Even the best paint spraying pumps need a little

TLC

Aristospray UK

London
Granville House
Wallingford Road
Uxbridge
UB8 2RW

T 01895 276751
E sales@aristospray.com

Dublin
2b Stephenstown
Industrial Park
Balbriggan
Co. Dublin

T 00353 1690 3162
F 00353 1690 3480
E sales@aristospray.com

www.aristospray.com

Q-TECH

Q-P021 ELECTRIC AIRLESS SPRAY PUMP
Q-P025 ELECTRIC AIRLESS SPRAY PUMP

USER MANUAL

CAUTION!
This manual contains
important warnings and information

PLEASE READ & KEEP FOR FUTURE REFERENCE
ISSUE DATE 31.01.2013

SPECIFICATIONS

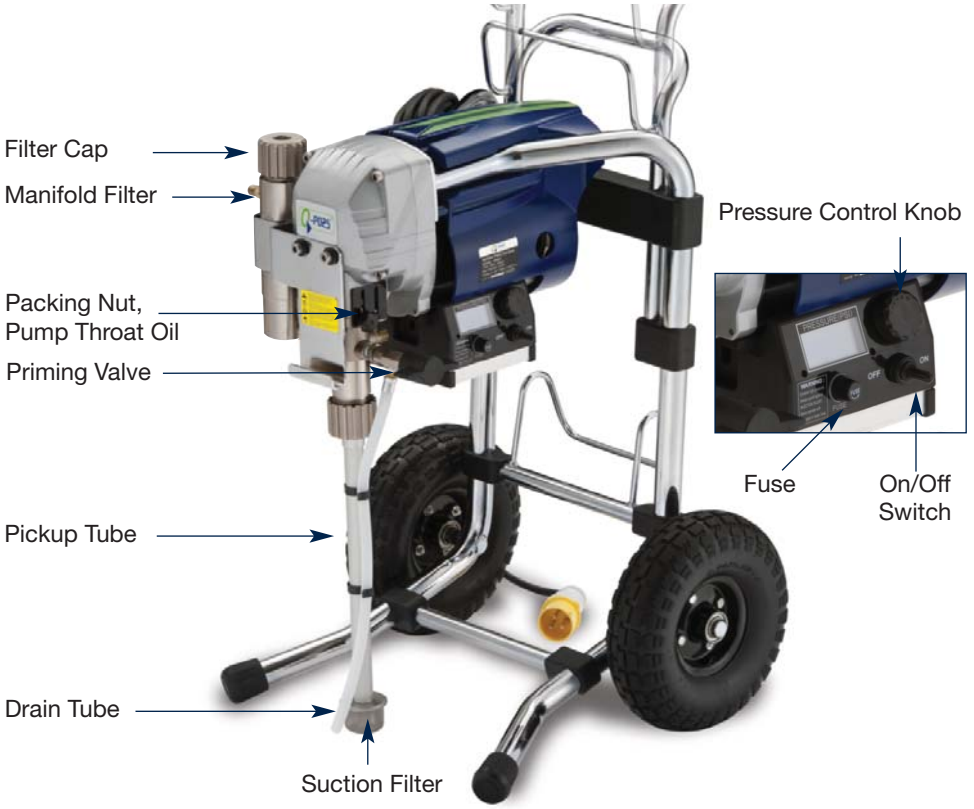
Models	Q-P021
Motor Type	1000W TEFC DC
Max Pressure	207 bar, 3000 PSI
Max Output	2.1 l/min (0.55 gpm)
Max Tip Size	.021"

Material Applications	
Wood interior	lacquer, varnish, stain, sealer, enamel,
Ceiling	high-build,
Wood exterior	exterior stain, vinyl, acrylic, latex,
Masonry	alkyd, vinyl, latex, elastomeric, block filler,
Structural steel	heavy coatings

SPECIFICATIONS

Models	Q-P025
Motor Type	1300W TEFC DC
Max Pressure	207 bar, 3000 PSI
Max Output	2.7 l/min (0.71 gpm)
Max Tip Size	.025"

Material Applications	
Wood interior	lacquer, varnish, stain, sealer, enamel,
Ceiling	high-build,
Wood exterior	exterior stain, vinyl, acrylic, latex,
Masonry	alkyd, vinyl, latex, elastomeric, block filler,
Structural steel	heavy coatings



GENERAL SAFETY RULES

WARNING! Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and / or serious personal injury. The term airless sprayer in all of the warnings listed below refers to your mains-operated (corded) airless sprayer.

SAVE THESE INSTRUCTIONS

Work area

a) **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
b) **Do not operate airless sprayers in explosive atmospheres, such as in the presence of flammable liquid, gases, or dust.** Airless sprayers create sparks which may ignite the dust or fumes.
c) **Keep bystanders, children, and visitors away while operating a airless sprayer.** Distractions can cause you to lose control.

Electrical Safety

a) **Airless sprayer plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) airless sprayers.** Unmodified plugs and matching outlets will reduce the risk of electric shock.
Grounded sprayers must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the sprayer should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
b) **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
c) **Do not expose airless sprayers to rain or wet conditions.** Water entering an airless sprayer will increase the risk of electric shock.
d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the airless sprayer. Keep the cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged or entangled cords increase the risk of electric shock.
e) **When operating an airless sprayer outdoors, use an outdoor extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.

Personal Safety

a) **Stay alert, watch what you are doing and use common sense when operating an airless sprayer. Do not use while you are tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating airless sprayers may result in serious personal injury.
b) **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

c) **Avoid accidental starting. Ensure the switch is in the off position before plugging in.**
d) **Do not overreach. Keep a proper footing and balance at all times.** This enables better control of the airless sprayer in unexpected situations.
e) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.

Service

Have your airless sprayer serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the airless sprayer is maintained.

If the supply cord of this airless sprayer is damaged it must be replaced by a specially prepared cord available through the service organization.

SPECIFIC SAFETY RULES

HANDLE THIS UNIT AS YOU WOULD A LOADED WEAPON!

Extreme high pressure spray can cause extremely serious injury.

OBSERVE ALL WARNINGS!

WARNING: HIGH PRESSURE. Never leave pressurized system unattended. Always follow the Pressure Relief Procedure. Take precautions to avoid high pressure component rupture.
DANGER: INJECTION INJURY. Skin injection by high pressure paint is not a simple cut. It must be treated surgically immediately.

WARNING: FIRE AND EXPLOSION HAZARD. Take all precautions to avoid sources of sparks and ignition when spraying. Keep the machine at least 6 meters away from the spraying operation.

WEAR PROTECTIVE EQUIPMENT AT ALL TIMES. Always use a respirator, eye protection and protective clothing.

Keep clear of moving parts when starting or operating the sprayer. Do not put your fingers into any openings to avoid amputation by moving parts or burns on hot parts. When starting the motor, maintain a safe distance from moving parts of the equipment.
Before adjusting or servicing any mechanical part of the sprayer, follow the PRESSURE RELIEF PROCEDURE.

