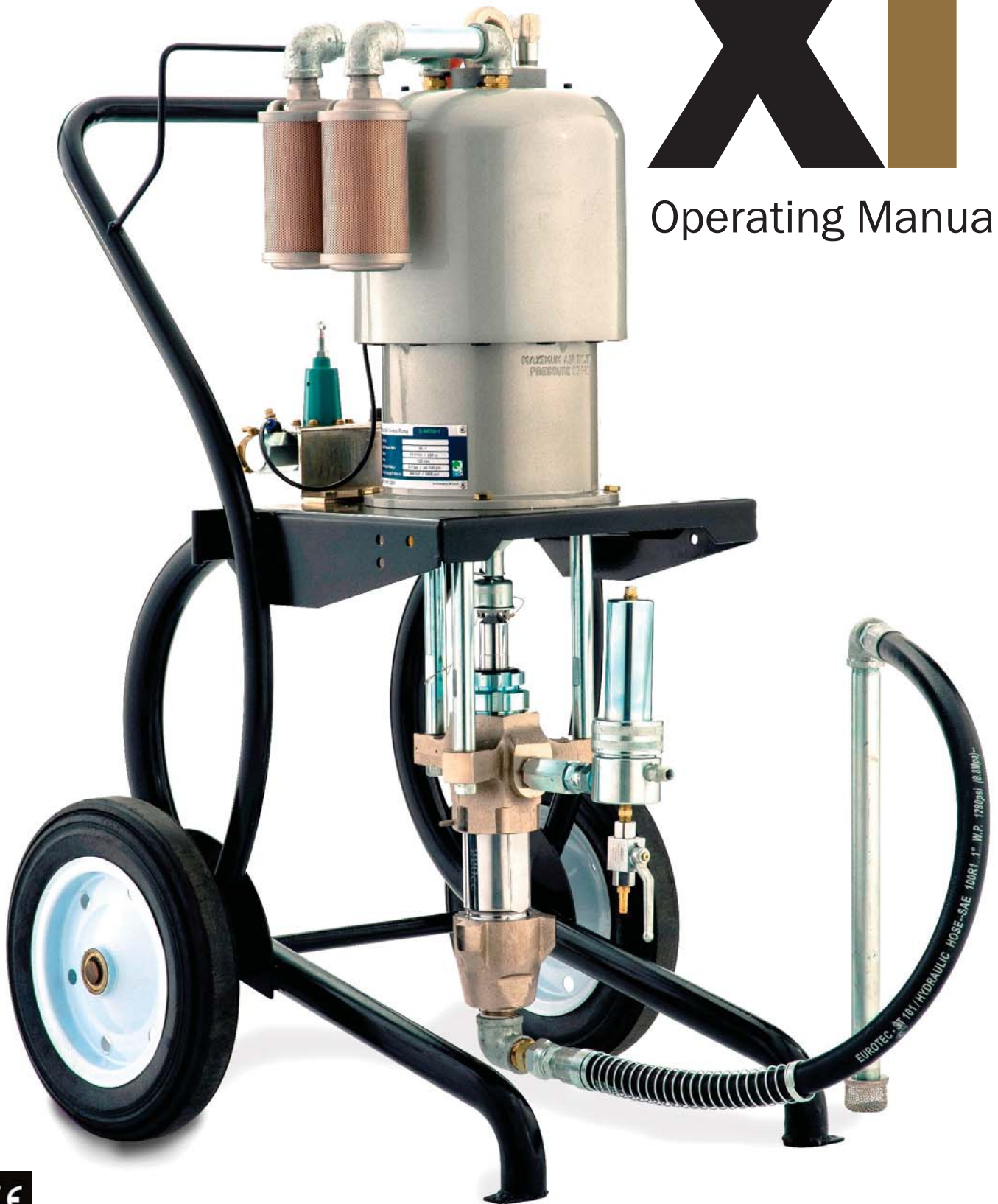


XT

Operating Manual



! CAUTION !

This manual contains
important warnings and information
PLEASE READ & KEEP FOR FUTURE REFERENCE
ISSUE DATE 16.07.2015

Model

Serial #



Operational Hazards

! WARNING !

EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are not sure, call your Aristospray distributor.
- Do not alter or modify this equipment.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. Refer to the **Technical Data** on page 15 for the maximum working pressure of this equipment.
- Use fluids and solvents which are compatible with the equipment wetted parts. Refer to the Technical Data section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Do not use hoses to pull equipment.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Aristospray hoses to temperatures above 82°C or below -40°C.
- Wear hearing protection when operating this equipment.
- Do not lift pressurized equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

! WARNING !

INJECTION HAZARD

Spray from the gun, 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.

- Fluid injected into the skin might look like just a cut, but it is a serious injury. Get immediate medical attention.
- Do not point the gun at anyone or at any part of the body.
- Do not put your hand or fingers over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove or rag.
- Do not "blow back" fluid; this is not an air spray system.
- Always have the tip guard and the trigger guard on the gun when spraying.
- Check the gun diffuser operation weekly. Refer to the gun manual.
- Be sure the gun trigger safety operates before spraying.
- Lock the gun trigger safety when you stop spraying.
- Follow the **Pressure Relief Procedure** on page 5 if the spray tip clogs and before cleaning, checking or servicing the equipment.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn or damaged parts immediately. Do not repair high pressure couplings; you must replace the entire hose.

! WARNING !

