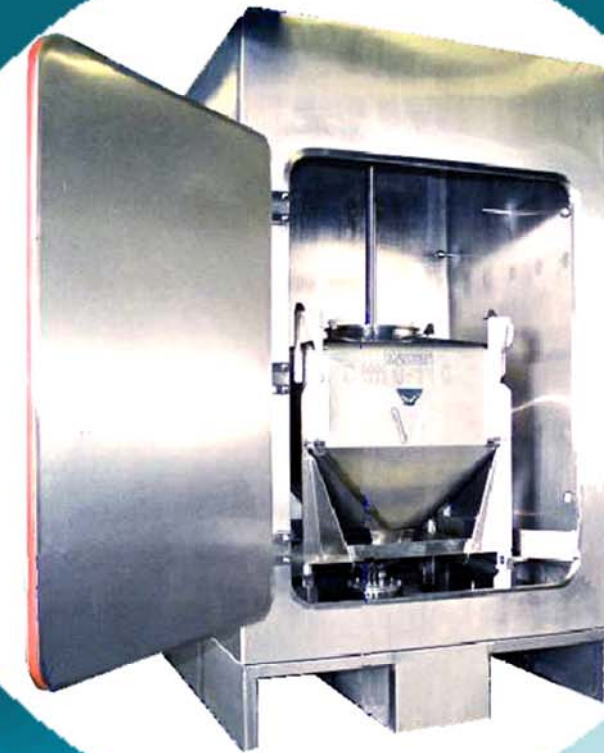




SUNCOMBE
CIP, BIOWASTE & PROCESS SOLUTIONS

IBC Wash Booth™



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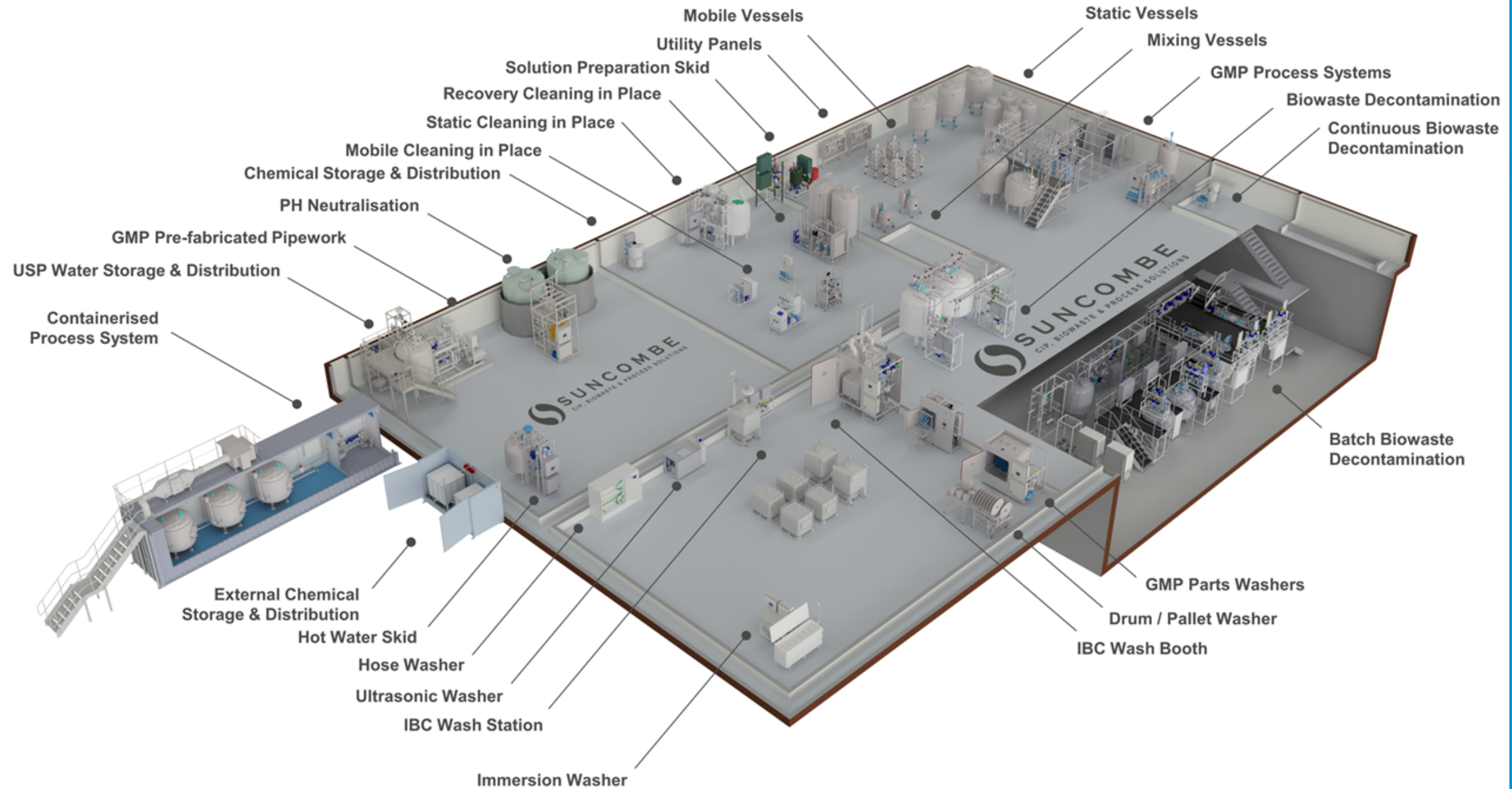
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IBCWashBooth™

IBCWashBooth™ and DuoBooth™ Introduction

Developed over the last 30 years, Suncombe IBCWashBooth™s are heavy duty validateable walk-in Intermediate Bulk Containers (IBC) washers available as single door or pass through versions. They are high specification units that use an innovative spray technique, that offers a contained, validatable wash. Accessed via a robust hinged or sliding door, the washing chamber is constructed from 316 stainless steel and is of sanitary construction. Employing a combination of specially developed variable duty spray technologies, the washer provides high energy impingement washing together with low energy flushing chosen by a simple recipe selection, to wash and/or dry IBCs. Built to a generic design, with the ability to custom engineer to suit clients requirements, they achieve excellent washing using high impact accurate spray targeting and incorporate existing and new technologies to provide an environmentally friendly, low water and energy usage washing. The Suncombe DuoBooth™ is used on high throughput systems, where two IBCs are cleaned simultaneously in a single booth.

