

REPORT

FEHLMAN

PICOMAX[®] 56 TOP





Frank Fehlmann
CEO FEHLMANN AG

Dear Reader

What eventful times! We recently have been through the worst – although fortunately relatively short – demand crisis 2008/2009 that our industry has experienced in decades. Now Swiss export-oriented companies are stumbling into the next no less challenging situation, namely the historically rapid revaluation of the Swiss Franc against major global currencies.

As entrepreneurs, we know: Exaggerations of any kind will be compensated sooner or later by counter-movements. We have no choice but to face the challenges.

For us, these challenges are: Innovation, long-term mindset and a focus on our current successful values. Our recently-launched and fortunately very successful new machine is proof of our resolve: The 56 TOP PICOMAX was conceived as a machine for training, for advanced prototypes and small batches, in other words, for our industrial future in Swiss and European work places.

To successfully implement such challenges, companies need an enthusiastic and efficient workforce and, of course, future-oriented clients. With these, FEHLMANN has successfully emerged from the turmoil by concentrating on our strengths and using the time to innovate.

At FEHLMANN AG, we are proud of you, our esteemed customers as well as of our employees. For your trust, you deserve my sincere thanks. I wish you an informative and entertaining reading.

Frank Fehlmann

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Allow us a brief but global look back on a variety of events, exhibitions and other occasions.

It has always been a give and take. Here, we would like to cordially give thanks to all who have visited us at these fairs and exhibitions, who, again and again, have given us their trust and, last but not least, have contributed with highly interesting discussions.

RETRO SPECTIVE

Trade Fairs

As a global company, last year again we were on site at various trade fairs and exhibitions around the globe with our machines and representatives.

World premiere in 2010: Market launch of the PICOMAX 56 TOP at PRODEX Basel/Switzerland and at the EuroMold Frankfurt/Germany.



Occasions and events

Funded project Heidenhain-Swissmem-Fehlmann: Some forty visitors, mostly vocational trainers, came to exchange experiences at the RUAG in Emmen. Highlight of the day: The visit of an Antonov cargo plane.

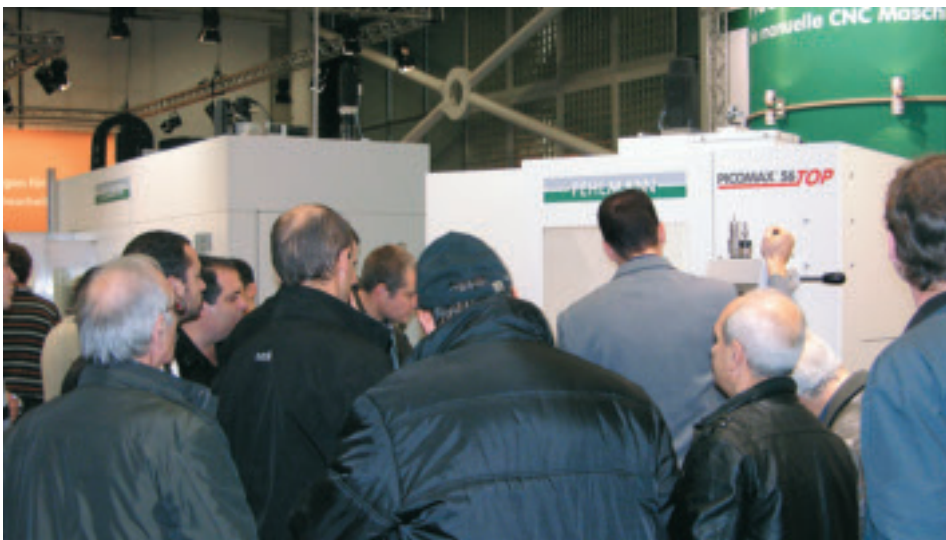


The seminar about machining and EDM in mold making, organized in cooperation with the company Dihawag, was once again an ideal platform to exchange ideas.



