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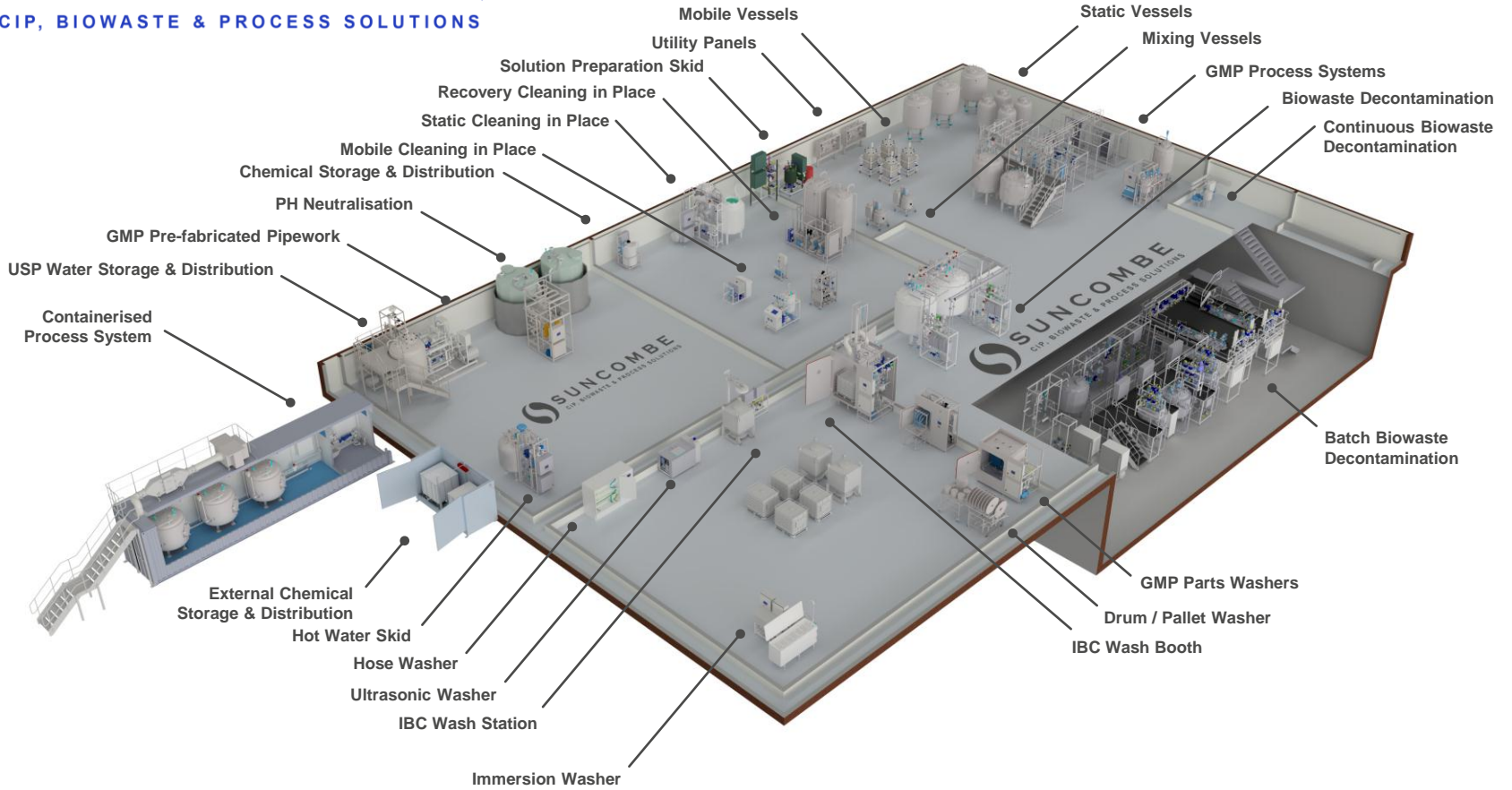
PureKleen™ Parts Washer



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PureKleen PartsWasher

PureKleen Washer Introduction

Developed over the last 30 years, Suncombe PureKleen 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 PureKleen 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.

