

Division Heating Technology and Sanitary Equipment



Division Kitchens and Refrigeration



Division Windows and Doors



Division Steel Technology



Division Surface Technology



Logistics



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# AFG WORLD

Where the regions and the world meet.



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|---|---------------|
| ■ Heating Technology and Sanitary Equipment | Pages 12 – 19 |
| ■ Kitchens and Refrigeration                | Pages 20 – 29 |
| ■ Windows and Doors                         | Pages 30 – 37 |
| ■ Steel Technology                          | Pages 38 – 43 |
| ■ Surface Technology                        | Pages 44 – 49 |

Regional Page 4

International Page 8

Global Page 45

**Corporate Center  
rolls out  
red carpet**

**Slovaktual  
crosses  
borders**

**AFG developing  
Middle and Far  
East**



# Contents

## ■ Prelude

Editorial ..... 1

## ■ In a nutshell

News ..... 2

## ■ Focus

Corporate Center: 900 guests congratulate AFG! ..... 4

Slovaktual – the window to the east ..... 8

## ■ AFG Arbonia-Forster-Holding AG

AFG ARENA opens on 25<sup>th</sup> May 2008 ..... 10

AFG with a new sales record ..... 10

## ■ Heating Technology and Sanitary Equipment

Arbonia and Prolux shine at Hilsa 2008 ..... 13

Floor heating system xnet takes off ..... 14

Arbonia surprises with «New Inspirations» ..... 15

Kermi online really delivers! ..... 16

Cuya/Cuya XP: new shower cubicles ..... 16

Tradesmen: «Kermi is the best!» ..... 17

Jive – irresistibly exciting and sleek ..... 18

Top marks for the new Credo-Uno ..... 19

Verteo: the new vertical panel radiator ..... 19

## ■ Kitchens and Refrigeration

The largest kitchen centre in

the Rheintal region is now open ..... 21

Forster: the new generation of A++ refrigerators ..... 22

A new foaming plant for Forster ..... 23

New cutting centre for Piatti ..... 23

Miele De Keuken opens new flagship store ..... 24

Miele Kitchens win WohnDesign Award 2007 ..... 26

Miele Kitchens goes global ..... 26

Making the most of opportunities ..... 27

Piatti Kitchens in the longest apartment house in Bern ..... 28

New kitchen worlds from Piatti ..... 29

## ■ Windows and Doors

Modern architecture and EgoKiefer

MPR2 plastic/aluminium windows ..... 31

Energy-saving with the new

Ego-Kiefer XL® plastic/aluminium windows ..... 32

EgoKiefer is the energy-saving expert! ..... 33

With safety in mind: EgoKiefer window systems ..... 34

RWD Schlatter AG: MINERGIE® specialist partner ..... 34

RWD Schlatter with sound test facility ..... 36

RWD Schlatter outside door design for trainees ..... 36

RWD Schlatter as «Preferred Supplier» ..... 37

## ■ Steel Technology

Aesthetic safety in the BMW World ..... 39

Tested down to the last detail ..... 40

Forster profile systems for Europe's largest building site ..... 40

Two successful appearances ..... 41

A profile system on the road ..... 42

Drawn special profiles ..... 42

Stylish, high-gloss steel furniture ..... 43

## ■ Surface Technology

STI | Hartchrom goes China ..... 45

2<sup>nd</sup> STI Surface Symposium with top-class speakers ..... 46

STI starts up in the commercial US market ..... 48

Finished by STI, used by Piatti ..... 48

STI – on water and in the air ..... 49

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Title image: After only 16 months of planning and construction, the Corporate Center at Amriswilerstrasse 50 in Arbon, Thurgau gleams in its full glory.

## Surface Technology



The high-quality, chrome-plated and well-finished piston rings and piston heads for the maritime industry stand out thanks to their optimum wear characteristics.



## STI – on water and in the air

**Leading manufacturers of marine diesel engines, their licencees, and well-known public and private companies in the aviation industry are among the numerous satisfied customers of STI | Hartchrom.**

STI | Hartchrom Steinach has developed proprietary technology for the hard chromium plating and grinding of snap ring grooves in piston heads for marine diesel engines – also for the professional overhaul of piston heads that have already been used either coated or uncoated. In order to offer our customers total solutions, STI | Hartchrom also chromes plate piston rings. This results in a system that works together perfectly and displays optimal wear characteristics. In addition to piston heads, piston rings, piston shirts, cylinder liners, STI | Hartchrom also processes crankshafts, valves and other components for the generation of power.

Pyrénéen SA and Hydrométal SA companies, the subholding of Hartchrom Aeronautics France SA has two production locations in southern France where the Airbus industry is situated. These facilities provide hard chromium surfaces for aircraft chassis parts, hydraulic components and other items with surfaces that are certified to the strict standards of the aviation industry and the government authorities. «

### Components for Airbus

STI | Hartchrom has created a strong position as a supplier to the aviation industry. With the companies Chromage

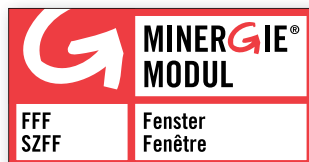
STI | Hartchrom provides Airbus with surface technology for various aircraft components, giving them surfaces that are certified to the strict standards of the aviation industry and the government authorities.



# news

## EgoKiefer MPR2 Windows

### New with MINERGIE certificate



Now that the EgoKiefer plastic and plastic/aluminium windows MPR2 have been certified according to the high MINERGIE standards, EgoKiefer now has the complete range of MINERGIE module windows, unrivalled in Switzerland. The company is thus able to document its unbeatable competence the field of energy-saving windows. EgoKiefer is the energy-saving professional in Switzerland. «

## German ambassador visits AFG

On 11<sup>th</sup> March 2008, the government of Thurgau welcomed the Ambassador of the Federal Republic of Germany, Andreas von Stechow. At the heart of the visit were a personal exchange of views and an inspection of AFG Arbonia-Forster-Holding AG in Arbon, Thurgau. The councillor welcomed the German ambassador, Andreas von Stechow, and the economic consultant, Roland Grafe, in Schloss Frauenfeld TG. After an initial exchange of ideas, issues relating to economic and commercial relations between the canton of Thurgau and Germany were discussed over lunch together. A visit to AFG in Arbon was on the agenda in the afternoon. Dr. Edgar Oehler, Chairman of the Board of Directors and CEO of AFG Arbonia-Forster-Holding AG, welcomed the guests at the recently- opened Corporate Center. During the subsequent tour through the kitchen exhibition, the guests gained an insight into the products of Forster Küchen- & Kühltechnik AG. These days, AFG Arbonia-Forster-Holding AG currently comprises 50 companies. Thanks to these companies and agencies abroad, AFG operates in 70 countries. Germany is one of the most important markets for AFG products. Altogether, AFG Arbonia-Forster-Holding AG employs about 2,000 people and has five factories in Germany. «



From left to right: economic consultant Roland Grafe; Ambassador Andreas von Stechow and District President, Hans Peter Ruprecht with Dr. Edgar Oehler, Chairman of the Board of Directors and CEO of AFG Arbonia-Forster-Holding AG, in front of the new Corporate Center of Arbonia-Forster-Holding AG in Arbon, Thurgau.

## Training with RWD Schlatter

Exterior doors from RWD Schlatter will henceforth serve as models in the basic training program. They will be presented as part of the development of «moduLine outer parts» at the Swiss Assembly of Joinery Teachers in March 2008. This means that as of 2009 joinery apprentices can be trained using models of exterior doors from RWD Schlatter. For the renowned door manufacturer it is nice to be able to support industrial training in such a special way. «

## STI | Hartchrom meets Piatti

Piatti Kitchens has acquired an ultra-modern board trimming plant, with an STI | Hartchrom machine table. This equipment was developed and manufactured by the Schelling company in Schwarzach, Vorarlberg. This company has 90 years of experience in the development and manufacture of panel dividing saws for wooden materials as well as precision saws for plastics, printed circuit boards and NE metal materials. What all the companies involved have in common are their above-average innovative strength and high quality standards. «

## Kermi: iF product design award



Winner of the iF product design award 2008: the shower enclosure series Gia/Gia XP; displayed here is the Gia XP as a corner solution with up to 30 mm adjustment in the wall profile.

Once again, Kermi was presented with the coveted iF product design award 2008. The award was for the shower enclosure series Gia/Gia XP launched at the beginning of this year. The iF product design award presented by the Design Zentrum Nordrhein-Westfalen, based in Essen, is one of the most renowned international awards for good design. This year, 1,002 manufacturers with more than 2,700 exhibitions took part. After several successes in previous years, Kermi received the iF product design award 2008 this time round. The shower enclosure series Gia/Gia XP was presented with an award, because the jury considered it to be a perfect combination of form and function. The highly expressive appearance of the shower enclosure series is essentially characterised by the straight, gently-rounded fittings and door handles as well as – with Gia XP – its wall profile. In addition, the all-glass shower enclosure is distinctive because of its extremely transparent aesthetic appearance. Safety and function are every bit as important as design. Kermi only uses high-quality single pane-safety glass; the tried and trusted rising hinge mechanism ensures smooth operation of the door especially when installed flush with the floor. The award for the Gia/Gia XP continues the series of international design awards that Kermi has won in the past for a multitude of its products in the heating technology and shower enclosure sectors. The company thus expressly underlines its position as a trendsetter in design and technology. «



## Implementation planning: best possible workflow



Nothing could be easier: implementation planning with documentation from the Forster unico profile system.

The Forster unico profile system has been continually expanded since its launch in 2007. The processor documentation that has been re-issued because of this expansion contains not only lots of additional handy hints but also some interesting improvements. The profile range was supplemented by extremely slim window and door profiles and the range of fittings with solutions for escape routes. The highlight of the new documentation is a CD with CAD data (dwg) of all system plans, construction details and installation plans. The direct linking up of the documentation with the drawing details significantly simplifies implementation. «



# Corporate Center: 900 guests congratulate AFG!

On 28<sup>th</sup> and 29<sup>th</sup> February, AFG Arbonia-Forster-Holding AG opened its newly-built Corporate Center in Arbon. The new group headquarters, with over 4,600 m<sup>2</sup> of floor space, is a state-of-the-art working environment for 250 persons.

Caption



«The new  
Corporate Center is  
the face of AFG.»



Group administration, accounting and finance, marketing and PR work, human resources, IT, the legal department and the construction department as well as the sales department of Arbonia, Prolux, ASCO Swiss and Forster precision steel pipes and profile systems are now all under one roof. The ambitious schedule that allowed only 16 months from the planning phase to the completion of the superb building was finished on time.

## Commitment to Switzerland

On both days, the some 900 invited guests were guided through the Corporate Center and given detailed information about its construction history. Afterwards, they had the chance to visit one of the five production sites in the area of Arbon. In the evening, Dr. Edgar Oehler, Chairman of the Board of Directors and CEO of AFG Arbonia-Forster-Holding AG, welcomed the guests and explained the reasons for the new





If you feel good, you work better and there's the best chance of that with these light and airy meeting and work areas.



«The Corporate Center symbolises growth and globality.»



building: «Bringing all the staff together under one roof will simplify and speed up all workflows and direct communication. The Corporate Center does fulfil the function of an administrative building but it is also in particular a management and decision-making centre for the globally-active and growing AFG. The new Corporate Center building is a clear statement that the company is committed to the Arbon site, the canton of Thurgau and to Switzerland as an industrial base.»

#### AFG with a new face

The Corporate Center is not just a purely functional building. On the contrary, it represents the «new AFG». Dr. Edgar Oehler explained: «The Corporate Center is, so to speak, the public face of our company and illustrates our company philosophy: Innovation, technology, quality, ecology and internationality. It reflects our self-confidence as a company that is used to taking its fate in its own hands. At the same time, thanks to its glass architecture, it is also a symbol of openness and

transparency, which is a distinct feature of our corporate culture.» In his speech, Hans Peter Ruprecht, District President of the Canton of Thurgau, recognised the importance of AFG as an attractive employer and as an long-term industrial group in Eastern Switzerland. In the zoning and building permit phase, the interaction between the fields of politics and business could not have been better. Thus the foundation stone of AFG's headquarters was laid which can now be expanded on. During the ceremony at which the keys were handed over, Dr. Arthur R. Wettstein, CEO of Karl Steiner AG; Christian Meng, a partner at the architectural practice of Gisel und Partner; and Alfred Müller, CEO of Stutz AG, emphasised the extremely flexible planning as well as the overwhelming energy and determination of the builders. Even during its construction phase, the building was continually being refined and adapted. Mascha Santschi, vice Miss Schweiz 2000, was a charming hostess throughout the evening, while the guests allowed themselves to be spoilt with all kinds of culinary deli-

cacies. The dinner was accompanied by a varied program of entertainment. The guests were highly amused by the antics of «thomas & lorenzo». The musical duo from Germanspeaking Switzerland and the canton of Ticino – both classically trained musicians – met up at the famous Dimitri School where the two of them learnt to do mime, acrobatics and comedy. A further highlight for the audience was the artistic Swiss duo Scacciapensieri that performs world-class acrobatics. The Ottermusik St.Gallen orchestra also ensured a good atmosphere and gave the evening panache.

