WM Thermoforming Machines

Moved by Passion

SERIES TWIST 700

IN-MOULD TRIMMING WITH LOWER TILTING PLATEN
下模翻转系统搭配模内切技术



twist

中文

TWIST 700 全新概念的翻转模打杯机
TWIST 700 a new concept of tilting machine

TWIST 700机型采用正负压真空成型，模内冲切，配备全伺服电机控制下模翻转系统，无机械凸轮。领先技术的TWIST 700机型为中高产能的一次性杯子、盖子、乳品容器、碗和罐提供优异的解决方案。在全自动化的过程中具有裁切精准，高产品质量等特点。

The TWIST 700 is a pressure forming - punch and die machine with lower tilting platen without mechanical cams. One step ahead technology that makes TWIST 700 the most interesting solution for medium - high productions of tubs, dairy containers, pots, disposable cups and lids that require closed cutting tolerance, high product quality within a fully automated process.

全新的理念:下模台翻转75°是采用全伺服电机控制，不再使用机械凸轮，并在棱柱形直线导轨上进行导向，以减少震动

New concept:

The lower tilting platen, moved without mechanical cams , rotates 75° and is guided on prismatic linear guides to reduce vibrations.

“电子凸轮”保证绝对精度和可重复性，同时MLS自动设置系统可计算并合理化所有速度和加速度

The “electronic cam” guarantees an absolute precision and repeatability of the movements while the MLS auto setting system calculates and rationalizes all speeds and accelerations.

这两项新技术的结合确保了设备生产极限可达每分钟50模次。

The combination of the two technologies insures a maximum speed of 50 cycles/minute in production.

上下模台设计的预留接口可最大程度的实现既有模具的共用。

The upper and lower platens have an interface designed to receive most of the existing tools.

针对食品包装企业的理想利器

The ideal machine for the leading companies in food packaging industry.

在第一次就做正确的选择！

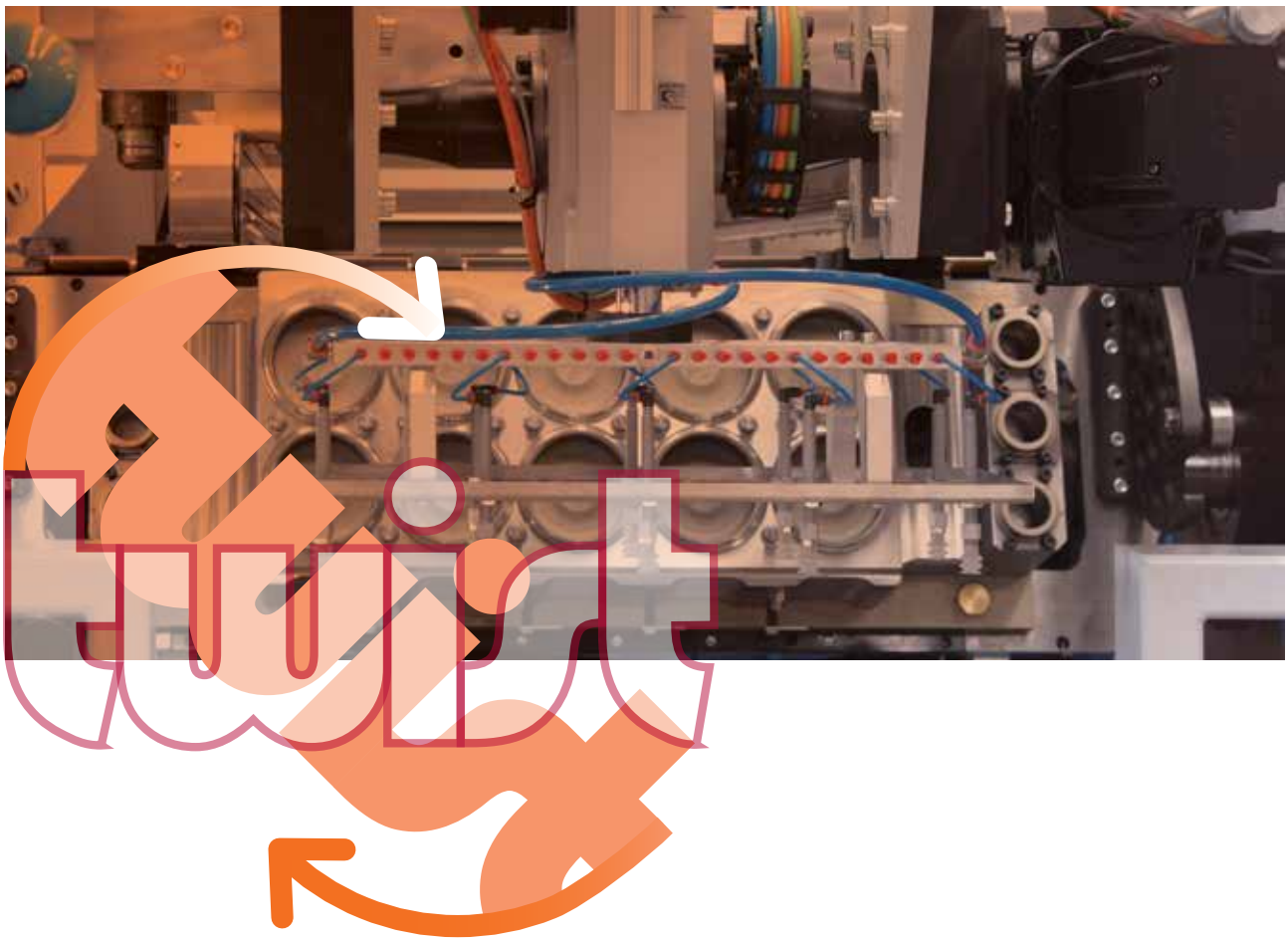
Do it right at the first time!




