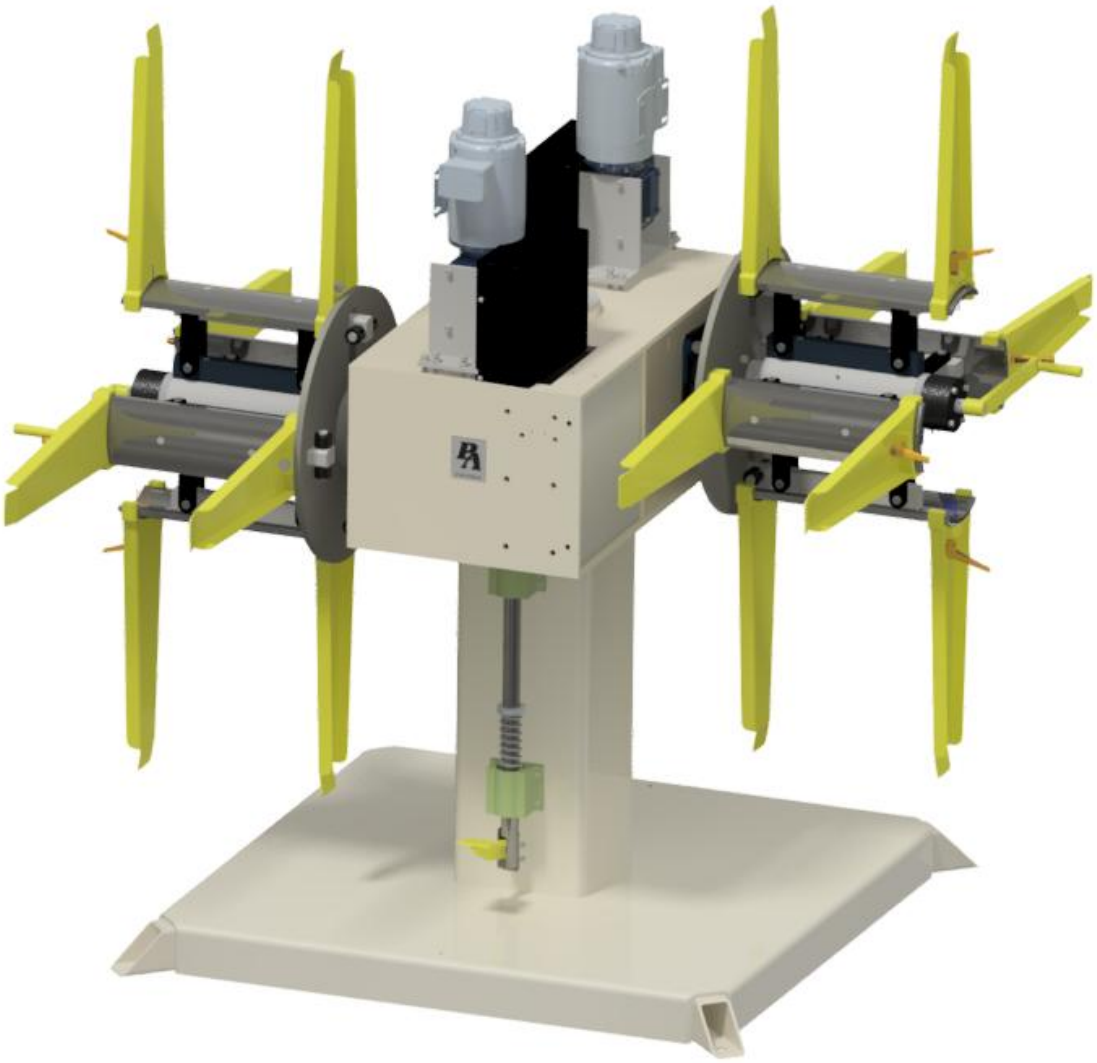
P/A INDUSTRIES INC.
522 Cottage Grove Road • Bloomfield, Connecticut 06002 U.S.A. • Web: www.pa.com
Telephone: 860-243-8306 • Fax: 860-242-4870 • Email: sales@pa.com

# Dual Medium Duty Stock Reel

Motorized and Drag Models: DSRA 1612, 2516, 4524, 6512, 6524, 6536



# Table of Contents



***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 RESPONSIBILTIY 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 PA Adjustable Stock Reel so that the centerline of the coiled material is in line with the centerline of the press and remaining process equipment.

**Warning:**

**The fixed base must be lagged to the floor. To prevent accidental tipping of the unit, minor dislocation from its working spot by bumping from coil handling equipment or from banging the unit against its mechanical stop during turn around with a heavy coil on the reel.**

## 2.2 Electrical

See schematic.

# 3 Setup and Operation

The P/A Dual Stock Reel is mounted on a rotating turret to minimize the time lost in production from reloading a new coil for unwinding or unloading a rewound coil after it has reached full size.

The Dual Stock Reel's rotating turret must be locked to the fixed base in either of its two working positions, with the foot pedal. Locate the unit in your material line so that the coil on the "working" reel is centered to the production machine.

**Warning:**

**The fixed base must be lagged to the floor to prevent accidental tipping of the unit. Minor dislocation from its working spot by bumping from coil handling equipment or from "banging" the unit against its mechanical stop during turn around with a heavy coil on the reel can disturb the production line.**

A new coil may be loaded for unwind, or, a full coil unloaded after rewind. This is done from the "idle" side of the reel, while the other side is working.

**Warning:**

**The rotating turret must be locked to the fixed base after each turn-around, before operation is started again.**

The rotating turret has a pair of mechanical stop blocks that allow turning the unit only halfway around, and then back again. This is to prevent windup of the electrical power cord or externally mounted loop control cord on models which include them.

