Rosemount™ 700XA

Process Gas Chromatograph

ROSEMOUNT™

EMERSON™

Applications

The Rosemount 700XA Gas Chromatograph is designed for a variety of natural gas, refining, petrochemical, power, and environmental applications in which selected components in gaseous or liquid streams must be precisely monitored on a continuous basis.

Natural gas	Refineries	Gas processing	Petrochemical	Power generation	Enviromental monitoring
BTU and hydrocarbon dewpoint	Catalytic reformer	Natural gas liquids (NGL) and liquefied natural gas (LNG) plants	Ethylene plants	Combustion turbines	Ambient air monitoring
Pipeline monitoring	Isomerization unit	Cryogenic gas plants	Polymer plants		HR-VOCs in flares and cooling towers
Custody transfer	Aromatics unit				

Features and benefits

Flexible design to meet all process requirements

- Fully compatible with modern Ethernet networks and DCS communication

- Diaphragm-based chromatograph valves available in six-port and ten-port versions

- Thermal conductivity detector (TCD) sensitive down to very low parts-per-million levels

- Flame ionization detector (FID) sensitive to parts-per-billion levels

- Micro flame photometric detector (μFPD) for sulfur measurements in the parts-per-billion levels

- Storage of up to 2,500 chromatograms, including sample calibration and validation streams

- Archives up to 31,744 item averages and over 88 days of standard runs and calculations

- Minimizes maintenance and spare parts requirements

- Simplifies the scope of analyzers at the pipeline

- Reduces the overall cost of the analytical solution

Simplified functionality and ease of use

Full color local operator interface (LOI) with built-in software assistants to guide the operator through common tasks, such as:

- Gas chromatograph (GC) start-up

- Changing calibration gas

Reduced installation costs

- Flexible power with both 120/240 Vac and 24 Vdc options

- Integrated controller electronics

- Pipe-mount, wall-mount, or floor-mount

Lower operational costs

- Designed for field-mounting without the need for expensive analyzer shelters or sacrificing analytical performance

- Hazardous area operation with no need for purge gas

- Low carrier and power consumption

- Longest gas chromatograph valve and column warranties available

Unmatched measurement performance

- Wide dynamic range from percent to trace-level components

- Reliable performance over broad ambient temperatures (-4 °F (-20 °C) to 140 °F (60 °C)) and reliable hydrocarbon dew point calculations from the extended C9+ analysis

- Capable of complex natural gas analysis, process applications for refinery, chemical, liquefied natural gas (LNG), power plants and other applications.

- Best C6+ heating value/BTU repeatability available: ± / -0.010% (± / -0.10 BTU/1000 BTU) in temperature controlled environments. ± / -0.20% (± / -0.20 BTU/1000 BTU) in uncontrolled environments (-4 °F (-20 °C) to 140 °F (60 °C)) with a three-minute cycle time.

- Best in industry C9+ repeatability available to ±0.0125% of heating value (±0.125 BTU/1000 BTU) for controlled environments. ±0.025% (±0.25% BTU/1000 BTU) of heating value for uncontrolled environments (-4 °F (-20 °C) to 140 °F (60 °C)) with a five-minute cycle time.

The Rosemount 700XA is designed for the continuous online analysis of natural gas. The analyzer can support multiple valve combinations from two to six valves of either a 6-port or 10-port variety.

Note
The GC can support only four 10-port valves.

The typical measurement ranges for natural gas are shown Table 1.

Table 1: C6+/C7+ /C9+ standard measurement ranges

Component	C6+	C7+	C9+
Methane	65 to 100 mole %	65 to 100 mole %	65 to 100 mole %
Ethane	0 to 20 mole %	0 to 20 mole %	0 to 20 mole %
Propane	0 to 10 mole %	0 to 10 mole %	0 to 10 mole %
n-Butane	0 to 5 mole %	0 to 5 mole %	0 to 5 mole %
Iso-butane	0 to 5 mole %	0 to 5 mole %	0 to 5 mole %
n-Pentane	0 to 1 mole %	0 to 1 mole %	0 to 1 mole %
Iso-pentane	0 to 1 mole %	0 to 1 mole %	0 to 1 mole %
Neo-pentane	0 to 1 mole %	0 to 1 mole %	0 to 1 mole %
Heptane[1]	N/A	0 to 1 mole %	N/A
Nitrogen	0 to 20 mole %	0 to 20 mole %	0 to 20 mole %
Carbon dioxide	0 to 20 mole %	0 to 20 mole %	0 to 20 mole %
Hexanes[2]	N/A	0 to 1 mole %	0 to 1 mole %
Heptanes[2]	N/A	0 to 1 mole %	0 to 1 mole %
Octanes [3]	N/A	N/A	0 to 0.5 mole %
Nonane[3]	N/A	N/A	0 to 0.5 mole %

