

Interesting facts for the tool- and mould making

Editorial



PowerMax® 2.0 – the next generation of the standard cam is ready for new tasks.

The change in the tool construction is characterized by cost pressure, savings and new innovations for the steady improvement of the most efficient production process. Narrow space conditions and fewer tool stages – these are the requirements of a modern tool construction and the designers of today.

We met the challenge and are starting on the fair Blechexpo with a further development of our proven standard cam PowerMax®. The new PowerMax® 2.0 is a further-developed, revolutionary designed cam that is tailored to the requirements of the automotive industry and its suppliers.

With a more than 45% shorter and more compact design, compared to commercially available cams, the new generation is able to save space, to combine operations steps and thus to produce cost-effectively and efficiently.

PowerMax® 2.0 offers the user maximum reliability and service life with low operating costs and this for a wide range of applications.

Learn more about the PowerMax® 2.0 and the service features which you are used to from the company STRACK in our current Normalienreport.

Enjoy your reading!

Dag Friedrich
Managing Director



The new PowerMax® 2.0 has a 45% shorter design compared to the commercially available cams.

The tool construction is subjected to a constant change

Compact, powerful, efficient and safe – the new PowerMax® 2.0 as a problem solver

The high art to bring metal in the desired shape has always been considered one of the great challenges the toolmaker has to meet. If you look at the vehicles of today's generation and compare them to vehicles of past eras, it is noticeable that the designer in the past often had to subject to the technical feasibility.

Today design has top priority for the purchase decision. Beads, crinkles, edges and hip swings underline the characteristics of a brand, thus the power of the language of shapes has priority. The tools are always subjected to the change of this challenge.

But the tool construction of today must not only meet this challenge. EU directives to reduce emissions require constantly new materials to reduce weight. This is accompanied by a high solidity and rigidity while the thickness of the material is reduced to achieve these goals. Multi-material-mix is the magic word which sends again and again a little shiver down the spine of the toolmaker. New material properties serve to achieve the set goals, but steadily change

the requirements on the tools. The load on all components installed in the tools increases dramatically in the processing of high-strength sheets.

However, it is not the only challenge to question again and again the learned knowledge and to find out new solutions. In the past the consumer had to decide between 3 to 4 car variations per manufacturer, today he has to decide between 40 up to 50 different models. The OEMs meet this challenge in quite different ways. Volkswagen relies across the group on the Modular Transverse Toolkit, short MQB, as a basis for



A PowerMax® 2.0 in the special width 700 mm.

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many models. Herewith, the number of pieces per MOB-sheet metal part is increased by a multiple, which again drastically changes the requirements on the tools. Tool components are required which can meet this demand and can reliably realize the high number of pieces.

The PowerMax®

Until now the standard part producer STRACK NORMA has already been able to meet the requirements on this stable and highly productive production with its PowerMax® standard cam by using extremely hard-wearing guiding strips out of sintered metal and a precise self-centring guiding system.

BWM has chosen a different way with the large range of variants of different vehicle models. Quickly it was recognized that traditional processes in the tool-construction here are insufficient. The flood of tools which have to be built, could only be mastered with new approaches. The goal was to take the supplier of tool components in the obligation. Components have to be delivered ready to be installed so that they can be mounted in the tool without great adaptation. This, of course, also applied for all standard cam producers. STRACK NORMA has quickly recognized the enormous benefits and has spe-

cially converted its whole production concept for the standard cams. Now, in the last work step the finish-machining is made including all necessary bore holes, pins, pockets and fits required by the tool construction directly according to 3D-data set. The result is a cam ready to be installed. The concept allows a great modification flexibility until shortly before the delivery.

But what was solved well in the past, must increasingly be improved due to cost pressure. In future, tools should summarize even more operation steps. In this context time- and resulting costs savings play a major role. Meanwhile more and more work steps are made in one stroke to be able to save one, respectively more steps. No losses concerning running property and press force should be made.

