

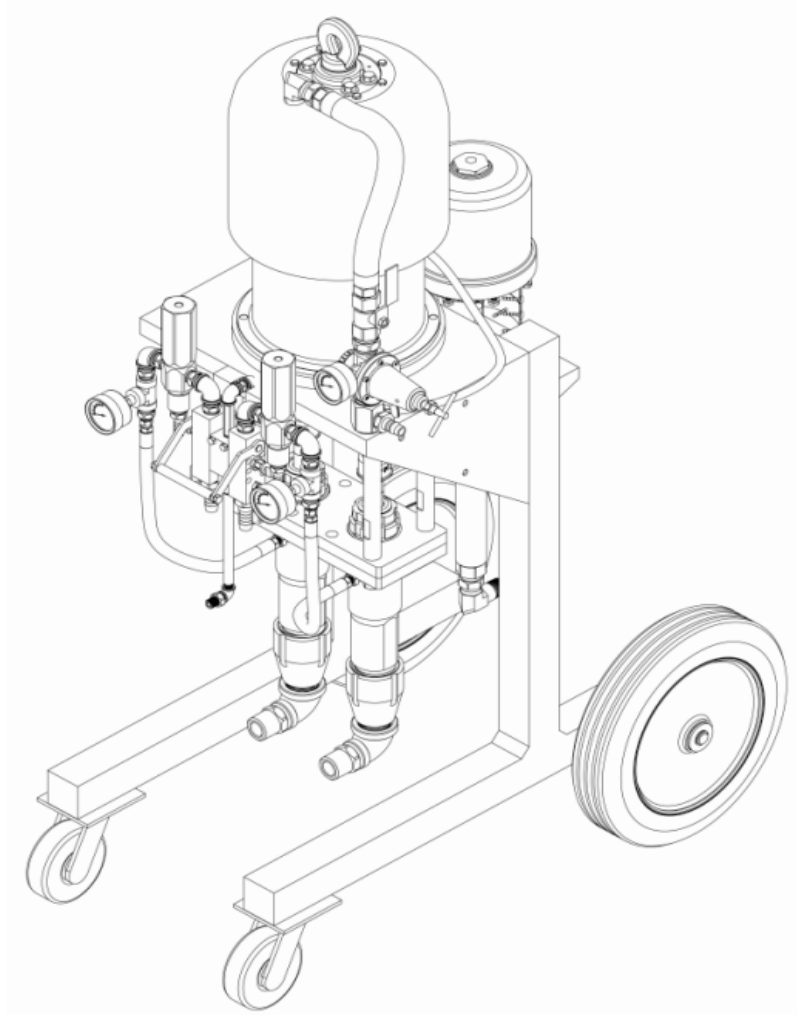
# Instructions - parts List

TWO COMPONENT SPRAYER - CART FIXED RATIO

## Proportioning pumps

*3000 psi(21Mpa, 210bar) Maximum Working Pressure*

\*Includes Mixing manifolds, pressure Relief Valve,  
Check Valves, pressure Gauge  
Regulators, **Cleaning pump, Heater (options)**