MOVING PARTS HAZARD

Moving parts, such as the air motor piston, can pinch or amputate your fingers.

- Keep clear of all moving parts when starting or operating the pump.
- Before servicing the equipment, follow the **Pressure Relief Procedure** on page 5 to prevent the equipment from starting unexpectedly.

! WARNING !

FIRE AND EXPLOSION HAZARD

Improper grounding, poor ventilation, open flames or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.

- Ground the equipment and the object being sprayed. Refer to **Grounding** on page 3.
- If there is any static sparking or you feel an electric shock while using this equipment, stop spraying immediately. Do not use the equipment until you identify and correct the problem.
- Provide fresh air ventilation to avoid the build up of flammable fumes from solvents or the fluid being sprayed.
- Keep the spray area free of debris, including solvent, rags, and petroleum.
- Electrically disconnect all equipment in the spray area.
- Extinguish all open flames or pilot lights in the spray area.
- Do not smoke in the spray area.
- Do not turn on or off any light switch in the spray area while operating or if fumes are present.
- Do not operate a petroleum engine in the spray area.

! WARNING !

TOXIC FLUID HAZARD

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.

- Know the specific hazards of the fluid you are using.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.

Setup

GENERAL INFORMATION

NOTE: Always use genuine Aristospray parts and accessories, available from your Aristospray distributor. If you supply your own accessories, be sure they are adequately sized and pressure rated for your system.

PREPARE THE OPERATOR

All persons who operate the equipment must be trained in the safe, efficient operation of all system components as well as the proper handling of all fluids. All operators must thoroughly read all instruction manuals, tags, and labels before operating the equipment.

PREPARE THE SITE

The Q-AXT45/XT56/XT68 pumps require 4.2 m³/min (150 cfm) of compressed air while operating at 6.3 bar (90 psi) air pressure and 60 cycles per minute. Ensure that you have an adequate compressed air supply.

Bring a compressed air supply line from the air compressor to the pump location. Be sure all air hoses are properly sized and pressure-rated for your system. Use only electrically conductive hoses. The air hose should have a 1/2" bore. Install a bleed-type shutoff valve in the air line to isolate the air line components for servicing. Install an air line moisture trap and drain valve to help remove moisture from the compressed air supply. Keep the site clear of any obstacles or debris that could interfere with the operator's movement. Have a grounded, metal pail available for use when flushing the system or draining the fluid filter.

Grounding

! WARNING !

FIRE AND EXPLOSION HAZARD

Before operating the pump, ground the system as explained below. Also read the section Fire or Explosion Hazard on page 2.

- 1. Pump:** install a ground wire and clamp. Loosen the grounding terminal screw and crimp onto ground cable. Tighten screw securely. Connect the other end of the wire to a true earth ground.
- 2. Air and fluid hoses:** use only electrically conductive hoses.
- 3. Air compressor:** follow manufacturer's recommendations.
- 4. Spray gun:** ground through connection to a properly grounded fluid hose and pump.
- 5. Fluid supply container:** follow your local code.
- 6. Object being sprayed:** follow your local code.
- 7. Solvent pails used when flushing:** follow your local code. Use only metal pails, which are conductive, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts the grounding continuity.
- 8.** To maintain grounding continuity when flushing or relieving pressure, hold a metal part of the spray gun firmly to the side of a grounded metal pail, then trigger the gun.

Setup

SUPPLIED COMPONENTS

! WARNING !

A orange-handled bleed-type master air valve and a fluid drain valve are supplied. These accessories help reduce the risk of serious injury, including fluid injection and splashing of fluid in the eyes or on the skin, and injury from moving parts if you are adjusting or repairing the pump. The bleed-type master air valve relieves air trapped between this valve and the pump after the valve is closed. Trapped air can cause the pump to cycle unexpectedly. Locate the valve close to the pump. The fluid drain valve assists in relieving fluid pressure in the displacement pump, hose, and gun. Triggering the gun to relieve pressure may not be sufficient.

- The **orange-handled bleed-type master air valve** is required in your system to relieve air trapped between it and the air motor when the valve is closed (see the **Warning** above).
- Remove the **female air line coupler**. Attach it onto the main air hose. Leave the mating coupler attached to the air regulator.
- The **air regulator** controls pump speed and outlet pressure by adjusting the air pressure to the pump.
- The **air relief valve** opens automatically to prevent over pressurization of the pump.
- The **fluid filter or surge tank** includes a 60 mesh (250 micron) stainless steel element to filter particles from the fluid as it leaves the pump. It includes the **fluid drain valve**, which is required in your system to relieve fluid pressure in the hose and gun (see the **Warning** above).
- The **suction hose and tube** allow the pump to draw fluid from a 19 litre (5 gallon) pail.
- The **Q-AXT45/XT56/XT68** pumps have two fluid shut-off valves at the fluid filter outlets. Attach the fluid hose to one of these outlets. The other outlet should be kept capped and closed at all times unless using a second hose and gun.

CONNECT THE SUCTION HOSE

Apply thread sealant to the suction hose and screw it into the bushing at the pump's fluid intake.

CONNECT THE FLUID HOSES & GUN

All Aristospray pneumatic airless pumps are normally supplied complete with a Hose and Gun Kit, which includes fluid hoses, a spray gun, tip, guard and connecting parts. If you supply your own fluid hoses and gun, be sure they are properly sized and pressure-rated for your system. Use only electrically conductive hoses.