Location and Mounting

The IBCWashBooth™s can be mounted in a floor pit for floor level loading or can be loaded using ramps, lifter trucks or conveyor loaded.



Typical Installation

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. Standard units are a single piece but this section can be optionally removed for ingress and can also optionally be located in a remote area.

Inflatable Door Seal

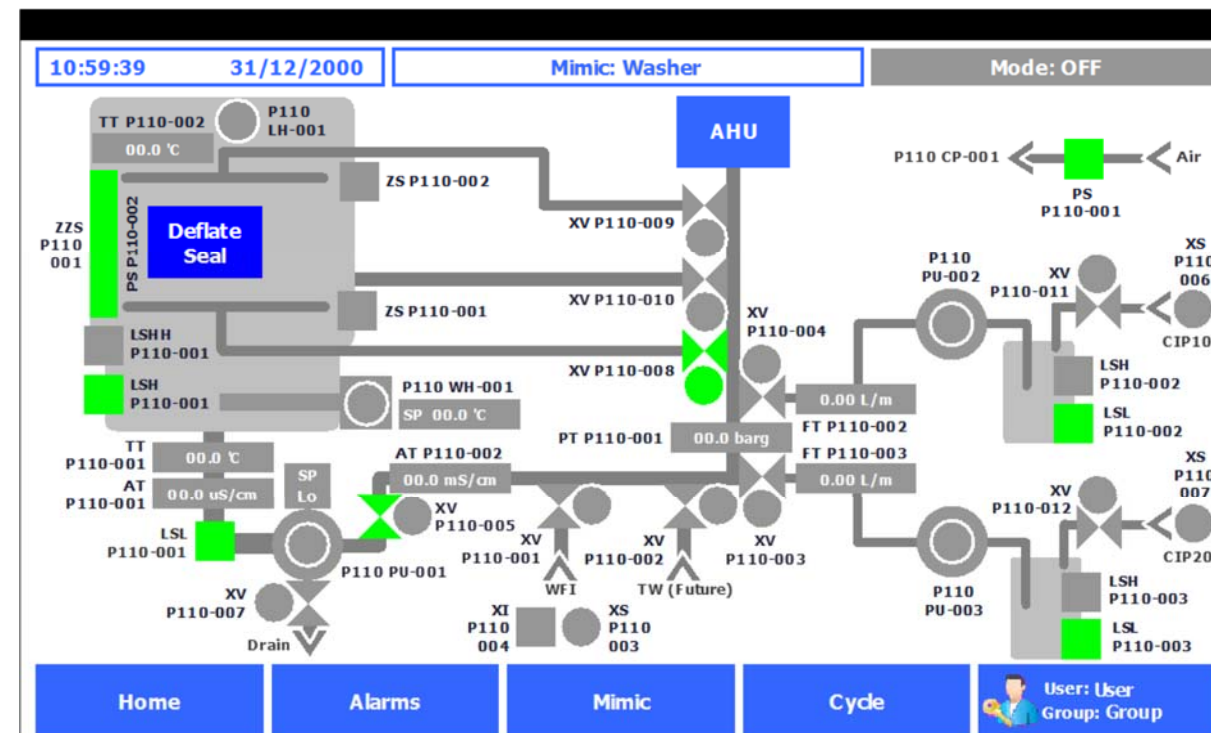


Floor Mounted



Pit Mounted

Typical Mimic Diagram



Internal Finish



Typical Manufacturing Standards

The IBCWashBooth™ provides liquid heating, chemical dosing, air drying, valving, pumps, instrumentation and an in-built control system.

Features

- 316L Stainless steel radius-corners, sloping design, crevice-free Washing Chamber
- Floor mounted or pit mounted booth with adjustable levelling
- Insulated Construction
- One to four chemical dosing systems
- Automatic locking door with window and internal light
- Inflatable door seal for full containment
- Options for cone and butterfly valve operation
- Special trolleys for drum, pallet and hose cleaning
- In-built CIP System for validated washing—can be remote mounted
- Hygienic Pumps, Valves and instruments
- Local or remote mounted HEPA filtered air drying and cooling

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

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

Wash Carts

Wash carts are available for IBCWashBooth™ to wash and clean other equipment. We offer standard and custom designed active and passive carts, trolleys and racks, to wash equipment, such as:

- Drums
- Pallets
- Change Parts
- Chutes
- Split Valves

We offer design services and 3D wash modelling to develop custom carts to load and hold parts for cleaning in a repeatable, validateable method with riboflavin qualification.

Example Wash Cart Photographs



Common Options		
Pass Through Doors	Drying	Water Buffer Tank
Automatic Door/s	Automatic Lid Removal	Water Reclaim Tank
Cone Valve Actuation	Loading Conveyors	Electrical Heating
Split Butterfly Valve Actuation	Steam Heating	Bar Code Identification
Split Valve Manual Actuation	BSL Decontamination	Lights Out Operation
Changed Pit Depth	Water pre-heater	90° Doors

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 IBCWashBooth™ 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

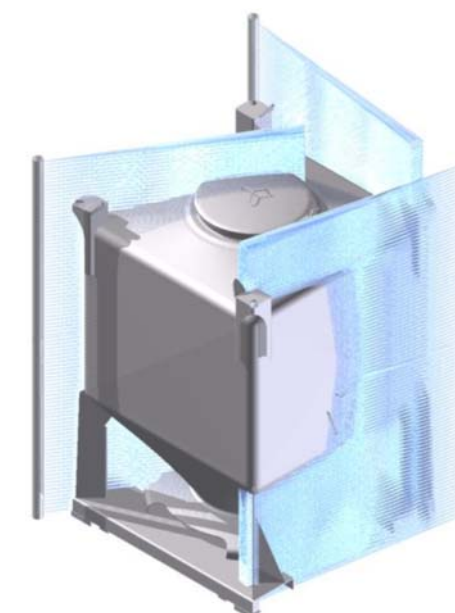
All functions of the equipment would be fully wet and dry tested and test results would be documented in the 'Pre-Factory Acceptance Test' (FAT) protocol. Following successful completion of this protocol, the client will be invited to the FAT test, where all tests can be repeated or the pre-FAT tests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

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.

