

## The Zehnder Story

Zehnder was already a household word in Switzerland well before it became an international byword for radiators. In the Switzerland of the twenties Zehnder stood for affordable mobility, for the Zehnder motorcycle. Zehnder's popular lightweight two-wheeler sold extremely well, particularly among the less affluent. Although the Zehnder family started its business as early as 1895, the product that was to make Zehnder a major company – Europe's first tubular steel radiator – was not invented until 1930. This brief history sketches the development of Zehnder from its early beginnings as a small mechanical workshop to a Group of companies with more than 2,000 employees.

### The Quest for New Products

Jakob Zehnder, born in 1855, started the family business. He was employed as a mechanic in a factory producing music boxes when he started trading in bicycles on his own account in 1889. In 1895 he built a house and workshop in his home village of Gränichen in the canton of Aargau. As a qualified mechanic, he undertook repairs of all kinds. He was the local representative for the German Adler bicycles and, apart from selling the occasional bicycle, he traded in typewriters, sewing machines, washing machines and motorcycles.

Jakob Zehnder's seven sons were trained as mechanics or studied commerce. They increasingly played a role in their father's business and urged him to expand his workshop. In the winter of 1911/12 a small factory was added to the existing premises. On March 1, 1912, Jakob and his three oldest sons founded J. Zehnder & Söhne. Apart from repairs and sales, the small factory carried out enameling jobs, as well as nickel- and copper-plating. During the First World War the company supplied the munitions industry with parts, and its total number of employees grew. During this period there were up to 118 people employed in the workshops.

After the war the Zehnder brothers decided to manufacture tool grinding machines. Although the machines were highly praised for their precision, the venture had little chance of success in the postwar recessionary environment. The brothers tried to keep the company afloat through building up an electro-mechanical department and putting a number of new developments on the market. Overall, the first 25 to 30 years of the Zehnder company's history are marked by a permanent quest for new products. Despite all their efforts, Zehnder's workforce had dwindled to some 25 employees by 1922.

### Zehnder's Light Motorcycle Conquers Switzerland

In their search for new fields of activity, the Zehnder brothers ran across a small German motorcycle in 1923. They tuned the engine to improve performance and put it on the market in the fall of 1923. It sold extremely well. This light motorcycle only weighed about fifty kilograms. Its two-stroke engine with a capacity of 110 cc was very simple in design. Its comparatively low price made the motorcycle readily affordable. It was soon given the affectionate sobriquet Zehnderli (Zehnder's little one).

The Zehnder brothers began the first large-scale series production of 1,000 motorcycles in the Gränichen workshop. With the support of an investor, they founded the Aktiengesellschaft J. Zehnder & Söhne (J. Zehnder & Sons Ltd.) on January 1, 1924. During the next few years the company produced at full capacity and at times employed more than 70 people.

At that time, motorcycle racing was a very popular sport in Switzerland and it was here that the Zehnder motorcycle demonstrated its reliability for everyday use and its suitability for motor sport fans. There was hardly a race in which the Zehnderli did not take first prize in its category. The network of Zehnder outlets in Switzerland grew steadily. Some dealers even started Zehnder clubs, with membership being confined to Zehnderli owners. Although numerous domestic and foreign motorcycles were available in Switzerland, Zehnder reached a proud market share of ten percent.

Sales figures dropped for the first time in 1927. There was increasing demand for enhanced performance, which spurred the Zehnder brothers to develop a 250 cc model. It was put on the market in 1928, but the engine proved to have some shortcomings, so that the new model did not sell particularly well. Low sales volume led to a liquidity problem. A substantial quantity of material had been purchased to ensure economic production and these stocks soon developed into a problem for the company. Once again the brothers tried to find a follow-up product to provide work for their labor force. By the beginning of 1930, the financial situation had deteriorated so far that the creditors forced the Zehnder brothers to resign from the management of their company.

The main creditor continued to run the company under its old name until 1931, thereafter renaming it Maschinenfabrik Gränichen AG. In 1932 the new management began to produce Standard motorcycles under license, so that the Maschinenfabrik Gränichen supplied both Zehnder and Standard motorcycles. By the second half of the 1930s, however, the Zehnder models were no longer up-to-date and production was discontinued.

### Europe's First Tubular Steel Radiators

After they had withdrawn from J. Zehnder & Söhne, the Zehnder brothers set about finding a new field of activity. One of the brothers, Robert, had heard that there were exceptionally long delivery times for radiators. He had been advised to move into the production of cast-iron radiators, the only type of radiator generally installed at that time. But the Zehnder brothers had little experience of working with cast iron. Robert, however, recalled that many trucks were equipped with a cooling device made of steel tubes exposed to the air stream. If one were to reverse this principle, he thought, it should be possible to use such a "radiator" for heating purposes. And unlike cast iron, the brothers knew all about steel tubes from their motorcycle venture.

