



Selecting an Industrial Pressure Washer for your Wash Bay

Introduction:

The intent of this paper is to provide general information to assist in understanding the various types of Industrial pressure washers and in making the right decision for your wash bay application.

How are Pressure Washers Rated?

Pressure washers are rated by the output pressure measured in pounds per square inch (PSI) and by the volume of water per minute, measured as gallons per minute (GPM).

For Example:

Light Duty pressure washers are rated below 2,000 PSI and have a flow rate of less than 3 GPM. Pressure washers in this range are typically for home use. They work well for cleaning mold and mildew from decks, patio furniture and siding as well as washing cars, trucks and boats. A typical light duty application is a coin operated car wash which generally uses 1,800 PSI at 2.5 GPM.

Medium Duty pressure washers range between 2000 and 2800 PSI. They can easily handle the same cleaning projects as light-duty models, but are more robust for tougher cleaning jobs. A typical medium duty pressure washer uses 2,500 PSI at 3 GPM.

Heavy-duty pressure washers put out between 2,900 and 3,500 PSI. These pressure washers are generally found in industrial applications. They work well for many cleaning jobs, where the item being cleaned is not subject to damage by the pressure washer. Caution should be exercised when using these pressure washers to clean rubber tires or rubber hydraulic hoses as the high pressure water jet can damage rubber parts. They can also strip paint. A typical medium duty pressure washer uses 3,000 PSI at 4 GPM.

Extra heavy-duty or professional-duty pressure washers offer 3,500 PSI and up. These models are usually selected for a specific industrial application and are not recommended for home use. Caution is advised when using these machines



and protective clothing is recommended. A typical medium duty pressure washer uses 4,000 PSI at 5 GPM.

Cleaning Units

Note that while higher PSI provides deeper cleaning, higher GPM means quicker cleaning time and rinsing of difficult-to-reach surfaces. Use both PSI and GPM ratings to determine the cleaning power of a pressure washer. Multiply the PSI times the GPM to get the Cleaning units. The greater the number of cleaning units, the more area you can efficiently clean.

Should I use Detergent or Heat?

If you plan to recycle your wash water, try using heat as some detergents can cause foaming problems in recycle systems.

Can I Use One Pressure Washer with Two Wands?

You can, but both the pressure and the flow rate will drop in half.

I'm not sure if I will need high pressure or not, what should I do?

If you're not sure about the pressure get the higher pressure machine. You can always lower the pressure by changing the nozzle if you don't need as much pressure. You cannot effectively raise the pressure without changing out the motor. Nozzle charts are available to help determine the correct nozzle.

I am washing equipment with a lot of mud. What flow do I need?

The more mud that you have to move off the equipment the more flow you need. 5 gpm is usually enough in most applications. If you are cleaning earth moving or mining equipment you might want to consider a water cannon. Typical water cannons deliver 25 gpm and go as high as 150 gpm. Wash bays for earth moving equipment typically use a water cannon for a pre wash to rapidly remove the bulk of the mud and solids followed by 3,000 to 4,000 psi pressure washer at 4 to 5 gpm.



Pressure Washer Glossary

- **Axial cam** and **triplex** are two pump types. Axial cam pumps are found on most pressure washers designed for homeowner use. Pressure washers intended for frequent, commercial use will often have triplex pumps, which have a longer life expectancy and greater efficiency.
- **Interchangeable nozzle tips** determine pressure and flow. Tips with narrow sprays provide more pressure and less coverage, while wider sprays provide greater coverage at lower pressure. There are also low-pressure tips designed for applying detergent.
- **Adjustable wands** allow you to change the spray pattern from narrow (higher pressure) to wide (lower pressure) without changing the nozzle tip.
- **Interchangeable wands** are preset for different cleaning types. With these models, you change the wand rather than changing or adjusting the nozzle tip.
- **Rotating nozzles** combine a powerful spray with a circular motion.
- **Detergent injection** allows use of degreasers, cleaners and other cleaning chemicals designed for pressure washers. Generally feed either by a siphoning tube that is placed into the detergent container.
- **Remote Panels** allow for the operation of the pressure washer from the wash bay when the pressure washer is in a separate area. Remote panels can have on/off, soap on/off and heat on/off.
- **Time Delay Shutdown** is a safety feature that will turn off the pressure washer after a period of non-use.
- **Unloader Valve** is a safety feature that prevents a sudden pressure build up (Water Hammer) when the wand is released.