External Cleaning

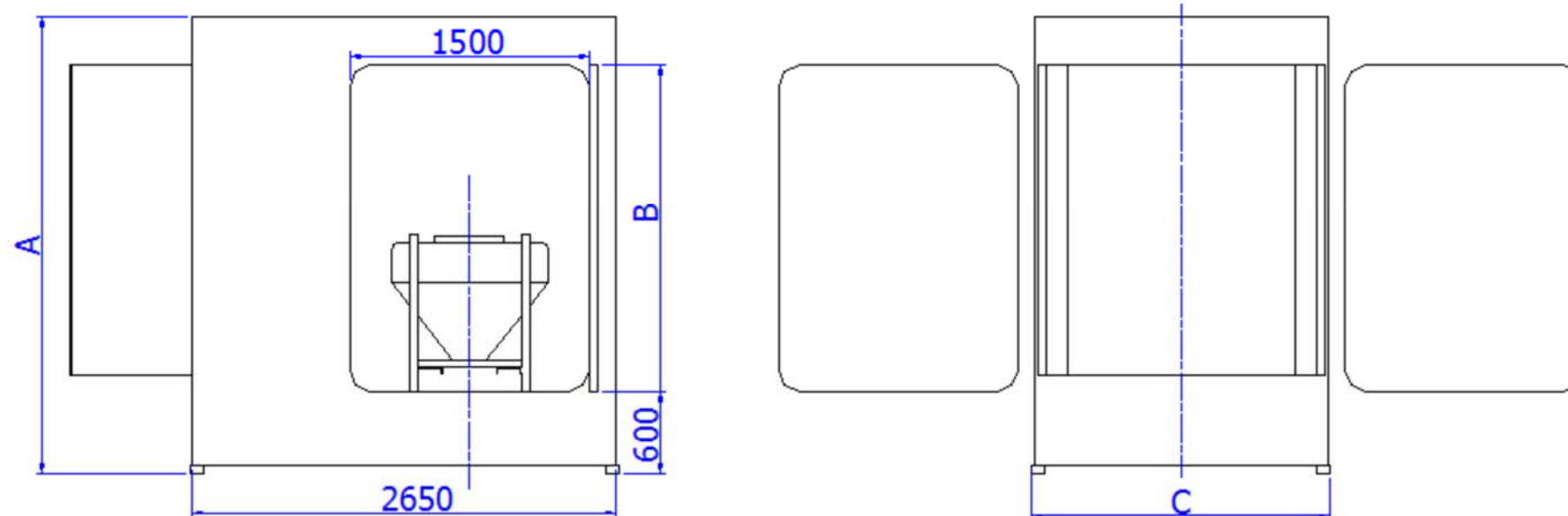
External cleaning is by provided by Suncombe exclusive Splurge Bars, providing repeatable results at low flow.



