

## **700APD Power Drive**

The REED 700APD Power Drive is a portable, pneumatic-motor-driven, heavy-duty power drive which provides power for threading pipe and conduit up to 2" (50 mm) in diameter.

- Automate the pipe threading process
- Dropheads available separately in sizes from 1/2" to 2".

700V Safety Arm (#05275) sold separately.



#### WARNING!

READ AND UNDERSTAND ALL INSTRUCTIONS.
FAILURE TO FOLLOW ALL INSTRUCTION LISTED
INSIDE MAY RESULT IN ELECTRIC SHOCK, FIRE,
AND/OR SERIOUS PERSONAL INJURY.

# SAVE THESE INSTRUCTIONS!

**REED MANUFACTURING COMPANY** 

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#### **WORK AREA**

- Keep your work area clean and well lit. Cluttered benches and dark areas invite accidents.
- Keep bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

#### **PERSONAL SAFETY**

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.
  - A moment of inattention while operating power tools may result in serious personal injury.
- Dress properly. Do not wear loose clothing or jewelry.
   Contain long hair. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.
- 3. Avoid accidental starting. Be sure valve is in the neutral position and deadman switch is off before turning on air supply. Carrying tools with a finger on the switch or Energizing tools that have the switch ON invites accidents.
- 4. Remove adjusting keys or wrenches before turning on the tool. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
- **6. Use safety equipment. Always wear eye and hearing protection.** Dust mask, non-skid safety shoes, hard hat must be used for appropriate conditions.

#### **TOOL USE AND CARE**

- Use clamps or other practical methods to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
- Do not force the tool. Use the correct tool for your application.
  - The correct tool will do the job better and safer at the rate for which it is designed.
- 3. Do not use the tool if switch does not turn it ON or OFF.

  Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- 4. Disconnect the air supply from the power source before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
- Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
- 6. Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.
- 7. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- 8. Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may become hazardous when used on another tool.

#### **SERVICE**

- Tool service must be performed only by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.
- When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

#### **SPECIFIC SAFETY RULES**

The Operator's Manual contains specific safety information and instructions for your protection against serious injuries including:

- Loss of fingers, hands, arms or other body parts if clothing or gloves get caught in moving parts.
- Impact injuries, including broken bones if machine tips over or workpiece falls.
- Eye injuries, including being blinded by the workpiece or workpiece chips.

Read and follow the safety labels on the machine. Know the location and functions of all controls before using the tool.

#### **Switch Safety**

The DEADMAN SWITCH is for your safety. It lets you shut off the motor by removing your fingers. If clothing should become caught in the tool, it will continue to wind up. Because this tool has high torque, the clothing itself can bind around your arm or other body parts with enough force to crush or break bones.



WARNING: CLOTHING/GLOVES CAN BE CAUGHT IN MOVING PARTS. FINGERS, HANDS, ARMS OR OTHER BODY PARTS CAN BE CRUSHED OR BROKEN.

- · Do not wear gloves.
- · Keep sleeves and jackets buttoned.
- · Keep switch in working order.
- · Use safety arm when threading.

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#### **TOOL SAFETY**

- The POWER DRIVE is made to thread pipe. Follow instructions in this Operator's Manual on tool use. Other uses may increase the risk of injury.
- Secure POWER DRIVE using the 700V optional safety arm (#05275). Do not use this POWER DRIVE without the safety arm. The safety arm resists torque developed during threading and prevents losing control of the tool.
- **3. Do not use dull or damaged dies.** Sharp cutting tools are less likely to bind and tool is easier to control

#### **FUNCTIONAL DESCRIPTION**

The REED 700APD Power Drive is an pneumatic-motor-driven, heavy-duty power drive which provides power for threading pipe and conduit up to 2" in diameter. The 700APD is able to drive geared threaders, tapping machines, or other equipment.

### SPECIFICATIONS / STANDARD EQUIPMENT Threading Capacity

Pipe and Conduit: 1/8" through 2" right hand threads only.

