



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

Light Duty Stock Reels

Model Numbers: SRA200, SRA400, SRA600

For Motorized & Non Motorized Reels

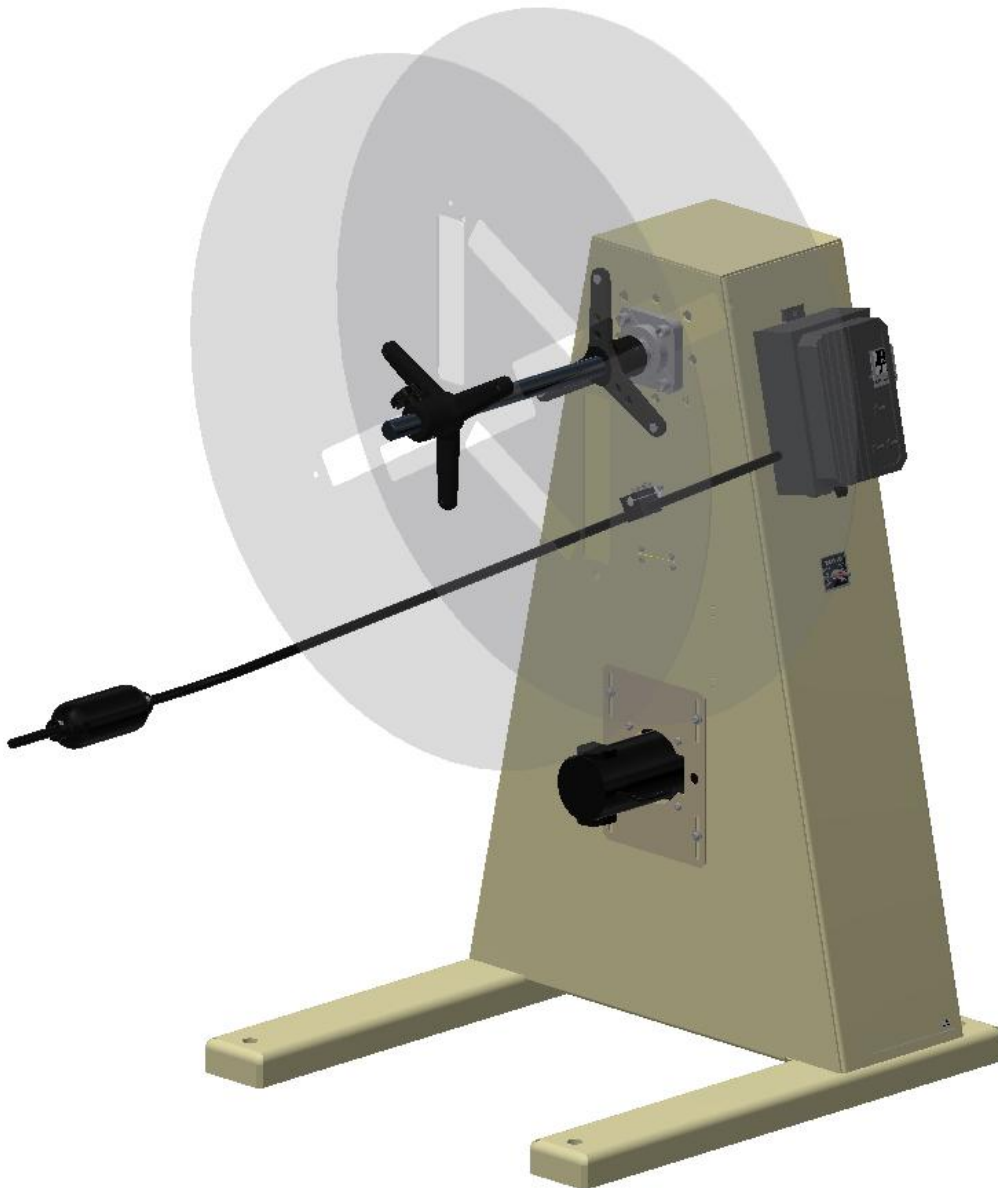


Table of Contents

2	Introduction	3
2.1	<i>General Safety program.....</i>	3
2.2	<i>Warning</i>	3
2.3	<i>Warranty Program.....</i>	4
2.4	<i>Receiving and Inspection.....</i>	4
3	Installation and Assembly	4
3.1	<i>Mechanical.....</i>	4
3.2	<i>Electrical.....</i>	5
4	Setup and Operation	5
5	Maintenance	7
5.1	<i>Mechanical.....</i>	7
5.2	<i>Electrical.....</i>	8
6	Troubleshooting	8
7	Specifications	9
7.1	<i>Overall Model Specifications.....</i>	9
6.2	<i>Parts List</i>	9
6.3	<i>Dimensions & Drawings</i>	11
7.4	<i>Options.....</i>	13
8	Schematics	Error! Bookmark not defined.

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.

1 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.

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 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.

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. Our Company 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

SPECIAL NOTE: P/A INDUSTREIS INC. ASSUMES NO RESPONSIBILITY IN CONNECTION HEREWITH, NOR CAN IT BE ASSUMED THAT ALL ACCEPTABLE SAFETY MEASURES ARE CONTAINED IN THIS PUBLICATION, OR THAT OTHER ADDITIONAL MEASURES MAY NOT BE REQUIRED UNDER PARTICULAR OR EXCEPTIONAL CIRCUMSTANCES OR CONDITIONS.

RECEIVING INSPECTION

