PURE CIP™ DATASHEET
Version 3.5

SUNCOMBE
CIP, BIOWASTE & PROCESS SOLUTIONS

PURE CIP™

CLEANING IN PLACE (CIP) SYSTEMS

The Biotech, Pharma and Critical Application cGMP Validatable Total Loss Cleaning In Place System

Overview

These skid mounted systems provides a robust and repeatable method of cleaning process equipment with water and added chemicals, such as detergents or sanitisers.

Skids comprise all the necessary water storage tanks, heaters, pumps, valves, pipework and related components and instrumentation to deliver the required CIP cycle. Type, quantity and physical sizes of components are determined during the design phase of each project to suit the required application.

System construction and components are suitable for sanitary use in pharmaceutical, biotech and other hygienic applications.

Systems include a user-configurable recipe based control system to suit a wide range of applications and are pre-assembled and fully tested with operating utility supplies in our works to minimise risk and optimise installation and validation time on-site.

Systems comply with all applicable regulatory standards and are accompanied by a comprehensive suite of documentation covering all aspects of installation, operation and maintenance. Extended documentation packages can be supplied to meet specific validation needs.

Applications

Cleaning of Tanks
Vessels Intermediate
Bulk Containers
(IBCs) Vats
Fermenters
Mixers Processors
Pipework
Flexibles Transfer
Line Valves
Fluid Bed Dryers Mills
Coaters
Filters
Pumps
Dryers
Tumblers
Fillers
and many more in Pharmaceutical, Bio-Waste and other Critical process industries.

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Welcome

Since our foundation in 1961, Suncombe has pioneered the development of innovative solutions for Cleaning In Place, BioWaste decontamination, GMP Washers, GMP skids, Sanitary Tanks and Vessels. The business continues to be privately owned and managed day to day by Dave Adams and Steve Overton.

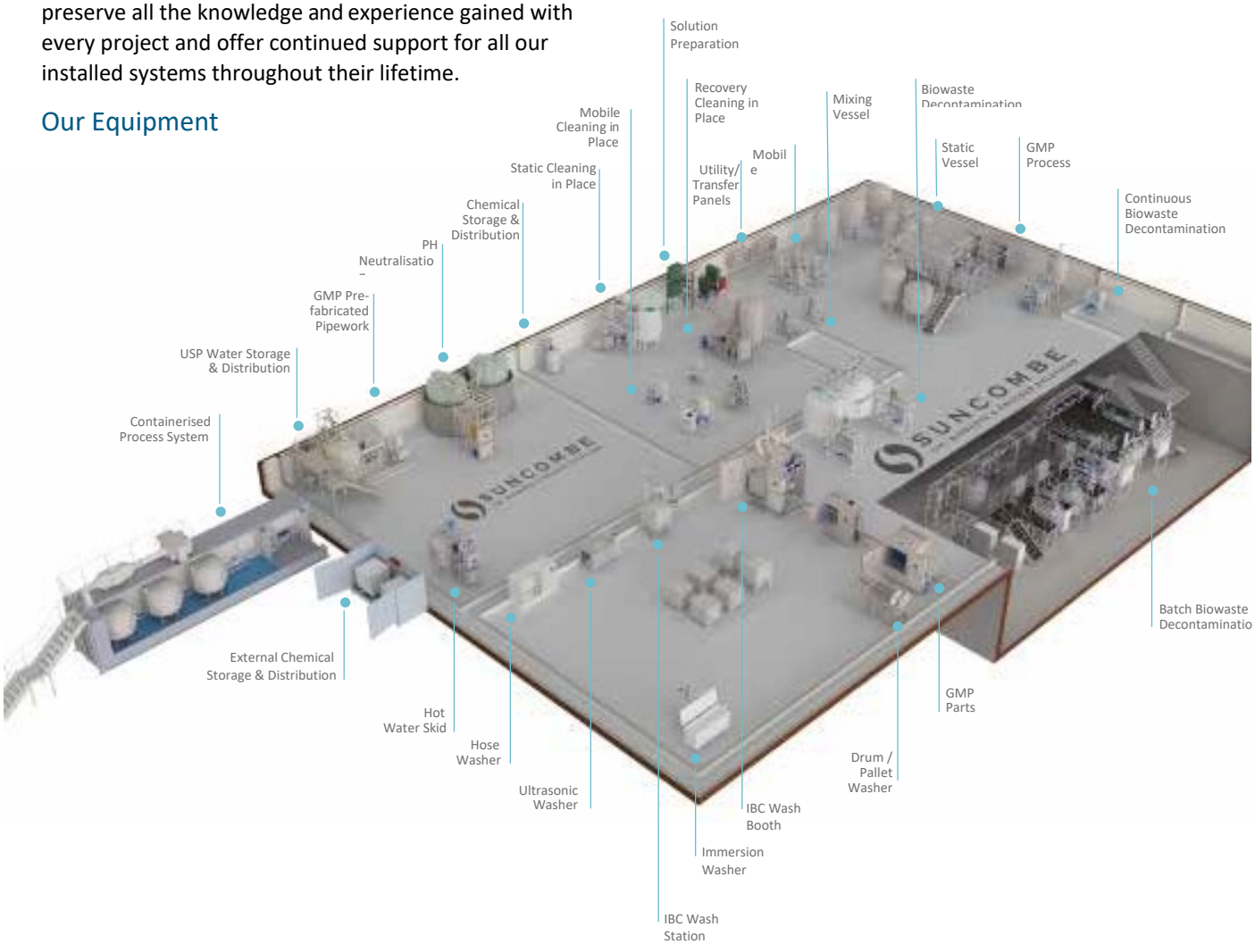
Supporting Dave and Steve is a close-knit, dedicated, highly motivated and long-standing team encompassing a wealth of technical experience and knowledge in all relevant disciplines, including design, manufacture, testing, installation, validation, documentation and after-sales support. All of our work is carried out across our own facilities, just off the M25 in north London.