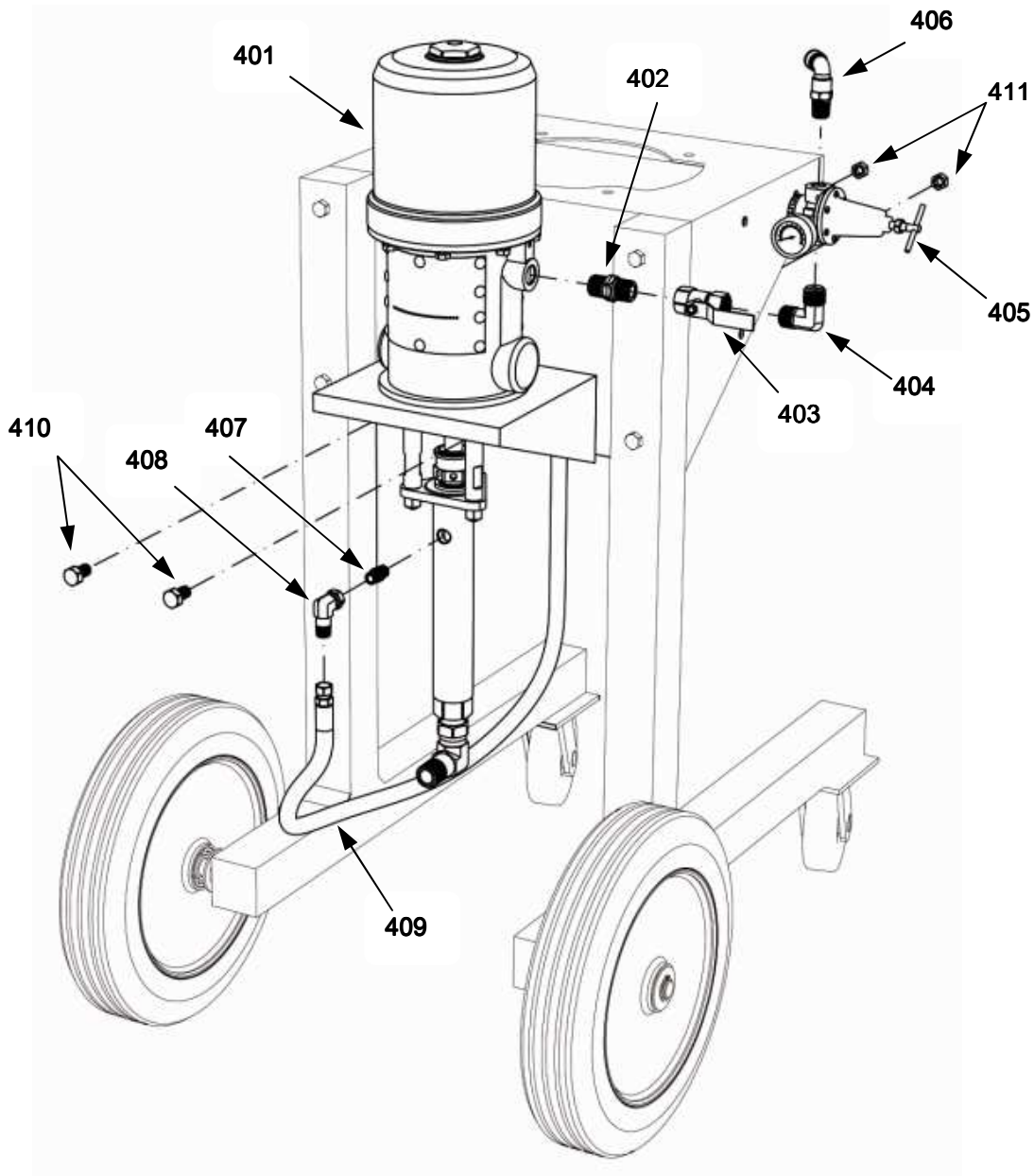


# ⚠ WARNING

 <p>INSTRUCTIONS</p>	<h2>EQUIPMENT MISUSE HAZARD</h2> <p>Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.</p> <ul style="list-style-type: none"> <li>_ This equipment is for professional use only.</li> <li>_ Read all instruction manuals, tags, and labels before operating the equipment.</li> <li>_ Use the equipment only for its intended purpose. If you are uncertain about usage, call your KST distributor.</li> <li>_ Do not alter or modify this equipment. Use only genuine KST parts and accessories.</li> <li>_ Check equipment daily. Repair or replace worn or damaged parts immediately.</li> <li>_ Do not exceed the maximum working pressure of the lowest rated system component.</li> <li>_ Do not use hoses to pull equipment.</li> <li>_ Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose KST hoses to temperatures above 82_C (180_F) or below -40_C (-40_F).</li> <li>_ Wear hearing protection when operating this equipment.</li> <li>_ Do not lift pressurized equipment.</li> <li>_ Comply with all applicable local, state, and national fire, electrical, and safety regulations.</li> </ul>		<h2>INJECTION HAZARD</h2> <p>Spray from the gun/valve, hose leaks, or ruptured components can inject fluid into your body and cause extremely serious injury, including the need for amputation. Fluid splashed in the eyes or on the skin can also cause serious injury.</p> <ul style="list-style-type: none"> <li>_ Fluid injected into the skin might look like just a cut, but it is a serious injury. <b>Get immediate medical attention.</b></li> <li>_ Do not point the gun at anyone or at any part of the body.</li> <li>_ Do not put your hand or fingers over the spray tip.</li> <li>_ Do not stop or deflect leaks with your hand, body, glove or rag.</li> <li>_ Do not “blow back” fluid; this is not an air spray system.</li> <li>_ Always have the tip guard and the trigger guard on the gun when spraying.</li> <li>_ Be sure the gun trigger safety operates before spraying.</li> <li>_ Lock the gun trigger safety when you stop spraying.</li> <li>_ Tighten all fluid connections before operating the equipment.</li> <li>_ Check the hoses, tubes, and couplings daily. Replace worn, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.</li> <li>_ Use only KST approved hoses. Do not remove any spring guard that is used to help protect the hose from rupture caused by kinks or bends near the couplings.</li> </ul>
	<h2>TOXIC FLUID HAZARD</h2> <p>Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> <li>_ Know the specific hazards of the fluid you are using.</li> <li>_ Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.</li> <li>_ Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.</li> </ul>		<h2>FIRE AND EXPLOSION HAZARD</h2> <p>Improper grounding, poor ventilation, open flames or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.</p> <ul style="list-style-type: none"> <li>_ If there is any static sparking or you feel an electric shock while using this equipment, <b>stop spraying immediately.</b> Do not use the equipment until you identify and correct the problem.</li> <li>_ Provide fresh air ventilation to avoid the buildup of flammable fumes from solvents or the fluid being sprayed.</li> <li>_ Keep the spray area free of debris, including solvent, rags, and gasoline.</li> <li>_ Electrically disconnect all equipment in the spray area.</li> <li>_ Extinguish all open flames or pilot lights in the spray area.</li> <li>_ Do not smoke in the spray area.</li> <li>_ Do not turn on or off any light switch in the spray area while operating or if fumes are present.</li> <li>_ Do not operate a gasoline engine in the spray area.</li> </ul>
	<h2>MOVING PARTS HAZARD</h2> <p>Moving parts, such as the air motor piston, can pinch or amputate your fingers.</p> <ul style="list-style-type: none"> <li>_ Keep clear of all moving parts when starting or operating the pump.</li> </ul>		

