



P/A INDUSTRIES INC.

522 Cottage Grove Road • Bloomfield, Connecticut 06002 U.S.A. • Web: www.pa.com
Telephone: 860-243-8306 • Fax: 860-242-4870 • Email: sales@pa.com

Unwind/Rewind Stock Reels

Model Numbers: SR50, SR75, SR100 Series



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1 Introduction

1.1 General 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 qualified personnel can carry out an effective safety program either as a group or someone who knows your operation and its problems.

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.

1.2 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.

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

1.3 Warranty Program

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 to our plant, freight prepaid, for our inspection prior to replacement 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 there under. In no event shall we be liable for special, indirect incidental or consequential damages, however rising.

1.4 Receiving and Inspection

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RECEIVING INSPECTION

Before removing the unit from its packaging, check for visual damage, especially if the crate, skid, or carton has been damaged in transit. Any damage caused by shipping should be immediately reported to the carrier. If the unit appears to be in satisfactory condition, remove all packing and wipe rust preventive from rollers with mild solvent.

2 Installation and Assembly

2.1 Mechanical

Place the reel so that the centerline of the coiled material is aligned with the centerline of the pass line of the next machine (straightener, feed, die, etc.) The stock reel should be secured to the floor by lagging through the holes in the base legs.

For portability, the reel can be equipped with casters. Typically there are two (2) fixed and two (2) swivel casters with locks so the reel stays stationary.

2.2 Electrical

For the standard base model we supply a 120VAC cord. For non standard models that are CE or 220VAC we supply a control box where you can tie in your power cord (see schematic). The control has two (2) fuses:

1. One for the main power line – 15A
2. One for the armature (DC motor) – See Table in 4.2

3 Setup and Operation

3.1 Non-Motorized Reels

The P/A Non-motorized Stock Reel is supplied with an adjustable disc/caliper drag brake. You can adjust the amount of resistance desired for unwinding material in your application by turning the brake adjustment knob clockwise to increase drag and counterclockwise to decrease drag.

3.2 Motorized Reels

The P/A motorized stock reel works through the Penta drive control panel. On the control panel you have forward “FWD”, break or stop “BRK” and you have reverse “REV”. You have two settings for jog or run with the corresponding start and stop. Looking at the dancer arm switch below you will see the corresponding rewind and unwind positions.

All models of motorized reels may be used either for Unwind (Pay-off) or Rewind of coiled material. Frictional drag is not desired for motorized operation, and a drag brake is not provided. However, electrical “dynamic” braking is available as an option

A D.C. variable speed motor drives the reel shaft and is controlled by the position of the dancer arm. The dancer arm is in turn adjustable via a selector switch on the side of the unit.

Below are various combinations between dancer arm location and selector switch setting for your application’s combination of:

- Mode (unwind or rewind)
- Dancer arm location (right or left side of reel)
- Coil wrap (under or over)

3.3 Dancer Arm

Install the dancer arm toward the side of your choice through the clamp on the dancer arm shaft extending from the front panel of the base cabinet. Slide the dancer arm in or out to set the roller at the estimated point of minimum material slack loop motion. Set the slack loop height by rotating the dancer arm clamp on the shaft, after first loosening the clamping screws, then retightening.

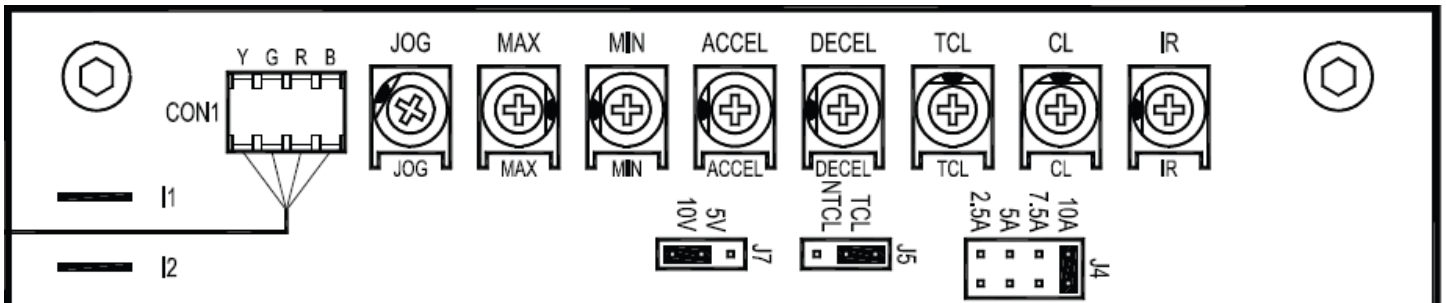
You may find that the mechanical smoothness of a dancer arm motion (up and down) can be improved by the setting of dancer arm extension (closer to or further from, the reel) for higher speeds and longer travel feed lengths. Find the point of minimum loop motion while feeding and place the roller at that point.

While the dancer arm is very light and flexible to reduce the danger of light material being marked by contact with the roller, further protection is available for extremely delicate material in critical situations.

- You may add a small counterbalance to the dancer arm.
- You may add a foam rubber sleeve around the roller, provided in attached kit.

The roller has been positioned on the arm so that the inner edge of its cylindrical section is in line with the inner keeper disc.

These parameters are all preset to factory defaults and equipment specification and should not be changed before consulting the PA service department.



