



SUNCOMBE
CIP, BIOWASTE & PROCESS SOLUTIONS

SteriWasher™
Mid Size GMP Parts Washer



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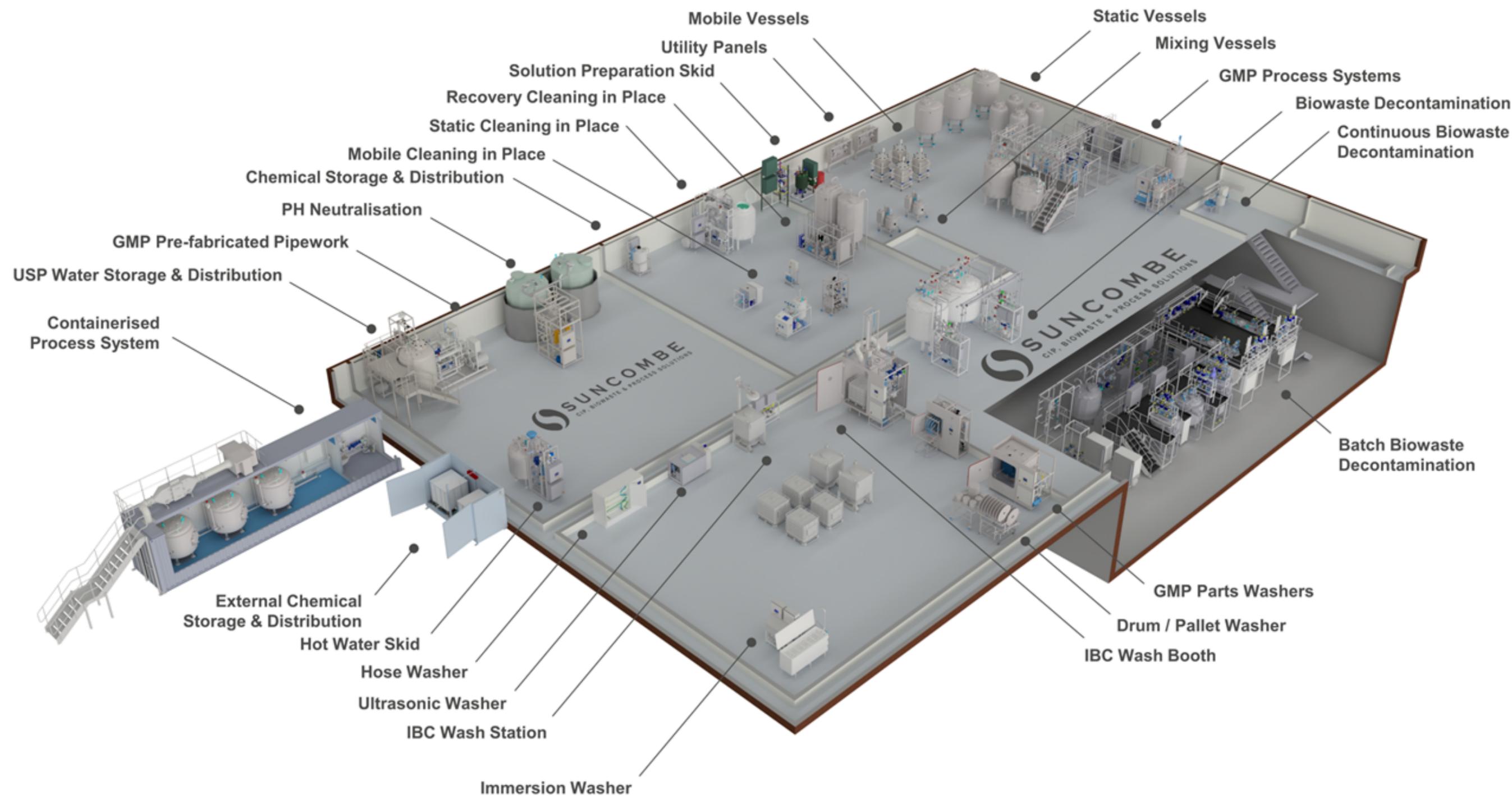
SteriWasher Datasheet V1.4