EXPLOSION RISK FROM HALOGENATED HYDROCARBON SOLVENTS

Never use halogenated hydrocarbon solvents in this machine.

Contact with aluminum parts may cause an explosion.

Some of the most common of these solvents are:
Carbontetrachloride
Chlorobenzene
Dichloroethane
Dichloroethyl Ether
Ethylbromide
Ethylchloride
Tethrachloethane

PREVENT STATIC SPARKING FIRE/EXPLOSIONS

Vapors created when spraying can be ignited by sparks.
To reduce the risk of fire, always locate the sprayer at least 20 feet (6 m.) away from spray area. Do not plug in or unplug any electrical cords in the spray area. Doing so can cause sparks which can ignite any vapors still in the air. Follow the coating & solvent manufacturers safety warnings and precautions.

MEDICAL ALERT - Airless Spray Injection Injuries

If any fluid appears to penetrate your skin, **GET EMERGENCY MEDICAL CARE AT ONCE.**
DO NOT TREAT AS AN ORDINARY CUT.
High pressure fluids from spray or leaks are powerful enough to easily penetrate the skin and cause extremely serious injection injury, leading to the possible need for amputation.

- **NEVER** point the spray gun at anyone or any part of the body.
- **NEVER** put your hand or fingers over the spray tip. Do not use a rag or any other materials over your fingers. Paint will penetrate through these materials and into the hand.
- **NEVER** try to stop or deflect leaks with your hand or body.
- **ALWAYS** have the tip guard in place when spraying.
- **ALWAYS** lock the gun trigger when you stop spraying.
- **ALWAYS** remove tip from the gun to clean it.
- **NEVER** try to "blow back" paint, this is not an air powered sprayer.
- **ALWAYS** follow the **PRESSURE RELIEF PROCEDURE** before cleaning or removing the spray tip or servicing any system equipment.
- Be sure the equipment safety devices are operating properly before each use.
- Tighten all of the fluid connections before each use.
- **NEVER** alter equipment in any manner.
- **NEVER** smoke while in spraying area.
- **NEVER** spray highly flammable materials.
- **NEVER** use around children.
- **NEVER** allow another person to use sprayer unless he is thoroughly instructed on its safe use and given this operator's manual to read.
- **ALWAYS** wear a spray mask, gloves and protective eye wear while spraying.
- **ALWAYS** ensure fire extinguishing equipment is readily available and properly maintained.

NEVER LEAVE SPRAYER UNATTENDED WITH PRESSURE IN THE SYSTEM. FOLLOW PRESSURE RELIEF PROCEDURES

ALWAYS INSPECT SPRAYING AREA

- Keep the spraying area free from obstructions.
- Make sure the spraying area has good ventilation to safely remove vapors and mists.
- **NEVER** keep flammable material in spraying area.
- **NEVER** spray in vicinity of open flame or other sources of ignition.
- The spraying area must be at least 20 ft. away from spray unit.

SPRAY GUN SAFETY

- **ALWAYS** set gun safety lock in the "LOCKED" position when not in use & before servicing or cleaning.
- **NEVER** remove or modify any part of the gun.
- **ALWAYS REMOVE THE SPRAY TIP** when cleaning. Flush unit at the **LOWEST POSSIBLE PRESSURE.**
- **ALWAYS** check operation of all gun safety devices before each use.
- Be very careful when removing the spray tip or hose from the gun. A plugged line will contain fluid under pressure. If the tip or line is plugged, follow the pressure relief procedure

TIP GUARD

- **ALWAYS** have the tip guard in place on the spray gun while spraying. The tip guard alerts you to the injection hazard and helps prevent accidentally placing your fingers or any part of your body close to the spray tip.

SPRAY TIP SAFETY

- Use extreme caution when cleaning or changing spray tips. If the spray tip clogs while spraying, engage the gun safety latch immediately. ALWAYS follow the **PRESSURE RELIEF PROCEDURE** and then remove the spray tip to clean it.
- **NEVER** wipe off build up around the spray tip.

TOXIC FLUID HAZARD

- **ALWAYS** remove tip guard & tip to clean **AFTER** pump is turned off and the pressure is relieved by following the **PRESSURE RELIEF PROCEDURE.**
- Hazardous fluid or toxic fumes can cause serious injury or death if splashed in eyes or on skin, inhaled or swallowed. Know the hazards of the fluid you are using. Store & dispose of hazardous fluid according to manufacturer, local, state & national guidelines.
- **ALWAYS** wear protective eyewear, gloves, clothing and respirator as recommended by fluid manufacturer.

HOSES

- Tighten all of the fluid connections securely before each use. High pressure fluid can dislodge a loose coupling or allow high pressure spray to be emitted from the coupling and result in an injection injury or serious bodily injury.
- Only use hoses with a spring guard. The spring guard helps protect the hose from kinks or other damage which could result in hose rupture and cause an injection injury. Do not allow kinking or crushing of hoses or allow it to vibrate against rough, sharp or hot surfaces.
- Use only conductive fluid hoses for airless applications. Be sure the gun is grounded through the hose connections. Use only high pressure airless hoses with static wire which are approved for 3000 psi.

- **NEVER** use a damaged hose, which can result in hose failure or rupture and cause an injection injury or other serious bodily injury or property damage. Before each use, check entire hose for cuts, leaks, abrasions, bulging of the cover, or damage or movement of couplings. If any of these conditions exist, replace the hose immediately.
- **NEVER** use tape or any device to try to mend the hose as it cannot contain the high pressure fluid. **NEVER ATTEMPT TO RECOUPLE THE HOSE.** A high pressure hose is not possible to recouple.

GROUNDING

- Ground the sprayer & other components in the system to reduce the risk of static sparking, fire or explosion which can result in serious bodily injury and property damage. For detailed instructions on how to ground, check your local electrical code.
- **ALWAYS** ensure switch is in **OFF** position before plugging unit in.

Always Ground All of These Components:

1. **Sprayer:** plug the power supply cord, or extension cord, each equipped with an undamaged three-prong plug, into a properly grounded outlet. **DO NOT USE AN ADAPTER**. Use only a 3 wire extension cord that has a grounding plug, and a receptacle that will accept the grounding plug on the product. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. If in doubt, use the next heavier gauge.
2. **Fluid hose:** use only grounded hoses.
3. **Spray gun or dispensing valve:** grounding is obtained through connection to a properly grounded fluid hose and pump.
4. **All solvent pails must be conductive metal material and properly grounded. Do not place on a non conductive insulating surface unless a ground wire is added to a true earth such as a metal water pipe.**

ALWAYS ensure fire extinguishing equipment is readily available and properly maintained.

FLUSHING SAFETY

WHEN SPRAYING & CLEANING WITH FLAMMABLE PAINTS AND THINNERS

1. When spraying with flammable liquids, the unit must be located a minimum of 25 feet away from the spraying area in a well ventilated area. Ventilation must be sufficient enough to prevent the accumulation of vapors.
2. To eliminate electrostatic discharge, ground the spray unit, paint bucket & spraying object. See GROUNDING. Use only high pressure airless hoses approved for 3000 psi which is conductive.
3. Remove the spray tip before flushing. Hold the metal part of the gun firmly to the side of a metal pail & use the lowest possible fluid pressure during flushing.
4. Never use high pressure in the cleaning process. USE MINIMUM PRESSURE.
5. Do not smoke in spraying/cleaning area.

