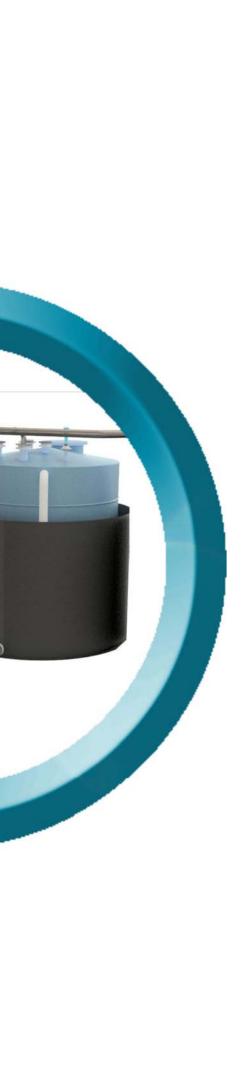


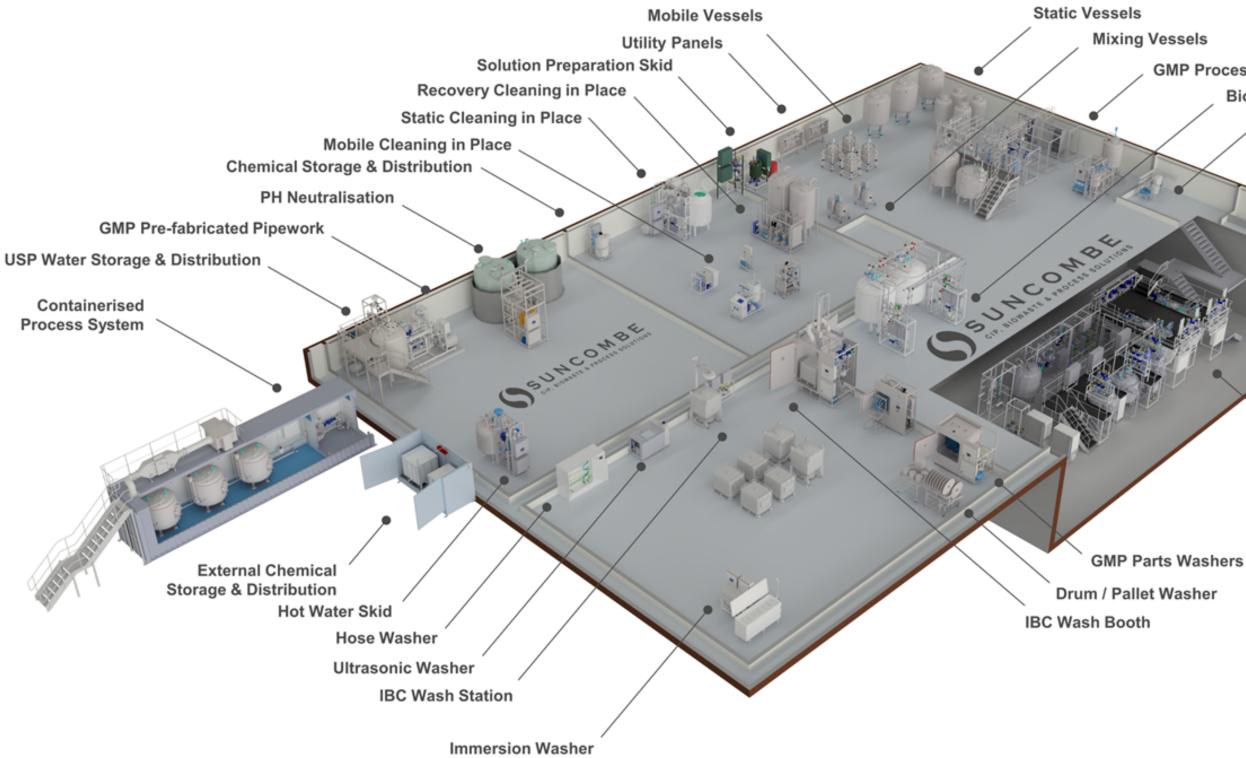
# pH Neutralisation Skids

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**GMP Process Systems** 

Biowaste Decontamination

Continuous Biowaste Decontamination

Batch Biowaste Decontamination Sunc

# **SUNpH<sup>™</sup> Neutralisation Systems**

#### SUNpH<sup>™</sup> Neutralisation Systems

Suncombe *SUNpH*<sup>™</sup> *Neutralisation Systems* are used for neutralising acids and alkalis and to buffer and control the outgoing effluent stream. The systems can accept waste streams from processing, CIP, Washer and laboratories and other waste sources. Built to a generic design, with the ability to custom engineer to suit clients requirements, they achieve pH Neutralisation using ultra efficient instrumentation, chemical mixing and versatile control systems.

#### Location and Mounting

The *SUNpH*<sup>™</sup> *Neutralisation Systems* are self bunded and can be located internally or externally.

