生产及创新-齿轮刀具专家
Productive and innovative – Gear cutting experts
Without them, our world would not move. Clocks, cars or wind turbines, they are all driven by gears. For more than 100 years, hobs have been used to manufacture all types of gears. Even since LMT Fette has driven the development and manufacturing of innovative gear cutting tools, whether cylindrical gears or helical gears – the production goals are always the same: Reduce production time and setup time to minimize production costs and improve the quality of the manufactured gear. With LMT Fette gear cutting tools all these goals can be achieved. To stay ahead of the challenging requirements, we are developing innovative gear cutting tools to optimize your processes and to manufacture gears with the highest quality.

Maximum performance guaranteed – the LMT hob system

Apart from cutting materials and coatings, LMT also offers application-specific engineering and a comprehensive range for services for its new hob cutting system.
SpeedCore is a newly developed substrate for hobs. The increased hot hardness of this intermetallic cutting material enables cutting speeds which are at least 30% higher than those of PM-HSS hobs. They enable shorter manufacturing times and meet customer’s requirements for simple handling and easy reconditioning. SpeedCore hobs have now established themselves as the new standard in modern gear industry. In combination with the improved nanostructured Nanosphere 2.0 coating it achieves a top performance and tool life is extended by 35-40% compared to similar coatings.

Following extensive field tests, hobs up to module 16 are now available. This means that customers can now also benefit from SpeedCore advantages for larger gear machining.

Advantages:
- Increased productivity – up to 70 %
- Reduction of costs per part
- Process reliability – as PM-HSS
- Easy implementation on existing machines
- Non-critical reconditioning – as PM-HSS
- The Original
三周滚刀 —— 三周的交货期
3W-hobs —
available in three weeks

滚刀的交货期降低了一些周期时间的灵活性。
我们在高精确度条件下创造了更大的灵活性：3周滚刀，基于精选的滚刀毛坯，保证了精度在0.8-3.25的滚刀可以3周交货。如果急需，你收到的CE质量的涂层，再加一周。这要响应了客户对紧急状态的快速反应。

优势：
- 模数 0.8 - 3.25
- 交货期：3周，带涂层4周

Long lead times for hobs are reducing the flexibility of your production processes. We at LMT Fette created a solution to overcome this issue: The 3W-Hob. Based on a selected range of blank sizes we will deliver finished hobs from module 0.8 to 3.25 within 3 weeks. If requested, you receive the coating in CE quality additionally within one week. This allows you to respond quickly to the requirements of your customers or in case of any production urgency to support you with the hobs in very short time.

Advantages:
- Module 0.8 - 3.25
- Delivery time: 3 weeks, coated 4 weeks

倒角刀滚刀和去毛刺一步完成
ChamferCut – hobbing and deburring in one step

首先是滚刀，第二步是去毛刺，这是传统的典型倒角工艺。我们使用倒角刀及倒角刀在一起加工。此轴、倒角一体的刀具装在同一个刀杆上。此套装置经过调整后，
第一个倒角刀用于加工顶部的倒角，第二个倒角刀用于加工底部的倒角。此倒角不要额外其它工序。

优势：
- 提高生产力
- 在同一工位完成加工
- 无需增加额外机床
- 完美的倒角
- 高度均匀，一致性

First hobbing then - in a second step - deburring: previously that was the typical method when chamfering gears. With ChamferCut, we allow cutting and deburring in one single process. You do not only save time, but also investment for additional units and machine tools for deburring. With ChamferCut, the tools for cutting and deburring are mounted on one single arbor. Once the gear teeth have been cut, the first ChamferCut – for deburring the top side – and the second ChamferCut – for the same step on the bottom side – are immediately put into operation. The result is a chamfered gear wheel, which requires no subsequent processing.

Advantages:
- Increased productivity
- Processing in one operation
- No additional deburring machines necessary
- Defined chamfer
- Consistent high quality
领先的外齿加力在砂轮技术上的结合

Gear Runner External – a combination of productivity and quality

历经30多年，我们的工程师开发了用于可换刀片及可转位硬质合金刀片刀具的模块化设计。我们有丰富的设计外齿加工刀具的经验，为客户提供不同应用情况下的最理想刀具。

优势：
- 短段加工时间/提高生产率
- 快速换刀
- 不断创新的硬质合金刀片来适应加工工艺
- 单、双头都可以做到
- 组合加工可以达到DIN8级
- 组合加工一体式可以做到的

For over 30 years, our engineers have been developing gear cutting tools in modular design with exchangeable segments and indexable carbide inserts. Every day we use this extensive experience for the design of our Gear Runner External – to provide our customers with the ideal tool for their individual application.