Last year we celebrated our 80th anniversary. As part of the anniversary event in September, we were able to give business partners, representatives of the Canton of Aargau and the community Seon an insight into the processes of our engineering works. Roland Brogli, financial director of the Canton of Aargau, presented the greetings of the Argovian government.

Fehlmann-Office in China



Fehlmann is now also represented in Asia. With the opening of an office in Suzhou/China, we are expanding our presence in the Asian market and thus are able to provide even better support for our customers in sales and after sales services.

The PICOMAX[®] 56 **TOP**.

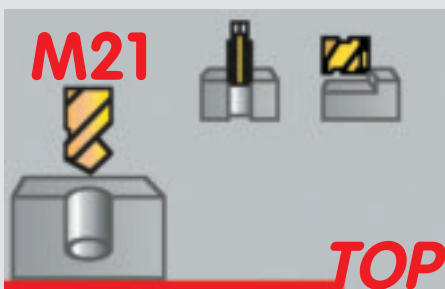
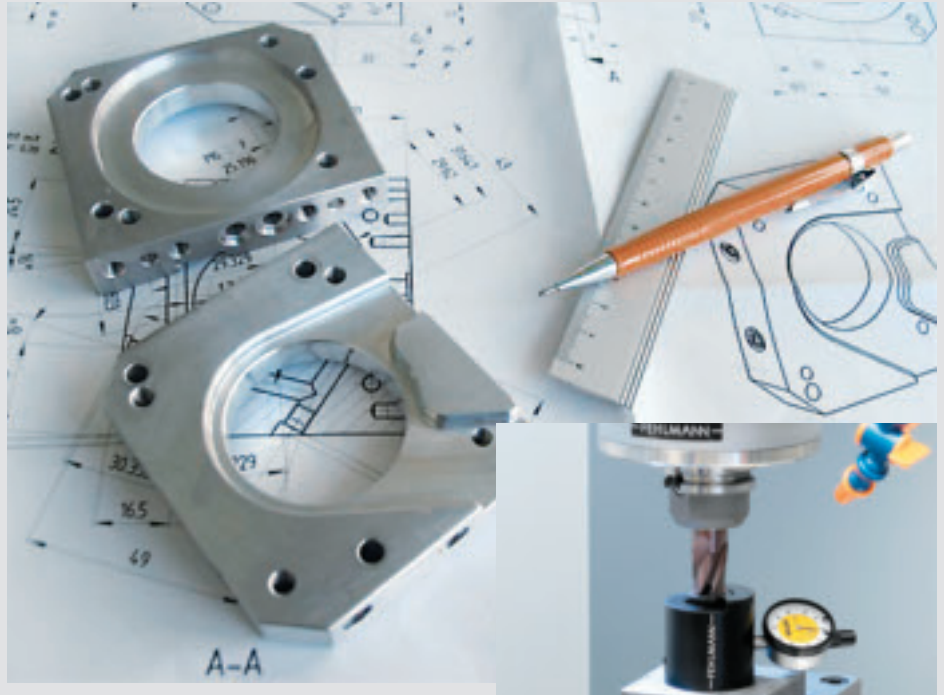
TOP in manual as well as in CNC operation.

The milling/drilling machine PICOMAX 56 TOP, a world innovation presented at the PRODEX 2010, has a novel, patent-pending operating concept, which combines 3-axis CNC operation and manual operation using electromechanical drilling levers and hand wheels.

The PICOMAX 56 TOP is therefore suitable both for economic machining of geometrically simple and complex workpieces as well as small-batch production.

TOP

With its TOP-functions (Touch or Program), the PICOMAX 56 can be operated just like a manual machine. Fast and easy – ideal for simple parts and single operations.



The TOP package

consists of TOP-software, mechanical Z drilling lever as well as X/Y hand wheels and the load cell for detecting the Z zero point with the spindle at standstill.

Milling, drilling and thread cutting

on single parts are executed quickly, reliably and efficiently without time-consuming programming. In this way, assigned operators are able to efficiently operate the machine without programming knowledge after a minimum training period.





