PA INDUSTRIES®

INSTALLATION & OPERATING INSTRUCTION MANUAL

Form No. 1114 3-08

PALLETIZER

Model PR-4
Model PR-5
Model PR-6
Model PR-8
Model PR-10

PALLETIZER

PALLETIZER

SAFETY INSTRUCTIONS

Throughout this manual, each section will emphasize certain safety precautions that should be adhered to by all personnel who are setting up, operating, maintaining, and repairing your **P/A Pallet Reel**.

It is impossible to mention all the precautions that should be taken in a working environment, therefore, it is **YOUR** responsibility to **"BE ALERT"** while working on, or operating this equipment.

CAUTION - PERSONAL INJURY MAY RESULT IF THE FOLLOWING SAFETY PRECAUTIONS ARE NOT OBSERVED

1) DO **NOT** OPERATE THE MACHINE UNTIL THE MANUAL HAS BEEN READ.

2) STAY CLEAR OF ALL MOVING PARTS.

3) STOP MACHINE BEFORE CLEANING.

4) DISCONNECT MACHINE BEFORE OILING OR PERFORMING MAINTENANCE.

5) MAKE SURE MACHINE IS PROPERLY GROUNDED.

6) BE AWARE THAT ONLY QUALIFIED PERSONNEL SHALL OPEN ELECTRICAL CABINET.

7) DO NOT PUT HANDS UNDER PLATFORM TO ROTATE MANUALLY.

PALLET REEL DESCRIPTION

The *Pallet Reel* pallet decoiler is specifically designed to automatically feed strip stock directly from a palletized stack of coils. The *Pallet Reel* series are designed and built to handle a variety of stock widths, thickness and stacked weights. This is accomplished by three major components of the Pallet Reel system: **Base, Control Arm, and Drive**.

BASE

The BASE of the Pallet Reel is a series of urethane casters equally spaced. These casters are positioned on the outside edge of the rotating top to insure the unit will rotate smoothly under great loads. This design is the reason your Pallet Reel can effectively handle up to 10,000 Lbs. (depending on model) and still be easily positioned on line. This low profile design also saves on valuable shop floor space.

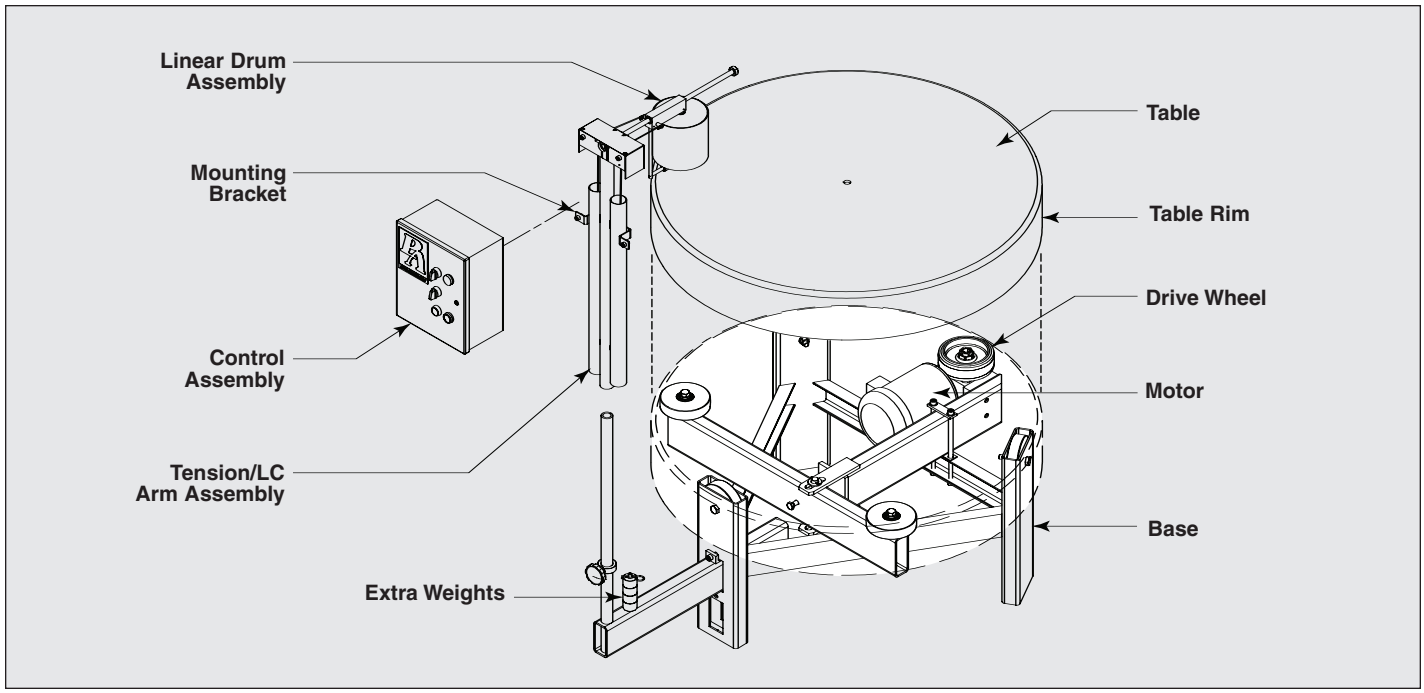
CONTROL ARM ASSEMBLY--

The CONTROL ARM is the most important and critical element to your horizontal Pallet Reel. It guides the material, controls the turntable speed, and provides consistent and constant material tension to your press or forming equipment. This unique design to the Pallet Reel is the most effective available to the industry.

It has a hollow, lightweight feed pulley that slides horizontally on linear bearings so that the weight of the drum is supported. Weights are attached to the drum to minimize their inertia affect and to give constant tension to the material being controlled. With this system, it is possible to achieve very accurate tensioning of thin and thick stock without bending or distortion by adding or subtracting weights.

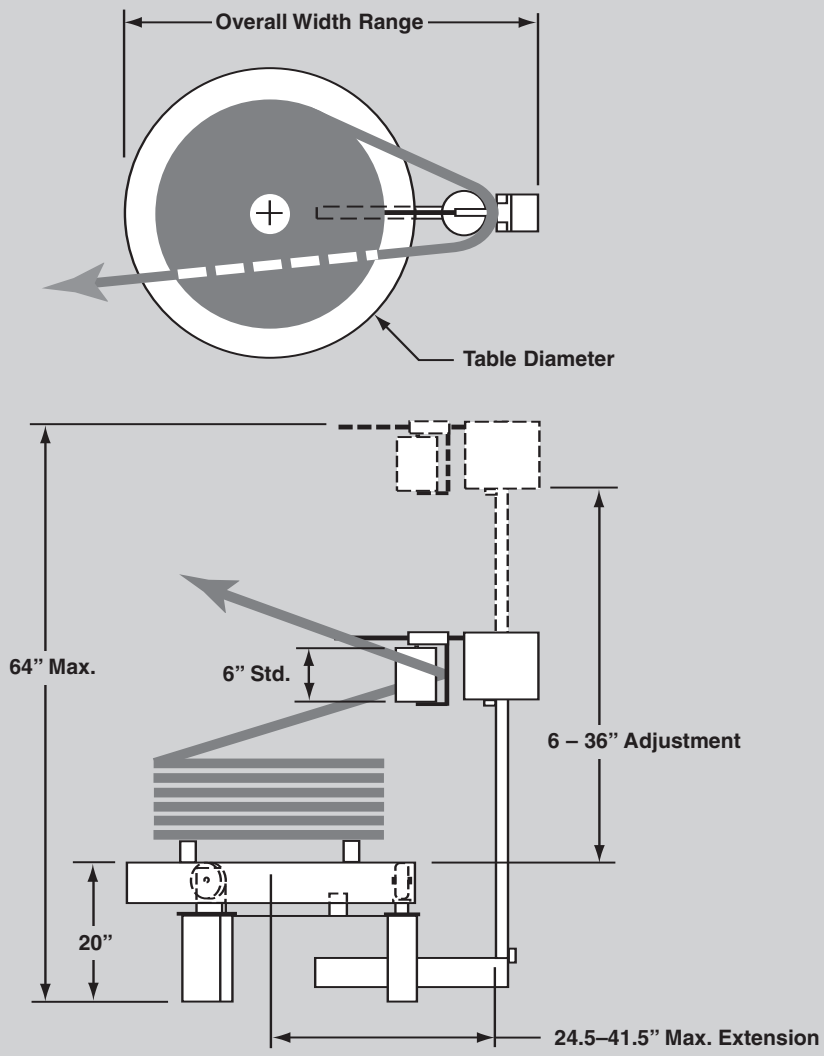
DRIVE

A high torque, AC motor, with a right angle worm gear reducer, drives a solid rubber wheel against the inside rim of the table.



PALLETIZER

DIMENSIONS



SPECIFICATIONS

Model		PR4	PR5	PR6	PR8	PR10
Pallet Coil Weight		4000 Lbs.	5000 Lbs.	6000 Lbs.	8000 Lbs.	10000 Lbs.
Table Diameter		42"		52"		
Overall Width Range		46–63"		56–73"		
Coil Stacking Height		36"				
Table RPM	- Standard	0–12				
	- Optional	0–24				
Stock Width	- Standard	0–6"				
	- Optional	0–9"	0–12"	0–15"	0–18"	0–24"
Stock Thickness Range		.004–.065"				
AC Drive Motor, HP		3/4	1	1-1/2 (High Speed 2)	2	3
Electrical Input (Optional Voltage Available)		120 VAC, 1 Phase, 60 Hz		240 VAC, 1 Phase, 50/60 Hz		
		230 VAC, 1 Phase, 50/60 Hz		400V, 50 Hz and 460V, 60 Hz		

UNIT INSTALLATION

Receiving

Inspect the Pallet Reel for shipping damage immediately upon receipt. If damage is observed, make a note of the damage on the carrier's delivery receipt before signing. Then notify your local carrier terminal and P/A Industries.

