IBC SafeConnect™ DATASHEET

VERSION 2.0

SUNCOMBE
CIP, BIOWASTE & PROCESS SOLUTIONS

IBC SafeConnect™

Intermediate Bulk Container (IBC) Discharge Station for Hazardous and High-Value Liquids.

Designed to eliminate manual handling and ensure safe automated liquid transfer.

Overview

The **IBC SafeConnect**™ Station is an advanced, modular solution engineered for the safe, efficient, and compliant discharge of hazardous chemicals and other liquids stored in Intermediate Bulk Containers (IBCs). Designed with a focus on operator safety, environmental protection, and process automation, the **IBC SafeConnect** ™ system enables controlled extraction and transfer of liquids from 1,000-litre IBCs in both standard and ATEX-rated environments.

The system features a stainless steel framework, mounting a fully enclosed thermoplastic housing that isolates the operator from chemical exposure, fumes, and splashes. At the heart of the unit is an automated, motorised lance that inserts into the IBC at the press of a button, eliminating manual handling and reducing the risk of spills or contamination. Integrated level sensors provide real-time feedback on chemical volume, enabling proactive changeover and safe removal of empty containers.

The **IBC SafeConnect** ™ unit is compatible with a wide range of transfer pumps and can be tailored to meet specific site requirements, including integration with SCADA systems and compliance with GxP/GAMP validation standards. Whether deployed in pharmaceutical, biotech, chemical, or food production environments, the **IBC SafeConnect** ™ station offers a robust and scalable platform for safe chemical and other liquid distribution and handling.

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

- ✓ Safe and controlled discharge of liquids from IBCs
- ✓ Suitable for hazardous, sensitive, or high-value process liquids
- ✓ Integration into cold and hot water handling systems
- ✓ Precise transfer of temperature-controlled liquids
- ✓ Ideal for pharmaceutical, biotech, chemical, and other regulated industries
- ✓ Compatible with cleanroom and production environments
- ✓ Customisable for a wide range of liquid transfer and distribution tasks

Sustainability

- ✓ Designed to minimise chemical waste and reduce operator exposure
- ✓ Supports environmentally compliant operation and spill containment

Construction

- ✓ Stainless Steel structure
- ✓ 316 Stainless Steel, Duplex Alloys and Thermoplastic internals available for full liquid compatibility
- ✓ Control and instrumentation to GAMP