Before removing the unit from its packaging, check for visual damage, especially if crate, skid, or carton had been damaged in transit. Any damage caused by shipping should be immediately reported to the carrier. If the unit appears in satisfactory condition, remove all the packaging. Read these instructions. They are provided to answer questions regarding the Operation and use of this equipment.

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. If you do not lag it to the floor, the reel could be knocked over.

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). See our fuse chart in section 4.2 to determine the correct amperage rating on the machine.

3 Setup and Operation

NON-MOTORIZED REELS

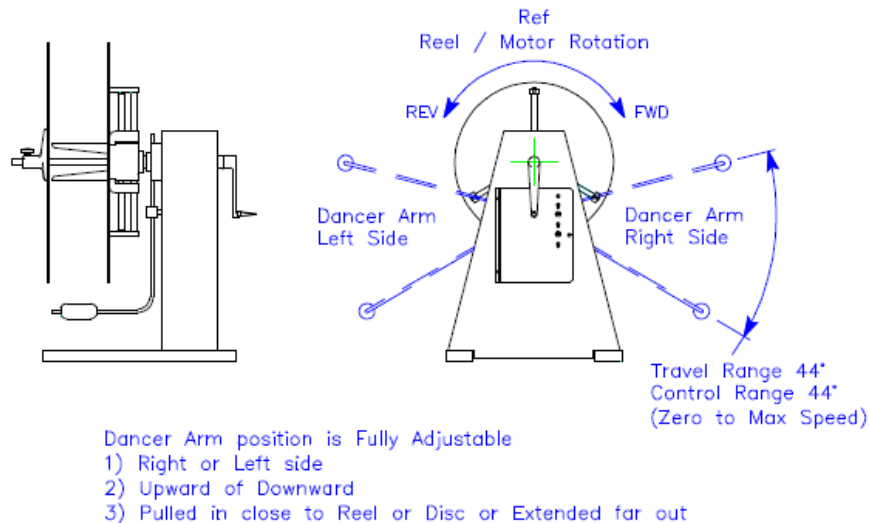
The P/A Non-motorized Stock Reel is supplied with an adjustable disc/caliper drag brake. You can adjust the amount of resistance desired for unwinding material in your application by turning the brake adjustment knob clockwise to increase drag and counterclockwise to decrease drag.

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 (also called “Pay-off” or “Dereel”) or Rewind (also called “Wind” or “Reel”) 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.



Drawing 17176

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.

Drawing 17173-02 shows the 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)

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.

