

Metalscan 2500 series

Small size, big performance affordable analysis



Analysis

Tin

Copper

Zinc

Iron

Aluminium

Bronze

Metalscan 2500 series



Metalscan 2500 series is easy to set up and simple to use

Metalscan M2500 series

- Low cost, high performance desktop spectrometer
- Easy to install, robust construction, and easy to use
- SPARCS Windows based software
- From the world leader in CCD based metals analysis

Metalscan M2550 and M2550X

- Spark excitation in argon
- For non-ferrous applications or those not requiring carbon, phosphorous or sulphur
- Single or multi-matrix

Metalscan M2560 and M2560X

- Spark excitation in argon
- For ferrous applications or those where carbon, phosphorous or sulphur is required
- Single or multi matrix

Features

- Compact size with small footprint, fits on a desk
- Integrated colour LCD screen with touch operation (M2550 and M2560)
- No vacuum pump
- No complex installation
- Rapid multi-element analysis
- Stable, heated miniature optical chamber
- CCD array detector with wide spectrum coverage
- Holographic diffraction grating
- Weight 23 Kg, 51 lbs

Metalscan M2500 series

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 now equipped with Windows XP, a larger CCD chip, faster industrial processors, more memory, a backlit colour LCD display and enhanced analytical software, all operated from the touch screen.

The Metalscan 2550 and 2560 are easy to set-up and simple to use. A typical installation takes less than a full day and includes basic training on the operation of the unit. Operation is even easier than before thanks to the touch screen and intuitive menu screens.

This simplicity is not at the expense of performance and the Metalscan 2550 and M2560 offer levels hitherto seen in larger, more complex – and considerably more costly – instruments.

For those users who would prefer to have a more basic instrument and utilise a standard PC and external screen, the Metalscan M2550X and M2560X are now available without a touch screen nor any internal processor.

Thus the analytical unit can be connected to a standard Personal Computer by a simple USB connection. The Metalscan 2550, 2550X, 2560 or 2560X models give laboratory grade analysis across the full range of commercial metals types such as Cast-Irons, Steels, Brasses, Bronzes, Aluminium Alloys, Nickel alloys, Magnesium, Cobalt and Titanium etc.

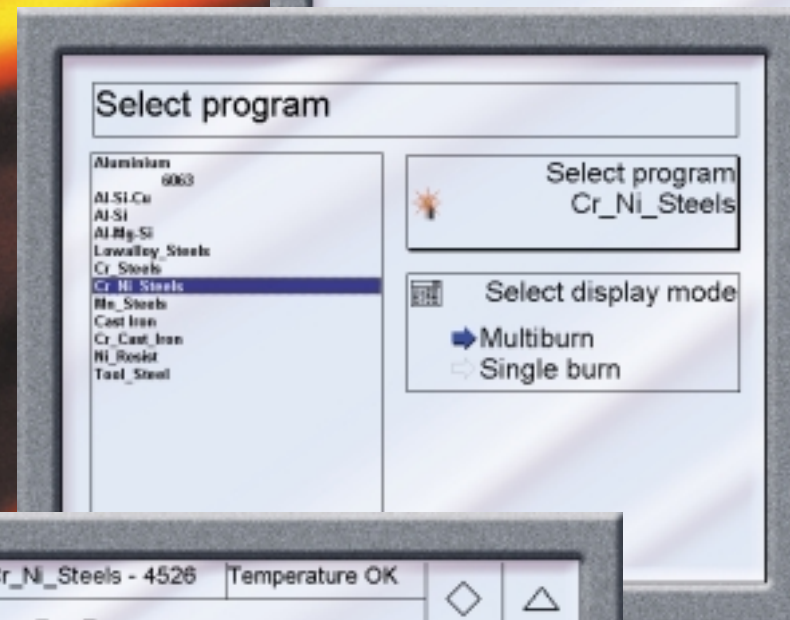
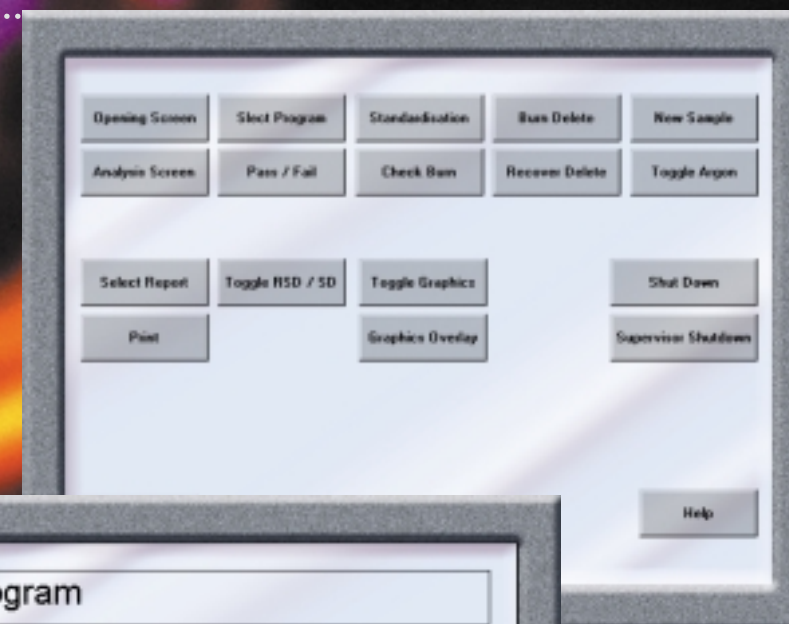
In fact apart from the difference in size, the Metalscan desktop units can analyse exactly the same types of metal and analytical element ranges as the older Photo Multiplier Tube (PMT) based vacuum units that have been in industrial use since the 1960s.

