

# SEALS

TECHNOLOGY



0410

客户杂志 Magazine for customers and partners

## Welcome to Seal City!

Milestones 2010

SML 700plus

ISO 9001:2008

[www.seal-maker.com](http://www.seal-maker.com)



We'll be there!

2011



# Review 2010



亲爱的读者，

光阴荏苒，一个激动人心的一年即将流逝，但它却久久留在我们的记忆中。随着厂、仓库、经营部扩建工程的先后竣工，尤其是新一代数控机器SML 500e的推出，Seal Maker跨入了一个全新的纪元。

从进口机器元件再进行装配开始，直至成为如今独立的机器制造商，是一次智勇兼全的行动。而事实也证明了我们迈出的这一步是正确的，非常成功的。这些由2010年生产并交付的机器的可观数量，证明了我们的销售纲领的正确性。不仅如此，还有所有的新老客户都100%地认同这新一代的设备。这无疑给了我们双倍的理由，为本年度的业务感到意满志得。

此外，企业内务营运工作也很出色。随着2010年春季银行和金融危机的逐渐消退，公司整个业务也再度急剧上升。结果是：订单像洪流般地涌向我们。在一段时间里，甚至把我们推到了接收能力的极限。尽管我们已经加倍努力力争按期交货，但在这方面还是没有100%的做妥善。通过和客户及合作伙伴的对话交流，我们达成共识，采纳双方都能接受的方案。对于他们积极的配合，在此我向他表示衷心的感谢。

长久以来，正因为我们习惯于在短时间内应对不断增长的业务，所以我们早就又可以如您所期望的，提供及时、有条不紊的服务。目前我们有100多名员工在公司的驻扎地Pöttelsdorf及另外20名分别在Kapfenberg, Linz, Brasov (罗马尼亚)和新加坡为您待命、服务。

对于2011年，我们踌躇满志又充满了计划和想法。不过，为避免透露过多，目前我还只能告诉您 - 2011年我们的计划对您们大家每位都会有意义：内容涉及到扩大您们在机械领域和在材料领域上的业务基础扩建。

最后，我要感谢今年刚与我们建交的新客户及我们长期的老客户对我们的信任。并祝您们节日快乐，2011年一帆风顺！

您的

Johann Glocknitzer



Dear readers,

A tantalizing year, which will without a doubt be remembered for quite some time, is about to end: With the completion of the factory extension for production, warehouse and offices – and most of all with the introduction of the new machine generation SML 500e – a new era has begun for Seal Maker

The step up from assembling to producing machines was a risk, but one which has since proved justified and successful. Not only the impressive number of sold machines since May gives proof to this sales concept. The fact that both, existing long time customers as well as newcomers, have selected this machine to nearly 100% doubles our reasons for being happy with this fiscal year.

In-house, too, there was quite some movement. With the abating of the banking and financial crisis in spring 2010, the business as a whole experienced a strong increase. The consequence was that we were flooded with orders which for some time brought us to the limits of our capacity. Despite our best efforts to keep up with the requested delivery times, we did not succeed 100%. However, in the communication with our customers we have always been able to find a solution suitable for all parties. I take this opportunity to thank all of them for their willingness to cooperate!

As we have been used to being able to quickly react to an increase in demand, we have for quite some time now been able to offer you anew this timely service, you rightly demand from us. More than 100 employees at our location in Poettelsdorf and 20 more in Kapfenberg, Linz, Brasov (RO) and Singapore are at your disposal.

For 2011, again, we have a multitude of plans and ideas. I do not want to reveal too much, but I can already tell you that there will be something in it for EVERYBODY which will help you to widen the basis of your business. This refers to both machines and materials.

Finally, I would like to thank both our longtime customers as well as the new customers for the confidence they have in us, and wish you happy celebrations and all the best for 2011!

Yours,

Johann Glocknitzer



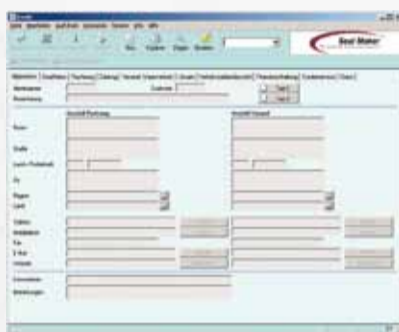
# 不负众望...Live up to expectations

... 藉着这句话我们在今天的春季宣布了一系列的创新计划。Seal Maker的年度审查表显示，我们不仅让这宣言兑现了，在某些项目上甚至远远超出指标。

... with these words, we announced several innovative projects last spring. The review of this year's events shows that the original goals have not only been reached, but even exceeded.

