

# SEALS

TECHNOLOGY



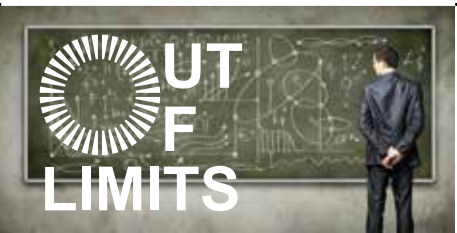
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客户杂志 *Magazine for customers and partners*



## "MACHINED, NOT MOLDED."

Out of Limits



Seal your brand.



Food industry approval





## EDITORIAL

敬爱的读者，  
就在当下我们充满活力、怀着许多新想法计划和开始第二年具体项目之前，我们想借今年2018年最后一版的Seals Technology向您通报一下最新消息，并回顾即将结束的2018年。

Seal Maker在2018年有着非常令人满意的业绩表现，与去年的成功实现了无缝对接。客户对Seal Maker的车削机床以及原材料的需求仍然很高，我们从以前没有业务关系的国家获得一些新客户，这些都令我们骄傲。至此，我们在全球开展业务的国家目前已经达到了70个 - 分布在各大洲。尽管这种发展令人满意，但由于地缘政治条件，它也带来了一些挑战。例如，某些地区的旅行警告级别已经增加，这使得在这些地区销售的机削设备的维护和维修工作变得更加困难。

这也是Seal Maker努力在主要出口国建立自己办事处的原因之一。新加坡分公司于2005年开始运营，上海分公司于2017年开始运营，而对于南美地区，一位经验丰富的本地出口经理已经为我们工作了几个月。他为我们在该地区的客户提供积极支持。

今年不太有利的是四氟乙烯的价格上涨。由于原料价格上涨，四氟乙烯的价格在过去一年中一再上涨。到目前为止，我们已经尽可能把价格上涨对客户的影响降到最低。由于我们现在也面临着越来越多的原料和人力成本的上涨压力，我们不太可能保持2019年的所有商品价格不变。按照当前的预测，在不久的将来，市场将放松并且可以预期商品价格的稳定。

在本期Seals Technology 客户杂志中，我们为您准备了一些有趣的主题。我们告知您Seal Maker及其制造商如何命名使用材料的商品名称。我们报告了食品行业中密封材料使用的严格指导原则，并报告我们挤出试验的现状（另见上一期“密封技术”）。

我們還將展示2019年的新海報系列。它的座右銘是“機加工而非模塑”。我們希望您喜歡這些時尚的作品。

最后，感谢您对我们的信任和一直以来的良好合作。祝您圣诞快乐，新年快乐！我期待着继续与您进行建设性合作，一起从事更多有趣的项目。

谨上，  
Johann Glocknitzer

Dear Readers,

just before starting the new year filled with fresh drive and a whole raft of new ideas, plans and scheduled projects, we would like to take the opportunity to inform you about recent developments since last Seals Technology issue, and take a brief look back on the ending year.

Continuing last years success, Seal Maker's performance in 2018 was rather impressive; the demand for SML machine systems and our semi-finished products remains robust.

We also managed to acquire a number of clients in markets new to our company; the company now operates in >70 countries all over the world. This positive development has also raised several challenges due to the realities of geopolitics and global policy; one such issue was an increase in the frequency of travel alerts for certain regions, complicating maintenance and service work on the machine systems sold there.

Due to changes in the political climate, international free trade has not developed as solid as expected. Trade barriers such as tariffs, sanctions and other new obstructions to trade enacted in the interest of protective measures by certain countries have complicated global trade significantly.

This is one of the motivating factors for Seal Maker to work toward establishing its own subsidiaries in its main export markets. For instance, our Singapore location started operations in 2005, the Shanghai branch followed in 2017, and an experienced export manager has been overseeing operations in South America for several months now. He actively supports our clients in this region.

PTFE price adjustments have been a detrimental factor this year. As a result of rising commodity prices, PTFE prices increased several times during the period.

