



# 汽车行业塑料部件紧固解决方案

英莳国际-塑料件紧固解决方案专家

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2013. 04. 11

Fastening Solutions for Plastic Application in Automotive Industry  
PSM International – Global Fastening Solutions For Plastics

# THE STORY OF PSM

## 关于英蒨国际



### PSM Facts 英蒨

- ◆ **Over 80-year history**  
超过80年的历史
- ◆ **Distribution & operations in 23 countries**  
运营公司覆盖全球23个国家
- ◆ **5 Technical centers**  
5个技术中心
- ◆ **3 Manufacturing sites**  
3个生产基地



# GLOBAL FOOTPRINT

## 遍布全球的分支机构



### TECHNICAL CENTER

技术中心

**UK, Wuxi, Taiwan, Japan, US**

英国, 无锡, 台湾, 日本, 美国

### MANUFACTURING

生产基地

**Wuxi, UK, Taiwan**

英国, 无锡, 台湾

### SALES & OPERATIONS

销售&运营公司

**Europe, US, China, Taiwan,**

**Singapore, Hong Kong**

欧洲, 美国, 中国, 台湾, 新加坡, 香港

### JOINT VENTURE

合资公司

**Sweden, Italy, Japan, Australia**

瑞典, 意大利, 日本, 澳大利亚



PSM International Wuxi, **China**  
英蒔国际中国无锡



PSM International, Pembroke, **UK**  
英蒔国际英国



PSM International Ohio, **USA**  
英蒔国际美国俄亥俄

# PSM CORE COMPETENCY

## 核心竞争力



### Technical Strength 技术优势

- Products 产品
- Technical Centers 技术中心
- Engineering Experience 工程经验



### Industry Application 工业应用



### Project Management 项目管理

- Communication 信息互通
- Quality 质量
- Delivery 交付



PSM cooperates with customers early in the design phase and provides a full range of fastening solutions throughout the product life-cycle, from design conception and prototyping through product launch and general production.

