OPERATOR'S MANUAL

INCLUDING: OPERATION, INSTALLATION AND MAINTENANCE.

INCLUDE MANUALS: S-635 General Information (pn 97999-635).

RM552H-XXX-XX RM552S-XXX-XX

RM552H-XXX-XX AND RM552S-XXX-XX
TWO POST LIFT / RAM

RELEASED: REVISED: (REV: K)

3-25-22

For use with 55 gallon / 200 liter drums



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.
- **104468** for repair of filter section of P39124 -120 filter / regulator.
- **104302** for repair of regulator section of P39124-120 filter / regulator.
- 104326 for repair of filter section of P39344 -110 filter/regulator.
- 104327 for repair of regulator section of P39344 -110 filter/ regulator.
- 637472 for repair of lift / ram seals.

SPECIFICATIONS

Maximum Temperature Limits..... 25° F to 125° F (-5° C to 52° C)

 Dimensional Data.
 see page 12

 Stroke.
 37-3/4" (958.9 mm)

Weight

models RM552H-C......355 lbs (161.0 kgs) **models RM552S-C**.....248 lbs (112.5 kgs)

Noise Level @

125 psig (continuous duty) 87.7 dB(A) $^{\odot}$

The pump sound pressure levels published here have been updated to an Equivalent Continuous Sound Level (LA_{eq}) to meet the intent of ANSI S1.13-1971, CAGI-PNEUROP S5.1 using four microphone locations.

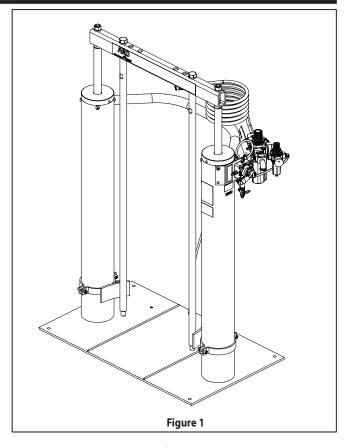
GENERAL DESCRIPTION

The ARO model RM552X-XXX-XX two post lift / ram uses two air powered cylinders connected by a steel cross member and welded to a heavy gauge base plate. It is normally used to raise and lower a fluid handling pump and follower in and out of a standard 55 gallon / 200 liter drum, or when used as a ram, it can force high viscosity flowable material into the pump inlet.

When properly secured (see "General Information - Air Operated

When properly secured (see "General Information - Air Operated Lifts and Rams"), this unit has the ability to raise a pump to clear a standard 55 gallon / 200 liter drum. The operator is then able to easily remove the pump from the drum.

This lift / ram uses a rotary 3-way control valve which controls the air necessary to raise and lower the lift / ram. This unit includes an auxiliary manual air valve which is used to supply a controlled amount of air pressure to the bottom of the follower plate. When the control valve is in the "up" position, a small amount of air pressure applied under the follower plate will help raise the follower plate, pump and lift / ram by relieving the vacuum (see page 3).

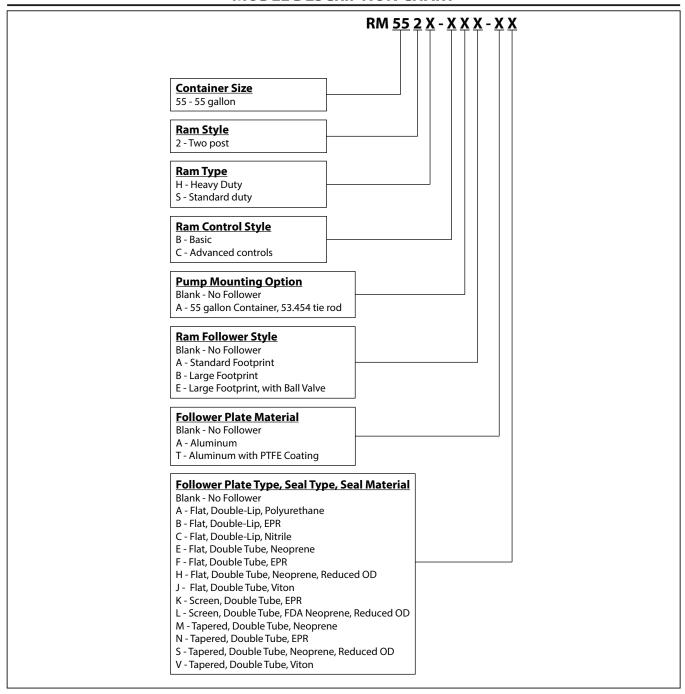


IMPORTANT

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

- RM552X-XXX-XX Model Operator's Manual (pn 97999-1445)
- S-635 General Information Air Operated Lifts and Rams (pn 97999-635)
- ☐ P391XX-XXX and P393XX-XXX Filter / Regulator Safety Manual (pn 100400-53)
- ☐ **P391XX-XXX** Product Information Manual (pn 100400-54)
- ☐ **P391XX-XXX** Maintenance Manual (pn 100400-55)