Inside of the KB control are a set of potentiometers at the top of the control. These trim pots are used to adjust the following parameters:

JOG – Adjusts motor speed when in manual mode

MAX – Maximum speed for motor when the maximum signal is reached

MIN – Minimum speed for motor at 0 (Zero) volts

ACCEL (Acceleration) – The time it takes the control to reach full output.

DECEL (Deceleration) – The time it takes the control to go from max output to minimum speed.

TCL (Time Current Limit) – Time the control will time out after being in current limit.

CL (Current Limit) – Maximum current (DC) the motor can draw.

IR (IR Compensation) - Sets the amount of compensating voltage required to keep the motor speed constant under changing loads

NOTE: Do not adjust trim pots with main power on.

4 Maintenance

4.1 Mechanical

The drive belt tension should be checked occasionally. To adjust the drive belt tension, first loosen the four bolts through the slots in the motor mounting plate and move the plate up or down. The belt must be reasonably tight. A good indication of tightness can be checked by pushing the belt at the midpoint with one finger and seeing a deflection of about 3/8 to 1/2 inches. Or you can check by plucking the belt at the midpoint which should give you a sound similar to the bottom string on a base guitar.

On specified models using dancer arm controls, the dancer arm shaft bearing block and the speed pot shaft located inside the panel of the cabinet should also be lubricated occasionally. An oil hole is located on top of the bearing block. Refer to the Parts List to order replacement parts from P/A Industries or from your dealer.

4.2 Electrical

Armature Fuse Chart:

Fuse type should be little fuse 326 ceramic, buss ABC or equivalent.

Motor Horsepower		Approx. DC Motor Current Amps	Fuse Rating (AC Amps)
90VDC	180VDC		
1/8	1/4	1.3	2
1/6	1/3	1.7	2
1/4	1/2	2.5	4
1/3	3/4	3.3	5
1/2	1	5.0	8
3/4	1	7.5	12
1	2	10.0	20

5 Troubleshooting

5.1 KBPC-240D

For the motorized stock reel, the KB penta drive has three LED indicator lights on the top of the control. The function of the lights is as follows.

(ON) This light will glow green when there is AC power supplied to the control.

(STOP) This lamp will glow yellow when the control is placed in stop mode with the start/stop switch.

(CL) Occurs when the motor is loaded to the current limit set point (CL set point is established by the setting of jumper J4 and the CL trim pot), this lamp will glow RED. If the control is allowed to stay in CL and then trips out in Timed Current Limit, the OL LED will remain lighted, until the control is restarted with the start/stop switch. If the OL LED remains lighted during control operation, a fault condition may exist. Possible causes for this condition are as follows:

- Motor is in an overload state - check motor amps with DC ammeter in series with armature. (If motor is shunt type, field may be open or not receiving proper voltage.)
- Motor may be defective, check motor for shorts or grounds.
- The CL may be set too low, check position of jumper J4 and CL trim pot.

NOTE: In some applications, especially those requiring the motor to cycle on and off or from one speed to another, the OL indicator may blink indicating a transient overload. This may be a normal condition for the application.

6 Specifications

6.1 Overall Model Specifications

Table 1: Fixed Shaft Payoff

USA – Specification								
Model	Max Weight (lbs)	Stock Width (in)	Shaft Diameter	Spool OD (in)	Paper Rewind	Speed (RPM)	Motor HP	Input Power VAC/Phase/Hz
SR50	50	3	0.75	30	No	0-50	1/8	120/1/60
SR50R	50			Yes				
SR75	75			42	No			
SR75R	75			30	Yes			
SR100	100		1	42	No			
SR100R	100			30	Yes			
Metric – Specifications								
Model	Max Weight (Kg)	Stock Width (mm)	Shaft Diameter	Spool OD (mm)	Paper Rewind	Speed (RPM)	Motor kW	Input Power VAC/Phase/Hz
SR50	23	75	19	760	No	0-50	0.1	Specify When Ordering
SR50R	23				Yes			
SR75	34			1070	No			
SR75R	34			760	Yes			
SR100	45		25.4	1070	No			
SR100R	45			760	Yes			

Table 2: Rewind

USA – Specification											
Model	Max Weight (lbs)	Max Width (in)	Shaft Diameter (in)	Spool OD (in)	Speed (RPM)	Motor HP	Input Power VAC/Phase/Hz	# of Motors	# of Controls	Spool Shafts	Stock Sensors
SRWD	75	3	0.75	30	0-50	1/8	120/1/60	1	1	1	1
SRWD2								2		2	
SRWD2/2LC								2	2	2	
Metric – Specifications											
Model	Max Weight (Kg)	Max Width (mm)	Shaft Diameter (mm)	Spool OD (mm)	Speed (RPM)	Motor HP	Input Power VAC/Phase/Hz	# of Motors	# of Controls	Spool Shafts	Stock Sensors
SRWD	34	75	19	760	0-50	0.1	Specify when Ordering	1	1	1	1
SRWD2								2		2	
SRWD2/2LC								2	2	2	

