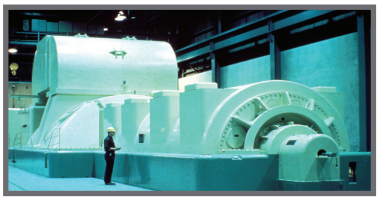
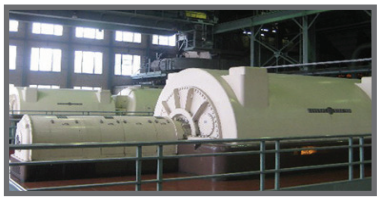
NOVA

Dependable Gas Analysis Solutions

381 SERIES

PORTABLE TRI-GAS ANALYZER FOR HYDROGEN/NITROGEN/AIR PURGING





APPLICATIONS

For checking purity of hydrogen (H_2) in H_2-cooled generators and synchronous converters. The Model 381 Series will also monitor the safe purging of H_2 during shutdown or startup. This model is designed specifically for generators that are purged with nitrogen (N_2) instead of carbon dioxide (CO_2).

FEATURES

- Rugged design that is easy to operate and maintain
- Fast warm up and response
- Monitors 0-100% H_2 in air, 0-100% H_2 in N_2, 0-100% Air in N_2
- Long-life thermal conductivity H2 cell
- Rugged long-life electrochemical O2 sensor
- Digital readout displays active range
- Rechargable battery operation
- Built-in flow meter, flow control valve, and pump
- Built-in pressure regulator prevents over pressuring of pump and sensor
- Suitcase cabinet has carry handle and is weatherproof when closed
- Sample pressure ranges 0.5 PSI to 125 PSI

NOVA MODEL 381K HYDROGEN ANALYZER for NITROGEN PURGED GENERATORS

RANGES

- **Range 1**: 0-100% H_2 in Air
- **Range 2**: 0-100% H_2 in N_2
- **Range 3**: 0-100% Air in N_2

NOVA ANALYTICAL SYSTEMS

www.nova-gas.com

DESCRIPTION

The Nova 381 Series Tri-Gas Analyzer is designed for monitoring the H_2 purity inside a power generator and to monitor the purging procedure during a generator shutdown or startup. This analyzer is specifically for generators that are purged with N_2 instead of the more commonly-used CO_2.

The analyzer contains a temperature compensated thermal conductivity (T/C) cell, electochemical O_2 sensor, amplifier board, digital readout, range switch, pressure regulator, gas flow control valve, pump and a flow indicator. A 4-20mA recorder output is standard.

The T/C cell does not burn the sample nor is it consumed in any way, so it has a life expectancy of over 10 years. The electrochemical O_2 sensor typically has 3-5 year life and is easy and inexpensive to replace. Measurement results are fast and accurate. A rechargeable 'gel cell' battery provides enough power for about 4-6 hours of continuous operation and the analyzer can be used while it is being recharged.

SPECIFICATIONS

Nova reserves the right to specification changes which may occur with advances in design without prior notice.

Description	
Method of Detection:	Thermal conductivity (T/C) cell, electrochemical O2 sensor
Ranges Available:	**Range 1**: 0-100% H_2 in Air; **Range 2**: 0-100% H_2 in N_2; **Range 3**: 0-100% Air in N_2
Resolution:	0.1% of gas measured
Accuracy and Repeatability:	**Range 1**: ± 1% of Full Scale; **Range 2**: ± 2% of F.S.; **Range 3**: ± 2% of F.S.
Drift:	H_2 in N_2 or Air in N_2, ± 2% F.S. per week maximum drift, 0-100% H_2 in Air range is ± 0.4% per week maximum
Response Time (T-90):	10-15 seconds to 90% step change - not including sample transport time
Ambient Temperature Range:	32-120°F (0-50°C)
Linearity:	± 1.0% of F.S. on H_2 in Air range. ± 2% of F.S. in H_2 or Air in N_2 ranges
Size and Weight :	Approx. 9½" L x 7" W x 6½" H @ 8 lbs (24 x 17 x 18 cm @ 3.6 kg)
Power:	115VAC 60Hz for recharging (220VAC 50Hz available)
Output Options:	4-20 mA or 0-1 VDC

UNIQUE APPLICATIONS

All Nova analyzers are built using proven technologies and techniques. If this product does not suit your application, please contact Nova at 1-800-295-3771. In many cases, we are able to build an analyzer specific to your needs.

NOVA ANALYTICAL SYSTEMS
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