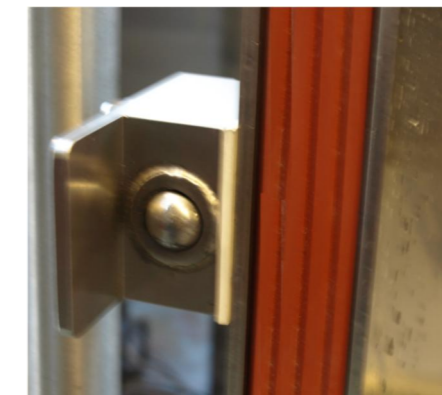
Loading

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

Internal Rack Loaded



Inflatable Door Seal

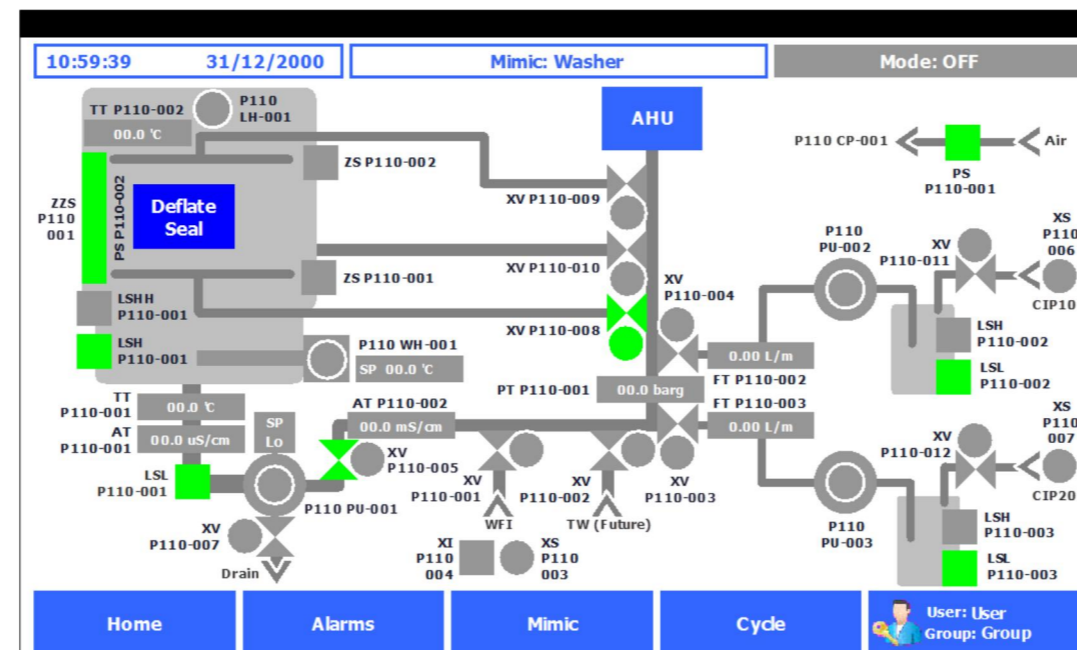


Internal Finish

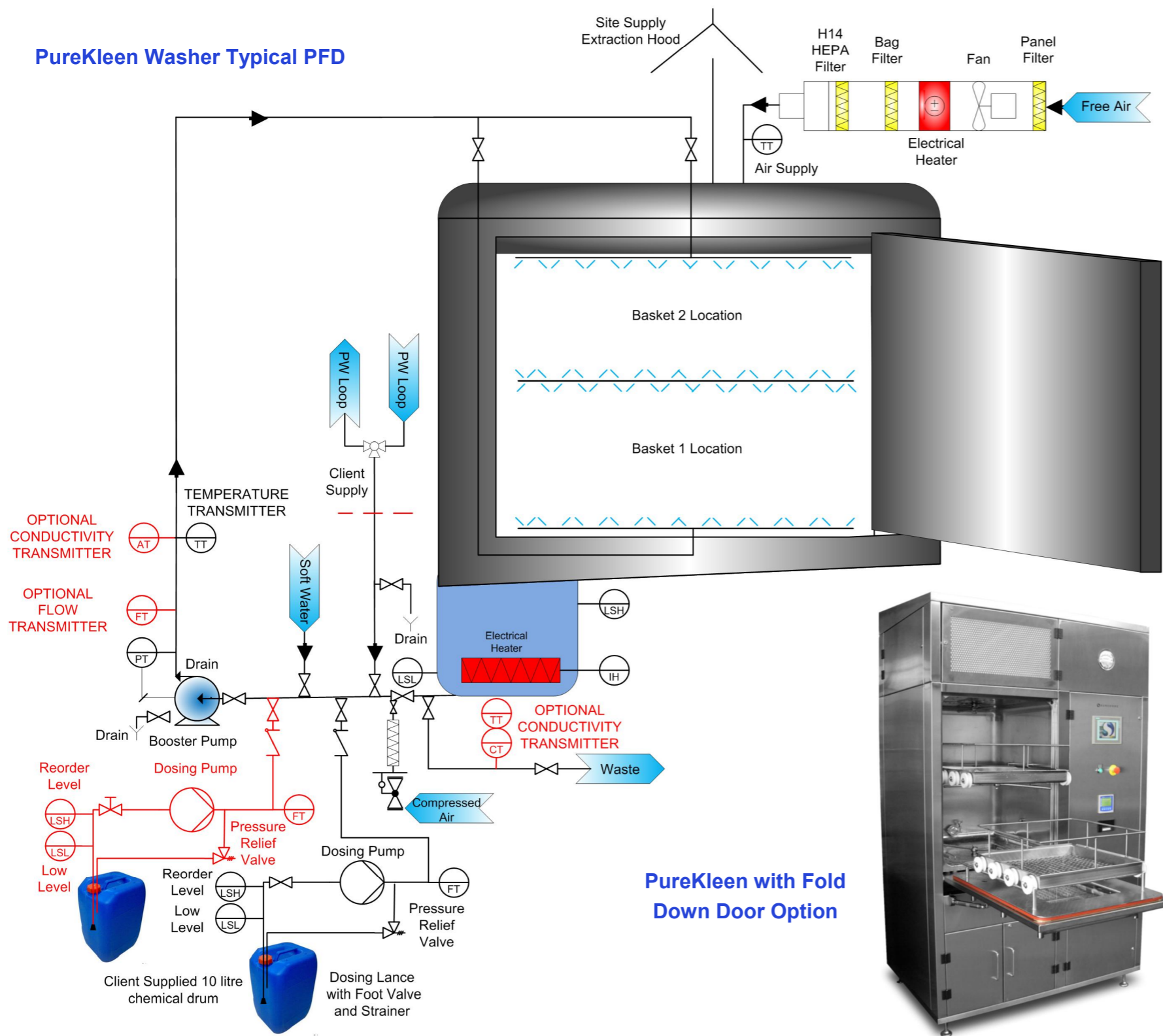


Chemical Compartment

Typical Mimic Diagram



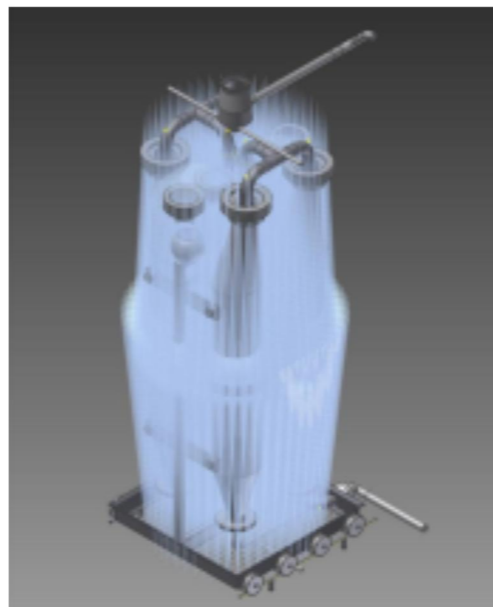
PureKleen Washer Typical PFD



Typical Washer Loaded with Double Rack



Typical Trolley Loaded with Double Rack



