QSG 750-II

Optics

- spectrometer in Paschen-Runge mounting
- Rowland circle diameter 750 mm
- wavelength range 110-770 nm
- optics and read-out electronics temperature stabilised to ± 0.1°C for excellent long-term stability
- automatic computer controlled profiling
- coma corrected slits
- PMT types selected according to the respective wavelength
- shock resistance

Vacuum System

- evacuated light metal chamber
- maintenance free 2-stage rotary vane pump
- vacuum pump integrated in cabinet
- pump duty cycle <5%
- oil diffusion protection
- automatic pressure regulation and stabilisation

Spark Generator

- Gated Digital Source (GDS) with integrated multi-spark system
- maintenance free
- spark frequency up to 1 kHz
- unipolar medium voltage discharge
- separate parameter for pre-sparking and integration selectable
- variable excitation parameters & discharge characteristics selectable by software
- Ignition voltage 20kV

Spark Stand

- argon purged spark stand, optimised for low Ar consumption
- patented self-cleaning
- open sample stand for easy handling
- low-wear top plate with 12 mm opening
- optionally adapters for small parts and wires are available
- low-wear tungsten electrode
- pneumatic sample clamp for rapid sample handling
- automatic electrode cleaning as option
- about 3 l argon consumption per measurement
- easy maintenance

Electronics

- stabilised PMT high voltage supply
- 23 bit AD conversion for each channel
- GISS technology (Gated Integration of Single Sparks)
- DSP processor controlled
- USB interface to spectrometer PC

Dimensions & Weight

- width 104 cm
- height 130 cm
- depth 90 cm
- weight about 460 kg

Power Supply

- 230V; 50/60 Hz; 1,5 kVA
- 500 W in stand-by mode

Environmental Conditions

- operation temperature 10 – 40 ºC

Computer-Hardware

- standard computer system
- MS Windows® 10 operating system with custom specific regional and language settings

Software

- OBLFwin spectrometer program
- easy routine operation
- freely configurable sample IDs
- automatic repeatability control for measurements
- automatic averaging
- warning signal if calibration is exceeded
- bad sample detection including dynamic measurement control (option)
- as many analysis programs to customer specifications as required
- individual analysis parameters for each program
- multivariate calibration model (incl. line overlaps and matrix effects)
- easy and simultaneous recalibration of a complete matrix
- automatic program selection
- fomula editor for GISS calculations
- graphical single spark evaluation module
- online inclusion analysis calculations
- type calibration and type measurement
- spectrometer control sample measurements
- average and standard deviation from chosen measurements
- automatic reminder of regular recalibration
- grade control by comparison with grade database settings
- automatic display of of selected grade or material number
- freely editable grade database
- printout of certificates
- analysis database
- several statistical functions as display of control charts
- automatic analysis data export
- system check preceding each analyse
- System diagnostics module
- software supported maintenance tasks, for example entrance window cleaning