QUIK-JET AIR®

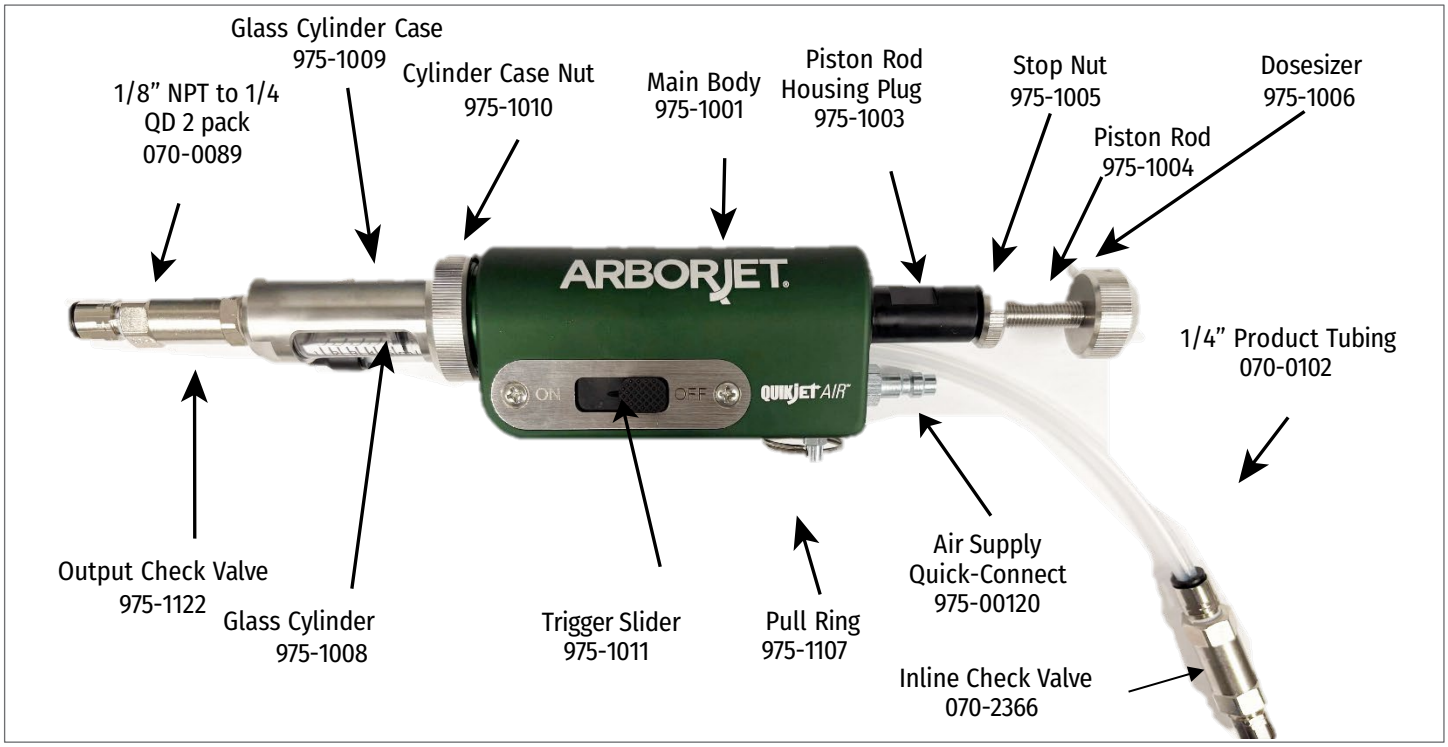
USER MANUAL

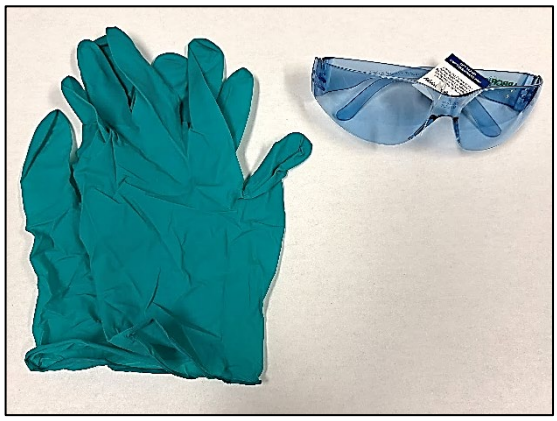
ARBORJET. | Ecologel®

PARTNERS IN PLANT CARE

Table of Contents

QUIK-jet AIR® Device Overview





Safety Overview

Always wear safety glasses and protective gloves (e.g. disposable nitrile) when setting up, operating or maintaining the Arborjet QUIK-jet Air System. Read label of injectable product for further precautions and warnings.

ARBORJET | Ecologel
PARTNERS IN PLANT CARE

Standard Warranty & Device Registration

Our Equipment is warranted for 90 days against defects in workmanship and materials. Register your device to activate your warranty and receive a FREE Bag of Arborplugs®.

To Register Your Device: Fill out the online form at https://arborjet.com/equipment-support-registration/

OR fill out, tear off, and mail in the registration post card included in your device packaging to receive:
- A 90-day warranty against defects in workmanship
- A free bag of Arborplugs
- Your company listed as a Service Provider on our website at arborjet.com

Warranty Process: Contact Arborjet directly for all warranty claims by filling out the RMA Intake Form on our website. Please do not contact your original point of purchase.

1. Locate original invoice and contact our customer service team for a Return Merchandise Authorization (RMA)
2. Once your RMA has been approved, package the item(s) appropriately, including sales receipt or invoice, write the RMA # legibly on the box, and ship to Arborjet HQ.

Scan this code to head directly to the RMA form

ARBORJET | Ecologel
PARTNERS IN PLANT CARE

What's Included in your QUIK-jet AIR® Kit

QUIK-jet AIR Kit (070-2350) includes:

- 1 QUIK-jet AIR device (070-2355)
- 1 Liter supply bottle with Cap Assembly (070-2200)
- 1 Air Tank (975-00183)
- 1 Carrying Bag with shoulder strap (975-1123)
- 1 Arborplug® Setter (070-0120 sold in 2-pack)
- 2 Drill Bits (3/8" and 9/32") (070-0660)
- 1 Needle Cleanout Tool (070-0130 sold in 2-pack)
- 1 Graduated Cylinder (070-0104 sold in mixing & measuring kit)
- 1 Pair of safety glasses (975-00084)
- 1 Funnel (070-0104 sold in mixing & measuring kit)
- ½ Liter of CLEAN-jet™ (030-2030 1 liter for reordering)
- 1 Training Manual (available online for reference)
- QUIK-jet AIR Regulator Assembly (070-2370)
- 2 Viper Needles (070-0501 sold in 4-pack)
- Allen Wrench - 5/64" (989-00008)

Filling the Air Tank

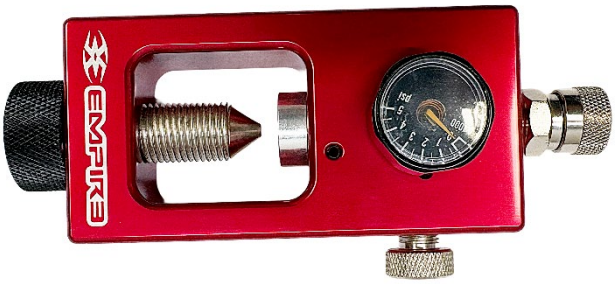
- NOTE: Air Tank does not come filled. You will need to fill the tank to use the device.
- Fill Air Tank with compressed air only.
- Most dive/paintball shops can fill air tanks. If the shop does not have the proper filling station, item #975-00039 will be needed.
- You can fill your air tank if you have a personal compressed air tank of your own, all you'll need is part #975-00039N (see below).

