

25

25 years Bystronic

Dear reader



Do you remember our first generation machines: Bylas and Byflex? Do you know when and where we founded our first subsidiary in Asia? Or why in 2002 Bystronic was split into glass and sheet metal processing systems? With this booklet we want to help jog your memory in your search for answers. It is not our intention to review Bystronic's history, but rather to relive a few episodes from this history. Some things will certainly be familiar to you, others you will perhaps cause you to marvel or chuckle to yourself.

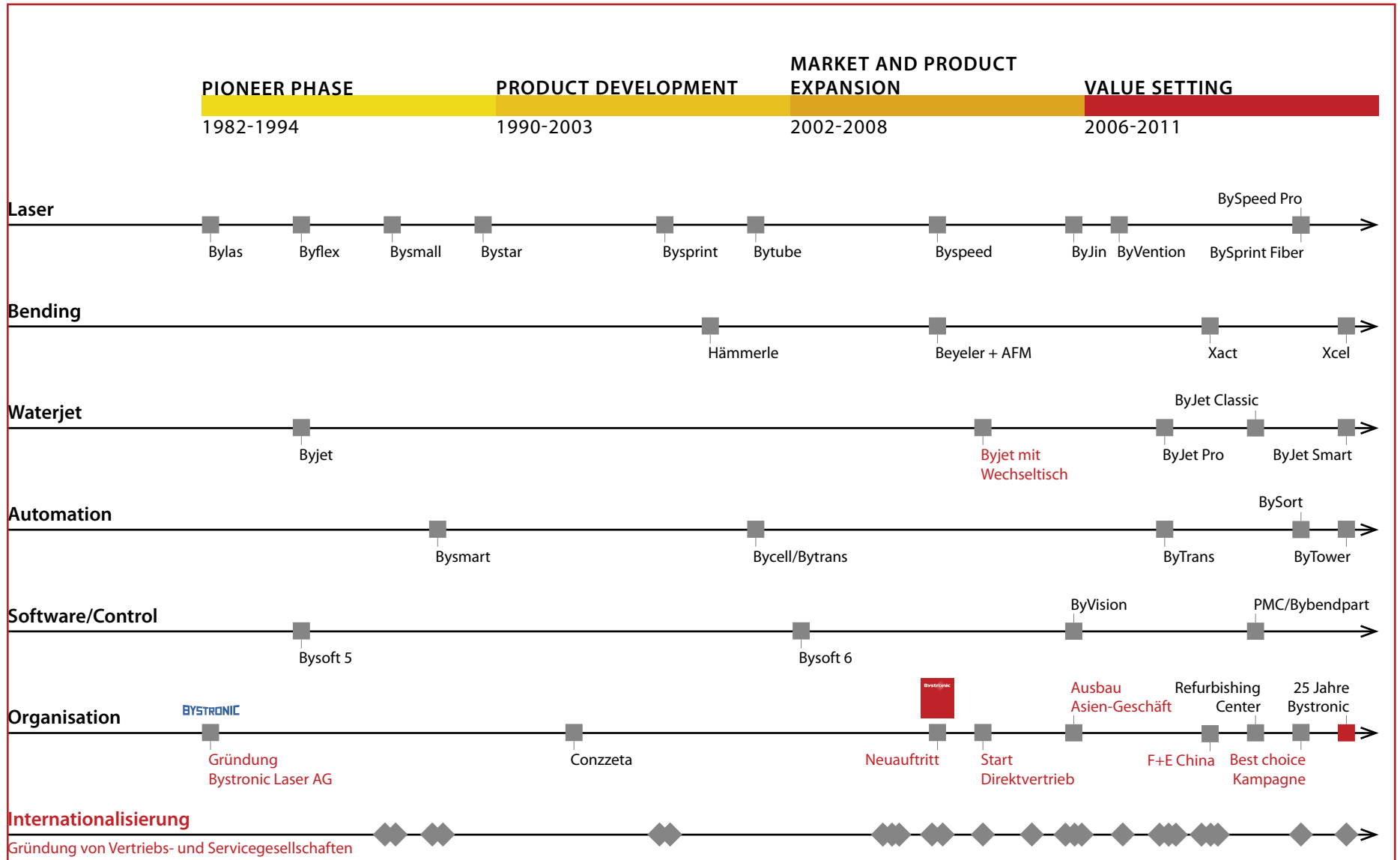
I hope you enjoy yourself while browsing through 25 years of Bystronic!

A handwritten signature in black ink, appearing to read 'F. Töngi'.

Ferdi Töngi

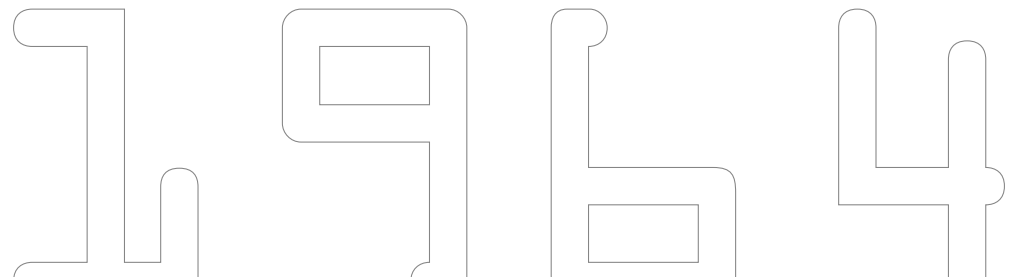
25 years Bystronic

Eine Erfolgsgeschichte



The name Bystronic

The name Bystronic first appeared in 1964. The mechanical engineer Hans **By**land, the master mechanical craftsman Paul **S**chneider and Heinz **T**rösch, initiator and financial backer, founded the company Bystronic Maschinen AG in the Swiss town of Bützberg where they manufactured systems for cutting glass. Just a year later a change took place in the structure of the ownership: the mechanical engineer Ernst Zumstein took over the shares of Messrs Byland and Schneider and became a 50% shareholder. From this point on, Ernst Zumstein managed Bystronic for more than three decades.



BYSTRONIC

1982-1994

PIIONEER PHASE

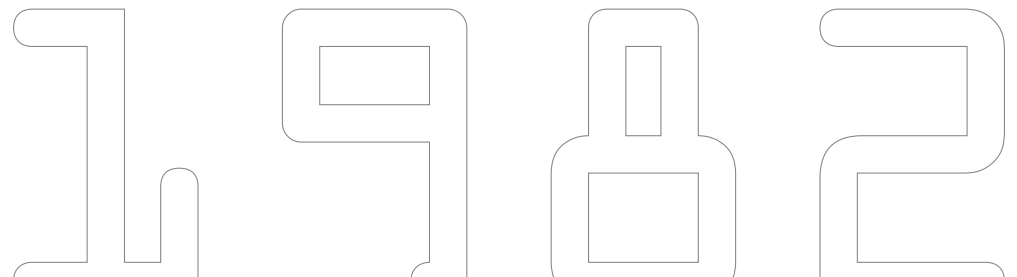
The potato harvester



The trigger for laser cutting at Bystronic came from the company Samro AG in Burgdorf that manufactured machines for harvesting potatoes. In the 1980s this company belonged to the entrepreneur Ernst Zumstein, who was simultaneously managing partner of the glass processing company Bystronic in Bützberg. For its harvesters, Samro required many, often large, sheet metal parts which could be produced far more flexibly and rationally using a laser cutting system than with a punching machine. Samro AG is no longer owned by Bystronic: Shortly before the takeover by Conzzeta in 1994, Ernst Zumstein bought out Samro from Bystronic once again on a private basis. The potato harvesters had become an alien element within the Bystronic structure.

„If Bystronic had not bought the Samro company, there would be nothing in Niederönz today. No laser technology.“

Ernst Zumstein, co-owner and Managing Director 1965–2000





▲ Bystronic bought a 500 watt laser in England, incorporated it in a glass cutting machine and with this prototype started to process sheet metal at Samro.

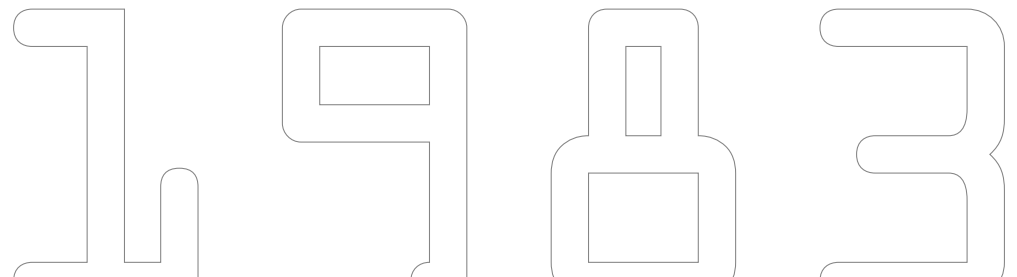
The prototype



The first laser machine that Bystronic built was installed with the company Samro in Burgdorf, Switzerland, in 1983. It was based on a glass laser cutting system: the machine structure and drives were actually designed for moving in continuous paths with low acceleration and at high speeds. However, the sheet metal parts had irregular contours and demanded high acceleration at low speeds. Hence the drives wore out very quickly. Bystronic engineers spent many long nights repairing the machine so that during the next day sheet metal parts could once again be cut. Nevertheless, Samro was most enthusiastic about the new technology.

„On this machine we became acquainted with the demands placed upon laser cutting.“

Thomas Plüss, Head of Product Support (previously Head of Development Machines and Controls)





▲ Bystronic bought a 500 watt laser in England, assembled it on one of their glass cutting machines and started to cut sheet metal at Samro.

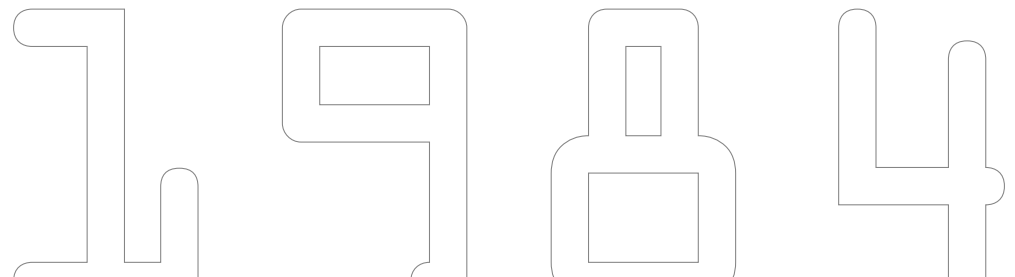
The first attendance at a trade fair



On the basis of the prototype at Samro, in 1984 Bystronic built the first laser cutting machine that was suitable for the market: the Bylas 3015. In the very same year Bystronic exhibited this machine for the public at the „Blech“ trade fair in Essen (Germany). The only personnel manning the exhibition stand were from the glass processing segment – people who had no real knowledge about sheet metal processing and who were ridiculed by the competition. Nevertheless, with flying optics and the shuttle table, Bystronic had two unique selling points in the laser cutting market and soon became a player to be taken seriously.

„The competition asked: ByWhat? By-Who? Who are you?“

Urs Singer, from 1985 Head of Sales, later holding a number of management positions





▲ **Bylas 3015** Laser power: 500/1000 watts Maximum axis speed: 80 m/min Maximum path acceleration: 1 m/s²

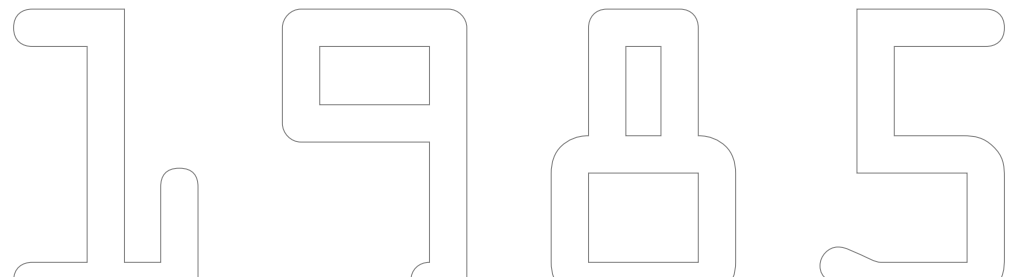
Plasma cutting – a brief intermezzo



During the 1980's, in addition to laser cutting the Bystronic engineers also experimented with plasma cutting machines. In 1985 they exhibited the Bycut BP 3000 at a trade fair in Hanover, Germany. The machine, which had been developed primarily for the heating and ventilation industry, was able to cut thick metal sheets, but in doing so produced a great deal of heat and was not able to process fine contours. Since the plasma cutting machines were too expensive, Bystronic soon abandoned this technology.

„Plasma cutting never really caught on. It was a completely different world from laser cutting.“

Urs Singer, from 1985 Head of Sales, later holding a number of management positions





▲ Plasma cutting machine BP 3000

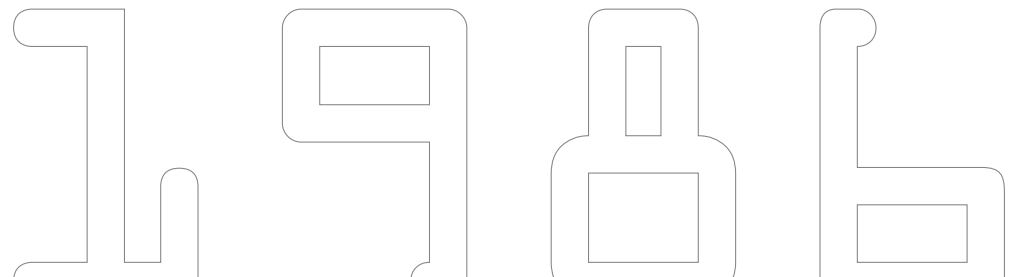
The founding of Bystronic Laser AG



Bystronic began to develop its own laser source quite early on. The bought-in 500 watt laser was not powerful enough and was extremely unstable. In 1985 its proprietary 1000 watt laser beam source was operational and was fitted to the Bylas 3015. This improved machine was so successful on the market that the rapidly growing laser cutting department had to be separated from the Bystronic glass processing business. Thus at the beginning of 1986 a new company opened its doors in Niederönz: Bystronic Laser AG. Hence from the hobby of the glass cutters, a new Business Division was created. Meanwhile the Bylas had also awakened interest beyond the sheet metal processing segment. In 1986 Bystronic constructed a Bylas 4020 for cutting textiles and acrylic glass (Plexiglas).

„In Bützberg the company was bursting at the seams.“

*Ernst Zumstein, Co-owner and Bystronic
Managing Director 1965–2000*





▲ The location in Niederösterreich in 1986.