First experiments with steel pipes welded together to form radiators were successful: the prototypes stayed watertight, even under pressure. When series production seemed within reach, six of the seven brothers joined together again to produce tubular steel radiators – a patent had already been applied for. On October 15, 1930 they decided to found a new company under the name of Gebrüder Zehnder (Zehnder Brothers).

Heating specialists throughout Switzerland soon recognized the tremendous advantages of the Zehnder radiators. Unlike cast-iron radiators, which were only available in a few standard sizes, architects and heating specialists were free to determine the dimensions of tubular steel radiators. Additionally, the Zehnder

radiators left little to be desired in terms of aesthetics. Their unobtrusive, functional design reflected the trend in modern architecture. And, of course, a tubular steel radiator was three times lighter than a cast-iron radiator with comparable performance.

The Swiss manufacturers of cast-iron radiators began to wage a fierce price war, but by 1935 the Zehnder radiator was firmly established on the market. Patent protection ensured that competitors could not place copies on the market. Although sales declined as construction came to a virtual standstill during the Second World War, they began to skyrocket after 1945. Year after year there was two-digit growth of both unit production and sales. The primary concern of the management at that time was: How can we expand capacity to meet the demand and where can we recruit the necessary labor?

The tubular steel radiator has remained virtually unchanged. In its essentials it is still the same as the first tubular steel radiator in the 1930s – the classic modern radiator. But manufacturing technology has advanced so much that today one cannot even guess where the welds are.

#### Pressing, Welding, Testing

The first radiators were more or less hand-made. In 1934/35 machines were acquired to join the steel tubes with the pressed head pieces. The numerous processes involved made the production of tubular steel radiators very labor intensive. As little changed between 1935 and 1965, productivity increased only marginally.

During the Second World War the Zehnder brothers had some fifty to sixty employees, by 1950 there were more than one hundred. This culminated in the early 1960s with just under 300 employees, roughly 250 working in production, some 30 as office staff and the rest concerned with shipping the products and looking after the stocks. At this stage rationalization measures were implemented, and the work force again declined. The employees, mostly male, were primarily recruited in Gränichen and surroundings; later they also came from abroad, especially from Italy.

#### Changes in the Market – Looking Beyond National Borders

In the 1950s a new generation of the Zehnder family took the helm. Two of the original Zehnder brothers had already died when, in 1959, a limited company was formed. Two members of the third Zehnder generation took over the management.

The company's original policy had been to concentrate on the Swiss market for tubular steel radiators. The new management began to broaden its horizon. Gebrüder Zehnder AG had exported to Germany since 1953, albeit in modest quantities. When German radiator manufacturers began to produce tubular steel radiators a few years later, the company realized it was high time for Zehnder to focus on the German market and establish a strong market position there. The first step was taken in spring 1963 by founding a subsidiary that could acquire an interest in foreign production and sales companies. Zehnder also bought a small factory to manufacture the necessary machines and equipment for future foreign production plants.

After negotiations with several potential German partners had failed, Zehnder decided in fall 1963 to build its own factory near Freiburg im Breisgau. As sales developed exceptionally well in Germany, the factory underwent several phases of expansion in the second half of the 1960s. By 1970 the German production and sales company had surpassed the parent company in Gränichen in terms of both sales and personnel.

In 1967 Zehnder founded a sales company in France which, in 1971/72, built its own production facilities in Châlons-sur-Marne, 150 km east of Paris. Establishing a firm market position in France was slow, uphill work. The French market leader, Acova, was a particularly strong competitor, even trying to take over the French Zehnder company at one time. Ironically enough, Acova became part of the Zehnder Group in 1994.

#### **New Types of Radiator Late on the Scene**

After the Second World War the patent for tubular steel radiators expired. Other manufacturers were free to exploit Zehnder's invention. It was not until 1956, however, that other Swiss radiator companies began to include tubular steel radiators in their range and thus to compete directly with Zehnder. Runtal was a major competitor. This company did not copy the Zehnder radiators but put new types of steel radiator on the market: convectors and heating panels. Their promotion strategy focused on architects and builders, and Runtal rapidly secured a substantial share of the market.

Most of the other manufacturers began to include convectors and heating panels in their range. Given the strong market position of its radiators, Zehnder did not follow this trend but, instead, developed a new tubular steel radiator, the 1-column radiator launched in 1967. The demand for heating panels and convectors increased further, however, and Zehnder was forced to react. By 1972, Zehnder had caught up with its competitors in terms of product range.

#### **Diversification to Combat the Effects of Recession**

It seemed as if nothing could stop economic growth between 1945 and 1973. It was therefore all the more shocking when, in October 1973, the OPEC countries cut their oil supplies and brought the boom years to an abrupt end. The subsequent crisis only served to speed up the downturn in the economic cycle.

As a supplier to the construction industry, a sector particularly hit by the recession, Zehnder was forced to consider its future in the radiator business. Sales for the Swiss production company dropped by thirty percent in 1974 and 1975. Other Swiss manufacturers decided to move out of radiator production, but Zehnder was determined to stay in the market and to retain its position as the largest producer of radiators in Switzerland. At the same time, however, it was agreed to establish a second major pillar in order to be less dependent on economic developments.