#### Setting the course for the future – growth and expansion

With the opening of the Corporate Center, AFG is also setting a course for the future. AFG's new industrial site in Arbon has an area of about 60,000 m<sup>2</sup> that has not yet been built on. It is the avowed intention of the company to start with the relocation of the factories on the outskirts of Arbon in the near future. In the next phase, this will affect the production

of kitchen furniture and fridges. Moreover, there is enough industrial land available to expand the production areas and thus also the capacity for the manufacture of precision steel tubing and steel profiles. AFG Arbonia-Forster-Holding AG currently comprises 50 companies. At the beginning of March 2008, therefore, work started on the construction of a new manufacturing plant for surface technology in Steinach, St.Gallen with a production area that is being expanded to a total of approximately 10,000 m<sup>2</sup>. In the summer of 2008, work will also start on the construction of a new, large factory and the headquarters of AFG China in the metropolitan area of Shanghai, China. «

# Transparency

# Openness



# Slovaktual – the window to the east

The Windows and Doors division has now also taken a first step towards internationalisation: in January 2008, AFG Arbonia-Forster-Holding AG took over Slovaktual s.r.o., based in Pravenec, Slovakia.



A view of window production at Slovaktual. With a market share of 35% to 40% the company is the Slovakian market leader.

With the acquisition of Slovaktual, the Windows and Doors division of AFG Arbonia-Forster-Holding AG is now also developing international production and sales markets. This means that AFG now has the best conditions to successfully take part in the growth that Eastern Europe is currently enjoying. The Windows and Doors division, which has until now only been active on the Swiss market with EgoKiefer and RWD Schlatter AG (acquired in 2007), will, together with Slovaktual, be one of Europe's largest manufacturers of windows and will post sales of between CHF 350 million and CHF 400 million in the foreseeable future.

## Leading Slovakian window supplier

With a share of between 35% and 40% of the Slovakian market for plastic windows, Slovaktual is the leading supplier – also in the field of doors. In 1990, the company was founded by Marián KrD, its current chairman and former principle shareholder as a company specialised in assembly. In 1993, Slovaktual acquired its own production facility and today, it has highly sophisticated manufacturing plants. The company

currently employs around 250 workers and posted sales of around CHF 50 million in 2007. In Slovakia and in some export markets such as the Czech Republic and Austria, Slovaktual has its own sales organisation. Its sales network includes around 150 branch offices that together employ more than 200 workers.

## Measurable synergies

With the integration of Slovaktual in the Windows and Doors division, AFG Arbonia-Forster-Holding AG expects measurable synergies in R&D, in procurement, production as well as in the cultivation of the market. Thanks to the fact that the Heating Technology and Sanitary Equipment division is already firmly anchored in Eastern Europe, where it operates a large radiator plant in the Czech town of StDibro, AFG will soon be able to offer comprehensive solutions with products from both divisions. The concentrated course of action will allow the Group to be able to participate even more actively than before in the rapid growth of the eastern European markets.



Modern facilities and well-trained staff enable high productivity levels.

«With Slovaktual, the Windows and Doors division is developing new, fast-growing markets.»

## Slovaktual s.r.o.

- **Headquarters:** Pravenec, Slovakia
- **Founded:** 1990
- **Integration into AFG:** January 2008
- **Employees:** approx. 250
- **Turnover 2007:** CHF 50 million
- **Market share (Slovakia):** 35% – 40%
- **Sales network:** 150 branch offices with approx. 200 employees

## Focussed market development

AFG's takeover of Slovaktual will increase the share of the company's sales outside Germany and Switzerland from 22% to 24%. This will bring AFG one step closer to achieving its strategic objective of establishing an equilibrium, over the long term, between sales volume in the company's two domestic markets and sales in foreign markets. AFG plans to continuously expand and strengthen its sales channels in eastern Europe and the neighbouring countries in the near future. Once a certain sales volume has been achieved, this expansion program will be supported and expedited by AFG's own production facilities. At its two production sites of StDibro, Czech Republic (Heating Technology and Sanitation), and Pravenec, Slovakia (Windows and Doors), it already employs over 1,000 people. Together with the strongly expanded agencies in Russia and Poland, they form the backbone of the expansion in eastern Europe and states even further east than that. «



Ready for action: Slovaktual's service fleet.





Working on the pitch subsurface. The shopping centre and car park are directly beneath it.

## AFG ARENA opens on 25<sup>th</sup> May 2008

**In the west of St.Gallen, AFG ARENA is nearing completion after an intensive construction phase of less than two-and-a-half years. AFG ARENA will give eastern Switzerland a state-of-the-art sports facility with standing room and seats for 21,000 people.**

25<sup>th</sup> May 2008, earlier than originally planned, is the official opening of AFG ARENA, with an opening day that goes under the slogan of «AFG ARENA is open to all». And under the motto of «ready, steady, great!» the opening ceremony and kick-off match of FC St.Gallen will take place on Saturday 5<sup>th</sup> July 2008. Before that, on 30<sup>th</sup> May 2008, the Swiss national football team will honour the AFG ARENA and eastern Switzerland with an international match against Liechtenstein, its last match in preparation for the start of the European football championship.

### Natural turf from Bavaria

Work on the pitch is going ahead full steam. The pitch will be put in place at the end of April – natural turf, grown on a specialist farm in Bavaria. Located at a height of 700 m above sea-level, a special seed mix is required. That is why a combination of smooth meadow grass and the often-used English ray grass came into play. Directly beneath the pitch, there is the 40 to 80 cm thick concrete ceiling of the shopping centre (Shopping Arena) and parking level. There is, therefore, no

natural subsurface. So that the water can still drain off well, a base layer consisting of a bituminous seal (as a water barrier), crushed glass cells (for heat insulation) and lava sand is being built under the pitch. This layer contains a piping system, several kilometres in length, that waters, ventilates and drains the soil. In addition, the pitch will be heated with a system that uses waste heat.

### Fair pricing policy

Ticket sales, including season tickets, for the matches of FC St.Gallen in the AFG ARENA got off to a good start. Most prices will be the same as in Espenmoos, FC St.Gallen's old stadium, even though the sophisticated infrastructure and the excellent visibility would easily justify any price increase. In addition, AFG ARENA's range of season tickets categories is huge – from the extremely fairly-priced tickets in the standing area of the home supporters' stand to the extravagant business seats on the grandstand via the family-friendly Family Corner. «



The best views all round: AFG ARENA stands can accommodate up to 21,000 people.

### A sports facility in our name

As AFG Arbonia-Forster-Holding AG holds the naming rights to the AFG ARENA, its name will be a key component in all the arena's marketing activities. This commitment is a clear declaration of allegiance to eastern Switzerland as a business location and an expression of its close ties to its people and to FC St.Gallen.



Preparing to lay the lush, green turf.



18,000 seat frames have to be installed and fitted with seats.



View from the west to the rows of spectator stands that are supported by huge steel struts.

## AFG with a new sales record

**In the five years since its takeover by Dr. Edgar Oehler, AFG's net revenues have more than doubled to CHF 1.471 billion (2006: CHF 1.243 billion, annual growth of 18.3%).**

«**Exceptional items also affect the EBIT margin.**»

In the 2007 fiscal year, AFG Arbonia-Forster-Holding AG greatly improved its standing and reputation for soundness and reliability. With the takeover of STI Surface Technology International Holding AG in Steinach SG, RWD Schlatter AG in Roggwil TG and Aqualux Products Holding Ltd. in Wednesbury (UK), the product portfolio was significantly extended, dependency on the building industry reduced and the internationalisation of the company greatly boosted. The requirements as regards organic growth have been achieved, as has a considerable increase in turnover of nearly 20% to CHF 1.471 billion thanks to the recent acquisitions. AFG took another step towards its strategic goal of greater internationalisation outside the home markets of Switzerland and Germany with a market share of 24% (2006: 22%). The Board of Directors will propose to the Annual General Meeting of 18 April that the company pay an unchanged dividend of CHF 10 per bearer share and CHF 2 per registered share. The improved competitiveness of the Heating Technology and Sanitary Equipment division contrasts with the continuing decline

in prices in the kitchen business, which poses great challenges to the Kitchens and Refrigeration division, despite its excellent product portfolio. With the takeover of the Slovakian market leader in window construction, Slovaktual s.r.o. the Windows and Doors division, which is also strong on the German and Swiss market, became the fifth and final division of AFG to start internationalizing its business. The Steel Technology division enjoyed excellent results once again. Due to its unique position on the global market, the earnings of the Surface Technology division are expected to improve over the next few years. «

# Opportunities



# Heating Technology and Sanitary Equipment

«Together we are strong!»

Attractive brands under the same roof: networking in the generous communication zone and cafe.

## Arbonia and Prolux shine at Hilsa 2008

At the end of January the Hilsa 2008 trade fair for heating, ventilation, air conditioning, cooling and sanitary installations closed its doors at the Basel Exhibition Centre. Arbonia and Prolux both rated the event as a great success. The fair was attended by 24,000 visitors.

Between Tuesday 22<sup>nd</sup> and Saturday 26<sup>th</sup> January, more than 24,000 visitors took the opportunity to attend the key meeting point for the industry and made the most of the information and networking platforms it presented. Alongside 421 other exhibitors, the Arbonia and Prolux brands put on a ground-breaking show and took every opportunity to dazzle with innovation. The market launch of the new floor heating system xnet which will be distributed by Prolux from April 2008 received a very warm response, as did the new colour concept called «New Inspirations» unveiled by Arbonia.

### The Hilsa 2008 trade stand – a vibrant meeting point

The joint exhibition put on by Arbonia and Prolux clearly presented account of the advancements made by AFG Arbonia Forster Holding AG in Switzerland. The exhibition area pre-

sented the diverse product portfolio of the Heating Technology division and Sanitary Equipment: designer bathroom radiators, designer living space radiators, heating panels, convectors, surface heating/cooling, tube radiators, flat tube radiators and underfloor convectors. Both of these increasingly popular quality brands made an excellent impression on the numerous visitors. The stand gave an impressive account of the companies, with the confident market launch of the floor heating system xnet, the generous communication zone and the inviting cafe. The underfloor convectors from Asco Swiss also received a very warm welcome. The next Hilsa trade fair will be combined with the Swissbau exhibition, which will offer significant additional benefits for exhibitors and visitors. The next Swissbau is due to take place in 2010. «

### The new floor heating system xnet

From April 2008, Heizkörper Prolux AG will be selling the floor heating system xnet, which meets all the requirements for a modern and comfortable surface heating system. Rather than focussing solely on ultra-competitive prices, Prolux has delivered exactly what the market has

been waiting for in a well thought-out system with efficient, installation-friendly components. At its heart are the modified distribution box and a wide range of control accessories, plus the xnet professional pipe decoiler which reduces installation costs by up to 50%.





The xnet concrete distribution box meets increased structural and sound insulation requirements. Thanks to the free space with double panel for attachments, it offers enough space for the electrical components.

## Floor heating system xnet takes off

From 1<sup>st</sup> April 2008 on, the highly capable sales team of Heizkörper Prolux AG will forge ahead into the floor heating market. This addition to the company's range of products will give a further big boost to the attractiveness and diversity of the Prolux portfolio.

Rather than focus solely on ultra-competitive prices, the xnet system from Heizkörper Prolux AG is designed with durable components which are easy to install and comprehensive planning and consultancy services. This is exactly what the market has been waiting for! xnet was unveiled at the Hilsa 2008 trade fair at the start of the year, where it received a very enthusiastic response from a wide audience.

### Optimised heat distribution

«We all need warmth.» – The need for cosiness and comfort in the home is shared by all people. For many years Heizkörper Prolux AG has been supporting this feeling of cosiness with the right heating systems. xnet stands for a modern heat delivery concept with professional surface heating systems and components for new buildings and renovation projects alike,

and it opens up new levels of freedom for architects, planners and house builders. The xnet system offers individual solutions for optimised heat distribution. The components can be combined in many different ways, allowing the design and construction of tailor-made heat supply systems. Thanks to the carefully thought-out range of products and accessories, xnet can not only be used for surface heating, but it can also be connected to radiators or combined with Asco Swiss underfloor convectors.

### Persuasive technology

The radiant heat of xnet is based on a flow temperature of between 30°C and 50°C. This allows the system to maintain floor temperatures of between 20°C and 27°C. Modern energy systems (such as heat pumps) require heat output systems which can be optimally integrated. xnet offers the ideal conditions for environmentally friendly and energy-saving heating technology. The innovative heart of the xnet system is the modified distribution box, the wide range of accessories for open and closed loop control as well as the xnet professional pipe decoiler. The latter in particular opens up new options for installation engineers in particular. Whereas it always took two fitters to install a floor heating system in the past, this is now just a one-man job!

