since 1990

Order Information:

Article no.	Type	Description
0.100.002	AAS-13B	Atomic Absorption Spectrophotometer, flame type • Flame type, Automatic PC control, Software Analyst • 4-lamp turret, Air-C_2H_2 flame • D_2 background correction
0.100.003	AAS-12B	Atomic Absorption Spectrophotometer, flame type • Flame type, Automatic PC control, Software Analyst • 6-lamp turret, Air-C_2H_2 flame • D_2 & S-H background correction
0.100.004	AAS-10B	Atomic Absorption Spectrophotometer, flame type • Flame type, Automatic PC control, Software Analyst • 6-lamp turret, D_2 & S-H background correction • Air-C_2H_2 flame and patented air-C_2H_2-O_2 flame
Required accessories for site preparation:		
0.100.020	Exh4	Hood and Vent Kit, Stainless Steel with flexible tube L= 4m
Accessories for electrical site preparation		
0.100.026	UPS-01	UPS (3 KV) Uninterruptable Power Supply
Accessoires for gas supply		
0.100.031	REG/C_2H_2	Acetylene Pressure Regulator
0.100.032	REG/air	Air Pressure Regulator
0.100.033	REG/O_2	Rich Oxygen Pressure Regulator
0.100.034	REG/N_2O	Nitrous Oxide Pressure Regulator
0.100.036	COMP-01	Air compressor, oil-free, 220V 50/60Hz
Accessoires for system operation		
0.100.041	HG-103A	Hydride Vapor Generator
0.243.050	PC-Work station	PC with TFT screen, Keyboard, Mouse, XP-Windows

Hollow cathode lamps & Standards

Article no. Element	Article No. Standard	Sym	Element	Article no. Element	Article No. Standard	Sym	Element
0.100.101	0.100.201	Al	Aluminium	0.100.132	0.100.232	Hg	Mercury
0.100.102	0.100.202	Sb	Antimony	0.100.133	0.100.233	Mo	Molybdenum
0.100.103	0.100.203	As	Arsenic	0.100.134	0.100.234	Nd	Neodymium
0.100.104	0.100.204	Ba	Barium	0.100.135	0.100.235	Ni	Nickel
0.100.105	0.100.205	Be	Beryllium	0.100.136	0.100.236	Nb	Niobium
0.100.106	0.100.206	Bi	Bismuth	0.100.137	0.100.237	Os	*Osmium
0.100.107	0.100.207	B	Boron	0.100.138	0.100.238	Pd	Pallabium
0.100.108	0.100.208	Cd	Cadmium	0.100.139	0.100.239	Pt	Platinum
0.100.109	0.100.209	Cs	*Cesium	0.100.140	0.100.240	K	Potassium
0.100.110	0.100.210	Ca	Calcium	0.100.141	0.100.241	Re	Rhanium
0.100.111	0.100.211	Ce	Cerium	0.100.142	0.100.242	Rh	Rhodium
0.100.112	0.100.212	Cr	Chromium	0.100.143	0.100.243	Rb	*Rubidium
0.100.113	0.100.213	Co	Cobalt	0.100.144	0.100.244	Sm	Samarium
0.100.114	0.100.214	Cu	Copper	0.100.145	0.100.245	Sc	*Scandium
0.100.115	0.100.215	Er	*Erbium	0.100.146	0.100.246	Se	Selenium
0.100.116	0.100.216	Eu	*Europium	0.100.147	0.100.247	Si	Silicon
0.100.117	0.100.217	Gd	Gadolinium	0.100.148	0.100.248	Ag	Silver
0.100.118	0.100.218	Ga	Gallium	0.100.149	0.100.249	Na	Sodium
0.100.119	0.100.219	Ge	Germanium	0.100.150	0.100.250	Sr	Strontium
0.100.120	0.100.220	Au	Gold	0.100.151	0.100.251	Ta	Tantalum
0.100.121	0.100.221	Hf	*Hafnium	0.100.152	0.100.252	Tb	*Terbium
0.100.122	0.100.222	Ho	*Holmium	0.100.153	0.100.253	Te	Tellurium
0.100.123	0.100.223	In	Indium	0.100.154	0.100.254	Tl	Thallium
0.100.124	0.100.224	Ir	Iridium	0.100.155	0.100.255	Sn	Tin
0.100.125	0.100.225	Fe	Iron	0.100.156	0.100.256	Ti	Titanium
0.100.126	0.100.226	La	Lanthanum	0.100.157	0.100.257	W	Tungsten
0.100.127	0.100.227	Pb	Lead	0.100.158	0.100.258	V	Vanadium
0.100.128	0.100.228	Li	Lithium	0.100.159	0.100.259	Zn	Zinc
0.100.129	0.100.229	Lu	*Lutecium	0.100.160	0.100.260	Zr	Zirconium
0.100.130	0.100.230	Mg	Magnesium	0.100.161	0.100.261	P	Phosphor
0.100.131	0.100.231	Mn	Manganese				