1. Connect the main fluid hose to one fluid connection/shutoff valve at the fluid filter outlet.
2. Screw the coupling or nipple onto the other end of the main fluid hose.
3. Screw the short whip hose onto the coupling or nipple.
4. Screw the whip hose onto the spray gun swivel.

Operation

PRESSURE RELIEF PROCEDURE

⚠ WARNING !

Injection hazard. The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the Pressure Relief Procedure whenever you:

- **are instructed to relieve the pressure,**
- **stop spraying,**
- **check or service any of the system equipment,**
- **or install or clean the spray tips.**

- 1.** Lock the gun trigger safety.
- 2.** Close the orange-handled bleed-type master air valve.
- 3.** Open the fluid shutoff valve.
- 4.** Unlock the gun trigger safety.
- 5.** Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
- 6.** Lock the gun trigger safety.
- 7.** Open the drain valve having a container ready to catch the drainage.
- 8.** Leave the drain valve open until you are ready to spray again.

If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, **very slowly** loosen the tip guard retaining nut or hose end coupling and relieve pressure gradually, then loosen completely. Now clear the tip or hose.

PACKING NUT/WET CUP

Before starting, fill the packing nut 1/3 full with Aristospray Q-Lube piston lubricant or compatible solvent.

⚠ WARNING !

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the Pressure Relief Procedure at left.

The packing nut is torqued at the factory and is ready for operation. If it becomes loose and there is leaking from the throat packings, relieve pressure, then tighten the nut using the supplied wrench. Do this whenever necessary. Do not over tighten the packing nut.

FLUSH THE PUMP BEFORE FIRST USE

The pump is tested with lightweight oil, which is left in to protect the pump parts. If the fluid you are using may be contaminated by the oil, flush it out with a compatible solvent. See **Flushing** on page 7.

USING THE AIRLESS SPRAY GUN

Before operating the equipment, read the instruction manual supplied with the gun. Spray some test patterns before doing any finished work. Refer to the gun manual for detailed Information on correct spraying technique.

Operation

⚠ CAUTION !

To avoid tip-over, the cart must be on a flat and level surface. Failure to follow this caution could result in injury or equipment damage.

PRIME THE PUMP

1. Remove the tip guard and spray tip from the gun. See the gun instruction manual.
2. Close the air regulator and bleed-type air valves.
3. Close the fluid drain valve.
4. Engage the air line coupler with the mating coupler attached to the air regulator.
5. Check that all fittings throughout the system are tightened securely.
6. Place the suction tube into the fluid supply container.
7. Open the fluid shutoff valve.
8. Open the bleed-type air valves.
9. Hold a metal part of the gun firmly to the side of a grounded metal pail and hold the trigger open.
10. Slowly open the air regulator until the pump starts.
11. Cycle the pump slowly until all air is pushed out and the pump and hoses are fully primed.
12. Release the gun trigger and lock the trigger safety. The pump should stall against pressure.
13. If the pump fails to prime properly, open the drain valve. Use the drain valve as a priming valve until the fluid flows from the valve. Close the valve.

HELPFUL HINT

When changing fluid containers with the hose and gun already primed, open the drain valve to help prime the pump and vent air before it enters the hose. Close the drain valve when all air is eliminated.

SET THE AIR & FLUID PRESSURE

⚠ WARNING !

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the Pressure Relief Procedure on page 5.

1. Relieve the pressure. Install the tip guard and spray tip in the gun, as explained in the gun manual.
2. Open the air regulator slowly. Use the regulator to control pump speed and fluid pressure. Always use the lowest air pressure necessary to get the desired results. Higher pressures cause premature tip and pump wear.

HELPFUL HINT

To open the air regulator, turn the T-handle in (clockwise). To close the regulator, turn the handle counter clockwise. To lock the regulator setting, tighten the jam nut.

⚠ WARNING !

COMPONENT RUPTURE HAZARD

To reduce the risk of over pressurizing your system, which could cause component rupture and serious injury, never exceed the specified Maximum Incoming Air Pressure to the pump (see the Technical Data, on page 14).

3. With the pump and lines primed, and with adequate air pressure and volume supplied, the pump will start and stop as you open and close the gun.

⚠ CAUTION !

Do not allow the pump to run dry. It will quickly accelerate to a high speed, causing damage. If your pump is running too fast, stop it immediately and check the fluid supply. If the container is empty and air has been pumped into the lines, refill the container and prime the pump and the lines, or flush and leave it filled with a compatible solvent. Eliminate all air from the fluid system.

Operation

SHUTDOWN & CARE OF THE PUMP

⚠ WARNING !

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the Pressure Relief Procedure on page 5.

For overnight shutdown, stop the pump at the bottom of its stroke to prevent fluid from drying on the exposed displacement rod and damaging the throat packings. **Relieve the pressure.** Always flush the pump before the fluid dries on the displacement rod. See **Flushing** below.

FLUSHING

⚠ WARNING !

FIRE AND EXPLOSION HAZARD

Before flushing, read the section Fire & Explosion Hazard on page 2. Be sure the entire system and flushing pails are properly grounded. Refer to Grounding on page 3.

Flush the pump:

- Before the first use
- When changing colors or fluids
- Before fluid can dry or settle out in a dormant pump (check the pot life of catalyzed fluids)
- Before storing the pump.

Flush with a fluid that is compatible with the fluid you are pumping and with the wetted parts in your system. Check with your fluid manufacturer or supplier for recommended flushing fluids and flushing frequency.