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Product Portfolio

SteriWasher™ Mid Size GMP Parts Washer

SteriWasher™ Introduction

Developed over the last 30 years, Suncombe SteriWasher™ Mid Size Parts Washers are available as single door or two door pass through versions. They are high specification units that employ controllable and recipe variable, high power, spray washing, providing a contained, validatable wash. Accessed via a robust stainless steel insulated hinged door with an inflatable seal, the washing chamber is constructed from 316 stainless steel, with radius-corners of sanitary crevice-free fully drainable construction. The washer provides high energy impingement washing together with low energy flushing chosen by a simple recipe selection, to wash and/or dry Parts and other equipment. Built to a generic design, with the ability to custom engineer to suit clients requirements, they achieve excellent washing results whilst using minimal utilities, providing an environmentally friendly, low water and energy usage wash.

Standards

Built to hygienic and sanitary standards and available to comply with ASME BPE, GAMP and 21CFR11, the Washers are supplied worldwide to the Biotech, Pharmaceutical, Medical, Healthcare, Personal Care and other critical processing industries. Including washing and drying, they incorporate technologies to provide repeatable patterns to ensure total coverage of all surfaces.

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



Service Compartment

The Service Compartment is located to the left or right hand of the washer and incorporates the liquid and/or air handling equipment. With maintenance access from the side and/or back.

Loading

The SteriWasher™ Parts Washer is supplied with a trolley for to mount the racks allowing loading and unloading away from the washer.