News
CRAIN
Nature-like
protection

投资意味着价值
Investment means value:

- ✓ 新型运转系统，无需凸轮即可在生产中达到50次/分钟
  New motion system without cams to reach up to 50 cycles/minute in production
- ✓ 伺服电机驱动顶取系统，可实现更好的循环同步
  Electric extractor for better cycle synchronization
- ✓ 始终如一的品质，高性能及合理化的材料利用率
  Constant quality, high performance and rationalized material utilization
- ✓ MLS系统（机器自动学习系统）用于循环参数的初始自动设置
  MLS System (Machine Learning System) for initial self-setting of the cycle parameters
- ✓ 搭配更高的合模力保障模具更多模穴下，PP、PET生产亦游刃有余
  Higher clamping force insuring more cavities for PET and PP materials
- ✓ 通用型堆垛系统能够适配自动化包装系统，满足轻质及浅薄型产品的自动化包装
  Universal stacker enables easy automatic handling of light and shallow products to the packaging machine
- ✓ 堆垛系统不使用任何刷子或橡胶材料，确保健康卫生的生产
  Hygienic production as the stacking system is not using any brushes or rubber material
- ✓ 集成冷却系统配备温度监控以确保稳定及安全的生产
  Integrated cooling system with temperature monitoring to insure a stable and safe process
- ✓ 简易的操作和维护
  Easy operating and maintenance



技术特点
Technical Features:

TWIST 700

堆垛装置 Stacker

		TWIST 700
最大模具尺寸 / Max. mould dimensions	mm	705x400
最大成型面积 / Max. cutting area dimensions	mm	685x340
片材最大步距 / Max. sheet indexing	mm	360
片材宽度 / Sheet width	mm	400-750
片材最大厚度 / Max. sheet thickness	mm	2,0
合模力 / Platen clamping force	kN	400
上加热板功率 / Upper heating power	Kw	81,9
下加热板功率 / Lower heating power	Kw	44
下模具高度 / Height of the lower half mould	mm	185
上模具高度 / Height of the upper half mould	mm	300
正向成型深度 / Positive forming depth	mm	10
最大成型深度 / Negative forming depth	mm	180*
顶杯行程 / Stroke of the ejectors	mm	100

MSv 7-9



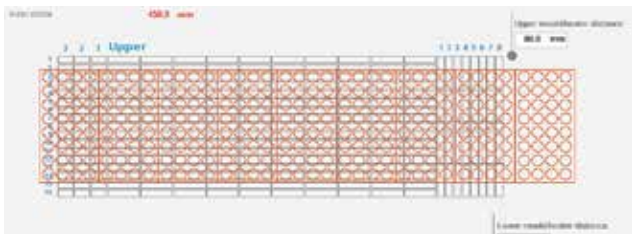
✓

(*) 最大成型深度与产品设计有关，必须经过验证 - Maximum forming depth is related to the product design and must always be verified