⚠ CAUTION !

Never leave water or water-base fluid in the pump overnight. If you are pumping water-base fluid, flush with water first, then with a rust inhibitor such as mineral spirits. Relieve the pressure, but leave the rust inhibitor in the pump to protect the parts from corrosion.

⚠ WARNING !

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the Pressure Relief Procedure on page 5.

1. Relieve the pressure.

2. Remove the tip guard and spray tip from the gun. See the gun instruction manual.

3. Remove the filter element from the fluid filter or surge tank. Reinstall the filter or surge tank bowl.

4. Place the suction tube in a container of solvent.

5. Hold a metal part of the gun firmly to the side of a grounded metal pail.

6. Start the pump. Always use the lowest possible fluid pressure when flushing.

7. Trigger the gun.

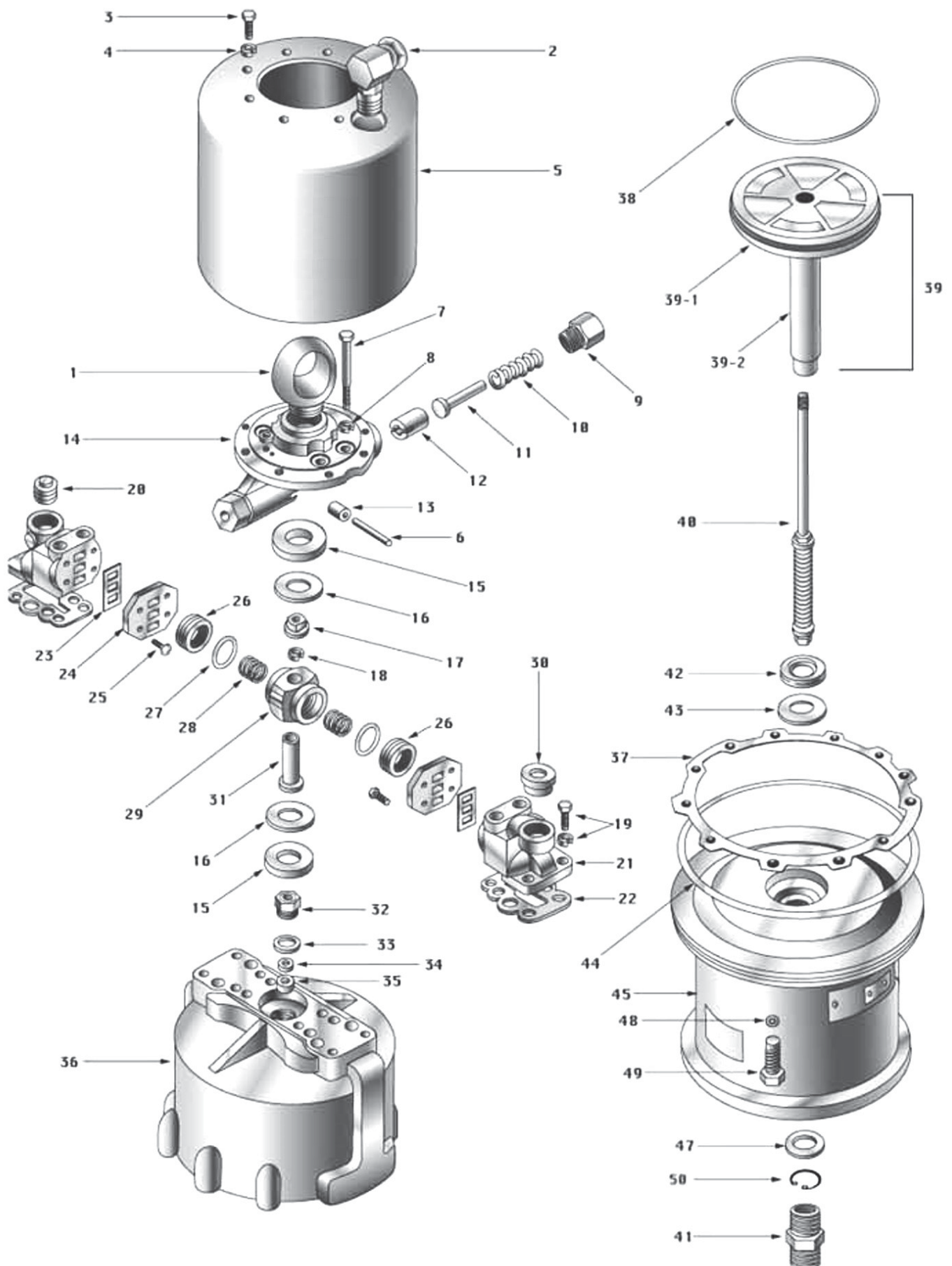
8. Flush the system until clear solvent flows from the gun.

