

# OPERATOR'S MANUAL

# NP322XXXXR8-XX

## INCLUDING: OPERATION, INSTALLATION AND MAINTENANCE.

INCLUDE MANUALS: NM2322X-XX-XXX Extrusion Pump (PN 97999-755), 66731-X Follower Assembly (PN 97999-213), 67347-X Follower Assembly (PN 97999-1102), 67486-X Follower Assembly (PN 97999-1809), 67487-X Follower Assembly (PN 97999-1810), RM052S-X Two Post Lift / Ram (PN 97999-1345), and S-636 General Information (PN 97999-636).

RELEASED: 12-10-08

REVISED: 9-18-20

(REV: E)

**3" AIR MOTOR**

**22:1 RATIO**

**3" STROKE**

## NP322XXXXR8-XX EXTRUSION SYSTEM

For use with 5 gallon / 20 liter drums (tapered or straight)



### READ THIS MANUAL CAREFULLY BEFORE INSTALLING, OPERATING OR SERVICING THIS EQUIPMENT.

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.

### SERVICE KITS

- Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.
- **104217** for repair of P39124-120 filter / regulator.
- **104453** for repair of P39344-110 filter / regulator.
- **637290-X43** for repair of 67100-X43 lower pump end.
- **637290-X48** for repair of 67100-X48 lower pump end.
- **637291-X43** for repair of 67101-X43 lower pump end.
- **637291-X48** for repair of 67101-X48 lower pump end.
- **637316** for repair of 66915 air motor.
- **637466** for repair of lift / ram seals.

### MODEL DESCRIPTION CHART

NP 3 22 X XXX R8 - XX	
<b>Air Motor Size</b> 3 - 3"	
<b>Pump Ratio</b> 22 - 22:1	
<b>Check Type / Wetted Materials</b> E - Chop-Check / Carbon Steel F - Chop-Check / Stainless Steel	
<b>Lower Pump End Options</b> Refer to pump model operator's manual	
<b>Ram Style</b> R8 - Two Post, 5 gallon	
<b>Follower Assembly</b>	
10 - 67486-1	22 - 66731-2
11 - 67486-2	30 - 67347-1
12 - 67486-3	31 - 67347-2
13 - 67487-1	40 - 67347-11
20 - 66731	41 - 67347-12
21 - 66731-1	50 - 67486-4

### NP322XXXXR8-XX EXTRUSION SYSTEM

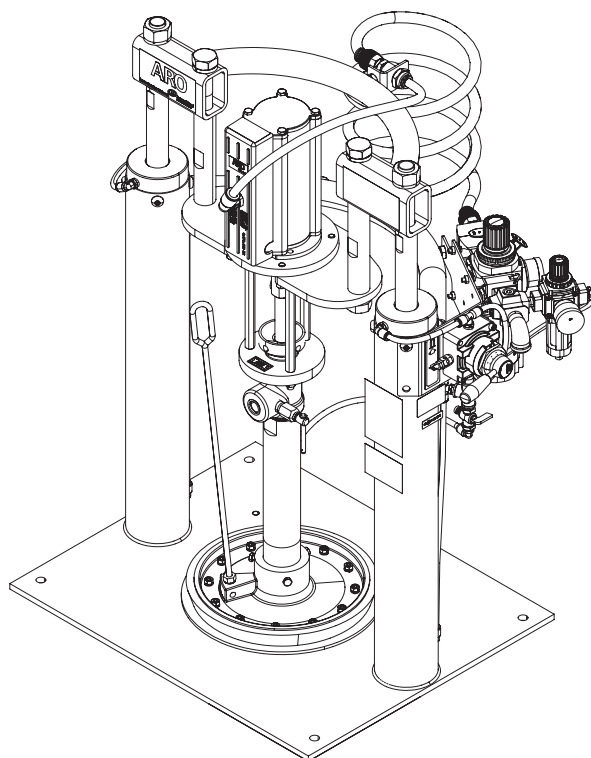


Figure 1

### GENERAL DESCRIPTION

By delivering a smooth, continuous bead of the proper size, an ARO system helps the operator maintain both production rate and produce high quality standards. Maintained quality standards assures that the material benefits are realized. To further maximize operator production time, the ARO system has a built-in lift / ram feature for quick and easy drum changeover and easy lifting of the pump assembly from the container.