# Installation – Optional Cleaning Pump

1. Mount the cleaning pump bracket (303) on the back of the stand
2. Mount the pump (401) to the bracket using the hardware supplied with the pump.
3. Use the existing proportioning pump air regulator (405) to supply air to the cleaning pump.  
Remove the plug from the back of the one touch nipple(406) and install the adapter
4. Install the other one touch nipple(406), regulator (405), elbow (404),ball valve (403) and adapter (402) to the pump inlet.
5. Connect the adapter (407), elbow (408) and fluid hose (409) to the pump outlet.



# Troubleshooting

## ⚠ WARNING

### INJECTION HAZARD



To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the Pressure Relief procedure if the spray tip/nozzle clogs and whenever you:

- Are instructed to relieve the pressure.
- Stop spraying,
- Check or service any of the system equipment,
- Or install or clean the spray tip.

### MOVING PARTS HAZARD



To reduce the risk of serious injury, Including amputation, from moving parts inside the air motor housing, never operate the pump with the air motor plate removed.

The chart below is specific to the air motor and pump, Refer to the other instruction manuals included with the system to troubleshoot individual components

This chart uses the proportioner gauges To determine pump malfunctions.

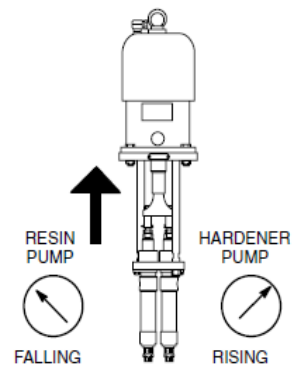
Faulty manifold check valves can mask pump cylinder problems.

Observe the gauge readings during the Stroke direction indicated by the bold Arrow, and immediately after closing the Manifold.

