



# SUNCOMBE

CIP, BIOWASTE & PROCESS SOLUTIONS

## ImmersionWasher™



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ImmersionWasher Datasheet V1.4

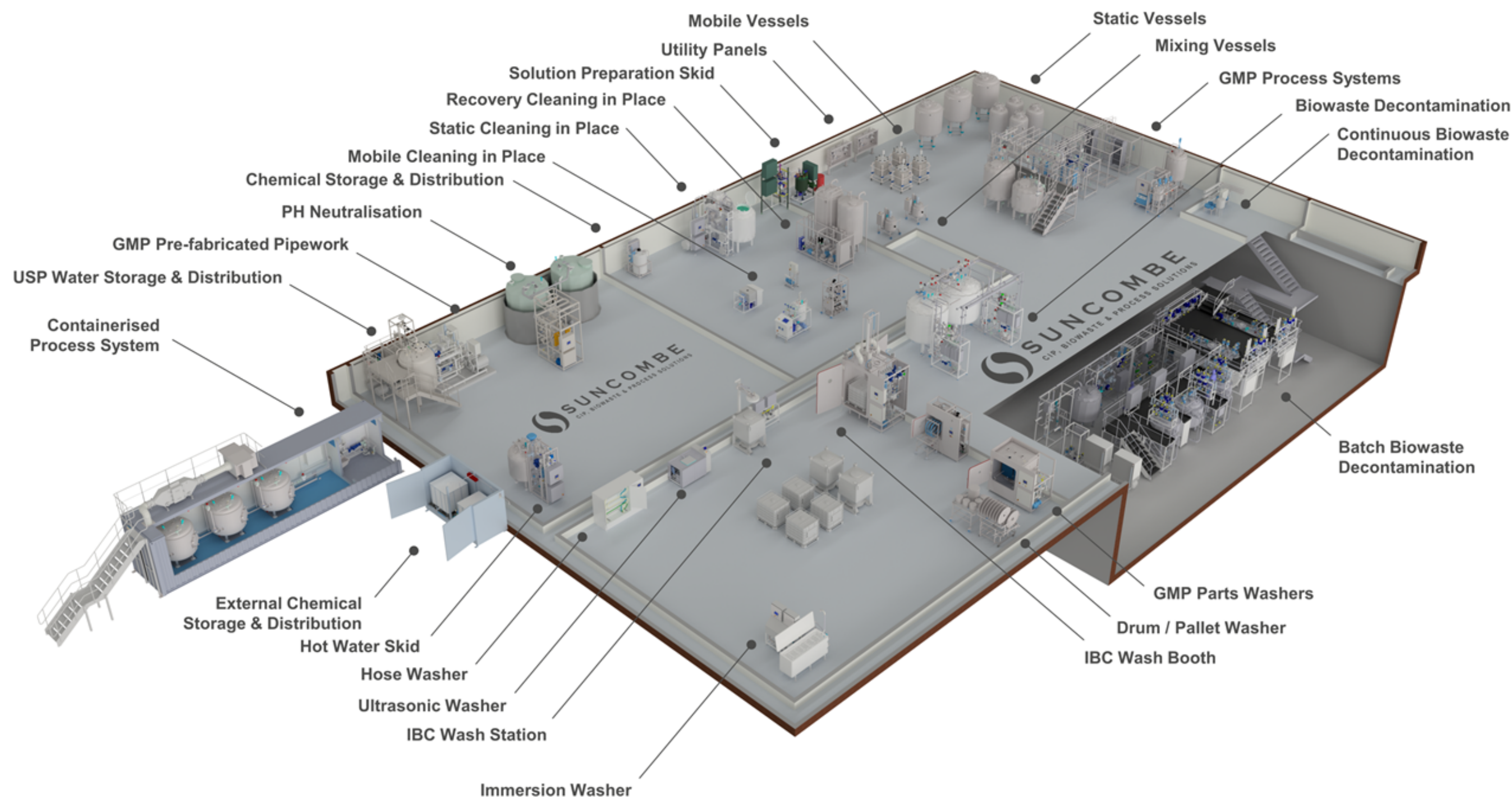
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# ImmersionWasher™

