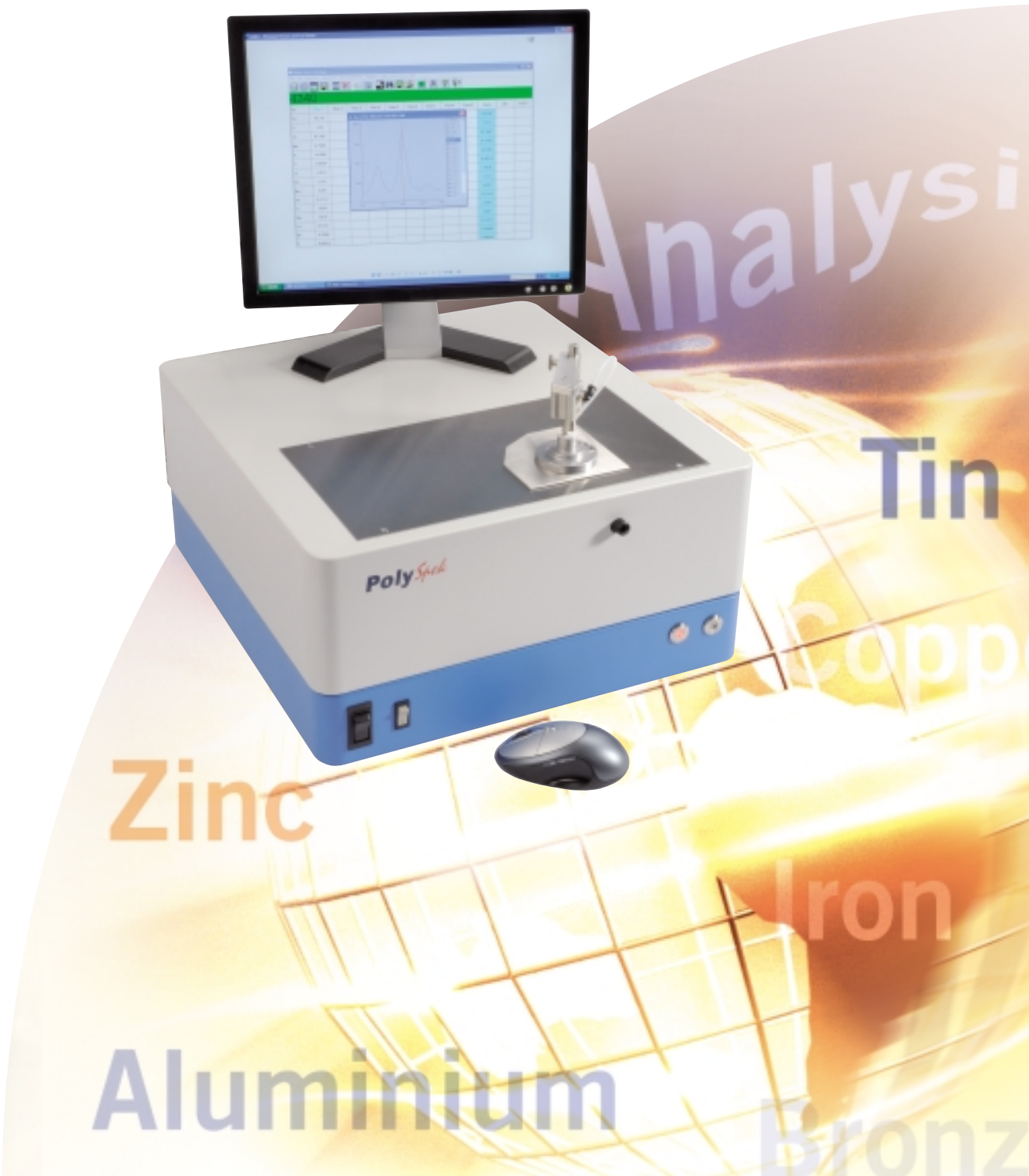
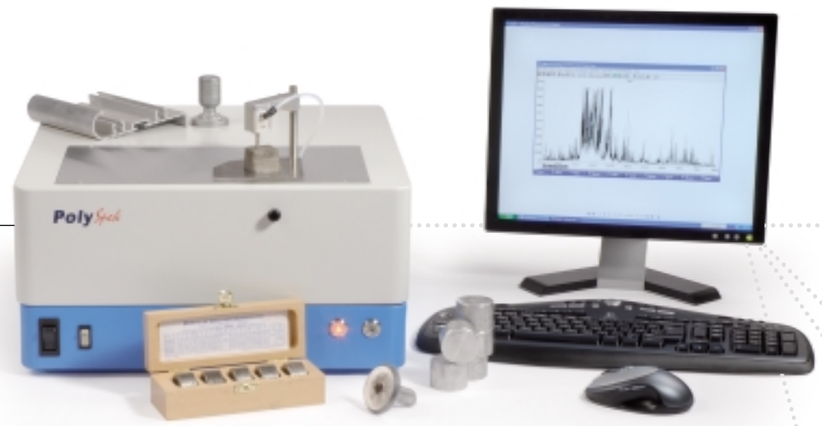
ARUN
TECHNOLOGY