**Caution:**

**The crank handle must be removed from the inner shaft extension before rotating an idle reel into working position.**

The machine is equipped with a **dancer arm speed control system**. The speed is zero at rest and increases as the dancer arm is lifted up.

To accommodate shipping, this dancer arm is detached, and must be re-attached when the machine is undergoing installation.

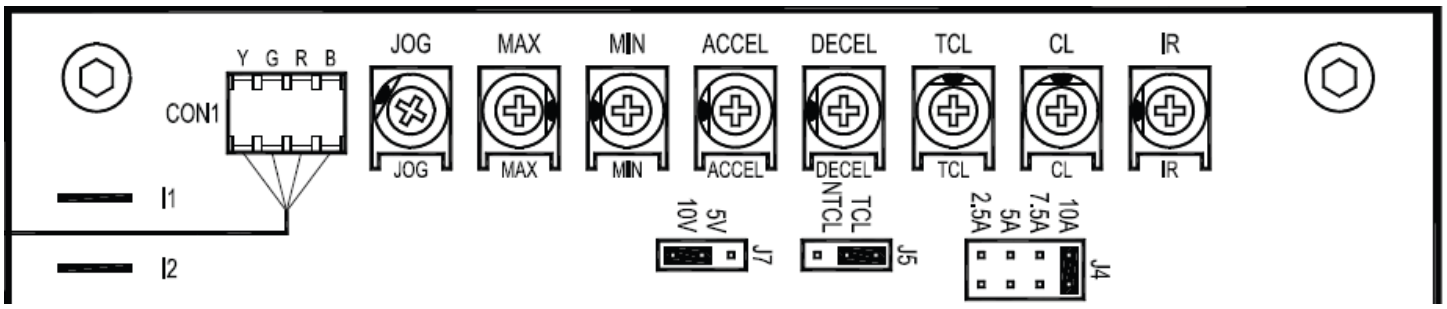
The dancer arm MUST be positioned such, that the roller end faces toward the press and is secured onto the knurled shaft with the supplied clamp block.

The height of the dancer arm should be set so that it rests in a horizontal position when the knurled shaft is against the **rotational stop**.

**NOTE: The dancer arm must be set low enough so that when the turret is rotated, it does not obstruct the rotation of the coil and coil keepers.**

The machine is operated using the commands on the control box and jog pendant.

| CONTROL/DEVICE | DESCRIPTION |
|---|---|
| Power On/Reset button | Turns controller on; resets the AC drive. |
| Start/Stop button | Allows the reel to unwind by instruction from the dancer arm; ceases movement of the reel. |
| For/Rev button | Changes the direction of the mandrel. |
| Emergency Stop red mushroom button | Shuts controller off. |
| Jog Pendant | Jogs the mandrel in either direction via the For (Forward) and Rev (Reverse) buttons. |




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

Mandrel

| SEQ. | MAINT. ITEM | REQUIREMENT | FREQUENCY-DAYS |
|---|---|---|---|
| 1 | Jaw Linkage | Apply (SAE30) Lube Oil | 14 |
| 2 | Main Shaft Bearing | Apply Standard Grease to Fittings | 14 |

Gear Reducer

The reducer requires no periodic maintenance. However, an occasional visual inspection to check for hardware tightness, leakage and the general overall condition of the reducer is good practice. This reducer is designed to operate successfully without breather vents. Since the reducer is shipped with lubricant, and breather plugs are not required, the user is able to eliminate the lengthy preparation normally required to place a reducer into service.

Drive Chain and Maintenance

| SEQ. | MAINT. ITEM | REQUIREMENT | FREQUENCY-DAYS |
|---|---|---|---|
| **1** | Check Chain Tension | Adjust as Necessary | 30 |
| **2** | Lubricate Chain | Apply Chain Grease | 30 |

At approximately 90 day intervals, or if proper torque is not being maintained, inspect Torque Limiter for presence of oil, grease, moisture or corrosion on driving surfaces and for proper setting of spring load. Clean and adjust as required. Friction facings and bushings are the only parts that should normally require replacement.

# 5 Specifications

## 5.1 Overall Model Specifications

| Model | Max Coil Weight lbs(Kg) | Max Stock Width in(mm) | | ID Range in(mm) | Max OD Range in(mm) | Jaw Quantity | Speed Range (RPM) | Drive Motor HP(kW) | AC Power Input V/Ph/Hz |
|---|---|---|---|---|---|---|---|---|---|
| | | W/ keepers | Wout/ Keepers | 12-20.5(300-520) | 51-60(1.3-1.52) | | | | |
| **DSRA1612** | 1600(727) | 12(305) | 15(381) | 15.7-20.5(400-520) | 55-60(1.4-1.53) | 8 | 4-23 | 3/4(0.56) | 120/1/60 |
| **DSRA2516** | 2500(1136) | 16(400) | 20(500) | 15.7-20.5(400-520) | 55-60(1.4-1.53) | 8 | 3-15 | 3/4(0.56) | 120/1/60 |
| **DSRA4524** | 4500(2045) | 24(610) | 28(711) | 15.7-20.5(400-520) | 55-60(1.4-1.53) | 8 | 3-15 | 1(0.75) | 230/1/60 |
| **DSRA6512** | 6500(3000) | 12(305) | 16(406) | 15.7-20.5(400-520) | 55-60(1.4-1.53) | 6 | 3-15 | 2(1.50) | 230/3/60 |
| **DSRA6524** | 6500(3000) | 24(610) | 28(711) | 15.7-20.5(400-520) | 55-60(1.4-1.53) | 6 | 3-15 | 2(1.50) | 230/3/60 |
| **DSRA6536** | 6500(3000) | 36(915) | 40(1016) | 15.7-20.5(400-520) | 55-60(1.4-1.53) | 6 | 3-15 | 2(1.50) | 230/3/60 |

