



**A Force for
Sustainable Change.**





Company Vision

Building a safer & healthier world through sustainable innovation.



Company Mission

As a trusted partner, we deliver value by solving sustainability and operational challenges with the right people, the right experience and the right technology. Our solutions help conserve natural resources and promote cleaner and safer environments.

We live in a world of opportunity

Opportunity to...



Drive efficiencies



Make measurable impacts



Do what's right

Solenis is your path forward

For more than 100 years, customers have trusted us to deliver value-driven, tailor-made solutions, advanced insights, measurable results and service that is second to none.



Global trends drive Solenis to develop sustainable solutions



Protect & Recycle Resources

23% of net global greenhouse gas emissions is caused by deforestation.

Fiber Management & Recycling



Clean & Safe Water

By 2030, the world will have only 60% of the water we need.

Industrial Water Management & Reuse

Recreational Water Care



Safe Food & Minimize Waste

World Health Organization (WHO) reports an estimated 600 million cases of foodborne illnesses annually worldwide.

Food & Beverage Safety & Stewardship



Infection Prevention

Hand hygiene interventions in healthcare settings reduced healthcare-associated infections by approximately 30%.

Institutional Health, Cleaning & Hygiene

We offer differentiated solutions for the world's critical concerns

Our deep domain expertise and mission-critical solutions help you meet your operational and sustainability goals and help create a cleaner, safer world.



**Water management
& reuse**



**Fiber management,
recycling & process
treatment**



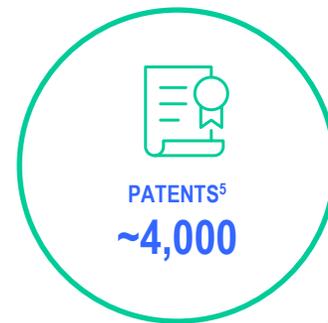
**Infection
prevention**



**Food & beverage
safety**

Solenis overview

Our market-oriented business model delivers value-added solutions & services to customers



Serving myriad industries



Food & Beverage Processing

- Agriculture
- Beverage
- Dairy
- Food Processing



Industrial

- Biorefining
- General Manufacturing
- Life Sciences
- Mineral Processing
- Municipal
- Oil & Gas
- Power Generation
- Refining & Chemical Processing
- Specialties & Engineered Wood



Institutional

- Commercial Laundry
- Education & Government
- Facility Management
- Food Service
- Healthcare
- Hospitality
- Retail



Pulp & Paper

- Food & Beverage Paper Packaging
- Graphic & Specialty Papers
- Packaging
- Pulp
- Tissue & Towel

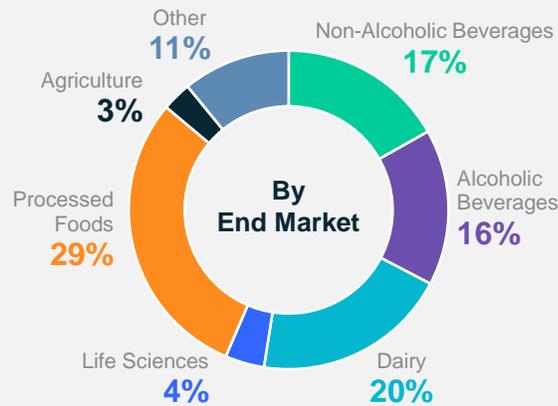
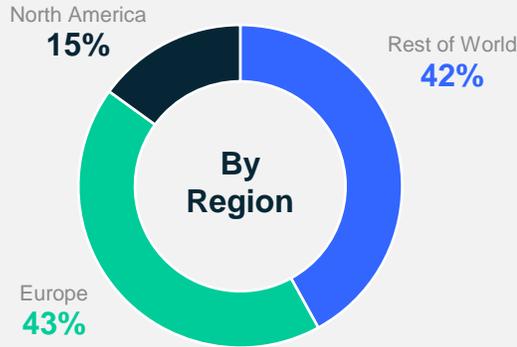


Pool & Spa

- Commercial Pools & Spas
- Residential Pools & Spas

Food & Beverage segment overview

Hygiene and water treatment solutions to protect food safety, promote the sustainable use of resources and drive operational efficiency



