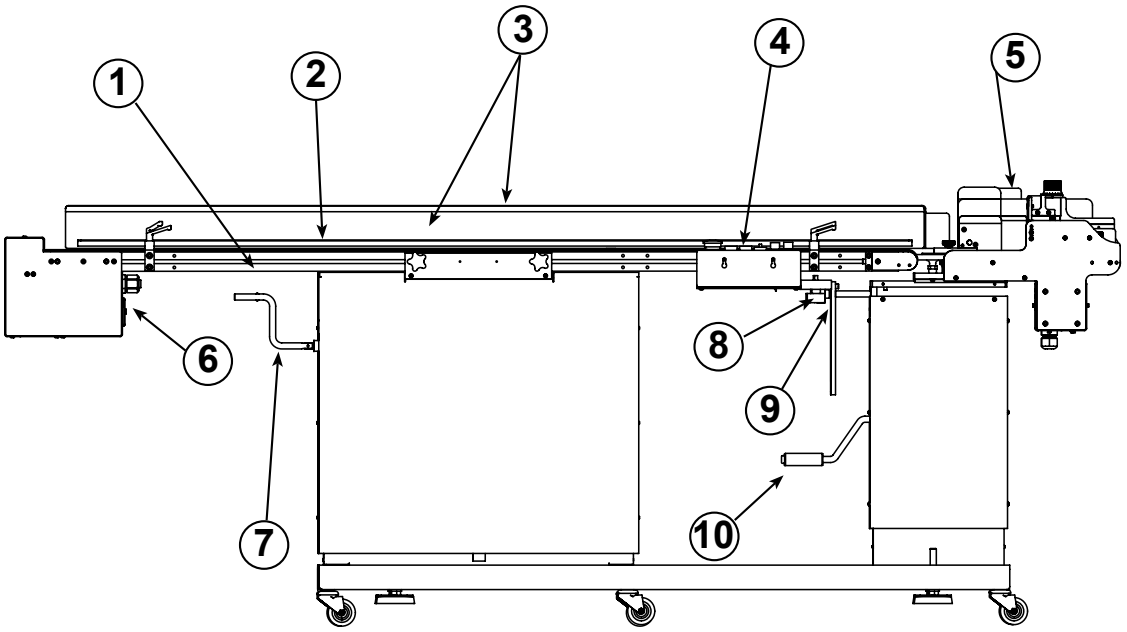
Feeder Height (adjustable range): .....31-43 in (787-1092 mm)

Warranty: ..... One-year limited

1 About Your Machine

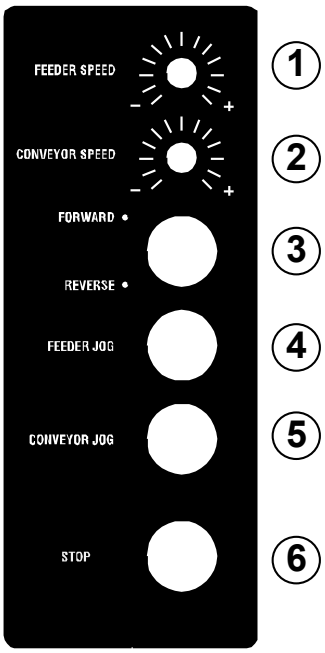
The AutoStream Model M2 is designed for reliability, flexibility, and ease of use. All parts required for setup, loading, feeding, sensing and easy operator control is combined into one compact unit. Review the main assemblies to become familiar with names and locations of feeder parts and adjustments. This will help to prepare you for initial setup.

Main Assemblies



1. Base Assembly
2. Conveyor Belt
3. Side Guides
4. Operator Station
5. Feeder
6. Power Switch/Connection, Enable/Inhibit Switch, Feeder/Operator Station Interface Connections, External Run Connector
7. Conveyor Height Adjustment Crank
8. Conveyor Base Adjust Lock Knobs
9. Docking Plate Lock Lever
10. Feeder Height Adjustment Crank

Operator Station



Operator Station

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

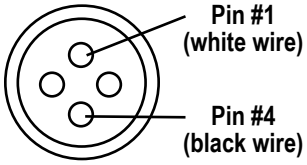
Enable/Inhibit Switch

Enable/Inhibit Switch

The AutoStream feeder was designed to be controlled by a dry contact input signal from the “host”.

When Inhibit is selected you can use the input for 2 functions. One function is for stand alone use, no connection required.

When Enable is selected it can use the input for a host system that starts the feeder when pins #1 (white wire) and #4 (black wire) are closed.



External Run Connector

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.

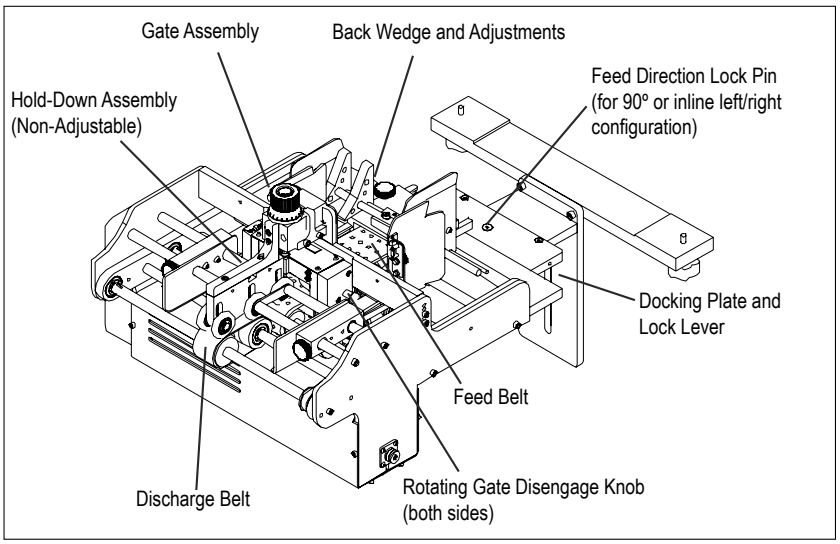
1. Before powering on, make sure the 115V tag is showing through the window in the power entry module. If the 220V tag is showing, the module must be opened and the switch block must be removed, turned 180 degrees and re-inserted so the 115V tag shows through the window when the receptacle is closed.

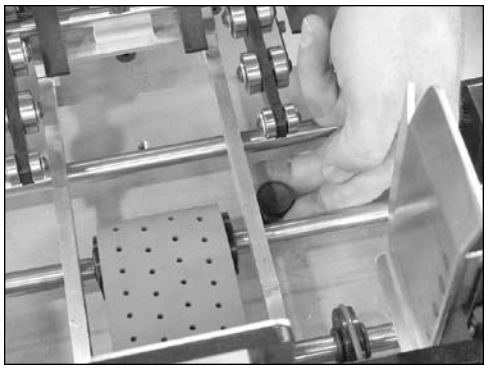
2. The AutoStream is protected by two 5A/250V fuses. These fuses are located inside the power entry module. To replace/inspect the line fuses, open the module and remove the switch block. In each side of the switch block is a 5A/250V fuse. If the fuse has blown, it will normally show discoloration. Replace 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.

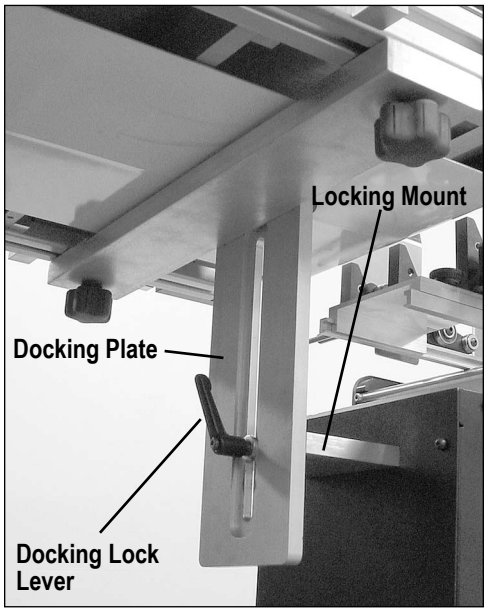
STEP 2:
Feeder Direction/ Height Adjustment





Pull lock pin to change feeder direction

Set the direction of the feeder based on the configuration of the component it is feeding (90º left/right or inline). While pulling up on the lock pin, turn the feeder 90º left/right or inline. While turning the feeder, release the lock pin. The lock pin will set itself into the corresponding locking hole.



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

STEP 3: Gate Assembly Adjustment

NOTE

Excessive lowering of the gate assembly can damage material or lead to premature wear of the O-rings or feed belt, and cause the product to skew. Not enough gate pressure can cause double feeds, and lead to no gap between the material being fed.

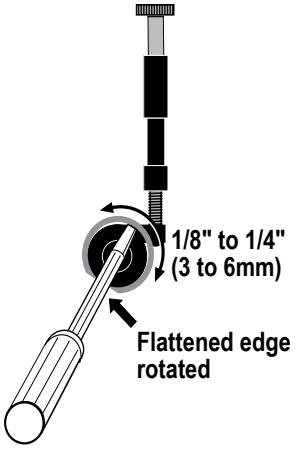
NOTE ***OPTIONAL***

The default position for the rotating gate is reverse. For heavy card stock set the rotating gate to forward.

NOTE ***OPTIONAL***

The rotating gate can be disengaged to allow freewheeling of the separating surfaces, enabling you to clear a jam if necessary. Pull the black knobs on either side of the rotating gate to disengage.

O-Ring Gate: Adjusting Worn O-Rings



Review

The gate assembly provides the curvature to help preshingle material, and provides the proper gap to help the feed belts pull material through the gate assembly area — one at a time. The downward pressure (or weight) of the stack in the hopper will provide the force to help push the material against the curvature of the gate assembly, and help it contact the feed belt. This preshingling will allow the gate assembly to efficiently separate (and singulate) material. To achieve the optimum separation, you have to use the adjustment knob to either increase (clockwise) or decrease (counter-clockwise) the gap between gate assembly and the feed belts.

Objective

Adjust the gate assembly for minimum gap, with minimum pressure on the material. Your objective is to adjust the clearance so that only a single piece of material passes under the gate at one time.

Procedure

To adjust the gate assembly for proper gap, follow these steps:

1. Raise the gate assembly so that the gap is greater then one piece of sample material. Then slide one piece of sample material under the gate assembly.
2. Test the top piece for clearance. Grasp with two hands and slide it front-to-back under the gate assembly. Lower the gate assembly by turning the knob counter-clockwise until the gate makes contact with the sample material, and drag can be felt on the top of the material when moving it front to back.

To adjust worn O-rings on O-ring gate:

1. Turn Off feeder and remove power cord from outlet.
2. Remove gate assembly from gate plate.
3. Insert a screwdriver in slot on top of gate assembly and rotate screwdriver clockwise or counterclockwise 360° to move worn area of O-ring about 1/8 to 1/4 in. (3 to 6 mm).
4. Remove screwdriver and repeat for each ring.
5. Reinstall gate assembly and restore power.

STEP 4: Set Feeder Side Guides

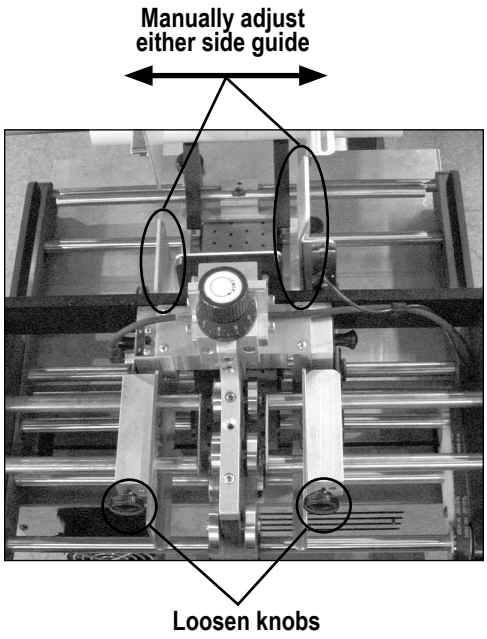
Review

The side guides hold the stack of material being fed, and they guide the material through the feeder in a straight line of movement. You can adjust the side guides to accommodate different widths of material.

Objective

Adjust the side guides so that the material stack maintains uniformity from top to bottom, with no drifting or binding. Adjustments are made horizontally. Make sure the space between the side guides can accommodate the size of the material being fed. Consider the following as you adjust the guides:

- The initial starting point should always be that each guide is of equal distance from the center point of the machine.
- Each edge of the material should rest equally on the belt, on both sides of the gate assembly (or equidistant spacing). However, there can be certain instances where guides do not need to be centered due to material characteristics. This is called offset spacing.
- Adjust both side guides to be as close as possible to either sides of the material, without causing binding, curling of edges, or resistance to movement.



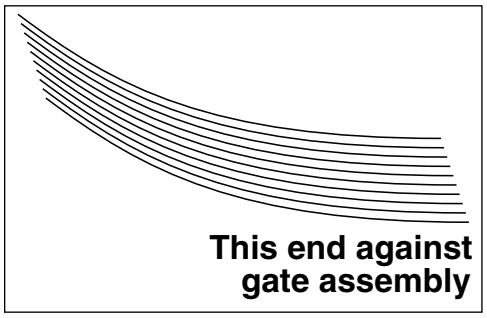
Horizontal Adjustment of Side Guides

Procedure

To adjust each side guide for proper equidistant horizontal spacing follow these steps:

1. Loosen each side guide adjustment knob (counter-clockwise), and move the guide to a width greater then the product.
2. Place one piece of sample material in the hopper, and center it on the gate assembly.
3. Grasp the lower part of each guide and slide to the recommended distance from the material: .0625 in. (1.6 mm) from each edge, .125 in. (3.1 mm) overall. Tighten each side guide adjustment knob after you establish proper position for each guide.
4. Visually check both guides for proper spacing from material (centered on the gate).

STEP 5: Back Wedge Adjustment



NOTE

There are a number of feeding problems, which can be solved by simply adjusting the back wedge to different positions. Some of these problems include double feeds, no feed or slipping, skewing, twisting, poor singulation, ink or varnish buildup on the belt, and jamming at the gate assembly area

Review

The back wedge provides proper lift to keep the weight of the material on the feed belt, and it creates the force necessary to push material against the gate assembly. By adjusting it back and forth from the gate assembly, you can create the lift and force necessary to preshingle material against the curvature of the gate assembly. Also, it keeps other sheets off the feed belt until proper separation of the bottom sheet at the gate assembly has occurred.

Here are some general guidelines that should help you determine how the back wedge should be positioned for your particular material:

- Moving the individual wedges to the outside of the shaft will create a bow in the center. The bow will stiffen the material to promote better singulation of thinner material.
- If the back wedge is positioned too far backward from the gate assembly then the belt will start driving the material under the gate before the bottom sheet has separated and left the gate assembly area. This pushes the gate assembly up, creating more pressure on the material, O-rings, and feed belt. The result may cause more than one piece to be forced under the gate assembly at the same time, creating a double feed. By moving the back wedge forward, until only the bottom material can make contact with the belt surface. Slippage is reduced, and double feeding is minimized.
- If the back wedge is positioned too far forward to the gate assembly, then a pinch point can be created between the top surfaces of the wedge and the material. A pinch point on the top of the wedge will cause the material to slip on the belt, and create a no feed condition. Moving the back wedge even closer towards the gate assembly can allow material to actually overhang the wedge, creating too much lift of the material off the feed belt again causing belt slippage and no feed condition.

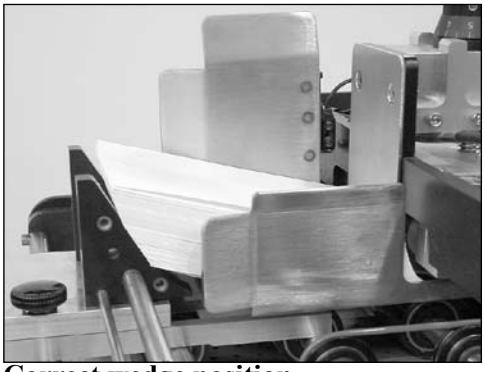
Objective

Adjust the back wedge for proper support of the material off the feed belt, without creating any pinch or stress points between the wedge and the material.

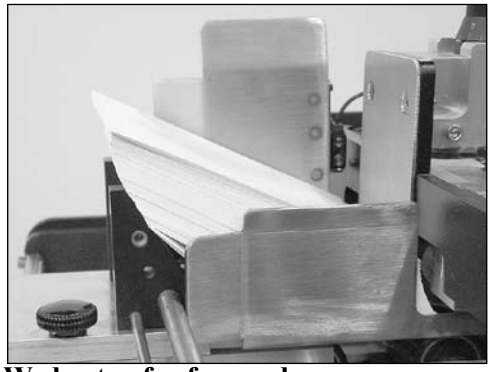
STEP 5: (continued) Back Wedge Adjustment

NOTE

Raise the conveyor height to allow adjustment of the feeder gate by turning the conveyor height adjustment crank.



Correct wedge position



Wedge too far forward

Wedge too far back

Procedure

To adjust the back wedge for proper initial positioning, follow these steps:

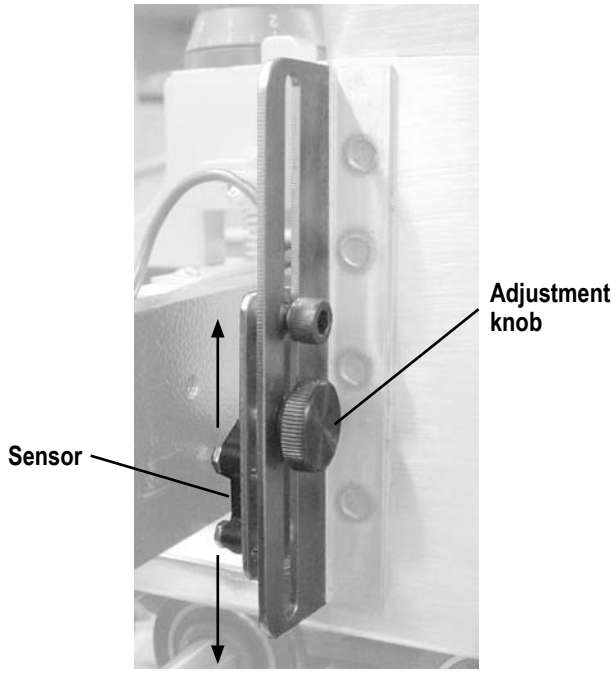
1. Grasp a handful of material, approximately 2 to 2.5 in. (5 to 6cm) thick, and preshingle the edges with your thumb to match the curve of the gate assembly.
2. Place the preshingled material in the hopper so that the edges rest against the curvature of the gate assembly.
3. Turn the back wedge adjustment knob counter-clockwise to loosen the wedge.
4. Move the back wedge forwards and backwards until the bottom few sheets are touching the feed belt, and the remainder of the stack is being supported by the wedge.

Stack Height Sensor Adjustment

The Stack Height Sensor regulates the amount of product being dropped into the hopper.

To adjust the Stack Height Sensor:

1. Turn the adjustment knob to loosen.
2. Move the sensor up or down.
3. Tighten the adjustment knob.



STEP 6: Verifying Feeder Operation

NOTE

If moving the wedge forward does not stop double feeds increase the gate pressure by turning the gate adjustment knob counter-clockwise.

NOTE

The hold down assembly is self-adjusting. No adjustments are required.

NOTE

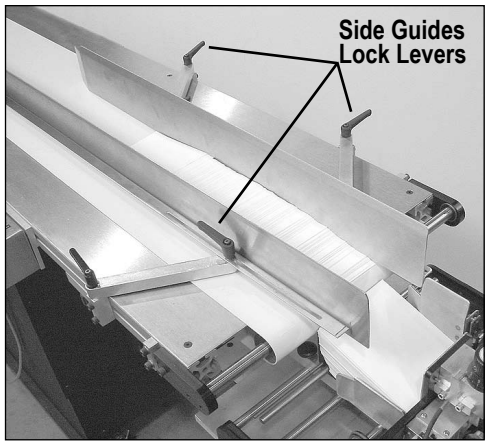
The conveyor belt will continue to advance even if the speed control is turned all the way down. To stop all motors, press the STOP button.

Procedure

Prepare your test by loading the hopper with approximately 2 to 2.5 in. (5 to 6 cm) of material. Make sure you preshingle the stack so that material rests against the curvature of the gate assembly.

1. Manually feed several sheets of material through the feeder by pressing the feeder jog button.
2. Observe how individual material enters and exits the gate assembly area. Remember that a properly set gap will allow each new sheet to enter at about the centerline of the cylinder while the bottom sheet is exiting the gate assembly area. Ideally, this means a slight overlap of both the first sheet and the second sheet (1/8 in., or 3 mm) at the gate assembly area. The overlap occurs as the bottom sheet is exiting, and the next sheet is entering.
3. If feeding doubles, then move the wedge in towards the gate assembly. Test again.
4. If sheets are overlapping excessively or, if the machine is feeding doubles, then reduce the gap slightly by moving the knob on the gate assembly about 1/8 turn counter-clockwise. Test again.
5. As material moves through the hold-down area, check for any skewing, jamming, and look for a gap between pieces. If no gap exists reduce that gap at the gate by turning the knob counter-clockwise. Test again.
6. If this or other feeding problems still persist (slipping, skewing, and jamming), then review all adjustment procedures.

STEP 7: Conveyor Set Up



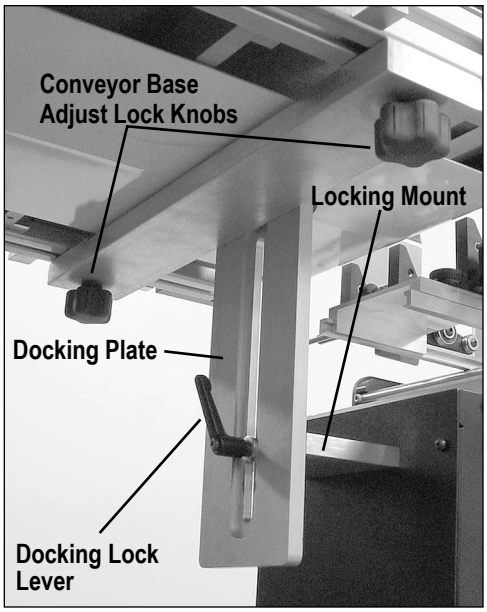
Procedure

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.

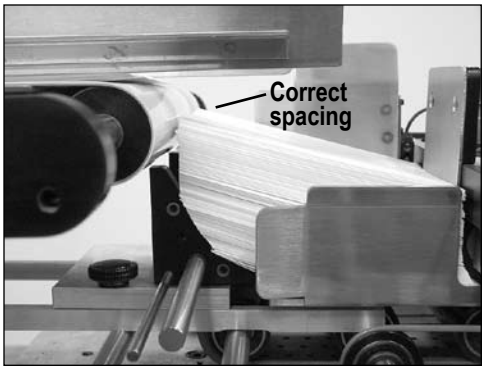
STEP 7: (continued) Conveyor Set Up

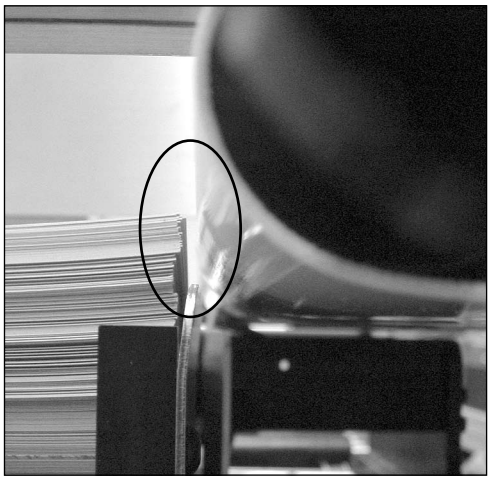


The discharge of the conveyor must be set above the feeder to allow product to fall into the hopper. Release the docking plate by loosening the lock knobs and lever. Then turn the conveyor height adjustment crank to set the height of the conveyor.