CAUTION: Do not fill with CO_2

CAUTION: Fill to maximum of 3000 psi.

975-00039N

Fill Station Open/Close Knob



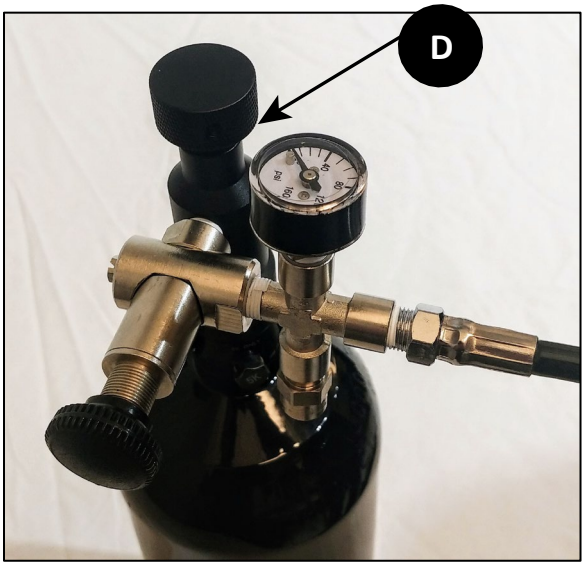
QUIK-jet AIR® tank fits here for filling

Bleed Valve

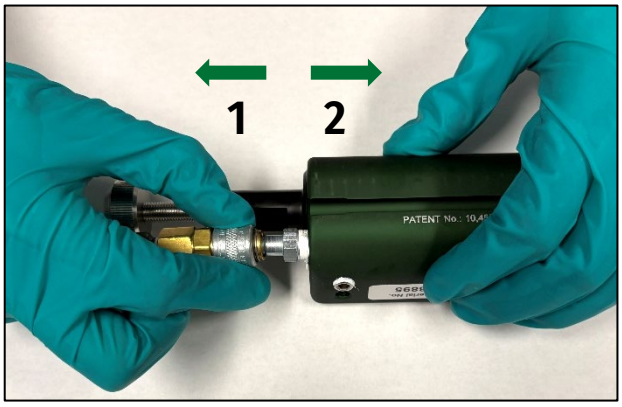
Filling Steps: Dive or Paintball Shop with Correct Filling Station

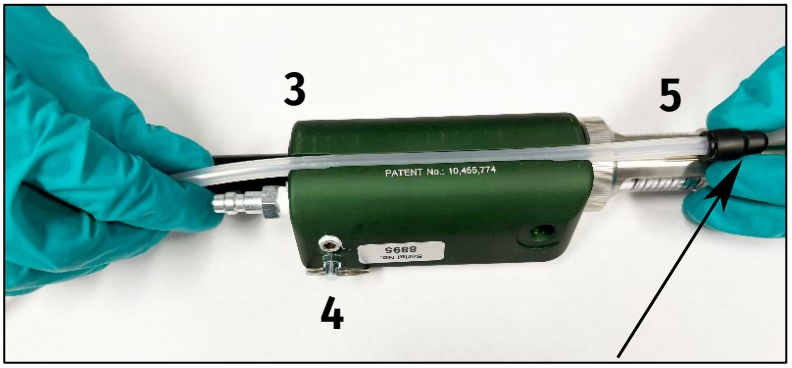
- Make sure bleed valve is closed when filling tank with air
- Be sure to bleed all air from scuba fill station before removing from air tank
- Be sure to follow full instructions included with item #975-00039N
- Attach the regulator to the tank as shown
- Tank on/off valve (D) is shipped in the closed position
- Once securely attached, open valve (D) clockwise

Holding regulator assembly still, twist air tank clockwise to tighten

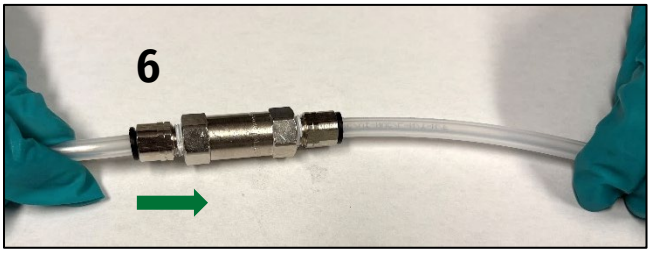


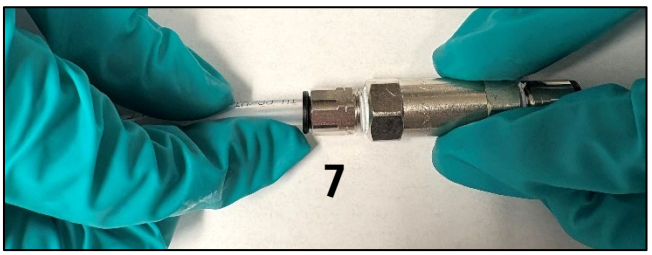
Connecting the Device





PTC Fitting

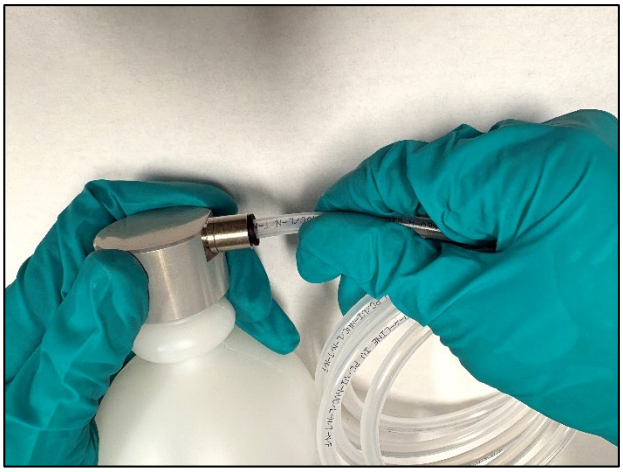




Attach pressure supply line and product tubing:

1. Pull back outer sleeve.
2. Push to connect.
3. Flip device body over so on/off switch faces down.
4. Feed product tubing through channel in body until it passes the front of the body.
5. Push product tubing into PTC fitting.
6. Push the other end of tubing into the inlet check valve. Ensure that the arrow on check valve points towards the device.
7. Connect the tubing from product supply bottle into the other end of check valve.