## ImmersionWasher™ Introduction

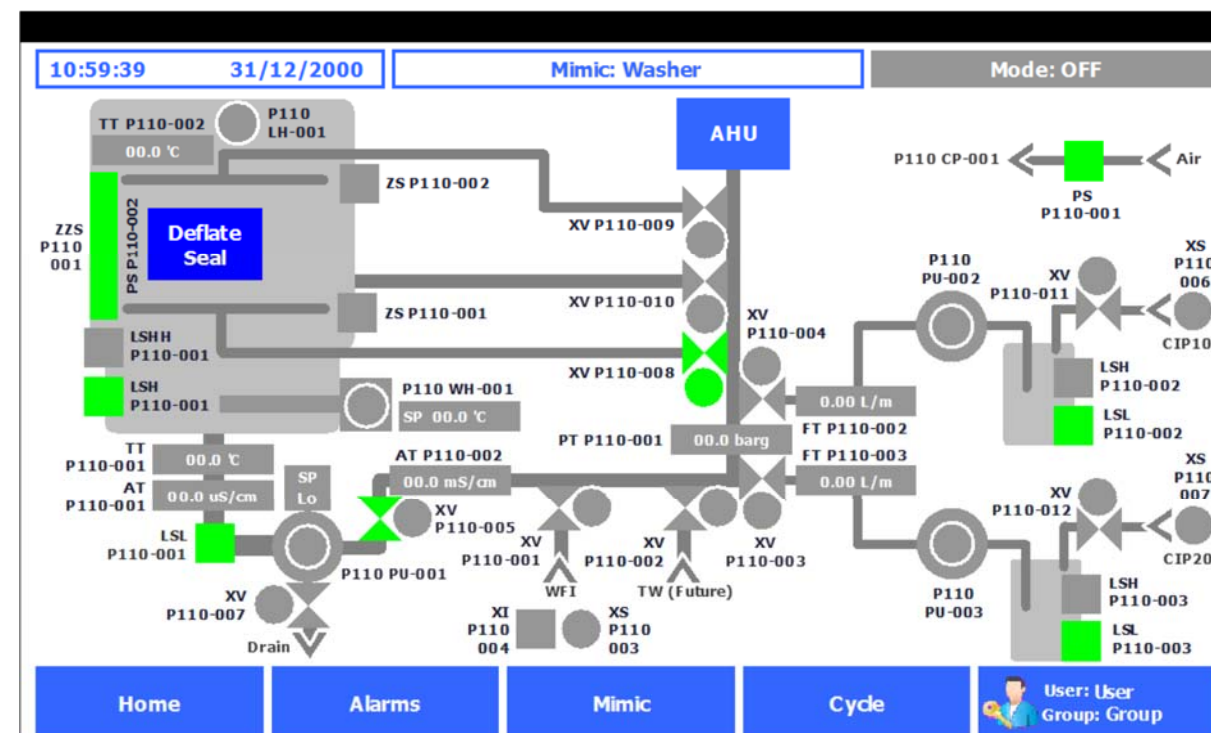
Developed over the last 30 years, the Suncombe ImmersionWasher™ range of Parts Washers are top loading washer/disinfectors, which provide a cleaning solution for hoses and parts. Employing a combination of immersion, turbulation, recirculation and spray cleaning, the connections within the washers can be used for hoses with standard and bespoke baskets used for parts cleaning. They incorporate existing and new technologies to provide an environmentally friendly, low water and energy usage washing facility.

They are high specification units in which the washing recipes can be built up of a combination of the following steps:

- Immersion Step
- Turbulation Step
- Recirculation Step
- Spray Cleaning Step
- Drying Step
- Cooling Step
- Drain Step
- Ultrasonic Step (optional)



Typical Mimic Diagram



## Washing Chamber

316 Stainless steel radius-corners, sloping design and smooth, crevice-free with an optional certified surface finish. The chamber is constructed with innovative mechanisms for turbulation, recirculation and spray cleaning providing a robust, reliable washing facility that provides a high level of efficiency. Availability of drying systems to dry the components following washing. Optionally "Air Bubbling" washing can be used.

## Detergent Dosing

One to four liquid dosing systems, which can be incorporated within any recipe step at any concentration, complete with dosing safeguards including low detergent confirmation and detergent dosed volume confirmation, as well as pump priming facilities.

