Welcome to the bauma 2007 in Munich

ROTZLER presents winch solutions and technical highlights

It’s nearly that time again: the largest international specialist tradeshow for construction machinery, building material machines and mining machines – the bauma – is due to open its doors in Munich from April 23 to 29, 2007. Displaying its broad range of winches and system solutions, Rotzler will also be one of the exhibitors. Rotzler’s welcoming bauma tradeshow booth, featuring an information-island design, will see our three business areas – winches, system technology and after sales services – presenting the latest developments all around hydraulic winches to the specialist visitors. Rotzler will be presenting its compact TITAN winches as market-compliant solutions for hoisting operations. The range of possible applications for TITAN winches is broad; among others, they are fitted in various loading cranes, drilling rigs or telescopic handlers. The TITAN winch series has been continually extended and is now setting a further milestone with regard to safety and performance in hoisting operations with the TITAN TC 5. From the field of pulling winches, Rotzler will be showing robust HZ winches and the TREIBMATIC family will also be represented with the TR 030 FIRE recovery winch. As a systems provider, Rotzler will in addition be presenting customized solutions from various fields of application. An accessories’ island will provide information about useful accessories as well as deliver impressive proof of Rotzler’s competence in developing electronic controls. Tradeshow visitors can furthermore obtain details about Rotzler’s customer-friendly after sales concepts and services. The bauma will give Rotzler an opportunity to show the company’s entire performance spectrum, which goes from project planning and development right up to customer-specific, all-round solutions and cooperative customer support. Noting key tradeshow events in your appointments diary and making the trip to Munich will therefore certainly be worthwhile.
A country with a great history, culture and impressive countryside – that sums up the Republic of Austria. This INFORM feature takes a closer look at and reports on one of the nine Austrian federal states, namely Tyrol.

Tradition and High-Tech in the Alps

The state of Tyrol belongs to the Federal Republic of Austria and forms the Austrian (northern) part of the Tyrol region, which was separated from South Tyrol in Italy in 1919. Covering an area of 12,647.71 km², it is the third-largest Austrian federal state and borders on Germany, Italy and Switzerland. Tyrol is home to 686,400 inhabitants, of which 130,000 live in the state capital of Innsbruck, a city that already hosted the Olympics.

Within the space of just several decades following WWII, the country, which had previously lived off its mountain agriculture and modest trading along the Brenner pass, turned into a modern region favored by service providers and industry. The present-day Tyrolean economy rests on several pillars, including tourism, a lively and dynamic trades sector as well as leading industrial companies. Despite the small size of Tyrol compared to other popular research locations in Europe, the state has attracted a wealth of research centers in addition to universities and advanced technical colleges. The conducted research is focused on life sciences, biotechnology, medical informatics, nanotechnology, new materials, Alpine space and IT.

Great importance has also traditionally been attached to agriculture in Tyrol. The farmers in the Tyrolean region preserve the intact cultural landscape that is so valuable for the population and tourism. In harmony with nature, they produce excellent domestic produce for discerning consumers and with that make a contribution to improving the quality of life.

Majestic Mountains and Picturesque Valleys

The Tyrolean countryside is characterized by the Alps; the highest peaks of the region include Mount Großglockner (at 3,798 m the highest mountain in Austria) and Mount Wildspitze at 3,772 m. But Tyrol is not only great for mountain-eering fans. Just a few miles from Innsbruck, the vacation region “tirolmitte” (central Tyrol) is one of the loveliest recreation areas in North Tyrol due to its sunny location and surrounding forests.

Whether you go hiking to enjoy the panoramic view or rafting to pit your strength against the white water, the diverse sports opportunities in the Tyrolean holiday region can be counted on to ensure fun and well-being. Well-signposted cycle and hiking paths, sports centers with modern equipment or swimming pools and golf greens guarantee plenty of variety.

And in winter, this area is a safe bet for snow and turns into an El Dorado for ski fans.

