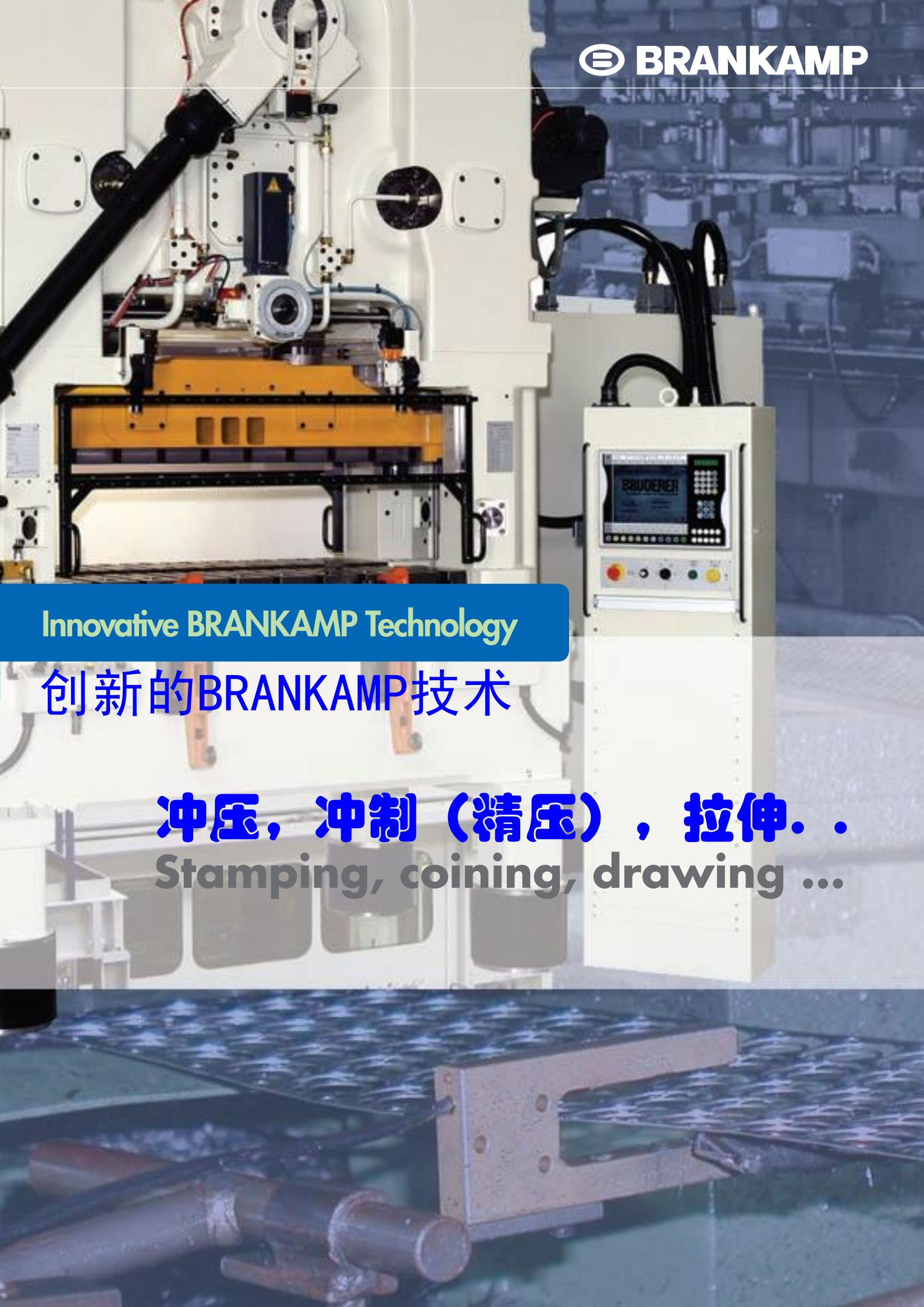
BRANKAMP



Innovative BRANKAMP Technology

创新的BRANKAMP技术

冲压，冲制（精压），拉伸. .

Stamping, coining, drawing ...