#### Motor, Gears, Speed

- · Pneumatic, 4 HP motor. 28 RPM, up to 400 lb-ft torque
- Deadman switch, spring return to OFF position.
- Forward, neutral and reverse directional valve.
- Spur gear reduction, bearing mounted shafts, gears packed in grease.
- · Spring-loaded adapter pawls.
- · Gear case is cast aluminum. Handle is cast aluminum.
- · Machine weight: 46 lbs (20.9 kg).
- The 700V safety arm (standard) is highly recommended for operation to absorb power drive torque.
- Safety Arm weight: 7 lbs (3.2 kg). Safety Arm is ductile iron and steel

#### **Auxilary Equipment Required:**

Air compressor capable of sustaining 80 SCFM @ 90 psi., 2.4 cu. m/min @ 6.2 Bar.

Hoses equipped with compatible fittings. Fittings should be a full bore type to maximize motor speed.

## **USE A FILTER-REGULATOR-LUBRICATOR (FRL) UNIT** not included. Reed recommends FRL #97591.

**NOTE:** It is imperative that a filter, regulator, lubricator be employed when running the 700APD Pneumatic Power Drive. The air should be clean, dry, and lubricated to maximize motor life and performance.

#### **USE NONFLUID OIL® AIR LUBRICANT.**

This product mixes with water inside the line and via the lubricator is introduced as a mist in the air stream to provide lubrication fairly quickly. Set the Oiler drip on the lubricator to 3-4 drops per minute. Nonfluid lubricating oil is sold by the quart from Reed as UPOIL #97583.

#### **OPERATION**

For threading with drophead die heads only, such as Reed R12+ Dropheads with R12+ Segmental Dies.

WARNING: OPERATOR SHOULD BE THOROUGHLY FAMILIAR WITH SAFETY INFORMATION BEFORE ATTEMPTING TO OPERATE THIS EQUIPMENT. See Figures 1-5.

- Push die heads, small end first, squarely into power drive opening until spring-loaded adapter pawls catch securely.
   NOTE: Installation can be on either side of face gear.
- 2. Secure pipe in portable tripod or bench vise, if available.

WARNING: WHEN THREADING ANY SIZE PIPE, THE 700V OPTIONAL SAFETY ARM SHOULD ALWAYS BE USED AND SECURELY LOCKED ON PIPE BECAUSE OF TORQUE DEVELOPED DURING THREADING.

- 3. Ensure at least 6" (150 mm) of exposed pipe end. Position 700V safety arm between 4" (100 mm) and 7" (180 mm) from the end of the pipe so the end of the guide bar is 1" (25 mm) to 4" (100 mm) beyond the end of the pipe. Clamp the safety arm securely onto the pipe. When threading 1 1/2" and 2" pipe, it is best to place the safety arm just 4" (100 mm) from the end of the pipe for firmest control of higher torque.
- Place die head over end of pipe. Make sure power drive is correctly positioned on support arm. For right hand threads, die head should rotate clockwise (looking at face of die head).

**NOTE:** During threading, apply plenty of REED Threadguard cutting oil to dies.

- Simultaneously actuate deadman switch and exert pressure against die head with palm of free hand to make sure thread is started.
- 6. Keep deadman switch depressed until end of pipe is even with edge of chaser, then release deadman switch.

# WARNING: HOLD ON TO POWER DRIVE HANDLE FIRMLY TO RESIST INITIAL TORQUE WHILE BACKING OFF DIE HEAD.

- After completion of the thread, and after the motor has stopped, actuate the directional valve in the reverse direction.
- 8. When dies clear the end of the pipe, grip handle on top of the power drive and remove the power drive from the pipe. Release the safety arm and remove it as well.

#### **MAINTENANCE**

WARNING: ALWAYS DISCONNECT AIR SUPPLY BEFORE SERVICING POWER DRIVE.

**NOTE:** If any maintenance is required, take power drive to an authorized REED warranty repair center or return to factory.

#### Lubrication

Gearing has been greased at the factory and does not require additional grease. It is best to blow dust off the machine after work is over.