Telfs – Dynamic Cultural Stronghold

The community of Telfs is an example of the merger of history and modernity in Tyrol. Measuring 2,662 m in height, Mount Hohe Munde towers over the town in which one of the most original carnival customs draws more than 20,000 visitors every five years. The Schleicherlaufen is a (solely male!) procession of “skulking” ("schleichen") groups and masked characters numbering over 500 in all. The central figures of the spectacle are the colorful “skulkers”, who wear a kind of renaissance costume with huge, artistically styled headwear. They move around in a strangely silent and skulking manner – only to then suddenly and loudly jump up and start dancing. Apart from the “skulkers”, more than a dozen other groups go to make up these carnival festivities in Telfs: heralds, groups of musicians, some wearing ‘olde-world’ clothes, figures that embody the four seasons, savages dressed in lichen, the Panzeraff, a figure who performs antics and is relied on to poke his long tongue out at the spectators, as well as bears, Orientals and funny floats. As a further cultural highlight, the Tyrolean Volksschauspiele (traditional theater festival) annually transforms the town into a real magnet for actors. This is a perfect time to make close contact with the stars of the German-speaking stage. As a complement to customs and culture, the research center in Telfs both stands for modern-day Tyrol and reflects the region’s attractiveness as an economic location. Internationally operating companies are located here and are contributing to dynamic development. The variety offered by this community is rounded off by the diversity of the countryside, which forms an ideal setting for spending a relaxing and unforgettable vacation.
Competent Partner for New Solutions

ROTZLER supplies externally mounted winch for telescopic handler

ROTZLER has been cooperating with the Austrian company Liebherr in Telfs for many years by now and delivers HZ drum winches for the production of bulldozers and crawler loaders. Top quality and delivery reliability, first-class technical support and technical application know-how led to a partnership in which Rotzler develops winch solutions that are customized to suit the specific requirements of Liebherr. The latest result of this cooperation is a winch for external mounting that Rotzler supplies as a flexible accessory for the new Liebherr telescopic handler. With the responsible design engineers and developers from both companies working closely together, the project was implemented step by step, from the technical conception right up to inspection and final handover of the product. The ROTZLER TITAN TC 2 winch was specially adapted to suit the technical conditions of the telescopic handler. This entailed modifying the interfaces to satisfy the demands of the customer’s application in terms of the winch hydraulics, electrics and mechanics. We therefore do not just supply a winch for external mounting – we much rather develop, check and test the entire winch solution in line with Liebherr’s wishes. The ROTZLER TITAN TC 2 hoisting winch, which has stood the test of time in thousands of applications, e.g. in loading cranes and drilling rigs, forms the basis of the winch system. During operation, the TITAN TC 2 is characterized by its very sensitive positioning abilities, which is especially useful during installation work. The winch’s hoisting force totals 35 kN with a double line pull. Thanks to its electric end-of-rope detection and hydraulic overload protection, Rotzler’s MCD monitoring system ensures safety during all winch operations. Further technical features are an overflow oil line connection, a valve block with pressure control valves and an electric shutdown at the external mounting plate. A quick-change system with color-coded connections, which was specially manufactured by Rotzler for this winch, makes short work of error-free mounting. In addition, a protective frame around the winch ensures it can easily and securely be placed on the ground. You can see this winch solution at the bauma 2007 tradeshow in Munich where the telescopic handler will be presented to the international public for the first time.

Suitable accessories round the system off
Having already constituted a quasi-standard within the automotive industry for many years, CAN-bus-based systems are now increasingly establishing themselves in other sectors of automotive and mechanical engineering as well, e.g. in agricultural, road-construction and mining machinery and vehicles, etc. This development has prompted Rotzler to provide user-friendly solutions in this field as well – with evident benefits.