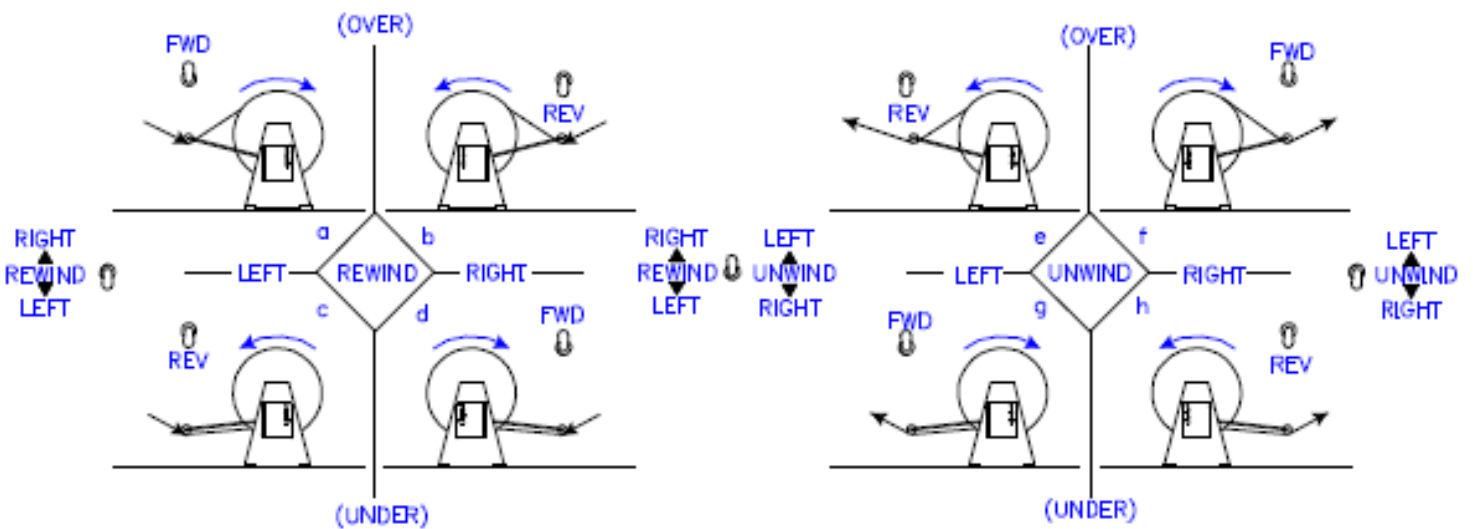
You may find that the mechanical smoothness of a dancer arm motion (up and down) can be improved by the setting of dancer arm extension (closer to or further from, the reel) for higher speeds and longer travel feed lengths. Find the point of minimum loop motion while feeding and place the roller at that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

SR & SRA 200 / 400 / 600 – SELECTOR SWITCH SETTINGS



DRAWING 17173-02



Inside of the KB control you will see a set of potentiometers at the top of the control. These trim pots are used to adjust the following parameters jog, max, min, acceleration and deceleration. TCL, CL and IR are preset and should not be adjusted please call the PA service department if you need to adjust these pots. The min and max trim pots set the minimum and maximum speed of the motor. If you set the max too high then you will receive a red CL indicator light (See Troubleshooting). If you receive a red CL light, simply dial the trim pot back until you no longer get the red light.

NOTE: Do not adjust trimpots with main power on.

4 Maintenance

4.1 Mechanical

Please periodically lubricate the thrust bearings and bushings with regular machine lube oil (SAE 30). The main shaft bearings, lead screws and guide rod bushings are lubricated through grease fittings and should be greased at regular intervals.

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 base 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 littlefuse 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

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) When the motor is loaded to the current limit setpoint (CL setpoint is established by the setting of jumper J4 and the CL trimpot), 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:

1. Motor is overloaded, check motor amps with DC ammeter in series with armature. (If motor is shunt type, field may be open or not receiving proper voltage.)
2. Motor may be defective, check motor for shorts or grounds.
3. The CL may be set too low, check position of jumper J4 and CL trimpot.