End Market	Key End Products	Products & Applications	Customer Benefits
Non-Alcoholic Beverages	<ul style="list-style-type: none"> No and Low Fruit Juice Soft Drinks Water 	<ul style="list-style-type: none"> Cleaning-in-place (CIP) Open plant cleaning (OPC) Filler cleaning Bottle washing Conveyor lubrication Membrane cleaning Water treatment Waste water treatment Hygiene engineering Hygiene equipment Hygiene academy Knowledge based services (KBS) 	<ul style="list-style-type: none"> Sustainable chemistry Energy and chemical reduction Water reduction, reuse and recycling Process efficiency and automation Maximize labor utilization Downtime reduction Waste reduction Asset protection / cost avoidance Total cost of ownership (TCO) reduction Process compliance Product quality and safety Brand equity protection Safe Operations
Alcoholic Beverages	<ul style="list-style-type: none"> Brewing Distilling Wine 		
Dairy	<ul style="list-style-type: none"> Dairy Processing Cheese / Butter / Cream / Ice Cream Yoghurt / Powder / Infant Formula Dairy Alternatives 		
Processed Foods	<ul style="list-style-type: none"> Protein Harvest Fish Ready to Eat Produce Soups & Sauces Plant Based 	<ul style="list-style-type: none"> + Direct food contact (DFC) 	<ul style="list-style-type: none"> + Food safety compliance + Food waste minimization
Life Sciences	<ul style="list-style-type: none"> Pharmaceutical Sterile Pharmaceutical Cosmetics Research Facilities 	<ul style="list-style-type: none"> Cleaning-in-place Open plant cleaning Sterile sanitation Detergent selection Water treatment Waste water treatment 	<ul style="list-style-type: none"> Validated portfolio Sustainable chemistry Energy and chemical reduction Water reduction, reuse and recycling Process efficiency and automation Total cost of ownership (TCO) reduction Process compliance Product quality and safety Safe Operations
Agriculture	<ul style="list-style-type: none"> Dairy Farming Poultry Farming Pork Farming 	<ul style="list-style-type: none"> Parlor hygiene Cleaning-in-place Robot cleaning Teat care Hoof hygiene 	<ul style="list-style-type: none"> Maximizing milk quality and price Reduced water and energy usage Animal welfare Productivity improvement Sustainable chemistry Safe Operations

Footnote: LTM June 2024A Segment Net Sales

Food & Beverage

Value Proposition and Drivers



Food & Beverage

Global F&B Hygiene and Water expertise that delivers a total solution tailored to achieve your **operational efficiency, food safety** and **ESG** goals.

Implemented by a **reliable** team of passionate **specialists** equipped with the latest **innovation** in chemicals, **services** and **digital technologies**.

Food & Beverage Value Drivers



**Sustainable use
of Resources**



**Operational
Efficiency**



Food Safety



Brand Protection

Underpinned by Expertise and Knowledge



Global Expertise

Experts trusted to provide consistent service by over 25,000 production sites in 180 countries



Food safety

Protecting your products, your consumers, and your brand



Operational efficiency

Always striving to maximise productivity, while minimising your total cost of ownership (TCO)



Sustainable use of resources

Committed to reaching our shared ESG objectives through water, energy, CO2 and food loss management



Reliable

Proven, consistent delivery on the commitments we make and in taking responsibility for results



Specialists

Dedicated team of experts in hygiene and water management, solely focused on the F&B industry



Innovation

Disrupting traditional methods with sustainable chemical engineering, service and knowledge transfer



Services and Digital technologies

Implementing technologies that advance hygiene efficiency, compliance and data analysis

Global Expertise

Experts trusted to provide consistent service by over 25,000 production sites in 180 countries

A global team:

- ❖ **Working in partnership with local, regional and global F&B brands**
- ❖ **Protecting over 25,000 F&B production sites**
- ❖ **Delivering consistent solutions across geographies**
- ❖ **Supported by global manufacturing, distribution and service coverage**
- ❖ **Committed to knowledge sharing, from traditional training, to eLearning, and with our growing pool of over 13,000 webinar registrants**



Operational Efficiency

Always striving to maximise productivity while minimising your TCO

- ❖ **Implementing solutions and focus resources to:**
- ❖ **Maximise cleaning efficiency**
- ❖ **Increase production output and line efficiency**
- ❖ **Reduce food loss and reject rates**
- ❖ **Optimise labour utilisation**
- ❖ **Automate and control the hygiene process**
- ❖ **Protect your assets – your process equipment, facilities and your bottle fleet**
- ❖ **Reduce utility and chemical usage**
- ❖ **Improve wastewater efficiency**