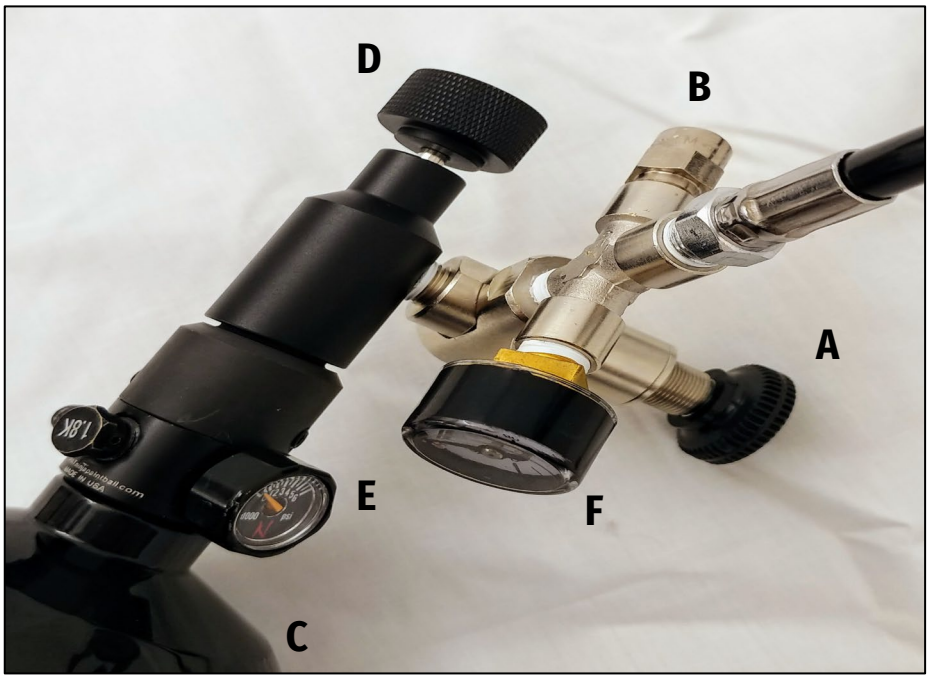
Filling and Attaching Product Supply Bottle



1. Load formulation into product supply bottle.
   - Do not load more than 1000 mL of product.
2. Holding product suppply bottle upright, screw bottle clockwise into product bottle top assembly.
   - Ensure product tubing is snugly connected in PTC fitting.

ARBORJET | Ecologel
PARTNERS IN PLANT CARE

Regulator Components



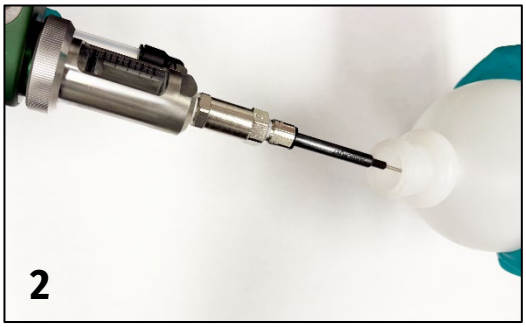
A. PSI Adjustment Knob
B. Pressure Release Valve
C. Air Tank
D. Regulator On/Off Valve
E. Tank Supply Gauge
F. Regulator Pressure Gauge

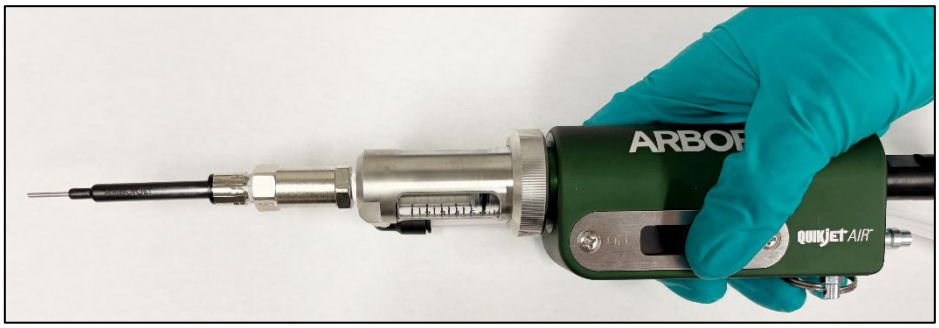
Regulator

- To adjust the air pressure, turn adjustment knob (A) slowly:
    - Counter clockwise to decrease pressure
    - Clockwise to increase pressure
- Watch the pressure change on the regulator supply gauge (F)
- Start/set to 80 PSI

CAUTION: Do not exceed 110 PSI

Prime the Dose Chamber





1. Press the ON/OFF switch several times until formulation reaches the dose chamber.
2. Dispense product back into original product bottle or extra supply bottle until you get a full dose inside the chamber.

NOTE: Be careful when pointing the needle

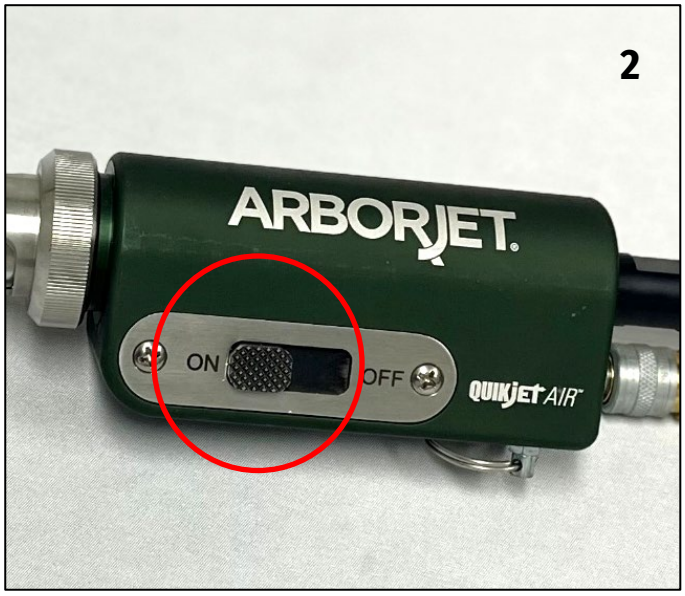
Ready for Injection

System is assembled, pressurized, primed, and ready for micro-injection.

Now you are fully assembled!