#### R12+ HSS Segmental Dies & Dropheads

#### **R12+ SEGMENTAL DIES**

#### Cat. No. Item Code Std. Pkg. Size 1/2" NPT R12DN1/2 05606 R12DN3/4 05608 3/4" NPT 4 1" NPT R12DN1 05610 R12DN1 1/4 05612 1 1/4" NPT R12DN1 1/2 05614 1 1/2" NPT R12DN2 05616 2" NPT

#### **R12+ DROPHEADS**

| Cat. No.      | Item Code | Size       |
|---------------|-----------|------------|
| DHR121/2NPT   | 05626     | 1/2" NPT   |
| DHR123/4NPT   | 05628     | 3/4" NPT   |
| DHR121NPT     | 05630     | 1" NPT     |
| DHR121 1/4NPT | 05632     | 1 1/4" NPT |
| DHR121 1/2NPT | 05634     | 1 1/2" NPT |
| DHR122NPT     | 05636     | 2" NPT     |

#### **R12+ THREADER SETS**

Find R12+ Threader Sets in the Reed catalog or www.reedmfgco.com.

#### 700APD Set-up and Operation



Fig. 1 700PD



Fig. 2 Inserting R12+ Drophead

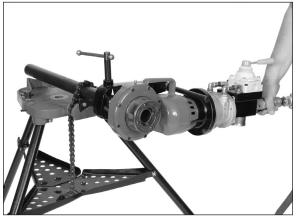


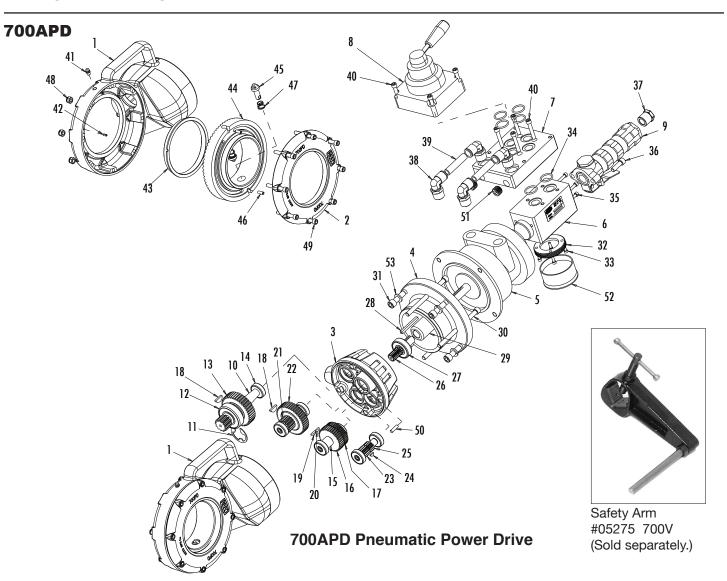
Fig. 3 Set Up for Threading



Fig. 4 Threading 2" Pipe



Fig. 5 Rod on black safety arm helps resist the threading torque to protect the operator.



|         |                       |           | Part      | s List  | t         |
|---------|-----------------------|-----------|-----------|---------|-----------|
| Ref. No | . Description         | Item Code | Qty. Used | Ref. No | . De      |
| 1       | GEAR CASE             | 98800     | 1         | 27      | BAL       |
| 2       | COVER PLATE           | 98804     | 1         | 28      |           |
| 3       | FAN HOUSING           | 98801     | 1         | 29      |           |
| 4       | AIR MOTOR ADAPTER     | 95010     | 1         | 30      | SHCS      |
| 5       | AIR MOTOR             | 47710     | 1         | 31      | SHCS      |
| 6       | INTAKE BLOCK          | 95007     | 1         | 32      | MUFF      |
| 7       | MANIFOLD              | 95006     | 1         | 33      | SHC       |
| 8       | 3 WAY VALVE           | 37757     | 1         | 34      | O-I       |
| 9       | LEVER HANDLE, DEADMAN | 47683     | 1         | 35      | SHC       |
| 10      | SHAFT 4               | 98817     | 1         | 36      | SHC       |
| 11      | RETAINING RING        | 38856     | 1         | 37      | В         |
| 12      | BALL BEARING          | 98845     | 1         | 38      | 90 TU     |
| 13      | SPUR GEAR             | 98818     | 1         | 39      | TUBE (    |
| 14      | BALL BEARING          | 98846     | 7         | 40      | SHCS      |
| 15      | SHAFT                 | 98822     | 1         | 41      | GREA      |
| 16      | SPUR GEAR             | 98812     | 1         | 42      | SPRING F  |
| 17      | SPUR GEAR             | 98809     | 1         | 43      | FAC       |
| 18      | GEAR KEY              | 48816     | 2         | 44      | FA        |
| 19      | GEAR KEY              | 48810     | 1         | 45      |           |
| 20      | GEAR KEY              | 48807     | 1         | 46      | SPRING F  |
| 21      | SHAFT 3               | 98814     | 1         | 47      | PAV       |
| 22      | SPUR GEAR             | 98815     | 1         | 48      | NYLO      |
| 23      | SPUR GEAR             | 98824     | 1         | 49      | SHCS      |
| 24      | GEAR KEY              | 48819     | 1         | 50      | DOWEL P   |
| 25      | GEAR SHAFT            | 98823     | 1         | 51      | PIPE PLUG |
| 26      | DRIVE GEAR            | 95001     | 1         | 52      | MOTO      |
|         |                       |           |           |         |           |