We have not passed on price increases to our clients so far; however, as we are now also faced with rising energy and labor costs, we expect that we will not be able to keep all of our prices unchanged throughout 2019. On the other hand, current forecasts suggest that the market may well ease in the near future and bring about a stabilization of raw material prices.

For this Seals Technology issue we have prepared some interesting topics. For example, you will learn about the trade names and manufacturers of the materials used at Seal Maker. We report on the strict guidelines that apply when using seal materials in the food industry, and update you on the status of our extrusion tests (see previous Seals Technology issue).

We are also presenting the new poster series for 2019. It is based on the motto "Machined, not molded." We hope that you like these stylish works.

Finally, I would like to thank you for your confidence in us, and our excellent cooperation this year. I wish you a Merry Christmas and a successful New Year! I am looking forward to further collaboration and common projects.

Yours,  
Johann Glocknitzer

谈到Tesa 德莎胶带, Post-it报事贴和Edding艾迪油漆笔, 这些名词都和什么有关呢? 当然, 所有这些都是办公用品。那么谷歌, iPod 和宝丽来呢? 以上都是些信息技术术语。在密封行业, 我们经常谈论AFLAS, VITON或TEFLON。 这些名字有什么共同之处? 它们是注册商标或名称, 由于其市场渗透而突然成为该类产品的代名词。

您是否想过我们能用日常用语代替我们的密封行业的哪些术语呢? 我们将向您介绍行业中使用的一小部分知名商品名称, 以及其背后的材料名称或制造商。

What do Tesa\*, Post-it\* and Edding\* have in common? They are all office items. What about Google\*, iPod\* and Polaroid\*? These are key brands in information technology. In the sealing industry, AFLAS\*, VITON\* or TEFLON\* are widely mentioned. What do these names have in common? They are either registered brand names or names that have become synonymous with a product group because of their market penetration.

Have you ever thought about terms in the sealing industry that are substituted by brand names in everyday language? Find a small selection of well-known trade names used in the industry, as well as the material names and manufacturers behind them.

Trade name*	Abbreviation	Product name	Manufacturer and/or registered by
Aflas	TFE/P	Tetrafluoroethylene propylene elastomer	Asahi Glass Co., LTD.
Viton	FPM	Fluorelastomer	DuPont TM
Teflon	PTFE	Polytetrafluoroethylene	DuPont TM
Kalrez	FFKM	Perfluoroelastomer	DuPont TM
Nylon	PA	Polyamide	DuPont TM
Stepseal	-	O-ring pre-tensioned rod seal	Trelleborg Sealing Solutions
Plexiglas	PMMA	Polymethylmethacrylate, acrylic glass	Evonik Röhm GmbH
Simmering	-	Shaft-sealing ring	Freudenberg Sealing Technologies

\*所有商品名称通常是受保护的注册商标。在表格中, 名称后面省略了名称®。

\*All trade names are generally registered and protected trademarks. The ® symbol was omitted after the names in the table.

