EFFICIENT WASHING

PROFESSIONAL FINISHING

INTELLIGENT AUTOMATION





# SEA-LON

Overall solution for global industrial and commercial washing.

# **Sea-lion Industrial Park**

Washing technology and equipment leader.









Sea-lion is China's technological leader in heavy-duty industrial and commercial laundry machinery possessing a wealth of experience in manufacturing from years of research and development. Sea-Lion specializes in a comprehensive range of laundry solutions, including washer-extractors, tunnel washers, tumble dryers, ironers, folders, feeders, and finishing equipment. We offer over 100 models across 10 product series, catering to various industries such as hospitality, healthcare, transportation, and industrial and commercial laundries.

# Together, we create a clean world!





# **Custom-Built. Customer-Focused.**

At Sea-lion, we don't just manufacture industrial laundry equipment—we engineer solutions tailored to your operation, your space, and even your brand identity. From intelligent automated rail systems to high-efficiency tunnel washers to professional finishing systems, every Sea-lion machine can be configured to meet your unique workflow and capacity need. We can help you determine strategies, measure operation capacity, rationally configure equipment, optimize workplace operation efficiency, provide information management solutions, simplify operation management, and support the digital evolution of the Internet of Things (IoT) and Industrial Internet of Things (IIoT) to further improve business performance.

#### **HOSPITALITY LAUNDRY SOLUTIONS**

Improve the cleanliness and service life of linen, reduce sewage discharge, save energy costs, and improve hotel customer experience. Our complete solution will help you optimize production and factory operations, and produce more results with less resources.

#### **MEDICAL LAUNDRY SOLUTIONS**

Your specialty is in the field of medical services, and our specialty is washing, disinfection, antibacterial and energy management. Learn how our two sides work together to help hospitals and healthcare washing facilities achieve safety and sustainability goals.



# **Efficient Washing**

Environmentally friendly and efficient washing systems and equipment.

- Tunnel Washer System
- Commercial Washer
- Barrier Washer
- Industrial Washer
- Titanium Series
- Tumble Dryer



# **Professional Finishing**

Systems and equipment for the final touch for customer presentation.

- Spreader/Feeder
- Serpentine Ironer
- ❖ Chest Ironer
- Flatwork Folder
- ❖ Small Piece Accumulator
- ❖ Towel & Blanket Folder



## **Intelligent Automation**

Improve the movement of laundry without human intervention.

- Cart Dumper
- Multi-station Soiled Sorting System
- Overhead Monorail System
- Shuttle & Conveyor
- Elevator Transport
- ❖ SCADA Control



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# **Tunnel Washer System**



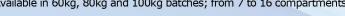
Sea-lion **SDX** tunnel washer combines the best of single-drum and double-drum technology for unmatched efficiency and flexibility. Double-drum modules feature dedicated chemical ports and independent water and drain valves, allowing precise control of wash liquor ratios and instant color changes—no need to leave modules empty. Powerful lifting ribs ensure exceptional mechanical action, while the bottom-transfer design minimizes blockages and keeps operations running smoothly. Choose from weight-sensing conveyor loading or overhead sling monorail systems for seamless integration into your workflow. Extraction options include a high-efficiency multi-stage hydraulic press or centrifugal extractor. At the heart of it all, our advanced SCADA platform—powered by PLCnext—delivers full system programming and real-time monitoring for total control of your wash process.

#### **Key Tunnel Features:**

- Water flow meters precisely control water supply for each compartment, and conductivity rate is monitored continuously
- Bus-manifolds are adopted for pneumatic system
- \* Rinse steps can be done in individual or combination to improve washing quality
- Very low risk of blockage as bottom transfer design is adopted
- Two tanks with lint filter system for water recovery and reuse
- Instant color changing function whereby colored linen can be washed without delay or empty module
- ❖ Over-flow device is installed on the outer drum to control foam and lint
- \* Managed by color touch screen controller with multi-lingual display. Entire system process is monitored, including: 100 washing programs; additive amount of washing detergents and chemicals; temperature monitoring; water flow; water change during washing; washing time/cycle time; transference of customers codes from press to dryers



Available in 60kg, 80kg and 100kg batches; from 7 to 16 compartments.



# System Components:

Extraction: SDT Press or SDT-L Centrifuge

Removes water from the laundry with high pressure or G-Force.

