

Envelope Monitoring System for cold forming machines

Process Monitoring and Tool Protection System

Force monitoring system for
metal forming machines:

- cold headers
- thread rollers
- multi-die cold formers
- trim presses
- stamping presses
- etc.

Force Enveloping Technique
(Up to 16 channels)

SKAutomaster

SKFuzzymaster

SKProfilemaster

Q-Factor and Trending

TFT Color-Display

Visual force curve

Networking option



IMPAX/SK 4

Top performance in technology, function, design and user friendliness: the new IMPAX/SK 4 process monitoring terminal combines state-of-the art PC technology with powerful signal conditioning processors to provide the most advanced monitor available to the industry.

The new SKFuzzymaster, SKAutomaster, and SKPROFILEmaster technologies represent the next generation of envelope monitoring, and they are going to create a new standard for signal analysis. The large full color TFT display combined with simplicity of operation via the NEMA rated front panel make the advanced features easy to use.

Features such as trending, part data memory, up and down time analysis, and an error log are complemented by such enhancements as the Windows operating system and an array of detailed process and machine diagnostic functions.

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Monitoring Functions

Offers the SKAutomaster technique for automatic signal length setting, the new SKFuzzymaster for automatic envelope width setting, the SKQmaster signal stabilizer and SKROLLmaster®/ SKToolmaster machine set-up assistance and tool wear indicators. Other features include Machine Diagnosis Functions, Peak Force/Absolute Force Display, Stop Code and Down Time Statistics, Machine Run Time Diagram, Efficiency Indicator, Error Curve Log, Part Data Memory with Target Wave Forms and Machine Loading Profile, Q-factor, Q-limit and Trend Monitoring.

NEW: SKWartmaster technology to detect very small defects occurring within a small portion of the forming curve.

NEW: SKFuzzymaster technology for automatic envelope width setting.

Technical Features

10.4" TFT color display, Windows operating system, Flush front panel, New state-of-the-art PC technology. EMR-proof, NEMA 12 enclosure, Numerous mounting options (yoke, swivel, floor pedestal, etc.), Parts counters, Sorting and Batching logics. SKTelemaster for remote diagnosis.

Technical Data

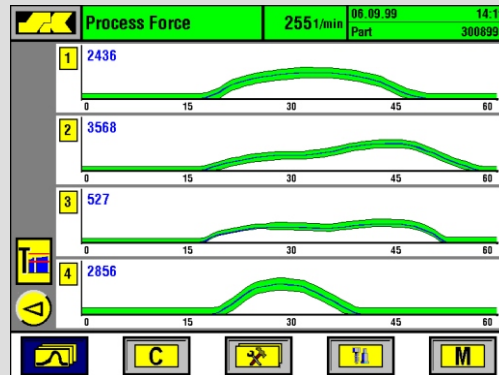
Up to 16 sensor inputs, 6 relay outputs, 3 digital inputs for binary sensors, input for angle decoders, serial data port RS-232, parallel printer port, hard disk mass storage, PC networking option (Ethernet or WLAN), high speed digital processor, high output digital signal amplifiers

Dimensions (without yoke):
485 W x 375 H x 120 D (mm)
Supply: 85 - 265 VAC, 50/60 Hz
Weight: 15 kg



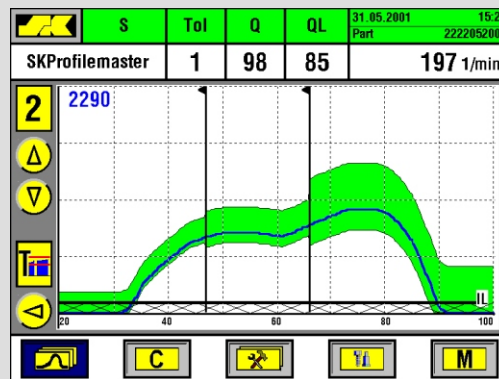
Please note that some features are optional features even if not specifically mentioned. Prices are subject to change without notice.

Examples for display screens and functional features:

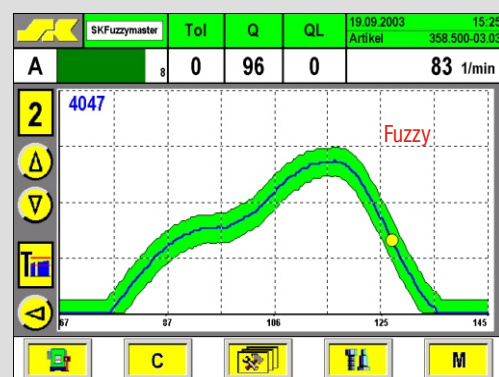


Dynamic enveloping with visual presentation of force curves and current envelope limits (single and multi channel display).

The screen will display a message with stop reason and time of stop in case of an automatic machine stop.



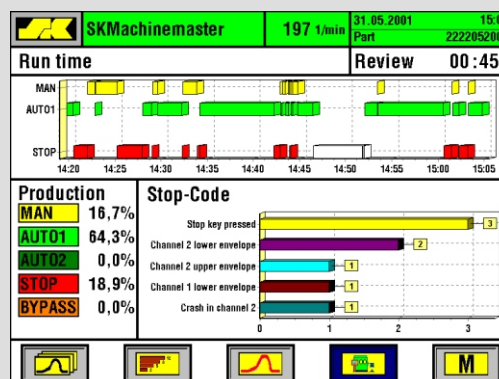
SKProfilemaster represents the next generation of force monitoring: the new "profile enveloping technique" by SK improves the monitoring performance even more. Sensitive where needed, and less sensitive during unstable forming phases. SKProfilemaster ensures optimum sensitivity and maximum productivity by avoiding nuisance machine stoppages.



The new SKFuzzymaster-Software ensures that the envelope width is always set so that the current process is perfectly monitored.

An automatic routine guarantees a uniform and consistently high monitoring accuracy without the need for any additional operator intervention:

- for every product
- on every machine
- with every operator



SKMachinemaster: Review of machine run time analysis includes error statistics and effective utilization rate.

Detailed histograms of all stop reasons. Frequency and Downtime causes are included as well as a complete log of all error force curves.