

NORMALIEN report

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Unscrewing allrounder

Compact unscrewing unit provides reduction of cycle time



■ For even more comfort: the new unscrewing units.

For years the production of plastic articles with threads has been a very complex and cost-intensive process. The tools necessary for this like gear racks or collapsible cores had to be developed and produced specifically for each order. This was a high working effort for the constructing engineer and the toolmaker. Now, an eye on the latest trends, these unscrewing units were adapted to the current requirements and combine now all advantages of the products currently available on the market.

By introducing the innovative thread unscrewing units, the conventional technologies of the thread demoulding were supplemented by a rapid, precise and particularly economic alternative. Since the market introduction in 2009 the sales figures for standard- and special units have been increased sharply. The new compact unscrewing unit combines all advantages of the products currently available on the market including accessories and mounting alternatives in a closed assembly.

Concerning the development of the new unscrewing unit we focused on the user-friendliness of the unit. The fundamental principle of the new unscrewing units was maintained and is based on the construction of base plate, gear plate, guide thread nut, core support and cover plate, which has proven itself for decades. In order to facilitate the

work for the user, however, the new compact-unscrewing unit is much more simply constructed than hitherto. So the thread core can be mounted in the core support without dismounting of the unit. Therefore the core support is completely moved out of the unit and can be removed easily. Thus the changing of a worn thread core can be effected without a long and cost-intensive production stop. In addition to that, the new compact unscrewing unit disposes of a new integrated active core cooling, an improved sensor technology and is produced in a compact and encapsulated construction design. Thus, because of the fact that there are no open toothed wheels, a high degree of safety is reached.

Editorial



Meanwhile STRACK NORMA is a permanent guest on the international trade fair EuroMold. As in the previous year you will find us as usual in hall 9 at booth A 101. In addition to a wide standard range of standard parts our guests can experience in particular many special products of our company in Frankfurt am Main. Products designed and produced to customer request, to be able to carry out special tasks in the tool function. You always rely on sustainable strengths – increase of capacities- reduction of costs – with STRACK NORMA.

We are proud to point out that our new generation of motion- and demoulding elements are practically obtainable for 1.000 and one application. This will create many new opportunities for the constructing engineers concerning the development of new manufacturing processes of complex injection molded plastic components. Even the first impression will convince you.

Have fun while reading!

D. Friedrich

Dag Friedrich
Managing Director

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The new sensor connecting guarantees a simple adjustment of the end positions. Thus a soft approach of the core holder on the fixed stop can be realized.

The integrated active core cooling allows a considerable reduction of the cycle time. For this the thread core is provided with a boring, through which a cooling fluid is passed removing the heat from the overmoulded thread core. The result is an enormously positive influence on the cooling time which compared with the un-cooled standard type once again reduces the cycle times considerably and contributes in the production to the reduction of the unit costs. Up to now this active cooling has only been available as refitting element. Now the proven principle has been firmly integrated in the new unscrewing unit.

Furthermore, a central lubrication was mounted. This is provided with a gas capsule and a timer and releases a reduced quantity of lubricating fluid according to an adjusted interval. The timer can be adjusted in month's steps from one to 12 months and empties the reservoir of lubricating fluid completely in this period of time. As soon as the timer is started, the gas capsule is slowly emptying and thus presses the piston in the casing. The lubricant being placed below is added. Hence the lubrication of the guide thread is effected automatically. The central lubrication increases the operating convenience and reduces the maintenance intervals.

The new compact unscrewing unit can actually be obtained in 3 types: as simple, double and quadruple unscrewing unit. The manifold unscrewing units are suited if several female threads are demoulded at the same level, direction and pitch. These units can be delivered with different axes distances.

Access to more advantage

Slide elements reduce costs and provide flexibility

The functionality of tools is increasingly the focus of the operate activities of the constructing engineers and the tool manufacturers. More functionality in the tool provides a reduction of costs per unit concerning the production of plastic parts in the serial production.