The Pallet Reel is shipped disassembled and packaged for protection during transit. Care should be taken during unpacking so that all paper work and parts are collected and accidental damage is avoided. The stretch wrap around the head assembly should be removed after assembly, not before.

Assembly

The Control Head Assembly Base Arm must be inserted into one of the two holes provided in the leg (Figure 1). For shipment, a rubber band is placed around the Base Arm Tightening Assembly. Remove this rubber band. Select which mounting hole to use by identifying the job to be run. General guidelines are as follows:

The following drawing displays Control Head capacity dimensions:

Use Lower Mounting Hole (Figure 2) for:

- Very narrow strip stock less then 2" where parallel pull-off is preferred.
- Coil stack height does not exceed 30".

Use Upper Mounting Hole (Figure 3) for:

- Tall coil stacks where maximum elevation of Guide Drum Assembly is required.
- Wider strip materials where near parallel UN-winding is not a concern.

Lift the Control Head Assembly from the tabletop, leave wrapped until inserted, and slide the base arm into the selected mounting hole. The Base Arm slides in and out of the leg to allow adjustable clearance for different size pallets rotating on the tabletop.

Position Base Arm to desired location and tighten the one hex head bolt to wedge the base arm in a fixed position. If using the upper mounting hole, simply unthread the wedge-tightening bolt and reinstall the assembly at the upper hole.

Base arm position drawing

Remove stretch wrap protecting the Control Head Assembly and remove corrugated retainers located in Weight Channels.

Electrical Power

The electrical power requirement of your Pallet Reel is clearly marked on the Control Box and on the tag attached to the end of the power cord.

Models requiring 220V (and up) power are shipped without a supply power connection.

Please ensure the Pallet Reel is connected to the correct power source and that all wire, cable, etc. are installed in accordance with all prevailing codes. Refer to schematic for proper fuse or circuit breaker size.

Figure 1

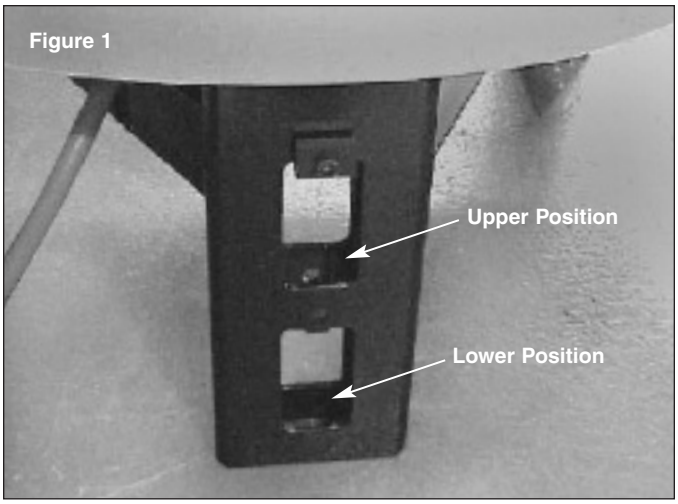


Figure 2

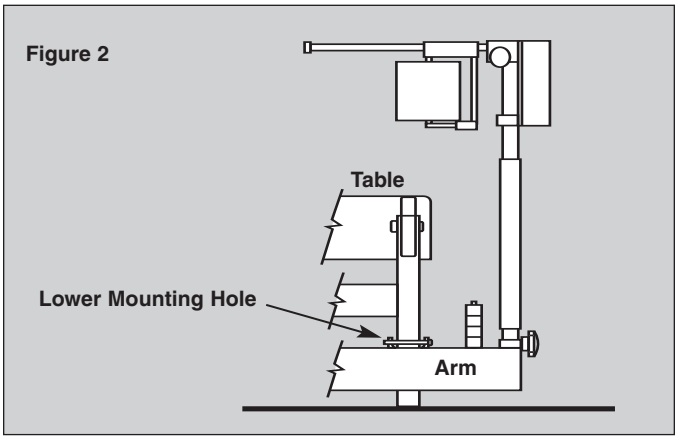
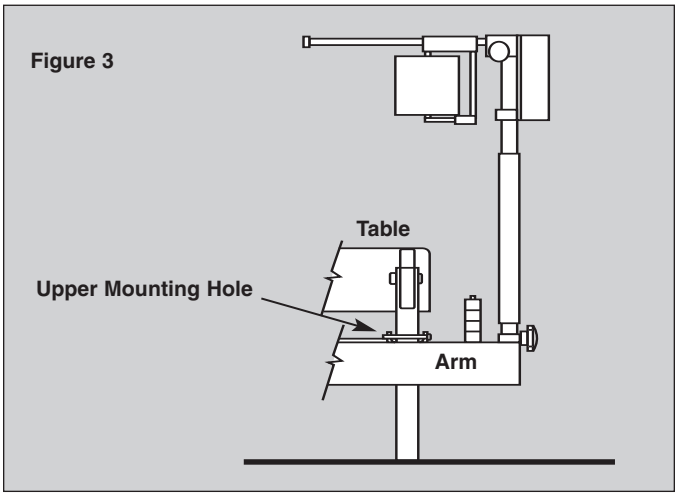


Figure 3



Safety Interlock Circuit

Each Pallet Reel is equipped with a pre-wired Safety Interlock Circuit.

NOTE: FAILURE TO ENSURE OPERATIVE INTERLOCK CIRCUIT CAN RESULT IN PERSONNEL INJURY TO PRODUCTION EQUIPMENT, AND VOIDING OF THE PALLET REEL WARRANTY.

The Safety Interlock Circuit will allow you to shut down the production equipment used in conjunction with the Pallet Reel if the Pallet Reel detects a Drive Fault or a material tight loop condition. There is a pre-wired circuit in the Pallet Reel that requires connection to associated production equipment.

Control Head Position (Figure 4)

The Control Head should always be aligned with the production equipment feed entry so that the strip loop will follow a straight run from the Pallet Reel Guide Drum directly to the forming equipment entry. This alignment can be done by visual line of sight from Control Head Mast to feed entry.

Table Position (Figure 4)

The diagrams demonstrate the various material flow options available. Although feeding the coil strip directly back over the coil stack (Position 3) is a feasible option, it is not highly recommended. Unwinding off to either side is preferred since this reduces the opportunity for tangling the strip on the coil stack and damaging the strip edge. Also, off center feeding will allow a more parallel pull of the strip from the coil.

Distance from Forming Equipment

The distance required between the Pallet Reel and the forming equipment will depend on the characteristics of the coil strip being used. There is no specific rule or formula for this determination.

The strip material passes around the Pallet Reel Guide Drum in a vertical position. As it feeds to the forming equipment it will transition to a horizontal plane requiring a 1/4 turn or twist either to the left or right. The distance required to achieve this twist easily, without kinking or bending, will determine the position for the Pallet Reel.

Lighter, thinner materials will transition very easily and will require little more than the 42" footprint of the Pallet Reel itself. Heavier, thicker materials will require more loop length to achieve the 1/4 twist and more set back will be required.

You may estimate this distance before positioning the Pallet Reel by pulling off a strip from the coil to be used, manually twist to 1/4 turn and measure the distance needed to achieve an easy transition. Place the Control Head of the Pallet Reel at this approximate measured distance from the forming equipment.

OPERATIONS START-UP

Before beginning production with the Pallet Reel, complete the following steps to ensure a safe and successful start-up.

Positioning (Refer to Figure 4))

Make sure the Pallet Reel is oriented so that the Control Head Mast is aligned with the feed entry to the forming equipment. Also, make sure that the table is placed to accommodate the wind direction of the coils to be fed.

It is best to check positioning at this stage rather than later when the pallet load is on the turntable.

Clockwise/Counter-Clockwise (CW/CCW) Rotation

Examine the coils to be fed to determine the unwind direction. Determine if the coil will rotate in a CW direction or a CCW direction.

Set the CW/CCW Switch on the Motor Control Box to the appropriate setting. Change setting of this switch only when table rotation has stopped.

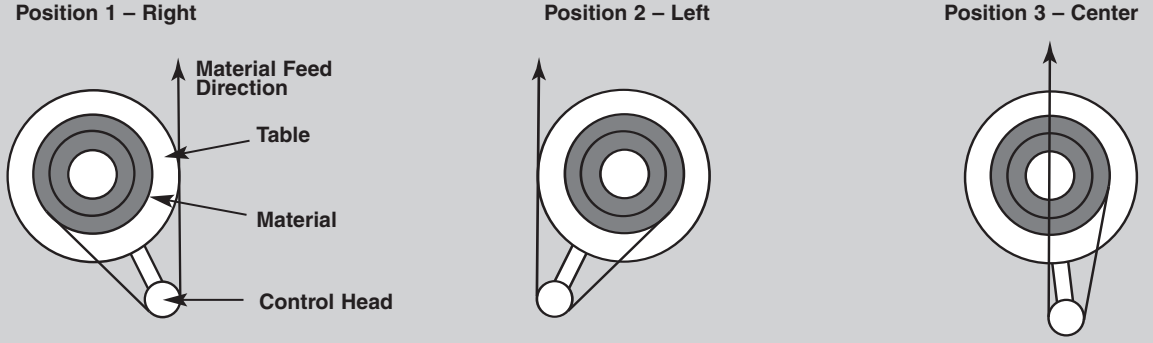
Loading

Load the pallet of coiled materials, being careful not to strike the Control Head Assembly. The top portion of the Control Head can be swiveled to the left or right to position it away from the loading side.