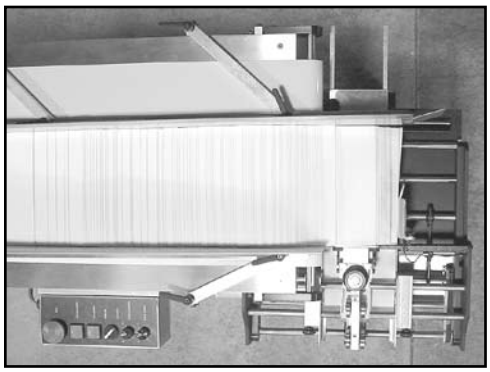
The front edge of the conveyor belt must be set approximately 1/16 in (depending upon product type) from the product in the feeder hopper. This keeps product that rests above the feeder back wedge from slipping back towards the conveyor. With the docking lock lever tightened, loosen the 2 conveyor base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

When feeding at 90° the discharge roller on the conveyor must extend over the side guide by 1/16" or more. Otherwise, it may fall on or in between the side guide and conveyor belt.





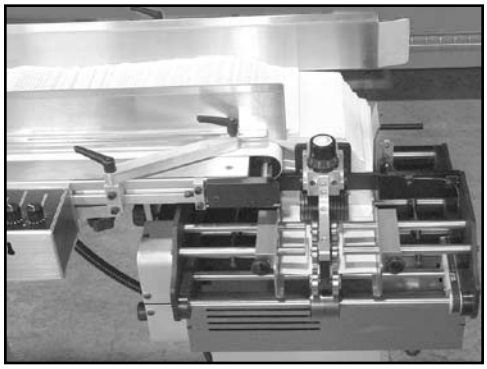
Product at 90° with belt tangent over the side guide.



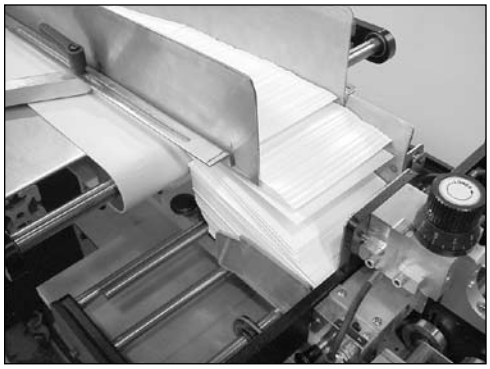
Overhead view of feeder at 90º discharge.

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.

Flimsy product may require more conveyor speed - more speed at 90° than inline.

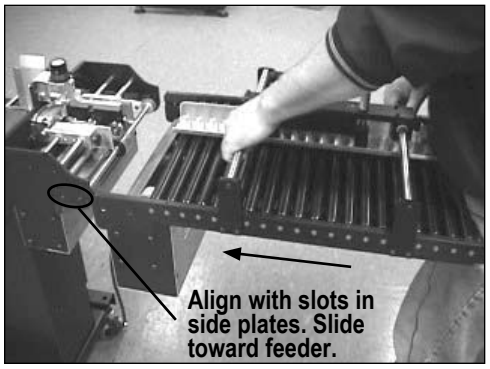


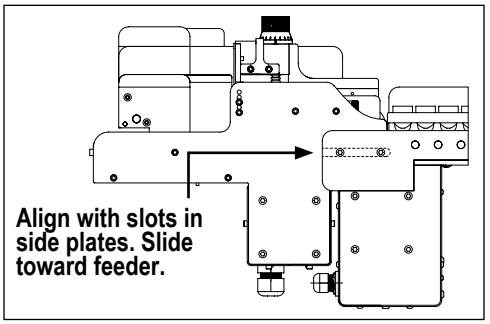
Side view of feeder at 90º discharge.



Product evenly dropping into hopper.

STEP 8: Optional Alignment Section Set Up



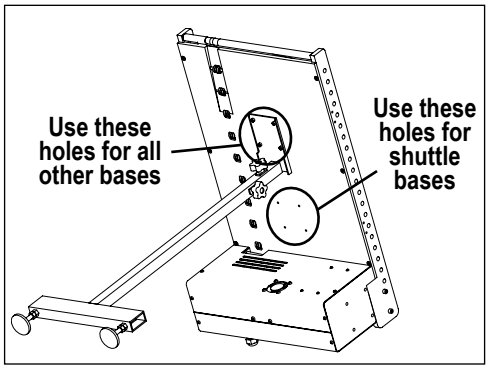


Procedure

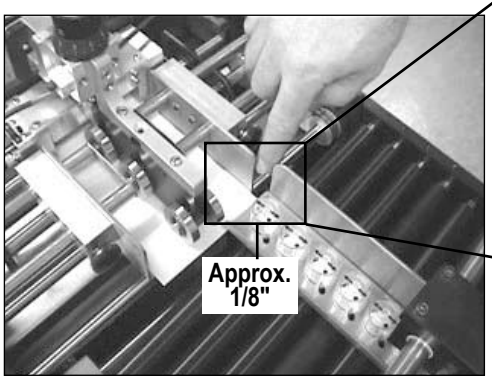
The optional alignment section can be added to the feeder section to provide improved product alignment.

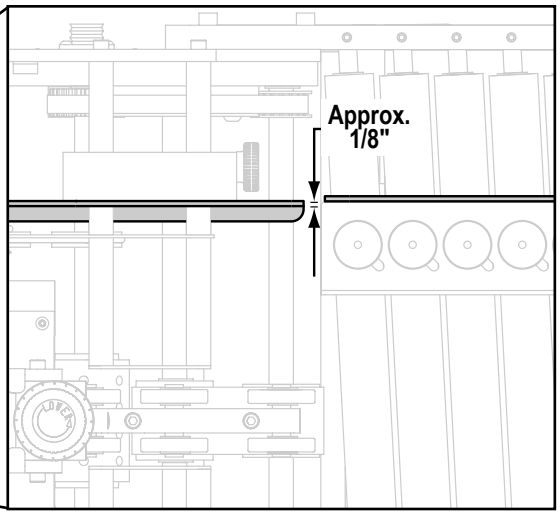
1. Attach the alignment section to the feeder by aligning the slots in the right and left side plates with the screws in the feeder side plates as shown. Slide the alignment section toward the feeder. Install 2 SHCS 1/4-20 X 3/4” on each side; do not tighten until after support stand is installed (See Step 2).

STEP 8: (continued) Optional Alignment Section Set Up

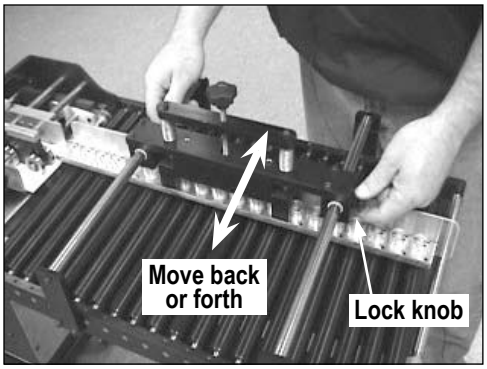


2. Install the support stand to the bottom mounting plate using four 10-32 x 3/8" socket head cap screws. Use the back set of holes for use with a shuttle base; use the front set of holes for use with all other bases.

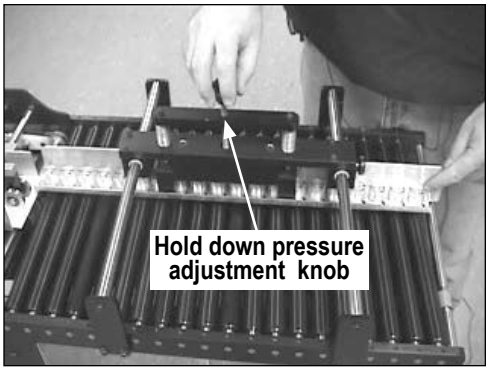




3. Set the distance between the alignment section and the feeder about 1/8" between the hold down side alignment guide and the discharge of the feeder. Then tighten the screws.



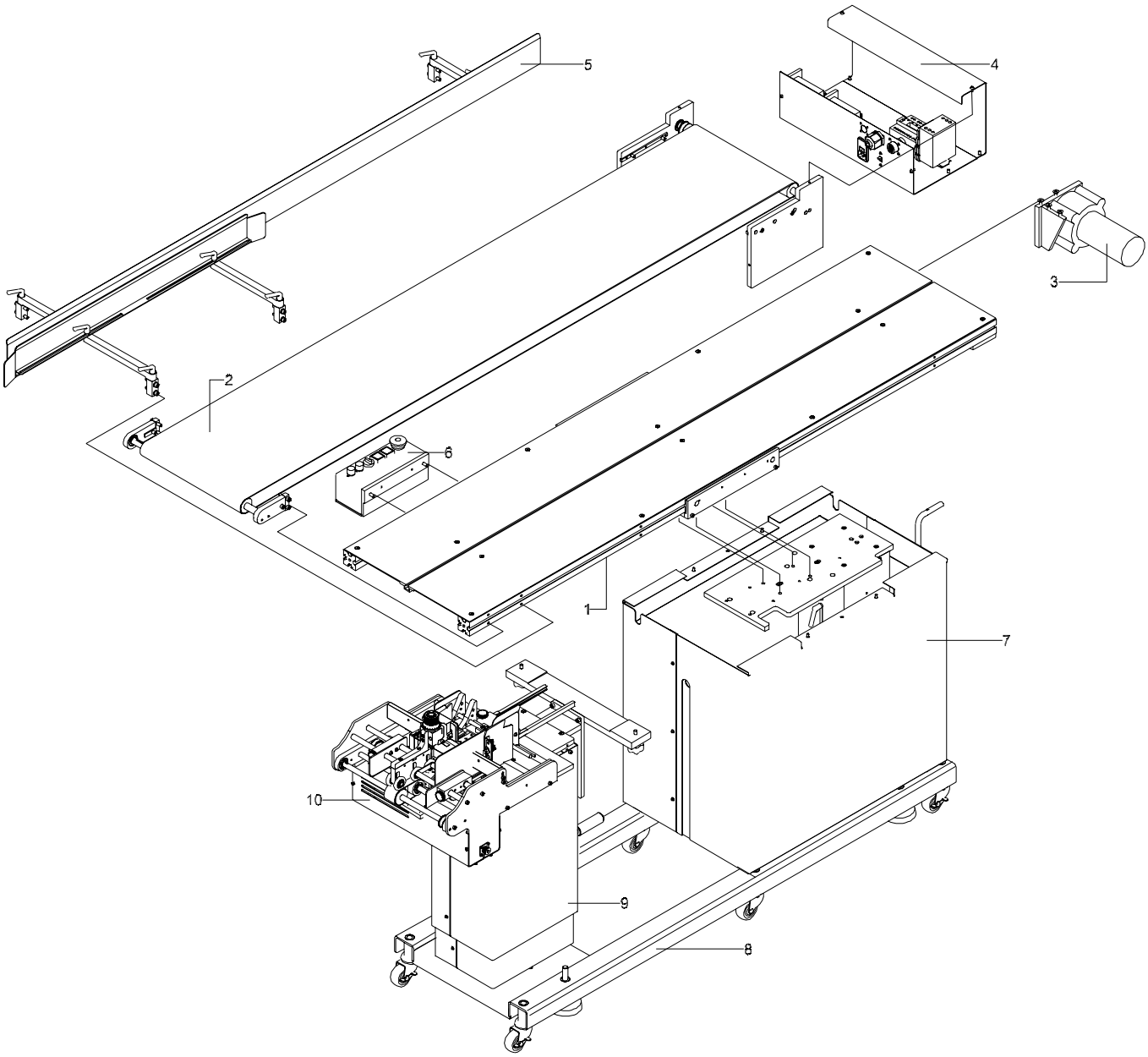
4. The hold down assembly can be adjusted by loosening the lock knob, moving the assembly back or forth, then tightening the lock knob.



5. Adjust the amount of hold down pressure. Clockwise reduces pressure, and counter-clockwise increases pressure.

3 Mechanical Components

AUTOSTREAM M2

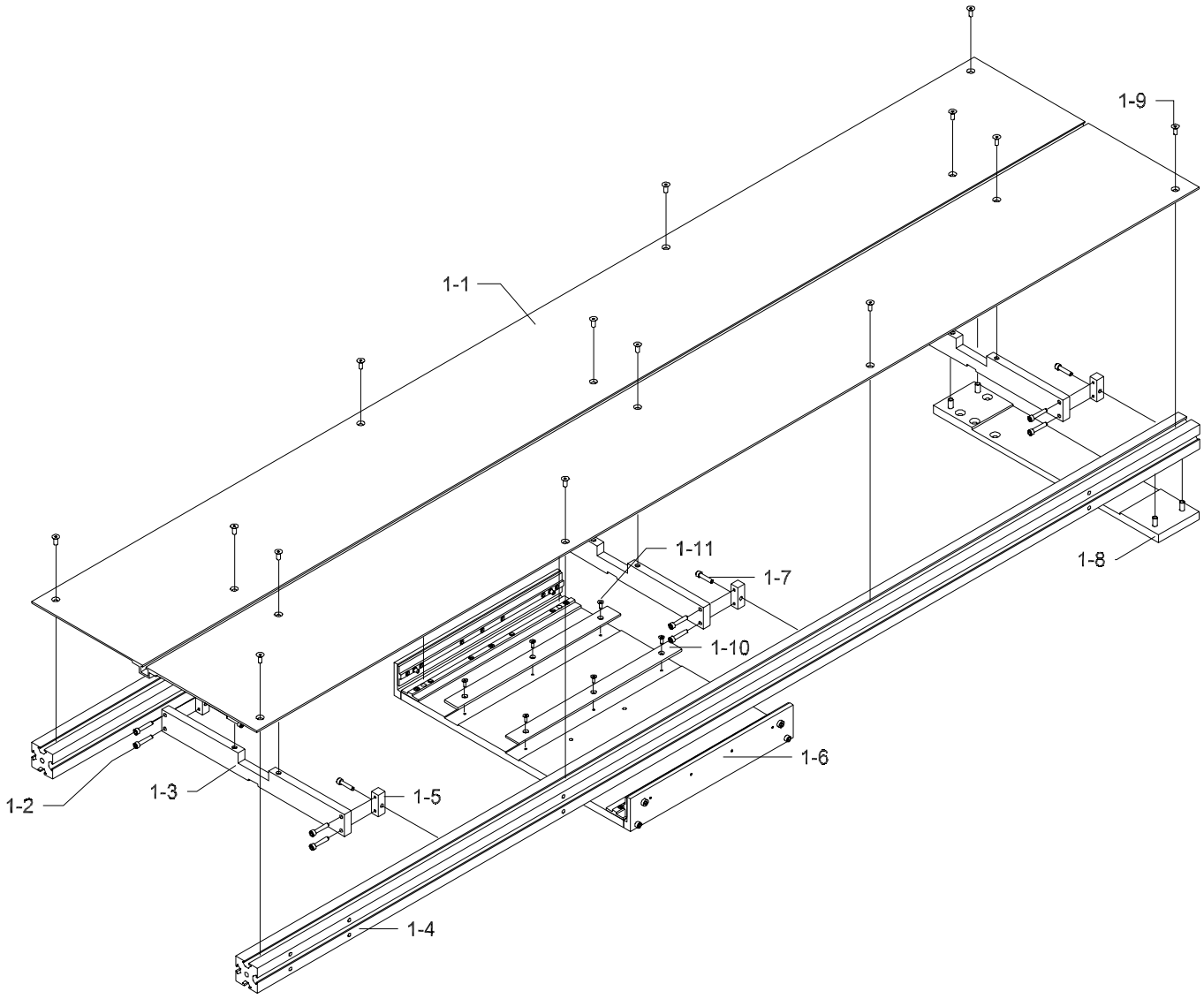


AUTOSTREAM M2

Diagram Number	Description	Part Number
1	BASE ASSEMBLY	14971133
2	BELT ASSEMBLY	14971102
3	MOTOR ASSEMBLY	14971103
4	ELECTRONICS ASSEMBLY	16311133
5	SIDE GUIDE ASSEMBLY	14971104
6	REMOTE BOX ASSEMBLY	14971110
7	STAND SHELL ASSEMBLY	16311112
8	STAND ASSEMBLY	16311111
9	FRONT STAND SHELL ASSEMBLY	16311110
10	BASE ASSEMBLY	16311102
NS	CARRIAGE ASSEMBLY	16311103
NS	GATE PLATE ASSEMBLY	16311104
NS	HOLD DOWN ASSEMBLY	16311105
NS	RIGHT WEDGE ASSEMBLY	16311117
NS	NARROW WEDGE ASSEMBLY OPTIONAL	16311118
NS	LOW PROFILE WEDGE ASSEMBLY OPTIONAL	16311118
NS	MOUNTING PLATE ASSEMBLY	16311166
NS	O-RING GATE ASSEMBLY	16311132
NS	ROTATING GATE ASSEMBLY OPTIONAL	16311106
NS	RIGHT SIDE GUIDE ASSEMBLY	16311107
NS	LEFT SIDE GUIDE ASSEMBLY OPTIONAL	16311135
NS	LEFT WEDGE ASSEMBLY OPTIONAL	16311165
NS	ALIGNMENT BASE ASSEMBLY	16311113
NS	ALIGNMENT HOLD DOWN ASSEMBLY	16311114

NS = NOT SHOWN

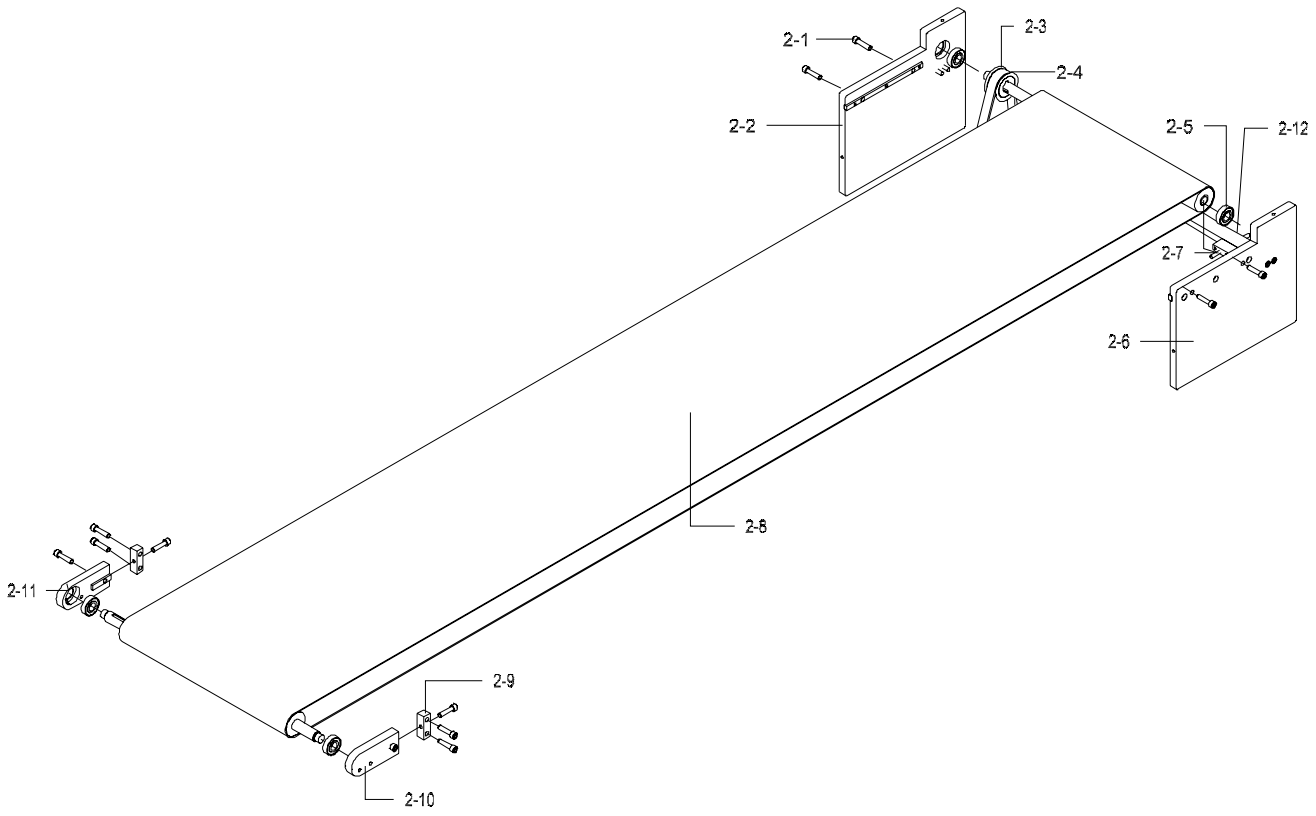
BASE ASSEMBLY
Assembly # : 14971133



BASE ASSEMBLY
Assembly # : 14971133

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	Shoulder Bolt	44854032
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
NS	14	Nut T-Slot ¼-20	51208214
NS	18	Nut T-Slot 10-32	51390108

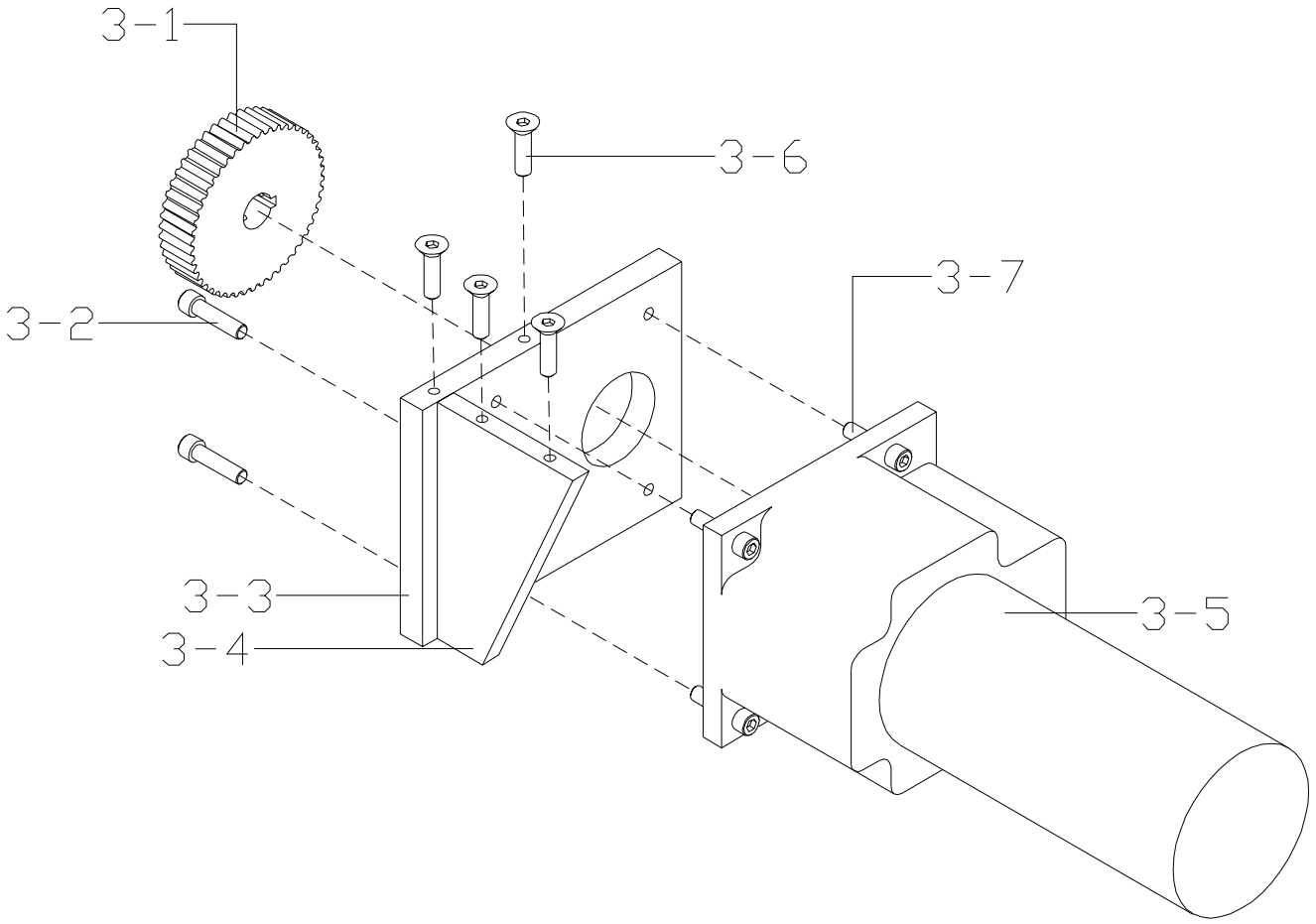
BELT ASSEMBLY
Assembly # : 14971102



BELT ASSEMBLY
Assembly # : 14971102

Diagram Number	Qty	Description	Part Number
2-1	12	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	00003389
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	00003352
NS	1	Key Stock 3/16	44852081

