

ABB MEASUREMENT & ANALYTICS

GCP Pro Series Gas Chromatograph

GCP100



Versatile, reliable, and accurate measurement for upstream, midstream, and downstream oil and gas applications

Measurement made easy

**Versatile, reliable, and accurate measurement
for upstream, midstream, and downstream oil and gas applications**

Designed for peace of mind

- Low cost of ownership increases profitability
- Accurate and precise process streams analysis identifies costly process interruptions
- Reliable performance reduces unplanned maintenance
- Modular design ensures maximum analyzer availability

Designed for the digital world

- User-friendly interface gives quick access to a wide range of data
- Advanced software features provide analytical insights and self-diagnostics directly from the analyzer

Product overview

—
01 Designed for easy maintenance, GCP100 modular components ensure maximum analyzer availability.

The GCPro family of gas chromatographs analyzes and quantifies gas composition in many different processes of the oil and gas market. Analytical applications range from custody transfer in the upstream market to process control in the midstream and downstream markets.

GCP100, the first analyzer of the GCPro line, is a process gas chromatograph that delivers superior performance with a low cost of ownership. Created specifically for remote and hazardous locations, the simple, modular, and weatherproof design makes it the ideal analytical solution for:

- Natural gas production and transmission
- Natural gas fractionation
- Oil refineries
- Petrochemical plants

Low total cost of ownership:

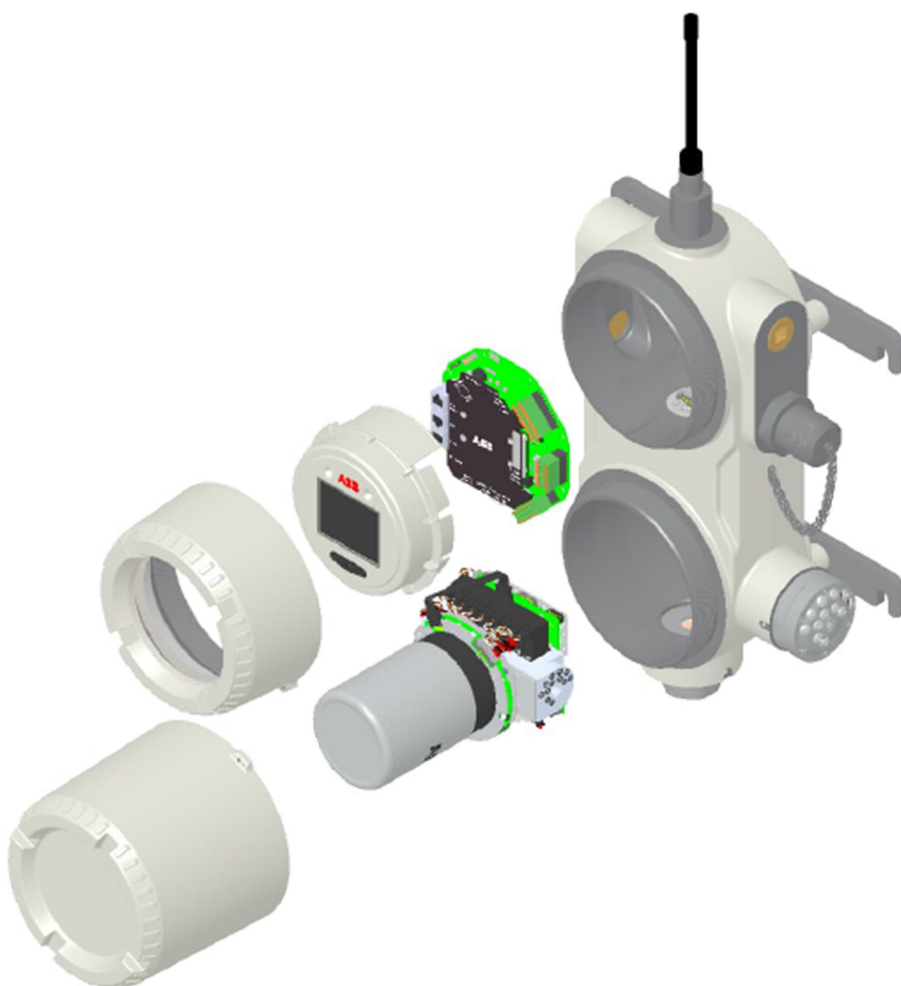
- Low power and utility gas consumption
- No instrument air or analyzer shelter requirement
- Less frequent service, simple maintenance