### xnet – success with class-leading technology

The 5-layer composite pipe developed in the 1980s rapidly became the number one in the field of heat distribution. A vision became a complete worldwide innovation.



### xnet floor heating – the advantages

- **Dry system:** cost-effective solution for low installation heights (25 – 65 mm)
- **Track system:** solutions which cover virtually any room and installation scenario
- **Tools:** for easier installation
- **Distributors and boxes:** more space in the box and more options
- **Planning support:** consultation and calculation of the floor heating system, plus CAD drawing support
- **Just-in-time:** the right place at the right time
- **Consultancy:** straight away and highly trained

Right at the heart of the system, the one-man professional pipe decoiler can reduce installation time by up to 50%.

### Pure comfort

Thanks to the optimally coordinated system components, different variants of the system can be designed and built with the same high level of safety and reliability. The range is supplemented with a large number of heat distributors. The heat distributors can be equipped with the latest heat measuring equipment. The unit comprising floor insulation and edge insulation strips ensures that the bottom of the underlay is

completely separated from load-bearing elements. All current regulations relating to thermal insulation, footfall sound insulation and noise insulation are met and even exceeded by the xnet system. A simple and user-friendly open and closed loop control program rounds off the range. Conclusion: the xnet floor heating system ticks all the right boxes for a modern and comfortable surface heating system. «

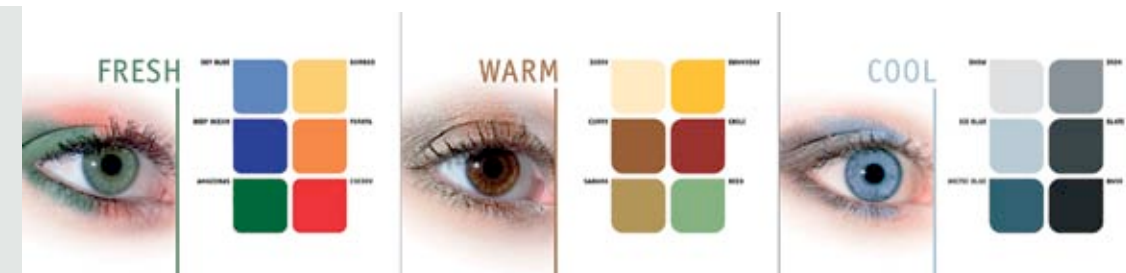
## Arbonia surprises with «New Inspirations»

Unusual surfaces and attractive colours turn radiators into real eye-catchers.

In addition to the standard comprehensive range of colours, Arbonia has added the 18 strong new colours in the «New Inspirations» colour concept.

Thanks to the high-grade powder coating, the new colours from Arbonia continue the company's tradition of offering durable protection for long and trouble-free service. The company's commitment to only work with first-rate suppliers, the use of state-of-the-art painting systems and the continuous inspections and self-tests carried out by Arbonia guarantee the first-class quality of their products. The three brand new

categories «Fresh», «Warm» and «Cool» – now available for the first time with six new shades each – were unveiled at the Hilsa 2008 trade fair in Switzerland as well as at the spring exhibitions in Germany in Essen and Nuremberg. The extremely positive response among visitors exceeded all expectations and shows that Arbonia has once again demonstrated its ability to read the market early on with the «New Inspirations» range. «



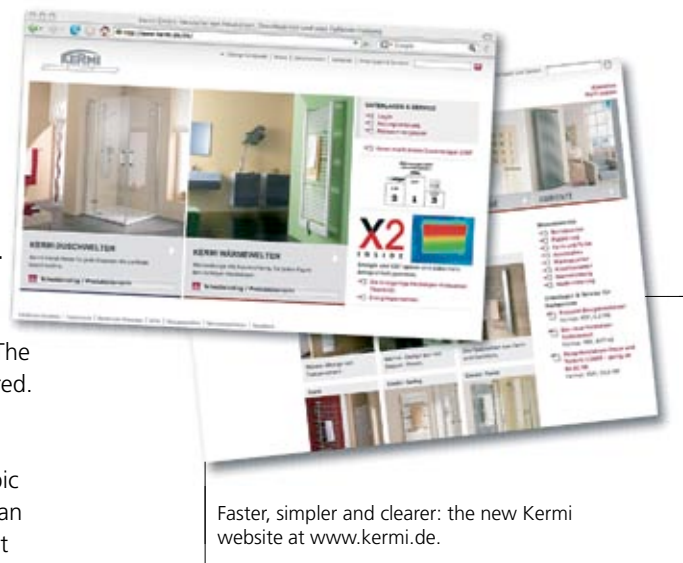
The new colour concept «New Inspirations» from Arbonia exude warmth – for the eye as well.



# faster

## Kermi online really delivers!

Kermi has completely revamped the company's website. As well as improving the look of the website, it has been updated with the latest Internet technology in order to significantly shorten loading times. The navigation concept has also been simplified and restructured. Fast access options allow visitors to navigate straight from the homepage to the required section. In addition, a comprehensive new index helps users to locate the desired topic within a few clicks. Once inside the website, there is now an even greater wealth of information which is clearly laid out and supplemented with additional pictures. New areas which have been added include picture galleries, invitation to tender documents and assembly instructions, as well as programs for calculating heating systems and for CAD applications. In addition, a new «References» section has now also been added. As always, customers and anybody else who is interested can visit the site 24 hours a day at [www.kermi.de](http://www.kermi.de) for access to all product information, all documents in PDF



Faster, simpler and clearer: the new Kermi website at [www.kermi.de](http://www.kermi.de).

format, data sets for software applications, the Kermi images database ... As well as this, Kermi will also use the site as an outlet for latest news and updates before they become available in printed form or on the Kermi CD-ROMs. All this makes a visit to the new Kermi website worthwhile. Why not take a look and see for yourself? «



Ensuring that high quality standards are met: Inspections carried out during production of the Kermi shower cabins.



All smiles at the award ceremony: Hans Georg Pauli from market intern (5<sup>th</sup> from right) and the Kermi team.

## Tradesmen: «Kermi is the best!»

According to a current survey carried out among representatives of the skilled crafts in the heating and sanitary equipment industry, Kermi has been able to maintain its leading position as a manufacturer of shower enclosures. After coming first in 2003 and 2005, Kermi has now managed to do a hat-trick in this widely recognised survey. Germany's skilled crafts in the sanitary/heating/cooling equipment sector were asked to give their vote on the best shower enclosure manufacturer in nine different categories. Some of the individual criteria focussed on product and servicing aspects, which are particularly important to customers as well. The two main categories here are «Product quality and quality of finishing» as well as «Delivery service and delivery reliability». Kermi came first in both categories – and in both cases was awarded significantly higher marks than in the survey conducted in 2005. On top of this, two second places and one third place in the categories «Range policy», «Response to customer complaints/spare parts supply» and «Ease of installation/advanced technology» underline the widespread approval for Kermi in the industry. One thing is clear – this level of acceptance and approval does not come about by chance. «

## Cuya/Cuya XP: new shower cubicles

One of the cornerstones on which the success of the model policy at Kermi is based is the company's aim of developing trendsetting models with cutting edge and contemporary design. Following the incredibly successful introduction of the exceptional comfort class series Gia and Gia XP, Kermi has now also perfected its fittings range in the compact class.

Cuya and Cuya XP are the names of the new shower cabin pair which the company hopes will dominate in the compact class – with soft, rounded edges, impressive comfort levels and excellent all-round value for money. The high-quality, balanced design of the fittings, which are available in four special surface variants, is the perfect match to the curved form language of the trendsetting bathroom architecture – right up to the solid and ergonomically shaped handle. Both series are packed with sophisticated technology for superior comfort and offer top-level functions which are sure to be unmatched in this class – from the fittings which are

«Cuya and Cuya XP means:  
soft curves, impressive comfort  
and an attractive price.»

flush-mounted on the inside for easier cleaning to the lift/lower mechanism through the transparent hook for variable towel positioning. This is rounded off with other neat touches like the minimised transparent sealing strips and magnetic strips, the special horizontal «roof gutter» sealing strip or the optional installation with or without a floor sill. As a frameless version, Cuya offers pure trendsetting aesthetics – individual and tailor-made. Cuya XP, with a harmoniously integrated wall connection profile, fits on all standard shower trays thanks to its intelligent compensating system and measuring system. «

Cuya XP: an example of how attractive shower cabins can be in the compact class!

Cuya stands out with trendsetting aesthetics.







The new Jive – also available as an electric version – leaves nothing to be desired.

## Jive – irresistibly exciting and sleek

**Credo, Credo-Half, Credo-Duo – these are the exciting new names that Kermi has recently been using for the company's trendsetting and award-winning heat design elements, which have recently been setting standards in the industry. The new Jive range from the Kermi design department is no different and seamlessly follows this trend.**

Jive embodies a feel of delicate sophistication in a sleek design with powerful heating output. The brilliant panel design offers a fascinating contrast to the asymmetry of the dynamically curved piping. The strong design with hidden connections and the perfectly integrated thermostatic sensor head is fully in tune with modern bathroom design. Even the way the range is matched to a particular situation and requirements leaves nothing to be desired: a choice of left or right-handed design, single or multi-layer units according to the heating requirements, attractive colour combinations – the new range

will make customers' dreams come true, as seen here with a luxurious chrome heating pipe. Jive also demonstrates that exceptional design can also be genuinely comfortable and user-friendly. For example, towels can be dried with ease by inserting them from the side and hanging them over the heating pipes. For all-year warmth which is independent of the central heating system, Kermi also offers a version with additional electrically-powered operation, as well as the Jive-E which is powered solely by electricity. «



## Top marks for the new Credo-Uno

**The new Credo-Uno is a genuine attraction in its class, where it easily takes top spot both for its high-class styling and for its exceptionally high value for money.**

With the Credo-Uno, Kermi has impressively shown that strong and discerning design values are absolutely possible even in the lower price segment. Its pure, straight visual appearance with the rectangular vertical profile and the straight cross-pipes is perfect for the clear design language of modern bathrooms. Hidden behind the harmonious panel design, the mid-level 50 mm connections make life easy for planners. The only visible component is the perfectly integrated thermostatic sensor head which comes with the unit. The integrated valve fittings are matched to the heat output and provide effective and energy-saving controls. With a wide range of available sizes and a special selection of colours, the new Credo-Uno offers plenty of scope for individual planning and leaves a lot of room for special wishes from customers, ranging from the optional choice of different colour shades for the top panels to the luxurious option of a full-chrome version. The Credo-Uno is also available with an additional electric heater or – in the form of the Credo-Uno-E – for purely electrical operation. Kermi also offers xlink connection fittings for the Credo-Uno for connection to the Kermi floor heating system xnet. «



The new Credo-Uno with its fabulous design – surely a gold medal in waiting.

## Verteo: the new vertical panel radiator



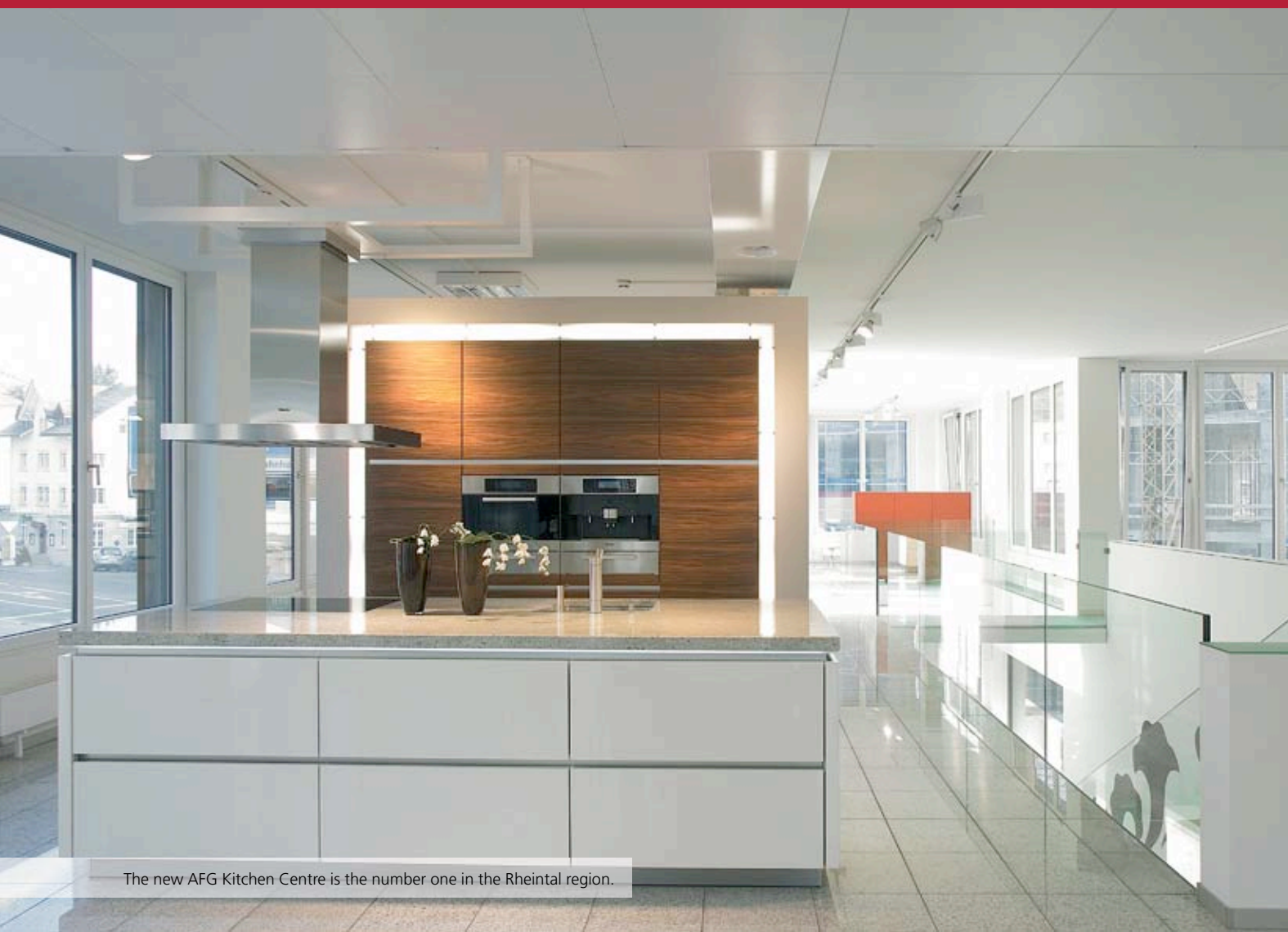
Verteo: ideal for a space-saving solution.