At the PRODEX in Basel, the PICOMAX 56 TOP has been awarded the PRODEX AWARD 2010. The award honors and validates our innovation.

The development of the PICOMAX 56 TOP was a great challenge.

by Urs Schmid
Head of Development Projects,
(3rd from left)

On the one hand, the bar was set very high because the previous machine PICOMAX 54 enjoys high popularity thanks to its excellent manual operation, with over 1,000 machines in use.

On the other hand, technical and commercial challenges had to be mastered. The operator convenience, much appreciated by PICOMAX 54 users, had to be maintained while expanding the functionality of the machine and meeting the needs of modern machining technologies - all at an affordable price.

Now the development has been completed and the machine is being delivered to customers since May 2011.

Simple workpieces can be manufactured on the PICOMAX 56 TOP with best ergonomics and operator safety, manually and without CNC programming knowledge. The PICOMAX 56 is also available for complex workpieces and for the production of small batches, as a full 3-axis CNC machine with automatic tool changer. Thanks to a clear concept and simple solutions, the commercial target, a good cost-performance ratio, was also achieved. And all this without sacrificing quality and high-grade machine components.

Full of pride I'm looking – together with the entire Fehlmann development team – at the results.



PICOMAX 56 TOP "Made in Switzerland"

Compact, powerful and easy-to-use machine tool for prototypes, small-batch production and fixture construction as well as for the training sector.

Equipped with a fully digital Heidenhain TNC 620, and Fehlmann's own oil-cooled, high-torque motor spindle for universal milling up to 12,000 rpm, ZS-interpolated thread cutting, 3D milling, boring etc.

The mechanical basis:

A vibration-damping and rigid structure made of mineral casting based on a 3-point support.

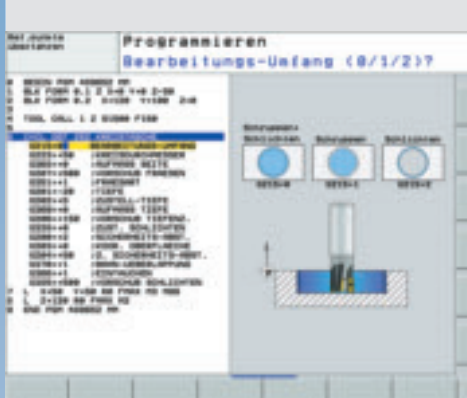


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New

The PICOMAX® 56 **TOP**. Powerful, versatile, compact and upgradeable.

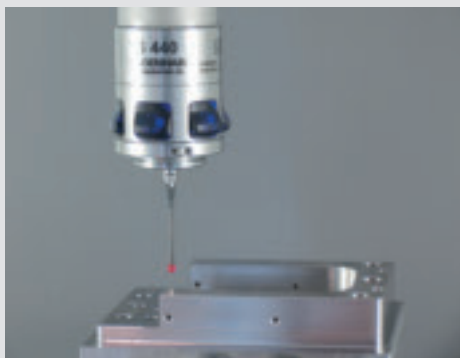
A number of intelligent options complete the possibilities of this TOP machine.



Depending on application, the PICOMAX 56 TOP can be expanded with additional options. For example, Fehlmann dividing attachments for 4-axis machining:

AT 125 with centre height of 125 mm

AT 100 with centre height of 100 mm
(Image example with tailstock)



CNC

In CNC operation, batch production parts and complex 3-axis machining tasks can be realized in a highly uncomplicated and economical way, using the Heidenhain TNC 620 and the graphically supported cycles.