Food Safety

Protecting your products, your consumers, and your brand

Dedicated to uncompromised hygiene:

- ❖ Hygiene Compliance
- ❖ Promoting Hygienic Design
- ❖ Proactive cross-contamination control
- ❖ Managing water quality across incoming, process and wastewater
- ❖ Embedding a 'food safety first' culture with leading training capabilities
- ❖ Fact-driven approach to risk assessments and mitigation
- ❖ Balancing Food Safety and Operational Efficiency through innovation and experience



Sustainable use of resources

Committed to reaching our shared ESG objectives through water, energy, CO₂ and food loss management

We aim to support and drive change throughout the industry through reducing:

- ❖ CO₂ emissions
- ❖ Water, energy and chemical consumption
- ❖ Wastewater discharge and toxicity
- ❖ Food loss and waste management

With a focused approach on:

- ❖ Promoting Corporate Social Responsibility (CSR) and an ethical approach
- ❖ Extending asset lifespan
- ❖ Developing safer and renewable chemistry
- ❖ Developing innovative packaging solutions



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Water

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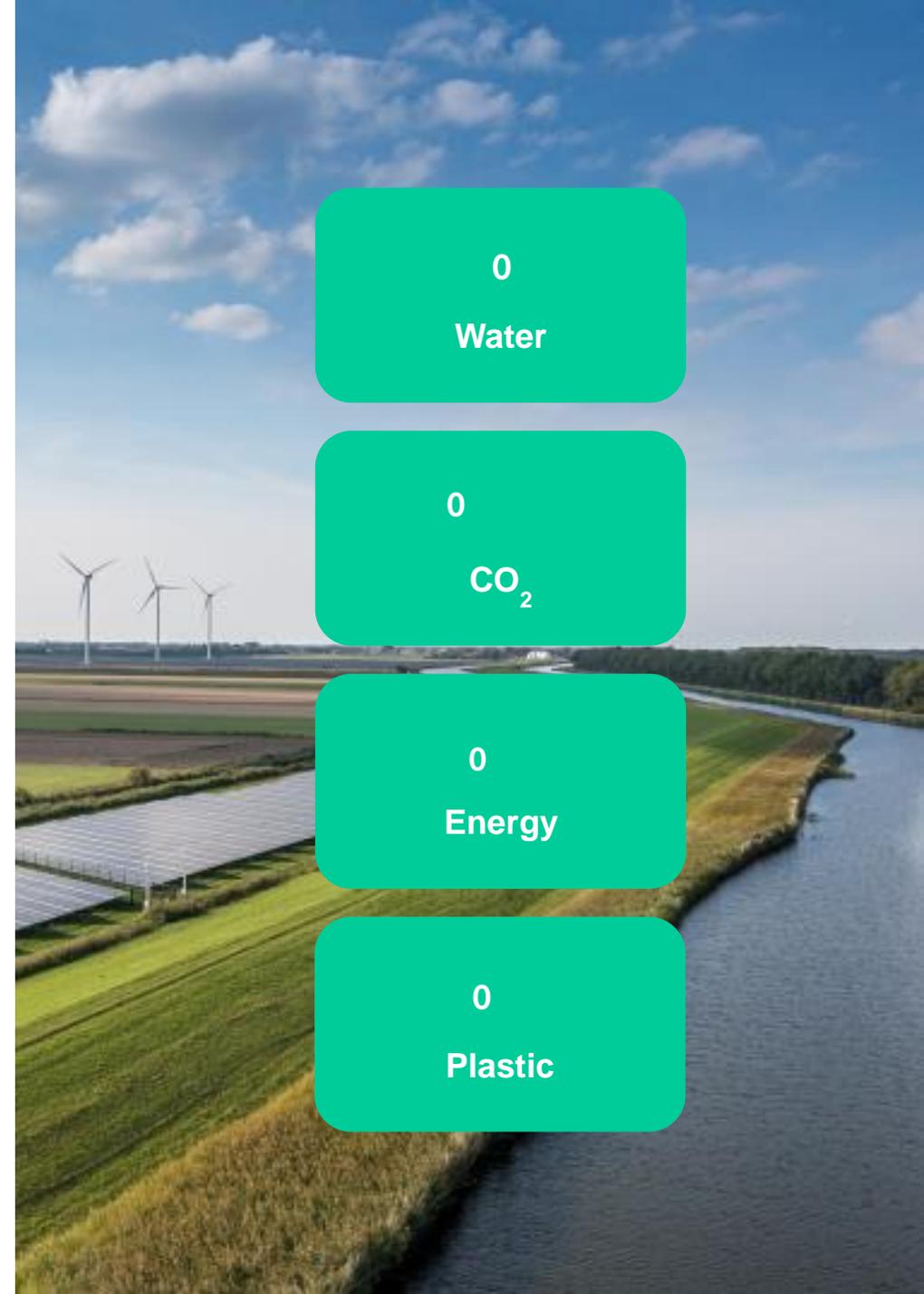
CO₂