**In order to complete and optimise the range of panel radiators, Kermi now offers the Verteo, the vertical panel radiator.**

The Verteo is a genuine alternative, offering an attractive heating surface for applications which demand a space-saving solution which is integrated in a harmonious overall room design. The new design features the patented X2 technology found on all the company's other multi-layer valve layouts, which offers effective energy-savings. Available in both flat and profiled versions, with side panels as standard, the Verteo is an attractive proposition in almost any room. With an output ranging from 650 to 3,100 W, four different heights and four different lengths, the flexibility demanded of a modern system is assured. Adding to this, the system has six connecting sleeves for a wide variety of connection options from the top and bottom. The Kermi valve block is also available as an option for the Verteo. «



# Kitchens and Refrigeration



The new AFG Kitchen Centre is the number one in the Rheintal region.

«The unique  
ambience  
enthral.»



## The largest kitchen centre in the Rheintal region is now open

More than one hundred invited guests from the worlds of politics, commerce, architecture and industry attended the celebrations to mark the opening of the largest kitchen centre in the Rheintal region in Heerbrugg SG. The concept of the «three-brand showcase» met with a warm response.

Dr. Edgar Oehler, Chairman of the Board of Directors and CEO of AFG Arbonia-Forster-Holding AG, opened the evening with an address during which he offered the audience insights into the successful history of AFG and the development of the Kitchens and Refrigeration division. Three years ago the three kitchen brands of AFG, Forster Steel Kitchens, Miele Kitchens and Piatti Kitchens were first brought together for an exhibition in Chur. With success: the concept of the «three-brand showcase» met with a high level of interest. Visitors are able to directly compare the three leading kitchen brands and thus make decisions about their own personal kitchen world much more quickly.

### Swiss quality – with German precision engineering

The unique ambience in the modern and generously appointed exhibition in Heerbrugg fascinates and quickly draws visitors under its spell. The kitchens on show impress with clever

colour combinations, sophisticated shapes, unique materials and state-of-the-art kitchen technology. The combination of Swiss quality, German precision engineering and Italian design makes any visit an unforgettable experience.

### Passion and emotions

«This is about more than just kitchens», emphasises Dr. Edgar Oehler, «this is about living spaces, passion and emotions». The vision is clear: all three brands are to be distributed worldwide. The new kitchen centre acts as the showcase for this new drive. It is run by Mirjam Oehler, who has many years of experience in real estate and has cultivated excellent contacts with architects and general contractors. She is assisted by a team of three colleagues. With the kitchen centre in Heerbrugg, AFG has demonstrated the company's leading role in the kitchen industry and has also shown its commitment to Rheintal as an economic region. «



Creating quite a stir: the «three-brand showcase». 2<sup>nd</sup> from left: Mirjam Oehler, Head of the Centre



Dr. Edgar Oehler (right) welcomes the guests.



## Forster: the new generation of A++ refrigerators

In addition to two brand new models in the energy efficiency class A+, a new integrated refrigerator which meets the energy efficiency class A++ and offers a further 25% reduction in electricity consumption will be available from spring 2008.

As well as offering modern, timeless and functional design, the new units will also offer the following features:

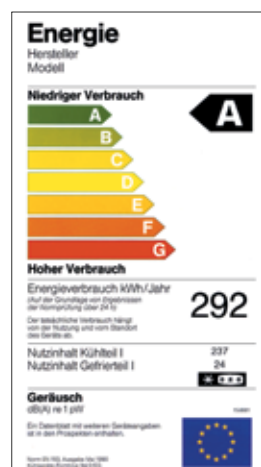
- The electronic touch controls and temperature display are positioned on the front at the top.
- In order to save space, the four LED bulbs used for illumination of the chilled compartments are integrated in the side walls.
- The intelligent layout of the control panel and lighting allows full and unrestricted access to the entire interior.

The innovative and patented shelf system also offers significant customer benefits. The shelves are attached directly to the walls using a self-locking snap closure. The smooth inside walls without shelf support ribs are easy to clean and allow the available space to be used to the full. Refrigerators manufactured by Forster also offer much greater capacity in comparison to other refrigerators with the same unit height. Alongside the new, generously-sized door and vegetable trays, the push-fit – and hence easy to replace – magnetic door seal rounds off the impressive advantages of the new generation of refrigerators from Forster. Initial reactions from our sales partners and end users have all been positive,



All of the new integrated refrigerators satisfy energy efficiency class A+. The 10/6 Eco unit even manages A++ rating with a further 25% less energy.

confirming that Forster is on the right track. Six further models are due to be added by 2010. All of the new generation of integrated refrigerators meet the requirements for energy efficiency class A+, and the 10/6 Eco unit available from spring 2008 even achieves an A++ rating with a further 25% reduction in electricity consumption. «



The diagram opposite shows the energy efficiency classifications and underlines the fact that Forster refrigerators are top the pack when it comes to energy efficiency as well.

The Forster foaming plant delivers future-oriented, environmentally friendly and efficient production facilities for a new generation of refrigerators.



## A new foaming plant for Forster

On 5<sup>th</sup> November 2007, 13 semitrailers loaded with machinery parts pulled up outside the production buildings of Forster Küchen & Kühltechnik AG. This was the start of the assembly and installation of a new foaming plant for refrigerator production.

The old plant, somewhat long in the tooth after manufacturing more than 2.5 million refrigerators, was no longer up to the challenge of producing a new generation of refrigerators. Construction of the new plant started in December 2006 and took nearly a year. The production halls needed to be prepared so that they could take the load of a production line weighing 178 t on a floor space no larger than a 5-a-side football pitch. In order to keep customers supplied with an uninterrupted production of 8,000 refrigerators per month, these preparations had to take place alongside live production. Ten weeks after the machinery parts were delivered, one of seven stations started production of the foamed plastic

refrigerator containers. The results met all expectations, marking the start of a new period of refrigerator foaming technology. With high reproducibility, excellent form stability and higher insulation values, the conditions were perfect for cost-effective production of the challenging technology required for the latest generation refrigerators. Thanks to this type of investment, the costs associated with non conformity have been reduced, while process reliability has gone up. These important prerequisites have to be met in order to be able to continue developing and producing high-tech refrigeration appliances with the longest possible service life at affordable prices. «

## New cutting centre for Piatti



Proud employees in front of the new cutting centre.

As the largest producer of kitchens in Switzerland, Bruno Piatti AG relies on flexible use of production equipment to achieve the highest possible quality with short processing times and minimal use of materials.

This allows the company to react quickly to individual customer requirements and short-term market trends. The new cutting centre is one of the most modern plants in Europe. Together with the plant, the extraction system has also been replaced. It was possible to eliminate the existing fans and pipes, and the new «jet filtration technology» yields enormous energy-savings. Environmentally friendly lighting was also installed for optimum illumination of the workplaces. This has improved energy efficiency and ensures that resources are used as sparingly as possible.

### Automatic calculation of raw material requirements

The daily requirements for front and carcass parts are calculated from the customer orders. To start with, this information is analysed with the aid of an optimisation program, after which the data are sent online to the cutting plants, together with the cutting plans. The raw material requirements are automatically calculated to leave as little leftover material as possible. The system can then automatically supply the required materials. The assorted stacks of boards are then supplied to the new plant, where they run through the different stations in the new production line under the watchful eye of state-of-the-art sensor technology. In this way, up to 7,000 parts can be produced in a single shift. «





One of numerous attractive variations: Programme L13, super 160 mirror finish, 601 diamond white, stainless steel handles 438, 3 cm solid wood «Zebrano» worktop with 20 cm thick and 640 cm long stainless steel hob top and working area cut from a single piece.

## Miele De Keuken opens new flagship store

Since the end of 2006, the company SuR bv has been a subsidiary of AFG Arbonia Forster Holding AG in the Netherlands. Under the leadership of Marc Jongsma, Marcel Geerts and Cees van Nispen, the sales outlets for Miele Kitchens are being strengthened and expanded.



The initial flagship store concept has been developed under the brand name of Miele De Keuken. It has taken shape in the form of the first Miele De Keuken flagship store, which opened in the autumn of 2007 in Amsterdam with 14 display kitchens and a total floor space of around 900 m<sup>2</sup>. The clear principle is «quality not quantity». The idea is to surround customers in design and high-end equipment – and to simply make them feel as comfortable as possible. With this first flagship store in Amsterdam, SuR bv has introduced a new store concept for the premium segment focusing on atmosphere, high-end appointments and vibrancy.

Dr. Edgar Oehler, Chairman of the Board of Directors and CEO of AFG Arbonia-Forster-Holding AG (centre) marks the opening of the new flagship store with a striking speech. At his side the executive board of SuR bv (left to right): Marcel Geerts, Marc Jongsma and Cees van Nispen.

### Exclusiveness is the key

With Miele De Keuken there are no rules – every kitchen is different, thanks to the unique possibilities afforded by the design. The result is a kitchen which perfectly matches the individual lifestyle of the customer, with exactly the desired level of equipment. The unique character of each kitchen is defined in a creative planning process, which includes careful choice of materials and a clear and linear choice of shapes. A kitchen from Miele De Keuken represents unconventional thinking and planning in which different options are carefully weighed up against each other in order to give each kitchen its own special character. More than anything else, this is what sets a kitchen from Miele De Keuken aside from all others. For Marc Jongsma, Marcel Geerts and Cees van Nispen, the style and presentation of the new flagship store in Amsterdam set the tone for all of the new Miele De Keuken trade partner stores which are to be built. With this design, the three CEOs are hoping to create a recognisable brand and a unified brand identity in the market – across all sales outlets and regions throughout the whole of the Netherlands. This concept has now also found its way into a second flagship store: Haute Cuisine Keukendesign in Eindhoven. «



Careful choice of colours and materials: plastic F17, «Abet» colour 1029 Grigio Graphite with stainless steel metal edges, 411 stainless steel handles, thin 2 cm worktop in stainless steel with 439 light oak. 10 cm table top in 439 light oak.



Miele De Keuken trusts in quality: L15 high-gloss paint finish in cream white (828), profiled handle strips in place of handles, LED worktop lighting. Niche system with LED recess lighting, 2 cm granite worktop in Bianco Cristal Antiek combined with a 6 cm Bianco Cristal Antiek worktop on the island.

# Exclusive



## Miele Kitchens win Wohndesign Award 2007

On 11<sup>th</sup> October 2007 the Miele Center Pellet was awarded the 2007 «Wohndesign Award». The jury was impressed by the innovative technology and the inspiring «kitchen as living space» design. The prize award ceremony took place at the Wohndesign trade fair in Hofburg/Vienna. Wilhelm Rieder, CEO of Gaggenau and initiator of the Wohndesign Award, and Alexandra Graski-



All smiles at the award ceremony (left to right): Claus Pellet, Miele Center Pellet; Alexandra Graski-Hoffmann, MAC Hoffmann; Wilhelm Rieder, Gaggenau; and Erwin Gegenbauer, Jury Award.

