

OPERATOR'S MANUAL

NP304R01-X

SPECIFICATIONS, SERVICE KITS, GENERAL INFORMATION

INCLUDE MANUALS: 651615-D LIFT / RAM (PN 97999-1025), 65184X-X FOLLOWER PLATE (PN 97999-605), NM2304A-X PUMP (PN 97999-749) & S-636 GENERAL INFORMATION MANUAL (PN 97999-636).

RELEASED: 9-19-03

REVISED: 10-30-03

(REV. 02)

NP304R01-1 and NP304R01-2

CARBON STEEL

RAM, PUMP & CART ASSEMBLY

SERVICE KITS

- Use only genuine ARO® replacement parts to assure compatible pressure rating and longest service life.
- **104158** for repair of 127122-000 regulator.
- **104176** for repair of F25241-100 filter.
- **104177** for repair of R27241-100 regulator.
- **116772** for repair of E512LM valve.
- **637176** for repair of 67151-A-311 lower pump section.
- **637228** for repair of 67151-A-C11 lower pump section.
- **637316** for repair of 66913 air motor section.

SPECIFICATIONS

Model Series	NP304R01-X
Type	Air Operated, Two Ball
Ratio	4:1
Air Motor	66913
Motor Diameter	3" (7.62 cm)
Stroke (Double Acting)	3" (7.62 cm)
Air Inlet (female)	1/2 - 14 N.P.T.
Lower Pump End Series	
NP304R01-1	67151-A-C11
NP304R01-2	67151-A-311
Material Outlet (female)	3/4 - 14 N.P.T.F. - 1

PERFORMANCE

Air Inlet Pressure Range	0 - 150 p.s.i. (0 - 10.3 bar)
Fluid Pressure Range	0 - 600 p.s.i. (0 - 41.4 bar)
Maximum Rec'd Cycles / Minute	125
Displacement In ³ Per Cycle	8.2
Volume / Cycle	4.54 oz. (134.3 ml)
Cycles Per Gallon	28.2
Flow @ 60 Cycles / Minute	2.1 g.p.m. (8.06 l.p.m.)
Noise Level @ 100 p.s.i.	85 db(A) *

* The pump sound pressure level has been updated to an Equivalent Continuous Sound Level (L_{Aeq}) to meet the intent of ANSI S1. 13-1971, CAGI-PNEUROP S5.1 using four microphone locations.

IMPORTANT

This is one of the ten documents which support the system. Replacement copies of these forms are available upon request.

- ☒ NP304R01-X MODEL OPERATOR'S MANUAL
- ☐ GENERAL INFORMATION - AIR OPERATED PUMPING SYSTEMS
- ☐ 67151-X LOWER PUMP END OPERATOR'S MANUAL
- ☐ 66913 AIR MOTOR OPERATOR'S MANUAL
- ☐ NM2304A-X PUMP OPERATOR'S MANUAL
- ☐ 65184X-X FOLLOWER PLATE OPERATOR'S MANUAL
- ☐ 651615-D SINGLE POST LIFT / RAM OPERATOR'S MANUAL
- ☐ 1251X1-XXX MINIATURE F-R-L OPERATOR'S MANUAL
- ☐ F252XX-XXX FILTER OPERATOR'S MANUAL
- ☐ R272X1-XXX REGULATOR OPERATOR'S MANUAL