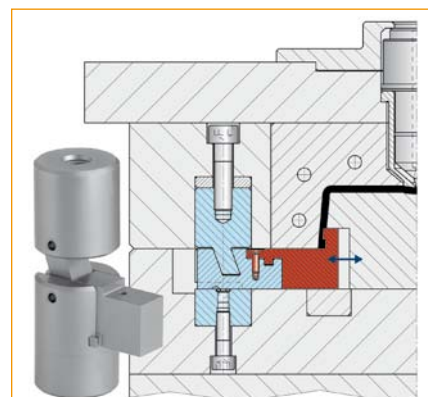
The utilization of standardized slide elements gives support. STRACK NORMA is a leader in the production of slide elements and offers a great number of types and dimensions. The slide elements can also be used in the tightest available spaces.

The combination of fastening elements with mounting elements requires the construction of break-troughs or locking hooks at the outer contours of the tool. The slide elements of STRACK NORMA offer here more construction options. Thus with the mounting in the tool very simple undercuts can be built, break-troughs and borings can be realized and outer- as well as inner contours can be formed.



■ Z4200

The basic element is the Slide assembly Z4200, which individual components are completely hardened. It is equipped with a slide box, the guide rails, a pressure piece with an acceptance for the inclined column and the pressure plate. The pressure plate allows a comfortable adaptation of all slides mounted in the tool. The particularity: all slides can be demoulded from the mould parting plane. At the same time STRACK NORMA offers with the Z4200 the largest variety on the market. Even large dimensions are offered as standard items from stock. But at the same time special designs are produced according to customers' specifications.



■ Z4293

The real slide units Z4290 to Z4293 are already available from a diameter of 16 mm and allow a stroke of 2,7 to 6,4 mm. Each unit consists of an upper part with an attached pressure piece and the slide. The necessary slide stopper unit is mounted in the suitable bottom part. Concerning the compact variant a smaller form structure can be considered alternatively. The cylindrical construction can be integrated in the moulding plate with a little hand work. The patented combination of motion and locking in a component as well as the demoulding of inner undercuts provide for a unique capability in the market. The round slide elements which can be delivered from a diameter of 16 mm, allow a stroke of 2,7 to 6,4 mm.

The advantages at a glance:

- Space saving
- Cost-efficient mounting in the moulding plates
- Patented function "Motion and locking in a component"
- Demoulding of inner undercuts (Z4293)
- Simple adjustment of the slide elements
- Special designs possible

„Les Stracks“ bring the moldmaking in motion

Latch locks as construction element: tool design nearly without limits

They are called “Les Stracks” in France. In Germany they are known to the toolmaker under the product name latch locks. Already in the sixties of the previous century STRACK NORMA introduced the first latch locks on the market. Today we offer the customers a wide product range of latch locks to realize a variety of movements of single tooling plates.



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Latch locks are standard parts, which serve for the mechanical movement of plates in injection moulds or die-casting moulds. They are widely used where an additional parting plane has to be created.

The round latch locks Z3, at least two are required for each tool, are used in the tooling plates. They are used if there is too little space at the external area of the tool. The utilization of the round latch locks is also very popular in the ejector assembly for the two-stage ejecting of articles.

The latch locks Z4 have a flat type of construction. They are mounted in the external area of the tool laterally at the tooling plates. The constructing engineer uses this product series to reduce the

cycle times sustainably, because the latch lock allows quick opening- and closing movements of the tools. In practice this latch lock offers a maximum security, for the drawn moulding plate is mechanically limited and locked in the end position. It can only be removed to the initial position if the pulling rail is entered in the latch lock housing. Additional stop elements are not necessary in this system. During the utilization the latch lock Z4 shows itself flexible concerning the movement of the plates. As latch lock with or without retard, but also in combination as two-stage ejector. Expressed in values: the latch lock Z4 is able to reach tensile forces till 60 kN depending on the type.

Similar to its little brother Z4, the latch lock Z5 has a similar design. This flat latch lock is also used in the external area, laterally at the plates.

Z4 + Z6 = First opening in the main parting plane

The locking catches Z6 are mounted in combination with the flat latch lock Z4. This combination allows in the separation pro-

cess that in the first step the main parting plane is opened. Here the locking catch avoids that the moulding plate, which has to be drawn, moves involuntarily forward. If this separation process is finished the second parting plane opens. Also concerning the 3-plate-tool this function is structured by means of slides and core pullers. The stepwise separating sequence provides now again a variety of construction possibilities. For example the latch lock Z4 can be used without retard.