ARBORJET | Ecologel
PARTNERS IN PLANT CARE

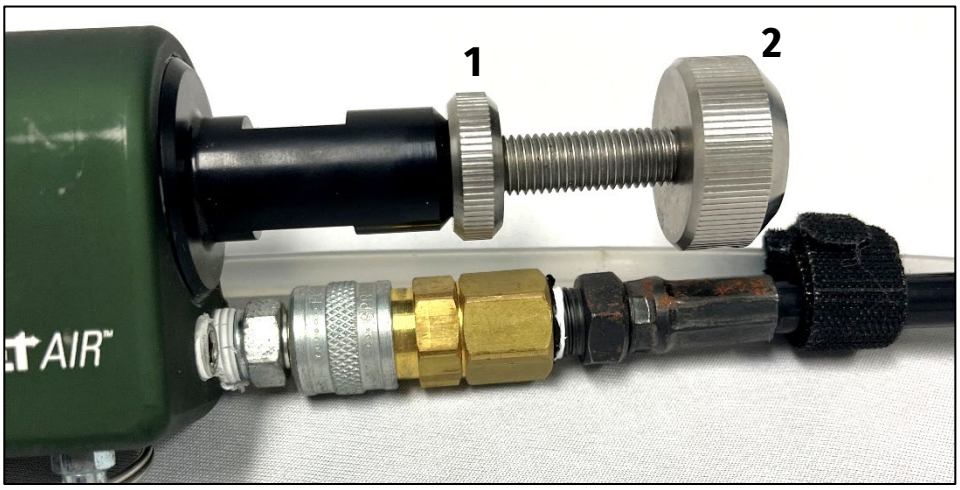
Applying a Dose



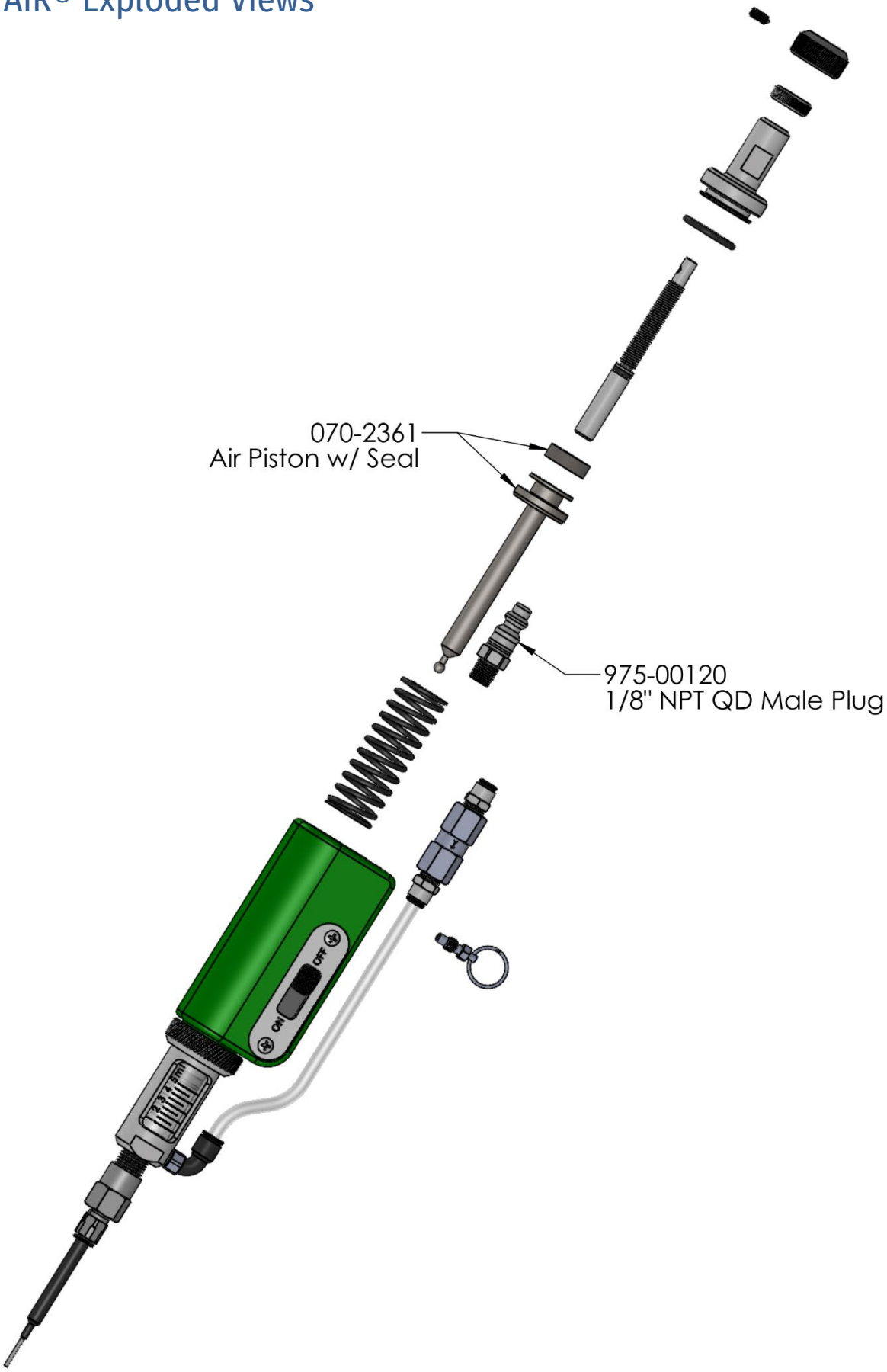
1. Determine mL dose per injection site (per Arborplug®).
2. Insert needle and push switch forward to ON position to apply dose (up to 5 mL).
3. Hold until piston has stopped moving forward; push switch back to OFF position so piston retracts.
4. Repeat dose / injection site until entire dose is in the tree.

Changing the Dose

1. Loosen the Stop Nut
2. Twist the Dosesizer until the plunger is aligned with your preferred dose size. The markings on the Glass Cylinder will indicate the size of your dose.
3. Re-tighten the Stop Nut and begin the injection process.

