

SUNpH™

pH Neutralisation Systems



The reliable, repeatable, validatable pH Neutralisation Systems for Low, Medium and High Volume Waste Streams

Overview

Suncombe SUNpH™ 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 production and process operations, cleaning in place, washing, laboratories and other waste sources generated by research, laboratory, production and bio-containment facilities from a single laboratory room to a large multi-user facility and for.

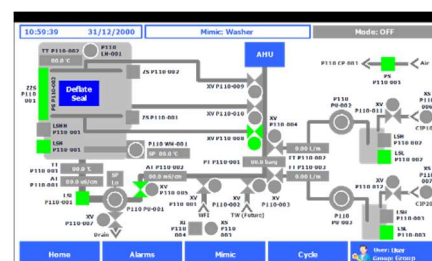
Heavy duty, reliable, repeatable, validatable Neutralisation System, they are available in a wide range of capacities and configurations, with every system individually designed to suit each client's specific requirements, with a dedicated Project Team, who will co-ordinate throughout the project lifecycle and agree approval prior to construction.

Built to a generic design, with the ability to custom engineer to suit client's requirements, they achieve pH Neutralisation using ultra efficient instrumentation, chemical mixing and versatile control systems.

Using robust, proven design principles, the Suncombe SUNpH™ Neutralisation Systems are built to a generic design, with the ability to custom engineer to suit client's requirements, they achieve pH Neutralisation using ultra efficient instrumentation, chemical mixing and versatile control systems, whilst ensuring containment and protection of the external environment and neutralised waste stream.

Applications

Production Plants
Industrial Facilities
Biologics
Laboratories
Hospitals and Healthcare Facilities
Research Institutions
Animal Laboratories
Research Laboratories
Mobile Operations



Typical HMI Screen

SUNpH[®] DATASHEET

VERSION 4.1



Welcome

Since our foundation in 1961, Suncombe has pioneered the development of innovative solutions for cleaning in place, bio-waste decontamination, GMP Washers, sanitary skids and vessel skids. The business continues to be privately owned and managed day to day by Dave Adams and Steve Overton.

Supporting Dave and Steve is a close-knit, dedicated, highly motivated and long-standing team encompassing a wealth of technical experience and knowledge in all relevant disciplines, including design, manufacture, testing, installation, validation, documentation and after-sales support. All of our work is carried out across our own facilities north of London near Stansted Airport.

