

# Membrane Filtration Systems

For Filtration, Purification and Separation, Process Filtration, Micro Filtration, Ultra Filtration, Nano Filtration, TFF and Reverse Osmosis



Award Winning Custom Designed  
Biopharma Filtration Module

## Overview

The Suncombe Membrane Filtration Systems are used for Filtration, Purification and Separation, Process Filtration, Micro Filtration, Ultra Filtration, Nano Filtration, TFF and Reverse Osmosis. Suncombe do not manufacture filter membrane and hence our designers can select the optimum filtration product form any supplier to suit your requirement.

Working with the best filtration membrane suppliers, our solution represents a joint approach to review and manage your entire process. This starts with an up-front consultation, assessment and detailed technical analysis of your required final product's characteristics, quality requirements and production volume. This is followed by an in depth analysis of construction standards and automation options, taking into full account of business management requirements and compliance issues. Our final product specification is a combination of the correct filtration and automation solutions with business management interfaces. Advanced project management techniques supported by full life-cycle manufacturing documentation and validation ensure full technical compliance is met.

The systems 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.

## Applications

Biologics  
Laboratories  
Pharmaceutical  
Water  
Food and beverage  
Nuclear  
Hospitals & Clinics



# Membrane Filtration DATASHEET

VERSION 2.5



## 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.

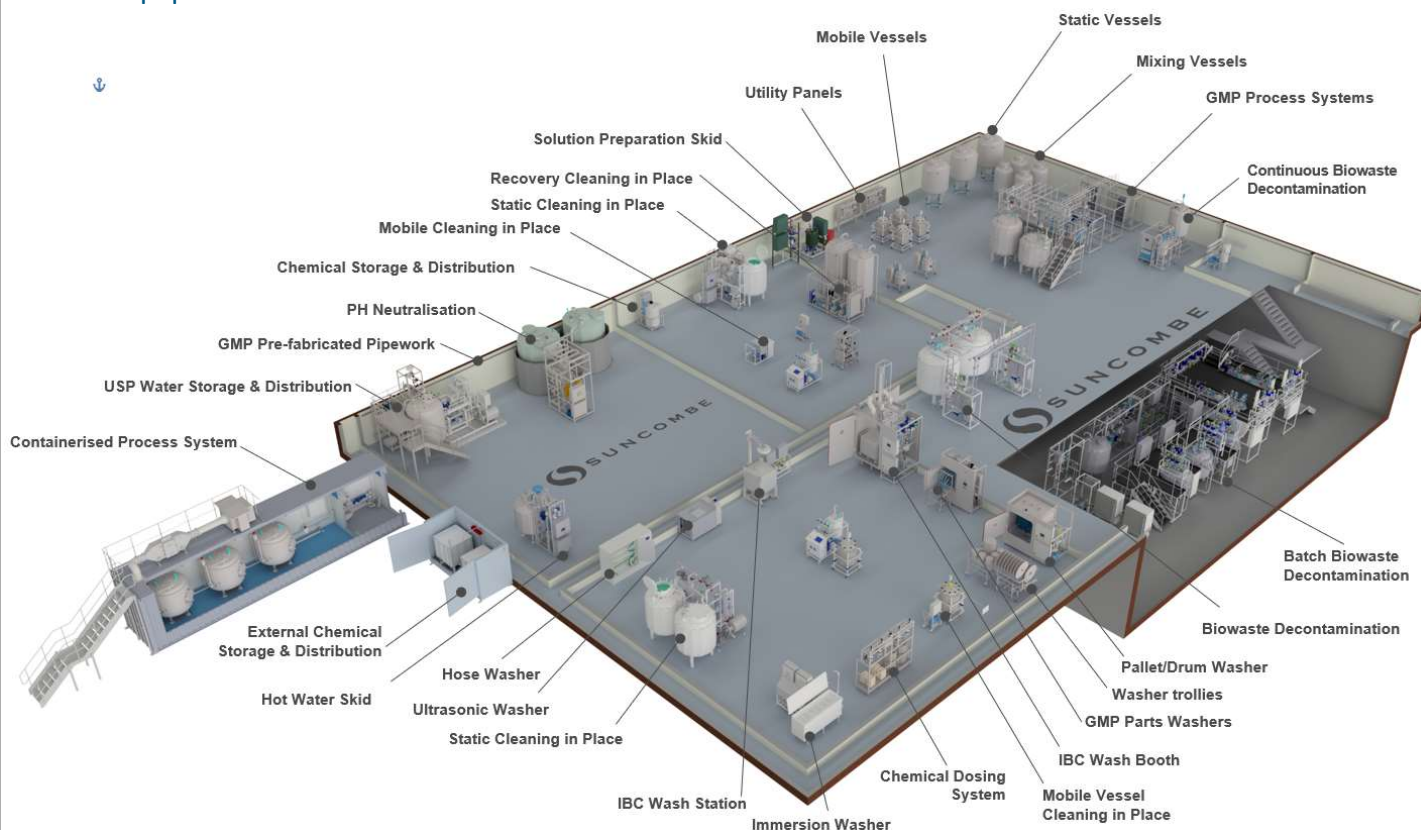
The team employ the very latest techniques, standards and best in class solutions. Having such a strong team allows us to offer the ability to carry out all of our work in-house, under our direct control