MOTOR ASSEMBLY
Assembly # : 14971103

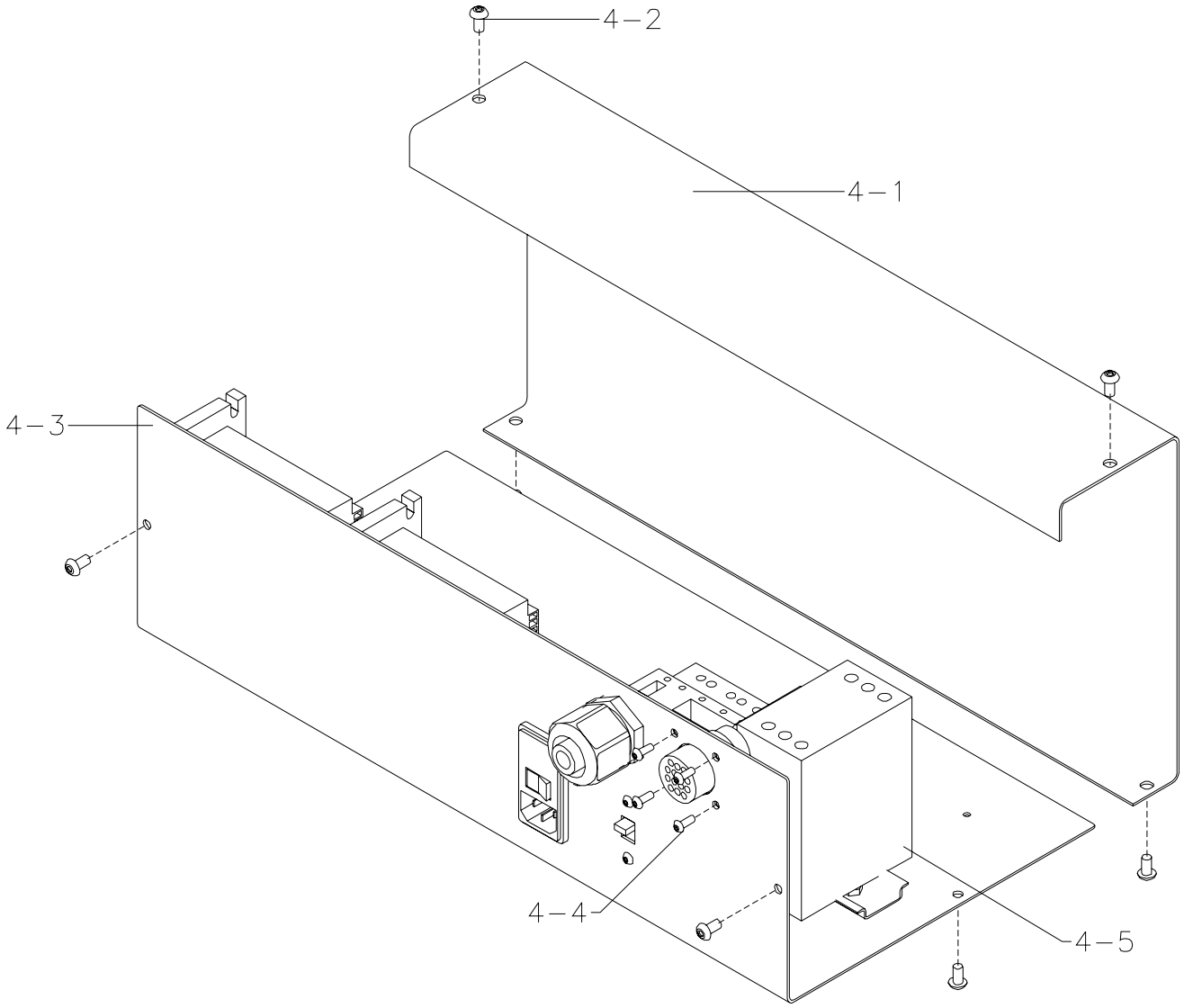


MOTOR ASSEMBLY
Assembly # : 14971103

Diagram Number	Qty	Description	Part Number
3-1	1	Pulley Timing 48 Tooth	51497142
3-2	2	SHCS 1/4-20 X 1	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
3-7	4	SHCS ¼-28X 1	00002400
NS	1	Plug 3 Pin	53500385
NS	3	Male Pins	53500386
NS	12”	Ground Wire	53500057
NS	10”	Varflex	44649085
NS	1	Ring Terminal Blue	53500048
NS	1	BHCS 10-32 X ¼”	00003417
NS	1	Flat Washer	00002607

AUTOSTREAM ELECTRONICS ASSEMBLY

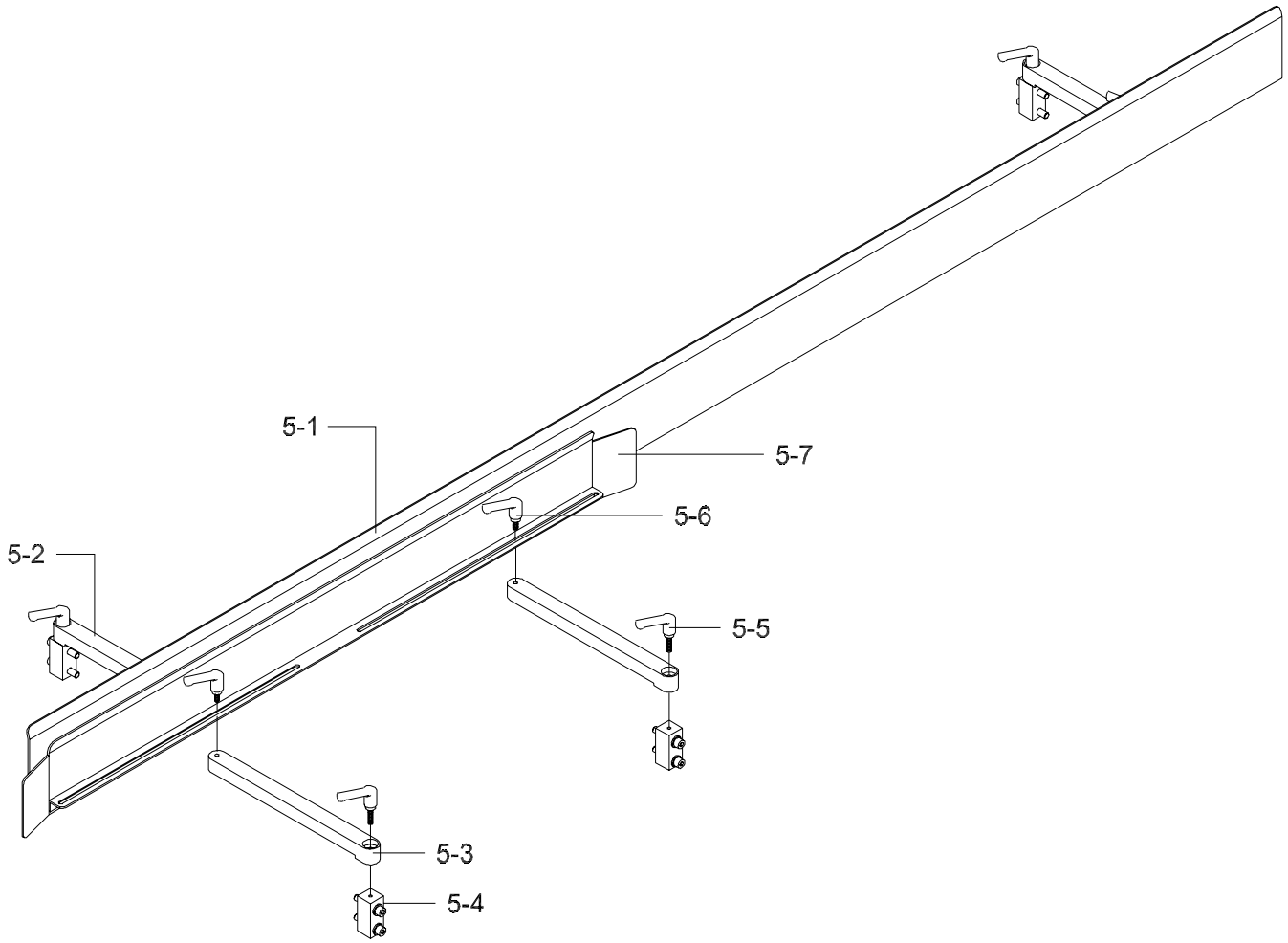
Assembly # : 16311133



AUTOSTREAM ELECTRONICS ASSEMBLY
Assembly # : 16311133

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
	1	Module Power AC	51631037
	2	DC Drive	51050252
	1	Switch	44642026
4-4	4	BHCS 8-32 X 1/4	00002210
4-5	4	Din Rail	53500154
	1	Zilio Logic Relay	51631116
	2	Relay	51241005
	1	Power Supply	51631117
NS	2	Fuse 10AMP	51631120
NS	1	Power Cord	53500002
NS	2	Kep Nut 4-40	00002116
NS	12	Kep Nut 8-32	00002121
NS	2	Screw 4-40 X 1/4”	00002227
NS	1	Screw 8-32 X 1/2”	00002302
NS	2	Screw 8-32 X 3/8”	00002306
NS	1	Harness, Feeder Interface	16311152
NS	1	Harness, Feeder	16311153
NS	1	Harness, AC	16311154
NS	1	Harness, Conv Motor	16311155
NS	1	Harness, Conv DC Drive	16311156
NS	1	Harness, Conv Inhibit	16311157
NS	1	Harness, Feeder DC Drive	16311158
NS	1	Harness, Feeder Inhibit	16311159
NS	1	Harness, Internal Main	16311161
NS	1	Harness, External Run	16311162
NS	1	Harness Feeder Motor Y	16311170
NS	1	Connector Pins	44649026
NS	5	Terminal, Female	44649046
NS	2	Terminal Disc Female	53500254
NS	1	Assembly Cable Inter/Fault	84111011

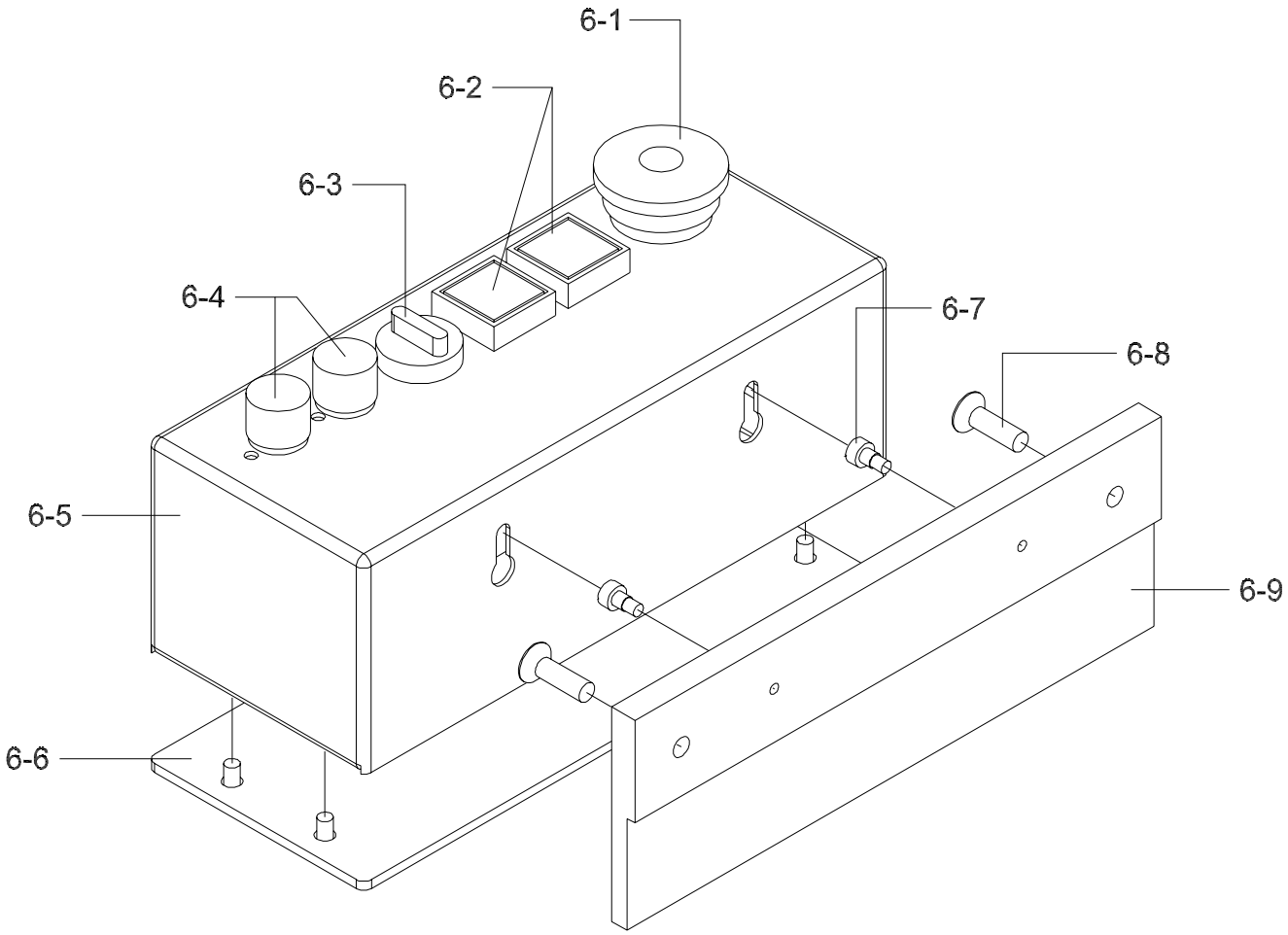
SIDE GUIDE ASSEMBLY
Assembly # : 14971104



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
	8	Lock Washer 1/4	00003348
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

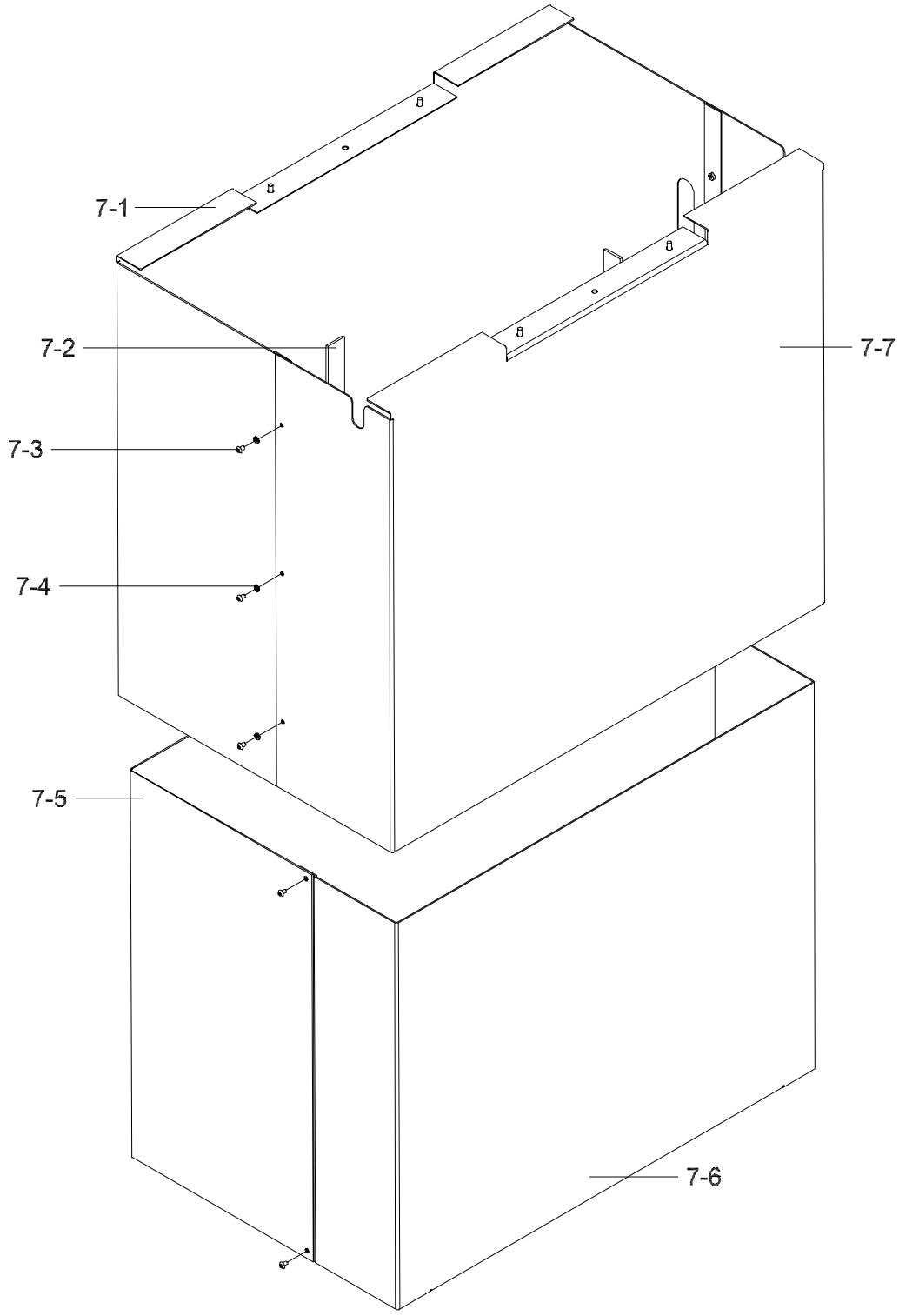
REMOTE BOX ASSEMBLY
Assembly # : 14971110



REMOTE BOX ASSEMBLY
Assembly # : 14971110

Diagram Number	Qty	Description	Part Number
6-1	1	E-Stop 22mm	53500552
	1	Contact Block NC	51327025
6-2	2	Blue Button	51379088
6-3	1	Selector 3 Pos	51379085
6-4	2	Knob	44675030
6-5	1	Remote Operator Station Enclosure	51460097
6-6	1	Plate Base Operator Station	51460099
	4	BHCS 10-32 X 1/2”	00002834
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	Cable Assembly, Remote Operator	16311160
NS	8	Sheathing #7	44649087
NS	1	Graphic Set (Used With Assy 16311112)	51497127
NS	4	Terminal, Fork	53500047
NS	18”	Wire 22Ga Brown	53500213
NS	8	Terminal, Disc Female	53500253
NS	1	Switch, Contact BLK NO	53500523

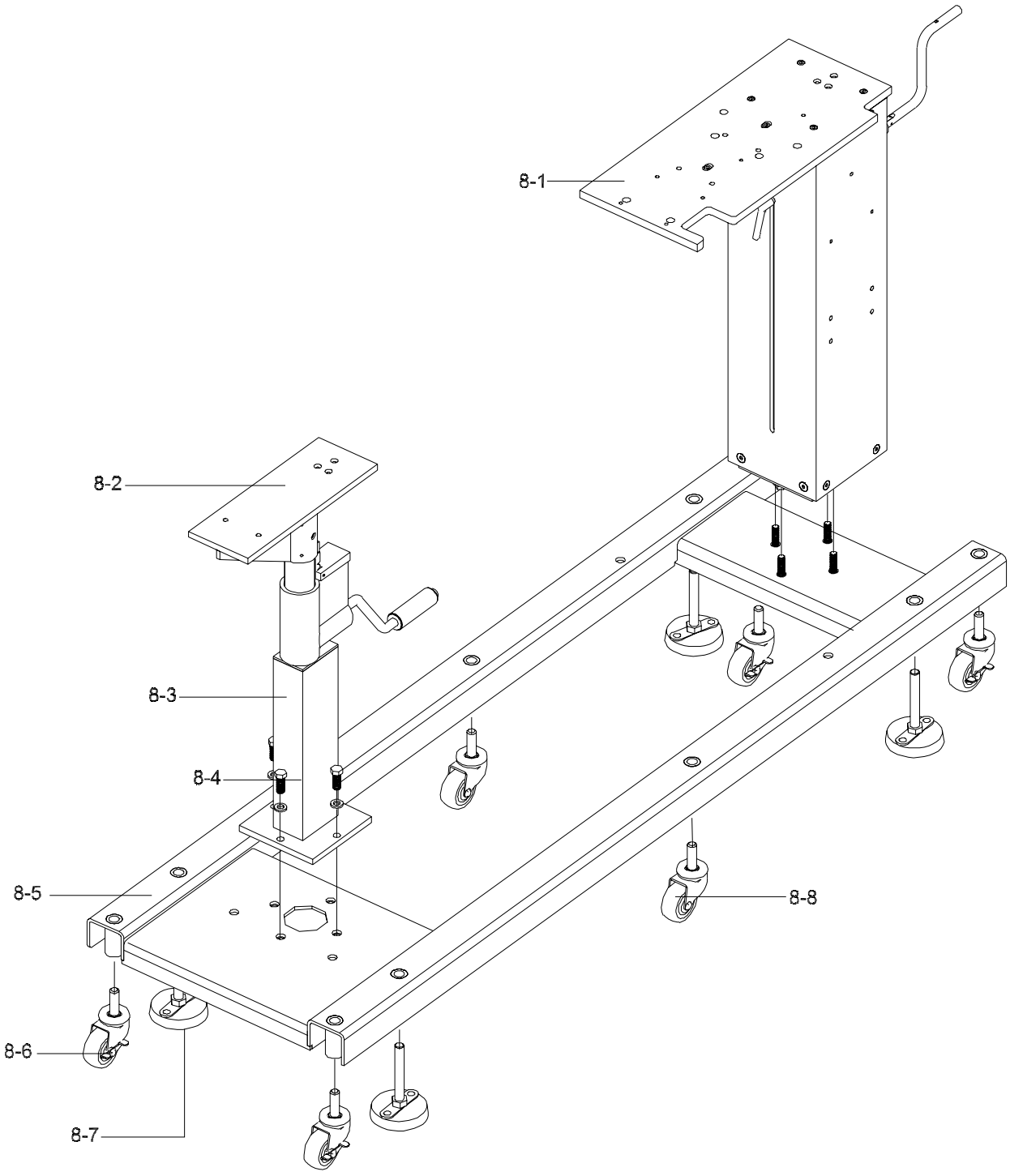
STAND SHELL ASSEMBLY
Assembly # : 16311112



STAND SHELL ASSEMBLY
Assembly # : 16311112

Diagram Number	Qty	Description	Part Number
7-1	1	Outer Shell	51497129
	4	SHCS 10-32 X 3/8	00002310
7-2	4	Block Stand Spacer	51497045
7-3	10	BHCS 8-32 X 1/4	00002210
7-4	6	Number 8 Lock Washer	00003301
7-5	1	Inner Shell	51497131
7-6	1	Inner Shell	51497132
7-7	1	Outer Shell	51497130
NS	1	Graphic	51497127