TWIST 700 有效率的制程提升了生产力
TWIST 700 Process Efficiency increasing productivity









红外线加热器
Infrared heaters

- **HTS系列黑陶瓷加热片提供更高加热效率**
  HTS black heaters for higher energy efficiency
- **通过MLS系统计算设定，第一排加热器具有开关功，利于精确设定多重加热指数。**
  ON-OFF function of the first rows for exact setting of the multiple heating index calculated by the MLS system
- **纵向和横向的温度控制器可以优化片材实际温度**
  Longitudinal and transversal temperature controllers to optimize the real sheet temperature
- **利用高温计读取片材温度及闭环温度调节**
  Pyrometer for sheet temperature reading and temperature adjustment in closed loop
- **加热器的长度为模板最大宽度的7倍，以确保成型前片材获得均匀受热**
  Bank heaters length is seven times the maximum pitch of the mould in order to guarantee a homogenous sheet temperature

新的拉伸成型系统
New plug movement

改善后的成型力和更快的速度使材料在模腔内成型时拥有更好地厚薄均匀度
Improved forming force and higher speed provides better distribution of the material inside the mould cavity.

- **无拉伸痕和更好的透明度**
  No plug marks and better transparency
- **更好的机械特性**
  Better mechanical characteristics
- **能够成型更厚的片材**
  Higher sheet thickness possible



下模台翻转75°是采用全伺服电机控制，不再使用机械凸轮，并在棱柱形直线导轨上进行导向，以减少震动。

The lower tilting platen, moved without mechanical cams, rotates 75° and is guided on prismatic linear guides to reduce vibrations.



伺服电机驱动顶取系统，在模具内不再需要安装任何机械止动装置，因此减少了整体维护成本

Electric extractor for better cycle synchronization is not requiring any mechanical stopper inside the mould, therefore reducing overall maintenance.



压实器可确保产品堆叠后在传送带上稳健的移动，尤其是针对一些较浅的产品

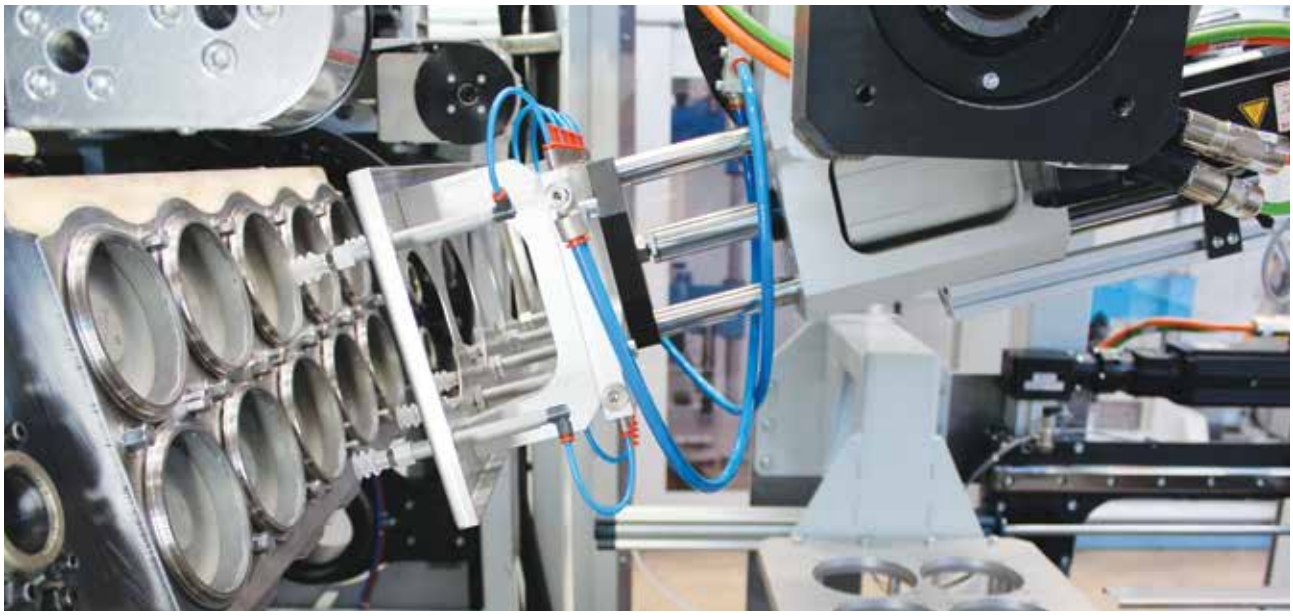
Compactor insures better product handling during stacking pile extraction especially for shallow products designs.



