

Optical Emission Spectrometer

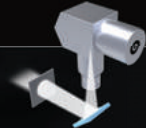
PDA-5000



 **SHIMADZU**

PDA-5000 OPTICAL EMISSION SPECTROMETER

EXCELLENT STAB



Photomultiplier

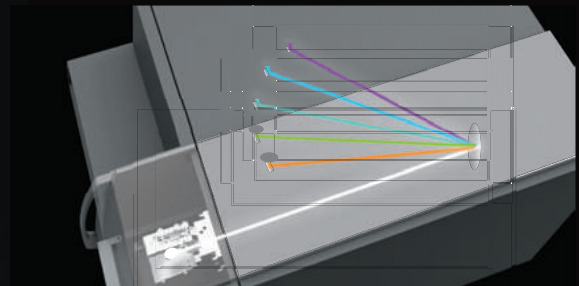
PHOTO
MULTIPLIER
TUBE

Brand new digital excitation source

Brand new designed digital excitation source, non-auxiliary electrode and free maintenance and design; The excitation energy and excitation frequency are flexible and adjustable, which form to be the condition of various excitation source bars, and the measures for different metallic materials are complete.

Stable and artful design of vacuum system

The spectral chamber is made of special cast iron that is precise and stable and in small expansion coefficient. Ensure good stability during non-stop operation in 365 days; The method of continuous vacuum pumping is used to avoid that the fluctuation of vacuum degree may affection the analysis results, the stability of analysis would be enhanced and the failure rate would maintain low; The spectral chamber is placed horizontally in anti-vibration way. The constant temperature shall be controlled at $38 \pm 0.1^\circ\text{C}$, and sweeping and blowing of are unnecessary, cost-reduced and suitable.



Unique design of spark stand

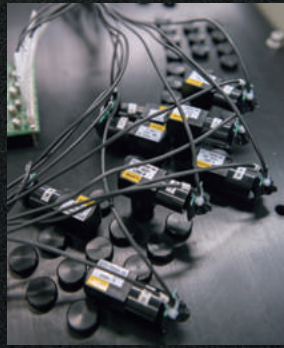


The sliding enclosed excitation table design is adopted, reducing the influence of powder under severe environment before treatment in furnace; meanwhile the sample of any size can be measured accurately;

Large test board made of special stainless steel is used. The durability is enhanced while the operation is ensured convenient;

Measure various irregular samples by selecting analysis tools of wires and small samples.

ILITY



Standardized automatic judgement

The stability of analysis is enhanced by combining the timing standardization and the standardization of automatic judgement according to the analysis results.

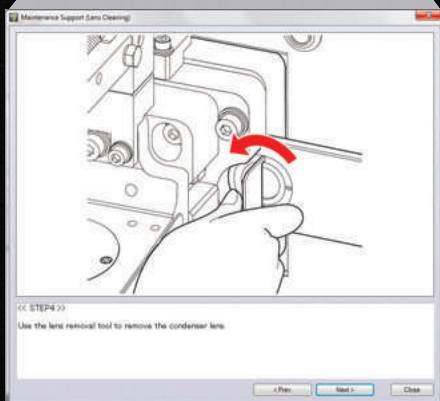
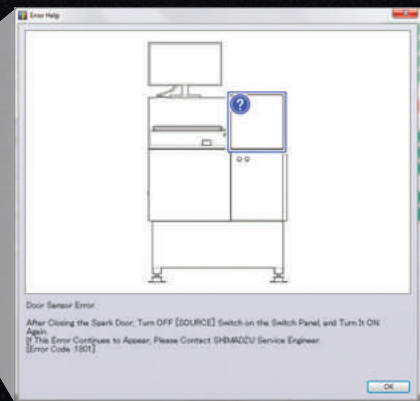
Excellent extended function

Unique factory calibration curve is integrated with the on-site correction curve to ensure the best analysis precision and accuracy of instruments;

◀ Passages can be added on site according to client requirements, while various extended applications can be performed, so as to satisfy the demand of future analysis.

EASY TO USE

The management and monitoring to realize humanized operation and maintenance are performed comprehensively from aspects of operation diagnosis, maintenance and care.



Management & support to maintenance

Remind the order of maintenance, operate according to the direction in the image.

- Process of cleaning optical lens
- Change the electrode
- Clean the Spark Stand
- Change the oil of vacuum pump

Management & support to abnormal conditions

The real-time software displays the status of each unit of the instrument, make diagnosis on abnormal condition automatically and propose the solution

- Light source system
- Temperature and vacuum degree of spectral chamber
- Metering device
- Host control system

Top Performance of Analysis

■ Top Performance of Analysis

PDA-5000 integrates the essence and the latest analysis technology of Shimadzu spectrometer. It is a ground direct-reading spectrometer customized for casting and metal processing enterprises in the world, suitable for analysis from the lab to the front of furnace, even more severe environment. Relying on reliable digital excitation source design, this equipment can be integrated with unique factory calibration curve and humanized operation software, which can make accurate certification and stable analysis on demanded elements, while ensuring simple operation and convenient maintenance. It is the ideal selection for enterprises of metal manufacturing and processing.

Main application fields and analysis materials

It can be applied to fields of steel, casting, machines and auto & auto parts, with the following conventional analysis:



Carbon structural steel: Crank, Gear, Piston and other auto parts

Cast iron: Engines and pump valve and so on

High-chromium iron: Wear-resistant material

Stainless steel: Materials for making transmission equipment of food, drugs and petroleum

Bearing steel: Roller for high-speed rail, aero-engine

START

STOP



Specifications

Main indexes

Spectrometer system	Paschen-Runge mounting, Concave diffraction grating, Vacuum type, Special cast iron chamber
Excitation system	Full digital excitation source, Spark stand for argon atmosphere
Readout system	Photomultiplier
Software	PDA-RLE software package for analyzing operation and calibration, daily management of analysis data, guidance on maintenance, care and operation, and function of self diagnosis.

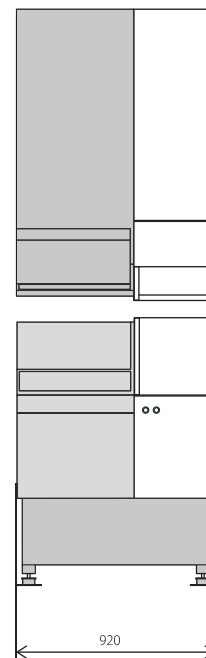
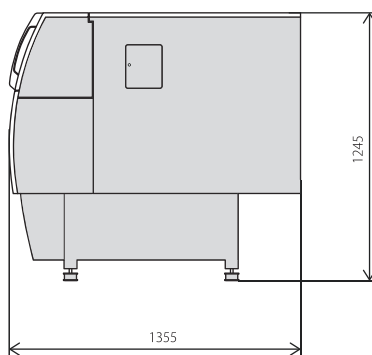
Requirements on setting environment

Temperature	10 - 30°C
Humidity	15 - 70%
Power supply	Single-phase 220 V / 230 V \pm 10% or 240 V \pm 5% (Overvoltage Category II) 50/60 Hz 2.2 kVA
Argon gas	Purity 99.999% or more Oxygen Concentration (1 ppm or less) den Point Below -70°C.

External Dimensions and Weight

Body : W 920 x D 1355 x H 1245 mm

Weight : Approx. 350 kg



This product conforms to Shimadzu's Eco-labeled designation.

Energy savings: 55% reduction as compared to the previous model.

* In case of 10 times analysis per hour.



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