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Energy

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Plastic



Reliable

Proven consistent delivery of the commitments we make and in taking responsibility for results

We do what we promise.

Proven track record of delivering on our TCO commitments:

- ❖ Water Saving
- ❖ Energy Saving
- ❖ Time Saving
- ❖ Production Output
- ❖ Giving you peace of mind - consistency, reliability and repeatability of results
- ❖ Water Re-use
- ❖ Asset Protection
- ❖ Employee Safety



Specialists

Dedicated team of experts in hygiene and water management, solely focused on the F&B industry

Offering you a single point of contact for world class expertise in hygiene and water management

- ❖ Generations of collective experience in the F&B industry
- ❖ Sector-based industry knowledge
- ❖ A team of customer-facing experts including:
 - ❖ Chemists
 - ❖ Microbiologists
 - ❖ Brewers
 - ❖ Food Technologists
 - ❖ Engineers



Innovation

- Intelligent CIP
- CIPtec
- Divosan Uniforce - CO2 Atmosphere
- Rapid CIP
- OSA
- Dual CIP
- Single Stage
- CIP Additives
- Reduced P, N and Na CIP detergents

- Elite 360 Electrostatic Spraying
- Antifoams
- Food Processing Aids
- Biocides

- Coagulants and polymers
- Odor control programs
- Antiscalants for Waste Water
- Sludge dewatering polymers
- Antifoams and defoamers



- Diverclean Sonic Pre-Clean Technology
- N&P Free
- Enduro Range Thixotropic Foams
- Clean & Disinfect 2 in 1
- Low Pressure Foamers
- Gels
- General Purpose Foams
- Biocides

- Divobrite Defend – Reduced bottle scuff
- Bottleshawing Additives
- Divomask – Bottle Masking Technology
- DryFormance – Dry Lubrication
- DryTech
- Hybrid Lubrication
- Synthetic Lubricants

- Accelerated Cleaning Protocol (ACP)
- Enzyme Technology
- Divos Technology (updated)
- BMF – Beer Membrane Filtration
- WWT membrane cleaning

Industry leading digital technology integration

Equipment and Engineering Innovation

Services & Digital

Implementing technologies that advance hygiene efficiency, compliance and data analysis

- ❖ Our expertise and technology provide data-driven insights that advance hygiene efficiency, sustainable use of resources and operational efficiency
- ❖ Comprehensive suite of services
- ❖ Advanced digital technologies and sensor technology,
- ❖ Innovative monitoring, data analysis and reporting
- ❖ Industry-leading Training - Classroom, eLearning, Webinars, Customer training institute
- ❖ System Assured - hygiene compliance system
- ❖ Knowledge and Expertise



Total Solutions

				
Chemicals	Equipment	Engineering	Knowledge Based Services -KBS	Training
<ul style="list-style-type: none"> • Cleaning in Place (CIP) • Open Plant Cleaning (OPC) • Sanitizers & Disinfectants • Direct Food Contact Antimicrobials • Water Treatment • Track Treatment 	<ul style="list-style-type: none"> • Dosage and Allocation Systems • Storage and Distribution Systems • Foaming Systems • CIP Solutions 	<ul style="list-style-type: none"> • Automated Cleaning • Bulk chemical storage and distribution • Project and Design • Remote Monitoring Systems • Data Analytics Programs 	<ul style="list-style-type: none"> • Water and Energy Conservation • Yield Management and Improvements • Food Safety consulting programs • Productivity • Labour Management 	<ul style="list-style-type: none"> • E-learning • Pay as you go Food and Beverage application training courses • Fully customizable enterprise platform • Documented training records and renewals

**Engineers, Technical Customer Support
Sector Specialists, Training Solutions & Operational Support**

Chemical Applications and Innovations

A snapshot of recent industry leading innovation

Open Plant Cleaning (OPC)



Complete portfolio of OPC detergents, disinfectants and application equipment coupled with training and optimisation services

Cleaning in Place (CIP)



CIP detergents and disinfectants, project engineering and optimisation and monitoring services

Conveyor Lubrication



Wet, semi-dry and dry lubrication chemicals and application systems for all packaging types.