IBC SafeConnect™ DATASHEET

VERSION 2.0

Welcome

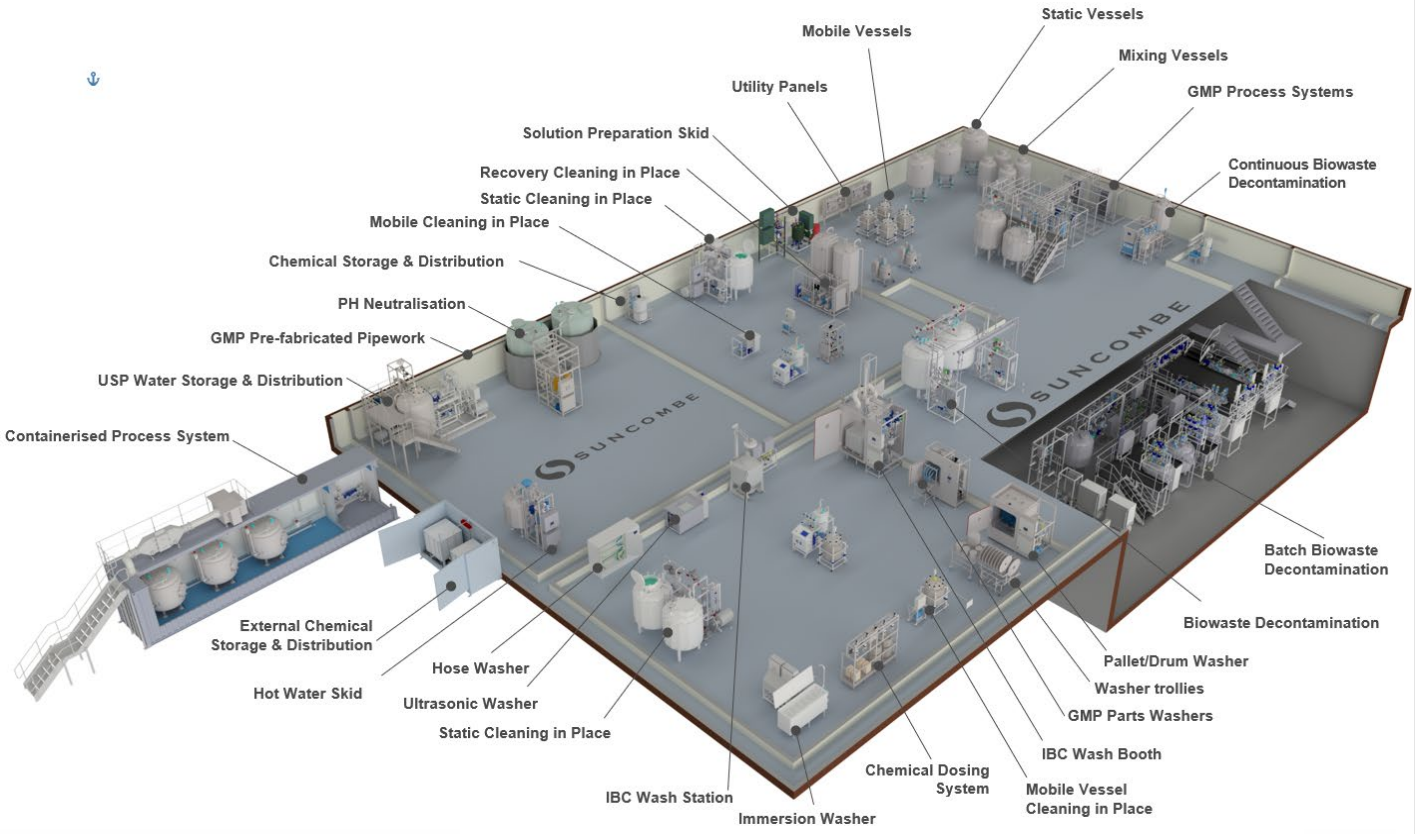
Since our foundation in 1961, Suncombe has pioneered the development of innovative solutions for cleaning in place, bio-waste decontamination, GMP Washers, sanitary skids and vessel skids. The business continues to be privately owned and managed day to day by Dave Adams and Steve Overton.

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

Suncombe House, Unit B Woodside Industrial Estate, Dunmow Road, Bishop's Stortford, CM23 5RG, United Kingdom

T +44(0)20-8443-3454 F +44(0)20-8443-3969

E info@suncombe.com W www.suncombe.com

IBC SafeConnect™ DATASHEET

VERSION 2.0

SUNCOMBE
CIP, BIOWASTE & PROCESS SOLUTIONS

Key Features	Benefits
Construction	316 Stainless Steel, Duplex Alloys and Thermoplastic internals construction and components' available for full liquid compatibility.
Automated Insertion Lance	Automatic, retractable lance inserted at the touch of a button, designed for hands-free operation and equipped with mid-level and low-level liquid detection switches
Automated Variable-Speed Pump System	316 Stainless Steel, Duplex Alloys and Thermoplastic Heavy Duty Discharge pumps of centrifugal, magnetic, diaphragm, double diaphragm and other suitable pump types. Variable Speed Drive to allow speed control to vary the flowrate and pressure. Duplex and triplex arrangements available for dual redundancy and N+!/" operation.
Access Door	Hinged front access door with interlocked safety switch prevents operation when open
Safe Chemical Extraction	External pump unit extracts liquid through the lance and transfers to designated destinations.
Operator Safety	Isolates the operator from chemical exposure, fumes, and splashes. Enclosure prevents unauthorised access during operation.
Flexible Operation	- Simple button-press to insert or retract the lance - Mid-level switch alerts user to prepare the next IBC - Low-level switch confirms IBC is empty before safe removal
Interlocking	Interlocked safety access door to prevent operation when open, pump interlocked to lance position and IBC contents
Safety	Alarms, interlocks and fail-safe design ensures safe operation. This encompasses scenarios such as power loss and under-temperature events.
Spillage Containment	110% integral bund for full spill containment manufactured from 316 Stainless Steel, Duplex Alloys or Thermoplastic
Continuous monitoring of key parameters	Discharge process is highly repeatable and validatable.
Plug 'n' Play	Comprehensive in-house testing to ensure fast start up on site.
Covers	The systems are also available with stainless steel or thermoplastic covers
Compact design	Designed to fit into new facilities or to be retrofitted into existing facilities with limited available space.
Configurable	Based on standard modules, we can supply individual units' custom designed for your specific requirement.
Automation	Available without automation, manual, Semi-automatic and fully automatic operation with a Siemens or Rockwell (Allen Bradley) PLC and colour HMI. Versions also available with remote I/O for control by clients control system. Control hardware is industry standard and supported worldwide by Siemens.
Integration	Seamless integration with Suncombe Cleaning In Place, Effluent Decontamination Systems, Process Kids and with other clients systems