## At your Service



**Tiago Medeiros**

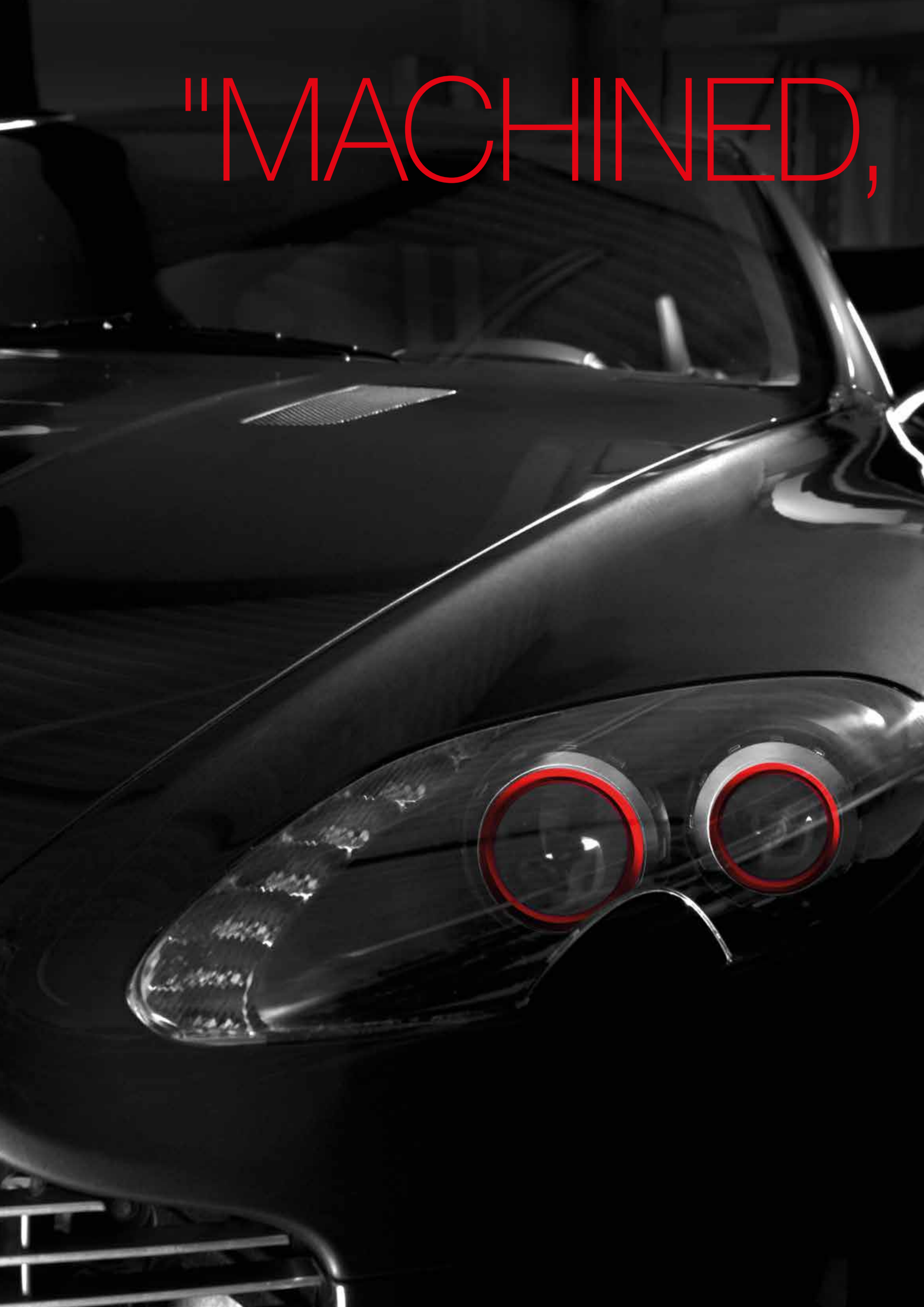
由于不同地区存在时差, 往往难以快速回答客户的询问。除了我们在新加坡和中国的子公司, 我们现在还可以在当地为南美客户提供直接服务。

从现在开始, 来自圣保罗的新同事Tiago Medeiros将亲自照看Seal Maker的整个南美市场。Medeiros先生在著名的密封行业公司拥有丰富的从业经验, 并会讲葡萄牙语、西班牙语和英语。在过去的12周里, 他在奥地利的公司总部完成了强化培训计划, 他现在非常熟悉我们的产品。凭借这些, Medeiros先生将来能够更加集中和迅速地为我们南美市场客户提供服务。

Due to varying time zones in different regions it is rather challenging to respond quickly to customer needs. Therefore we have established branches in Singapore and China. Our new colleague Tiago Medeiros from Sao Paolo is in charge of our customers in South America.

He services the entire South American market and looks back on a long and successful career at well-known sealing industry companies. He speaks Portuguese, Spanish and English. He attended an intensive 12 weeks training at the Seal Maker headquarter in Austria, meaning he now has an excellent understanding of our products. This knowledge will enable Tiago to attend to your requirements and concerns even more comprehensively and promptly.

"MACHINED,



# NOT MOLDED!"



今年Seal Maker将再次为客户推出全新的Seal Maker宣传画报系列,在这期系列中将会出现全球最有名的特工.在他2019年秋季的新任务开始之前,我们把Seal Maker的产品和电影中必备的道具为您一起呈现在画面中

在“要车削,不要模压“口号下,画报结合了“魅力,传统,和高贵,把超级特工和Seal Maker两者的共性很好的展现:长期忠诚可靠,服务于远大的目标.