The new PowerMax® 2.0

STRACK NORMA has heard the call of the designers and faces this challenge. The result is the cam of the latest generation:

PowerMax® 2.0 *the next generation*

Already the PowerMax® cam of the first generation combines attributes such as

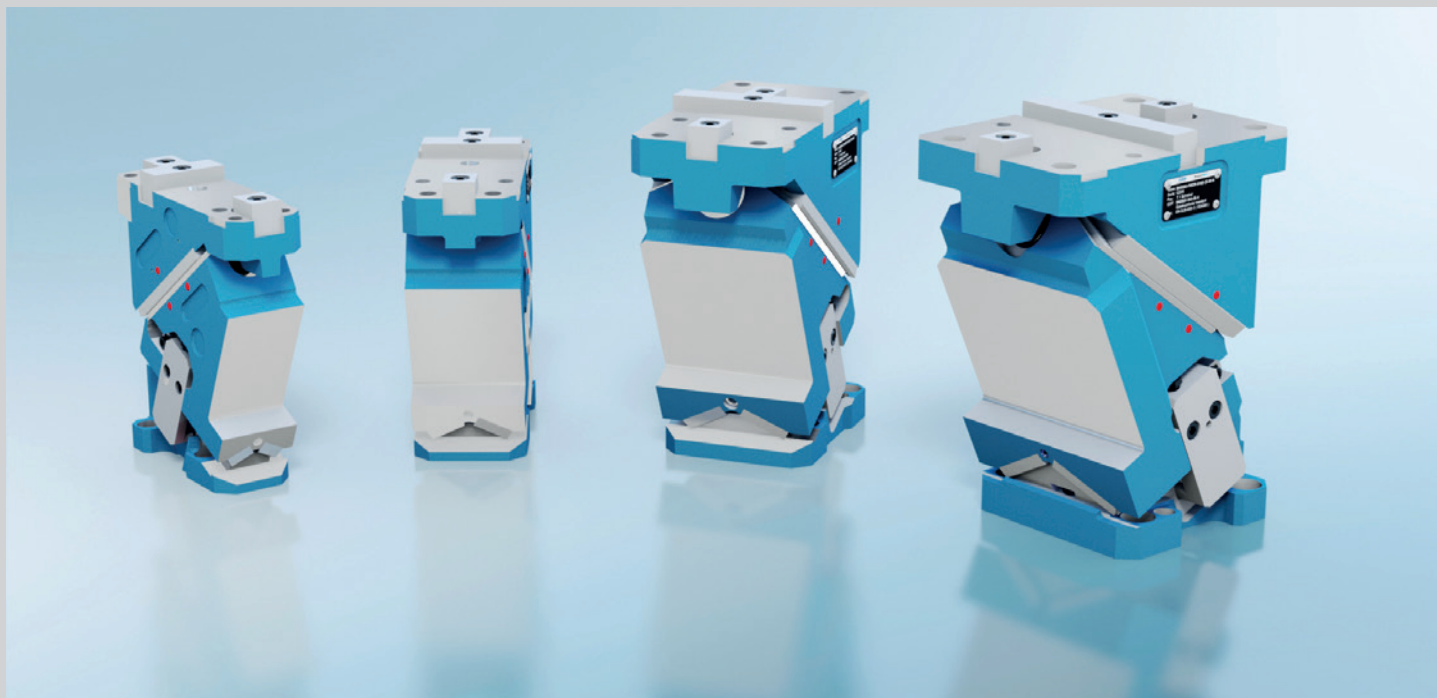
high running precision, high press- and retraction forces and tightest tolerance values in a simple product and is especially designed for tight spaces. Tools can be saved by merging operation steps and form the basis for efficient and safe working.

The result: a by up to 30% shorter standard cam compared to the normal PowerMax® cam. Compared to the standard cams usually available in the market even a reduction of more than 45% could be achieved.