Innovative BRANKAMP Technology

保护机器
Machine protection

保护模具
Tool protection

声音发射检测冲头破损
Detection of broken punch with AcousticEmission

生产助手
Set up Aide

独立于机器速度系统的监测
Monitoring independent from speed

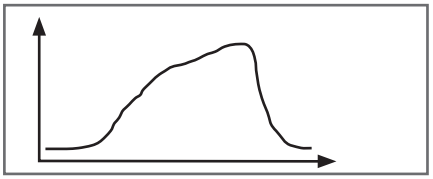
交互发射检测碎屑
Slug detection with UltraEmission

STANDARD

检测方法 生产过程监控的原理

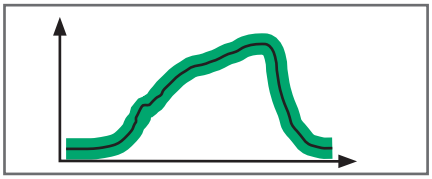
METHODOLOGY the principle of process monitoring

一个传感器测量出一个应用力的过程值，就像一个冲压力的一个循环



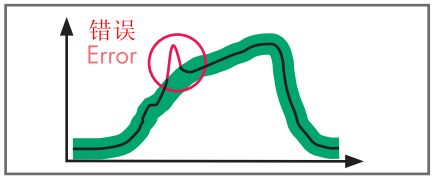
A sensor measures a process value being applied, such as a force with each cycle.

监控系统学习力的信号然后自动的建立生产过程监控的包络曲线



The monitor studies the force signal and automatically establishes envelop curves for monitoring purposes.

当检测到的信号偏离包络曲线时系统就会提示分选出次品成型件或停机操作

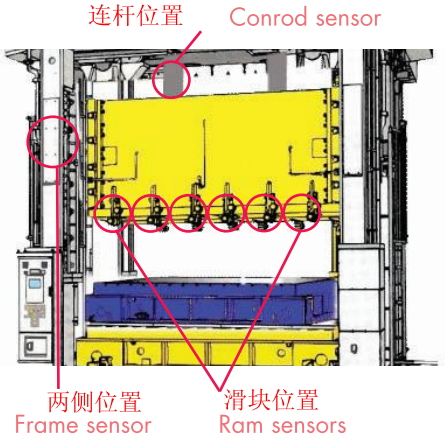


Where the measured signal moves outside an envelop curve, the formed part is sorted as a reject, or the press is stopped.

传感器的位置 传感器的安装位置按照生产的要求来决定的

SENSOR POSITION is determined by the production task

传感器安装在冲床两（侧面），可以检测和记录整个产品成型过程的力变化；安装在滑块上检测模具的变化。安装在模具里边可以提供在成形过程中各种具体数据。



The total forming process can be monitored and recorded all within the machine frame – sensors in the ram monitor the tools in the machine and the sensors in the tools provide detailed data on the forming process.

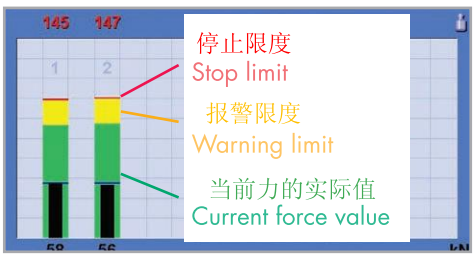
保护机器 解决您的机器安全忧虑

MACHINE PROTECTION not only a safety concern

机器和冲床的过载导致了高额的维修成本和不必要的机器停机。

传感器安装在机器的两侧或连杆部分可以防止机器过载。

如果冲力超过限定值时，机器就会立即停机。



Overloading the machine leads to high repair costs and downtime. Sensors in conrod and frame are installed to avoid this from happening. If the maximum force limit is exceeded, the machine is stopped immediately.

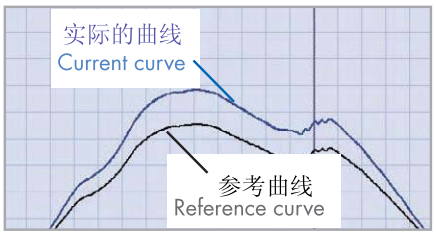
Innovative BRANKAMP Technology

STANDARD

SPECIAL

生产助手
减少调机事件

安装在机器两侧或滑块上的传感器显示的曲线为操作人员提供冲压设备调整与设定的相关信息；随时为模具的变化与调整提供参考和支持。

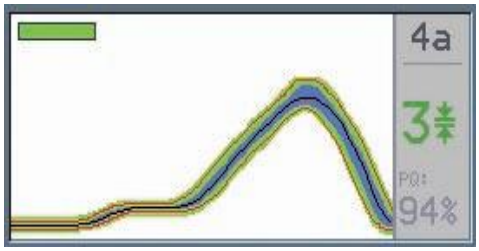


SET UP AIDE
shorter setup times

Force sensors in the frame or ram provide setup personnel with additional information about the process. The on-call references for each tool facilitate setup of the machine in case of tool changes.