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

Model	Max. Coil Weight (lbs.)	Max. Stock Width (in)	ID Range (in)	Keeper Disc OD (in)	Speed Range (RPM)	DC Drive Motor (HP)	Input Power VAC/Phase /Hz
Adjustable Shaft							
SRA200D	200	4	5-18	24,30,36,42	0-28	1/8	120/1/60
SRA400D	400	8	6-17				
SRA600D	60	8	8-18				
SRA1200D	1200	12	10-22	48	0-23	3/4	
SRA1500D	1500	6					
Fixed Shaft							
SR200D	200		1				
SR400D	400	10	1.44			1/8	120/1/60
SR600D	600		1.94				

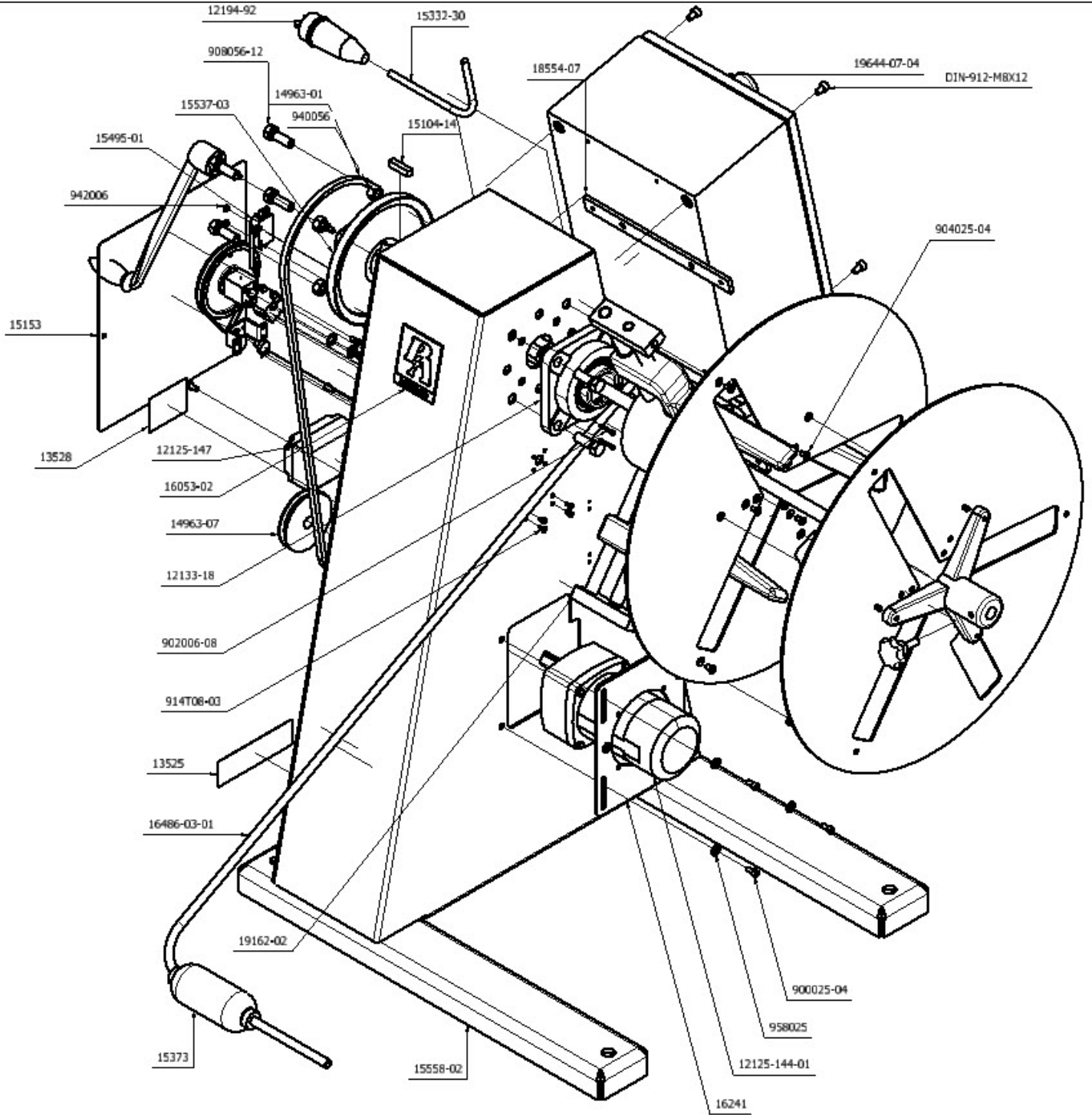
6.2 Parts List

MOTORIZED STOCK REEL PARTS LIST				
Models 200RF/400RF/600RF for drwngs 15238 & 15275				
Part Name	Item	200RF Part#	400RF Part#	600RF Part#
V-Belt	A	14963-58	14963-58	14963-01
Sheave, Main Shaft				
-Adjustable Jaws	B	14963-112	14963-112	14963-31
-Fixed Jaws	"	15537-04	15537-02	15537-03
Terminal Block	C	12106-10	12106-10	12106-10
Terminal Block End Section	D	12106-11	12106-11	12106-11
Power Cord	E	12194-15	12194-15	12195-15
Gearmotor, D.C. 1/8 HP	F	1215-04	12125-04	12125-04
Sheave, Motor	G	14963-02	14963-02	14963-02
Motor Mounting & Adj. Plate	H	15180	15180	15180
Green Indicator Light	I	12095-16	12095-16	12095-16
Switch, Power	J	12096-32	12096-32	12096-32
Switch, Motor	K	12096-33	12096-33	12096-33
Speed Control & RF Cable/sensor	L	14964-02	14964-02	14964-02
RF Cable/Sensor Only	M	14964-03	14964-03	14964-03
N.C. Switch, Safety	N	15091	15091	15091
Fuse Holder	O	12106-18	12106-18	12106-18
Hinged Access Door	P	15109-02	15109-02	15109-02
R.F. Antenna Assembly	Q	14991	14991	14991

