

# SEALS

TECHNOLOGY



0217

客户杂志 *Magazine for customers and partners*

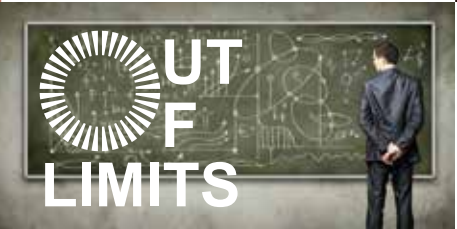


## THE JOURNEY OF A SEAL MAKER MACHINE

Out of Limits

New from 2018: Machine controls

Improved Production Procedures







亲爱的读者，

世界大部分地区主要的休假季已经结束，我很高兴我们所有的同事和商业伙伴都身体健康，心情舒畅回到了自己的工作岗位，再次投入工作。

Seal Maker公司，自年初起就接到来自客户积极踊跃的订单，我们为此感到非常高兴，尤其是在车削机床方面，另外还有半成品和密封件。近几年的发展和创新最终得到了回报，在这一点上，我要感谢我们的团队CNC 开发部门和材料研发部门所作出的卓越贡献。

本期“密封科技”刊物，您也会发现一些关于“材料”方面的新闻：我们将密封材料对于介质耐腐蚀性的数据添加到了Seal Maker官网客户版面。对数据库在源源不断地扩充，也显示出我们对客户的服务提升。当然，我们的专家也提供个人咨询。

在2018年初，我们的 SML 500e 车床系统也将以新面貌出现。为了提供客户最便捷的操作和最新的技术，SML 500e 将配备新的控制系统。Seal Maker 软件也进一步地改进还扩展了一些产品简介。软件版本由4更新为4.4.5，供客户常规使用，请进入我们的官网登录页面进行下载。

其他更多Seal Maker关于生产优化方面有趣的内容，请参阅第7页。

在新系列期刊“超越极限”中，我们想向您介绍一个有趣的项目。自2016年新加坡在重型起重机的特殊塑料部件生产有市场需求。

对我个人来说，Seal Maker公司历史上一个特别重要的里程碑是即将在上海成立的子公司。经过紧锣密鼓及艰苦的筹备工作，公司将于9月开始正式启动。

希望您能在本次“密封技术”期刊内阅读到一些您喜欢有趣的文章。

敬上  
Johann Glocknitzer

Dear readers,

in most parts of the world the main holiday season is already over and I am glad that all our colleagues and business partners have returned to their jobs in good health, relaxed and ready for action.

At Seal Maker, we have been very pleased with an extremely positive order situation since the beginning of the year, especially in terms of machine systems, but also for semi-finished products and seals. The developments and innovations in recent years have ultimately paid off. At this point, I would like to thank our teams from the CNC - Development department and Material Development very much for their excellent work!

In this issue of "Seals Technology" you will also find some news concerning our "Materials": We have recently added to the customer section of the Seal Maker website a database in which the media resistance of sealing materials can be queried. This database is constantly being expanded and represents an additional service for our customers. Of course, our specialists are also still available for personal consultation.

At the beginning of 2018, our SML 500e machine systems will also come up with a new feature. In order to be able to provide our customers with the maximum convenience in handling and the latest technology, our new SML 500e machines will be equipped with a new control system. For more information about the advantages of this new control referred to as "0iTf", please refer to page 3 of this issue.

The Seal Maker Software 4 has also been further improved and extended by a few profiles. The update with the version number 4.4.5. is available for our customers as usual and can be downloaded from the login section of our website.

For other interesting production optimisations at Seal Maker please refer to page 7.