请您自己想象这个画面!如果您希望得到我们最新的一期2019画报系列“要车削,不要模压”欢迎来信: [marketing@seal-maker.com](mailto:marketing@seal-maker.com)



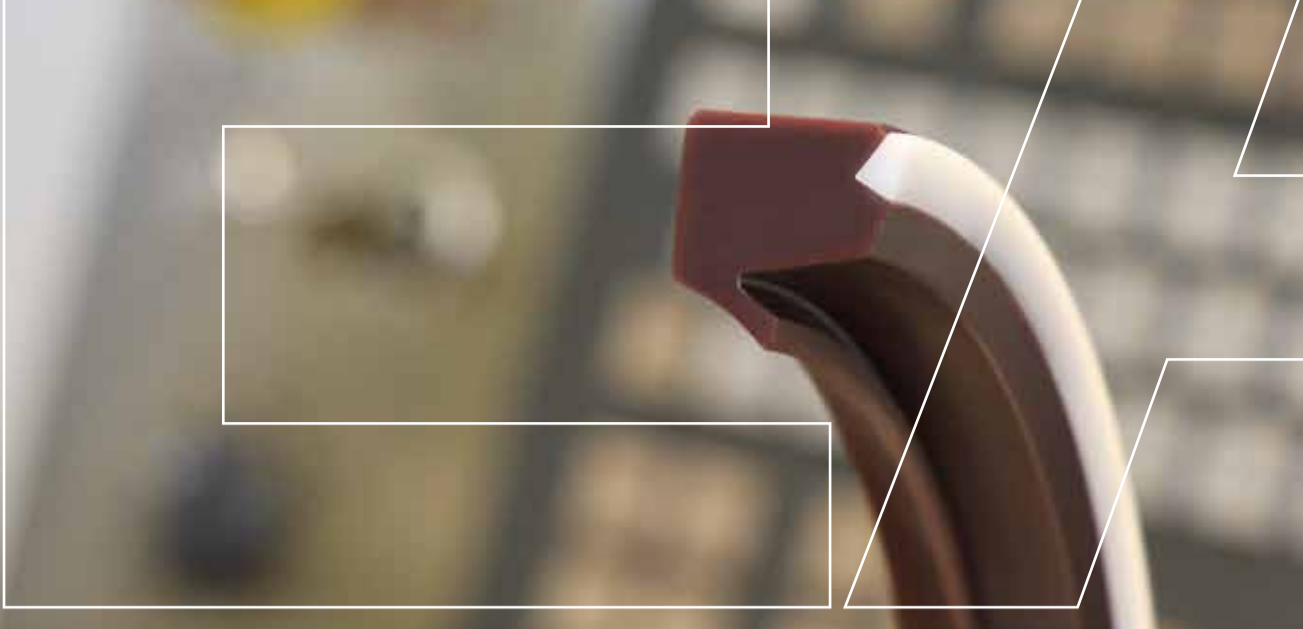
Once again we have designed an amazing poster series for our customers. This time we take you on a journey into the world of the most famous top secret agent. Before he starts his new mission in autumn 2019, we stage some well known requisites of the familiar character with some of our trusted Seal Maker products.

With the theme „Machined, not molded.“ the poster series combines charisma, tradition und elegance. Even then showing common aspects of the well known secret agent and Seal Maker products. For many years both represent a unique reliability and serve a higher purpose.

So convince yourself about our new designs.