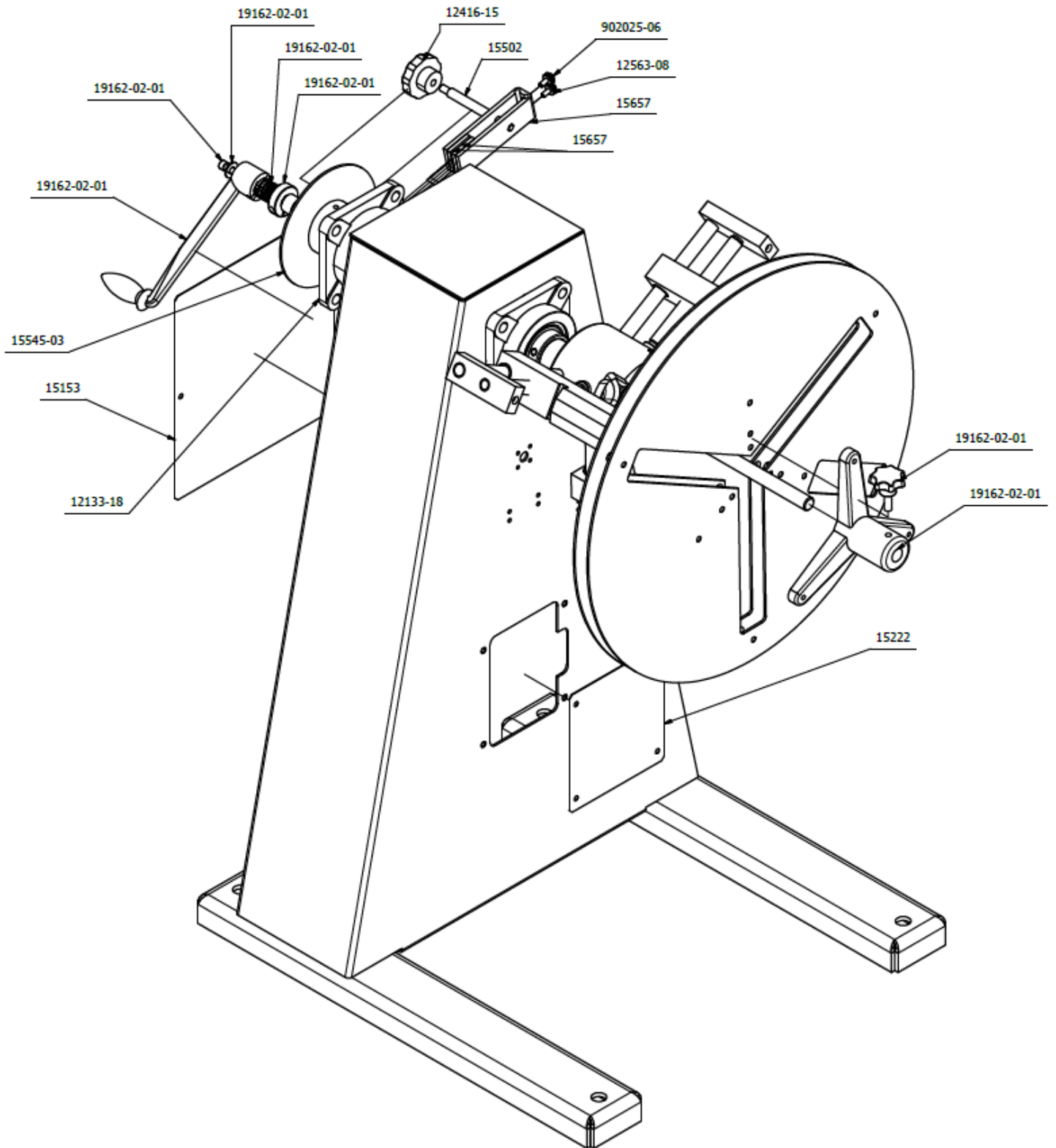
Stand Off	R	12441-20	12441-20	12441-20
Resistor, 100z 25W	S	14965-01	14965-01	14965-01
NON MOTORIZED STOCK REEL PARTS LIST For drwngs 15279-01, 15287-01 & -02				
Bearing, Adjustable Jaws	A	12133-05	12133-18	12133-18
Bearing, Fixed Shaft	B	12133-04	12133-05	12133-05
Hub	C	15664	15665	15665
Shaft, Fixed Shaft	D	15556	16912	16912
Main Shaft, Outer	E	15555	15553	15553
Shaft, Inner	F	15218	15282	15282
Miter Gear, Master	G	14521	14529	14529
Miter Gear, Driven	H	14517	14530	14530
Bushing, Lead Screw	I	12128-45	12128-44	12128-44
Lead Screw	J	14514	14531	14531
Bushing, Guide Rod	K	12128-36	12128-40	12128-40
Guide Rod	L	14513	14532	14532
Tie Bar	M	14518	14542	14542
Jaw	N	14919	16911	16911
Clamp Collar, Split	O	12441-08	12441-11	12441-11
Crank, Assembly	P	14522-03	16061	16061
Crank Holder	Q	15838-01	15838-01	15838-01
Keeper Disc Hub, Adjustable Jaws	R	14465-01	14465-02	14465-02
Keeper Disc Hub, Fixed Shaft	S	14465-03	14465-05	14465-05
Hand Knob	T	14977	14977	14977
Keeper Disc, Removable				
24"	U	14516-04	14516-04	14516-04
30"	U	14516-05	14516-05	14516-05
36"	U	14516-06	14516-06	14516-06
42"	U	14516-07	14516-07	14516-07
Keeper Disc, Adjustable				
24"	V	14516-01	14516-01	14516-01