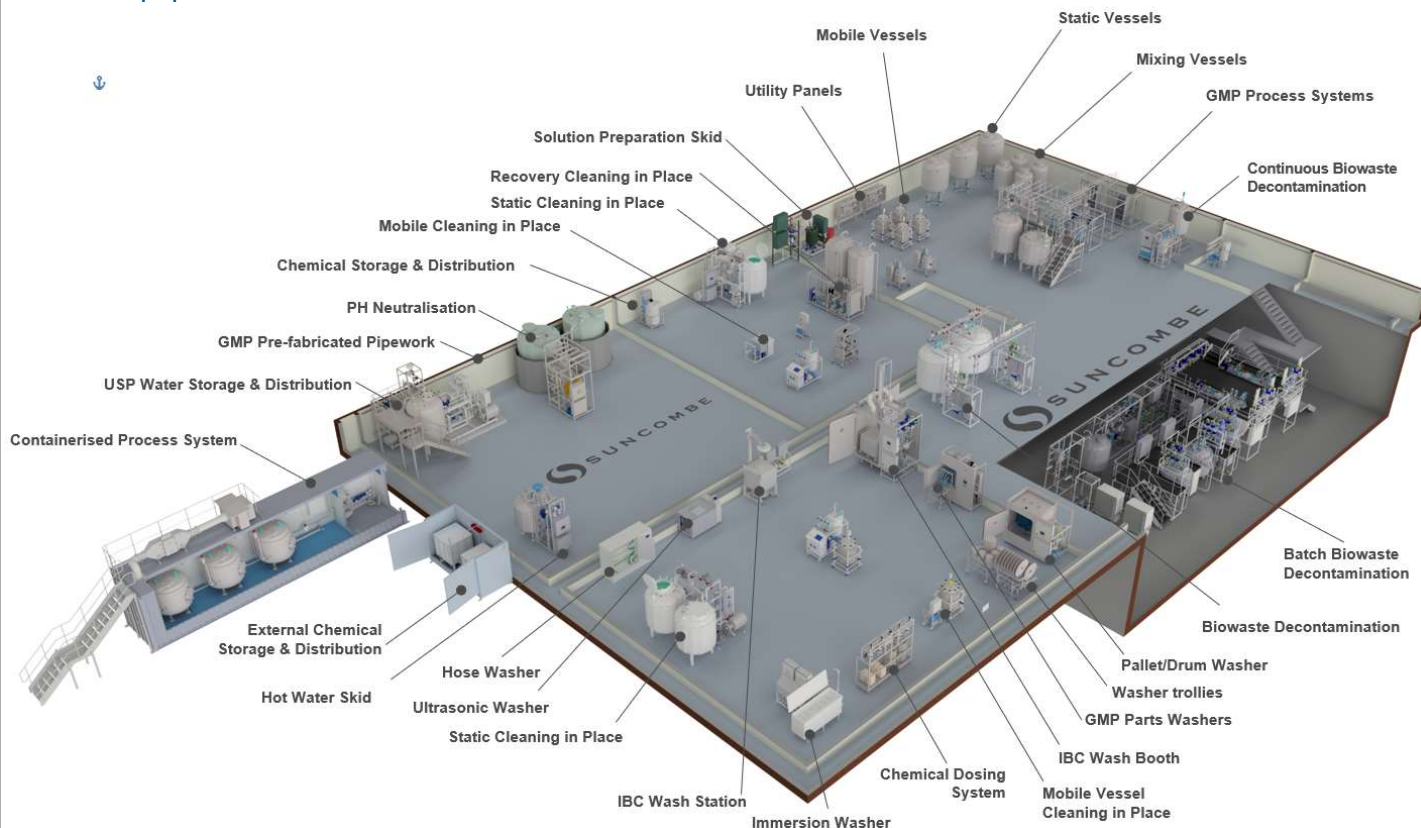
The team employ the very latest techniques, standards and best in class solutions. Having such a strong team allows us to offer the ability to carry out all of our work in-house, under our direct control

and quality management system. It also ensures that we own and preserve all the knowledge and experience gained with every project and allows us to offer continued support for all our installed systems throughout their lifetime.

Our Clientele



Our Equipment



Suncombe Ltd

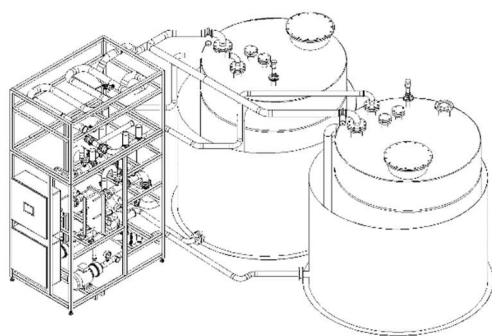
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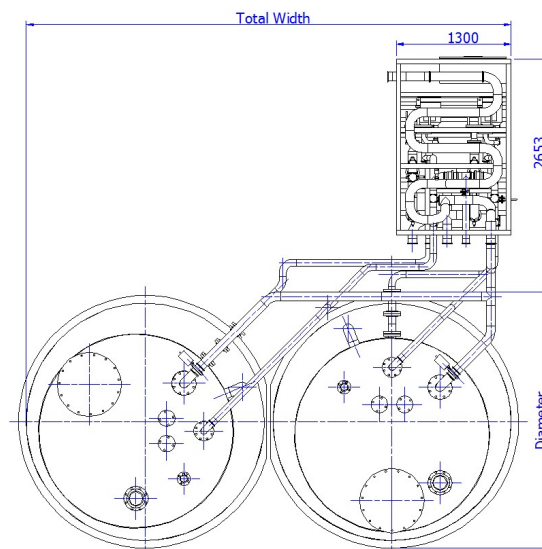
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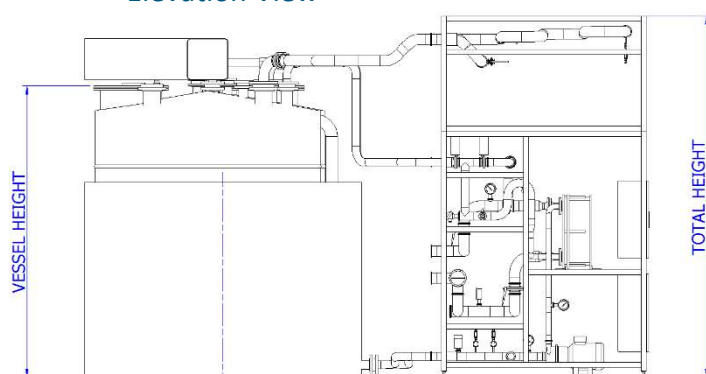
Isometric View