### TROUBLE AREA:

#### RESIN PUMP LEAKAGE

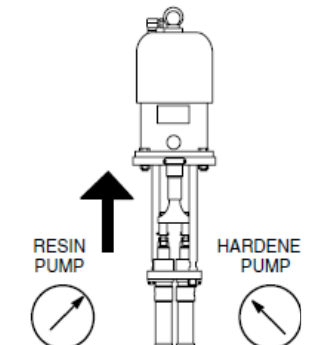
1. THROAT PACKING
2. PISTON PACKING
3. PISTON BALL CHECK



### THOUBLE AREA:

#### HARDENER PUMP LEAKAGE

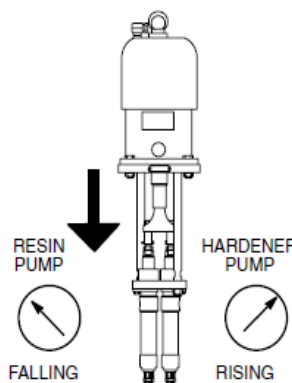
1. THROAT PACKING
2. PISTON PACKING
3. PISTON BALL CHECK



### TROUBLE AREA:

#### RESIN PUMP LEAKAGE

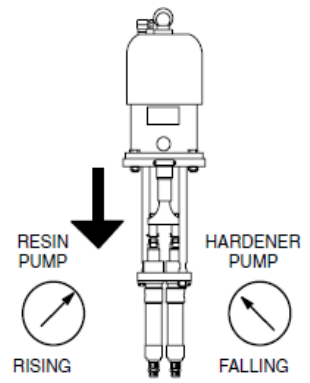
1. THROAT PACKING
2. INTAKE BALL CHECK



### TROUBLE AREA:

#### HARDENER PUMP LEAKGE

1. THROAT PACKING
2. INTAKE BALL CHECK



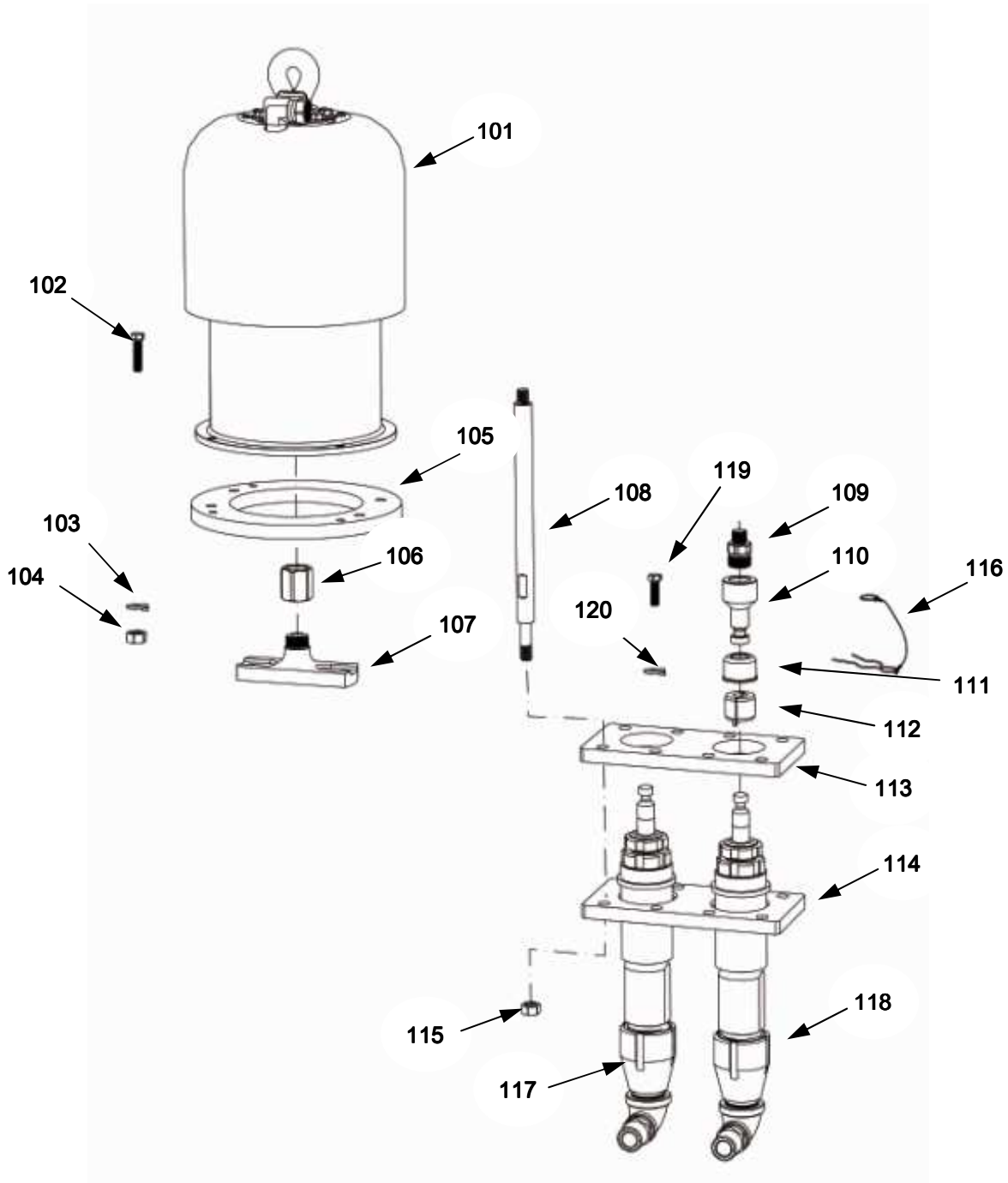
# Troubleshooting

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
System will not run or stops while running.	.Air pressure or volume too low. .Closed or restricted air line or air valve. .Fluid valves closed. .Clogged fluid hose. .Air motor worn or damaged. .Displacement pump stuck.	.Increase, check air compressor. .open or clean as required. .Open fluid valves. .replace fluid hose. .Service air motor. See instructions in separate manual <b>P-Air Motor</b> .Service pump.
System speeds up or runs erratically	.Fluid containers are empty.** .Air fluid lines.** .Displacement pump parts worn or damaged.	.Check often-keep filled. .Purge, check connections. .Service pump.