## Door

Fold down single piece or multi-piece lids, fitted with an optional observation window and interior light, provide a seal with integral vents for vapour removal.

## Example Fully Loaded Washer



Example Wash Baskets in Bath



## Key Features

- 316L Stainless steel wetted parts including radius-cornered chamber, distribution pipework and racks.
- Sloping design and smooth, crevice-free construction
- EPDM, PTFE FDA-approved elastomers and tri-clamp connections
- 304 stainless steel non-wetted parts
- Sanitary pipework on skid
- BioPharma Diaphragm or sanitarybutterfly valves
- Large hygienic 316 stainless steel variable speed washing pump
- One to four liquid dosing systems including dosing confirmation
- Pressure and temperature indicating instruments
- Sanitary finish with options for certified surface finishes to 0.4 ra and electropolished
- Safety Interlocks and Controls
- Fold down single panel or insulated stainless steel door for ergonomic loading.
- Optional integrated drying system, variable drying temperature control up to 120°C, providing fast and efficient drying, HEPA filters available
- Optionally available with additional instruments including temperature, pressure, flow, pH, conductivity and turbidity transmitters.
- Factory Acceptance Protocol and Test allowed.
- Sanitary and fully validatable versions available.

## Automation System

The Integrated automation is designed to be operator friendly and simple to use whilst providing flexibility and optimisation. Reliable and robust, they have been developed over the last 20 years, they encompass all elements required to provide a controllable, repeatable automatic system. A range of automation levels are available, starting from entry level, through mid level PLC and HMI versions, to advanced validateable systems. All levels provide a repeatable automated cycle.

See Automation Datasheet for full details

## Cleaning Technologies

A typical ImmersionWasher™ includes separate recipes, each which can be built up of a combination of the different cleaning technologies, detailed below.

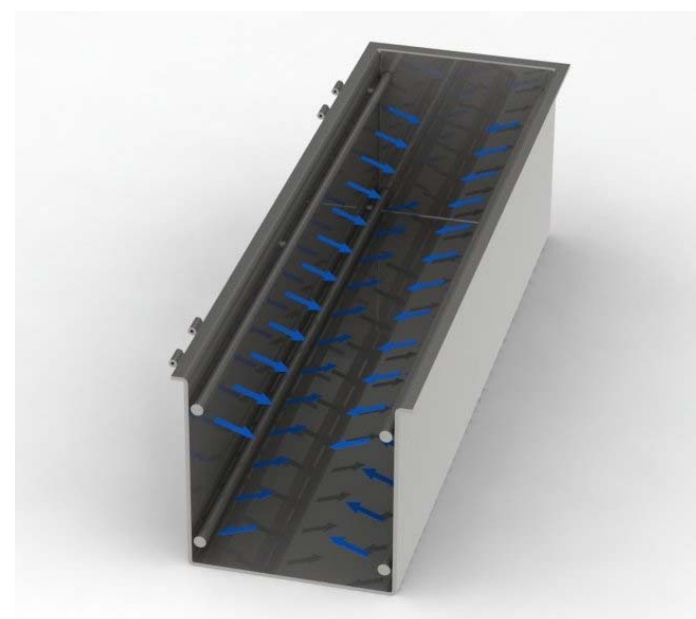
### Immersion, Turbulation & Recirculation Cleaning

Immersion cleaning loosens soilage to prepare it for other cleaning methods. Turbulation and recirculation cleaning provide targeted low and high velocity jet action within the immersed fluid.



### Spray Cleaning

A highly effective, low energy method of applying a targeted liquid spray onto parts surfaces.



## Typical Manufacturing Standards

- Sanitary Construction, fully drainable, crevice free.
- 316 stainless steel contact parts, 304 non-contact parts, T.I.G. Welding

See Manufacturing Standards Datasheet for full details

## Typical Equipment

- 316 Stainless Steel pipework
- Large Sanitary Centrifugal Pump
- Sanitary Valves, manual and air operated
- Steam heating
- Calibrated Instruments

See Equipment Standards Datasheet for full details

## LEAN Technology

Adopting LEAN principles, the ImmersionWasher™ was developed to minimise utilities and wash times, whilst ensuring the safety of the operators and the efficiency of the processing. Our automated systems are configured to incorporate LEAN principles including Overall Equipment Effectiveness, Energy Lean and minimise downtime maintenance.