Split Loading Trolley

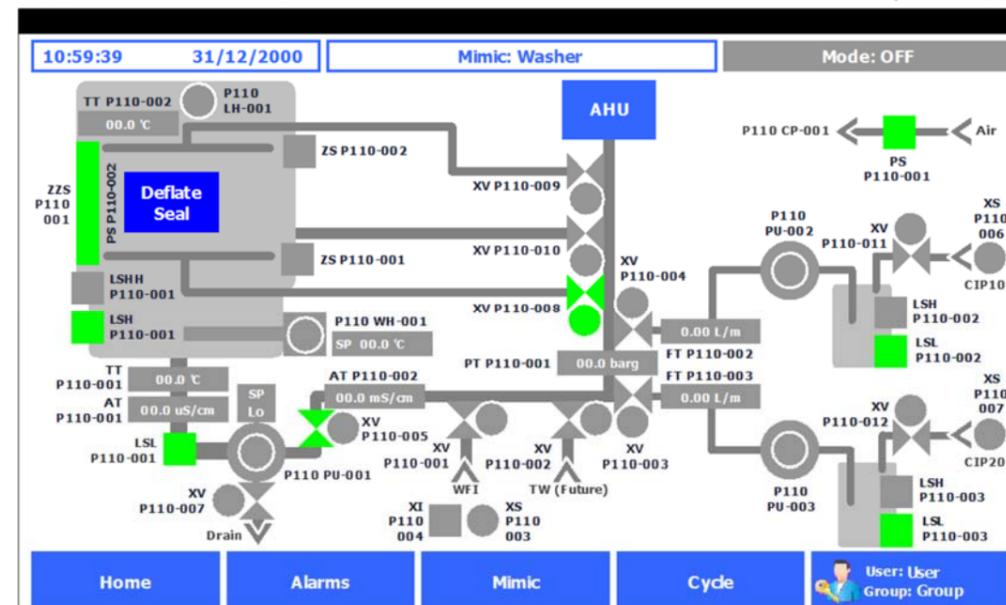


Chemical Compartment

Chamber Loaded



Typical Mimic Diagram



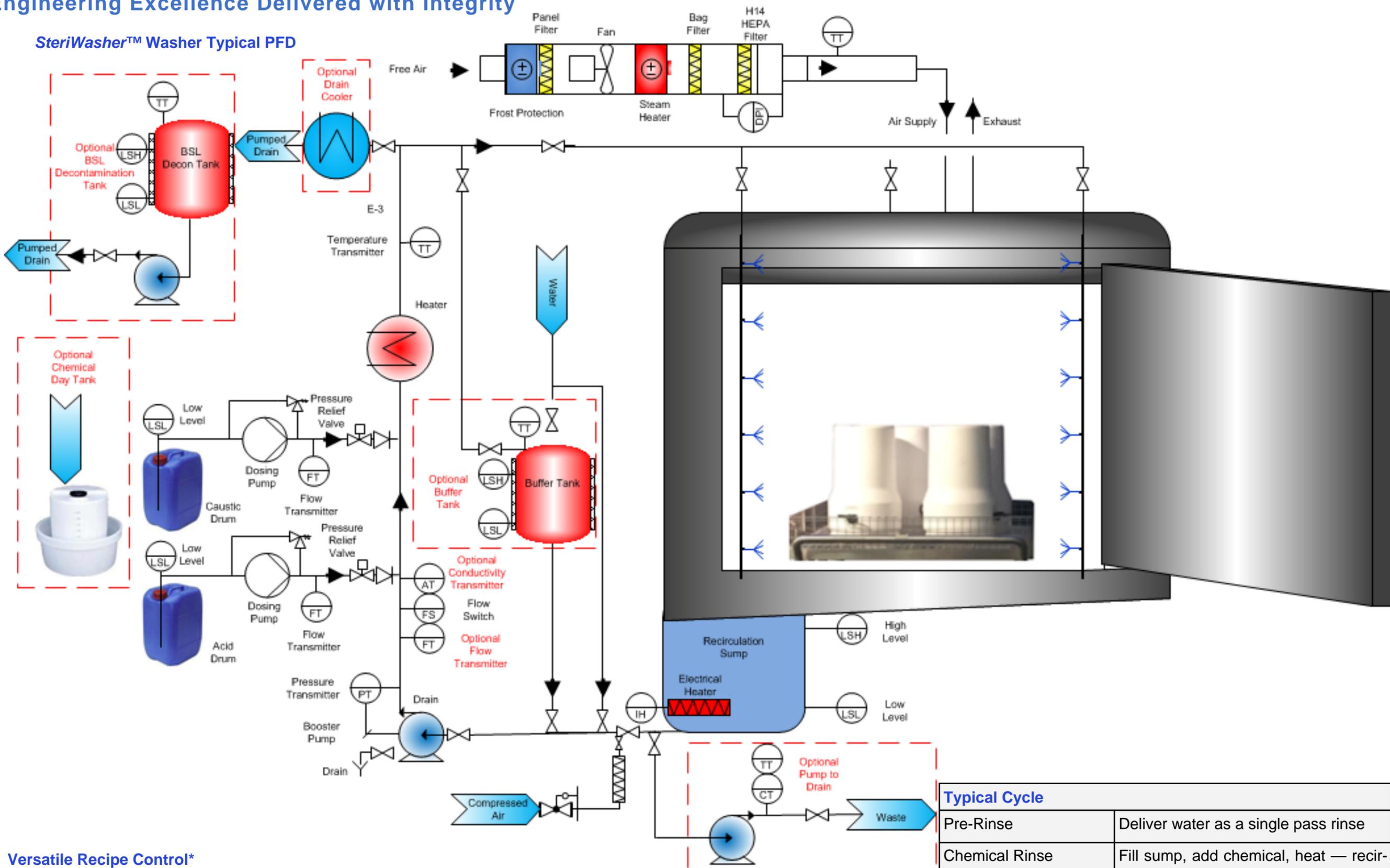
Inflatable Door Seal



Internal Finish



SteriWasher™ Washer Typical PFD



Versatile Recipe Control*

Versatile automation system allows you to build your own recipes from pre-commissioned steps in any order. The variables in each step can be individually configured. The system can either be run as a single pass, so that the wash liquid goes directly to drain after washing or can be used in recirculation mode, so that the sump is filled and recirculates the liquid for a pre-set time.

Standard programmes are included for short clean, long clean and self clean/descale. Additional programmes can be individually configured allowing optimisation to ensure repeatability and maximum efficiency.

*See Automation Datasheet for full details

| Typical Cycle | |
|-------------------|---|
| Pre-Rinse | Deliver water as a single pass rinse |
| Chemical Rinse | Fill sump, add chemical, heat — recirculate |
| Inter-rinse Rinse | Fill sump — recirculate |
| Final Rinse | Deliver water as a single pass rinse |
| Air purge | Removes water from pipework |
| Air Blow | Air pumped into washing chamber |
| Gravity Drain | System Drain |

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 washers were 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.

