Model 292B Portable Natural Gas Chromatograph

The production and custody transfer of natural gas requires accurate measurement of the composition of the gas. Many contractual requirements define the desired composition, heating value and relative density of the gas being sold or transported. Portable gas analysis of the critical components in natural gas ensures reliable results when installation of stationary analyzers is impractical or costly.

The AMETEK Model 292B natural gas chromatograph is designed as a truly 'portable' analyzer. An integrated sample inlet manifold allows for single connections of sample and drive (carrier) gases, allowing for flexible installation either as a stand-alone analyzer, or integrated into a mobile platform such as a truck or other vehicle.

Chandler Dew Point Testers

BUREAU OF MINES-TYPE DEW POINT TESTER FROM AMETEK

The Chandler Bureau of Mines Dew Point Tester is a primary instrument used to measure the dew point temperature of any gas. It is rugged, portable and can provide very repeatable results. Because of its primary nature, the standard dew point tester requires no calibration. Consequently, it is frequently used to verify results of electronic instruments.

The Chandler Dew Point Tester, which meets ASTM D1142 and traceable to NIST, is a chilled mirror device that operates by achieving the conditions required by the definition of dew point. When a gas is cooled out of contact with liquid water, the humidity or water content remains constant, but the percentage of saturation increases until it reaches 100% and moisture begins to condense. The temperature at this point is known as the dew point or frost point.

Ranarex™ Gas Gravitometer

Ranarex Gravitometer measures the specific gravity of gases as compared to air. For many industrial process gases there is a definite connection between the analysis of the gas mixture and its specific gravity. When the specific gravity is involved in the analysis of the total mixture, or when the instruments are used with orifice metering in gas volume, they are graduated in specific gravity. When the gravimetric principle can be applied, Ranarex gravitometer excells over more complex and costly analyzers in total performance.

Chandler UGC Vibrating Densitometer

For more than 30 years, the Chandler Densitometer has been used by major pipelines and other industries. It was developed primarily for extremely accurate fluid metering (custody transfer), plus many other applications, such as pipeline interface detection, blending, process control, etc. The frequency output of the Chandler Vibrating Densitometer is compatible with most flow computers.

For detailed information of each model, please refer to the product specification sheets.

Model	292B Portable Natural Gas Chromatograph	Chanscope II Bureau of Mines Dew Point Tester
Principle	TCD	Chilled mirror
Components	C1~C5, C6+	Moisture
Range	0-2000 BTU/scf	-129°C~ambient temperature
Accuracy	±0.05%	±0.1°C~±1°C (depend on ranges)
Sensitivity	±0.05%	0.1°C
Repeatability	±0.05% or 0.5BTU/1000BTU	—
Limit of detection	C2/C3/C4: 0.025%, varies with different component	-129°C (depends on cooling medium)
Measuring cycle	12 Minutes	Depends on final dew point and cooling rate
Analog output	0-10 VDC, 4-20mA (option)	—
Communication	RS-232C Modbus	—
Sample gas pressure	49 kPa-24.1 mPa	0-34.6 mPa
Flow rate	100-1300 mL/Minute	2.36 L/Minute
Power	115/230 VAC ±10%, 50/60 Hz	Battery-powered with 115 VAC or 230 VAC charger (optional)
Operation temperature	-25~55°C	-20~50°C
Explosion proof area	Class 1, Division 2, Group C & D	—
Enclosure	NEMA 4	—
Installation	Portable	Portable
Weight	17 kg	11 kg
Dimension H×W×D (mm)	280 × 267 × 457	200 × 355 × 178 (Portable case)
Main applications	• Natural gas	• Natural gas • Sour gas • Industrial gases • Heat Treating Furnaces
Features	Portable; Compliance with industry standards: GPA, ATMS, ISO, AGA; Column can be used more than 10 years	Portable; Meets ASTM D1142; RTD traceable to NIST; Easy to maintain and use

CHANDLER ENGINEERING®

Model	Ranarex Gas Gravitometer	UGC Vibrating Densitometer
Principle	Torque created by gases in opposite direction	Vibrating densitometer
Components	Gas gravitometer	Liquid density
Range	Portable: 0.52-1.03/0.97-1.90	0.3 - 1.6 g/mL
Accuracy	±0.5% of real value	±0.0002 g/mL (0.3~0.5 g/mL), depends on ranges
Repeatability	—	±0.00001 g/mL (0.3~1.0 g/mL), depends on ranges
Limit of detection	—	0.3 g/mL
Analog output	—	Frequency: 1kHz~2kHz
Flow rate	4.7-9.5 L/Minute	5.7 L/Minute
Sample gas pressure	<140 kPag	<22.4 mPa
Operation temperature	-18~54°C	-40~85°C
Power	115 VAC, 60 Hz or 230 VAC, 50 Hz	24 VDC ±8 VDC @ 35mA
Explosion proof area	GP Only	Class 1, Division 1, Group C & D
Enclosure	—	NEMA 4, Optional NEMA 4X
Dimension H×W×D (mm)	535 × 375 × 267	—
Weight	Portable: 23 kg	11 kg
Main applications	• Oil Refining • Natural Gas Measurement • Gas Utilities • Chemical Processing • Heat Treating Metals • Combustion Analysis • Sewage Treatment	• Pipeline interface detection • Blending • Process control
Features	Portable, Accurate, Sensitive, Fast Response; Durable, corrosion-resistant materials. Outer case protects against dust, humidity and shock.	Continuous on-line density measurement; Provides input for mass flow calculations; Excellent repeatability and long-term stability; Model 278 CSA approved