The aerial standard cams are initially offered in the standard widths 65, 90, 125 and 165 mm in the Medium version. Other widths are already in planning or can be required on demand. As in the first generation, the available angle dimensions will be at 0°-75° in 5° steps. On request intermediate angles are possible. Also at the new version the proven active return provides for high retraction forces.

Conclusion

Compact, powerful, efficient and safe – with the new PowerMax® 2.0 a problem solver is introduced into the market which is, due to the shorter and more compact design, able to save space, to combine operation steps (see construction tip) and to produce efficiently. ■



The model series of the new PowerMax® in the standard widths 65, 90, 125 and 165 of the Medium version. Other widths are already in planning and available on request.

The construction tip

Space problems? Not with STRACK

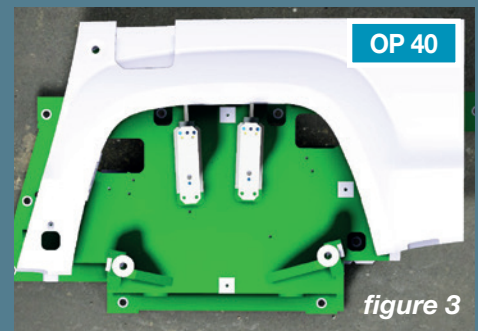
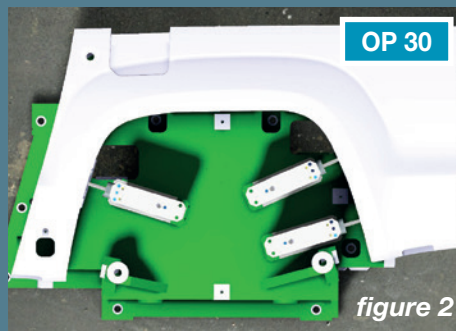
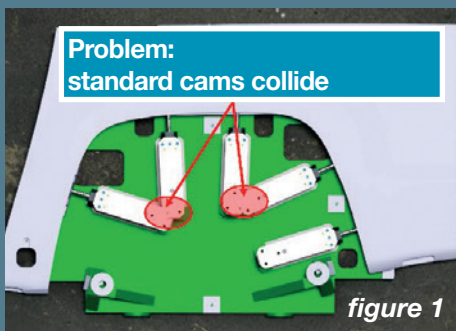
The newly developed compact cam PowerMax® 2.0 offers a solution

Space problems always cause costs.

As shown here using the example wheel-house-tool: 5 holes are required for fixings in the interior. These holes are normal-