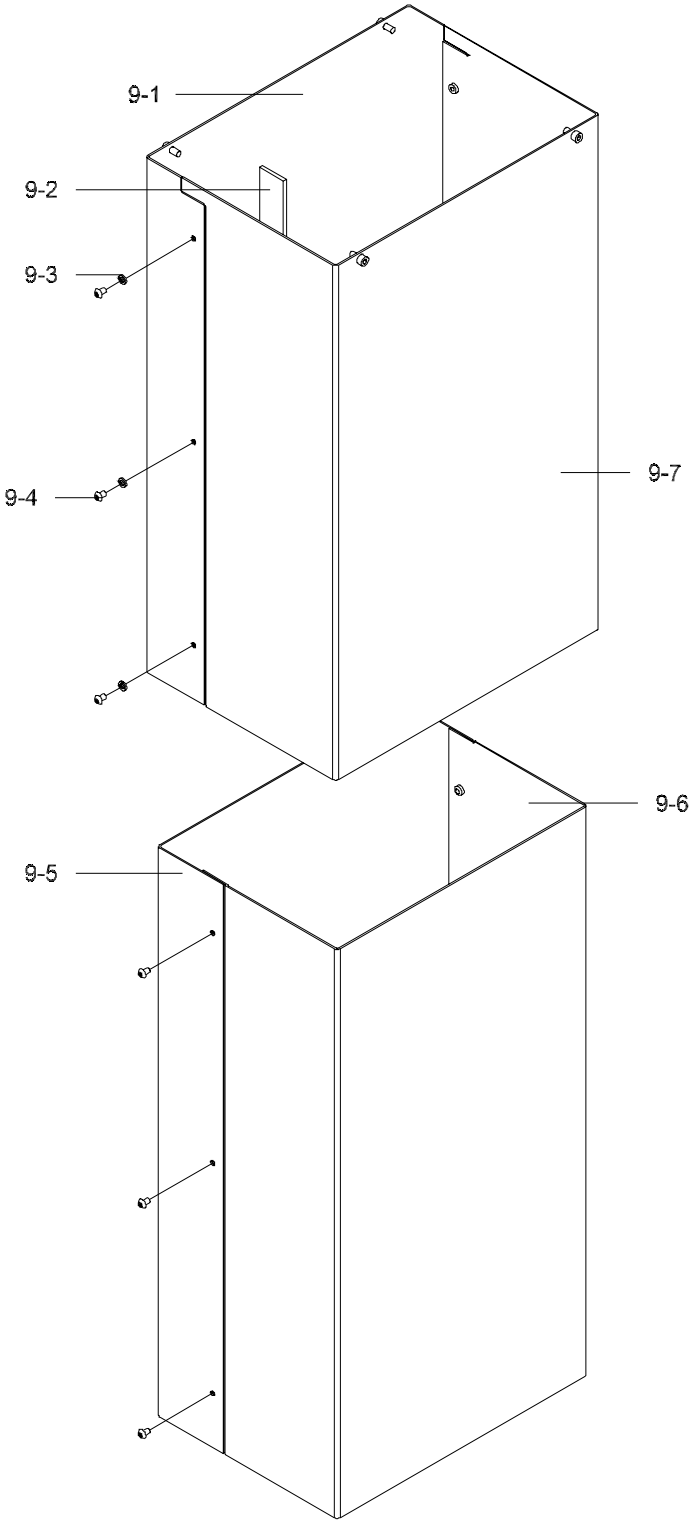
STAND ASSEMBLY
Assembly # : 16311111



STAND ASSEMBLY
Assembly # : 16311111

Diagram Number	Qty	Description	Part Number
8-1	1	Stand Upright 29”	51021028
	4	Hex Head Bolt 3/8-16 X 1-1/4	00003375
	4	Lock Washer	00003334
8-2	1	Feeder Weldment	51631014
	1	Hex Head Bolt 3/8-16 X 3	00003344
	1	Hex Nut 3/8-16	00002104
8-3	1	11” Upright Weldment	44360043
8-4	4	Hex Head Bolt 3/8-16 X 1	00002660
	4	Lock Washer 3/8	00003334
8-5	1	Stand Assembly	16311101
8-6	4	Caster 2” Low Profile w/Brake	51299013
8-7	4	Leveler Pad	36011013
8-8	2	Caster 2” Low Profile	51299014
NS	2	Lever, Ratchet	43555097
NS	1	Rack	44360033

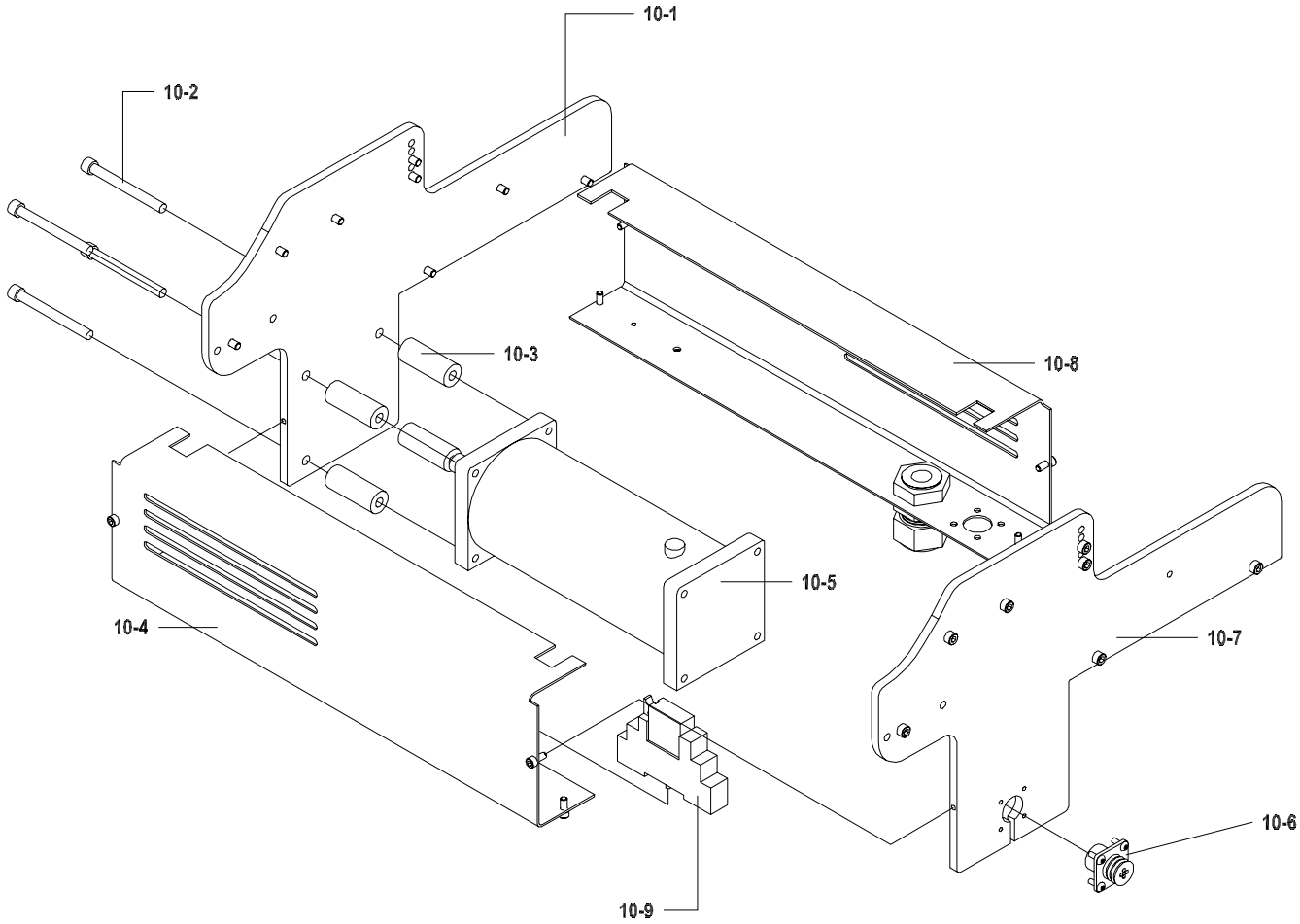
FRONT STAND SHELL ASSEMBLY
Assembly # : 16311110



FRONT STAND SHELL ASSEMBLY
Assembly # : 16311110

Diagram Number	Qty	Description	Part Number
9-1	1	Outer Shell	51631103
	4	SHCS 10-32 X 3/8	00002310
9-2	4	Stand Spacer Block	51497045
9-3	6	Washer Lock #8	00003301
9-4	12	BHCS 8-32 X 1/4	00002210
9-5	1	Inner Shell	51631105
9-6	1	Inner Shell	51631106
9-7	1	Outer Shell	51631104

BASE ASSEMBLY
Assembly: 16311102



BASE ASSEMBLY
Assembly: 16311102

Diagram Number	Qty	Description	Part Number
10-1	1	Side Plate Right	51631012
	4	SHCS 10-32 X 3/8”	00003314
10-2	4	SHCS ¼-20 X 2-1/2	00003465
10-3	4	Motor Standoff	51631018
10-4	1	Motor Cover	51631121
	4	SHCS 8-32 X 3/8”	00002213
10-5	1	DC Motor Assembly	16311149
10-6	1	4 Pin I/O	53500505
	4	BHCS 8-32 X 3/8”	00002808
10-7	1	Side Plate Left	51631011
	12	SHCS 10-32 X 1/2”	00002315
10-8	1	Motor Cover	51631121
	4	SHCS 8-32 X 3/8”	00002213
	1	Cord Grip	51631171
10-9		Dry Contact For External Run (Standard Configuration)	
	1	External Run Kit Option	16311177
NS	2	Tie Wrap	435SO263
	9	BHCS 8-32 X ¼”	00002210
	1	Clamp Cable ¼ Black Nylon	53500581

CARRIAGE ASSEMBLY
Assembly: 16311103

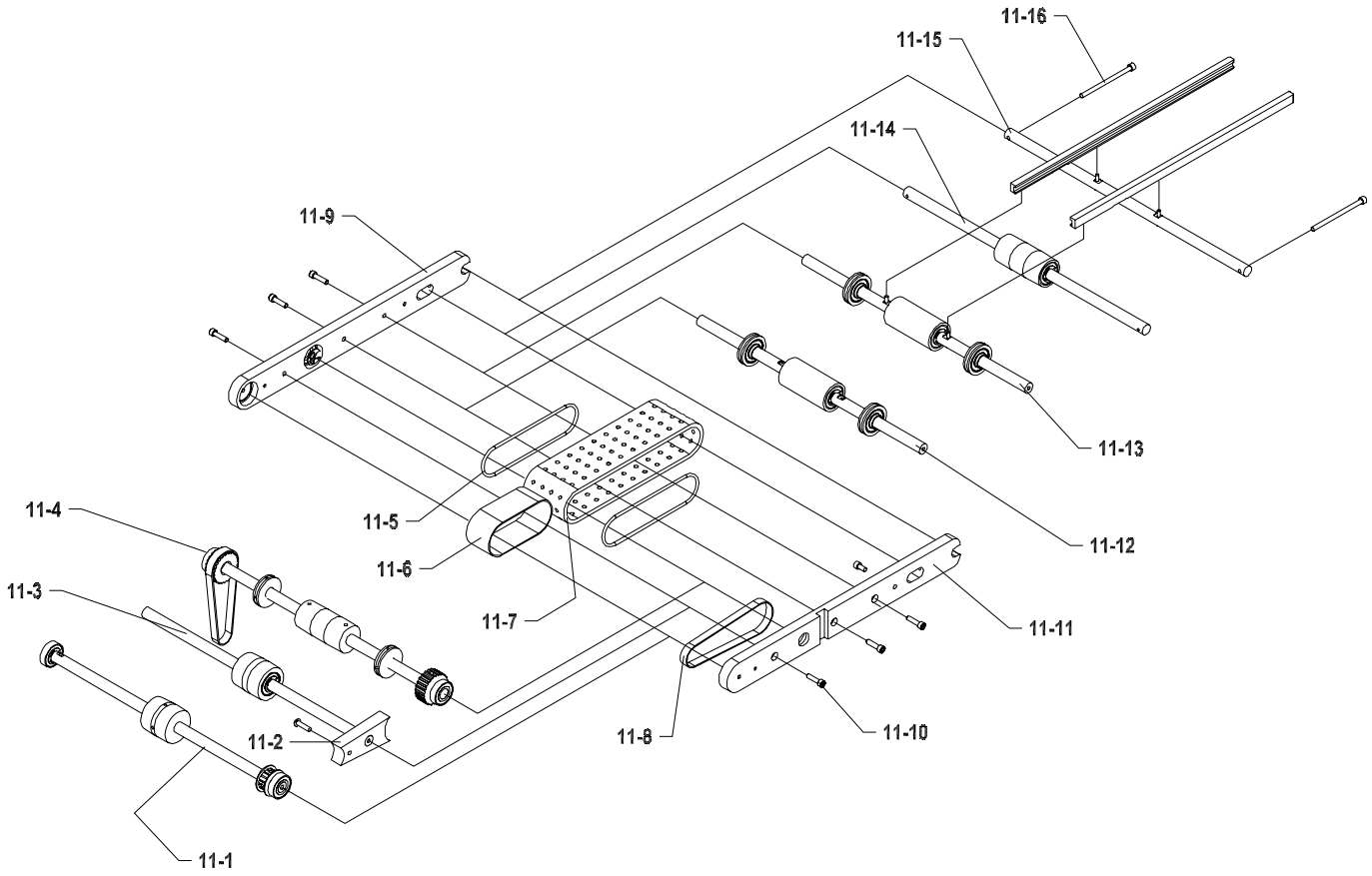
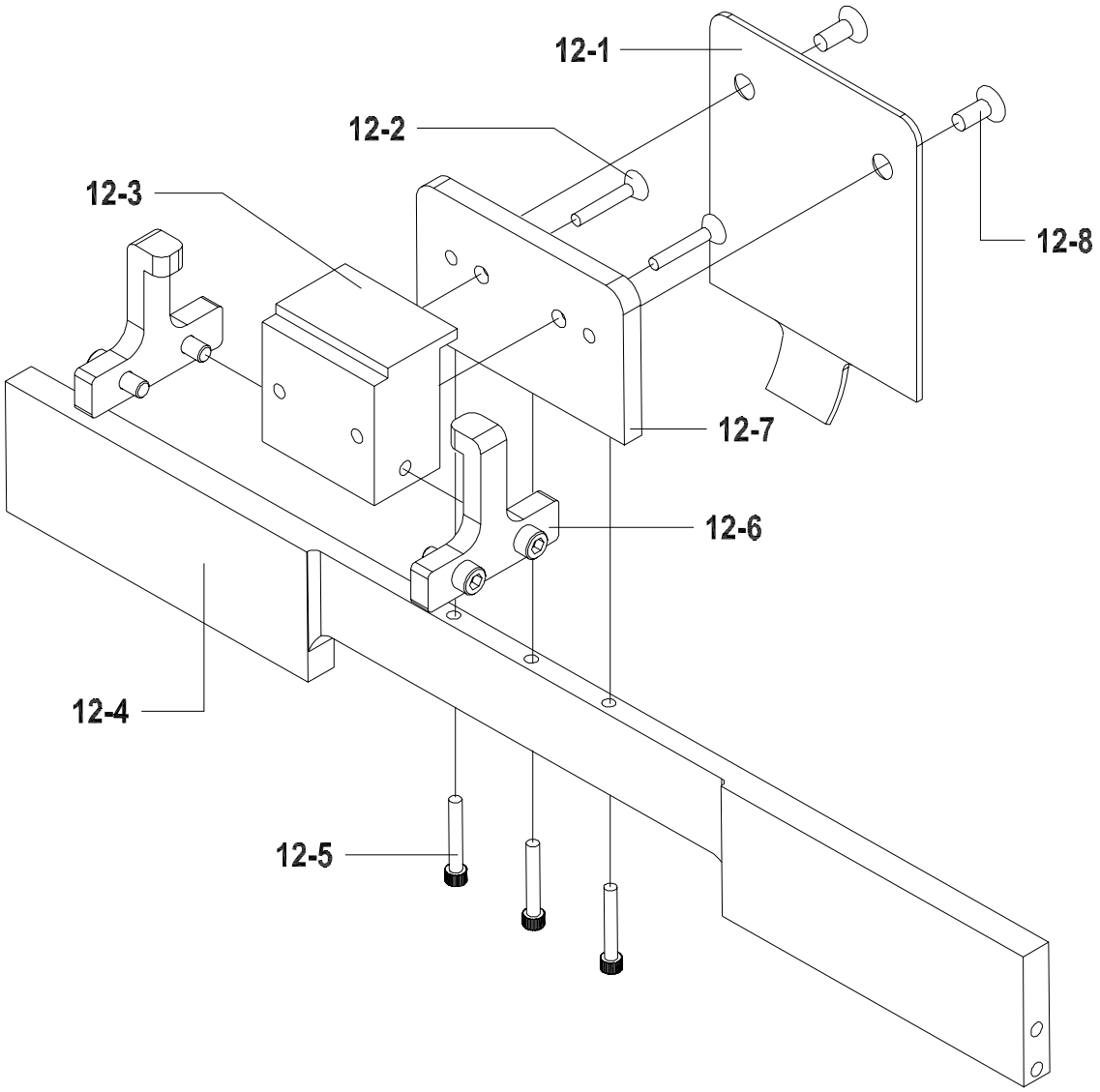


Diagram Number	Qty	Description	Part Number
11-1	1	Shaft	51277008
	1	Pulley, Crowned Discharge	51277053
	1	Pulley, Timing 16XL037 .500KDFA	43560097
	2	Bearing Ball R8	23500094
	2	E Clip, 1/2 Inch Shaft	00001155
	2	Screw, Socket Set 10-32 X 5/16” LG (for crowned pulley)	00002217
	2	Screw, Socket Set 10-32 X 1/8” LG (for timing pulley)	00003352
	1	Key, Woodruff 1/8 X 3/8	00003351
11-2	1	Belt Guard	51277121
	1	BHCS 10-32 X 3/4”	00003409
11-3	1	Shaft, Idle Discharge	51631019
	1	Crown Pulley Assembly	23511105
	2	E Clip, 1/2 Inch Shaft	00001155

CARRIAGE ASSEMBLY
Assembly: 16311103

Diagram Number	Qty	Description	Part Number
11-4	1	Shaft, Drive	51631020
	1	Pulley, Feed Drive	51277011
	2	Pulley, O Ring Drive	51277013
	2	Pulley, Timing 24XL037 .500KA	43560098
	2	Bearing Ball R8	23500094
	2	E Clip, 1/2 Inch Shaft	00001155
	4	Screw, Socket Set 10-32 X 5/16” LG	00002217
	4	Screw, Socket Set 8-32 X 5/16” LG (for o ring pulleys)	00002211
	2	Key, Woodruff 1/8 X 3/8	00003351
	1	Timing Belt 110XL037	435BG107
	1	22 Tooth Pulley	51631180
11-5	2	Belt, O Ring Feed	51277056
11-6	1	Belt, Center Discharge	51277069
11-7	1	Belt, Vacuum Feed	51277055
11-8	1	Timing Belt 120XL037	5177057
11-9	1	Holder, Right Carriage	51277001
11-10	6	SHCSS/S 10-32 X 3/4” LG\	00002825
11-11	1	Holder, Left Carriage	51277002
11-12	1	Shaft, Feed Support	51277005
	1	Roller Feed Support	51277139
	2	Pulley, O Ring Driven	51277012
	4	Bearing Ball R8	23500094
	2	E Clip, 1/2 Inch Shaft	00001155
	4	O-Ring 7/16	44340017
11-13	1	Shaft, Feed Support	51277005
	1	Roller Feed Support	51277010
	2	Pulley, O Ring Driven	51277012
	2	Bearing Ball R8	23500094
	2	E Clip, 1/2 Inch Shaft	00001155
	4	O-Ring 7/16	44340017
	2	SHCS 6-32 X 5/8”	00003303
11-14	1	Shaft, Rear Feed	51277004
	1	Pulley, Driven Feed	51277009
	2	Bearing Ball R8	23500094
	2	E Clip, 1/2 Inch Shaft	00001155
11-15	1	Shaft, Rear Wedge Mount	51277003
	2	SHCS 6-32 X 5/8”	00003411
	1	Wedge Block Right	51277147
	1	Wedge Block Left	51277148
11-16	2	SHCSS/S 10-32 X 2-3/4 LG	00003410

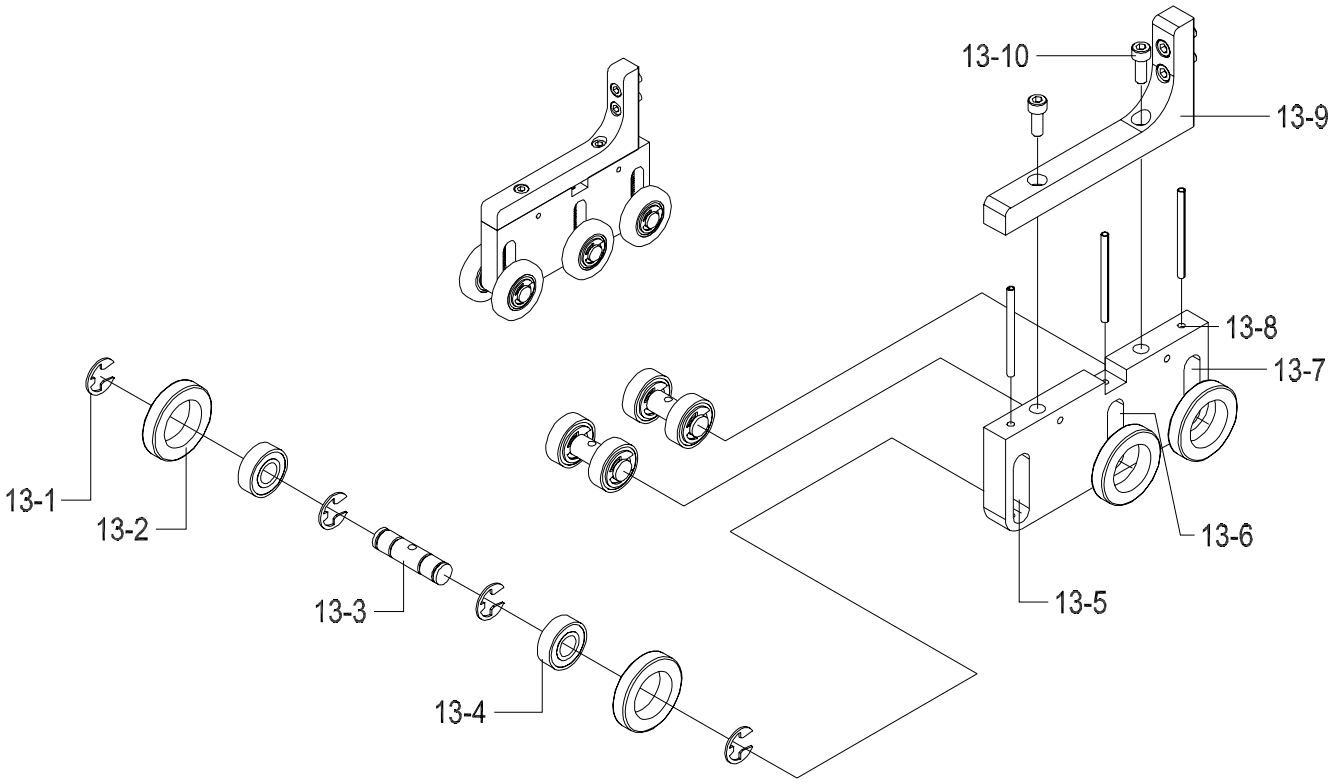
GATE PLATE ASSEMBLY
Assembly: 16311104



GATE PLATE ASSEMBLY
Assembly: 16311104

Diagram Number	Qty	Description	Part Number
12-2	2	FHSCS 10-32 X 7/8	00002341
12-3	1	Gate Spacer	51631027
12-4	1	Gate Cross Support	51631053
12-5	3	SHCS 6-32 X 1-1/8”	00002801
12-6	2	Gate Block Alignment	51631087
	4	SHCS 10-32 X 1/2”	00002315
12-7	1	Gate Mount Block	51631054
12-8	2	FHSCS 10-32 X 3/8”	00002234