## 5.2 Parts List

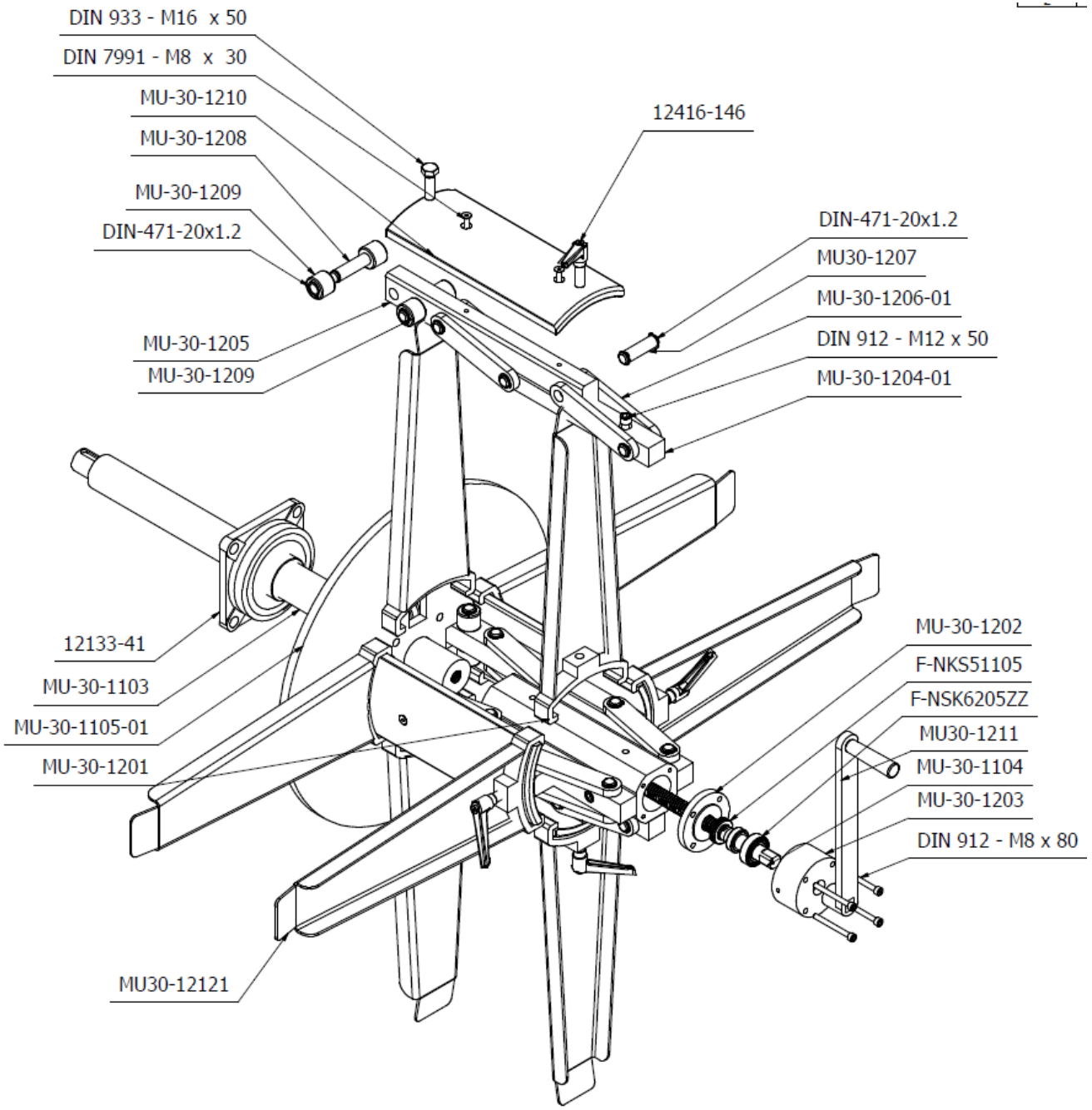
| Item# | 1612 Part# | 2516 Part# | 4524 Part# | 6512 Part# | 6524 Part# | 6536 Part# | Description | Qty |
|---|---|---|---|---|---|---|---|---|
| **1** | N/A | N/A | N/A | G-STW100 | G-STW100 | G-STW100 | Shaft Retaining Ring | 1 |
| **2** | N/A | N/A | N/A | F-NSK6220ZZ | F-NSK6220ZZ | F-NSK6220ZZ | Rear Bearing | 1 |
| **3** | N/A | N/A | N/A | G-AN23 | G-AN23 | G-AN23 | Locknut | 2 |
| **4** | N/A | N/A | N/A | U303-1109 | U303-1109 | U303-1109 | Sprocket and disc, brake | 1 |
| **5** | N/A | N/A | N/A | U303-0610 | U303-0610 | U303-0610 | Bushing | 1 |
| **6** | MU30-1209 | MU30-1209 | MU30-1209 | U505-0709 | U505-0709 | U505-0709 | Fixing Wheel | 16/12 |
| **7** | MU30-12125 | MU30-12121 | MU30-12121 | U503-12051 | U503-12051 | U503-12051 | Keepers | 6 |
| **8** | MU30-12141 | MU30-12141 | MU30-12141 | G-C1640 | G-C1640 | G-C1640 | Hand Lever | 6 |
| **9** | N/A | N/A | N/A | U505-0707 | U505-0707 | U505-0707 | Linkage Pin | 18 |
| **10** | MU30-1202 | MU40-1202 | MU50-12021 | U303-0710 | U303-0710 | U303-0710 | Spacer | 1 |
| **11** | F-NSK51105 | 12117-114 | 12117-114 | F-NSK51310 | F-NSK51310 | F-NSK51310 | Thrust Ball Bearing | 1 |
| **12** | MU30-1104 | MU40-1104 | MU40-1104 | MU50-1104 | MU50-1104 | MU50-1104 | Expansion Screw | 1 |
| **13** | F-NSK6205ZZ | F-NSK6206ZZ | F-NSK6205ZZ | F-NSK6208ZZ | F-NSK6208ZZ | F-NSK6208ZZ | Expansion Screw Bearing | 1 |
| **14** | G-ZL242-1 | G-ZL242-1 | G-ZL242-1 | G-ZL242-1 | G-ZL242-1 | G-ZL242-1 | Handle | 1 |