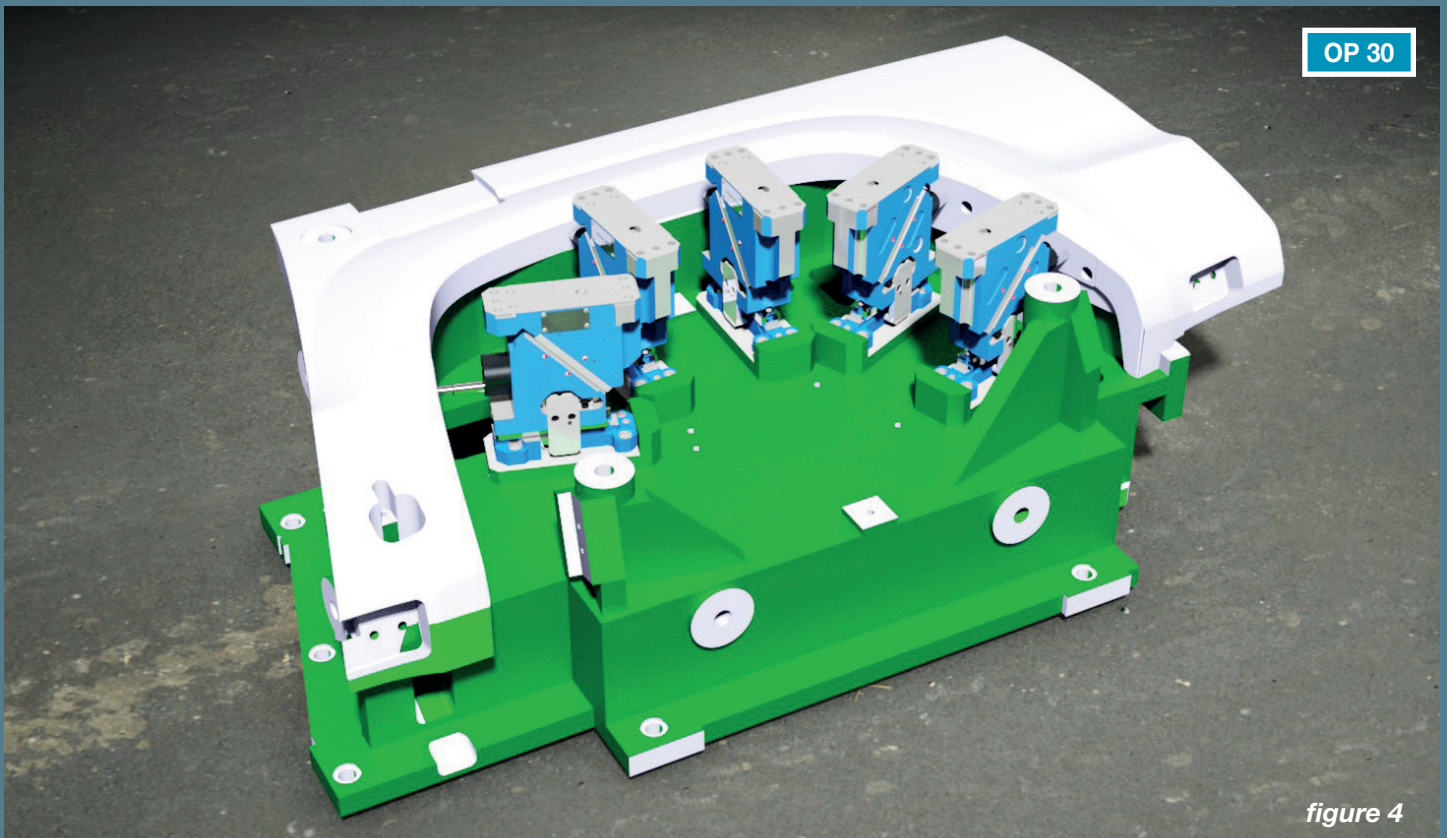
ly made with standard cams. Due to the bow-shaped arrangement it happens that the installation space of the standard cams overlaps and the cams interfere with each other (figure 1).

Mostly the necessary operations are then divided in two operations (figure 2 + 3). The newly developed compact cam of the standard part producer STRACK NORMA can be a solution.



The problem solution:

As you can see in figure 4, optimally entire operations can be summarized and thus significant savings can be achieved by the shortened space of the PowerMax® 2.0.

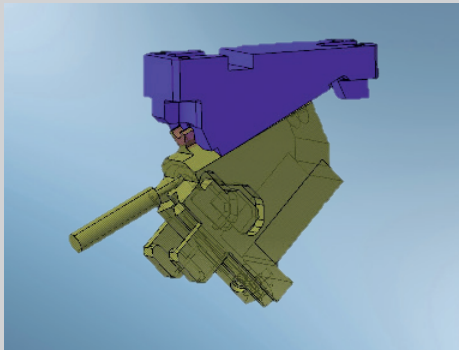


Design fast and efficiently

STRACK offers BAK adapter in Cativa V5 – more security and lower costs

Time is money – and this applies above all for the design of tools. Here the designers like to use the standard part libraries of the individual manufacturers to make construction drawings fast and efficiently.