MODEL DESCRIPTION CHART



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OPERATING AND SAFETY PRECAUTIONS

MARNING = Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.

CAUTION = Hazards or unsafe practices which could result in minor personal injury, product or property damage.

NOTICE

= Important installation, operation or maintenance information.

Read and heed all warnings, cautions and safety precautions before operating.

AWARNING READ THE GENERAL INFORMATION MANUAL IN-CLUDED FOR OPERATING AND SAFETY PRECAUTIONS AND OTHER IMPORTANT INFORMATION.

NARNING Store and operate the lift on a level surface. WARNING ANCHOR THE LIFT BASE OF STATIONARY UNITS SECURELY TO A CONCRETE FLOOR. An improperly secured lift could be unsafe. Do not attempt to use the lift until all possible measures have been taken to ensure that the lift has been properly installed and the base has been secured. It is the duty of the installer to provide anchor bolts / studs (not included) and for them to be securely embedded in concrete which is more than 2" (50.8 mm) thick.

Shock hazard. Striking electrical fixtures can cause injury.

Keep the area overhead clear of electrical devices.

WARNING PREVENT ELECTRICAL SHOCK. Be certain the area above the lift is clear of electrical fixtures, devices and wiring. Examine the working area and take necessary action to assure adequate clearance for the lift and pump assembly to raise to the fullest limit and function properly.



Pinch hazard. Follower can descend quickly, causing injury.

Keep hands clear when aligning with container.

WARNING PINCH HAZARD. Follower can descend quickly, causing injury. Keep hands clear when aligning with con-

tainer. In the raising and lowering function, the lift could get hung up or the descent could be temporarily restricted. The lift could, in some situations, drop suddenly and be hazardous. If the follower plate does not enter the drum properly, DO NOT ATTEMPT TO RE-POSITION IT WITH YOUR HANDS. Release the downward pressure, raise the lift, realign the drum and restart.

WARNING STAND CLEAR. When raising or lowering the lift, keep clear and operate from a safe position.



Hazardous pressure. Can result in injury or property damage.

Do not exceed maximum inlet air pressure.

WARNING HAZARDOUS PRESSURE. Do not exceed maximum inlet air pressure of 125 psig (8.6 bar). Operating lift at higher pressure may cause lift damage and / or personal injury and / or property damage. Do not service or clean pump, hoses or dispensing valve while the system is pressurized.

WARNING DO NOT EXCEED DRUM PRESSURE LIMITS. Know the pressure limitations of the drum and regulate the air pressure within safe limits when supplying air to the follower plate.

MARNING Place the main valve in the "neutral" (center) position before air pressure is directly connected or turned on to the system.

WARNING Depressurize the lift / ram before performing maintenance by disconnecting the main air line and rotating the main valve to relieve pressure. Replacement warning label ("Depressurize" / pn 97165) is available upon request.

CAUTION Be certain all operators of this equipment have been trained for safe working practices, understand it's limitations and wear their safety goggles / equipment as required.

NOTICE To extend seal life, lubricate seals with Gadus® S2 U1000 grease upon reassembly.

NOTICE To prevent premature failure of the piston rod and / or seals, it is good practice to keep the piston rod clean and free of debris and any other type of contamina-

LIFT / RAM INSTALLATION

MARNING Failure to properly install the lift assembly can result in severe injury and property damage. Read the warnings above.

- 1. This lift /ram assembly comes completely assembled.
- 2. Establish the desired location for the lift / ram and pay special attention to the work area above. This area above the lift must be open, without obstructions and safely away from any electrical devices.
- 3. THE LIFT MOUNTING BASE PLATE MUST BE SECURELY AN-**CHORED TO THE CONCRETE FLOOR.** The mounting plate itself can be used as a template for establishing the proper anchor locations.
- 4. Assemble the pump to the mounting plate. **NOTE:** The combined weight of the piston pump and accessories (follower plate, etc.) must not exceed 400 lbs (181.4 kg).
- 5. Install the pump air hose and follower plate air hose from the control valve.
- 6. Assemble the vent plug to the follower plate.