Due to the increasing number and complexity of sensors, considerable wiring effort is involved when it comes to integrating these into systems. Bus systems provide clear advantages over conventional wiring in such cases and the developed solutions are substantially more cost-effective, structured and straightforward. Superior electromagnetic compatibility (EMC), resistance against high temperatures and extreme functional availability are further strong arguments for using CAN-bus technology.

Among the various high-layer communication protocols that are available, CANopen stands out due to its superior flexibility of use. Rotzler therefore decided to begin developing CAN-bus-based systems. This is a courageous step for a mechanical engineering company.

Now, in the spring of 2007, the major phases of this in-house development have been concluded and the market launch of the following products is scheduled for the coming weeks and months:

- **Rotzler digital controller ROC 16/40**
  - (Ruggedized Outdoor Controller – particularly rugged and tough)
  - Operating unit RC-S 1/8 (one-handed operation, a joystick, eight function keys, display 44 mm x 30 mm)
  - Operating unit RC-S 2/16 (two joysticks, 16 function keys, two displays 44 mm x 30 mm)
  - Operating unit RCP-MS 2/6FP (two joysticks, six context-sensitive function keys, programmable multifunctional display 108 mm x 58 mm)
  - CAN connection box for operating units
  - **ROTZLER NEXUS II, diagnostics and software-administration program**

The various components are presented in more detail below.

### Rotzler Digital Controller ROC 16/40

The controller is based on a modern 16-bit microcontroller. At present, a proprietary Rotzler BIOS system has been implemented that offers the following advantages:

- The BIOS system has been implemented that offers the various functions needed for the controller's current application spectrum. This makes operating units particularly flexible to work with as even flash procedures from the controller onto the operating unit are possible in some situations.
- The diagnosis routines that run when the BIOS starts up also satisfy the requirements of safety category 3 in accordance with EN 954-1 for the EMERGENCY STOP function.
- One of the key strengths of the ROC 16/40 rests on the extended interactivity between the BIOS and the object directory. This BIOS function, which was developed by Rotzler, enables flexible system configuration, which then even supports a highly intelligent software administration concept for the application software.
- Another key BIOS function is that it can force individual in- and outputs, i.e. set them to a defined value via the parameters, irrespective of the values calculated by the application software. This makes it possible to easily and effectively program an application to include an error-processing function.
- It is equally worth noting that the controller features numerous in- and output ports that cover the entire range of frequency inputs, digital and analog inputs as well as digital and current-controlled PWM outputs. Most of these in- and outputs are manufactured as multifunctional ports so that their functionality can be configured to suit the given need. Next to the great flexibility of the controller, its robustness is particularly worthy of mention.

### Operating Units

Designed to partner Rotzler’s digital controller, three operating units were developed that meet various requirements. The operating units of the RC-S series function as pure terminals at the CAN-bus connection and typically communicate with Rotzler's digital controller via the integrated CAN-bus interface. The fact that both systems were fine-tuned to work in perfect tandem makes it possible to realize highly flexible and convenient solutions.

Only the controller’s application software contains all the information that needs to be shown on the operating unit. In order not to put an undue load on the bus, the operating unit is still addressed by its own processor/memory. A paradox? Not at all! On first contact between the two components, a proprietary, patent-pending Rotzler procedure ascertains if the data needed for the application software is available on the operating unit. Should this not be the case, the controller writes the respective data to the memory of the operating unit, after which bus communication, limited to the essential data, can take place. And if the same operating unit needs to be used with a different system on occasion? No problem! The described function makes it possible to use the same operating unit with several systems. While this might only happen in very rare cases under normal operating circumstances, the concept certainly provides a slick answer to the numerous challenges surrounding the topic of spare parts supply.

With the RCP-MS-series operating unit, Rotzler has developed a high-end product that can be freely programmed in any way and is thus ideal for use in even the most complex systems.
combination with the manual or function-dependent option to switch the information on display, the six programmable function keys open up almost limitless possibilities. The ease with which graphics and pictograms can be created further adds to an excellent GUI. The unit moreover is highly robust, guarantees a superior level of EMC as well as easy legibility – and all that at the lowest possible weight, just to round off the list of remarkable advantages this operating unit ensures. In contrast to the models of the RC-S series, this RCP-MS 2/6FP model can be used as a fully independent node in either master or slave mode.