9. Relieve the pressure.

10. Clean the tip guard, spray tip, and fluid filter element separately, then reinstall them.

11. Clean the inside and outside of the suction tube.

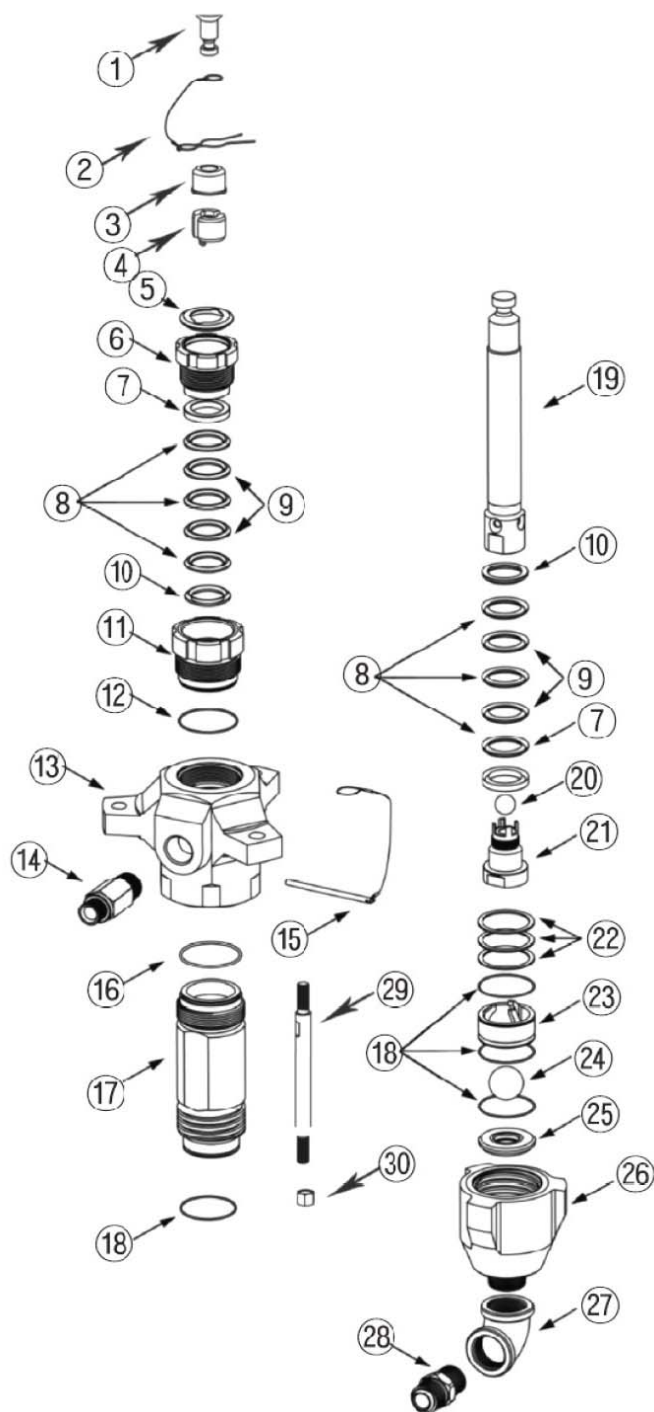
Q-AXT45 | Q-AXT56 | Q-AXT68 | Air Motor



Q-AXT45 | Q-AXT56 | Q-AXT68 | Air Motor

Item #	Description	Quantity
1	Ring	1
2	Union	1
3	Screw (1/4" 20 x 1/2")	8
4	Spring Washer (1/4")	8
5	Shield	1
6	Axle	2
7	Screw (7/16" 14 x 3 1/2")	4
8	Lock Washer	4
9	Retainer	2
10	Spring	2
11	Guide Spring Detent	2
12	Plunger	2
13	Roller	2
14	Detent Housing	1
15	Dampening Pad (rubber)	2
16	Flat Spring Washer	2
17	Detent Spring Nut	1
18	Spring Washer (M10)	1
19	Screw	4
19	Washer	4
20	Pipe Socket Plug (3/4" NPT)	1
21	Manifold	2
22	Manifold Gasket	2
23	Valve Plate Seat	2
24	Plate	2
25	Screw	8
26	Air Director Valve	2
27	O-Ring (Nitrile Rubber)	2
28	Compression Spring	2
29	Air Valve Housing	1
30	Air Inlet Rubber Grommet	1
31	Valve Housing Hub	1
32	Trip Rod Bearing	1
33	Gasket (copper)	1
34	Washer (leather)	1
35	V-Block Packing (polyurethane)	1
36	Air Motor Cylinder	1
37	Gasket (cylinder)	1
38	Piston O-Ring	1
39	Piston Assembly	1
40	Trip Rod Assembly	1
41	Piston Tube Stud	1
42	Nitrile Rubber U-Packing	1
43	Washer	1
44	Nitrile Rubber O-Ring	1
45	Air Motor Base	1
47	Seal	1
48	Washer	12
49	Screw	12
50	Snap Ring	1

