

A large, white industrial machine with a control panel and a viewing window, likely used for wire processing. It is set against a background of a factory floor with various equipment.

**Innovative BRANKAMP Technology**

**创新的BRANKAMP技术**

**搓丝与行星式滚丝过程监控**  
**Flat Die and Planetary Roller**

# 创新的 BRANKAMP 技术

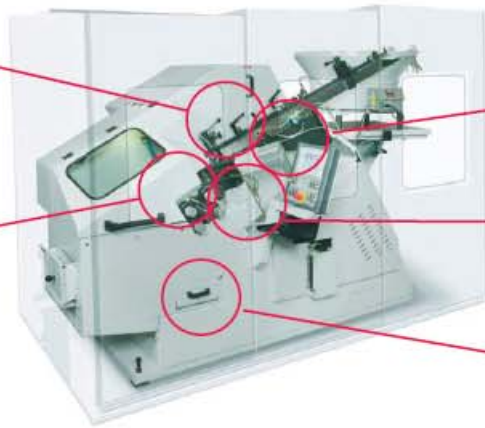
回搓监控  
Roll back monitoring

给料监测  
Injector monitoring

校验传感器  
Line Up Sensor

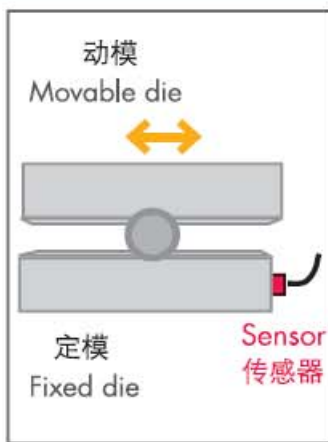
绝对力监测  
Absolute force monitoring

分选控制  
Sorter controller



## 监测功能 过程监控原理

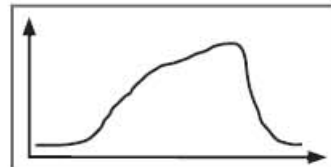
## METHOD OF FUNCTION the principle of process monitoring



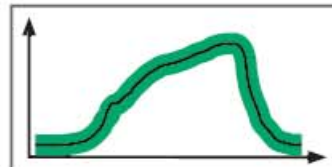
每一个周期，传感器检测到的过程数据都会被记录下来。例如：压力数据。

监测系统自动学习压力信号数据并且自动建立包络曲线作为生产监测标准。

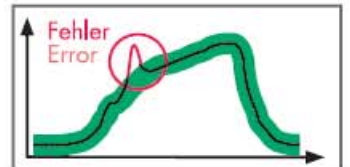
测试信号在某点超出包络曲线，成型后的部件作为次品被分选掉或者机械设备被停机。



With each cycle, a sensor measures the process values being applied, i.e. force.



The device studies the force signal and automatically establishes envelope curves for monitoring purposes.



Where the measured signal moves outside an envelope curve, the part is sorted as a reject or the roller is stopped.

## 传感器的位置 要通过生产任务来决定。

## SENSOR POSITION is determined by the production task

更容易的改进安装可以在机身上的全面检测，更精确的过程监测可以安装在接近螺栓部分。传感器更完美的装进夹具内，用趋于理想的过程曲线监控不会影响到设备结构。

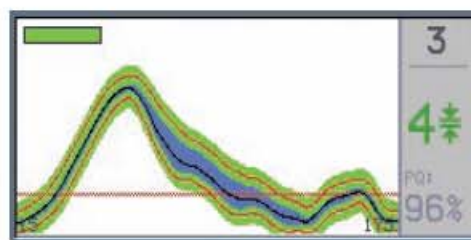


The overall measurement on the machine body can be easily retro-fit. Process-nearer measurements can be taken in the setting screws. The sensors are ideally integrated into the jaw cage. Configuration work is not affected with optimal process proximity.

## 自动调节功能 自动调节包络曲线轮廓

## AUTOPROFILER automatic adjustment of envelope curve profile

根据压力曲线的每一点可以自动分析计算最佳的包络曲线的宽度。以这种方式：用最佳的包络曲线的过程信号自动监测每一个环节（导入、校准、导出）。



The Autoprofiler automatically calculates the optimal envelope curve width for each point on the force curve. In such a way, the process signal is automatically monitored in each section (input/calibration/output) with the optimum envelope curves.

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D

## 停机曲线的存储

精确的错误分析

每次机械设备的停机，详细的错误日志记录下日期、停机原因和错误曲线。



## STOP CURVE MEMORY for precise error analysis

Every time the machine shuts down, a detailed error log is recorded with date, shutdown reason and error curve.

## 曲线的存储

记录所有的曲线

所有过程曲线的获取图像就像拍照一样，在任何时间和任何数据，你可以把这些照片和其他过程曲线做对比，或者作为文件打印出来。



## CURVE MEMORY for saving any curve

Take snapshots of any process curves similarly to a camera phone. At any time and any number. You may compare these screens with other process curves or make prints for documentation purposes.