Center these coils on the turntable with eyesight accuracy. The Pallet Reel can tolerate a small amount of off-center loading, however too great a miss-alignment will create an oscillating rotation of the coils which will cause uneven feeding and uneven loading on the Pallet Reel frame and tabletop.

Be aware of the difference between centering the coil and centering the pallet. Coils are not always centered on the

Figure 4



pallets. When loading the Pallet Reel, it is best to look at the coils first and then the pallet for centering purposes.

The load should be checked on all sides for centering and to ensure no strapping or wrapping materials are hanging down off the turntable.

Base Arm Adjustment

As described under Unit Installation (Page 5), the Control Head Base Arm slides in and out of the leg, closer or farther away from the table top, for the purpose of clearing overhanging pallet corners.

This adjustment is made by loosening the two 3/8" nuts at the Base Arm, positioning the arm as needed, and retightening the two nuts. See BASE ARM POSITION DRAWING on page 5.

Ensure that the Control Head Mast is sufficiently away from the turntable to allow pallet corners to rotate past with generous free clearance.

Control Head Height Adjustment (Figure 5)

The height of the Control Head is manually adjusted to accommodate the decreasing height of the coil stack as coils are fed into the forming equipment.

Loosen the black knob on the Control Head Mast and slide the Control Head and Support Ring up or down as needed. When in position, tighten the black knob to secure the height position.

The Control Head should be adjusted so that the bottom of the Guide Drum is parallel or somewhat higher than the bottom edge of the top coil. This setting will allow the strip to separate from the coil cleanly without hitting the wood spacers under the coil.

As the coils are expended, the Control Head should be manually lowered with the start of each new coil. For narrower width strips, the Control Head may need to be lowered only for every second or third coil. Experience will be your best guide.

Pre-Test

Pre-Test operation of the Pallet Reel in the following manner:

1) Apply power to the control. Check “Power On” light is illuminated.

2) Place Selector Switch Man/Auto in the Man position. Depress the Jog button for table rotation.

3) Select CW/CCW switch and Motor Arm position for proper directional setting.

4) Place Selector Switch Man/Auto in the Auto position.

5) Manually slide Guide Drum on Linear Rod. Observe normal rotation of table (Figure 6)

6) Manipulate Guide Drum to different positions on Linear Rod. Observe variable rotation speed of table.

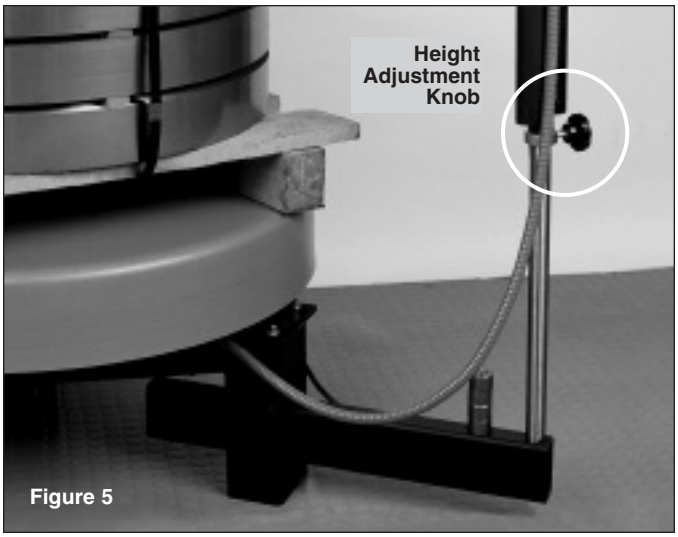


Figure 5

7) Release Guide Drum and allow it to fall back to off position. Observe stopping of table rotation.

8) Extend the Guide Drum to the end of the Linear Rod travel (Figure 7). Pull the Guide Drum further to activate the Tight Loop fault. Check that the red Reset pushbutton is illuminated indicating the Tight Loop fault. Reset the Tight Loop fault by pushing inward on end of Linear Rod then pushing the Reset pushbutton to distinguish the red Reset pushbutton light (Figure 9 on page 9).


Figure 6

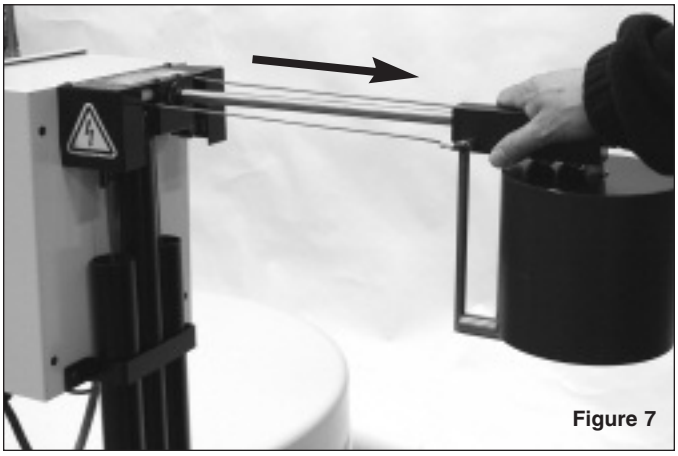


Figure 7

Counter-Weight Tension System

Begin operation with two weights on each cable. Pull cable upwards through top of Weight Channel. Weights are easily added or removed by positioning the Cable Toggle to slip weights on or off.

Extra weights are stored on the Base Arm.

The weight on the cables should be sufficient to draw the Guide Drum back to the off position when material demand stops. Weight/tension should not be so great as to cause undue stress on the stock or erratic motion of the Guide Drum.

There is no formula or specific rule regarding how much tension weight is needed. The goal is to balance the weight of the strip loop with the back tension created by the weights. Variables of strip width, thickness, loop weight, feed length and press speed in a wide range of combinations preclude a specific guiding rule.

Proper weight/tension balance is a matter of beginning with two weights on each cable, running the forming equipment, observing results at guide drum, and then adjusting weights.

Optional Coil-lock (Figure 8)

The Coil-Lock will prevent the top coil from shifting off center or pulling off the coil stack as its weight diminishes toward the inside diameter of the coil. The Coil-Lock fits inside the open space at the core of the coil stack.

Trial fit the Coil-Lock.

Adjust the length and tension of the Coil-Lock by positioning the Stop Collar at the appropriate location. The Stop Collar is secured with the black knob. Set the Stop Collar in a position that results in a Coil-Lock length slightly longer than the I.D. dimension.

The Coil-Lock is compressed and placed in the open I.D. space, then released to snugly press outward against the coil.

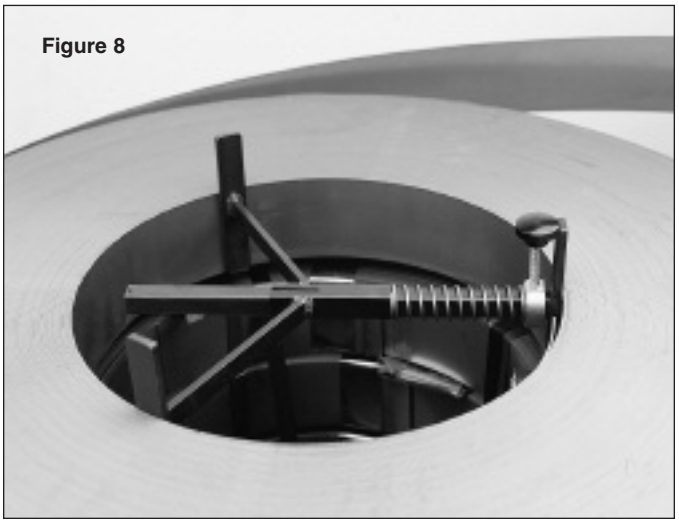


Figure 8

The vertical legs of the Coil-Lock should connect with the top coil and however many of the lower coils as strip width will allow.

MAINTENANCE

Proper care and maintenance of the Pallet Reel will ensure efficient operation and will extend service life of the machine.

We recommend that upon receipt of your Pallet Reel, arrangements be made to have your Pallet Reel added to the plant maintenance schedule to ensure regular and consistent maintenance attention.

WARNING - DO NOT PERFORM ANY MAINTENANCE FUNCTIONS WITHOUT FIRST DISCONNECTING POWER.

Cleaning

Periodically wipe clean the surface areas of the Pallet Reel including the tabletop, Control Box and Guide Drum.

Frequency of cleaning will be dictated by shop conditions of dirt, dust, oil, etc.

Lubrication

- Edge Guide Roller - At 30-day intervals apply a thin coat of light machine oil.
- Reduction Gear- Manufacturer's product information contains detail on this maintenance procedure. The following summarizes lubrication change schedules.

	Petroleum Lubricant	Synthetic Lubricant
Initial Change:	250 hours	1500 hours
Regular Change:	2500 hours or six months	5000 hours

- Linear Shaft – At thirty-day intervals wipe polished rod and spray with DTE Light Oil or other light machine oil.

Electric Motor

Manufacturer's product information contains detail on care of the motor.

TROUBLE SHOOTING

Table Does Not Rotate or Tight Loop

- Check Supply Power and Line Voltage.
- Check Circuit Breaker inside the motor control.
- Check if Reset Light on Control is illuminated. Reset by either pushing Reset Button and/or pressing Linear Shaft towards Motor Control (Figure 9).

