

# Ancillary equipment

specifically designed for gas analysis systems

In addition to reference method gas analysers, Signal Group also manufactures a full range of sample handling, calibration and test instruments; making Signal a one-stop-shop for emissions monitoring equipment.

**Raising gas analysis to new levels**

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# Ancillary equipment

## Heated line

### Heated line plus Model 540 Temperature controller

Available in lengths from 0.5m up to 30m, and internal diameters of ¼", to ½". Unlike wire-wound trace heaters, Signal heated lines use powered stainless steel braided PFA tubing to provide unparalleled structural integrity and complete surface heating, preventing cold spots.



## Heated pre-filter

### 363SM

The 363SM is a heated pre-filter which is installed close to the sampling point, providing a filtration of hot sample gas before allowing down the heated line to the gas analyser. The equipment comprises of a temperature controlled (heated @191oC) oven housing a particulate filter. Filter removal is easily achieved via the back panel, avoiding the need to remove the equipment from the stack.



## Heated sample handling units

### 363 Portable heated sample pump/filter

A light duty, portable heated pump and pre-filter unit for use with single heated instruments. Provides variable inlet pressures and sample flow rates for very low sample pressures, or very long heated lines, or for pumpless measurement instruments.



### 340 Distribution oven

340 is designed to distribute hot, sample gas throughout the gas analyser system, the Model 340 Distribution Oven comprises a temperature controlled oven assembly, housing a particulate filter and needle-valve manifold arrangement. Filter removal and needle-valve adjustment is easily achieved via the front panel, enabling individual flow control to three outlet ports.



### 361/2 Heated pump/filter/dist oven

A built-in heated pump draws sample from the pre-filtered exhaust probe. This is then distributed to two heated analysers, and a third line is fed to a cooler dryer for sample conditioning for dry gas analysers such as the Signal Group S4 PULSAR Multi-gas analyser. The two filters can be switched via an external switching unit (picture shows dual channel Model 362).

A single sampling point unit (Model 361) with just one filter unit is also available.



### 346 FEF Module

The Front End Filter (FEF) Module is a prefilter which is installed close to the sampling point, providing sample filtration and system integrity checking with Span gas being passed down the heated line to check for hydrocarbon 'hang-up'.



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## Cooler Dryers

### 203 Cooler / Dryer

This 19" rack mounted cooler dryer has up to three independent channels and is supplied complete with temperature and condensate alarms. The cooled and dried outlet sample is directed to the gas analyser.

A single channel version (known as the Pod) is also available.



### 200SM Series Cooler / Dryer

These 19" rack mounting cooler dryers remove water vapour from Stack and Exhaust emission gases, before analysis by ambient analysers.



## Methane cutters

### 320 Cutter

An external non-methane hydrocarbon cutter provides the capability to measure methane-only for clients with a standard heated flame ionisation detector (FID). The Model 320 therefore provides a low cost alternative to all-in-one FIDs with a built in cutter.



## NO<sub>2</sub> and NH<sub>3</sub> to NO Converters

### 410 and 420 Converters

This compact 19" rack enclosure houses either a NH<sub>3</sub> to NO converter or NO<sub>2</sub> to NO catalysts, as well as a self contained heated filter and calibration gas selection valve. It is generally used with chemiluminescent NO<sub>x</sub> analysers.



## Test & Calibration equipment

### AS80 Zero air generator

Provides an inexpensive source of clean, zero-grade air for flame ionisation detectors (FID). Removes all hydrocarbons, including methane, down to 0.1% of the original level. Up to 10 FID units can be run from one unit.



### 821S Gas divider

This gas divider provides ten fixed points for checking instrument linearity across the full measurement range. The instrument is suitable for use with any gas compatible with st-st, ptfе and kynar materials.



### NOXGEN 3 NO<sub>x</sub> converter efficiency tester

This device is used to check the converter efficiency of Chemiluminescent NO<sub>x</sub> analysers during manufacture and after every 6 months of operation. The Noxgen 3R provides the option of remote control using TTL levels for all operational functions.