PolySpek series



PolySpek series



PolySpek - the new multi-CCD, multi-optic desktop spectrometers from Arun Technology, the originators of CCD based metals analysis.

PolySpek series

- **High performance desktop spectrometers**
- **Application specific, each model optimised for the application**
- **Wavelength coverage 165-780 nanometers**
- **SPARCS Windows based software running under Windows XP**
- **From the world leader in CCD based metals analysis**

Features

- Compact size with small footprint, fits on a desk
- Uses a standard external Personal Computer, screen and keyboard via USB connection
- No vacuum pump
- Open spark stand for small or large 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 30,000 elements
- Weight 30 Kgms, 66 lbs

PolySpek-N

- Spark excitation in an Argon atmosphere
- Wavelength coverage 225-470 nanometers
- For non ferrous applications not requiring Phosphorous or Sulphur, e.g. Aluminium, Magnesium, Zinc, Copper
- Single or multi-matrix

PolySpek-F

- Spark excitation in an Argon atmosphere
- Wavelength coverage 165-470 nanometers
- For Ferrous or Nickel applications requiring Phosphorous and Sulphur or high level Nitrogen
- Copper based applications requiring Phosphorous
- Single or multi-matrix

PolySpek-A

- Spark excitation in an Argon atmosphere
- Wavelength coverage 165-780 nanometers
- For Aluminium applications requiring Phosphorous, Sodium, Lithium and Potassium
- Single matrix

PolySpek-M

- Spark excitation in Argon
- Wavelength coverage 165-780 nanometers
- For multi-matrix applications requiring both the ultraviolet and far infra-red spectra

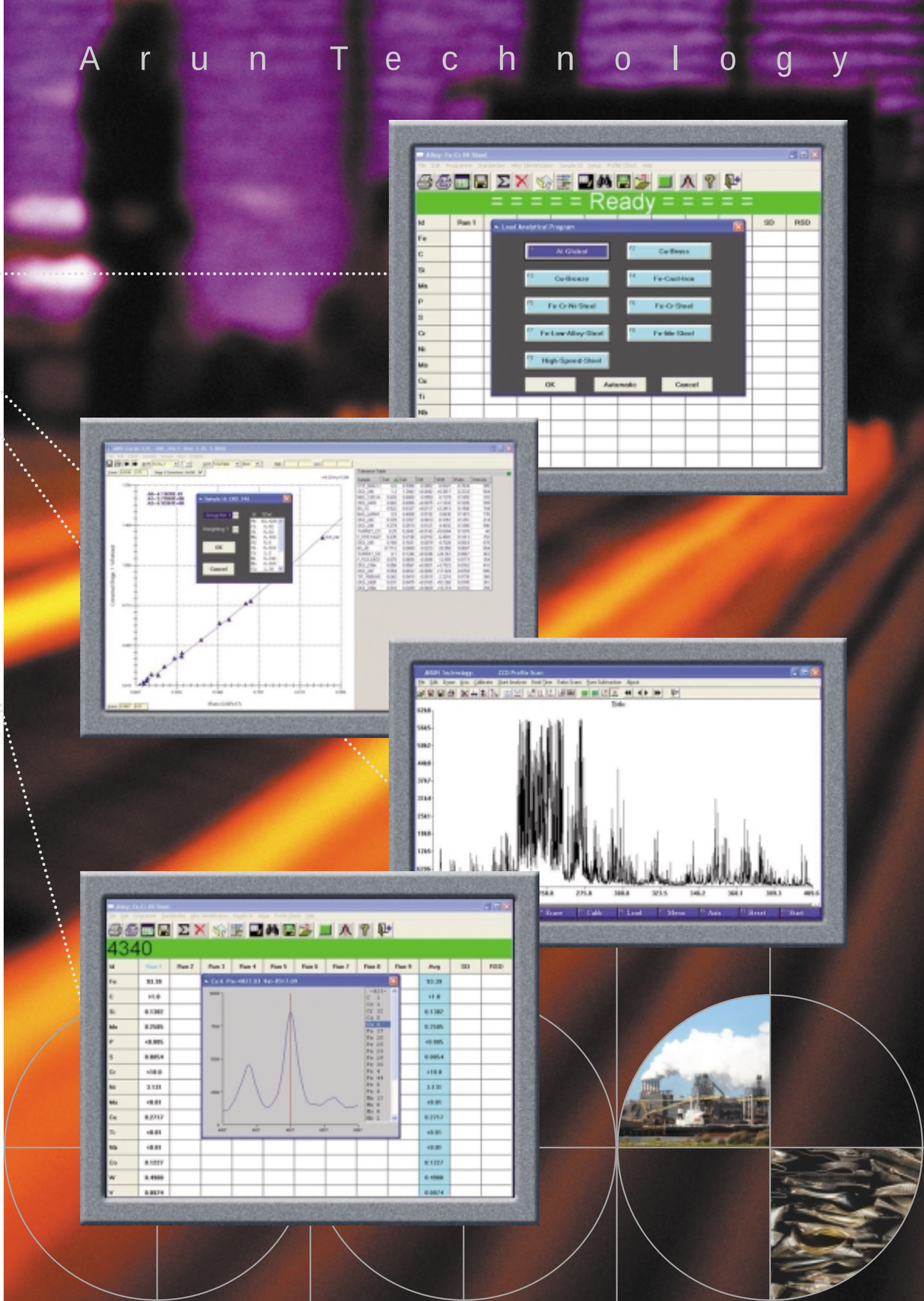
The PolySpek is a new high-performance desktop spectrometer, the first new model to be developed since the management buyout of Arun Technology from Solartron Analytical and Ametek Inc.