## Milestones 2010

01



### Enterprise Resource Planning

- >> 启用新的订单管理软件
- >> Start-up of the new software for order administration

02



### Go East

- >> 打入哈萨克斯坦市场
- >> Market entry in Kazakhstan

03



### PU advanced

- >> 聚氨酯的转换和新化学实验室的投入使用
- >> PU modification and start-up of the new chemical laboratory

04



### Double Seals

- >> 公司位于Pöttelsdorf的驻扎地扩建工程竣工，完成设备组装厅的扩建工作
- >> Completion of the factory extension at our headquarters in Poettelsdorf, and add-ons to our production machinery

05



### A new era has begun

- >> SML 500e 正式投入批量生产
- >> Start of series production of the SML 500e

06



### Go Brazil

- >> 全球首次交付2台SML 500e
- >> Dispatch of the first two SML 500e to export markets

07



### Seal your career!

- >> 12名新员工，到年底另有16名将陆续被聘任
- >> 12 new employees, 16 more to follow until the end of this year

08



### Go Asia

- >> 首次在亚洲安装第一台SML500e
- >> Installation of the first SML 500e in Asia

09



### New Media

- >> Seal Maker 在 You Tube
- >> Seal Maker on YouTube

10



### Get new technology first

- >> 成功参加于苏联莫斯科举行的MDA动力博览会以及在亚洲上海的PTC国际动力展
- >> Successful participation at the MDA Russia and at the PTC Asia

11



### Serial Success

- >> “5轴加工中心器”正式投入使用，以供批量生产机器元件之用
- >> Start-up of a 5-axis machining center for the series production of machine components

12



### The facts 2010

- >> 生产并交付18台SML500e，2台SML 700以及SML 700plus 和 SML 420各一台
- >> Production and dispatch of 18 SML 500e, 2 SML 700 and one each SML 700plus and SML 420 machines

# 旗舰 The Flagship SML 700plus

在数控机床全套系统中Seal Maker推出了SML 700 plus型号这一强大高性能的机床用于车削生产密封件。在性能功率和适用多样化的方面上，没有其它型号机床能与它论比美。在生产特殊密封件上的精确度和灵活性更是完全不被束缚。SML 700plus的亮点不仅仅体现在能精密生产直径长达720mm的密封件上，该驱动刀具机床更能实现轻松、迅捷地铣切和钻孔塑料件。

With the SML 700plus, Seal Maker presents the power pack in the range of complete machining systems for the production of lathe-cut seals. No machine outperforms the SML 700plus, neither in capacity nor in the range of applications. There are practically no limits pertaining to precision and flexibility for the manufacture of special products when working with this machine. The highlights of the SML 700plus are not only high-precision production of seals with an o.d. of up to 720 mm (!), but also the simple and fast milling and drilling operations of engineered plastic products with the live tooling.

## 技术参数

GE Fanuc Oi-T \*\* 操作系统

总功率 连接瓦数: 28 kVA

供电电压: 3x380 V, 3x415 V, 3x460 V, 50 Hz (可选)  
(可选择用于不同电压的变压器)

操控系统电压: 24 V

设备尺寸: L x B x H = 2.380 x 2.422 x 1.920 mm

冷却缸容量: 120 l

设备重量: 约3.950 kg

滑动托架

X-轴行程: 430 mm

Z-轴行程: 475 mm

X-轴行程、Z-轴行程快速档: 30 m/min

带驱动刀具的刀盘

12个驱动刀位

VDI- 接纳: 20

生产能力

最大床身回转直径: 720 mm

最大车削高度: 450 mm

常规3爪卡盘直径: 250 mm (最大3.500 rpm)

(附加液压卡盘直径: 210 mm)

棒料最大直径65mm

主轴箱

主轴头部: 圆柱体140 mm

主轴孔径: 73 mm

主轴发动机功率: 11 kW(S1), 15 kW(S2)

主轴转速范围: 30 - 4500 rpm (3500 rpm 经过材料持夹盘)

最大转速范围: 153 Nm

可选配置

Accu Finish 磨床, 用于打磨刀具

自动给料机

工具和配件用于保养、安装和操作

\*\* 当前型号以Fanuc技术水平为基础。

技术参数: 于2010年11月发布。保留变更

## TECHNICAL DATA

Numeric control system: GE Fanuc Oi-T\*\*

Total power installed: 28 kVA

Power supply voltage: 3x380 V, 3x415 V, 3x460 V, 50 Hz (selectable)  
(optional: Transformer for other power supply voltage)