CE

TÜV International Certification — TÜV THÜRINGEN CERT ISO 9001:2008 15 100 85361 TIC

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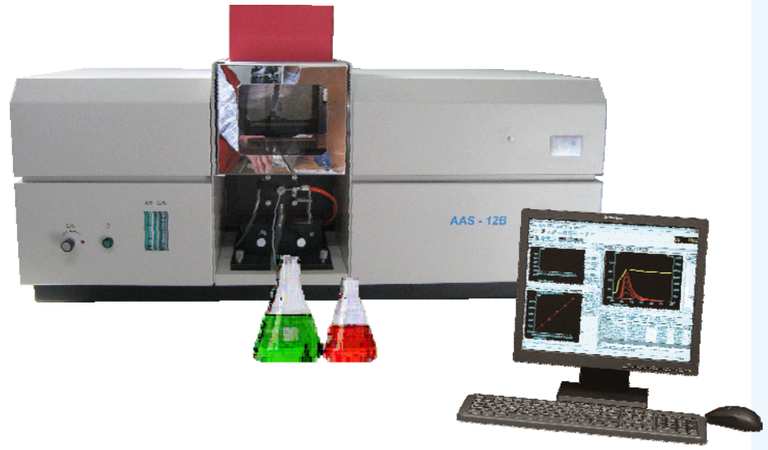
TECHNOLOGY FOR FUTURE

since 1990

Type: AAS-10B/12B/13B

Atomic Absorption Spectrophotometer
(Flame type)



Safe
Simple
Sensitive
Low cost

This AAS –series is a single beam optical technology designed to utilize a high energy throughput for the best detection limits with more sensitivity. smaller size and competitive price. The Background correction was achieved by inserting the deuterium lamp directly after the hollow cathode lamp and using variable giant pulse.

The patented new technology rich oxygen air-acetylene flame analysis provide our AAS with:

- High sensitivity,
- Simple and safe operation
- Low analytical cost

An intelligent advanced atomization with flame furnace. The automatic multi-lamp turret technology allows a precise and automatic adjustment of lamp current and optimizes the light beam position ensure a fully automatic system control..

A perfect safety operation is provided with alarm in case of gas leakage, insufficient cooling water supply and over-heating. The system has an advanced electronic design and built of high quality electronics compartments to ensure stability and accurate measurements.

The powerful Windows based software AAS Analysis is user friendly and easy to use with wide range of facilities for system control, measurements, results charts, calculations, documentation and print-out.

Features:

Innovated Rich oxygen air-acetylene flame analysis technique (AAS-10B)

The patented flame analysis technique is adopting rich oxygen air-acetylene flame as the substitution for nitrous oxide-acetylene flame for high temperature element analyses, such as Ca, Al, Ba, W, Mo, Ti, V, etc. Flame temperature is continuously adjustable between 2300-2950 °C, which makes it possible to choose the best atomization temperature for different elements. It features easy operation, low analysis cost and wide flame AAS analytical range. Rich oxygen flame will not pollute the environment and is not harmful to human bodies. It's a break-through in flame AAS analysis.