CAN Connection Boxes for Operating Units

Have you ever asked yourself how you could hot-switch an operating unit from a running CAN-bus and reconnect it at another port? Thanks to Rotzler, you now have the answer! In combination with suitable processing of the signals put out by the respective digital controller (deactivation and activation of the heartbeat monitoring), the CAN connection box makes it possible to hot-switch operating units without endangering safe CAN-bus operation or compromising the EMERGENCY STOP safety category.

ROTZLER NEXUS II

We already ran a feature on the NEXUS II software in the last issue of INFORM. This software is a combination of an excellent diagnostics system and a highly flexible database with which to administer and flash application software. As a supplementary interface for entering parameters, it enjoys a unique position as a comprehensive software solution when it comes to the maintenance of CAN-bus systems.

ROTZLER NEXUS II is based on the diagnosis system made by Sontheim Industrie Elektronik GmbH and was extended by adding the Rotzler database. This combination provides considerable advantages for service technicians. When a service laptop is connected to the CAN-bus system, a network scan identifies all connected components. This also makes it possible to see which software is installed on the individual controllers. NEXUS II then determines and opens the correct GUI for the chosen controller from the database. After that, the system is ready to perform all the tasks associated with a normal service call-out:

- **Error Detection**
  As the clearly-structured GUI provides a full overview of all inputs, outputs, error messages, etc., any possible problems can be quickly localized.

- **Loading New Software**
  Thanks to the integrated flash-procedure tool, the desired software is simply selected from the database and uploaded in a matter of just a few minutes. The procedure is then documented in a logbook database thus removing the need to fill out paper forms.

- **Modification of Parameters**
  Easy-peasy! An authorized-access system ensures that only certain parameters can be modified in line with the level of authorization. Documentation and security are critical elements for such operations, as a result of which modified parameter sets are first stored in the database and then transferred to the controller. This ensures that anybody can determine what is in operation and located where at any time. In addition to this, the intelligent flash tool guarantees that the logic and the application software match the given parameter set.

- **Software Distribution**
  One of the greatest strengths of NEXUS II. The central administration of software and parameters, e.g., in the company’s headquarters, provides a full overview of the existing active, suspended, etc. software statuses of the most diverse application programs. This also constitutes an advantage that should not be underestimated with regard to product liability. In accordance with specific selection and authorization criteria, the main database can be used for synchronizing data stored on service-technician laptops or at the customer’s premises. In an age of wireless transmission and internet, this can be accomplished with a simple mouse click. Is there any easier way to administer and distribute software?

Gone are the days in which different controllers had to be diagnosed using a variety of programs. ROTZLER NEXUS II is the universal software solution for all CAN-Open-compliant controllers. NEXUS II provides the basis for uniform and with that quick and cost-effective maintenance of complex CAN-bus systems.

One-Stop Shop – Maximizing Performance with External Support

In its capacity as a user, Rotzler pushed its developmental activities concerning controller components forward. Consequently, the focus was less on the technical brilliance of electronic details and much more on the usability of the individual products in an overall system. In line with this system approach, Rotzler naturally also tackled those areas for which it was unable to use its own products or services. For this reason, Rotzler and Sontheim concluded a cooperation agreement. Sontheim has been active in the area of field-bus systems, and in particular CAN-bus systems, for many years. Sontheim provides numerous hardware products for the automation and automotive industries. The main control computers and I/O modules come with many benefits thanks to their flexibility, reliability and modular design so that they can be individually equipped to suit the given field of application. In addition to that, Sontheim provides innovative and highly powerful software for controlling, regulating and diagnosing field-bus systems in the automation and automotive industries. Rotzler and Sontheim pursue similar goals. Both companies have made it their mission to provide optimum customer support in as many areas as possible – from the concept stage via development including prototype commissioning right up to the finished solution.

