

# ARCHIVED REPORT

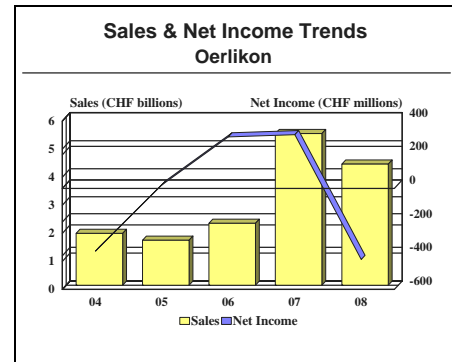
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## Oerlikon

### Outlook

- In June 2009, Oerlikon sold Oerlikon Space AG to RUAG to focus on core businesses
- The sale effectively removed Oerlikon from the aerospace and defense markets



### Headquarters

OC Oerlikon Management AG  
Churerstrasse 120  
8808 Pfäffikon, Switzerland  
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Web site: <http://www.oerlikon.com>

Oerlikon traces its history back to 1906, when Schweizerische Werkzeugmaschinenfabrik Oerlikon was formed. Emil Georg Bührle took over the company in 1926. Contraves was formed in 1936. The firm was chartered to develop and produce air defense systems. Oerlikon-Bührle Holding AG was formed in 1973 to manage the large group of companies controlled by Oerlikon-Bührle.

In 2000, Oerlikon-Bührle transformed itself from a widely diversified industrial conglomerate into a high-technology group. This change was accompanied by a

new name, Unaxis. Prior to the change, Oerlikon-Bührle was active in aerospace and defense primarily through its Oerlikon Contraves Defense operation. However, this unit was sold in 1999 to Rheinmetall DeTec AG as part of the company's reorganization efforts.

In 2006, Unaxis changed its name again to OC Oerlikon Management AG, or simply Oerlikon. Shortly thereafter, the company acquired textile machinery and power transmission systems producer Saurer AG and tripled its size.

In 2009, Oerlikon agreed to sell its only remaining aerospace operation, Oerlikon Space (formerly known as Contraves Space), to RUAG.

Oerlikon employs approximately 16,000 people.

### Structure and Personnel

Hans Ziegler  
Chief Executive Officer  
Jürg Fedier  
Chief Financial Officer  
Bjoern Bajan  
General Counsel and Secretary  
Thomas Babacan  
Chief Operating Officer

Jürg Henz  
CEO Oerlikon Solar  
Hans Brändle  
CEO Oerlikon Coating  
Andreas Widl  
CEO Oerlikon Vacuum  
Thomas Babacan  
CEO Oerlikon Textile

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CEO Oerlikon Advanced Technologies  
Gary Lehman  
CEO Oerlikon Drive Systems Fairfield

Marcello Lamberto  
CEO Oerlikon Drive Systems Graziano

## Product Area

Oerlikon manages its holdings as follows:

1. Oerlikon Coating
  - 1.1 Balzers
2. Oerlikon Vacuum
  - 2.1 Leybold Vacuum
3. Oerlikon Textile
  - 3.1 Barmag
  - 3.2 Neumag
  - 3.3 Saurer
  - 3.4 Schlafhorst
  - 3.5 Textile Components
4. Oerlikon Drive Systems
  - 4.1 Graziano
  - 4.2 Fairfield
5. Oerlikon Advanced Technologies
  - 5.1 Oerlikon Systems
6. Oerlikon Solar

**Oerlikon Coating.** Led by Balzers, this unit provides protective coatings for precision tools and components, production equipment and coating processes for solar modules, and production systems for data storage devices. These include equipment and processes for

coating tools and components (Services) and also complete production lines and coating plants for data storage devices, such as hard disks or DVDs, as well as additional production solutions for special coating and etching processes in the manufacture of semiconductors (Systems).

**Oerlikon Vacuum.** Leybold Vacuum produces vacuum solutions for a broad spectrum of cutting-edge manufacturing and analytical processes, as well as for research purposes.