NOTE: When assembling air line to the lift / ram air inlet, hold the air inlet port with a wrench to eliminate possible damage to filter regulator connections.

NOTE: The ram was tested at the factory. The unit should be generally checked over for leakage, because the fittings on the system may have loosened in shipment.

NOTE: Make sure to torque all fasteners before operation.

NOTE: If material leakage occurs around the follower plate, check the lift / ram air pressure and check all fittings and fasteners to be sure they are secure.

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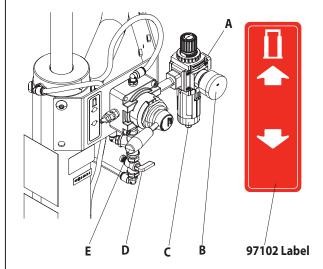
OPERATING INSTRUCTIONS

OPERATING INSTRUCTIONS / INITIAL SETUP PROCEDURE.

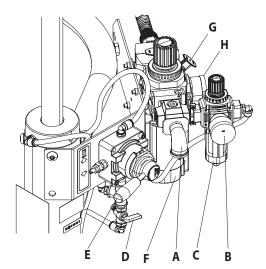
MARNING STAND CLEAR WHEN RAISING OR LOWERING THE LIFT. Read the warnings on page 3.

LIFT / RAM, PUMP AND FOLLOWER PLATE AIR CONTROLS

Models RM552X-BXX-XX



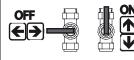
Models RM552X-CXX-XX



- A Air inlet (RM552X-BXX-XX 1/4 18 NPT) (RM552X-CXX-XX - 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
- Pump air filter / regulator / lubricator
- G Pump air supply valve
- H Pump pressure gauge

Figure 2

Follower plate air supply valve





TO RAISE 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 3.
- 2. Connect the air supply (125 psig / 8.6 bar maximum) to the air inlet. Adjust the air pressure on the lift / ram pressure regulator (turn knob clockwise) to 20 psig (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
- 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.

TO LOWER LIFT:

WARNING PINCH HAZARD. Follower can descend quickly, causing injury. Keep hands clear when aligning with container. Read the warnings on page 3.

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.
- Replace the vent plug once the material begins to ooze from the vent opening.
- 3. Models RM552X-CXX-XX: 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):

- Models RM552X-CXX-XX: Close the pump air supply valve.
- Shift the control valve lever to the "up" position.
- 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 DRUM:

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

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

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	P	ART	TS LIST / R	RM:	552)	KXXX-XX
Item	Description (size)	Qty	Part No.		Item	Description (size
1	Nut (3/4" - 16)	(2)	Y11-12-C	ĺ	29	
2	Lock Washer (3/4")	(2)	Y14-750	ł	30	(models RM552X-E Shut-Off Valve
© 3	Wear Ring (models RM552H-XXX-XX only)	(2)	97166	}	31	
€ 4	"O" Ring (models RM552S-XXX-XX) (3/16" x 3-1/4" OD)	(4)	Y325-336	}		•
	(models RM552H-XXX-XX) (0.275" x 5.525" OD)	(4)	Y325-429	ŀ	32	
5	Piston Rod Assembly (models RM552H-XXX-XX)	(2)	67477	ŀ	33	
	(models RM552S-XXX-XX)	(2)	67476	ŀ	35	
7	Stop	(2)	97163	ŀ		
9	Base and Cylinder Assembly			ŀ	36	
	(models RM552H-XXX-XX)	(1)	96768	ŀ	37	Rod
	(models RM552S-XXX-XX)	(1)	67419	}	38	Screw (7/8" - 14)
10A1	Tubing (5/16" O.D x 59.75")	(1)	94980-(10)	}	39	
10A	Tubing (5/16" O.D x 64.25")	(1)	94980-(10)	}	40 Connector (
10B	Tubing (5/16" O.D x 26.25")	(1)	94980-(10)	-		tems listed belo
10C	Tubing (5/16" O.D x 44")	(1)	94980-(10)	}	10D	Tubing (5/16" OI
10B1	Tubing (5/16" O.D x 29.50")	(1)	94980-(10)	}	41	
10A2	Tubing (5/16" O.D x 35")	(1)	94980-(10)	}	42	
10B2	Tubing (5/16" O.D x 22.50")	(1)	94980-(🛈)	ŀ	43	
12	Pipe Tee (1/4 - 18 NPT)	(1)	Y43-32-C	ŀ	44	
13	Bracket Assembly	(1)	67432	ł	45	Bushing Street Elbow (1
14	Rotary Lever Valve	(1)	M512LR	ł	48	
15	Male Elbow (1/4 - 18 NPT x 5/16" OD tube)	(7)	59756-158	ł	51	
17	Nipple (1/4 - 18 NPT x 1-1/2")	(1)	Y27-52-C	ł	52	
18	Mounting Arm	(1)	96729	ł	54	
21	Clamp Spacer Kit	(2)	104394	ł	55	
22	Pipe Adapter	(1)	104474-2	}	56	
23	Cap (models RM552H-XXX-XX)	(2)	96766	-		Drum Hold Do
	(models RM552S-XXX-XX)	(2)	97168		57	(models RM552H-)
© 24	Wear Ring (1-3/8" ID x 1-1/2" OD)	(2)	96753		0	Bulk Tubing (5/
€ 25	"U" Cup (3/16" x 1-3/4" OD)	(2)	96752		0	Items not show
27	Connector (1/4 - 18 NPT x 5/16" OD tube)	(1)	59474-158		€	Gadus S2 U100
				1		

