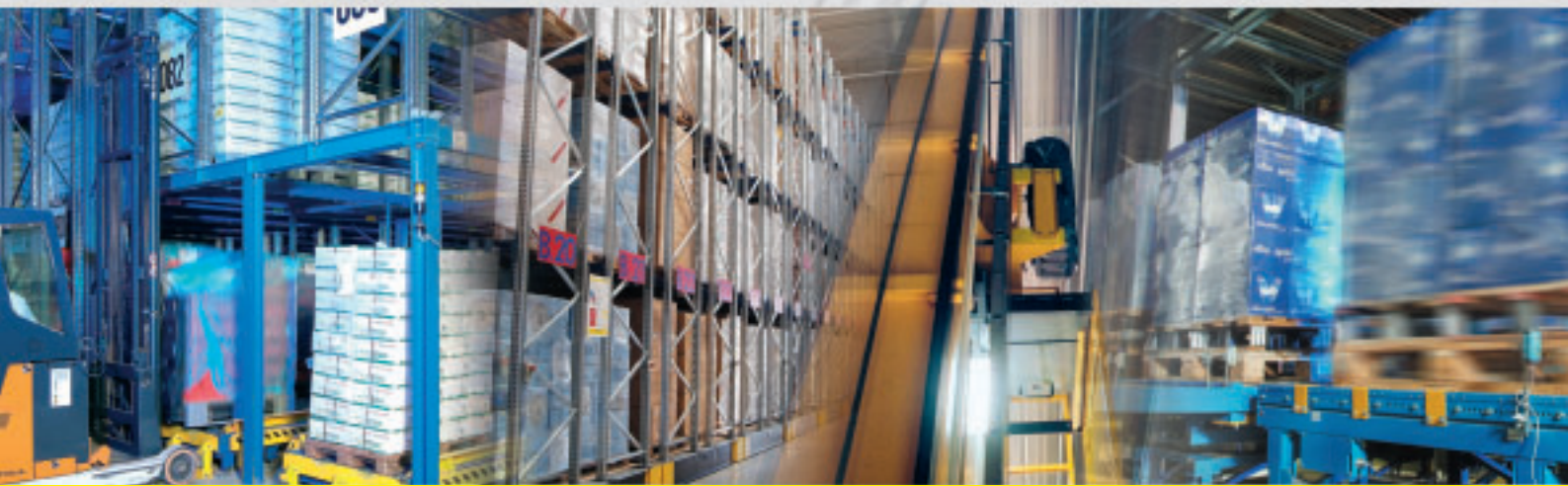


Temperature-controlled logistics Deep-freeze and temperature- controlled warehouses

System solutions
for the food industry

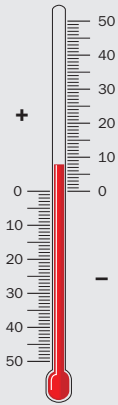


Logistics in the Eternal Ice

The worldwide cooling chain for foods contributes to the quality of our lives. SSI SCHAEFER lays the essential technical foundations for swiftness, quality, and economic efficiency. With regard to our solutions, we use products and services that are planned, developed, manufactured, and implemented by us. In the end, industry-related experience ensures a smooth overall function.

Specific requirements in the frozen products industry such as service, flexibility, reliability, swiftness, and traceability are implemented successfully with the solutions of SSI SCHAEFER. A multitude of modularly designed system components leads to standardized and at the same time individually tailored process procedures. Consequently, even specific customer requests can be implemented in a target-oriented way without difficulty.





Challenge: temperature-controlled logistics

We have gotten used to a supply that is independent of the seasons and climatic zones. Green products of temperature-controlled logistics require prompt handling and direct transports. With the relevant concepts for buffering and cross-docking, the required hardware equipment, components for additional automation and software connections, the solutions of SSI SCHAEFER ensure an optimized handling in the supply chain from the farmer to the refrigerated shelf.

In the area of meat processing, tougher requirements apply. Products are stored for the short term and are completely cooled. "Best before" dates, HACCP hygiene standards, and traceability required since January 01, 2005 must be ensured. Storage solutions like that require processes with high availability and the promptest handling of high throughputs.