Flame atomization system with flame emission burner

A flame emission burner head can be installed to perform flame emission analysis to Alkali metals as K, Na etc. (AAS-10B/12B)

Perfect safety protection measures

Alarm and automatic protection to fuel gas leakage, abnormal flow, insufficient air pressure and abnormal flame extinction in flame system;

Accurate fully automated control system

- Automatic multi-lamp turret, automatic adjustment of lamp current & optimization of light beam position.
- Automatic wavelength scanning and peak picking
- Automatic spectral bandwidth changing
- Automatic ignition

Advanced and reliable electronic design

- Adopting large-scale programmable logic array and Inter I2C bus technology
- European type sockets and AMP adapters with high reliability to ensure long term reliability of the whole electronic system.

Easy and practical analysis software

- Easy-to-use AAS analysis software is made under Windows operating system, realizing fast parameter setting and optimization.
- Automatic display of measured data, automatic calculation and analytical result automatic print out.

Oil-free air compressor

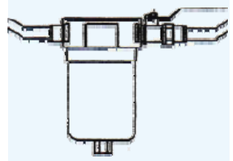
A high quality oil free air compressor suitable for laboratory application to connect to analytical systems such like AAS, GC etc. Equipped with moisture separation system . high efficiency and low noise.

Model	COMP-01
Rated discharge pressure:	0.3MPa
Discharge flow rate:	0.3~ 0.9 m3/h, adjustable
Noise:	< 55dB (A)
Dimensions:	400 x300 x620 mm
Power:	AC 220 V, 1 ph, 50/60 Hz

Type of tank and cooling water separation:
double tanks, two steps cooling water separation.

Gas – Water Separator

The gas-water separator to be installed between the air compressor and the AAS main unit (next to the gas control box) and used for gas-water separation



Specifications:

Main Specification	
Wavelength range	190-900 nm
Wavelength accuracy	±0.25nm
Resolution	Two spectral lines of Mn at 279.5nm and 279.8nm can be separated with the spectral bandwidth of 0.2nm and valley-peak energy ratio less than 30%.
Baseline stability	≤0.004A/30min
Background correction	The D_2 lamp background correction capability at 1A is better than 30 times. The S-H background correction capability at 1.8A is better than 30 times. (only for AAS-10B/12B)
Hollow Cathode Lamps	
Lamp turret	6-lamp turret (AAS-10B/12B), 4-lamp turret (AAS-13B) Auto-alignment, fully automated scan and peak-picking.
Lamp current adjustment	Automatic adjustment and displa. Wide pulse current: 0~25mA Narrow pulse current: 0~10mA
Lamp power supply mode	400Hz square wave pulse 100Hz Narrow square wave pulse + 400Hz wide square wave pulse (AAS-10B/12B)
Optical System	
Monochomator	Single beam, Czerny-Turner design grating monochromator
Grating	1800 l/mm
Focal length	277mm
Blazed Wavelength	250nm
Spectral Bandwidth	0.1nm, 0.2nm, 0.4nm, 1.2nm automatic change.
Flame Atomizer	
Burner	10cm single slot all-titanium burner
Spray chamber	Corrosion resistant all-plastic spray chamber.
Nebulizer	High efficiency glass nebulizer with metal sleeve, sucking up rate: 6-7mL/min
Emission burner	Provided with AAS-10B/12B
Detection and Data Processing System	
Detector	R928 Photomultiplier with high sensitivity and wide spectral range.
Software	Windows operating system
Analytical method	Working curve auto-fitting; standard addition method; automatic sensitivity correction; automatic calculation of concentration and content.
Repeat times	Maximum 20 times of repeat measurement, automatic calculation of mean value, standard deviation and relative standard deviation.
Multi-task function	Sequential measurement of multi-elements in one sample
Condition reading	With model function
Result printing	Measurement data and final analytical report printout, editing with Excel.
Port	Standard RS-232 serial port communication
Characteristic Concentration and Detection Limit	
Normal Air-C_2H_2 flame	Cu: Characteristic concentration≤0.025mg/L, Detection limit≤0.006mg/L;
Oxygen-rich Air-C_2H_2 flame	Ba: Characteristic concentration ≤ 0.22mg/L Al: Characteristic concentration ≤ 0.4mg/L (for AAS-10B)
Function Expansion	
Hydride vapor generator can be connected for hydride analysis	
Dimensions and weight	
Main unit (LxWxH)	1020 x 490 x 540 mm / Net weight : 80kg