30"	V	14516-02	14516-02	14516-02
36"	V	14516-03	14516-03	14516-03
42"	V	14516-08	14516-08	14516-08
Adjustment Screw	BA	15502	15502	15502
Grommet	BB	12563-08	12563-08	12563-08
Knob, Fluted Plactic	BC	12416-15	12416-15	12416-15
Brake Disc				
-Adjustable Jaws	BD	15542-02	15543-03	15543-03
-Fixed Shaft	BD	15545-01	15545-02	15545-02
Brake Caliper	BE	15657	15657	15657
Base Cabinet	SA	15558	15558	15558
Cover, Front	SB	15222	15222	15222
Cover, Back	SC	15153	15153	15153

6.3 Dimensions & Drawings

Motorized Stock Reel



Non-Motorized Stock Reel



6.4 Options

P/A Motorized Stock Reels, 200/400/600 series, are built with the same options (mandrel, weight, & discs) as the non-motorized units. In addition, they are available with options for different types of motor speed controls, and selection of drive motor/sheave combination for required shaft speed. 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 On/Off Touch Probe
- LC-3 On/Off Touch Probe
- Radio Frequency Loop Control
- Laser Loop Control
- Sonar Loop Control
- Paddle Loop Control

The maximum reel shaft speed is nominally 28 RPM. Higher reel shaft speeds are available on special order; please consult P/A Industries for more information. Also larger keeper discs are available as well.

