QUIK-jet
Micro-Injection System

Training Manual

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Introduction to Arborjet’s QUIK-jet Micro-Injection

QUIK-jet’s speedy delivery in fast uptake trees allows the applicator to work effectively and profitably in a variety of situations. Low volume injections with the QUIK-jet are a breeze on ring porous oaks and diffuse porous maples.

For customer assistance, call from 8AM - 4:30PM EST Monday - Friday at 781-935-9070 or visit the website at www.arborjet.com. Arborjet welcomes your comments, questions, and suggestions concerning the QUIK-jet and injectable products.
QUIK-jet Assembly and Setup

1. Connect Leur to PTC fitting
2. Connect Leur and PTC fitting to QUIK-jet device
3. Push VIPER Needle into PTC
4. Attach Supply Line to QUIK-jet device

PTC fittings use a 5/16” hex tool for installation and removal.
QUIK-jet Assembly and Setup

Attach Bottle Clip to QUIK-jet bottle

The Bottle Clip is used with Holster, belt, or belt loop.

Clip the QUIK-jet Hook to Holster, Belt, or Pants

Use plastic guard to protect Glass Barrel
Prepare the QUIK-jet for Micro-Injection

1. Measure tree DBH (Diameter at Breast Height) in inches by using a diameter tape, or measure circumference and divide by Pi (3.1415)

2. Read product label and use DBH” to determine total injection volume for entire treatment application.


4. Pour into QUIK-jet bottle using screw-on funnel.

5. Fasten QUIK-jet bottle-top

SAFETY REMINDER

Always wear safety glasses and gloves when handling equipment and products.

WARRANTY VOID WITH USE OF NON-ARBORJET APPROVED FORMULATIONS
Adjust the dose chamber to desired mL dose size. (1-5mL per trigger push)

Spin the piston rod to adjust the dose chamber, and use the lock nut to secure in place.
Prime the QUIK-jet Dose Chamber

1. Press trigger several times until formulation reaches the dose chamber.

2. Point VIPER needle upward to bring air bubble upward, and slowly press trigger until air bubble leaves the chamber.

NOW QUIK-jet is PRIMED AND READY.
Select Arborplug™ Sites

No. of Arborplugs = DBH”/2
(ex. 16”DBH = 8 Arborplugs)

Optimal sites are within 36” above the soil line.

Root Flares show best uptake and formulation distribution to the canopy. Choosing good Arborplug sites result in faster injections.
Drill Sites for Arborplugs

- Use sharp, high-helix brad-point drill bits (included in kit).

For Beginners - Drilling in 2 Steps:

1. Use light pressure to drill through outer bark. The drill bit will stop after the outer bark. You can remove drill bit to note the bark thickness.

2. Use quick heavy pressure to drill at least 5/8” into the Xylem.

Estimated Drill Depth into Xylem:
- Hardwoods: 5/8” – 2” deep
- Conifers: 1 5/8” – 2” deep

Drill Bit Sizes:
- 9/32” for #3 Arborplugs
- 3/8” for #4 Arborplugs
Set the Arborplugs

1. Set Arborplugs into drilled holes using set tool (from kit) and hammer.

2. Make sure the barbs on the Arborplug make a seal between the xylem and the inner bark as illustrated.

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**INCORRECT**

- Too Deep
- Too Shallow

**CORRECT**

- Xylem Tissue
- Inner Bark
- Bark
- Barbs
Micro-Injection with the QUIK-jet

1. Determine mL dose per injection site (per Arborplug)

2. Insert VIPER needle and push trigger to apply dose.

3. Keep an even LIGHT pressure when pushing trigger.

4. Repeat even dose per injection site until entire dose is in the tree.

NOTE: Putting excessive pressure on the trigger will NOT advance the dose more quickly. “Forcing” the trigger will likely cause damage to the tree.
3 Easy Steps for QUIK-jet

1. DRILL
2. PLUG
3. INJECT

QUIK-jet in use
**Procedure: Conifers vs. Deciduous**

**Important Note For Conifer Injections:**
Sap flows out of conifers as a protective response to drilling.

For best results, make sure the QUIK-jet is inserted and the micro-injection occurs right after the Arborplug is set. Drill, plug, and **inject 1 site at a time**. If too much time has passed between Arborplug setting and QUIK-jet application, sap may flow into your injection site, and make your uptake slower.

