



SIEMENS
Ingenuity for life

Weighing air cargo shipments reliably

A weighty detail

Zurich Airport is Switzerland's largest airport, and for the Swiss economy it assumes a key role particularly as a cargo hub. Smooth processing is provided in the air cargo business by handling companies such as Cargologic AG. The company is a leader in air cargo handling and has been operating at Zurich Airport for more than 50 years. Its success can be attributed to factors such as flexibility, reliability and security. Not only do these three properties characterize the entire company, but they can be also found in the smallest of details, such as the weighing technology used in a platform scale.

Air cargo handling involves the management of import, export and transit cargo, as well as security checks, the receipt of exports and also the placement of shipments in temporary or long-term storage. At Zurich Airport Cargologic has the capacity to handle 600,000 t annually. In three-shift, around-the-clock operations, 700 employees look after urgent, hazardous, perishable, temperature-sensitive, valuable and even live cargo. The job of ensuring day after day that all air cargo shipments arrive at their intended destinations requires not only qualified employees, but also reliable and modern technology. Cargologic AG – part of the international Rhenus Group since 2002 – has a fully automated high-rack storage facility in Zurich for 8200 Euro pallets and 3500 air cargo pallets.

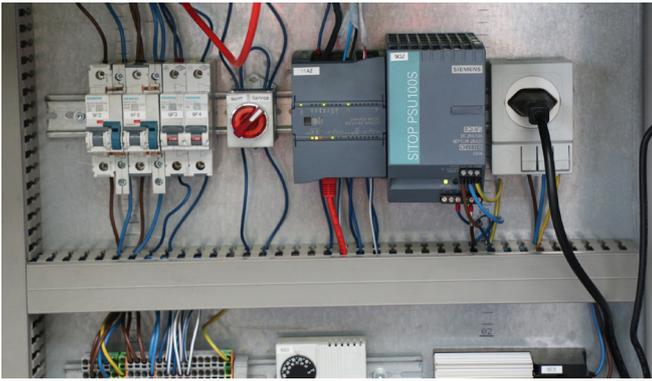
The freight forwarding building at Zurich Airport is where the „flight“ begins for the cargo: this is where freight is handed over to the employees and checked. Once weight

and volume of the packages have been checked and security status ascertained, in-house storage labels are applied to each item – and now they are „ready for carriage.“ The associated air waybill contains all the relevant information specifying the cargo's further routing, and because the information is entered in the superordinate warehouse management system, it ensures precise allocation to storage locations and optimum use of cargo capacity on the air carriers.

The task - Rejuvenation treatment for a platform scale

For efficient, extremely tightly planned handling operations, it is essential that cargo properties such as volume and weight are determined precisely, quickly and reliably. For the weighing operations various weighing systems are available in Zurich. To weigh individual freight units and complete unit load devices (ULDs), a floor model of a platform scale is used. Discontinued load cells and the resulting uncertain supply of spare parts meant the scale had to be completely retrofitted, because an unscheduled outage would have resulted in lasting problems for the meticulously orchestrated logistics chain. Urs Strupler, who is responsible for maintenance and supply management at Cargologic, sought a solution that would not only ensure reliable functionality of the platform scale, but also guarantee supply of spare parts for years to come.

Based on the many years Cargologic had worked together with Siemens Schweiz AG, it made sense to convey these needs to Customer Service in Zurich.



A powerful team in the control cabinet: The Siwarex WP231 weighing module operates at Cargologic without a Simatic controller. The standard power supply, Sitop smart, impresses with high efficiency combined with a compact construction.

„Immediately, Hans Bosshard at Siemens responded to our needs with a solid concept,” reports Strupler. „We were aware that the new load cells would not fit one-to-one and we were concerned that the involved conversion would mean the scales would be out of use for an extended time. So we were duly relieved when we were told the conversion would only take a maximum of two days,” continues Strupler.

The solution - Modern technology and professional implementation

Taking the local operations into account and in consideration of customer needs, Hans Bosshard, Head of Retrofit and Modernization at Siemens in Switzerland, proposed a combination comprised of four Siwarex WL280 RN-S SA load cells and the Siwarex WP231 weighing module. „The compact mounting dimensions of the load cells, the robust stainless steel design with an IP66/68 protection rating, and the integrated overload protection all clearly spoke in favor of their use at Cargologic,” explains Bosshard. The easy integration through Modbus and the comprehensive integrated diagnostic functions made the Siwarex WP231 weighing module the ideal partner for this weighing application. For label printing as well as the superordinate control system, the weight measurements are processed and made available by a Simatic IPC 277 panel PC with Windows operating system. The mechanical conversion of the platform scales was taken care of by Hans Baumgartner and his team. As a specialist in project management and design, Baumgartner ensured that no changes at all had to be made to the pit or the upper plate. The only necessary conversion was to the substructure, to make room for the new load cells.

The benefit - Smoothly integrated

Operation and integration in the superordinate warehouse management system are comparable to the previous

application. This meant that operators did not have to accustom themselves to a new system, and it could be handled intuitively. Now Cargologic can benefit from a long-term supply of electronic and mechanical spare parts for the new weighing application. „Additionally, because of the product chosen, the customer always has the option of an easy conversion to a legal for trade system,” adds Bosshard. Cargologic is happy that the conversion could be accomplished so fast, and the conversion of other scales has already been commissioned. „Aviation logistics is like a precision machine,” sums up Urs Strupler. „The reason we are so successful at Cargologic is because all the parts work together so smoothly. But that requires attention to the smallest detail. Siemens Schweiz AG helps us here.”



Ergonomic operation: A Simatic Panel as stationary control unit can be found directly above the control cabinet.

Siemens
Process Industries and Drives
Östliche Rheinbrückenstr. 50
76187 Karlsruhe
Germany

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