Membrane Cleaning



Chemicals and optimisation services for membrane installations and processes.

Water Treatment



Treatment of incoming water to enhance quality and reduce corrosion, deposition and bio-fouling. Treatment and recycling of waste water.

Diverclean Sonic



Pioneering pre-clean treatment for high soil environments. Saving time, water and chemical.

Intelligent CIP



Digital monitoring and analytics to maintain food safety while reducing downtime. Saving water, energy, time.

DryFormance



Water free conveyor lubrication. Saving water, energy and extending asset life. Enhancing operator safety.

Divos ACP



Novel membrane cleaning technology and procedure. Saving water, energy, time and extending asset life

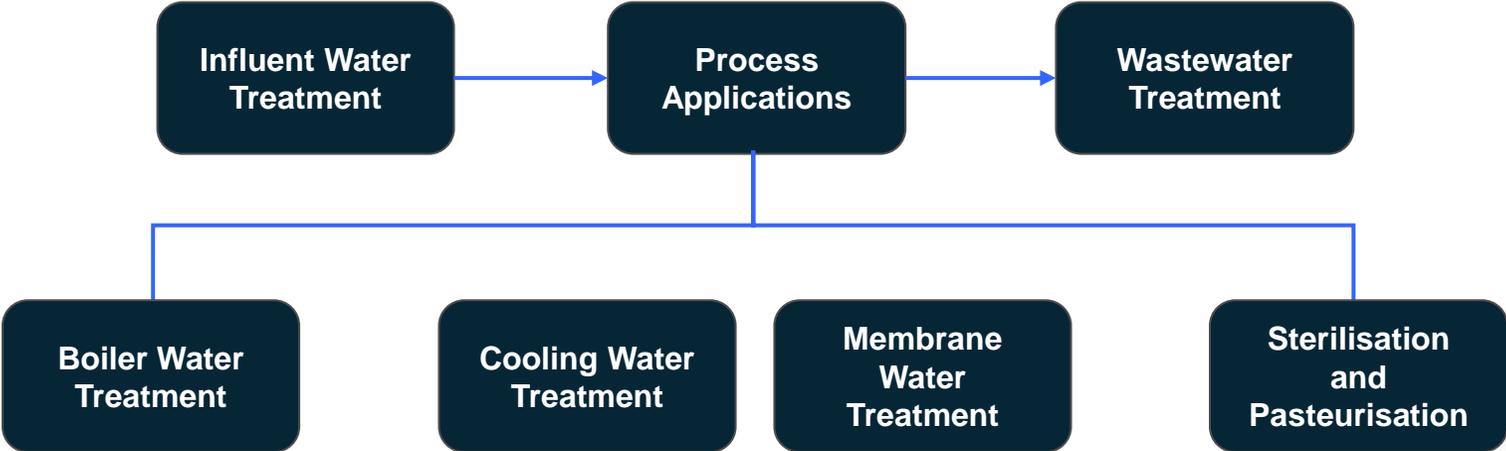
Solenis



Full portfolio of innovative water and wastewater treatment solutions.

Water Treatment

Combining Hygiene and Water Treatment to maximise resource optimisation



- Specialty chemicals
- System design, Engineering and installation

- Monitoring and control equipment
- Total approach to water reduction, recovery and recycling

A 2x3 grid of icons representing various resources and goals: an hourglass (time), three dollar signs (cost), a hand holding a pipe (leakage), a water drop (water), a lightning bolt (energy), and a leaf (environment).

- Reduce water consumption
- Reduce energy consumption
- Protect the life of assets
- Reduce total cost of operations
- Maintain regulatory compliance

Equipment and Engineering

Application Expertise & Hygienic Design

Diversey engineering and support teams provide project engineering, full system design, custom build options, installation and commissioning.