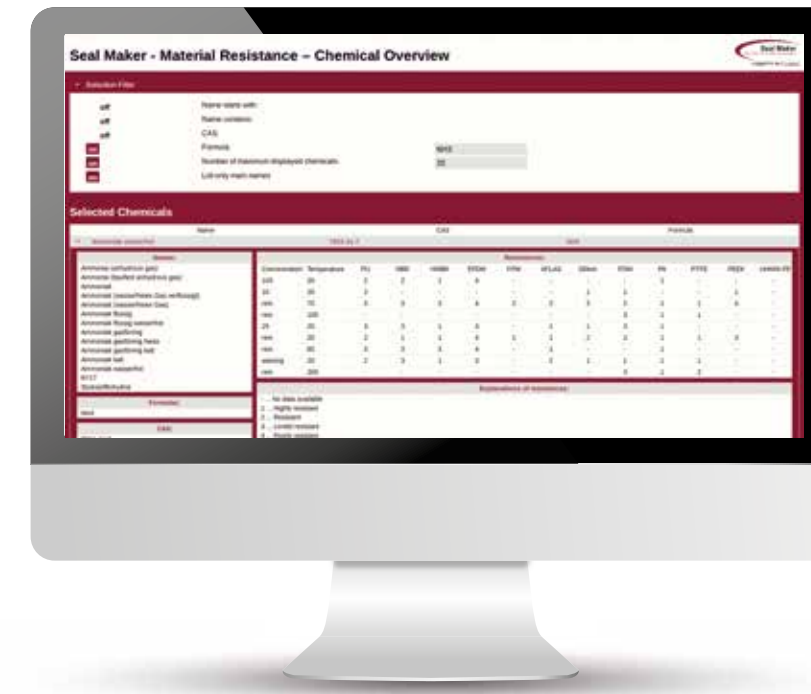
In our new series "Out of Limits", we would like to introduce an interesting project of the year 2016, which was the production of special plastic parts for a heavy-duty crane in Singapore.

For me personally a particularly important milestone in the history of Seal Maker is the upcoming opening of our new subsidiary in Shanghai. After intensive and sometimes quite strenuous preparatory work, the branch will start official operation in September.

I hope that you will enjoy reading and that you will once again find some interesting articles in this issue of "Seals Technology"!

Yours truly,  
Johann Glocknitzer

## Database for material resistance



为了更好的服务客户Seal Maker 增加了服务内容，材料特性数据库，通过访问数据库客户可以取得密封材料的介质特性。客户也可以通过化学公式，CAS代码，和国际通用标识来查找相关材料，理所当然您还可以咨询我们的专业人士，他们会给您最专业的服务。

As of now, the Seal Maker service will be expanded with another tool. A database in which the media resistance of sealing materials can be queried, is available in the customer area of the Seal Maker website. In addition to the usual search criteria of the medium itself, there is also the possibility to search for chemical formulas or for the CAS Registry Number, which is the international standard naming for chemical substances. The database will be constantly expanded and supplemented with data. However, our specialists will always be at your disposal for any detailed questions.

Check our  
Hot News



## NEW FROM 2018: MACHINE CONTROLS

研究，创新和技术是Seal Maker前进的动力，因此我司的推陈出新不会让您太久，为了让我们的客户生产出更好的产品，我们改进了SML500e的操控系统，从0iTD 升级到0iTf

新的操控系统的优势如下：

- 大屏幕
- 安全双保险。 SML500e机床升级了安全系统，新系统满足国际安全标准和监控所有的安全范围。这意味着设备和操作更加安全
- 存储空间更大
- 运转速度更加快，加工效率更高

Seal Maker 将在明年推出新一代的机床设备操控系统，它满足新一代国际相关标准的同时，操作舒适性更好

Research, innovation and technology are driving forces at Seal Maker, for this reason the latest innovation didn't take long to appear. In order to offer our customers the best conditions for optimum seal production, all future SML 500e machines will be equipped with a completely new control system. This system named 0iTf (Zero-i-Te-eF) will replace the current 0iTD control unit.

The new control system has a number of convenient new features, such as:

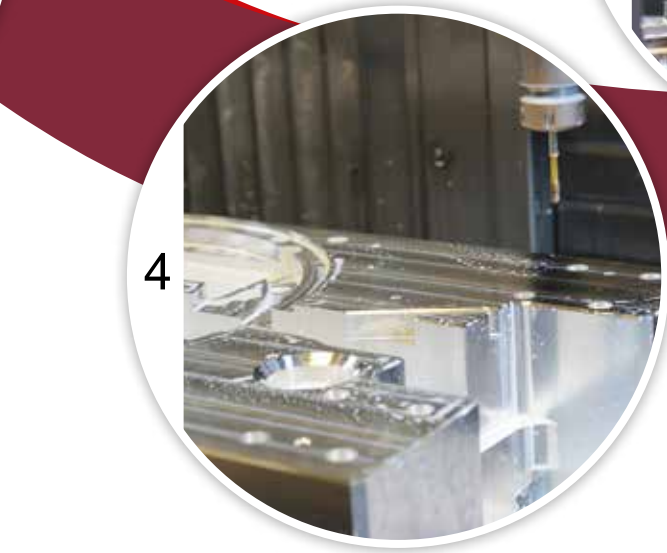
- A larger screen in the size of 15" (instead of the 10.2" at present)
- Dual check safety: As the carousel machines, the SML 500e machines will now also be equipped with this safety system. This safety system meets all current international safety standards and monitors several safety-critical areas of the machine. This results in increased safety for operators and machinery.
- Extended memory for tool offsets
- Faster processing - NC and SPS run faster and data is processed more quickly, which enables the machine to work more efficiently.

