



HEALTHCARE
SOLUTIONS



LOGISTICS
AUTOMATION



swisslog

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Healthcare Solutions

Logistics Automation

Swisslog designs solutions in logistics automation to meet the storage, movement and distribution needs of the healthcare industry.

Our solutions are composed of systems that greatly reduce the manual flow of materials and associated information within healthcare facilities.

Our customers benefit from faster turn-around time, increased productivity and greater safety at a lower cost of operation.

Core Competence

Swisslog has installed hospital material transport and pharmacy automation systems in more than 2000 hospitals and pharmacies throughout North America.

Swisslog offers total system design, manufacturing, installation and customer support providing you with a complete hospital supply chain management approach to your logistics challenges.

Our System Solutions

Swisslog Healthcare Solutions offers a broad portfolio of products and services for automated material transport:

- > Pneumatic Tube Systems
- > Track Vehicle Systems
- > Automatic Guided Vehicles
- > Selective Vertical Conveyors

For hospitals and hospital pharmacies, Swisslog offers:

- > Automated Drug Management Systems

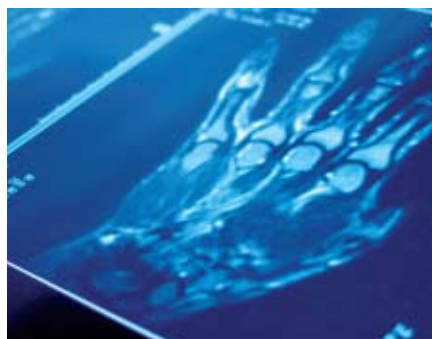


Healthcare Solutions

Automated Material Transport Systems (AMTS)

Swisslog offers automated material transport systems for both on-demand and scheduled transport within the hospital. Our systems are designed for the hospital environment, where sterility and highly-sensitive transport of goods must be taken into consideration.

Transport of drugs, specimens, samples and blood products or sterile goods require an immediate response. Scheduled material transport is usually for larger volumes within special containers. Typical logistic processes with scheduled material transport include the transport of food, linens or waste.



Pneumatic Tube Systems (PTS)

TransLogic and Quantum

Swisslog is the world's leading provider of pneumatic tube systems. Our pneumatic tube systems enable fast and secure on-demand material transport for the special needs of healthcare, where absolute reliability is critical.

Swisslog's TransLogic and Quantum pneumatic tube systems are designed for North American and international healthcare facilities, with more than 2,000 systems installed throughout North America.

Features

- > Unobtrusive pipe installation behind walls and above ceilings
- > Transport 15 lbs up to 20 fps
- > Durable/secure transport carriers
- > Optimal carrier content protection

Benefits

- > Improves patient care, and safety
- > Increases staff productivity
- > Provides immediate and continuous ROI

Applications

- Transports spontaneous and on-demand items
- > Laboratory specimens
 - > Blood products
 - > Controlled medications



Track Vehicle Systems (TVS)

UniCar

Swisslog's Track Vehicle System product line is a light-load horizontal and vertical conveyor system, which meets many of the material transport needs of today's modern hospitals. The TVS is also used for document and book transportation in libraries, light goods transport in production and distribution areas, as well as in air cargo applications.

Features

- > Modular horizontal/vertical track routes
- > Transport 30 lb payloads at speeds up to 120 fpm
- > Quiet, safe, non-disruptive travel
- > Versatile hospital containers

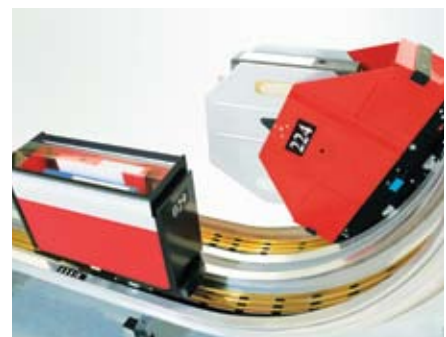
Benefits

- > Provides safe and secure medical item transport
- > Relieves hospital staff from courier/delivery duties
- > Provides increased payload transport capability

Applications

Transports routine and non-routine light-load items

- > Laboratory specimens
- > Medical records
- > X-rays
- > Central supplies



Automatic Guided Vehicles (AGV)

TransCar

Swisslog automatic guided vehicles move routine and on-demand deliveries of bulk materials for hospitals. Automatic guided vehicles offer many benefits, such as reducing operating costs through automatic transport, reducing the potential

for injury by eliminating manual transport, and ensuring the timely delivery of materials.

Swisslog's TransCar AGV negotiates multiple floor facilities via elevators and hallways amid human traffic.

The AGV system employs an industry-unique virtual path, laser contour following guidance system. TransCar interfaces with automatic doors, elevators, battery charging stations, and cart washers -all without direct human intervention.