| Item# | 1612 Part# | 2516 Part# | 4524 Part# | 6512 Part# | 6524 Part# | 6536 Part# | Description | Qty |
|---|---|---|---|---|---|---|---|---|
| **15** | MU30-12111 | MU30-12111 | MU30-12111 | MU30-1211 | MU30-1211 | MU30-1211 | Crank Handle | 1 |
| **16** | DIN-912-M8X80 | DIN-912-M8X100 | DIN-912-M8X100 | DIN-912-M12X110 | DIN-912-M12X110 | DIN-912-M12X110 | M12 Socket Head Cap Screw | 6 |
| **17** | MU30-1203 | MU40-1203 | MU50-12031 | U303-0711 | U303-0711 | U303-0711 | Bearing Holder | 1 |
| **18** | N/A | N/A | N/A | G-AW23 | G-AW23 | G-AW23 | Lockwasher | 2 |
| **19** | N/A | N/A | N/A | U303-1106 | U303-1106 | U303-1106 | Front Bearing Holder | 1 |
| **20** | F-NSK6205ZZ | N/A | N/A | F-NSK6224ZZ | F-NSK6224ZZ | F-NSK6224ZZ | Front Bearing | 1 |
| **21** | N/A | N/A | N/A | U303-1107 | U303-1107 | U303-1107 | Bearing Holder | 1 |
| **22** | MU30-11052 | MU40-1105 | MU50-1105 | U303-0702 | U303-0702 | U303-0702 | Inner Keeper | 1 |
| **23** | MU30-1201 | MU40-1201 | MU50-1201 | A (U303-0701) | A (U503-0701) | A (U903-0701) | Expansion Slide | 1 |
| **24** | MU30-12125 | MU30-1205 | MU50-1205 | B (U303-1203) | B (U503-07031) | B (U903-0703) | Jaw Bracket | 3 |
| **25** | MU40-12101 | MU40-12101 | MU60-12101 | C (U303-1204) | C (U605-1204) | C (905-0702) | Expansion Jaw | 3 |
| **26** | MU30-12064 | MU30-12062 | MU30-1206 | E (U505-0704) | E (U505-07041) | E (U905-0704) | Connecting Link | 12 |
| **27** | MU30-1103 | MU40-1103 | MU50-11031 | F (U303-0604 | F (U503-0604) | F (U903-0604) | Main Shaft | 1 |
| **28** | G-STW20 | G-STW20 | G-STW20 | G-STW20 | G-STW20 | G-STW20 | Pin Retaining Ring | 36 |
| **29** | MU30-12042 | MU30-1204 | MU50-1204 | N/A | N/A | N/A | Mandrel Tie Bar | 4 |
| **30** | MU30-1207 | MU30-1207 | MU30-1207 | N/A | N/A | N/A | Linkage Pin | 16 |
| **31** | MU30-1208 | MU30-1208 | MU30-1208 | N/A | N/A | N/A | Keeper Disc Pin | 8 |
| **32** | 12133-41 | UCF215 | UCF218 | N/A | N/A | N/A | Pillow Block Bearing | 2 |
| **33** | AA | AA | AA | AA | AA | AA | Cabinet | 1 |
| **34** | AB | AB | AB | AB | AB | AB | Motor | 2 |
| **35** | AC | AC | AC | AC | AC | AC | Gearbox | 2 |
| **36** | AD | AD | AD | AD | AD | AD | Torque Limiter | 2 |
| **37** | AE | AE | AE | AE | AE | AE | Upper Sprocket | 2 |
| **38** | AF | AF | AF | AF | AF | AF | Drive Chain | 2 |
| **39** | AG | AG | AG | AG | AG | AG | Cabinet Base | 1 |
| **40** | AH | AH | AH | AH | AH | AH | Lower Cabinet Bearing | 1 |
| **41** | AI | AI | AI | AI | AI | AI | Lower Bearings | 8 |
| **42** | AJ | AJ | AJ | AJ | AJ | AJ | Dancer Arm Clamp | 2 |
| **43** | AK | AK | AK | AK | AK | AK | Potentiometer Bracket | 2 |
| **44** | AL | AL | AL | AL | AL | AL | Potentiometer Shaft | 2 |
| **45** | AM | AM | AM | AM | AM | AM | Bearing Block | 2 |
| **46** | AN | AN | AN | AN | AN | AN | Potentiometer | 2 |
| **47** | AO | AO | AO | AO | AO | AO | Upper Timing Sheave | 2 |