You can order the new poster series „Machined, not molded.“ by now without fees. Just send us a mail to [marketing@seal-maker.com](mailto:marketing@seal-maker.com)

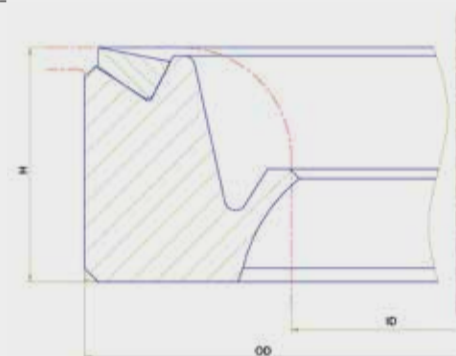
# OUT OF LIMITS



„导向叶片密封“项目 Vane seal	
客户/ 国别 Region	瑞典 Sweden
项目开始时间 Project start date	五月 2018 May 2018
应用材料 Material used	U550 和 PA U550 and PA
客户要求 Customer requirements	提升使用寿命 Increased service life
特殊功能 / 挑战 Particularities / challenges	由於迄今為止安裝的密封件的沉積物負載導致高磨損，因此降低了使用壽命。 High seal wear and reduced service life due to high sediment load
密封成品件已交貨 / 客戶反饋 Delivery of the finished seal / customer feedback	客戶反饋預計在1月份獲得 Customer's feedback expected in January

Seal Maker的一大优势是以客户为中心。客户通过查询定制产品已经不是一个例。我们的新“Out of Limits超越极限”系列展示了需要特殊解决方案的特殊要求的项目。这可能涉及形状、尺寸、轮廓、直径和公差以及定制材料。我们不会设限，并期待尝试各种密封技术类型的挑战。

One of Seal Maker's major strengths is our customer focus. Custom designs based on specific customer requirements are our daily business. Our new "Out of Limits" series presents projects with special requirements that need unique solutions. These can relate to shapes, sizes, profiles, diameters or tolerances, as well as to custom materials. We set ourselves no limits and are looking forward to new sealing-related challenges.



## EXTRUSION TEST RIG FIRST RESULTS

自从安装新的挤出试验台（我们在上一期中报道）以来，Seal Maker内部已经通过测试和检验。为了确定挤出工艺过程，可以在高达2800 bar和120°C的条件下模拟材料。第一阶段测试已经完成，我们可以在下表中为您提供第一手比较值。

该表显示了600巴/ 50 °C/ 168小时的挤出试验结果。与竞争对手相比，评估材料PU U500的挤出凸耳的长度(mm)。

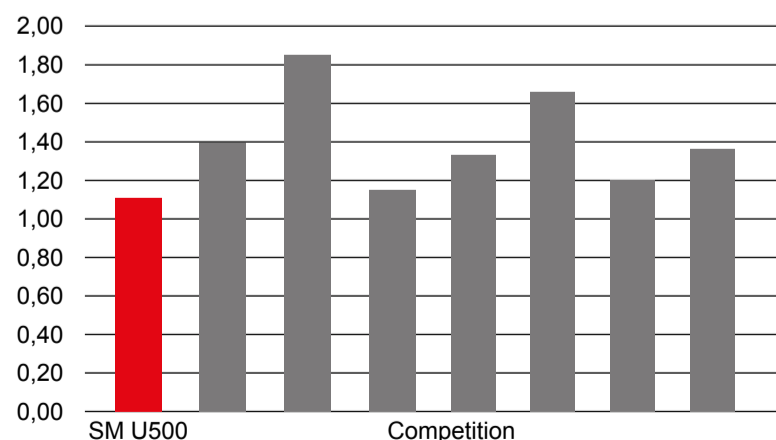
请进一步阅读和详细了解测试和测试结果。我们会及时向您通报最新的密封技术有关问

Since the installation of the new extrusion test rig, Seal Maker has conducted some thorough testing and verification work, which we reported on in the previous issue. Materials can be simulated under conditions of up to 2800 bar and 120 °C to determine extrusion behavior. The first test series has now been completed, giving us the chance to show you first comparison values in the table below.

The table shows the findings of the Extrusion test – 600 bar/50 °C/168 h. The length of the extrusion gap in mm of PU U500 material was evaluated in comparison to competitors.

Find out more about further tests and results in upcoming Seals Technology issues.