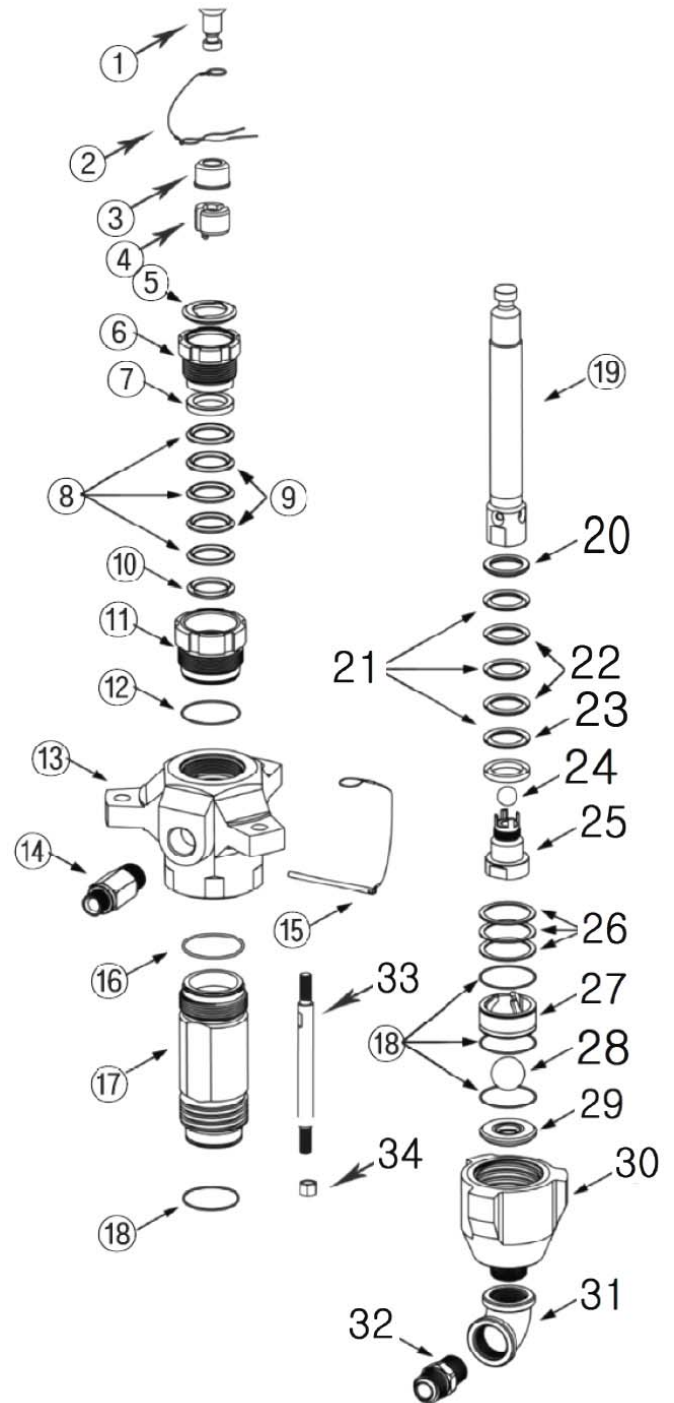
Q-AXT45 | Lower Parts 250 cc



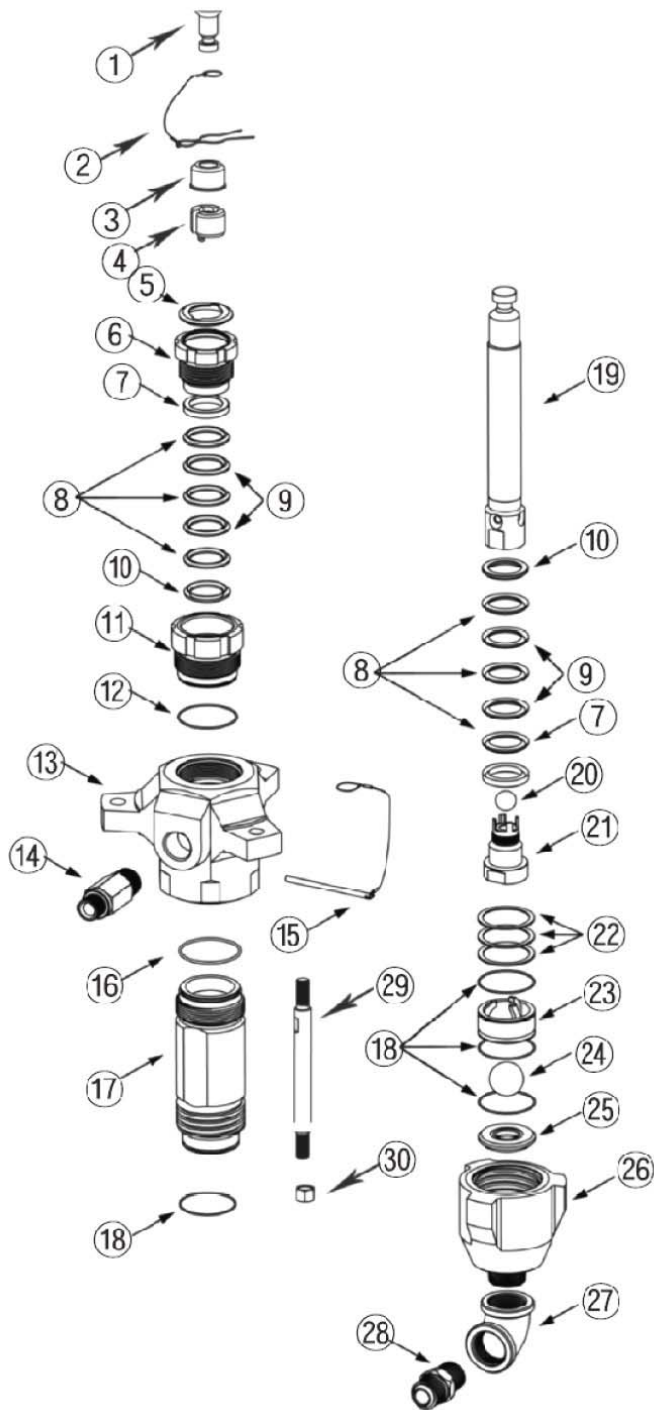
Item #	Description	Quantity
1	Adaptor	1
2	Hairpin Clip	1
3	Cover	1
4	Coupling	1
5	Plug (throat seal)	1
6	Packing Nut	1
7	Gland (F)	2
8	V-Packing (UHMWPE:PRO-451)	6
9	V-Packing (leather)	4
10	Gland (M)	2
11	Cartridge	1
12	O-Ring (cartridge)	1
13	Pump Housing	1
14	Nipple (PT1" x PF3/4")	1
15	Pin (self-locking)	1
16	O-Ring (top-sleeve)	1
17	Sleeve	1
18	O-Ring (sleeve & intake)	4
19	Displacement Rod	1
20	Ball (7/8" dia)	1
21	Piston	1
22	Shim	3
23	Ball Guide	1
24	Ball (1 1/2" dia)	1
25	Seat	1
26	Intake Housing	1
27	Elbow (1 1/4" x 1")	1
28	Nipple (PT1" x PF1")	1
29	Tie Rod	3
30	Nut (Teflon)	3