我们与客户合作从早期设计阶段开始，并从设计理念和样件开发到产品投放和批量生产为客户提供全方位的紧固解决方案和产品生命周期管理。





**Automotive**  
汽车行业



**Consumer Electronics**  
电子消费产品



**Medical**  
医疗健康



**Power & Energy**  
电力 & 能源



**Industrial**  
工业行业



**Home Appliance**  
家用电器



**Other Applications**  
多种应用

# PSM PRODUCTION CAPACITY

## 生产能力

Single Spindle 单轴机



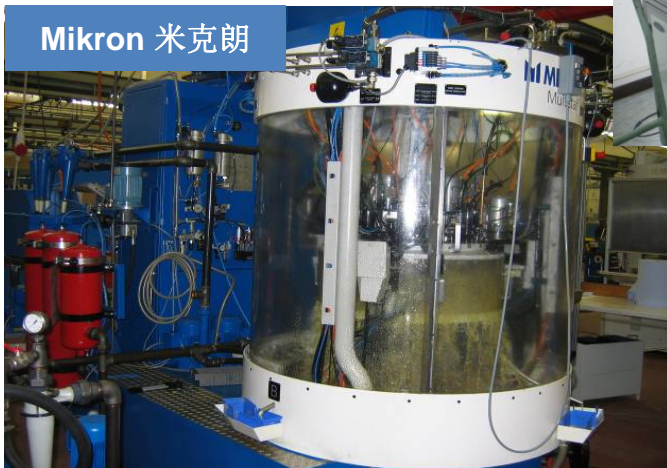
Davenport 五轴机



Sorting Machine 分选机



Mikron 米克朗



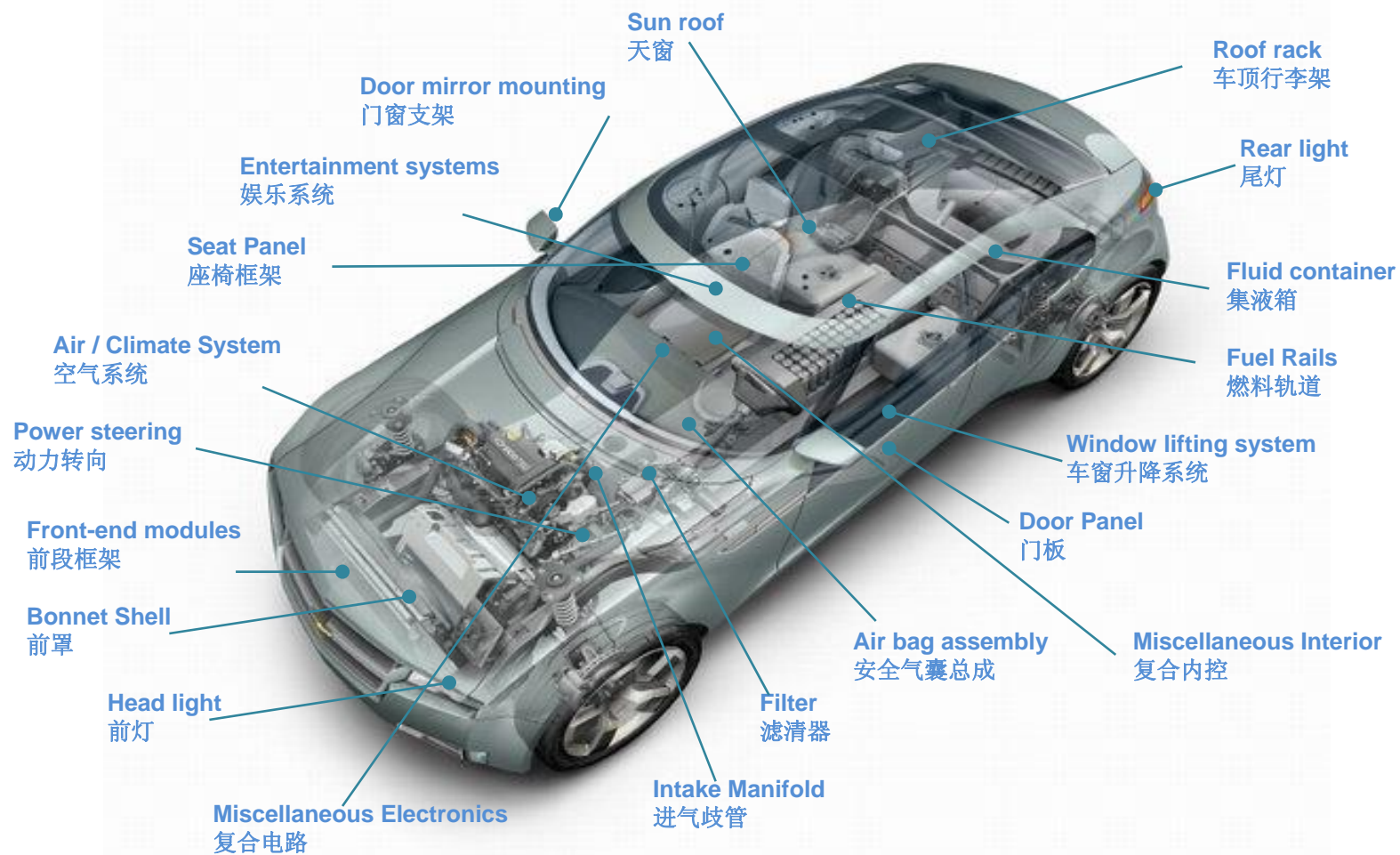
CNC





# APPLICATION COVERAGE

## 整车应用



**TRI-STEP™**

**SONIC-LOK®**

**HI-TORK**

**BANC-LOK®**

**HEAT-LOK®**

**TECH-SONIC®**

**FLANGEFORM®**

**PRESS-LOK®**

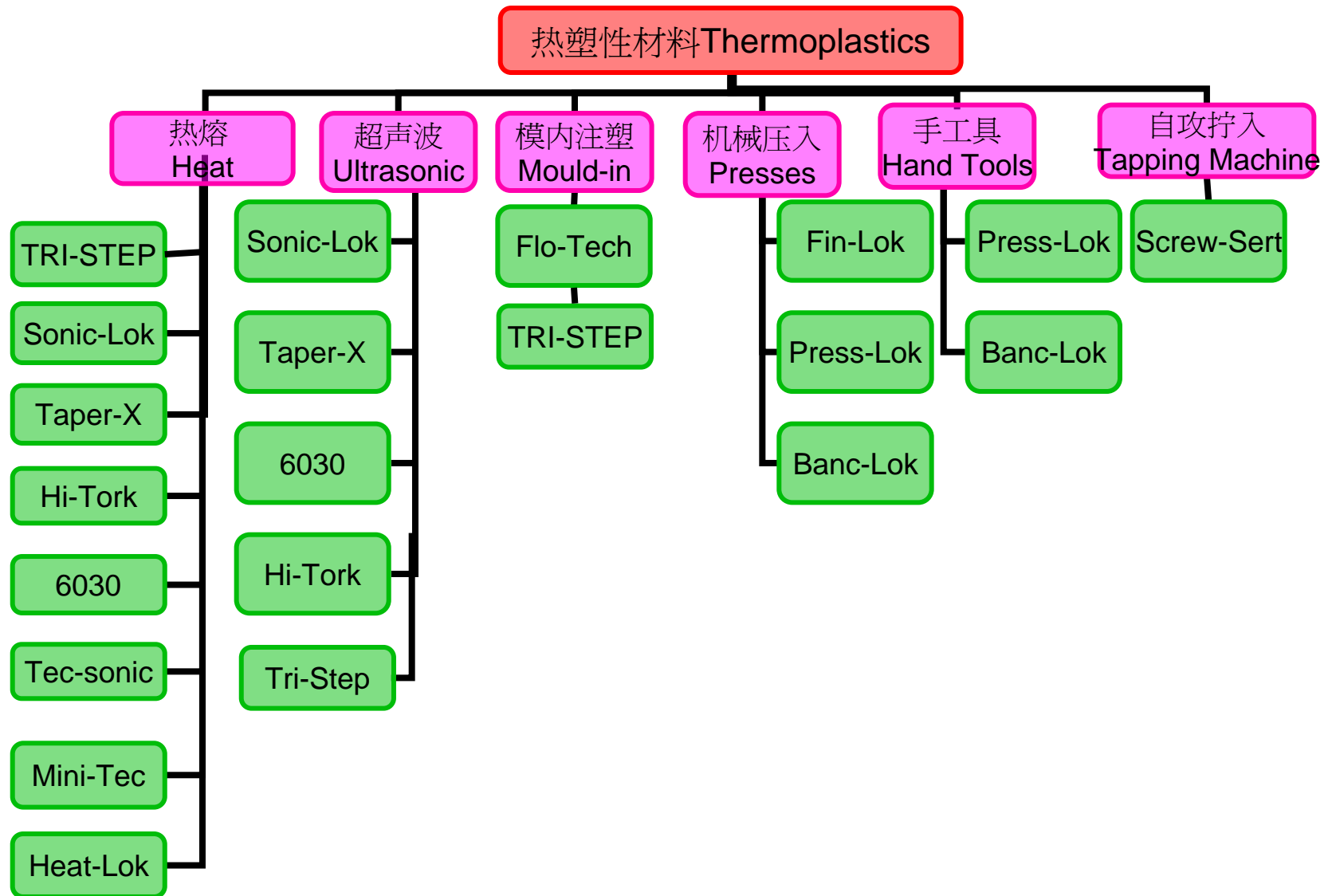