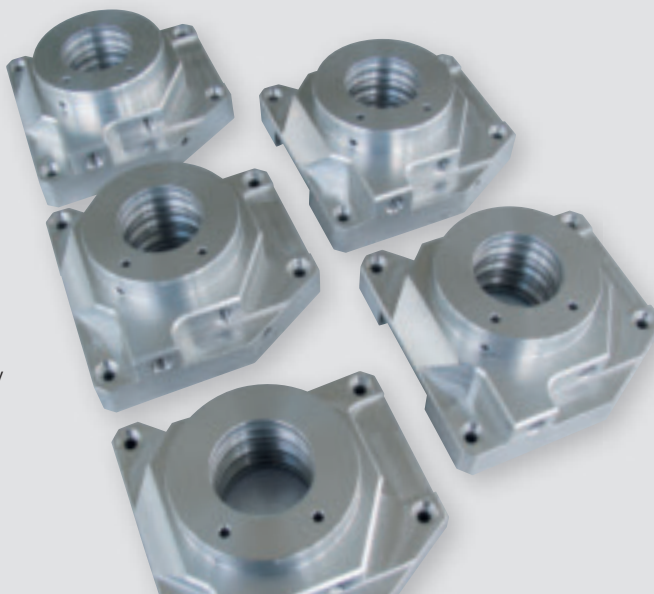
3D probes used to measure the zero point in a fast and precise manner. The signals are transferred via cables or infrared.

Automatic tool changer for **20 or 30 tools** for the automation on tool side.



3D milling

Digital drive technology and internal memory for optimum results with 3D machining.



Ask for the new FEHLMANN PICOMAX TOP 56 brochure or get in touch with us. We will be pleased to personally show you our "youngest".

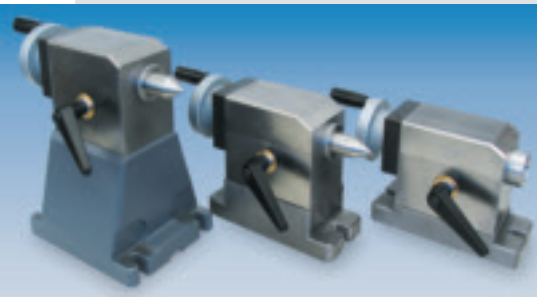
Further innovations.

Based on our long-standing practice-orientated experience.



FEHLMANN ATS 200 CNC

Designed for use on FEHLMANN machining centers, types PICOMAX 90 and PICOMAX 95. Compact, stable and highly precise, equipped with double clamp on the swivel axis. For fully automatic dividing, circular milling, helical milling, etc. This CNC dividing/swiveling attachment has an increased peak height of 200 mm with reduced swivel radius. The C-axis is equipped with a direct position measuring system.



FEHLMANN tailstocks

Our accessories range has been supplemented with additional tailstocks. For each dividing attachment size, a tailstock of the corresponding height is available (center height of 100 to 200 mm).



FEHLMANN rack magazine for PICOMAX 823 / 825 VERSA

In 2008, we first presented the machining center in portal machine design PICOMAX 823/825 VERSA. Today, the VERSA is being widely used with excellent results.

As an additional option, we also offer for this machining center a rack magazine for 186, 218 or 250 tools (scalable according to sizes).

The rack magazine is designed in a way that the operator is able to inspect the tools from the outside at any time. The tools are positioned in a transfer station with double gripper which loads the tool in or unloads it from the spindle. The transfer unit ensures tool transport during machining. Tool management as well as drive axes and sensor systems are integrated into the Heidenhain control unit.

We are happy to advise you about these and other topics, please feel free to contact us.

For more information visit www.fehlmann.com



Safety 1.

Operational safety and energy efficiency have long been common practice for us.



Energy efficiency, resource conservation and CO2 emissions

Buzzwords which define mega-trends in communication policies today. As a company which is both rich in tradition and future-oriented, we have always been sticklers for quality and sustainability. For over 80 years, our guiding principle has been “quality“ and our main task has been the development of machines that meet current requirements for highest precision, ergonomics, handiness and reliability.

We always consider energy consumption

in the development of new machines. Not only consumption at peak loads but permanent consumption during setup and retooling operations are also important parameters for us when selecting available technologies and drives.

FEHLMANN machines have long had by default an energy-recovery system which ensures substantial savings in energy and operating costs. In addition, FEHLMANN CNC machines can be completely switched off after processing the NC programs by means of a simple M function.