6.2 Parts List

Stock Reel Assembly: Figure 1			
Item	QTY	Part Number	Description
1	1	Items Vary- Call PA	Cabinet SR
2	2	15986	Plate, Motor
3	2	15156-01	Cover, Top, 8.875 X 8.375
4	1	15156-04	Cover, Drag Brake
5	2	12125-04	Gear motor Assembly, 130VDC 1/8 HP 57 RPM
6	3	15158	Keeper Disc, 18in Dia X.09 Thick
7	1	16035	Disc, Lexan, 18in Dia
8	3	15181-01	Shaft, 3/4 Dia X 21 Long
9	4	14465-02	Keeper Disc Hub For .750 Dia Shaft
11	2	14977	Knob, 2.38 Dia X 3/8-16 Thread X 1 in Long
12	4	12133-12	Bearing, Flanged, 3/4
13	1	14963-02	Sheave, 3L X 3.5 PD X 5/8 Bore
14	2	14963-07	Sheave, 3L X 3.5 PD X 3/4 Bore
15	2	14963-15	Belt, 3L X 46 in Long
20	6	15239	Spacer, Disc, 5 OD X 3/4 ID X 3/4 Thick
24	4	15342-02	Leveling Pad: 180lb Max
31	12	904024-04	1/4-20 X 1/2, FHSCS, Black
32	2	14964-71-01	Controller, Motor, DC, KBPC-240D, 120VAC
34	1	21253-02	Name Plate Blank 6 1/2 X 4 Black Anodized
45	3	15444-09	Strain Relief 7/8 Diameter
46	2	13650-12	Hole Plug 7/8 Diameter
47	1	13650-13	Hole Plug 5/8 Diameter
48	1	13650-20	Hole Plug 7/16 Diameter

Slip Clutch Assembly: Figure 2			
Item	QTY	Part Number	Description
1	2	15179	Friction Disc
2	1	12128-46	Bushing, Bronze, 1in X .75in X 1in
3	1	15185-01	Sheave, Slip
4	1	15184	Clutch Ring, Outer
5	1	12442-14	Spring, 1.5 OD X 2.5 Free Length
6	1	12466-33	Fastener, Nut, Knurled, 3/4-10 Thread
7	1	13379-47	PIN, SPRING, 3/16 X 1 1/2" LG
8	1	16254	Shaft, Assembly Motor Extension

Dancer Arm Assembly: Figure 3			
Item	QTY	Part Number	Description
1	1	14974-02	Sheave, Timing, 72T, 4.584 PD, 1/2in Bore
2	1	14974-01	Sheave, Timing, 11T, .700 Pitch Diameter
3	1	14960	Bracket, Potentiometer
4	1	14946-02	Potentiometer, 5K Ohm
5	1	14958	Bearing Block, 1.25 Square X 1.5 Long X .5 Bore
6	1	14957	Shaft, .5 in Diamter X 4.56 Long
7	1	14959	Clamp, 1.25 Square X .5 Bore
8	2	12434-08	Washer, Shim, .75 OD X .5 ID X .020 Thick
9	1	972P18-12	.187 Diameter X 1/2 Long Roll Pin
10	3	900025-10	1/4-20 X 1 1/4 Long, SHCS, Black
11	1	14975	Roller, 2.38 Diameter X 5.5 Long
12	2	12441-08	Collar, Clamp, 1/2 Bore, Black Oxide
13	1	15170-01	Dancer Arm, .5 DIA X 41 X 14
14	4	901010-04	41.0 x 14.0
15	4	914T08-03	8-32x3/8 LG, Pan Head Screw, Philips, Self-Tap
16	1	12126-10	Belt, Timing, 80T

Paper Rewind Outrigger Assembly: Figure 4			
Item	QTY	Part Number	Description
1	1	16166-01	Keeper Disc Hub
2	1	16166-02	Keeper Disc Hub
3	1	16029	Support, Tension Fork
4	1	16169	Collar, Nylon Clamp
5	2	12466-33	Fastener, Nut, Knurled, 3/4-10 Threat
6	1	15820-02	Washer, Non-Metallic, 1.5 OD X .765 ID
7	1	15820-03	Washer, Non-Metallic, 2.0 OD X .765 ID
8	4	15504-02	Spring, Washer, 3/4 X 1.5 X .045 Thick
9	1	13650-16	Hole Plug, Square, 2in Square X 14 Gage
10	1	16168	Spindle, Paper Interleaf Welding Assembly
11	3	12416-08	Knob, 1.38 Diameter X 1/4-20 Stud X .5 Long
12	1	16167	Shaft, Slip Clutch
13	2	16035	Disc, Lexan, 18in Diameter
14	1	15998	Shaft, Tension Fork
15	1	14977	Knob, 2.38 Dia X 3/8-16 Thread X 1in Long
16	1	15999	Base Plate, Tension Fork
17	2	970P50-32	.500 Dia X 4.0 Long, Dowel Pin
18	1	15993-03	Interleaf Outrigger Weldment 30in Bolt On