**PRESS-LOK®**

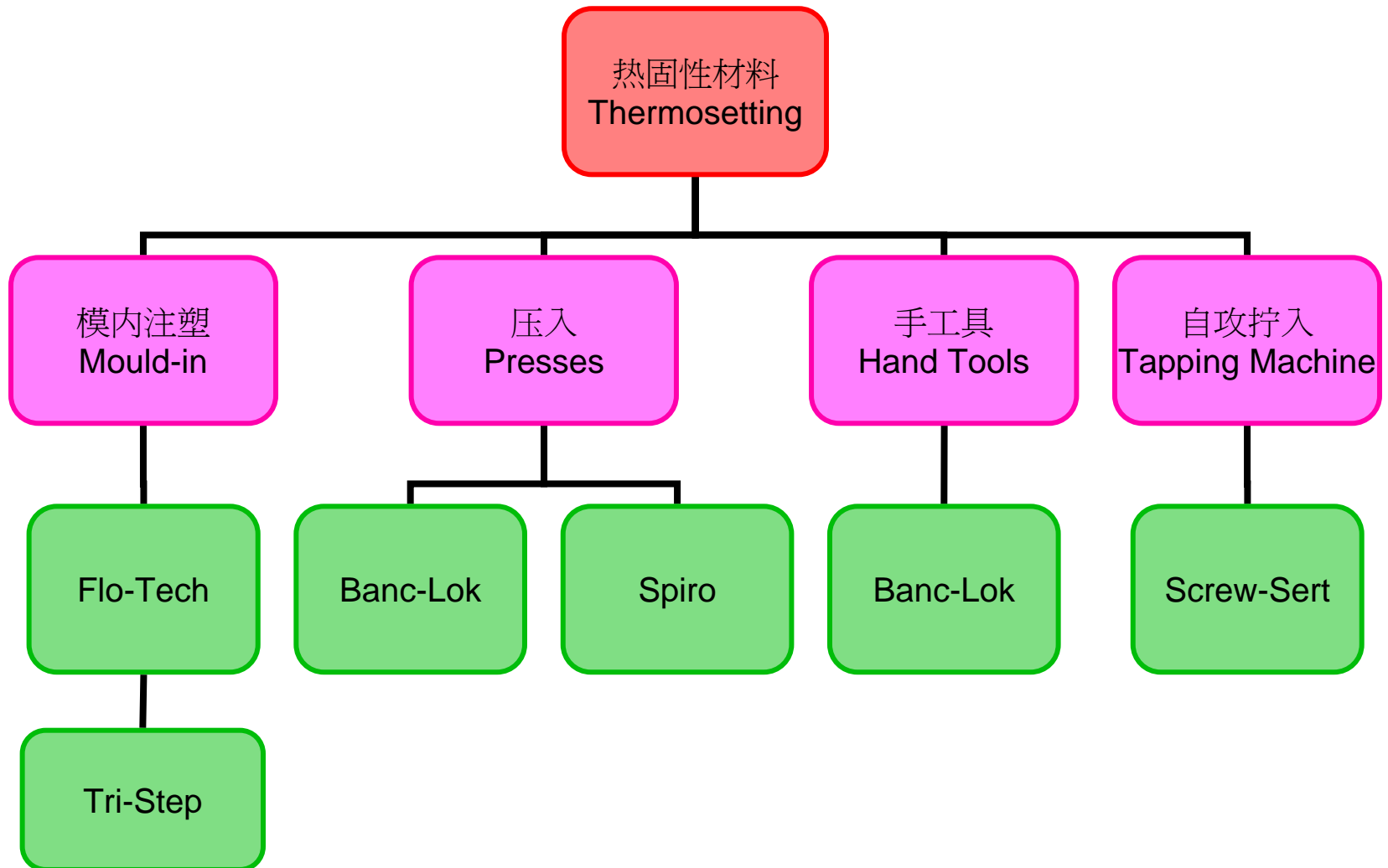
**TAPER-X®**

**FLO - TECH®**

**MINI - TECH®**







# TRI-STEP™ INSERTS

## TRI-STEP™ 镶嵌螺母





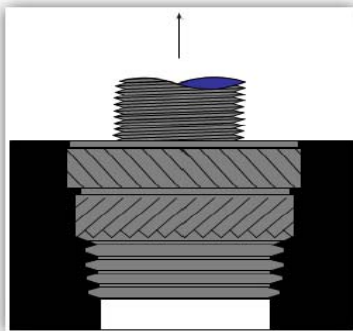
# HIGH PERFORMANCE

## 优异的产品性能

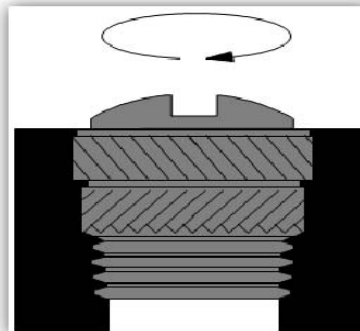
客户认可的高性能产品  