Furthermore, for years we have offered a programmable timer with our CNC machines, with which the machine is automatically started up in the morning and an un-supervised warm-up of spindle and axes is enabled. After a program has been executed, the machine goes into sleep mode and restarts by itself all systems the next morning.

Conservation of resources and CO2 emissions

from the very start. Already in the planning of its company building, FEHLMANN paid attention to energy-saving construction: Optimum insulation as well as the orientation of windows for best temperature control and light exposure, deliberate multi-level solutions that ensure land is used in the most cost-saving and economical manner – and much more. Not least, FEHLMANN's high degree of in-house production and central production site are important factors for environmental conservation, ensuring that transportation routes are reduced to the minimum.

The list of measures would be long and shows: True energy, environment and resources conservation does not only apply to the finished machine but begins much earlier.



Operational safety with manual FEHLMANN machines

The safety of our machines meets state-of-the-art requirements and complies with the relevant CE directives. Only by continuously optimizing safety and manageability your machine tool's high degree of economic efficiency can be guaranteed.

Manual FEHLMANN machines are standardly equipped with spindle protection made of polycarbonate. The protective shield prevents improper access to dangerous areas and also reduces pollution around the machine. For older FEHLMANN machines of the types PICOMAX 20/51/54, a suitable spindle protection is available for retrofitting.

We encourage you to take advantage of our package deal. In addition, you get a free quick check of your machine by FEHLMANN specialists.

Contact FEHLMANN Customer Service. Our service team will be happy to help!

Phone: +41 62 769 12 80

Telefax: +41 62 769 11 93

E-Mail: service@fehlmann.com

Monday to Thursday:

08.00 to 12.00

13.00 to 17.00

Friday:

08.00 to 12.00

13.00 to 16.15

Safety 2.

Most modern infrastructure for holistic process stability.

Ever since the company was founded, FEHLMANN has practiced a high vertical range of manufacture. This factor has measurable benefits in the medium to long term: On the one hand, consistent quality and precision; on the other hand, short lead times, quick routes and increased availability of service and, not least, added value and resource conservation. Efficient production processes require a modern infrastructure.

In addition to the construction of a new Technology Center in 2005, in 2009 we built a new, 2,600 m² air-conditioned assembly hall. Moreover, equipment, production machines but also facilities for goods logistics, etc. are renewed extensively and continuously adapted to ever advancing technologies.



Testimonials.

What is more persuasive than an overall positive response?

The machining center Fehlmann PICOMAX 823/825 VERSA has now been on the market for about three years, with great success. Thanks to its versatility, this machining center is used in different industries. World wide, numerous VERSA are in widespread daily use. We interviewed six of our VERSA customers to find out which parts are processed on the VERSA, to what extent the VERSA determines the quality of the machining process and the finished product and why they have chosen a machining center PICOMAX 823/825 VERSA. We herewith would like to express our sincere thanks for their friendly collaboration!



MEAG AG, Gretzenbach/Switzerland.

Werner Bossart, Division Manager.

As components and systems suppliers, MEAG AG provides, with over 100 qualified employees, services in all sectors of the engineering industry. An innovative and reliable generalist, specializing in the manufacture of sophisticated components, assemblies and systems. 5-axis/5-sided parts in aluminum, structural steel, stainless steel and plastics are manufactured on the Fehlmann PICOMAX 825 VERSA.

"This machine determines the quality of the machining process and the finished product to 100%. When choosing the Fehlmann PICOMAX 825 VERSA, we were persuaded by the proximity, professional consulting, communication and support, in addition to the best cost-performance ratio."



Gindele GmbH, Neuhausen/Germany.

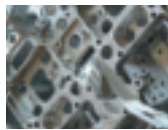
Matthias Gindele (left), Managing Director, Michael Bucher (center), CEO, and Filipe Borges (right), Machine Operator

For the last 25 years, Gindele GmbH has been a competent partner, from consultation and design through to the manufacture of high-precision injection molding products and assemblies. Spectrum for standard injection molding, insert/outsert techniques, micro-injection molding, 2-K, reel-to-reel process, etc.