**Oerlikon Textile.** Produces textile machines and provides textile plant engineering solutions.

**Oerlikon Drive Systems.** Provides propulsion system technology in the following markets: gearing solutions, automotive, and off-highway systems.

**Oerlikon Advanced Technologies.** Through Oerlikon Systems, this unit focuses on future markets in clean technologies and advanced nanotechnology.

**Oerlikon Solar.** This unit produces thin-film solar modules for energy generation.

## Facilities

RUAG Space AG (formerly Oerlikon Space), Schaffhauserstrasse 580, 8052 Zürich. Telephone: + 41 1 306 22 11. Oerlikon Space (formerly known as Contraves Space) develops and produces spacecraft

structures, payload fairings for launchers, precision mechanisms, and instruments. This unit was sold to RUAG in June 2009.

Web site: <http://www.ruag.com/space/ch>

## Corporate Overview

Oerlikon provides systems and services primarily for information technology markets. The company is also involved in semiconductors, textile production, data storage, and surface coating technology.

The company sold its space operation, Oerlikon Space AG, to RUAG in June 2009, effectively exiting the aerospace and defense markets.

### New Products and Services

**Small GEO.** In March 2007, a group of companies, including Oerlikon Space AG, was selected by the European Space Agency (ESA) to develop and construct a new European satellite platform called Small GEO. With Small GEO, the ESA hopes to capture a share of the global market for telecommunication

satellites and has commissioned an international industrial syndicate led by the German firm OHB Technology AG to develop and produce the new satellite platform. Oerlikon Space will be responsible for the structure of the satellite, drive mechanisms of the solar arrays, and system leadership for the thermal system.

**Planck Telescope.** In November 2001, Oerlikon Space was selected by prime contractor Alcatel Space to design, construct, and qualify the telescope for the Planck spacecraft. The Planck mission is one of the ESA's cornerstone projects in the scientific program. Its goal is to study the cosmic background radiation that was created 14 billion years ago when the universe had reached a temperature low enough to allow the radiation

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to separate from matter. The Planck spacecraft will be equipped with extremely sensitive instruments able to image the cosmic background with a temperature resolution of one millionth of a degree Celsius.

### Plant Expansion/Organization Update

**Semiconductor Unit Restructured.** In November 2004, Unaxis restructured the Semiconductor Equipment segment to create an independent and profitable supplier. As part of this effort, the buildup of production capacity of Assembly & Packaging (ESEC) in Asia was accelerated, while the Display Technology operation was restructured with the option of either merging or divesting its business activities.

### Mergers/Acquisitions/Divestitures

**Oerlikon Sells Space Unit to RUAG.** In June 2009, Oerlikon sold Oerlikon Space AG to RUAG for an undisclosed purchase price, paid in cash. All 380 employees of Oerlikon Space based in Switzerland have been transferred to RUAG.

**Oerlikon Sells Optics Unit.** In October 2008, Oerlikon sold its Oerlikon Optics business unit to the operation's management. The Balzers-based optical coating business, including relevant technical plant and equipment, plus customer and supplier relationships, will be transferred to the new company. The newly constituted business posts annual sales of CHF35 million and has 160 staff. The unit will operate under the name Optics Balzers AG.

**Magnetic Media Unit Sold.** In June 2008, Oerlikon sold its magnetic media equipment business to the U.S.-based Intevac. Terms were not disclosed.

**VST Keller Acquired.** In October 2007, Oerlikon Balzers acquired Verschleiss Schutz Technik Keller GmbH & Co KG (VST Keller) for an undisclosed amount. With the acquisition, Oerlikon Balzers takes over two new coating centers – one in Schopfheim, Germany, and one in Alabama in the United States.

**SiLas Acquired.** In April 2007, Oerlikon Solar acquired SiLas, a laser technology development enterprise, for an undisclosed amount. SiLas GmbH specializes in the processing of thin-film silicon coating.

**Exitech Acquired.** In December 2006, Oerlikon acquired U.K.-based Exitech Ltd in an asset deal. Exitech is a provider of nano and micro laser systems worldwide. Oerlikon's Optics, Solar, and Wafer Processing business units in particular stand to benefit from this acquisition. Exitech has been integrated in the Oerlikon Optics business unit. Terms were not disclosed.