## Testing

All functions of the equipment would be fully wet and dry tested and test results would be documented in the **‘Pre-Factory Acceptance Test’ (FAT)** protocol. Following successful completion of this protocol, the client will be invited to the FAT test, where all tests can be repeated or the pre-FAT tests results can be used.

## Optional Ultrasonic Version

The ImmersionWasher™ is available with the option of an Ultrasonic washing step. It can also be supplied as just an Ultrasonic washer without the liquid delivery steps.

## ATEX Systems

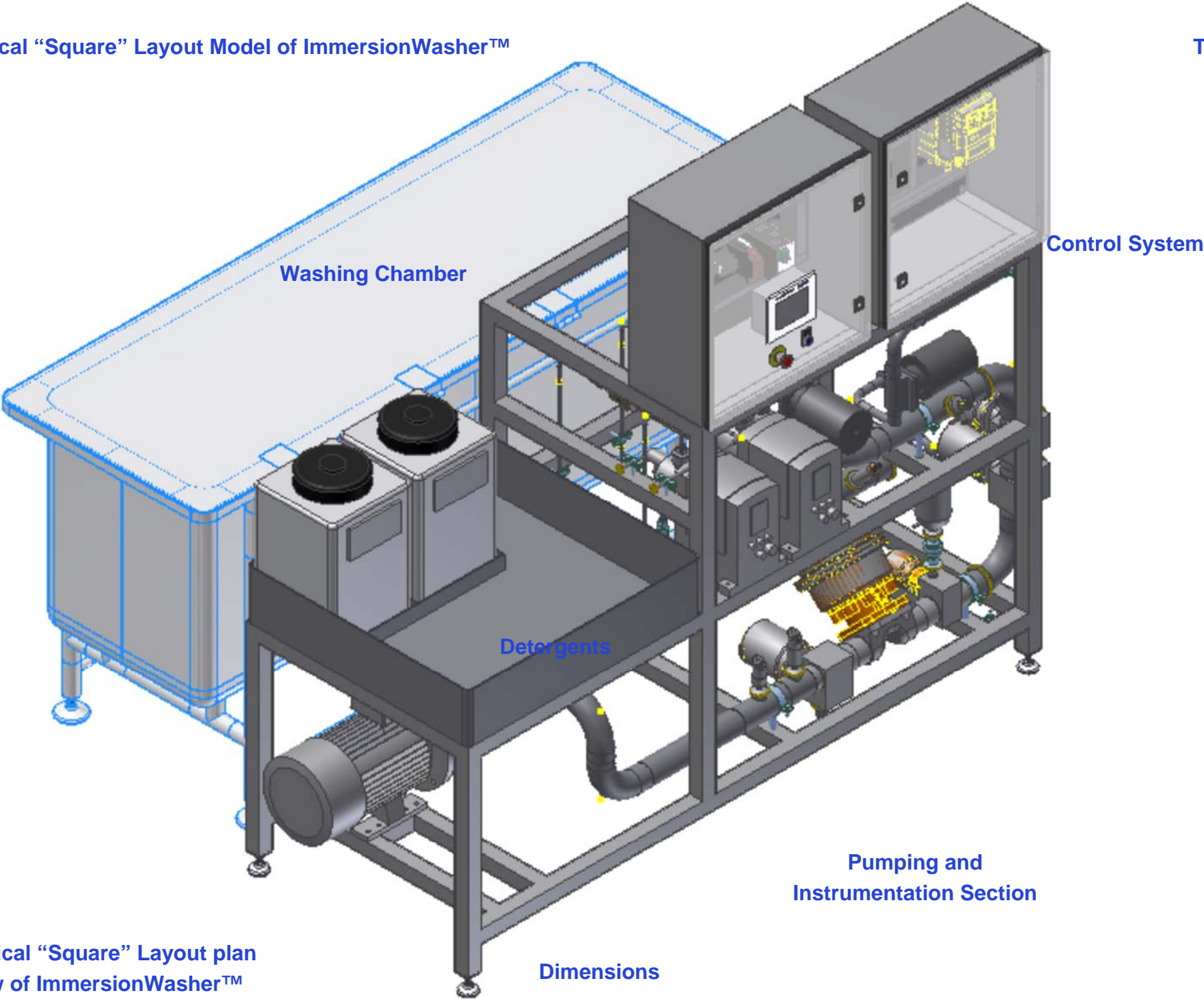
The ImmersionWasher™ range of Parts Washers are available as ATEX rated units for aqueous washing in ATEX areas and for solvent washing.