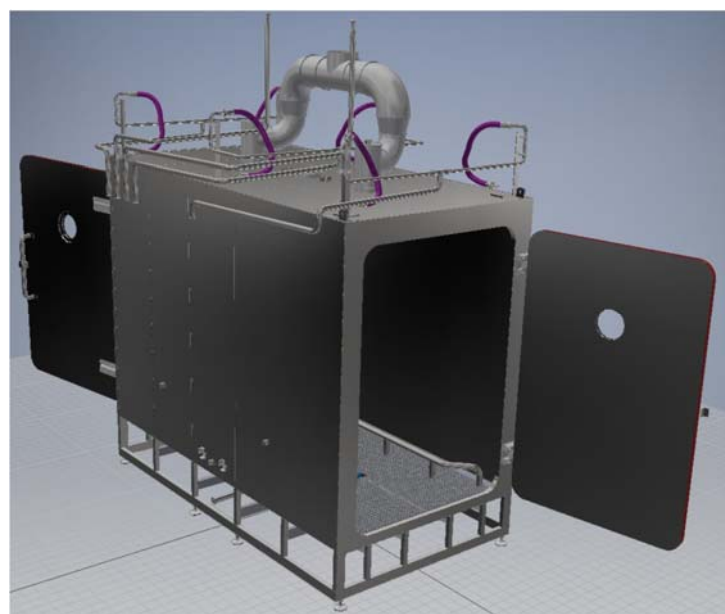
Typical IBCWashBooth



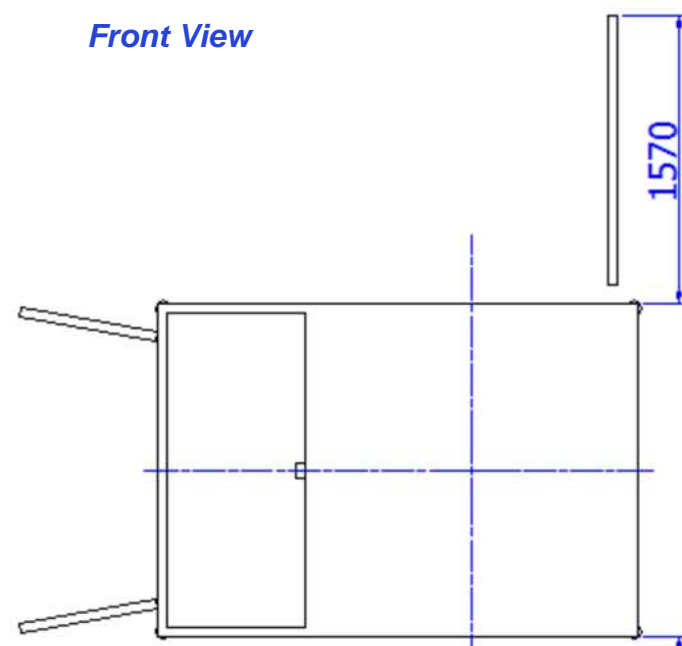
IBCWashBooth™ Layout



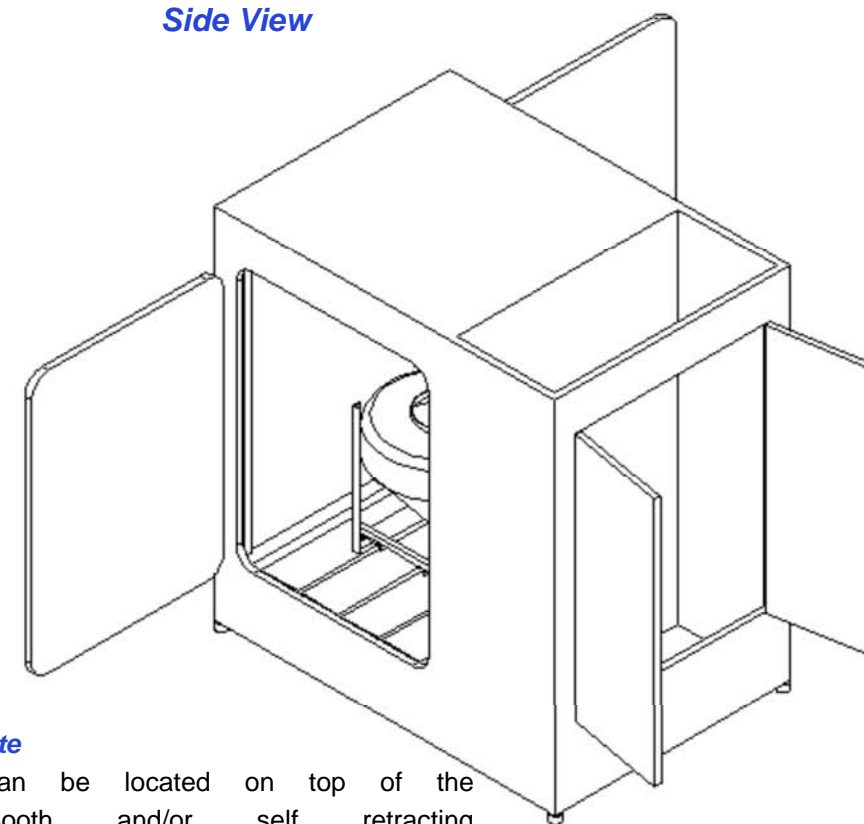
Typical IBCWashBooth Model



Front View



Side View



Top View



Height Note

Dryers can be located on top of the IBCWashBooth and/or self retracting spray devices. Both options would increase the height of the unit.

Typical IBCWashBooth Split Valve



Dimensions

Part #	Dimensions mm		
	A	B	C
IBCWashBooth™1500	2,700	1,500	1,850
IBCWashBooth™2000	3,200	2,000	1,850
IBCWashBooth™2300	3,500	2,300	1,850
IBCWashBooth™2500	3,700	2,500	1,850
IBCWashBooth™2800	4,000	2,800	1,850
IBCWashBooth™3000	4,200	3,000	1,850
DuoBooth™	Various	Various	3,700

Lean Technology

Adopting LEAN principles, all Suncombe products are developed to ensure they minimise utilities and time, whilst ensuring the safety of the operators and the efficiency of the cleaning. Utilising innovative fluid handling techniques, they incorporate a combination of traditional and new technologies to provide an environmentally friendly, low water and energy usage washing facility that is safe and ergonomic for the operators.

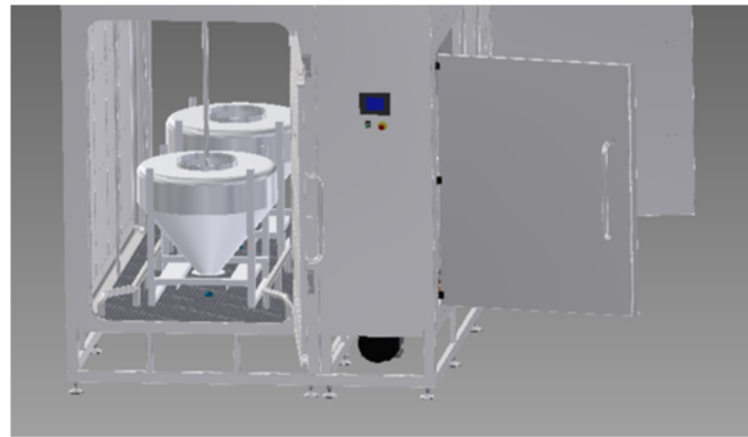
Validation/ Documentation

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.