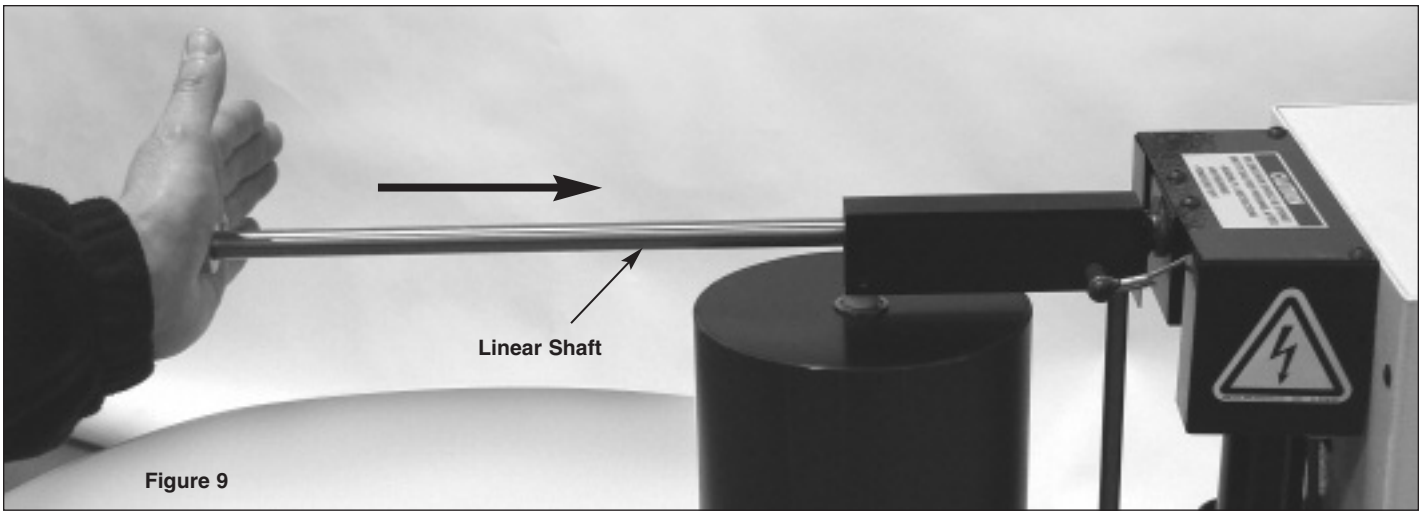


Figure 9

Table Does Not Stop

- Inspect cable windings on Pulley Cable Guide to be sure that each winding is laying flat and that full rotation is operative (Figure 10).
- Add more weight one at a time; from one side to the other until weight is sufficient to pull Drum Roller back to off position.

Table Does Not Rotate Fast Enough

- Check for stable Supply Power and correct line voltage.
- Visually check that Drive Wheel is touching inside of table rim (Figure 11).
- Inspect cable windings on Pulley Cable to be sure that each winding is laying flat and that full rotation of Pulley Cable is operative.
- **With power disconnected**, inspect and feel inside surface of tableside rim for grease or lubricant. Presence of such material will cause Drive Wheel to slip, clean both rim and Drive Wheel with a suitable cleaner. Review speed requirements of job and speed capability of the Pallet Reel to ensure compatibility.

Erratic Motion in Drum Roller

- Check that Drive Wheel is touching inside of table rim.
- Review number of Tension Weights placed on Tension Cables. If Drum Roller is moving erratically back and forth, this usually indicates too much weight. Remove weights one at a time, from one side then the other until balance in the Drum movement is achieved.
- Inspect cable windings on Pulley Cable Guide to be sure that each winding is laying flat and that full rotation of capstan is operative.

Drum Roller Hitting Tight Loop

- Machine Feed demands material faster than Pallet Reel acceleration.
- Review speed requirements of job and speed capability of the Pallet Reel to ensure compatibility.
- Review number of tension Weights placed on Tension Cables. If Drum Roller is moving erratically back and forth, this usually indicates too much weight. Remove weights one at a time, from one side then the other until balance in the Drum movement is achieved.

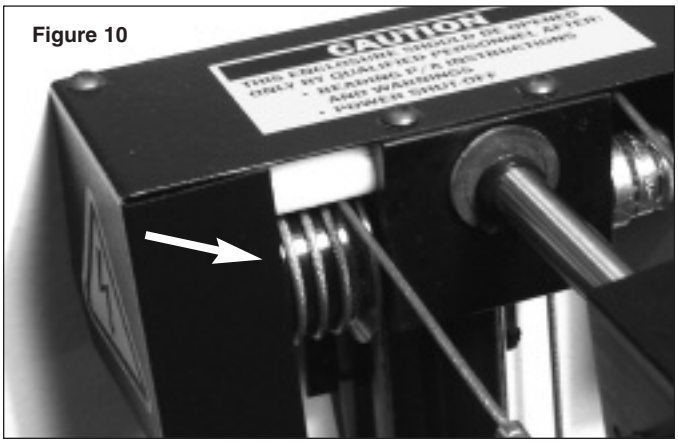
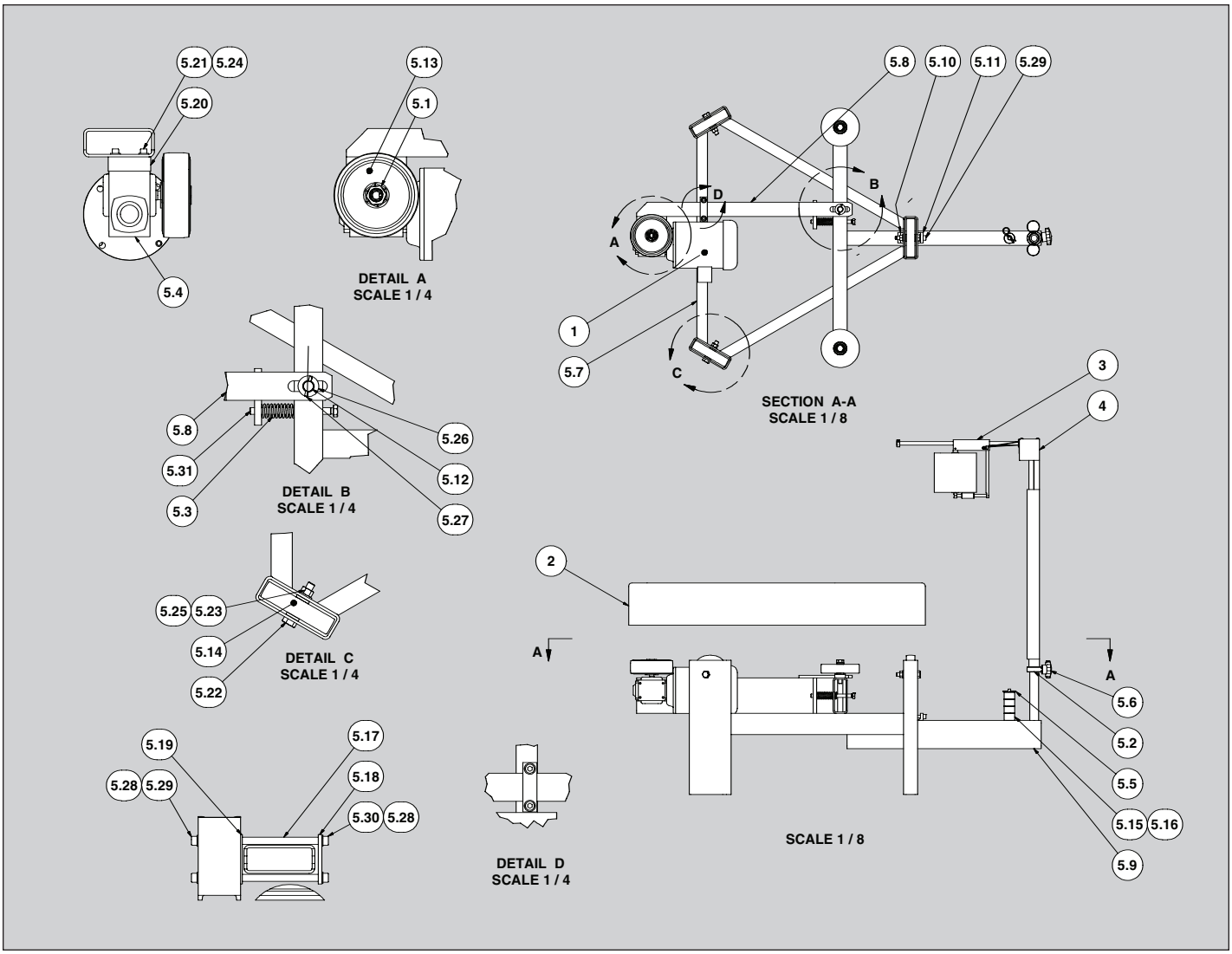