The internal design and CCD technology has been enhanced to further improve the performance of the Metalscan 2550, 2550X, 2560 and 2560X while retaining the major benefit of earlier units- the ability to analyse elements across the complete range of commercial metals and alloys.

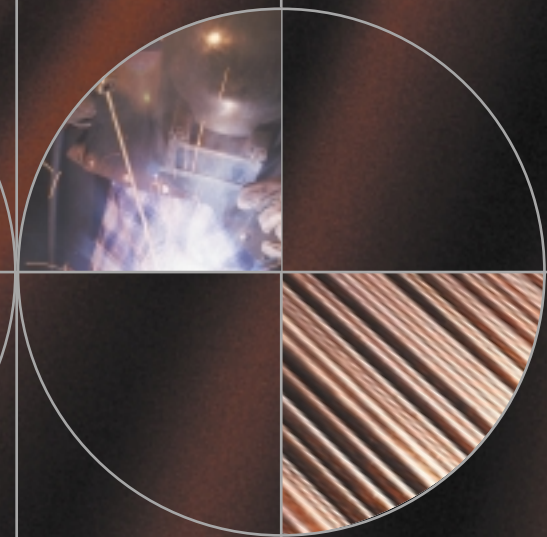
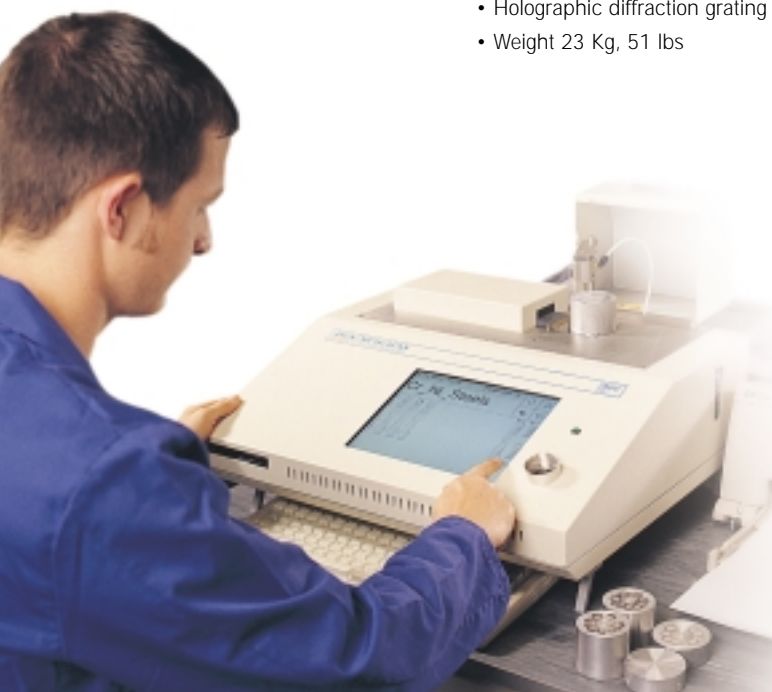
Additional bases, matrix calibrations and elements can be analysed without the additional hardware costs normally associated with classical spectrometers. Calibration is still required for each new material using certified reference materials.