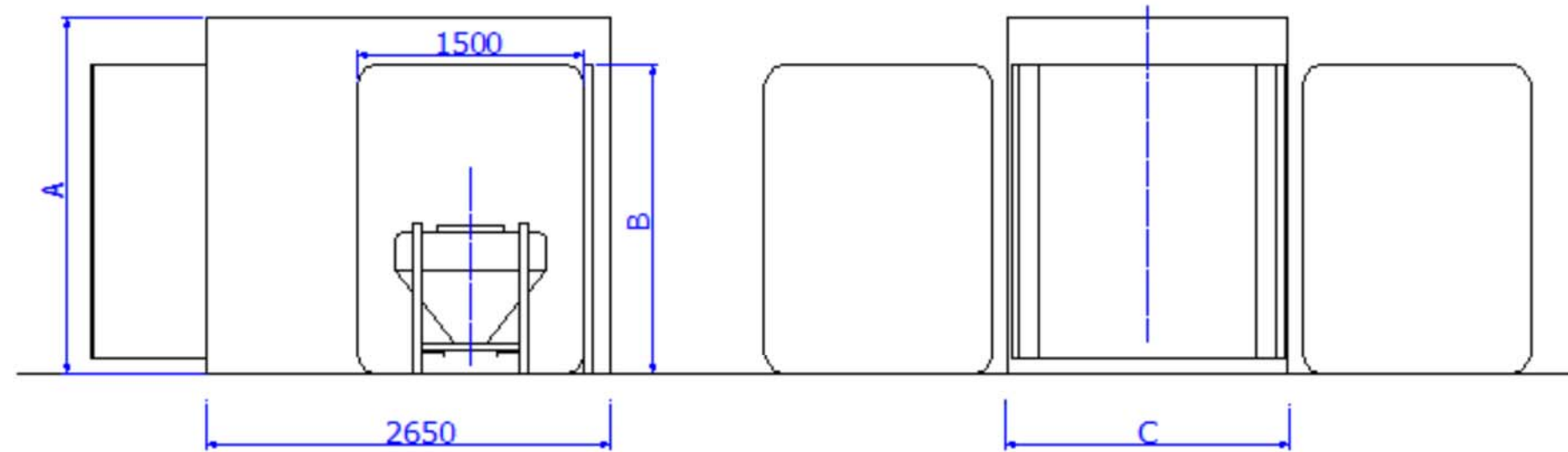
Custom Dimensions

Due to the flexibility of our manufacturing methodology, we are able to provide the IBCWashBooth range to client preferred dimensions. This can be requested to aid ingress into a building or due to building constraints.

DuoBooth Model

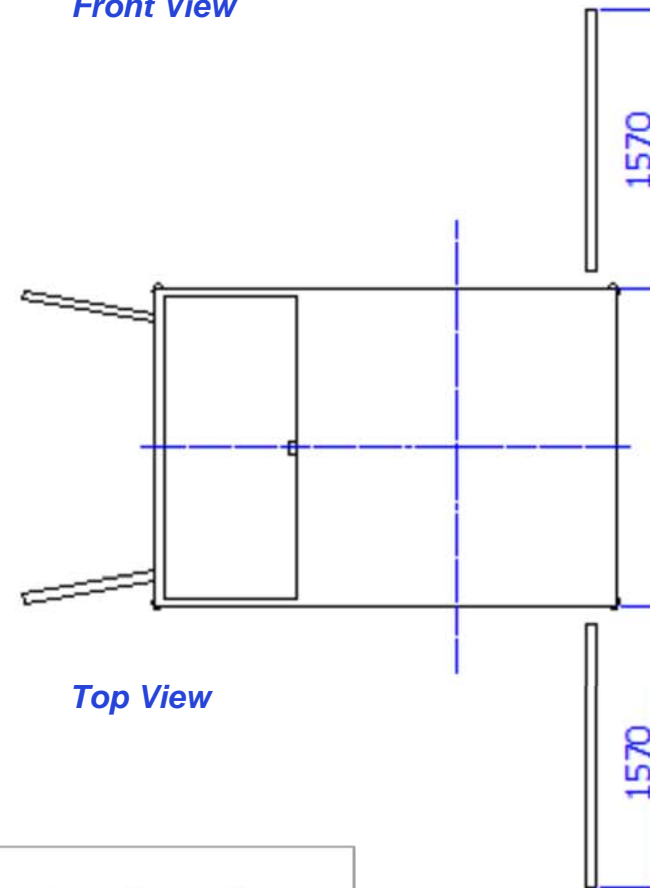


Pit Mounted IBCWashBooth™ Layout

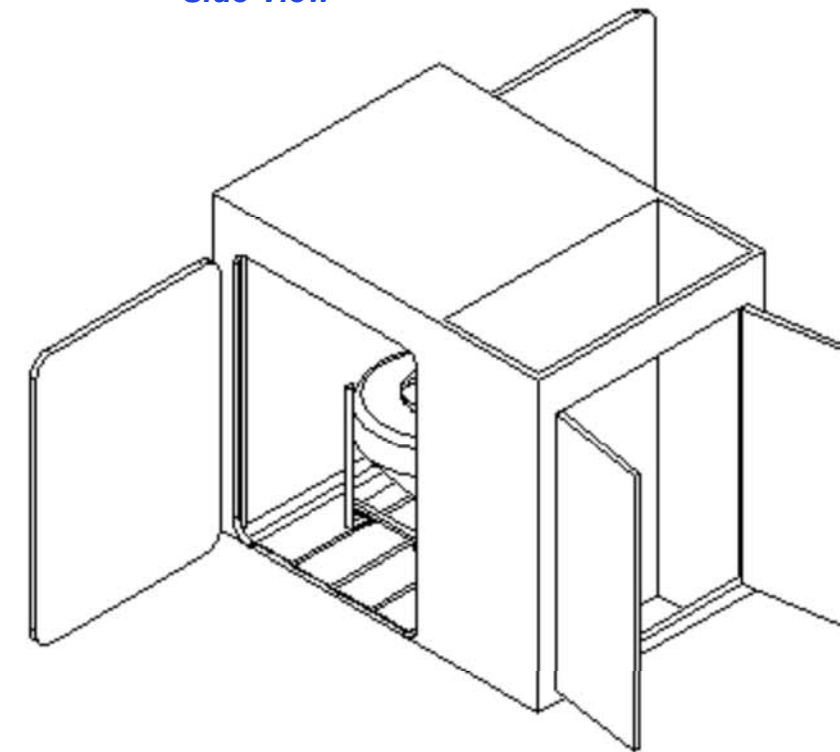


Front View

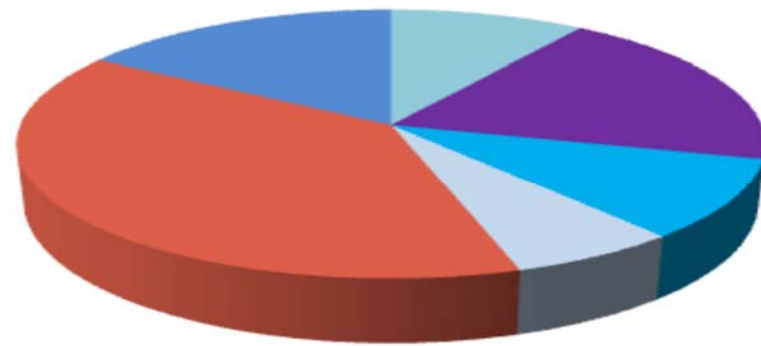
Side View



Top View



Typical Wash Cycle Times



- Pre-Rinse (3 mins)
- Detergent Rinse (6 mins)
- Final Rinse (3 mins)
- Air Purge (2 mins)
- Drying (12 mins)
- Cooling (5 mins)

