



PRODUCTS & SERVICES
FROM FEINTOOL



FEINMONITORING

Intelligent Industry 4.0 solution
for fineblanking

 FEINTOOL

EXPANDING HORIZONS



FEINMONITORING – YOUR BENEFITS:

- ▶ Highly profitable fineblanking thanks to constant monitoring carried out by experts
- ▶ Optimization of production using your machine's data thanks to Industry 4.0
- ▶ Increase in the availability and cost-effectiveness of the fineblanking press



FEINMONITORING

The fineblanking press talks to you

With FEINmonitoring, your press suddenly becomes much more intelligent: It will inform you automatically of what it needs for perfect functionality and maximum output. You receive the information directly at the press, on your office computer screen, on a tablet and even on a smartphone.

FEINmonitoring is an intelligent analysis and maintenance tool that continually monitors the technical condition of your fineblanking presses and analyses the data obtained. FEINmonitoring enables you to detect problems early on. Combined with the Smart Maintenance concept, it facilitates needs-based maintenance.

Take the next step into Industry 4.0 and optimize your machine's capabilities!

INDUSTRY 4.0 FOR YOUR SUCCESS

Clever production with FEINmonitoring



At a glance: FEINmonitoring supplies all the relevant measuring data on the press on a continuous basis and issues a warning before faults occur.

Sensors built into the fineblanking presses continuously measure different values – for example power consumption, particles in the oil, temperature or pressure at various points. The data flows via a secure mobile radio connection to the FEINmonitoring database, where it is analyzed. As soon as the measured values are found to be in a critical area, you and your team will automatically receive a notification. You are immediately kept up to date about long press downtimes, technical faults or forthcoming maintenance tasks – and never again will you miss an important event.

FEINmonitoring also supports the optimal productivity of your press. The data gathered permits an accurate overview of its operating condition. One look at your PC, tablet or smartphone will tell you about any interruptions and the fault notifications associated with them. With the help of informative analysis reports, trends can be detected and systematic production problems rectified. The analysis reports also form a basis for boosting productivity. Where can you improve further?

FEINmonitoring gives you answers:

- ▶ Production potential is shown clearly and detailed
- ▶ Causes of production interruptions can be easily targeted
- ▶ Specific prevention measures maintain the availability and operation of the press over the long term

Data transfer:

The data of your press will not only be accessible on the control panel, but also by e-mail, via the FEINmonitoring-Data Base to the maintenance team and the production line. You can access the information you need on the internet world wide and thus react from wherever you are.

Data storage:

Access to the history of your press speeds up fault rectification so you are able to update your customers quicker. You get important information via the Internet within seconds – wherever you are in the world.

Pro-active support from Feintool:

You will receive regular reports with analyzes of trends and systematic productivity issues including recommendations to take action.

Greater scope for reaction and action thanks to a supply of information:

Automated notifications to your colleagues permit faster and more targeted interventions. You can gain an accurate picture online and work with your team in an informed manner – regardless of where you are or where your press is located.

MEASURING, EVALUATING, OPTIMIZING

How FEINmonitoring works

1. Recording data: Sensors measure various values

General
(e. g.) operating mode, stroke rate and operating hours

Structure
(e. g.) various values relating to acceleration peaks

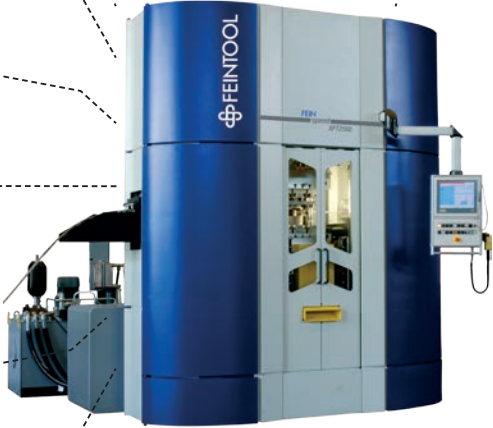
Hydraulics
(e. g.) filter contamination, relative water content in oil, oil temperature

Drive
(only for XFT version)
(e. g.) angle difference, current difference between the main motors, temperatures of the drives

Energy
(e. g.) performance factors and effective power

Maintenance
(e. g.) maintenance

Performance
(e. g.) status and causes for downtime



secure cellular radio connection

2. Detecting wear: FEINmonitoring tracks important parameters

FEINmonitoring database



Software collects the data and analyzes it according to a particular algorithm and stored threshold values.

ADVANTAGE: Unscheduled downtime and secondary damage can be minimized.



3. Carrying out maintenance: The Smart Maintenance Care complete package



Feintool is responsible for undertaking appropriate repairs or maintenance.

ADVANTAGE: Users have no unexpected costs and can plan on the basis of a fixed budget.