6.3 Dimensions & Drawings

Figure 1: Reel Assembly

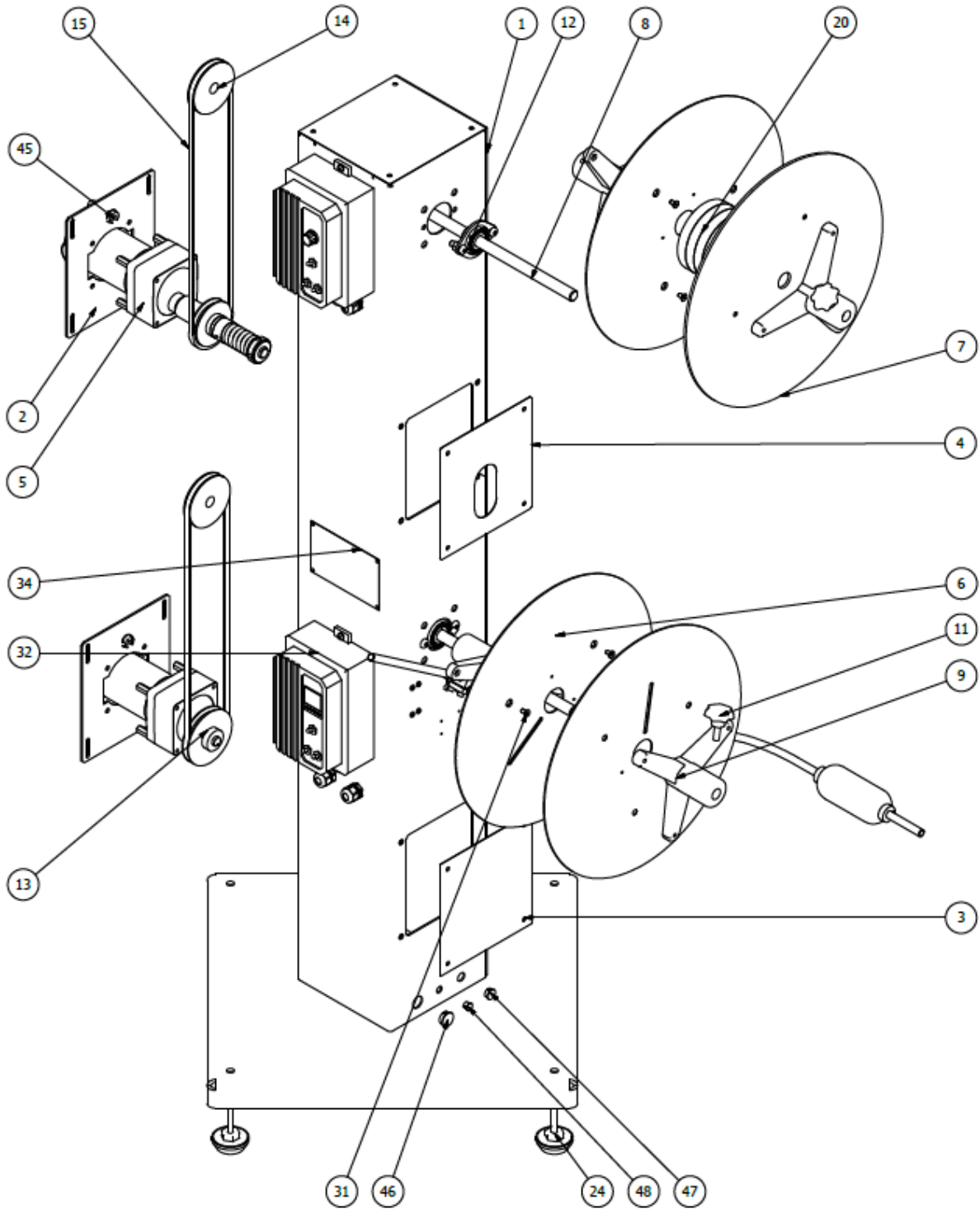


Figure 2: Slip Clutch Assembly