- **NEVER** use cleaning solvents with flash points below 140 degrees F. Some of these are: acetone, benzene, ether, gasoline, naptha. Consult your supplier to be sure.

ASSEMBLY:

1. Attach the hose to the pump and tighten with a wrench.
2. Attach the hose to the gun and tighten with a wrench.

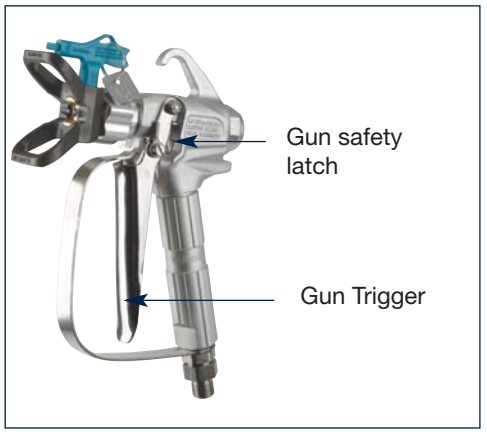
OPERATION

BEFORE BEGINNING:

1. **New Sprayer**
   Your sprayer was factory tested in an oil solution which was left in the pump. Before using oil-base paint, flush with pump conditioner only.
   Before using water-base paint flush with pump conditioner, followed by soapy water, then a clean water flush.
2. **Changing Colors**
   Flush with a compatible solvent such as pump conditioner or water.
3. **Changing from water-base to oil-base paint.**
   Flush with soapy water, then pump conditioner.

PRESSURE RELIEF PROCEDURE

IMPORTANT! To avoid possible serious body injury, always follow this procedure whenever the sprayer is shut off, when checking it, when installing, changing or cleaning tips and whenever you stop spraying.



1. Engage the gun safety latch.
2. Turn the unit off & unplug it from the electrical outlet.
3. Disengage the gun safety latch and trigger the gun to relieve residual fluid pressure. Hold metal part of the gun in contact with grounded metal pail.
4. Turn the Priming Valve to the open (priming) position to relieve residual fluid pressure.
5. Re-engage gun safety latch and close Priming Valve.

If the SPRAY TIP OR HOSE IS CLOGGED, follow Step 1 through 5 above. Expect paint splashing into the bucket while relieving pressure during Step 4.

FLUSHING

When to flush:

1. **Cleanup (for further instructions see "cleanup" below)**
2. **Changing from oil-base to water-base paint.**
   Flush with pump conditioner, followed by soapy water, then a clean water flush.
3. **Storage**
   Always relieve pressure (See pressure relief procedure above) prior to storage or when machine is unattended.
   Oil-base Paint: Flush with pump conditioner. Ensure that there is no pressure in the unit, then close the priming valve.
   Water-base Paint: Flush with water, then pump conditioner. For longer term storage fill with pump conditioner. Always ensure that there is no pressure in the unit, and close the prime/pressure relief valve for storage.

4. **Start-up after storage**
   Before using water-base paint, flush with soapy water and then with clean water.
   When using oil-base paint, flush out the pump conditioner with the material to be sprayed.

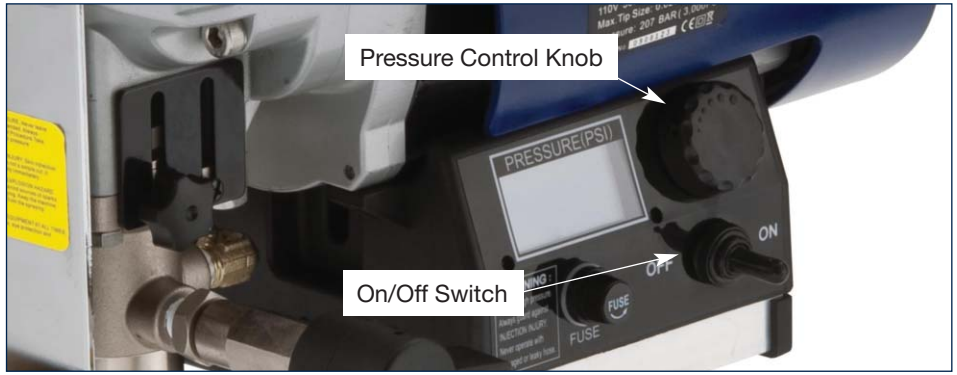
How to Flush:

1. Be sure the gun safety latch is engaged and there is no spray tip in the gun.
2. Pour enough clean, compatible solvent into a large, empty metal pail to fill the pump and hoses.
3. Place the suction tube into the pail.
4. Turn the Priming Valve to the "OPEN", priming position.
5. Point the gun into the metal pail and hold a metal part of the gun firmly against the pail.
   To reduce the risk of static sparking which can cause fire or explosion, always hold a metal part of the gun firmly against the metal pail when flushing. This also reduces splashing.
   Disengage the gun safety latch and squeeze the gun trigger. Turn the ON-OFF Toggle Switch to the "ON" position and turn Pressure Control Knob clockwise to increase pressure just enough to start the pump.
7. Close the priming valve. This will allow solvent to be flushed through the pump, hoses and gun. Allow the unit to operate until clean solvent comes from the gun.
8. Release the trigger and engage the gun safety latch.
9. Whenever you shut off the sprayer, follow the "PRESSURE RELIEF PROCEDURE".

SPRAYING

1. **Connect the hose and gun.**
2. **Check the electrical service.**
   Be sure the electrical service matches the rating on the machine's nameplate and that the outlet you use is properly grounded.
3. **Fill the packing nut/wet cup with a few drops of Q-Lube Piston Lubricant.**

4. **Flush the sprayer**
   a. Prepare the media to be sprayed according to the material manufacturer's recommendations.
   b. Place the suction tube into the media container.
   c. Prime Valve must be "OPEN" in the priming position.
   d. When you have ensured that the gun safety latch is engaged, attach tip and safety guard.
   e. Turn the power switch to the "ON" position.
   f. Allow the pump to prime. After the pump is primed, immediately turn Prime Valve to the "Closed" position.
   g. Turn Pressure Control Knob to the desired spray pressure.
   h. Disengage the gun safety latch and you are ready to spray.



Spraying, Adjusting the pressure

a. Turn the Pressure Control Knob Clockwise to increase pressure and counterclockwise to decrease pressure.
b. Always use the lowest pressure necessary to completely atomize the material.