#### **Features**

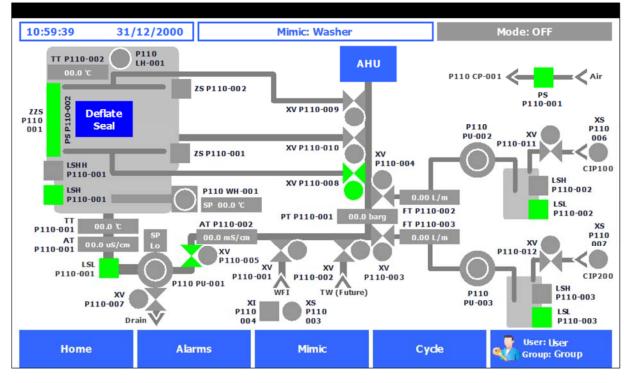
- Positive release of waste post treatment
- Minimisation of direct energy and utility usage
- Duty/standby arrangement in case of equipment failure providing guaranteed availability
- Developed and manufactured in the United Kingdom
- Designed for reliable, efficiency and validatable performance
- Single or dual neutralization Systems available with a range of volumes for to suit the waste generation
- Tanks incorporating self bundss
- Variable Speed chemical dosing control to cater for varying demands
- High quality HDPE Neutralisation Tanks with options for 316 stainless steel, duplex steel and other thermoplastics
- Stainless steel framework and control panels
- 316 stainless steel pipework with options for duplex steel or thermoplastics pipework
- Optional safety Interlocks to SIL3
- Pre-divert system to divert neutral pH liquids prior to neutralisation system
- High, low and mid level sensing, indication and interlock



#### Features (continued)

- Pressure relief and safety devices
- Risk assessment, method statements, operating instructions and full documentation
- 2D drawings and 3D models
- Factory Acceptance Testing Included
- Local control location with remote control locations available
- Optional interfaces to waste generation equipment, DCS, BMS, Historian etc.
- Options for cooling systems to control the temperature of the outgoing effluent
- Full wet Factory Acceptance Test with all equipment
- Full safety features to ensure no effluent discharge in the event of out of condition discharge or failure
- Local and remote Alarm messages

#### Typical Mimic Diagram





#### **Typical Manufacturing Standards**

- Generally Sanitary Construction. •
- 316 stainless steel pipework contact parts, 304 non-contact parts, T.I.G. Welding

See Manufacturing Standards Datasheet for full details

#### **Typical Equipment**

- **HDPE Neutralisation Tanks**
- 316 Stainless Steel pipework
- 316 Stainless Steel Valves, manual and air operated
- High flow pumps
- Calibrated Instruments

See Equipment Standards Datasheet for full details

#### LEAN Technology

Adopting LEAN principles, Suncombe systems are developed to minimise utility usage, 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

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.

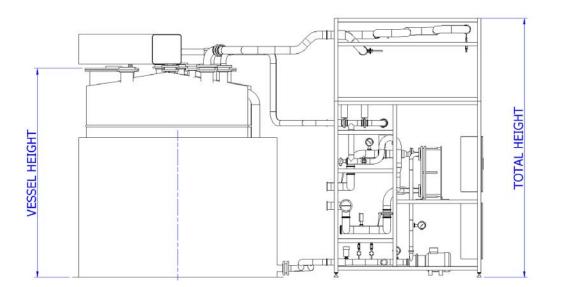
#### **Custom Versions and Layouts**

Custom versions and layouts are available, including systems with one, two, three or more tanks with layouts to suit your space availability.

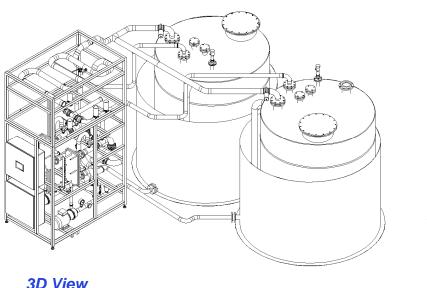
#### Automation System

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







Part #	Duty Details			External Dimensions mm			
	Tank Volume (litres)	Max. Inlet Flowrate (litres per minute)	Outlet Pressure (barg)	Width	Diameter	Total Height	Vessel Height
SUNpH™1000/2	2 x 1000	150	0 - 3	4653	2000	2300	1500
SUNpH™1500/2	2 x 1500	250	0 - 3	4953	2300	2300	1500
SUNpH™2000/2	2 x 2000	400	0 - 3	4953	2300	2500	2000
SUNpH™3000/2	2 x 3000	400	0 - 3	5153	2500	2900	2500
SUNpH™4000/2	2 x 4000	1000	0 - 3	5453	2800	2900	2500
SUNpH™5000/2	2 x 5000	1000	0 - 3	5553	2900	2900	2500
SUNpH™6000/2	2 x 6000	1000	0 - 3	5553	2900	3200	2800
SUNpH™10000/2	2 x 10000	1250	0 - 3	5553	2900	3300	2900

**Top View** 