"The drastic reduction of operations enables significant time savings. Set-up and alignment must only be performed once. Close tolerances of less than one-hundredth of a millimeter can therefore be implemented easily.

The Fehlmann PICOMAX 825 VERSA achieves the precision we require. However, for us the overall machine concept was also important, i.e. we compared accessibility, efficiency and

productivity achieved as well as machine space requirements."



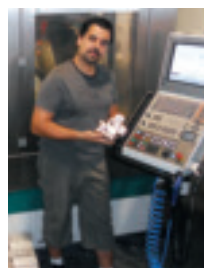
RIGO Spanntechnik, Sersheim/Germany.

Ralf Goltz (left), Production Manager, and Rüdiger Goltz (right), Managing Director.

RIGO Spanntechnik is an innovative family-run business, specializing in the manufacture of complex precision parts. With the PICOMAX 825 VERSA, the company manufactures parts for the aerospace industry (housings, wave guides, junctions), for medical technology (devices for mass production) as well as for automotive technology (valve bodies for paint systems).

"The accuracy of the machine makes a significant contribution to ensuring the high quality of our parts. Features such as high accuracy, high thermal stability, high-capacity spindle, good operability, and not least the professional Fehlmann Customer Service were key factors in selecting a Fehlmann PICOMAX 825 VERSA."

CMHP, Cransac Mécanique de haute précision, Capens/France.



David Cransac, Production Manager.

CMHP was founded with the goal of establishing itself in the segment of complex parts. Under the direction of the CM group, CMHP has positioned itself in the specialized field of precision, with over 10 years of industry experience.

Mainly aerospace parts are machined on the Fehlmann PICOMAX 825 VERSA.

"With this machine, we achieve a very high level of precision and finish. Over the months, we have also noticed the significantly high capacity of the

VERSA in the field of mechanics. We are sure to take advantage of this in the future."

"There were many reasons we decided for the purchase of a VERSA. First and foremost, the professionalism and quality of the advice convinced us; decisive factors were also the practical demonstrations at Fehlmann's premises as well as the support. We recommend FEHLMANN AG to all our partners."



SFS intec AG, Heerbrugg/Switzerland.

Ahmet Gebesce (left), CNC operator, Hans Peter Baumgartner (right), Team Leader Milling

SFS intec is a global development partner, manufacturer and supplier of precision mold parts, special fasteners and mechanical fastener elements. Based on know-how accumulated over many years in selected core technologies – cold massive forming, deep drawing, plastics injection molding and fastening technology – SFS intec's engineers develop innovative and efficient solutions.

"On our VERSA we manufacture thread rolling dies, sockets, equipment components, machine components, etc. The required minimum manufacturing tolerances are guaranteed, thus achieving high precision and quality."

We are extremely satisfied with the 5-axis PICOMAX 825 VERSA with Erowa handling system for all pallet sizes (ITS148 and UPC). It allows the loading of the smallest to the biggest tools. The machine design is future-oriented and allows multiple machining operations in a single setup."



Joint-stock company FED, Kharkov/Ukraine.

Viktor Popov, Head of board

Joint-stock company FED is the largest association of enterprises in the CIS on mass production and maintenance of fuel supply units, automatic control systems for gas turbine engines, aircraft power supply systems, automatic flight control systems and hydraulic aircraft systems.

The manufactured products are used in almost all types of aircraft and helicopters produced by the CIS countries and are traded in more than 60 countries.

"The VERSA-machines allow the complex finishing operation for our parts of fuel control units. With these machines we guarantee the final quality and reliability parameters of the units as a whole."

"First of all, its precision, speed, combination of various processing methods, versatility and high reliability convinced us. All these attributes ultimately grant the implementation of the technological process."



Partner projects. Potentiated power.

Ever since the founding of our company, we have also maintained a strong commitment to education. We support and promote holistic, future-oriented educational programs for young professionals in collaboration with industry partners such as Heidenhain, Swissmem and Swissmechanic.

One of our many partner projects is the funded project "CNC-Learning", a quality label developed two years ago by Swissmem with support from Heidenhain Schweiz AG and FEHLMANN AG.