Pump operates but resin output pressure drops during upstroke.*	.Dirty, worn or damaged resin pump piston valve. .Worn or damaged resin pump piston packings	.Clean, service pump. .Replace.
Pump operates but resin output pressure drops during down stroke.	.Dirty, worn or damaged resin pump intake valve.	.Clean, service pump.
Pump operates but resin output pressure drops during both strokes.*	.Dirty, worn or damaged resin pump piston valve. .Fluid supply low.**	.Clean, service pump. .Refill or change container
Pump operates but hardener output pressure drops during upstroke.*	.Dirty, worn damaged resin pump intake valve. .Worn or damaged hardener pump piston packings.	.Clean, service pump. .Replace
Pump operates but hardener output pressure drops during down stroke.*	.Dirty, worn or damaged hardener pump intake valve.	.Clean, service pump.
Pump operates but hardener output pressure drops during both strokes.	.Dirty, worn or damaged hardener pump intake valve. .Fluid supply low.**	.Clean, service pump. .Refill or change container.
.Fluid leaks around fluid pump packing nut	.Loose packing nut or worn throat packings.	.Tighten, replace.
Relief valve opens too soon or will not close.	.Relief valve needs adjusting or is damaged.	.Adjust, service pump.

\* Fluid ratio will be wrong.

\*\*Purge all air out of the system before proportioning the fluids.