- ✓ Hydraulic drive with maximum pressure of press membrane of 50 bar
- ✓ 100 press programs; process is graphically displayed on control panel
- ✓ Exclusive second rinse process with unique twist press action
- ✓ Press pressure is stepless and adjustable
- ✓ Discharge is controlled by fuzzy logic and IR sensor for safety
- √ Robust structure of upper and lower pillars made from forged and hardened steel
- ✓ Centrifuge Extractor features multiple speeds and based on proven XGQ washer design

#### ❖ SDC Shuttle

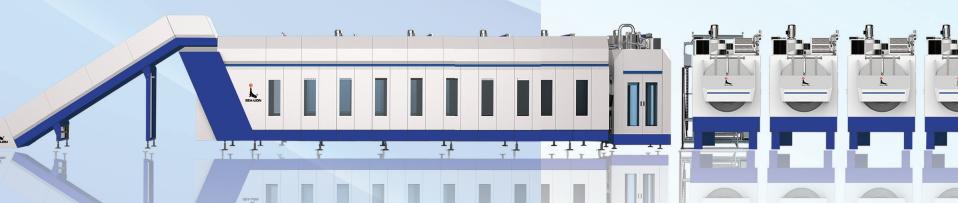
Shuttle works to transfer goods from press to dryers for conditioning or drying.

- √ Shuttle discharge position can be customized to site requirements
- √ Safe and reliable with sensors measuring active length of conveying belt
- ✓ Special PVC belt prevents off-tracking and limits distortion
- ✓ Adopts Industrial Ethernet for reliable and precise shuttle transfer points

## SDH Pass Through Dryer

Processes goods after washing and extraction for conditioning or drying.

- ✓ Optimized unloading air duct is efficient and smooth
- √ Back pressure is constantly monitored with indicators for lint removal
- √ Constant monitoring of inlet and outlet temperatures
- ✓ 2-stage gas burner / "Rain Forest" steam heat exchanger Available in 120kg & 160kg loading capacities with Gas or Steam heating.











# **Washer-Extractors**



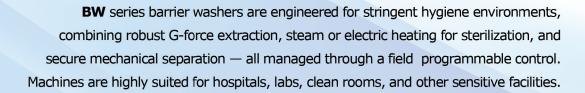
# **Commercial Series**

XGQ-F stationary soft mount and XGQ-FQ tilting soft mount washer-extractors combine economy and performance into a reliable, field proven machine design. Features like large door openings into baskets with smooth, dimpled perforations highlight the design quality and build craftsmanship. Field programmable computer control offers washing flexibility for a wide variety of goods.

#### **Key Features:**

- Tubular steel frame is a solid structure housing all electrical components, as well as suspension system.
- \* Efficient direct v-belt setup with inverter with single motor drive provides mooth power at all speeds.

# **Barrier Series**



#### **Key Features:**

- Compact air bag suspension system isolates machine vibration transmission.
- Cylinder positioning is controlled by a proximity switch and magnets to automatically align inner door position for loading and unloading operations.
- Weight sensing device monitors load volume for proper loading volume.

# **Prevents cross-contamination** between clean and soiled operations.



**XGQ-CF** (and related CFQ/CFSQ tilting) models are large-capacity, fully automatic washer-extractors designed for industrial and commercial laundry environments. Known for reliable performance, easy maintenance, and flexibility in handling different linen types. A robust, versatile choice for mid to large-scale laundry operations that need power, control, and uptime.

#### **Key Features:**

- Automatic door and hydraulic tilting assist loading and unloading functions.
- Innovative suspension system improves extraction performance.

# **Titanium Series**



NEW XGQ-TI elevates traditional industrial washers with state-of-the-art automation, smart sensing, IoT readiness, and pro-level ergonomics. If you're seeking premium performance with digital control and operational insights at scale, this line is a strong contender. Excellent fit for applications that demand smart facility integration, remote monitoring, and high efficiency.

## **Key Features:**

- Control adopts a unique algorithm that enables water-free load balancing, significantly reducing energy consumption and washing cycle time. While lowering costs, it also improves production efficiency.
- Super high speed extract for maximum water extraction.















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# **Tumbler Dryers**

# **Commercial Series**

Sea-lion **GZ** stand-alone tumble dryers are available with gas burner, steam or electric heating elements. Designed to have the perfect balance of CFM air flow and heat transfer for optimal drying. Fitted with an ultra smooth and durable 304 grade mirror Stainless Steel drum with dimpled perforated basket to eliminate snags and protect goods. Outer panels are made of corrosion resistant stainless steel finish.

#### Key Features:

- Simple microprocessor control features programmable time and temperature settings.
- \* Reversing motor system gently tumbles the goods in both directions to reduce tangling.
- ❖ Access to the lower lint screen panel is simple making quick work for filter maintenance.