Q-AXT56 | Lower Parts 220 cc

Item #	Description	Quantity
1	Adaptor	1
2	Hairpin Clip	1
3	Cover	1
4	Coupling	1
5	Plug (throat seal)	1
6	Packing Nut	1
7	Gland (F)	1
8	V-Packing (UHMWPE)	3
9	v-Packing (leather)	2
10	Gland (M)	1
11	Cartridge	1
12	O-Ring (cartridge)	1
13	Pump Housing	1
14	Nipple (PT1" x PF3/4")	1
15	Pin (self-locking)	1
16	O-Ring (top-sleeve)	1
17	Sleeve	1
18	O-Ring (sleeve & intake)	4
19	Displacement Rod	1
20	Gland (M)	1
21	Packing (UHMWPE)	3
22	Packing (Leather)	2
23	Gland (F)	1
24	Ball (7/8" dia)	1
25	Piston	1
26	Shim	3
27	Ball Guide	1
28	Ball (1 1/2" dia)	1
29	Seat	1
30	Intake Housing	1
31	Elbow (1 1/4" x 1")	1
32	Nipple (PT1" x PF1")	1
33	Tie Rod	3
34	Nut (Teflon)	3



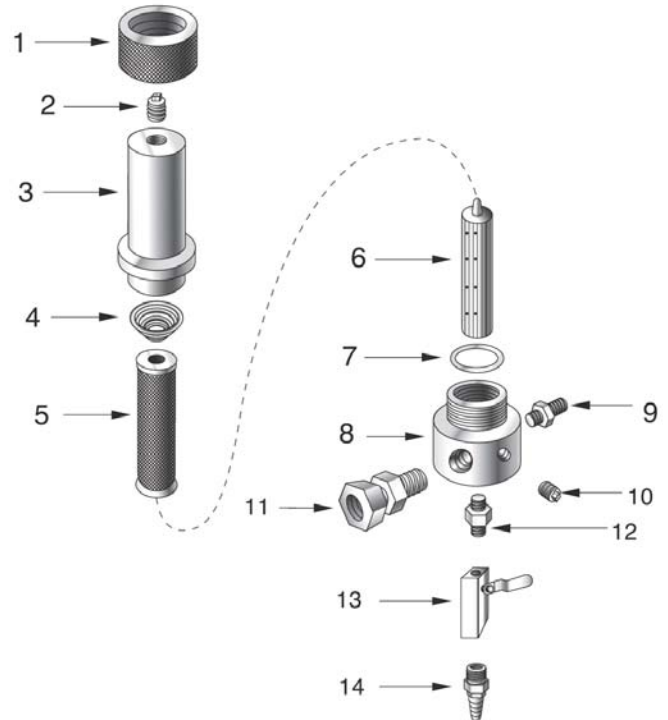
Q-AXT68 | Lower Parts 180 cc



Item #	Description	Quantity
1	Adaptor	1
2	Hairpin Clip	1
3	Cover	1
4	Coupling	1
5	Plug (throat seal)	1
6	Packing Nut	1
7	Gland (F)	2
8	V-Packing (UHMWPE:PRO-451)	6
9	V-Packing (leather)	4
10	Gland (M)	2
11	Cartridge	1
12	O-Ring (cartridge)	1
13	Pump Housing	1
14	Nipple (PT1" x PF3/4")	1
15	Pin (self-locking)	1
16	O-Ring (top-sleeve)	1
17	Sleeve	1
18	O-Ring (sleeve & intake)	4
19	Displacement Rod	1
20	Ball (7/8" dia)	1
21	Piston	1
22	Shim	3
23	Ball Guide	1
24	Ball (1 1/2" dia)	1
25	Seat	1
26	Intake Housing	1
27	Elbow (1 1/4" x 1")	1
28	Nipple (PT1" x PF1")	1
29	Tie Rod	3
30	Nut (Teflon)	3