The holistic approach by SSI SCHAEFER from the development of special means of transportation and powerful conveyor and storage systems to manufacturing and/or covering of the components with maintenance-free stainless steel applies.





Schaefer high bay warehouses

Storage and retrieval strategies with sequential processes and continuous high availability of stored goods form the basis for high delivery quality with regard to handling temperature-controlled foods.

Consequently, high bay warehouses from SSI SCHAEFER are not only geared to the most modern storage and order-picking processes. In consultation with the customer, the systems and components are individually adapted to the stored goods, the quantities stored, handling, and throughputs. Efficient, continuous, and transparent processes as well as a high degree of flexibility are the results.

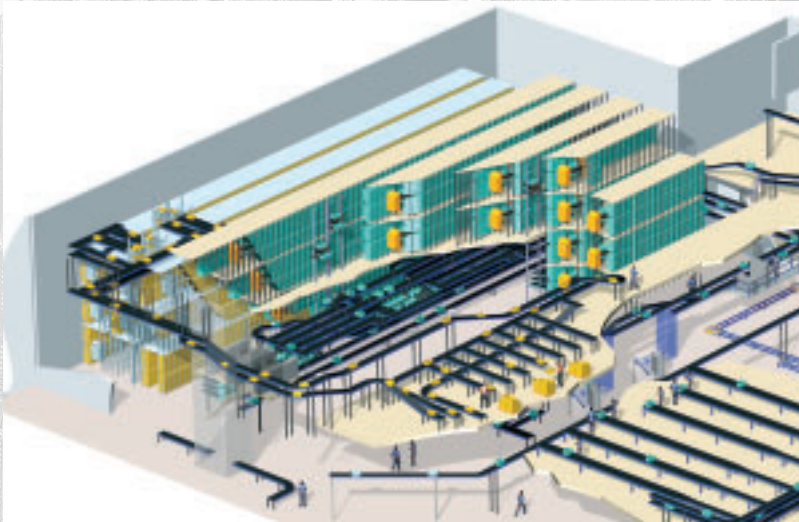


Automation for any storage system

As much automation as necessary, as little automation as possible – the golden rule of warehouse equipment. Here, the order-picking area has a special role: 60 to 65 percent of the total warehouse costs and 50 to 60 percent of the staff are allocated to this area of the process chain. For this reason, the future of warehouse logistics lies particularly in the area of automatic order-picking systems.

Increasingly changing ranges of items and increasing order numbers with batch sizes getting ever smaller require flexible and automated systems with minimal space required. With the continuous redevelopment of special conveyor system components and state-of-the-art dynamic order-picking systems, SSI SCHAEFER offers a wide range of efficient solutions for the requirements of temperature-controlled and deep-freeze logistics. From the classic mobile racking system to the compact high-performance order-picking system - a complete offer for flexible automation solutions.

- HBW
- Mobile racking system
- Flow rack storage system
- Channel storage system
- Tray storage system
- Bin storage system



Everything from one single source: Storage systems for temperature-controlled warehouses and deep-freeze logistics.



Logistics planning and consulting

Close to the customer and with the competence of a general contractor – SSI SCHAEFER ensures an optimal tailoring of projects.



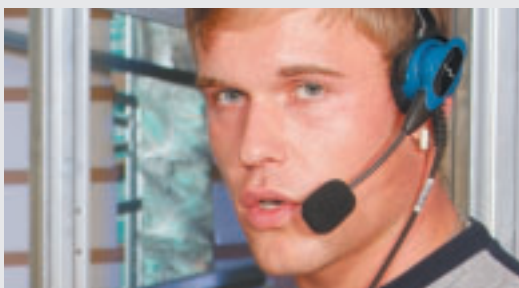
Mobile racking systems with laser-guided VNA trucks, high bay racks with SRMs, flow racks

Dynamics in the warehouse – at SSI SCHAEFER this is based on precisely calculated statics. From manually operated to fully automated warehouses – racking systems from SSI SCHAEFER have proven effective in practice all over the world.



Conveyor systems and automation

Wherever material flows may lead - from deep-freeze production to direct shipping: conveyor systems from SSI SCHAEFER will bring the goods to the “right path”.