Figure 10

Figure 11

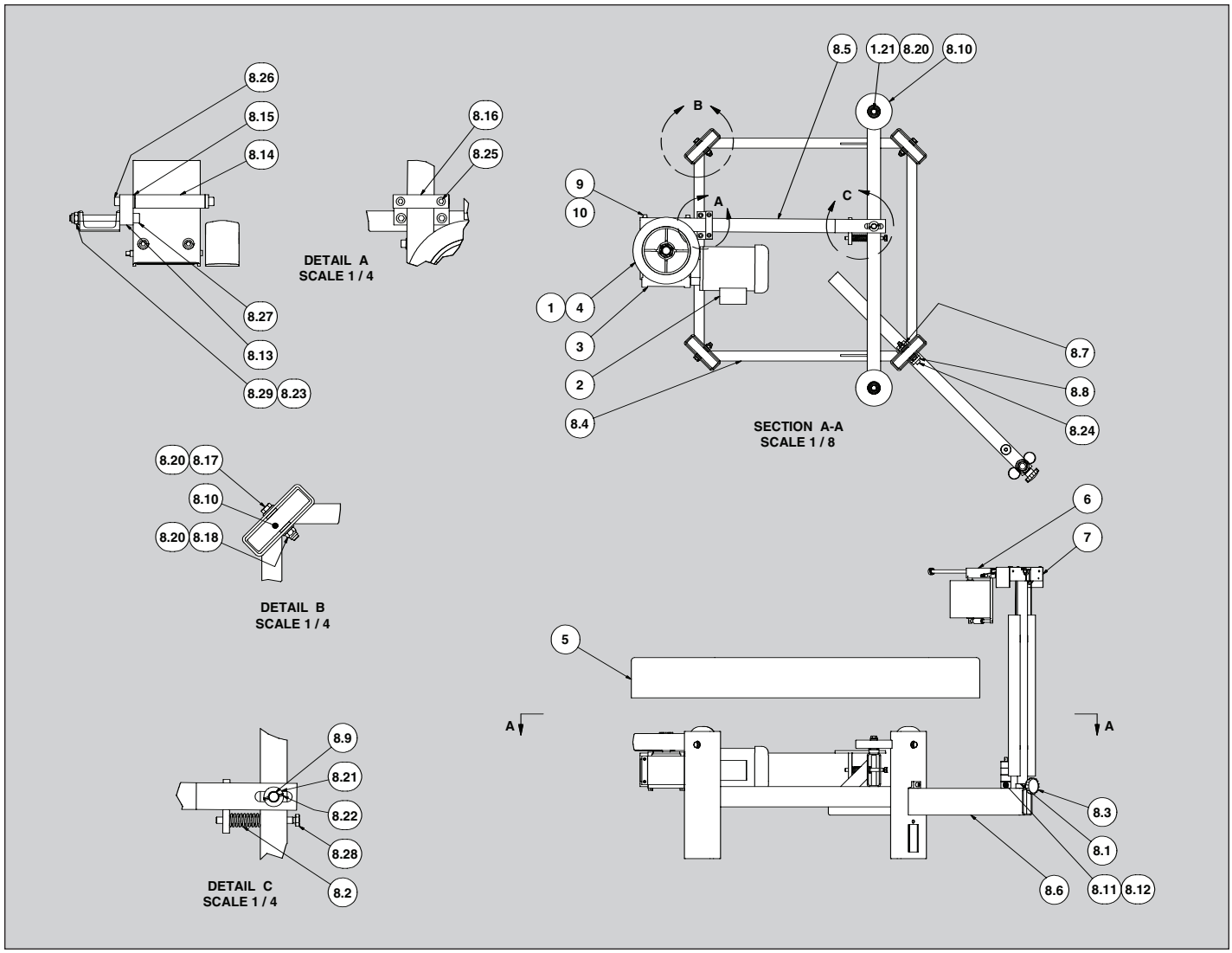
PALLETIZER PR-4 and PR-5



Item	Qty	Description	Part Number
1	1	PR-4 Motor, 230/460 VAC	12125-111
	1	PR-5 Motor, 230/460 VAC	12125-126
2	1	PR-4 Table, 42 in.	17934-01
	1	PR-5 Table, 42 in.	17934-03
3	1	Guide Drum Assembly, PR	Refer to pg.14
4	1	Tension/LC Arm Assy, PR, 12 in. Travel	17962-20
5.1	1	Trantorque, 1.5 OD x .625 ID	12028-55
5.2	1	Set Collar, 1.25 ID x 2.0 OD x 11/16	12441-108
5.3	1	Spring, Compression. 1 OD x .5 ID x 3	12442-77
5.4	1	Reducer, Worm Gear, 15:1, 133, 56C	12445-143
5.5	1	Hairpin Cotter Pin, 1/8 Dia x 2.30 Long	12466-69
5.6	1	Knob, 2.38 Dia x 3/8-16 Thd x .50 Long	14977-02
5.7	1	Base Weldment, Fixed Arm, PR, 42 in.	17920-03-04
5.8	1	Motor Arm, Fixed, PR, 42 in. (25.16)	17921-07
5.9	1	Arm Weldment, Outrigger, PR, 42 in.	17923-01
5.10	1	Clamp, Outrigger, Threaded, Metric	17925-02
5.11	1	Clamp, Outrigger, Thru Hole	17926
5.12	1	Pin, Motor Arm	17927
5.13	1	Wheel, Drive, 6 in. Dia x 2 in.	17930-01

Item	Qty	Description	Part Number
5.14	5	Wheel Assembly, Idler, 5.415 Dia	17931-01
5.15	4	Collar, Counter Weight	17955-01
5.16	1	Rod, Counter Weight Storage	17964
5.17	2	Spacer, 1.0 OD x .56 ID x 5.24 Long	18233-04
5.18	1	Strap, Hold Down, 3.5 x 1.0 x .25 Thick	18234-03
5.19	1	Wear Strip, 3.5 x 1.0 x .125	18234-04
5.20	1	Spacer, Reducer, 1 in. Tigear 13Q Series	18783-01
5.21	4	5/16-18x2” Lg. SHCS Black	900031-16
5.22	5	1/2-13x3.0 Lg, Hex Hd, Cap Screw	908050-24
5.23	3	1/2-13, Hex Nut, Nylon Insert Locknut, Stain	942050SS
5.24	4	5/16, Flat Washer, SAE	958031
5.25	5	1/2, Flat Washer, SAE	958050
5.26	1	3/4, Flat Washer, SAE, ZP	959075
5.27	2	.187 Diax1 1/2 Lg, Roll Pin	972P18-12
5.28	4	M10, Washer, Flat, Reg, Zinc Plated Steel	Din-125-M10
5.29	3	M10x110mm Lg, SHCS, Black	Din-912-M10x100
5.30	2	M10x25mm Lg, SHCS, Black	Din-912-M10x25
5.31	1	M12x150mm Lg, Hex Hd SCR, Black	Din-933-M12x150