ARO systems are totally enclosed, sealing the material in the system from air and moisture, preventing premature cure-out of the material. This allows for either continuous or intermittent use of the system and allows the need for daily system clean-up.

## INSTALLATION

The NP322XXXXR8-XX Extrusion System comes completely assembled. Remove the unit from the crate and place on a level surface. Install the material hose and dispensing device as required. When the following instructions are observed, heavy paste materi-

als can be pumped directly from their original drum without air inclusion or excessive waste. The follower plate creates an air tight seal as well as clean-wiping action in its progressive downward movement into the drum.

## OPERATING INSTRUCTIONS

### OPERATING INSTRUCTIONS / INITIAL SET-UP PROCEDURE

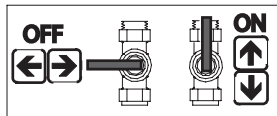
Read the warnings on page 2 of RM052S-X Two Post Lift / Ram Operator's Manual.

**⚠ WARNING** Stand clear when raising or lowering the lift.

### LIFT / RAM, PUMP AND FOLLOWER PLATE AIR CONTROLS

- A - Air inlet (1/2 - 14 NPT)
- B - Lift / ram pressure gauge
- C - Lift / ram air filter / regulator
- D - Follower plate air supply valve
- E - Lift / ram control lever
- F - Pump air filter / regulator
- G - Pump air supply valve
- H - Pump pressure gauge

#### Follower plate air supply valve



97102 Label

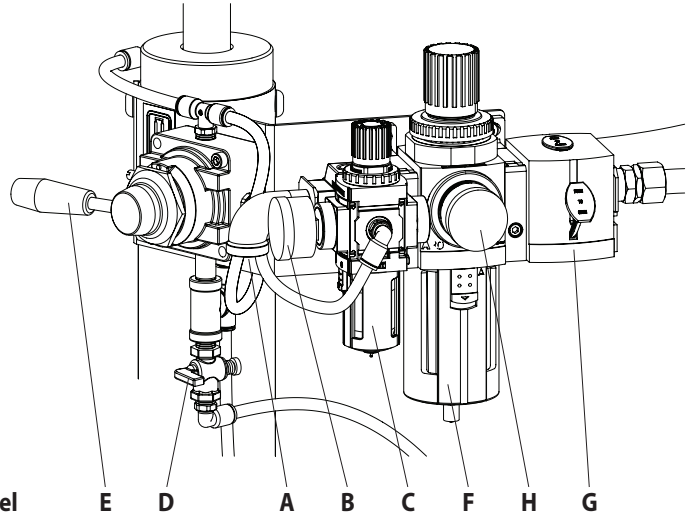


Figure 2

#### TO RAISE THE LIFT, (THE FIRST TIME):

1. Take note of the pump / drum clearance above. Be certain the lift / ram is clear of any objects above. Also, refer to "Operating and Safety Precautions" found on page 2 of RM052S-X Two Post Lift / Ram Operator's Manual.
2. Connect the air supply (125 p.s.i. / 8.6 bar max.) to the air inlet. Adjust the air pressure on the lift / ram pressure regulator (turn the knob clockwise) to 20 p.s.i. (1.4 bar).
3. Shift the control valve lever to the "up" position.
4. Raise the lift / ram high enough to clear the height of the drum. Stop the lift upward travel by moving the control valve lever to the "neutral" (center) position.
5. Once the lift / ram assembly and pump are in the "up" position, place and center an opened drum of material on the lift / ram base.
6. Lubricate the lower follower wiper plate seal with grease.  
**NOTE:** Make certain the grease is compatible with the material being dispensed. This ensures a smooth fit into the drum, as well as prevents curing type compounds from bonding to the seal.
7. Check the vent plug on the follower plate to be sure it easily threads in and out. It is recommended to lubricate the threads of the plug to help prevent possible set-up of the compound at this point (see RM052S-X Operator's Manual).