Note: Operating the sprayer at higher pressure than needed, wastes material, causes early tip wear, and shortens sprayer life. It will also result in the motor cycling on and off to maintain pressure. This cycling will result in poor and inconsistent spraying results.

c. If more coverage is needed, use a larger tip rather than increasing the pressure.
d. Check the spray pattern. The tip size and angle determines the pattern width and flow rate. Spray a test pattern and then adjust the pressure to eliminate heavy edges. Use a smaller tip size if the pressure adjustment can not eliminate heavy edges.
e. While spraying, hold the gun perpendicular, about 25-30cm (10-12 inches) away from the surface. Spray back and forth. Trigger the gun before moving and release the trigger after each stroke. Overlap by 50%.

WARNING: When you spray into the paint bucket, always use the lowest spray pressure and maintain firm metal to metal contact between gun and container. To stop the unit in an emergency, turn the motor off. Then relieve the fluid pressure in the pump and hose as instructed in the Pressure Relief Procedure.

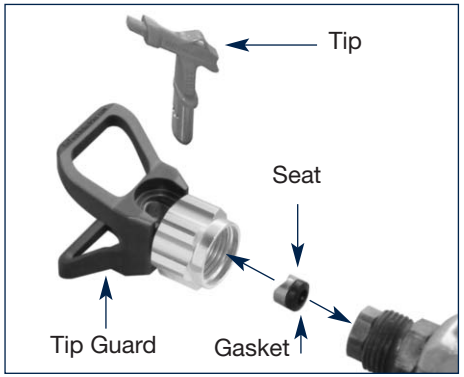
WARNING: Follow the "Pressure Relief Procedure". To reduce the risk of injection, never hold your hand, body, fingers or hand in a rag in front of the spray tip when cleaning or checking for a cleared tip. Always point the gun toward the ground or into a waste container when checking to see if the tip is cleared or when using a self-cleaning tip.

5. **When Shutting off the Sprayer**
   a. Whenever you stop spraying, even for a short break, follow the "Pressure Relief Procedure".
   b. Flush the sprayer at the end of each work day, if the material you are spraying is water-based, or if it could harden in the sprayer overnight. See "Flushing". Use a compatible solvent to flush, then fill

the pump and hoses with an oil based solvent such as pump conditioner.

SPRAY GUN

Attach spray gun to airless unit and tighten fittings securely. Set the gun safety latch. The gun safety latch should always be set when the gun is not being triggered. Read all warnings and safety precautions supplied with the spray gun and in product manual.



SPRAY TIP ASSEMBLY

1. Be sure pressure relief procedure is followed before assembling tip and housing to the gun.
2. Lock gun safety latch.
3. Insert Tip into the guard housing assembly.
4. Guide metal seat into guard housing assembly through retaining nut & turn until it seats against the cylinder.
5. Insert O-Ring gasket on metal seat so it fits in the grooves.
6. Finger tighten guard housing retaining nut onto the gun.
7. Turn guard in the desired position.
8. Completely tighten the retaining nut.

TO REMOVE CLOGS FROM SPRAY TIP

1. Lock gun safety latch.
2. Turn Tip handle 180 degrees.
3. Disengage trigger lock & trigger gun into pail.
4. If the Tip handle appears locked loosen the retaining nut. The handle will now turn easily.
5. Engage gun safety latch & return handle to the spray position.

CLEANING SPRAY GUN

CLEANING FILTER IN GUN HANDLE

Immediately after the work is finished, flush the gun out with a solvent. Brush pins with solvent and oil them lightly so they will not collect dried paint. To clean the filter, use a brush dipped in an appropriate solvent. Change or clean filters at least once a day. Some types of latex may require a filter change after About four hours of operation.

CLOGGED FLAT TIP

Should the spray tip become clogged, relieve pressure from hose by following the "Pressure Relief Procedure." Secure gun with the safety latch, take off guard, take out the tip, soak in appropriate solvent & clean with a brush. (Do not use a needle or sharp pointed instrument to clean the tip. The tungsten carbide is brittle and can chip.)

SPRAY TIP SELECTION

Spray tip selection is based on paint viscosity, paint type, and job needs. Generally, use a smaller tip For light viscosities (thin paints), and use a larger tip for heavier viscosities (thicker paints). Spray tip size is based on how many gallons of paint per minute can be sprayed through the tip. Do not use a tip larger than the maximum pump flow rate or capacity the sprayer can accommodate. Pump flow rate is measured in gallons per minute (GPM) and liters per minute (LPM).

PATTERN WIDTH

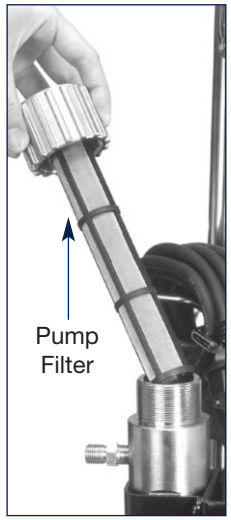
Two tips having the same tip size, but different pattern widths will deliver the same amount of paint over a different area (wider or narrower strip). A spray tip with a narrow pattern width makes it easy to spray in tight places. Thickness of the paint coat per stroke is determined by spray tip "fan width", rate of the spray gun movement, and distance to surface.

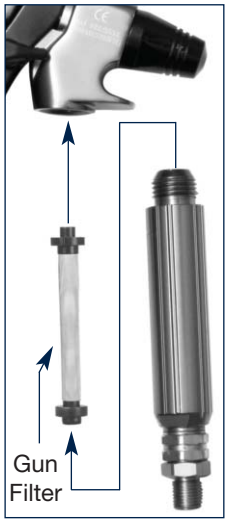
SPRAY TIP REPLACEMENT

During use, especially with latex paint, high pressure will cause the orifice to grow larger. This destroys the pattern. Replace tips before they become excessively worn. Worn tips waste paint, cause overspray, make cutting-in difficult, and decrease sprayer performance. If the tip is the maximum rated size, when it wears, it will exceed the flow rate capacity of the sprayer. If when using maximum capacity tip size the pump cannot keep up, then you know that the tip is worn beyond capacity.

CLEANUP

1. Perform pressure relief procedure.
2. Place pickup tube in a bucket of flushing fluid. (Use water for water base paint and pump conditioner for oil base paint).
3. Turn the power on. Close priming valve.
4. Increase pressure to half. Hold the gun against the paint pail. Take off the trigger safety. Trigger the gun until flushing fluid appears.
5. Move the gun to a waste pail. While holding the gun against the pail, trigger the gun to thoroughly flush the system. Release the trigger and put the trigger safety on.
6. Open the priming valve and allow the flushing fluid to circulate for 15 seconds (to clean the drain tube).
7. Raise the pickup tube out of the flushing fluid and run the sprayer for 20-30 seconds to drain the fluid.
8. Close the priming valve. Trigger the gun into flushing pail to purge the hose.





9. Turn the power off.
10. Open the priming valve.
11. Unplug the sprayer.
12. Remove the filters from the pump and gun. Clean and replace.
13. If flushing was with water, flush again with pump conditioner to prevent corrosion inside the pump. (for long term storage, mix motor oil into the spirits).
14. Clean the exterior of the sprayer with rag soaked in pump conditioner.