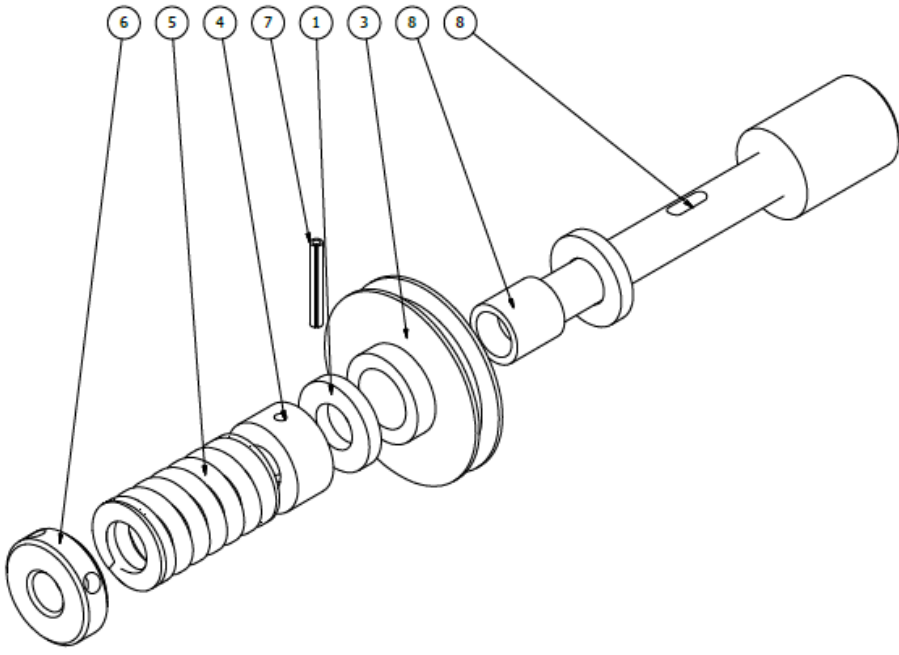


Figure 3: Dancer Arm Assembly

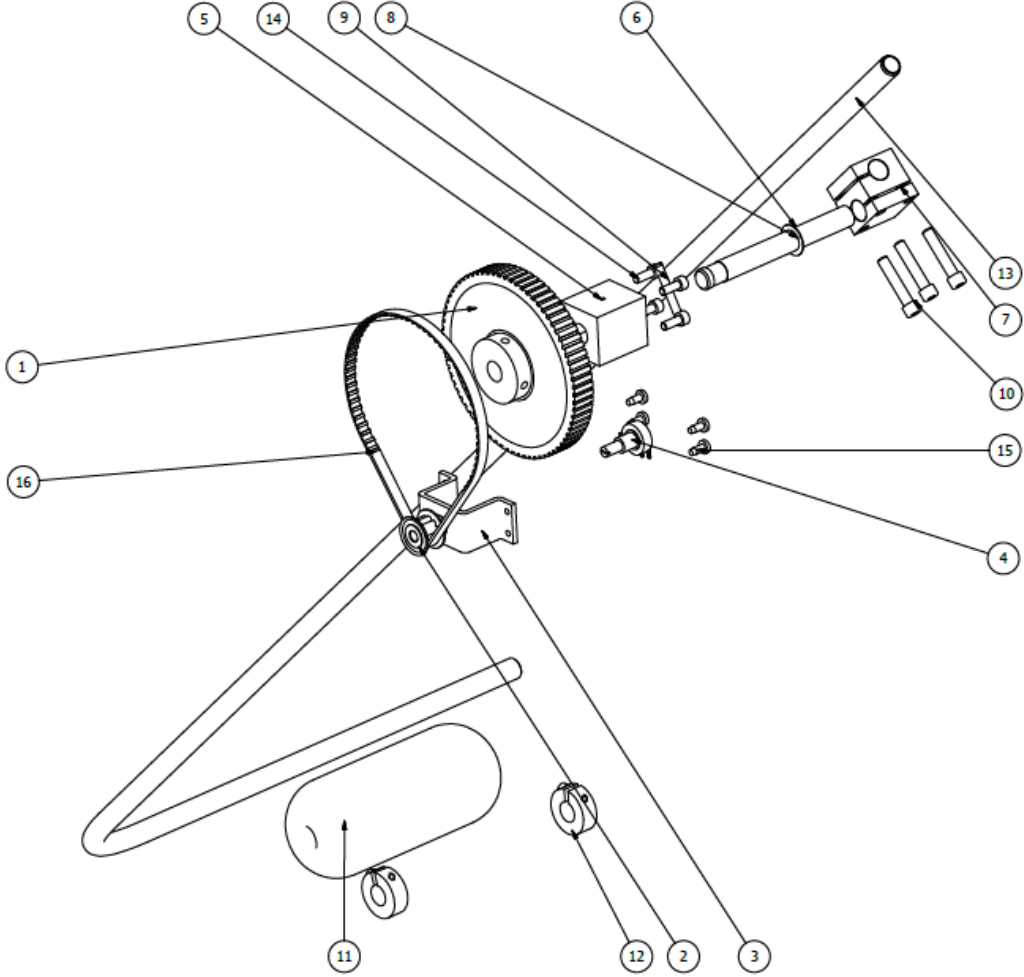
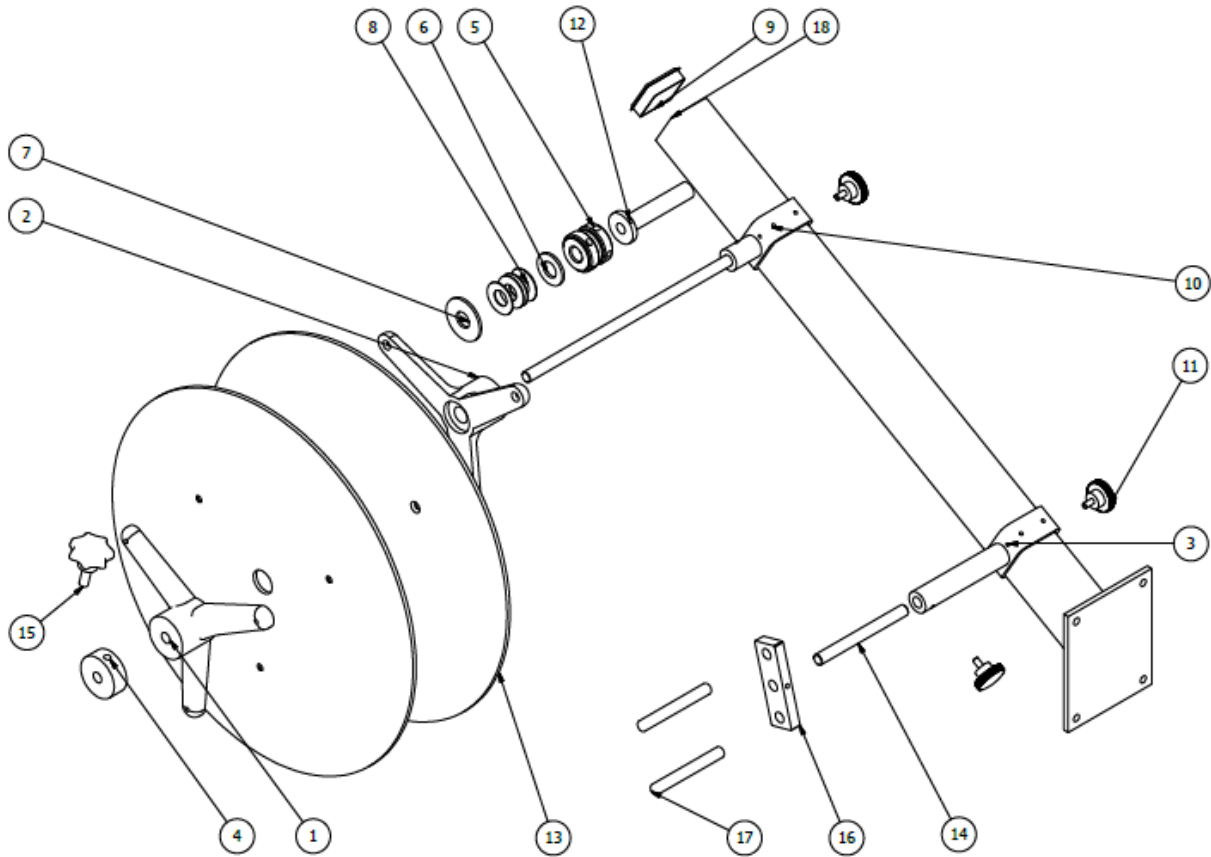


