

## Specification - PolySpek Neo

### Optical system

- Multiple optical systems
- Wavelength range capability 130-680 nm
- Sealed against dust and contamination
- Multiple holographic diffraction gratings
- Multiple linear multi-element CCD detectors
- Unlimited number of software selected element channels
- Automatic electronic peak searching, no moving parts
- Latest technology USB communications
- Fully thermally controlled

### Excitation source

- Completely solid state with integral stabilisation
- High precision spark (condensed arc) source
- Software controlled frequency, energy level and timing
- Frequency up to 600Hz
- High energy pre-spark
- Parameters automatically selected by each analytical program

### Spark-stand

- Argon flushed spark-stand
- Open spark stand to take large or small samples
- Low standby and analytical flow levels to minimise Argon usage
- Special 'Argon Miser' system for infrequent users
- Optimised Argon flow path to maintain optical transmission level
- Long-life Tungsten electrode
- Automatic sample clamp
- Easily removable sample plate for spark-stand cleaning

### Control and data processing requirements

- External Personal Computer (can be user supplied)
- Windows operating system
- USB ports for communication with PolySpek Neo
- Touch screen option

### A-PLUS Analysis and analytical software

- Foreign language menu capability
- Simple multi-choice touch screen menus \* Only available with touch screen option

- Original factory calibrated programs traceable to CRMs
- Automatic inter-element interference corrections
- Display of single or multiple analyses
- Display of Mean, Standard Deviation or Relative Standard Deviation
- Alloy identification
- Factory supplied and user configurable alloy library
- Pass/ Fail option
- User standardisation for each program
- User configurable Type Standardisation
- Storage and retrieval of data

### Quality and other features

- Log of burns for graphical comparison
- Log of all actions to hard disk
- Storage and retrieval of data from HDD to USB memory
- Optional transfer of data via network communication
- Simple report generator
- Transfer of data to Excel spreadsheet
- Interface to commercially available Quality and SPC software packages

### Weights and dimensions

- Instrument size 720 x 559 x 305mm (approximately 29 x 22 x 12 inches)
- Packing Weight - without setting up samples - 55 Kilos (120 lbs)

### Electrical requirements

- Line input 110 or 230 volts AC 50-60 Hz
- Automatic voltage stabilisation

### Environmental requirements

- Operating temperature 15 to 35C (59 to 95F)
- Storage temperature -10 to 70C (14 to 158 F)

### Other requirements

- Argon: 99.999% purity \* Argon gas purifier can be used
- Optional Nitrogen purge system for UV optic
- Sample taking equipment relevant to metal type
- Sample preparation equipment relevant to metal type

### ARUN Technology:

#### a track record of success

Since ARUN technology launched the world's first portable metals analyser based on CCD technology in the 1980's, the company has led the field in the fast growing market for portable and desktop metals analysis spectrometers. In the 1990s the MetalScan 1625 and MetalScan 1650 portable metals analysers established themselves as the industry standard for 'arc in air' grade identification or Positive Material Identification. The MetalScan 2000 desktop unit with a high-precision spark source, was introduced in the early 1990s and rapidly gained acceptance in foundries, die casters and metal finishers and this was followed by the MetalScan M2500 desktop unit in 1999. Since 2006 under the control of MetalScan Limited and a management buyout team, the new PolySpek Neo, PolySpek and PolySpek Junior desktop models as well as the ASSort and ASCert series of portables and mobiles have been introduced.



ARUN Technology is a privately owned independent company dedicated to the design, development and manufacture of optical emission spectrometers for metals analysis. Sustained and extensive investment in research and development continues to ensure that the ARUN Technology products remain at the forefront of metals analysis. Close links with industry, development centres and trade groups are used to keep applications of the technology relevant and up to date.



All our products carry the mark, showing that they are fully compatible with EC Directive 89/336/EEC

**ARUN**  
TECHNOLOGY  
*Poly\_50 Neo*

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MetalScan spectrometers are continually being improved and MetalScan Limited reserves the right to change specifications without notice

METALS ANALYSIS

**ARUN**  
TECHNOLOGY



**PolySpek Neo**

Everything you need for Metals Analysis  
Made to measure

**ARUN**  
TECHNOLOGY  
METAL Scan Limited

## POLYSPEK NEO SERIES



**PolySpek Neo** the multi-CCD, multi-optic desktop spectrometers from ARUN Technology, the originators of CCD based metals analysis.

### PolySpek Neo

From the world leader in CCD based metals analysis  
High performance desktop spectrometers  
Each model optimised for the application  
Wavelength coverage 130-680 nanometers  
Spark excitation in an Argon atmosphere  
For multi-matrix applications requiring both the ultraviolet and far infra-red spectra  
A-PLUS Windows based software

### Features

- Compact size, fits on a bench
- Uses a standard external Personal Computer, screen and keyboard via USB connection
- No vacuum pump
- Open spark stand for large or small samples
- No complex installation
- Rapid multi-element analysis
- Multiple optical systems
- Multi-element CCD array detector in each optical system
- Holographic diffraction grating in each optical system
- Complete Spectrum resolved by more than 400,000 iPixels
- Weight 52 Kgms, 115 lbs

### PolySpek Neo

The PolySpek Neo is a high-performance desktop spectrometer. With an increased wavelength coverage and improved resolution the PolySpek Neo is positioned above the entry end MetalScan PolySpek Junior for more demanding applications. In fact apart from the difference in size, the ARUN Technology desktop units can analyse exactly the same types of metal and analytical element ranges as the older photomultiplier tube (PMT) based vacuum units that have been in industrial use since the 1960's.

The overall optical design has been enhanced, and improvements in CCD technology, utilised to further improve the performance of the PolySpek Neo while retaining the major benefit of earlier units - the ability to analyse elements across the complete range of commercial metals and alloys. Additional bases, matrix calibrations and elements can be analysed without the additional hardware costs normally associated with classical spectrometers. Calibration is still required for each new material using certified reference materials. Each original calibration is supplied with the necessary setting up (restandardisation) samples.



### ARUN Technology

The original MetalScan 2000 introduced in the early 1990's was the world's first desktop spectrometer for metals analysis based on Charge Coupled Device detectors. The MetalScan 2500 introduced in 1999 with argon-flushed optic brought the possibility of ferrous analysis including Carbon, Phosphorous and Sulphur. A non-flushed version, the MetalScan 2500N, was also introduced for the non-ferrous applications. ARUN, the originator of this technology now offers its 6th generation of CCD based units and current models in the desktop range are the MetalScan PolySpek Neo and PolySpek Junior. The PolySpek Junior, aimed at the entry end of the market, is equipped with Windows software, a large CCD chip, integrated fast panel PC with a backlit colour LCD display complete with enhanced analytical software, all operated from a touch screen. The MetalScan PolySpek Junior is also available as a stand-alone spectrometer for use with an external PC. The higher performance PolySpek Neo is aimed at the user replacing an out dated photomultiplier based instrument or one with more complex applications.