Advantages:
- Shorter manufacturing times / higher productivity
- Indexable inserts with multiple cutting edges can be changed quickly
- Innovative carbide grades, adapted to the machining process
- Single and two start version available
- Roughing / finishing up to DIN class 8
- Roughing / finishing combinations are possible

领先的内齿加力

Gear Runner Internal – cutting of internal gears

ICO内齿滚刀是世界首创的可转位内齿滚刀，用于直径800mm以上的内齿圈加工。例如，这样的内齿刀应用于风力发电装置或起重机。现在还在使用齿形滚刀加工此类齿形。这款内齿滚刀的用户可以使用同一个模具完成所有的加工，达到更高的精度，并且极大地缩短了加工时间。

优势：
- 无需更换刀具即可实现磨削加工
- 非常高的节圆精度（DIN 6-7级）
- 提高生产率（对于精加工可以提高40%）
- 高的表面质量
- 快速换刀
- 不断创新的硬质合金刀片来适应加工工艺

The Gear Runner Internal is the first hob with indexable inserts for the internal gear cutting of large gears starting from a ring diameter of 800 mm. This type of internal gears are used, for instance, in wind turbines or in crane construction. Until now such rings have been manufactured using gear shaving cutters. The benefit for the Gear Runner Internal user is that everything can be processed on a single machine in a higher gear cutting quality and with a significant reduction of the machining time.

Advantages:
- Roughing and finishing without a tool change
- Excellent pitch accuracy (DIN class 6-7 achievable)
- Increased productivity (up to 40 % for finishing)
- High quality surface finish
- Indexable inserts with multiple cutting edges can be changed quickly
- Innovative carbide grades, adapted to the machining process

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机夹式刀具标准化带来的快速有效

Segmented tooth form cutters – quick availability due to standardization

标准化的可转位刀片 —— 常备库存

Standardized indexable inserts – available from stock

优势:
- 刀片常备库存
- 经济性，每个可转位刀片可达到8个有效的切削刃
- 创新的硬质合金等级，适合加工工艺
- 合理设计刀具的几何形状来保证加工的可靠性

对于此新的齿轮粗切刀，我们开发了常备库存的标准化可转位刀片，尤其适用于大批量加工齿轮的需要。

优势:
- 持续的刀片库存
- 快捷反应
- 创新的硬质合金等级，适合加工工艺
- 适应所有的计划
- 经济性

For the roughing of internal and external gears, the gear graving cutter range has been redesigned. The profile is generated by radial tip inserts and flank inserts with 8 cutting edges – all on stock. The body can be made from existing blanks. This ensures very quick availability and thereby flexibility in the production of large gears. In addition to this standardized version we also offer special solutions for adapted profiles for roughing or finishing.

Advantages:
- Indexable inserts kept in stock
- Quick availability
- Innovative carbide grades, adapted to the machining process
- Flexible, all-purpose
- Economical

For the new gear graving cutters we have developed standard indexable inserts which are available at stock and which have especially adapted for the requirements of large gear manufacturing.

Advantages:
- Indexable inserts on stock
- Economical, up to 8 usable cutting edges per indexable Insert
- Innovative carbide grades, adapted to the machining process
- Cutting geometries were designed for process reliability

LCP35H —— 出众的切削材料

来满足您的齿轮加工

LCP35H – The superior cutting material for your gear production

新的切削材料LCP35H用于大部分的齿轮加工刀具，是抗断裂的超细晶粒硬质合金与耐磨的纳米涂层的完美结合。例如，对于湿加工，与市场上现有的刀片材料相比，这种完美结合使刀片性能显著改善了。这种新型切削材料LCP35H将有线型图样，可以持续地使用更长。

优势:
- 提高了刀具寿命
- 高切削参数
- 干、湿加工均适合
- 可靠的加工性

The new cutting material grade LCP35H for multipart gear cutting tools offers the perfect combination of an ultrafine grain carbide extremely resistant to cog fractures with a wear-resistant nanothermal coating. For example, in wet machining this combination allows for a significant performance improvement compared to grades previously available on the market. The new cutting material grade LCP35H has a micro-surface topography, which sustainably supports and facilitates the cutting process.

Advantages:
- Increased tool life
- Allows highest machining parameters
- For dry and wet processing
- Reliable processing

www.lmt-tools.com.cn
刀具服务
Tool service

LMT的精密磨削服务，可以大大降低刀具费用。

优势:
- 精确的磨削
- 磨削表面
- 延长刀具使用寿命
- 精密的磨削
- 高效率的磨削
- 高质量的磨削

优势:
- 精确的磨削达到原厂的质量水平
- 保密刀具历史记录
- 精确的磨削
- 高质量的磨削
- 丰富的经验

With LMT's experienced reconditioning service you can reduce your tool costs significantly.

Advantages:
- Reconditioning in original manufacturer's quality
- Documentation of the tool history
- Continuous implementation of innovations
- 100 years of experience

技术支持
Technical support

创新
Innovation

服务顾问
Service consultants

物流及退货服务
Logistics and pick-up service

管理程序
Supervised process

磨削的质量达到原厂的质量水平
Reconditioning in original manufacturer's quality
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