PUMP DATA

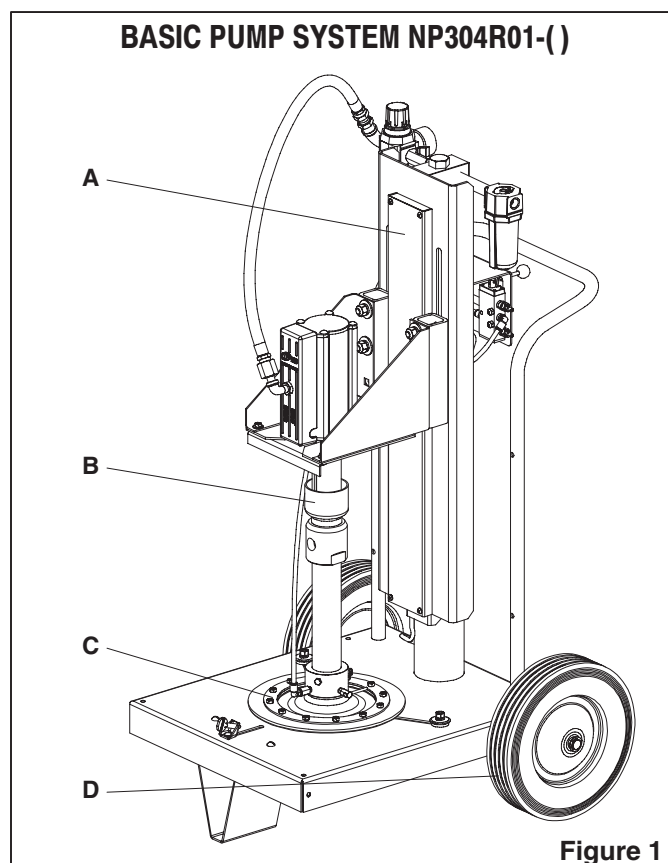


Figure 1

MAJOR COMPONENTS

Item	Description (size in inches)	Qty	Part No.
A	Single Post Ram	(1)	651615-1-D
B	Basic Pump (NP304R01-1)	(1)	NM2304A-A1-C11
	(NP304R01-2)	(1)	NM2304A-A1-311
C	Follower Plate	(1)	651840-1
D	Portability Kit	(1)	66713

OPERATING AND SAFETY PRECAUTIONS

WARNING READ THE GENERAL INFORMATION MANUAL INCLUDED FOR OPERATING AND SAFETY PRECAUTIONS AND OTHER IMPORTANT INFORMATION.

WARNING DO NOT EXCEED MAXIMUM OPERATING PRESSURE OF 600 P.S.I. (41.4 BAR) AT 150 P.S.I. (10.3 BAR) AIR INLET PRESSURE.

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GENERAL DESCRIPTION

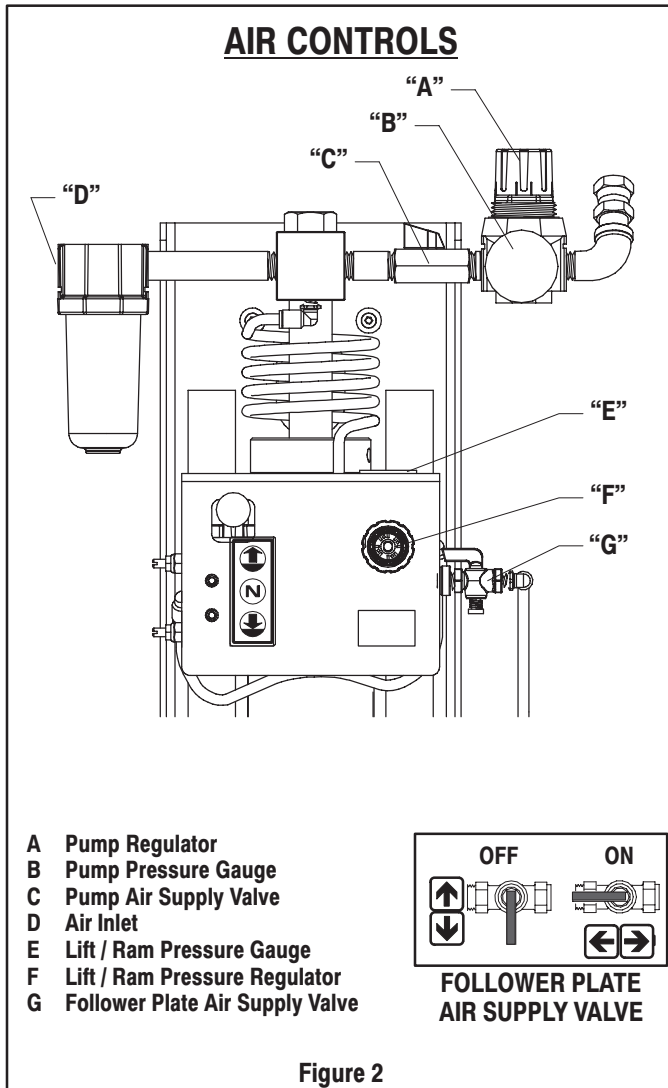
ARO systems are totally enclosed, sealing the material in the system from air and moisture, preventing premature cure-out of the material. This allows for either continuous or intermittent use of the system and reduces the need for daily system clean-up. The built-in lift capability allows for quick drum changeover and easy lifting of pump assembly from the container.