With an increased wavelength coverage and improved resolution the PolySpek is positioned above the entry end Metalscan M2500 series 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 1960s.

The overall optical design has been enhanced, and improvements in CCD technology, utilised to further improve the performance of the PolySpek 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 calibration is supplied with the necessary setting up (restandardisation) samples.

The original Metalscan 2000 introduced in 1995 was the 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.

The current models in the range, aimed at the entry-end user are the Metalscan 2550 and 2560 which are equipped with Windows XP, a large CCD chip, fast industrial processors, and a backlit colour LCD display complete with enhanced analytical software, all operated from the touch screen. The Metalscan 2550X and 2560X are also available as stand-alone spectrometers for use with an external PC.



Specification

Optical system
-Multiple miniature optical systems
-Wavelength range 165-780 nanometers
-Sealed against dust and contamination
-Multiple holographic diffraction gratings
-Multiple linear multi-element CCD detectors
-Unlimited number of software selected element channels
-Automatic electronic profiling - no moving parts
-Latest technology USB communications

Excitation Source
- Completely solid state with integral stabilisation
- High precision spark (condensed arc) source
- Software controlled frequency, energy level and timing
- Frequency up to 400Hz
- Peak current up to 200 amps
- High Energy pre-spark
- Parameters automatically selected by each analytical program

Spark Stand
- Argon flushed Petrey table
- Open spark stand to take large or small samples
- Low standby and analytical flow levels to minimise Argon usage
- Optimised Argon flow path to maintain optical transmission level
- Tungsten electrode
- Automatic sample clamp
- Easily removable sample plate for chamber cleaning

Control and Data Processing
Can be supplied by user
- External Personal Computer
- Windows XP operating system
- USB ports for communication with PolySpek
- Touch screen option

SPARCS Analysis and analytical software
- Foreign language menu capability
- Simple multi-choice touch screen menus, *only available with touch screen option*
- 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
- Check burn system
- Grade identification
- 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 475 x 475 x 235mm (19 x 19 x 9 inches)
- Packing Weight – without setting up samples - 34 Kilos (75 lbs)

Electrical Requirements
- Universal line input 90-260 volts AC 50-60 Hz
- Automatic voltage adjustment and stabilisation

Environmental Requirements
- Operating temperature 0 to 35°C (32 to 95°F)
- Storage temperature -10 to 70°C (14 to 158°F)

Other requirements
- Argon: 99.999% purity, *Argon gas purifier can be used*
- Sample taking equipment relevant to metal type
- Sample preparation equipment relevant to metal type

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

Arun Technology
- a track record of success

Arun Technology is a privately owned and 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.

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GAMBICA AUTOMATION INSTRUMENTATION & CONTROL LABORATORY TECHNOLOGY

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

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