**Saurer Acquired.** In December 2006, Oerlikon acquired 90.98 percent of Saurer AG. As a result, Oerlikon assumed operational control of the company effective January 2007. Saurer AG has two main fields of operation: textile machinery, and gear and power transmission systems. The company employs some 12,000 and had 2005 turnover of CHF2.43 billion.

**Oerlikon Space Acquires Snecma Space Unit.** In October 2005, Oerlikon Space acquired the high-precision space mechanism business activities of Snecma, a Safran group company. The purchase made Oerlikon Space the top European supplier of solar array drive mechanisms (SADMs), which are responsible for the optimal alignment of a satellite's solar generators toward the Sun. Oerlikon Space has independently developed a solar array drive mechanism specifically for the Galileo. With the addition of the Snecma family of SADMs, consisting of Septa 14, 23, 24, 31, 32, and 41, Oerlikon Space now qualifies as the only European supplier offering a full range of SADMs. Terms were not disclosed.

**Coating Services Acquires Two Italian Operations.** In October 2005, Unaxis' Coating Services segment (Balzers) agreed to acquire the assets of two Italian PVD coating operations of Samputensili Spa, located in Zola Predosa and Ortona, Italy. The acquisition strengthens Balzers' position in Italy as a long-term coating partner of the gear-cutting and general tooling industry. Terms were not disclosed.

**Mecanovis AG Sale Canceled.** In December 2004, as part of the overall restructuring of its Semiconductor unit, Unaxis decided not to divest Mecanovis AG. In September 2004, Unaxis had agreed to sell Mecanovis AG to Liechtenstein-based Büchel Holding AG.

**Unaxis Acquires ESEC.** In September 2003, the boards of Unaxis and ESEC signed an agreement to completely merge ESEC with Unaxis Corporation. As part of the merger, ESEC's shares were to be exchanged for those of Unaxis, with ESEC stockholders receiving 1.1 share of Unaxis for each ESEC share they owned. ESEC and Unaxis signed a Memorandum of Understanding on August 18, 2003. Through the combination of Unaxis' three existing fields of semiconductor-related activity – Semiconductors Back End, Semiconductors Front End, and Displays – the newly created Unaxis Semiconductors segment attained the critical mass necessary to move into the ranks of the world's leading manufacturers of such equipment. By combining its core capabilities and keying on its global presence, Unaxis Semiconductors is creating the conditions that will enable it to satisfy customer needs more effectively, as well as allow it to participate largely in future market developments. The deal was completed in March 2004.

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**Pilatus Aircraft Sold.** In December 2001, Unaxis sold its wholly owned subsidiary, Pilatus, located in Stans, Nidwalden, to a group of predominantly Swiss investors for CHF250 million. The investors are Dr. Jörg Burkart, Zurich; Hilmar Hilmarsson, Greppen; IHAG Holding AG, Zurich; and Pensionskasse der F. Hoffmann-La Roche AG, Basle. The company was to be led by the then-management team.

**Contraves Defense Sold to Rheinmetall.** In September 1999, Oerlikon-Bührle sold Oerlikon Contraves Defense to Rheinmetall DeTec AG, headquartered in Ratingen, Germany. Rheinmetall DeTec AG is a subsidiary of the Rheinmetall group. Rheinmetall DeTec AG acquired 100 percent of Oerlikon Contraves Defense's share capital under the terms of the sales agreement signed in Zurich.

Although Oerlikon Contraves Defense enjoyed a strong position in land-based anti-aircraft gun systems, the company lacked the critical mass essential to its long-term survival. By integrating Oerlikon Contraves Defense, Rheinmetall DeTec AG became a center for

medium-caliber land-based air defense systems. The name Oerlikon Contraves was retained. Oerlikon Space would continue operation as an autonomous unit within Oerlikon. Terms of the deal were not disclosed.