Cleaning in Place

Application Control and Automation

Open Plant Cleaning

Conveyor Cleaning

External Filler Cleaning

Bulk Storage and Distribution

Caustic Recovery

System Integration

Track Treatment

Remote Monitoring and Servicing



Equipment and Engineering

- Our standard equipment range has been selected from the trusted suppliers that we have worked with on thousands of projects and installations in the Food and Beverage industries.
- Whether you are looking for a full open plant cleaning system, water driven dosing pump or a hygienic entrance control system, you can be sure that the recommended products are proven in their capabilities and promote improved operational efficiency.



Diversey Open Plant Cleaning | Hose Reels

Automatic Hose Reel
Spring driven automatic stainless steel hose reel built for designed for food and beverage applications

Technical Specification

Working pressure	200 bar
Working temperature	90°C
Lead thread	1/2" NPT
Outlet thread	1/2" F
Hose length	20.00 m
Hose diameter	1/2"

Item No. Description

1220010	Automatic hose reel 1/2" x 20 m
1220011	Automatic hose reel 1/2" x 25 m
1220012	Automatic hose reel 1/2" x 30 m

Hoses not included

Accessories

- Lead thread hose reel 1220010
- Lead thread hose reel 1220012
- Pressure gauge for hose reel and hose reel accessories
- Pressure gauge for hose reel and hose reel accessories
- Pressure gauge for hose reel and hose reel accessories
- Pressure gauge for hose reel and hose reel accessories

Manual Hose Reel
Manual stainless steel hose reels designed for food and beverage applications

Technical Specification

Working pressure	200 bar
Working temperature	90°C
Lead thread	1/2" NPT
Outlet thread	1/2" F
Hose length	20.00 m
Hose diameter	1/2"

Item No. Description

1220013	Manual hose reel 1/2" x 20 m
1220014	Manual hose reel 1/2" x 25 m
1220015	Manual hose reel 1/2" x 30 m

- ❖ OPC equipment including mobile, integrated wash down systems, hoses and accessories.
- ❖ Industrial Steam Cleaning systems and accessories
- ❖ Chemical Storage
- ❖ Chlorine Di-Oxide Generation
- ❖ Control and Monitoring – in line sensors, meters and control units
- ❖ Chemical Dispensing and Dosing
- ❖ Fogging Systems
- ❖ Personal Care dispensing and access control systems
- ❖ UV air and water disinfection systems

Diversey Personal Hygiene | Hygienic Entrance Systems

Hand Cleaning / Disinfection (HDT)
Designed to reduce the risk of contamination during the production process, the automatic dispenser allows fluids being sprayed and delivered over or distributed in a hygienic, safe and controlled manner. The dispenser is designed to be used in a hygienic environment. The dispenser is designed to be used in a hygienic environment. The dispenser is designed to be used in a hygienic environment.

Options combinations available as shown

1211001	HDT B	Access control - Hand disinfection - Wall mounted
1211002	HDT B	Access control - Hand disinfection - Wall mounted - Right
1211003	HDT B	Access control - Hand disinfection - Wall mounted - Left
1211004	HDT B	Access control - Hand disinfection - Free standing - Right
1211005	HDT L	Access control - Hand disinfection - Free standing - Left
1211006	HDT B	Access control - Hand disinfection - Wall mounted - Right
1211007	HDT B	Access control - Hand disinfection - Wall mounted - Left
1211008	HDT R	Access control - Hand disinfection - Free standing - Right
1211009	HDT L	Access control - Hand disinfection - Free standing - Left

Technical Specification

	HDT B/L	HDT B/R/L	HD B/W
Width	1200 mm	700 mm	700 mm
Depth	300 mm	400 mm	300 mm
Height	1300 mm	1100 mm	1100 mm
Safety	IP 65	IP 65	IP 65
Electrical connection	120V V / 50Hz	230V V / 50Hz	230V V / 50Hz
Power	0.1 kW	0.1 kW	0.1 kW
Weight	120 kg	80 kg	80 kg

*This applies to the standard version

Diversey Open Plant Cleaning | Wall Mounted

Main Station MS SEE
The Main Station MS SEE is a fully automatic primary station with a variable wall on the wall or on the wall. It is designed for use in a hygienic environment with a range of 15-20 bar to control the pressure and water supply. MS SEE is available in two versions: MS SEE for 1.5 bar and MS SEE for 1.5 bar. Each unit has a built-in hose reel and a built-in hose reel.