Item	Description (size)	Qty	Part No.					
29	Nipple (1/4 - 18 NPT x 2-1/2") (models RM552X-BXX-XX only)	(1)	Y44-12-C					
30	Shut-Off Valve (1/4 - 18 NPT)	(1)	Y28-1					
31	Cap Screw (M6 x 1 - 6g x 40 mm)	(2)	96719					
32	Button Head Screw (M10 x 1.5 - 6g x 18 mm)	(9)	96696					
33	Gauge (0 - 160 psig / 0 - 11 bar)	(1)	29850					
34	Piggyback Filter / Regulator (1/4 - 18 NPT)	(1)	P39124 -120					
35	Decal (warning)(not shown)	(1)	93922					
36	Muffler (1/4 - 18 NPT)	(1)	20313-2					
37	Rod	(2)	94016					
38	Screw (7/8" - 14 x 4")	(2)	94009					
39	Lock Washer (7/8")	(2)	Y14-875					
40	Connector (Tee)	(2)	97162					
	Items listed below used on models RM552X-CXX-XX only							
10D	Tubing (5/16" OD x 11")	1	94980-(10)					
41	Hose Assembly (1/2" ID x 12")	(1)	628023-12					
42	Male Elbow (1/4 - 18 NPT x 5/16" OD tube)	(2)	59756-158					
43	Filter / Regulator / Lubricator (1/2 - 14 NPT)	(1)	P39344-110					
44	Gauge (0-160)	(1)	29850					
45	Bushing	(1)	Y45-9-C					
46	Street Elbow (1/2 - 14 NPT)	(1)	Y43-4-C					
48	Manifold Block	(1)	104413-4-2					
51	Lock-Out Valve (3/4 - 14 NPT)	(1)	104392-4					
52	Nipple (1/4 - 18 NPT x 7/8")	(1)	Y27-12-C					
54	T - Type Wall Mount	(2)	104401					
55	Button Head Screw (M10 x 1.5 - 6g x 18 mm)	(4)	97105					
56	Washer	(4)	97115					
57	Drum Hold Down Kit (models RM552H-XXX-XX only)	(1)	67504					
0	Bulk Tubing (5/16" OD x 100')	(1)	94980-100					
0	Items not shown							
6	Gadus S2 U1000 grease packet	(2)	94833					
6	Items included in service kit	(1)	637472					