## Validation / Documentation

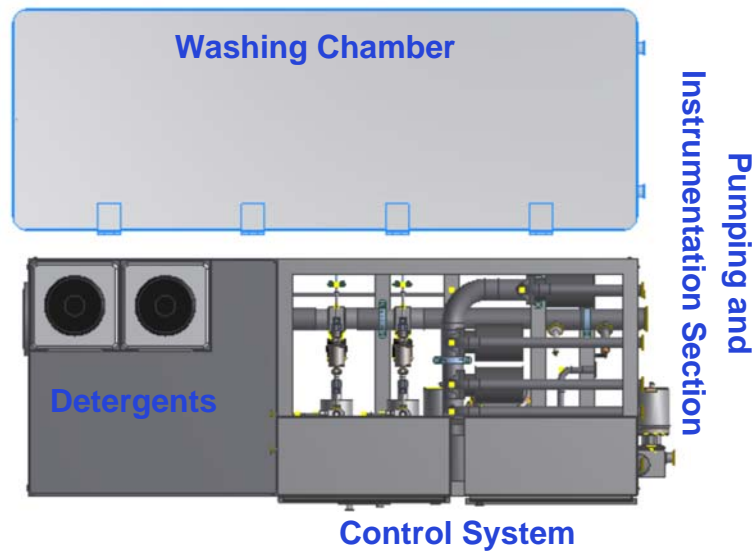
User documentation is included with an option to follow the validation lifecycle approach (DQ, FAT, SAT, IQ & OQ) where validation is key to every stage of the development process, including Factory Acceptance Testing (FAT), SAT and Qualification.



Typical “Square” Layout Model of ImmersionWasher™



Typical “Square” Layout plan view of ImmersionWasher™

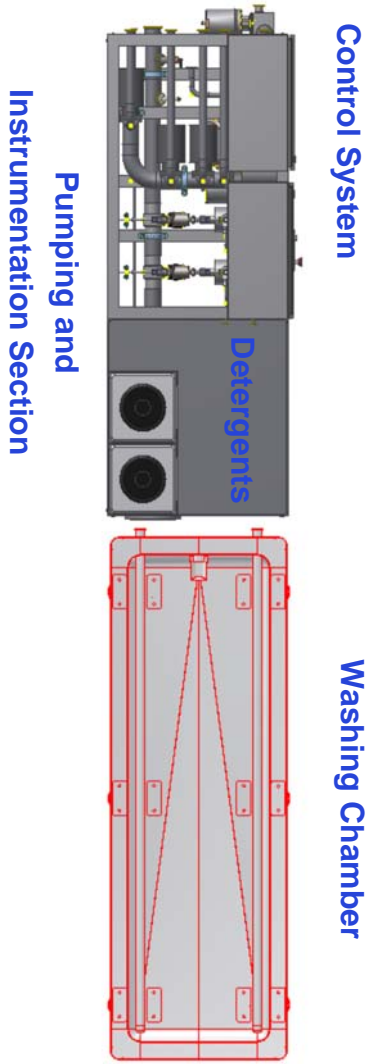


Part #	Volume Litres	Dimensions mm		
		Height mm	Length mm	Width mm
Washing Skid	-	1,800	1,800	1,000
ImmersionWasher™125	125	1,000	500	600
ImmersionWasher™250	250	1,000	1,000	600
ImmersionWasher™375	375	1,000	1,500	600
ImmersionWasher™500	500	1,000	2,000	600
ImmersionWasher™750	750	1,000	3,000	600