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 systems, ensuring that we own and preserve all the knowledge and experience gained with every project and offer continued support for all our installed systems throughout their lifetime.

Our policy is to re-invest much of our profits into continuous development of our staff and our facilities, together with Research and Development to provide the optimum technical solutions for our clients requirements.

Our Clientele

Our Equipment



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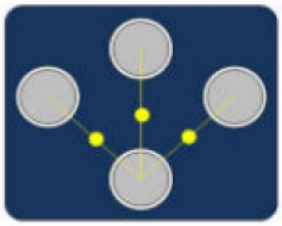
Key Features	Benefits
Sanitary 316L stainless steel construction and components (refer to separate datasheet for more details)	CIP fluids are maintained at the highest sanitary standards complying with ASME BPE with diaphragm valves with full material traceability and welding dossier.
Siemens PLC and 12" colour HMI with options for additional HMIs (alternatives may be used if necessary) (refer to separate datasheet for more details)	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. Versions also available with remote I/O for control by clients control system.
Suncombe SmartCIP™ software (refer to separate datasheet for more details)	Control software specification has been developed and proven over many years for CIP applications and includes a wide range of user or administrator configurable parameters to enable customised cleaning recipes, including water flow, pressure, time, temperature, chemical concentration and many more. User passwords, Active Directory, Audit Trails, Electronic CIP 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.
Single-pass or Recirculation options	CIP fluids can be immediately discarded to waste after use ("Single Pass") or may be recirculated to reduce overall water and energy consumption.
Steam, hot water/oil or electric water heating options	Heating energy may be derived from most convenient and cost-effective source available.
Heated Solution Preparation	Heated solutions can be batch made up in tank/s or using In-Line Heating validated method
Continuous monitoring of key parameters	CIP process is highly repeatable and validatable.
Variable chemical dosing	Delivery of 1, 2, 3 or 4 chemicals into CIP fluids is controlled.
In-line or batch chemical dosing	Chemical solutions can be batch made up in CIP tank/s or using In-Line Dilution validated method
Scavenge/Return	Skid prepared to accept return of fluids from optional scavenge pump/s, gravity drains or other site method of equipment liquid return
Plug 'n' Play	Comprehensive in-house testing to ensure fast start up on site
Skid may be fixed to a floor ("static") or on castors ("mobile") as required	Location and relocation of CIP system is very flexible.
CIP Distribution	A single CIP outlet is included. Options available for up to 10 separate CIP outlets for feeding to different items to be CIP'ed. Each outlet can be a single or double valve for CIP isolation. Distribution can also be via flowplate/splitter panel.  Typical flowplate/splitter panel
CIP Solution Cooling	In the event of hot water utilities (for example 'WFI hot loops), in-line or batch coolers can be added for colder CIP rinses.
Hazardous and Safe Area options	System may be located in a hazardous area, if required and may be designed to operate with solvents instead of water if required

