



# CAR WASH

WATER TREATMENT  
SOLUTIONS

[www.pentairaquaeurope.com](http://www.pentairaquaeurope.com)

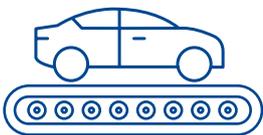
# Car wash

## NORMS AND REGULATIONS

In the past, the majority of people washed their car at home. Nowadays, most European countries have regulations restricting these practices, largely due to environmental reasons.

These regulations represent an important step forward towards water conservation. First of all, by promoting car washing by professional methods (conveyors, roll-over, self-service) that require less water consumption and, secondly, by encouraging professionals to use the most optimal methods of water treatment.

## MAIN TYPES OF CAR WASH FACILITIES



### CONVEYORS

A conveyor moves the vehicle through a series of fixed cleaning mechanisms.



### ROLL-OVER

An automatic washing machine and dryer rolls back and forth over a stationary vehicle.



### SELF-SERVICE

Self-service facilities, generally coin-operated, where the car owner does the washing, including pressurized "jet washing".

## BENEFITS OF CAR WASH WATER TREATMENT

### Recycle treated water for reuse

- Decreased water bills
- Contributes to a more sustainable planet
- In certain EU countries, fiscal incentives are granted to companies that are environmentally conscious
- Car washes equipped with a water recycling system impacted less by water scarcity

### Soft water for cleaner cars & happy customers

- Reduce white spots on cars due to hard water
- Improved efficiency of cleaning products - save money with less detergent use
- Foam rinses more quickly which helps save water
- Reduced scaling protects and extends the life-time of car washing equipment

## WATER TREATMENT PROCESS IN A CAR WASH

The next page represents how Pentair products provide car wash system owners with benefits through **two main channels**: waste water recycling and hard water treatment.

This is a good example how Pentair envisions the ideal car wash\*.

*\*Subject to changes due to local legislation.*



**PUBLIC WATER SUPPLY TREATMENT**

**WELL WATER/RAIN WATER REUSE**

**HARD WATER**

**WELL WATER/RAIN WATER**

1a

**PREFILTRATION**

Protection of equipment against fine particles

Pentair DGD Cartridges (Dual Gradient Filtration) ensure premium sediment removal while reducing pressure drop.

**MORE INFO**

*Pentair DGD Series Cartridges*

1b

**PREFILTRATION**

Protection of equipment against fine particles

Sand and iron particles are efficiently removed thanks to systems featuring the Pentair Autotrol Performa 268FA Control Valve.

**MORE INFO**

*Pentair Autotrol Performa 268FA Control Valve*

2

**SOFTENING**

Removal of calcium and magnesium ions

The Pentair 9100 SXT delivers a continuous flow of soft water with its alternating regeneration cycles.

**MORE INFO**

*Pentair 9100 SXT Twin Sensor Kit*

3

**REVERSE OSMOSIS FILTRATION**

Post-softening salt removal

The Pentair Modular Pro Series removes Total Dissolved Solids (TDS) naturally present in water via reverse osmosis.

**MORE INFO**

*Pentair Modular Pro Series System*

4

**MIX BED DEIONIZATION**

Final polishing step

Removes very low concentrations of dissolved materials for higher purity water.

**MORE INFO**

*Pentair PCF Series Cartridges*



**WASTE WATER**

1

**MACRO FILTRATION**

Physico-chemical treatment and screening

4

**DISINFECTION**

Microorganism and bacteria removal via ultrafiltration

The Pentair LineGuard UF-100 system's billions of microscopic pores retain microorganisms, including bacteria, viruses and cysts.

**MORE INFO**

*Pentair LineGuard UF-100 System*

3

**FINAL CLARIFICATION**

Removal of remaining oil traces

Combine a Pentair Big Blue Housing with our OAC Plus Cartridge to remove oil traces and odors present in the water.

**MORE INFO**

*Pentair OAC Plus Cartridge*

**WASTEWATER RECYCLING**

**MICROFILTRATION**

Removal of remaining suspended solids

Pentair housings and bags are an easy cost effective solution against finer suspended particles down to 1 micron (size of a flour grain).

**MORE INFO**

*Pentair Big Blue Vessels*

*Pentair Liquid Filter Bags*

2

# Fact and figures

# 7.3 billion€

of car wash retail sales in Europe; CAGR of 5.5%  
(2015 data)

1 **79'000**  
car washes in Europe

2 **380M**  
cars in Europe  
(2016 data)

3 Average frequency  
of commercial car  
washing per car:  
**10 times**  
a year  
(2016 data)



## CURIOUS FACTS ABOUT NORMS

- ▶ Switzerland, Germany and The Netherlands are some of the countries that forbid car washing at home.
- ▶ Austria requires car wash companies to recycle at least 80% of the water used.
- ▶ Eco-labels are starting to appear in The Netherlands, Scandinavia and Germany, with the aim to recycle 80% of the water used. These limitations also impact both the amount of fresh water consumed in an automatic car wash, and also the flow to 7 Lpm for self-service car washes.

Softened water use  
helps reduce car wash  
soap consumption by

# 50%



## Did you know?

Over a 5-year period, the water saved by using a commercial self-service sprayer versus car washing at home is 17'500 liters (per car-owning household).

### AVERAGE WATER PER WASH (IN LITERS)



**85%**  
less water  
consumption

## About us

At Pentair, we believe the health of our world depends on reliable access to clean water. We deliver a comprehensive range of smart, sustainable water solutions to homes, business and industry around the world. Our industry leading and proven portfolio of solutions enables people, business and industry to access clean, safe water, reduce water consumption, and recover and reuse it. We help ensure water is clean when returned to the environment. Whether it's for fitness and fun, healthier homes, better flood control, safer sky rises, more sustainable ways to farm, or safe drinking water for those who need it most, we won't stop until the world's water is managed the best way possible.

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## Sources

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