Typical Washer Spray Pattern Model for Custom Designed Racks



PureKleen with Fold Down Door Option

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 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 pumped into washing
Gravity Drain	System Drain

Typical Cycle	
Pre-Rinse	Deliver cold water as a single pass rinse
Chemical Rinse	Fill sump with hot chemical — recirculate
Inter-rinse Rinse	Fill sump with cold water — recirculate
Final Rinse	Deliver cold 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

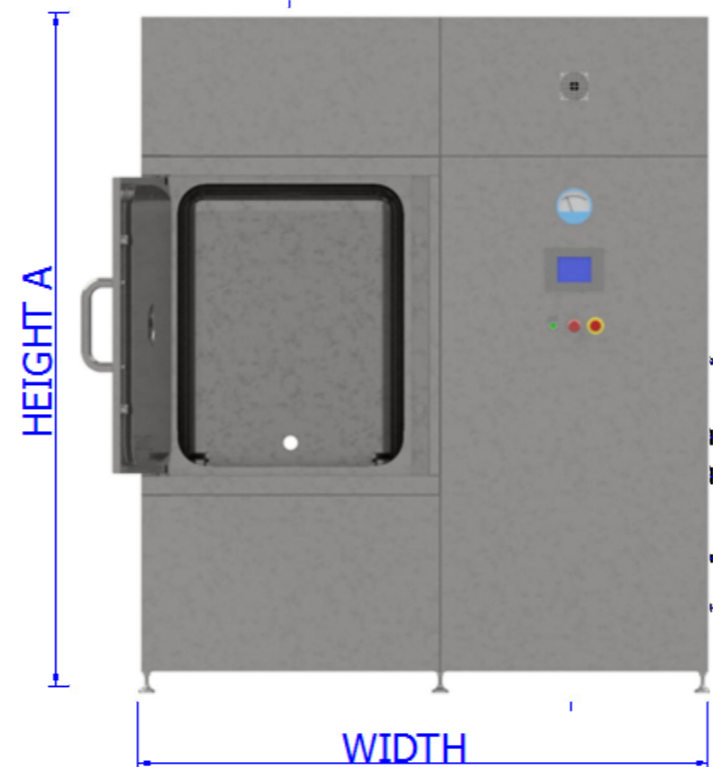
All functions of the equipment would be fully wet and dry tested and test results would be documented in the 'Pre-Factory Acceptance Test' (FAT) protocol. Following successful completion of this protocol, the client will be invited to the FAT test, where all tests can be repeated or the pre-FAT tests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