This label is awarded to apprenticeship companies or training organizations that meet high quality standards in training with computer-controlled machine tools.

The quality criteria include CNC training according to Swissmem training methods and teaching materials, meeting the 10 quality standards of MEM-professions and training with high-quality CNC machine tools.

Within the project "CNC Centers of Excellence" seven inter-company training centers were equipped with high-quality CNC milling machines of the type Fehlmann PICOMAX 60-M. These modern machines allow the training centers to expand and deepen their offerings in the field of CNC training.

Even at university level, we were able this year to start a sustainable project in collaboration with Heidenhain and the IWF/Inspire Institute of the ETH, the highest internationally recognized, university-related center of excellence for the Swiss machine industry. The Inspire Institute conducts research for the industry and solves problems in all fields of knowledge.

In view of joint research projects, Heidenhain and the IWF/Inspire Institute decided to purchase a FEHLMANN 5-axis machining center PICOMAX 825 VERSA. We are pleased and proud to have been chosen.



80 years of Fehlmann.

We celebrated with our staff and guests.



Retrospective of 80-years anniversary

Around 1,200 people accepted our invitation and celebrated with us our 80th anniversary. The celebration was officially opened by Mr. Frank Fehlmann, CEO. This landmark anniversary became an occasion to look back at the past years and remember the milestones of the family business FEHLMANN AG. However, it was with great pleasure that we could demonstrate primarily the performance and innovation of present day's Fehlmann AG. The tours through our company premises attracted great interest, with Fehlmann employees giving informative insights into the respective works to interested listeners.

To mark the company anniversary in July, employees and partners were treated to culinary delights in the restaurant Schützen in Aarau. On behalf of the entire staff, Roland Sandmeier (Sales Export) presented Mr. Willi Fehlmann senior a picture by the famous, unfortunately recently deceased, artist René Villiger. With a brush and creativity, he had composed a unique commemorative picture especially for this 80-years anniversary. Afterwards, all were invited to the premiere of the stunning Circus Knie in Aarau. An eventful day that will long remain a pleasant memory for all participants.





And also our subsidiaries

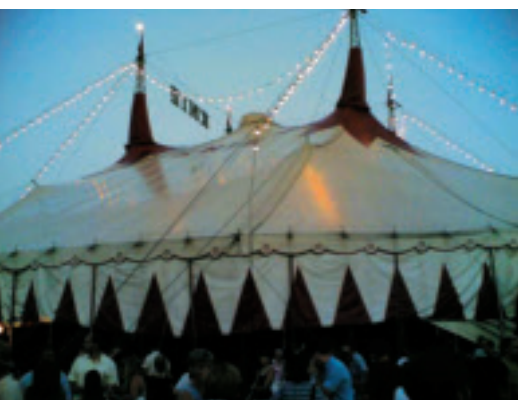
We opened the door for the general public.

In addition to interesting tours of the company with lots of behind-the-scenes information and insights of a machine tool manufacturer, the physical welfare of all those present was also catered for.

The team of sports marksmen Seengen actively supported us in entertaining all guests and employees.

We say thank you!

80 years of Fehlmann AG – an anniversary of which we are proud and take as an opportunity to say thank you!



Fehlmann office in Suzhou/China

On 01/09/2010 in Suzhou, China, the Fehlmann Ltd. China was founded. The offices are situated in a modern Xinghong commercial building in the Industrial Park of Suzhou.

After Fehlmann GmbH Germany, a third pillar of our global connections was thus erected. The new branch in Suzhou (Jiangsu Province, 1 hour drive from Shanghai Pudong International Airport) is an excellent base and the best way to reach our new customers and the Asian market.