#### TO LOWER LIFT:

**⚠ WARNING** PINCH HAZARD. Follower can descend quickly, causing injury. Keep hands clear when aligning with container. Read the warnings on page 2 of RM052S-X Two Post Lift / Ram Operator's Manual.

**NOTE:** Be certain the follower plate vent plug has been removed so that the air trapped between the follower and the material is allowed to escape from this vent.

**NOTE:** The lift / ram may hesitate momentarily before starting downward. The air pressure inside the post air chamber must decrease before it will begin to descend.

1. Shift the control valve lever to the "down" position and proceed to lower the pump.
2. Replace the vent plug once the material begins to ooze from the vent opening.
3. The unit is now ready for operation. Open the pump air supply valve. Adjust the air pressure on the pump filter / regulator (turn the pump regulator knob clockwise) until the pump begins to cycle.
4. Trigger the gun to prime the pump with material.

#### TO RAISE LIFT, (NORMAL OPERATION):

1. Close the pump air supply valve.
2. Shift the control valve lever to the "up" position.
3. Raise the lift / ram high enough to clear the height of the drum. Stop the lift upward travel by moving the control valve lever to the "neutral" (center) position.

#### TO CHANGE THE DRUM:

**NOTE:** The control valve lever must be in the "neutral" position and the pump air supply valve should be closed.

1. To avoid damage, DO NOT OVER PRESSURIZE THE DRUM.
2. Open the follower plate air supply valve to allow air under the follower plate.
3. Shift the control valve lever to the "up" position.
4. Place and center a new drum into position. Remove the cover.

## PARTS LIST / NP322XXXXR8-XX

Item	Description (size)	Qty	Part No.
1	<b>Pump Assembly</b>		
	models NP322EX4XR8-XX - carbon steel	(1)	NM2322E-11-X4X
	models NP322FX4XR8-XX - stainless steel	(1)	NM2322F-11-X4X
2	<b>Male Elbow</b> (1/4 - 18 NPT x 1/2" o.d. tube) (included with item 3)	(1)	59756-162
3	<b>Two Post Lift / Ram</b>	(1)	RM052S-C
4	<b>Follower Assembly</b> (see "Model Description Chart", page 1)	(1)	
5	<b>Lock Washer</b> (3/8")	(4)	Y14-616-C
6	<b>Cap Screw</b> (3/8" - 16 x 1-1/4")	(4)	Y6-66-C

Item	Description (size)	Qty	Part No.
7	<b>Screw</b> (7/8" - 14 x 4")	(2)	94009
8	<b>Lock Washer</b> (7/8")	(4)	Y14-875
9	<b>Tie Rod</b>	(2)	97126
10	<b>Mounting Plate</b>	(1)	96737
11	<b>Bolt</b> (7/8" - 14 x 2")	(2)	95145
12	<b>Wet-Sol "Plus"</b> (1 quart) (not shown)	(1)	66333-B