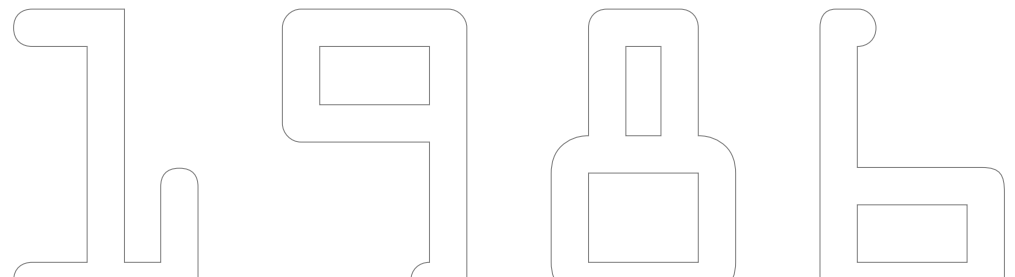


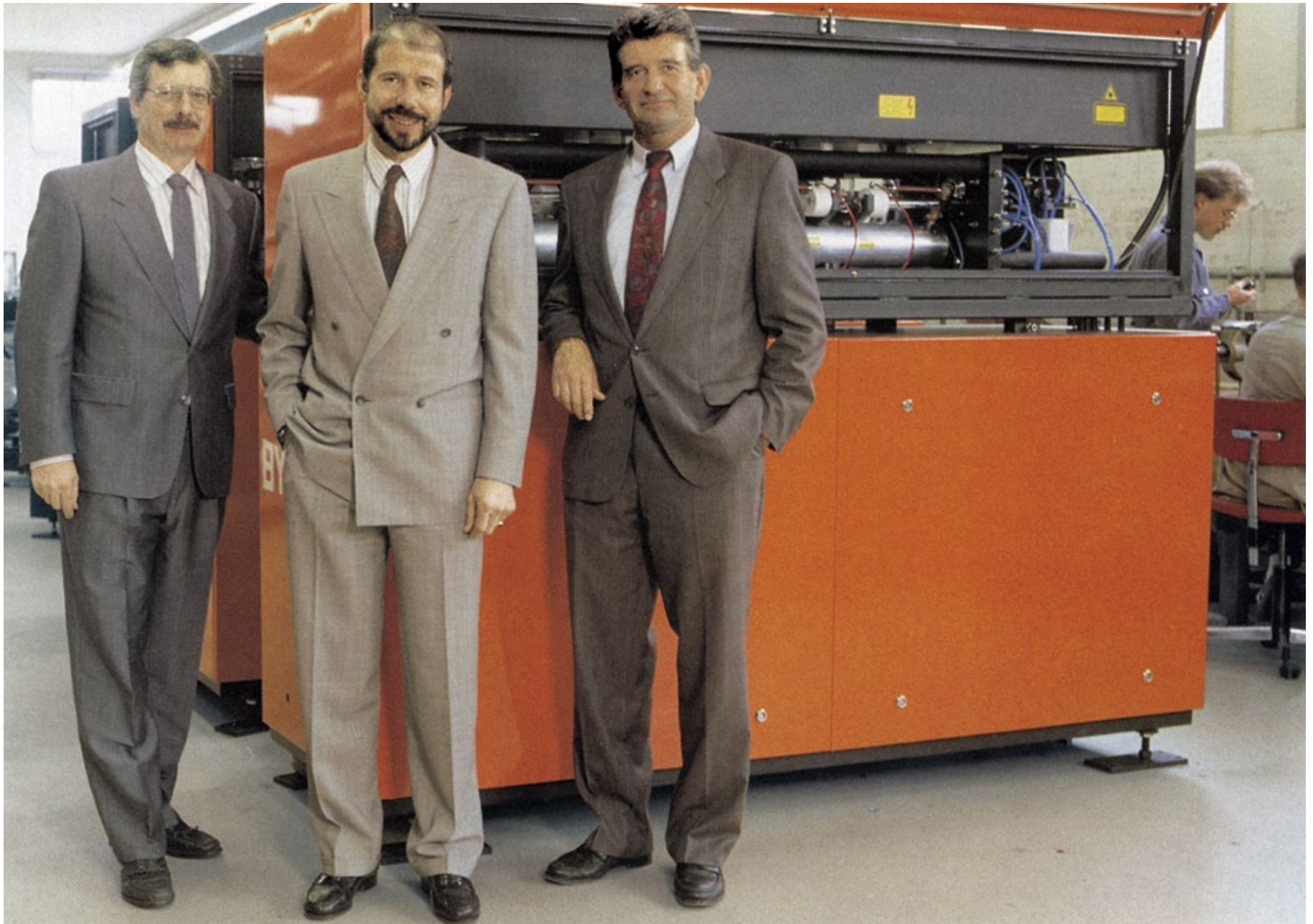
The itinerant preacher

Urs Singer was the first sales person at Bystronic Laser AG. During a time in which laser cutting was still completely unknown, he travelled up and down the country preaching to sheet metal processors about the advantages of this new technology compared with punching: greater flexibility in production, no long tool changeover times, no expensive tools, fewer work processes (no deburring and straightening) – and in addition to all this: shorter throughput times for the increasingly smaller batch sizes. His words fell upon sympathetic ears. Soon the large sheet metal processors in Switzerland became his customers. They provided fantastic figures and hence soon became Urs Singer's best sales persons. The ball had been set rolling.

„It was like trying to spread the Gospel“.

Urs Singer, from 1985 Head of Sales, later active in a number of management positions





▲ Urs W. Hunziker, Leiter Laserentwicklung

▲ Urs Singer, Leiter Verkauf

▲ Ernst Zumstein, Geschäftsführer

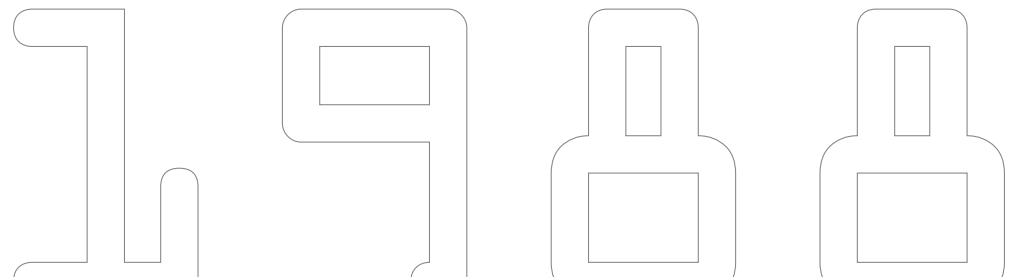
The software revolution



In 1988 Urs Singer heard about a French software house that had written a nesting software for optimizing the cutting of textiles. This allowed the fast nesting of various jobs on a predefined format with minimum waste. Urs Singer sent one of his sales people to a trade fair in France with the single task of finding the person responsible and of inviting him to Switzerland. And indeed: During the first visit the deal was done. Bystronic integrated the nesting software into the existing Bysoft package and from then on was in possession of the world's first fully integrated nesting software for laser cutting that ran on a commercially available PC. This program – in an improved version – is still used today.

„With demonstrations in Niederönz, we showed our customers that the software really worked. They were hardly able to believe their eyes.“

Kurt Maibach, Head of Systems





▲ The first PC-compatible nesting software



▲ From 1986 on, Kurt Maibach established and built-up the IT infrastructure and the Bysoft training at Bystronic Laser AG.

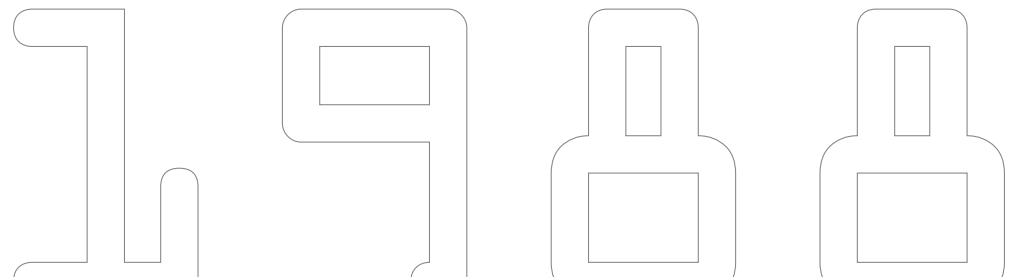
The Bystronic standard tube



Towards the end of the 1980's, the market was crying out for a flexible machine for both sheet metal and tube processing. Bystronic reacted and at the „Blech“ trade fair in Essen (Germany) in 1988 presented the Byflex. To accommodate the additional rotary axis for processing tubes, the control package had to be extended. Since the software was not completed in time for the trade fair, at the exhibition Bystronic was able to cut tubes of one diameter only: the Bystronic standard tube.

„At the trade fair we were able to cut just a single tube diameter. Nobody noticed this.“

Thomas Plüss, Head of Product Support (previously Head of Development Machines and Controls)





▲ **Byflex 3103** Laser: 1800/2800 watt turbo laser
Maximum rotation speed: 100 rpm
Maximum path acceleration: 1 m/s²

◀ **Byflex 4015-3**

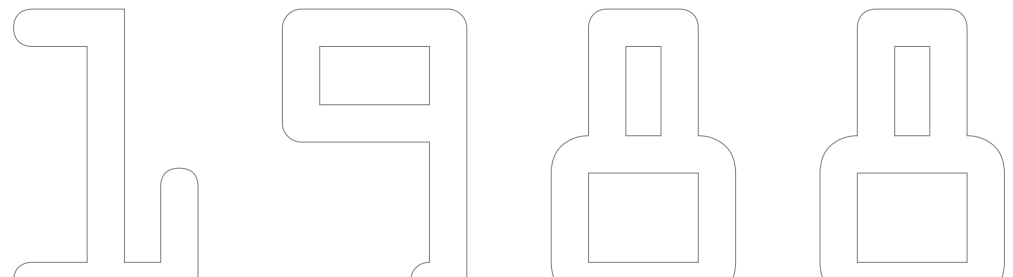


Cutting with water

For the initial attempts with waterjet cutting, Bystronic built a high-pressure pump onto a glass cutting machine. Based on this prototype, the first complete Bystronic system for cutting sheet material using a water jet was built in 1988: the Byjet. Bystronic quickly discovered the potential of this technology, in particular with material types and thicknesses with which the laser was at its limits. The Byjet became a synonym for the reliable and precise processing of all types of material using a water jet. In 1993 it was equipped with the BJD 4000 – a unique high-pressure pump developed by Bystronic that with an operating pressure of up to 3700 bar was able to cut economically. It was later developed further to provide the first fully regulated high pressure pump, today known as the ByPump Active.

„We soon realized that in addition to glass we could cut a whole range of other things.“

*Ernst Zumstein, Co-owner and Bystronic
Managing Director 1965–2000*





▲ Byjet 3015 2-Schneidkopf-Maschine mit integrierter Höhenabtastung und Abrasivzufuhr Maximaldruck: 2800 bar

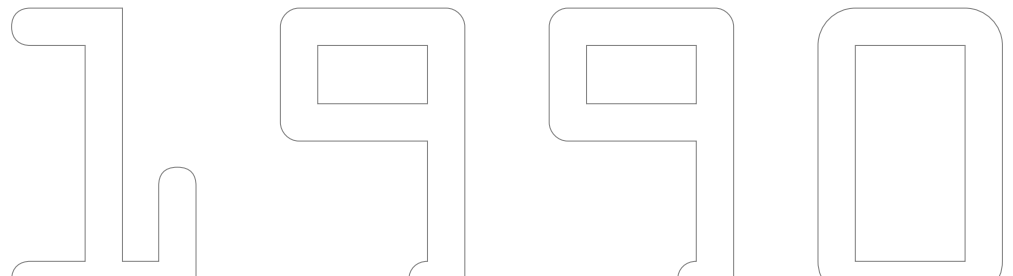
Extraordinary formats

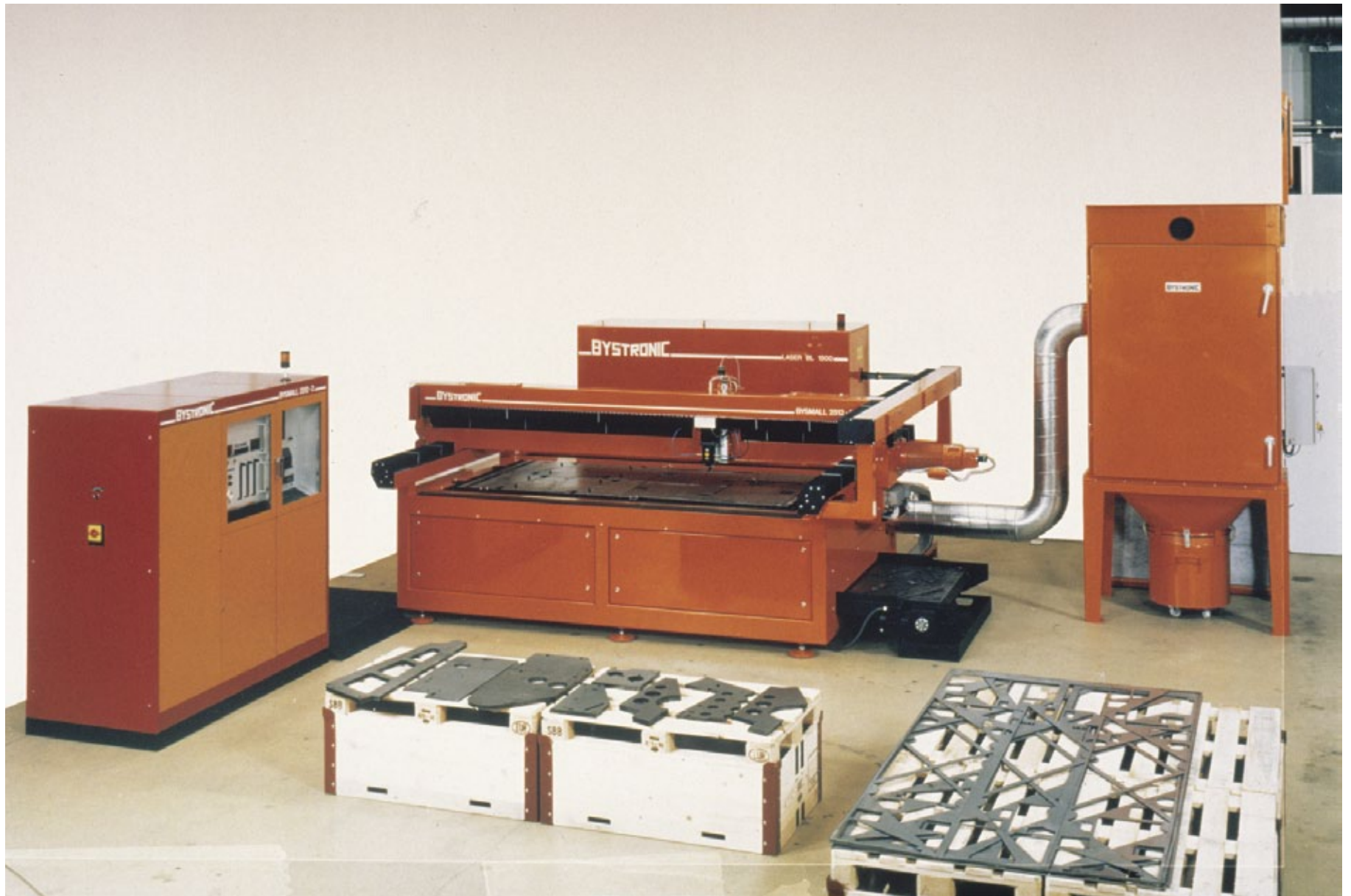


In 1990 Bystronic produced for the first time a machine that did not conform to the standard metal sheet format of 3 x 1.5 meters: the Bysmall 2512. The idea for this originated in the USA, where the Japanese manufacturers of cheap hybrid laser cutting systems were putting Bystronic under a price pressure. These machines used metal sheets with a size of 2.5 x 1.25 meters as standard. The USA is also responsible for the fact that the 3 x 1.5 meter machines have a cutting area of 3048 x 1524 mm, since they work with inches and feet and not in meters. The more popular American standard sheet size is exactly 120 x 60 inches (3048 x 1524 mm).