Hoffmann from trade fair organizers MAC-Hoffmann guided the 8-man jury around the exhibition. Among the 10 nominated kitchens, the jury unanimously opted for the kitchen from Miele Kitchens, which convinced them with its pure and light character. Claus Pellet, CEO of Miele Center Pellet, explains: «We won the award in our first appearance at the Wohndesign trade fair, so we are very proud. Innovative technology, such as the electronically controlled pull-out system and design details like the glass worktop helped to sway the jury. Minimalist and light, but with a futuristic feel – this appealing kitchen design offers smooth, handleless fronts in cool white and horizontal Tineo, shown here in a layout which is deliberately reduced and features no higher-level cupboards. The kitchen stays bright, with niche lighting over the corner, which continues through the kitchen like a reflective light strip. The powder-coated steam extractor in the same colour as the wall and the wall-recessed, short-length tall cupboards underline the high-class character. «



Programme L13, high-gloss paint finish in a combination with matt horizontal Tineo, thin 12 mm glass worktop with mounted on a surface painted the same colour as the front, handleless design with electric pull-outs.

## Miele Kitchens goes global

The rise in export sales of the German kitchen furniture industry seems unstoppable. The company Warendorfer Küchen GmbH also aims to direct this level of focus on markets outside Germany. At present, exports account for 60% of sales. In 2007, turnover increased by 10% thanks to the boost in non-domestic activities. The company now sells in 35 different countries, all of which play a role in this success. In addition to the European market, the Middle East, Asia and North America are increasingly gaining importance. Depending on the different market conditions in each country, national organisations are either set up by creating an independent subsidiary of AFG Arbonia Forster Holding AG, via a sales management setup which is directly integrated in Warendorfer Küchen GmbH, or directly via the headquarters in Warendorf. As a result, sales tend to specialise more on the kitchen trade in some countries, while efforts in other markets are more focussed on contract business. Miele Kitchens is represented by about 250 specialist retailers worldwide. Further export growth is promised by the subsidiaries set up in 2007 in the UK and the United Arab Emirates. In addition, independent sales organisations are also pushing business in Italy and Switzerland now as well. «



## Making the most of opportunities

Miele Kitchens is positioning itself in the Swiss market, where an average of 140,000 kitchens is sold every year. Growth can be expected through to 2011 in the medium to low-price sector in particular, while the high-end segment is set to remain static at a relatively high level.

In Switzerland, the market potential for high-end kitchens is around 6,500 kitchens per year. This segment is set to remain static at a relatively high level for the next few years (source: Wüest & Partner). Miele pursues with a passion the perfect combination of design, function and quality. These quality characteristics are the key requirement for ensuring that even unusual customer requests can become reality.

### First flagship store in Zurich

High-end and representative displays throughout the whole of Switzerland are a key part of the sales strategy of Warendorfer Küchen (Schweiz) AG. Summer 2008 will see the opening of the first flagship store in Zurich. On a floor space of 360 m<sup>2</sup>, the company aims to present kitchen architecture to the highest standards, with a focus on individuality and customised solutions. The aim is to open further flagship stores at other strategically important sites in Switzerland and to unlock new markets both in terms of private customers and high-end contract business. Particular importance is placed on the cooperation with selected specialist retail outlets. Appropriate presentation in representative kitchen studios which are right for the market and continuous training of sales staff and fitters are just some of the requirements for a long-term cooperation.

### An inspiring concept

Together with an interior designer, a studio concept was developed which is specifically tailored to specialist retail outlets and will help to create a standardised corporate image across the whole of Switzerland. The advantages of this are obvious: Customers who might have been inspired after visiting a trade exhibition will recognise the same kitchen architecture when they visit one of the kitchen studios of Miele Kitchens. This recognition factor underlines the tight brand control and also creates a basis for trust on the part of a customer who is showing interest. This opportunity to sell Miele Kitchens products as a specialist retail outlet will only be available to partners who are willing to meet these quality standards. In 2008 Miele Kitchens will be represented at a number of trade exhibitions in Switzerland. In a two-pronged approach, an image campaign will also be launched in a number of lifestyle and home living magazines. With the message of «valuable for life», the campaign will show emotional and inspirational kitchens which will arouse interest among potential customers. But of course, customers can only find their way into Miele Kitchens showrooms if they know where they are. A list of sites can be found at [www.miele-kuechen.com](http://www.miele-kuechen.com). Visitors to the site can also order various types of information or simply enjoy a tour of the fascinating world of Miele Kitchens. «



The quality brand Miele Kitchens is set to establish itself in the Swiss market with kitchen architecture of the highest quality.



## Piatti Kitchens in the longest apartment house in Bern

With the construction of apartments in Hardegg/Bern, Piatti has been able to land a prestigious high-volume order. At a length of 225 m, the modern and futuristic development in Weissenstein-Hardegg has taken the record for the longest housing development in Bern.



The residential apartments built in Hardegg, Bern. High quality, appealing design, attractive prices and competent consultancy services – these are the factors which helped Piatti clinch the deal.

187 attractive apartments ranging in size from 1 to 5½ rooms will provide homes for around 1,000 people. The kitchens are without a doubt the most eye-catching aspect of the newly constructed apartments. With high-gloss synthetic resin fronts, combinations of tall cupboards and low-level cupboards with flush fronts and handleless high level cupboards with integrated lighting, the expectations of the tenants and owners have been exceeded. Even on larger developments, architects are increasingly opting for modern kitchens with appealing design. The challenge here is to plan and produce modern, high-quality

kitchens at inexpensive prices. Thanks to the newest kitchen production facilities in Europe, Piatti is able to meet the expectations and deliver the best possible value for money.

### Piatti does a convincing job

The client for this large-scale project was the Brünnen-Eichholz building cooperative in Bern. Thomas Balmer, the president of the building cooperative, explains the reasons for choosing Piatti: «The attractive design of the kitchens in the living area and the high quality of their appointments really swayed the decision for our 120 rented apartments. In addition, it was important for us to find a kitchen supplier who would be able to offer competent and individual advice to the purchasers of the 66 freehold apartments and to take their wishes into account.» The architecture office matti ragaz hitz in Bern was responsible for implementing the project. Urs Schär, responsible for communications at matti ragaz hitz, reveals why Piatti managed to close the deal: «The fact that they offered such good value for money was the most important factor.» The first occupants will move into the development during the autumn of 2008. «

Striking elegance: the kitchens from Piatti with their easy to clean synthetic resin fronts.

## New kitchen worlds from Piatti

Design should follow the varied needs of real people, not a set of self-proclaimed rules. For Piatti, the challenge in kitchen design is to combine aesthetic appeal with functionality and – at the same time – to create an ambience of comfort.

Another challenge is the fact that customers increasingly face their environment with more information and greater expectations. Key words like lifestyle, expectations and design have now become part of the everyday vocabulary.

### On to new dimensions – with «P»

The «P» kitchen stands for the creation of a new Piatti kitchen world. «Profile», «Provocation» or simply «Piatti»? For the time being, the team at Piatti are keeping the meaning of the letter «P» under wraps. In terms of its clarity and directness, «P» acts like a breezy commitment to individuality. Private, personal, perfect – these are other possible interpretations of the «P» moniker. The «P» kitchen is a deliberate mixture of nature and shiny, glossy surfaces – a perfect interplay between different elements of design and technology.

### FRAME kitchens for a clear solution

The FRAME kitchen range came about when the company was looking for a user-friendly yet communicative solution. What is the idea behind this kitchen? Is the aim to carefully set the scene – or is it an opportunity to relish an approach which is out of the ordinary? FRAME is a plea for simplicity, perfectly combined forms, and corners which connect rather than get in the way. A monolith which confidently separates the kitchen from the living area whilst simultaneously connecting them from two sides.

### MICRO: Cubism in tiny spaces

MICRO is the compact all-in-one kitchen with a contemporary form language which impresses with a compact geometry. The tall unit catches the eye and dominates the all-in-one station, giving the kitchen a sense of strength and excitement. Everything is focussed on making the most of the living space and the kitchen area and to bring them together in a single aesthetic unit. In developing this kitchen, Piatti concentrated on the bare essentials without making any concessions in terms of comfort.

### The perfect integration of different lifestyles

These three kitchens are aimed at design-conscious kitchen buyers who wish to take their personal lifestyle choices into the kitchen as well. They stand out with a clear and functional form language, careful choice of materials and a high-quality finish. With these kitchens, the living space will evolve more into a representative space where life can be lived to the full, and they can also be supplied with a range of electronic entertainment systems. With this desire to innovate, Piatti has created the ideal conditions to remain the leader in the kitchen market. «



The «P» kitchen offers wide-ranging individual design options with its clarity and modular layout.



The FRAME kitchen world shines with its simple, interconnected shapes.



The practical all-in-one station (left): MICRO combines simplicity with practical levels of comfort.



# Windows and Doors



Stylishly clear outline: Office building in the Geltenwilenstrasse in St.Gallen.

## Modern architecture and EgoKiefer MPR2 plastic/aluminium windows

The impressive building in the Geltenwilenstrasse in St.Gallen was erected in 2006 by the company die.bauengineering ag from St.Gallen for CS REF Property Plus, a real estate investment fund of Credit Suisse. EgoKiefer supplied 810 MPR2 plastic/aluminium windows.

Concrete elements of the saw spannbetonwerk ag in Widnau were added to the visible area of the facade of the building, lending this property its unique identity. Another noteworthy feature is that the facade was already fully sealed and insulated during the installation of the 1,280 elements. The air tightness of the building was measured by means of a blower door test. This test serves to detect leakage in the shell of the building and determine the air replacement rate. The blower door test was passed the first time without any difficulties. When the pre-fabricated concrete elements were mounted, all windows had already been installed and the time-consuming interior work on the building was already underway. Due to the parallel processes and the use of a non-bearing

facade construction, it was possible to shorten the construction time by more than three months. These time savings not only resulted in much lower investment, but also enabled the owner to have the building occupied at an early date, which also meant financial advantages.

The high-performance EgoKiefer MPR2 plastic/aluminium windows have outstanding technical thermal and sound insulation values, as well as excellent driving rain safety and air permeability. They also offer maximum freedom of design in style and colour. The EgoKiefer MPR2 plastic/aluminium windows are naturally also certified to the high MINERGIE standards. «

# MPR2





EgoKiefer XL® plastic/aluminium windows: practically all RAL or NCS scale colours are possible, even very dark colours.

## Energy saving with the new EgoKiefer XL® plastic/aluminium windows

The successful EgoKiefer XL® window range has been extended in an attractive manner – the new EgoKiefer XL® plastic/aluminium windows will be available from April 2008 and feature additional advantages for colour design and the new premium version of the EgoKiefer EgoVerre® insulating glass, the new triple glass with the unbelievable thermal insulation value of  $U_g 0.4 \text{ W/m}^2\text{K}$ .

Customers therefore enjoy an unrivalled heat insulation package. The facade is the face of a house. The individual elements must therefore satisfy high demands regarding aesthetics, variability and individuality. Windows also play a decisive role in characterising the look of a facade. The new EgoKiefer XL® plastic/aluminium windows open up new perspectives in creative facade construction. The aluminium frame on the weather side has an anodised or powder-coated surface with excellent quality and long-term durability. This is enhanced by a unique range of colours. Practically all RAL or NCS scale colours are possible, even very dark colours. In addition various finishes are possible (anodisation). The new XL® design naturally has impressive structural performance values.

### Up to 75% lower energy consumption

Combined with the new premium version of the exclusive EgoKiefer high-performance EgoVerre® insulating glass, the new EgoKiefer XL® plastic/aluminium window is a thermal insulation window which offers customers impressive advantages. With the unique thermal insulation value of the new

triple glass of  $U_g 0.4 \text{ W/m}^2\text{K}$ , all EgoKiefer XL® window systems reach the above-average insulation value of  $U_w 0.7 \text{ W/m}^2\text{K}$  – also the new XL® plastic/aluminium window systems. The window reduces energy consumption – depending on the type and age of the replaced windows – by up to 75 percent. With the XL® window technology and the new EgoVerre® top glass, EgoKiefer presents a new dimension of efficient energy conservation, confirming its leading role as an energy-saving professional. EgoKiefer XL® plastic/aluminium windows have unsurpassed ecological efficiency in comparison to conventional window designs. Depending on the construction, they provide up to twice the environmental benefits. Customers not only make a considerable contribution to environmental protection by conserving energy, they also save money as a result. The EgoKiefer XL® plastic/aluminium windows are naturally also certified to the high MINERGIE standards. It is already clear that these high-tech windows are also ideal for MINERGIE-P and zero-energy housing construction. «

## EgoKiefer is the energy-saving expert!

The topics of energy conservation and CO<sub>2</sub> reduction have never been as relevant as they are today. Every day, the man and woman on the street are called upon to make an active contribution to environmental protection. With success! Consumers are sensitised to the topic and selective in their choice and use of products – also in the window sector.