DISASSEMBLY

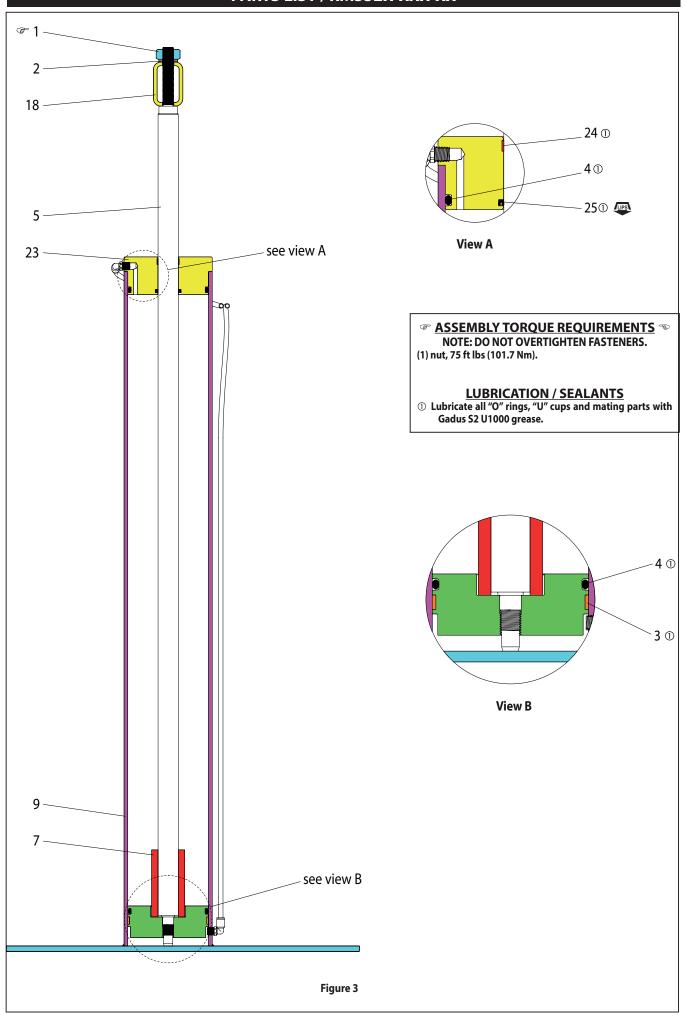
- 1. Raise the pump, follower and ram out of the drum.
- 2. Disconnect the air supply and depressurize the ram by rotating the (14) valve into the "up" and "down" positions.
- 3. Models RM552X-CXX-XX: Disconnect (41) hose from (51) lock-out valve and from (45) reducing pipe connector.
- 4. Disconnect (10C) tubing from follower and remove pump from ram.
- 5. Unthread (1) nut and remove (2) washer.
- 6. Remove (18) mounting arm and components.
- 7. Disconnect (10A2, 10B2) tubing.
- 8. Remove (32) screws, releasing (13) bracket assembly and ram air control components.
- 9. Remove (23) cap from (9) base and cylinder assembly and (5) piston rod.
- 10. Remove (5) piston rod and components from (9) base and cylinder assembly.
- 11. Remove (4) "O" ring and (3) wear strip (where applicable).

REASSEMBLY

- 1. Grease and assemble (4) "O" ring and (3) wear strip (where applicable) to (5) piston.
- 2. Carefully slide (5) piston rod and components into (9) base and cylinder assembly.
- Grease and assemble (4) "O" ring, (25) "U" cup (note the lip direction) and (24) wear strip to (23) cap.
- 4. Assemble (23) cap over the end of (5) piston rod and into (9) base and cylinder assembly, being careful not to damage (25) "U" cup.
- 5. Place (13) bracket assembly and ram air control components into place and secure with (32) screws. **NOTE:** Tighten (32) screws to 20 ft lbs (27.1 Nm)
- 6. Assemble (18) mounting arm and components to (5) piston rods
- 7. Assemble (2) lock washer and (1) nut. **NOTE:** Tighten (1) nut to 75 ft lbs (101.7 Nm).
- 8. Reconnect all tubing.

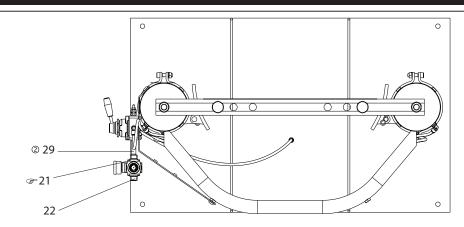
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PARTS LIST / RM552X-XXX-XX



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PARTS LIST / RM552X-XXX-XX



■ ASSEMBLY TORQUE REQUIREMENTS

NOTE: DO NOT OVERTIGHTEN FASTENERS.