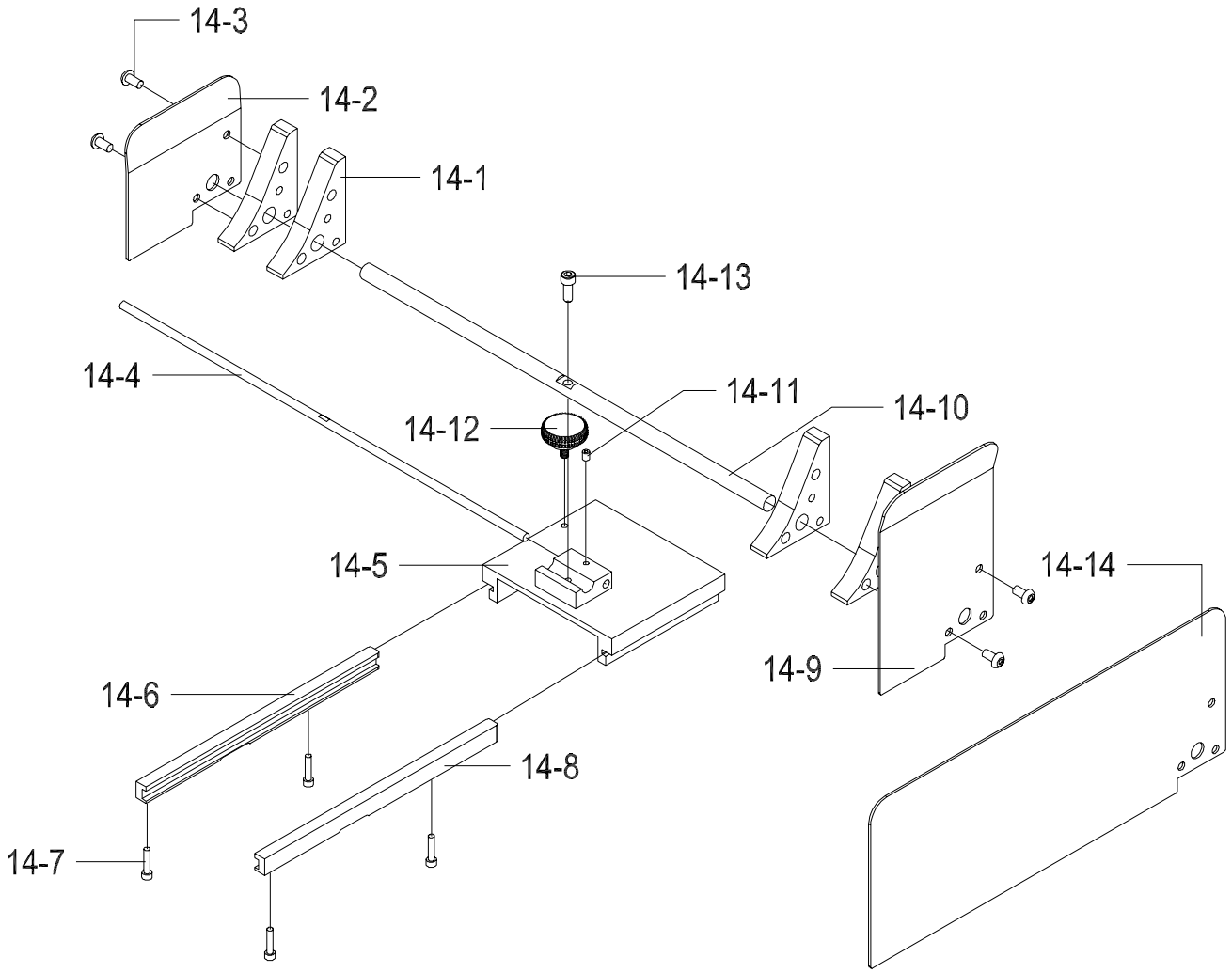
HOLD DOWN ASSEMBLY
Assembly: 16311105



HOLD DOWN ASSEMBLY
Assembly: 16311105

Diagram Number	Qty	Description	Part Number
13-1	12	E Clip, 3/8 Inch Shaft	00001150
13-2	6	Rear Discharge Roller Collar	51277088
13-3	3	Hold Down Shaft	51277052
13-4	6	Bearing Ball R6	23500095
13-5	1	Hold Down Spring Pin	51277077
	1	Hold Down Spring	51277138
13-6	1	Hold Down Spring Pin	51277077
	1	Hold Down Spring	51277090
13-7	1	Hold Down Spring Pin	51277077
	1	Hold Down Spring	51277076
13-8	1	Hold Down Shaft Block	51277051
13-9	1	Hold Down Block	51631024
	2	SHCSS/S 10-32 X 5/8”	00002820
13-10	2	SHCSS/S 10-32 X 5/8	00002820

Right WEDGE ASSEMBLY
Assembly: 16311117

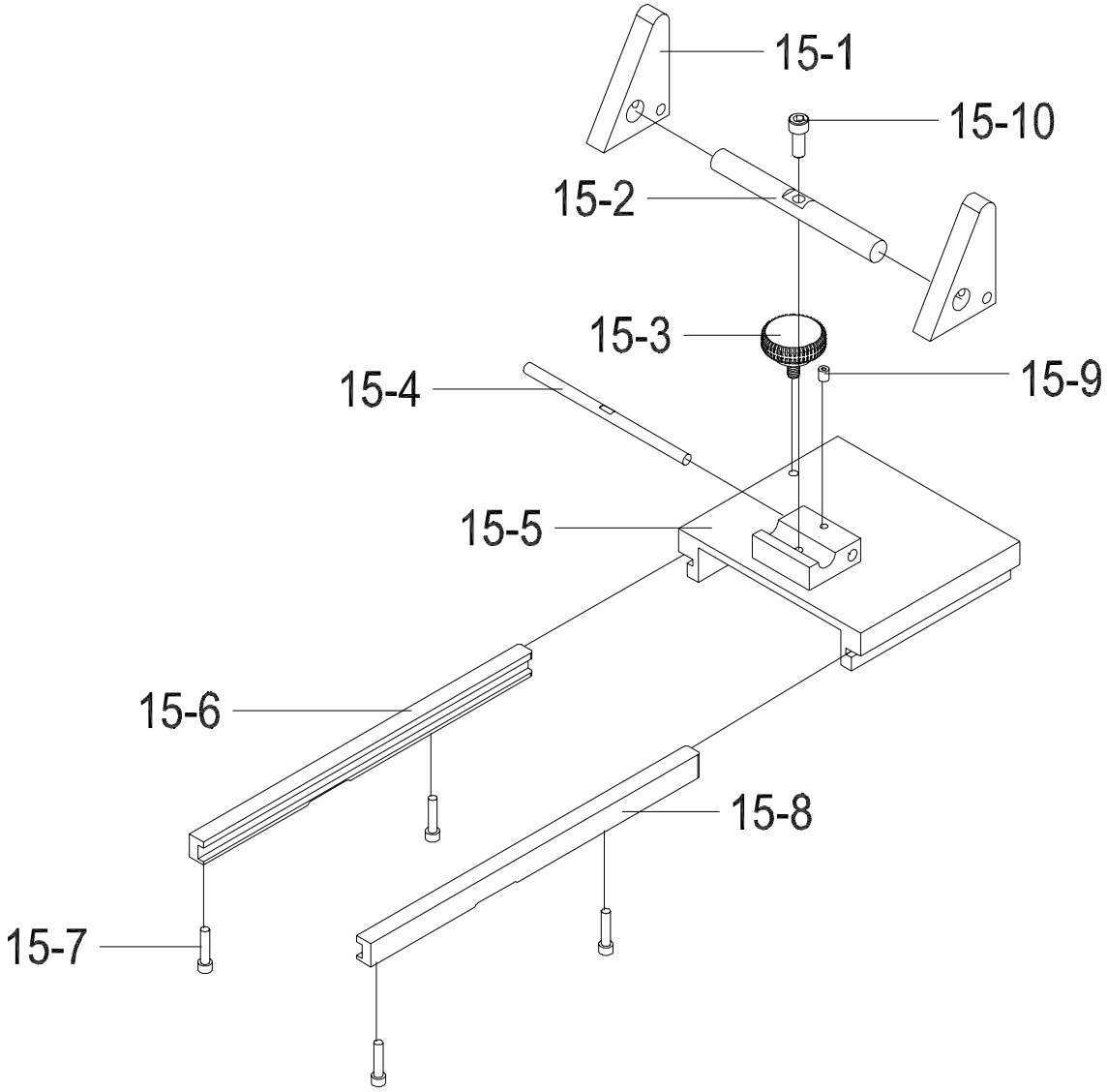


Right WEDGE ASSEMBLY
Assembly: 16311117

Diagram Number	Qty	Description	Part Number
14-1	4	Wedge	51631089
14-2	1	Right Wedge Guide	51631085
14-3	4	BHCS 10-32 X 3/8”	00002305
14-4	1	Wedge Support Shaft	51631097
14-5	1	Wedge Holder	51277035
14-6	1	Wedge Block Right (Reference Carriage)	51277147
14-7	4	SHCS 6-32 X 5/8” (Reference Carriage)	00003303
14-8	1	Wedge Block Left (Reference Carriage)	51277148
14-9	1	Left Wedge Guide	51631086
14-10	1	Wedge Guide Shaft	51631084
14-11	1	Set Screw 8-32 X 3/16”	00003337
14-12	1	1” Round Knob	44681021
	1	Set Screw Nylon Tip 10-32	44681020
	1	Set Screw 10-32 X 1/8”	00003352
14-13	1	SHCS 10-32 X 1/2”	00002315
14-14	1	Long Wedge Guide	51631088

NARROW WEDGE ASSEMBLY OPTIONAL

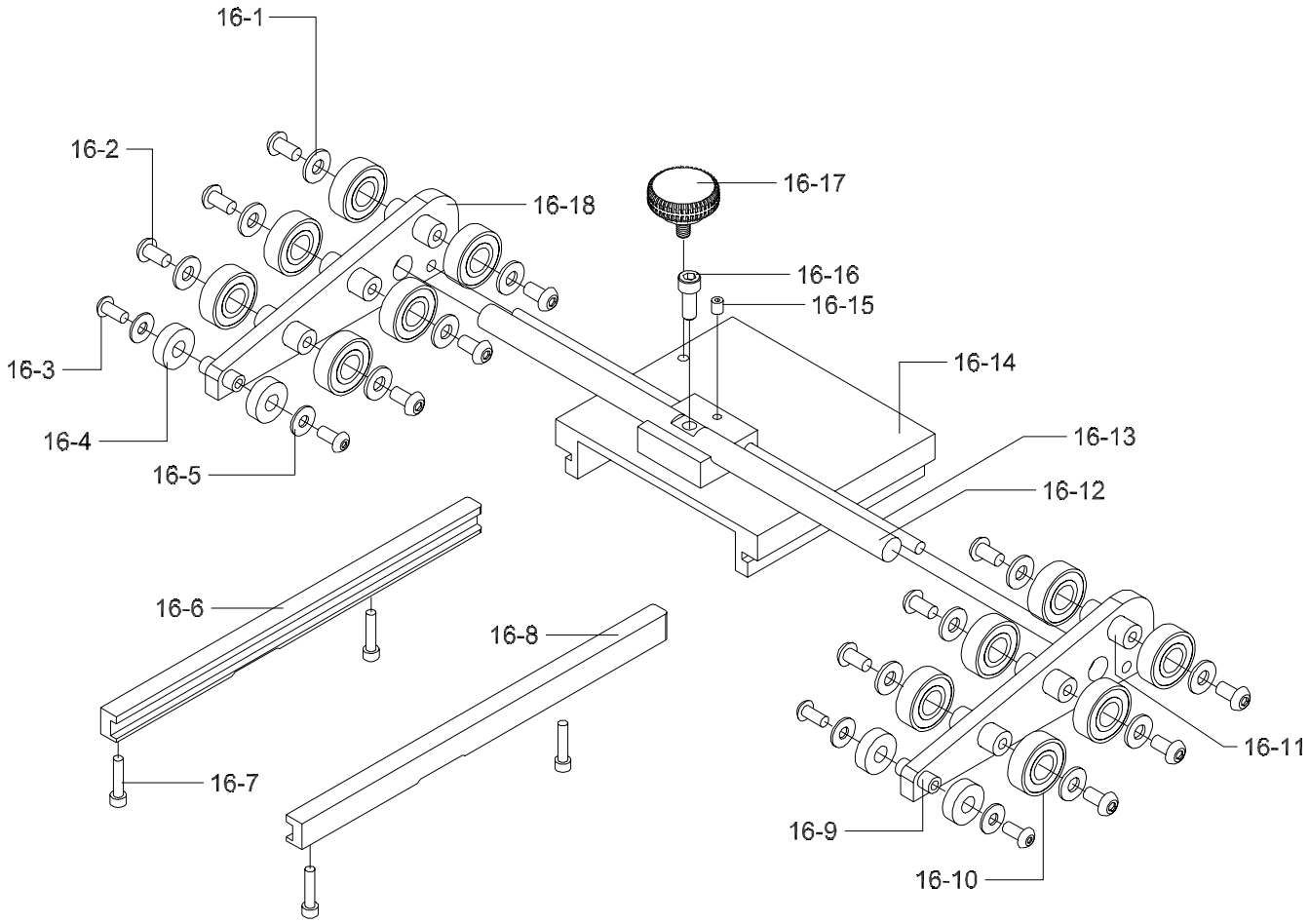
Assembly: 16311118



NARROW WEDGE ASSEMBLY OPTIONAL
Assembly: 16311118

Diagram Number	Qty	Description	Part Number
15-1	2	Narrow Wedge	51631090
15-2	1	Narrow Wedge Guide Shaft	51631092
15-3	1	1” Round Knob	44681021
	1	Set Screw Nylon Tip 10-32	44681020
15-4	1	Narrowed Wedge Support Shaft	51631091
15-5	1	Wedge Holder	51277035
15-6	1	Wedge Block Right (Reference Carriage)	
15-7	4	SHCS 6-32 X 5/8” (Reference Carriage)	
15-8	1	Wedge Block Left (Reference Carriage)	
15-9	1	Set Screw 8-32 X 3/16	00003337
15-10	1	SHCS 10-32 X 1/2”	00002315

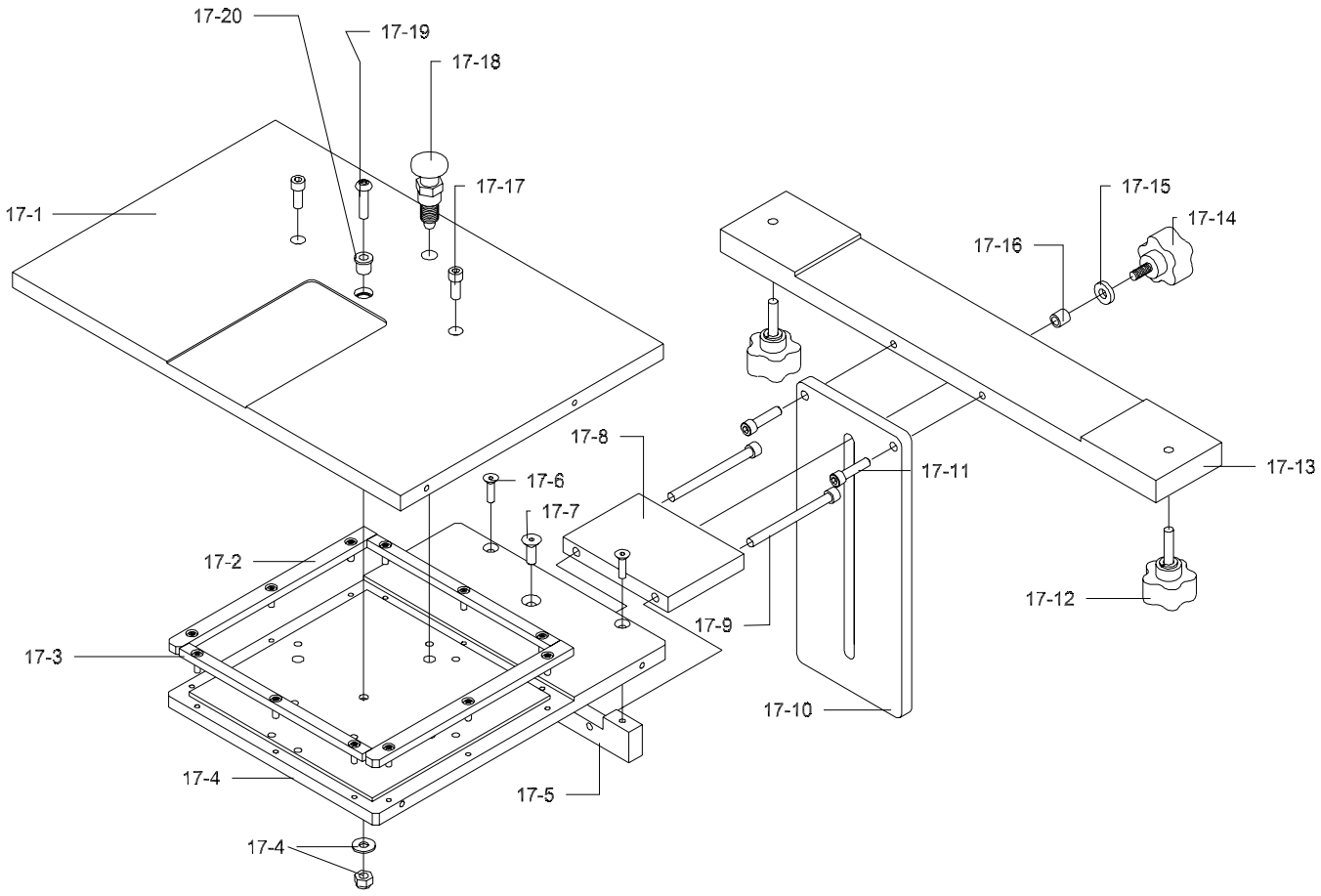
LOW PROFILE WEDGE ASSEMBLY OPTIONAL
Assembly: 16311119



LOW PROFILE WEDGE ASSEMBLY OPTIONAL
Assembly: 16311119

Diagram Number	Qty	Description	Part Number
16-1	12	Flat Washer #10	00002607
16-2	12	BHCS 10-32 X 3/8”	00002305
16-3	4	BHCS 8-32 X 3/8”	00002306
16-4	4	R4 Bearing	44582021
16-5	4	Flat Washer #8	00002600
16-6	1	Wedge Block Right (Reference Carriage)	
16-7	4	SHCS 6-32 X 5/8” (Reference Carriage)	
16-8	1	Wedge Block Left (Reference Carriage)	
16-9	2	End Roller Shaft	51497056
16-10	12	R6 Bearing	23500095
16-11	6	Belt Tensioner Shaft	33500020
16-12	1	Wedge Guide Shaft	44633018
16-13	1	Wedge Support Shaft	44759076
16-14	1	Wedge Holder	51277035
16-15	1	Set Screw 8-32 X 3/16	00003337
16-16	1	SHCS 10-32 X 1/2”	00002315
16-17	1 1	1” Round Knob Set Screw Nylon Tip 10-32	44681021 44681020
16-18	2	Roller Wedge	51497046

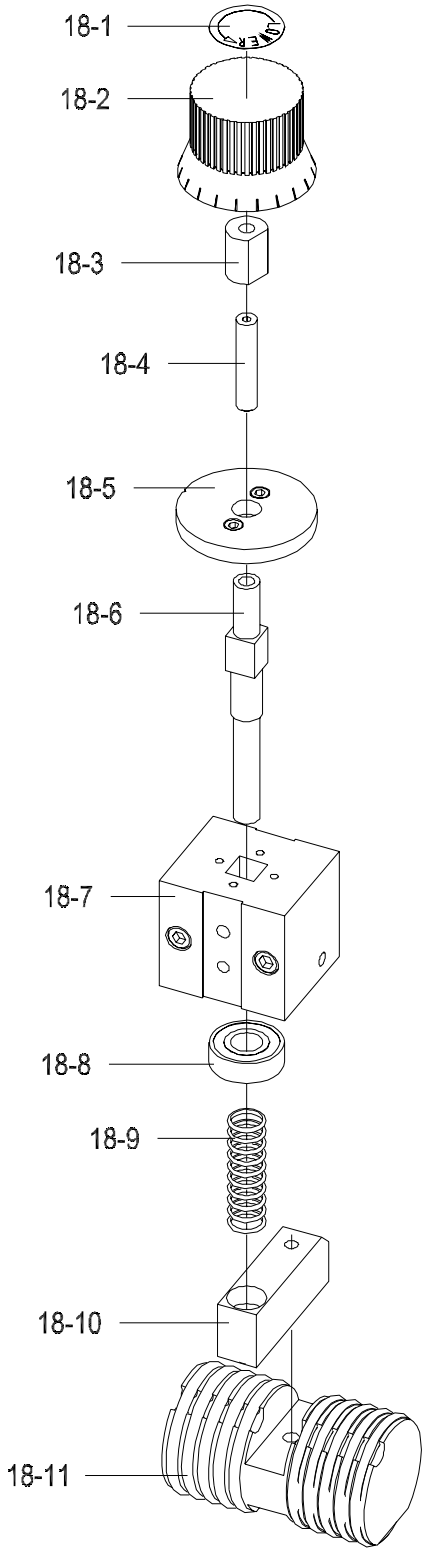
MOUNTING PLATE ASSEMBLY
Assembly: 16311166



MOUNTING PLATE ASSEMBLY
Assembly: 16311166

Diagram Number	Qty	Description	Part Number
17-1	1	Base Plate	51631161
17-2	2	Delrin Spacer	51631163
	6	BHCS 8-32 X 1/2	00002302
17-3	2	Delrin Spacer	51631164
	6	BHCS 8-32 X 1/2	00002302
17-4	1	Stand Plate	51631160
	1	¼-20 Nylock Nut	00002114
	1	Washer Bronze	51631175
17-5	1	Docking Block	51631093
17-6	2	FHSCS 10-32 X 3/4	00002338
17-7	1	FHSCS ¼-20 X 3/4	00003395
17-8	1	Locking Mount	51631102
17-9	2	SHCS 1/4-20 X 3	00002397
17-10	1	Docking Plate	51631125
17-11	2	SHCS 1/4-20 X 3/4	00002328
17-12	2	Comfort Knob	51632107
	2	¼" Lock Washer	00003348
17-13	1	Docking Mount	51631094
17-14	1	Comfort Knob	51631167
17-15	1	Flat Heavy Washer 1/4	00003374
17-16	1	Bronze Bearing	33560054
17-17	2	SHCS ¼-20 X 5/8	00003360
17-18	1	Spring Plunger	51631165
	1	Spring Plunger Spacer	51631168
17-19	1	BHCS ¼-20 X 1	00002353
17-20	1	Bronze Bearing	51631174
NS	2	SHCS ¼-20 X ¾	00002328
NS	2	#10 Flat Washer	00002605

