



Belec Lab 3000s

Compact Spectrometer for Metal Analysis

Specifications

- compact construction
- low detection limits
- excellent precision
- user-friendly software Belec Win 21
- free accessible sparking stand for bigger samples
- low weight of only 49 kg
- attractive design
- more flexibility than usual laboratory instruments (e. g. by trolley)
- installation and instruction by qualified personnel



Our Recommendation

The Belec Lab 3000s is the compact stationary spectrometer for metal analysis. The tabletop instrument combines most of the features of a complex laboratory instrument in a compacted way.

Attractive Companion for Small and Medium-Sized Enterprises

The Belec Lab 3000s is the companion for all small and medium-sized enterprises. The standardized configuration of the inert gas breathed spectrometer optics and optimization of frequently requested analysis applications make the instrument attractive. At the same time, the Belec Lab 3000s offers high-performance and accuracy to the user.

On the stable transport wagon, the Belec Lab 3000s has a good position. There is enough space for appropriate equipment like e. g. monitor, keyboard and mouse. Together with other accessories, the instrument presents a real unit and is an interesting alternative to pure stationary operation.

Small but Nice

The Belec Lab 3000s is well suitable for laboratory operation. The small space required makes it possible to situate the instrument at almost any possible place.

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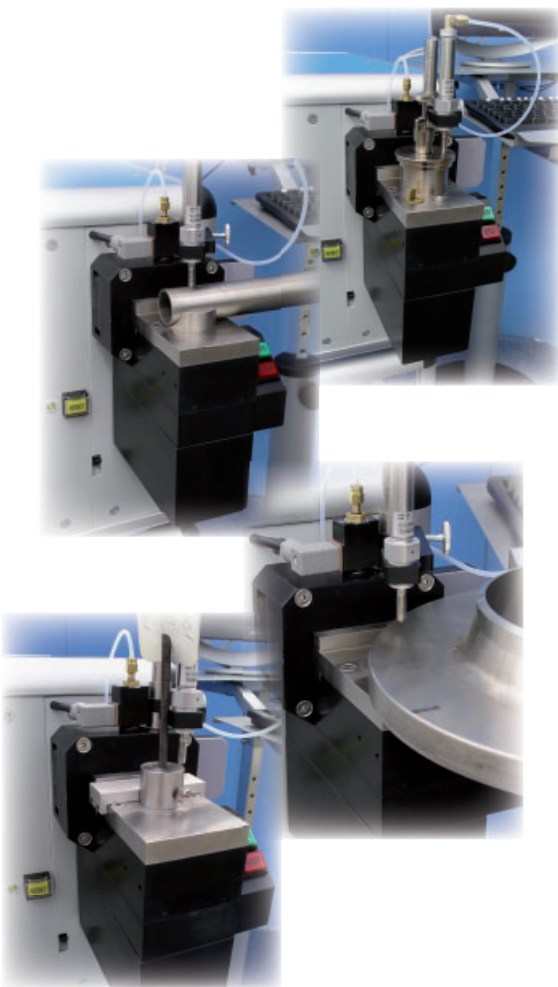


Adapters for any Kind of Sample Shapes

Belec offers a wide range of adapters for nearly every sample shape and size. Without a special sample preparation, various pieces such as pipes, wires, metal splinters, screws and even small balls can be analysed.

Laboratory-like Results and Maximum Flexibility

The sparking stand of the Belec Lab 3000s is freely accessible from three sides which enables non-destructive material testing from even huge and bulky specimens.



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The Belec Lab 3000s impresses by its enormous performance. With an adequate trolley it gains mobility and more flexibility.

The Compact Stationary Instrument as Perfect Alternative to Bigger Laboratory Spectrometers.



Technical Data

Optics

- double spectrometer in Paschen-Runge mounting
- Rowland circle diameter 300mm
- usable wavelengths 175-430 nm
- groove 3600 lines/mm
- reciprocal dispersion 0,9 nm/mm (1st order)
- shock resistance
- photomultiplier detector systems are ± 0.1 °C temperature-stabilised for excellent long-term stability
- one base module completely calibrated, expandable up to two additional base modules
- expandable to a maximum of 24 element channels
- inert gas-breathed optical chamber with purifier system
- optionally configured as vacuum spectrometer instead of inert gas-breathed

Source

- sparking generator with max. 400 Hz frequency
- unipolar discharge
- separate parameter for pre-sparking and integration selectable via software
- ignition frequency program specifically selectable via software
- discharge power program specifically selectable via software
- arc source for air probe, optional
- ignition voltage 20 kV

Measuring Stand

- argon-flushed measuring stand for exact analysis
- sparking stand grounded with \varnothing 10mm analysis opening, optionally with ceramic insert for samples of \varnothing 4mm minimum
- adapters for wires, pipes and small parts are available
- low-wear tungsten electrode
- pneumatic sample clamping
- argon flow 0,1 l/min in stand-by mode and 2 l/min during analysis
- low maintenance effort

Electronics

- stabilised high voltage
- zero-stabilised analogue amplifier
- 6-decade dynamic A-D converter for each channel
- 36 channels with digital integration, configurable for several bases

Dimensions

- width 17.4 in. (440mm)
- height 16.4 in. (415mm)
- depth 22.5 in. (570mm)
- plus 7.3 in. (185mm) for sparking stand

Weight

- analysis unit 108.0 lbs. (49,00 kg) plus monitor and keyboard

Power Supply

- 230V/50 Hz or 110V/60 Hz
- 100 W in stand-by mode
- 600 W during analysis

Power Supply with optional vacuum system

- 600 W in stand-by mode
- 1100 W during analysis

Computer Hardware

- system-integrated industrial computer system
- Intel Celeron from M 1.5 GHz with real time clock
- 1 GB RAM minimum
- 2.5" hard disk 60 GB minimum
- 19" colour monitor, other sizes available
- complete external keyboard
- USB 2.0 ports
- Ethernet interface RJ45

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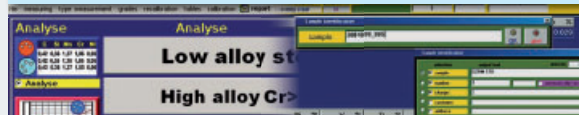
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Documentation Made Easy

Our software Belec WIN 21 convinces its users: easy to handle, always up-to-date and best operation conditions by clear arrangements. Measuring values and statistics are displayed at the touch of a button and can then be printed out or archived.

The analysis values can be easily filed in a local network via Ethernet connection.

win 21



Belec WIN 21 Analysis and Quality Control Program

Software

- arbitrary operating system, e.g. MS Windows XP
- Remote-Service-System
- display of analysis values at each measurement
- as many analysis programs to customer specifications as required
- individual analysis parameters for each program
- automatic program selection (APF)
- analysis computation with: background correction, curve position correction, additive and multiplicative inter-element correction
- automatic correction with standard types
- easy and simultaneous recalibration of several programs
- mix-up checking by comparison with reference measurement
- grade checking by comparison with analysis regulations
- type calibration and type measurement
- tolerances for every analysis program and element in absolute and relative weight percentages, individually adjustable
- average and standard deviation from chosen measurements
- warning signal, when calibration curve is exceeded
- automatic reminder of regular recalibration
- automatic display of quality description or material number
- alloy data bank, 100.000 qualities and more storable (only limited by computer storage capacity)
- text size on monitor variable for optimum legibility
- protocol storage function
- report memory function for later analysis, printing and archiving
- several statistic functions with graphical representation