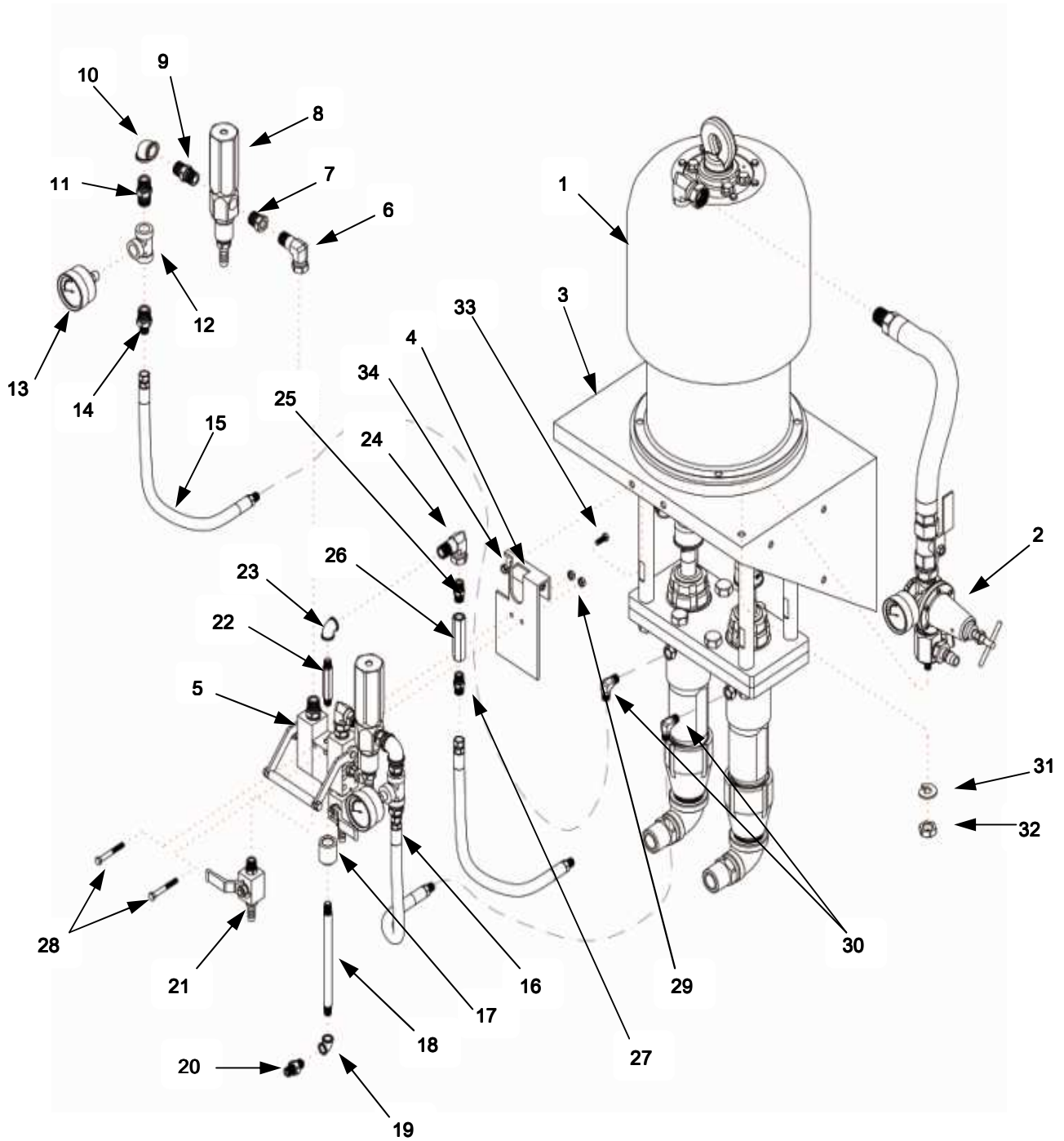
# Parts – Bare, Pumps



## Parts – Bare, Pumps List

No.	Part No.	Description	Qty	No.	Part No.	Description	Qty
101		KING AIR MOTOR	1	111		COVER	2
102		SCREW, M10x50L	4	112		COUPLING	2
103		WASHER, spring M10	4	113		UPEER PLATE	1
104		NUT, lock M10	4	114		LOW PLATE	1
105		PLATE, mounting	1	115		NUT, lock 5/8"-11	4
106		COUPLER, tube	1	116		CLIP, hairpin	2
107		YOKE, connector tube	1	117		RESINDISPLACEMENT PUMP	1
108		TIE ROD	4	118		HARDENER DISPLACEMENT PUMP	1
109		ADAPTER	2	119		SCREW, hex cap head M16	4
110		COUPLER	2	120		WASHER, spring M16	4