Customer Recognized High Performance Product



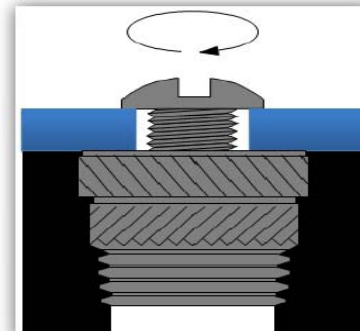
高扭矩  
High torque

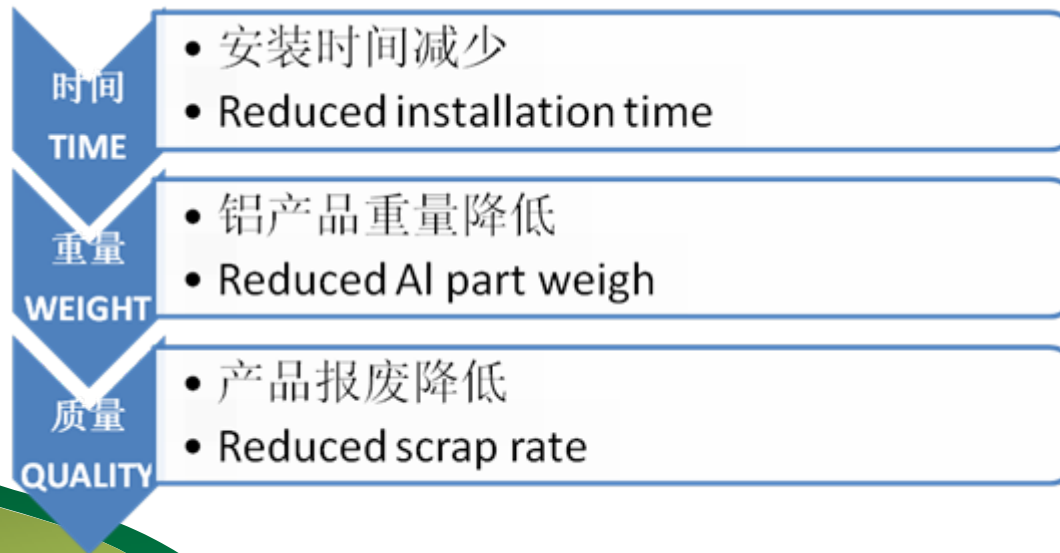


高推出力  
High push out force

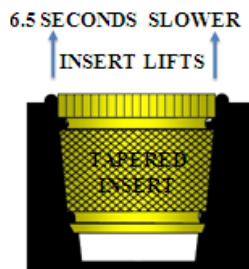


高安装扭矩  
High Max torque





Increased heating time, insertion travel and insert produces "plastic flash"