- (21) screw, 4 in. lbs (0.45 Nm).
- (31) cap screw, 95 100 in. lbs (10.7 11.3 Nm).
- (32) button head screw, 20 ft lbs (27.1 Nm).
- (38) screw, 75 ft lbs (101.7 Nm).
- (54) screw, 17 in. lbs (1.92 Nm).
- (55) button head screw, 95-100 in lbs (10.7-11.3 Nm).

LUBRICATION / SEALANTS

② Apply anaerobic pipe sealant to male pipe threads at assembly.

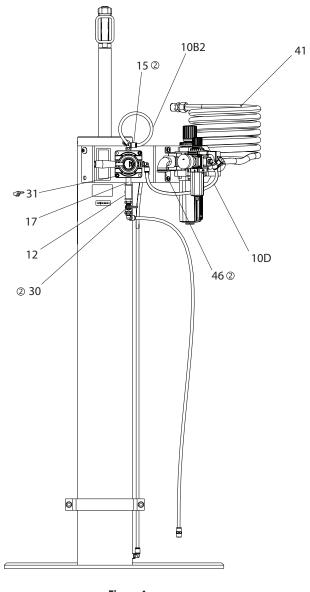
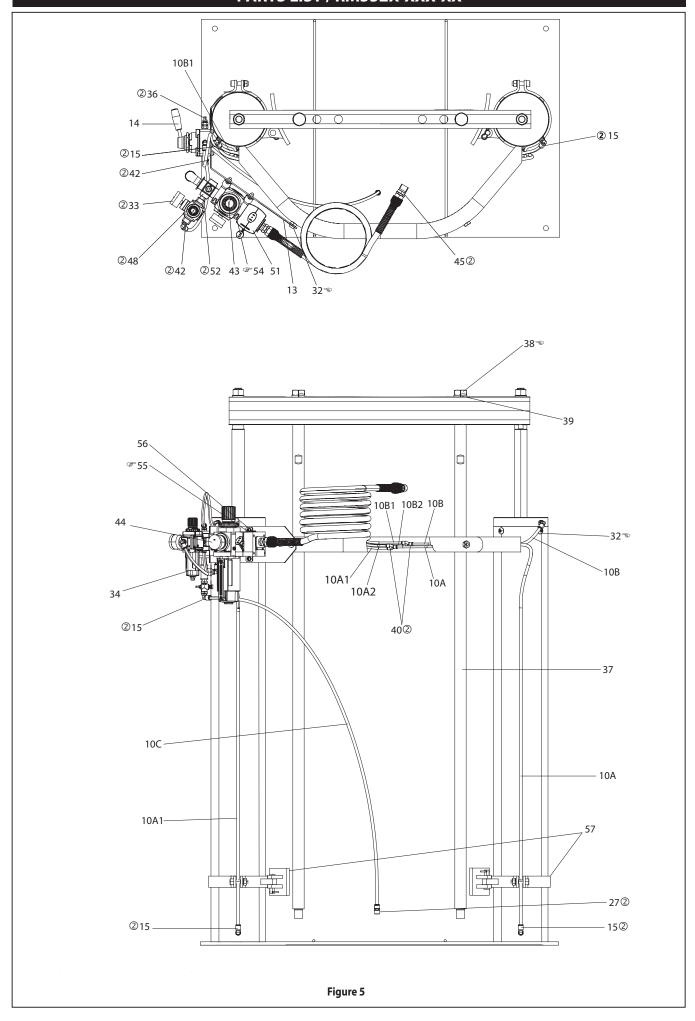


Figure 4

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PARTS LIST / RM552X-XXX-XX

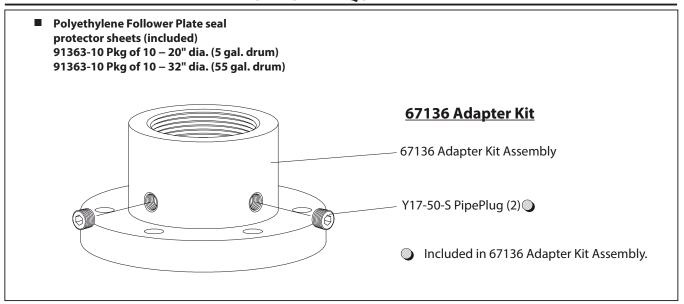


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GENERAL DESCRIPTION

Cast Aluminum followers are fitted with a dual lip seal or dual "O" ring seal to wipe the drum clean and seal off the material from the atmosphere. Several material options are available for the follower plate outer seal. Select a compatible seal for the material being pumped. The model chart shows the pump motors they will generally accommodate.