Control system voltage: 24 V

Overall dimensions: L x W x H = 2.380 x 2.422 x 1.920 mm

Coolant tank capacity: 120 l

Machine weight: ~ 3.950 kg

Carriage

X axis travel: 430 mm

Z axis travel: 475 mm

X and Z axes fast traverse: 30 m/min

Tool turret with live tooling

No. of driven tool stations: 12

VDI tool shank type: 20

Capacity

Maximal turning diameter over bed: 720 mm

Maximal turning length: 450 mm

Diameter of standard 3-jaw chuck: 250 mm (max. 3.500 rpm)

(diameter of additional hydraulic chuck: 210 mm)

Bar capacity: 65 mm

Headstock

Spindle nose: cylindrical 140 mm

Spindle bore: 73 mm

Main spindle motor power: 11 kW (S1), 15 kW (S2)

Spindle speed range: 30 - 4.500 U/min

(3.500 rpm due to limitation of spindle)

Maximal spindle torque: 153 Nm

Optional

Accu Finish grinder for the sharpening of cutting tools

Bar feeder

Tools and accessories for maintenance, installation and operation

\*\* Numeric control in its current version as available through FANUC.

Status: 11/2010. Errors and omissions excepted.





**FSP (整套全功能系统包) 标价打25% 折扣**

绝大多数客户在订购SML设备的同时，都会选择“整套全功能系统包”。由此，使您在购置设备的同时，获得25%的红利折扣。

咨询FSP“整套全功能系统包”的详情，请联系我们

>> [office@seal-maker.com](mailto:office@seal-maker.com) | +43 (0)2626 20085

**FSP - 25 % discount on list price**

The large majority of Seal Maker customers chose the Full-System-Package upon ordering an SML machine. This way, up to 25 % can be saved off the list price by means of a bonus!

For more information about the Full-System-Package FSP, please contact us at

>> [office@seal-maker.com](mailto:office@seal-maker.com) | +43 (0)2626 20085

# Best of Seals

## 第二章 怎样保持温度

正如第一章中“最好的”所述，一件完美的作品是从正确选择合适的密封件开始。而这又取决于各种相关因素。概要一览：

温度 | 介质 | 压力 | 运动形式 | 应用时长

根据应用温度值预选

首先可根据应用温度值来迅速选择合适的材料。值得一提的是：最高应用温度限制和最低应用温度限制两方面必须都被考虑在内。

在高温下会发生什么变化？热塑性材料被加温后，物理的交联区会加速分解，这会直接致使机械性能产生变化。比如：硬度和拉伸强度下降。

在某一定的温度范围内，这是一个可逆性的过程，一旦冷却后，又重新交联，并返回原来的属性。但如果加热超过了一定的温度界限，热塑性材料就会失去它原本形态的稳定性，并有可能永久变形。

对橡胶材料进行加温，会导致它热老化，变脆易碎。硬度相应增加，断裂伸展率指数下降。因为加温会影响到聚合基体，所以这是不可逆的变化过程。在一定的条件下，它还能继续维持它的功能。但是，一旦被加热至可致分解的温度，聚合基粒就会迅速分解，直至材料完全毁坏。

在低温下会发生什么变化？

对于低温应用，应注意材料的最低应用温度极限。强烈的降温会导致材料失去它的弹性性能，失去密封作用必备的复位应变能力。

以下指标可帮您评估材料的最低应用限制范围：致使玻璃化温度—(Tg)和TR10值。Tg值表明材料达到此温度，会过渡到变脆易碎状态。TR10值表明材料在此温度下，还具有10%的弹性性能。当材料处于冻结的状态时，它的聚合链体并没有发生变化，因此，当温度回升时，材料重新恢复其原有的属性，这种状态变化是可逆性的。

提示：请参阅材料数据表

无论在高温应用还是在低温应用，或在设计密封几何截面时，都要考虑到材料的伸长系数。高温使密封件体积增大，相反，低温造成密封件萎缩。这有可能导致泄漏。

关于各种材料具体的应用温度值您可参阅Seal Maker 的数据表 >>

登录下载区[www.seal-maker.com](http://www.seal-maker.com)

在下期的季刊里您可以了解关于应用因素 - 介质

## Vol. 2 – How to keep up with temperature

As already outlined in the first part of our „Best of“ series, a perfect job starts with the selection of the appropriate seal material. This depends on various factors. Here are the most important ones in form of an overview:

Temperature | Fluid | Pressure | Type of movement | Action time

**Preselection on the basis of service temperature**

First of all, a fast preselection of the appropriate material can be done on basis of the service temperature. It is important to consider both the upper and the lower temperature limits.