NEW **GZ-TI** Titanium Dryers from Sea-lion feature an intelligent dynamic control system that accurately controls airflow through frequency conversion technology to achieve dynamic optimization of the suspension state of the fabrics and significantly improve the efficiency of energy utilization and heat exchange. This shortens drying cycle while reducing energy consumption.

## Key Features:

- Drive motor is controlled by a frequency inverter, enabling multi-stage speeds (4 stages).
- Fan motor is inverter controlled. It can linearly control wind speed according to the inlet air temperature to maintain drum temperature, accelerating evaporation rate of linen moisture and enhancing drying effect.
- The heater is equipped with a special heat preservation and cold air extraction mechanism keeping heater at a high temperature state all the time, reducing the heating up time of the heater.



# **Pass-Through Series**

Sea-lion **SDH** pass-through dryers stand out for its high capacity, full automation, smart drying control, and flexible adjustments—making it a robust, efficient solution for commercial laundry facilities seeking speed, reliability, and quality. Equipped with automatic loading/unloading doors that work in tandem with loading shuttles and unloading conveyors—ideal for seamless, continuous operation.

#### **Key Features:**

- Driven by variable speed drives—operators can tailor airflow (CFM), drum rotation speed, and basket movement via the controller for optimal drying cycles.
- Smart drying control: Dual thermal sensors at inlet and outlet guard against overdrying and constant monitoring of airflow backpressure ensures consistent and efficient moisture removal.
- Available with exclusive "Rain Forest" steam heating or dual stage gas burner.

# **Lint Collectors**

Sea-lion **CRM** lint collectors have been developed with the latest air purifying technology. Offering safe removal of lint from entering ductwork. It offers both manual and automatic operation. Spray function (optional) - during operation, when air from dryers enters into lint collector, it is easy for lint to ignite because of the high temperature of the air flow; therefore, when temperature sensor detects temperature over the set limit, the sprayer will automatically start spraying and bring the temperature down, to prevent a fire from happening.

#### **Key Features:**

- Can effectively filter 95% of lint material out of the air flow to greatly improve air quality.
- Two side view windows for daily check and cleaning.
- Strong blowing device removes built up lint from filter and deposits into collection bag.
- Utilizes a high temperature resistant and fine mesh filter to create a good filtering effect and long service life.











# **Professional Finishing**

## **High-Speed Flatwork Finishing**

Sea-lion high-speed flatwork ironing line is a fully integrated system designed for high-volume processing of flat linen such as flat sheets, fitted sheets, pillowcases, duvets, and table linen. It combines precise feeding, efficient ironing, accurate folding, and automated stacking to maximize productivity and quality.

# **Complete Linen Processing, Simplified**

Advanced automation with proven engineering delivers superior results for today's most demanding laundry operations. From feeding to finishing, every stage is optimized for speed, precision, and consistent quality — helping your business stay competitive and profitable.





- \* ZBQ Automatic Spreader/Feeder
- ✓ High-speed, precision feeding system ensures linens enter the ironer perfectly aligned.
- ✓ Smooth, wrinkle-free presentation optimizes finish quality.
- ✓ Adjustable to handle a wide range of flatwork sizes from pillowcases to king sheets.
- ✓ Reduces manual labor and improves operator ergonomics.
  - \* YSV High-Performance Serpentine Ironer
  - ✓ Delivers superior moisture removal and an exceptional finish.
  - ✓ Multi-roll serpentine design maximizes ironing surface in a compact footprint.
  - $\checkmark$  Consistent high-temperature performance with steam or thermal oil heating.
  - ✓ Energy-efficient operation with excellent heat retention and recovery.
  - ✓ Built for continuous-duty operation at high production speeds.

#### \* ZD Folder with Stacker

- ✓ Automatic folding for primary (cross and longitudinal) folds.
- ✓ Programmable folding patterns to handle various linen sizes.
- √ High folding accuracy even at high processing speeds.
- ✓ Dual stackers allow separation of different items or sizes into two discharge positions.
- √ Stacks are neatly arranged for easy handling and downstream processing or packaging.

## **Key Features:**

- ❖ High-speed processing: typically up to 1,000–1,200 pieces per hour depending on linen size.
- \* Fully automated workflow reduces labor costs and operator fatigue.
- High-finish quality suitable for hospitality, healthcare, and high-end laundry markets.
- Built for durability and long operational life with lower maintenance requirements.



## Advantage of Serpentine Linen Flow Path

Serpentine roller design ensures items pass over multiple heated areas multiple times, delivering more consistent pressure and temperature across the fabric—resulting in a smoother, glossier finish.