Figure 4: Paper Rewind Outrigger



6.4 Options

P/A Stock Reels, 50, 75, 100 series, are built with .75in or 1in fixed shaft options with aluminum and lexan discs for material and paper rewind.

P/A also offers an AC motor for CE compliant applications.

This instruction covers the dancer arm speed control option only. Indicated by the suffix “D” on the model number. The other loop control options available are:

- LC-2
- LC-3
- RF LC
- Laser LC
- Sonar LC

The maximum reel shaft speed is nominally 50 RPM. Higher reel shaft speeds are available on special order; please consult P/A Industries for more information.

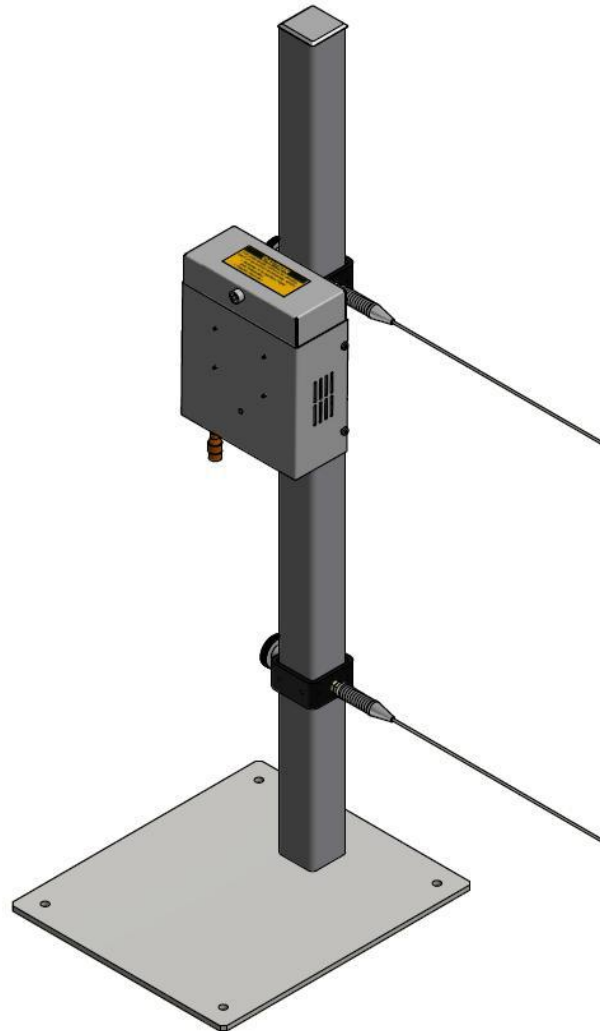
7 Schematics

Wiring diagrams and schematics for the unit and loop controls are sent with the unit or attached to this manual upon receipt. Please contact the PA service department at (860) 243-8306 to request a copy.

Loop Control 2

Model Number: LC-2

For Motorized & Non Motorized Reels



Thank you for selecting our product for your coil handling needs. This manual will provide you with all the information necessary to install, operate, apply and maintain your machine. Safety is always a priority so please follow all the caution and warning stickers labeled on our machines.

8 Introduction



Please read this manual thoroughly before installing, operating, applying and maintaining this machinery. Failure to do so may result in serious injury to yourself and/or others.

8.1 General Safety program

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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.

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9 Installation and Assembly

9.1 Electrical

Refer to schematic 19167-01

- Ground the loop control stand to the same ground as the main equipment ground.
- Check to make sure that the upper probe lead wire is plugged into the upper jack on the control box and the lower probe lead wire is plugged into the lower jack for unwind reel operation. The procedure is reversed for rewind reel operation.
- Verify that all coil material is electrically conductive and makes continuous contact with the ground either through the reel, straightener, feed or press. For best operation, the circuit resistance from probe to ground (through material when the material is lightly in contact with the probe) should not exceed 5 ohms.
- When connecting the output signal, connect the positive and neutral to the stock reel motor starter. Ground all electrically conductive materials together to include the frame of the reel, straightener, feed, press and connect it to the main supply ground.
- The relay contact ratings are: 7 Amps @ 30VDC and 10 Amps @ 125VAC. Do **NOT** exceed this rating when driving the stock reel motors directly. Smaller size motors may be switched directly as shown in the larger size motors require a motor-starter, and in that case, the relay contacts may be used to energize the motor-starter coil as a two-wire controller.
- Larger size motors require a motor starter; in this case, the relay contacts may be used to energize the motor starter coil as a two wire controller.