**What occurs at high temperatures?**

When heating up thermoplastic materials, their cross linkage is increasingly loosened. This results in a change of the mechanical properties, e.g. the reduction of hardness and tensile strength. Up to a certain limit this process is reversible – the cross linkage is re-established upon cooling, and the original properties are regained. But if the temperature exceeds a certain limit, then the thermoplastic materials lose their form stability and might undergo a remanent/lasting deformation. With rubber materials, on the contrary, elevated temperatures cause heat aging. The material embrittles – its hardness increases, and the elongation at break decreases. Due to the fact that this process causes a deterioration of the polymer matrix, this process is NOT reversible. However, under certain circumstances the functionality might still be given. When heated up to the degradation temperature, the polymer molecules are increasingly broken up, leading to complete destruction of the material.

**What occurs at low temperatures?**

For low temperature applications, the lowest possible temperature must be taken into consideration. Severe cooling causes the loss of elasticity. The material loses its memory effect which is very important for seals. To estimate the minimum service temperature of a material the following characteristics are helpful: the glass transition temperature (Tg) and the TR10 value. Tg indicates the temperature at which the material attains a brittle, glass-like state. The TR10 value gives the temperature at which 10% of the material's original elasticity remains. As freezing does not cause any alteration of the polymer chains, the material regains its original properties when warmed up again. This means the changes to a material's properties due to freezing are reversible.

**A suggestion: Take a look at the material data sheets**

For both high and low temperature applications, the material's coefficient of thermal expansion must be taken into consideration when designing the seal geometry. High temperatures cause an increase in volume, low temperatures cause a shrinkage of the seal. This can potentially result in leakages.

The particular service temperatures are given in the Seal Maker material data sheets >> available for download in the log-in area at [www.seal-maker.com](http://www.seal-maker.com)

*In the next issue you will read about the application factor „Fluid“*



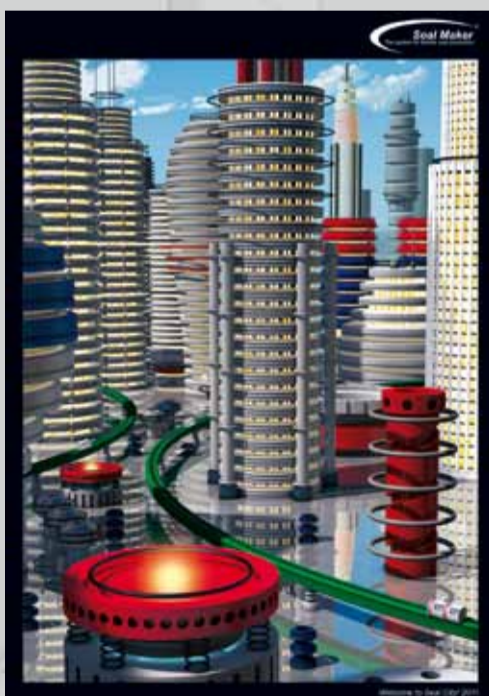
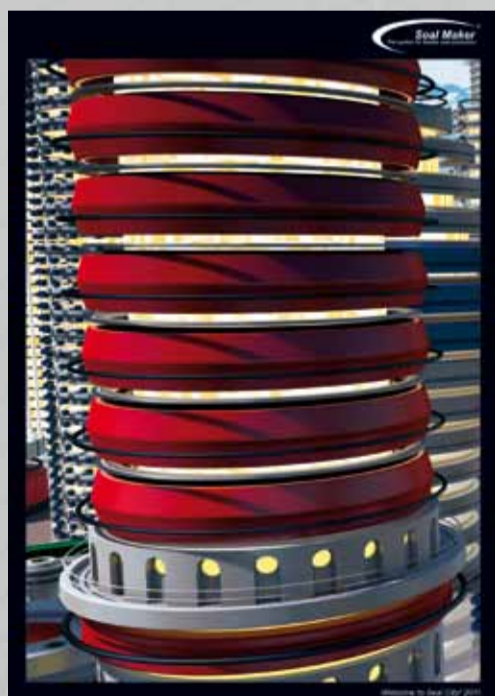
# Welcome to Seal City!