# Parts – Wall Mount, Pumps

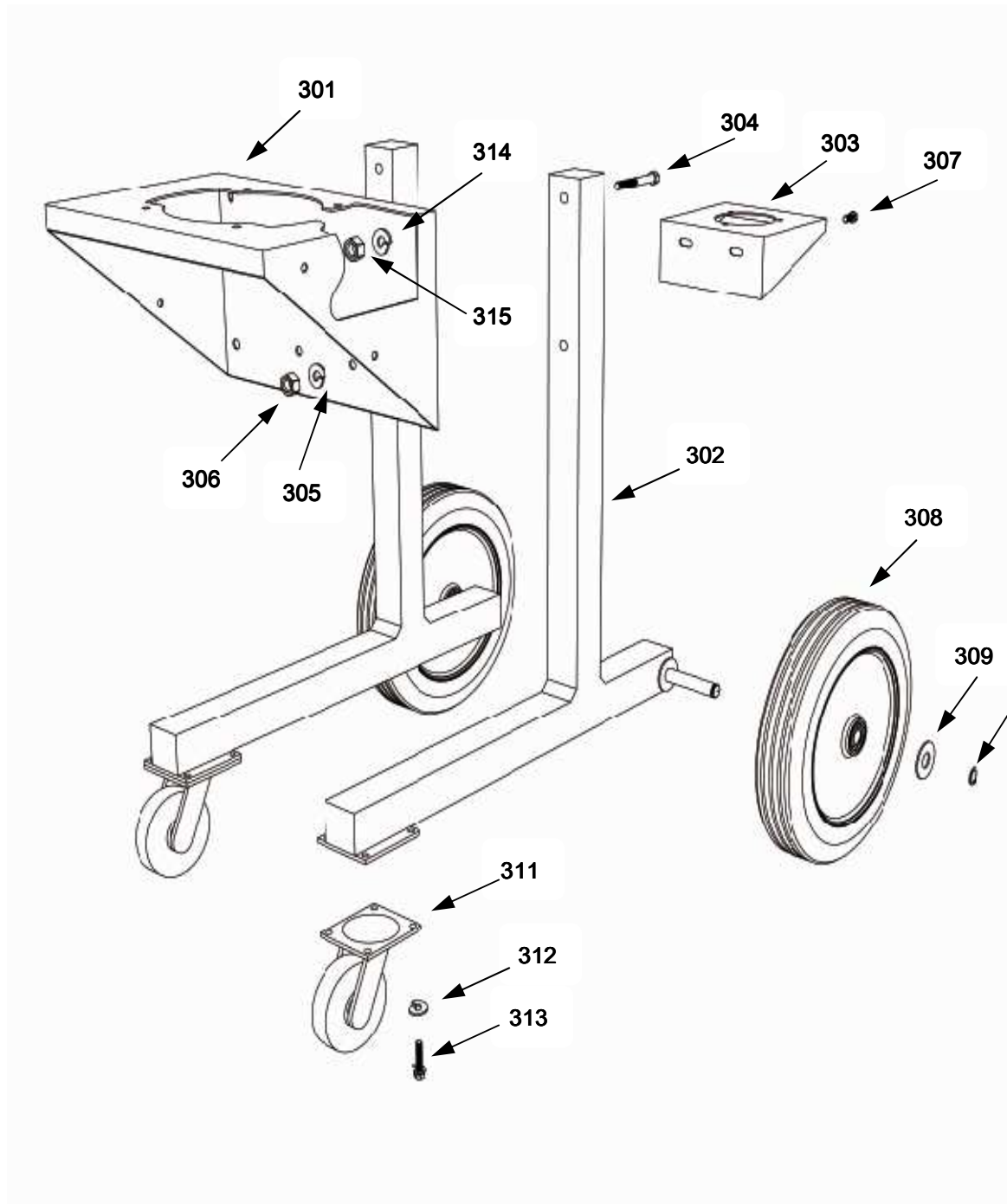




# Parts – Wall Mount, Pumps List

No.	Part No.	Description	Qty	No.	Part No.	Description	Qty
1		PROPORTIONAL PUMP	1	21		PRESUER VALVE, 1/4"	2
2		AIR REGULATOR	1	22		NIPPLE, 1/4"	1
3		BRACKET, mounting	1	23		90° SOCKET, 1/4"	1
4		BRACKET, manifold	1	24		90° SWIVEL, 1/4"	1
5		MIXER MANIFOLD	1	25		NIPPLE, 1/4"	1
6		90° SWIVEL, 3/8"	2	26		CHECK VALVE, 1/4" 210bra	1
7		ADAPTER, 1/2"x3/8"	2	27		NIPPLE, npt 1/4"	1
8		PRESSUER RELIEF VALVE	2	28		SCREW, hex cap head M8	2
9		ADAPTER 1/2"x 3/8"	2	29		NUT, M8	1
10		90° ELBOW, socket	2	30		90° SWIVEL, 3/8:	2
11		NIPPLE, 3/8"	2	31		WASHER, M12	1
12		SOCKET, "T"	2	32		NUT, lock M12	1
13		PRESSUER GAUGE	2	33		SCREW, hex cap head M10	2
14		NIPPLE, npt3/8"	2	34		NUT, lock M10	2
15		RESIN HOSE, 3/8" nylon	1				
16		HARDENER HOSE, 3/8" nylon	1				
17		SOCKET, 1/2" x1/4"	1				
18		STATIC MIXER	1				
19		90° SOCKET, 1/4"	1				
20		NIPPLE. npt 1/4"-18	1				