This new sales office offers ideal conditions to be closer to our customers and provide better support:

Fehlmann China Ltd.
Room 602, Xinghong Mansion
No. 225, Mid-Suhong Road
215021 Suzhou Industrial Park
CHINA
Telefon 0086 512 629 665 03
Fax 0086 512 629 665 03

Fehlmann office in Mönshheim/Germany

Since fall 2006:

The three service staff members are employed directly by the headquarters in Seon. Customers receive parts from the central spare parts warehouse. This guarantees 24-hour service for production processes. European customers no longer need to handle customs themselves for unused or exchanged parts, but can conveniently use the return form to Mönshheim.

Various components in our high-quality machines are of German origin. Therefore, purchase assistance here makes sense. Sales for North Baden-Württemberg have their base here. And the agencies have an additional contact:

Fehlmann GmbH Rotweg 10
71297 Mönshheim
GERMANY
Phone 0049 7044 91580 60
Fax 0049 7044 91580 69



EMO 2011

We are again represented at the most important trade fair in Europe.



And those are the Fehlmann highlights at EMO Hanover 2011

At the EMO Hanover we will show following machine tools on an exhibition space of 140 m²:

– Fehlmann PICOMAX 56 TOP

New universal milling/drilling machine for manual and CNC operation with an innovative FEHLMANN operating concept:

Convenient, fast and economical. Presented in two versions:

With manual and automatic 20-tool changer.

– Fehlmann PICOMAX 825 VERSA

Vertical machining center in portal machine design, exhibited as a flexible 5-axis manufacturing cell, fully equipped with palletizing EROWA Robot Easy and new FEHLMANN rack magazine for 218 tools HSK-A63.

– Fehlmann PICOMAX 60 ERC

Vertical machining center equipped with Erowa Robot Compact, ideal for those seeking a compact, space-saving yet extensible automation solution.

– Fehlmann PICOMAX 20-M

Our small drilling/milling machine meets the highest precision and handiness requirements of modern workshops.

Visit us at EMO Hanover 2011. Let us show you our machines in person by means of a practical demonstration.

We are looking forward to your visit!

We have a limited number of trade visitor day-tickets available and will be happy to send you your personal ticket. Just send an email to: mail@fehlmann.com

**19th to 24th
September
Hall 12
Booth D48**

Our in-house exhibition: Benefit from first-hand information!

Invitation to Fehlmann in-house exhibition 2011

Thursday 27th October 2011
from 09:00 to 20:00

Friday 28th October 2011
from 09:00 to 20:00

Saturday 29th October 2011
from 09:00 to 14:00

Fehlmann PICOMAX 56 TOP live in action!

The new Fehlmann milling machine
for manual and CNC operation.

Interesting, practical machining examples

are shown in the Fehlmann
Technology Center

Industry lectures

by well-known customers and partners

Guided tours of the factory, and much more...

We kindly ask for your registration!
Simply fill out the adjacent form and send
it to fax no. +41 62 769 11 92 or
mail@fehlmann.com

We look forward to seeing you!

Registration for Fehlmann in-house exhibition 2011

Please register by fax +41 62 769 11 92 or mail@fehlmann.com until 21st October 2011.
Thank you!

YES, I am coming to the Fehlmann in-house exhibition on

Thursday 27th October 2011, 09:00 - 20:00

- Morning Seminar participation
 Lunch
 Afternoon Seminar participation
 Dinner

Friday 28th October 2011, 09:00 - 20:00

- Morning Seminar participation
 Lunch
 Afternoon Seminar participation
 Dinner

Saturday 29th October 2011, 09:00 - 14:00

- Morning Seminar participation
 Lunch

NO, I cannot come to the In-House Exhibition. Please send me the following
documents: _____

Please contact me about:

First/Last name _____

First/Last name _____

First/Last name _____

Company _____

Street _____

Zip code, City _____

Country _____

Phone _____ Fax _____

E-mail _____

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19th to 24th September 2011
EMO
Hanover, Germany



3rd to 7th October 2011

MSV
Brno, Czech Republic



27th to 29th October 2011

FEHLMANN
in-house exhibition
Seon, Switzerland



3rd to 9th November 2011

ZEBI
Lucerne, Switzerland



29th November to 2nd December 2011

EUROMOLD
Frankfurt/Main, Germany

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FEHLMANN