Plan View



Elevation View



Part #	Duty Details			External Dimensions mm			
	Tank Volume (litres)	Processed Volume (litres per minute)	Processed Volume (litres per 24 hr day)	Width (mm)	Diameter (mm)	Total Height (mm)	Vessel Height (mm)
SUNpH™100/2	2** x 100	0.5*	720	1853	600	2000	1200
SUNpH™250/2	2** x 250	1.4*	2,000	1853	600	2000	1200
SUNpH™500/2	2** x 500	2.8*	4,000	2653	1000	2000	1200
SUNpH™1000/2	2** x 1000	5.6*	8,000	4653	2000	2300	1500
SUNpH™1500/2	2** x 1500	8.3*	12,000	4953	2300	2300	1500
SUNpH™2000/2	2** x 2000	11.1*	16,000	4953	2300	2500	2000
SUNpH™3000/2	2** x 3000	16.6*	24,000	5153	2500	2900	2500
SUNpH™4000/2	2** x 4000	22.2*	32,000	5453	2800	2900	2500
SUNpH™5000/2	2** x 5000	27.8*	40,000	5553	2900	2900	2500
SUNpH™6000/2	2** x 6000	33.3*	48,000	5553	2900	3200	2800
SUNpH™10000/2	2** x 10000	55.5*	80,000	5553	2900	3300	2900

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Designers, manufacturers & installers of quality, hygienic processing and cleaning systems and Equipment

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Key Features	Benefits
High quality Thermoplastic Neutralisation Tanks with options for 316 stainless steel, duplex steel and other thermoplastics	Systems are constructed to the highest sanitary standards with material traceability. This ensures a fully validatable and neutralisation environment.
316L stainless steel pipework and components with options for duplex steel or thermoplastics pipework	Systems are constructed to the highest sanitary standards with 3.1/2.2 material traceability and welding dossier. This ensures a fully validatable and cleanable treatment environment.
Fully automated processing	The pH Neutralisation software enables fully automated treatment of waste and safe release to drain.
Treatment Parameters	Variable configuration to provide Concentration/Time.
Collection and Discharge Buffer Options	For large inlet flows, Integral Collection Tanks can be provided and for outlet flow limitations, integral discharge tanks can also be provided.
Continuous monitoring of key parameters	Neutralisation process is highly repeatable and validatable.
pH Level	Systems suitable for pH levels from 1 to 14
Safety	Alarms, interlocks and fail-safe design prevent waste discharge in the event of an unsuccessful treatment. This encompasses scenarios such as power loss and under-temperature events.
Siemens PLC and 12" colour HMI with options for larger HMIs	Control hardware is industry standard and supported worldwide by Siemens. Ethernet interface included for transfer of critical operating variables to other systems. Designed to enable integration to third party equipment or higher level control system.
Suncombe Suite software	Control software specification has been developed and proven over many years for critical applications and includes a wide range of user or administrator configurable parameters to enable customised decontamination profiles. User passwords, Active Directory, Audit Trails, Electronic batch reports for local or network storage are possible. User interface screens and process visualisation is simple, intuitive, clear and comprehensive. Remote access options are possible if required. Software complies with FDA 21CFR and EU GMP regulations.
Fully automated batch report	Electronic pdf reporting included – printed report optional
Utility Requirements	Systems requires compressed air, water, steam and electrical utilities.
Configurable	Based on standard modules, we can supply individual units custom designed for your specific requirement.
Cleaning In Place	Prepared for CIP with optional Automatic or Manual Cleaning In Place System
Redundancy	System configurations available for N+1 Dual redundancy providing guaranteed availability