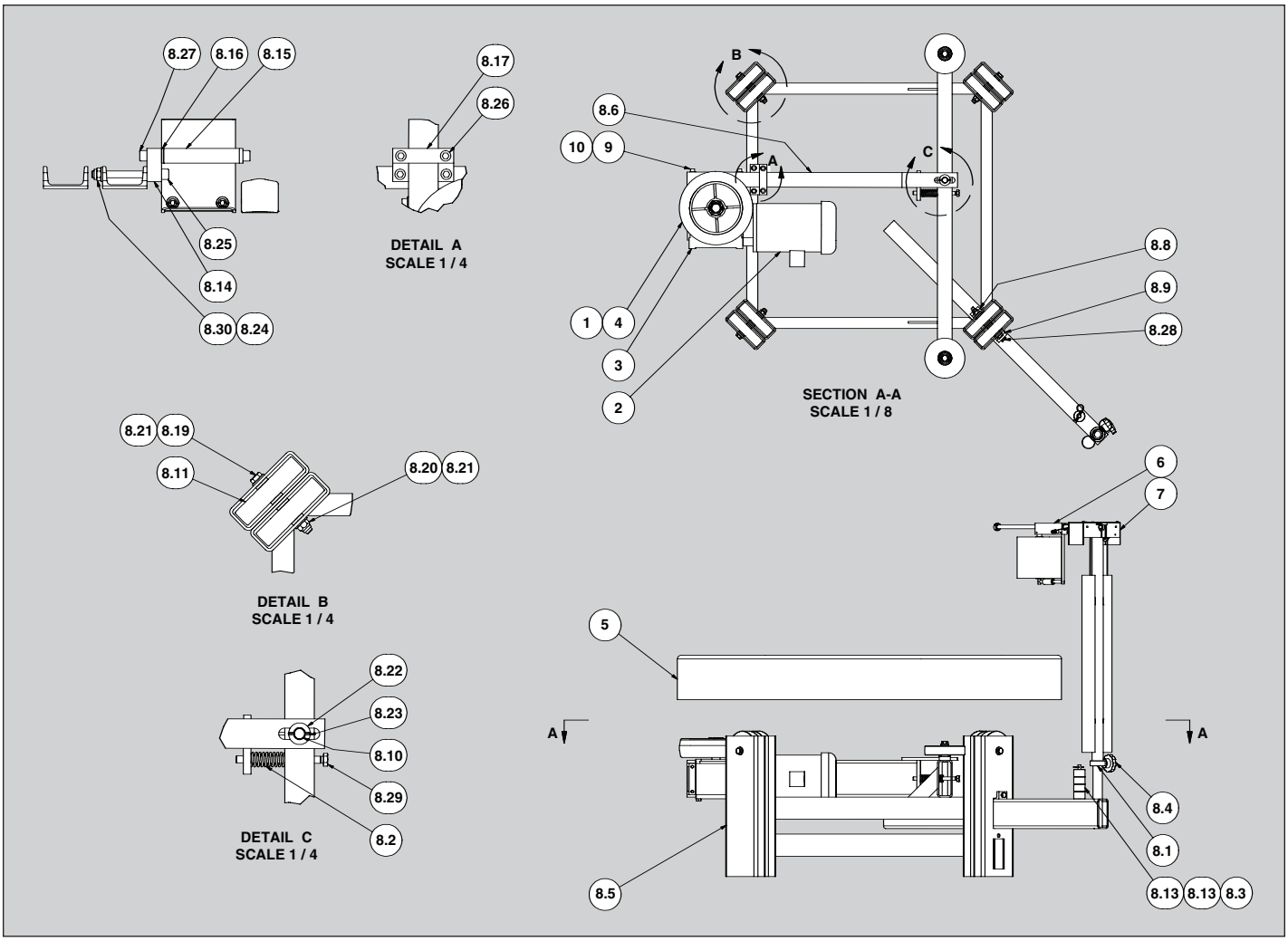
PALLETIZER PR-6



Item	Qty	Description	Part Number
1	1	Trantorque, 2.0 OD x 1.125 ID	12028-72
2	1	PR-6 Motor, 230/460 VAC	12125-125
	1	PR-6HS Motor, 230/460 VAC	12125-128
3	1	PR-6 Reducer, Worm Gear	12445-76
	1	PR-6HS Reducer, Worm Gear	12445-154
4	1	Wheel, Drive, 10 Dia x 2.5 W x 2 in. Bore	17930-06
5	1	Table, 52 in.	17934-02
6	1	Guide Drum Assembly, PR	Refer to pg.14
7	1	Tension/LC Arm Assy, PR 12 in. Travel	17962-20
8.1	1	Set Collar, 1.25 ID x 2.0 OD x 11/16	12441-108
8.2	1	Spring, Compression. 1 OD x .5 ID x 3	12442-77
8.3	1	Knob, 2.38 Dia x 3/8-16 Thd x .50 Long	14977-02
8.4	1	Base Weldment, Fixed Arm, 52 in. Table	17920-02
8.5	1	Motor Arm, 42 in, Stationary	17921-09
8.6	1	Arm Weldment, Outrigger, PR 52 in.	17923-02
8.7	1	Clamp, Outrigger, Threaded, Metric	17925-02
8.8	1	Clamp, Outrigger, Thru Hole	17926
8.9	1	Pin, Motor Arm	17927
8.10	6	Wheel Assembly, Idler, 5.415 Dia	17931-01
8.11	4	Collar, Counter Weight	17955-01

Item	Qty	Description	Part Number
8.12	1	Rod, Counter Weight Storage	17964
8.13	1	Spacer, 1 in. Square x 4.25	18233-06
8.14	2	Spacer, 1.0 OD x .56 ID x 5.25 Long, mm	18233-07
8.15	1	Wear Strip, 4.25 x 1.0 x .125	18234-05
8.16	1	Spacer, 1.0 OD x .56 ID x 5.24 Long	18234-06
1.21	2	1/2-13x2 1/2 Lg, Hex Hd, Cap Screw	908050-20
8.17	4	1/2-13x3 Lg, Hex Hd, Cap Screw	908050-24
8.18	4	1/2-13, Hex Nut, Nylon Insert Locknut, ZP	942050ZP
8.20	10	1/2, Flat Washer, SAE	958050
8.21	1	3/4, Flat Washer, SAE, ZP	959075
8.22	2	.187 Dia x 1 1/2 Lg, Roll Pin	972P18-12
8.23	2	M12, Washer, Flat, Reg, Zinc Plated Steel	Din-125-M12
8.24	1	M10x110mm Lg, SHCS, Black	Din-912-M10x100
8.25	2	M10x20mm Lg, SHCS, Black	Din-912-M10x20
8.26	2	M10x40mm Lg, SHCS, Black	Din-912-M10x40
8.27	2	M12x120mm Lg, SHCS, Black	Din-912-M12x120
8.28	1	M12x150mm Lg, Hex Hd Scr, Black	Din-933-M12x150
8.29	2	M12, Hex Nut, Nylon Insert Lock Nut, ZP	Din-985-M12
9	4	3/8-16 x 2 1/2 Lg, SHCS, Black	900038-20
10	4	3/8, Flat Washer	958038

PALLETIZER PR-8 and PR-10



Item	Qty	Description	Part Number
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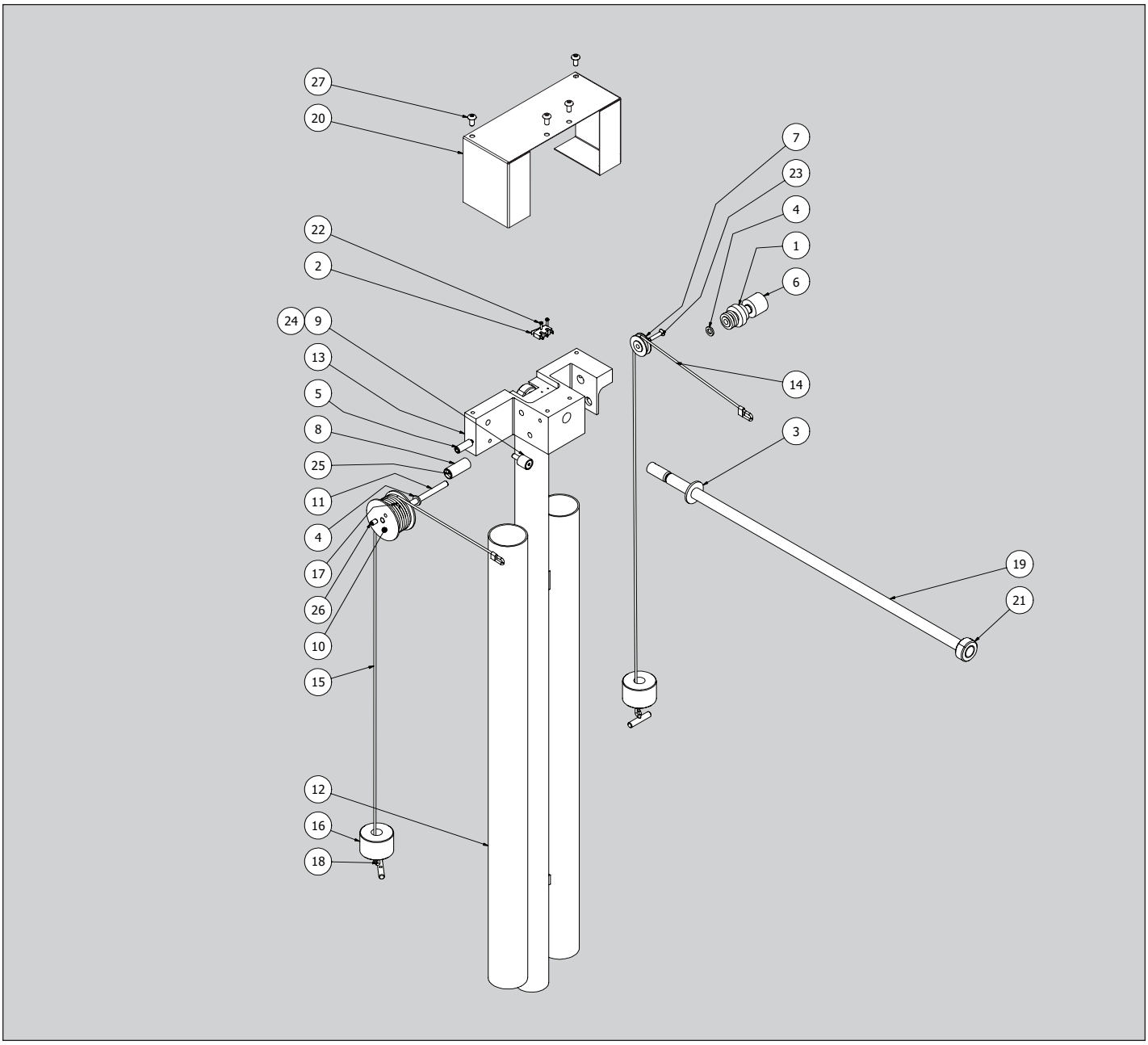
2	1	PR-8 Motor	12125-128
	1	PR-8HS Motor	12125-128
	1	PR-10 Motor	12125-106
	1	PR-10HS Motor	12125-106
3	1	PR-8 Reducer	12445-76
	1	PR-8HS Reducer	12445-154
	1	PR-10 Reducer	12445-85
	1	PR-10HS Reducer	12445-156
4	1	Wheel, Drive, 10 Dia x 2.5 W x 2 in. Bore	17930-06
5	1	Table, 52 in.	17934-02
6	1	Guide Drum Assembly, PR	Refer to pg.14
7	1	Tension/LC Arm Assy, PR 12 in. Travel	17962-20
8.1	1	Set Collar, 1.25 ID x 2.0 OD x 11/16	12441-108
8.2	1	Spring, Compression. 1 OD x .5 ID x 3	12442-77
8.3	1	Hairpin Cotter Pin, 1/8 Dia x 2.30 Long	12466-69
8.4	1	Knob, 2.38 Dia x 3/8-16 Thd x .50 Long	14977-02
8.5	1	Base Weldment, PR-8/10	17920-04
8.6	1	Motor Arm, 42 in, Stationary	17921-09
8.7	1	Arm Weldment, Outrigger, PR 52 in.	17923-02
8.8	1	Clamp, Outrigger, Threaded, Metric	17925-02
8.9	1	Clamp, Outrigger, Thru Hole	17926
8.10	1	Pin, Motor Arm	17927