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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## Introduction

Membrane filtration technology is a globally accepted stage in many of the process lines in the pharmaceutical, biotechnology and many other industries. A pressure driven technology, it enables very specific separations of dissolved, colloidal or particulate constituents at low or ambient temperatures with no phase change using semipermeable polymeric and inorganic membranes.

## Versatile Recipe Control:

Providing operation methods can be built from sequences including:

- Process flow
- Water chase
- Cold water rinse
- Warm or hot water rinse
- Clean-in-Place rinse (CIP)
- Backwashing
- Hot water sanitization
- Steam-in-Place (SIP)
- Integrity testing

## Lean Technology and OEE

Using state of the art software and adopting Lean principles, the systems combine environmentally friendly concepts regarding utility and energy consumption and OEE including downtime logging and maintenance to optimize process efficiency.

## Intelligent Automation Options

- Historical archiving, Trending and Batch records, 21CFR11 compliance
- Web access, remote monitoring
- Server / client architecture
- Integration, networking and communication
- OPC, SQL, ODBC and OLE-DB integration
- Ethernet, Profibus and Fieldbus
- Overall Equipment Effectiveness (OEE) monitoring



Membrane Filtration Module

## Options

Material of Construction	SAF 2205 duplex or Hastelloy for chlorine resistance
Operating Voltage	Various
Automation	ControlSuite Level 3000 with 21CFR 11 reports, records and networking
Safety	Failsafe versions available for SIL 2 and SIL 3
Covers	Thermoplastic or stainless steel covers
CIP	Chemical CIP for system cleaning
Sanitisation and Sterilisation	Steam, hot water and chemical SIP options
Pump Feed	Discharge pump to transfer waste
Remote Control	Remote start and remote HMIs

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



# Membrane Filtration DATASHEET

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Key Features	Benefits
Filtration Media	A wide range of Filtration Media Options, configurations and membrane types from multiple manufacturers, to allow every system to be optimised for the best separation.
Filtration Configuration	Complete range of filter configurations allowing the automated system to deliver customer requirements.
Product Characteristics	Product character and quality requirements established by customer and technical support scientists prior to automation specification ensuring mutual agreement of product characteristics and quality requirements.
Filtration Parameters	Variable configuration and multiple filtration elements may be proposed to provide optimum filtration.
Custom Automation	Extensive custom automation capability combined with flexible approach to meet exact customer requirements.
Intelligent Automation	Optimization of filter life and reduced cost through management by intelligent automation software.
Automatic control	Increased product quality due to minimized human intervention and optimization of process control.
Utilities Saving	Optimization of utilities (water, electricity) consumption due to intelligent software control of the CIP and filter regeneration process.
Sanitary 316L stainless steel construction and components	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.
Continuous monitoring of key parameters	Filtration process is highly repeatable and validatable.
Safety	Alarms, interlocks and fail-safe design. This encompasses scenarios such as power loss and under-filtration 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 ControlSuite software	Control software has been developed and proven over many years for filtration 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
Automatic Operation	Automatic Waste Inlet, treatment and Discharge Automatic Alarms and Warnings
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

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