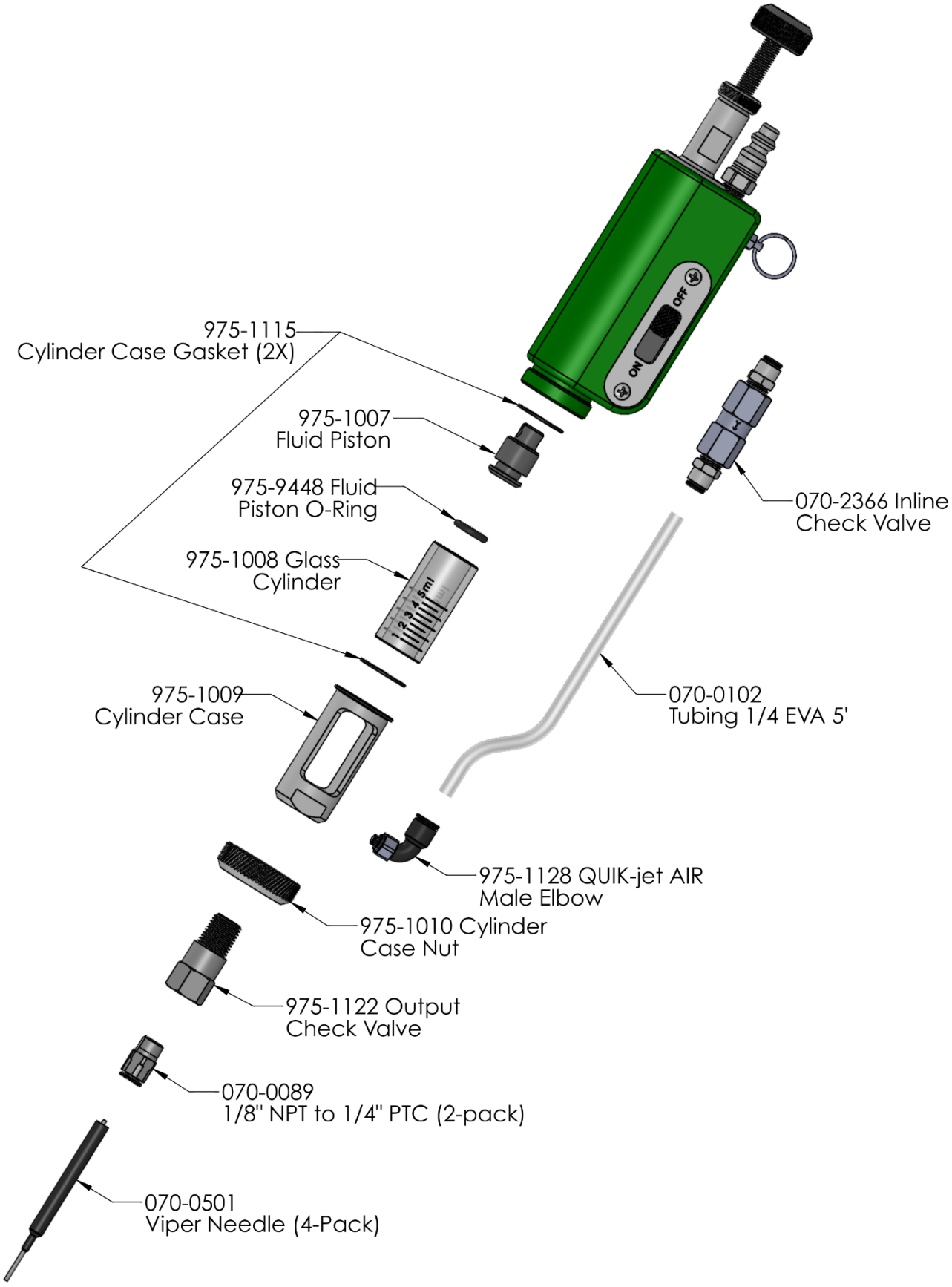


QUIK-jet AIR® Exploded Views



ARBORJET | Ecologel
PARTNERS IN PLANT CARE

QUIK-jet AIR® Exploded Views



ARBORJET | Ecologel
PARTNERS IN PLANT CARE

Cleaning Out the QUIK-jet AIR®

IMPORTANT: Prior to switching to another product, or storing the QUIK-jet AIR, it is essential to clean and rinse out the device and product tubing to maintain proper function and to avoid clogging the internal components of the system.

Cleaning out the system involves a 3-step process:

1. Push excess product out of the device using air only
2. Rinse away residue with CLEAN-jet™
3. Empty product tubing of rinse solution (Fill with air)

IMPORTANT: CLEAN-jet is the best cleaning solution for this device regardless of product. Users should also flush the device with water after using CLEAN-jet. All product tubing must be free of both product and rinse solution before re-in-troducing a new product to the device.

Step 1: Clear the System

1. Disconnect product tubing from device.
2. Pull trigger to discharge remaining product from device (about 10mL) into final injection site in tree, or into original product bottle.
3. Turn OFF compressed air (D)

Note: Leave Pressure Line disconnected and set injection device aside.

1

2

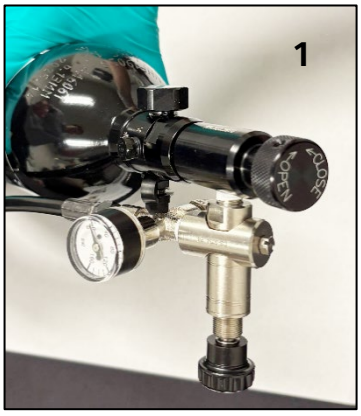
3

ARBORJET | Ecologel
PARTNERS IN PLANT CARE

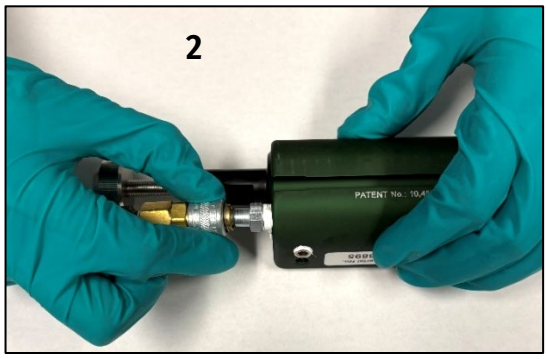
Step 2: Rinse with CLEAN-jet™

1. Label a "WASTE" container to capture residue as it is rinsed out of the device.
2. Store unused chemical in separate bottle or return it to original container.
3. Add at least 30-40 mL of CLEAN-jet to a clean product supply bottle and attach to device.
5. Reconnect air tank and product tubing.
6. Turn Pressure Supply ON to re-pressurize the system.
7. Shoot CLEAN-jet fluid through the device and into the WASTE container. Repeat several times.
8. Disconnect product tubing from product supply bottle.
9. Push on/off switch several times to empty CLEAN-jet fluid into the WASTE container.

Step 3: Safely Dispose of Waste



1. Turn OFF compressed air.
2. Leave pressure line disconnected and set injection device aside.
3. Dispose of waste according to local and state regulations
4. System is now ready to be loaded with another product or may now be lubricated and stored.



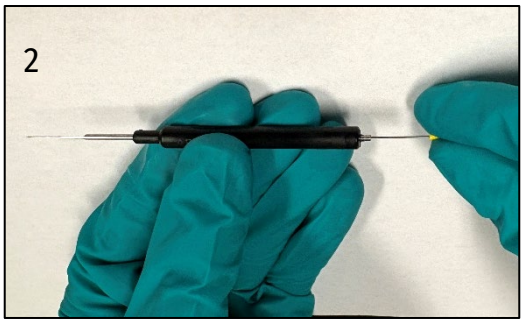
IMPORTANT: Always follow these maintenance steps before storing the QUIK-jet AIR® system.

ARBORJET | Ecologel
PARTNERS IN PLANT CARE

Regular Maintenance

To clean out any debris in VIPER Needles:

1. Remove VIPER needle by pushing the Compression Fitting in and pulling on the needle.
2. Push the VIPER Needle Cleanout Tool through the VIPER needle.



Long-Term Storage

REMINDER: Before proceeding to Long-Term Storage, be sure...