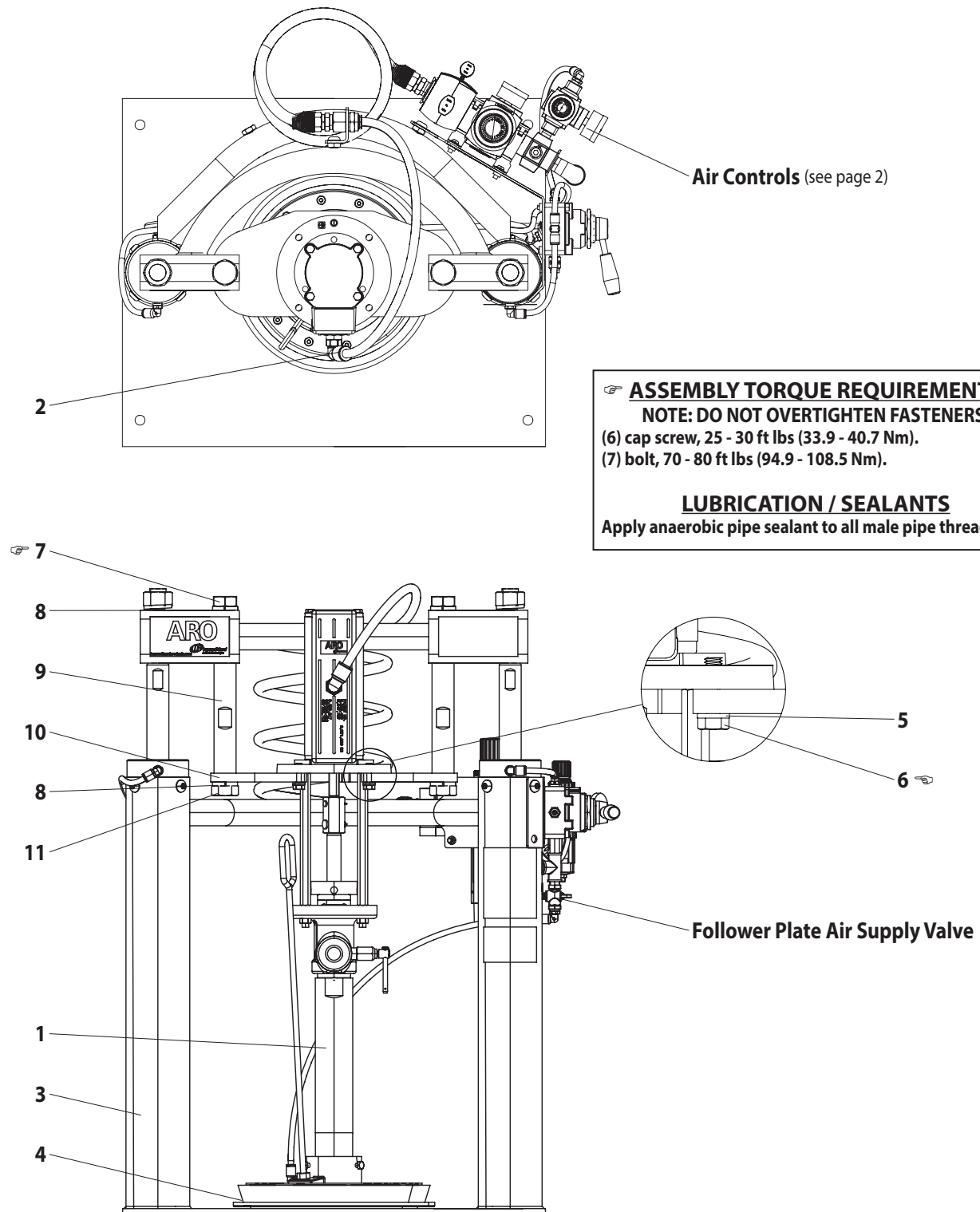


Figure 3

## PARTS LIST / NP322XXXXR8-XX

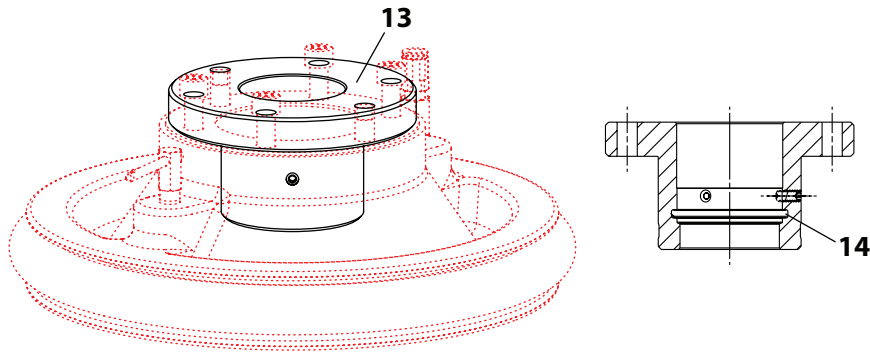


Figure 4

Item	Description	Qty	Part No.	Material
13	Adapter (models NP322XXXXR8-3X only)	(1)	67446	Aluminum
	(models NP322XXXXR8-4X only)	(1)	67447	PTFE Coated Aluminum
14	O Ring	(1)	Y325-227	Nitrile

