



INSTALLATION INSTRUCTIONS PRO-SERIES FLOW CONTROL VALVE

BLOWSION PRO-SERIES FLOW CONTROL VALVE

Installation Instructions

The Pro-Series Flow Control Valve sharpens bottom-end response by holding water back from the water box at idle and just off idle. It installs on any exhaust system, on the bypass line between the stinger feed and the water box, or on a separate cooling line with the correct bypass fitting.



HOW IT WORKS

The valve is a spring-loaded relief valve. It stays closed until water line pressure rises above its pop-off setting, then opens to pass water in the direction of the stamped arrow.

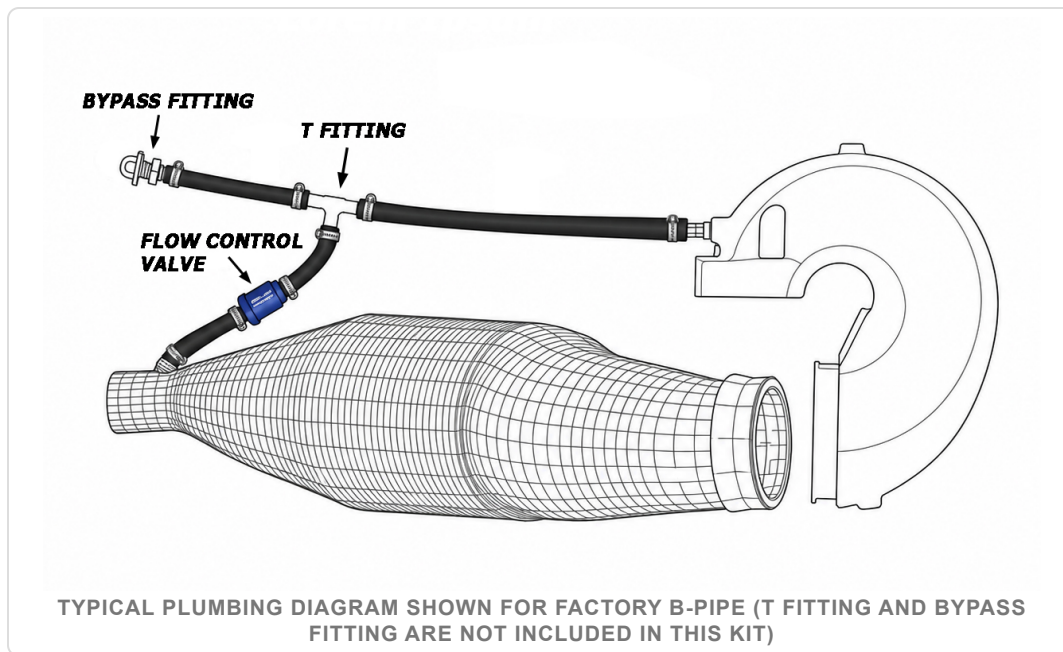
Two terms are used throughout this sheet:

- **Line pressure** is the water pressure your pump generates. It is low at idle and climbs with RPM.
- **Pop-off pressure** is the pressure at which this valve cracks open. You set it by turning the hex body.

At idle, line pressure sits below the pop-off setting, so the valve stays shut and stops water from bleeding off to the water box. That keeps the exhaust charged and wakes up the bottom end. As RPM and line pressure climb past the pop-off setting, the valve opens and bypasses the excess.

INSTALLATION

The plumbing diagram shows the standard install: the valve sits on the bypass line running from the T-fitting to the water box. The T-fitting and bypass fitting are existing boat plumbing and are not included in this kit.



1. **Choose the mounting location.** Standard placement is the bypass line to the water box, as shown. It can also be installed downstream through a resonator or hull exhaust fitting, or on a separate cooling line with the correct bypass fitting.
2. **Orient the valve** so the stamped arrow points in the direction of water flow through that line. On the standard install shown, flow runs from the T-fitting toward the water box, so the arrow points toward the water box.
3. **Secure both hose ends** with the supplied stainless hose clamps.

ADJUSTMENT

4. **Set the pop-off pressure** by holding the hose on the inlet side of the valve and turning the hex body. Clockwise raises pop-off pressure, counter-clockwise lowers it. The hose clamps do not need to be loosened to adjust. The valve can feel stiff to turn until a section of hose is installed on it for leverage, so do your rough setting with hose attached.

VERIFYING AND DIALING IN

5. **Set your baseline on the bench.** Verify the pop-off pressure with a carburetor pop-off gauge before final installation.
6. **Fine-tune on the water.** To dial it in for a race start, use a digital tachometer to find the RPM your craft leaves the line at, then check water flow through the valve at that RPM: momentarily plug the stinger water inlet and route a section of hose outside the craft. This can be done with the craft tied down on a trailer and submerged in a few feet of water. Avoid a test tank, where aerated water from cavitation skews the reading.

MAINTENANCE

Periodically inspect and lubricate the o-ring and thread area with a marine or lithium-based grease to keep adjustment easy.

TUNING TIPS

- On modified or super-stock engines with multiple or larger bypasses, line pressure runs lower. If pressure is excessively low, the spring's large-diameter coil can be trimmed 1/8" at a time to fine-tune.

IMPORTANT

Do not raise the pop-off pressure too high when line pressure is low. It can cause exhaust components to overheat and is not covered under warranty.

PERFORMANCE NOTE

Flowing more water into the stinger and bypassing less generally increases top speed. The water stream narrows the stinger's effective cross-section, similar to running a smaller stinger, and increases the reflectivity of the sonic pulse bouncing off the water stream.

SAFETY NOTICE

Exhaust and cooling system modifications should only be performed by an experienced installer. Verify water flow and pressure after every adjustment. Overheating caused by incorrect pop-off pressure or blocked water flow is not covered under warranty.

Thank you for choosing Blowsion Performance Products. Ride Hard. Ride Smart.

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