

Specac

Gas Sampling solutions

**Pure
Performance**



smiths
A part of Smiths Group plc

www.specac.com

***THE SOLUTION IS SPECAC
WHAT'S THE PROBLEM?***

Pure Dedication

Specac's success and reputation as a leading supplier of gas sampling solutions has been built on one clear proposition: *to provide our customers with the most cost effective, technically innovative sampling solution to their problem.*

Our comprehensive range of FT-IR and process gas cells covers every conceivable analytical need, whether it be in the laboratory, the field or on the plant, Specac provides the answer.

The innovative design of our Storm™, Tornado™, Cyclone™ and Typhoon™ series gas cells, allows us to offer sampling solutions in a wide range of pathlengths, volumes, construction materials and windows. The most corrosive gases and vapors can be measured at high concentrations right down to ppb levels, and at temperatures as high as 280°C and pressures as high as 1500 p.s.i.

Optional upgrades further enhance applications adaptability, creating an extremely cost-effective gas measurement solution, with no compromise in performance.

Our systems are currently used world-wide by scientists, process engineers and operators in many industries, research institutes and universities.

Now you know why we say;

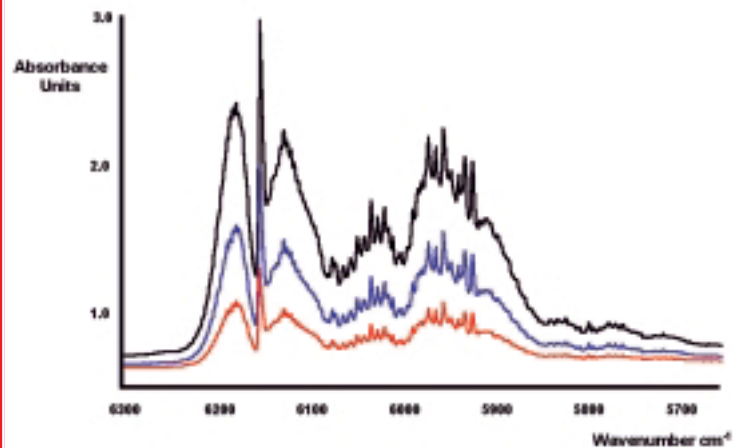
THE SOLUTION IS SPECAC. WHAT'S THE PROBLEM?



Gas Sampling Expertise

Our gas sampling expertise and applications experience has proved invaluable in solving some of the most technically challenging applications.

With our team of specialist chemists and spectroscopists you can be assured of unrivalled technical support and applications advice.



Design and Manufacture

From our purpose built 25,000 sq. ft. facility, our team of optical and mechanical engineers use the latest in 3D CAD systems and optical design software to produce the most innovative and cost-effective solution for your requirements. Our expertise in infrared optics, mechanical and electrical design, are combined with quality componentry and precision manufacturing, to ensure the highest possible performance and reliability.



Product Range

Storm™ Series - Short Pathlength Gas Cells

For the analysis of concentrated (% levels) gases and vapors at ambient and elevated temperatures.

Tornado™ Series - Fixed Long Pathlength Gas Cells

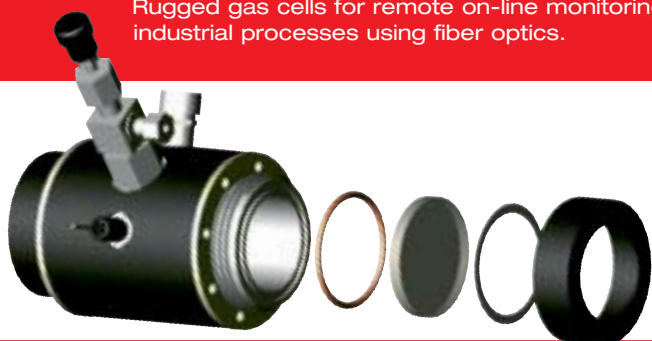
For the routine analysis of low concentrations of gases and vapors at ambient temperatures and pressures.

Cyclone™ Series - Variable Heatable Long Pathlength Gas Cells

High performance gas cells for the analysis of low concentrations of gases and vapors under a wide range of temperatures and pressures.