### MODEL DESCRIPTION / FOLLOWER PLATE OPTIONS

Model	Pump Size	Follower Plate Material	Seal Type	Seal Material	Seal Diameter	Follower ASM
NP322XXXXR8-31	Standard Footprint "A" with 67446 or 67447 adapter	Aluminum	Single Tube	EPR	11.440" (290.6 mm)	67347-2
NP322XXXXR8-30				Nitrile		67347-1
NP322XXXXR8-41		Aluminum with PTFE Coating		EPR		67347-12
NP322XXXXR8-40				Nitrile		67347-11
NP322XXXXR8-11	Slip-On "C"	Carbon Steel, Electroless Nickel Coating	Single Lip	Nitrile / Polyethylene	11.614" (295.0 mm)	67486-2
NP322XXXXR8-10				Polyurethane / Polyethylene	11.437" (290.5 mm)	67486-1
NP322XXXXR8-12				Nitrile / Polyethylene	12.281" (311.9 mm)	67486-3
NP322XXXXR8-50				Polyurethane / Polyethylene	14.500" (368.3 mm)	67486-4
NP322XXXXR8-21			Double Lip	Polyurethane	11.609" (294.9 mm)	66731-1
NP322XXXXR8-22				EPR		66731-2
NP322XXXXR8-20				Nitrile		66731
NP322XXXXR8-13				Stainless Steel	Single Lip	PTFE Coated Nitrile / Polyethylene