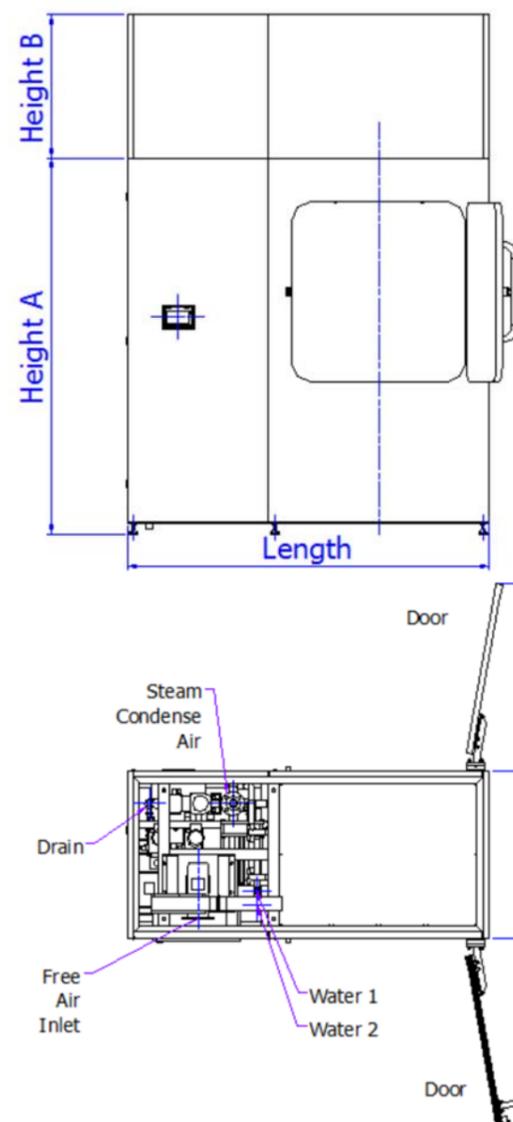
Validation/ Documentation

The lifecycle approach is adopted (DQ, FDS, HDS, SDS, FAT, SAT, IQ & OQ) with validation being key to every stage of the development process, including Factory Acceptance Testing (FAT), SAT and Qualification.

Load Details

Available with standard or bespoke racks with individual locations for validated cleaning of specific components. Racks are loaded onto transport trolleys for split level loading.

SteriWasher™ Washer Layout



SteriWasher™ Washer Dimensions

| Part # | Chamber Dimensions mm | | | External Dimensions mm | | | | |
|------------------------------|-----------------------|--------|--------|------------------------|---------|----------|----------|--------|
| | Width | Length | Height | Width A | Width B | Height A | Height B | Length |
| SteriWasher™600 | 630 | 630 | 800 | 830 | 500 | 1800 | 800 | 1600 |
| SteriWasher™1/600 | 1000 | 630 | 800 | 1100 | 900 | 1800 | 800 | 1600 |
| SteriWasher™800 | 800 | 800 | 970 | 1000 | 700 | 1800 | 800 | 1800 |
| SteriWasher™1/800 | 1000 | 800 | 800 | 1100 | 900 | 1800 | 800 | 1800 |
| SteriWasher™800/15/1 | 800 | 1500 | 1170 | 1100 | 1100 | 2000 | 800 | 2500 |
| SteriWasher™1000 | 1000 | 1000 | 1170 | 1100 | 900 | 2000 | 800 | 2000 |
| SteriWasher™1250//970 | 1250 | 1250 | 970 | 1350 | 1100 | 1800 | 800 | 2250 |
| SteriWasher™1250 | 1250 | 1250 | 1420 | 1350 | 1100 | 2000 | 800 | 2250 |
| SteriWasher™1500 | 1500 | 1500 | 1670 | 1700 | 1500 | 2000 | 800 | 2500 |