The agreed collaboration, which involves both companies having access to the entire collective hardware and service range, has put both Rotzler and Sontheim in a position to satisfy customer requirements even more actively and comprehensively in line with each company’s aims.

Sontheim Industrie Elektronik GmbH

Since its foundation in 1996, the company Sontheim Industrie Elektronik GmbH has been developing and producing systems and components for industry in the Allgäu town of Kempten. As the owner-run company attaches great importance to its home ties and the traditions of the region, both Sontheim’s products and its production meet high standards of environmental compatibility. Company profits are continually reinvested into ever newer technology and ensuring further quality improvements. Moreover, the company is interested in opening up new markets. The strengths of the company clearly lie in the profound technological expertise and drive of its workforce, in its customer-oriented in-house development and production facilities and in fostering a creative working environment. As an extremely specialized high-end provider of customer-specific hard- and software systems development, Sontheim Industrie Elektronik GmbH is ideally set to expand its successful operations in the future. Over and above the standard product range, Sontheim provides customer-specific modifications and even special development services for hard- and software products. Sontheim is certified according to ISO 9001:2000 and is an active member of the CiA (CAN in Automation), ASAM and VDMA trade associations.

Both Sontheim and Rotzler feel sure that the agreed collaboration constitutes a further step in the right direction.
Certified ROTZLER Quality for Greater Safety

Welding technology in accordance with DIN EN ISO 3834-2:2006

Rotzler products are especially known for their safety, which we guarantee by exacting the highest standards from our entire development and production process right up to quality testing. A current example of our policy is the successful certification of Rotzler as a company that fulfils the international DIN EN ISO 3834-2:2006 standard governing the quality demands placed on welding technology. The international validity of the standard puts Rotzler, as a globally operating winch manufacturer, in a position to provide proof of specified quality requirements in production processes involving welding technology. The certification audits were carried out by accredited external institutes like the DVS (Deutscher Verband für Schweißtechnik – German Federation for Welding Technology) and the EWF (European Federation for Welding, Joining and Cutting). The audit includes complete welding processes, starting with the construction of welded parts, going through the procurement of material and the use of tested welders in the production chain right up to qualified supervisory staff for the assessment of welded seams or cracks using destruction-free material testing methods. This ensures that heavy-duty components that have to withstand major strain are ideally manufactured for their designated purpose. This additional quality guarantee provides Rotzler customers and operators of Rotzler products with a certified boost in safety and reliability. Because, after all: trust may be good, but certification is safer.

Cruise Liners – Gleaming Pearls of the Oceans

Use of Rotzler HZ pulling winches at the Meyer Werft shipyard in Papenburg

Who has not at some point dreamed of going on an elegant luxury cruise on the oceans of this world? A company that can make such dreams come true is the German Meyer Werft shipyard in Papenburg. Since the middle of the 1980s, the traditionally family-run company has been building luxury passenger liners, including the well-known AIDA fleet and the Norwegian Pearl, one of the world’s fastest cruise liners. Yet long before any vessel can set a course on the ocean wave with all its passengers on board, it first has to be built. In this case, at a yard offering the most cutting-edge shipbuilding technology. Depending on the size and fitments of the vessel, construction can take nearly 24 months. A ship measuring 295 meters in length with 15 decks and 1,200 passenger cabins requires 20,000 tons of steel to be transported and processed. Perfect logistics as well as robust, reliable tools and machines play a crucial role at Meyer Werft – all to ensure these gigantic floating hotels are safe to navigate the oceans. For that reason, you will also find Rotzler pulling winches at Meyer Werft in Papenburg. Our hydraulic winches (type HZ 051, max. pulling force of 50 kN) provide valuable assistance in supplying heavy steel sheet for building the decks. The winches are mounted on a transport vehicle that conveys the steel sheet from the warehouse to the fuel machines for further processing. The cabins that later ensure comfortable passenger accommodation are pieced together in this way.
Solutions for OEM Markets in North America