自动优化
自动对曲线的轮廓变化进行调整

系统能够自动计算出力的曲线上每个点的最优化曲线宽度。在进行冲压-冲制-拉伸过程各自都有曲线显示，监控系统在包络曲线内进行调整，当曲线偏离和超出包络曲线后会停机。

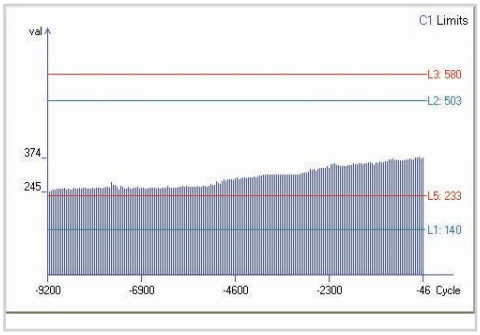


AUTOPROFILER
automatic adjustment of envelope curve profile

The Autoprofiler automatically calculates the optimal curve width for each point on the force curve. Punching, coining and drawing each have their own curves. The monitor tolerates variations within the envelop, but stops the machine if the deviation exceeds the envelop curve.

生产趋势显示
监测长时间生产过程的变化

生产趋势功能监测机器的长时间生产过程变化如模具的磨损状况；操作人员可以设定生产的行程数量和观察检测系统的记录以及行程数量的显示；如果生产变化超出了设定的限定，机器就会停机。

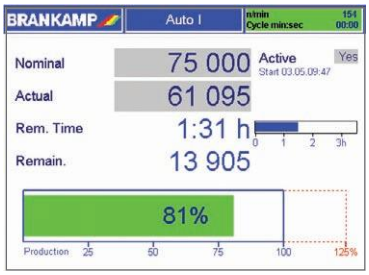


TREND
detects long-term process changes

The Trend function detects long-term process changes such as tool wear. The operator sets the number of production cycles and the monitor records and displays the cycles graphically. The monitor shuts down the machine if preset limits are exceeded.

生产数据记录
系统了解当前生产数据

完整的生产数据记录功能：如：订单数量，轮班数量，机器维护周期数量，总数量，生产进度显示；生产数据页面实时显示当前的生产数据变化状况。

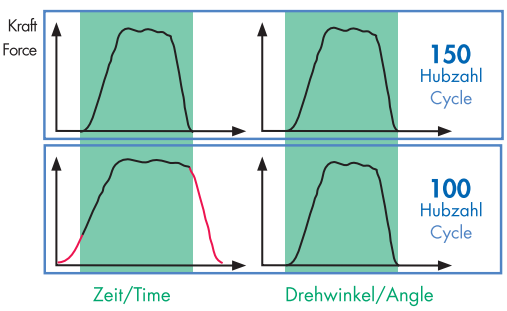


COUNTER
overview of current production

Comprehensive counter functions, such as order counter (see illustration), shift counter, maintenance counter and overall counter, come as standard. The counter screens provide a constant up-to-date overview of current production status.

循环跟踪系统
独立于机器速度的监控

使用角度编码器确保生产过程监控的曲线的稳定，甚至机器运行偏离了正常行程（循环），特别是在最关键的生产阶段，如冲压机开始运行即有实时的包络曲线在监控系统显示。



SPEEDMATIC
monitoring independent from speed

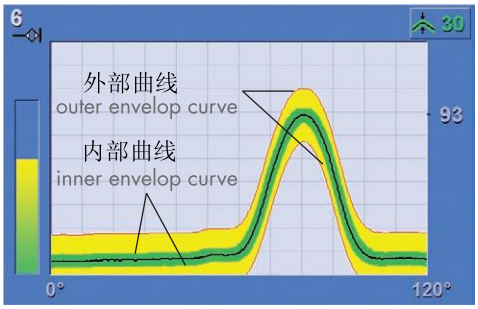
Using an angle encoder enables reliable monitoring of the envelop curve, even in case of deviations from the nominal cycle. Especially critical production phases, such as start up of the press can now be monitored with tight envelop curves.

SPECIAL

双包络曲线控制
提高产品品质和生产效率

内部的曲线识别小的瑕疵和分选出次品；外部的曲线在出现危及机器或模具的重大错误时会停止机器。根据包络曲线颜色的亮度比例，操作人员可以对包络曲线进行最优化的调整。

QUATTROMATIC
for the highest quality and productivity

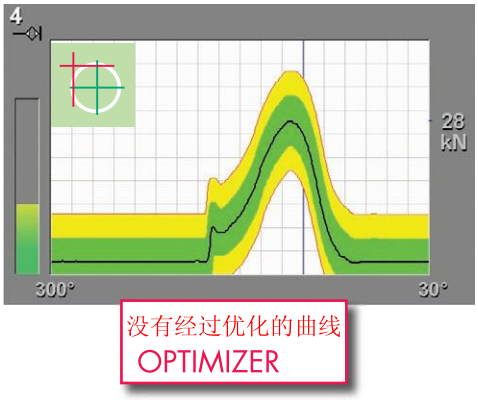


The inner envelop curve identifies small defects and sorts out faulty parts. The outer envelop curve stops the machine in the event of serious defects, which endanger machine and tool. With the envelop curve lamp the operator can optimally adjust the envelop curve.