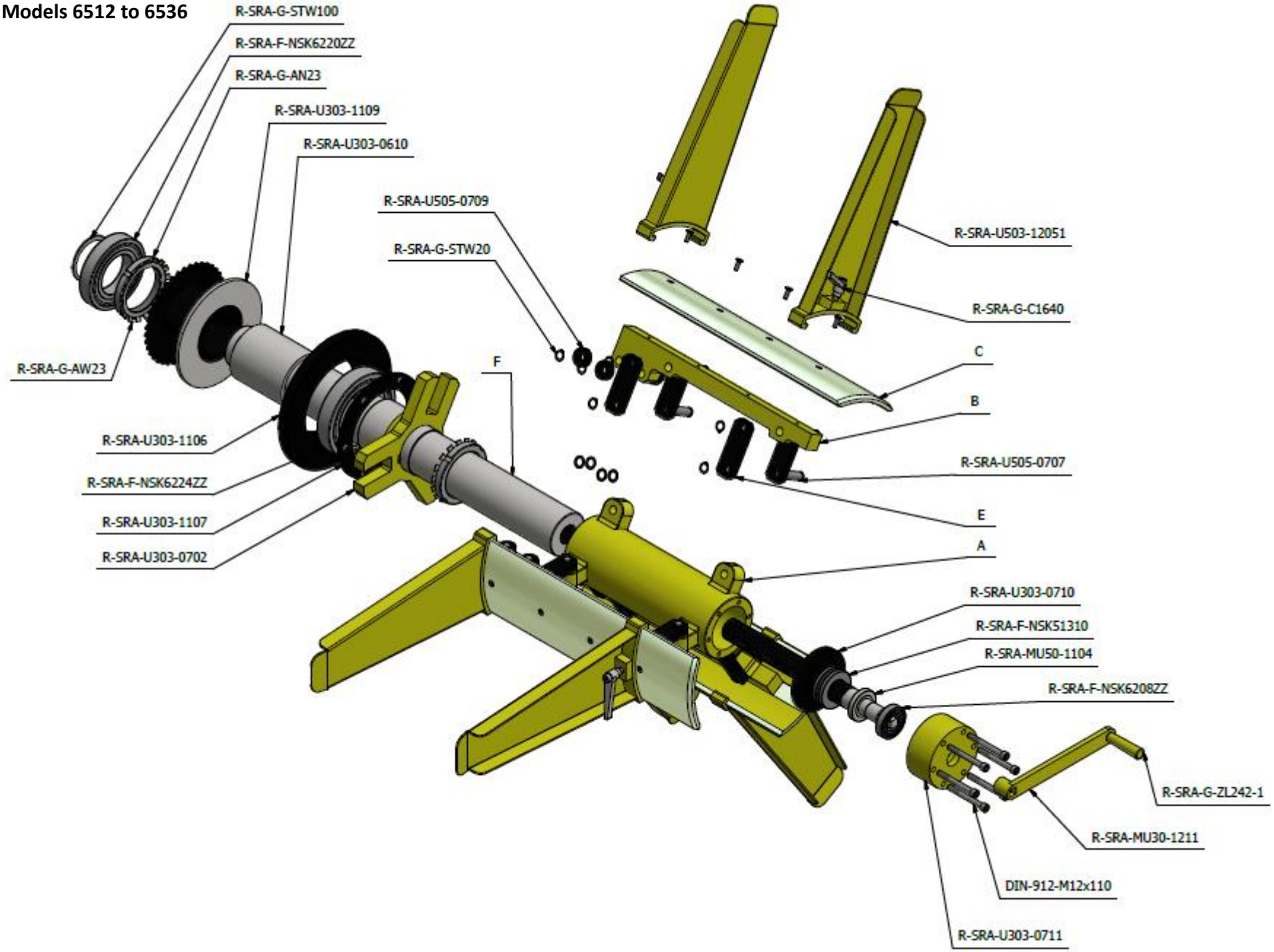
| Item# | 1612 Part# | 2516 Part# | 4524 Part# | 6512 Part# | 6524 Part# | 6536 Part# | Description | Qty |
|---|---|---|---|---|---|---|---|---|
| **50** | AP | AP | AP | AP | AP | AP | Lower Timing Sheave | 2 |
| **51** | AQ | AQ | AQ | AQ | AQ | AQ | Timing Belt | 2 |
| **52** | AR | AR | AR | AR | AR | AR | Dancer Arm Rod | 2 |
| **53** | AS | AS | AS | AS | AS | AS | Collar Clamp | 4 |
| **54** | AT | AT | AT | AT | AT | AT | Dancer Arm Roller | 2 |
| **55** | AU | AU | AU | AU | AU | AU | Pedal | 1 |
| **56** | AV | AV | AV | AV | AV | AV | Pin | 1 |
| **57** | AW | AW | AW | AW | AW | AW | Spring | 1 |
| **58** | N/A | AX | AX | AX | AX | AX | Brake Assembly | 2 |
| **59** | AY | AY | AY | AY | AY | AY | Brake Bracket | 2 |
| **60** | AZ | AZ | AZ | AZ | AZ | AZ | Brake Disc | 2 |
| **61** | N/A | BA | BA | BA | BA | BA | Cover | 2 |
| **62** | N/A | BB | BB | BB | BB | BB | Pneumatic Clutch | 2 |
| **63** | N/A | BC | BC | BC | BC | BC | Stop Block | 1 |
| **64** | N/A | BD | BD | BD | BD | BD | Solenoid Valve | 4 |
| **65** | N/A | BE | BE | BE | BE | BE | Pedal Pivot Block | 1 |
| **66** | N/A | BF | BF | BF | BF | BF | Air Regulator | 1 |
| **67** | N/A | BG | BG | BG | BG | BG | Upper Taper Bearing | 1 |
| **68** | N/A | BH | BH | BH | BH | BH | Lower Taper Bearing | 1 |
| **69** | N/A | BI | BI | BI | BI | BI | Washer | 1 |
| **70** | N/A | BJ | BJ | BJ | BJ | BJ | Linear Bearing | 2 |
| **71** | N/A | BK | BK | BK | BK | BK | Lower Sprocket | 2 |
| **72** | N/A | BL | BL | BL | BL | BL | Clamp Collar | 1 |
| **73** | N/A | BM | BM | BM | BM | BM | Pedal Pivot Block | 1 |
| **74** | N/A | BN | BN | BN | BN | BN | Turret Body | 1 |
| **75** | N/A | BO | BO | BO | BO | BO | Lower Sprocket | 2 |
| **76** | N/A | BP | BP | BP | BP | BP | Motor Bracket | 2 |
| **77** | N/A | BQ | BQ | BQ | BQ | BQ | Slotted Shaft Nut | 2 |
| **78** | N/A | BR | BR | BR | BR | BR | Spacer Brake | 2 |
| **79** | BS | BS | BS | BS | BS | BS | Pneumatic Brake | 2 |
| **80** | N/A | BT | BT | BT | BT | BT | Drag Brake Bracket | 2 |