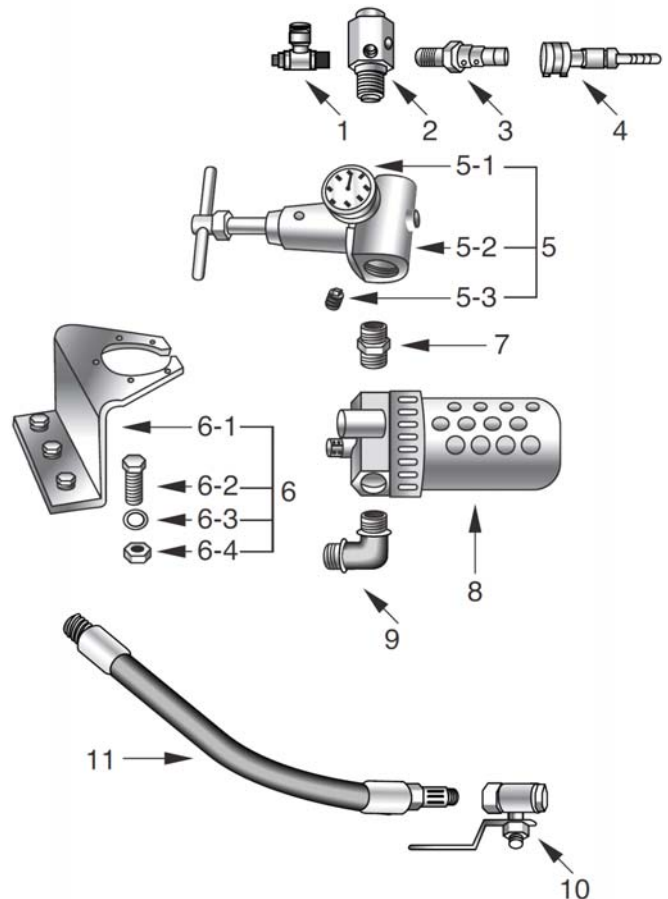
Q-AXT | Surge Tank Assembly

Item #	Description	Quantity
1	Ring	1
2	Plug	1
3	Bowl	1
4	Spring	1
5	Surge Filter #60	1
6	Support	1
7	Packing	1
8	Manifold	1
9	Nipple (PT3/8" x NPS1/4")	1
10	Plug	1
11	Union (3/4")	1
12	Nipple (PT1/4" x PT1/4")	1
13	Ball Valve	1
14	Drain Nipple	1

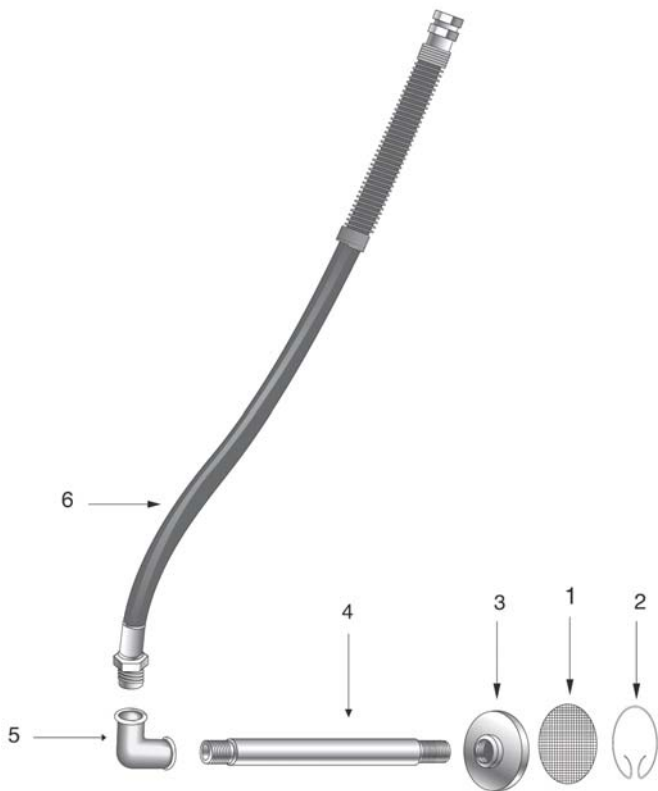


Q-AXT | Air Regulator Assembly

Item #	Description	Quantity
1	Speed Control	1
2	Air Manifold	1
3	Air Coupling (M:1/2":PM300)	1
4	Air Coupling (F:1/2":SH300)	1
5	Air Regulator & Gauge	1
5	Air Regulator	1
5	Gauge	1
5	Plug 1/4"NPT	1
6	Bracket Set	1
6	Bolt	3
6	Washer	3
6	Nut	3
6	Bracket	1
7	Nipple (3/4" x 3/4")	1
8	Oiler	1
9	Elbow (3/4" x 3/4")	1
10	Valve (3/4")	1
11	Air Hose (570 mm)	1



Q-AXT | Suction Assembly



Item #	Description	Quantity
1	Screen	1
2	Clip	1
3	Cup (POM)	1
4	Pipe	1
5	Elbow (1")	1
6	Hose (1")	1

Q-AXT | Cart Assembly



Item #	Description	Quantity
1	S1-Cart	1
2	Crumb Wheel 15" x 3"	2
3	Bolt, Washer & Nut	1
4	Bolt	4
5	Washer	4
5	Nut	4
5	Tyre Snap Ring	2
5	Cup Ring	2
6	Cup	2

Q-AXT

|

Technical Data

	Q-AXT45	Q-AXT56	Q-AXT68
Pump Ratio	45:1	56:1	68:1
Displacement	250 cc	220 cc	180 cc
Maximum tip size	0.052"	0.052"	0.052"
Flow per minute	12.5 litres	11.0 litres	9.0 litres
Maximum input pressure	6.3 bar / 90 psi	6.3 bar / 90 psi	6.3 bar / 90 psi
Weight	107 kg	104 kg	101 kg
Power supply	Air compressor	Air compressor	Air compressor