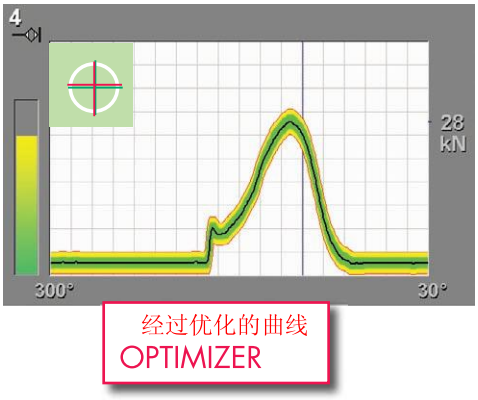
自动优化
准确的设定包络曲线的范围

自动的曲线优化功能会根据曲线信号的偏离程度调整出最适合的曲线敏感度。保证包络曲线总在理想的设定范围内。

OPTIMIZER for automatic
setting of the envelop curve range



没有经过优化的曲线
OPTIMIZER



经过优化的曲线
OPTIMIZER

The Optimizer automatically generates the optimum limits of sensitivity, using the signal deviation – this ensures the ideal setting for the envelop curves at all times.

声音发射传感系统
解决冲头破裂和破损等问题

声音发射传感系统检测冲头损害和防止接着发生模具损害。这种检测方法要比一般的检测方法反应快速和灵敏。

声音发射传感检测是最新的，非常有效的应用与保护机器的检测方法

ACOUSTIC EMISSION
the solution for cracked and damaged punches

AE Sensor

AcousticEmission (AE) detects punch damage and protects against subsequent tool damage. The response is earlier than with conventional monitoring methods. AE is a powerful, innovative monitoring method, an optimal supplement to the machine protection.

交互发射检测
应用于碎屑检测

交互发射检测系统监测冲头微小破损和模具上的碎屑。能够及时地反应冲压板材（材料）的软硬，厚度，即使很薄的材料也没有问题。交互发射系统不需要用设定螺丝来调节传感器的距离。

ULTRA EMISSION
detecting slugs

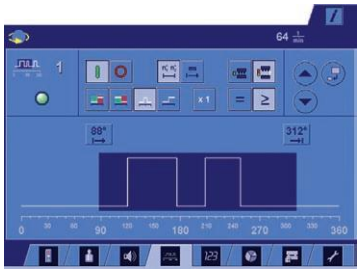
UE Sensor

UltraEmission (UE) detects small punching scrap and chips in the tool. Strong springs on the stripper plate, soft, hard, thick, or very thin materials are no problem and UE does not require the inconvenient adjustment of distance sensors with setscrews.

SPECIAL

TOOLMATIC
创新的数字模具保护

准确的表现模具传感器的变化状况确保准确的设定进料和退料限度控制。只需按动按钮即可进信号限度的设定。

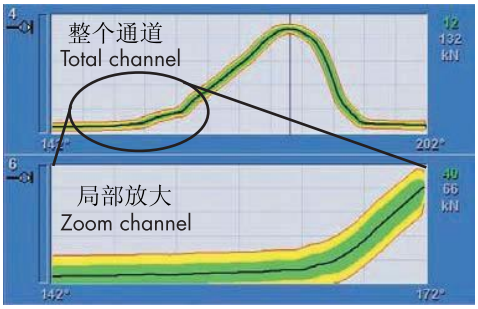


TOOLMATIC
innovative digital tool protection

The exact representation of tool sensor switching conditions enables exact setting of limits for feed and eject control. Signals with their limits are learned just by the click of a button.

曲线放大
生产过程曲线放大功能

整个独立的信号范围进行监控后能进行特殊放大变成更具体和详细的纪录曲线，增加了对生产过程变化的了解和认识。便于对机器进行调整。

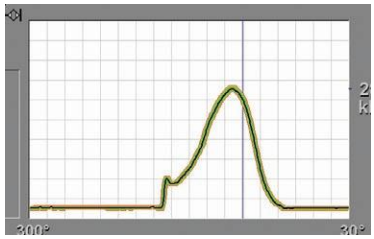


ZOOM
the magnifying glass of the process

All individual signal ranges can be monitored specially and changes in the signal curve recorded in greater detail. The degree of recognition is significantly increased.