“In order to be price competitive with the low-cost suppliers, we also wanted to have a low cost machine with a format of 2.5 x 1.25 meters.”

Frank Arteaga, Head of Product Management, Bystronic Inc.





▲ Bysmall 2512

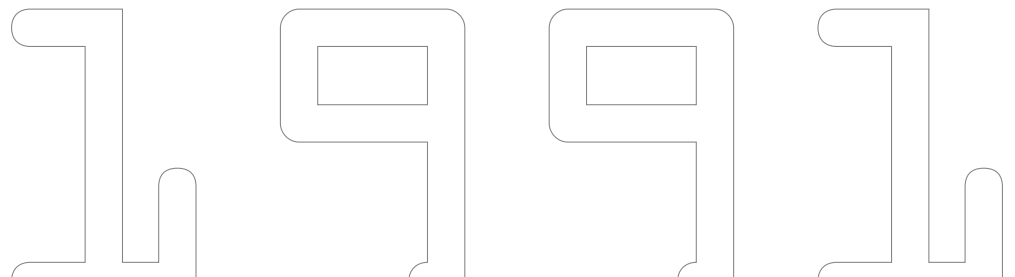
The beginning of automation



Bystronic Laser AG also offered automation solutions at a relatively early stage. Right from the beginning an optional loading station was available for laser cutting systems. Bystronic then tried to master the stacking of individual parts, which proved to be difficult, because many customers were producing an ever increasing variety of parts. The first Bysort attracted many casual customers onto the Bystronic exhibition booth, but was very susceptible to faults. Also the subsequently developed freefall collection system, which allowed the cut parts to fall through the cutting grate onto a conveyer belt where they were turned into the correct position with the aid of a camera, was not able to establish itself.

“We exhibited the first Bysort at the EMO in Paris in 1989. It looked very good but was fairly susceptible to faults.”

Alfred Horisberger, Head of Design and Production 1986–2003





▲ **Bysmart:** first Bystronic system for the stacking of individual parts

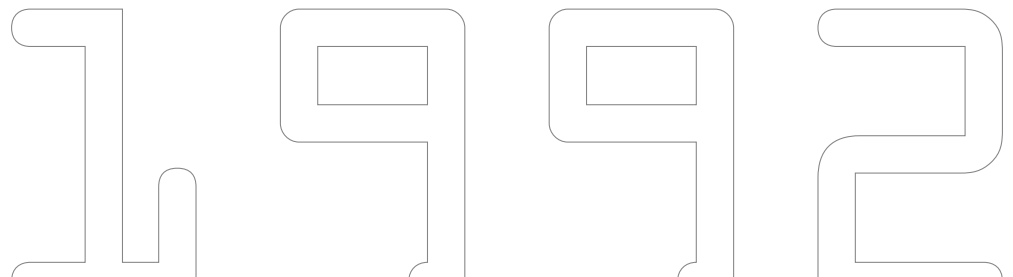


Bystar – the most successful machine

At the close of the pioneer phase in 1992, Bystronic incorporated all its previous products into a single machine: from the Bylas the flying optics, from the Byflex the optional processing of sheet materials and tubes, from the Bysmall the cutting bridge on the longitudinal side. Admittedly, the latter made the machine heavier and the drive more complicated, but improved access enormously. The operator was always able to see what was going on – a huge advantage in a phase in which the machines were still very susceptible to faults. Bystronic named this prodigy Bystar. It is still to this day the most successful machine: in summer 2011 the 2000th machine was delivered.

„As far as I am concerned, the Bystar was the absolute breakthrough.“

Alfred Horisberger, Head of Production and Development 1986–2003





◀ Bystar 3015



▲ Bystar L with repositioning



BYSTAR

1990-2003

PRODUCT DEVELOPMENT

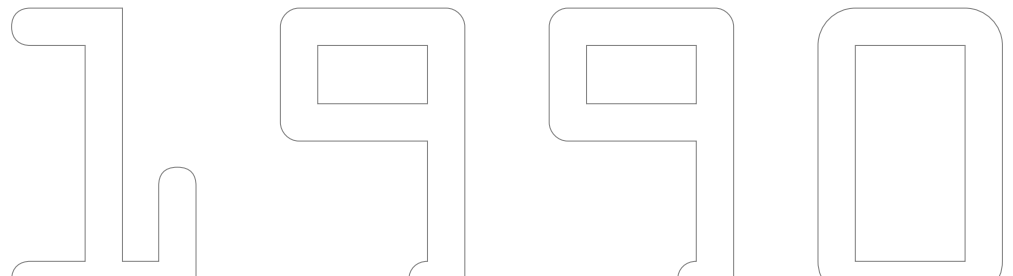
Beyond the border



At the beginning of the 90s, Bystronic Laser AG took its first tentative steps into foreign sales activities. In the USA the company was able to use existing structures: the parent company at that time, Bystronic Maschinen AG, had already founded a subsidiary in Hauppauge near New York in 1978 – Bystronic Inc. – which was able to add laser cutting to its activities. Bystronic used its high market position and well recognized customer base in the US automotive industry as a reference, positioning its machines as highly reliable and Bystronic as a trusted brand. In Hauppauge the laser cutting systems were not only sold but also manufactured until 2003 when Bystronic concentrated production in Niederönz.

“It was quite a challenge to enter the US sheet metal market in the early 1990s, as Bystronic was not well recognized and there were already established competitors here for many years.”

Ulrich Troesch, Managing Director, Bystronic Inc. 1978–2006





▲ The initial premises of the American subsidiary **Bystronic Inc.** in Hauppauge.

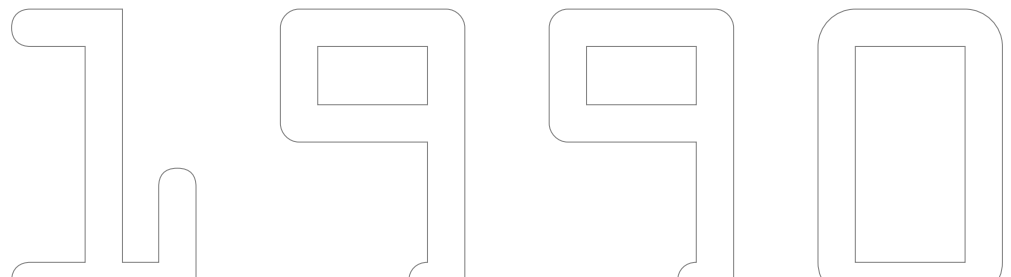
Without service, no sales



After branching out to Bystronic Inc. in North America, Bystronic Laser AG also set up its first subsidiaries in Europe: 1990 in Germany, 1991 in Italy and Sweden and in 1996 in France. Whereby first and foremost, the idea was to establish customer services in these markets. Since without customer service there can be no sales. During this phase, the sales activities were carried out exclusively via agents. It was only in 2003 that Bystronic began to change over to direct sales.

*„It has been shown several times in the history of:
in markets where we established a good customer
service at an early stage, we achieved the greatest
success.“*

*Johan Elster, Head of the NAFTA and Northern Europe Market Division
(previously Managing Director at Bystronic Scandinavia)*





▲ Well trained **service technicians** are the basis for a later sale on the market.

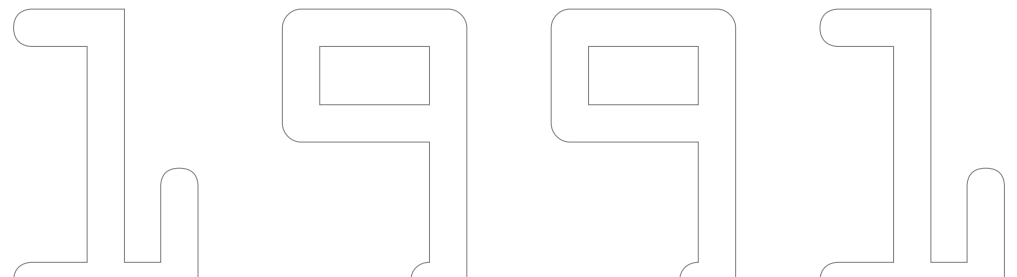
Bystronic needs space



When Bystronic Laser AG first started in Niederönz in 1986, only a part of today's production halls existed and the first floor of the old office block. Already one year later Bystronic extended both buildings to today's status. In 1991 a further decisive expansion followed: Bystronic bought its first machine for the production of the large parts from Ingersoll-Bohle. Together with the foundations and tools the system cost between 3 and 4 million Swiss francs – a huge investment and a clear indication that the owners believed in the young company.

“The processing of large parts had become a dangerous bottleneck for us. We were dependent on a single supplier who, as it were, determined our machine output.”

Alfred Horisberger, Head of Design and Production 1986–2003





▲ The Ingersoll-Bohle machine installed in 1991 was the first processing center for large parts at the location in Niederönz.

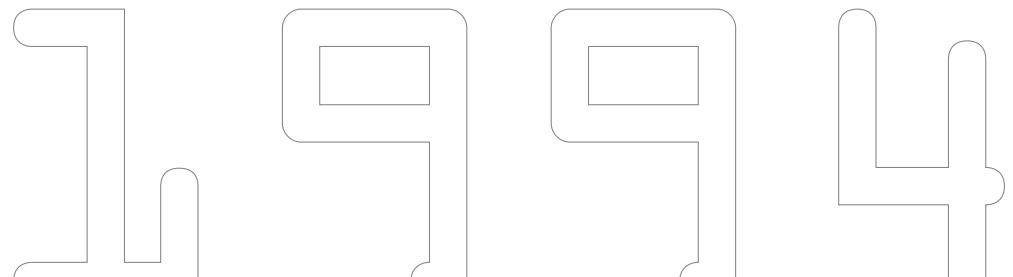
Conzzeta comes on board



In 1994 the Swiss Holding Conzzeta (at that time known as the „Zürcher Ziegeleien Holding“) acquired Bystronic. The opportunity arose when the „Glas Trösch Group“, a glass specialist that held a 50% participation in Bystronic, set up a company in Elsass for the production of float glass. Thus a difficult situation arose in the relationship with Bystronic customers, who also manufactured glass. This led to the situation where the Trösch Group sold its holding in Bystronic. The other owner Ernst Zumstein searched for a long-term solution for the company and also decided to entrust Conzzeta AG with his part of the company.

„I think back with pleasure on the negotiations, which from the very beginning were characterized by trust and an orientation to the future. I often think about them when in the ups and downs of the economy, sustainable paths are being sought.“

Jacob Schmidheiny, Chairman of the Board at Conzzeta AG



conzzeta

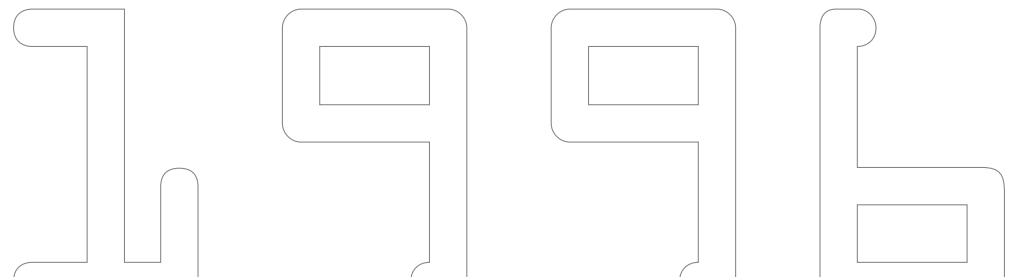
Bysprint – the first alternative to punching



The machines from the pioneer phase, such as the Bylas or the Bystar, still offered no true competition to mechanical sheet metal processing. In particular in the processing of thin sheet metal they were unable to compete with the productivity of the punching and nibbling machines. This changed with the advent of the Bysprint 3015 that was launched on the market by Bystronic in 1996 thus heralding the start of the second generation of machines. At that time, the Bysprint was one of the fastest laser cutting systems on the market.

“With the advent of the second generation of machines, the competitive struggle with punching really began.”

*Thomas Plüss, Head of Product Support
(previously Head of Development Machines and Controls)*





BYSPRINT



▲ **Bysprint 3015** Laser power: 2200/3000 watts
Maximum axis speed: 100 m/min
Maximum path acceleration: 2,6 m/s²

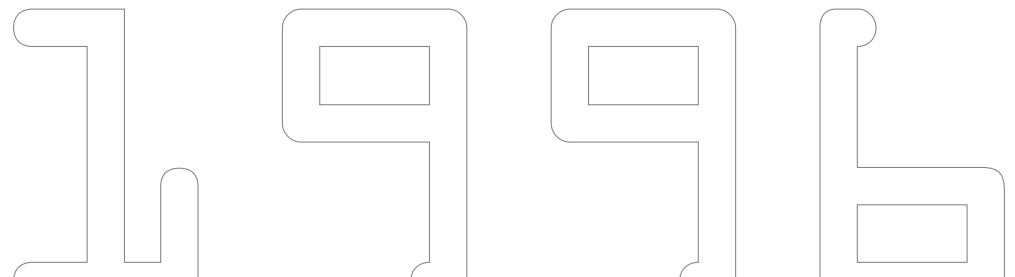
New venture in Asia



In 1996 Bystronic founded the first country subsidiary on Asian soil. Not coincidentally in Singapore: the small city-state is the only largely unbureaucratic country in the region, and for western countries it is the door to Asia. Decisively involved in the setting up and its subsequent success was Florian Stoffel, who joined Bystronic in the nineties. His many years of experience in setting up organizations in Asia for two companies in the steel and machine industries played a significant role in learning to understand the completely different mentality and requirements. Thus Bystronic was able to successfully orient itself to this vast region and its customers. Until the end of 2006, Florian Stoffel was Head of the Asia/Pacific Market Region.

“Already back then Singapore was the hub for logistics for the whole of Asia. Spare parts were shipped around the clock, also on Saturdays and Sundays.”

Florian Stoffel, Head of Asia/Pacific Market Region 1996–2006





▲ As a result of the foundation of the company in **Singapore**, the Bystronic culture was extended by an Asian element.