Accurate, reliable, and precise results:

- Advanced calibration techniques enhance linear dynamic range
- Stable pressure and temperature control

Simple to use, operate, and maintain:

- Intuitive user interface
- Plug-and-play functionality simplifies troubleshooting and minimizes downtime
- GC modules operate over 1 million cycles without failure



Product features

—
02 Designed for peace of mind, GCP100 ensures reliable performance that reduces unplanned maintenance.

- Multiple GC module configurations
- Internal stream switching for up to 4 streams
- Housing with all front access for easy serviceability
- Low utility consumption
- No instrument air required
- No shelter required (IP66)
- Modular design for fast maintenance
- Intuitive user interface
- Wi-Fi connectivity available

Advanced software diagnostics

Inside GCPPro, advanced software diagnostics provide analytical insights directly from the analyzer:

- Advanced algorithms for automatic startup and retention time tuning
- Analyzer diagnostics
- Health metrics monitoring
- Predictive maintenance

Dynamic QR Code with AutoID assistance

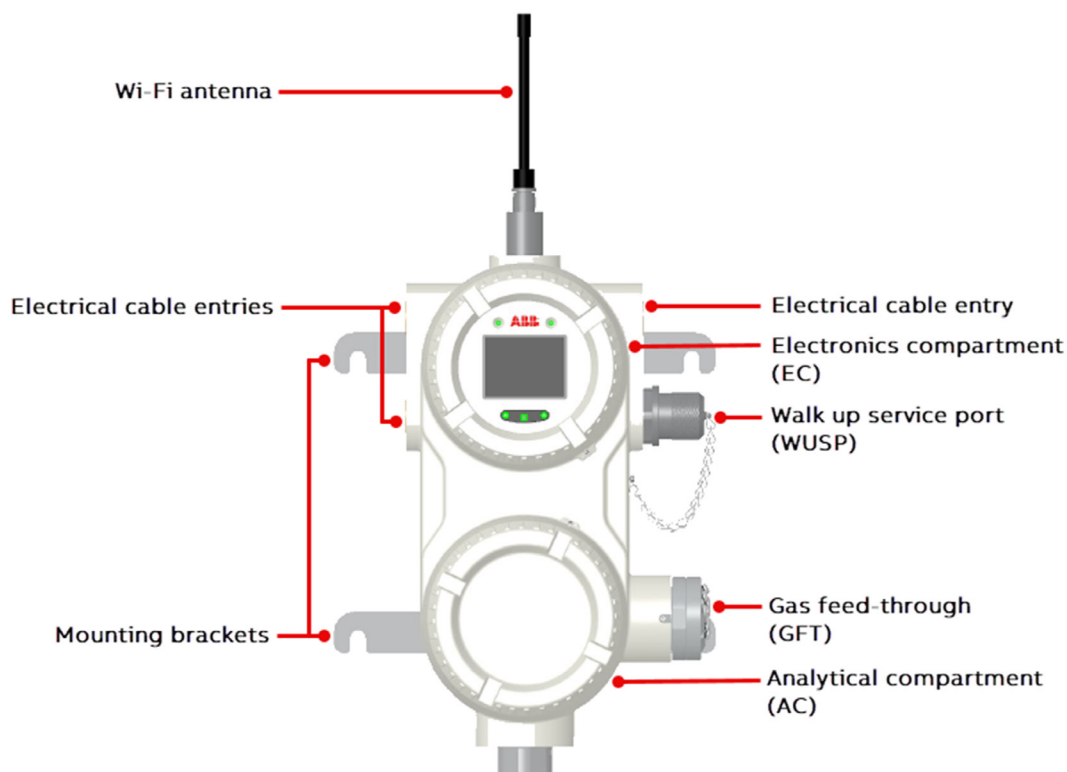
ABB's Dynamic QR Code with AutoID assistance is a unique feature that enables comprehensive product health checks and effective troubleshooting without physically connecting to the system. In addition to providing static information for analyzer identification from the AutoID feature, the Dynamic QR Code provides dynamic information about analyzer configuration and current health status. ABB specialists can use this data to troubleshoot and provide a rapid response solution.