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# **Professional Finishing**

# **Small Piece Linen Processing**

Sea-lion **YZC** Chest Ironer and **ZD** Folder System delivers exceptional productivity, finish quality, and automation for today's demanding commercial laundry operations. Designed for high-volume processing of small flatwork items, the system combines efficient ironing, precision folding, automated stacking, and small piece accumulation in a fully integrated finishing line. Engineered for durability and easy operation, Sea-lion's advanced design reduces labor, increases throughput, and ensures a consistent professional finish on every piece.



- \* YZC Chest Ironer
- √ Heavy-duty polished chests ensure rapid heat transfer and superior results.
- ✓ Energy-efficient design with insulated chests and variable speed drives.
- ✓ Easy-to-use PLC controls with multiple program settings.
- ✓ Adjustable ironing pressure for a wide range of fabric types.

#### **System Benefits**

- High-Speed, Continuous Operation
  - ❖ Professional Finishing Quality
    - Labor-Saving Automation
      - ❖ Modular, Flexible Layout

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- ✓ Stacks are neatly arranged for easy handling and downstream processing.

#### ❖ ZDZT / ZDCJ Small Piece Accumulator

- √ Small Piece Handling: Processes pillowcases, napkins, towels, and similar small piece items.
- ✓ Batch Accumulation: Collects, counts, and batches items for bundling.
- ✓ Labor Saving: High capacity output reduces manual intervention.

# **High-Speed, Precision Folding for Towels and Terry Products**

Sea-lion **ZDMJ** Automatic Towel Folder delivers fast, accurate, and reliable folding performance for a wide range of terry cloth items. Designed to reduce labor costs while improving product presentation, this folder is ideal for high-volume commercial laundries serving hospitality, healthcare, and industrial customers.

#### **Key Features**:

High-Speed Performance

- Processes up to 1000–1200 towels per hour.
- Efficient design maximizes throughput without compromising fold quality.

#### Gentle Fabric Handling

- Air-blast folding and belt conveyors minimize towel stress.
- Preserves fabric softness and prolongs towel life.

#### Versatile Folding

- ❖ Handles multiple towel sizes: bath towels, hand towels, washcloths, bath mats, and more.
- Automatically detects towel size for optimal folding pattern selection.

#### Multiple Folding Patterns

- Programmable longitudinal and cross folds.
- Customizable fold sequences for various customer or facility requirements.

#### Integrated Stacker

- ❖ Automatically stacks folded towels in uniform, easy-to-handle piles.
- Adjustable stack height and neat presentation for packaging or cart loading.



#### **Machine Benefits**

- Labor-Saving Automation
- Consistent, Professional Presentation
- High Productivity with Minimal Downtime
- ❖ Reliable Operation & Low Maintenance
- Easy Integration into Full Finishing Lines

#### **User-Friendly Operation**

- PLC touchscreen control panel.
- Easy programming, real-time monitoring, and d iagnostic functions.

## Compact, Efficient Design

- Small footprint fits easily into most laundry layouts.
- Simple access for maintenance and adjustments.

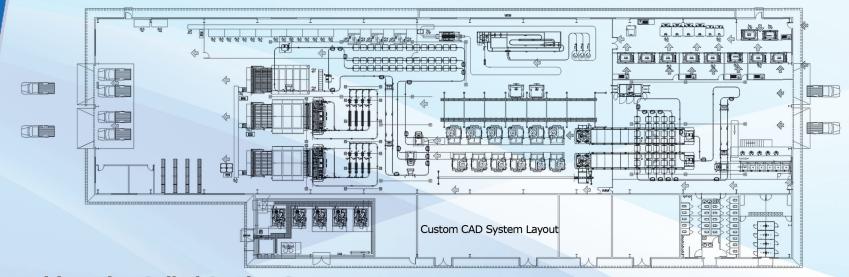






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High-volume laundry operations increasingly rely on intelligent automation and the Internet of Things (IoT). In response to this evolution, Sea-lion has developed a comprehensive portfolio of automated systems engineered to transport laundry between machines with minimal human intervention. Utilizing AI-driven control through the PLCnext software architecture within a SCADA framework, the system optimizes equipment performance and workflow efficiency. CAD-designed system layouts ensure the most effective use of available space.



# **Multi-station Soiled Sorting Systems**

Soiled sorting includes cart dumpers, weight sensing loading faveolate bins or conveyors into transport garment bags. Once loaded, the PLCnext software through SCADA network control is able to monitor goods throughout the laundering process.

# **Overhead Monorail Systems**

Overhead monorails with transport garment bags are custom designed to take advantage of available space and store both soiled and clean linens during the laundering process. Built with industrial grade rail and hardware. Intelligent routing controlled and monitored by a sophisticated SCADA control network to keep accurate track of linen locations.

