

# DS Optima PH

A compact-size, cost-effective, pre-configured full GMP washing machine

## 3 Months ready for FAT!

A fast-track development of a pre-configured fully GMP compliant washing machine for the pharmaceutical manufacturing industry.

A compact-size, cost-effective GMP washer with standard features and available options to enable minimal lead time from order to delivery.



### + Versatile configuration

It can be configured in different layouts: single or double door version with hinged full glass door with technical area on the right or left side.

### + Hygienic design

The design ensures self-cleaning of the machine chamber and pipework at each process stage, to prevent cross contamination risk.

### + Low water consumption

Detailed engineering on the sump reduces water consumption and assures high performance in terms of both cleaning and consumption.

### + Cleaning system

Multiple rotating sanitary washing arms located at the top and at the bottom of the chamber to provide full washing and drying coverage.

### + Drying efficacy

The electrical drying unit, with adjustable time and temperature setting, ensures the complete internal and external drying of all the items loaded.

### + Automation system

15" color touch screen HMI developed according to the latest ISPE GAMP® guidelines and FDA 21 CFR Part 11 and EU Annex 11 compliance.

# DS Optima PH

## The optimal solution for your cleaning process needs



DS Optima PH - Pharma Grade Parts Washer is designed for validatable cleaning and optimal throughput of materials and components used in Bio-Pharmaceutical manufacturing in the smallest available footprint of valuable GMP manufacturing space.

It is designed, manufactured, validated, and documented according to the latest global practices and standards to facilitate customer compliance with current Good Manufacturing Practices (cGMPs).

### Dimensions

**Chamber WxDxH:**

1000 x 1000 x 1200 mm  
40" x 40" x 48"

**External WxDxH:**

2200 x 1150 x 2500 mm  
87" x 45" x 98"

**Chamber Volume**

1200 liters / 43 cu ft



### Easy access to sampling and dosing system

Different sampling systems are available: from sump, from final rinse, and from point of use for each water. Easy access to sampling system and detergents from technical area below the chamber from loading side.



### Repeatable and reliable washing cycles

Different cycle recipes with adjustable setpoints and durations are available: pre-wash, wash with or without detergent, rinse with or without recirculation, recirculated or single-pass, drying and cooling.



### Modular or customized carts and trolleys

Steelco designs, develops, manufactures, and tests all its own wash racks in-house, ensuring that the quality of this critical process is carefully monitored. All racks are provided with standard validation package.