TWIST 700上模及下模各具有一个独立的冷却系统，维持上下模温差在2°C以内

The TWIST 700 has integrated two independent mould temperature circuits to keep constant the ΔT in 2°C between the upper and lower mould.

集成堆垛系统可在产品形状方面实现最佳质量及高性能
Integrated stacking systems achieve best quality and high performance in relation to the product shape



多功能码垛装置
MSv - Multi Stacker

接取器将产品从模具中轻轻抓取，随后将其于储存架垂直堆垛及计数，无需机械接取装置。计数后，产品将渐进地逐排释放并疏导到传送带进行后道工序的操作。MSv绝对是最具灵活适应性的堆垛装置，可以轻松的处理浅的和极轻的产品以配合自动化堆垛系统及包装工位

The product is taken gently from the mould by the catching plate, and subsequently vertically stacked, counted and placed in an accumulator basket without mechanical catcher. Once counted, the pieces are progressively discharged on a conveyor belt row by row for subsequent operations. The MSv model is absolutely the most flexible and complete automatic stacker possible to handle shallow and very light products.



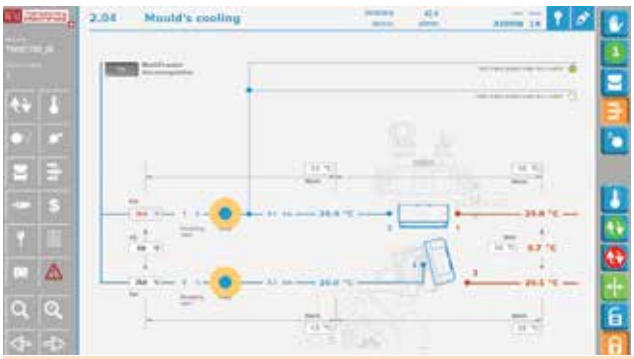


最新一代的驱动程序和控制系统
Latest generation of drivers and control system









- ✓ **該系統基於極其可靠且經過良好測試的貝加萊工業电脑和驅動器**
  The system is based on extremely reliable and well tested B&R industrial PC and Drives
- ✓ **简单明了的触控屏界面** / Compact touch screen
- ✓ **高速数据传输优化最佳生产参数**
  High speed data exchange to optimize at the best cycle times
- ✓ **MLS机器自我学习系统用于生产周期起始参数的自 行设定，从而优化机器排序并且提高机器产量和产品质量**
  MLS System (Machine Learning System) for initial self-setting of the cycle parameters to be able to optimize machine sequencing and increase machine output and product quality
- ✓ **模具更换程序** / Program for mould change
- ✓ **合模力实时监控** / Cutting force monitoring
- ✓ **能量回收** / Energy recovery
- ✓ **陶瓷加热元件配备独立温度控制便于精确设定**
  Ceramic heating elements with individual temperature controllers for precise setting
- ✓ **能耗及驱动分析**
  Energy consumption and driver analysis
- ✓ **设备联网远程操作，在线解决设备问题**
  High speed modem connection in order to facilitate technical aftersales support.



应答器 / Transponder

根据不同的安全等级，限定不同的设备权限，保护机器内部参数不被改动
To control and to allow the accessibility to machine set up at different security levels.

完整的在线热成型设备用于生产PP一次性饮用杯
TWIST for the IN-LINE thermoforming plant for PP disposable cups



TWIST 700可以为客户提供连线方案，形成真正的生产一体机，从原料到产品，包括在线粉碎回收
TWIST 700 machines can be supplied as an IN-LINE series, forming a real “production island” starting from the raw material up to the finished product, including the IN-LINE recycling of the granulated scrap.

连线一体机在生产速度，管理，节能和卫生食品包装生产的最佳条件方面保证了高性能系统。
The IN-LINE version guarantees a high performance system in terms of production speed, management, savings and the best conditions for hygienic food packaging production.







卷边机B 1400
Rim Rolling machine B 1400

设计并制造用于PP，PS和PET材质杯子
的卷边机，速度最快可达每小时200,000只杯子
Designed and manufactured to rim up
to 200.000 cups/hour in PP, PS and PET.

本手册中的技术参数和图片仅用于解释和说明目的。 它们必须被视为近似的且不具有约束力。 所示机器的配置包括选配装置
The technical data and the pictures present on this brochure have merely explanatory and indicative purpose. They must be considered as approximate and not binding.
The configurations of the machines shown may include optional equipment.



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