[Find out more about Dynamic QR Code.](#)

Cyber security

ABB strives to maintain cyber security for its products and services. This product meets ABB's cyber security standards. It features enhanced system integrity, data protections, and much more.

[Find out more about ABB cyber security.](#)



—
03 Designed for performance, GCP100 user interface features on-demand analytical insights.

User interfaces

GCPPro user interfaces give quick and detailed information access.

User Interface (UI)

The browser-based UI is a powerful tool for operations, diagnostics, and data handling. Local or remote access to the UI provides:

- Analysis data
- Settings and configuration parameters
- Alarm information and acknowledgement
- Process change conditions
- Reports and export of historical data
- System information

Human Machine Interface (HMI)

The GCP100 HMI has a 4-inch screen, informational LEDs, and gesture navigation. The HMI displays:

- Analyzer status
- Measurements
- Alarms
- System information
- Dynamic QR

Offline configuration tool

The GCPPro ConfigTool supports configuration maintenance without the need for connection to the analyzer.

Users can:

- Review and adjust the analyzer's configuration
- Review chromatograms
- Review and adjust peak gating

Maintenance

The GCPPro modular design reduces the level of expertise required to troubleshoot and maintain the analyzer. Front access covers ensure easy accessibility to all replaceable components.

Replaceable components

- Analytical module
- Base manifold
- Gas feed-through (GFT)
- LCD display
- Topworks assembly (electronics board stack)
- Walk Up Service Port (WUSP)
- Wi-Fi kit (optional)

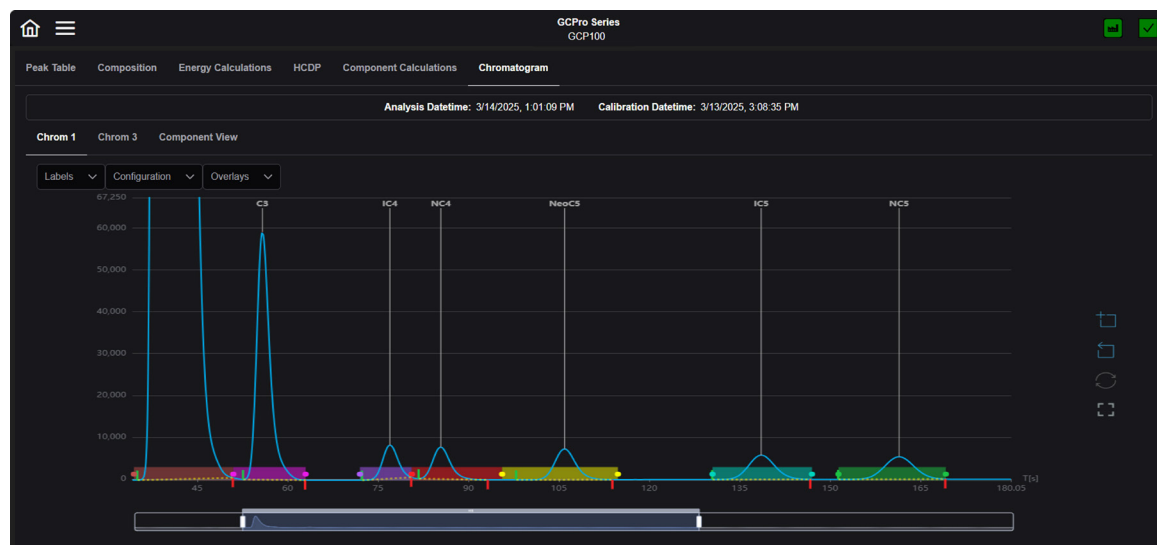
Software maintenance

Software maintenance and upgrades are accessible through the user interface.