As the number one Swiss window and door manufacturer, EgoKiefer has a uniquely extensive range of high-performance products for efficient energy conservation. With the complete range of MINERGIE-certified window designs of the materials plastic, plastic/aluminium, wood and wood/aluminium, customers can be certain that they are buying the best products on the market. The EgoKiefer premium windows – especially the EgoKiefer XL® plastic/aluminium window – are also ideal for use in MINERGIE-P and zero-energy construction.

### Praise for EgoKiefer «premium window»

In the recently published book «MINERGIE-P – the Swiss zero-energy house», the EgoKiefer XL® window was referred to as a «premium window». This classification is awarded by this label to windows which are suitable for high-efficiency buildings such as zero-energy and MINERGIE-P houses. In contrast to the zero-energy house windows with their thick, high-insulation frames, the EgoKiefer «premium windows» with their aesthetically pleasing narrow frames score extra points; in the overall rating they are just as efficient as the zero-energy windows, due to the fact that their higher frame U-values (0.9 to 1.4  $\text{W/m}^2\text{K}$ ) are not weighted so highly due to the larger glass area.

### Information events for clarity

As an active member of the MINERGIE association, EgoKiefer attends information events which serve to improve clarity and provide a sound basis for decision-making. EgoKiefer experts were speakers at seminars for construction companies and home-builders at the Immo trade fair in St.Gallen from 14<sup>th</sup> to 16<sup>th</sup> March 2008, organised by the MINERGIE association, focusing on «Energy-efficient renovation». EgoKiefer will also be attending the annual conference of the Energiecluster Switzerland organisation from 22<sup>nd</sup> April 2008. In west Switzerland EgoKiefer also supports the MINERGIE association during the series of seminars and training courses featuring more than 30 events for trade craftsmen and architects. Additional events are also planned throughout Switzerland in 2008.

### Book tip

The book «MINERGIE-P – the Swiss zero-energy house» has met with great interest. Energy-saving housing construction is becoming increasingly attractive to planners and house-owners in light of rising oil prices and the threat of climate changes. The MINERGIE-P construction standard, which is related to the German zero-energy house regulations, is becoming more frequently regarded as a benchmark for new construction work and the renovation of existing buildings. The authors, Marco Ragonesi, Urs-Peter-Menti, Adrian Tschui and Othmar Humm, describe how these low-energy houses can be built with conventional materials and systems. However, more planning and construction hurdles must be taken in comparison to the construction of conventional buildings. MINERGIE-P series, Faktor Verlag, Zurich 2007  
Information: [www.faktor.ch](http://www.faktor.ch)



### Attractive Klimarappen Partner

EgoKiefer is the only supplier of window systems in all materials and different versions (e.g. MINERGIE module) which satisfy the high requirements of the building programme of the Klimarappen foundation. Customers are therefore granted subsidies from the foundation. «

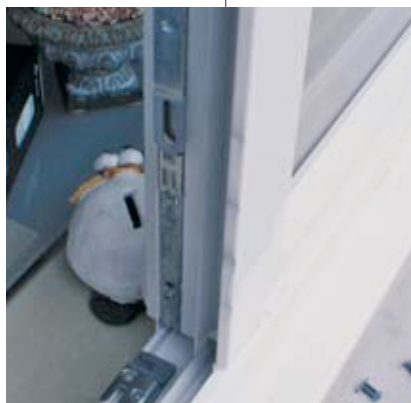


Systematic energy-saving: EgoKiefer offers windows with the MINERGIE module.



## With safety in mind: EgoKiefer window systems

In Switzerland a burglary happens every few minutes – and 85 percent of these are casual break-ins. For effective protection, it is not necessary to invest large sums to turn a house into a fortress.



The burglars met their match in the EgoKiefer windows – and only left a few marks.

The multi-stage EgoKiefer system for security windows can cover individual customer requirements in different categories. Rolf Bosshart, owner of a detached family home, had MPR3 EgoKiefer plastic windows installed in 2006. Today he is glad that EgoKiefer window systems meet the very latest security standards. In the night from 23<sup>rd</sup> to 24<sup>th</sup> November 2007, the EgoKiefer windows successfully prevented the entry of an unwanted guest. In the following interview Rolf Bosshart describes how unpleasant and also complicated an attempted burglary can be.

### Burglars attempted to break into your house. How did you notice?

We have electric shutters with anti-lifting devices. In the morning we couldn't open the shutters on those windows, as the burglars had ripped the shutters out of the rails.

### How did the burglars try to break into the house and what stopped them?

The burglars tried several times to lever the window open with a large lever or crowbar. However, except for a few marks on the frame, they didn't get very far. There was a piggy bank behind the window. I can imagine that they were bitterly disappointed when they couldn't get at it.



The EgoKiefer Basis, MONO, DUO and TRIO safety windows guarantee a high level of security against break-ins.

### The EgoKiefer window and door service offers a special emergency hotline. Did you call the hotline?

The robust EgoKiefer window stayed whole. We only had to contact the EgoKiefer window and door service to «knock out» the dents. Repair work only took a few minutes.

### Even if an attempted burglary fails, it is still advisable to contact the police. Did the police officers give you any important security tips which you can pass on to our readers?

The police were on the spot within minutes. The officer saw immediately that there were no fingerprints. He told us that our security measures were exemplary. At the time we had electric shutters with anti-lifting devices installed. We also have a door with a multi-point locking system and solid windows which are also locked at several points. As we have forced ventilation in our house, the windows are always closed. Tilted windows are often a weak point which burglars like to take advantage of.

### What would you pay more attention to the next time you buy new windows?

We would definitely choose EgoKiefer windows again. We would also have the panes protected with a film to prevent break-ins (laminated safety glass). Although the police told us that only 10 to 15 percent of break-ins actually go through the pane, we think it's worth it. We have invested a considerable sum in all these measures to protect ourselves, but in the end it is still worth it when you consider how you must feel when someone has violated your private sphere, an unpleasant experience which we were luckily able to avoid. «

## RWD Schlatter AG: MINERGIE® specialist partner

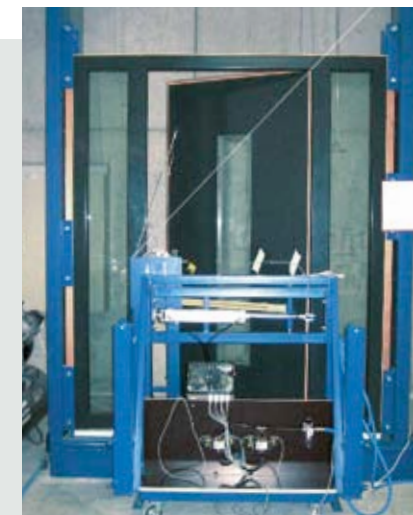
MINERGIE® specialist partners provide support to construction companies and investors for the implementation of MINERGIE® projects. RWD Schlatter AG is now also a MINERGIE® specialist partner.

«Customers profit from a wider scope of advisory competence.»

MINERGIE® specialist partners are companies with operations in the construction planning or building work sectors, and which can prove that they have either built or renovated at least two buildings to the MINERGIE® standard. Instead of the necessary reference objects, the construction planning and building companies can also become specialist partners on the basis of their professional experience and after attending a corresponding MINERGIE® further training course. Now that RWD Schlatter has become the first company to develop

MINERGIE®

a MINERGIE® door, the company is very proud to have been accepted as a member of the group of MINERGIE® specialist partners. The customers of RWD Schlatter AG now also profit from the high degree of advisory competence of the renowned door manufacturer. Now that it is being discussed in political circles whether all buildings built before 1995 should be renovated in the medium term to the MINERGIE® standard as a measure to prevent climate change, a great deal can be expected in this field over the next few years. «



Outside door with glass side sections on the durability test facility.





Christoph Schefer, Project Manager,  
in the cabin of the sound test facility.

## RWD Schlatter with sound test facility

In collaboration with the respected ift Rosenheim German institute for window technology, RWD Schlatter built a sound test facility within the scope of a three-month project. RWD Schlatter continuously invests in widening its competence in the testing sector. Due to increasing noise pollution levels and growing awareness of the general public of the negative effects of noise emission, demands on doors are also becoming more complex. Investment was made in a futuristic project to enable the company to offer a competent advisory service in this additional area; door elements of 3 x 3 metres can now be tested in a sound test facility developed and built in accordance with EN SN ISO 717-1. Measurement is carried out in accordance with SN EN 140-1, and the test results therefore meet the standard of a certified institute. During planning, the measuring instruments were designed in such a way that mobile tests are also possible. Measurement is therefore also possible at the construction site. RWD Schlatter has yet again passed an important milestone in providing customers with even more competent information. «

## RWD Schlatter outside door design for trainees

In the future, RWD Schlatter designs will be used as models for vocational training in the industry. If everything goes according to plan, the outside door designs of RWD Schlatter will be presented to the Swiss carpenter specialist instructor conference in March 2008 as part of the development of the «moduLine outside components».

It is therefore possible that from 2009 onwards trainees will be taught using models from RWD Schlatter in the outside door sector. For the renowned door manufacturer it is a rewarding way of supporting industrial trainees, and it is also a long-term investment in improving the quality of outside doors. A large percentage of constructional damage still occurs as the result of unprofessional outside door design. The KSAP-68 was developed as a specimen using a cork plywood laminated board with an aluminium inner layer. The raw type has the following, extremely good technical values, on the basis of which it became the first door to be awarded the MINERGIE® label:

- Sound insulation  $R_w$  35 dB
- Climate class 3c, 3d, 3e to EN 12219
- U-value 0.9 W/m<sup>2</sup>K
- Burglary resistance class RC 3 to ENV 1627-1630
- Fire protection category EI30 to EN 1634
- MINERGIE® label

The high technical climate values combined with the burglary resistance class RC 3, also on wooden frames, are of particular interest in the renovation sector. «



Open outside  
door model.

# Premium



## RWD Schlatter as «Preferred Supplier»

There are many awards, but the best ones come from customers. In this case it comes from the renowned Schlössli Group, which elected RWD Schlatter AG as a preferred supplier.

The traditional Schlössli private clinic evolved from an establishment founded in 1889 by Gottlieb Hinderer in Oetwil am See, near Zurich. In 1941 the Bergheim in Uetikon am See near Zurich was also acquired. From 1979 the clinics were supplemented with outpatient and daycare facilities in Wetzikon, Uster and Männedorf, all near Zurich. In 1998 the Hinderer Holding AG assumed responsibility for the private healthcare facilities of the Schlössli Group. Doors installed in healthcare facilities always make particularly high demands on security and hygiene levels. RWD Schlatter AG is pleased that as a door manufacturer they have been included in the circle of Preferred Suppliers of the Schlössli Group.

The company also regards this special distinction as an obligation to meet the high demands of the customer every day.

One interesting parallel between the Schlössli Group and RWD Schlatter AG are the success factors of the Schlössli Group. These can be summarised as follows:

- High degree of customer orientation
- Expert competence in all fields
- Pronounced workforce orientation
- Innovative force
- Concentration on core business
- Efficiency-oriented goods and services
- Time savings with fast decision-making
- Optimum interdisciplinary cooperation