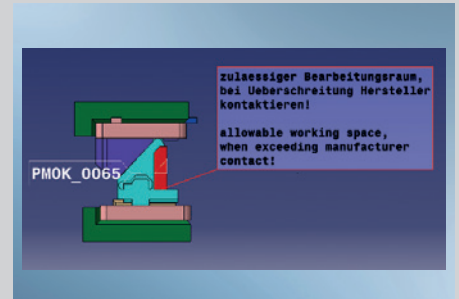
For this purpose the standard part producer STRACK NORMA created a BAK adapter which is designed to meet the requirements of the designers in Catia V5.



This directive serves to achieve a uniform structure of the CAD models and to ensure the applicability along the production chain. In addition to the actual component, the user can blend the cast surfaces and bearing shoulders and use the processing volumes for the CNC programming. Moreover the designer has the possibility to display the cam during the placing on the driver and in front work position over the parameters.

Also the consideration of possible interference factors in the environment, which must be taken into account, is important. This also includes the displaying of the gas springs or the cam carriage to be able to dismount it under the press.

The BAK adapter provides the designer an additional safety. The work surface can be provided with an optional machining. For this, the working area has a red-coloured volume which shows the



maximum available installation space. A warning text indicates the designer possible problems and helps to avoid them already in advance.

Due to many years of experience in the design of cams this dataset is necessary to make designs as efficiently as possible and to avert problems early. If the customer uses the STRACK CATIA V5 adapter, costs and unnecessary delays in the production are avoided and the efficiency is increased. ■

Excellent, fast service

Comprehensive service completes the market launch of PowerMax® 2.0

Through comprehensive and timely service measures the launch of PowerMax® 2.0 will be rounded.

- Delivery in up to 24 hours in case of a crash
- 24 hour service hotline
- CAD data (BAK-adapter) and information material on the home page
- Free staff training at the customer
- Construction support in the design of the cam
- Patented Lock-Out-System SN 5654 without charge included
- Replacement parts available from stock
- Hole pattern on the work surface, complete cam ready to be installed according to customer CAD data
- Special cam with calculation of the forces and deployment of CAD data
- Intermediate angle easily achievable

A reliable production is the pillar of any modern production. STRACK NORMA provides high-quality products, which guarantee a high service life.

We have set up a service hotline if you are in need of particular urgent action, e.g. at an unforeseen incident as a tool crash, in which we can help. This “emergency service hotline” is available around the clock, the whole year.

You can reach us at our service hotline:

+49 2351 8701 - 444

or by e-mail:

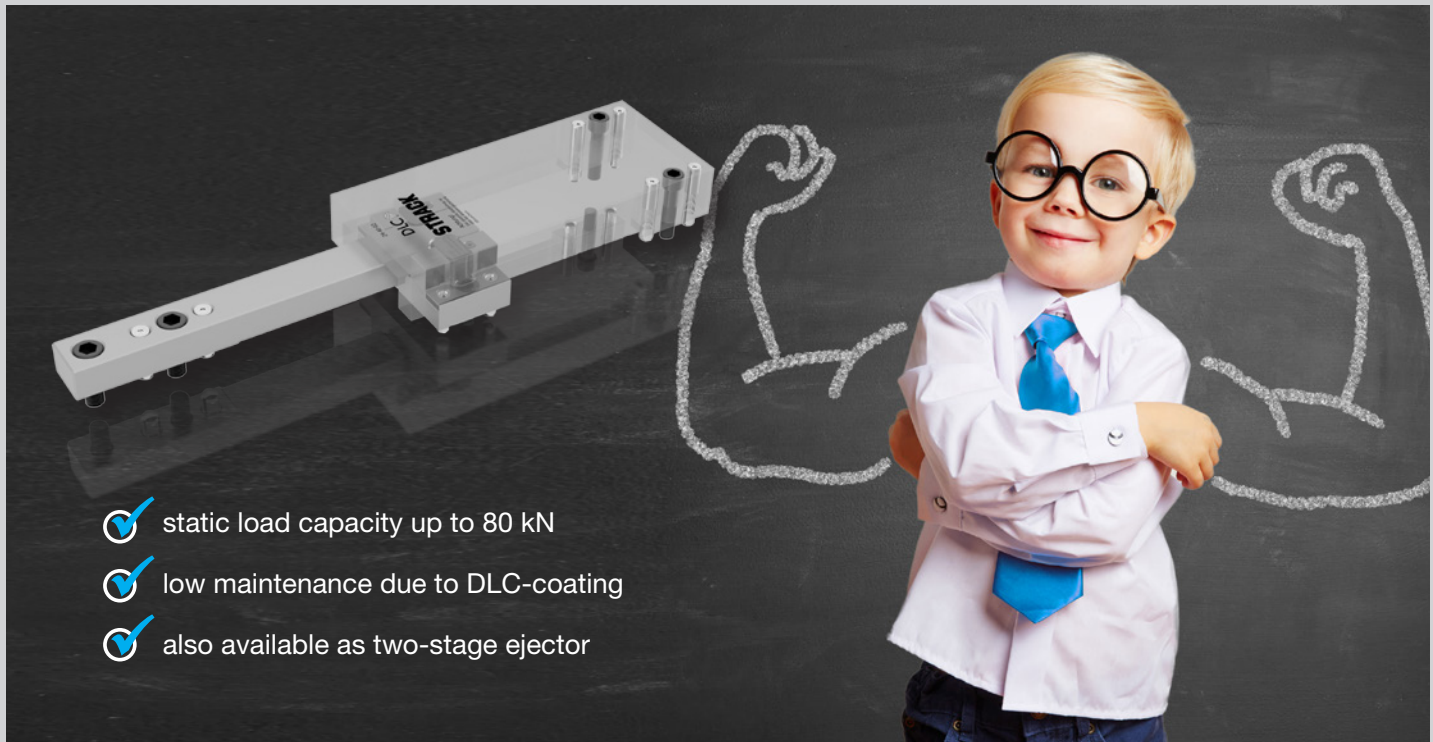
hotline@strack.de

We will contact you as soon as possible.



Small becomes LARGE - The new latch lock for heavy weights

New latch lock Z4-40 for large tools – also with DLC-coated components



- ✓ static load capacity up to 80 kN
- ✓ low maintenance due to DLC-coating
- ✓ also available as two-stage ejector

Also this year the standard part specialist STRACK NORMA GmbH & Co. KG Lüdenscheid puts its focus on motion elements and latch locks in injection moulding tools. Mechanical plates movements can be defined comfortably and reliably with the proven latch lock Z4. This series had now been extended by a larger version.

With the new latch lock Z4-40 a novelty will be presented on the current fairs, which creates additional application possibilities. Ideally designed for the large-scale mould making, the new latch lock has a static load capacity of up to 80 kN.

This novelty responds to the actual trend in the market, because the share of electrically powered machines is significantly increasing.

Energy-saving, efficient work even requires from the standard part producer to adapt to the prevailing market conditions. The latch-lock Z4-40 can replace hydraulic components,

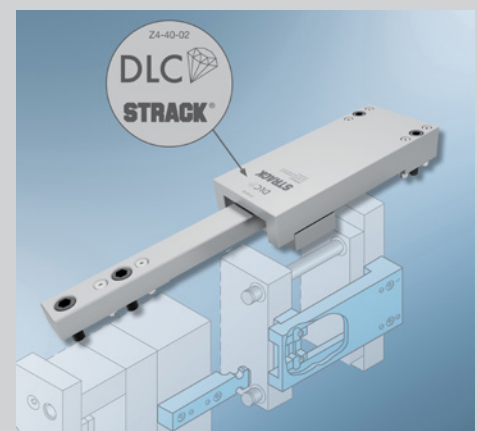
such as hydraulic cylinders and thus allows the user among other things the use on electrical machines.