Dimensions

Part #	Dimensions mm		
	A	B	C
IBCWashBooth™1500	2,100	1,500	1,850
IBCWashBooth™2000	2,600	2,000	1,850
IBCWashBooth™2300	2,900	2,300	1,850
IBCWashBooth™2500	3,100	2,500	1,850
IBCWashBooth™2800	3,400	2,800	1,850
IBCWashBooth™3000	3,600	3,000	1,850
DuoBooth™	Various	Various	3,700

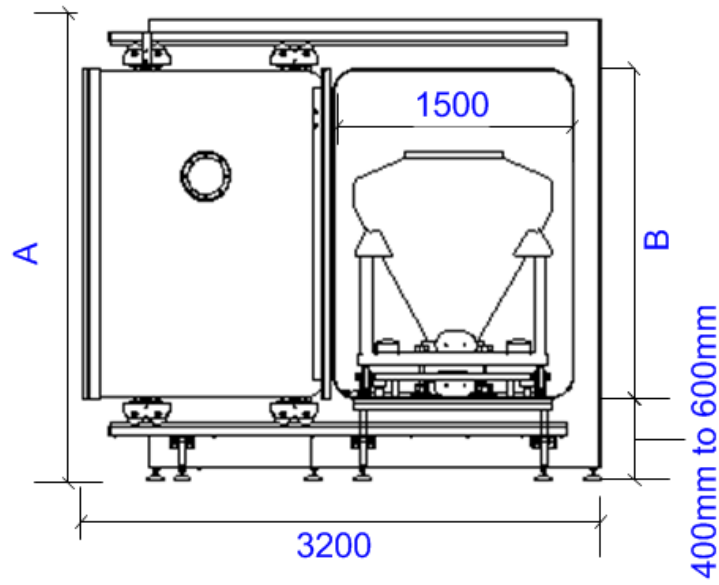
Height Note

Dryers can be located on top of the IBCWashBooth and/or self retracting spraydevices. Both options would increase the height of the unit.

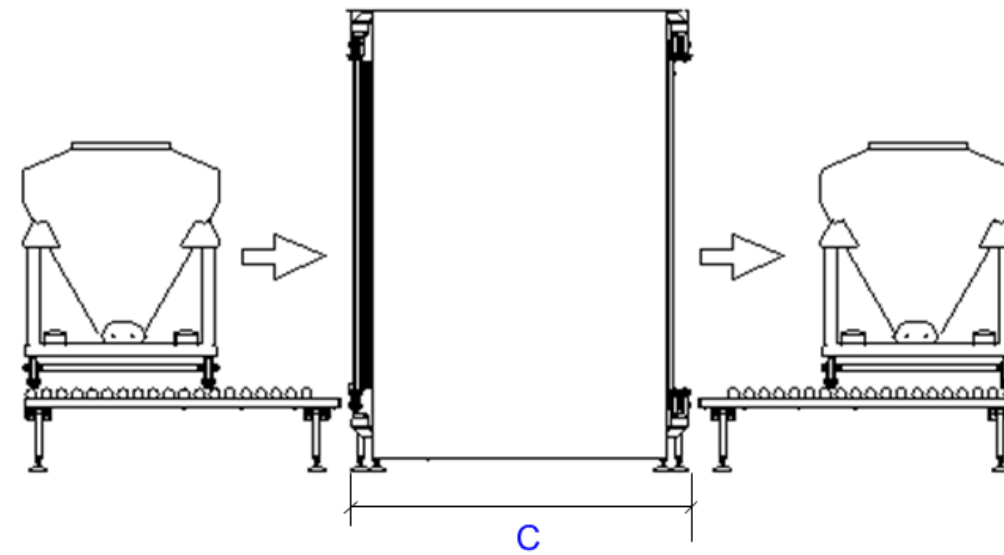


IBCWashBooth™ with Conveyor Feed, Passthrough Automatic Doors, Automatic Lid Removal, Automatic Spray Device Insertion, Split Containment Valve Opening, and Drying.

