

Upstream vs Downstream Chemical Injectors for Pressure Washers: What To Know



Why should you use detergents with your pressure washer? Adding chemicals or detergents to your cleaning process is single-handedly the best way to enhance your cleaning results. Detergents will help you work quicker and more efficiently with a better result every time.

But first things first, is your pressure washer set up to run chemicals or detergents? We've compiled a short guide with things you should know before venturing into chemical application.

Pressure Washer Requirements – Upstream vs. Downstream Injection

When using detergents or chemicals with your pressure washer, you should first know if you have an upstream or downstream injector. What the heck is that? Let us explain. The upstream or downstream refers to whether the chemical enters the mix before or after the pump. Let's elaborate a bit.



Upstream Injectors

Upstream chemical injectors draw chemicals into the machine before the pump. This does an excellent job of combining the water and chemicals for a uniform output. Upstream injectors typically run more efficiently, allowing you to use fewer chemicals.

The chemical is drawn in with the Venturi effect. Upstream injectors require a shut-off valve so the machine can be used without chemicals and to prevent air from entering the system.

Important to know:

If running fresh water supply tanks, you may require an additional valve to prevent chemicals from leaking back into your tanks in between using the equipment.

The type of chemical you use with upstream systems is also essential. A low PH chemical will cause less wear and tear on your pump and coils. Higher PH will quickly dry out seals and can damage your coil pre-maturely.



Downstream Chemical Injectors



Downstream Injectors

Downstream chemical injectors draw chemicals into the system after the pump. The chemical is then combined with water at a lower pressure.

Chemical draw happens with the Venturi effect when there is a pressure drop. This can happen with a soap nozzle instead of a high-pressure cleaning nozzle. Some downstream injectors include an adjustable valve to fine-tune how much chemical is used.

Downstream injectors are the most common form of injectors on pressure washers. They are typically lower in cost and easy to operate. They also tend to use more chemicals than upstream injectors, but the added benefit of less wear and tear on your [pump coil](#) should be noted.

Upstream and downstream both have benefits and downsides, but adding detergent and chemicals to your cleaning regimen is undoubtedly a win. If you have questions about Hydroclean Equipment's line of pressure washer detergents and chemicals or need help picking a machine, we are ready and waiting to help!