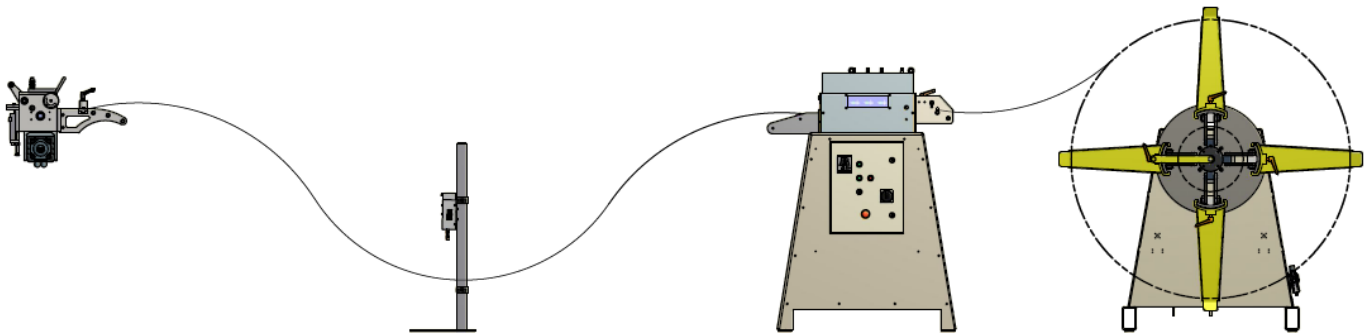
9.2 Mechanical

- Set the base and column sub-assembly onto the floor.
- Locate the “Lo Probe” lower probe sub-assembly (square collar and antenna with control box attached). Loosen the hand knob, if necessary, to enable sliding the square collar down over the square column. Install the lower probe as shown in the drawing 15284. Tighten the hand knob to lock its position. Check that the wire from the probe is plugged into the lower jack (receptacle) at the rear of the control box for unwind reel operation; or into the upper jack for rewind reel operation.
- Locate the “Hi Probe” upper probe sub-assembly (square collar and probe with long pig-tail cord attached) and loosen the hand knob, if necessary, to enable sliding the square collar down over the column as shown in drawing. Tighten the hand knob to lock its position. Plug cable connector at the end of the pig-tail into the upper jack also at the rear of the control box for Unwind Reel Operation or plug into the lower jack for rewind reel operation.

10 Setup and Operation

The P/A Loop Control is an automatic electrical switching device. The device works through the grounding of the material on the top and bottom probes to control the speed of the material paying off. Once the material makes contact with one of the probes, the device then reacts by properly opening and closing relay contacts. The relay contacts are used to control the motor driving a Stock-Reel or similar machine (such as a Stock-Straightener or Pinch-Rolls) in a production line involving unwind or rewind of coiled material (wire or flat). The loop control works to maintain slack in the loop between the limits established by the adjustable probe positions. A typical unwind arrangement of a press, loop control, and motorized stock-reel, as shown in the figure below. In an unwind line, the production machine starts by taking material from the slack loop until it touches the upper probe. This triggers the loop control to switch the reel-motor on. The motor then unwinds the coil until material touches the lower probe and the motor is switched off again. The processes continue in a catch up and wait fashion.

In a rewind line, the connection between the upper and lower probe leads and the loop control box is reversed. The reel starts by taking material from the slack loop until it touches the upper probe and triggers the loop control to switch the reel-motor off. This allows material to be added to the slack loop from the production machine until it touches the lower probe and switches the reel motor on again. These steps repeat to maintain the desired loop slack.



Unwind Reel Operation: When the feed material touches (momentarily or continuously) the upper probe the relay's K1A (for single unit), K1A and K2A (for dual units) will energize and close its contacts to turn ON (Run) the Stock-Reel-Motor-Starter to unwind the coil. It will remain ON until the feed material touches (momentarily or continuously) the lower probe. Once the feed material touches the lower probe the Relay's will de-energize and open its contacts to turn OFF (Stop) the Stock-Reel-Motor-Starter. The corresponding red LED will illuminate to indicate when the relays are energized.

Rewind Reel Operation: For this operation the process is reversed. When the feed material touches (momentarily or continuously) the lower probe the relays K1A (for single unit), K1A and K2A (for dual units) will energize and close its contacts to turn ON (Run) the Stock-Reel-Motor-Starter to Rewind the Coil. It will remain ON until the feed material touches (momentarily or continuously) the upper probe. Once the feed material touches the upper probe the relays will de-energize and open its contacts to turn OFF (Stop) the Stock-Reel-Motor-Starter. The corresponding red LED will illuminate to indicate when the relays are energized.

11 Maintenance

11.1 Electrical

- Motor Fuse Size: Select the fuse size to protect the motors from short-circuits and ground-faults in accordance with the N.E.C. Article 430, Section IV (Motor Branch-Circuit Short –Circuit And Ground-Fault Protection) and Table 430.52.
- The following table shows the maximum size fuses that should be utilized (by motor size and voltage):
- Fuse Type: Fusetron Dual-Element ceramic-tube slow-blowing fuses, symbol MDA, are recommended or equivalent fuse type.

These fuses do not protect the motors from overloads.

Refer to N.E.C. Article 430, Section III (Motor and Branch-Circuit Overload Protection) to select and size the Motor Overloads.

