



## Instant Car Wash (ICW)

**Our goals for the ICW were; effective, affordable, scalable, safe and environmentally friendly.**

### Every Goal Has Been Met

No question about it, vehicle washing is a challenge. When vehicle wash facilities are required it can be difficult to identify the best solution. Constructing a permanent wash rack requires expensive architectural designs, tedious permitting, and disruptive often time-consuming construction. Once built, it cannot be moved. Even if such a facility exists, it is rarely environmentally acceptable. New issues associated with ever changing wash water treatment and disposal requirements can surface.

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**Hydro Engineering, Inc.** solves these vexing problems by offering a pre-constructed, portable, self-contained vehicle wash system that recycles the wash water. Easy to assemble and maintain, the ICW is an effective car wash. Numerous systems have been installed around the world, including U.S. Embassies, automobile dealers and automotive service centers.

### **On-Site Car Wash —Without Compromising Quality**

Everything gathers dust and dirt, vehicles are no exception. A car wash is required for any organization that sells or rents vehicles. Service companies and fleet operators can benefit by maintaining clean vehicles.

The ICW can be installed anywhere, and moved as needed. It conserves water by recycling and it requires a surprisingly modest amount of fresh rinse water.

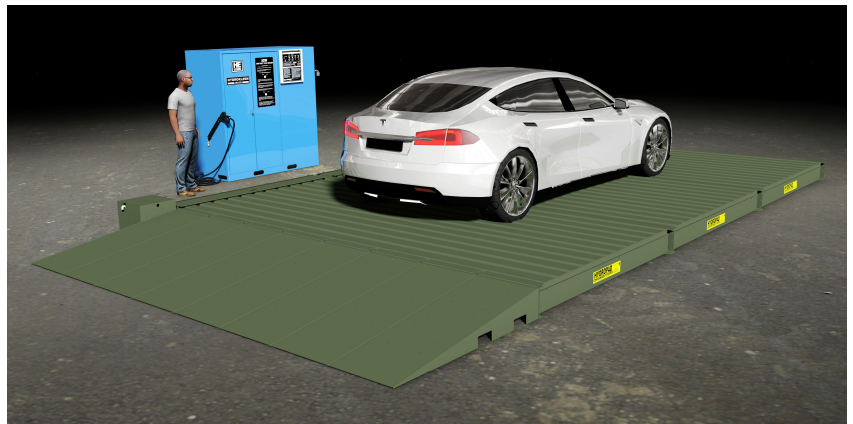


## How the Hydropad Portable Wash Rack System Cleans & Recycles

By using the ICW car wash process; cars are safely washed, wash water is captured and recycled, excess water is either directed to a sanitary sewer, stored for reuse or disposal.

Little to no chemistry is required to wash the vehicle. Chemicals can be used but rinse volume is increased which increases the requirement for a sewer connection. Without chemicals excess water can be discharged to a holding tank. Stored wastewater will require disposal periodically.

Safe car washing starts with proper (PPE) personnel protective gear. At a minimum safety glasses and gloves should be worn. We don't recommend it but if chemicals are added to the process, the Safety Data Sheet provided by the manufacturer should be consulted to determine if additional PPE is required.



To start the cleaning process, simply drive the vehicle to be cleaned onto the Hydropad above ground steel containment wash rack.

To properly wash a vehicle, it is essential that abrasive soils be gently removed before anything comes in contact with the vehicle surface because debris left on the surface can abrade the paint during the wash process. A Hydroblaster high pressure cold water washer is part of the ICW solution. The Hydroblaster is supplied with extensively filtered recycled water that removes abrasive soil without rubbing it against vehicle surfaces.

Proper use of the Hydroblaster starts with thoroughly wetting all glass and painted surfaces. Follow this with pressure washing wheels, tires, areas behind wheel wells and forward-facing surfaces to remove bugs.

At this point the car is clean of soil that can scratch the surface. The next step is removing the 'road film'. Road film can't be removed with anything other than touching the surface.