By converting the machine control, Seal Maker will be able to supply a machine system according to the latest industrial standards from the beginning of next year, which provides the customers with a maximum of comfortable operation and innovative technology.



# From Start to Finish

## the journey of a Seal Maker machine



- 图 1: 收到订单  
图 2: 完成合同, 给予准确的供货时间  
图 3-5: 铣削中心生产的高强度铝制机械部件。  
图 6: 零部件住组装  
图 7: 整机组装  
图 8: 线路组装  
图 9: 完成设备组装  
图 10: 测试  
图 11: 包装  
图 12-13: 装箱  
图 14: 抵港  
图 15: 装船

- Image 1: The sales department receives the order  
Image 2: Input of order, clarification of delivery times, notification/clarification regarding shipping  
Images 3-5: Production of machine components made of high-tensile aluminium at our milling centre  
Image 6: Pre-assembly of individual components  
Image 7: Assembly of these components onto the machine  
Image 8: Wiring of the electric control cabinet  
Image 9: Final assembly and measuring by Ballpar system  
Image 10: Test run  
Image 11: Packing in wooden crate  
Images 12-13: Loading into container  
Image 14: Transport to port  
Image 15: Loading onto the ship

### Project work with the

**JKU**  
JOHANNES KEPLER  
UNIVERSITÄT LINZ

林茨约翰·开普勒大学的高分子产品工程研究所目前正在开展一项有趣的项目有限元计算, 有限元公式是一种普遍应用于微积分方面的代数运算方式。最常见的是在对称固体的强度和材料变形上面的应用

约翰·开普勒大学为Seal Maker研发了一种计算方式, 可以准确的模拟出夹具的力度和其引起的材料的变形, 通过对不同材料的应用, 使得有限元模拟方式更加准确

这个基于有限元运算方式得出的大量数据都会被应用在我们的密封件生产中, 使得我们的客户最终受益, 这也是我们Seal Maker的服务宗旨

\*高分子产品工程研究所是约翰·开普勒大学为了进行高分子研究在2009年成立的, 该研究所的工作重心在于通过对CAD和有限元计算模式的应用, 对加强型和非加强型塑性材料或塑性-金属混合材料的结构研究



模拟 - 在压力作用下密封件的形变  
Simulation - deformation of the seal under pressure

The Institute of Polymer Product Engineering\* at the Johannes Kepler University in Linz is the venue for an interesting project on the calculation of finite elements. The finite element method (FEM) is a general numerical procedure for solving differential equations. It is best known for its use to investigate consistency and deformation on solid bodies with complex geometrical shapes.

The colleagues at the Johannes Kepler University created calculation models for Seal Maker in order to calculate, for example, the contact pressure of sealing lips or to simulate the deformation of the seal under pressure. For this purpose, various material analyses were carried out to incorporate these models in a FEM simulation.

The useful insights of the calculation model based on the finite element method will then be incorporated in the design of the seals, which will finally be beneficial for Seal Maker's customers, since our activities focus first of all on them.

\*The Institute for Polymer Product Engineering (IPPE) was founded in 2009 as part of the Polymer Science and Engineering Programme at JKU and works on teaching, research and services for the plastics industry. The main research areas focus on the design (CAD) and calculation (FE and other numerical methods) of components made of unreinforced and reinforced plastics or plastic-plastic and plastic-metal hybrid material systems, as well as the investigation of the structural integrity of plastic and composite components.