## 5.3 Overall Dimensions & Drawings

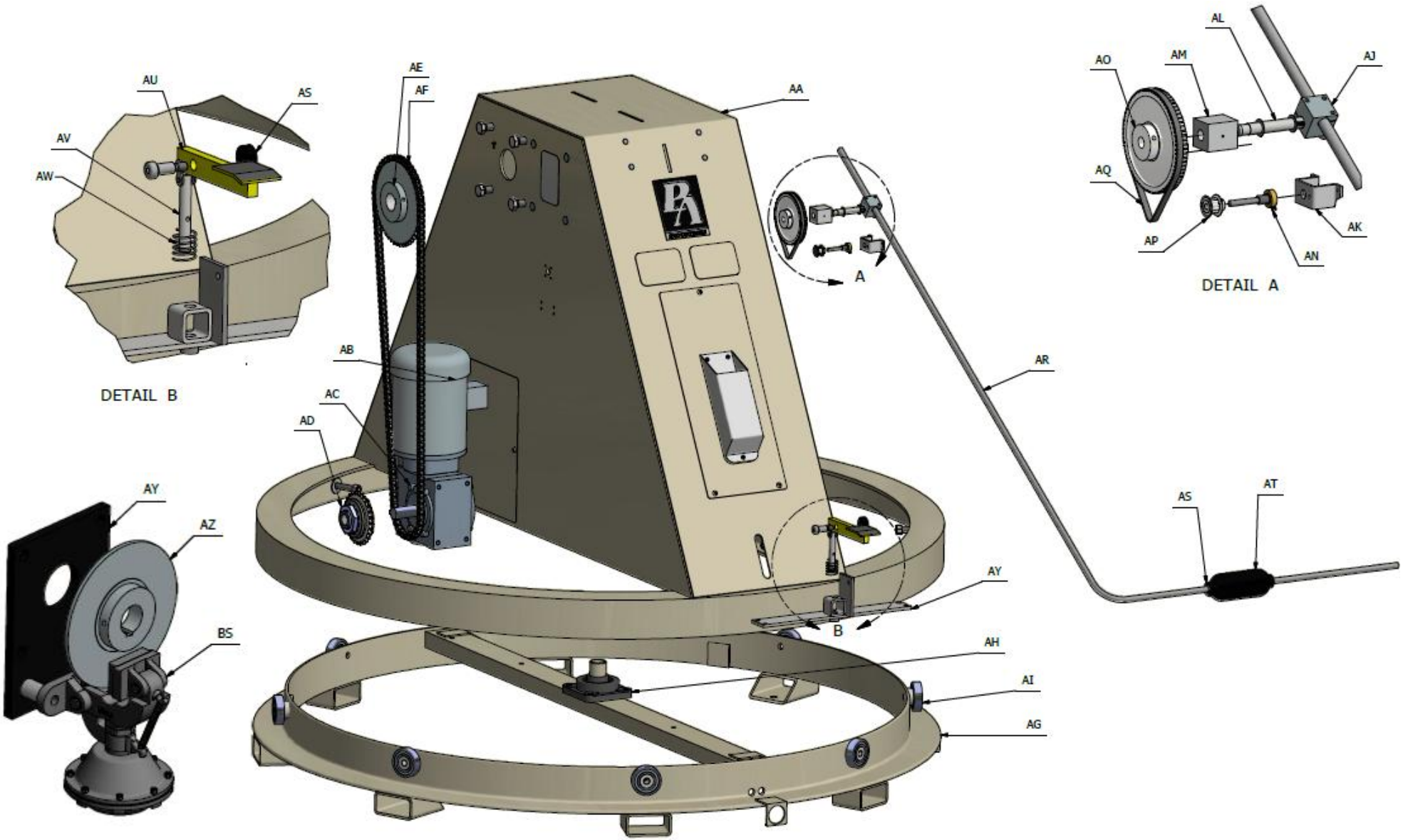
**Models 1612 to 4524**



**Models 6512 to 6536**

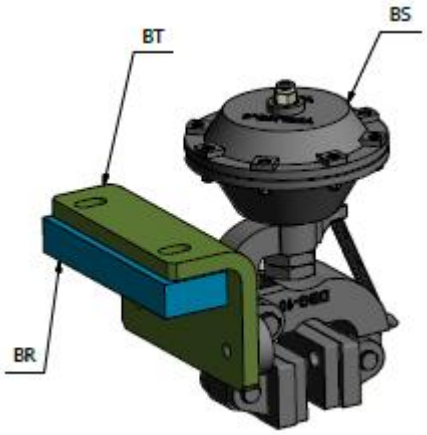


**Model 1612**

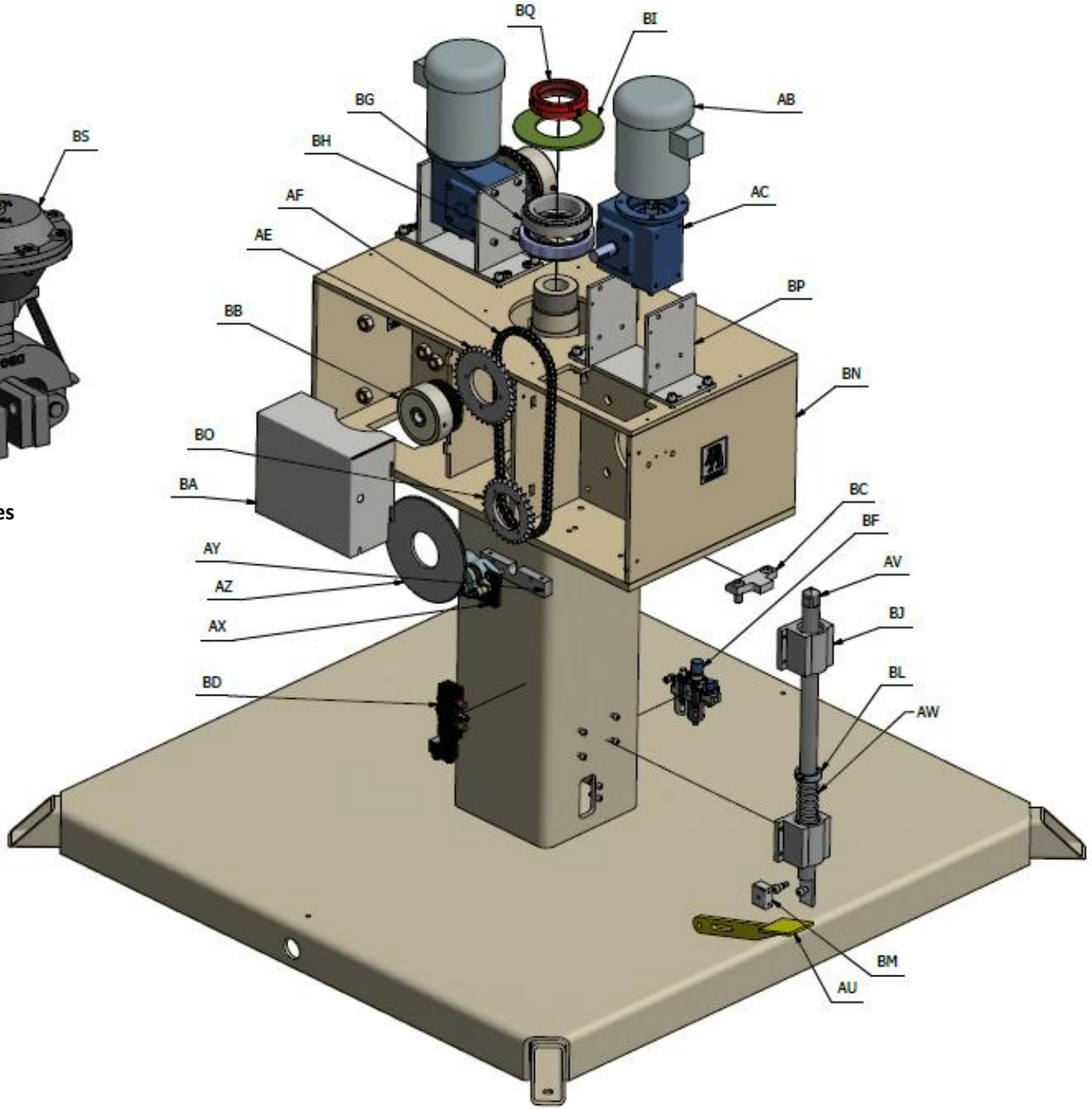



**For Drag Brake Assemblies**

**Model 2516 to 6536**




**For Drag Brake Assemblies**



## 5.4 VFD Status / Warning Messages

| Status / Warning | | Cause | Solution |
|---|---|---|---|
| **bF** | Drive ID Warning | The Drive ID (P502) stored on the EPM does not match the drive model | Verify motor data (P302-306) and perform Auto Calibration, Set drive mode (P300) to 0 or 1, Reset the drive (P199 to 3 or 4)and reprogram |
| **CAL** | Motor Auto Calibration | Refer to P300, 399 | Motor Auto-Calibration is being performed |
| **cE** | An EPM that contains valid data from a previous software version has been installed | An attempt was made to change parameter settings | Parameter settings can only be changed after the EPM data is converted to the current version (P199 = 5) |
| **CL** | Current Limit (P171) reached | Motor Overload | Increase P171, Verify drive/motor are proper size for application |
| **dEC** | Decel Override | The drive has stopped decelerating to avoid tripping into HF fault, due to excessive motor regen (2 seconds max) | If the drive trips to HF fault: Increase P105, P126, Install Dynamic Braking option |
| **Err** | Error | Invalid data was entered, or an invalid command was attempted | |
| **FCL** | Fast Current Limit | Overload | Verify drive/motor are proper size for application |
| **GE** | OEM Settings Operation Warning | An attempt was made to change parameter settings while the drive is operating in OEM settings mode | In OEM Settings mode (P199 = 1), making changes to parameters is not permitted |
| **GF** | OEM Defaults Data Warning | An attempt was made to use (or reset to) the OEM default settings (P199 = 1 or 2) using an EPM without valid OEM data | Install EPM containing valid OEM Defaults data |
| **LC** | Fault Lockout | The drive attempted 5 starts after a fault but all attempts we unsuccessful (P110 = 3-6) | Drive requires manual reset, Check fault history (P500) and correct the fault condition |
| **F_AF** | High Temperature fault | Drive is too hot inside | Reduce drive load, Improve cooling |