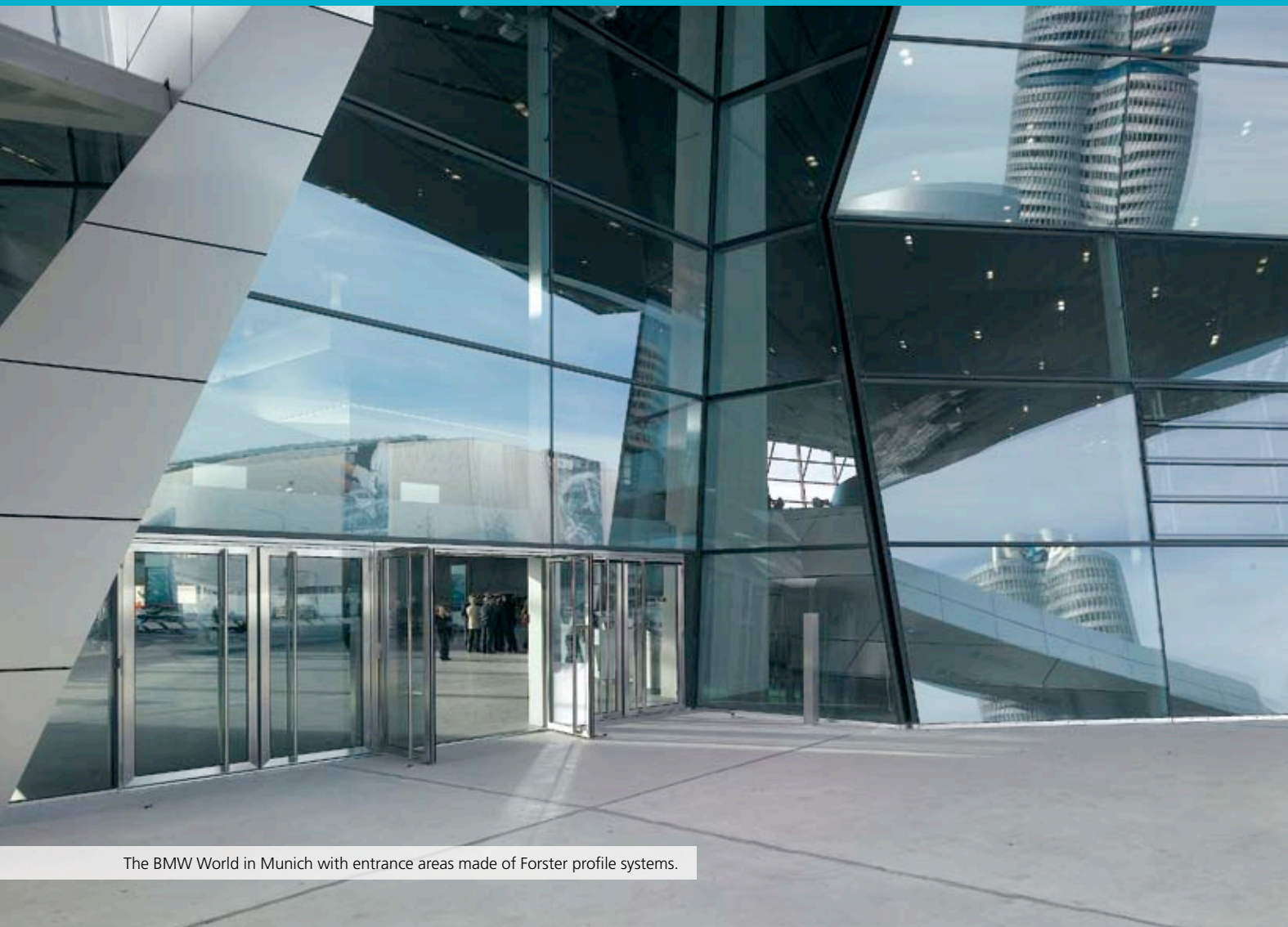
Without exception – except for different fields of specialisation – the success factors of Schlössli Group are also true of the orientation of RWD Schlatter AG. In light of such similarities it is therefore not surprising that communication between both companies is relatively easy. «



A clinic of the Schlössli Group: where people feel at home.



# Steel Technology



The BMW World in Munich with entrance areas made of Forster profile systems.

## Aesthetic safety in the BMW World

In October 2007, the BMW World, a multi-functional customer experience and showroom centre designed by the world famous COOP HIMMELB(L)AU architectural design office, was officially opened. Important criteria were decisive for the choice of the Forster safety systems.

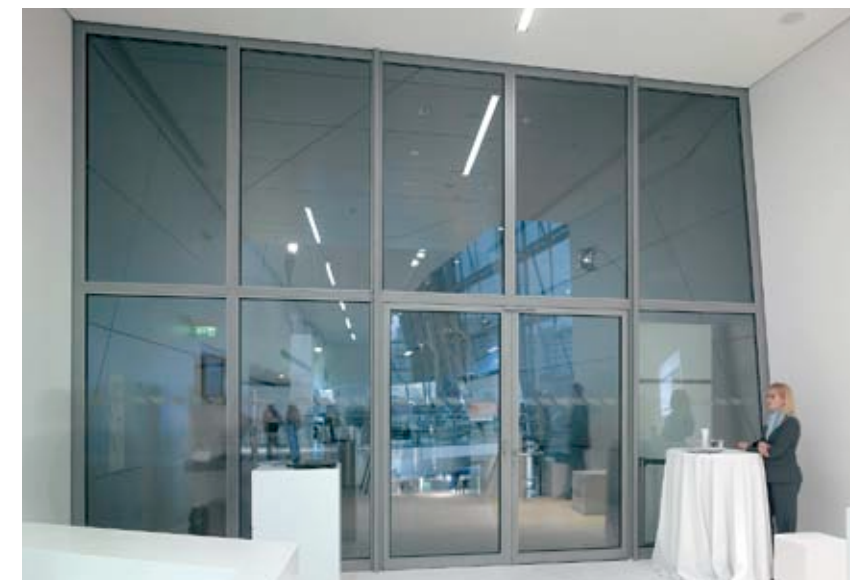
The unique form, with the double cone and the «floating» roof, now attracts not only BMW customers to its doorstep. The BMW World is among the first buildings of a new generation of communication buildings of the 21<sup>st</sup> century. The entrance areas to the main building are seamlessly integrated into the modern steel and glass architecture and allow visitors a view of the light-flooded, generously dimensioned interior.

### Forster lends elegance and safety

The elegant entrance areas, constructed with the insulated Forster therm tür profile system of stainless steel, meet the highest demands with regard to technical functionality and extreme long-term durability. Various structural demands regarding fire and smoke protection were decisive for the choice of Forster safety systems. A number of special solutions were elaborated together with the planning department and granted one-time approval by the authorities.

## «Forster participates in the new generation of communication buildings.»

The entire building is divided into separate fire-protection zones with the Forster fuego light EI30 system. The glazed single and double-leaf elements with the very slim profiles play an important role in creating the modern and light-weight look of the interior. The fitted smoke protection doors of the Forster presto RS system have the same sightlines and therefore guarantee a uniform appearance, irrespective of the respective safety requirements. «



EI30 fire prevention doors as a special construction.



EI30 fire protection doors secure the emergency exits at the intersections between the car park and the lifts.



## Tested down to the last detail

**Specific 100% product tests are necessary to ensure compliance with requirements which must be met by safety components for automotive applications if the product safety cannot be guaranteed on the basis of the process capability (position) and the process control (distribution).**

A zero-error strategy is always part of customer requirements for guaranteeing product safety. Compliance with customer requirements can be ensured in two different ways:

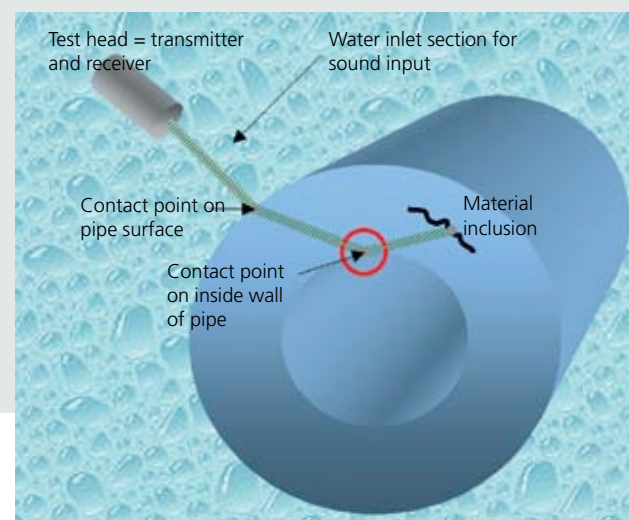
1. 100% test of critical features for which the manufacturing process does not meet requirements.
2. Statistical process control (SPC) on the basis of random specimen tests.

Testing critical features such as weld suitability and internal trimming, as well as the exclusion of non-permissible inclusions or damage must be ensured throughout the full length of the tube by means of a 100% test.

Forster ensures compliance of its precision steel tubes with these requirements by means of the non-destructive ultrasound and eddy current test methods.

### Ultrasound testing

The ultrasound is reflected by each barrier layer as well as by inhomogeneities in the material. At the Forster works ultrasound waves are sent to the tube surface by means of rotating test heads, which then run through the entire cross-section of the tube according to physical laws.

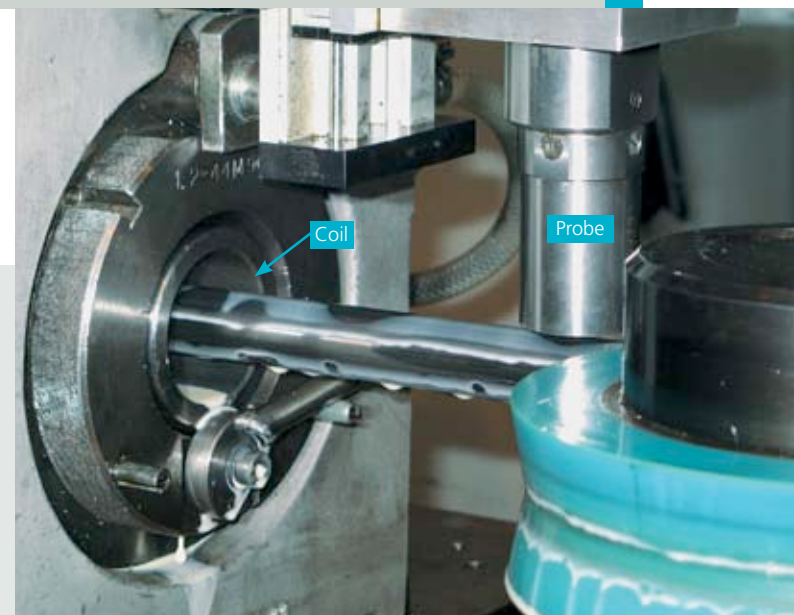


Ultrasound test of the pipe cross-section.

If changes in the acoustic properties of the material occur, as caused by oxide inclusions or other material inclusions or material doubling, these reflect the ultrasound and send it back to the test head, which acts as both a transmitter and receiver.

### Eddy current testing

Eddy current testing is a surface test method for electrically conductive materials which react very sensitively to faults which are open to the surface (cracks). During the test a primary magnetic field is generated by an excitation coil to which alternating current is applied. Eddies are created in the pipe surrounding the coil by this primary magnetic field by means of induction. These eddy currents generate a secondary magnetic field which is directed in the opposite direction to its source. The resulting changes in the complex resistance of the coil and tube are measured in a measuring coil. All Forster welding machines are equipped with an eddy current test feature which is used to test 100% of all produced tubes. In addition the weld area is checked with high-sensitivity probes. «



Eddy current test in the welding line.

## Two successful appearances

**Forster Profile Systems was shown at its best at two well-attended international shows: the Polyclose in Gent, Belgium, and at the debut of the MADE Expo in Milan.**

Forster Profile Systems presented the latest products at the Polyclose from 17<sup>th</sup> to 19<sup>th</sup> January 2008 together with the Belgian agency Dejong NV and Agentor BV from the Netherlands. Two weeks later the company made a very successful appearance in Milan: the debut of the MADE Expo from 5<sup>th</sup> to 9<sup>th</sup> February 2008 proved to be a magnet for architectural specialists. More than 170,000 guests attended, around 150,000 of these from Italy. This gives us confidence that Forster Profile Systems will also continue to expand successfully in the Italian market. «



Visitors to the Polyclose in Gent, Belgium (photo above) and at the MADE Expo in Milan were very impressed with the many options offered by the Forster products.



**«Both shows were a successful start to the year in the Benelux and Italian markets.»**

## Forster profile systems for Europe's largest building site

**The «Federation Tower» in Moscow, planned by the architects Professor Peter P. Schweger und Sergei Tchoban, is part of the large-scale project «Moscow City», currently the largest construction site in Europe.** More than 240 double-leaf fire protection doors EI(W)60 (Russian standard), made of the Forster presto profile system covered with anodised and coloured stainless steel sheeting, are installed at the site. When they are completed, the towers will be the two highest buildings in Europe. The East Tower reaches 506 m up into the sky and has 93 floors, and the somewhat smaller West Tower with a height of 360 m and 62 floors is almost finished. «



The «Federation Tower» in Moscow, which comprises the two highest buildings in Moscow, was equipped with Forster products. The smaller tower is shown in the foreground; the higher East Tower will be built behind it.



## A profile system on the road

When the Forster unico profile system was launched, a large number of detailed system presentation events were held in various countries. The aim of the events was to show metal engineers the advantages of the system.

These seminars were held for two weeks in February 2008 at six different venues across Germany. The company collaborated with works representatives in showing more than 200 metal engineers the new system in detail. At the one-day courses the basic theory was taught in the morning, and in the afternoon the participants were given the opportunity to put their knowledge into practice. It was then possible to demonstrate the extremely efficient production process and the high processing reliability directly and practically to the processors. During the subsequent discussion round, reactions were very positive, both to the new profile system and also the quality of the seminars. This pleasing outcome gave rise to the decision to continue and expand the scope of these training sessions as roadshows and seminars at Arbon, Thurgau. «



The event at Quickborn near Hamburg was fully booked.

## Drawn special profiles

«Where others stumble, Forster finds the right solution.»

«People respect you for your strengths and not because you lack weaknesses.» The Forster drawing plant has taken this old saying to heart in recent years, and has focussed on and intensified its strengths.