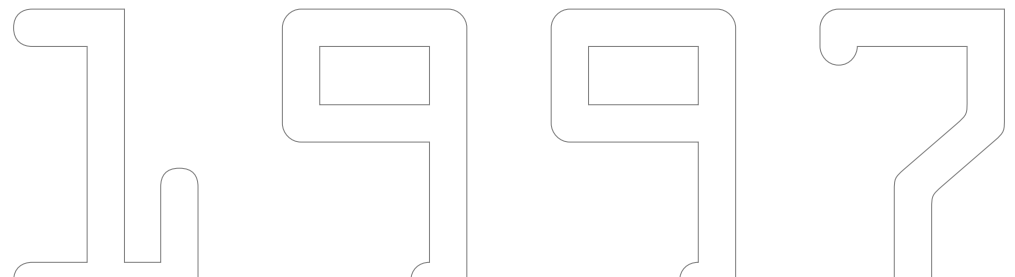


Entry into the bending business with Hämmerle

Anyone who wants to be successful in the sheet metal processing market must be able to offer both: cutting and bending. Ernst Zumstein became aware of this at an early stage and looked about for possible partners for the bending business. In 1997 the time had come: Bystronic took over the pressbrake business unit of the Swiss company Hämmerle AG. The Hämmerle machines were at that time the best on the market and consequently a niche product. With these machines alone, Bystronic would never have been able to develop the market and hence very soon considered other takeover candidates.

„For Hämmerle the takeover by Bystronic was a godsend.“

Richard Kölliker, from 1997–2010 Product Manager Bending at Bystronic, previously Head of Services and also Sales Manager for the English-speaking overseas markets at Hämmerle





▲ Assembly hall for Hämmerle pressbrakes at M+S in Brugg, Switzerland.

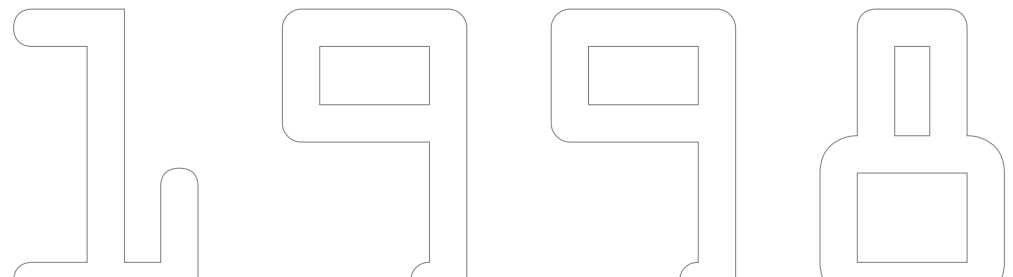
Bytube – goodbye to the tube

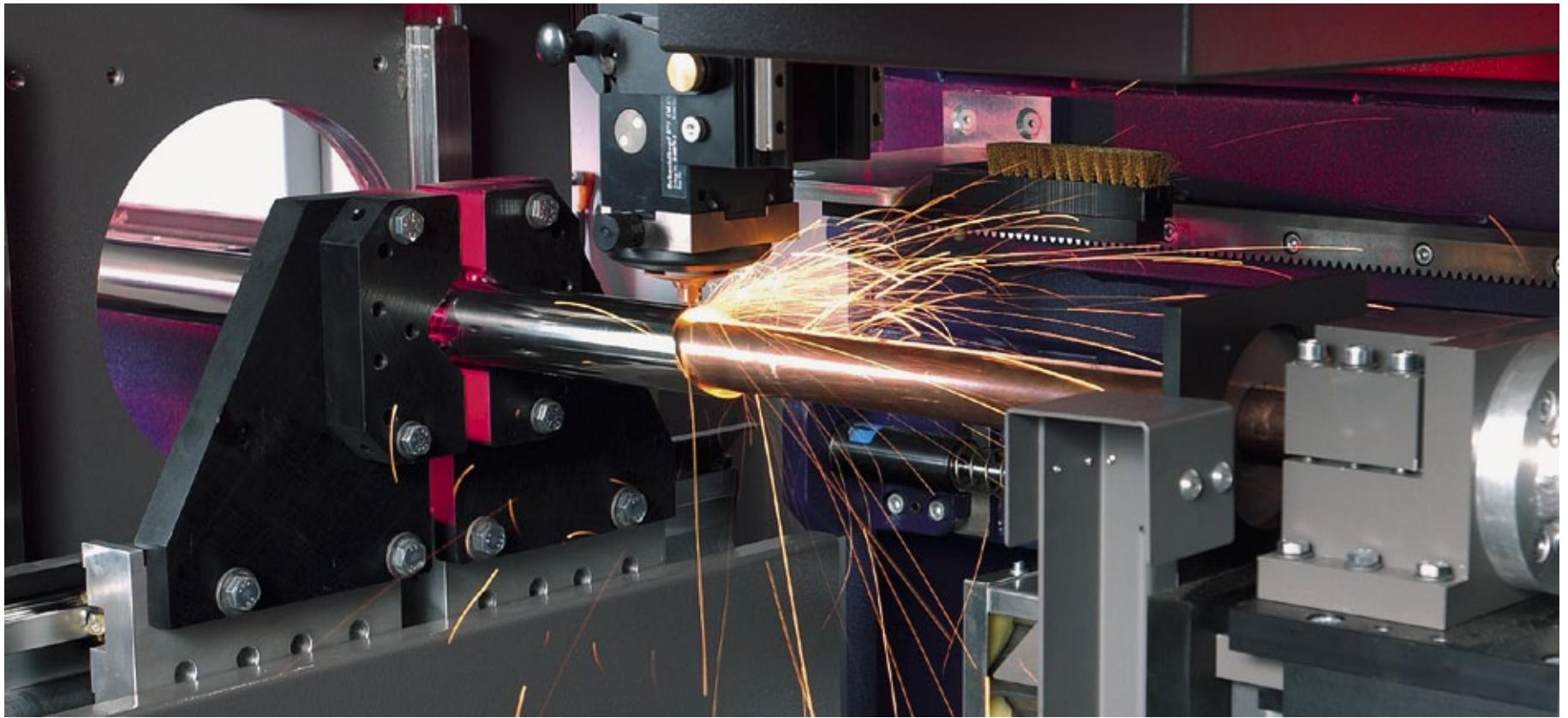


Ten years after the first attempt with Byflex, in 1998 Bystronic once again decided to venture into the tube processing field with a new machine and launched the Bytube. However, it soon became clear that this widely diverse market could not be developed using a universal machine. Almost all the Bytube systems that were sold were machines that had been specifically adapted to the customer's special requirements. But Bystronic was interested in series production. The processing of tubes and Bystronic were simply not compatible. Thus in 2004, the Bytube was removed from the product portfolio.

„The Bytube was a good machine. But not everything that is good can assert itself on the market.“

Walter Brun, Regional Sales Manager





▲ Even with the **Bytube**, the processing of tubes never took off at Bystronic.

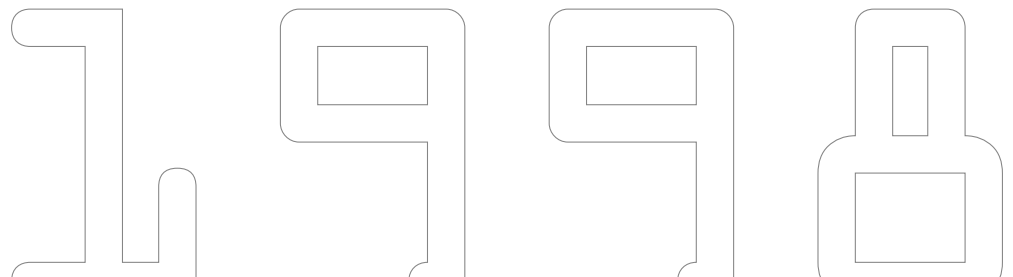
Bycell – a sheet metal warehouse for Bystronic

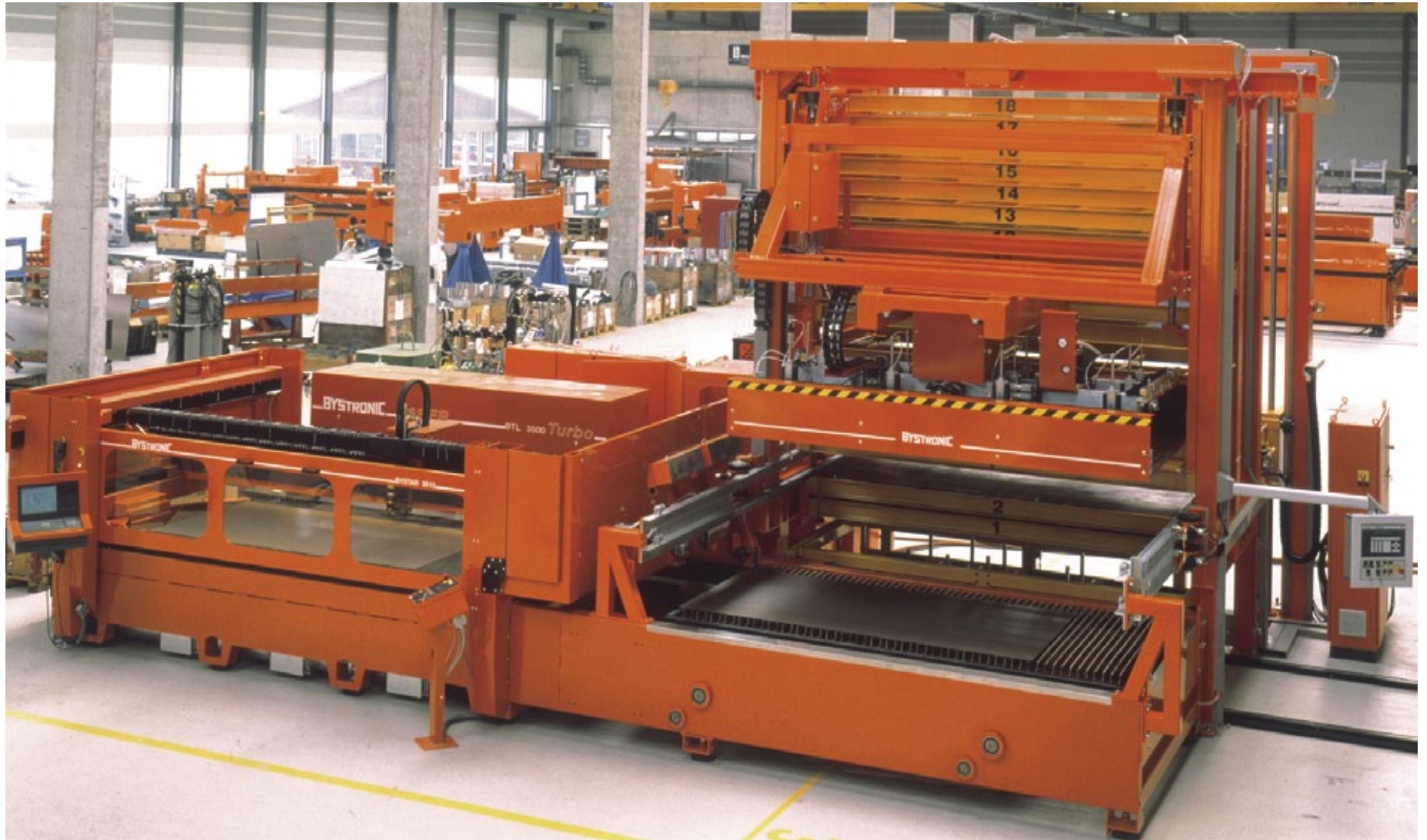


It was love at second sight. In 1996 Fritz Müller tried without success to sell the design department of the financially weakened “Maschinenfabrik OMA” to Bystronic in order to save the company from closure. At that time OMA, which was based in the Swiss town of Aarau and where from 1996 to 1998 Fritz Müller was Managing Director, sold the most compact solution for the automation of sheet metal warehouses. However, because of the interfaces they only sold it to customers who used Bystronic laser cutting machines. In 1998 negotiations were resumed – this time successfully. Bystronic bought all of OMA’s designs and renamed the storage system that they had thus purchased as Bycell.

“The Bystronic sales people quickly realized that it was easier to sell their machines if they were also able to offer the automation as an integral part of the machine.”

Fritz Müller, from 1998 until 2010 active in various sales functions at Bystronic, previously Managing Director of OMA





▲ Bycell storage system attached to a Bystar

Bystronic buildings – clear and simple

„Form follows function“ – the material flow determines the project: this was the basic principle applied by the architects Gerold Dietrich and Patrick Müller who designed the new Bystronic premises at the headquarters site in Niederönz in 1998 (Hall 2) and 2002 (office building 2 and Hall 3). The buildings are based on a basic grid of square zones with dimension modules of 2.5, 5 or 7.5 meters for all office and assembly workplaces. This is clearly arranged and provides Bystronic with a great deal of leeway for any future conversions. The architects' planning is farsighted: the positioning of Hall 2 was selected taking into account the logistics associated with a possible third hall. And the new office building can be extended upwards by three floors.



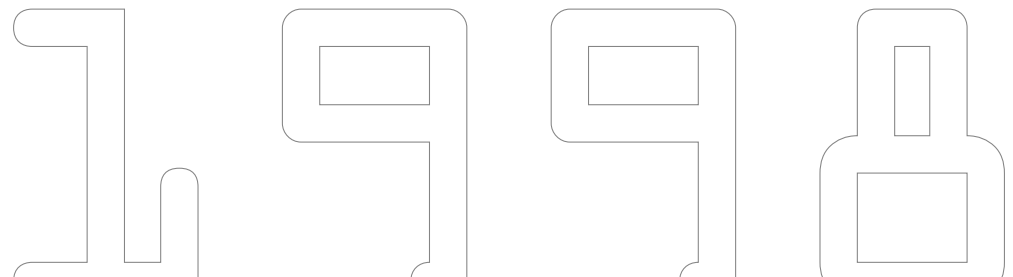
▲ Gerold Dietrich



Patrick Müller ▲

„The Bystronic buildings are simple, logically planned and clearly laid out. Once you have walked through the building twice, you know where everything is.“

Gerold Dietrich, Architect





▲ Top: Hall 2, built 1998 | Below: office building 2 and Hall 3, built 2002

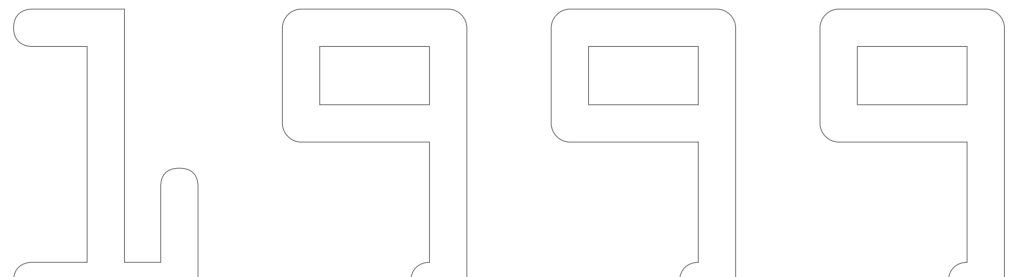
The power race



The laser source is an important factor for the productivity of a machine. Bystronic put its trust in its own development from very early on: the Bylas was equipped with a proprietary 1000 watt beam source already in 1985. Subsequently a desperate race took place amongst suppliers of laser cutting machines to produce the most powerful laser source. Greater power meant thicker metal sheets and shorter part cutting times. Whoever was able to take the step to the next level before the competitors, dominated the market. In 1999 Bystronic launched for the first time a valve excitation laser with an output power of 4 kwatts and subsequently converted to semiconductor technology.