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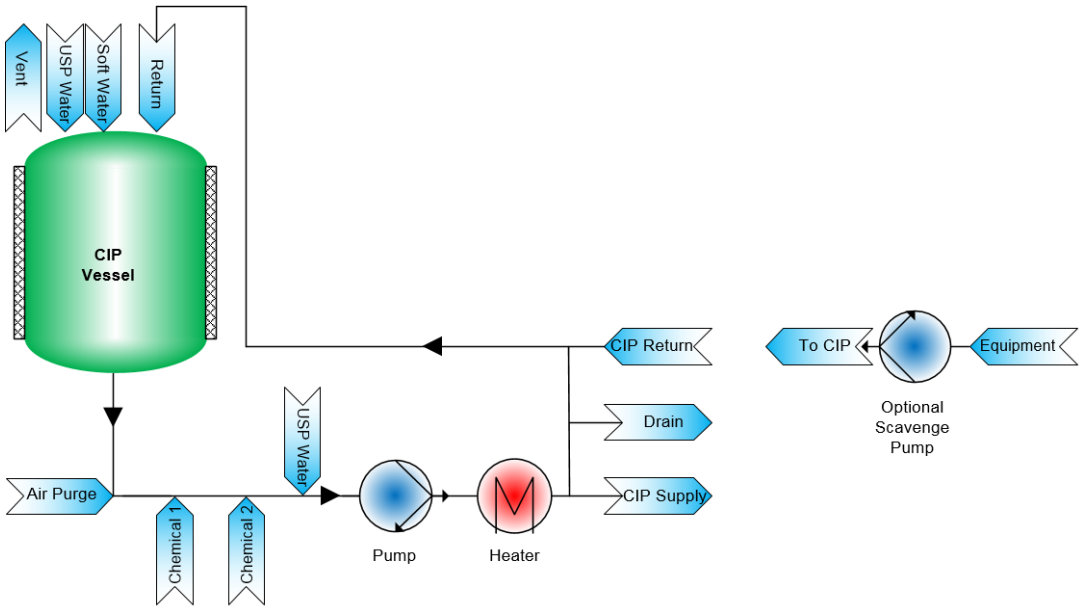
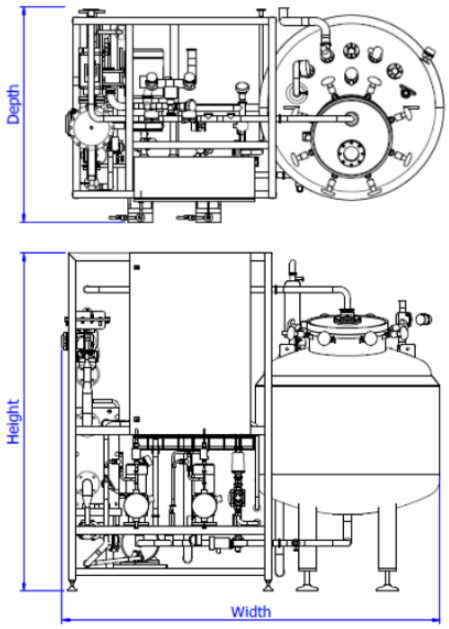
Diagram of Typical Configuration



Layout Drawing

PureCIP™ 750 shown with 750 litre Vessels – up to 3000 litre capacity vessels available.



Dimensions

These are typical only and should be confirmed.

Part #	Vessel Capacity litres	Flowrate litres per minute	Width mm	Depth mm	Height mm
PureCIP™ 150	150	0—60	1,600	840	1,850
PureCIP™ 300	300	0—80	2,000	1,000	2,000
PureCIP™ 500	500	0—120	2,200	1,200	2,300
PureCIP™ 600	600	0—150	2,300	1,300	2,500
PureCIP™ 750	750	0—300	2,500	1,400	2,500
PureCIP™ 1000	1000	0—300	2,500	1,400	2,800
PureCIP™ 1500	1500	0—300	2,500	1,400	3,100
PureCIP™ 2000	2000	0—300	2,500	1,400	3,400
PureCIP™ 2500	2500	0—300	3,000	2,000	3,000
PureCIP™ 3000	3000	0—300	3,000	2,000	3,400

All Systems also available with 0, 2, 3, 4 or more vessels.
All Systems also available with Shell and Tube Heat Exchanger with depth increase of 400mm.