The special Forster strengths in comparison to competitors are in two main fields: on the one hand small, thick-walled round tubes with high-strength qualities (e.g. manganese-boron steels), on the other high-precision profiles with variable wall thicknesses. This article focusses on the latter. Forster has many decades of experience in the production of sometimes complex steel profiles for windows and doors. In recent years, this know-how has also been more frequently used for other applications. Thousands of different tools have been designed, built, tested and improved over the years. In the meantime the process chain from CAD to the wire erosion machine and digitising of the actual contour of tools and workpieces with a profile measuring instrument is seamless. New tools can be created with the use of standardised hard metal blanks and – if necessary – gradually optimised. At the beginning of a new project the customer usually has the idea of using drawn steel profiles for a new product, or making an existing component, which may have been previously machined, less expensive by using a drawn, semi-finished

## Stylish, high-gloss steel furniture

Making a tube with a perfect surface is a challenge, not only in manufacturing terms but also during subsequent handling. For this reason steel furniture manufacturers prefer the products of Forster Precision Steel Tubes.

The WBKV tubes – also called Swiss gloss – are used for high-quality interior design applications. These include kitchen fittings, living room furniture, office furniture and as a special application, cantilever chairs. However, this application makes extremely high demands on the physical properties of the material, which can only be satisfied by the fine-grained steel used by Forster Precision Steel Tubes.

### Extraordinary saving potential

Paradoxically this application requires both a high strength and also a suitable elongation at break which tolerates the oscillating movement of the chair. For this reason Forster only buys corresponding materials from selected steel suppliers. All these products require WBKV tubes with an immaculate surface, as savings are only possible for the customer if these are faultless. On the one hand all preliminary coating work on the tube such as grinding or polishing is not necessary, and on the other hand the product requires less material (nickel as a base for the chrome layer) during the coating process. The greatest challenge is to achieve an undamaged



Cantilever chairs require a high material quality.

### Wide variety

The Forster WBKV tubes are as varied as the shapes of the products they are used for. They are produced as round, round-oval, flat-oval, square and rectangular tubes with outer diameters of 12 to 60 mm and wall thicknesses of 1 to 2.5 mm, and even up to 3 mm in special cases.

surface. For this reason the multiple lengths are taken by hand from the welding line. A unique product results which has been subject to continuous improvement for four decades. «

product. Normally the customer's drafts have to be converted into profile drawings required for manufacturing. When a contour has been agreed on, the drawing tool, which is used to make the profile from a suitable tube during one to four consecutive drawing operations, is designed. These are used mainly for functional assemblies which combine movement in a lengthways direction with torque transmission, which are often required in automotive and mechanical engineering applications.

### Experience-based savings

Annual quantities of a few thousand metres can be economically produced, in contrast to round tubes, as the savings are normally very high compared to the cost of conventional solutions. Due to the wide scope of experience at its disposal, Forster can often save one drawing operation and therefore costs, comply with tolerances of a few hundredths of a millimetre and produce geometries which others find to be an insurmountable hurdle. A main advantage is that Forster is able to estimate very quickly and free of charge to the customer whether it is possible to produce a profile or not. «

A sliding sleeve with internal toothing, which was previously machined is now made from a drawn semi-finished product.





# Surface Technology

Cylinder for the printing industry which has been precisely finished and polished to the last hundredth by STI | Hartchrom.

The «Changshu» region is home to more than 1.85 million people over an area of 1,264 square kilometres.



## STI | Hartchrom goes China

**The People's Republic of China is the most up-and-coming national economy of the 21<sup>st</sup> century. Leading machine manufacturers and suppliers of the capital goods industry have either already opened their own works in China or are planning to do so in the near future.**

Entering the Chinese market is an important strategic competitive factor for STI | Hartchrom, enabling the company to also competently supply international customers with functional surface technology in this high-potential market.

### Strategic partnerships

The speedy progress in China is also linked with impressive technological development. The increasing demand for goods requires high production capacities. China will also assume an important role in the mechanical engineering sector. For this reason high-tech equipment and machines are no longer imported, but made in the country to satisfy domestic demands and also for export. Several large-scale customers of STI | Hartchrom – all leading companies in their own sectors – have completed their expansion plans in China. The pre-requisite for successful implementation is access to suitable suppliers. Access to reliable surface finishing processes is essential for companies in the machine, plant and motor construction sectors which produce goods of the highest quality. For STI | Hartchrom this offers a great opportunity to gain a hold in this up-and-coming market. It is therefore also important to create a market image as an overall supplier which can offer customised solutions across the entire process chain through to final inspection. Existing strategic partnerships are mainly focused on the paper, printing and shipping industries and also general industries; after successful technology transfer these will be extended to include other sectors.

### Production facilities in the Shanghai region

A new company named «STI Hartchrom Shanghai Ltd.» was formed to organise of the operations of STI | Hartchrom in China. Under this name STI | Hartchrom is now building its own production facilities in the Shanghai region in the «Changshu» industrial zone over an area of around 12,000 square metres, with additional potential for extension to 50,000 square metres. The production facilities will be built to the latest technical standards with a complete electroplating

shop for hard chrome plating and a precision grinding shop for mechanical surface finishing. Construction of the production complex will be started in the middle of 2008, and the various production lines will be taken into operation successively from April 2009 due to the complex manufacturing technology. Not only expats will be sent to China to satisfy the high-level European quality standards. The future Chinese employees will also be given the opportunity to undergo training at the Swiss headquarters and acquire specific know-how. The high degree of process safety and the related quality testing require high-quality measuring techniques and production systems, which can also be directly supported by the Group through the internet. «



The STI Group is building its own production facilities on an area of 12,000 square metres under the name of «STI Hartchrom Shanghai Ltd.» in the Shanghai region.





At the 2<sup>nd</sup> STI Surface Symposium the invited guests were able to enjoy talks from top-class speakers. The subsequent discussion rounds sparked lively interaction on interesting topics.

## 2<sup>nd</sup> STI Surface Symposium with top-class speakers

It was impressively demonstrated at the 2<sup>nd</sup> STI Surface Symposium in Steinach, St.Gallen, Switzerland, from 23<sup>rd</sup> November 2007, how STI | Hartchrom and the invited speakers understand the term innovative entrepreneurship. The speakers from various sectors underlined the widespread need for surface technologies.

As one of the main suppliers of functional surface coatings, STI | Hartchrom has made a name for itself by specialising in customised solutions. At the 2<sup>nd</sup> STI Surface Symposium the invited customers were able to gain a deeper insight into the various applications in the surface technology sector. The speakers were Dr. Andreas Zielonka from the FEM research institute, Dr. Hans-Michael Höhle from Sulzer Metco, Dr. Jürgen Fromlowitz from 3M and Horst Jöbstl from Schwing. STI was represented by Ralf Altheimer, Head of Production and Technology, and Michael Hekli, Head of R&D, who presented the latest developments.

### High growth rates

The Chairman of the management board of STI | Hartchrom, Thomas Reifler, welcomed the guests. He pointed out the high demand for surface technology in Europe which resulted in 10% growth in this sector in 2007, commenting that this trend can only be continued in Europe if companies develop new coatings and improve existing coating systems. The speakers invited by STI | Hartchrom presented possible approaches for necessary developments in this respect.

### Nanotechnology with electrochemical processes

Dr. Andreas Zielonka from the FEM research institute for precious metals and metallochemistry informed the attendees about various paths of development for producing new layers such as composite layers, nanostructured materials, dispersion layers or nanoclusters. An important effect of such layer systems is increasing wear resistance, which can be achieved, for example, by the inclusion of nanodiamond, and contents of below 0.1% already achieve noticeable effects. In a recently completed project, metal chips – a waste product from ma-

chining of metals – were coated with precious metals. A mixed catalyst was thereby created which can be used for the high-efficiency decomposition of organic contaminants.

### Optimisation of functional layers

The results obtained by adapting the layers to customer requirements was presented by Michael Hekli, Head of R&D at STI | Hartchrom. The core competence of STI | Hartchrom is the production of functional chrome layers for machine parts. Such layers must satisfy high requirements ranging from extreme hardness to low wear and also thermal resilience. To satisfy such demands in the long term, good process control and careful machining is necessary. Positive properties are, for example, achieved by multi-layer constructions. The latest developments include layers of cobalt with phosphorous and nanoparticles which are very hard, have very high corrosion resistance, good sliding properties and an adjustable hardness with high ductility. They are a very interesting supplement to classic hard chrome layers.

### Thermal spraying

Another form of surface coating is thermal spraying, which is already being professionally tested by STI | Hartchrom. Ralf Altheimer, Head of Production and Technology of STI | Hartchrom, explained the basic principles. Thermal spraying is divided into various methods with different gas flame temperatures, gas flow rates and the head space between the surface and the spray gun. During this process a wide range of materials are applied in a fine powder form by impact onto the surface of a workpiece. Dr. Hans-Michael Höhle from the specialist Sulzer Metco presented modern thermal spray coating applications. According to Höhle this type of coating

is mainly used for turbine construction, aviation and aerospace applications and also energy technology. A large number of high-performance turbines can only be coated by thermal spraying so that temperatures far in excess of 1,000°C can be withstood over a long period of time and under high abrasive stress without suffering any damage. The latest developments include atmospheric plasma spraying. During this process a low pressure is created due to a wide flame distribution, which results in a higher performance and wider scope of applications.

### Innovation: not random – or is it?

The presentation of Dr. Jürgen Fromlowitz was very different. He described the philosophy of the 3M company, which has become one of the most innovative companies in the world. From the 3M viewpoint, combining the right corporate culture with the right people is the secret of innovative success. The gathered knowledge is converted into marketable products as soon as possible: 30% of turnover is generated with products which are less than four years old, a fact indicated by a correspondingly high number of patent applications. In addition all members of staff are able to use around 15% of their working hours as creative, free time. This requires an extremely pronounced willingness of managers to take risks, and also a high level of tolerance. Allowing randomness plays an important role.

### Wear protection in the construction industry

Finally, Horst Jöbstl of Schwing GmbH gave some insight into surface technology on construction machinery, especially on modern concrete pumps. The trend towards building even higher and faster has meant increasing demands which must

be met by such special machines. Schwing has the largest concrete pump in the world, with a boom length of 61 metres. The demands to be met by surface technology are on the steady increase, mainly regarding corrosion protection for exterior steel components and also the additional wear resistance of joints as well as the conveying pipes with very high corrosion and wear resistance requirements. Chrome layers for surfaces exposed to high stress levels require maximum adhesion to the substrate (for mechanical stress) and must be absolutely pore-free (for corrosion protection). For wear protection, not only good adhesion of the layer is necessary, but a primary requirement is also good cohesion. In contrast to the widespread general opinion that higher hardness is equivalent to improved wear protection, practical uses have proved the opposite. Layers which are too hard tend to be brittle, and therefore increase the risk of less efficient wear protection. «

«Growth in surface technology is only possible if new layers are developed and improved.»»





The modernised production complex with the new chrome-plating plant permits entry into the commercial US market.

## STI starts up in the commercial US market

Since the foundation of the subsidiary Hartchrom Inc. in the United States in 1999, STI | Hartchrom's US operations have mainly focussed on high-tech finishing of defence technology. The traditional site at Watervliet Arsenal in the state of New York is the oldest and at the same time most modern production site of the US army. To enable successful integration into the US market, STI | Hartchrom will invest in a completely new production plant and also offer services to customers in the commercial sector. This investment enables the company to tap additional market potential in 2008. For its US and Canadian customers, STI | Hartchrom has not only modernised the existing building and plants extending over an area of 3,010 square metres, but has also added a new chrome-plating plant. The new chrome-plating bath has a volume of 71,000 litres with an interior dimension of 2.5 x 2.5 m and a bath level of 11.4 m. This allows STI | Hartchrom to offer customers the possibility to chrome-plate medium to large components such as cylinders with a diameter of up to 2 metres. The smoothly completed technology transfer guarantees customers optimum conditions to meet high-quality surface treatment requirements. «

## Finished by STI, used by Piatti

STI | Hartchrom was given the task of finishing the machine table of a panel cutting system for the Austrian company Schelling in Schwarzach, Vorarlberg. Such a system is also in use by Piatti Kitchens. For 90 years Schelling has been producing panel cutting saws and systems for wood as well as precision saws for plastics, circuit boards and non-ferrous metals. As a specialist for functional surface technology, STI | Hartchrom chrome-plates machine tables of up to 13 metres in length for Schelling in compliance with exact specifications. The finished Schelling panel cutting system with chrome-plated STI components has now found its way to the Kitchens and Refrigeration division, to Piatti AG, which uses the system for cut-to-size kitchen elements. Quality and precision are the prime concern of all involved. The machine table with the high-quality STI chrome-plating must be extremely smooth and resistant to wear. The low friction coefficient prevents scratching of the product. The panel cutting system «ah 8» is the latest Schelling innovation.



The machine table, which was treated by STI | Hartchrom for the Schelling panel cutting plant, has now been installed at Piatti.

The system enables cutting of coated chipboard, and the angular plant with automatic stacking device is designed for a total capacity up to 20 m<sup>3</sup>/hour in two shifts. In addition to this plant, the «fh 6» Schelling panel cutting saw is part of the Piatti cut-to-size centre. «