IBCWashBooth™ with Sliding Door Layout



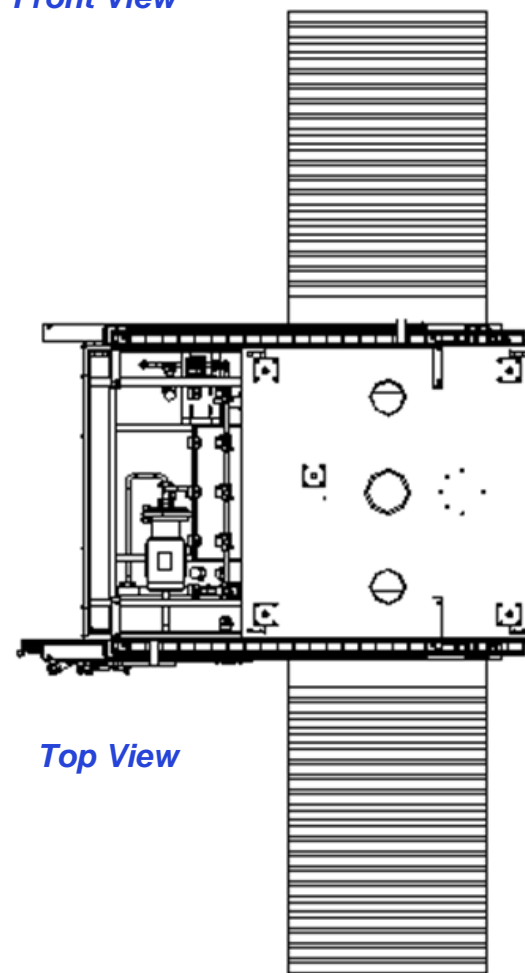
Front View



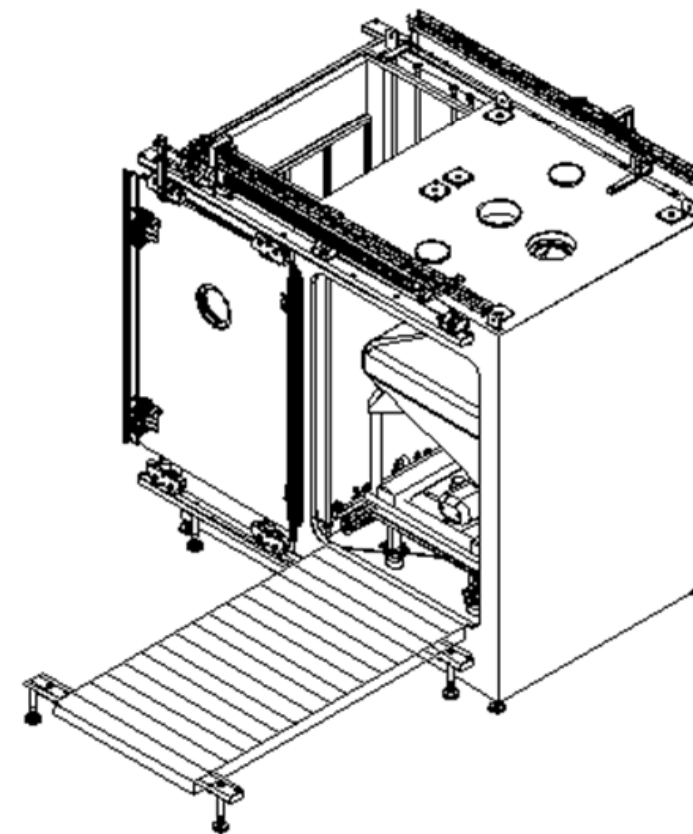
Side View



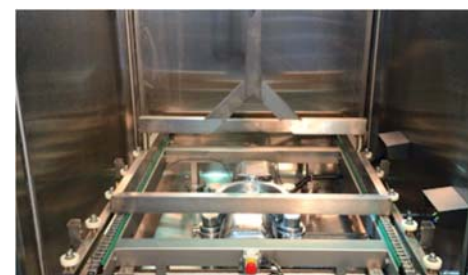
Split Valve Docking



Top View



Automatic Lid Removal

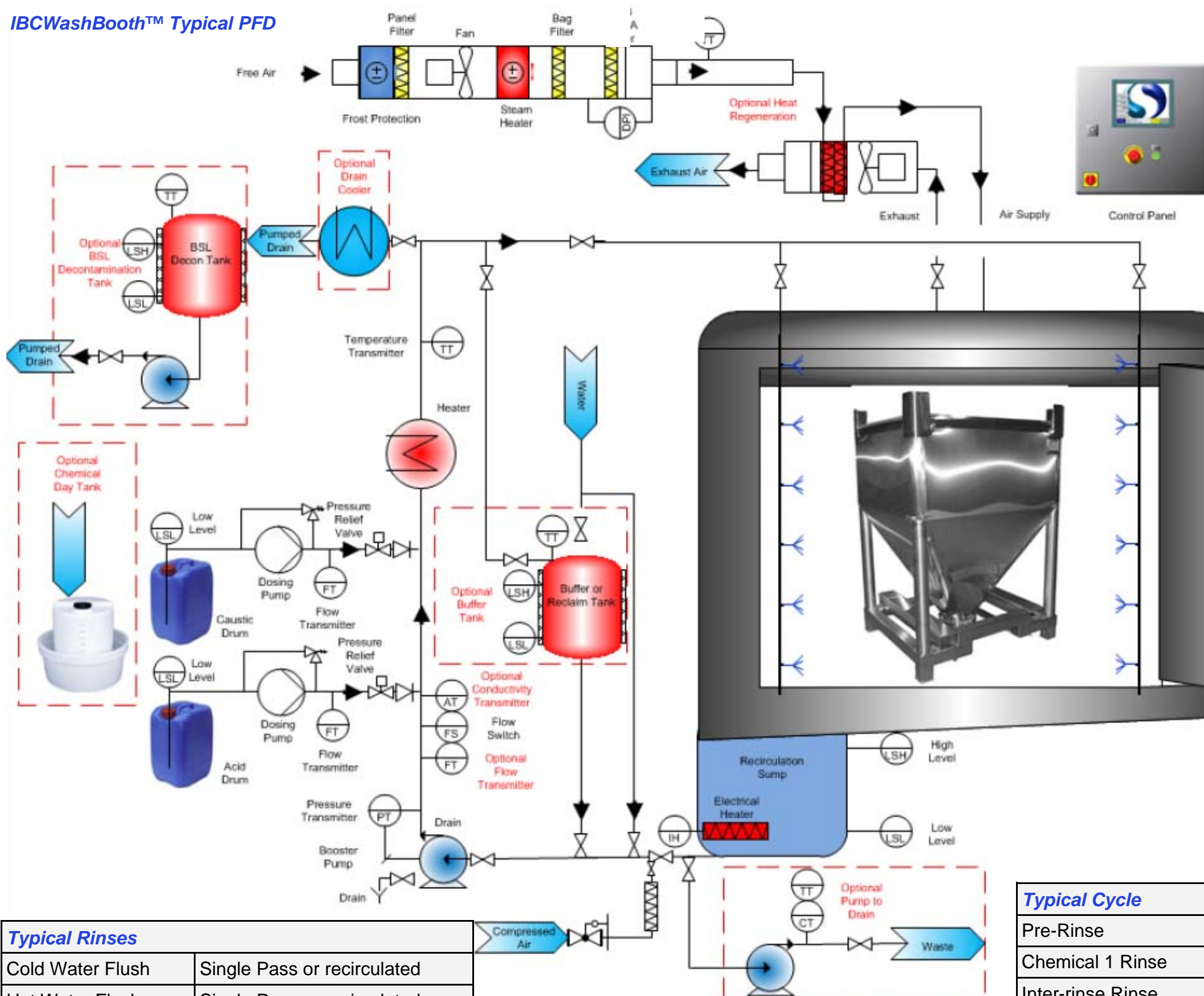


Internal Conveyor

Dimensions

Part #	Dimensions mm		
	A	B	C
IBCWashBooth™1500SL	2,100+	1,500	2,100
IBCWashBooth™2000SL	2,600+	2,000	2,100
IBCWashBooth™2300SL	2,900+	2,300	2,100
IBCWashBooth™2500SL	3,100+	2,500	2,100
IBCWashBooth™2800SL	3,400+	2,800	2,100
IBCWashBooth™3000SL	3,600+	3,000	2,100
DuoBooth™SL	Various	Various	3,700

IBCWashBooth™ 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.

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	Air pumped into washing cham-
Gravity Drain	System Drain

Typical Cycle	
Pre-Rinse	Deliver cold water as a single pass rinse
Chemical 1 Rinse	Fill sump with hot chemical — recirculate