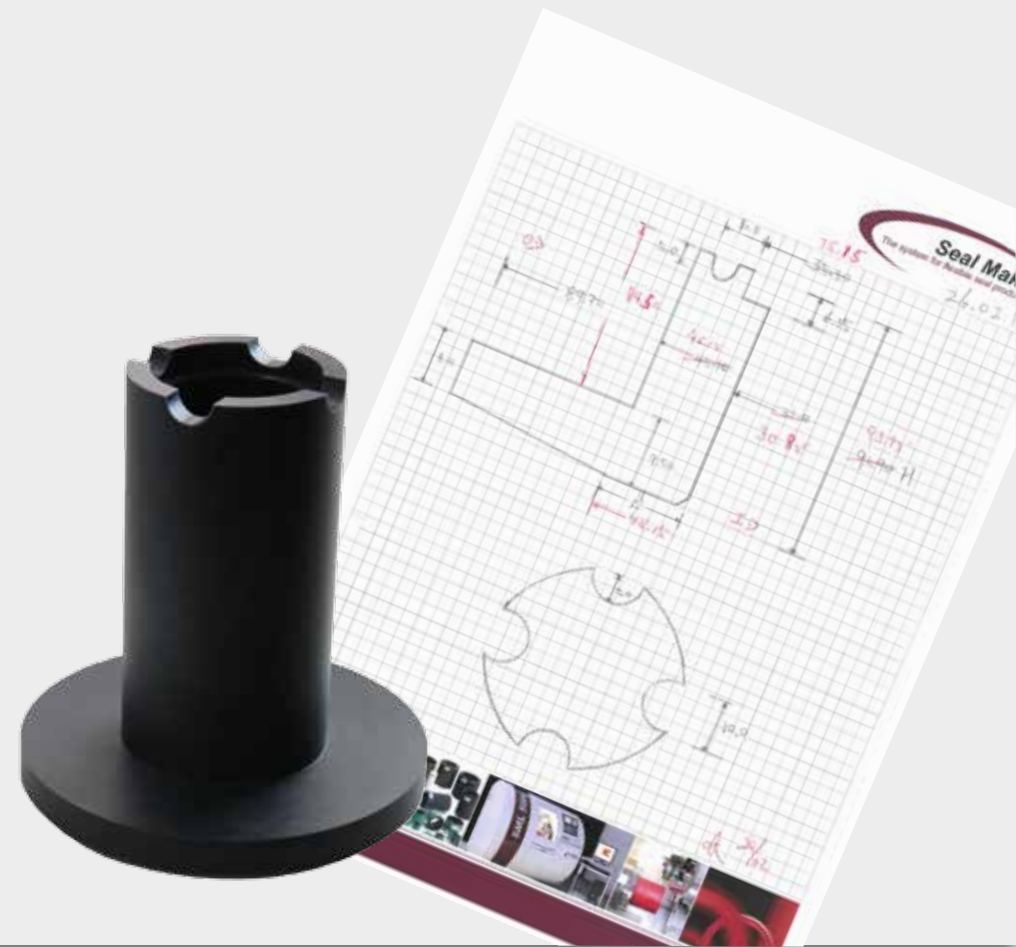
# OUT OF LIMITS

以客户为导向是我们Seal Maker的优势所在。根据客户的要求生产研发密封件，在上一期的密封科技专刊中我们推出了“超越极限”专栏，介绍在我们所做的特殊项目，其中客户对密封件的形状，大小，公差，材质所提出的特别要求，我们要超越自我，接受市场的在密封技术方面的挑战

One of Seal Maker's greatest strengths is its customer-focused approach. It is not unusual for us to custom-build specific customer requests. As part of the new series "Out of Limits", which was first presented in the previous issue of Seals Technology, we feature projects with special requirements on a regular basis, which need tailored solutions. These may relate to shape, size, profile, diameters and tolerances as well as customer-specific materials. We set no limits and look forward to any challenges of a seal-related kind!

## 密封件在重型起重设备的应用 / Thermoplastic flange use in a heavy-duty crane roller bushing

应用国家 Country	新加坡 Singapore
项目时间 Project start date	2.3.2016 设计图纸 2nd March 2016 customer drawing
使用材料 Material used	PA MoS2 (尼龙加二硫化钼) PA MoS2 (was specifically ordered for the customer)
特殊性 Particularities / challenges	<ul style="list-style-type: none"> <li>客户指定材料</li> <li>Customer-specific material (material behaviour during processing unknown)</li> <li>高度</li> <li>Height</li> <li>两面加工</li> <li>Two-sided processing</li> <li>轮廓加工</li> <li>Curved cut-off</li> <li>特制工具</li> <li>In case of a large order, new tools would need to be designed in order to enable one-sided processing</li> </ul>
供货时间 Delivery of the finished seal	19.4.2016: 20个供测试用产品 19th April 2016: Delivery of 20 parts for testing purposes 28.7.2016: 完成件 28th July 2016: another 180 pieces