Predictive maintenance

GCPPro onboard condition monitoring empowers the user to:

- Take proactive maintenance steps
- Minimize analyzer downtime
- Increase operational efficiency



Product specifications

Inlet specifications

Sample pressure

- 2-30 psig

Carrier gas pressure

- 90 psig inlet maximum

Carrier gas type

- helium, hydrogen, nitrogen, or argon

Environmental conditions

Operating temperature

- -13 °F to 140 °F (-25 °C to 60 °C)

Storage temperature

- -22 °F to 140 °F (-30 °C to 60 °C)

Moisture

- 95% relative noncondensing humidity

Electrical

Supply voltage

- 24 Vdc +/-10%

Power consumption

- Nominal: 12 W
- Nominal, manifold heater active: 32 W
- Start up: 24 W
- Start up, manifold heater active: 44 W

Mechanical

Dimensions (W × D × H)

- 11.1 in x 11.6 in x 18.7 in
(283 mm x 294 mm x 475 mm)

Weight

- Aluminum components: 42.8 lbs (19.4 kg)
- Stainless steel components: 48.8 lbs (22.1 kg)

Cable entries

- 3 1-inch NPT

Weatherproof construction

- IP66/UL Type 4X
- Aluminum alloy, polyester powder coating
- Flame proof, explosion proof

Ethernet and Wi-Fi access

- 1 external Ethernet port RJ-45, 100 Mbps
- 2 internal Ethernet ports RJ-45, 100 Mbps
- Optional Wi-Fi

Communication ports

- 2 serial ports, software-selectable for RS-232, RS-485, or RS-422 standards

Internal inputs/outputs

- 4 analog outputs, 4-20 mA
- 4 analog inputs, 0-26.4 V
- 8 digital outputs, 0-26.4 V open drain, 150 mA sink maximum
- 2 digital inputs, 0-26.4 V

Supported protocols

- TCP/IP
- Modbus / TCP Server
- Modbus ASCII, RTU
- Modbus Modicon, Word Swapped
- OPC UA

Energy calculation

- Compressibility (per AGA 8)
- Btu/CV value
- Real relative density (specific gravity)
- Total Liquids (GPM)
- Wobbe Index
- Speed of sound
- Methane number
- Optional: Hydrocarbon dew point

Certifications

- Class I, Division 1, Groups B, C, and D, T6
- Class I, Zone 1: AEx db IIB+H2 T6
- ATEX II 2G: Ex db IIB+H2 T6 Gb
- IECEx Ex db IIB+H2 T6 Gb
- EMC – EMI/RFI: EN 61326-1, EN 55011, EN 61000-6-1, EN 61000-4-2, 4-3, 4-4, 4-5, 4-6, 4-8, CISPR 11:2015 +A1:2016 +A2:2019
- FCC, 47 CFR Part 15b

Designed to meet standards

- IEC 61298-3, 60068-2-6

Optional equipment

Sample conditioning system

A sample conditioning system ensures the required sample is free of particulates and entrained liquids and provides an analyzer speed loop to minimize lag time.

ABB offers sample conditioning systems to meet the filtration and lag time requirements of typical natural gas streams and the most extreme process conditions.

Cold weather enclosure

A cold weather enclosure is available if ambient conditions are below either the sampled gas dew point or the operational specifications of the analyzer.

ABB offers cold weather enclosures in both pre-engineered and custom configurations.

Gas sample probes

A gas sample probe is essential to supply a representative sample to the analyzer. Without a probe, analytical accuracy will be negatively impacted and increased maintenance will be required.