Insert "spring back" due tapered section overfilling with plastic



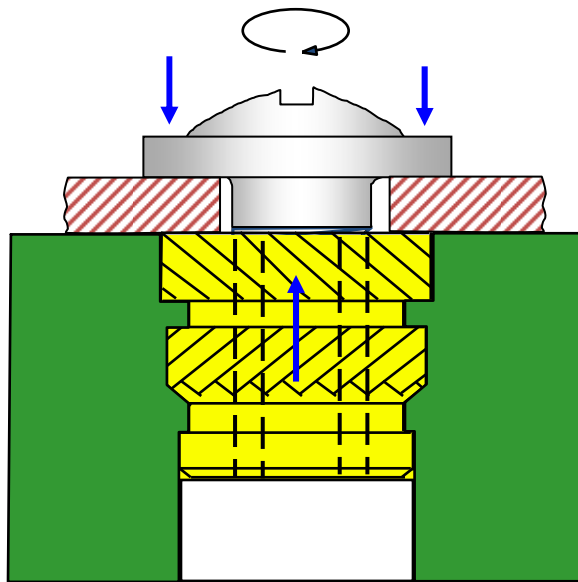
Insert free fits into hole for 70% of its length



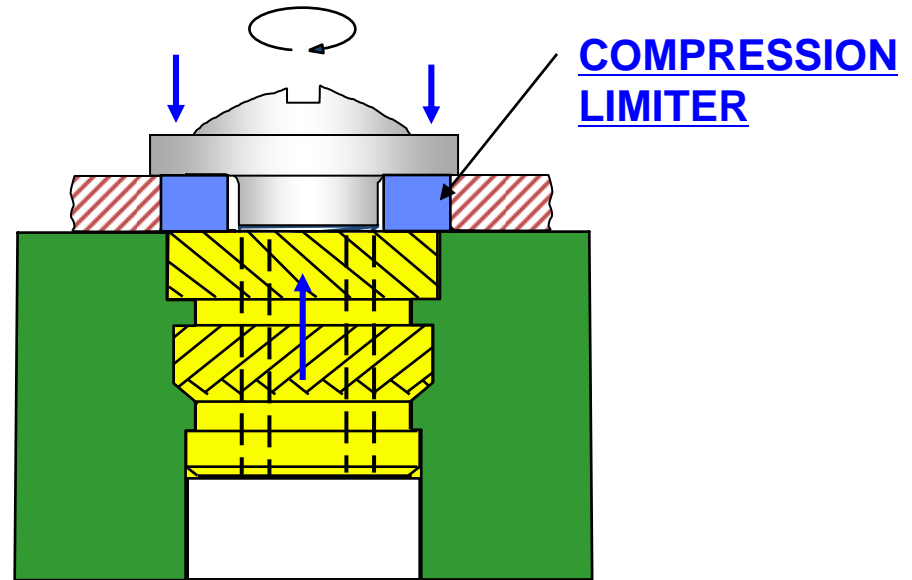
No plastic flash or insert "spring back"

# ADAPTATION OF THE CONNECTION MODE

## 连接方式的适应性



**SOFT JOINT**  
软连接



**HARD JOINT**  
硬连接



# TYPICAL PROJECTS

## 典型案例



**Ford Mondeo 蒙迪欧**  
CD132 Front End  
Module with Sonic-  
Lok® inserts and  
Compression Limiters  
前段框架使用Sonic-Lok®  
螺母和金属衬套