„With the technological advance to semiconductor excitation, lasers became more compact, more reliable, and more efficient.“

Oliver Bühler, Head of Laser Development





▲ Resonator assembly until 1999 Bystronic produced only valve excitation lasers

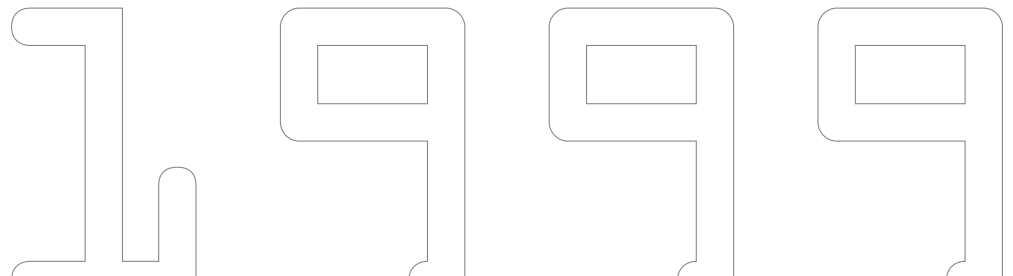
The end of DOS – the start of Windows

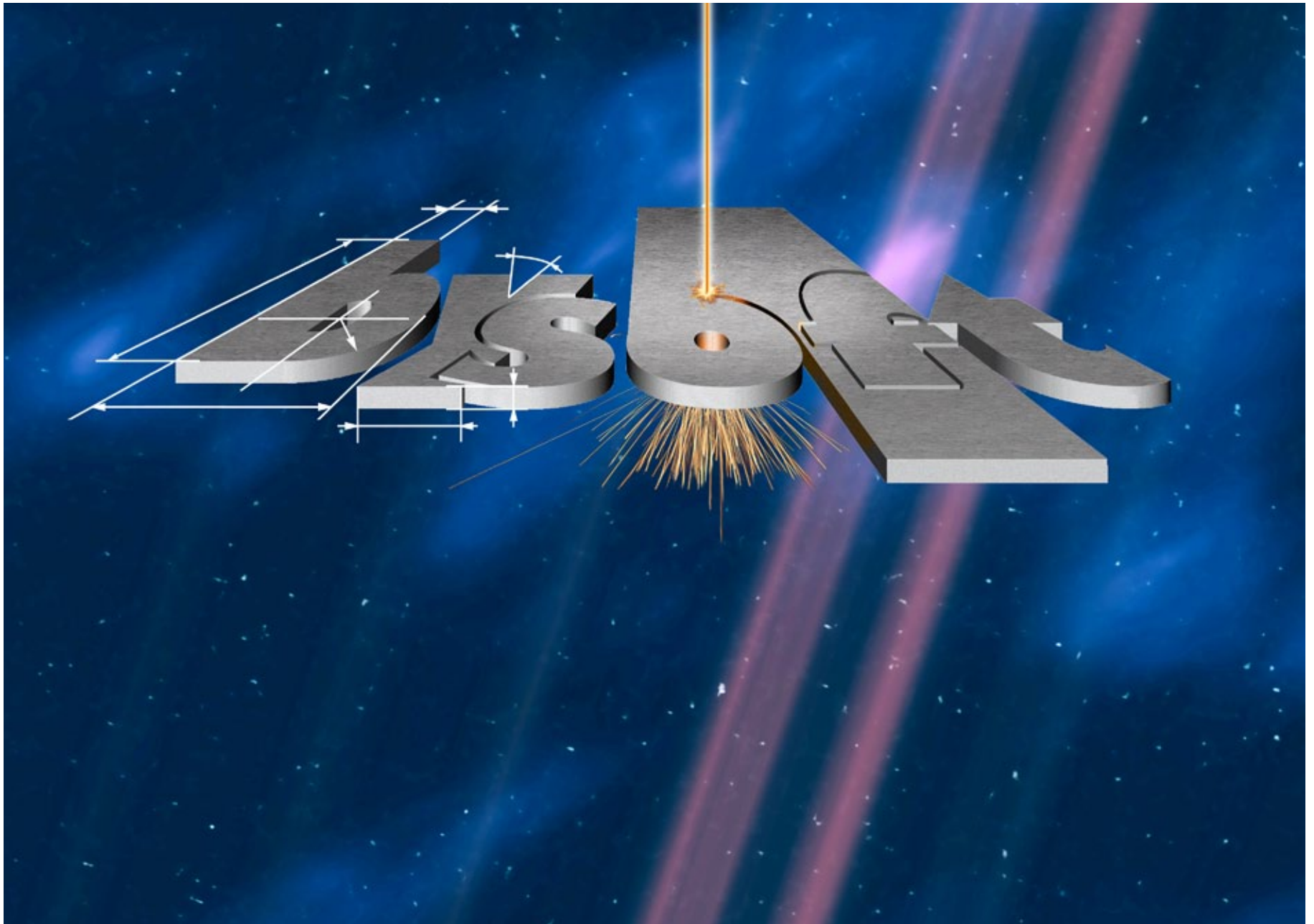


Shortly before the change of the millennium, a software era came to an end: the DOS-based operating systems from Microsoft had served their time and had to make way for the Windows platforms. In 1999 Bystronic also migrated its Bysoft software package from DOS to Windows. Indeed, Bysoft is one of the oldest and most successful Bystronic products of all time. It was an important part of the product portfolio right from the very beginning. Up to now more than 60 man-years have been invested in the development of the program package. A team of between three and five employees ensures its constant further development.

“With more than 12,500 licenses, Bysoft is the most successful Bystronic product of all time.”

Andreas Birrer, Head of Software CAD/CAM





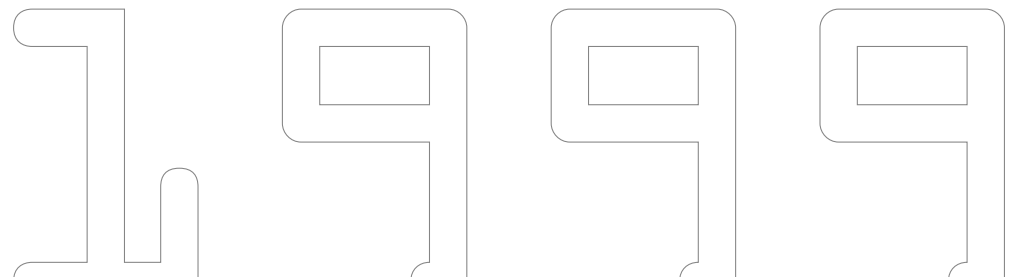
The largest laser cutting machine



Who needs a twelve meter long shuttle table for his Bystar? Ammann, a leading supplier to the construction industry. The company, with its head office in Langenthal, Switzerland, manufactures amongst other things a whole range of asphalt mixing plants to fulfill almost every customer requirement. Worldwide more than 3000 systems are in operation. The side walls of the sieve for these machines must not be constructed in two parts since the welding seam could split open as a result of the vibrations caused during operation. In order to manufacture the massive part, in 1999 Ammann ordered a Bystronic Bystar 4030 with a 12 x 3 meter shuttle table – to date the largest laser cutting machine that Bystronic has built.

„Using the Bystar 4030 we can manufacture the sieve walls for our asphalt mixing plants as a single piece.“

Thomas Wyss, Island Manager, Ammann Cutting Center





◀ **Bystar 4030** with a 12 x 3 meter shuttle table at the Ammann company in Langenthal, Switzerland.

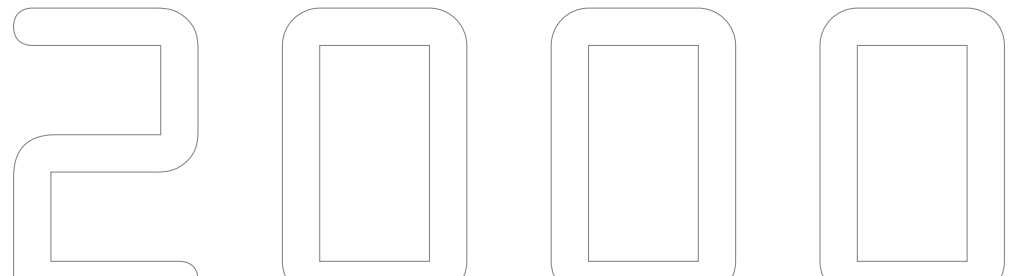
The owner stands down

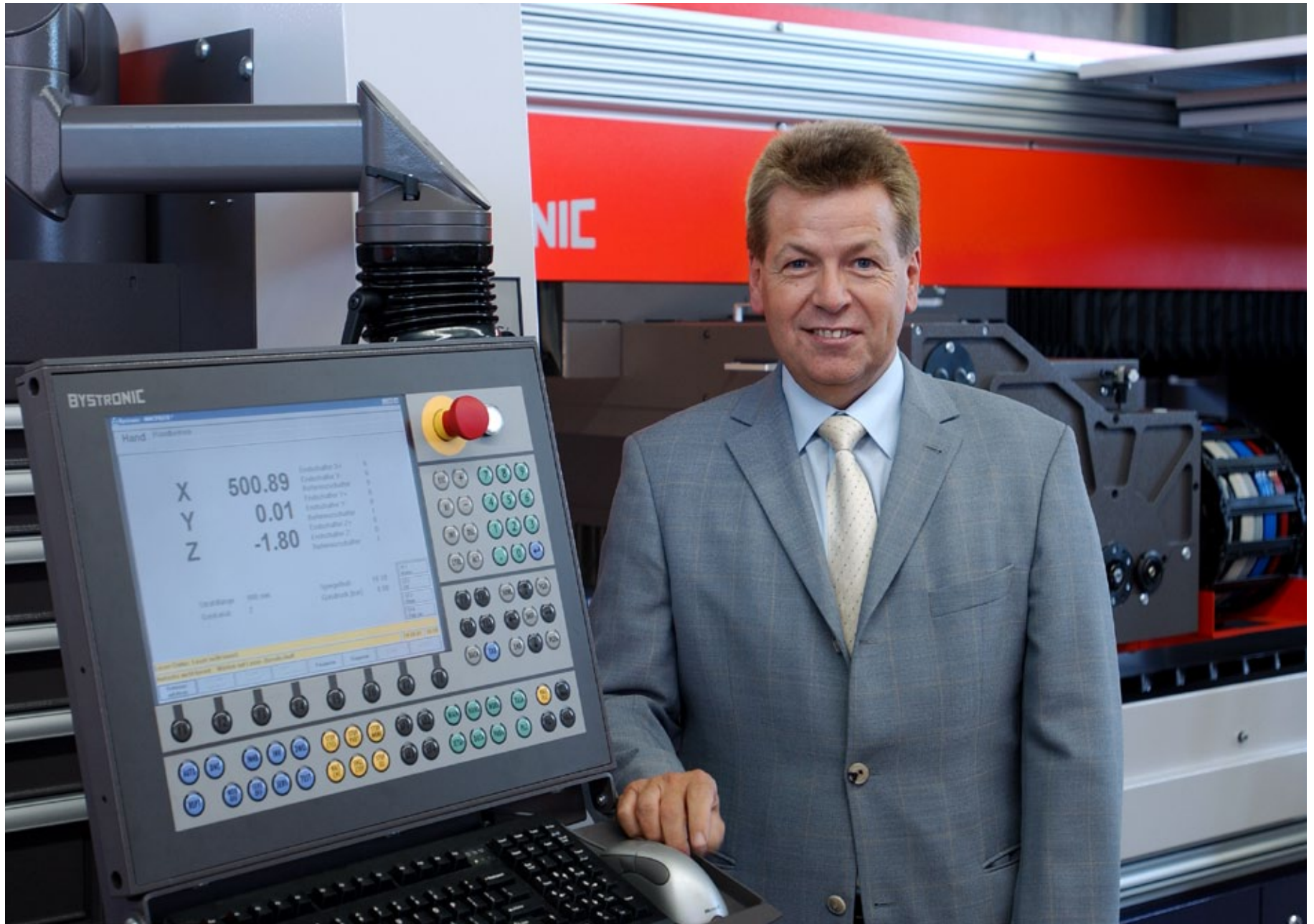


For 35 years Ernst Zumstein had managed Bystronic as Chief Executive and co-owner. In 2000 he handed over the baton to Ferdi Töngi. Thus a paradigm change was implemented from an owner-managed company to a CEO-managed, internationally active business. Ferdi Töngi benefitted from the technological developments of the pioneer phase and the market acceptance developed under Ernst Zumstein. On this basis he subsequently led Bystronic into new markets and to become a global market leader in the fields of cutting and bending.

„I knew from the very beginning that finding the successor for Ernst Zumstein would be a decisive step. I thus prepared for the changeover with the appropriate care, and today I am able to state: it was successful. New dynamics were able to develop on a solid foundation.“

Jacob Schmidheiny, Chairman of the Board of Conzzeta AG





▲ Ferdi Töngi, CEO Bystronic Gruppe seit 2000

2002 - 2008

MARKET AND PRODUCT EXPANSION

Sheet metal and glass are separated



The separation of glass and sheet metal was the beginning of the third chapter in the history of Bystronic. Due to the fact that the technical requirements were increasingly drifting apart, in 2002 the two business divisions were organizationally and optically separated: Bystronic Laser AG received its current visual identity with the red logo and the new lettering. Bystronic Maschinen AG (Bystronic glass) received a blue logo. With the separation, Bystronic Laser AG achieved greater latitude to react to its customers' requirements.

„Since Bystronic sheet metal and glass had no common customers and the requirements placed on the products were different, a separation seemed the obvious course.“

Ferdi Töngi, Bystronic CEO

2002

BYSTRONIC



Advance into China



From the subsidiary in Singapore, which had been founded in 1996, Bystronic advanced cautiously into China: at that time the first office in Peking (1997) did not have the legal status that would have allowed the setting up of its own business. This meant that initially the spare parts business had to be carried out through a partner company. In 2001 everything became much easier when Bystronic was awarded a license for a subsidiary in Shanghai. And in 2002 with the purchase of AFM Fabtek in Tianjin, a manufacturing plant was added. Here Bystronic was able to manufacture pressbrakes and laser cutting machines that were specifically tailored to the growing Asian market. In China Bystronic became Chinese.

