

PGS series: Pure Gas Purifiers

Superior gas purification



Features:

- Purifies nitrogen, helium, argon, hydrogen...
- Removes water, carbon dioxide, oxygen, hydrocarbons, freons, sulphur compounds
- Stable baselines, no 'noise'
- Turns economy 3.0 gas into UHP quality 6.0
- Self regenerates, no maintenance

Applications

- UHP carrier gases for GC and for GC-MS
GC-FID
- Separating columns
- Gas chromatographs

PGS series Puregas gas purifiers from cmc Instruments have been developed to purify bottle gases such as nitrogen (N₂), helium (He), argon (Ar) or hydrogen from contaminants like water, oxygen, carbon dioxide, hydrocarbons, freons or sulphur compounds.

Puregas purifiers adsorb multiple components with only one filter system. An integrated online regeneration in back purge mode continuously replaces the adsorbing capacity of the filter element. The adsorbing materials have endless capacity and are maintenance-free without any filter change.

Contaminants such as oxygen and water in carrier gas and purge gas for GC applications decreases the quality of analysis. Decomposition of the stationary phase in capillary and packed

columns will give unstable baselines and poor reproducibility, yielding unreliable results.

Pure and ultra high purity (UHP) gases of 5.0 or 6.0 quality are necessary to reach the limits of detection. However service on gas lines and changing bottles or filters invariably allows ingress of contaminants from ambient air. Even gas bottles with 5.0 quality contain impurities and the dragging in of contaminants from ambient air cannot be excluded.

The necessary gas quality can be guaranteed only by continuous use of gas purification systems. Using 3.0 quality gas and a Puregas gas purifier is a much more economic system than expensive 6.0 quality cylinders.

The PGS series is available in 4 standard capacities from 600 to 5,000ml/min.

Other capacities available on request.

The Puregas purification systems are designed as desktop versions for use in non-freezing areas. A high performance filter can be installed before the gas inlet in case the supplied gas is significantly contaminated by water and/or oil.

Designed and manufactured in Germany these products represent quality at an affordable price. Perhaps more importantly, the excellent reliability and almost zero downtime that can be expected over many years brings with it peace of mind.

Specification

Electrical requirements: 230V, 50Hz

Outlet hydrocarbon: < 0.1 ppm

Outlet CO₂: < 0.5 ppm

Outlet H₂O: < 0.05 ppm

Outlet O₂: < 0.1 ppm

Inlet pressure: 5-10 bar (recommended)

Connections: 4 mm Swagelok
(others on request)

Max power input

PGS 600, PGS 1500, PGS 2500: 60W

PGS 5000: 210W

Power demand (W/h)

PGS 600: < 30

PGS 1500: < 35

PGS 2500: < 40

PGS 5000: < 70

Weights and Dimensions

Dimensions (w x h x d) mm:

All models: 330 x 460 x 560

Weights net:

PGS 600: 9 kg

PGS 1500: 10 kg

PGS 2500: 12 kg

PGS 5000: 14 kg

Ordering Information

| Bestellnr. | Beschreibung | |
|------------|--|---------------------------|
| PGS 600 | Puregas gas purifier, < 0.1 ppm hydrocarbon, < 0.5 ppm CO ₂ , < 0.05 ppm H ₂ O, < 0.1 ppm O ₂ | Max. gas flow, 60ml/min |
| PGS 1500 | | Max. gas flow, 1500ml/min |
| PGS 2500 | | Max. gas flow, 2500ml/min |
| PGS 5000 | | Max. gas flow, 5000ml/min |

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