



Industrial

Thermo Scientific Gas Chromatograph Analyzers

TRACE 1610 GC Natural Gas Analyzer extended for
GPA 2286 plus GPA 2261 with O₂/N₂

Overview

This Thermo Scientific™ Natural Gas Analyzer analyzes natural gas (NG) samples to determine the British Thermal Content (BTU) as outlined in GPA Method 2286 plus GPA Method 2261 with O₂ and N₂ separation. The system, based on the Thermo Scientific™ TRACE™ 1610 gas chromatograph, analyzes a single NG sample on a dual-channel Thermal Conductivity Detector (TCD) and Flame Ionization Detector (FID) configuration.

A configuration with two dual-channel setup (2x TCD and 2x FID) is available to allow simultaneous analysis of two different samples for increased throughput.

Key features

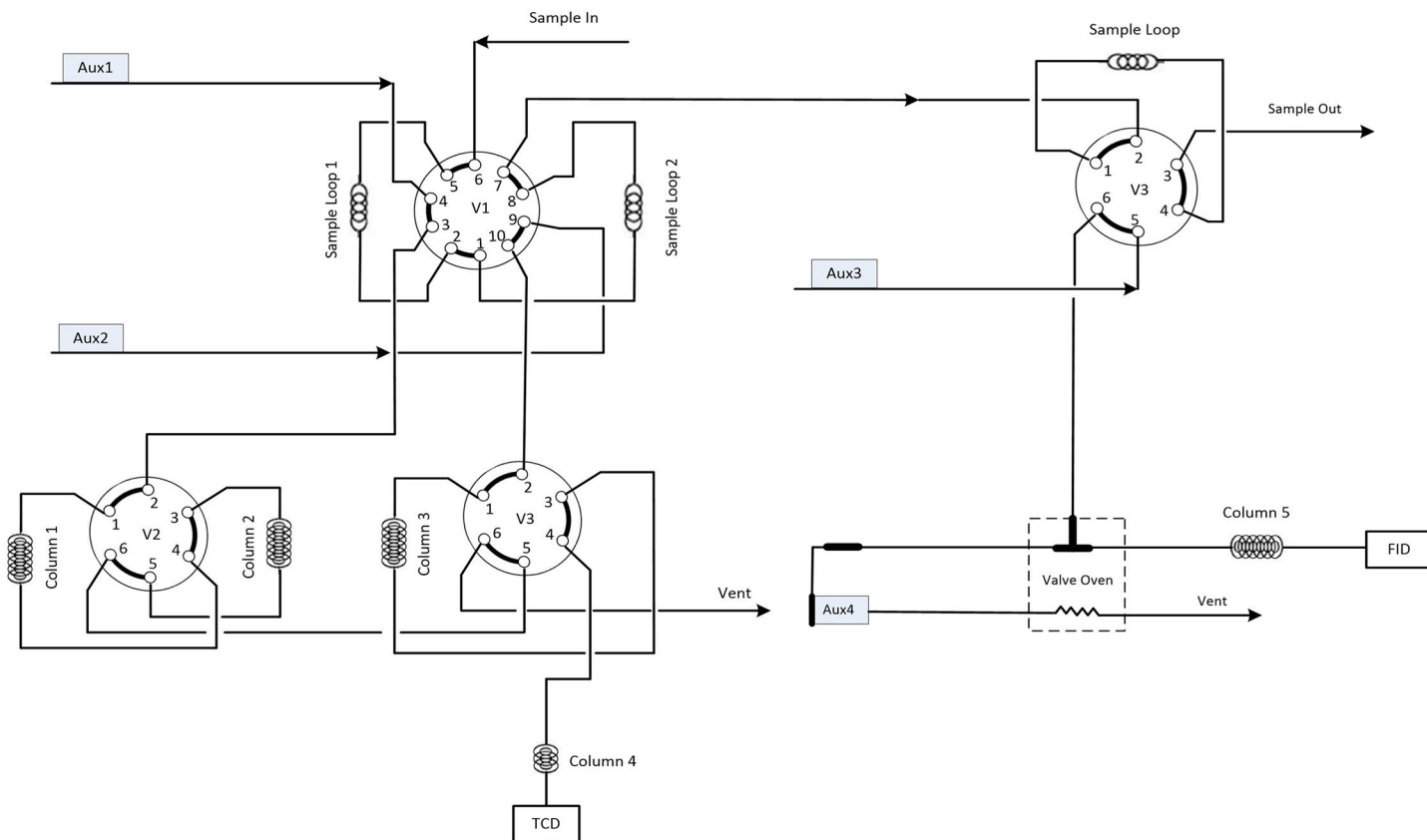
- Modular Thermo Scientific™ iConnect™ detectors to facilitate troubleshooting and maintenance
- Simultaneous analysis of two samples to increase productivity
- Repeatability <1%
- Dedicated BTU reporting in Thermo Scientific™ Chromeleon™ CDS
- Compliant with GPA 2286, GPA 2261, ASTM D7164, ASTM D3588

Channel one: Thermal Conductivity Detector (TCD)