SYSTOMATIC
检测常规瑕疵的最好方法

SYSTOMATIC是一种非常有用的检测常规（固定的）生产过程缺陷的程序；这种非常精确的监控方式一直被应用在检测如金属切割和模压，冲孔或拉模上。



SYSTOMATIC
finest-detail monitoring of systematic defects

Systomatic is a powerful procedure for detection of systematic (permanent) process faults. This statistic method for ultra-fine monitoring is used to detect, among others, damage to cutting and coining punches, or dies.

停机曲线记录
提供精确的错误分析依据

监控系统提供对机器停机时间；停机的原因，停机的错误代码停机时的曲线显示进行记录的系统，为产品的生产提供有效的参考分析依据。

STOP CURVE MEMORY
for precise error analysis

The monitor records a detailed error log with date, shutdown reason and error curve every time it shuts down the machine.

存储显示功能
能够存储生产过程各种曲线

可以在生产过程中的任何时间存储各种有参考价值的曲线；以便调整机器时进行对比或打印进行存档。

DISPLAY MEMORY
for saving any curve

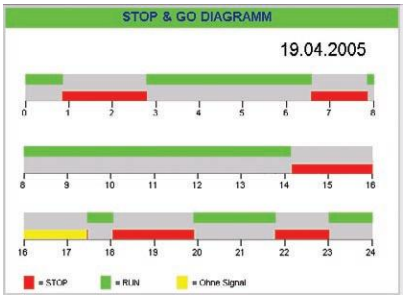
Take any number of snapshots of any process curves, at any time, and compare them or make prints for documentation.

OPTIONAL

机器停走图
机器运行时间显示

可以直观的看到机器持续的生产运行过程，您可以查阅从24小时到90天的机器运行状况记录。

绿色 = 机器运行
红色 = 机器停止
黄色 = 机器进行设定



STOP & GO CURVE
documents run-time behaviour

Gain a high level of visibility into manufacturing processes with constant, 24-hour documentation of the machine's run-time behavior for up to 90 days periods.
Green = Machine running
Red = Machine shut down
Yellow = Set up

FCX
灵活的信息交流

您可以使用生产数据终端装置；直接查看和输入指令，以及键入停止和激活代码。查看机器生产运行的各种图像和曲线信息，并且通过网络进行显示。

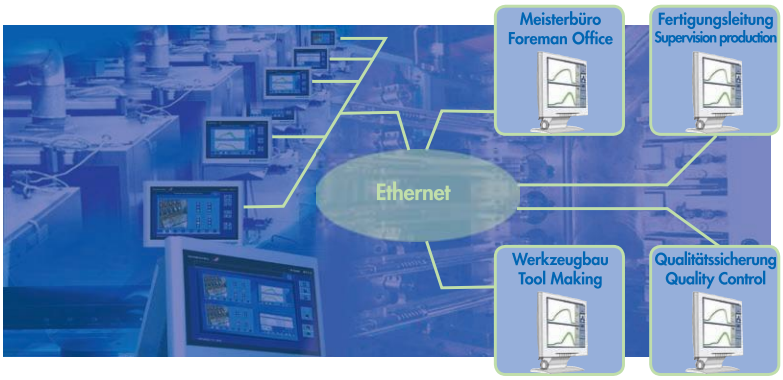
FCX
Flexible Communication eXchange

You can also use the device as a terminal for production data: check orders in and out directly, or enter stop and activity codes. Drawings and photos can be accessed and displayed via network.

网络化工厂
能够直观和详细的了解工厂生产运行状况

科学的将生产过程和所有其他的相关领域进行连接，使得运行空间还有很大的潜力发掘。

Brankamp 网络化统使得生产过程的管理更见快捷-透明-高效。



FactoryNet®
for a detailed insight into production operations

There is still plenty of untapped potential in the intelligent link-up between production and all other areas of a business. BRANKAMP FactoryNet® makes production processes more transparent, considerably quicker and more cost-favourable.

其它领域的应用：

* 联合式冷镦机
* 一模二冲 打头机
* 搓丝机
* 金属切割
* 加工中心

Other monitoring applications:

- Progressive Headers
- Single/Double Blow Header
- Thread Roller
- Cutting
- Assembly

8/2006 Prospekt_ST Technische Änderungen vorbehalten. Technical detail subject to change

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