**Rover 路虎**  
'K' Series Inlet Manifold  
Headed Sonic-Lok® M6 &  
Compression Limiters  
塑料进气歧管使用Sonic-  
Lok® 螺母和金属衬套



**Citroen 雪铁龙**  
Manifold project using  
split type compression  
limiters  
发动机塑料进气歧管使用  
PSM金属开口衬套开口



**Eaton 伊顿**  
Manifold project using an  
oval knurled type  
compression limiter  
集滤器使用椭圆形花纹衬套



**VW Golf 高尔夫**  
Passenger Airbag  
with HPFH studs  
副驾驶席安全气囊使用  
HPFH螺丝



**Land Rover 路虎**  
Magnesium Cross Car  
Beam Using TMA screws  
镁制框架使用TMA螺丝



**Jaguar X350 捷豹**  
Aluminium Airbag  
Anchor® Rivet  
Bushes  
铝制安全气囊使用  
Anchor铆钉



**Ford Focus 福克斯**  
Radio & Heater controls  
Using TMP screws  
中控控制面板使用TMP螺丝

# CASE STUDY 1

## 应用实例 1

### Customer Background 背景

The customer is a top engine plastic components provider in China.

我们的客户是国内顶级的发动机塑料部件供货商

The customer has adopted bunches of PSM products in their plastic products.

客户已经在现有产品中使用了PSM的零件

### Customer Problems 问题

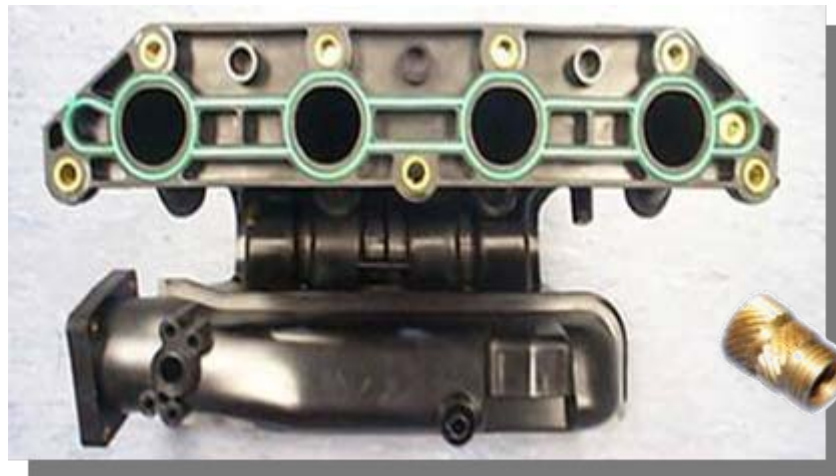
The customer is implementing a new project and they're still using PSM products designed for previous products.

客户想要在新的项目中继续使用现有设计的PSM零件  
They meet with plastic overflow problem during their assembling process and they can't define the boss hole size.

在安装过程中出现溢胶情况并且客户也无法界定安装孔尺寸

The project timeline is very tight.

该项目的需求时间已经不能延迟了



### PSM Solution PSM的解决方案

- PSM fully leverage the resources and opened a fast-tunnel for the project.

PSM利用优势资源最快速的配合项目进度

- PSM use New TRI-STEP™ design for the project and conduct the complete set of application testing work in house. PSM使用TRI-STEP™设计用于该项目并在自己的实验室完成了试装等性能测试

- Quick response to the customer's application feedback. 依据客户的实际应用完成快速反馈

- Complete the project within a tight timeline.

快速完成项目的时间达成原有进度

### Customer Benefits 客户利益

- Keep the development schedule smooth  
按照项目时间顺利达成

- Did not add any additional cost for a new product  
没有增加任何附加成本在新的产品使用上

- The new product meets all the quality and application requirements  
新产品达到所有性能要求并且质量更优良。

### Application: Plastic Components

应用：发动机用塑料部件

PSM products: M6 TRI-STEP™ Insert

PSM产品：M6 TRI-STEP™ 嵌件

# CASE STUDY 2

## 应用实例 2



### Customer Background 背景

The customer is a global leading automotive powertrain systems provider.

客户是全球领先的动力总成系统供货商

The customer has a local vendor providing plastic components manufacturing services.