- To wear safety protection.
- That pressure supply is OFF.
- System is depressurized.
- Product supply bottle is depressurized.
- Product supply line switch is closed (OFF).
- That Regular Maintenance is completed.

IMPORTANT: Prior to performing maintenance procedures or storing the system after use, it is essential to clean out the device and product tubing to maintain proper function and to avoid clogging.

Please follow these steps when storing the QUIK-jet AIR® for a prolonged period of time to prevent corrosion to the QUIK-jet AIR body, manifold and tools:

- Store clean and dry equipment.
- Clean bottles and product tubing using CLEAN-jet™.
- Store bottles empty.
- Oil metal components, especially Quick Disconnect on manifold and Male Quick Disconnect on gun – use 3 in 1 oil or WD-40.
- Spray tools with WD-40 or coat with 3 in 1 oil.

Lubricating the Device

Add a few drops of 3-in-1 oil to the device Pressure Inlet on the injector.

Apply 3-in-1 oil to the Pressure Supply Line Quick Disconnect, then pull the metal sleeve back and release.

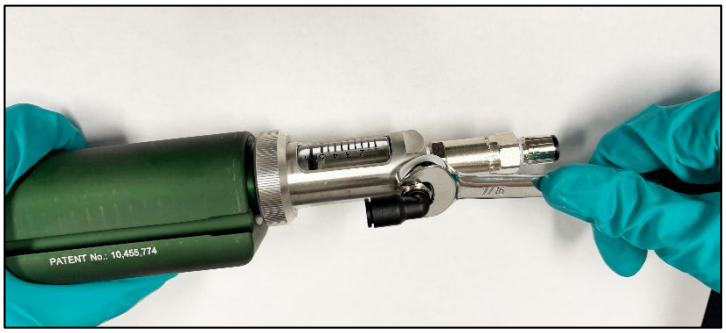
Apply grease to O-ring on Piston.

Whenever changing pressure supply tanks, apply grease to o-ring on supply bottle's neck.

Apply grease to Internal Piston Sleeve

Apply grease to Back Housing Plug Seal.

Disassembly Procedure



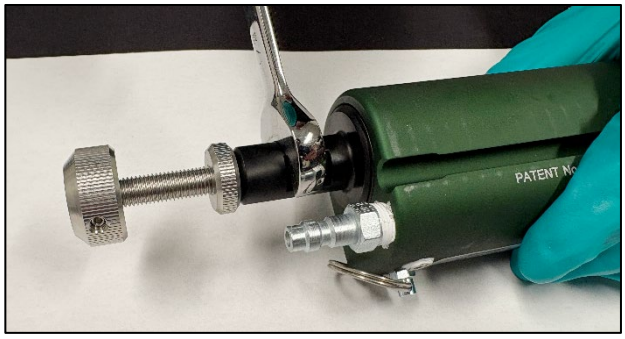
Remove Input Valve by taking a 7/16 wrench and turn the screw counter-clockwise.

Unscrew case ring by turning it counter-clockwise to free Glass Barrel Case from main body.

Remove the Glass Barrel case to reveal the Glass Barrel and Piston.

Pull Glass Barrel away from Piston.

Turn the Piston at an angle to remove it from the Piston Rod.



Using a ½" wrench, unscrew the black housing plug from body by turning it counter-clockwise.

Reassembly Procedure

Piston O-ring may need replacement over time.
See troubleshooting section. If device gets stuck, replace.

Push against the Internal Piston Sleeve with Housing Plug. While having the Piston Rod lined up through the hole, engage the threads and turn clockwise. Use a ½" wrench to tighten.

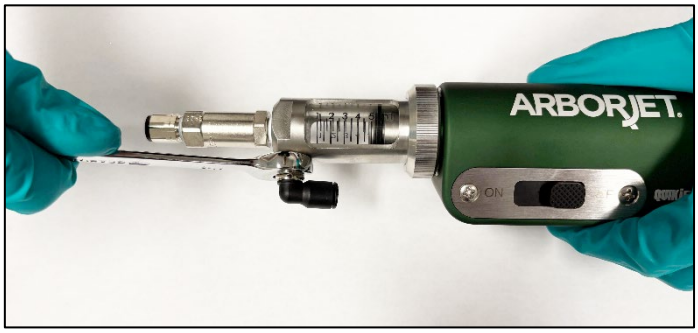
Push the Glass Barrel back onto the Piston. Ensure that grease is applied to Piston after each use.

Tilt and line up Piston with Piston Rod.

Slide the Glass Barrel Case back onto the Glass Barrel.

Put the Case ring back over Glass Barrel Case and turn clockwise. Do not tighten yet.

Turn the Glass Barrel until all of the measurement readings are lined up and centered.



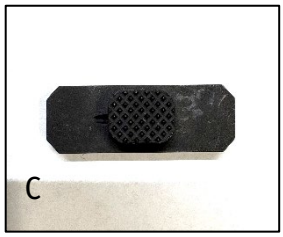
Using a 7/16 wrench, tighten the input valve back onto the Glass Barrel Case. Once the PTC fitting is lined up with the Tubing feed, tighten the Case Ring.

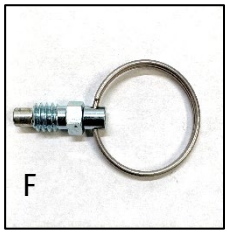
Slide tubing through main body and push it in the Push-to-Connect (PTC) fitting.

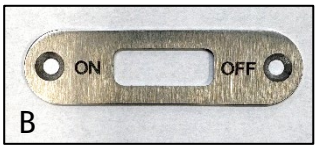
ARBORJET | EcoLogel
PARTNERS IN PLANT CARE

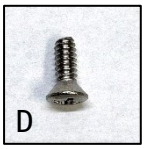
Replacement Parts

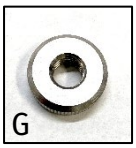
A. Main Body (975-1001)
B. Trigger Bezel (975-1012)
C. Trigger Slider (975-1011)
D. Trigger Plate Screws (975-1114)
E. Plug (975-1109)
F. Pull Ring (975-1107)
G. Stop Nut (975-1005)
H. Adjustable Knob Dosesizer (975-1006)
I. Housing Plug (975-1003)
J. Set Screw (sold with adjustable knob) (070-2372)
K. 1/8" MPT QD Male Plug (975-00120)
L. Inline Check Valve (070-2366)