In 1975 Zehnder had an opportunity to acquire an interest in Haenni, a company near Bern producing measuring devices. Haenni was looking for a partner to help solve its liquidity problems. Agreement had been reached on the terms of participation when an American group made a much more advantageous offer for

Haenni. However, with the support of its bank, Zehnder was able to top this offer a few days later, whereupon 98 percent of the Haenni shares were passed on to Zehnder.

In the next few years Zehnder's new Instrument Division contributed roughly one third to the Group's total sales. A further six to ten percent of sales were attributable to the machine construction operations in the factory acquired in 1963 and in a machine construction department in the parent company. Yet despite this diversification, more than half the Group's sales continued to be generated by the radiator business. This division was further strengthened in 1980 when Beutler, a German radiator manufacturer, merged with the German Zehnder company to form Zehnder-Beutler.

#### **New Momentum through Going Public**

At the beginning of the 1980s, Zehnder was still wholly family owned although by that time only two of the original six families were still active in the company. The funds required by the Group grew steadily, and it was debatable whether the family alone would be able to provide the necessary capital to ensure continuing growth.

The outcome of intensive discussion within the family was agreement to open up the company to a wider public. A first step towards this objective was the foundation of Zehnder Holding Ltd. in 1984. This gave a transparent structure to the Group companies, whereas before, with the holdings developing organically, the situation was complex and difficult to unravel.

In the fall of 1986, Zehnder exploited the favorable market conditions to issue its newly created bearer shares. Prior to going public, steps had been taken to ensure that the voting majority remained in the hands of the family shareholders actively working in the company, and of a few members of the management. The share issue and the subsequent listing on the Zurich stock exchange were very successful. The favorable time for going public and the issue of participation certificates together with a warrant issue a few months later provided Zehnder with an inflow of funds amounting to some SFr. 55 million, giving the company substantially more room for maneuver.

#### **Challenge and Change in the Zehnder Group since 1980**

Zehnder introduced several new products onto the market in the 1980s. The most important innovation in the product range was a towel radiator developed by Zehnder's French subsidiary and launched group-wide in 1980. This type of radiator was soon copied by the competition and various models are now available. It is an excellent market performer and eminently suited for post-construction installation. For Zehnder this new development opened up the renovation market, which was to become increasingly important in the 1980s.

In 1988 the operational management was passed on to Hans-Peter Zehnder, a representative of the fourth Zehnder generation. In the same year Zehnder took over Runtal, a Swiss competitor with sales equivalent to roughly fifty percent of the total sales of Gebrüder Zehnder AG. Runtal had licensees in several countries, thus giving Zehnder easier access to new markets in Europe and the United States.

In the next few years Zehnder acquired an interest in several Runtal licensees or took over such companies, as in the United States, Italy, Spain and Ireland. Targeted expansion in countries where it did not have a sales company of its own was a major contributor to the Zehnder Group's growth.

Development of the other divisions was varied. The machine construction operations were discontinued in 1982. The Haenni Group, taken over in 1975, modernized its product range by changing from mechanical to electronic measuring devices. However, this change was undertaken too slowly. As a typical export-oriented company, Haenni was badly hit by unfavorable exchange rates after 1985. A comprehensive restructuring program was developed to improve earnings but, by the time most of the measures had been implemented and its new internal structure was in place, Haenni saw itself confronted by a worldwide recession. The earnings problems were not solved.

No such problems arose in the radiator business where Zehnder's success continued unabated. With its broad geographic base, the Group was not severely affected by the recession that started in 1991. Zehnder's German subsidiary in particular flourished. It built up a sales organization in the new German Länder and benefited from the general optimism and economic confidence after reunification of the two German states. Zehnder-Beutler's share of the German market for special radiators at the end of the eighties was probably some fifty percent, the market share for the entire Zehnder Group in Europe was roughly one third. This made Zehnder the market leader in Europe. In Switzerland it had been the number one for some considerable time and, in order to expand its market position further, Gebrüder Zehnder and Runtal-Werk merged in 1992 to form Zehnder-Runtal.

Apart from strengthening its Radiator Division, Zehnder began to pursue a strategy of divesting operations not closely linked with its two main activities. Zehnder Holding sold most of its "Other Operations", including a company producing welding machines for tin cans and its shares in a paper finishing factory.

After years of effort and two fruitless attempts to take over the French market leader in special radiators, Zehnder acquired Acova in 1994. Acova was one of the two largest manufactures in Europe, but still substantially smaller than the Zehnder Group. Moreover, Acova was the largest Runtal licensee, and Runtal already belonged to the Zehnder Group. With this acquisition, in line with its strategy since 1991, Zehnder has largely achieved its objective of concentrating on its core business in the radiator sector.

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