### Teaming/Competition/Joint Ventures

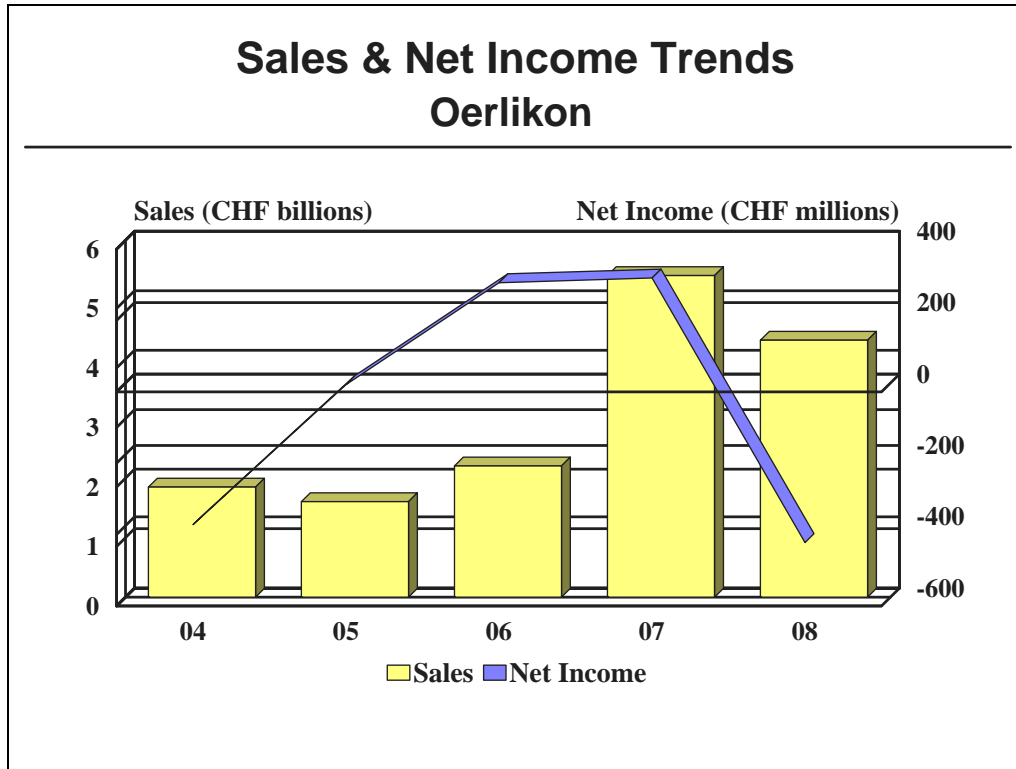
**Automated Transfer Vehicle.** Oerlikon Space is leading an international consortium to develop the structural subsystem of the Automated Transfer Vehicle. This module will contain the fuel tanks and the propulsion subsystem, as well as the related control systems. The unmanned ATV will be brought into orbit by means of the European launcher Ariane 5 and will reach the Space Station after a flight time of two days in a fully automatic mode.

**Laser Communication Terminals.** In June 2007, TESAT and Oerlikon Space AG signed a cooperation agreement for GMES satellites laser communication terminals. GMES (Global Monitoring for Environment and Security) is a joint initiative of the European Commission and the European Space Agency.

## Financial Results/Corporate Statistics

Oerlikon posted 2008 sales of CHF4.3 billion, down 20 percent from CHF5.4 billion in 2007. The company posted a loss of CHF422 million compared to net income of CHF319 million for 2007. The jump in 2007 was due to the acquisition of the Sauer group. The 2004 drop was attributed to heavy losses at the Display Technology unit, which incurred heavy expenditures for the development and market introduction of next-generation systems. The exchange rate as of December 31, 2008 was USD1 = CHF1.10225.

Y/E December 31	2004	2005	2006	2007	2008	2008
(CHF billions)						USD
Net Sales	1,850	1,605	2,206	5,404	4,319	4,416
Net Income	-372	21	306	319	-422	-431
Orders Received	1,778	1,455	2,491	5,811	4,319	4,416
R&D Expenditures	180	148	149	274	247	252



## Strategic Outlook

Following quickly on the heels of its name change from the Unaxis Group to its original moniker, Oerlikon, the firm completed the biggest acquisition in its history: Saurer AG. This acquisition has tripled Oerlikon's size. Saurer is focused on textile machinery and drive systems, and now forms the basis of two new units within Oerlikon.