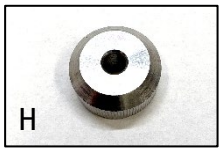


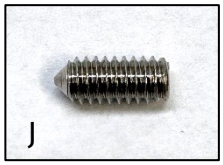


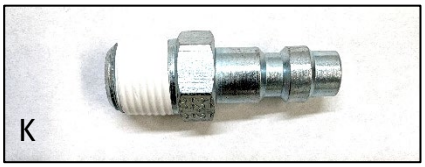


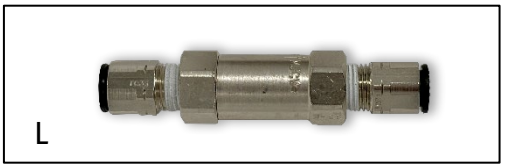






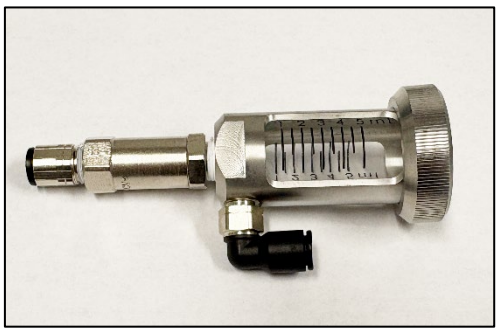


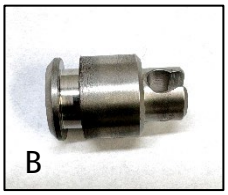


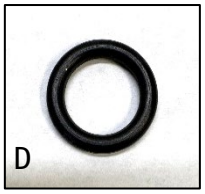


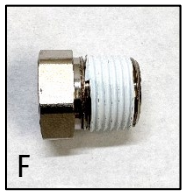
Replacement Parts (cont.)

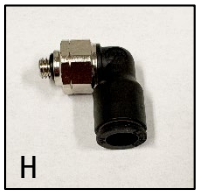
A. Cylinder Case (975-1009)
B. Fluid Piston (975-1007)
C. Glass Cylinder (975-1008)
D. #111 Piston Tightness O-Ring (975-9448)
E. 10-32 to ¼" PTC (975-00078)
F. 1/8" Male NPT x 10-32 Female Bushing (975-1124)
G. Output Check Valve (975-1122)
H. Adj. Threaded Elbow (975-1128)
I. Cylinder Case Nut (975-1010)

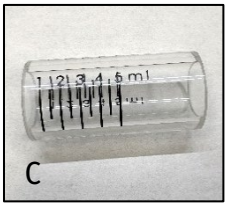


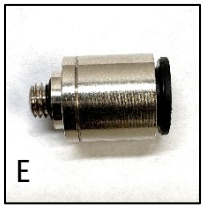












ARBORJET | Ecologel
PARTNERS IN PLANT CARE

Internal Parts

A. Air Piston (975-1002)

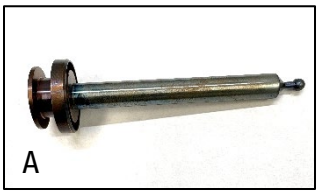
B. U-Cup Seal (Air Piston) (975-1103)

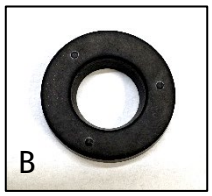
C. Trigger Valve (998-00048)

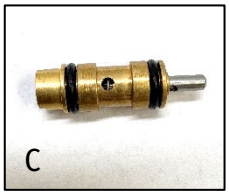
D. Snap Ring (998-00045)

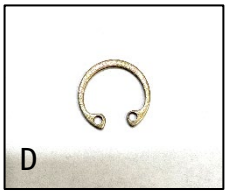
E. Stud Stopper (975-1004)

F. Housing Plug Seal (975-1104)


A


B


C


D


E


F

Additional Parts

A. QUIK-jet AIR® Rebuild Kit (070-2360)

B. Bottle Assembly (070-2200)

Air Tank Parts

A. Scuba Fill Station (975-00039N)

B. Tank Filling Adaptor - Dive Shop (975-00039)

C. Air Tank 62” cu 3000 PSI (975-00183)

D. QUIK-jet AIR Regulator Assembly (070-2370)

E. Air Tank O-Ring 2 pack (070-2376)

F. 1" Mini Burdon Tube Gauge 0-160 PSI (975-00189)

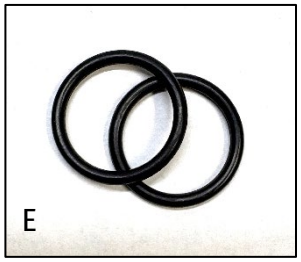
G. Air Tank Shut Off (975-00180)

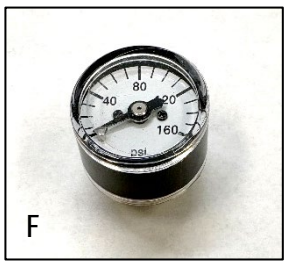
A


B

C


D


E



F

G

Troubleshooting

Device Won't Fire

- Is there compressed gas (air or nitrogen) pressure indicated on the supply gauge? If not, refill bottle (maximum 3000 psi).
- Is pressure Supply Line attached to the Device Pressure Inlet? Connect by pulling back Quick-Disconnect Sleeve and push onto Device Inlet.
- Is the Flow Control completely closed? Open the Flow Control by turning the knob counter-clock-wise.

Device Won't Deliver Product

- Check Product Supply Line.
- Is the Product Supply Line connected to the device? If not, push Quick-Disconnect Fitting onto Device Product Inlet.
- Is the delivery pressure (Primary Gauge) at least 35 psi? If not, then device pressure is insufficient to move the shot piston, which delivers product.
- Over time, the Internal Piston O-ring may wear down with use and need replacing.

Device Leaking from Needle

- Leaking from PTC? Make sure needle is seated properly.
- Leaking from tip of needle? Replace Check Valve before PTC fitting at front of device

Product Leaking from Product Supply Bottle

- Is Product Bottle Adapter screwed on tightly? If no, tighten bottle into adapter by turning clockwise (screw on carefully, making sure threads don't cross!)
- Is gasket in Bottle Adapter worn or damaged? If yes, replace rubber gasket.

Product Leaking from Arborplug®

Arborplug is set at incorrect depth.

- **Too Shallow =** product leaks from around injection site
  - Solution: Tap Arborplug further into injection site so barbs catch xylem tissue and not bark.
- **Too Deep =** injection site over-pressurizes and membrane ruptures
  - Solution: Drill, plug and inject a new site

Troubleshooting Check Valves

The QUIK-jet AIR® system utilizes 2 check valves. If there is a problem with flow of products, replace check valves. Note which valve seems to have problems—the two check valves on the QUIK-jet AIR are not interchangeable.

- Inline check valve
- Output check valve

Calculating Dosage of Injection Sites

1. Determine the Diameter at Breast Height (in.)

Measure tree diameter in inches, at breast height by using a diameter tape, OR measure circumference and divide by Pi (3.1415).

Arborjet DBH" Measuring Tape

2. Carefully read label of product to be injected

Use DBH" to determine total injection volume for treatment application.