## Software Update

不仅仅是在产品研发方面，而且在机器软件开发方面我们也走在了时间的前面。我们升级了Seal Maker 软件4.0版本，升级后的新版本为4.4.5，2017年6月起您可以在我们的官网上进行下载。

更新如下：

- 增加了密封截面图
- 增加了公差
- 修不了之前在PRO/PRX方面的缺陷
- 组合密封件的公差

更详细的信息您可以在我们网站中的SML软件4.0版本工作手册找到，您也可以通过如下链接咨询我们相关工程师sml-service@seal-maker.com



Seal Maker is not only up-to-date in terms of product development, but also has its finger on the pulse of the time regarding the continuous development of its machine software. In this context, the Seal Maker Software 4 has been further improved. The update with the version number 4.4.5. includes innovative features and has been available for download since June 2017 in the login area of our website, as usual.

What's new:

- Expanded profile range
- Expanded tolerance sheets
- Error correction when loading PRO/PRX files
- Displaying tolerance sheets for multipart seals

Additional details and information on functions and new features may be obtained from our SML System Software 4 brochure on our website or via the respective update notes. Should you have any further questions about your SML System Software, please contact our service technicians via »sml-service@seal-maker.com.

# Opening China



是时候了，我们很高兴的告知大家，Seal Maker上海公司成立了，上海公司的成立将利用其优越的地理位置和完善的基础设施，更好的服务中国客户，在这里让我们预祝其成功！

Finally the time has come! We are very pleased to announce the opening of the new Seal Maker branch in Shanghai. As one of the most significant industrial cities in the People's Republic of China, Shanghai was selected due to its ideal geographical position and perfect infrastructure.

With this new branch, Seal Maker aims to provide even better and more intensive support on site to its Chinese customers and intends to develop the market further. We are already looking forward to excellent business opportunities!

## Improved Production Procedures

为了满足不断增加的市场需要，Seal Maker 也在不断的优化其生产流程。为此，我们的CNC研发工程师和流程方面的专家也把相关经验应用到不同的项目中。

材料清洁设备：

开发该项目一方面是为了优化产品标签程序，另一方面洁净的产品可也简化质量检测。经过对各种清洁设施和方法的广泛测试，我们决定采购一个半自动且环保的清洁设备，可被很好地整合在现有的工作流程中以确保万无一失。该清洁设备将于9月安装，不仅确保每一个产品的完美整洁，同时也支持我们员工的工作以及提高我们的效率。

聚氨酯生产磨具：

聚氨酯生产磨具通常会磨损严重，尽管定期进行维修和更换各种单一模具，但也是时候获取一些新模具了。根据过去几年的经验和我们的生产人员的建议，我们的技术人员对现有模具结构进行了修订和修改。钢模具已被特殊塑料材料所制成的模具所取代。因此，脱模剂的使用以及模具的重量都得到了降低，取出工艺也得到了促进。因此，聚氨酯制成部门员工的日常工作将大大简化。模具将于9月初投入使用。如果这种模式被验证有效，现有的钢模具将被新系统逐步取代。

In order to keep up with the increasing requirements of the market, production procedures at Seal Maker are constantly being improved. For this reason our CNC development and process engineering specialists have put their experience in several common projects.

Cleaning Station for Materials:

This project was developed in order to optimize the product labelling procedure on the one hand as well as to facilitate quality control by optimally cleaned products on the other. After extensive testing of various cleaning facilities and methods, we have decided to purchase a semi-automatic, environment friendly cleaning station which can be integrated in existing working procedures without any problems. The station will be installed in September and not only guarantee a perfectly cleaned product, but also support our employees at their work and increase our capacities.