## 绝对力的监测

设备可重复的设置

以“KN”为单位的绝对力作为唯一标准，绝对力的显示使得在几台设备上采用相同的力同时生产相同产品成为可能。目的是尽可能用最小的压力搓出整洁的螺纹，这样降低了牙板的磨损并使牙板使用寿命提高30%。



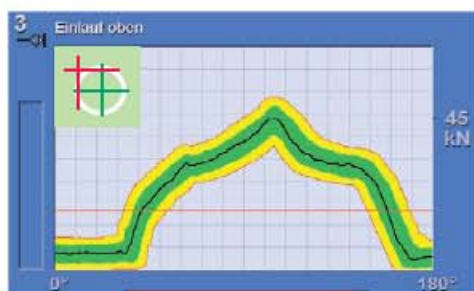
## ABSOLUTE FORCE MONITORING facilities repeatable set-up

Absolute force in kN is the only specification that makes the effects of set-up changes transparent to the operator. Displaying the absolute force makes it possible to manufacture products produced on several machines with the same force. The aim is to roll a clean thread with the least force possible. This reduces tool wear and increases tool life by up to 30%.

## 优化功能

自动调整包络曲线的范围

优化系统功能可以自动生成最合理的灵敏度曲线，利用信号偏差来确保包络曲线一直处于最佳的设置。



Ohne/Without  
OPTIMIZER



Mit/With  
OPTIMIZER

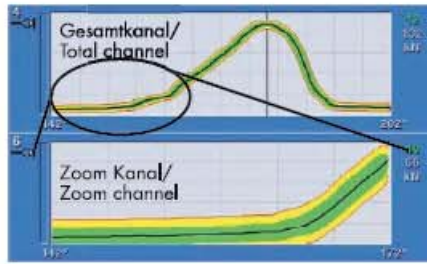
## OPTIMIZER for automatic setting of the envelope curve range

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

## 放大功能

局部过程的放大

BRANKAMP 装置可以特殊检测一个单独的信号范围及该信号曲线的详细变化, 极大的提高了识别程度。



## ZOOM

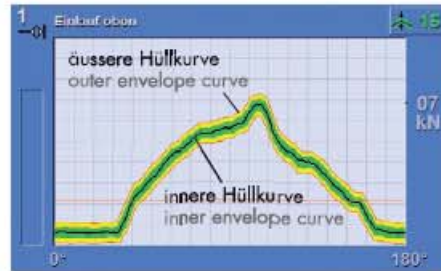
the magnifying glass of the process

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

## 自动化

最高的品质和生产力

内部包络曲线鉴别出小的错误, 并且分选出错误的部件。在发生严重的错误时, 例如: 模具脱落, 通过外包络曲线控制停机, 另外, 屏幕显示出操作者设置最佳包络曲线范围。



## QUATTROMATIC

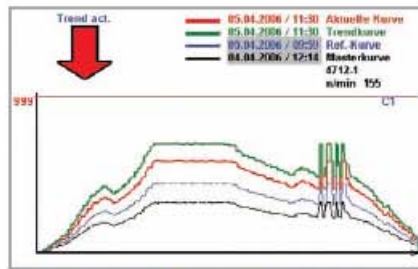
for the highest quality and productivity

The inner envelope curve identifies small defects and sorts out faulty parts. The outer envelope curve stops the machine in the event of more serious defects, e.g. raisers. In addition, the display shows the operator the optimum setting for the envelope curve range.

## 过程分析

理想的设置帮助

过程分析系统是一个简便使用的功能, 达到模具最理想的设置, 并且立刻可以判断出过程的波动。因此提高了过程监控和分析评估, 同时曲线可以存储或调用并进行比较。



## PROCESS ANALYSER

the ideal set-up aid

The Process Analyser is an easy-to-use function for achieving optimal tool settings and instantly recognising process fluctuations. For improved process monitoring and assessment, curves can be stored or called-up and compared.

## 校验传感器

获有专利校验传感器给操作者清晰的操作说明及如何进行牙板精确装配。避免螺纹的折叠, 降低模具的磨损和生产力的提升。



## LINE-UP SENSOR

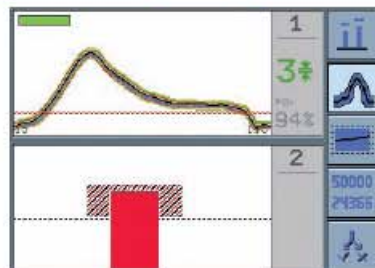
configuring line-ups optimally

The patented line-up monitoring system gives the operator clear operating instructions on how to configure line-up exactly – even during dynamic operation. Thread laps are avoided, tool wear lowered and productivity increased.