# Parts – Stand Mount, Pumps



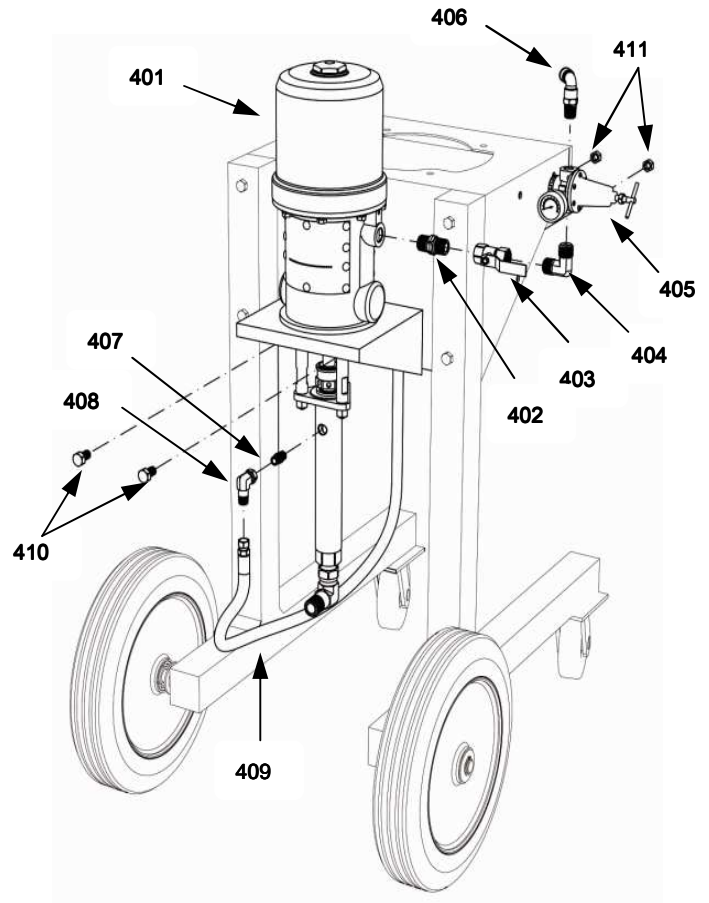
# Parts – Stand Mount, Pumps List

No.	Part No.	Description	Qty	No.	Part No.	description	Qty
301		BRACKET, mounting	1	309		WASHER	2
302		LEG, frame	2	310		SANP RING	2
303		BRACKET, mounting	1	311		CASTER, 4"	2
304		SCREW, hex cap head M14	4	312		WASHER, spring M8	8
305		WASHER, spring M12	2	313		SCREW, hex cap head M8	8
306		NUT, M12	2	314		WASHER, spring M14	4
307		SCREW, hex cap head M12	2	315		NUT, M14	4
308		TIRE, 14"	2				

# Accessories

## Parts for Installing Optional Cleaning Pump

No.	Part No.	Description	Qty
401		PRESIDENT PUMP	1
402		ADAPTER, 1/2x1/2	1
403		VALVE, 15A	1
404		ELBOW, 1/2x3/8	1
405		REGULATOR	1
406		ONE TOUCH NIPPLE, 3/8xΦ12	1
407		ADAPTER, 1/2x3/8	1
408		SWIVEL ELBOW, 90°	1
409		HOSE, npt1/4"	1
410		SCREW, hex cap head M12	2
411		NUT, M12	2



# Technical Date

## Pumps

Air operating range ... 30-100psi(210-700kPa,  
2.1-6.3bar)  
Fluid inlet size ..... 1 1/4 npt  
Fluid outlet size ..... 3/8 npt.  
Air inlet size ..... 3/4 npt  
Maximum fluid outlet  
Pressure ..... 3000 psi(21 MPa,210bar)  
Maximum fluid inlet  
Pressure ..... 250 psi(1.7 MPa,17bar)  
Wetted parts ..... Stainless steel, PTFE  
Chrome plating, carbon steel  
Ultra-high molecular  
Weight polyethylene.

## Manifold assemblies

manifold outlets ..... 1/2 npt  
Hoses ..... 3/8in. ID,PTFE, 3/8npt(m)  
3500psi(24MPa,240 bar)  
Maximum working pressure  
Hoses ..... 3/8 in. ID, nylon, 3/8 npt(m)  
3000psi(21MPa,210 bar)  
Maximum working pressure  
Solvent port size..... 1/4npt(m)  
pressure relief  
valves wetted parts.. stainless steel.  
tungsten carbide, Viton  
Ultra-high molecular

# Model Charts

Pressure and Ratio Ratings for KING Pumps

Mix Ratio	No.		Maximum Pump Fluid output pressure		Maximum Air pressure Of		Minimum Component Working Pressure		Pressure Ratio
	Resin	Hardener	psi	Mpa, bar	psi	Mpa, bar	psi	Mpa, bar	
1:1	115	115	3000	21, 207	58	0.4, 4	3000	21, 207	52:1
5:1	290	58	3450	23.8, 238	100	0.7, 7	3450	23.8, 238	34:1

# MM Services Standard Warranty

MM warrants all equipment referenced in this document which is manufactured by MM and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by MM, MM will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by MM to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with MM written recommendations.

This warranty does not cover, and MM shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-MM component parts. Nor shall MM be liable for malfunction, damage or wear caused by the incompatibility of MM equipment with structures, accessories, equipment or materials not supplied by MM, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by MM.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized MM distributor for verification of the claimed defect. If the claimed defect is verified, MM will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

**THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

MM sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within one (1) years of the date of sale.

**MM MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD**

**BUT NOT MANUFACTURED BY MM.** These items sold, but not manufactured by MM (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. MM will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will MM be liable for indirect, incidental, special or consequential damages resulting from MM supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of MM or otherwise.

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