客户在国内有配套的合作供货商

### Customer Problems 问题

The plastic vendor is always complained by the customer for its quality and application problems.

国内塑料件配套商长期被客户抱怨存在质量及应用有关问题

The plating, size and performance of the products have been existed for a long time and could not find a solution to solve.

零部件的表面处理，尺寸和性能问题长期不能满足客户使用并且未找到合理有效的解决方案。

### PSM Solution PSM解决方案

- PSM take over the projects and analyze the problem.

PSM受顾客委托接手该项目并着手分析问题情况

- PSM leverage company R&D strength to develop a product using a different manufacturing process.

PSM依托技术研发优势开发出使用新的生产工艺制作的产品

- The new product solve all the problems which the customer has long suffered.

新产品解决了之前长期被客户抱怨的所有问题

- PSM continues improving the cost efficiency and performance of the products.

PSM持续改善了产品性能并达到了成本优化

### Customer Benefits 客户利益

- Solved the problems which has existed for a long time  
一次性解决了所以长期存在的问题点
- Complete the components switch within 6 months  
在有限的6个月时间里完成从研发到量产

#### Application: Engine Oil Pan

客户应用：发动机塑料油底壳

PSM products: 6 different Inserts

PSM的产品：6款不同设计的嵌件



# CASE STUDY 3

## 应用实例 3



### Customer Background 背景

The customer is a world leading system solution provider in automotive industry.

客户是国际领先的汽车领域系统解决方案供货商

PSM has been cooperating with the customer for a long time with dozens of projects.

PSM已经与该客户在全球范围开展了广泛的合作

### Customer Problems 问题

The customer used to adopt a turned compression limiter for their in-take manifold with high cost.

客户原来在使用几款价格昂贵的机加工制作的金属衬套零件

The customer need a new type compression limiter with low cost and meanwhile of the same quality and performance.

客户需要新的成本更优化并具有同等性能的衬套产品

The product should comply with Overseas testing center standards.

新产品需满足海外测试中心的有关测试

### PSM Solution PSM解决方案

●PSM organized a dedicated project team involving technical and business staff across countries.

PSM利用跨国资源成立了技术商务合作项目组

●PSM developed a new type compression limiter using cold forming manufacturing process to cut the cost.

PSM开发了全新的冷锻工艺制作成本更低的产品

●With joint effort and application experience, we control the product size and quality to fully meet the critical standards.

通过各方面资源的合作新产品可以满足客户严苛的尺寸及性能要求

●The only supplier in China who meet the precision demands.

PSM是唯一在国内成功开发该项目并达到客户要求的供应商

### Customer Benefits 客户利益

●Cut the cost to an expected amount

节约成本达到既定目标

●Save the cost for development and testing

节省了多次测试的成本

●Maintain the quality and precision

维持了原有的高质量和高精度的要求

●Ensure the smooth production

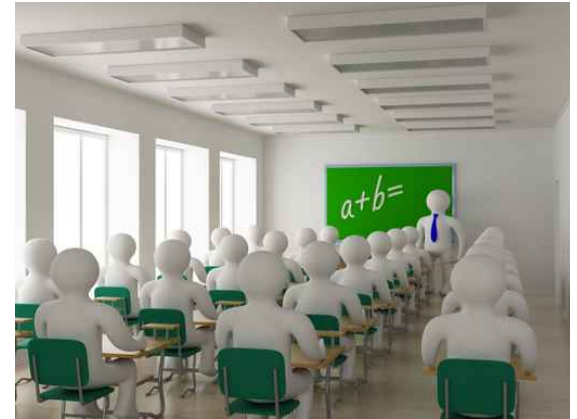
确保稳定顺畅的生产

**Application: In-take manifold**

**应用: 塑料进气歧管**

**PSM products: Compression Limiter**

**PSM产品: 冷锻衬套**



# LOOKING FORWARD TO YOUR QUESTIONS

期待您的提问







**THANK YOU !**