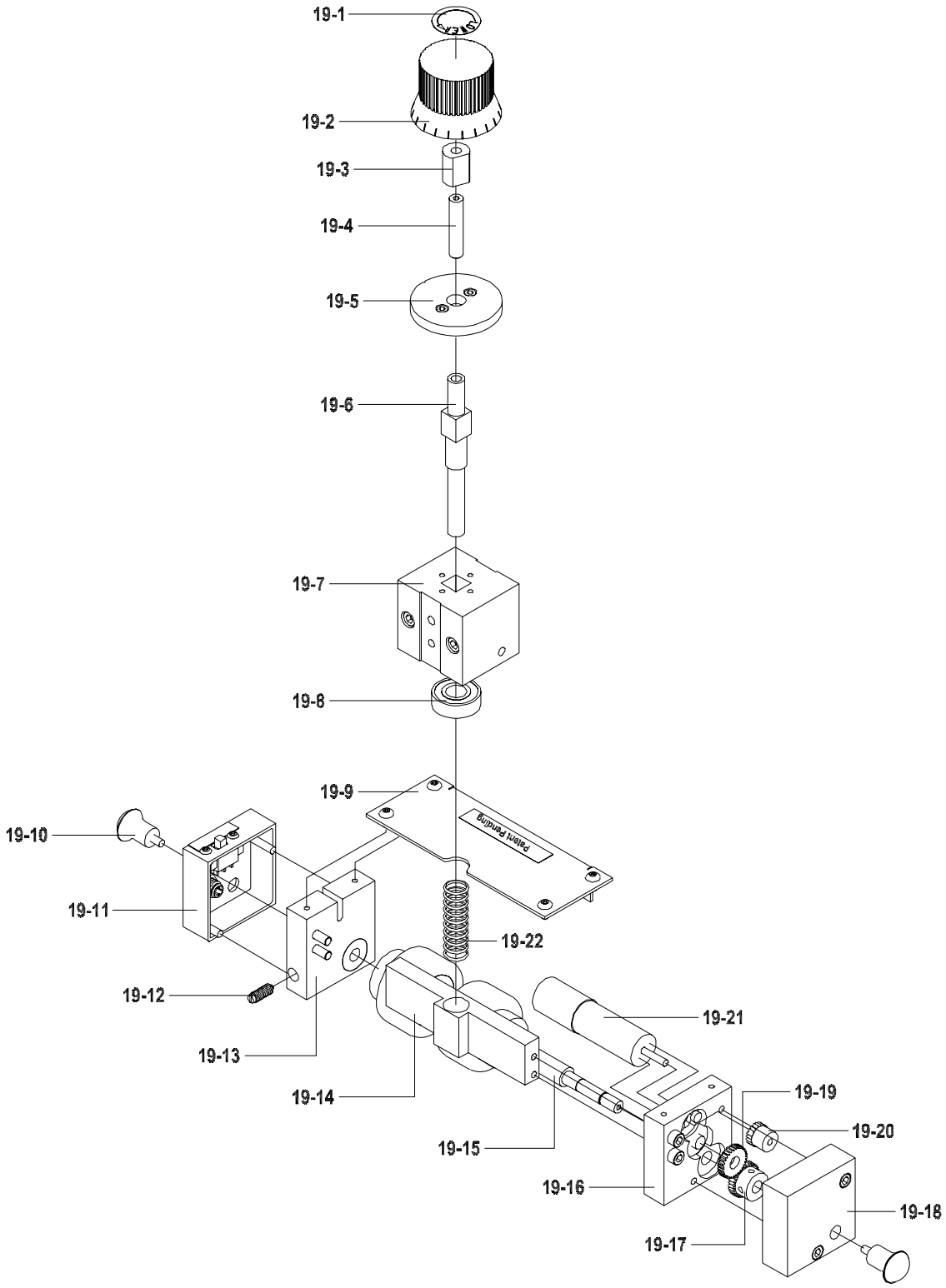
O-Ring GATE ASSEMBLY
Assembly: 16311132



O-Ring GATE ASSEMBLY
Assembly: 16311132

Diagram Number	Qty	Description	Part Number
18-1	1	Label Gate Adjust Knob	23500084
18-2	1	Knob	51277083
	1	O-Ring	23500104
18-3	1	Knob Insert	51277081
18-4	1	Screw, Socket Set 1/4-28 X 1-1/4” LG	00003407
18-5	1	Mounting Flanged Knob	51277082
	2	SHCS 5-40 X 1/4”	00002311
18-6	1	Gate Lift Shaft	51631023
18-7	2	SHCS 10-32 X 1-1/4”	00002312
	1	Block, Gate Sleeve	51631022
18-8	1	Bearing R6	23500095
18-9	1	Gate Spring	51631073
18-10	1	Mount, Gate Lift Shaft	51631124
	1	SHCS 10-32 X 1	00002835
18-11	1	Gate Cylinder	51277075
	10	O-Ring Gate Cylinder	23500089
	1	Washer # 10	00002607
	1	SHCS 10-32 X 3/4	00002825

ROTATING GATE ASSEMBLY OPTIONAL
Assembly: 16311106

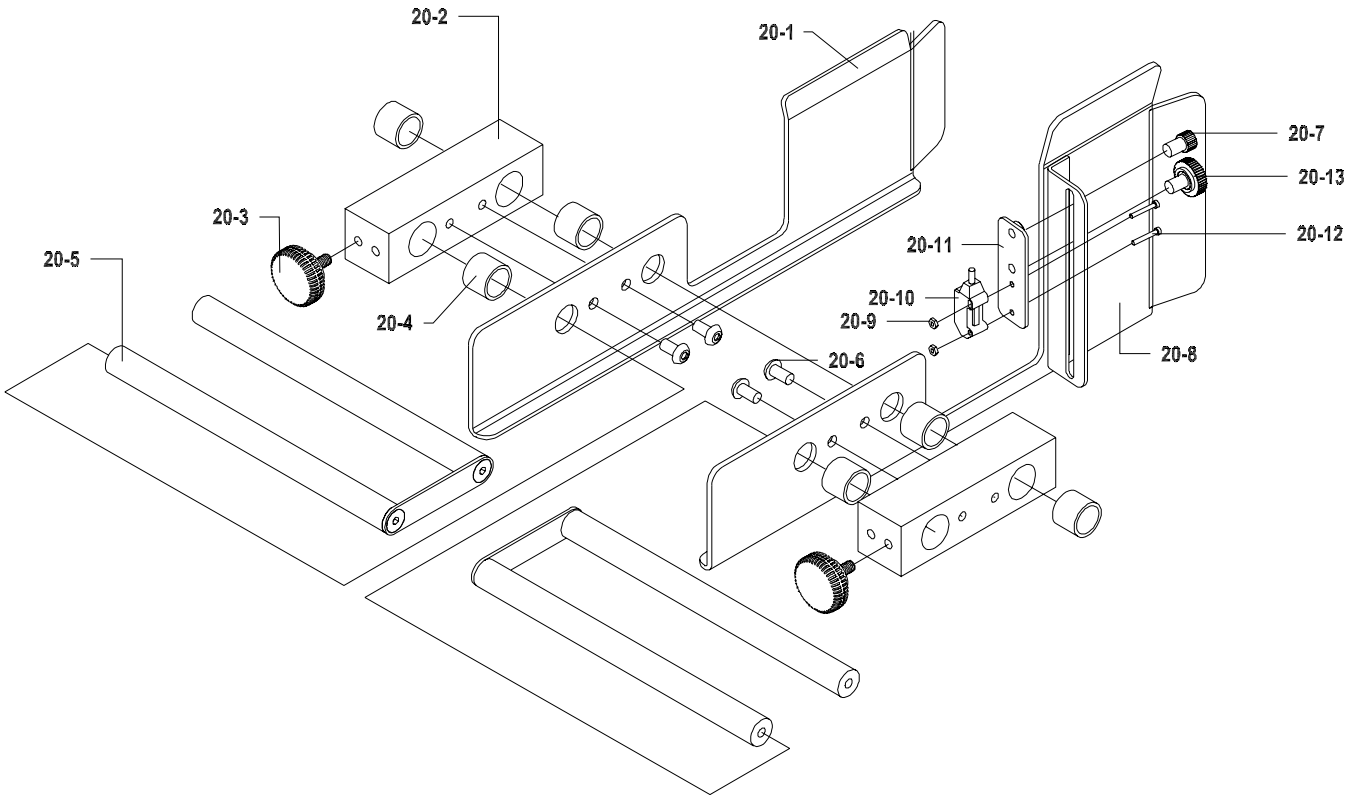


ROTATING GATE ASSEMBLY OPTIONAL

Assembly: 16311106

Diagram Number	Qty	Description	Part Number
19-14	2	SHCSS/S 6-32 X 1/2”	00003421
	1	BHCSS/S 10-32 X 5/8”	00003423
	1	Gate Lift Shaft Mount	51326004
19-15	1	Roller Shaft	51326002
	2	Roller	51326001
19-16	1	Roller Support Arm	51326007
	2	SHCSS/S 8-32 X 5/8”	00002816
	1	Dowel Pin	51326011
	1	Bearing R4	44582021
	2	Slotted Head Screw M2 X 5mm	51326017
19-17	1	6mm Spur Gear 32T	44874062
19-18	1	Bearing Insert	51326012
	1	Gear Cover	51326009
	2	SHCSS/S 8-32 X 7/8”	00003422
19-19	1	6mm Spur Gear 30T	44874063
19-20	1	6mm Spur Gear 20T	44874061
19-21	1	Motor	51326015
19-22	1	Spring	51631073
NS	1	Set Screw 10-32 X 1/4”	00002216
NS	1	Interface Power Cable	16311150
19-14	2	SHCSS/S 6-32 X 1/2”	00003421
	1	BHCSS/S 10-32 X 5/8”	00003423
	1	Gate Lift Shaft Mount	51326004
19-15	1	Roller Shaft	51326002
	2	Roller	51326001
19-16	1	Roller Support Arm	51326007
	2	SHCSS/S 8-32 X 5/8”	00002816
	1	Dowel Pin	51326011
	1	Bearing R4	44582021
	2	Slotted Head Screw M2 X 5mm	51326017
19-17	1	6mm Spur Gear 32T	44874062
19-18	1	Bearing Insert	51326012
	1	Gear Cover	51326009
	2	SHCSS/S 8-32 X 7/8”	00003422
19-19	1	6mm Spur Gear 30T	44874063
19-20	1	6mm Spur Gear 20T	44874061
19-21	1	Motor	51326015
19-22	1	Spring	51631073
NS	1	Set Screw 10-32 X 1/4”	00002216
NS	1	Interface Power Cable	16311150

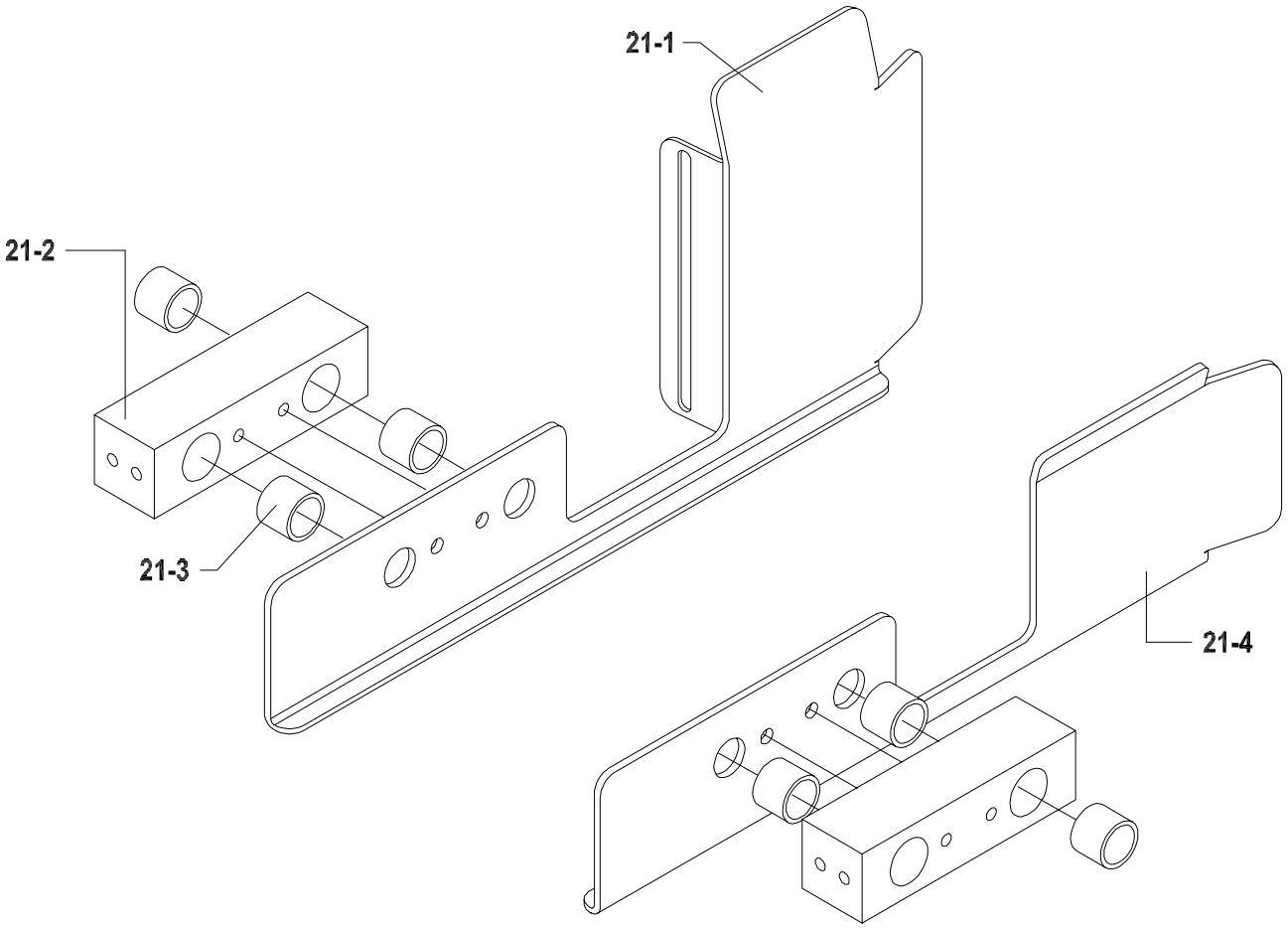
RIGHT SIDE GUIDE ASSEMBLY
Assembly: 16311107



RIGHT SIDE GUIDE ASSEMBLY
Assembly: 16311107

Diagram Number	Qty	Description	Part Number
20-1	1	Side Guide Right	51631032
20-2	2	Side Guide Slide	51631028
20-3	2	1” Round Knob	44681021
	2	Set Screw Nylon Tip 10-32	44681022
	2	Set Screw 10-32 X ¼	00002216
20-4	6	Igus Bearing Sleeve	51460088
20-5	4	Side Guide Shaft	51631030
	2	Side Bracket	51631031
	4	FHSCS 10-32 X 1/2	00002830
20-6	4	BHCS 10-32 X 3/8	00002805
20-7	1	SHCS 10-32 X 2/8	00003471
	1	Flat Washer #10	00002607
20-8	1	Side Guide Left	51631029
20-9	2	1/72 Nut	00003382
20-10	1	Cable Assembly Low Stack	16311163
20-11	1	Sensor Bracket	51631035
20-12	2	Screw 1/72 X 1/2	00003381
20-13	1	Adjusting Knob	23500091
	1	SHCS 10-32 X 5/16	00002309
	1	Flat Washer	00002607

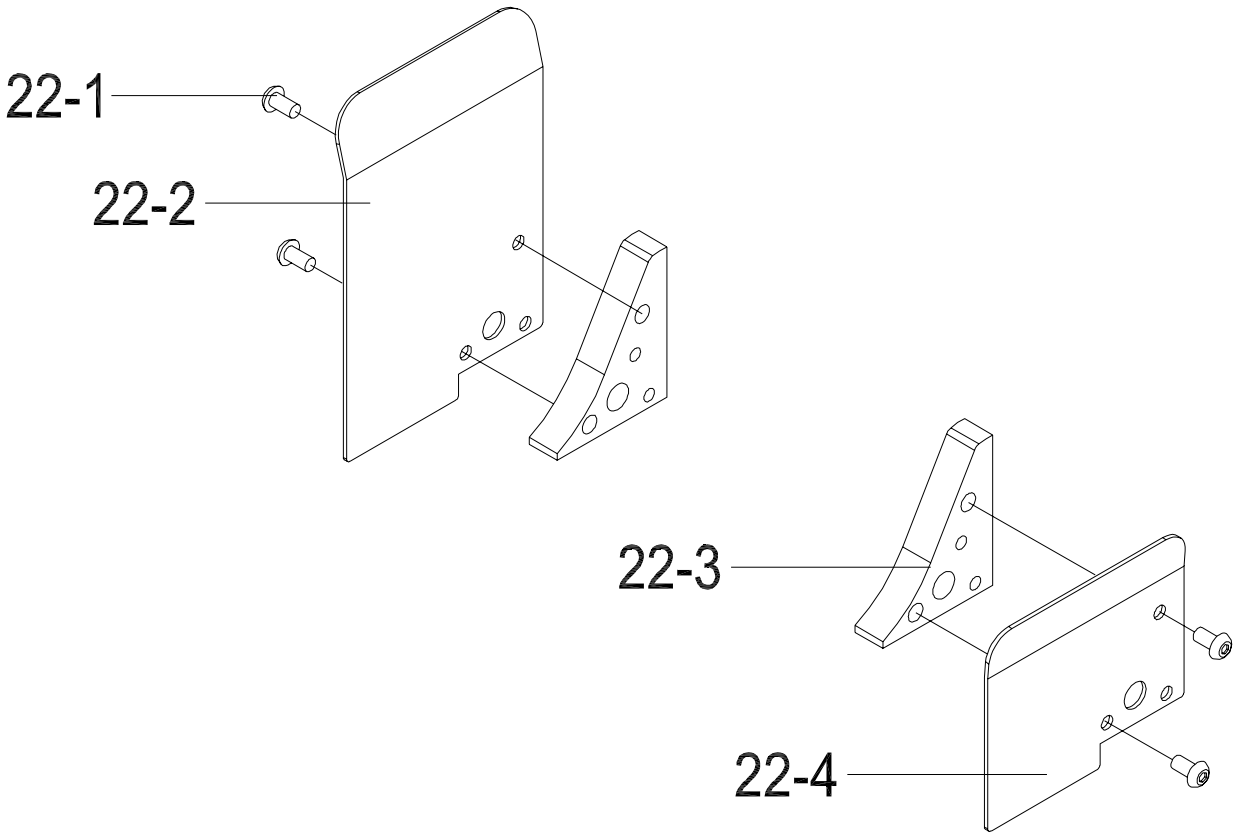
LEFT SIDE GUIDE ASSEMBLY OPTIONAL
Assembly: 16311135



LEFT SIDE GUIDE ASSEMBLY OPTIONAL
Assembly: 16311135

Diagram Number	Qty	Description	Part Number
21-1	1	Side Guide Right	51631140
21-2	2	Side Guide Slide	51631028
21-3	6	Igus Bearing Sleeve	51460088
21-4	1	Side Guide Left	51631141

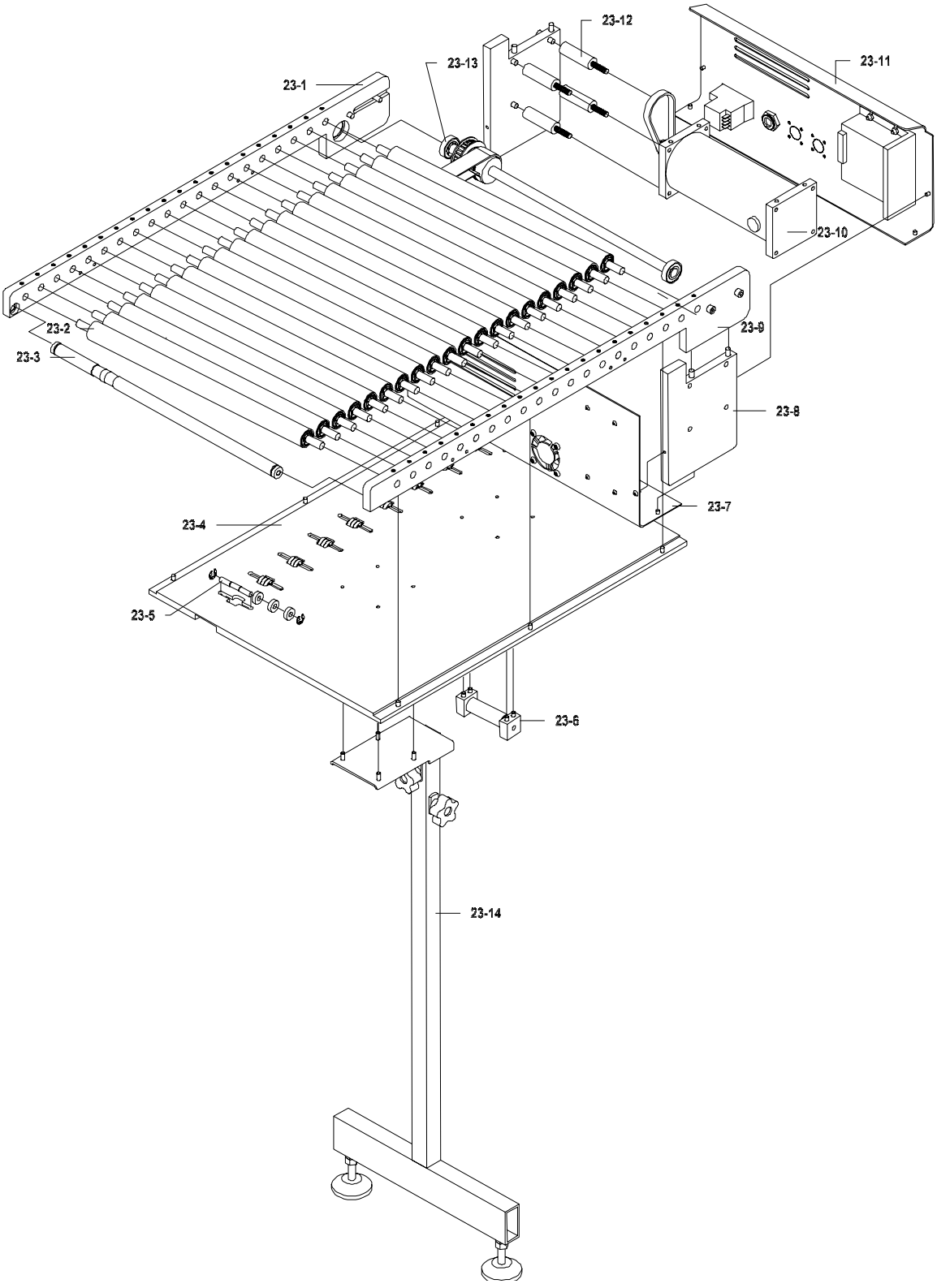
LEFT WEDGE ASSEMBLY OPTIONAL
Assembly: 16311165



LEFT WEDGE ASSEMBLY OPTIONAL
Assembly: 16311165

Diagram Number	Qty	Description	Part Number
22-1	2	BHCS 10-32 X 3/8”	00002305
22-2	1	Right Wedge Guide	51631170
22-3	2	Wedge	51631089
22-4	1	Left Wedge Guide	51631169

ALIGNMENT BASE ASSEMBLY
Assembly: 16311113



ALIGNMENT BASE ASSEMBLY
Assembly: 16311113

Diagram Number	Qty	Description	Part Number
23-1	1	Left Alignment Right Side Plate	51631043
	2	SHCS 1/4-20 X 3/4”	00002328
	20	Set Screw 10-32 X 1/4	00002216
23-2	20	Roller Tube	51631040
	40	R6 Bearing	51631150
	20	Idler Shaft	51631147
	40	E-Clip 3/8	00001150
23-3	1	Front Idler Shaft	51631047
	2	R4 Bearing	44582021
23-4	1	Bottom Mounting Plate	51631099
	6	FHCS 10-32 X 1/2	00002330
23-5	9	Shaft Belt Bearing	51631100
	27	R4 Bearing	51631151
	18	E-Clip 1/4”	00001145
23-6	2	Idler Block	51631145
	1	Idler Shaft	51631144
	2	R4 Bearing	44582021
	1	Idler Roller	51631146
	4	SHCS 10-32 X 1	00002335
	2	E-Clip 1/4”	00001145
23-7	1	Alignment Motor Cover	51631156
	4	BHCS 8-32 X 1/4	00002210
	1	Fan	44683008
	6	BHCS 10-32 X 3/8	00002305
	1	Speed Matching Board	51631176
	4	BHCS 6-32 X ¾	00002332
	4	6-32 Nut	00002113
	1	Support Block	51631177
23-8	2	Motor Mount	51631152
	4	SHCS ¼-20 X 5	00003480
	4	SHCS ¼-20 X ¾	00002328