## 回搓监控

保护机械和模具

如果搓丝压力在回搓过程中超出了自动计算的界限, 送料器立刻被关闭。冲搓的监控系统保护模具和机械设备不受严重的损伤。



## RETURN STROKE MONITORING

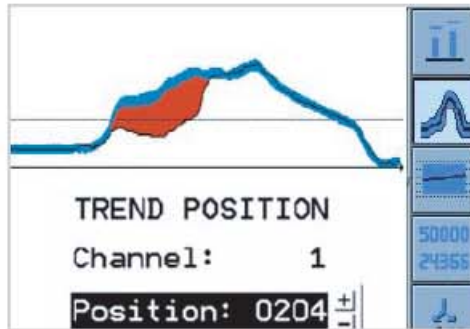
protects machine and tool

If rolling force during the return stroke exceeds the automatically calculated limit, the feed finger must be blocked immediately. Stroke monitoring prevents the tool and machine from being seriously damaged.

## 趋势化

监测搓丝板/滚丝轮的磨损

即使模具装配正确，搓丝板/滚丝轮经常会在导入区发生磨损问题。操作者用趋势化在这个区域可以进行特殊监控，可以非常容易检测到模具的磨损程度。



## VARIO-TREND

detects wear on roller dies

Roller dies are subject to wear – even if the tool is configured correctly – primarily in the input area. The operator can specifically monitor this area with VARIO-TREND, thus detecting progressive wear early.

## 数据统计

当前生产的描述

全面的数据统计功能：例如预设产量统计（如图），轮班统计，保养维护统计，总统计，统计屏幕上提供当前生产情况下最新的数据概况。



## 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.

## 行星式滚丝

包括所有监测

Brankamp 行星式滚丝监控通过用单独的包络曲线对滚丝轮运转进行检测以此来监控制造部件。监控精度提高，从而排除了滚丝轮和机械的影响。



## PLANETARY ROLLING

all-inclusive monitoring

BRANKAMP planetary roller software monitors manufactured parts with a separate envelope curve for each roll revolution. Monitoring precision is increased, thus eliminated the effect of roll and machine.

## 分选装置

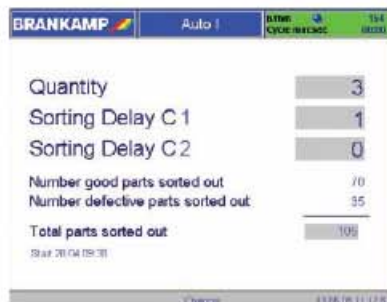
分出好和坏的部件

Brankamp ScrewScout® 软件可以分选出好坏的零部件，提高生产率。



## SORTING DEVICES

to separate out good and bad parts



Separate good and bad parts with the Brankamp ScrewScout®. Ideal with the software plug-in „Sorting“ and a wide range of sorting settings. Productivity is increased.

选配 = Option

## 停机-运行曲线

运行情况的记录档案

运行情况档案是机械设备24小时数据文件运行情况，直至90天内生产数据可以清楚的提供。

绿色=设备运行

红色=设备停机

黄色=安装调试



## STOP & GO CURVE

documents run-time behaviour

Documents run-time behavior constant 24-hour documentation of the machine's run-time behavior for up to 90 days provides for transparency in manufacturing.

Green = Machine running

Red = Machine stopped

Yellow = Set up

## FCX

便捷的交流信息

您也可以使用检测装置作为生产数据信息终端。直接检测命令的输入、输出，或者输入停机和运行编码。图表和照片可以通过网络存储并显示出来。

BRANKAMP STOP-CODES MASCHINE		
Arbeitsplatz-Nr. 13	Status STOP	
0 ohne Eingabe	1 Auftrag	2 Qualität
3 Werkzeug	4 Maschine	5 Material
6 Personal	7 Pause/Schicht	weitere Stopcodes

## FCX

Flexible Communication eXchange

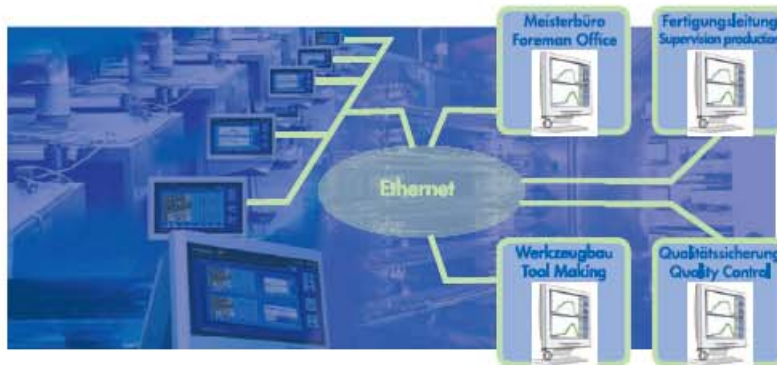
You can also use the device as a terminal for production data: check orders in and out directly, or enter stop and activity codes. Drawings and photos can be accessed and displayed via network.

## 网络化工厂

详细的观察生产操作的情况

在生产和其他商业领域中智能连接仍然还有很大开发潜力。

BRANKAMP 网络化工厂使生产更加清晰化，更加快捷，更有利于降低成本。



## 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.

## 其他监控应用:

- 螺栓成型机
- 一模二冲打头机
- 切割机
- 冲压机
- 装配总成

## Other monitoring applications:

- Progressive Header
- Single/Double Blow Header
- Cutting
- Stamping
- Assembly

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