DAILY MAINTENANCE

1. Keep the displacement pump packing nut/wet cup lubricated with Q-Lube Piston Lubricant at all times. Add about five drops of oil to the top of the pump each day. This helps protect the rod and the packings.
2. Inspect the packing nut daily. If seepage of paint into the packing nut and/or movement of the piston upward is found (while not spraying), the packing nut should be tightened enough to stop leakage only, but not any tighter. Overtightening will damage the packings and reduce the packing life.

PUMP PACKINGS

The packings are a wearing part. If the pump can no longer maintain pressure, has difficulty priming and paint seeps into the throat of the pump, and tightening the packing nut no longer helps, then the packings will require replacement. This is best entrusted to a qualified repair technician.

To remove the pump and replace the packings, follow the instructions below:

PUMP REMOVAL:

1. Use the special spline wrench to loosen the gland nut (2) and remove the pickup tube (3) from the bottom of the pump. At the same time remove the inlet ball seat disc (5), o-ring (6), check ball (7) and ball guide (8)
2. Lay the machine on its back and remove the heat sink electronics unit (67). This will allow access to unplug the pressure sensor (12) from the electronics unit.
3. Disconnect the junction (42) and three screws (40) on the pump filter bracket and remove the pump filter.
4. Turn the pump until the piston is at its lowest point. This will allow the snap ring (33) to be removed. This in turn will allow you to push out the piston wrist pin (35).
5. Remove the four bolts (9) to take off the pump unit.
6. Replacement is the reverse of removal. Grease the exposed portion of the piston and wrist pin when assembling.

PACKINGS REPLACEMENT:

1. Loosen the packing nut with the special wrench supplied and remove.
2. Pull out the piston.
3. Remove all parts and clean. Clamp the piston and in the bottom of the piston, remove the socket set screw (22) to allow removal of the small ball seat (23), and check ball (24)
4. Discard all old packings.
5. Soak the new leather packings in W30 oil for at least one hour before assembling.
6. Replace the packings, glands, o-rings and check balls with the new parts from the rebuild kit. Strictly follow the exact order and orientation.
7. Replace piston and thread on the packing nut. After resistance from the disc springs is felt, tighten the packing nut a further 3/4 turn.

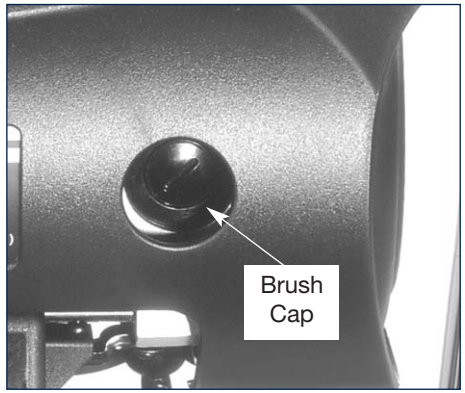
MOTOR MAINTENANCE

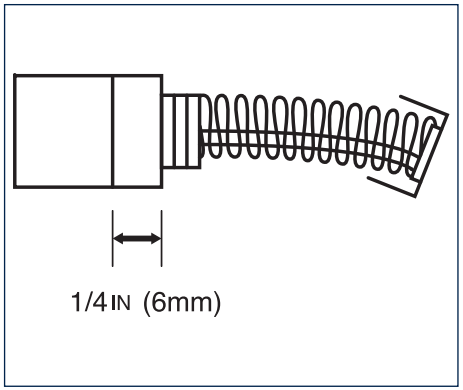
LUBRICATION – The gear case grease may be changed every 200 hours of operation. This is best entrusted to a qualified repair technician.
THE CARBON BRUSHES-The carbon brushes are a normal wearing part and must be replaced when they reach their wear limit.

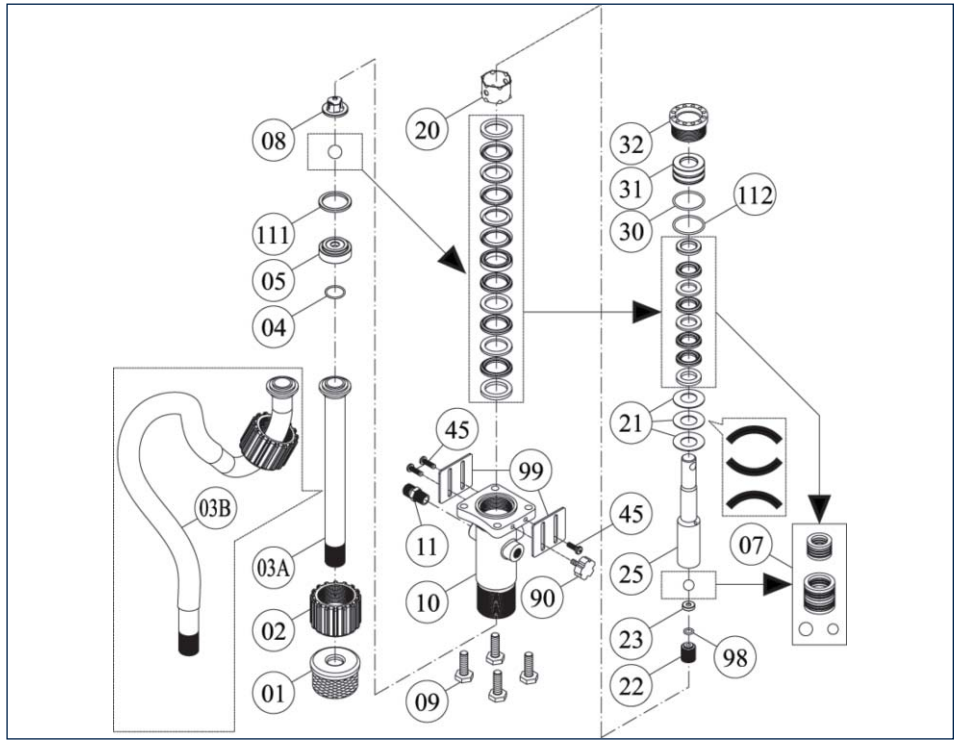
When the brushes are worn to a length of 1/4", they should be replaced.