# **Logistics: Elevator Transports / Shuttles & Conveyors**

Where space is at a premium, Sea-lion elevators connect washer and dryer lines by means of elevators. AI based software determines exit points from tunnel washer either to extraction press or centrifugal extractor then transportation to appropriate dryer machine. Shuttle and conveyor devices eliminate human interaction with the progress of laundry through the operation constantly moving goods from washing, drying and finishing stations.























# **Intelligent Automation**

#### **Phoenix Contact PLCnext Automation Software**



# **Key Features**

- \* Real-time SCADA dashboards for all system components
- Remote access for support via Phoenix Contact's mGuard VPN
- Barcode/RFID tracking from soiled input to clean output
- Optional integration of utility metering per load or shift
- ❖ Alarm notifications for jams, load delays, temperature faults, etc.

# Connectivity

- Supports Ethernet/IP, PROFINET, and OPC UA
- Easily integrates with ERP or laundry management software
- Open architecture allows future expansion

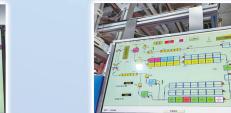
# **Operational Benefits**

- End-to-end automation of material flow
- Reduced manual labor and error risk
- Enhanced traceability and uptime

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\* Real-time insight for faster decisions and maintenance response







The SCADA control system from Phoenix Contact powers Sea-lion's automated overhead monorail system (soiled and clean side) and tunnel washer line, providing integrated control, real-time monitoring, and data visibility across the

# **System Architecture**

- Phoenix Contact PLCs control monorail hoists, tunnel washer functions, presses, centrifuges, shuttles, and dryers.
- Remote I/O modules gather data from limit switches, photo eyes, proximity sensors, valves, and motors.
- SCADA/HMI software provides:
  - ✓ Real-time equipment status and flow control
  - ✓ Batch tracking and load ID visualization

entire wash process in high-volume laundry operations.

- ✓ Alarm/event logging
- ✓ Trend and performance reporting

## **Subsystem Automation**

- Soiled Side Monorail
  - ✓ Automatic bag filling, weighing, and queuing based on wash type
  - ✓ Bag movement and routing logic controlled by PLCs
  - ✓ Real-time bag ID tracking and tunnel washer load sequencing
- Tunnel Washer System
  - ✓ Controls for drum speed, temperature, water levels, chemical dosing
  - √ Seamless integration with press, shuttle, and dryer operations
  - √ Load-based logic for variable tunnel cycles
- Clean Side Monorail
  - ✓ Automatic unloading of clean bags and routing to dryers or finishing lines
  - √ Synchronization with dryer availability and processing queue



# **After-Sales Technical Support & Spare Parts**

## **Our Promise**

- ❖ A Long-Term Commitment to North America
  - ✓ Jiangsu Sea-lion is a global leader with 55+ years in commercial laundry innovation
  - ✓ Sea-lion America represents our full commitment to long-term growth and support in the U.S., Mexico and Canada
  - ✓ Our investment goes beyond equipment—it's in people, partnerships, and lasting performance

## What After-Sales Means to Us

- ❖ More Than Service—It's Partnership
  - ✓ Real-time remote diagnostics and monitoring
- ✓ Rapid-response technical support
- ✓ Stocked spare parts warehouse in North America
- ✓ Preventive maintenance and training programs

# **Remote Access & Diagnostics**

- Advanced Troubleshooting from Anywhere
  - ✓ Reduces downtime and service cost
  - ✓ Live troubleshooting, software updates, system resets

# **WeChat Tech Support**

Dedicated group chat system to provide fast, real-time technical support for equipment issues, maintenance questions, and troubleshooting.

√ Secure VPN access

- ✓ Dedicated WeChat group for each customer site
- ✓ Built-in translation for clear multilingual communication
- ✓ Direct access to U.S. support team and factory engineers
- ✓ Ideal for real-time troubleshooting and shared photos/videos

# **Parts Availability**

- ✓ U.S.-based warehouse with high-demand spare parts
- √ Factory-direct access to global Sea-lion inventory

## **Preventative Maintenance**

- ✓ Custom PM plans based on your equipment and workload
- ✓ Scheduled inspections, updates, and key part replacements
- √ Keeps systems running and extends equipment life

# **Operator & Tech Training**

- ✓ Onsite or virtual training for staff
- ✓ Multilingual manuals and video guides
- ✓ Builds self-sufficiency and safe operation





## Why Sea-lion America?

- Local presence with global support
- Fast response, deep product knowledge
- Personalized service beyond the sale





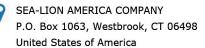














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