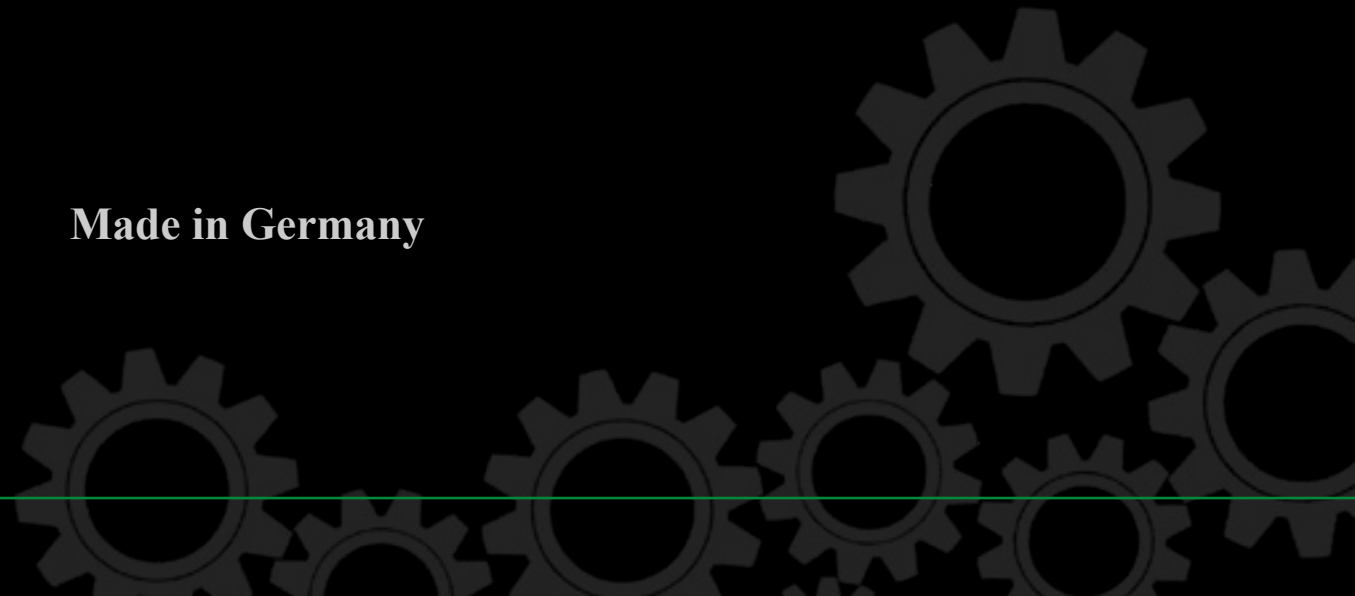


# Greensilver

Purespark

Made in Germany



# Purespark Argon Purifier

The rare gas purification system for any type of optical emission spectrometers

The rare gases are obtained from using different methods and afterward transfer to tankers or cylinders to distribute among various applications. The inert gases in every step of production, transfer and distribution might be contaminated by oxygen, nitrogen, moisture, or other impurities.

More than 30 years of experience on 2000 arc/spark optical emission spectrometers lead to develop the purification system to remove argon gas impurities as an independent portable system at the consumption point for any application which requires high purity of argon gas.

Purespark argon purifier is used to meet the requirements of metallurgy laboratories for spark optical emission spectrometry for the metal analysis, inductively coupled plasma analysis and gas chromatography analysis as carrier gas with high purity, flushing/filling vacuum chambers for keeping at near atmospheric pressure and the 3D metal printing process which takes place in an inert protective gas atmosphere for manufacturing metallic components made of titanium alloy.



# Purespark Argon Purifier

## Features

- Simple push-to-connect
- Long-life absorbent tubes
- Automatic temperature controller
- Quick connect couplings
- Double shell flexible hoses
- Easy service and maintenance
- Suitable for any gas flowrate

## Principle & Process

The argon gas purifier equipped with two independent furnaces each of which has a specific and separate function.

The main impurities in argon gas such as oxygen, nitrogen, hydrocarbons, carbon monoxide and hydrogen absorb at temperature between 450°C and 800°C by furnace one. The chemical reactions occur through 2 in 1 absorbent tube which contains zirconium + aluminum-oxide.

The moisture and carbon dioxide absorb at the ambient temperature by the molecular sieve tube. The moisture absorbent tube is embedded in second furnace which makes the regeneration process possible for many times.



## Control panel

Automatic temperature controller consists of thermocouples and thermal sensors which grant multiple safety alarm levels.

The LCD indicator displays the temperature of each furnace at every second.



## Push-to-connect

Quick connect couplings provide secure sealing for purification system.

Just push the plug into the socket for simple and safe connection. This reduces connection time and avoid any leakage.



## Long-life

High volume of absorbent tubes increased the capacity of removing impurities.

The lifetime of absorbent tubes estimates 5 years continuously by following Greensilver recommended rules.

# Purespark Argon Purifier

✓ **100% HIGH Quality**

Designed and manufactured in Germany

✓ **100% TOP Service**

24/7 Service and support

✓ **Environmentally Friendly**

CO<sub>2</sub> & CO cannot pass through

# Purespark Argon Purifier

## Accessories

The following items are included in the delivery package



### Argon valve

Argon gas pressure valve is equipped with the female quick connect coupling to avoid any leakage and facilitate argon cylinder replacement.



### Flexible hoses

Double Shell Stainless-Steel corrugated flexible hoses with male quick connect couplings on each side provide secure sealing for argon gas passage.



### Adapters

Exclusive brass adapter as an extension of female quick connect coupling is adaptable according to the optical emission spectrometer gas inlet fitting.

## Technical specification

Impurities removed	Moisture, Oxygen, Nitrogen, Hydrocarbons, CO, CO <sub>2</sub>
Temperature controller system	Automatic with multiple safety alarm levels
Furnaces warming-up time	
Furnace 1	25 minutes
Furnace 2	15 minutes
Working room temperature	5 °C - 45 °C
Maximum pressure bar	15 bar
Maximum flow (l/m)	20 l/m
Gas output purity	< 3 ppm
Gas inlet/outlet connections	Quick connect couplings, push-to-connect
Power supply	220 V - 1.2 KW - 50 Hz
Dimensions (h/w/d)	520 mm x 460 mm x 300mm
Weight	28.5 Kg

The above specification might be variable according to the application or customer demand.

# Greensilver

engineering · consulting · instrumentation

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Experience, new technology and quality from Greensilver