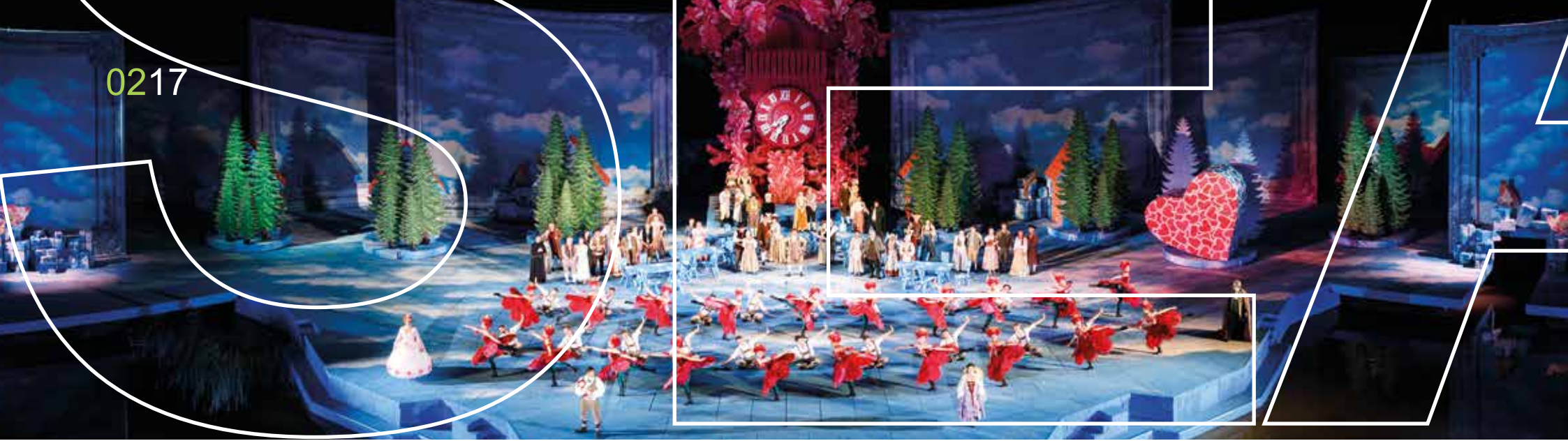
Molds for Polyurethane Production:

Molds for polyurethane production are usually subject to great wear. Despite regular maintenance and replacement of various single molds it was time to acquire a series of new molds. Based on experiences of the last years and on suggestions from our production staff, our technicians have revised and adapted the existing molds concept. Steel molds have been replaced by molds made of special plastic material. As a result, the use of mold release agent as well as the weight of the molds have been reduced and un-molding has been facilitated. Thus, the daily work of our colleagues in the polyurethane molding department will be significantly simplified. The molds will be handed over to our production department at the beginning of September. In case this pattern should prove effective, the existing steel molds will be replaced step by step by the new system.





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## Grüß enk Gott...

今年的7月7日将在Mörbisch 的Seefestspiele节首映“Der Vogelhändler”，2017年的夏天对于Seefestspiele Mörbisch来讲是一个非常特别的季节，因为今年是其60周年纪念日，在1957年开始的Seefestspiele Mörbisch，以其歌剧和音乐闻名于世，每年的参观者多达15万人次。

作为该节日的广告策划人，我们Logorhythmus团队将全程参与，并组织策划“Der Vogelhändler”的首映礼

今年Mörbisch 的Seefestspiele 节 将在7月12到8月25号之间举行。在节日期间将演出著名歌剧“Gräfin Mariza”。我们期待在节日期间同事会在那里出现

.. was the message at the premiere of "The Vogelhändler" (The Bird Seller) at the lake stage in Mörbisch on 7th July. The summer of 2017 is a special season, as the Seefestspiele Mörbisch (Mörbisch Lake Festival) celebrated its 60th anniversary this year. Embedded harmoniously in the beautiful natural scenery of the Lake Neusiedl, the lake stage has been the venue for famous operettas and musicals since 1957. With approximately 150,000 visitors, the Mörbisch Lake Festival is the biggest operetta festival in the world.

The colleagues of Logorhythmus, were, of course, also on site to convince themselves of the fantastic stage scenery. After all, they had created and designed the entire advertising campaign for "The Bird Seller" - from posters to programmes -...

Next year, the Mörbisch Lake Festival will take place between 12th July and 25th August. Emmerich Kálmán's famous operetta "Gräfin Mariza" (Countess Maritza) will be shown. We would be delighted to welcome any Seal Maker customer at this unique open air event.



## URBAN GARDENING AT SEAL MAKER

在绿色的环境中稍作停留会带来意想不到的效果。Seal Maker的管理层在公司建造了一个绿色生态园，在那里您可以看到西红柿，蓝莓，草莓等植物，我们的员工可以在那里小憩。

今年植物还在生长，明年我们将那里享受绿色生态园给我们带来的惊喜

Time spent outdoors can sometimes work wonders. That's what Seal Maker's management thought, when they set up a small wellness oasis outside the Seal Maker headquarters in Pöttelsdorf, including raised beds for tomatoes, raspberries and strawberries, where staff occasionally can relax physically as well as mentally.

This year, the plants will still need to grow, however, the raised beds should produce plenty of fruit next year, so that the staff can enjoy with all their senses.



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