Technical Specification

Minimum number of operators	4	6
Minimum water inlet pressure	1.0 bar	1.5 bar
Minimum water inlet pressure	10 bar	10 bar
Minimum water supply	30 m³/h	70 m³/h
Maximum water inlet temperature	90°C	90°C
Air supply	8 m³/h	8 m³/h
Minimum air inlet pressure	1 bar	1 bar
Minimum air inlet pressure	10 bar	10 bar
Minimum air supply	100 m³/h	100 m³/h
Water inlet connection	1.1/2"	1.1/2"
Weight	1200 kg	1000 kg
Height	1300 mm	1300 mm
Width	800 mm	800 mm
Depth	300 mm	300 mm

Installation Kit

Item No.	Description
1211010	MSA F 100
1211011	MSA F 100
1211012	MSA F 100
1211013	MSA F 100

Small parts available - please see Equipment fact sheet

Knowledge Based Services

Knowledge Based Services

The challenge to food and beverage manufacturers is how to **produce quality and safe product** whilst reducing operational costs to **stay competitive**

The Diversey Knowledge-based Services portfolio address key industry challenges under five core pillars of focus;

- Productivity,
- Water, Energy,
- Yield and
- Food Safety.

All have a common goal of continually improving **Food Safety, Operational Efficiency and the Sustainable use of resources** in Food and Beverage processing.



Knowledge-Based Services Portfolio



Diversey® BWCheck™✓

Optimisation of the Bottle Washing (BW) equipment and process. Page 6-7

P W E F



Diversey® CIPCheck™✓

Optimisation of Cleaning in Place (CIP) equipment and processes. Page 8-9

P W E F



Diversey® Dryformance™

Water-free conveyor lubrication engineering and optimisation. Page 10-11

P W E



Diversey® FillerCheck™✓

Optimisation of the Filler Cleaning equipment and processes. Page 12-13

P W E F



Diversey® LubeCheck™✓

Optimisation of the conveyor track lubrication system. Page 14-15

P W E



Diversey® OPCCheck™✓

Optimisation of Open Plant Cleaning (OPC) equipment and processes. Page 16-17

P W E F



Diversey® AquaCheck™✓

Optimisation of water usage. Page 18-19

W E



Diversey® AirCheck™✓

Optimisation of compressed air generation and usage. Page 20-21

E



Diversey® SteamCheck™✓

Optimisation of steam generation and usage. Page 22-23

E



Diversey® SecureCheck™✓

Food safety diagnostic tool. Page 24-25

F



Diversey® Hygiene Academy

E-learning platform and training modules. Page 26-27

F

Core pillars:

PRODUCTIVITY	P
WATER	W
ENERGY	E
YIELD	Y

FOOD SAFETY	F
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Training

Diversey offers a variety of customizable options available

1. **Face to face on-site training**

Power to increase employee retention rate by up to **60%**

2. **Customer Training: Classroom setting**

- Chemical Safety
- Principals of Cleaning
- Microbiology
- GMP for Food Plants
- Hygienic Design
- Allergens Management

- Open Plant Cleaning
- Cleaning in Place
- Bottle Washing
- Membrane Cleaning
- Track Treatment

3. **Hygiene Academy: Online e-learning platform**

Hygiene Academy

Combining Hygiene and Water Treatment to maximise resource optimisation

- ❖ Create, print and digitally sign training course certificates, and incorporate expiration policies
- ❖ Access powerful reporting capabilities to monitor employee participation, performance and progress
- ❖ Customise with your own branding
- ❖ Improve user experience and minimize setup time
- ❖ Increase accountability by tracking employee participation and provide documentation to workers and supervisors
- ❖ Save time and reduce expenses associated with face to face training
- ❖ No expensive hardware or software required



ESSENTIAL COURSES

- Chemical Safety
- Principles of Cleaning
- Microbiology



PROCESS COURSES

- Gmp for Food Plants
- Hygienic Design
- Allergens Management
- Dry Cleaning



APPLICATION COURSES

- OPC
- CIP
- Bottle Washing
- Membrane Cleaning
- Track Treatment
- Crate Washing



SPECIFIC MICROBE CONTROL COURSES

- Listeria
- Campylobacter
- Biofilm
- Salmonella

Service Excellence

100 years of Industry Experience

- ❖ Unmatched expertise focused on a holistic approach using innovative sustainable solutions to achieve optimal results.