TO CHANGE THE BRUSHES

1. Unplug the machine.
2. Remove the brush cap with a slothead screwdriver
3. Remove the brush.
4. Install new brushes in reverse order and replace covers







TROUBLESHOOTING

Problem: Motor will not run

Check	Solution
Electrical supply- must match voltage on machine nameplate	Use correct outlet
Extension cord-check continuity	Replace extension
Power supply cable-check continuity	Replace cable
Carbon brushes	Replace brushes
Bad switch	Replace switch
Motor damage	Replace or repair motor

Problem: Pump loses prime or will not prime

Check	Solution
Low paint	Refill
Clogged inlet strainer	Clean
Loose suction pipe	Tighten connection
Intake ball not seating	Clean or replace

Problem: Motor cannot turn pump

Check	Solution
Paint hardened in pump	Replace packings
Paint frozen in pump	Thaw pump

Problem: Pressure problems

Check	Solution
Clogged tip or filter	Relieve pressure and clean

Problem: Motor cannot maintain pressure

Check	Solution
Oversized tip	Use correct tip for sprayer
Tip worn to become oversize	Relieve pressure and replace tip

Problem:Low output

Check	Solution
Worn tip	Relieve pressure and replace tip
Worn packings	Replace packings
Filter clogged	Relieve pressure and Clean filter
Priming valve leaking	Relieve pressure and repair valve
Suction pipe leaking or kinked	Correct kink, or tighten as needed
Low voltage	Use shorter extension cord
Pump runs on when trigger is released	Service pump

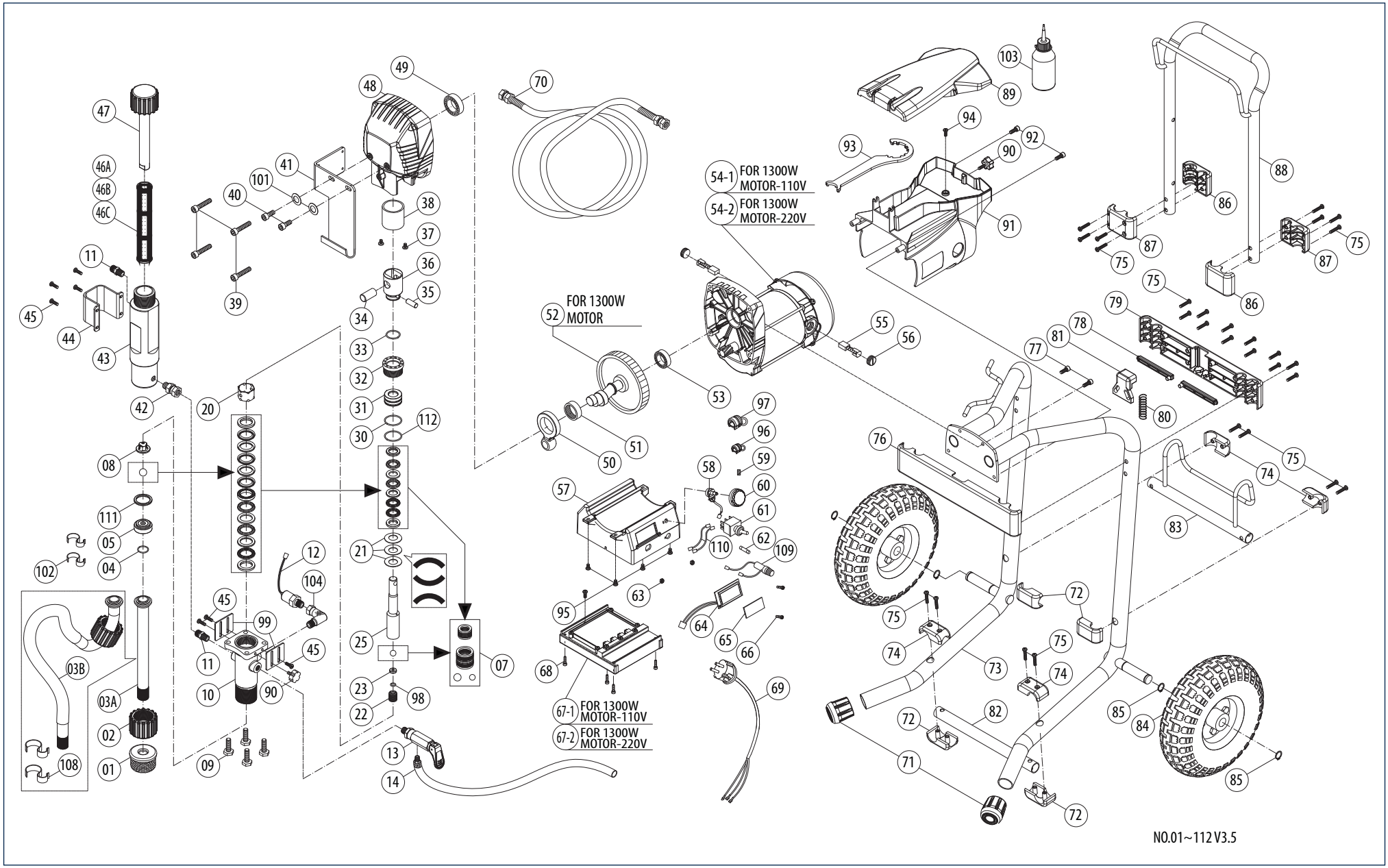
Problem: Motor runs intermittently

Check	Solution
Pressure set too high for the tip size	Adjust to the correct pressure

Problem: Motor hot and overloaded

Check	Solution
Packings too tight	Properly adjust packing nut

QP025 EXPLODED VIEW



QP025 PARTS LIST

Q-TECH PART NO.	ITEM	DESCRIPTION	QTY
QF0535015B	1	INLET STRAINER	1
QP00002	2	GLAND NUT	1
QP00003A	3A	SUCTION TUBE	1
QP00003B	3B	SUCTION HOSE	1
QP00004	4	O-RING Ø2 x Ø15.9 x Ø19.9	1
QP00005	5	INTAKE DISC	1
QP00006	6	O-RING 3028	1
INCL. IN KIT 1	7	CHECK BALL & PISTON PACKING	1
QP00008	8	BALL GUIDE	1
QP00009	9	SOCKET CAP SCREW M8 x 25	4
QP00010	10	PUMP HOUSING	1
QP00011	11	OUTPUT NIPPLE PT 1/4" x 1/4"-19UNF	2
QP00012	12	PRESSURE TRANSDUCER	1
QP00013	13	PRIMING VALVE	1
QP00014	14	DRAIN TUBE PT1/8" x 0.45M	1
QP00020	20	PACKING SPACER	1
QP00021	21	DISC SPRING	3
INCL. IN KIT 2	22	BALL SEAT FASTENER M16 x P1.0	1
INCL. IN KIT 2	23	BALL SEAT-SMALL Ø4 x Ø13.8 x 4	1
INCL. IN KIT 2	25	DISPLACEMENT PISTON	1
QP00030	30	O-RING S-31.5	2
QP00031	31	SEAL SEAT	1
QP00032	32	PACKING NUT	1
QP00033	33	SNAP RING	1
QP00034	34	WRIST PIN-ROD Ø16 x 32	1
QP00035	35	WRIST PIN-PISTON Ø9.5 x 25	1
QP00036	36	DRIVE PISTON	1
QP00037	37	SCREW M5 x 8	2
QP00038	38	GUIDE CYLINDER Ø38 x Ø44 x 43	1
QP00039	39	SOCKET CAP SCREW M8 x 50	4
QP00040	40	SCREW M8 x 16	2
QP00041	41	L-BRACKET	1
QP00042	42	FITTING PT 1/4"-19 x 1/4"-19UNF	1
QP00043	43	FILTER HOUSING	1
QP00044	44	BRACKET	1
QP00045	45	SCREW M5 x 8	7
QF0571xxx	46	PUMP FILTER AVAILABLE IN 30,60,100,200 MESH	1
QP00047	47	FILTER CAP	1
QP00048	48	CRANK HOUSING	1