Variants

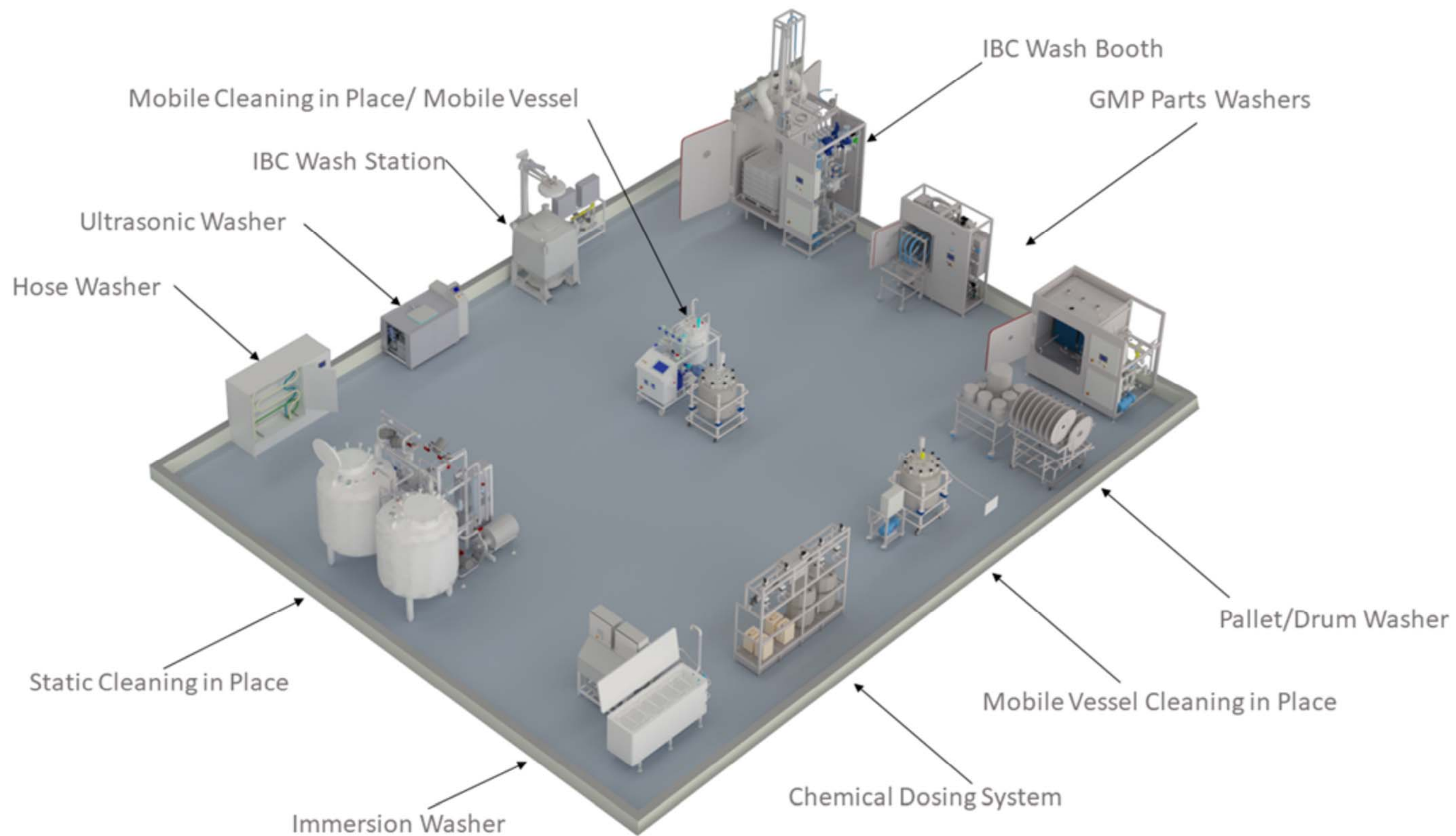
Constructed to a generic design, with the ability to custom engineer to suit clients requirements.