- Cleaning Optimization
- Utilities Optimization
- Cleaning Validation
- Audit Consulting

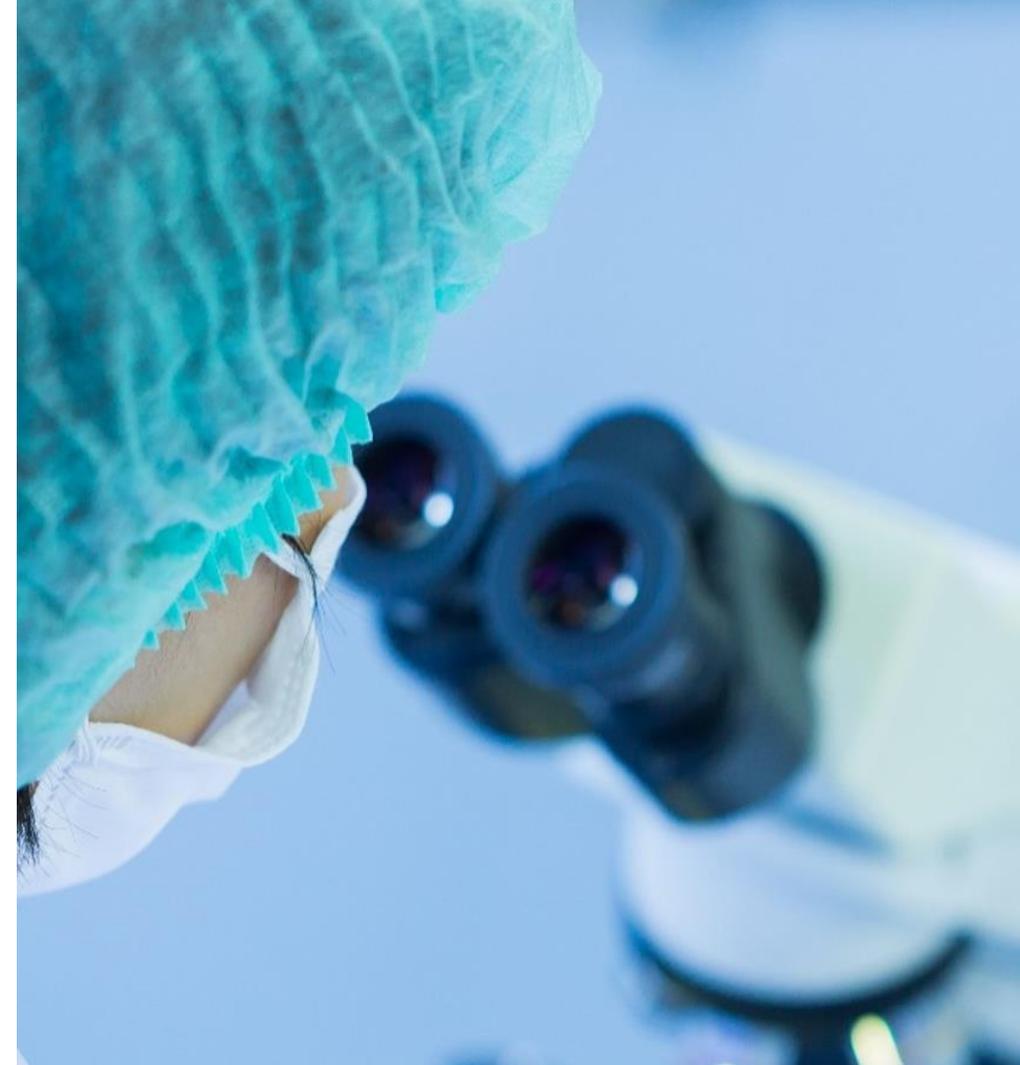
- SQF, BRC, GMP, HACCP, Food Safety
- Microbiological Troubleshooting
- Training

100 years of Industry Experience

- ❖ Over 100 scientists, chemists, microbiologists, engineers and application specialists with more than 1600 years of cumulative R&D experience
- ❖ In excess of 1200 patents granted, more than 600 active agreements with external technology partners and providers – from chemical companies to academia.

- New product development
- Soil Identification

- Cleaning Procedure development
- Microbiological Troubleshooting



Service Deliverables