INSTALLATION

The NP304R01-() Two Ball Dispensing System comes completely assembled. Remove unit from crate and place on a level surface. Install material hose and dispensing device as required.

When the following instructions are observed, heavy paste materials can be pumped directly from their original 5 gallon 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



TO RAISE LIFT:

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 in "Lifts and Rams General Information Manual" (pn 97999-635).
2. Connect the air supply (150 p.s.i. / 10.3 bar max.) to the air inlet. Adjust air pressure on lift / ram pressure regulator (turn 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 / ram's upward travel by moving the control valve lever to the "neutral" (center) position.

REFER TO PAGE 3:

1. Once the lift / ram assembly and pump are in the "up" position, place and center an opened 5 gallon drum of material on the lift / ram base. Use the stops on the base to center the 5 gallon drum. Tighten thumb screw to secure drum.
2. Lubricate 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 pail as well as prevents curing type compounds from bonding to seal.
3. Check vent plug on 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 compound at this point. **See 65184X-X Follower Plate Operator's Manual.**

TO LOWER LIFT:

⚠ WARNING PINCH HAZARD. Follower can descend quickly causing injury. Keep hands clear when aligning with container.

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. Captured air between the follower plate and drum will escape.

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. Adjust the air pressure on the pump filter / regulator (turn pump regulator knob clockwise) until the pump begins to cycle.
4. Trigger gun to prime pump with material.

TO RAISE LIFT, (NORMAL OPERATION):

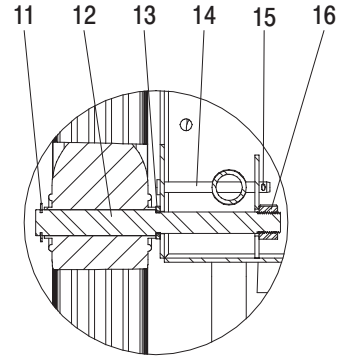
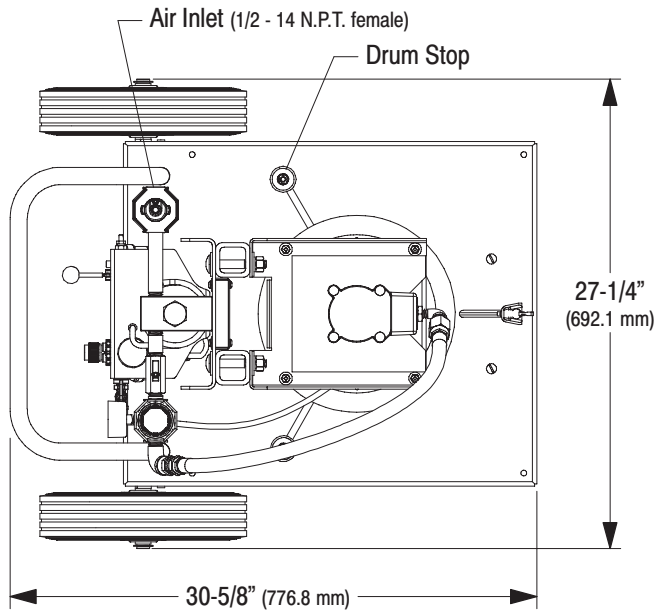
1. Adjust the follower plate air valve pressure up to approximately 8 p.s.i.g. (0.55 bar). **DO NO OVERPRESSURIZE THE DRUM** to avoid damage. NOTE: Air from this valve will only pass when the control valve is in the "up" position.
2. Shift the control valve lever to the "up" position.
3. Raise the lift / ram high enough to clear the height of the drum. Stop the lift / ram's upward travel by moving the control valve lever to the "neutral" (center) position.

TO CHANGE DRUM:

NOTE: The control valve lever should be in the "neutral" position.