(1)   *C7+ analysis results*
(2)   *C7+ and C9+ analysis results*
(3)   *C9+ analysis results*

Superior performance

Modular analytical oven

Building off of the proven valves, columns, and detectors of the Rosemount 500 and Rosemount 700 Gas Chromatographs (GCs), the Rosemount 700XA Gas Chromatograph analytical oven has been designed for maximum serviceability and expandability. It features a clean architecture with few cables, making the analyzer simple to maintain. In addition, the oven features a unique, pivot-top base that provides maximum accessibility to all of the components below.

By accommodating as many as six gas chromatograph valves, the Rosemount 700XA can handle more complex applications, and it can perform standard applications faster.

The GC has a dual stage isothermal oven and up to six valves and multiple independent detectors, which provide extreme application flexibility and range. All components in the oven are completely accessible and serviceable in the field to reduce the total cost of ownership over the life of the analyzer.

Gas chromatograph valves

The GC has the capacity to support up to six 6-port or 10-port diaphragm/piston gas chromatograph valves. These pneumatic valves are guaranteed for the life of the GC and are specified to operate over five million cycles. The unique, double-diaphragm design removes the need for springs, O-rings, and lubrication. To service the valve, the operator just needs to replace a cost-effective diaphragm set, which can normally be done in less than ten minutes.

Thermal conductivity detectors (TCDs)

The TCD is the detector of choice for most applications due to its universal response to components of interest in natural gas and light refinery and hydrocarbon processing gas analysis. The TCD in the Rosemount 700XA GC is able to measure well beyond the normal ranges seen in other designs by performing many applications with low parts-per-million measurement requirements. This greatly simplifies the GC design and lowers the cost to the end user when a simple and rugged TCD can be used.
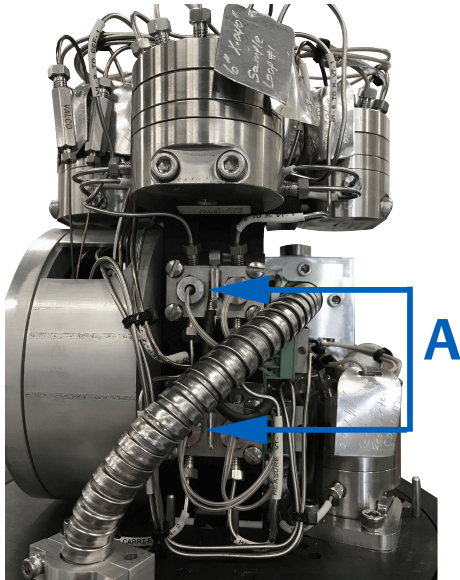

A. TCDs

Flame ionization detector (FID)

The FID permits measurement of trace hydrocarbons in a variety of samples at parts-per-billion (ppb) concentrations. The FID is unique in the industry because of its small size (less than 3 in (76 mm) high) that fits inside the explosion-proof housing of the GC. Typical applications include measuring trace impurities in gases and light hydrocarbons as well as ambient air monitoring.
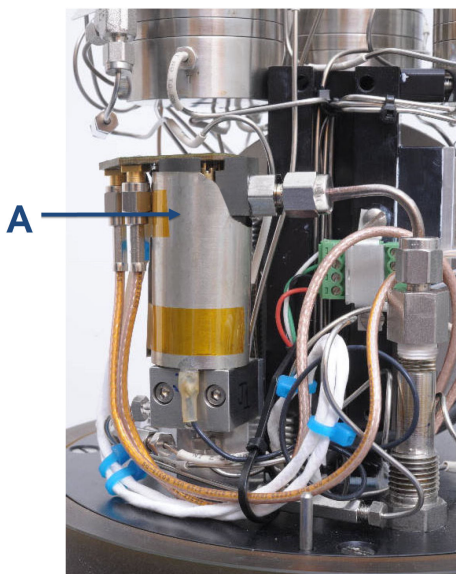
A. FID