Typhoon™ Series - Process Gas Cells

Rugged gas cells for remote on-line monitoring of industrial processes using fiber optics.



General Specifications

Storm™ Series

- ◆ Fixed pathlength (10cm)
- ◆ Pyrex or Stainless Steel bodies
- ◆ Choice of window materials including NaCl, KBr, ZnSe, CaF₂ and BaF₂
- ◆ Vacuum to 15 p.s.i. operation
- ◆ Flow or static mode
- ◆ Heatable version (to 250°C)

Tornado™ Series

- ◆ Fixed pathlengths (1m – 20m)
- ◆ Three models available
- ◆ Borosilicate glass bodies
- ◆ Gold mirrors (protected)
- ◆ Choice of window materials including KBr, ZnSe and CaF₂
- ◆ Vacuum to 15 p.s.i. operation
- ◆ Flow or static mode
- ◆ Purgeable transfer optics
- ◆ Range of options

Cyclone™ Series

- ◆ Fixed and variable pathlengths (0.5m – 10.6m)
- ◆ Three models available
- ◆ Borosilicate glass and metal body versions
- ◆ Gold mirrors (protected)
- ◆ Choice of window materials including KBr, ZnSe and CaF₂
- ◆ Vacuum to 125 p.s.i. operation
- ◆ Heatable to 200°C
- ◆ Flow or static mode
- ◆ Purgeable transfer optics
- ◆ Range of options

Typhoon™ Series

- ◆ NIR, UV or Visible region operation
- ◆ 20cm – 50cm fixed pathlengths (others available upon request)
- ◆ Range of metal bodies including Stainless Steel, Hastelloy®, Zirconium and Titanium
- ◆ Sapphire windows
- ◆ Perfluorelastomer seals
- ◆ Temperature rating 280°C
- ◆ Pressure rating 1500 p.s.i.
- ◆ Range of options

CE Compliance

All of our heated gas cells systems are fully CE compliant ensuring that they can be operated safely at all times under recommended conditions.

Applications

Medical gas purity
Laboratory gas purity
Industrial hygiene gas monitoring
Fire suppression gases
Electronic specialty gases
Engine exhaust and combustion gas monitoring
Aviation / diving gases
Workplace air monitoring

Gas phase chemical reaction monitoring
Gas phase precursor QC
Low level moisture analysis
VOC emissions
Semiconductor manufacturing & cleaning gases
Toxic / corrosive gas analysis
Stack / flue gas analysis
Ambient air monitoring (static and continuous emissions)
Natural emissions



Gas Cells At A Glance

	Storm 10	Storm 10H	Tornado T5	Tornado T10	Tornado T20	Cyclone C2	Cyclone C5	Cyclone C10	Typhoon
Pathlength(s)	10cm	10cm	1m – 8m	2.1m – 10.6m	2m – 20m	0.5m – 2.5m	1m – 8m	2.1m – 10.6m	20cm – 50cm
Pathlength steps	NA	NA	1m	1.06m	2m	0.5m	1m	1.06m	10cm
Fixed pathlength	✓	✓	✓	✓	✓	✓	✓	✓	✓
Variable pathlength	X	X	X	X	X	X	0	0	X
Gold mirrors	NA	NA	✓	✓	✓	✓	✓	✓	NA
Windows	CS	CS	CS	CS	CS	CS	CS	CS	Sapphire
Glass body	✓	X	✓	✓	✓	✓	✓	✓	X
Metal body	0	✓	X	X	X	0	0	0	✓
Heating Jacket / Controller	X	✓	X	X	X	0	0	0	X
Purgeable optics box	NA	NA	✓	✓	✓	✓	✓	✓	NA
Vacuum / gas taps	✓	✓	0	0	0	✓	✓	✓	Tubing
Pressure gauge	NA	NA	0	0	0	X	0	0	NA
Desiccant storage caps	NA	NA	0	0	0	0	0	0	NA
Purge bellows	NA	NA	0	0	0	0	0	0	NA
Laser alignment accessory	NA	NA	NA	NA	NA	NA	0	0	NA

✓ = standard feature 0 = optional X = not available
 CS = client specified NA = not applicable

If you would like to see how Specac can provide a solution to your problem, or receive more information on any of our products or services, please call your local sales office, or email sales@specac.co.uk