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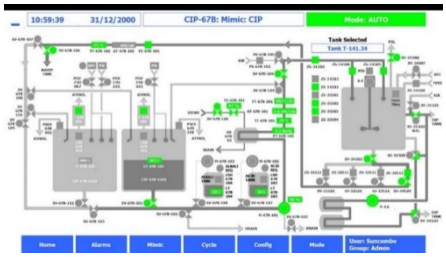
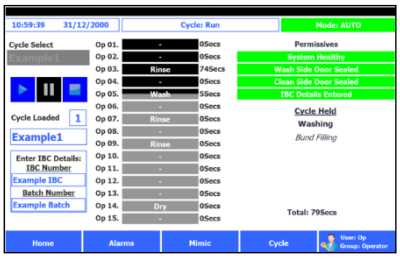
Typical PureCIP™

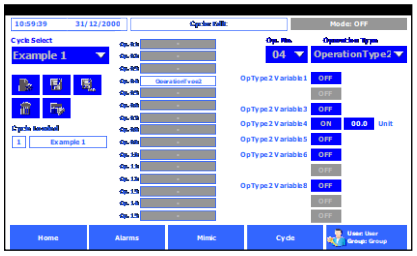
Typical Mobile PureCIP™ (MobileCIP™)

Typical PureCIP™
Operator Interface HMI



Typical PureCIP™ Operator Interface
HMI Recipe Configuration





Utilities

Water	20 - 300 litres/min @ 1 bar (dependant on tank usage)
Compressed Air (internal regulator)	Minimal use @ 7bar
Air Purge (internal regulator and HEPA filter)	700 Slpm
Electricity	<12 kW 400Vac 3ph+n 50hz. Other voltages available to order
Steam	To be confirmed dependant on system duty @ 3 bar for double plate heat exchanger
Drain	20 - 300 litres/min @ 1 bar (as per system flowrate)

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Diagram of Typical Configuration with two Tanks

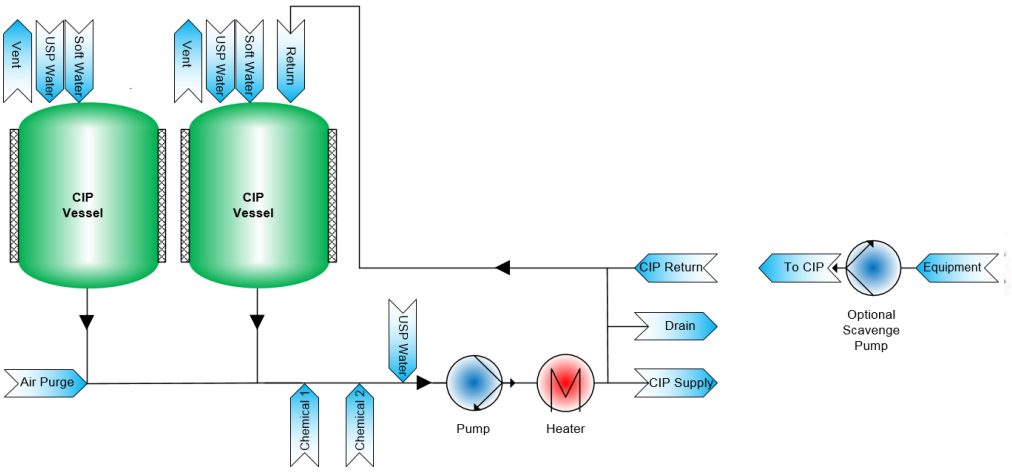

Diagram of Typical Configuration without a Tank

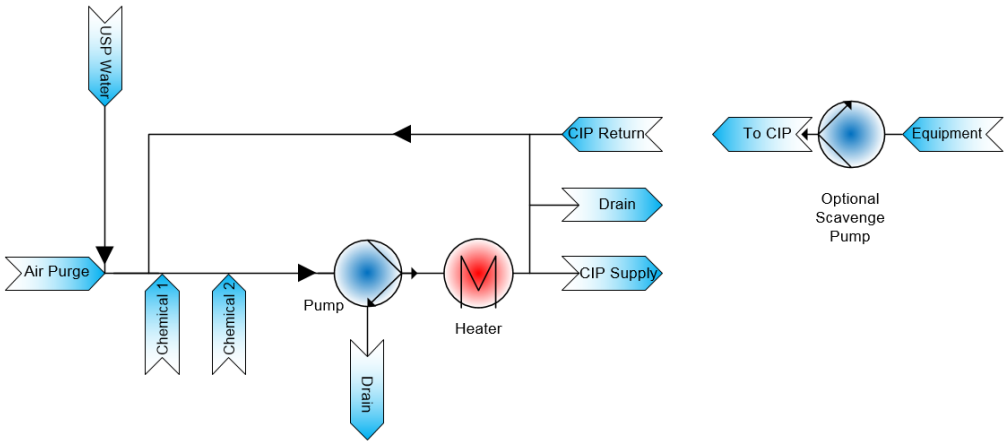

Diagram of Configuration with a Chemical Buffer