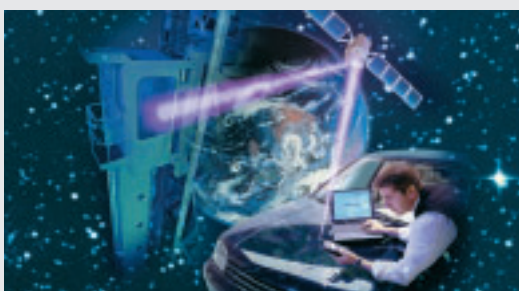
Order-picking technology

Innovations for the future – ergonomic conditions (work contents, work volume, workplace design) especially in deep-freeze areas are taken into consideration and, due to the extreme environmental effects, these areas are equipped with new technologies such as Pick by Voice.



Warehouse management and control

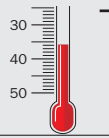
IT basis for efficient warehousing – the warehouse management software “ant” ensures the smooth control and universal transparency of processes.



Service and maintenance

Our Customer Service & Support (CSS) department does not only deal with the commissioning and support of the projects we implemented. Our scope of services also includes all services contributing to the preservation of value with new projects. Worldwide – 365 days a year.

Examples of our experience



Deep-freeze high bay warehouses

Sadia Brazil, 2006, automated
Size: 150 x 28 x 32 m, 12,240 storage locations, 5 aisles

HJEM IS, Denmark, 2006, automated
Size: 12 x 8 x 18 m, 6,912 storage locations, 4 aisles

La Huerta, Mexico, 2003, automated
Size: 140 x 22.7 x 33.7 m, 13,200 storage locations, 3 aisles

Bürger, Crailsheim, 2003
Size: 69 x 19 x 16 m, 3,560 storage locations, 4 aisles

Galliker, CH-Altshofen, 2003
Size: 3 x 43 x 26.2 x 27.8 m, 16,550 storage locations, 18 aisles

Wagner, Nonnweiler, 2002
Size: 94 x 22 x 31 m, 10,470 storage locations, 5 aisles

TKL, A-Vienna, 2001
Size: 102 x 18 x 24 m, 6,800 storage locations, 4 aisles

Ponta do Felix, Brazil, 2001, automated
Size: 74.5 x 23.3 x 27 m, 5,180 storage locations, 5 aisles

Schnee-Frost, Lönigen, 1995
Size: 82.6 x 18 x 29 m, 4,750 storage locations, 4 aisles

Deep-freeze, heavy-duty mobile racking systems, automated

FRIGO Coldstore Logistics GmbH & Co.KG, Hamburg, 2005,
15,000 storage locations in the deep-freeze area,
1,500 storage locations in the temperature-controlled area,
refrigerated and deep-freeze logistics center

Coldstore Verwaltungen GmbH, Hamm, 2004, 12,000 storage
locations, distribution warehouse for meat products

CP Food, Nakhon Ratchasima, Thailand, 2004,
9,688 storage locations, poultry

CS Logistic, Coevorden, the Netherlands, 2004,
9,609 storage locations, meat products

St. Anthony Cold Storage, Newfoundland, Canada, 2004,
5,184 storage locations, warehouse for cold water shrimps

Gold Cold, Sham Alam, Malaysia, 2003,
2,760 storage locations, various foods

Groconinental, Whitchurch, England, 2003, 1 x 8,958 storage
locations, 1 x 7,113 storage locations, warehouse for cheese

BÄKO Weser-Ems, Oldenburg, 2002, 1,000 storage locations,
raw material and goods for resale for bakeries

KLM-Kühl- und Lagerhaus Münsterland GmbH, Rheine, 2002
11,700 storage locations, various frozen products

Bonatura, Kerzers, Switzerland, 2001,
10,500 storage locations, vegetables

Temperature-controlled high bay warehouses for dairy products

Ljubljanske mLeKarne d.d., SL-Ljubljana, 2005, automated
Size: 60 x 27 x 20 m, 5,786 storage locations, 4 aisles

Campina, Belgium, 2005, automated
Size: 79 x 68 x 35 m, 24,640 storage locations, 10 aisles

Hansa-Milch, Upahl, 1994 + 2004, automated,
Size: 85 x 24 x 12 m, 2,930 storage locations, 3 aisles Order-
picking channel storage system: 6,500 storage locations, 7 aisles