Motor HP	Branch Circuit Protection Only		Branch Circuit & Motor Running Overload Protection	
	120 VAC	240 VAC	120 VAC	240 VAC
1/6	MDA-8	MDA-4	MDA-5	MDA-2 1/2
1/4	MDA-10	MDA-5	MDA-7	MDA-3 2/10
1/3	MDA-10	MDA-6.25	MDA-8	MDA-4
1/2	MDA-15	MDA-8	MDA-10	MDA-5

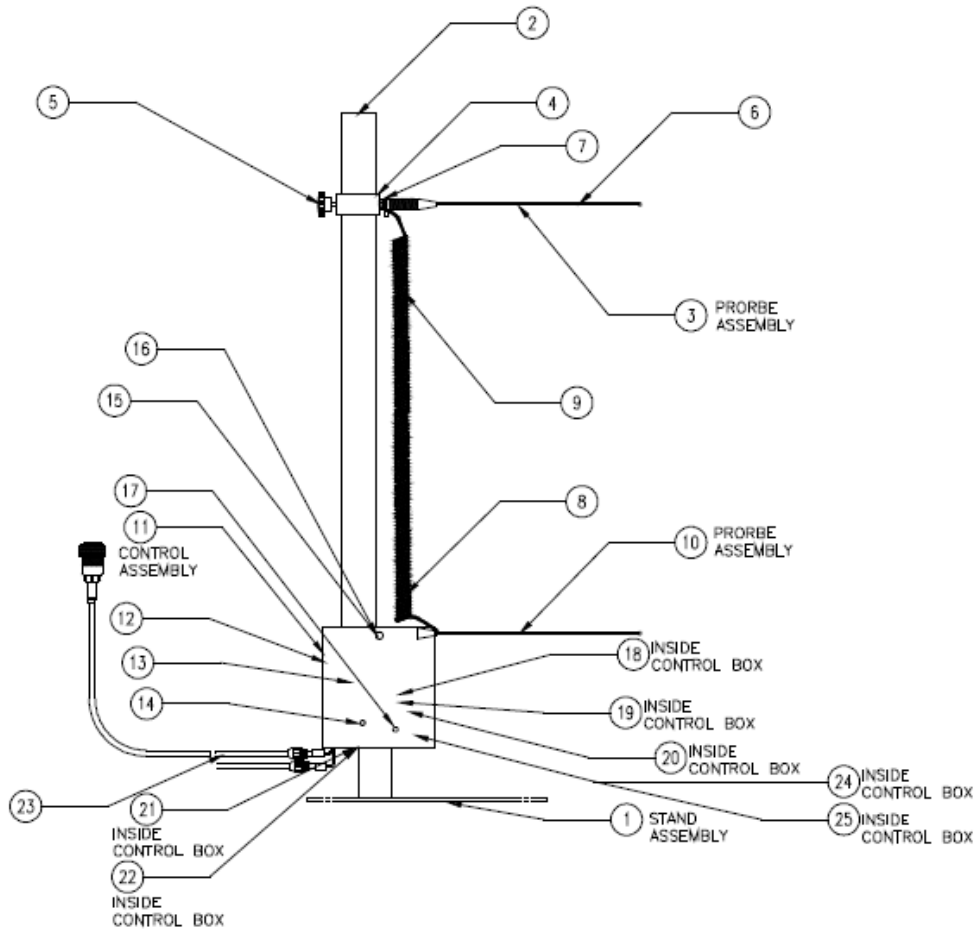
12 Troubleshooting

If the Stock Reel Motor does not start check the following:

- 1) Confirm that the Power is on in the Loop Control Panel.
 - a. The green LED will illuminate to indicate the Power is on in the Panel.
- 2) Confirm that Relay's K1A (for single unit), K1A and K2A (for dual units) will energize (turn On) once the corresponding probe has been activated.
 - a. The red LED, will illuminate to indicate the Relay's are on.
- 3) Confirm that the corresponding Circuit-Breakers are not opened.
- 4) Confirm that the power source to run the motor(s) is on.

13 Specifications

13.1 Parts List



REPLACEMENT PARTS LIST FOR LC-2		
ITEM	PART NUMBER	DESCRIPTION
1	15321	STAND
2	13650-16	PLUG
3	14606-02	PROBE ASSEMBLY-UPPER
4	14604	SQUARE COLLAR
5	12416-08	HAND KNOB SCREW
6	15336	PROBE
7	16500	INSULATED STUD
8	14603-01	CORD & PLUG
9	14603-02	CORD & PLUG
10	14606-01	PROBE ASSEMBLY-LOWER
11	19166-10	ELECTRICAL CONTROL ASSEMBLY
12	15263-02	HOUSING BASE
13	15264-02	COVER
14	12095-70	LIGHT PIPE, 0.62 LG, ROUND
15	12086-29	PUSH BUTTON
16	12086-30	PUSH BUTTON RING GUARD
17	12095-71	LIGHT PIPE, 1.52 LG, ROUND
18	12101-125	SENSITIVE RELAY, 12/24VDC
19	15448-36	POWER SUPPLY, 12VDC @ 1.66A
20	12194-18	PHONO JACK
21	12106-18	FUSE HOLDER
22	16284-47	FUSE, 1/4-AMP, MDA-1/4
23	12194-16	POWER CORD
24	15448-37	POWER CORD, IEC WIRE CORD
25	12106-95	TERMINAL BLOCK

YOU SUPPLY THE PRESS . . . WE'LL SUPPLY THE REST.