OPTIONAL EQUIPMENT



MODEL DESCRIPTION / FOLLOWER PLATE OPTIONS

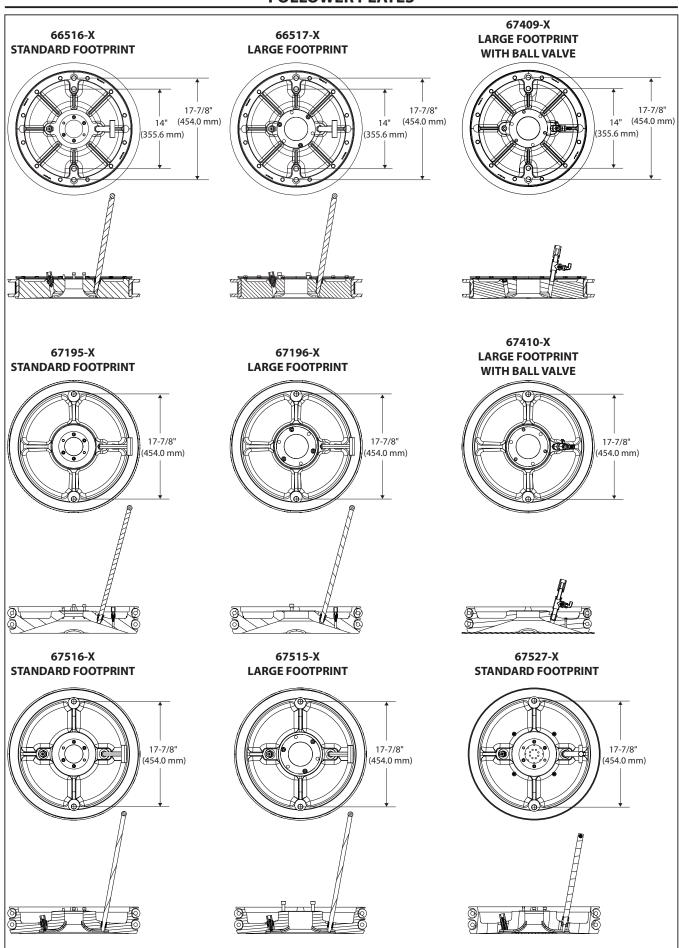
Model	Pump Size	Follower Type	Follower Seal Material	Seal Type	Seal Material	Follower Asm.
RM552X-XXA-AA		Flat	Aluminum	Double Lip	Polyurethane	66516-1
RM552X-XXA-AB					EPR	66516-2
RM552X-XXA-AC					Nitrile	66516
RM552X-XXA-AM		Tapered		Double Tube	Neoprene	67195-1
RM552X-XXA-AN					EPR	67195-2
RM552X-XXA-AS	Standard Footprint				Neoprene, Reduced OD	67195-8
RM552X-XXA-AV					Viton	67195-3
RM552X-XXA-AE		Flat			Neoprene	67516-1
RM552X-XXA-AF					EPR	67516-2
RM552X-XXA-AH					Neoprene, Reduced OD	67516-8
RM552X-XXA-AJ					Viton	67516-3
RM552X-XXA-TA		Flat	Aluminum with PTFE Coating	Double Lip	Polyurethane	66516-6
RM552X-XXA-TB					EPR	66516-7
RM552X-XXA-TC					Nitrile	66516-5
RM552X-XXA-TM		Tapered			Neoprene	67195-5
RM552X-XXA-TN					EPR	67195-6
RM552X-XXA-TS					Neoprene, Reduced OD	67195-9
RM552X-XXA-TV					Viton	67195-7
RM552X-XXA-TE		Flat		Double Tube	Neoprene	67516-5
RM552X-XXA-TF				Double Tube	EPR	67516-6
RM552X-XXA-TH					Neoprene, Reduced OD	67516-9
RM552X-XXA-TJ					Viton	67516-7
RM552X-XXA-TK		6			EPR	67527-1
RM552X-XXA-TL		Screen			FDA Neoprene, Reduced OD	67527-2

