

boreas

Automated GC analysis of compressed gas



- Increase productivity by 300%
- Eliminate manual injection
- Eliminate manual purge
- Make at least 3 injections per gas cylinder for repeatability
- Inject using gas cylinder with internal pressure as low as 25 psig
- Optimize instrument operation time with automation

The Boreas is a robotic platform that can perform a high throughput analysis of compressed gas tanks.

With its 20 gas cylinder automated carousel, the injector has access to the tanks from their manometer and can read the pressure from each tank with an online sensor. Only the vapor surface that is contained in the cylinders will be analyzed by gas injection.

The PAL3 RSI based Boreas is integrated to a GC through a Chronos interface to enable the injection from the tanks directly to the analyzer.

That makes the Boreas a fully automated platform that allows the analysis of the content of several gas cylinders by headspace.

Boreas was specifically engineered for the automatic analysis of pressurized gases via gas chromatography and/or mass spectrometry such as SF₆, SO₂, H₂S, HF, permanent gases and RG.

Features

- Pressure controlled injection for better reproducibility
- Complete purge between each sample to minimize carryover
- Online filter to prevent clogging
- Automatic cylinder alignment verification before each run
- Pressure log of each cylinder.
- Customizable sample injection volume and pressure
- Customizable carousel to accommodate different cylinders (initial setup for Restek #24133 cylinders)
- Designed to be interfaced with existing GC, GC-MS, GC-MS/MS
- Easily integrated in existing CDS such as Xcalibur™, ChemStation, MassHunter, MassLynx™ etc.
- Fully controlled via Chronos



Electrical/Gas Specifications

Boreas	120 V~, 60 Hz, 2 A
RSI	100-240 V~, 50-60 Hz, 3 A, 200 W (max)
Compressed air supply	60-100 psi