Washing and sterilization systems
Serving the pharma industry worldwide

Exceed expectations

Innovative washing equipment and customized loading racks
Diversified, steam and ETO sterilization range

Fully automated closure processing equipment
Drying and depyrogenation ovens
Automation systems

Steelco
your partner in infection control
Solutions for the pharmaceuticals and biotechnology companies

Located in modern factories near Venice in Italy, Steelco Group is a major global supplier of infection control and contamination prevention for the healthcare, laboratory and pharmaceutical sectors. Steelco’s success is demonstrated by its strong growth, becoming the partner of choice for many of the world’s leading pharmaceutical companies who appreciate the company’s:

**Experience and knowledge**
- Strong track record of establishing long term global partnerships.
- Integrated in-house operations in more than 52,000 sq.mt. manufacturing sites. Equipment totally manufactured in Italy.
- Fully certified quality systems with knowledge of pharmaceutical manufacturing standards.

**Global footprint**
- Global HQ in Italy with regional customer support centres in America and Asia.
- Network of factory trained agencies in over 100 countries worldwide with after service capabilities.

**Extensive product range**
With over 3000 installations worldwide, Steelco offers a wide portfolio including:
- Innovative washing equipment with customized loading racks.
- Diversified sterilization equipment, steam, terminal sterilization and ETO range.
- Innovative fully automated closure processing equipment.
- Drying and depyrogenation ovens.
- Automation systems to maximize productivity and safety.

**Flexible solutions**
- Ability to meet the most challenging processing needs.
- Only using best proven readily available from the market control systems and components.

**3D project layouts**
Steelco Group offers complete “turnkey” solutions for washing and sterilization processes in the pharmaceutical sector, with the ability to undertake all stages of a project from concept to delivering solutions that exceed customer expectations.
Steelco’s extensive experience assists customers to increase process productivity and quality with improved ergonomics whilst limiting costs.

**Quality engineering process**
Steelco Group’s engineering experience encompasses knowledge and understanding to be able to satisfy the most stringent requests from clients.
Quality system certification

We constantly strive to improve on our high standards to enable us to deliver optimal solutions for our partners in the pharma industry.

Integrated architecture

Steelco can install new equipment into an existing automation system through the adoption of a simple (HMI) or more sophisticated (SCADA) man-machine interface.

Compliance and guidelines

The planning and the production of our washing, drying systems and sterilization is based on standards and guidelines recognized both worldwide as well as in the final installation country.

Extensive customer support services

Customer service excellence is Steelco Group’s commitment to our clients and a cornerstone of our success with emergency service support if needed available, 24 hours, 7 days a week.

Control system

User friendly control systems developed according to the latest GAMP and design for 21 CFR Part 11 available, sourced from the best available suppliers avoiding customized electronics.

Validation documents

User safety, product quality and data integrity are Steelco Group core values. Factory Acceptance Test and Site Acceptance Tests. DQ (Design Qualification), Installation qualification (IQ), operational qualification (OQ), and performance qualification (PQ) are provided in standard version or customized according to the final scope of supply.
DS PH range
Pharma grade washers

Steelco understands the particular critical cleaning, disinfection and drying requirements of equipment and components used in pharmaceutical production including:

- Glassware
- Filling line components and tools
- Tubing, TC fittings
- Valve and pump bodies, filter housings
- Punches and Dies
- Reactor vessels and diverse equipment
- Bulk containers, tanks and carboys

ML Series
Pharma grade parts and glassware washers

Single (or double) hinged chamber door and dual locking mechanism to guarantee clean environments.

Machines are designed for pharmaceutical products such as glassware, pipettes, machine parts, tanks, glass bottles, pill stamps, carboys, tubes, needles, etc...

Chamber volume

from 230 litres / 8 cu.ft to 2,400 litres / 85 cu.ft

Available in different dimensions and configurations

Exceed industry standards

High performance cGMP compliant pharma grade washing systems available as single or pass-through double door versions to provide an effective barrier system between different zones.

Easy and safe access is assured using large automated vertical (either up or downward) or horizontal sliding glass doors or hinged door type.

Steelco can provide customised solutions with special drying programs or HPV (hydrogen peroxide vapor) decontamination according to customer needs.

Pharma carts and trolleys
Standard and customized solutions

Using sophisticated 3D tools, Steelco’s engineering department optimizes cart design in order to reduce process time and water consumption whilst maximizing process effectiveness.
**LC 80 PH Series**
Cabinet washing system

LC 80 PH is a versatile system to treat large volume of items such as wash containers, large components, ultracentrifuges, bulk chemicals. Easily adjustable floor guides for different carts with access to filter. Spray nozzles on oscillating arms for perfect washing results. High performance efficiency with steam heater versions available.