OLMA, CZ, 2003, automated
Size: 48 x 17 x 17 m, 2,808 storage locations, 4 aisles

Zott KG, Mertingen, 2001, Size: 2 halls at 70 x 40 x 25 m each, automated,
23,478 storage locations altogether, 18/18 aisles altogether

Tnuva, Israel, 2002
Size: 45 x 40 x 22.5 m, 5,150 storage locations, 9/3 aisles

Milch-Union Hocheifel, Pronsfeld, 2001, Size: 86 x 32 x 27 m,
12,110 storage locations, 7/3 aisles, Channel storage system
with positioning in the shipping area: 4,950 storage locations

Bergland Milch, A-Aschbach, 2001
Size: 33 x 24 x 25 m, 3,540 storage locations, 5 aisles

Temperature-controlled HBW for foods and catering

SEG Poulets, CH-Basel, 2003,
small parts storage system (miniload®) for food, automated.
Size: 45 x 21 x 11 m, 18,000 storage locations, 15 aisles with SQS

Ülker, TR-Ankara, 2001, sweets and chocolates, automated
Size: 147 x 43 x 16 m, 26,600 storage locations, 7 aisles

Cathay Pacific, Hong Kong, 1997, catering products
Size: 60 x 10 x 22 m, 2,600 storage locations, 2 aisles

SATS, Singapore, 1995, catering products
Size: 75 x 9 x 25, 4,100 storage locations, 2 aisles

Fiege, Hünningen, France 1994, automated, sweets and chocolates,
Size: 100 x 31 x 29 m, 23,000 storage locations, 7 aisles

Temperature-controlled channel and block storage systems, fresh meat

Tönnies, Rheda-Wiedenbrück, 2005,
40,300 storage locations, 4/13 aisles

SSI SCHAEFER has successfully implemented numerous systems in various areas of the food industry worldwide.



Zott KG, Mertingen: Modernization and extension,
refrigerated pallet warehouse for dairy products +5°C



Hansa Milch, Upahl:
Refrigerated pallet warehouse for dairy products +5°C



Frigorizados La Huerta, Mexico: Deep-freeze pallet
warehouse for fruits and vegetables -26°C



Coldstore, Hamm: Deep-freeze mobile racking system
for meat products -28°C



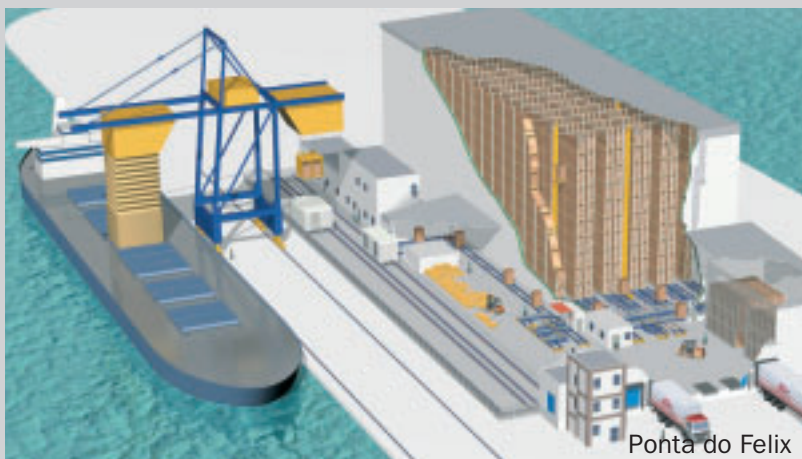
Cold Store, The Netherlands: Deep-freeze mobile racking
system for meat products -25°C



Odraport, Poland: Deep-freeze mobile racking system
for various foods -27°C



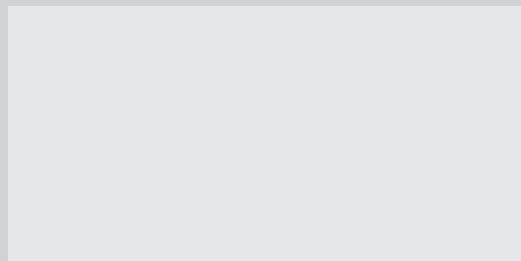
La Huerta



Ponta do Felix



Hansa Milch



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