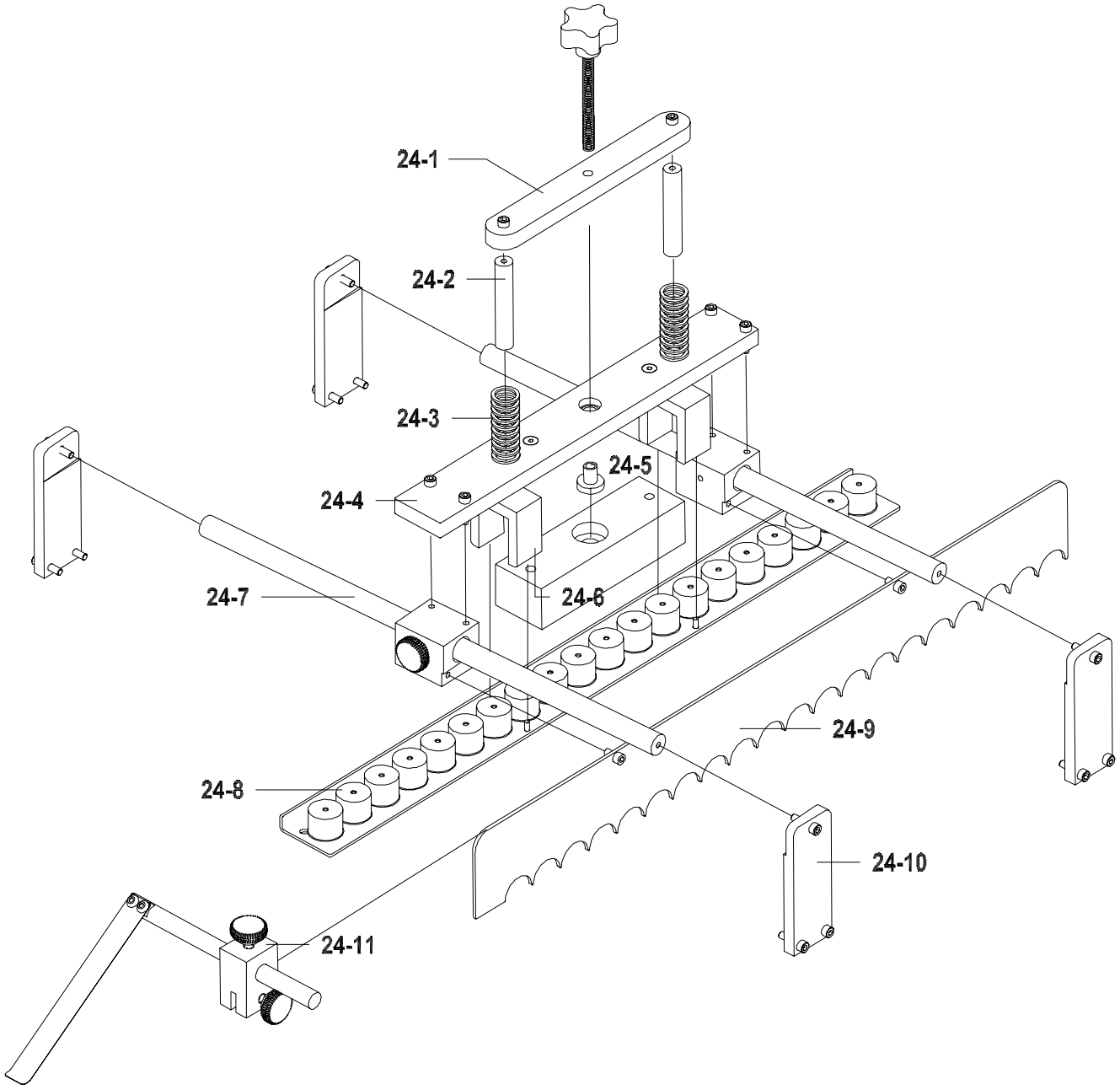
ALIGNMENT BASE ASSEMBLY (continued)
Assembly: 16311113

Diagram Number	Qty	Description	Part Number
23-9	1	Left Alignment Left Side Plate	51631042
	2	SHCS 1/4-20 X 3/4”	00002328
	20	Set Screw 10-32 x 1/4”	00002216
23-10	1	Timing Belt	51631154
	1	Motor 1/4HP	51631115
	1	Timing Pullet 12T	43555302
23-11	1	Alignment Motor Cover	51631155
	4	BHCS 8-32 X 1/4	00002210
	1	Board	51050252
	4	BHCS 8-32 X ½	00002302
	4	Nut 8-32	00002103
	1	A/C Module	44649034
	1	Cord Grip	53500217
23-12	4	Motor Stand Off	51631153
	4	Set Screw ¼-20 1-1/2	00003399
23-13	1	Driven Shaft	51631045
	1	28 Tooth Driven Gear	43560028
	2	1/2” E-Clip	00001155
	2	R8 Bearing	23500094
	2	Set Screw 10-32 X 1/4”	00003352
	1	Belt	51631080
	1	Drive Roller Crown	51631046
23-14	1	Support Stand	43511200

ALIGNMENT BASE ASSEMBLY (continued)
Assembly: 16311113

Diagram Number	Qty	Description	Part Number
NS	1	Harness Speed Following	16311171
NS	1	Cable Assembly PCM	16311172
NS	6	Sheathing	44649085
NS	2	Fuse Slow Blo	51631120
NS	2	Terminal Ring	53500041
NS	2	Terminal Disconnect Female	53500045
NS	9	Wire 18GA Green Yellow	53500057
NS	2	Ferrule White	53500235
NS	2	Terminal, Disc Female	53500254
NS	1	Assembly, 115V Configured	53511020

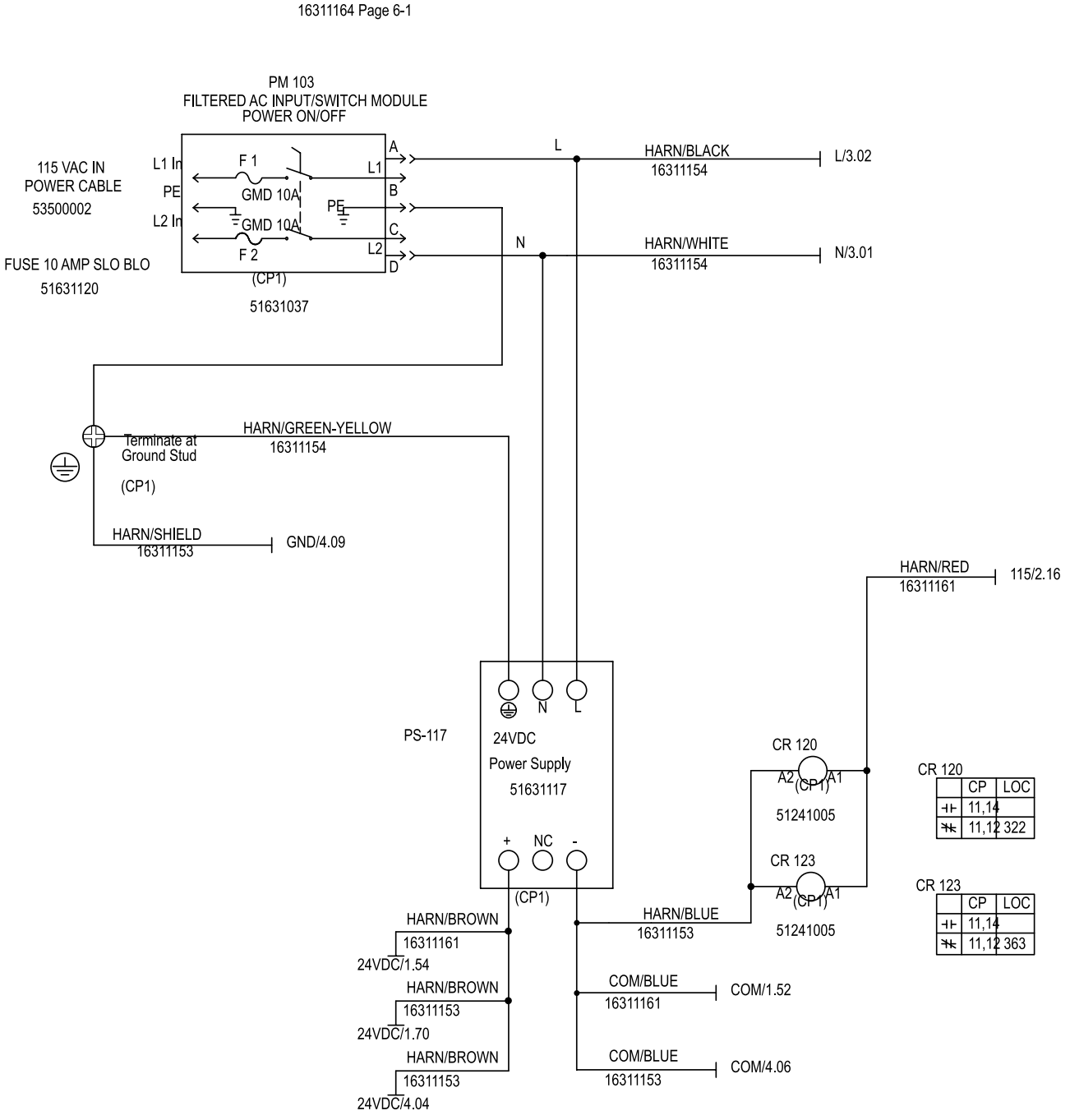
ALIGNMENT HOLD DOWN ASSEMBLY
Assembly: 16311114

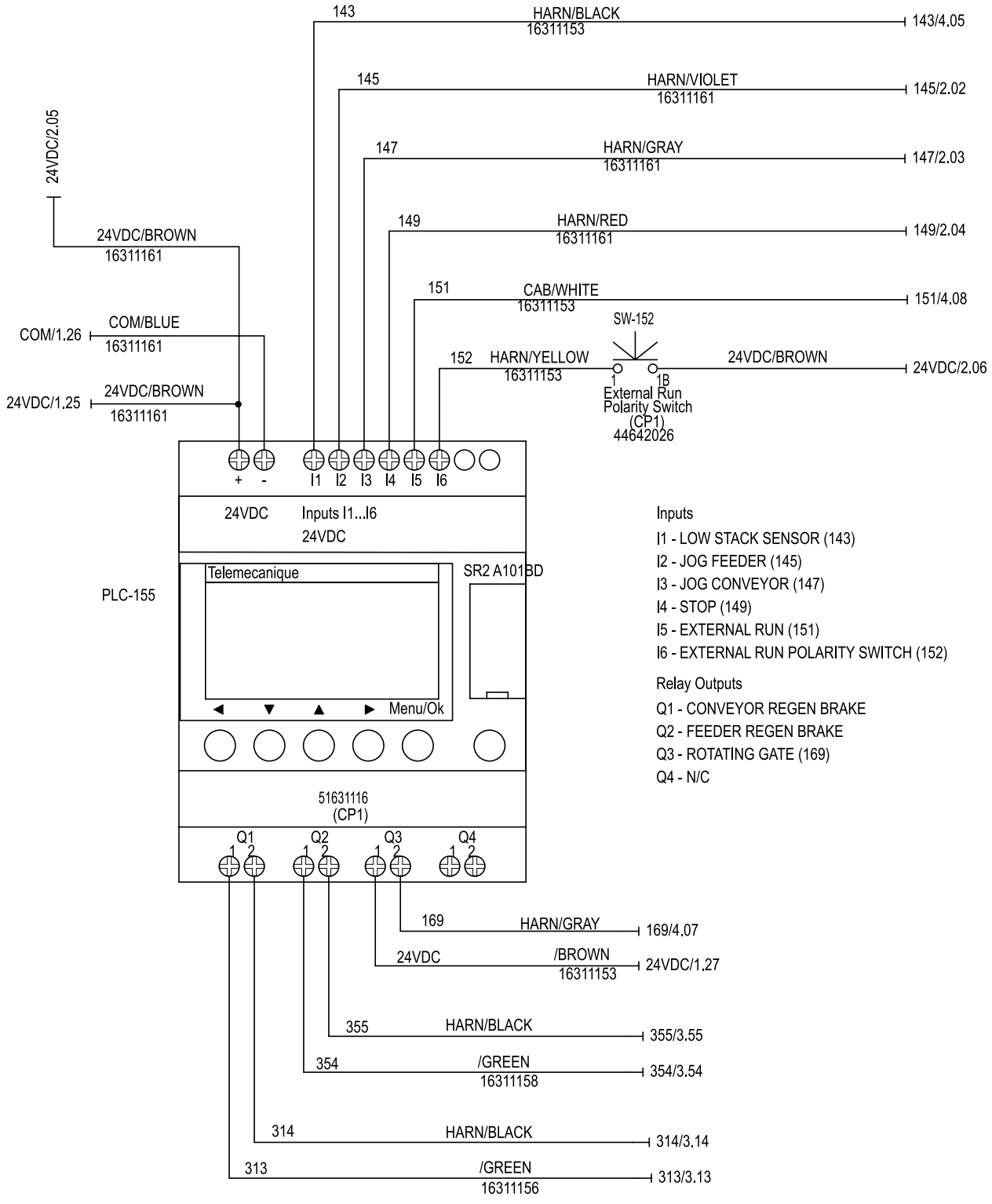


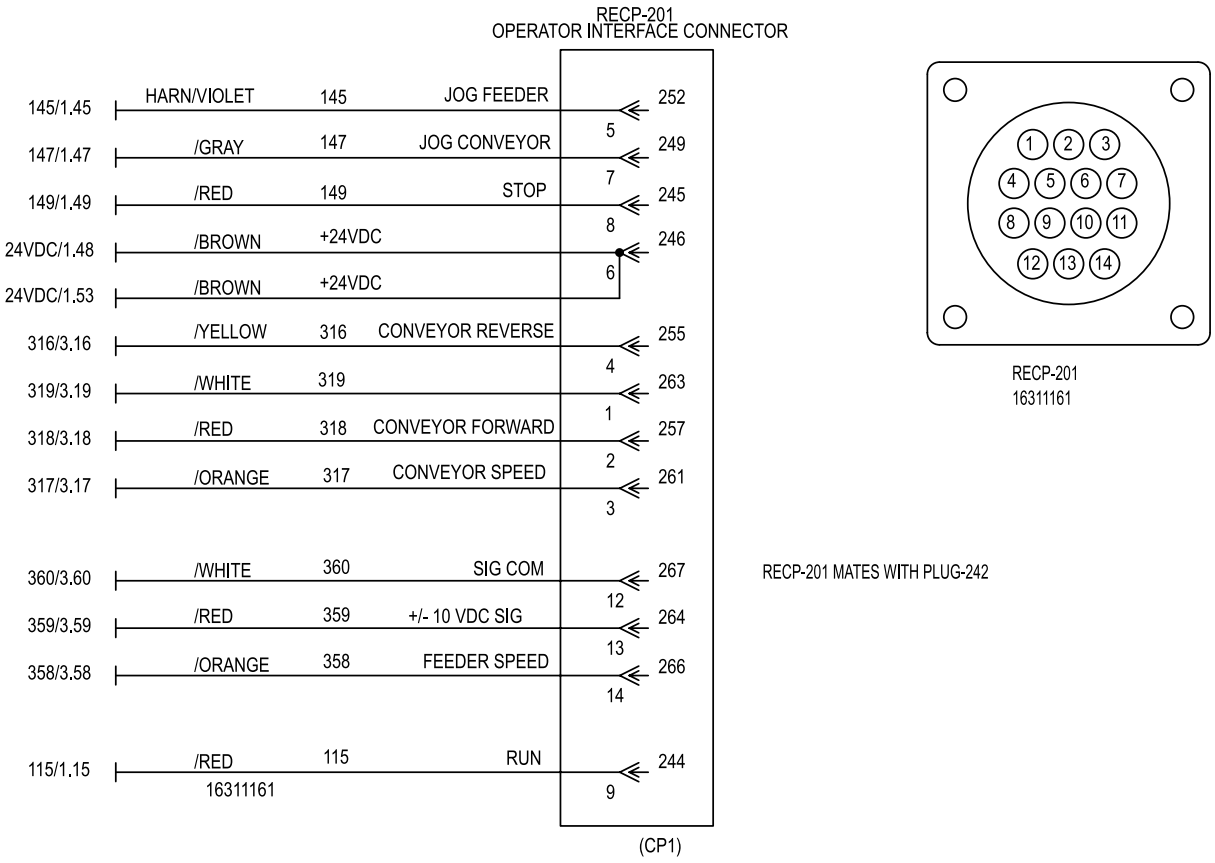
ALIGNMENT HOLD DOWN ASSEMBLY
Assembly: 16311114

Diagram Number	Qty	Description	Part Number
24-1	1	Upright Shaft Mount	51631064
	1	5 Lobe Knob	44947019
	1	Threaded Rod 5/16”	51631067
	2	SHCS 10-32 X 3/4”	00002325
24-2	2	Upright Shaft	51631063
24-3	2	Spring	51631069
24-4	1	Cross Bar Support Left Alignment	51631061
	2	Igus Bearing Sleeve	51460088
	4	SHCS 10-32 X 3/4”	00002325
	1	R6 Bearing	23500095
	1	Support Block	51631158
	2	FHCS 10-32 X ¾	00002338
24-5	1	Adjustable Spacer	51631065
24-6	2	Upright Mount	51631062
	2	SHCS 10-32 X 1/2”	00002315
24-7	2	Hold Down Support Shaft	51631057
	2	Left Align Hold Down Rail Mount	51631060
	1	Knob	44681021
	1	Set Screw Nylon Tip 10-32 X 1”	44681020
	1	Set Screw 10-32 X 1/4”	00003352
	4	Igus Bearing	44947015
24-8	1	Hold Down Rail	51631059
	20	Ball Cage	51631051
	10	Steel Ball (Optional)	51631078
	20	Plastic Ball	51631079
	4	FHSHCS 6-32 X 3/8”	00002235
24-9	1	Side Alignment Guide	51631055
	4	SHCS 10-32 X 3/8”	00002310
24-10	4	Left Alignment Hold Down Mount	51631058
	12	SHCS 10-32 X 3/4”	00002325
24-11	2	1” Knob	44681021
	2	Set Screw 10-32 X 1-1/4	00002202
	1	Mounting Block Slotted	44635127
	1	Knock Down	51631178
	2	BHCS 10-32 X 3/8	00002305
	1	Strip Shaft Upper	51332014

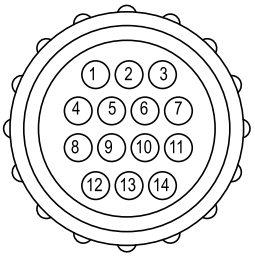
4 Electrical Diagrams




143
HARN/BLACK
16311153
143/4.05
145
HARN/VIOLET
16311161
145/2.02
147
HARN/GRAY
16311161
147/2.03
149
HARN/RED
16311161
149/2.04
151
CAB/WHITE
16311153
151/4.08
152
HARN/YELLOW
16311153
SW-152
24VDC/BROWN
24VDC/2.06
1
1B
External Run
Polarity Switch
(CP1)
44642026
24VDC/2.05
24VDC/BROWN
16311161
COM/1.26
COM/BLUE
16311161
24VDC/1.25
24VDC/BROWN
16311161
+ -
I1 I2 I3 I4 I5 I6
24VDC
Inputs I1...I6
24VDC
PLC-155
Telemecanique
SR2 A101BD
Menu/Ok
51631116
(CP1)
Q1 Q2 Q3 Q4
1 2 1 2 1 2 1 2
Inputs
I1 - LOW STACK SENSOR (143)
I2 - JOG FEEDER (145)
I3 - JOG CONVEYOR (147)
I4 - STOP (149)
I5 - EXTERNAL RUN (151)
I6 - EXTERNAL RUN POLARITY SWITCH (152)
Relay Outputs
Q1 - CONVEYOR REGEN BRAKE
Q2 - FEEDER REGEN BRAKE
Q3 - ROTATING GATE (169)
Q4 - N/C
169
HARN/GRAY
169/4.07
24VDC
/BROWN
16311153
24VDC/1.27
355
HARN/BLACK
355/3.55
354
/GREEN
16311158
354/3.54
314
HARN/BLACK
314/3.14
313
/GREEN
16311156
313/3.13

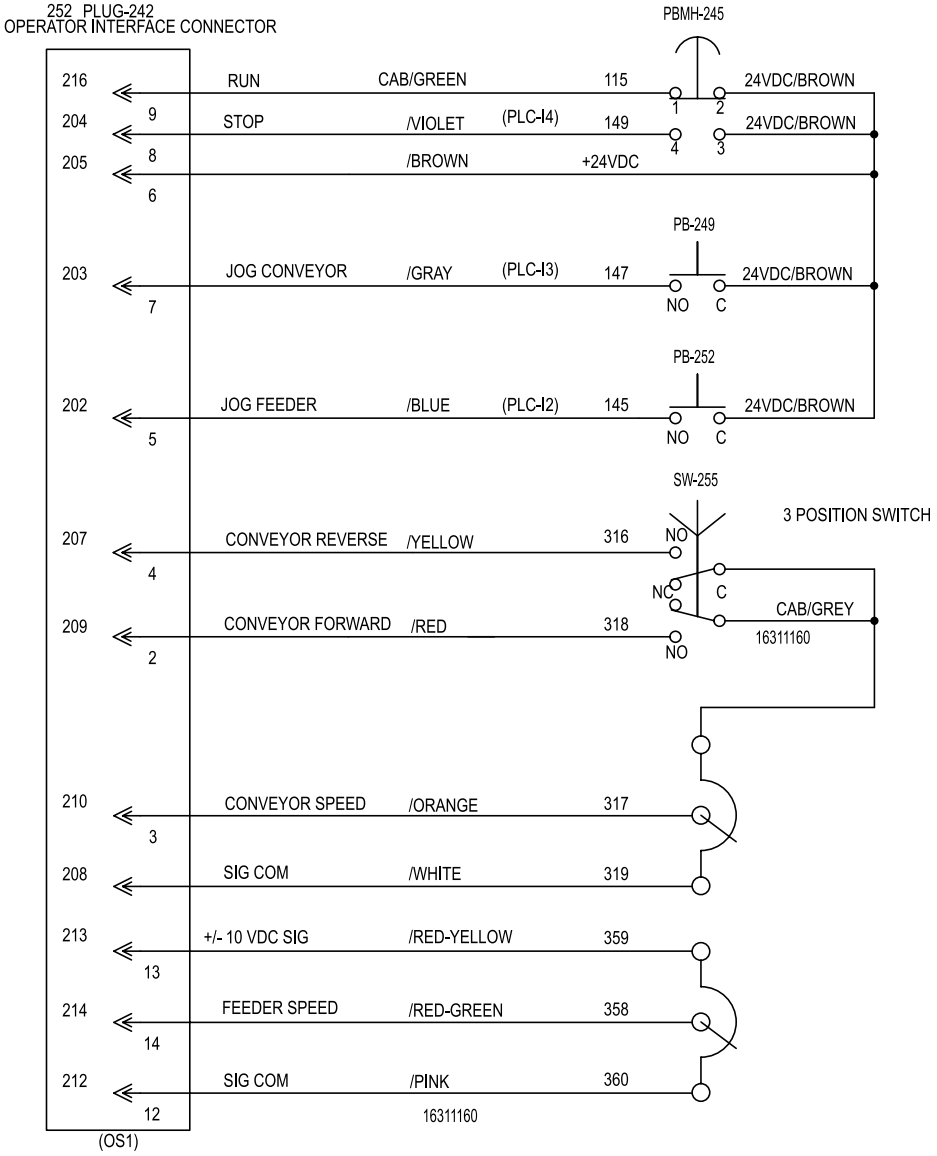

RECP-201
OPERATOR INTERFACE CONNECTOR
145/1.45
HARN/VIOLET
145
JOG FEEDER
252
5
147/1.47
/GRAY
147
JOG CONVEYOR
249
7
149/1.49
/RED
149
STOP
245
8
24VDC/1.48
/BROWN
+24VDC
246
6
24VDC/1.53
/BROWN
+24VDC
316/3.16
/YELLOW
316
CONVEYOR REVERSE
255
4
319/3.19
/WHITE
319
263
1
318/3.18
/RED
318
CONVEYOR FORWARD
257
2
317/3.17
/ORANGE
317
CONVEYOR SPEED
261
3
360/3.60
/WHITE
360
SIG COM
267
12
359/3.59
/RED
359
+/- 10 VDC SIG
264
13
358/3.58
/ORANGE
358
FEEDER SPEED
266
14
115/1.15
/RED
115
RUN
244
16311161
9
(CP1)
1
2
3
4
5
6
7
8
9
10
11
12
13
14
RECP-201
16311161
RECP-201 MATES WITH PLUG-242