Typical Rinses

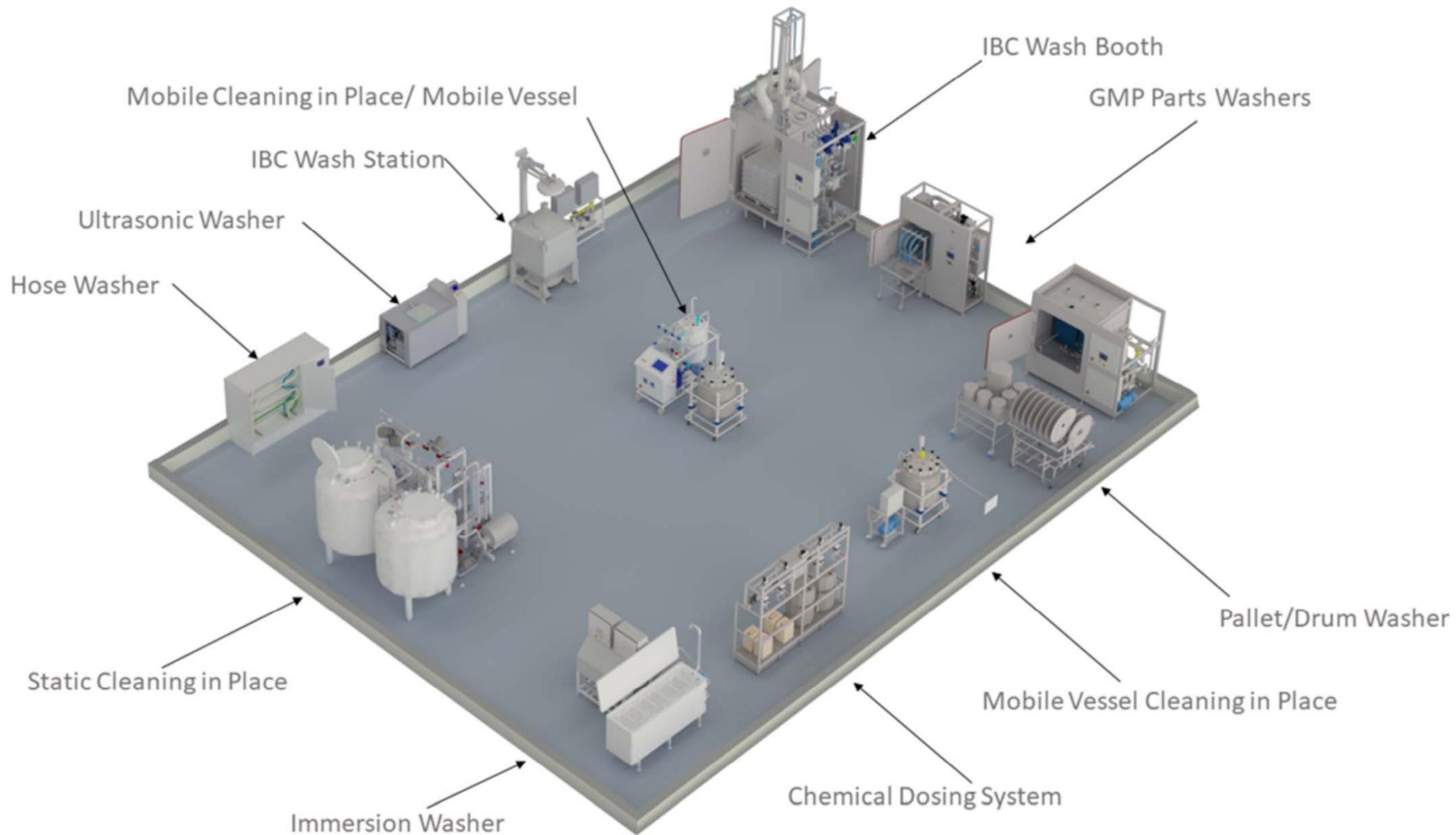
| | |
|---------------------|-------------------------------|
| Cold Water Flush | Single Pass or recirculated |
| Hot Water Flush | Single Pass or recirculated |
| Cold Chemical Rinse | Single Pass or recirculated |
| Hot Chemical Rinse | Single Pass or recirculated |
| Air purge | To remove water from pipework |
| Air Blow | Drying air |
| Gravity Drain | System Drain |