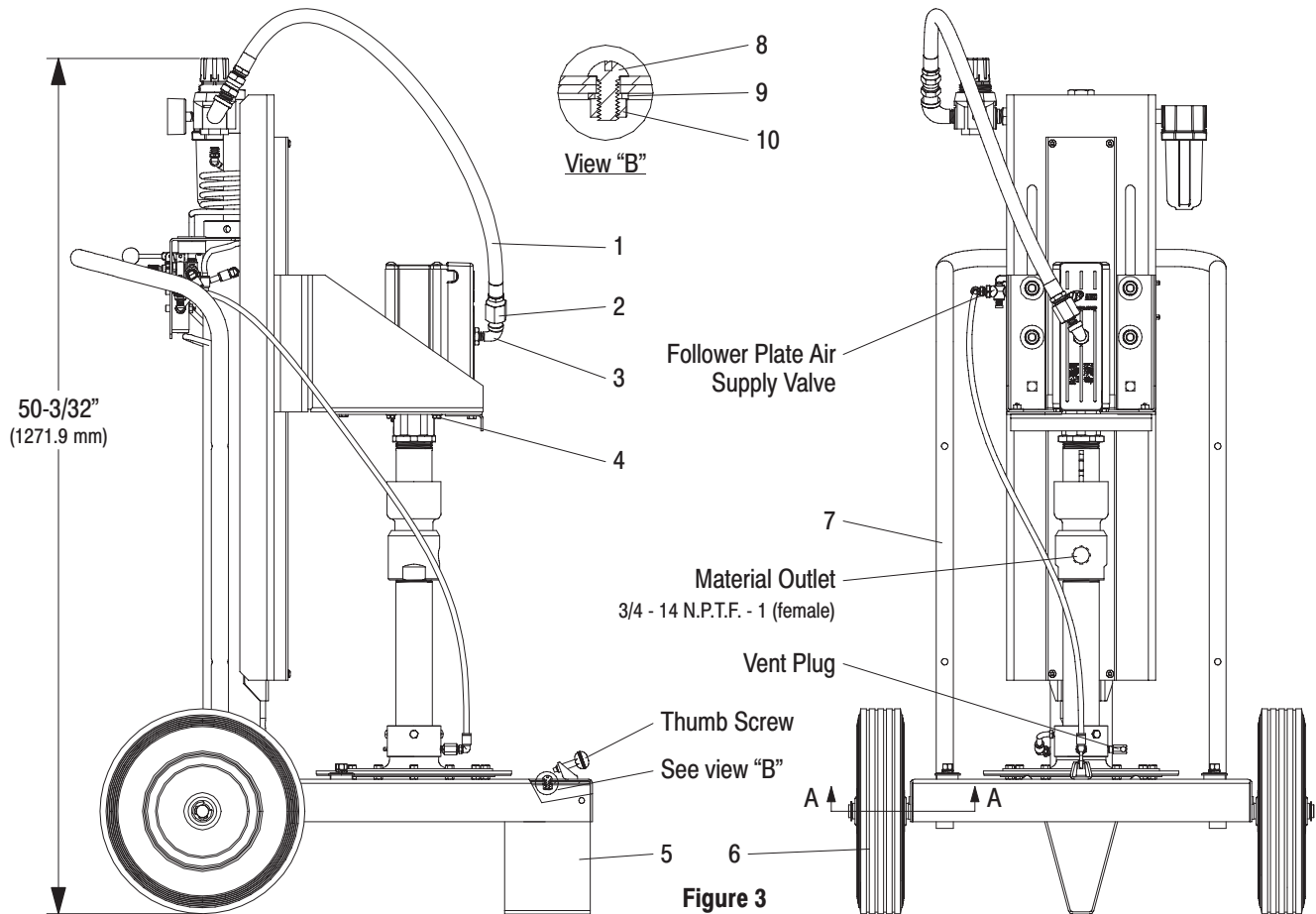
1. Unscrew thumb screw and remove old 5 gallon drum.
2. Place and center a new drum into position. Remove cover. Tighten thumb screw.

PARTS LIST



● Included in 651615-1-D Single Post Ram.

■ Included in 66713 Portability Kit.



Item	Description (size in inches)	Qty	Part No.
● 1	1/2" I.D. Hose (1/2 - 14 N.P.T. x 24" long)	(1)	621501-2
● 2	Adapter (1/2 - 14 N.P.T x 1/4 - 18 N.P.T.)	(1)	Y167-5
● 3	90° Street Elbow (1/4 - 18 N.P.T.)	(1)	Y43-2-C
● 4	Nut (1/4" - 20)	(4)	93828
■ 5	Base Stand	(1)	90418-1
■ 6	Wheel	(2)	75823
■ 7	Handle	(1)	75824
■ 8	Machine Screw (5/16" - 18 x 5/8")	(2)	Y8-58-C