一个一切都围绕着密封的地方，在这儿您对未来密封的愿望、要求和请求都会成为今天的现实。一个精通密封生产技术的地方，一个随时欢迎作为客户或合作伙伴的您的地方。欢迎您到密封都市来！这是我们Seal Maker 2011年的座右铭。

A place, where everything revolves around seals. Where all wishes and demands and seal requirements for future applications are already an integral part of today's reality.

A place, where the seal production know-how is at home. And a place, where you as customer and partner will always feel at home. Welcome to Seal City! This is the Seal Maker slogan for 2011.



现在订购！

新版系列海报3张套或单独98 x 51 cm 环景格式从现在起您可以马上在我们这里免费预定

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Order now!

The new poster series can be ordered by now, free of charge, as a set of 3 or in landscape format 98 x 51 cm at

>> [marketing@seal-maker.com](mailto:marketing@seal-maker.com)

TIP



# Quality Assurance: ISO 9001:2008



## 质量保证: 通过ISO 9001:2008

重大里程碑的其中之一“不断提高质量”我们Seal Maker 在几年前就订立了。自2007年以来,企业的管理体系ISO 9001:2000 一直确保着质量和效益的提升。

今年10月份, Seal Maker 经历了一次为期两天的严格审查, 并再度通过考核。我们被授予了最新标准ISO 9001:2008. 从而保证了 Seal Maker与当前有效的质量法规同步。

此次审核程序内容不但包括询问所有的员工, 就连公司如何处理对客户需求和要求的具体事宜也在审查范围之内。您对我们公司和产品的任何意见我们都非常欢迎, 期望并感谢您能够做出反馈。有关您的经验之谈、请求和愿望我们随时欢迎您通过邮件发送 >> [office@seal-maker.com](mailto:office@seal-maker.com)

One of the most important milestones in terms of continuous quality improvement had already been reached by Seal Maker a few years back. Since 2007, the management system ISO9001:2000 has constantly assisted with the increase in quality and efficiency within the company. This October, Seal Maker was subjected to a rigorous two-day inspection and could, yet again, stand its ground.

The ISO certification was thus renewed and at the same time adapted to the ISO 9001:2008 norms. This means that Seal Maker fulfills all currently relevant requirements for quality assurance. An opinion poll among our employees was part of this inspection, as was the orientation of our company along the customers' wishes and demands.

We are as always very grateful for your feedback concerning our products and our company, especially with regards to the quality of our products and services. You are always welcome to transmit us your experiences, requests and demands via e-mail at >> [office@seal-maker.com](mailto:office@seal-maker.com)

## 员工圣诞派对 Xmas staff party

共同的硕果, 共同分享。

今年我们将在“Reisinger's Haus am See” - 一家充满浓厚节日气氛的湖景餐厅隆重举行精彩的圣诞派对。

12月17日, 届时全体Seal Maker 的员工都将得以热烈的欢迎。

对于我们的客户, 为了感谢您们一直以来的友好合作, 我们也为您准备了一份小礼物, 并将随同您下次的送货单一同呈上。

祝您节日快乐, 2011年事业腾飞!

您的Seal Maker 团队

What we achieved together should be enjoyed together too.

This is what we are going to do this year at “Reisinger's Haus am See” in festive ambiance with a great menu and a beautiful view of the winter landscape around lake Neufelder See.

All Seal Maker employees are cordially invited on December 17th!

We extend our gratitude to our customers for the excellent cooperation by means of small presents which will be included in your next shipments.

Happy holidays and a successful year 2011

Your Seal Maker Team

### 向创新迈步

这是2011年IFPE拉斯维加斯动力展的一个充满希望的座右铭, 同时它也非常适合我们Seal Maker。理所当然, 我们会参加这届具有主导性的美国国际动力传动和控制技术博览会。请不要错过!



IFPE拉斯维加斯国际博览会

时间: 2011年3月22日-26日

地点: 拉斯维加斯会议中心

信息: [www.ifpe.com](http://www.ifpe.com)

门票预定和详细信息

>> [marketing@seal-maker.com](mailto:marketing@seal-maker.com)

### Moving Innovation Forward

The promising motto of the IFPE Las Vegas 2011 also holds true for Seal Maker. Of course we will attend the leading international trade show for drive and fluid technology in the US. Don't miss it!

### IFPE Las Vegas

When: 22.3. – 26.3.2011

Where: Las Vegas Convention Center

Info: [www.ifpe.com](http://www.ifpe.com)

Ticket reservation & more info

>> [marketing@seal-maker.com](mailto:marketing@seal-maker.com)

TIP