Typical Utilities

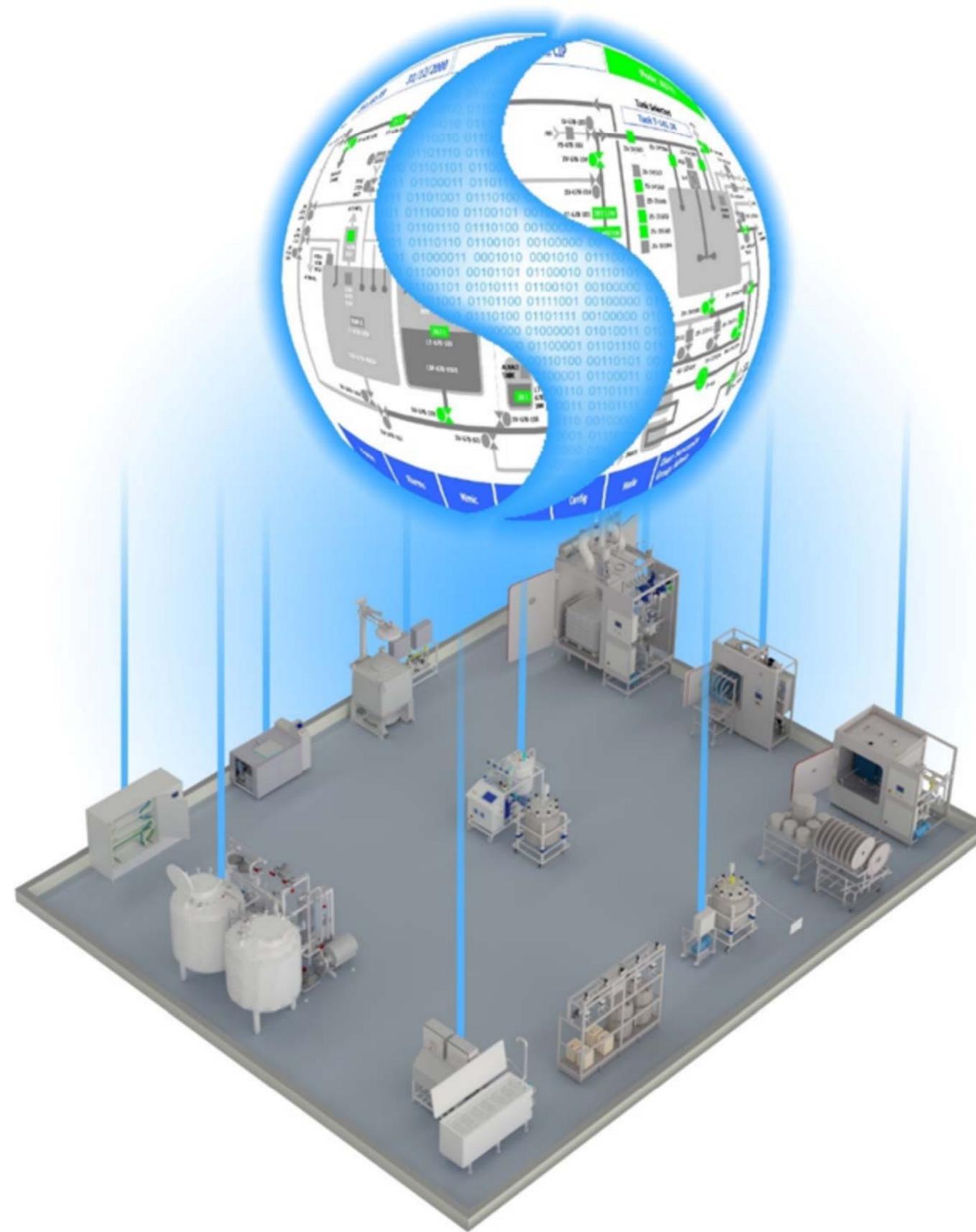
| | |
|----------------------|-------------------------|
| Water | 80 litres/min @ 1 bar |
| USP Water (optional) | 80 litres/min @ 1 bar |
| Air | Minimal use @ 7bar |
| Electricity | 32 kW 400Vac 3ph+n 50hz |
| Steam | 500 kg/hr @ 3 bar |
| Drain | 400 litres/min @ 1 bar |

Common Options

| | |
|--------------------|----------------------|
| Second Door | Water pre-heater |
| Fold Down Door/s | Conductivity Sensors |
| Automatic Door/s | Validation Reports |
| Steam Heating | 21CFR11 Compliance |
| Rinse Aid Addition | Drain Cooler |
| Ribbon Printer | Remote Control Panel |



Washer Portfolio



Suncombe Washers Linked Automation Packages