| **F_AL** | Assertion Level fault | Assertion Level switch is changed during operation, P120 is changed during operation, P100 or P121-P124 are set to a value other than 0 and P120 does not match the Assertion Level switch | Make sure the Assertion Level switch and P120 are both se for the type of input devices being used prior to setting P100 or P121-P124. Refer to 3.2.3 and P120 |
| **F_bF** | Personality fault | Drive Hardware | Cycle Power, Power down and install EPM with valid data, Reset the drive back to defaults (P199 = 3 or 4) and then re-program, If the problem persists, contact factory technical support |
| **F_CF** | Control fault | An EPM has been installed that is either blank or corrupted | |
| **F_cF** | Incompatible EPM fault | An EPM has been installed that contains data from an incompatible parameter version | |

| | | | |
|---|---|---|---|
| **F_cFt** | Forced Translation fault | An EPM from an old drive put into a new drive | Press [M] (mode button) twice to reset |
| **F_dbF** | Dynamic Braking fault | Dynamic braking resistors are overheating | Increase active decel time (P105, P126, P127), Check main voltage and P107 |
| **F_EF** | External fault | P121-P124 = 21 and that digital input has been opened, P121-P124 = 22 and that digital input has been closed | Correct the external fault condition, Make sure digital input is set properly for NC or NO circuit |
| **F_F1** | EPM fault | EPM missing or defective | Power down and replace EPM |
| **F_Fnr** | Control Configuration fault | The drive is setup for REMOTE KEYPAD control (P100 = 2 or 5) but is not set up for network communication | Set P400 = 1 or P600 = 1 |
| | | 4-20mA signal (at TB-25) drops below the value set in P164 | Set P400 or P600 to a valid network communications protocol selection |
| **F_GF** | OEM Defaults data fault | Drive is powered up with P199 = 1 and OEM settings in the EPM are not valid | Install an EPM containing valid OEM defaults data or change P199 to 0 |
| **F_HF** | High DC Bus Voltage fault | Mains voltage is too high | Check main voltage and P107 |
| | | Decel time is too short, or too much regen from the motor | Increase decel time (P105, P126, P127) or install Dynamic Braking option |
| **F_IL** | Digital Input Configuration fault (P121-P124) | More than one digital input set for the same function | Each setting can only be used once (except setting 0 and 3) |
| | | Only one digital input configured for MOP function (up, Down) | One input must be set to MOP up, another must be set to MOP down |