ABB recommends the use of a gas sample probe to extract the sample from the process stream. ABB offers a variety of gas sample probes from a wide range of vendors.

Wi-Fi antenna

An optional Wi-Fi antenna is available for wireless access to the analyzer.

Expandable I/O modules

ABB offers I/O systems to expand input/output capacity.

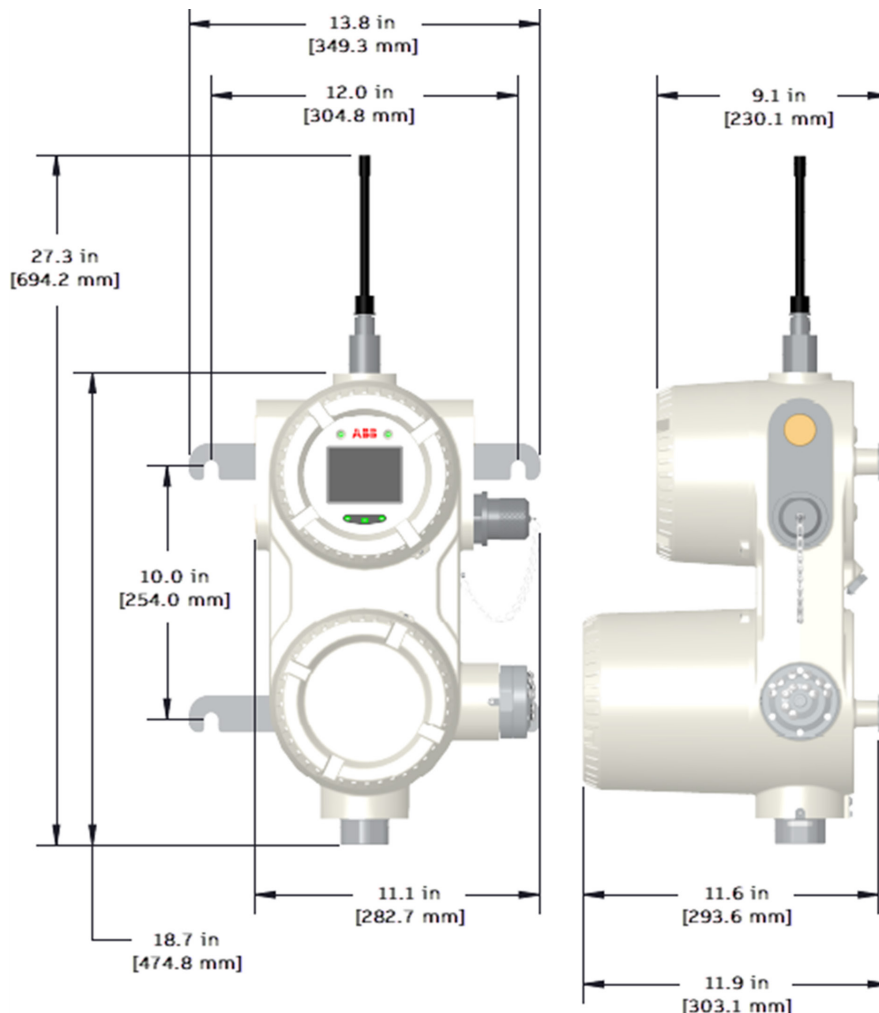


ABB Inc.**Measurement & Analytics**

Worldwide support: +1-440-585-7804

Americas support: +1-800-435-7365

Main Office - Bartlesville

7051 Industrial Blvd

Bartlesville, OK 74006

[https://new.abb.com/products/
measurement-products/analytical/gas-
chromatograph-analyzers/gcpro-series](https://new.abb.com/products/measurement-products/analytical/gas-chromatograph-analyzers/gcpro-series)



We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB Inc. does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties, or utilization of its contents – in whole or in parts- is forbidden without prior written comment of ABB Inc.

©ABB 2026

Specifications subject to change without notice.