„The purchase of AFM was an early but decisive step on the Chinese market. It strengthened the trust in our brand.“

Ferdi Töngi, Bystronic CEO

2002



◀ In 2002 AFM Fabtek became the first Bystronic production site in Asia



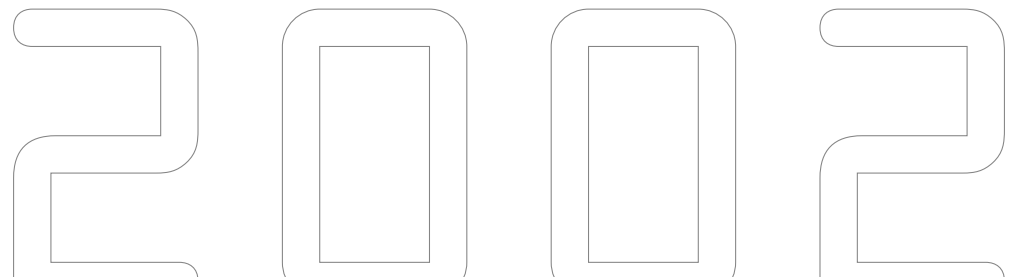
Byspeed – the third generation



In the autumn of 1999, Bystronic initiated the „Laser processing machine 2000“ project. The objective: to produce a container-compatible universal system as the third generation of machines. However, prior to the EMO 2001 in Hanover, Germany, the competition announced additional steps to reduce cutting times. In order not to lose touch in the race for speed, Bystronic also trimmed its latest thoroughbred to become a highly dynamic thin sheet metal machine – and in 2002 launched the Byspeed 3015 on the market. Subsequently, Bystronic extended Byspeed for thicker metal sheets and in 2004, under pressure from the market, to the 4020 format.

“The Byspeed was not able to cut any faster than other machines, but it had better acceleration. This is decisive with complex parts.”

Alfred Horisberger, Head of Design and Production 1986–2003





▲ **Byspeed 3015** Laser power: maximum 5200 watts Maximum axis speed: 120 m/min Maximum path acceleration: 7,2 m/s²

Bystronic takes over Beyeler



The takeover of the Beyeler Group in 2002 was a classic win-win situation: Bystronic was able to expand its portfolio in the bending segment and thus close the gap to its strongest competitor Trumpf. While Beyeler received a strong partner who is able to make investments. With the takeover, the Bystronic bending business largely relocated to Germany, since in 1994 Beyeler relocated its production to Gotha (Germany) and closed the original factory in Crissier in Switzerland. Since 2004 the Hämmerle pressbrakes are also developed and manufactured in Gotha.

“The takeover of Beyeler by Bystronic was a win-win situation.”

*Sven Künkels, Managing Director of Bystronic Maschinenbau GmbH
(previously Beyeler Maschinenbau GmbH)*

2002



The Beyeler Group was founded in 1954 in the Swiss town of Crissier by Willi Beyeler. It has on a number of occasions patented world firsts, for example, the first CNC control on a pressbrake, the first hydraulic and dynamic crowning.



▲ Through the takeover of the Beyeler Group, Bystronic completed its range of pressbrakes

The countries become fully fledged



In the course of the market expansion Bystronic founded further country subsidiaries in Mexico and Spain (2001), Brazil and Austria (2002) as well as also in Holland (2003) and in Switzerland (2004). And changed over to direct sales: the subsidiaries assumed the full responsibility for sales, first level support and the management of their staff. Until this point in time all machines sold were invoiced from the head office in Niederönz. In 2003, Bystronic Germany became the first company to become independent in all aspects of sales.

„The greatest challenge in converting to direct sales is to employ the right people. They have to represent the values of the company, but also possess a high level of self-motivation.“

*Leonardo Olsen, Managing Director of Bystronic Brazil,
previously active as an agent*

2003



▲ Sales and Services companies up until 2005

The first shuttle table worldwide



World premiere in waterjet cutting: in 2003 Bystronic presented its customers with a patented shuttle table. Until today it remains unique throughout the world. Also in the following years Bystronic set new standards with new waterjet cutting machines. In 2007 the ByJet Pro was launched on the market, which with four cutting heads, patented shuttle table and CNC controlled rotary axis was up to ten times more productive than the first Byjet from 1988. Only one year later it was followed by a „large“ version – designated ByJet Pro L it was equipped with a cutting area of up to 16 x 3 meters.

„With our shuttle table concept we revolutionized productivity with waterjet cutting.“

Michael Merkle, Head of Division Waterjet

2003



▲ ByJet 4022 with shuttle table



▲ ByJet Pro 3015

▲ ByJet Pro L 6030

ByJet L 12030 ▲

ByVision – a vision becomes reality



There are machine control packages with which one could execute a landing on the moon. A statement made by a user of laser cutting machines. In 2005 this era came to an end at Bystronic: with ByVision a user interface was launched on the market that is simple and intuitive and which does not overwhelm the user with a vast array of buttons and functions. It can only do what it has to do. But what it does, it does very well. Compared with the earlier control packages Bystronic has reduced the number of hardware buttons from 34 to 8 and redesigned ByVision completely for operation via a touch screen. Bystronic has now been on the market with ByVision successfully for six years and has continuously developed the control package further without it becoming more complex.

„With ByVision we developed a simple, intuitive operator interface. It achieved for us a clear advantage over other machine manufacturers.“

Guido Wahl, Head of Software & Control

2005



▲ Maschinensteuerung ByVision: einfache und intuitive Bedienung

ByJin – the first Chinese Bystronic machine



In Tianjin Bystronic is gradually developing its Chinese production plant into a company that can independently manufacture laser cutting machines. An ever-increasing number of assemblies are being produced in China: first of all the chassis, then the cladding and the electrical cabinets. Finally in 2005 Bystronic built the first laser machine for the local market in China. It is based on the Bysprint and was named ByJin 3015. Alone the resonator, cutting bridge, and control originated in Niederösterreich. In 2010 Bystronic celebrated the sale of the 200th ByJin 3015 – a number to be proud of, since the machine is sold exclusively in China. In the same year the Chinese product family was increased by the addition of a ByJin in a 4020 format.

“China is one of the fastest growing markets in the world. In order to be able to compete with the local suppliers, we need machines that are specifically tailored to this market.”

Henry Hou, Managing Director of Bystronic (Tianjin) Machinery Ltd

2005

ByJin 百劲 3015



▲ ByJin 3015 the first Bystronic laser cutting machine from China for China

From Poland through to Russia



In order to be able better to develop the fragmented eastern European market, within the shortest possible time Bystronic virtually simultaneously founded several subsidiaries in the region: in 2005 a representative office in Ukraine, subsequently sales and service companies in Poland (2006), the Czech Republic (2007), and Russia (2008). Direct sales became essential in these countries because they drifted ever further apart. Russia, for example, continues to be dominated by large businesses, while in Poland and the Czech Republic there are an ever-increasing number of job-shops. In all of these countries, Bystronic today speaks the customers' own language.

„Today there is a significant difference in whether one sells in the EU country Poland or in Russia.“

*Johann Ifanger, Head of the Market Division Europe South/East,
South America, the Near East, India and Africa*

2005



▲ Bystronic establishes itself in East and South Europe

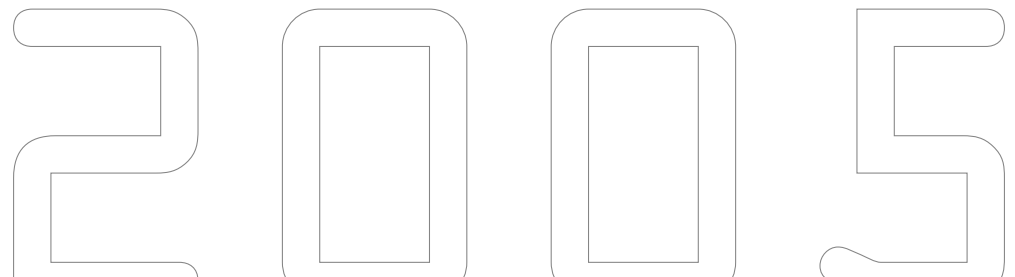
Limitless bending



Pressbrakes from Beyeler: this means heavy, large, powerful. In 1985 the company constructed the world's longest pressbrake with a bending length of 18 meters, and in 1989 the longest tandem machine with a length of more than 22 meters. This was followed in 1993 by the world's most powerful bending machine with a press capacity of 3500 tons, which could be used to bend sheet metal with a thickness of up to 65 mm. But also after the takeover by Bystronic in 2002, Beyeler remained a guarantee for limitless bending. In 2005 Bystronic supplied a tandem system with a bending length of 14.4 meters and a press capacity of 2500 tons to an Italian job shop. It is until this very day still one of the largest bending systems in Europe.

„A customer once said to me: ,The design and the software of your pressbrakes are so good that we look as if we are bending professionals. Although in fact we are a long way from this.“

Gerrit Gerritsen, Product Manager Bending





▲ The mammoth amongst the pressbrakes

Asia becomes a key market



The increasing importance of the markets in Asia is reflected in Bystronic's organization: after Singapore and China, Korea is the third Asian country in which Bystronic sales and services structures are being built up. The targeted market leadership was being achieved, with unbelievable ambition in a typical Korean manner, faster than planned. Consequently in 2008 its own building complex, incorporating a modern training and demonstration center, was constructed. The pine tree that was planted as part of opening ceremony symbolizes the roots that Bystronic Korea has already set down. Today Bystronic maintains further subsidiaries in India, Vietnam and Taiwan.

„The dedicated commitment of the Korean employees is still in modern Korea stronger than people in the western world could possibly imagine.“

Myung Kyu Yoon, Vice-President Region North-East Asia

2005



▲ Bystronic strengthens its presence in the growing Asian market

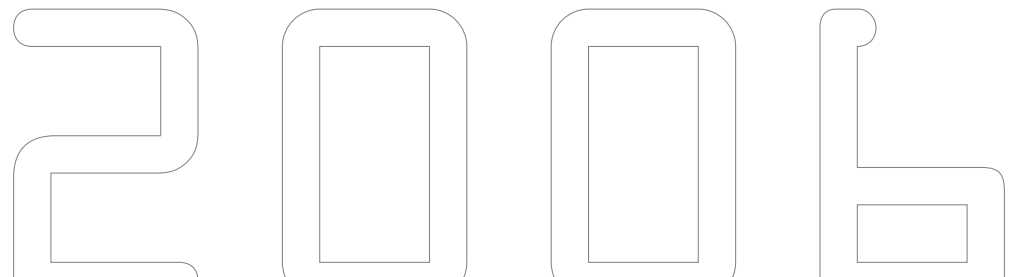
The limits of laser power



Following the turn of the millennium, laser sources were subjected to a generation change: from valves to semiconductors. The new excitation technology was more reliable and efficient, and the resonators were significantly smaller. In 2006 Bystronic developed the ByLaser 6000 with semiconductor excitation and simultaneously reached the sensible limit: with greater power the operating costs would become disproportionately high and the optics extremely complex. The most economical and hence by far the most frequently sold Bystronic resonator is the ByLaser/ByLaser 4400.

„More than 6000 watts makes no economic sense for our customers. The price of the optics rises disproportionately to the power.“

Oliver Bühler, Head of Laser Development





▲ The second-generation laser source was based on semiconductor excitation

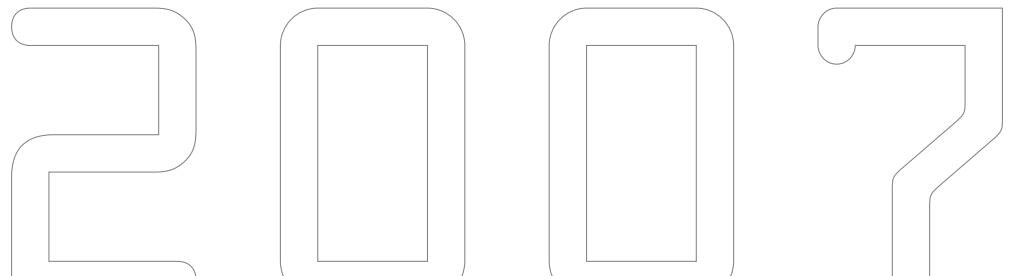
Consciously act according to values

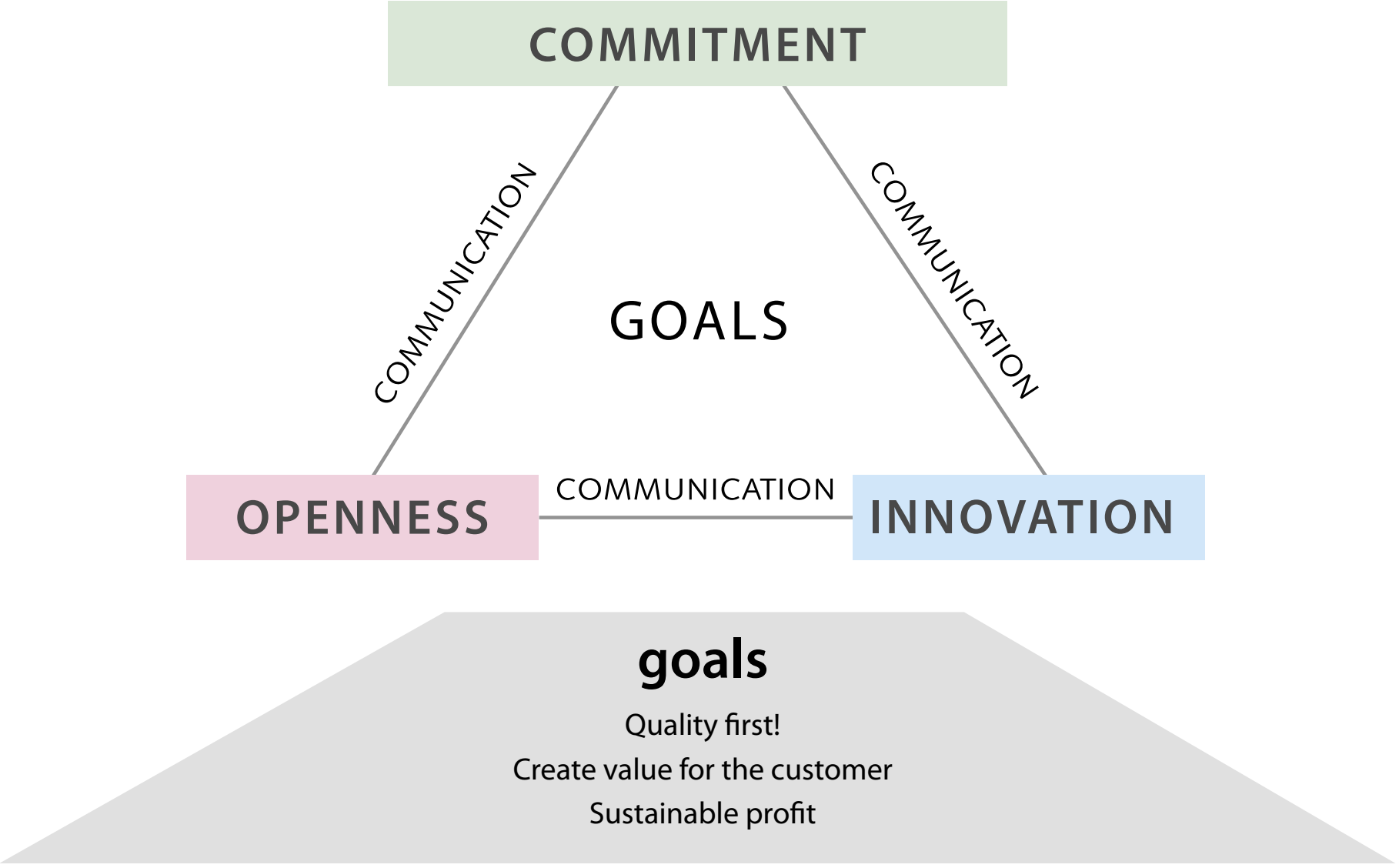


Values are a central part of one's own personality. The clearer one is about one's own values, the more conscious and purposive one behaves. This also applies to a company. Bystronic therefore decided to define its values and to become actively involved with them. Innovation, openness and commitment become the basis for all company actions. The three values are successively carried down to the grass roots of the company. Line managers work out together with their staff what the values actually mean for their particular area of responsibility and how they can be implemented in the daily work. Today it is impossible to imagine being without the three values in management communication.