Remote Operator Station

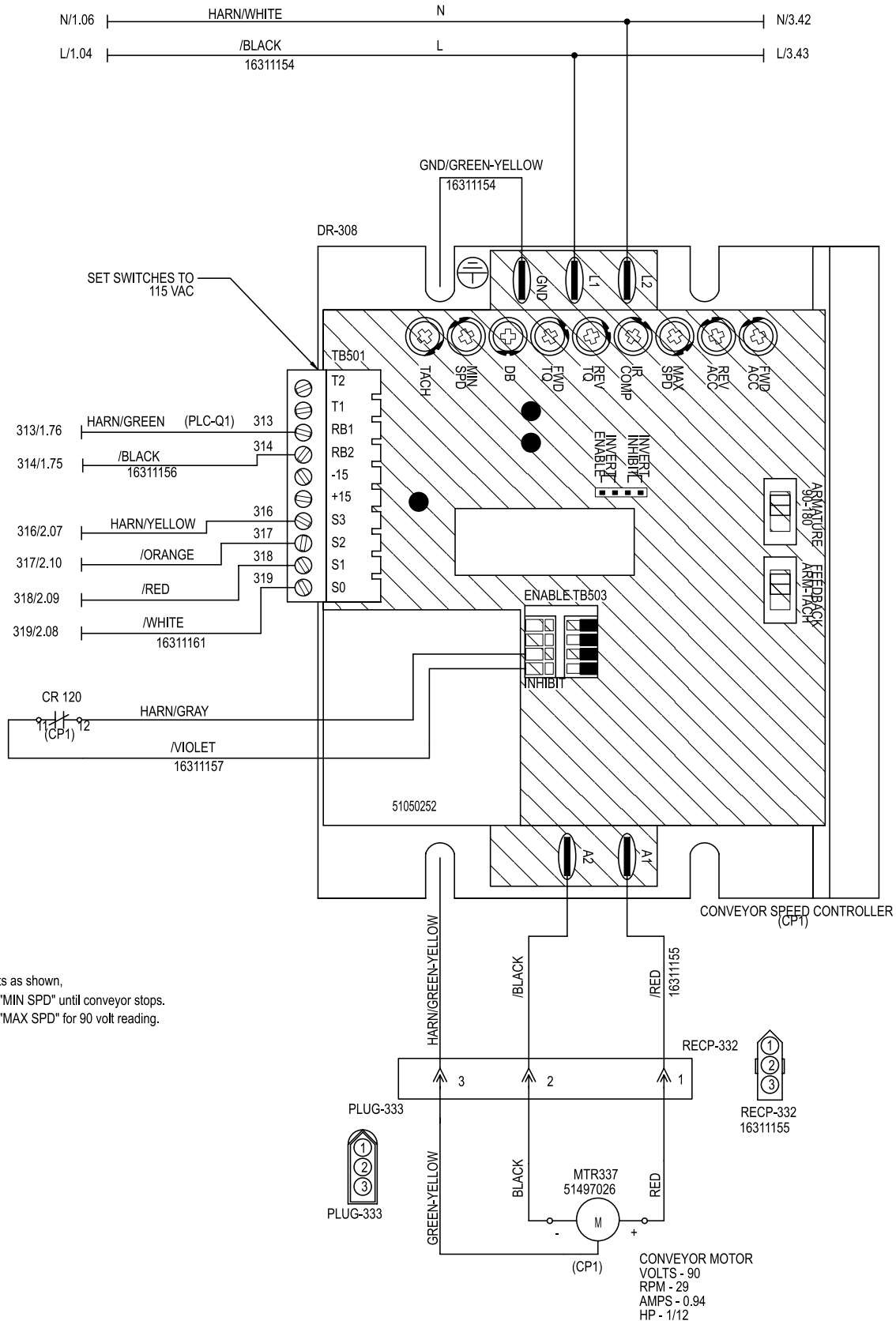


PLUG-242
16311160

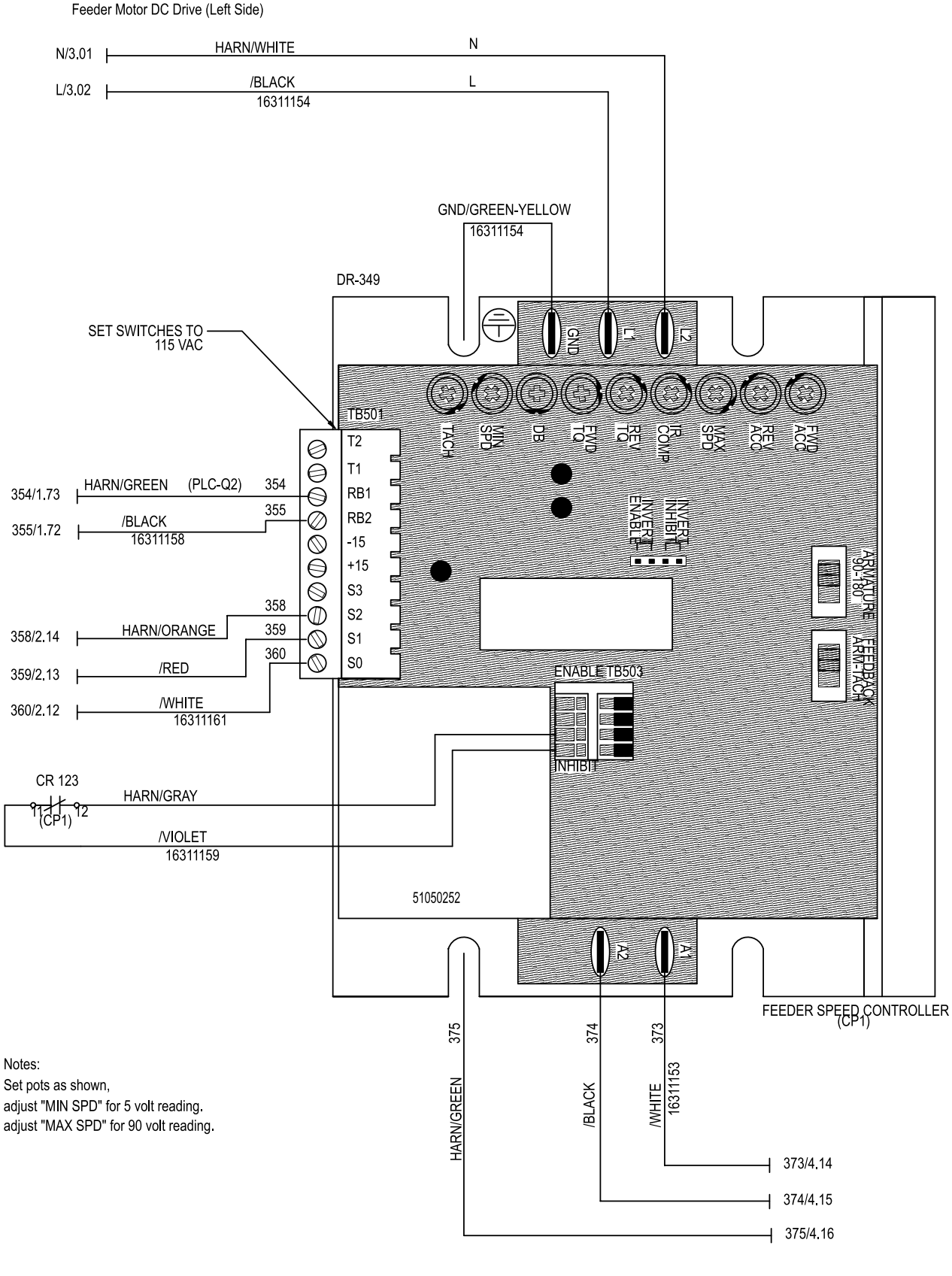
PLUG-242 MATES WITH RECP-201



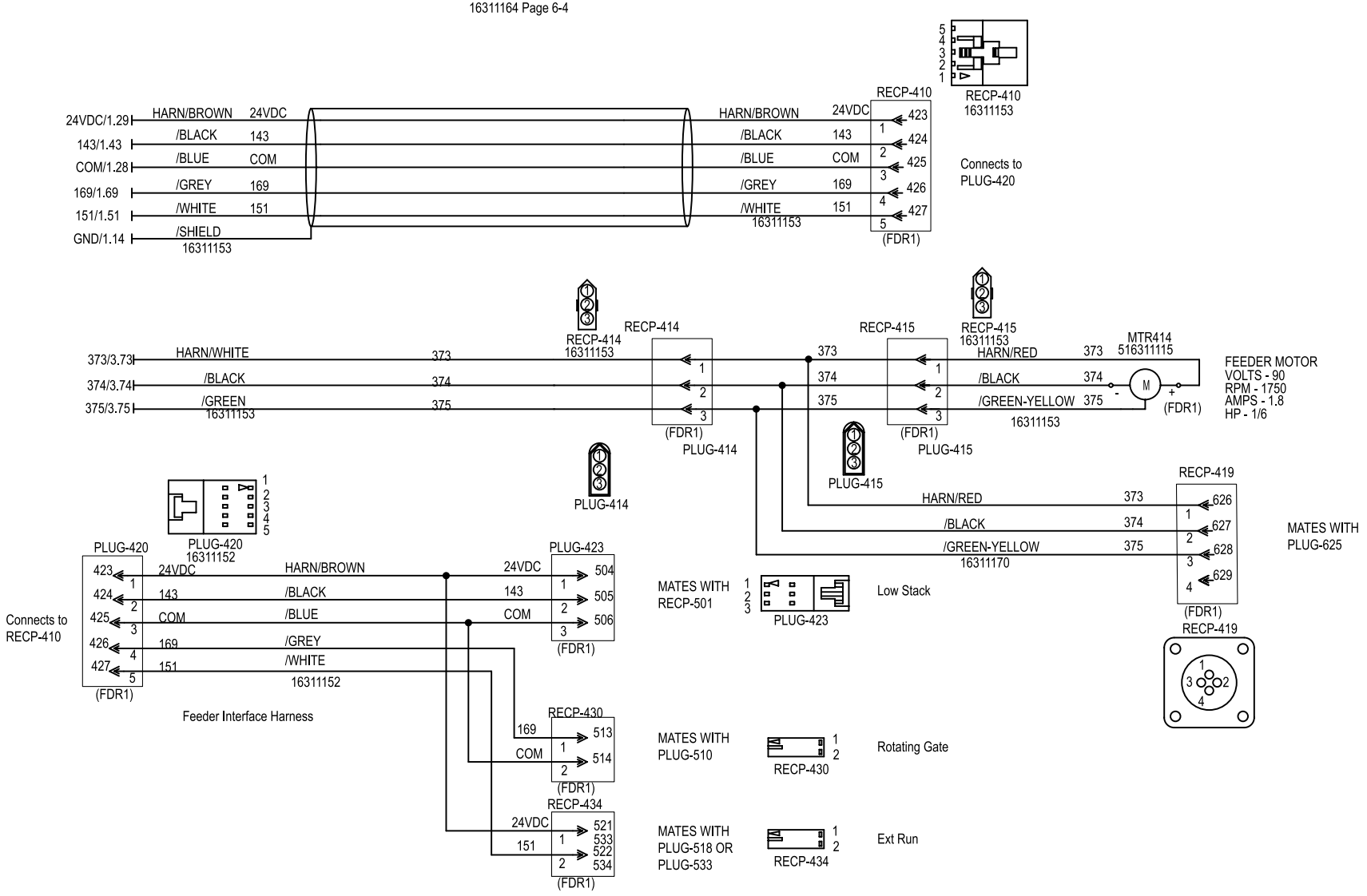
Conveyor Motor DC Drive (Right Side)



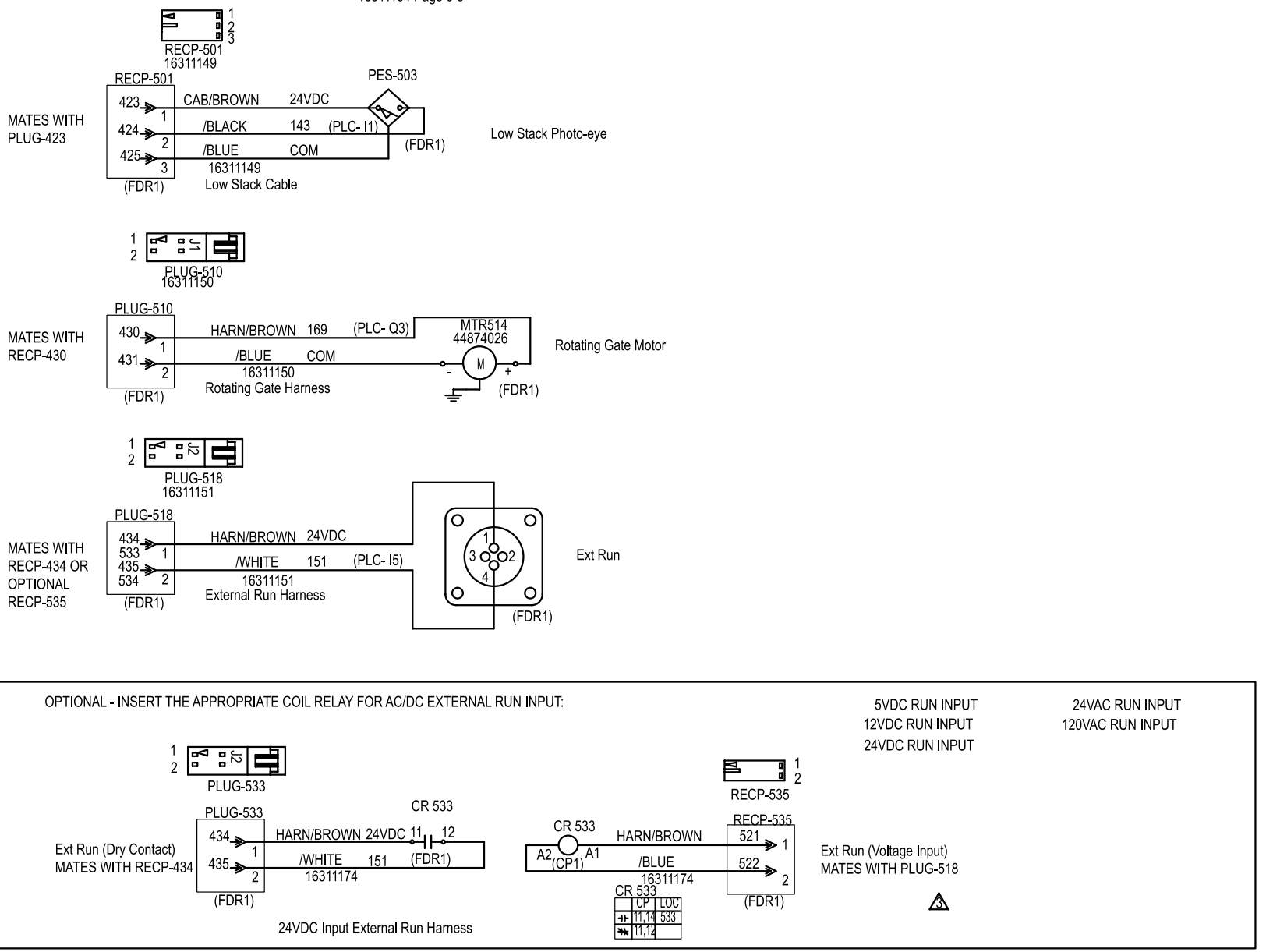
Notes:
Set pots as shown,
adjust "MIN SPD" until conveyor stops.
adjust "MAX SPD" for 90 volt reading.

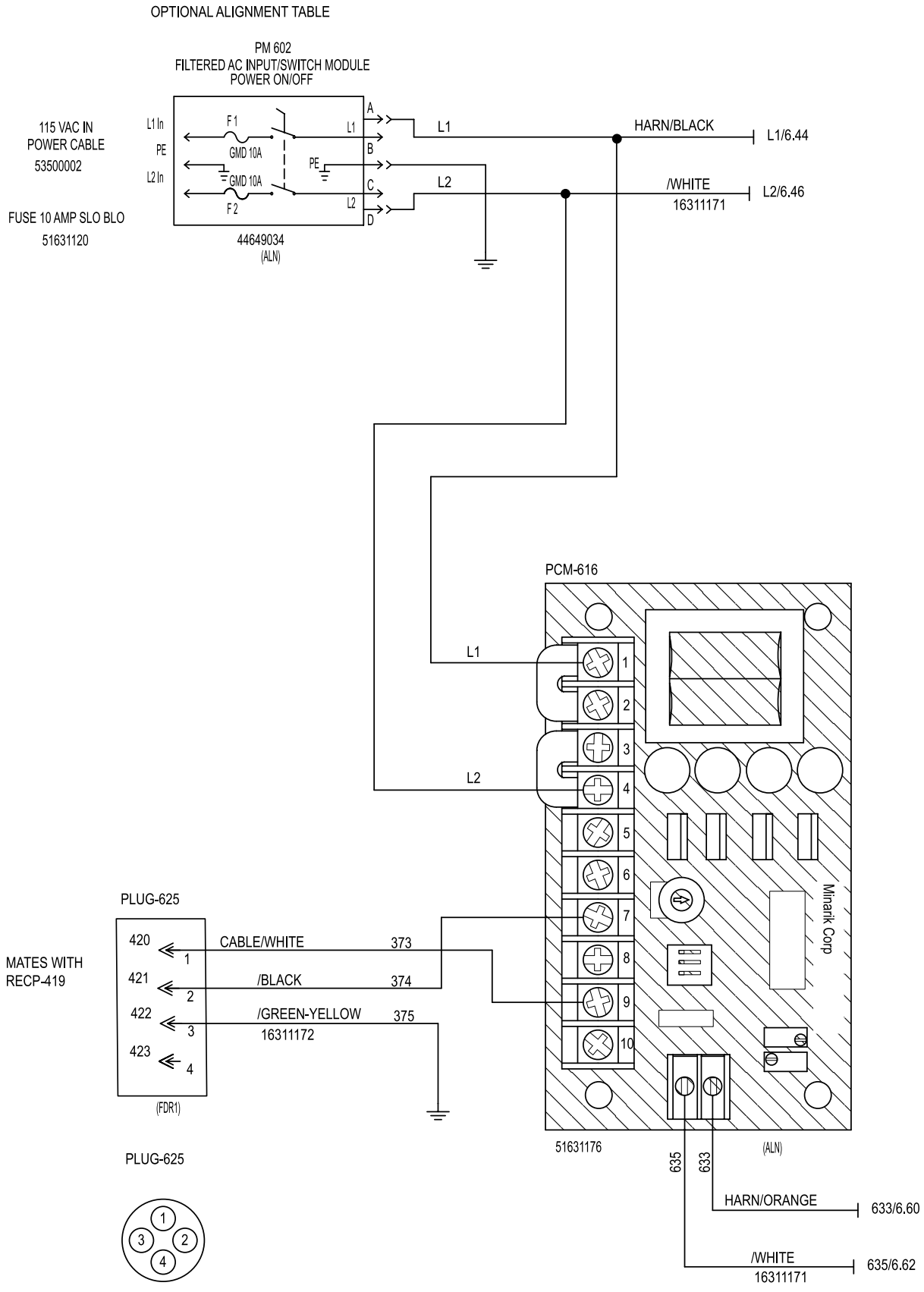

Feeder Motor DC Drive (Left Side)
N/3.01
HARN/WHITE
N
L/3.02
/BLACK
16311154
L
GND/GREEN-YELLOW
16311154
DR-349
SET SWITCHES TO
115 VAC
GND
L1
L2
TB501
T2
T1
RB1
RB2
-15
+15
S3
S2
S1
S0
TACH
MIN SPD
DB
FWD TQ
REV TQ
IR COMP
MAX SPD
REV ACC
FWD ACC
INVERT INHIBIT
INVERT ENABLE
ARMATURE 90-180
FEEDBACK ARM-TACH
354/1.73
HARN/GREEN
(PLC-Q2)
354
355/1.72
/BLACK
16311158
355
358/2.14
HARN/ORANGE
358
359/2.13
/RED
359
360/2.12
/WHITE
16311161
360
ENABLE TB503
INHIBIT
CR 123
(CP1)
HARN/GRAY
/VIOLET
16311159
51050252
A2
A1
FEEDER SPEED CONTROLLER
(CP1)
375
374
373
HARN/GREEN
/BLACK
/WHITE
16311153
373/4.14
374/4.15
375/4.16
Notes:
Set pots as shown,
adjust "MIN SPD" for 5 volt reading.
adjust "MAX SPD" for 90 volt reading.

16311164 Page 6-4

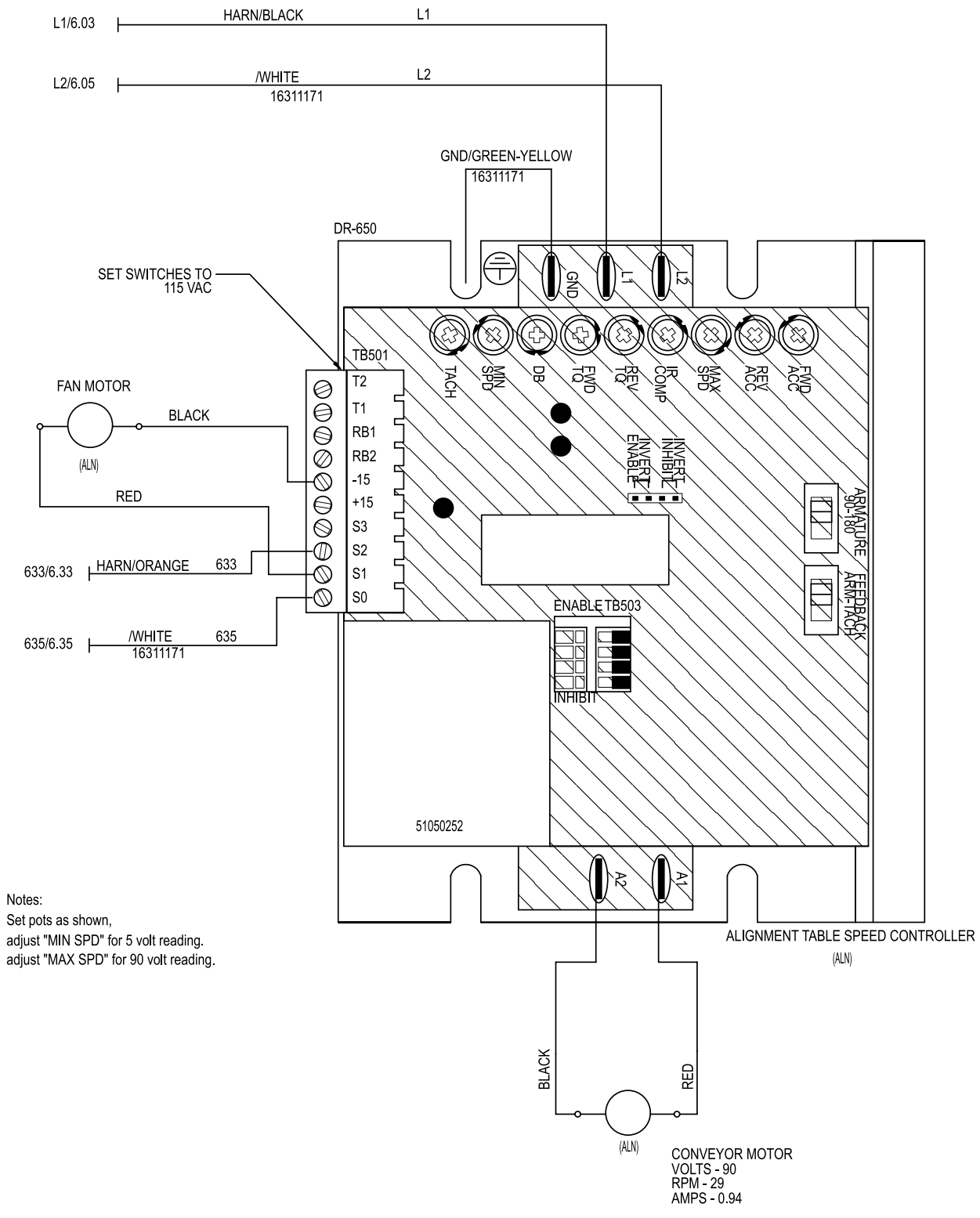


16311164 Page 6-5




OPTIONAL ALIGNMENT TABLE
PM 602
FILTERED AC INPUT/SWITCH MODULE
POWER ON/OFF
115 VAC IN
POWER CABLE
53500002
FUSE 10 AMP SLO BLO
51631120
L1 In
PE
L2 In
F 1
GMD 10A
GMD 10A
F 2
L1
L2
A
B
C
D
PE
44649034
(ALN)
L1
L2
HARN/BLACK
L1/6.44
/WHITE
16311171
L2/6.46
PCM-616
L1
L2
1
2
3
4
5
6
7
8
9
10
Minarik Corp
51631176
(ALN)
635
633
HARN/ORANGE
633/6.60
/WHITE
16311171
635/6.62
PLUG-625
MATES WITH
RECP-419
420
421
422
423
1
2
3
4
CABLE/WHITE
373
/BLACK
374
/GREEN-YELLOW
375
16311172
(FDR1)
PLUG-625
1
2
3
4

OPTIONAL ALIGNMENT TABLE



Notes:
Set pots as shown,
adjust "MIN SPD" for 5 volt reading.
adjust "MAX SPD" for 90 volt reading.

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