The ejector retainer Z7 rounds this series off by an often required design characteristic. Always when, for example, form-generating elements between hydraulic ejector and the injection moulding machine have to be protected from damage. Thus unnecessary repairs are avoided, because the ejector pins don't remain in the tool-side front position.

The products of the Z-series can all be mounted without problems. Also special solutions with up to 4 parting planes in one tool are possible. Our customers are supported by our application engineers.

Imprint

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STRACK[®]
NORMALIEN
STRACK NORMA congratulates
the employees who have
belonged to the STRACK family
for many years.

10 years
Seuthe, Martin 01.10.
Apostolidis, Apostolos 16.12.

25 years
Lohmann, Udo 30.06.

Congratulations!

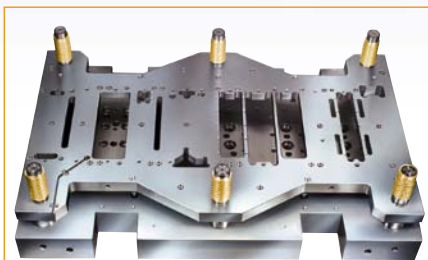
Tailor-made production for the toolmaking

Special processing: more flexibility and capacities



■ Highest precision and quality: Tooling plates according to customer demands with special processing

If the visitor enters the lowest floor of the company building, he immediately knows where he is because of hearing the sounds streaming towards him and having the typical smells: in the highly-automated production – the ventricle of STRACK NORMA. Here, everyday, multi-axial CNC controlled machining centers produce high-precision plates – with a great speed and absolute precision. Basic production – because of the fact that the tooling plates are the base for each toolmaker.



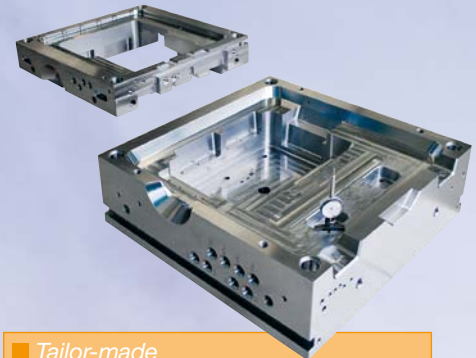
■ Complex requirements: die sets

“We understand the department for special processing as the extended work bench of our customers”, explains Wolfgang Weihe of the project team special processing. He and his team take care the constructions of the customers get their shape in steel. All borings, threads and contours are inserted in the plate by the multi-axial machining centers. An entire series of advantages arise from this “extended work bench”. Wolfgang Weihe: “Thanks

to our support the customer remains flexible”. If he decides to let the plates be produced in the Königsberger Straße, the toolmaker, whether for the punching- and forming area or also for injection moulds, can completely concentrate on his core competences. Particularly in these times where the order books are again full, the capacities of the machines in the own company are kept free. “Thus more offers from customers can be accepted and you are able to concentrate more on the follow-up processing.” Because of the high chip performance of the machining centers of the company STRACK NORMA this processing can be effected very quickly and economically.

Moreover the possibility to be able to process also complex plates with great dimensions speaks for a processing with STRACK NORMA. “Precisely in case of great dimensions the possibilities of the machinery at the customer are limited” knows Weihe from yearly experience. Therefore STRACK NORMA offers in principle additional services, to which belong, for example, the hardening, annealing or plasma-nitriding.

Thereby the implementation is configured extremely easy. By data-carrier or also by e-mail the CAD-data can be sent to the project team for special processing. “Just in Time” the orders are processed and are subsequently finished on the high-performance CNC-machining centers. Moreover milling machines and grinding machines as well as jig grinders are available for all necessary special processing. A high standard of production quality with documented final inspection is guaranteed by a processing with the modern machinery. The final inspection is effected in the department for quality assurance, where each tooling plate is controlled again by a 3D measurement concerning dimensional accuracy.



■ Tailor-made production: special processing according to customer demands

Also a feasibility check belongs to the tasks of the project team. It is expertly checked if the delivered construction can be produced correspondingly.

Project team special processing



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