| | | PID mode is entered with set point reference and feedback source set to the same analog signal | Change PID set point reference (P121-P124 or feedback source (P201) |
| | | One of the digital inputs (P121-P124) is set to 10 and another is set to 11-14 | Reconfigure digital inputs |
| | | One of the digital inputs (P121-P124) is set to 11 or 12 and another is set to 13-14 | |
| | | PID enabled in Vector Torque mode (P200 = 1 or 2 and P300 = 5) | PID cannot be used in Vector Torque mode |
| **F_LF** | Low DC Bus Voltage fault | Main voltage is too low | Check main voltage |
| **F_nId** | No Motor ID fault | An attempt was made to start the drive in Vector or Enhanced V/Hz mode prior to performing the Motor Auto-Calibration | Refer to parameters P300-P399 for Drive Mode setup and calibration |
| **F_OF** | Output fault: Transistor fault | Output short circuit | Check motor/motor cable |
| | | Acceleration time too short | Increase P104, P125 |
| | | Severe motor overload due to: Mechanical problem, Drive/motor too small for application | Check machine/system, Verify drive/motor are proper size for application |
| | | Boost values too high | Decrease P168, P169 |

| | | | |
|---|---|---|---|
| | | Excessive capacitive charging current of the motor cable | Use shorter motor cables with lower charging current, Use low capacitance motor cables, Install reactor between motor and drive |
| | | Failed output transistor | Contact factory for technical support |
| **F_OF1** | Output fault: Ground fault | Grounded motor phase | Check motor cable |
| | | Excessive capacitive charging current of the motor cable | Use shorter motor cables with lover charging current |
| **F_PF** | Motor Overload fault | Excessive motor load for too long | Verify proper setting of P108, Verify drive and motor are proper size for application |
| **F_rF** | Flying Restart fault | Controller was unable to synchronize with the motor during restart attempt; (P110 = 5 or 6) | Check motor/load |
| **F_SF** | Single-Phase fault | A line phase has been lost | Check line phases / voltage |
| **F_UF** | Start fault | Start command was present when power was applied (P110 = 0 or 2) | Must wait at least 2 seconds after power-up to apply Start command, Consider alternate starting method (P110) |
| **F_FAU** | TB5 (0-10V signal) Threshold fault | 0-10V signal (at TB5)drops below the value set in P158 | Check signal/signal wire, Refer to parameter P157 and P158 |