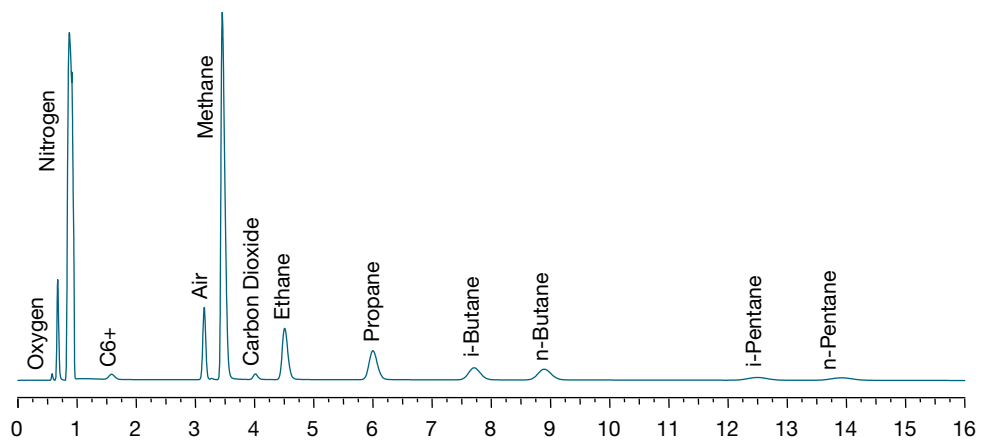
- Sample type: Natural gas
- Gas sampling valve
- Components: C6+ regroup, nitrogen (air composite), carbon dioxide, methane, ethane, propane, i-butane, n-butane, i-pentane, and n-pentane
- Independently heated auxiliary oven with two valves
- Three packed columns in the auxiliary oven
- Plumbed with sulfur-resistant tubing

Channel two: Flame Ionization Detector (FID)

- Gas sampling valve
- One capillary column in GC oven
- Components: C1-C16 hydrocarbons



Schematic of the dual channel NGA Analyzer for GPA 2286 and 2261 with O₂/N₂ separation



Natural gas TCD channel with C6+ early regroup and O₂/N₂ separation

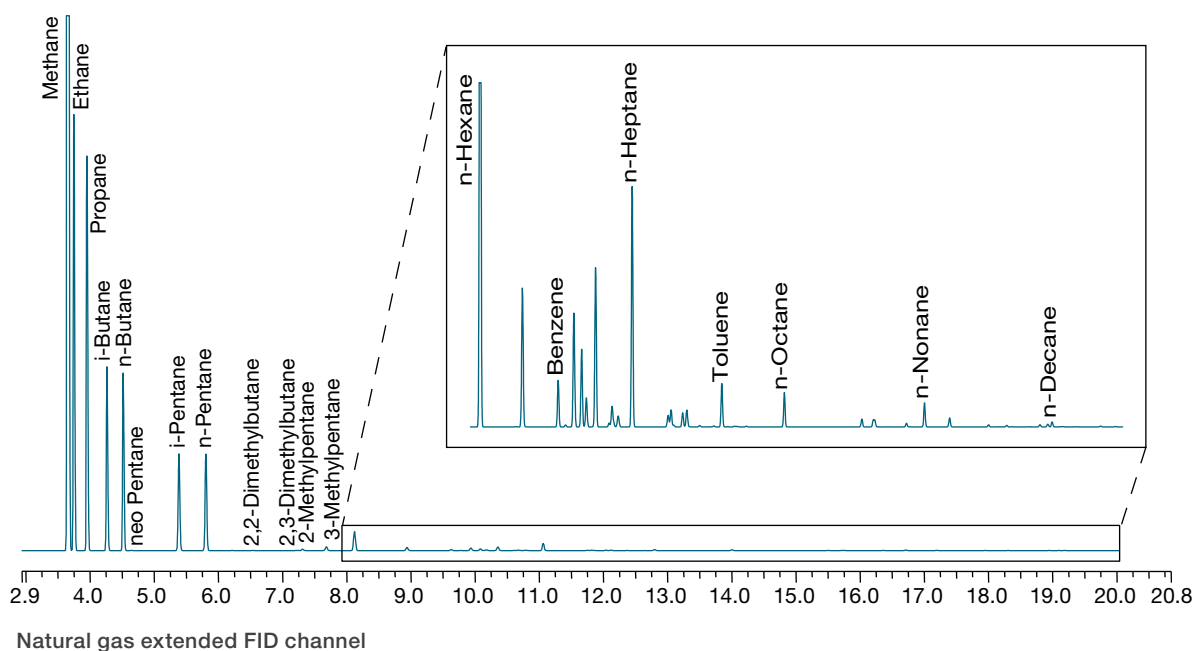
Natural gas system specifications

Channel	TCD channel	FID channel
Analysis	Natural gas C6+	Natural gas C1-C16
Detectors	TCD	FID
N ₂ (air composite), CO ₂	Yes	No
O ₂ /N ₂ separation	Optional*	No
He/H ₂ separation	No	No
Hydrocarbons	C1-C5 with C6+ regroup	C1-C16
Repeatability	<1.0%	<1.0%
MDL hydrocarbons	0.005%	0.001%
MDL perm gases	0.01%	NA
MDL H ₂ S	0.05%	NA
Valves per channel	2	1
Columns per channel	3 packed	1 capillary
Sulfur inert	Yes	Yes

* Add one valve and one packed column to the TCD channel

Tailored analyzers for specific application needs

Thermo Fisher Scientific offers a suite of analyzers for natural gas, natural gas liquids, and liquefied petroleum gas. TRACE 1610 GC Analyzers for NG/NGL conduct analyses according to standard methods from regulatory agencies, such as the GPA, ASTM, ISO, and DIN, including determination of calorific or BTU content, hydrocarbon speciation, and impurities. Single channel, dual channel, or multi-method combination systems are available to meet your requirements.



Learn more at thermofisher.com/gcsystems