Wash a vehicle at any commercial hand-held car wash using a Hydroblaster high pressure washer with either a chemical pre-spray or soap injection system or both and you will find that the road film is still on the surface. Test this by touching the wet painted surface anywhere on the vehicle and you will see a line where touching the surface has released the road film from the paint. This is the reason that every hand-held car wash offers a foaming brush for road film removal. It's not the soap, it's the brush that is breaking the bond between the vehicle and the road film.

Road film is easy to remove with the ICW soft touch brush. The brush is used with recycled water flowing through it. Soap elimination is a benefit that is provided only by the ICW. When the brush touches the surface, the recycled water flowing from the brush head flushes the road film from the surface before it can redeposit. It's quick and easy. It doesn't require repeated trips back to the soap bucket for additional product.

There is really no advantage to using soap with the ICW. Some will argue that the surfactants in the soap help prevent the road film from re-depositing on the surface as long as the surface stays wet but the soft touch brush flowing recycled water does the same job. The disadvantage to using soap with the ICW is that with soap, more fresh water will be required for rinsing. The added water will need to be discharged either to a sanitary sewer or to an excess water holding tank.

The final step in the car wash process is to use the ICW rinse gun that is connect to a culinary fresh water supply. This rinse gun provides a low volume fresh water rinse that removes all traces of recycled water from vehicle surface. Optionally, the rinse operation can be enhanced by using deionized or RO filtered water to eliminate dissolved solids from the rinse water and prevent spotting.



**ICW shown with optional Remote Equipment Module (REM), 180 degree booms for wash guns and brush, CMAFU-2 solids filter and awning**

## Maintenance of the Wash Rack System

The ICW and Hydropad Containment Wash Rack System require minimal maintenance.

- Outdoor wash racks must be protected from freezing, water must be drained from the entire system.
- It is best to cover, via an awning, the wash pad keeping rain off of the Hydropad and the sun off of cars during the washing process.
- The surface of each Hydropad is impervious to dirt. After each use, any dirt left on the surface should be washed into the side gutter.
- Solids accumulate in the side gutter. Clean the gutters regularly.
- The filter media will need to be changed periodically. The on-board logic controller will advise you when this is required.

## ICW Components:

The ICW is a cabinet that contains a wash water filtration system and Hydroblaster high pressure washer that is completely plumbed and wired ready for connection to power and water. The ICW includes a remote-control panel, soft touch brush, high-pressure and low pressure rinse gun assemblies with all required connection hoses.

The Hydropad above ground Wash Rack System typically includes three Hydropads. The complete Wash Rack System will measure 22 1/2' long by the width of the selected Hydropads which are available in 8', 10', 12', 14', 16', & 20' widths. Ramps are required to provide vehicle access onto the wash rack. Ramps can span the entire width of the Hydropad and are available in a 67" length for typical vehicles or up to 129" long for vehicles with low ground clearance and/or a long wheel base.

The Hydropads feature the patented side gutter. Water and debris is collected here. The water is pumped to the ICW while the solids are left in the gutter for manual removal.

The wash rack system may be configured with sidewalls to contain wash water overspray. Sidewalls configurations vary widely depending on your needs. Controls, operation instruction placards, brushes, wash wands and tools are easily attached to the sidewalls with optional brackets. These accessories simplify system operation for the user.



## Installation is Easy:

It takes about two man-days to deploy and connect the components. Factory verifications of connections, equipment startup and training on equipment operation is available.

When the ICW and Hydropad containment wash rack arrives, off-loading and assembly will require the following:

- Use of a 5,000-lb. forklift for positioning the equipment.
- Power; one 230V single phase circuit for the ICW and a second 120V circuit for the sump pump at the end of the Hydropad side gutter. Requirements differ depending on equipment options but exact requirements will be provided with Hydro Engineering, Inc. installation drawings and directions. This requires a licensed electrician to make connections.
- Water; A potable water supply is adequate but RO or DI filtered water is preferred.
- Where freezing temperatures are possible the equipment should be located inside a heated building to allow all season operation.

Each system arrives with the following information:

- Site layout drawing displaying power/water specifications and locations.
- Equipment manuals.
- Installation instructions.

For complete information, visit [Hydroblaster.com](http://Hydroblaster.com), or call 801.972.1181