„My vision is that our company's values are recognized in our operating environment – namely customers, suppliers and business partners – without it being necessary to mention them explicitly.“

Jürg Sutter, Head of Human Resources, Bystronic Group





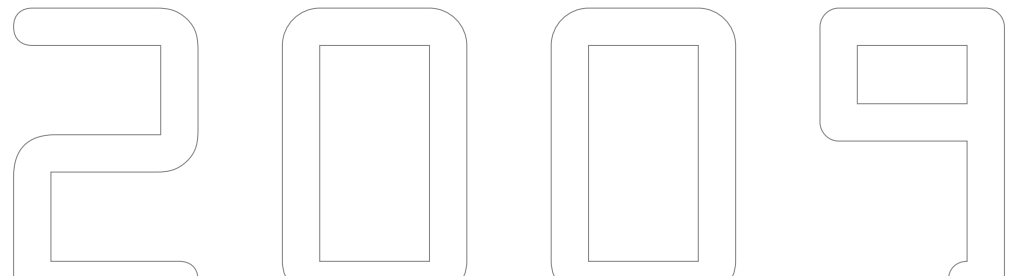
Turn the old into new



Many Bystronic machines change hands at least once during their lifetime. But Bystronic generally does not hear about this: independent dealers buy and sell secondhand machines, but often carry out only a superficial refurbishment or none at all. Thus in 2009 Bystronic entered the secondhand business itself and since then brings used Bystronic laser cutting machines up to scratch in a workshop in Brasov (Romania) and then resells them – even giving a six month guarantee. And successfully: the number sold is increasing.

„It is far more difficult to find used machines in the first place, than it is to sell them when they have been refurbished.“

André Brüttsch, Head of the Operations Division





▲ Bystronic Refurbishing Center in Brasov, Rumänien

2006-2011

VALUE SETTING

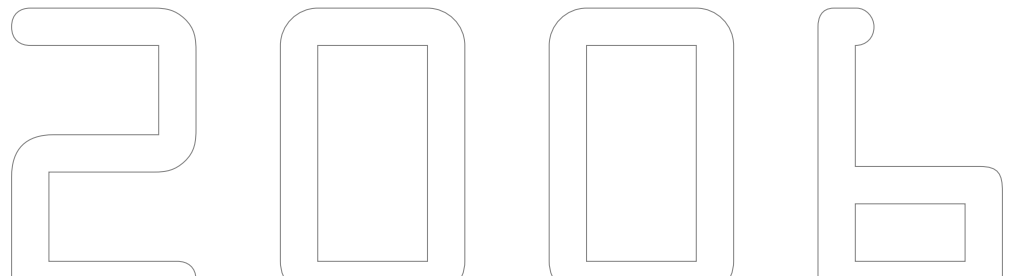
Uncompromising ByVention

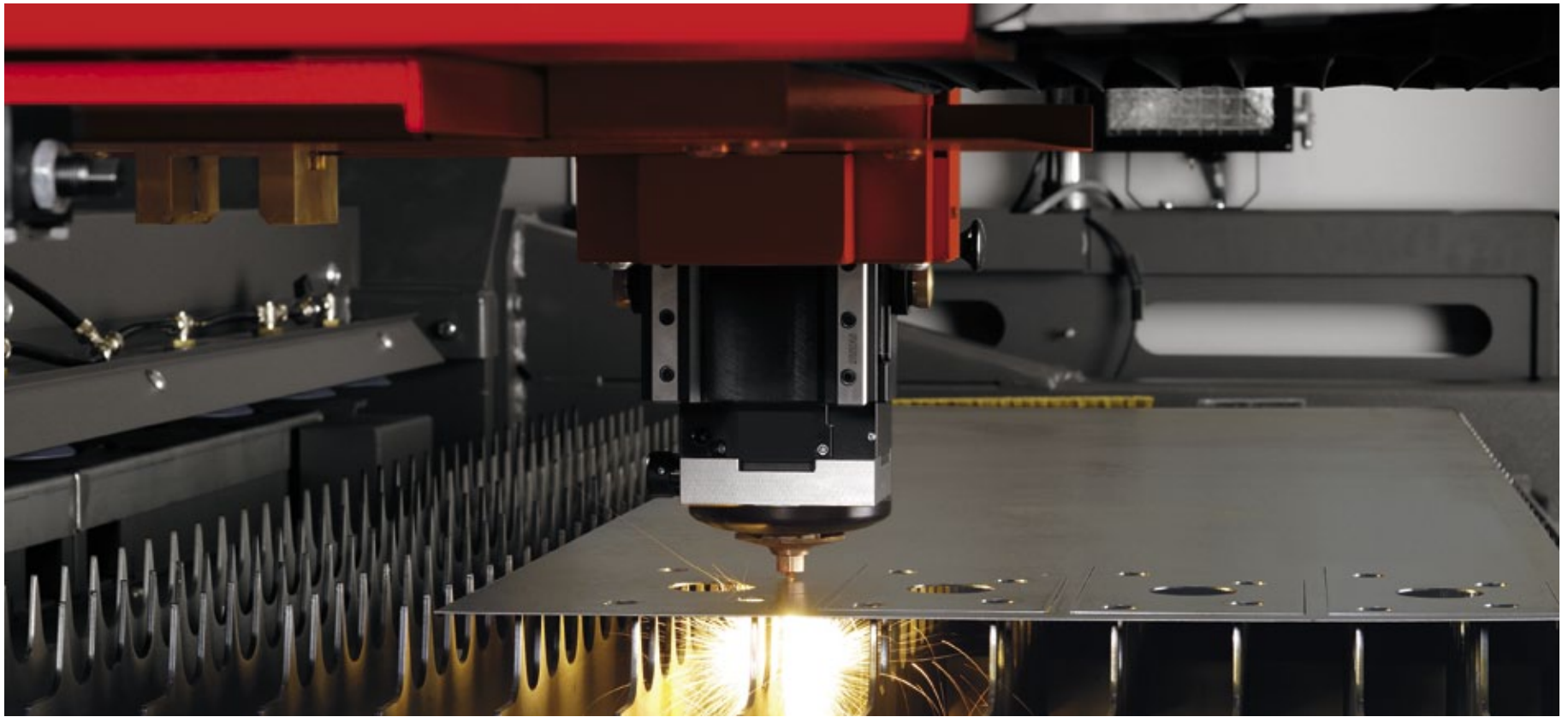


What a sensation! The smallest laser cutting machine for standard metal sheet formats caused a tremendous sensation when it was launched on the market. Since: the ByVention is completely uncompromising in its support of less frequent orders for which thick metal sheets or large parts have to be cut. On the other hand it can be used to produce „only“ 80 percent of the laser-cut parts produced on the market. But for this the customer pays only half the price of a conventional machine. Also new are the material flow concept, which does not require a shuttle table, and the fact that the system is sold at a clearly communicated fixed price. This includes everything from the software through to the preventive maintenance – another Bystronic innovation.

“The consistent focusing on customer requirements – to economically cut small sheet-metal parts from standard metal sheet formats – led to a machine structure that was innovative and differentiated itself from the competition.”

Dr. Bruno Weisshaupt, Managing Director of origo Systeminnovation





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▲ **ByVenton** the smallest Bystronic laser cutting system for standard metal sheet formats

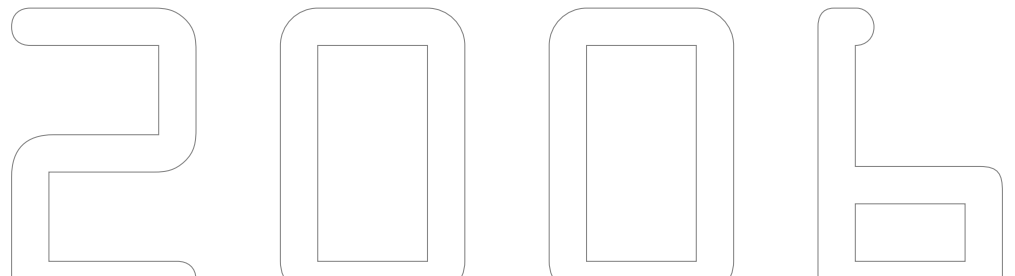
Automation 2.0 – a jigsaw puzzle



In 2006 Bystronic started the „New Automation“ project. The objective was to develop a new generation of automation in line with the market, since on the one hand automation had become increasingly important, and on the other, compared with the competition Bystronic had fallen behind in this area. The heart of the new automation is the ByTrans loading and unloading station that was launched in 2007. This was later followed by BySort, which sorts cut parts (2010), and the storage tower ByTower (2011). Together with the laser cutting machine these three components can be used to form a fully automated laser cell.

„The new automation functions like a jigsaw puzzle: the customer configures his own system depending on his/her requirements.“

Stefan Jost, Head of System Controls





◀ BySort 3015



▲ Monster automation: BySpeed Pro 3015 with ByTrans Extended 3015 and ByTower 3015

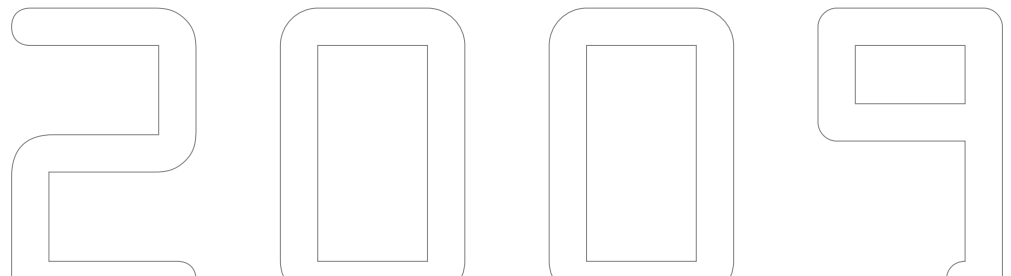
ByJet Classic – all-rounder status in record time



Against the background of the worldwide economic crisis, the Division Waterjet developed the ByJet Classic within a very short space of time. Based upon the ByJet Pro and designed for all conventional areas of application, it offers the Pro technology at mid-range prices. As with the ByJet Pro, one year after its market launch Bystronic also offered the „large“ version – for XXL formats. Simultaneously the ByJet systems were equipped with the ByPump Ultra and ByPump Ultra+ high pressure pumps that generate pressures of up to 5300 bar and which really come into their own with thicker materials.

„We reacted to the difficult economic situation by producing the ByJet Classic in record time and thus developed a high-quality all-rounder for a manageable investment volume.“

Michael Merkle, Head of Division Waterjet





▲ The potential to become a classic: ByJet Classic waterjet cutting system

Software that thinks for itself

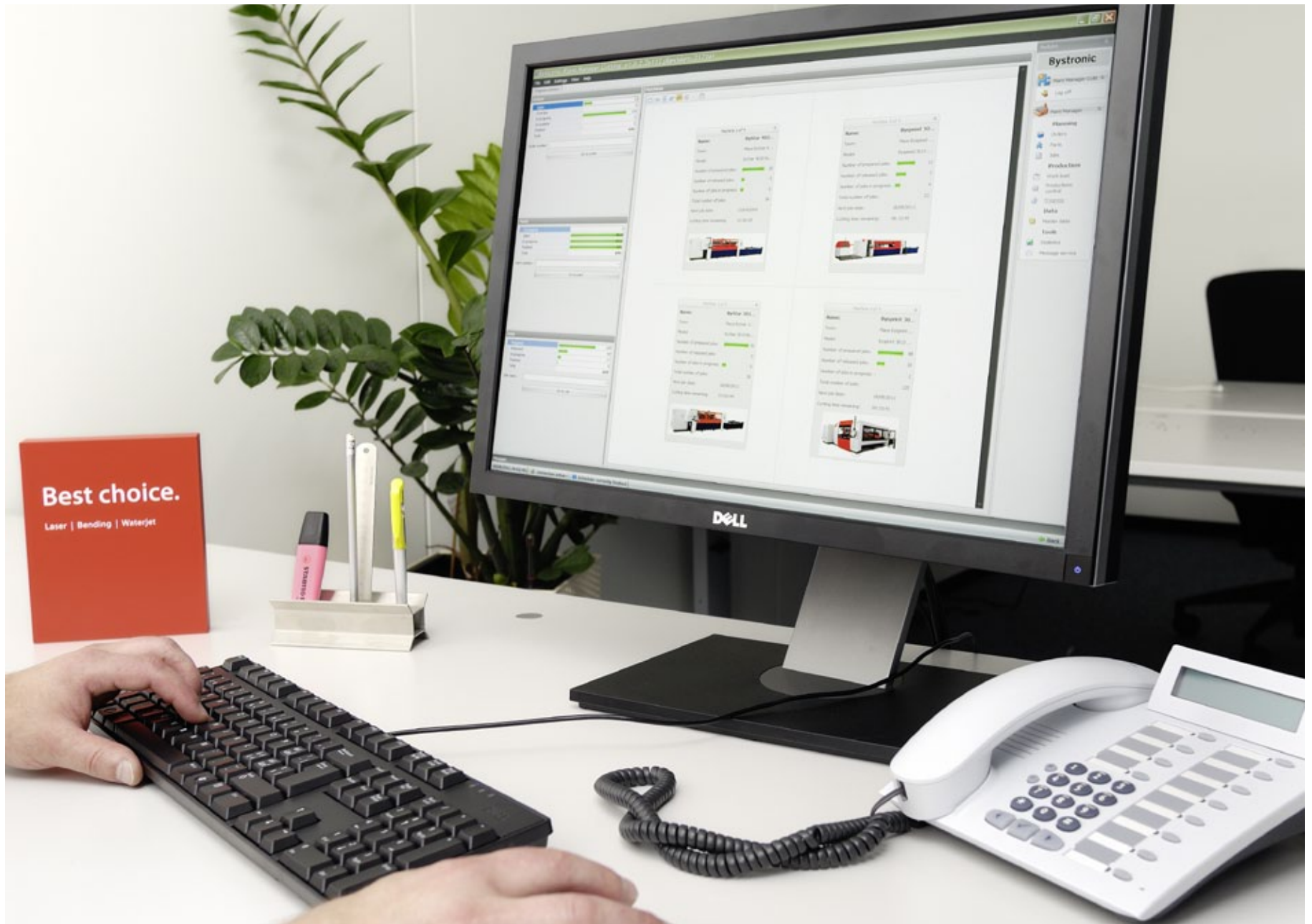


A software package that fully automatically processes the order data, prepares the perfect cutting plan, and also monitors all the cutting processes: this dream of many a laser cutting operator was realized by Bystronic in 2009 with the Plant Manager Cutting (PMC). The PMC is till this day still unique and without competition on the market, and the interest shown by the customers continues to grow. One large user of Bystronic machines is so enthralled with the software that he uses it worldwide, and in the meantime possesses more than 150 licenses.