### EXTRUSION TEST - 600 BAR / 50°C / 168 H



SM U500  
U500 profile section after the test (see table for parameters), very low extrusion visible



Competitor  
Competitor profile section after the test (see table for parameters), significantly higher extrusion visible



# FOOD INDUSTRY APPROVAL

在食品生产中，高要求和可靠性是首要任务。作为您在密封行业的合作伙伴，我们不仅希望为您提供高质量的产品，还提供相关的必要证书。特别是在食品行业，我们通过持续的外部 and 内部材料测试，仔细检查，使我们的产品符合各种严苛的法规和条例的要求。

Seal Maker 的工程师们通过熟悉最新法规，并迅速响应政府和监管当局对于食品行业要求的变化。除此之外，我们的化合物符合“肯定列表”的规范。此外，我们的材料符合欧盟和FDA法规的迁移测试上限。我们在线提供的所有证书都是符合法律法规要求的最新版本。如果您仍有疑问，我们也随时准备为您服务。

当前我们食品材料的认证可以在我们网站上的客户登录区域中找到：  
[www.seal-maker.com](http://www.seal-maker.com)

以下是食品级材料认证的最重要指南概述：

Strict standards and reliability are main issues in food production. As your partner in the sealing industry, it's our priority to provide you with high-quality products as well as the necessary certifications. Food sector rules and regulations are strictly kept to by continuous external and internal material testing.

Seal Maker technicians are familiar with the latest regulations and respond to regulatory changes promptly. Among other aspects, our compounds meet a "positive list" specification. Our materials also comply with the upper migration test limits set in EU and FDA regulations. All our certificates as proof of our compliance with the latest statutory regulations are available online. Should you still have any questions, please do not hesitate to contact us.

As usual valid food certificates are available in the login area of our website:  
[www.seal-maker.com](http://www.seal-maker.com)

The following is a summary of the most important guidelines for the certification of materials suitable for food:

EU FRAMEWORK REGULATION (EC) NO. 1935/2004
SINGLE REGULATION & OTHER EU REGULATIONS FOR CERTAIN MATERIALS  Commission regulation (EU) No. 10/2011 Regulation specifically for plastic materials and articles intended to come into contact with food
NO SPECIFIC MEASURE (REGULATION) OF EU  Elastomers & silicones
NATIONAL REGULATIONS  For example: Elastomer Guideline (Drinking Water Ordinance), KTW, W 270, ON EN 1186-14

FDA - U.S FOOD AND DRUGS ADMINISTRATION TITLE 21 – FOOD AND DRUGS PART 177 - Indirect Food Additives, Polymers
21 CFR § 177.1600  Polyethylene resins & Carboxyl modified
21 CFR § 177.1680  Polyurethane resins
21 CFR § 177.2600  Rubber articles intended for repeated use

## SML500e safety check

高质量和安全是我们进行开发、组装、调试和操作车削机床的最高目标。今年7月，SML500e机器系统再次按照欧盟机械制造条例2006/42 EC进行TÜV一致性测试。

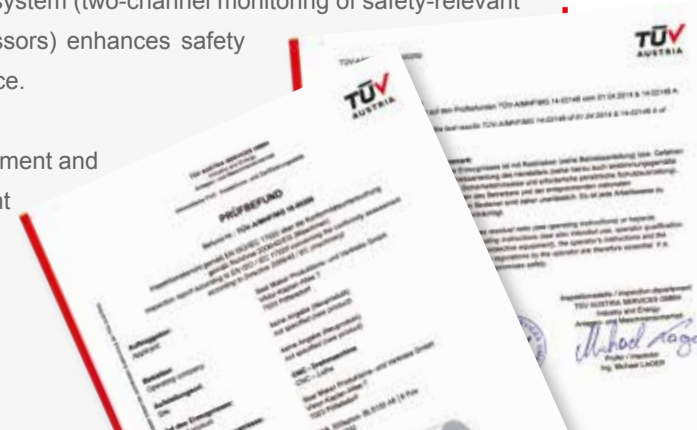
我们的车削机床系列在不断发展。具体而言，SML500e已扩展到使用最新的控制类型OiTF，具有更快的控制性能。我们还引入了舒适的15英寸显示器，这使得机器操控变得更加容易。在新型机器中，乍看之下无法识别，但是我们的安全标准得到了改进。双重检查安全系统（由两个独立处理器对安全相关区域进行双通道监控）和新的门互锁开关也有助于优化机器，同时提高安全性。

SML500e的符合性评估和相关风险评估已成功完成并由TÜV确认。

Excellent quality and safety are the main priorities during the development, assembly, commissioning and operation of our machines. In July, the SML500e machine system underwent another TÜV conformity assessment in accordance with EU's Machinery Directive (2006/42/EC).