ROTZLER INC. Vancouver, Canada

In October 1995, ROTZLER INC. was founded in Vancouver, Canada. Since then, the company has been responsible for the TITAN production business in North America (Canada, USA) and the Pacific region (Australia, South Korea). TITAN hoisting winches retail in various markets via a network of traders and also via our direct OEM business. The fields of application can go from the fishing industry through equipment for energy generation and loading cranes right up to oil-drilling rigs.

Top-notch Quality and Service

Over the past 11 years and aided by a team of 13 people, Brian Griffin, the managing director of ROTZLER INC., has succeeded in continuously increasing sales and establishing ROTZLER TITAN as a quality brand in North America based on short delivery times, optimum customer services as well as outstanding value for money. To provide our customers with these benefits, we also need to coordinate every last detail with our suppliers: product quality, delivery times, transport and so much more. Only if these aspects satisfy Rotzler’s high standards can the products in question be integrated into ROTZLER INC.’s concept.

Information Exchange for Optimized Processes

As an independent subsidiary, ROTZLER INC. is also an important partner and competence center for the development of Rotzler products that are used in global markets. In the area of TITAN hoisting winches, this requires a product concept that fulfills a number of standards (above all European and North American) and hence demands close contact between the German Rotzler headquarters and ROTZLER INC. As a result, we promote an active exchange of experience between the Steinen and Vancouver sites, which has, for instance, included the cross-company involvement of specialists during the development of the new TITAN TC 3 and TC 5. An engineer from the Steinen plant already spent three months working on site with the Canadian team in 2006 and is scheduled to provide another six months of support in 2007. This cultural and technological exchange promotes understanding of regionally different markets with differentiated requirements and thus inevitably leads to a product range that is closely modeled on the wishes and requirements of our customers. This is how Rotzler puts “think global, act local” into concrete practice.
Rotzler donates Multimedia Set to the Steinen School Complex

Pupils enjoy lessons with new presentation technology

For many years now, the support of regional projects and educational schemes for children and youths has been a cherished tradition at Rotzler. The media are full of reports regarding the importance of modern school equipment for our children’s education. Yet this field is sadly hit by public under-funding, too, as a result of which many essentials cannot be purchased. We decided that things would be different for the 962 pupils at the school complex in Steinen.

Thanks to a generous donation from Rotzler, the school complex was able to purchase a new multimedia set. The so-called “mobile cinema” consists, among other things, of a beamer, a DVD player and speakers and is used in class for giving presentations and teaching communication and dialogue skills. The pupils can, for instance, use films they made during exchange-program stays in France and the USA to practice these skills and prepare for exams. On receiving the check, Wolfgang Klingenfeld, the school’s principal, and Waltraud Kaiser, the vice principal, warmly thanked the Rotzler representatives Frank H. Pfister, authorized signatory, and Renate Berger, HR Manager. This kind of regional commitment underscores Rotzler’s allegiance to Steinen as the company’s headquarters. And in the end, the children of Rotzler staff who attend the school complex (which comprises an elementary and two types of secondary school) will also benefit.

Hello, I’m DaWinchy!

Naming the ROTZLER bear

In the last issue of INFORM we were looking for a name for our Rotzler bear and received numerous letters with tons of great suggestions. Choosing a name out of all those creative proposals was not an easy task, but we finally settled on “DaWinchy”. Obviously derived from the word “winch”, the name perfectly suits our mascot and its reference to the universal genius, Leonardo Da Vinci, is equally justified. DaWinchy would like to take this opportunity of once again saying thank you to his name-giver, Mr. Peter Luft (Rosenbauer Taiwan) and all the people who wrote in for their huge support.