

Fine cutting system with new features

The fine cutting system with integrated camera monitoring, from Precitec, Germany, can be used for high-precision applications that require laser performances of up to 500W. Clearance widths of approximately 10µm can be achieved with a high quality beam.

One new feature of the fine cutting system is its adjustable coaxial LED lighting with external power input, providing optimal illumination even during operation.

It also has an optically optimised monitoring system for online monitoring by camera. Documentation is

also possible, as camera data can be recorded and saved on a data storage medium.


The TCP can be readjusted in the X/Y direction (repeatable operation) after an optics change, and can thus be retained. The time required for readjustment after a nozzle, lens or protective window change can be significantly shortened by fading-in electronic cross-hairs. The system's design has been minimised, reducing its weight, and it can be operated with disk, fibre optic and Nd:YAG lasers.

The fine cutting system can also be used for cutting stents – very small, grid-shaped internal vascular expanders in tubular form, which widen vasoconstrictions in the coronary vessels.

 The size of a cut stent in comparison to an ant



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 The Fine Cutting System enables the cutting of very small clearance widths

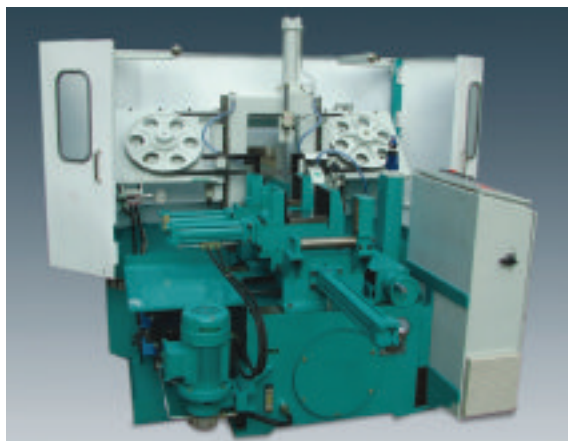


Latest solution for metal cutting band saws

ITL Industries Ltd, India, is the manufacturer of a new range of metal cutting band saw machines. These machines use linear motion guides and bearing blocks instead of conventional hard chrome plated columns and bushes for sliding of the cutting arm. This enables smooth and jerk-free movements of the cutting arm resulting in better accuracy and productivity.

The machine has also been redesigned giving it the look of a CNC machine. The

 The new metal cutting band saw machine uses linear motion guides and bearing blocks



user-friendly machine has less exposed areas, and is designed for accommodating a variety of jobs. The standard machine is available with a linear motion guide for the vertical movement of the cutting arm and linear motion. The guide can be used for feeding of jobs with better accuracy of cut length.

The newly designed linear motion guides have a number of special features. Anti friction LMG guides (linear motion bearings) provide smooth up-down movements of the cutting head. This results in high blade life and perfect cutting performance. An electronic automatic feed regulation mechanism adjusts the feed without operator involvement depending upon material composition, hardness and cross-section.

A floating shuttle vice is guided in dovetail slides for self-alignment depending upon workpiece straightness or surface roughness. There are bar stock slides on the

main vice that do not have any resistance as the shuttle vice adjusts automatically. A wider shuttle vice helps better gripping of bar stock while indexing.

High-pressure coolant jets are provided for high cutting rates. A compact and well-designed steel enclosure prevents coolant splash or spillage, thus saving cutting oil.

Auto cycle sequencing with PLC ensures smooth running, while a piece counter and length multiplier also operates through PLC. Infinitely variable blade speed is possible via the control panel through a variable frequency drive for optimum productivity and tool life.

The machine also includes an electrically driven swarf conveyor with container. In addition, there is a hydraulic band tensioning arrangement with continuous stretching of the blade during cutting for taper free cuts. A hydraulic vice and shuttle system is fitted for automatic clamping through full stroke double acting hydraulic cylinders.

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