- **Easy cart connections**
- **Double drying unit with capacity of 1000 m³/hour**
- **Lateral rotating washing pipes with nozzles to assure a adequate cleaning of all parts of loaded items**
- **Repeatable and validateable**
- **Automatic loading and unloading system available upon request**

Chamber volume

**from 4,250 litres / 150 cu.ft**
**to 10,500 litres / 370 cu.ft**

Available in different dimensions and configurations

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**LB Series**
Bin washer equipment

The LB Series is specifically designed for the cleaning and drying of containers and drums in pharmaceutical validated processes.

- **Continuous moving spray arms**
- **360° constant bin rotation during the cycle**
- **Drying unit with 1000 m³/hour capacity**

Chamber volume

**from 5,000 litres / 177 cu.ft**
**to 10,000 litres / 353 cu.ft**

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**Easy cart connection**

Machines can be equipped with special cart connections for water injection. Complete system including carts are tested with all critical process parameters monitored.
**AV Series**  
**Saturated steam sterilizers**

Versatile cGMP Steam Sterilizers, available in single or pass-through versions, with hinged (AVL Series) or sliding doors (AVS Series).

Built to a high standard, each unit is tailored to the customer's individual specifications. Cart guides are welded into chamber floor for easy loading.

Components from the market.

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**LST/LT Series**  
**Closure processor**

Innovative customized stopper processor solutions for highly cost-effective projects. Process validated with major suppliers of stoppers and multinational pharma companies.

Complete treatment of closure devices such as: rubber stoppers, plastic stoppers, droppers and other similar components.

Steelco also produces a "Closure washer" version without sterilizations (LT series)

Where continuous sterility has to be maintained, the LST Series offers washing, rinsing, siliconizing, sterilizing, drying and cooling all in one solution.

- Simultaneous processing of different types of stoppers
- Elimination of excessive accumulation of material during treatment phases
- Minimized particle generation due to mechanical stress and effective endotoxin reduction
- Enhanced surface exposure to process fluids
- Optimized washing process, with effective endotoxin and particle reduction
- Uniform silicone distribution on individual stoppers and the entire batch
- Optimization of the cip phase
- High productivity and efficiency

Automatic unloading into Sartorius Stedim Biotech clean & pre-sterilized Biosafe® Bags through the Biosafe® Biosteam S Port

Compatible with different loading/unloading systems, with the option of interfacing with vaporized hydrogen peroxide isolators.

**Chamber volume**

- from 40 litres / 1.4 cu.ft
- to 480 litres / 17 cu.ft

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Only Stainless Steel material: AISI 316L chamber, door, jacket, piping,  
AISI 304: control board and frame.

“Unique” design of door gasket with standard warranty three years without replacement.

PLC with copy of source code.

Open architecture Siemens or Allen Bradley.

**Chamber volume**

- from 195 litres / 7 cu.ft
- to 10,000 litres / 353 cu.ft
AGS/AGS-E Series
Ethylene Oxide Sterilizer

Low temperature sterilization of heat-sensitive items, according to the EN 1422 Standards. Suitable for plastic and rubber products, perfusion sets, dialysis cartridges and special surgical instruments.

Highest performance and versatility, sterilizing with Ethylene Oxide.

Chamber volume: from 1000 litres / 35 cu.ft to 63,000 litres / 2.225 cu.ft

The AGS/AGS-E series is engineered for safe and cost efficient cycle, protecting operators.
Steelco’s range of ETO sterilizers use thermal combustion for a complete breakdown of the sterilizing gas.

Terminal Sterilization

AMS Series
Steam Air Mixture sterilizer

Used to sterilize liquids in sealed or heat-sensitive containers such as: bottles, ampoules, vials, semi-open containers, bags, blister packs, pre-filled syringes, pouches, contact lenses, LPV’s, etc, and also for the pasteurization of products like blood plasma.

Air-Steam or Superheated Water Process?
Selection depends on the products thermal properties, level of dryness to be reached, utilities available on site and running costs.

Chamber volume: from 830 litres / 29 cu.ft to 25,000 litres / 883 cu.ft

Available in several different chamber sizes and configurations with accessories to tailor each unit to exact requirements with automatic loading & unloading systems.

SD Series
Hot Air drying/sterilization/depyrogenation Oven

Sterilization and depyrogenation of heat resistant materials including bottles, vials, glass containers, metal trays and production equipment, laboratory glassware and instruments, materials sensitive to humidity, thermostable basic pharmaceutical products, chemical compounds and non aqueous liquid materials such as oils, glycerines, etc.

Chamber volume: from 330 litres / 12 cu.ft to 10,000 litres / 353 cu.ft

EG Series
Hot Air Drying Oven

The EG series is used for drying by hot air of materials such as granulates, pellets, powders and porous loads.

For the treatment of granules with the presence of solvents, the dryer can be equipped to monitor flammability hazard by controlling LEL.

Chamber volume: from 330 litres / 12 cu.ft to 10,000 litres / 353 cu.ft
Steelco DS PL range
Industrial challenging application washers

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