



Belec Compact Port

Mobile Spectrometer for Metal Analysis

Specifications

- easy handling
- mobility by trolley
- easy transportation
- user friendly Software Belec Win 21
- analysis of P and S with Special Sparking Probe
- quick mix-up checking with Air Sparking Probe
- high accuracy grade ($C < 0,01\%$)
- connectable measuring stand
- adapters for the most different sample shapes
- installation and instruction by qualified personnel



The Smallest of its Kind

High performance combined with easy handling makes the spectrometer a reliable analysis instrument for quality assurance.

The Belec Compact Port spectrometer offers a variety of application possibilities. Whether it is used for measurements in production areas, on pipes in construction sites or on scrap yards – moving from one application to another is no problem for the instrument with its heat-stabilised climatic chamber.

The double spectrometer enables the use of the most ideal spectral lines. This small instrument can be configured for several bases (e.g. Fe, Ni, Al, Cu, Co, Ti).

High Standard Mobile Metal Analysis

Within only a few seconds you can detect and analyze up to 70 elements in metals.

With accurate sample preparation, mobile spectrometers show the same exact analysis results as the stationary instruments. They are all-purpose and there is hardly no analytical task which can't be resolved – no matter where or what sample shape.

More Flexibility: The Belec Probe Connector

The special Belec probe connector permits a very fast exchange of the different probes. Together with the possibility to connect a special measuring stand, the instrument grants a high versatility.



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argon-flushed sparking probe incl. C-analysis	●	●	—
argon-flushed sparking probe incl. P+S-analysis	—	●	—
probe connector system	●	●	●
quick mix-up checking	—	—	●
multi fibre quartz optics, 3m + 5m	●	●	●
adapters for tubes, wires + small parts	●	●	●
non-destructive material testing	●	●	●

Unique Option:

Make the best use of the characteristics of a stationary instrument — even with the Belec Compact Port. Ready for use in no time!

More Flexibility, Constant Quality

It offers versatile opportunities for the most different areas. Measurements are made with our special sparking probes and the results are displayed on the screen immediately.

In addition to other elements, the carbon content can be analyzed less than 0,01%. The Argon Special Probe allows the analysis of short wavelengths of Phosphor and Sulphur by a small spectrometer which is integrated in the probe.

The air probe comes into operation for quick mix-up checking and achieves inspection cycles of less than three seconds.



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Precise Material Analysis and Quick Mix-Up Checking with the Mobile Spectrometer Belec Compact Port

- Laboratory-like results and maximum flexibility by versatile possibilities for different application areas.
- The smallest spectrometer of its kind combines high performance with easy handling – the reliable system for quality assurance.
- This is mobile metal analysis at the highest level, not depending on the place of analysis or shape of sample.

Technical Data

Optics

- double spectrometer in Paschen-Runge mounting
- Rowland circle diameter 300 mm
- usable wavelengths 190-410 nm, 220-430 nm
- groove 3600 lines/mm
- reciprocal dispersion 0,9 nm/mm (1st order)
- shock resistance
- temperature stabilised photoelectric cells

Probes

- argon-flushed sparking probe for exact analysis, including carbon
- argon flow 0,1 l / min in standby and 2,5 l / min when analysing
- argon control on cable socket
- air probe for quick mix-up checking
- adapters for wires, pipes and small parts available for all probes
- lightweight shockproof plastic probe housing
- start and clear buttons easily hand-operated
- signal on mix-up identification: visual display for "repeat" and "reject", start button is blocked until confirm button is pressed
- multi fibre quartz optics, standard lengths 3m or 5m
- low-wear tungsten electrode
- silver electrode for air probe
- probe connector system

Source

- sparking generator with maximum 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

Connectable Measuring Stand

- argon-flushed measuring stand for exact analysis
- argon flow 0,1 l / min in stand-by and 2,5 l / min when analysing
- connector system incl. argon control on cable socket, device-independent
- sparking stand grounded with Ø 10mm analysis opening, optionally with ceramic insert for samples of 4mm minimum
- adapters for wires, pipes and small parts available
- low-wear tungsten electrode
- pneumatic sample clamping

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 14.2 in. (360 mm)
- height 7.9 in. (200 mm)
- depth 16.5 in. (420 mm)

Weight

- analysis unit 37.5 lbs. (17,00 kg)
- special probe 2.9 lbs. (1,30 kg)
- argon probe 2.1 lbs. (0,95 kg)
- air probe 1.8 lbs. (0,80 kg)
- measuring stand 20.0 lbs. (9,50 kg)

Power Supply

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

Computer Hardware

- system-integrated industrial computer system
- Intel Celeron M 1.0 GHz with real time clock
- 1 GB RAM minimum
- 2.5" hard disk 60 GB minimum
- 10.4" TFT colour display
- touch screen
- special dust and moisture protected keyboard integrated in hinged lid
- USB 2.0 ports
- Ethernet interface RJ45*

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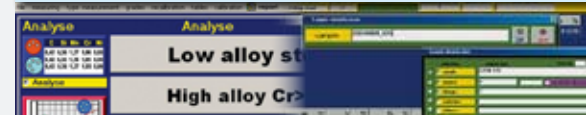
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Documentation Made Easy

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

SPKTROMETRIE OPTO-ELEKTRONIK
belec



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