Typical “In-Line” Layout plan view of ImmersionWasher™



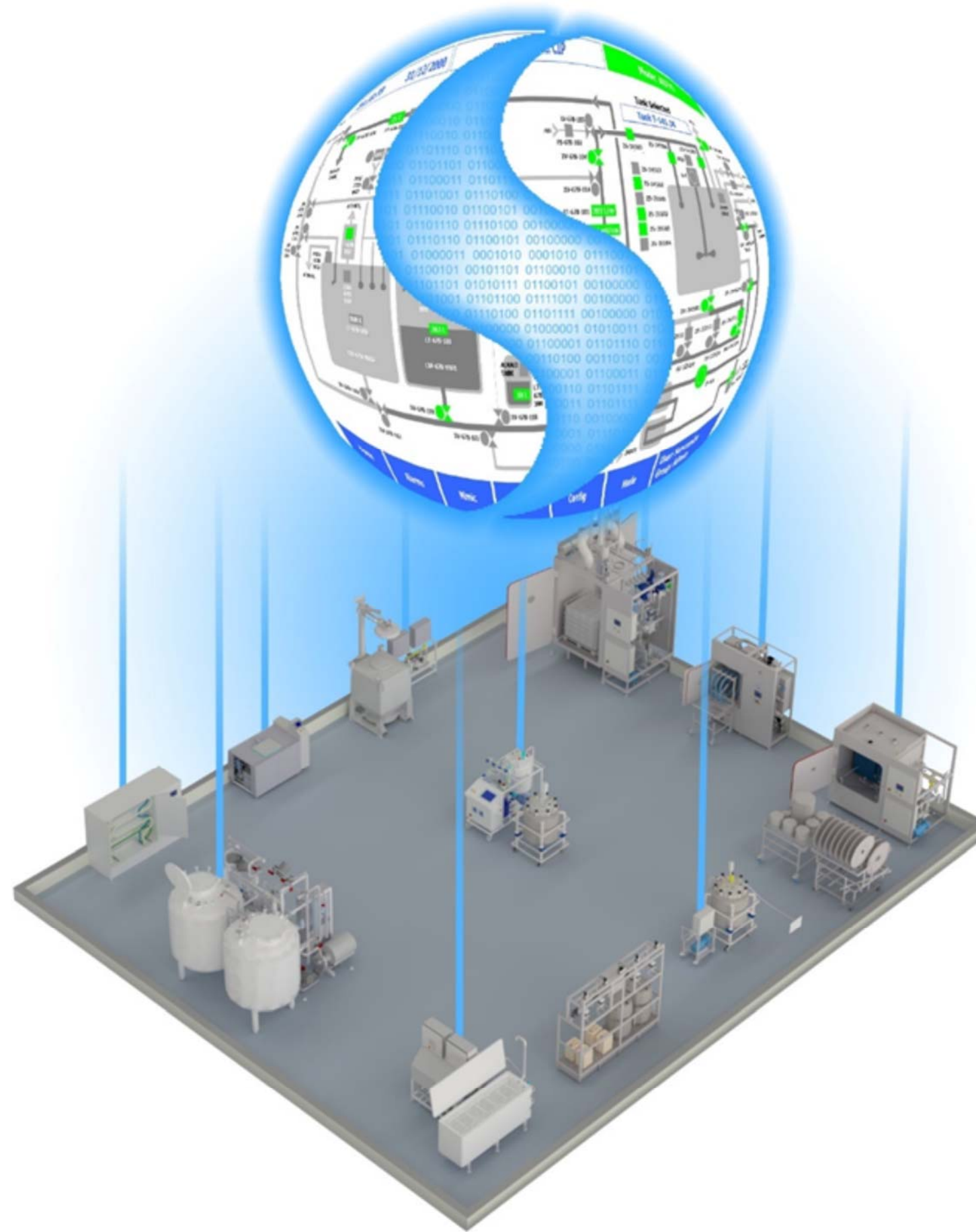
Typical Utilities	If Available
Water	100 litres/min @ 1 bar
Air	Minimal use @ 7bar
Electricity	12 kW 400Vac 3ph+n 50hz
Steam	500 kg/hr @ 3 bar
Drain	100 litres/min @ 1 bar

Common Options	
Water Buffer Tank	Drying
Water Reclaim Tank	Automatic Lid
Electrical Heating	BSL Decontamination
Steam Heating	Water pre-heater
Bar Code Identification	
Additional chemical dosing	



## Washer Portfolio





**Suncombe Washers Linked Automation Packages**