„The Plant Manager Cutting was the start of a new software era.“

Markus Flury, Project Manager

2009



▲ Plant Manager Cutting: Production planning made easy

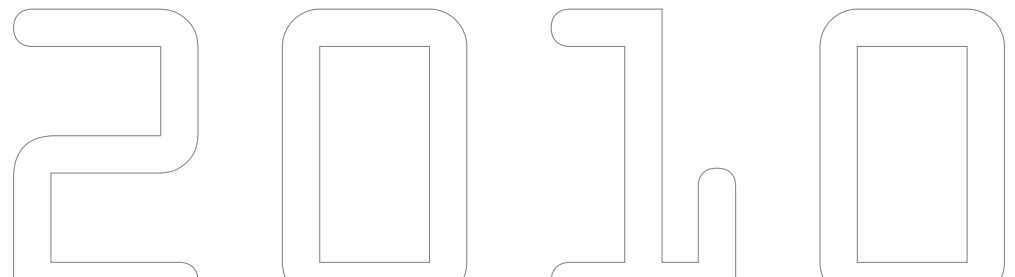
The bilateral path



As far back as 2004 Bystronic built a new production hall to double the production space of the old AFM factory in Tianjin. Since then, thanks to the rapidly growing market, China has become increasingly important for the Group. In 2005 Bystronic Tianjin started its own laser R&D activities in the form of the adaptation of existing Swiss products – the ByJin series. After more than five years of continuous success with this model the R&D team was seriously boosted and is now working on the development of brand new products fit for the Chinese market and developing countries. The Head Office in Niederörsz also profited from this new competence in China: the voices of the Chinese engineers complement well the Swiss perspective with new ideas.

„In the future, our cooperation will be increasingly bilateral, and Chinese ideas, concepts and designs might find happy customers worldwide.“

Laurent Castella, Head of Division Asia/Pacific





▲ New building, extended responsibilities: the location in Tianjin is becoming increasingly important for Bystronic

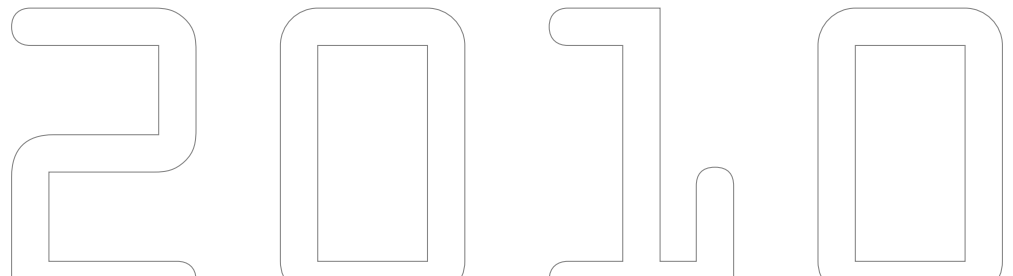
Fully automated

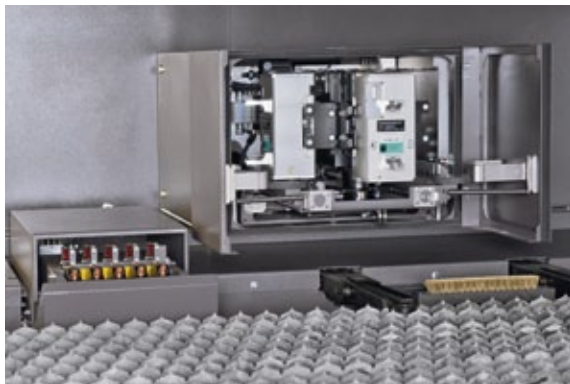


It also works through the night and at weekends. Since it works almost on its own: the BySpeed Pro that Bystronic launched on the market in 2010 is equipped with an abundance of functions which make the operator's life easier. Nozzle changing and centering take place just as automatically as the changing of the lens cassette. Thus the BySpeed Pro autonomously processes metal sheets of different materials and thicknesses. Connected to ByTrans, BySort, and ByTower, the machine becomes a fully automated laser cell.

„The combination of the automatic nozzle changer, nozzle centering, and lens cassette changer together with our high-performance automation, turns the BySpeed Pro into an unbeatable workhorse.“

Günther Silberbauer, Head of System Development





▲ Automatischer Linsenkassettenwechsler



▲ Automatische Düsenzentrierung

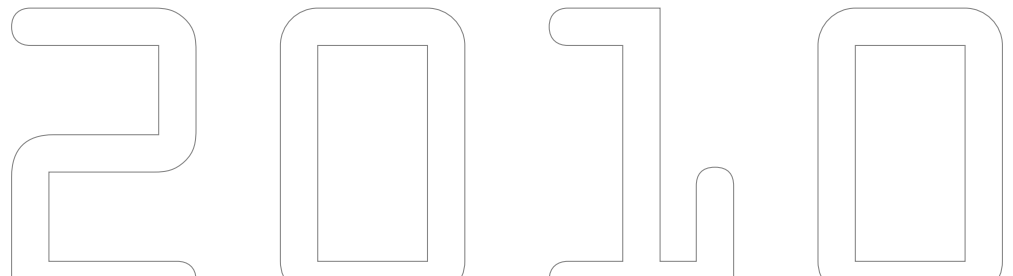
Best choice



It is quite something when a Swiss machine manufacturer almost immodestly asserts that it is the best choice. The „Best choice“ image campaign caused quite a stir since it is truly self-assured and the visual implementation is radical. The short text is simultaneously the graphical element. It provides the reason why Bystronic customers have made the best choice: for example, because Bystronic is a reliable partner, because it offers affordable innovation or because Bystronic customers can rely on life-time support. One wants to be judged on this promise – day in, day out. Really quite a brave statement!

„The ‚Best choice‘ campaign also provided a massive incentive to Bystronic employees worldwide. People are proud to be a part of the Bystronic family.“

Jean-Pierre Neuhaus, Head of Corporate Communications





▲ A powerful message: the „Best choice“ campaign produced an effect both internally and externally

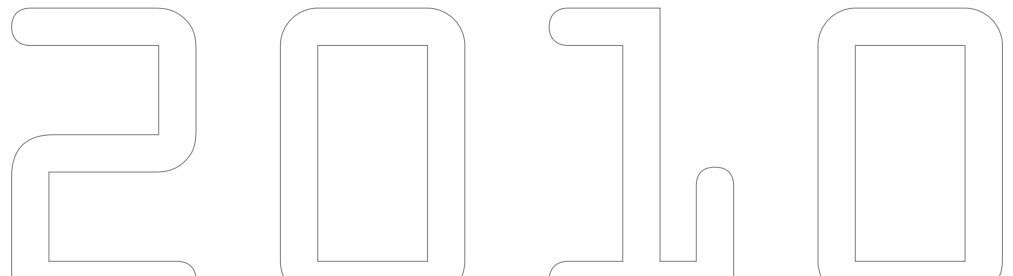
Fiber laser – a new technology

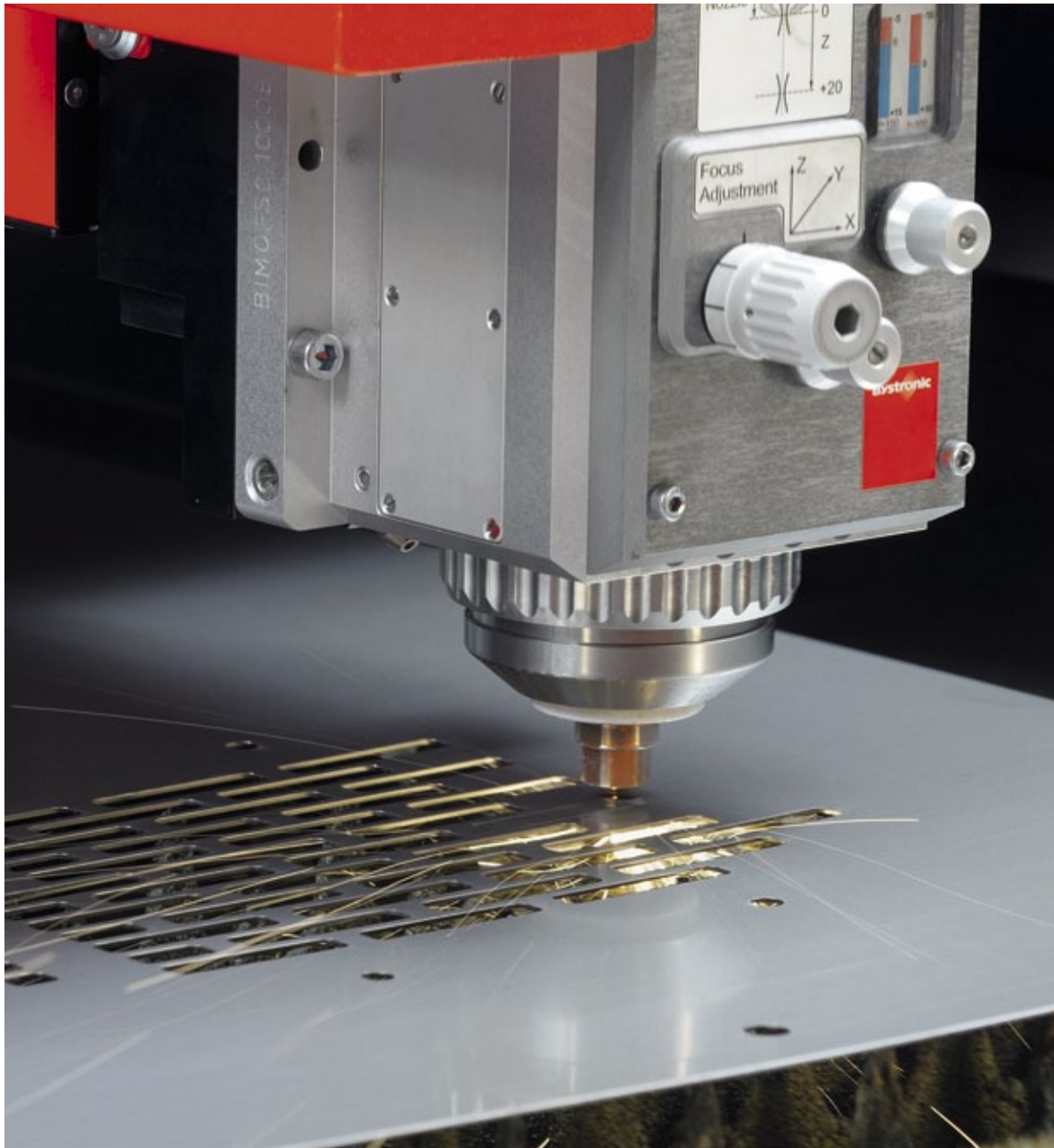


In recent years, the laser cutting industry has seen the advent of a completely new generation of laser source: fiber lasers. They are many times more efficient than gas lasers. While even the best Bystronic gas laser does not exceed an efficiency of 14 percent, fiber lasers achieve a value of 30 percent (from an electricity consumption of 1 kilowatt a laser beam of 300 watts can be generated). Back in 2007 Bystronic exhibited its first fiber laser at a trade fair for optical technologies in Munich, Germany – attached to a ByVention. In 2010 the first Bystronic laser cutting machine with a fiber laser was ready for batch production: die BySprint Fiber.

„The fiber laser will in future, because of its high efficiency, its high cutting speeds, and the simple operation, capture a substantial share of the market.“

Jürgen Hohnhaus, Head of Development





▲ BySpray Fiber 3015 a technology leap

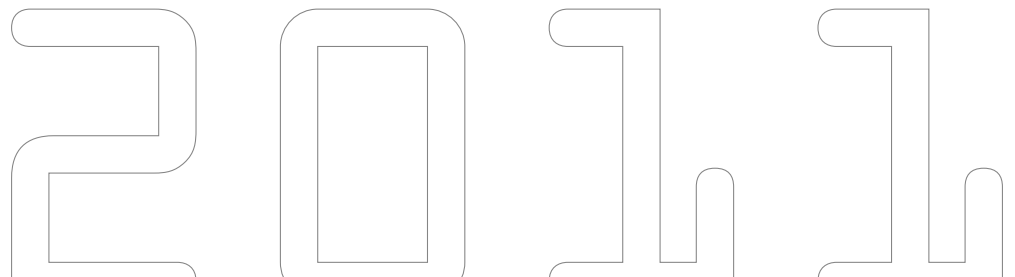
A smart machine



It is the most favorably priced ByJet of all time. Nevertheless it offers the top performance to which Bystronic customers have become accustomed. For the ByJet Smart, the waterjet development engineers have successfully accomplished a delicate balancing act: quality at a favorable price. Several Business Units pursued a common goal with a great deal of fervor: to produce a machine that will leave an indelible mark on the future waterjet-cutting market. The result is a completely new machine design, in which there is even room in the machine frame for the pump. The ByJet Smart is – simply smart.

„The ByJet Smart is the result of many clever ideas and close cooperation between the highly diverse Business Units.“

Daniel Marti, Head of Waterjet Development





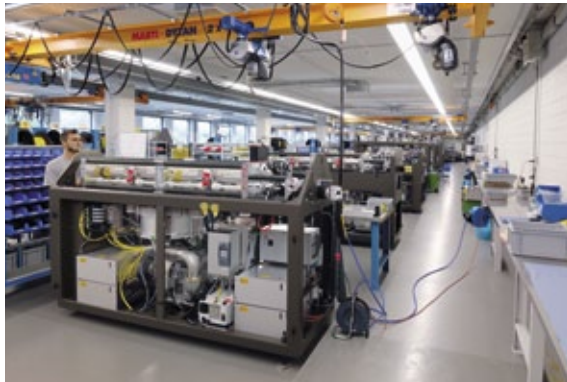
▲ ByJet Smart 3015

Bystronic headquarters



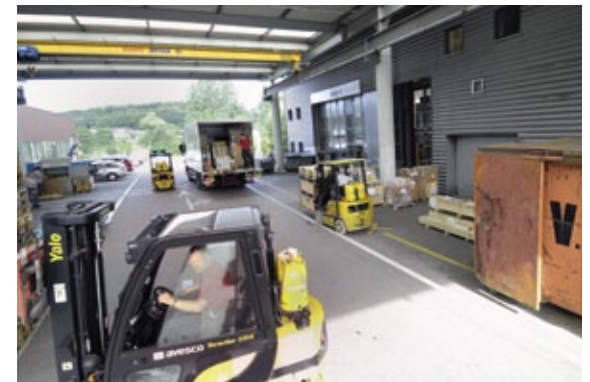


Bystronic headquarters





Bystronic headquarters





Bystronic **Best choice.**

Laser | Bending | Waterjet