Item	Qty	Description	Part Number
8.11	10	Wheel Assembly, Idler, 5.415 Dia	17931-01
8.12	4	Collar, Counter Weight	17955-01
8.13	1	Rod, Counter Weight Storage	17964
8.14	1	Spacer, 1 in. Square x 4.25	18233-06
8.15	2	Spacer, 1.0 OD x .56 ID x 5.25 Long, mm	18233-07
8.16	1	Wear Strip, 4.25 x 1.0 x .125	18234-05
8.17	1	Spacer, 1.0 OD x .56 ID x 5.25 Long	18234-06
8.18	2	1/2-13x2 1/2 Lg, Hex Hd, Cap Screw	908050-20
8.19	4	1/2-13x5.0 Lg, Hex Hd, Cap Screw, GR5, ZP	908050-40GR5ZP
8.20	4	1/2-13, Hex Nut, Nylon Insert Locknut, ZP	942050ZP
8.21	14	1/2, Flat Washer, SAE	958050
8.22	1	3/4, Flat Washer, SAE, ZP	959075
8.23	2	.187 Diax1 1/2 Lg, Roll Pin	972P18-12
8.24	2	M12, Washer, Flat, Reg, Zinc Plated Steel	Din-125-M12
8.25	2	M12x120mm Lg, SHCS, Black	Din-912-M12x120
8.26	2	M12x20mm Lg, SHCS, Black	Din-912-M12x20
8.27	2	M12x40mm Lg, SHCS, Black	Din-912-M12x40
8.28	1	M10x150mm Lg, Hex Hd SHCS, Black	Din-933-M10x150
8.29	1	M12x150mm Lg, Hex Hd Scr, Black	Din-933-M12x150
8.30	2	M12, Hex Nut, Nylon Insert Lock Nut, ZP	Din-985-M12
9	4	3/8-16 x 2 1/2 Lg, SHCS, Black	900038-20
10	4	3/8, Flat Washer	958038

CONTROL ARM ASSEMBLY

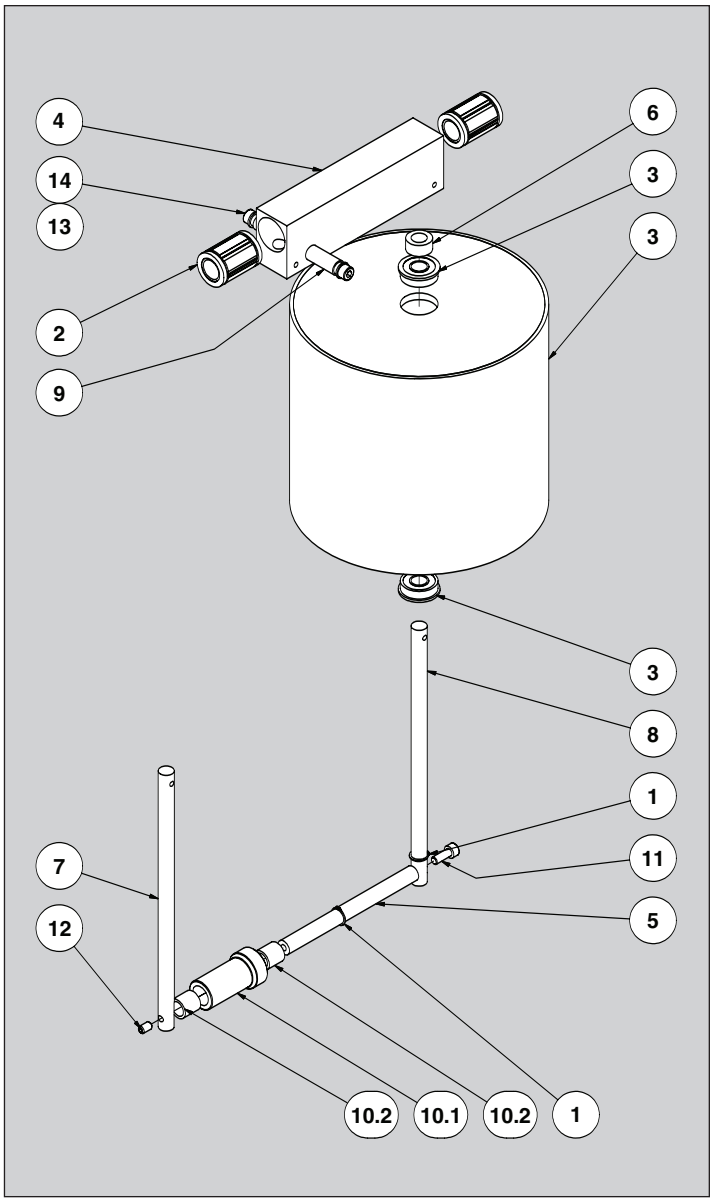


Item	Qty	Description	Part Number
1	1	Coupling, .25 Bore, Adj Slip	12028-77
2	1	Limit Switch, Micro, 10A @ 240 VAC	12031-23
3	1	Washer, Rubber, .5 ID x 1.062 OD x .093	12434-59
4	2	Washer, Thrust, .255 ID x .437 OD x 1/16	12434-60
5	1	Plunger, Ball, M8 x 22mm Long	13379-70
6	1	Potentiometer, 3-Turn, 10K	14946-16
7	1	Sheave, 1.0 Dia x 1/8 Rope Dia	14963-60
8	1	Wire Rope Guide	17945
9	1	Wire Rope Guide	17945-03
10	1	Pulley, Cable Guide, Metric	17946-03
11	1	Shaft, Pulley, Cable Guide	17947-01
12	1	Mast, Tubular Weldment	17948-02
13	1	Mounting Block, Upper, Control Mast, Metric	17950-05
14	1	Cable, 30 in Long, w/Loop Ends	17954-01

Item	Qty	Description	Part Number
15	1	Cable, 42 in Long, w/Loop Ends	17954-02
16	2	Collar, Counter Weight, 1 in	17955-01
17	1	Pin, Cable Pulley Guide	17957
18	2	Pin, Cable Counter Weight	17959
19	1	Linear Shaft, 1/2 OD x 20 in	17961-01
20	1	Cover, Tension/Loop Control Arm	17963-04
21	2	Collar, Modified, .501 ID	18305-03
22	2	M2x8mm Lg, Cheesehdscr, Raised, Steel-Plat	Din-7985-M2x8
23	1	M4x20mm Lg, FHSCS, Black	Din-7991-10-M4x20
24	1	M5x25mm Lg, FHSCS, Zinc Plated	Din-7991-M5x25
25	1	M5x30mm Lg, FHSCS	Din-7991-M5x30
26	1	M5x10mm Lg, Sock Set Scr, Cup Pt, Black	Din-916-M5x8
27	4	M5x10mm Lg, BHCS, Black	Din-9427-M5x10

GUIDE DRUM ASSEMBLY

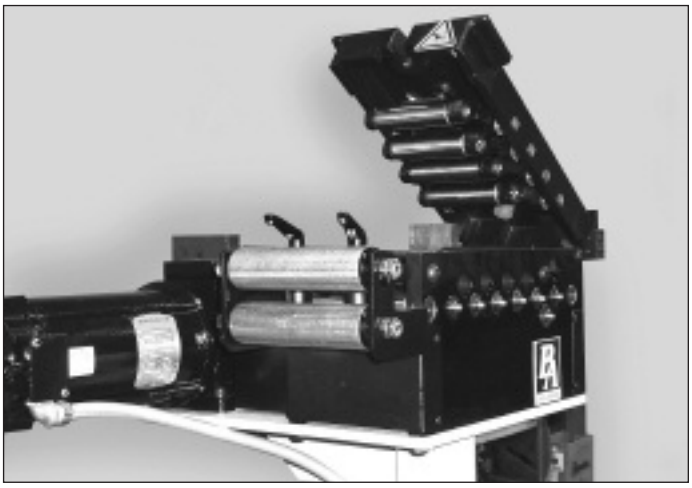
Item	Qty	Description	Part Number
1	2	Retaining Ring, External, 3/8 Shaft	12013-61
2	2	Linear Ball Bearing, .500 Dia	15433-24
3	1	Drum, Roller Guide Assy, 6 in. Drum	17935-01
	1	Drum, Roller Guide Assy, 9 in. Drum	17935-02
	1	Drum, Roller Guide Assy, 12 in. Drum	17935-03
	1	Drum, Roller Guide Assy, 15 in. Drum	17935-06
	1	Drum, Roller Guide Assy, 18 in. Drum	17935-04
	1	Drum, Roller Guide Assy, 24 in. Drum	17935-05
	1	Drum, Roller Guide Assy, 6 in. Drum, Urethane	17935-11
	1	Drum, Roller Guide Assy, 9 in. Drum, Urethane	17935-12
	1	Drum, Roller Guide Assy, 12 in. Drum, Urethane	17935-13
	1	Drum, Roller Guide Assy, 15 in. Drum, Urethane	17935-16
	1	Drum, Roller Guide Assy, 18 in. Drum, Urethane	17935-14
	1	Drum, Roller Guide Assy, 24 in. Drum, Urethane	17935-15
4	1	Bearing Block, Linear Guide	17938
5	1	Axle, Roller, Edge Guide	17939-01
6	1	Spacer, Roller	17940-01
7	1	Support Bar, Axle, 6 in Drum	17941-01
	1	Support Bar, Axle, 9 in Drum	17941-02
	1	Support Bar, Axle, 12 in Drum	17941-03
	1	Support Bar, Axle, 15 in Drum	17941-06
	1	Support Bar, Axle, 18 in Drum	17941-04
	1	Support Bar, Axle, 24 in Drum	17941-05
	1	Support Bar, Axle, 6 in Drum Urethane	17941-01
	1	Support Bar, Axle, 9 in Drum Urethane	17941-02
	1	Support Bar, Axle, 12 in Drum Urethane	17941-03
	1	Support Bar, Axle, 15 in Drum Urethane	17941-06
	1	Support Bar, Axle, 18 in Drum Urethane	17941-04
	1	Support Bar, Axle, 24 in Drum Urethane	17941-05
8	1	Axle, Drum Roller, 6 in Drum	17942-01
	1	Axle, Drum Roller, 9 in Drum	17942-02
	1	Axle, Drum Roller, 12 in Drum	17942-03
	1	Axle, Drum Roller, 15 in Drum	17942-06
	1	Axle, Drum Roller, 18 in Drum	17942-04
	1	Axle, Drum Roller, 24 in Drum	17942-05
	1	Axle, Drum Roller, 6 in Drum, Urethane	17942-01
	1	Axle, Drum Roller, 9 in Drum, Urethane	17942-02
	1	Axle, Drum Roller, 12 in Drum, Urethane	17942-03
	1	Axle, Drum Roller, 15 in Drum, Urethane	17942-06
	1	Axle, Drum Roller, 18 in Drum, Urethane	17942-04
	1	Axle, Drum Roller, 24 in Drum, Urethane	17942-05
9	1	Pin, Cable Anchor	17944-03
10	1	Roller Assembly, Edge Guide	17960-02
10.1	1	Roller, Edge Guide	17943-02
10.2	2	Bearing Sleeve, .3765 IDx.503 ODx.500 Long	12128-87
11	1	10-32x1/2 Lg, SHCS, Black	901010-04
12	1	10-24x3/8 Lg, Sock Set Scr, Cup Pt, Blk	931010-03
13	2	M5, Washer, Flat, Reg, Zinc Plated Yellow	Din-125-ZY-M5
14	2	M5x10mm Lg, SHCS, Black	Din-912-M5x10