### FOLLOWER PLATES

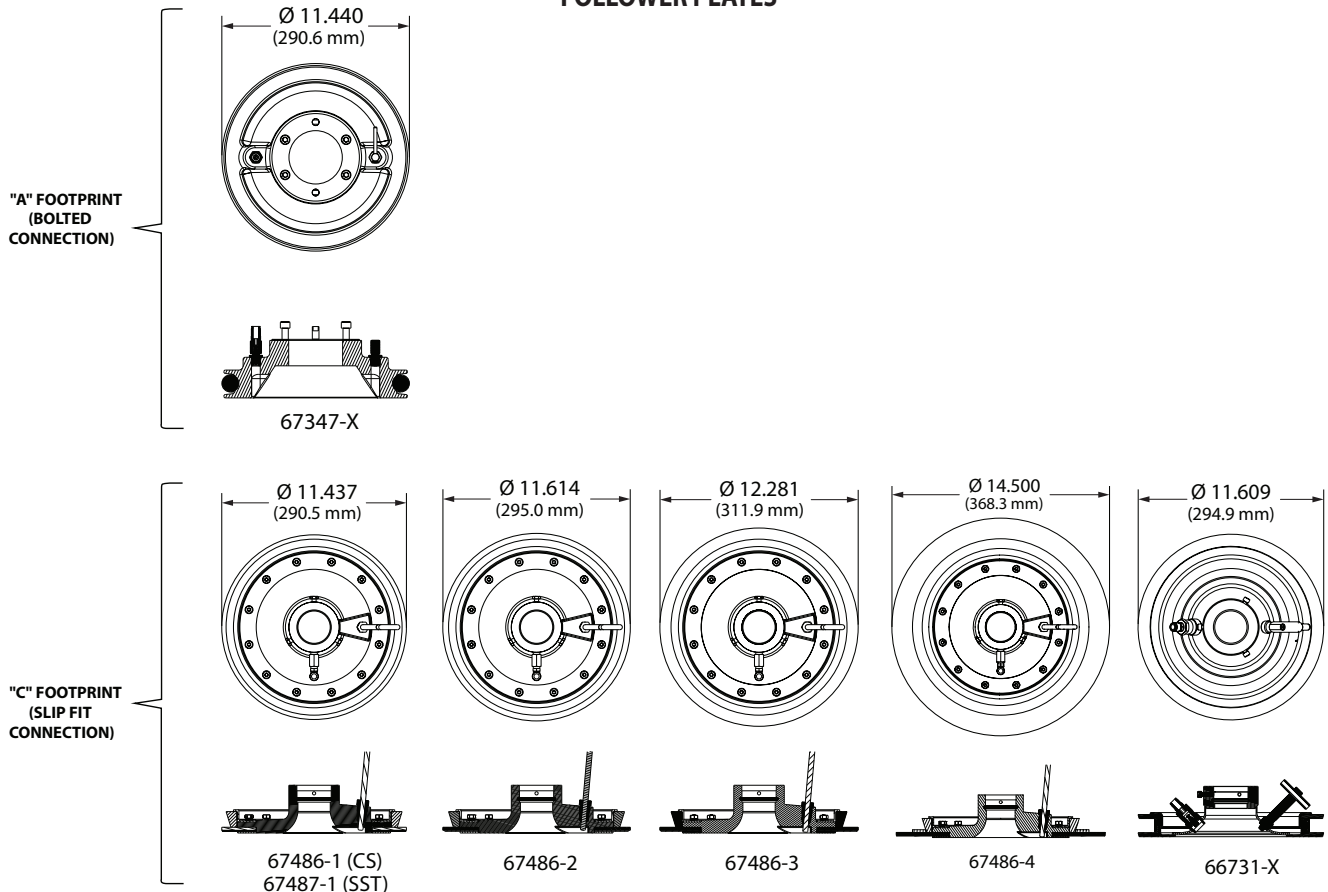


Figure 5

## MODULAR BACKUP RING

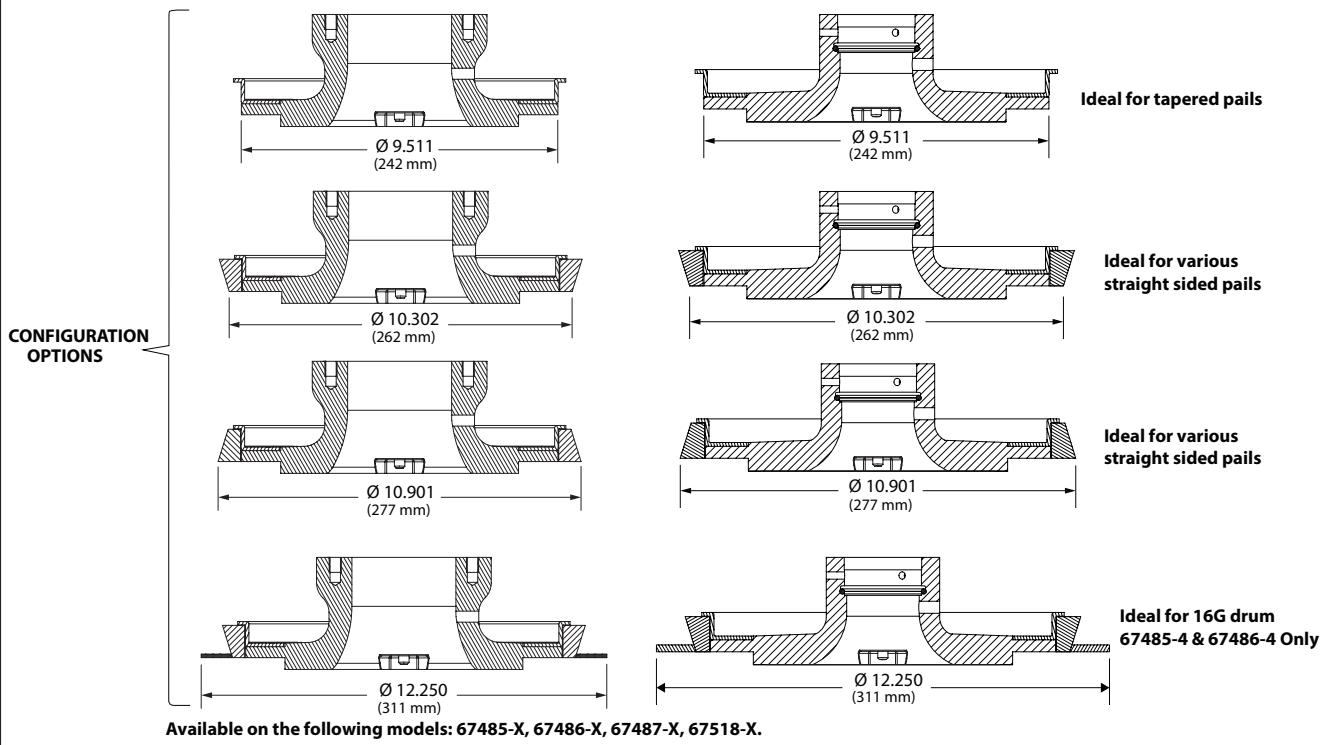


Figure 6