Kit 1. Complete Packing Kit: QP00016 Kit 2. Complete Piston Rod Assy: QP00025

QP025 PARTS LIST

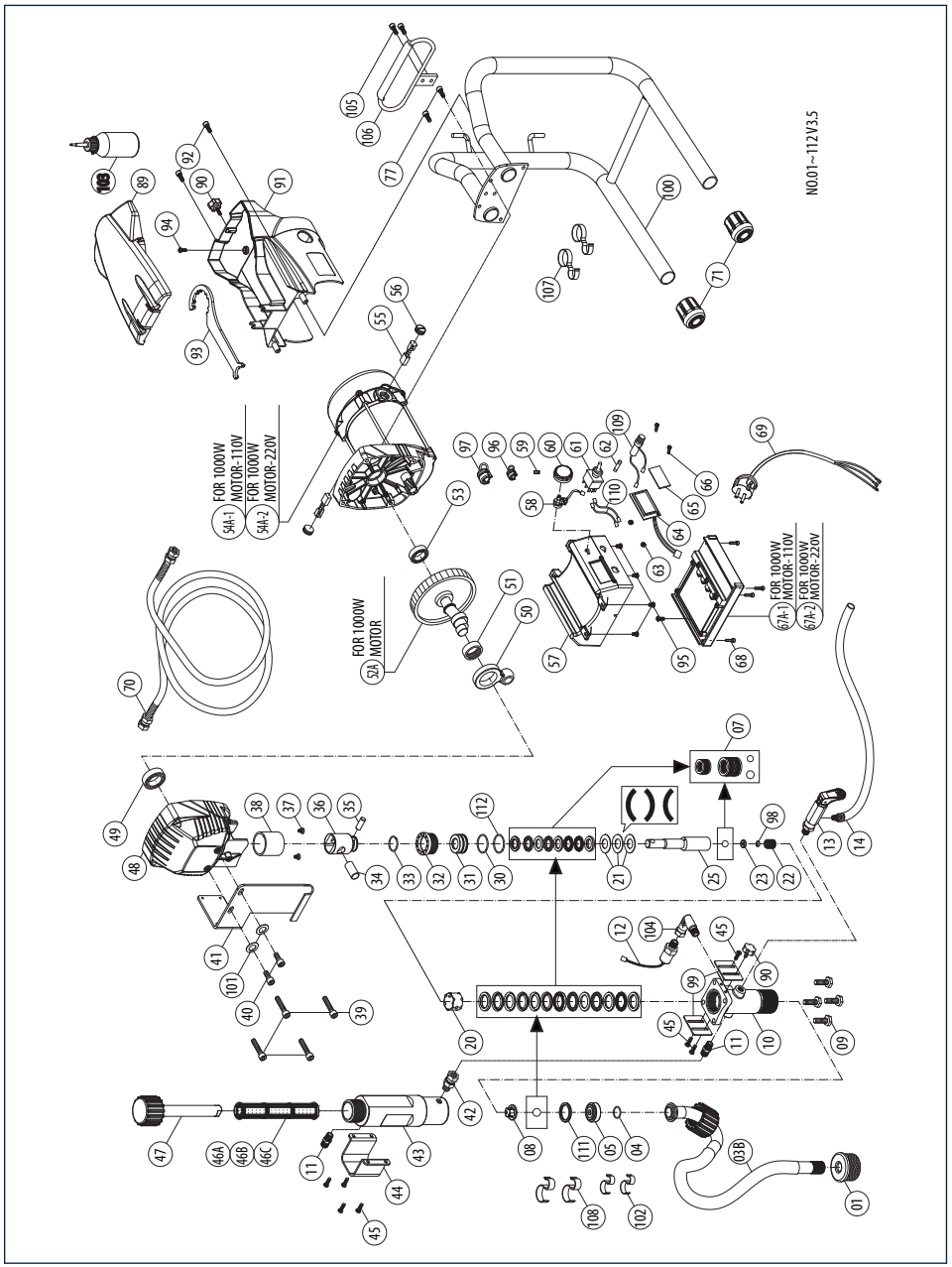
Q-TECH PART NO.	ITEM	DESCRIPTION	QTY
QP00049	49	BALL BEARING 6004 zz	1
QP00050	50	CONNECTING ROD	1
QP00051	51	NEEDLE BEARING HK 3012	1
QP00052	52	CRANK GEAR DP24 x 121T (1300W)	1
QP00053	53	BALL BEARING 6301 zz	1
QP00054-1	54-1	MOTOR UNIT 1300W (110V)	1
QP00054-2	54-2	MOTOR UNIT 1300W (220V)	1
QP00055	55	CARBON BRUSH8 x 16	2
QP00056	56	BRUSH CAP	2
QP00057	57	CONTROL BOX	1
QP00058	58	PRESSURE ADJUSTOR	1
QP00059	59	SET SCREW M4 x 4	1
QP00060	60	ADJUSTOR WHEEL	1
QP00061	61	POWER SWITCH	1
QP00062	62	FUSE	1
QP00063	63	NUT M3	2
QP00064	64	LCD DISPLAY	1
QP00065	65	WINDOW	1
QP00066	66	SCREW M3 x 12	2
QP00067-1	67-1	ELECTRONICS UNIT 1300W (110V)	1
QP00067-2	67-2	ELECTRONICS UNIT 1300W (220V)	1
QP00068	68	SOCKET CAP SCREW M4 x 12	4
QP00069	69	POWER SUPPLY CORD 1.5 x 3C x 3.5M	1
614154TD	70	HIGH PRESSURE HOSE 16.5M 3300 PSI 1/4"-19UNF	1
QP00071	71	END CAP	2
QP00072	72	FRAME BRACKET-LOWER	4
QP00073	73	FRAME	1
QP00074	74	FRAME BRACKET-UPPER	4
QP00075	75	SCREW M5 x 32	28
QP00076	76	CROSSPIECE-FRONT	1
QP00077	77	SOCKET CAP SCREW M6 x 16	2
QP00078	78	RELEASE LEVER	2
QP00079	79	CROSSPIECE-REAR	1
QP00080	80	SPRING Ø1 x Ø13 x Ø15 x 10T x 70L	1
QP00081	81	RELEASE BUTTON	1
QP00082	82	CROSSBAR	1
QP00083	83	LOWER HOSE BRACKET	1
QP00084	84	WHEEL	2