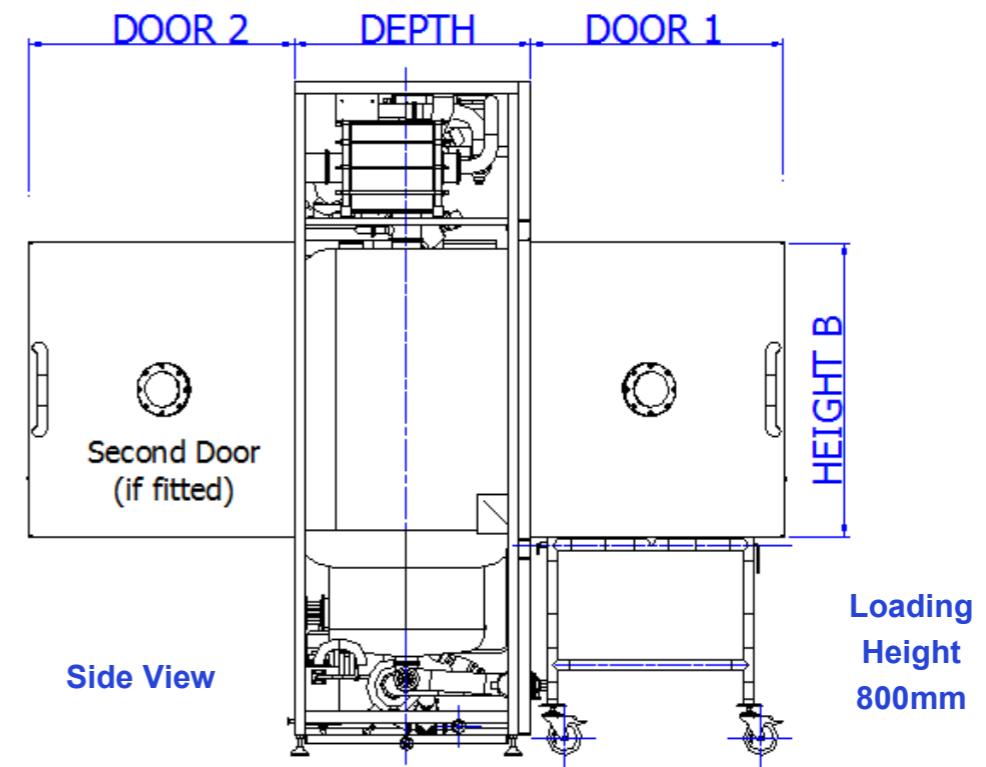
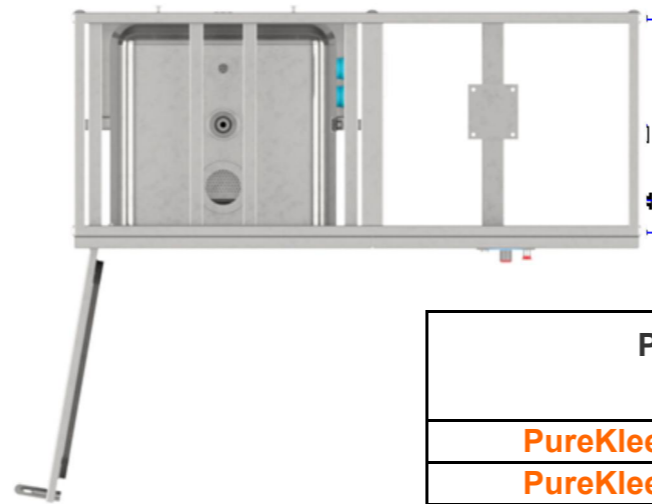
Typical Utilities	
Water	60 litres/min @ 1 bar
USP Water (optional)	60 litres/min @ 1 bar
Air	Minimal use @ 7bar
Electricity	32 kW 400Vac 3ph+n 50hz
Steam	500 kg/hr @ 3 bar
Drain	400 litres/min @ 1 bar

PureKleen Washer Layout



Front View

Top View



PureKleen Washer Chamber Dimensions

Part #	Dimensions mm		
	Width	Depth	Height
PureKleen 38987/760	760	760	760
PureKleen 39300/860	760	760	860
PureKleen 39300/1000	760	760	1,000

PureKleen Washer Dimensions

Part #	Dimensions mm				
	Width	Depth	Height A	Height B	Door 1/2
PureKleen 38987/760	1,500	800	2,200*	760	700
PureKleen 39300/860	2,000	850	2,400*	860	700
PureKleen 39300/1000	2,000	850	2,400*	1,000	850

* reduce height by 450mm if no drying section required

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

Washing Rack Configuration

Two rack loading each with media delivery points to allow washing on one or two levels. Multiple racks and combinations racks are available

- Standard racks are available with full width baskets
- Standard single or two level baskets
- Special racks are available for hoses, parts, filters etc.
- Custom racks are available which are individually modelled to hold custom parts