Inter-rinse Rinse	Fill sump with cold water — recirculate
Chemical 2 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

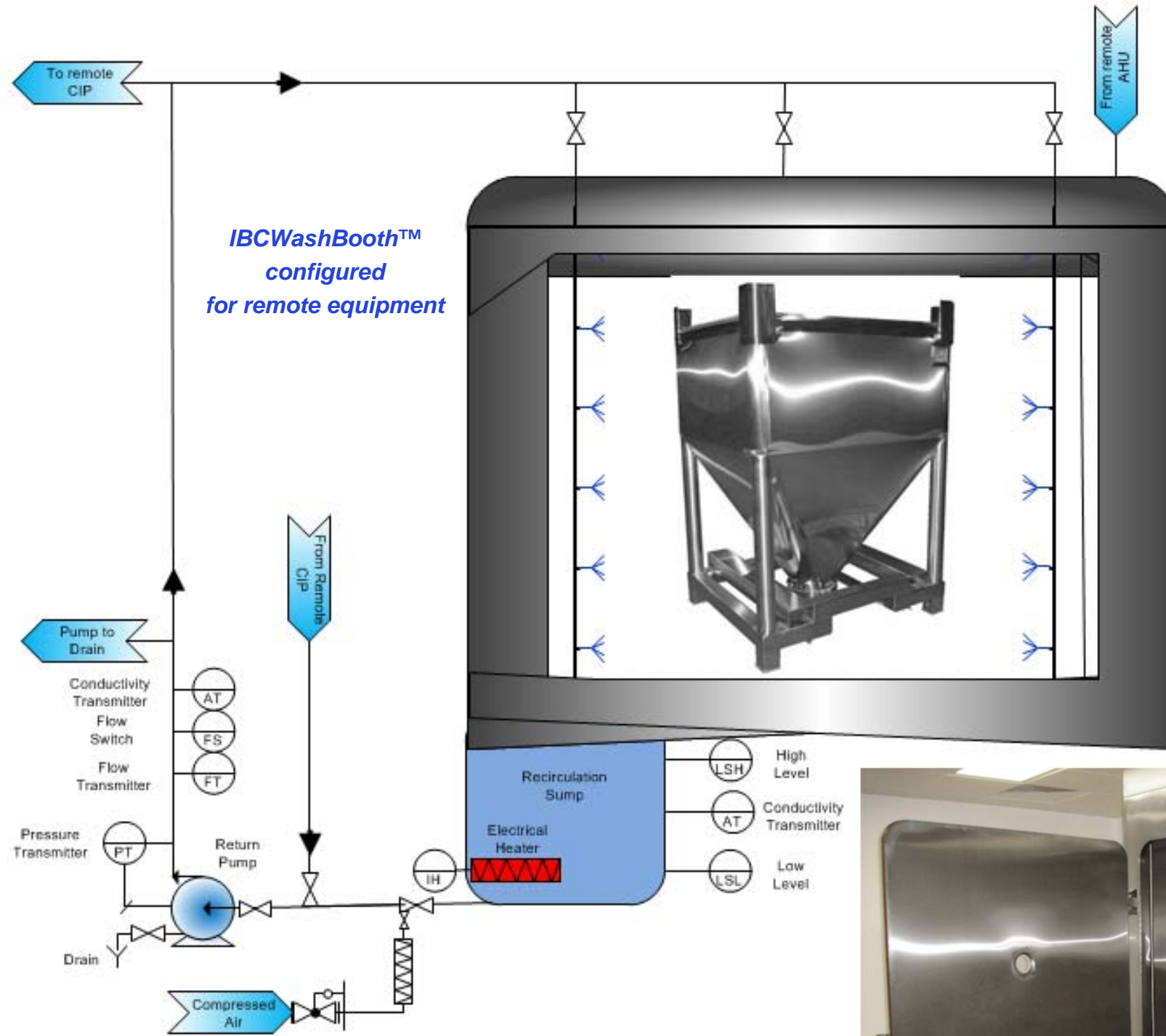
IBCWashBooth™ typical PFD with remote CIP skid and Remote Air Handling Unit



Remote Cleaning In Place System



Remote Air Handling Unit



IBCWashBooth™
configured
for remote equipment

Installed IBCWashBooth™
configured with remote
equipment

Remote Configuration

Suncombe IBCWashBooth™s are available with the fluid generation equipment fully integrated or a remote Cleaning In Place (CIP) System can be used for fluid generation. This methodology is sometimes adopted when the water supply utilities are low and needs to be stored prior to wash cycles and when available space is limited. The remote CIP systems can be configured as required to suit clients requirements and site utilities.

Remote CIPs can also be configured to be used for other CIP duties as well as feeding the IBCWashBooth™.