Kit 1. Complete Packing Kit: QP00016 Kit 2. Complete Piston Rod Assy: QP00025

QP025 PARTS LIST

Q-TECH PART NO.	ITEM	DESCRIPTION	QTY
QP00085	85	CIRCLIP S-19	4
QP00086	86	HANDLE SLIDE BRACKET B	2
QP00087	87	HANDLE SLIDE BRACKET A	2
QP00088	88	HANDLE	1
QP00089	89	TOOL BOX LID	1
QP00090	90	HAND KNOB M5 x 8	2
QP00091	91	TOOL BOX	1
QP00092	92	SOCKET CAP SCREW M6 x 35	2
QP00093	93	DUAL PURPOSE WRENCH	1
QP00094	94	SCREW M5 x 12	1
QP00095	95	SCREW M4 x 10	5
QP00096	96	CABLE GLAND SB7R-3	1
QP00097	97	CABLE GLAND SB8R-3	1
INCL. IN KIT 1	98	O-RING 2009	1
QP00099	99	FENCE	2
QP00101	101	FLAT WASHER Ø8 x Ø19 x 3	2
QP00102	102	TUBE HOLDER Ø12.5 x Ø22.5	2
QP00103	103	LUBRICATING OIL TANK 100 cc	1
QP00104	104	L-ATTACHMENT	1
QP00108	108	TUBE HOLDER Ø12.5 x Ø28	2
QP00109	109	FUSE PLATE	1
QP00110	110	WIRE	2
QP00111	111	WASHER Ø28.5 x Ø36 x 3	1

QP021 EXPLODED VIEW



QP021 PARTS LIST

Q-TECH PART NO.	ITEM	DESCRIPTION	QTY
QF0535015B	1	INLET STRAINER	1
QP00002	2	GLAND NUT	1
QP00003B	3B	SUCTION HOSE	1
QP00004	4	O-RING Ø2 x Ø15.9 x Ø19.9	1
QP00005	5	INTAKE DISC	1
QP00006	6	O-RING 3028	1
INCL. IN KIT 1	7	CHECK BALL & PISTON PACKING	1
QP00008	8	BALL GUIDE	1
QP00009	9	SOCKET CAP SCREW M8 x 25	4
QP00010	10	PUMP HOUSING	1
QP00011	11	OUTPUT NIPPLE PT 1/4" x 1/4"-19UNF	2
QP00012	12	PRESSURE TRANSDUCER	1
QP00013	13	PRIMING VALVE	1
QP00014A	14A	DRAIN TUBE PT1/8" x 1.28M	1
QP00020	20	PACKING SPACER	1
QP00021	21	DISC SPRING	3
INCL. IN KIT 2	22	BALL SEAT FASTENER M16 x P1.0	1
INCL. IN KIT 2	23	BALL SEAT-SMALL Ø4 x Ø13.8 x 4	1
INCL. IN KIT 2	25	DISPLACEMENT PISTON	1
QP00030	30	O-RING S-31.5	2
QP00031	31	SEAL SEAT	1
QP00032	32	PACKING NUT	1
QP00033	33	SNAP RING	1
QP00034	34	WRIST PIN-ROD Ø16 x 32	1
QP00035	35	WRIST PIN-PISTON Ø9.5 x 25	1
QP00036	36	DRIVE PISTON	1
QP00037	37	SCREW M5 x 8	2
QP00038	38	GUIDE CYLINDER Ø38 x Ø44 x 43	1
QP00039	39	SOCKET CAP SCREW M8 x 50	4
QP00040	40	SCREW M8 x 16	2
QP00041A	41A	L-BRACKET	1
QP00042	42	FITTING PT 1/4"-19 x 1/4"-19UNF	1
QP00043	43	FILTER HOUSING	1
QP00044	44	BRACKET	1
QP00045	45	SCREW M5 x 8	7
QF0571xxx	46	PUMP FILTER AVAILABLE IN 30,60,100,200 MESH	1
QP00047	47	FILTER CAP	1
QP00048	48	CRANK HOUSING	1

Kit 1. Complete Packing Kit: QP00016 Kit 2. Complete Piston Rod Assy: QP00025

QP021 PARTS LIST

Q-TECH PART NO.	ITEM	DESCRIPTION	QTY
QP00049	49	BALL BEARING 6004 zz	1
QP00050	50	CONNECTING ROD	1
QP00051	51	NEEDLE BEARING HK 3012	1
QP00052A	52A	CRANK GEAR DP24 x 121T (1000W)	1
QP00053	53	BALL BEARING 6301 zz	1
QP00054-A1	54-A	MOTOR UNIT 1000W (110V)	1
QP00054-A2	54-A2	MOTOR UNIT 1000W (220V)	1
QP00055	55	CARBON BRUSH 8 x 16	2
QP00056	56	BRUSH CAP	2
QP00057	57	CONTROL BOX	1
QP00058	58	PRESSURE ADJUSTOR	1
QP00059	59	SET SCREW M4 x 4	1
QP00060	60	ADJUSTOR WHEEL	1
QP00061	61	POWER SWITCH	1
QP00062	62	FUSE	1
QP00063	63	NUT M3	2
QP00064	64	LCD DISPLAY	1
QP00065	65	WINDOW	1
QP00066	66	SCREW M3 x 12	2
QP00067-A1	67-A1	ELECTRONICS UNIT 1000W (110V)	1
QP00067-A2	67-A2	ELECTRONICS UNIT 1000W (220V)	1
QP00068	68	SOCKET CAP SCREW M4 x 12	4
QP00069	69	POWER SUPPLY CORD 1.5 x 3C x 3.5M	1
QP00070	70	HIGH PRESSURE HOSE 16.5M 3300 PSI 1/4"-19UNF	1
QP00071	71	END CAP	2
QP00077	77	SOCKET CAP SCREW M6 x 16	2
QP00089	89	TOOL BOX LID	1
QP00090	90	HAND KNOB M5 x 8	2
QP00091	91	TOOL BOX	1
QP00092	92	SOCKET CAP SCREW M6 x 35	2
QP00093	93	DUAL PURPOSE WRENCH	1
QP00094	94	SCREW M5 x 12	1
QP00095	95	SCREW M4 x 10	5
QP00096	96	CABLE GLAND SB7R-3	1
QP00097	97	CABLE GLAND SB8R-3	1
INCL. IN KIT 1	98	O-RING 2009	1
QP00099	99	FENCE	2

Kit 1. Complete Packing Kit: QP00016 Kit 2. Complete Piston Rod Assy: QP00025

QP021 PARTS LIST

Q-TECH PART NO.	ITEM	DESCRIPTION	QTY
QP00100	100	FRAME	1
QP00101	101	FLAT WASHER Ø8 x Ø19 x 3	2
QP00102	102	TUBE HOLDER Ø12.5 x Ø22.5	2
QP00103	103	LUBRICATING OIL TANK 100 cc	1
QP00104	104	L-ATTACHMENT	1
QP00105	105	SCREW M8 x 12	2
QP00106	106	HANDLE	1
QP00107	107	TUBE HOLDER Ø21 x Ø31	2
QP00108	108	TUBE HOLDER Ø12.5 x Ø28	2
QP00109	109	FUSE PLATE	1
QP00110	110	WIRE	2
QP00111	111	WASHER Ø28.5 x Ø36 x 3	1

Kit 1. Complete Packing Kit: QP00016 Kit 2. Complete Piston Rod Assy: QP00025

WIRING