STRACK NORMA implements individually adapted solutions for the tool-makers. Due to the variety of customer specific designs in the range of the latch locks, the standard part specialist is the technology leader in the market. All latch locks of the standard specialist STRACK NORMA are from now on provided on moving components with a DLC coating to meet highest requirements of the injection moulding technology. Herewith the proven latch locks are able to guarantee even longer service lives and thus ensure a trouble-free production process.

The DLC coating (diamond like carbon) is a diamond-like carbon layer. It is applied on moving components, which are for example running unlubricated or to extend the maintenance intervals. DLC is the successor of WCC coatings, due to the fact that the coating is harder and more durable. In

addition DLC layers are characterized by low friction coefficients and good wear properties. By using DLC coated components and the resulting maintenance freedom an up to 80% reduction of the maintenance costs can be achieved.

The new DLC coating cannot be seen at first glance, because the pawls as well as the locks are covered with the layer. Thus a maximum benefit is achieved and friction and wear is minimized. ■



Stable and low-wear guiding elements

Square guide bars Z46 now with DLC-coating



The standard part specialist STRACK NORMA has converted his product range and presents further guiding elements with DLC-coating on the current fairs.

The DLC-coating (Diamond-Like-Carbon) is a diamond-like carbon layer. It is applied on the moving components, which are for example, running unlubricated or to extend

the maintenance intervals. DLC is the successor for WCC-coatings, due to the fact that the coating is harder and thus more durable.

From 1st November 2015 all square guide bars of the series Z46 will be converted on DLC-coating.

The DLC-coating on the guiding bar increases the service life and ensures a high resistance to scratches and wear of the surface.

Also, in addition, it reduces the susceptibility to corrosion, while at the same time a very homogeneous coating thickness is guaranteed. By using DLC-coated components the maintenance costs can be reduced by up to 80%. In the cleanroom technology DLC-coated components are enjoying growing popularity due to the release of lubrication. ■

STRACK goes to China

STRACK NORMA HK reinforces the service- and sales activities in China and Hong Kong

STRACK NORMA established a new sales office in China to be able to support the customers in Hong Kong and China even better.

The company, based in Hong Kong, promises a high-quality and direct service in the range of punching- and mould making for the Chinese market. The further expansion of this important key market has priority in the long-term planning of STRACK NORMA. By establishing the new sales office, the service quality and customer loyalty is enlarged and strengthened in such a manner that from the 1st June 2015 the customers can expect quick and competent support for

questions and problems. The new company will regionally handle all inquiries and requirements, including the sale and the technical support.

With Nicole Shum as sales manager, the customers have a qualified and experienced contact person on-site, who has already supported the customers of STRACK NORMA for many years. ■



Internal

New STRACK representation in Portugal

Standard parts producer extends European network in the field of stamping technology

The company VTOOLS UNIPESSOAL, LDA. with its headquarters in Loures/Portugal as a competent partner in terms of standard parts for the stamping range which has been successfully established on the Portuguese market for several years, has now taken over in the area Portugal the distribution of stamping products of the standard parts producer STRACK NORMA from Lüdenscheid,

With Antonio Valente the customers now have a competent and experienced contact person on-site, among other things, for the areas such as spring elements, part conveyors, cutting elements, guide pillars and -bushes and ball cages and the side cam series PowerMax®.

Due to the direct contact with the customer in the form of sales-, training- and consulting offices all inquiries and requirements can be handled promptly, including technical support. ■

Masthead

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STRACK NORMA GmbH & Co. KG

Anniversaries

Congratulations!

STRACK congratulates the employees belonging to STRACK family for 10 years

Volker Alms	June 2005
Jens Hasenclever	June 2005
Jennifer Granzow	September 2005

and the employee belonging for 25 years
Andreas Forsthoff October 1990