Item	Description (size in inches)	Qty	Part No.
■ 9	Lock Washer (5/16")	(2)	Y14-516-C
■ 10	Nut (5/16" - 18)	(2)	Y12-5-C
■ 11	Retaining Ring	(2)	90102
■ 12	Axle	(2)	98873
■ 13	Lock Washer (5/8")	(2)	Y14-625
■ 14	Retaining Pin	(2)	75834
■ 15	Cotter Pin (3/32" o.d. x 1/2" long)	(2)	Y15-31-C
■ 16	Nut (5/8" - 18)	(2)	Y11-10-C

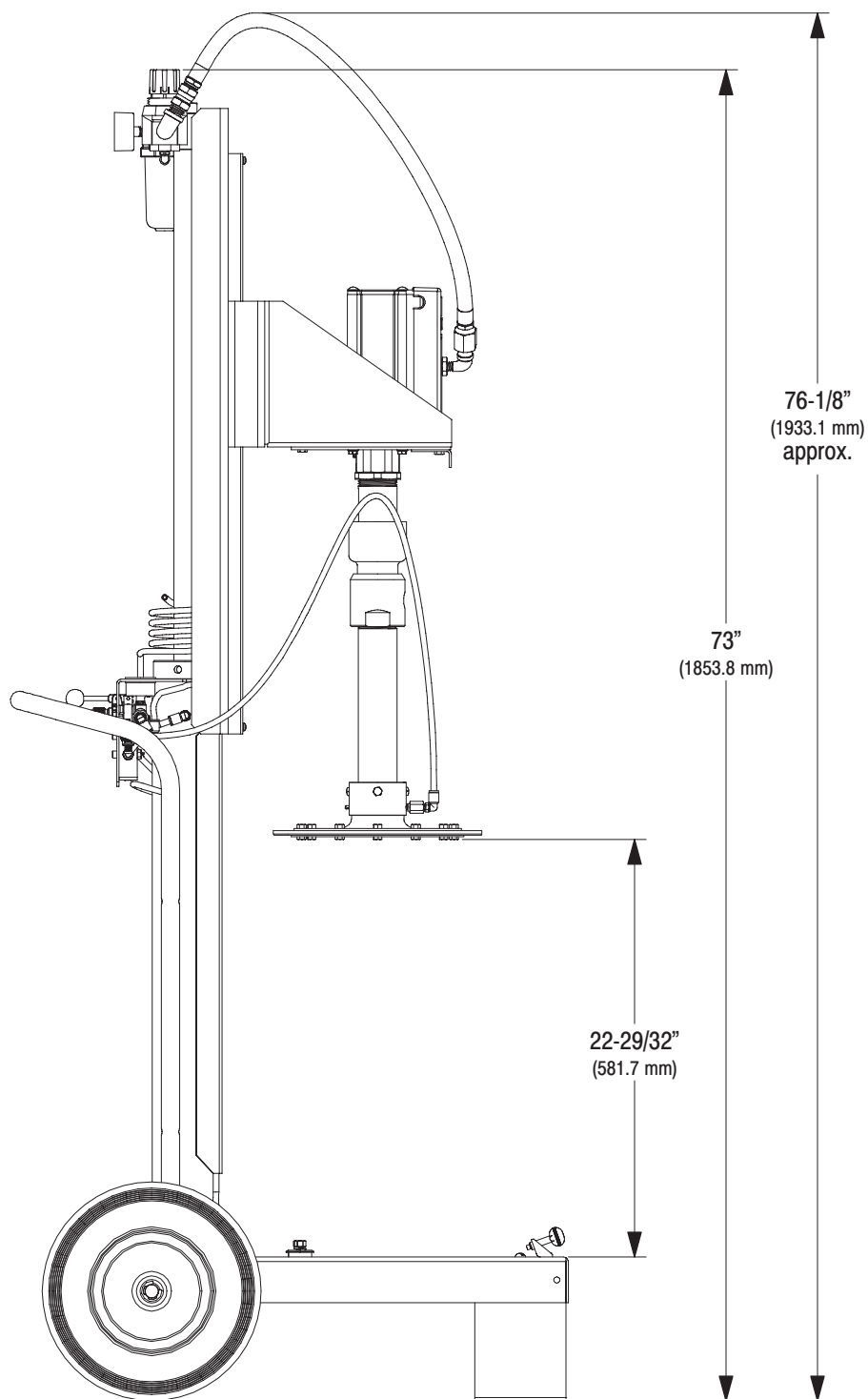


Figure 4