## DIMENSIONAL DATA

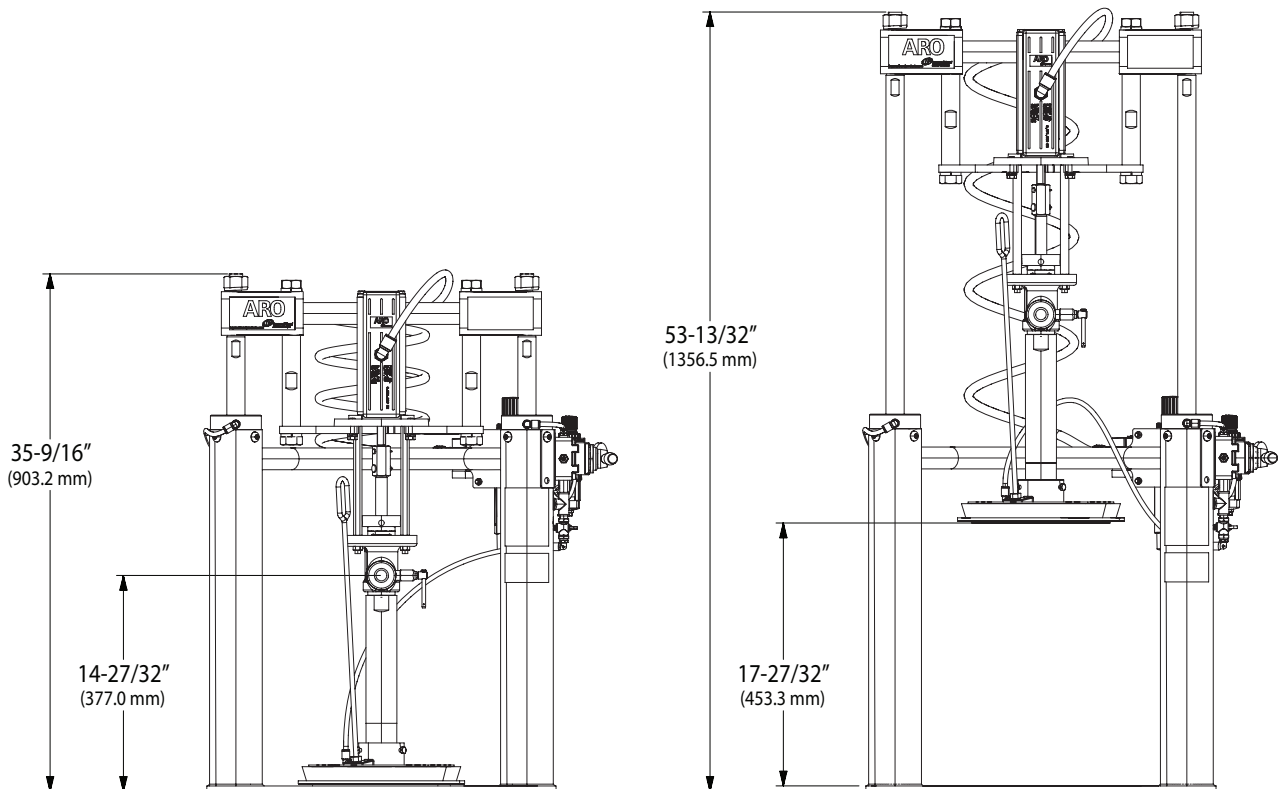


Figure 7

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## NOTES

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