QUIK-JET AIR® WARRANTY IS VOID WITH USE OF NON-ARBORJET APPROVED FORMULATIONS

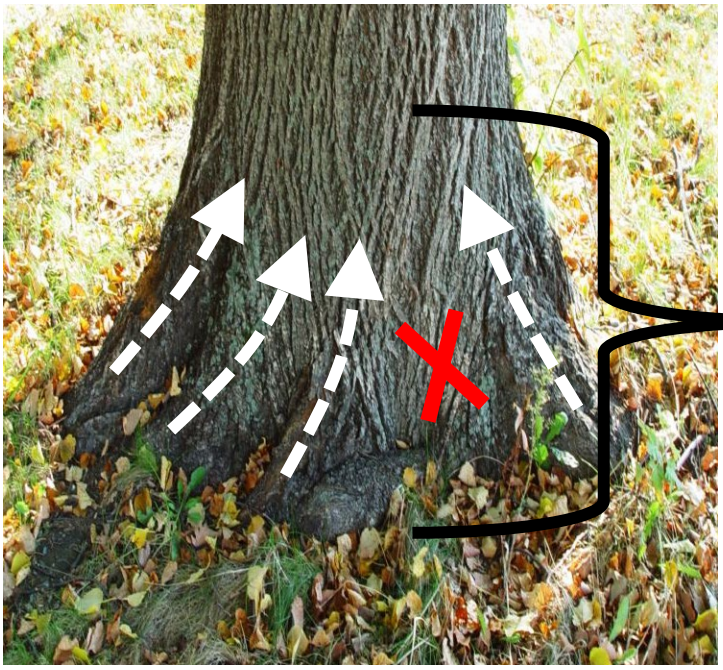
3. Using the graduated cylinder and funnel provided with your kit, measure the calculated volume and pour liquid into medicament bottle or attached cap assembly to product bottle

Be sure to wear safety glasses and nitrile gloves when handling product to be injected.

Selecting Arborplug® Injection Sites

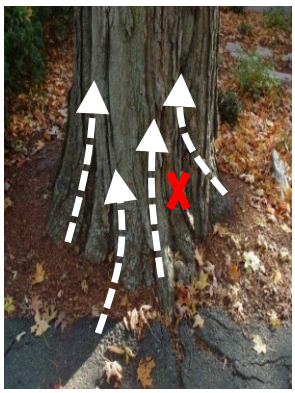
To determine how many Arborplugs will be needed per Tree, use the following calculation: DBH" ÷ 2

ex) 24" DBH / 2 = 12 Plugs → 12 Arborplug sites will be acceptable for this Tree



Sites must be plugged within 36" of the soil line. Avoid plugging in between flares, damaged areas, and tree crotches.

Root flares provide the best uptake and product distribution to the canopy.



Tree Drilling Technique

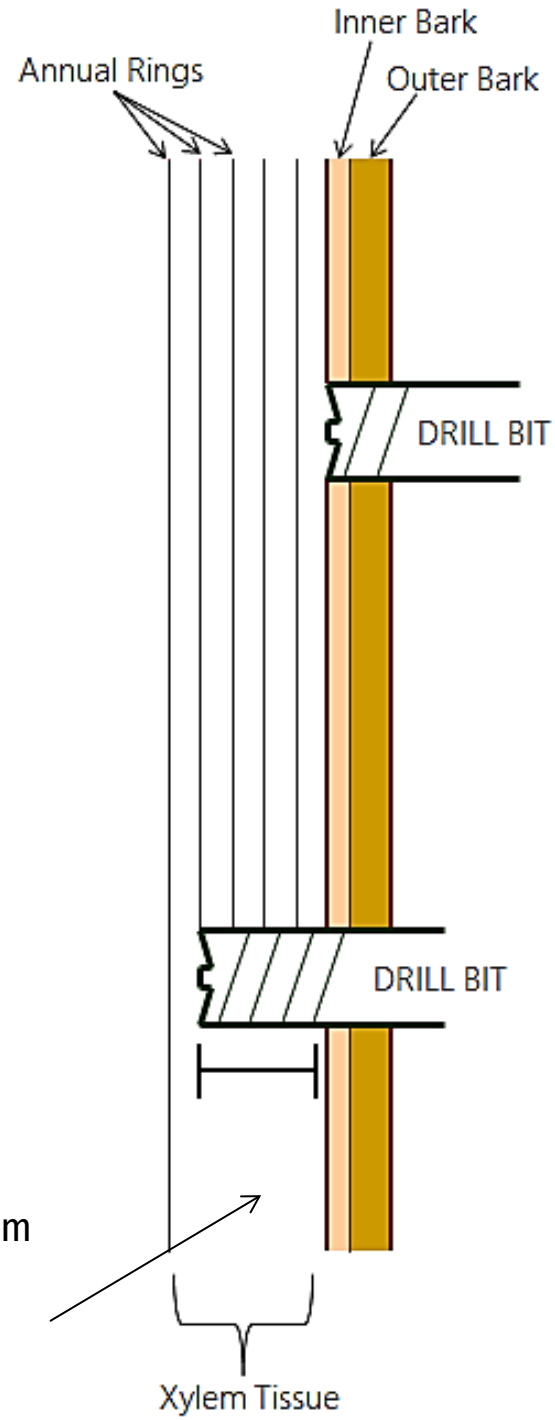
Your QUIK-jet AIR® Kit comes with two High-Helix Brad Point Auger Drill Bits designed specifically for Arborplug® drill sites

#3 Arborplug - 9/32” Drill Bit

#4 Arborplug - 3/8” Drill Bit

Drilling in Two Steps:

1. Using light pressure, drill through the outer and inner bark. Once you reach the xylem, you will feel greater resistance on the bit.
2. Remove the bit, noting the thickness of the bark. Re-insert the bit and use heavy pressure to drill into the xylem tissue.



ARBORJET | Ecologel
PARTNERS IN PLANT CARE

Setting the Arborplugs®

The effectiveness of the QUIK-jet AIR® system is dependent upon the user properly setting the Arborplugs into the xylem tissue of the tree to be injected.

Select the correct Arborplug based on the bit used to drill the tree.

Using the Arborplug setter provided with your kit, hammer the Arborplug until the barbs make a seal between the xylem and inner bark as illustrated below.

Too Deep

Results in slower uptake

Too Shallow

Causes damage to the bark and cambium layers

Just Right

Best results with fast uptake and no damage to the tree tissue

Conifers vs. Deciduous Trees

Conifers – Cone-bearing trees

Sap will flow out of conifers as a protective response to drilling. Therefore, if too much time has passed between setting and infusion, sap may flow into injection site. Arborplugs are highly recommended for conifer injections.

1. Prepare the QUIK-jet AIR® system and prime the supply line.
2. Drill and set one Arborplug at a time.
3. Insert VIPER Needle and initiate injection.
4. Repeat steps 2 and 3 for the remaining injection sites.

Deciduous – Trees that seasonally shed leaves, petals, or fruit

Sap will not flow out of deciduous trees after drilling. Therefore, you can drill and set all Arborplugs before beginning injection process.

Contacting Arborjet

Arborjet, Inc.
99 Blueberry Hill Rd.
Woburn, MA 01801

Phone: 781-935-9070
Fax: 781-935-9080
info@arborjet.com

@arborjetecologel

ARBORJET | Ecologel
PARTNERS IN PLANT CARE