Our machine systems are subject to continuous improvement. The SML500e for example has been upgraded with the most modern control unit, OiTF, which provides faster processing power. The convenient 15" screen makes working on the machine a lot easier. Not visible at first glance, the machine's safety standards have also improved. So the dual-check safety system (two-channel monitoring of safety-relevant areas by two independent processors) enhances safety and improves machine performance.

The SML500e's conformity assessment and the associated risk assessment were completed successfully and confirmed by TÜV.





# AID PROJECTS

与往年一样，Seal Maker将再次致力于承担社会责任并回馈社会。我们将捐款来支持选定的区域和国际项目。我们选择捐赠对象，重点在于捐赠目的和捐赠款项落实到捐赠对象手中。这种传统的筹款活动反映出Seal Maker的社会责任，公司对外部及员工的回应也很重要。

As in previous years, Seal Maker is taking over social responsibility and supports well-chosen regional and international projects with donations. Within the projects we focus on an effective allocation of the aid. This traditional fundraising highlights the importance of social commitment for us. Seal Maker acts equally as responsibly towards the outside world as it does towards its employees.

**Sterntalerhof** 星谷庄园 - 儿童临终关怀和家庭旅馆布尔根兰州，奥地利独特的项目，帮助有临终儿童的家庭度过生活中最困难的阶段。通过周全的门诊和移动护理，帮助长期家庭困难和家中有垂死儿童的家庭。Sterntalerhof 星谷庄园也是一个度假胜地，整个家庭可以在一段时间内充电，重新获得信心、安全和生活乐趣。

This unique Burgenland-based project supports families in extremely difficult situations. Families with children who are severely, chronically or fatally ill are supported by an extensive range of outpatient and mobile care services. Sterntalerhof is also a recreation resort where the whole family can relax for a while, so as to regain a feeling of confidence, security and joy.

## STERNTALERHOF



## PLAN INTERNATIONAL

国际计划通过“停止贩卖儿童”项目，致力于全球儿童保护。阻止贫困家庭的孩子被家人一次又一次贩卖，成为贩卖儿童的受害者或者被迫卖淫。该组织活动的目的是为儿童提供未来和安全保障，并提供培训，帮助他们从创伤中恢复。

Plan International's "Stop Child Trafficking" project is committed to child protection all over the world. Girls and boys who grow up in poverty are given away by their families and have to manage their life under adverse circumstances. Therefore the aim of Plan International's activities is to give them a future, offer them security, provide training and help them cope with the traumas they have gone through.



### INT. HEADQUARTERS

Seal Maker Produktions- und Vertriebs GmbH  
Viktor-Kaplan-Allee 7  
7023 Pöttelsdorf  
AUSTRIA

☎ +43 (0)2626 20085  
✉ +43 (0)2626 20085 66  
office@seal-maker.com

### ASIA - PACIFIC

Seal Maker Asia Pacific Pte. Ltd.  
#03-29 AMK Techlink Bldg.  
Blk. 20, Ang Mo Kio Industrial Park 2A  
Singapore 567761

☎ +65 64540568  
✉ +65 65524730  
singapore@seal-maker.com

### AUSTRIA

Seal Maker Dichtungstechnik GmbH  
Industriestraße Ost 7A  
8605 Kapfenberg

☎ +43 (0)3862 33 5 33-0  
✉ +43 (0)3862 33 5 33-3  
austria@seal-maker.com

### CHINA

速麦密封科技(上海)有限公司  
上海市闵行区莲花南路2899号莲谷科技园6号楼  
102室  
Seal Maker China Co., Ltd.  
Rm 102 Building6, No.2899 South  
Lianhua Rd, Shanghai China

☎ +86 21 5430 6361  
china@seal-maker.com