Features

- > Low-profile, bi-directional vehicles
- > 1,000 lb payloads
- > Versatile carts tailored for every hospital department
- > Automatic pick up and delivery of carts

Benefits

- > Minimizes injury risk
- > Provides 24-hour transport service
- > Automatic delivery/return
- > Reduces manual delivery requirements

Applications

Transports bulk routine and non-routine materials:

- > Meals
- > Fresh/soiled linen and bedding
- > Trash and medical waste
- > Medical supplies
- > Pharmacy carts

Healthcare Solutions

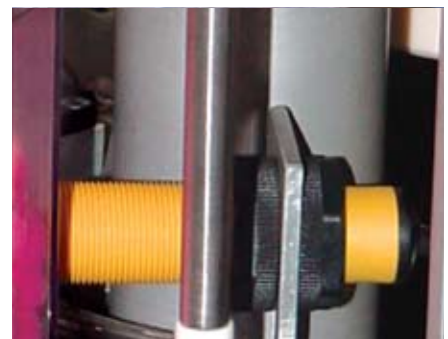
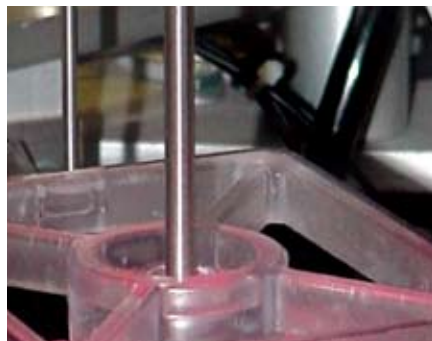
Automated Drug Management Systems (ADMS)

Swisslog's PillPick pharmacy automation system provides a comprehensive approach from unit dose packaging through medication dispensing. PillPick offers the ultimate automated pharmacy system providing patient

safety, medication dispensing efficiency, and pharmacy inventory management.

Swisslog also offers BoxPicker, a high-density automated pharmacy warehouse for the storage and

dispensing of medications, refrigerated medications, and supplies. BoxPicker is a faster and more secure solution than vertical carousels.



Pharmacy Automation

PillPick System

Swisslog's PillPick system bar-codes, packages, stores and dispenses unit dose medications. Unit doses are automatically placed by the pharmacy packager, PillPicker, into bar-code labeled bags and then sealed.

The medication storage and dispensing unit, DrugNest, is a high-density pharmacy robot for automated storage and medication dispensing of bar-coded unit doses. Packaged unit dose medications are automatically

transferred from the packager to the storage and dispensing unit. Dedicated pharmacy dispensing is integrated to downstream automation components including cassette filling and PickRing - Swisslog's unique patient specific, time-specific dispensing method.



Features

- > Packages oral solids, over-wrapped vials, cups, ampoules and more
- > Bar-code labels
- > Multi-tasks - simultaneous packaging and dispensing
- > Stores 52,000 unit doses
- > Automatically return unused meds to robotic storage

Benefits

- > Promotes significant reduction of medication error
- > Provides faster pharmacy turnaround time
- > Increases staff productivity
- > Minimizes manual handling of medications
- > PickRing promotes right patient, drug, dose, route, and time

Applications

- > Supports centralized and decentralized pharmacies
- > Complements cart-fill and hybrid operations
- > Provides automated filling of cabinets

Drug Storage and Retrieval

BoxPicker System

Swisslog's BoxPicker is a high-density, automated pharmacy warehouse for the storage and dispensing of medications, refrigerated medications, and supplies.

Box Picker is a cost-effective alternative to vertical carousel storage and retrieval in the hospital pharmacy. The unit provides higher speeds than vertical carousels, averaging 5 picks per minute and up to 200 transactions an hour. A dual-station configuration allows simultaneous production.

Drug access is secured in the BoxPicker by limiting user access to one medication bin at a time with a single-box access port. The software adds security by tracking inventory and user access.



Features

- > Reduces picking errors
 - Access only one bin at a time
- > Restricted-access storage bins
- > Hospital information system interface
- > Increased safety - user's not exposed to moving parts

Benefits

- > Dual station configuration increases productivity
- > Large capacity and higher speed enhances throughput over carousels
- > Compact footprint frees valuable floor space
- > Single-opening loading reduces wrong location placement

Applications

- > Inpatient hospital pharmacies
 - Narcotic and controlled substance storage
 - Replace shelving for stock items
 - Replace refrigerators
- > Outpatient pharmacies
- > Blood banks
- > Central supplies

Swisslog as a Partner

Consulting Services

Swisslog offers total logistics automation support from initial project conception to ongoing customer support services.

Swisslog staffs the largest, most experienced and comprehensive work force for hospital logistics in North America. Our capabilities begin with an in-house design team comprised of mechanical, electrical, software and application engineers. Our consultative system analytical approach includes simulation, system design analysis, and a product design team dedicated to hospitals.



Project Management

Our project management teams are located throughout North America to insure smooth system integration, efficient start-up and ongoing system monitoring and response.

Customer Support

Others claim customer support – Swisslog delivers

- > Largest and most experienced installation group for hospital systems
- > Over 90 service technicians located across North America
- > 24-hour live-phone support team
- > Comprehensive preventative maintenance programs
- > On-line real-time system diagnostic support
- > In-depth user training programs at your facility
- > State-of-the-art training facility for hospital operations staff
- > Customer parts ordering hot-line with rapid response
- > Fast guaranteed response times for system repair
- > Unparalleled hospital material transport protocol development program
- > Extensive printed and A/V support documentation





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