Each calibration is supplied with the necessary setting up (restandardisation) samples.

All Metalscan products utilise Arun's world beating SPARCS analysis software



Func	Cr_Ni_Steels - 4526				Temperature OK		
	1	2	3	4	Mean	SD	
Fe	69.28	69.29	69.36	69.30	69.31	.0360	
C	.0396	.0408	.0421	.0398	.0405	.0011	
Si	0.344	0.347	0.343	0.351	0.346	.0042	
Mn	1.26	1.26	1.26	1.26	1.26	.0000	
P	.0271	.0301	.0252	.0294	.0280	.0022	
S	.0344	.0345	.0316	.0365	.0343	.0020	
Cr	16.5	16.6	16.5	16.6	16.5	.0617	
Ni	1.87	1.86	1.83	1.87	1.86	.0191	
W	10.1	10.1	10.1	10.2	10.1	.0577	
Cu	0.353	0.352	0.355	0.347	0.352	.0034	
Mo	.0588	.0610	.0620	.0603	.0605	.0013	
Ti	0.051	0.050	0.049	0.050	0.050	.0008	
V	.0975	.0967	.0957	.0965	.0966	.0007	



Specification

Optical system

- Temperature stabilised miniature optical system
- Sealed against dust and contamination
- Holographic diffraction grating
- Wavelength range 174-406 nanometers
- Linear multi-element CCD detector
- Unlimited number of software selected element channels
- Automatic electronic profiling
- no moving parts

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
- Low standby and analytical flow levels to minimise Argon usage
- Optimised Argon flow path to maintain optical transmission level
- Tungsten electrode
- Automatic sample clamp and sample cover
- Provision for large and small sample sizes
- Easily removable sample plate for chamber cleaning

Control and Data Processing for M2550 and M2560

- Embedded industrial PC104 processor
- Minimum 330 MHz operating speed
- Windows XP operating system
- 512 MB RAM minimum
- Hard Disk Drive 40 GB minimum
- Twin USB ports for printer and external flash memory
- Port for external CRT or LCD monitor
- Ports for keyboard and mouse
- Parallel port for parallel printer
- Serial communications port

- Integral 25cm (10 inch) backlit TFT Liquid Crystal Display
- Simple multi-choice touch screen menus
- Foreign language menu capability

Analysis and Analytical Software

- Factory calibrated program 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
- Graphical representation of elements with overlay feature

Quality and other features

- Log of last 100 burns for graphical comparison
- Log of all actions to hard disk
- Storage and retrieval of data from HDD to FDD or USB
- Optional transfer of data by serial port
- Simple report generator
- Transfer of data to Excel spreadsheet
- Interface to commercially available Quality and SPC software packages

Weights and Dimensions

- Instrument size 546 x 160 x 465 mm (22 x 7 x 19 inches)
- Packing Size 670 x 670 x 510 mm (27 x 27 x 20 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)

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.



Arun Technology

Headquarters in the UK

ARUN
TECHNOLOGY

METAL Scan Limited

Arun Technology

UK Head office:
Metalscan Limited
16 The Brunel Centre
Newton Road
Crawley, West Sussex
England, RH10 9TU
Tel: +44 (0)1293 513 123
Fax: +44 (0)1293 521 507
Email: sales@aruntechnology.com
www.aruntechnology.com



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