| Ref. No | Description               | Item Code | Qty. Used |
|---------|---------------------------|-----------|-----------|
| 27      | BALL BEARING              | 98855     | 1         |
| 28      | KEY                       | 95015     | 1         |
| 29      | SLEEVE                    | 95002     | 1         |
| 30      | SHCS 5/16-18X4-1/2        | 30260     | 4         |
| 31      | SHCS 3/8-16X1-1/4         | 35411     | 4         |
| 32      | MUFFLER MOUNT             | 95016     | 1         |
| 33      | SHCS #8-32X1/2            | 30239     | 4         |
| 34      | O-RING #117               | 37759     | 6         |
| 35      | SHCS #10-32X4             | 30258     | 3         |
| 36      | SHCS 5/16-18X1            | 30257     | 2         |
| 37      | BUSHING                   | 37727     | 1         |
| 38      | 90 TUBE FITTING           | 37756     | 4         |
| 39      | TUBE (CUT @ ASS'Y)        | 95014     | 2         |
| 40      | SHCS 1/4-20X1-1/2         | 30256     | 8         |
| 41      | GREASE FITTING            | 40338     | 1         |
| 42      | SPRING PIN 1/8DIA X 5/16  | 38857     | 1         |
| 43      | FACE BEARING              | 98806     | 1         |
| 44      | FACE GEAR                 | 98805     | 1         |
| 45      | PAWL                      | 98837     | 2         |
| 46      | SPRING PIN 3/16 DIA X 1/2 | 38835     | 2         |
| 47      | PAWL SPRING               | 98836     | 2         |
| 48      | NYLOC NUT 1/4-20          | 30108     | 8         |
| 49      | SHCS 1/4-20X1-3/4         | 38838     | 8         |
| 50      | DOWEL PIN .205 DIA X 3/4  | 48847     | 1         |
| 51      | PIPE PLUG 3/8 NPT SOCKET  | Г 37726   | 2         |
| 52      | MOTOR MUFFLER             | 47711     | 1         |
| 53      | LOCK WASHER               | 30033     | 4         |
|         |                           |           |           |



#### **Reed Limited Warranty**

REED will repair or replace tools with any defects due to faulty materials or workmanship for one (1) year or five (5) years from the date of purchase, as applicable. This warranty does not cover part failure due to tool abuse, misuse, or damage caused where repairs or modifications have been made or attempted by non REED authorized repair technicians. This warranty applies only to REED tools and does not apply to accessories. This warranty applies exclusively to the original purchaser.

One (1) year warranty: Power units for pneumatic, electric, hydraulic and battery-powered tools have a one year warranty. This includes, but is not limited to REED pumps, universal pipe cutter motors, power drives, power bevel tools, threading machines, cordless batteries and chargers.

**Five (5) year warranty:** Any REED tool not specified under the one (1) year warranty above is warrantied under the REED five (5) year warranty.

NO PARTY IS AUTHORIZED TO EXTEND ANY OTHER WARRANTY. NO WARRANTY FOR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY.

No warranty claims will be allowed unless the product in question is received freight prepaid at the REED factory. All warranty claims are limited to repair or replacement, at the option of REED, at no charge to the customer. REED is not liable for any damage of any sort, including incidental and consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary by state, province or country.

**Warranty Effective December 1, 2018** 



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