IBC SafeConnect™ DATASHEET

VERSION 2.0

SUNCOMBE
CIP, BIOWASTE & PROCESS SOLUTIONS

Advantages of Safe Chemical Handling

In Line with Latest Health & Safety and COSHH Regulations, the IBC SafeConnect™ Station is specifically engineered to meet and exceed modern workplace safety requirements under UK HSE guidelines, COSHH regulations, and industry best practices. Key safety and compliance advantages include:

• Operator Exposure Minimisation – Enclosed housing and automated lance reduce exposure to splashes, vapours, and aerosols.

• COSHH Control Compliance – Complies with COSHH by providing: Closed transfer of hazardous liquids, enclosure-based containment, level detection for changeover planning, and reduced need for PPE by eliminating exposure.

• Spill & Contamination Control – 110% bunding prevents environmental release and aligns with UK environmental agency spill control rules.

• Reduced Manual Handling – Lance insertion/removal is push-button operated, eliminating lifting or tilting of heavy chemical containers.

• Integrated Safety Interlocks – Door interlock system ensures no operation when the access door is open, reducing the risk of operator error.

• Fume & Vapour Containment – Enclosure mitigates inhalation risks from volatile or corrosive chemicals; optional vapour extraction available.

• Safer Chemical Changeover – Mid- and low-level alarms enable proactive planning and safe IBC replacement via automatic lance retraction.

• Validation-Ready & SOP Compatible – Designed for use in GxP/GMP environments with optional validation packages, automation integration, and alarm logic for SOPs.

This unit supports the hierarchy of hazard control, using engineering controls to remove or isolate risks—ensuring full COSHH alignment and dramatically reducing operator risk in hazardous chemical environments.

IBC SafeConnect™ DATASHEET

VERSION 2.0

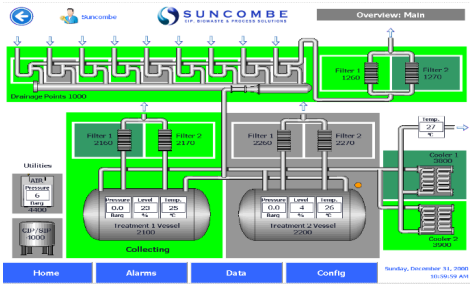
Control and Automation System

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

IBC SafeConnect™ DATASHEET

VERSION 2.0

SUNCOMBE
CIP, BIOWASTE & PROCESS SOLUTIONS

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.

IBC SafeConnect™ DATASHEET

VERSION 2.0

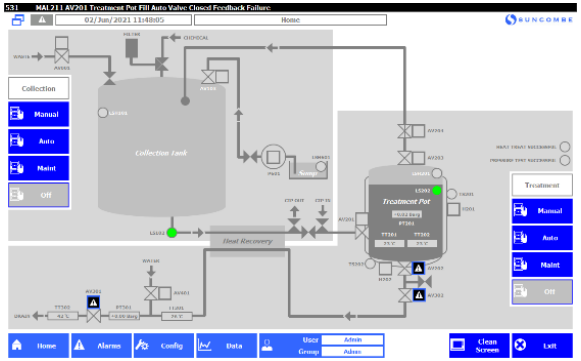
SUNCOMBE
CIP, BIOWASTE & PROCESS SOLUTIONS

Options

Material of Construction	Stainless Steel, Duplex, Hastelloy and thermoplastic materials available
Operating Voltage	Various to suit local utility
Covers	Thermoplastic or stainless steel covers
GMP	GMP versions available
Multiple Units	Multiple IBCIBC SafeConnect™ systems can be combined in one scheme, for discharge and delivery of different chemicals/liquids and dual redundant set ups
ATEX Compatibility	Options for Safe Area or Zone 1 / Zone 2 ATEX environments

Please contact us for final equipment dimensions

Typical HMI Display



Layout