**Important Note For Deciduous Injections:**
No sap flows from deciduous trees after drilling.

QUIK-jet micro-injection can occur after each Arborplug is set, or after all Arborplugs are set in the tree.
Clean Out QUIK-jet

CLEAN-jet is for rinsing formulation residues, to keep your QUIK-jet operating smoothly.

Before Clean-out:  Make sure all product is out of QUIK-jet bottle and lines.

1. Remove bottle top and add CLEAN-jet (about 30mL is good)

2. Fasten bottle top and repeatedly press trigger. CLEAN-jet rinse can be squirted in the soil at the base of the tree, unless specified otherwise on the pesticide product label.*

3. Rinse all CLEAN-jet out of the bottle, line, and device.

* Dispose of waste according to local and state regulations.

CLEAN-jet should not be mixed with other formulations.
To Clean out any debris in VIPER Needles:

1. Remove VIPER Needle by pushing the compression fitting in and pulling on the VIPER Needle.
2. Push the VIPER Needle Cleanout Tool into the VIPER Needle.

If ball valves are sticking, add very light oil or silicone, and press trigger several times.

Make sure to keep device clean by using CLEAN-jet. (020-2030)

Piston O-ring may need replacement over time. (070-2283)
QUIK-jet Device Parts

1. Piston Rod Assembly 070-2270
2. Metal Piston 975-9447
3. Glass Barrel 975-9446
4. QUIK-jet Rebuild Kit 070-2281
5. Valve Housings
   A. 975-9914
   B. 070-2275
6. Seal Kit 070-2280
7. Quick Connect Kit 070-2220

QUIK-jet Kit 070-2250
QUIK-jet Bottle Assembly 070-2200
QUIK-jet Device 070-2230
Trouble Shooting

If Trigger Handle is Not Pulling Back:
• O-ring on the piston (QUIK-jet Tightness o-ring 2pk 070-2283) may need to be replaced (also included in QUIK-jet Seal Kit (070-2280)).

If Leaking Occurs:
1. Make sure the glass barrel is sitting properly in the glass barrel housing with the proper QUIK-jet Barrel Casing Washer (included in QUIK-jet Seal Kit (070-2280)).

If Dose Chamber is Not Filling or Dispensing Formulation
• Ball Valves may need cleaning. (see Troubleshooting: Ball Valve)

If Leaking Occurs:
• VIPER Needle may not be snug – push all the way into PTC.
• Tighten all parts tighter than hand tight.
• If replacement is needed, order QUIK-jet Connect Kit (070-2220).
Trouble Shooting

If Blue Trigger Handle Doesn’t Line Up with Input Valve Housing:
• Loosen screw and reposition blue handle

If 1-5mL graduations can’t be read:
• Loosen steel barrel, adjust glass barrel, and tighten steel barrel.
Troubleshooting: Ball Valve

If QUIK-jet device will not push formulation out, ball may be stuck closed.

If QUIK-jet device will not prime and has a weak draw of formulation, ball may be stuck open.

CAUTION: Ball Valve assemblies contain small parts. Disassemble these parts over a bowl or cup so small ball and spring won’t be lost.

Ball valves can be lubricated by removing the tubing, and adding a very small amount of oil or silicone to the in-take check valve housing.

NOTE: Make sure ball valves are re-assembled as shown on the illustration. Don’t replace ball on wrong side of spring.

If QUIK-jet device will not draw formulation up, ball may be stuck closed.

If QUIK-jet device pushes formulation back into bottle, ball may be stuck open.
QUIK-jet Tips and Cautions

- Daily cleaning and regular maintenance are critical for consistent QUIK-jet operation.
- Do not over tighten fittings. Fittings should be just more than hand tight.
- Ball Valve assemblies contain small parts. Disassemble these parts over a bowl or cup so small ball and spring won’t be lost. DO NOT DISASSEMBLE IN THE FIELD.
- Apply very light oil or grease to ball valve assemblies to keep them working properly.
- Apply light to moderate pressure on the trigger handle QUIK-jet device. DO NOT try to force product into the tree.
QUIK-jet Tips and Cautions

- Always follow the formulation label for required personal protective equipment
- Never point the VIPER needle toward yourself or anyone else
- The QUIK-jet contains a Glass Barrel. Use caution when using or storing the device
- Do not store device loaded with formulation. Always follow proper cleaning and disposal instructions