PROGRESS THAT TAKES YOU FURTHER

FEINmonitoring makes the difference



Prompt intervention: Thanks to FEINmonitoring, the oil filter of a press is changed promptly and unplanned downtimes are avoided.



Wherever you are: Alongside the preventative warning system, FEINmonitoring offers various dashboards with data and information for different target groups, such as management, maintenance or production planning.

Scenario	Previously	Benefits
Oil, engine, drive and switchboard temperature	<ul style="list-style-type: none"> ▶ A temperature rise beyond the maximum is only displayed when the limit value is reached ▶ Press stops, no reaction time ▶ Downtime 	<ul style="list-style-type: none"> ▶ Notification to maintenance via e-mail or SMS before limit value is reached ▶ Less downtime thanks to simple and affordable prevention measures
Impurities in the hydraulic oil	<ul style="list-style-type: none"> ▶ No continuous measurement, often only every six months ▶ Valves become dirty and no longer function perfectly, downtime ▶ Moisture reduces the carrying capacity of the oil, wear and tear on the pumps increases considerably 	<ul style="list-style-type: none"> ▶ Ongoing monitoring of the oil particles ▶ Alarm e-mail or notification ▶ Reduced risk
Hydraulic oil filter	<ul style="list-style-type: none"> ▶ Only displayed when the filter is full ▶ Press stops after 8 hours ▶ Filter change has to be done spontaneously ▶ Downtime 	<ul style="list-style-type: none"> ▶ Capacity is monitored continuously ▶ Existing condition and trend can be displayed and anticipated ▶ Filter change can be planned
Hydraulic batteries	<ul style="list-style-type: none"> ▶ No information on the condition of the battery ▶ Delay in charging time leads to errors ▶ Downtime 	<ul style="list-style-type: none"> ▶ Charging time and cycle can be measured continuously ▶ Existing condition and trend can be displayed and anticipated
Press maintenance	<ul style="list-style-type: none"> ▶ Time based, not use based (strokes per hour) ▶ Press maintenance is often not carried out ▶ Increased wear and tear on the press ▶ Downtime and loss of value 	<ul style="list-style-type: none"> ▶ Simple intervention on the operating hours- and stroke-counter, e-mail notification where defined values are exceeded ▶ Press value and availability upheld thanks to systematic maintenance
Energy costs	<ul style="list-style-type: none"> ▶ High energy costs resulting from poor visibility of energy consumption 	<ul style="list-style-type: none"> ▶ Transparency in energy costs ▶ Graphic with energy per press stroke for each tool ▶ Targeted energy optimization
Error notifications	<ul style="list-style-type: none"> ▶ Reasons for downtimes are established manually by the operator. There is often no exact picture of the fault or the error notifications that go with it 	<ul style="list-style-type: none"> ▶ The stop in production can clearly be attributed to the corresponding error notification, which makes it easy to analyze the causes of press faults ▶ Targeted fault rectification

THE RIGHT COMBINATION FOR GREATER PROFIT

FEINmonitoring and Smart Maintenance

Smart Maintenance is an individually configurable maintenance service that offers the possibility of covering reactive malfunctions through a flat-rate fee. FEINmonitoring and Smart Maintenance are innovative key components that ensure a high output over the years and thus make fineblanking highly profitable. The two services can be combined: FEINmonitoring identifies the critical points, and it is precisely these that Smart Maintenance draws on. One example: FEINmonitoring makes it possible to promptly detect problems with parts subject to wear. Thus Feintool service engineers can independently carry out the preventive replacement of these parts. Your benefits: Maintenance always takes place at an optimal point in time, and you have a firm handle on maintenance costs at all times.

A great combination – your advantages

Feintool services:

- ▶ Feintool continually monitors the technical condition of your fineblanking press
- ▶ Feintool informs you as soon as the condition reveals a need for maintenance or repair
- ▶ Feintool takes over the needs-based maintenance and repair of your machine automatically

Your benefits:

- ▶ You ensure the utmost machine availability
- ▶ You can avoid costly downtimes and resulting damages
- ▶ You enjoy certainty when it comes to planning for your maintenance budget
- ▶ You are insured against substantial individual losses



Perfectly connected: The Feintool presses of types HFA and XFT are equipped with a mobile communication function for FEINmonitoring.

OUR OFFER

Would you too like to benefit from FEINmonitoring? Then we can offer you these possibilities:

- ▶ All new HFA and XFT type presses are equipped with the FEINmonitoring hardware.
- ▶ Existing HFA and XFT presses (with Beckhoff controls) can be fitted with the hardware quickly and easily.

We would be delighted to put together an offer for you for the use of FEINmonitoring. Please get in touch with us: feinmonitoring@feintool.com.

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