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Control and Automation System

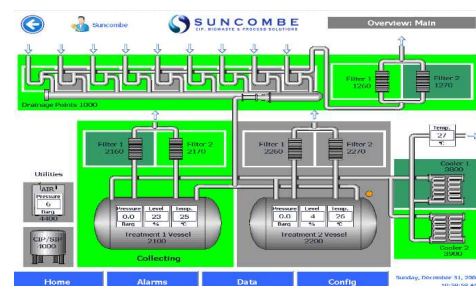
Renowned for their ease of operation and versatility, Suncombe systems are designed and manufactured for reliability, repeatability and longevity, whilst complying with the highest international regulatory standards. With dedicated in-house automation personnel for control design and software, Suncombe engineers have tremendous experience in incorporating a broad range of control solutions to suit your specific control requirements.

Developed to the GAMP 'V' model (Verification and Validation), system life cycle approach, which links the three main qualification activities (installation, operation and performance) back to the design process, the system software is produced in house by qualified software engineers, encompassing software development standards, quality control systems and change control during and post development.



Standards and Guidelines

- ✓ GAMP Guidelines
- ✓ FDA 21CFR11 Compliance
- ✓ ASME BPE
- ✓ EU Machinery Directive
- ✓ EU Low Voltage Directive
- ✓ EU cGMP Guidelines
- ✓ EU EMC Electromagnetic Compatibility Directive
- ✓ IEC 61131 for PLCs
- ✓ EN 60204 Safety of machinery
- ✓ EN 60439 Low Voltage Switchgear
- ✓ CE and UKCA Marks



Typical Operator Interface



Our Sustainability Operations



Sustainability of Suncombe Equipment

As a company, we recognise the importance of sustainability and the need to minimise our environmental impact. All Suncombe equipment has been re-developed for sustainability purposes and incorporates techniques and methodologies to minimise impact on the environment, including technologies that reduce energy consumption, emissions, and waste, as well as adopting practices that promote sustainability and reduce the environmental impact of operations.

Social Responsibility

Our company philosophy is one of Social Responsibility and under this banner we are fully committed to the need to balance economic growth with environmental stewardship and social responsibility.

Overall, Suncombe demonstrates a commitment to sustainability and environmental responsibility in our operations and products. For further details Suncombe have produced Sustainability and Lifecycle White Papers available **on request**

Here are some of the ways we achieve this:

- ✓ **Efficient use of resources:** Suncombe uses energy-efficient technologies in our equipment, which helps to reduce energy consumption and carbon emissions.
- ✓ **Waste reduction:** Suncombe strives to reduce waste throughout our operations, from manufacturing to product disposal. We use sustainable materials and designs that minimise waste and maximise product lifespan.
- ✓ **Recycling:** Suncombe promotes recycling and reusing of materials to reduce waste. We also recycle our own equipment where possible.
- ✓ **Compliance with regulations:** Suncombe adheres to environmental regulations and standards set by governing bodies, ensuring that our operations do not harm the environment.
- ✓ **Green initiatives:** Suncombe invests in research and development of new, sustainable technologies and processes to further reduce our environmental impact.
- ✓ **Lifecycle Considerations:** The company emphasizes the entire lifecycle of our equipment, from design and manufacturing to use and disposal. We strive to select materials and components that are environmentally friendly and can be recycled or disposed of responsibly. Featuring design with margin, upgrading and future-proofing extends the equipment lifecycle.