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Model	Pump Size	Follower Type	Follower Seal Material	Seal Type	Seal Material	Follwer Asm.
RM552X-XXB-AA		Flat	Aluminum	Double Lip	Polyurethane	66517-1
RM552X-XXB-AB					EPR	66517-2
RMSS2X-XXB-AC					Nitrile	66517
RM552X-XXB-AM		Tapered		Double Tube	Neoprene	67196-1
RM5S2X-XXB-AN					EPR	67196-2
RM552X-XXB-AS					Neoprene, Reduced OD	67196-8
RM552X-XXB-AV					Viton	67196-3
RM552X-XXB-AE		Flat			Neoprene	67515-1
RM552X-XXB-AF					EPR	67515-2
RM552X-XXB-AH	Large Footprint				Neoprene, Reduced OD	67515-8
RM552X-XXB-AJ					Viton	67515-3
RM552X-XXB-TA		Flat		Double Lip	Polyurethane	66517-6
RM552X-XXB-TB					EPR	66517-7
RM552X-XXB-TC					Nitrile	66517-5
RM552X-XXB-TM					Neoprene	67196-5
RM552X-XXB-TN		Tapered	Aluminum with		EPR	67196-6
RM552X-XXB-TS			PTFE Coating		Neoprene, Reduced OD	67196-9
RM5S2X-XXB-TV				Double Tube	Viton	67196-7
RM552X-XXB-TE		Flat			Neoprene	67515-5
RM552X-XXB-TF					EPR	67515-6
RM552X-XXB-TH					Neoprene, Reduced OD	67515-9
RM552X-XXB-TJ					Viton	67515-7
RM552X-XXE-AA		Flat		Double Lip	Polyurethane	67409-1
RM552X-XXE-AB					EPR	67409-2
RM552X-XXE-AC					Nitrile	67409
RM552X-XXE-AM		Tapered	Aluminum	Double Tube	Neoprene	67410-1
RM552X-XXE-AN					EPR	67410-2
RM552X-XXE-AS	Large Footprint with ball valve				Neoprene, reduced OD	67410-8
RM552X-XXE-AV					Viton	67410-3
RM552X-XXE-TA		Flat	Aluminum with PTFE Coating	Double Lip	Polyurethane	67409-6
RM552X-XXE-TB					EPR	67409-7
RM552X-XXE-TC					Nitrile	67409-5
RM552X-XXE-TM		Tapered		Double Tube	Neoprene	67410-5
RM552X-XXE-TN					EPR	67410-6
RM552X-XXE-TS					Neoprene, reduced OD	67410-9
RMS52X-XXE-TV					Viton	67410-7

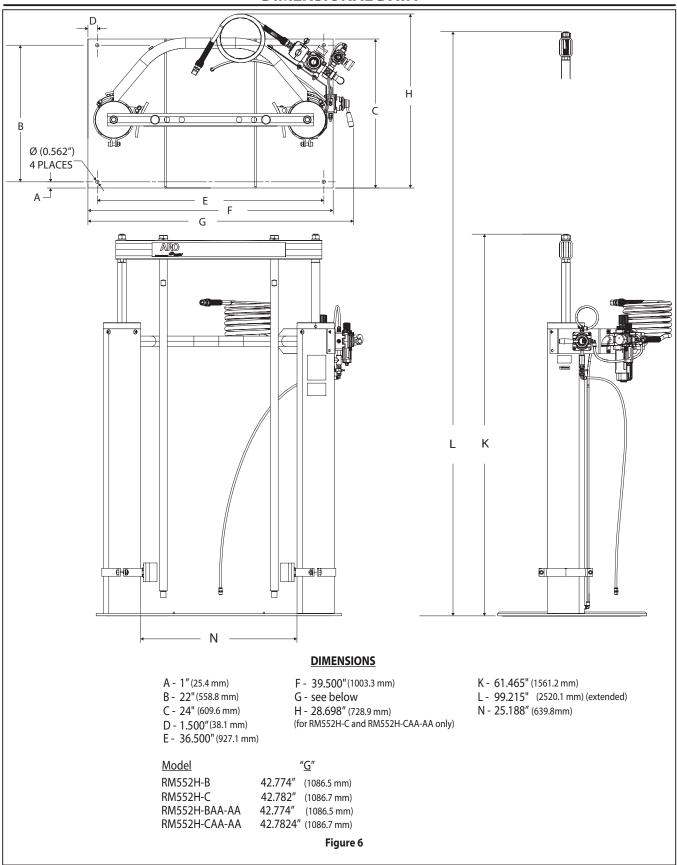
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FOLLOWER PLATES



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DIMENSIONAL DATA





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