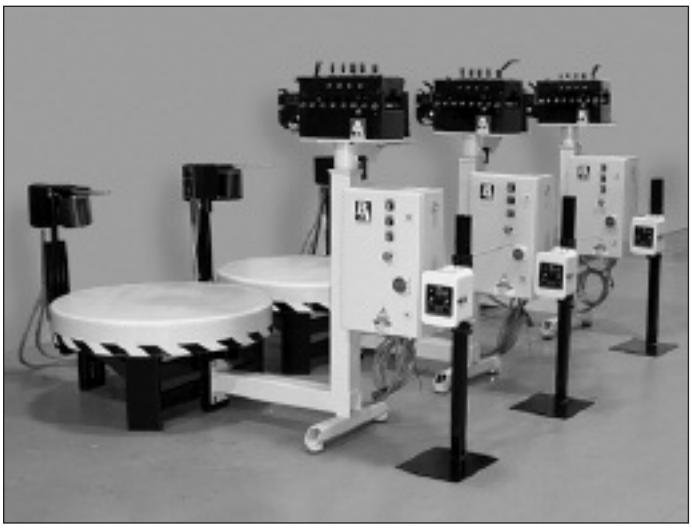


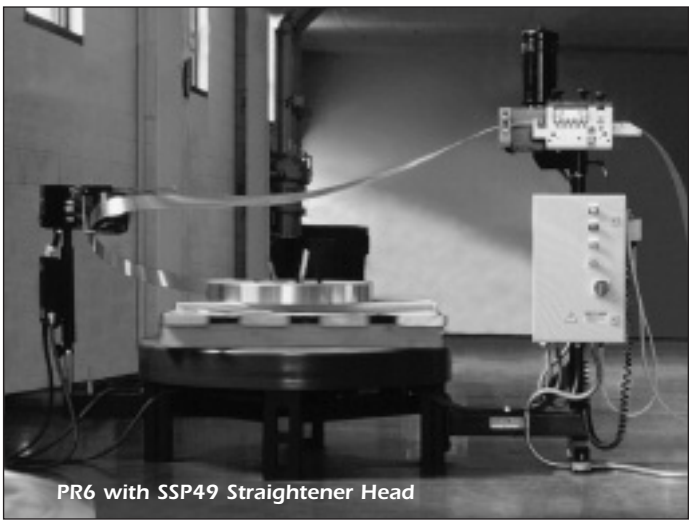
Guide Drum Assembly	
Description	**Part Number**
Linear Drum Assembly, PR, 6 in.	20029-01
Linear Drum Assembly, PR, 9 in.	20029-02
Linear Drum Assembly, PR, 12 in.	20029-03
Linear Drum Assembly, PR, 15 in.	20029-04
Linear Drum Assembly, PR, 18 in.	20029-05
Linear Drum Assembly, PR, 24 in.	20029-06
Linear Drum Assembly, Wire Guide	20029-21
Linear Drum Assembly, Break Away Wire Guide	20029-22
Linear Drum Assembly, PR 8 Dia x 2.12 with Pulley	20029-23
Linear Drum Assembly, PR, 6 in, Urethane	20029-31
Linear Drum Assembly, PR, 9 in, Urethane	20029-32
Linear Drum Assembly, PR, 12 in, Urethane	20029-33
Linear Drum Assembly, PR, 15 in, Urethane	20029-34
Linear Drum Assembly, PR, 18 in, Urethane	20029-35
Linear Drum Assembly, PR, 24 in, Urethane	20029-36

PALLET REEL STRAIGHTENER

The Pallet Reel Straightener incorporates all the features of the Palletizer and provides the additional function of straightening the material in a reduced floor space footprint. Separate Drive Motors and Loop Controls provide pallet reel rotation and material speed. This assembly provides larger material stock loop and no back tension.







PR6 with SSP49 Straightener Head

Model	Max. Pallet Weight (Lbs.)	Max. Stock Width (In.)	Stock Thickness Range (In.)	Max. Table Stacking Height (In.)	Table Speed Range (RPM)	Table Dia. (In.)	Drive Motor (HP)	Input Power VAC/Phase/Hz
PR4/SS49LC3		4	.015 – .065			42	1/2	
PR4/SS89LC3		6	.018 – .065			42	1/2	
PR4/SSP29LC3	4000	2	.005 – .040			42	1	
PR4/SSP49LC3		4	.005 – .040			42	1	
PR4/SSP69LC3		6	.005 – .030		0 – 12	52	1	
PR6/SS49LC3		4	.015 – .065	36	or	52	1.5	220 / 1 / 60
PR6/SS89LC3		8	.018 – .065		0 – 24	52	1.5	
PR6/SSP29LC3	6000	4	.005 – .040			52	2	
PR6/SSP49LC3		2	.005 – .040			52	2	
PR6/SSP69LC3		6	.003 – .030			52	2	

Guide Drum Assemblies up to 22" are available. *Wire Guides available.* *Coil weights up to 10,000 lbs. are available.*

WARRANTY AND SAFETY PROGRAM

Warning

This equipment offers various means of operating or controlling machines. The operator must not be in or near the point-of-operation of the machine, or the operating parts of any equipment installed on the machine, or bodily injury could result. The EMPLOYER must post adequate warning signs onto the machine with proper warnings for his machine and the specific application to which the machine and equipment are being applied.

Occupational Safety and Health Act (OSHA) Sections 1910.211, 1910.212, and 1910.217 contain installation information on the distance between danger points and point-of-operation guards and devices. No specific references have been made to which paragraph of OSHA 1910.211, 1910.212, 1910.217 or any other applicable sections because the paragraphs may change with each edition of the publication of OSHA provisions.

All equipment manufactured by us is designed to meet the construction standards of OSHA in effect at the time of sale, but the EMPLOYER installs the equipment so the EMPLOYER is responsible for installation, use, application, training, and maintenance, as well as adequate signs on the machine onto which this equipment will be installed.

Remember, OSHA says that the EMPLOYER must use operating methods designed to control or eliminate hazards to operating personnel.

It shall be the responsibility of the EMPLOYER to establish and follow a program of periodic and regular inspections of his machine to insure that all their parts, auxiliary equipment, and safeguards are in a safe operating condition and adjustment. Each machine should be inspected and tested no less than weekly to determine the condition of the machine. Necessary maintenance or repair of both shall be performed and completed before the machine is operated. The EMPLOYER shall maintain records of these inspections and the maintenance work performed.

Our Company is not responsible to notify the user of this equipment of future changes in State or Federal laws, or construction standards.

Safety Program

Accident free operation will result from a well developed, management sponsored and enforced safety program.

Of vital importance to any successful program is the proper selection of guards and devices. However, there is no safety device that will bring “automatic” safety to your operation.

Of equal importance to this proper selection of the guard and the device is the training of your personnel. Each person must be trained as to the operation of the guard or safety device, highlighting why they have been provided on the equipment. Rules for safe operating should be written and enforced at all times. A final major concern of an effective safety program is regularly scheduled inspection and maintenance of all of the equipment.

To ensure continued safety at all times, top management, line supervision, safety engineers and all employees must assume their proper share of the responsibility in the program. Only as a group, one that knows your own operation and its problems, can you carry out an effective safety program.

To assist you in the development of and continued use of safety programs, many safety minded groups have made guidelines available to you. However, you must know when and how to apply these guidelines. The manufacturer provides information to assist you in properly adjusting and maintaining your equipment. There is no short cut to proper safety; therefore, it is recommended that you comply with their recommendations at all times.

Warranty

We warrant our new parts against defects under normal use and service for a period of 12 months after date of shipment. Our obligation under this warranty is limited to replacing or repairing (at our option) the defective part without charge, F.O.B. our plant in Bloomfield, Connecticut. The defective part must be forwarded or repair. EXCEPT AS EXPRESSLY PROVIDED HEREIN, THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING A WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Furthermore, the seller does not warrant or represent that the equipment complies with the provisions of any law, particularly including the Occupational Safety and Health Act of 1970, and regulations promulgated thereunder. In no event shall we be liable for special, indirect incidental or consequential damages, however rising.

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