While the acquisition kicked up Oerlikon's sales to record levels for 2007, both of the new operations have been hit hard by the downturn of 2008. Despite the difficulties, Oerlikon's vacuum, space, and thin-film coating operations are holding the line.

With the company's management newly focused on getting its enormous acquisition back to profit in the midst of a global financial crisis, the decision was made to divest Oerlikon Space.

The Oerlikon Space unit specializes in developing and constructing payload fairings for launch vehicles, satellite structures and mechanisms, and scientific instruments. The unit acquired the high-precision space mechanism business activities of Snecma, further reinforcing its position as a niche manufacturer of specialty space system components.

With this transaction now complete, Oerlikon achieved its goal of focusing on its core competencies. At the same time, RUAG broadened and expanded its position in the European and U.S. aerospace industry, following the acquisition of Saab Space and Austrian Aerospace in 2008.

## Program Activity

Some important aerospace and government programs at Unaxis are listed below. The company's business interests center on space systems via RUAG Space (formerly Oerlikon Space).

### Space Systems Program

#### Ariane 5

Contraves is an active supplier for the Ariane series of launch vehicles. For the Ariane 3, Oerlikon Space is

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supplying the nose fairing, which protects the payload during passage through the atmosphere. Contraves supplied the large-diameter fairing for the Ariane 4. Oerlikon Space is supplying the fairing for the Ariane 5 program.

### Atlas Launch Vehicles

Atlas is a family of medium- to heavy-lift expendable launch vehicles. Atlas expendable launch vehicles are designed primarily to carry large communications satellites to geosynchronous transfer orbit. Atlas launch vehicles are manufactured by Lockheed Martin Space Systems. Oerlikon Space produces the Atlas V payload fairing.

### EELV

The Evolved Expendable Launch Vehicle is a class of rocket, built under a U.S. Air Force contract, to launch medium and heavy military payloads. Oerlikon Space is a subcontractor on this effort.

### International Space Station

The International Space Station is an orbiting manned research and work center. A variety of scientific activities are planned for the International Space Station. Basic research will be carried out in medicine, astronomy, space physics, and solar studies. Technological and scientific experiments will also be conducted. Boeing Defense and Space Group's Missiles and Space Division is the prime contractor for the International Space Station. Oerlikon Space is working on ATV structures, meteoroid/debris protection, and the Material Science Lab vacuum chamber for the station.

### LISA

The Laser Interferometer Space Antenna (LISA) mission is a constellation of three satellites that will

detect and study gravitational waves from a heliocentric orbit. The LISA Pathfinder mission will consist of one satellite to test laser interferometry relative to the LISA mission. EADS Astrium is the prime; Oerlikon Space is a supplier of modulators.

### PROBA

The Project for On-Board Autonomy (PROBA) was undertaken to test new technologies in space. Verhaert Design & Development is the prime contractor. Oerlikon Space is a subcontractor on this project, providing the Space Radiation Environment Monitoring (SREM) system. Since its launch in October 2001, PROBA-1 has demonstrated onboard operational autonomy and new spacecraft hardware and software technology, and has flight-tested various new Earth observation and space environment instruments. The PROBA-1 mission, launched October 2001 on a PSLV, was extended through October 2003 and was still providing data as of March 2005. The PROBA-2 was slated for launch in 2009.

### Vega

The Vega rocket is a four-stage, solid-propellant (three lower stages) and liquid-fueled (fourth stage) launch vehicle. The Italian Space Agency (ASI) and FiatAvio (now Avio SpA) developed a joint venture dubbed ELV SpA to organize and lead the production of the Vega launch vehicle. Under the February 2001 arrangement, ASI holds a 30 percent equity stake, while Avio retains the remaining 70 percent of the company. Oerlikon Space is producing the fairings and interstage components for the Vega. Vega will begin commercial service in 2009, with one to two launches per year expected thereafter.

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