Micro flame photometric detector (μFPD)

The μFPD photo multiplier tube (PMT) module enables the measurements of trace sulfur compounds when integrated with Rosemount 700XA GCs.
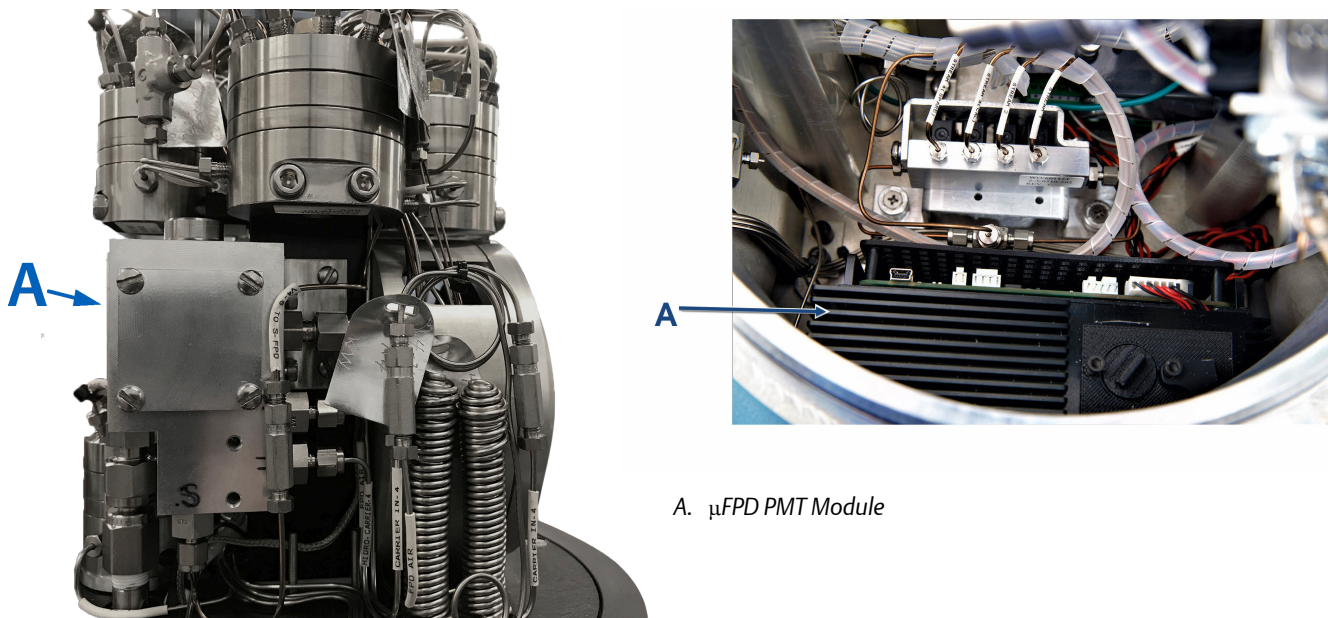
A.   μFPD burner

A.   μFPD PMT Module

The μFPD is installed in the analyzer oven. The associated electronics are mounted underneath. The design eliminates the need for instrument air, greatly reducing installation cost of the GC. The μFPD module comes fully integrated with the GC.

Micro-packed columns

The GC offers micro-packed columns with a superior combination of features found in both capillary and conventional packed columns: speed, sharp peak resolution, and low carrier gas consumption. In addition, the unique design provides for greatly extended column life and the longest warranty available on the market. If required, the standard capillary columns in GC applications can also be used.

Stream switching module

The internal sample stream switching module is available in four-stream or eight-stream versions. This saves end users the additional hardware and assembly costs associated with externally mounted stream selection assemblies. The module uses inert gas for solenoid actuation, with easy access for tubing changes and maintenance. For applications with varying stream composition, a double-block-and-bleed configuration is optionally available.

Controller electronics and communication

Modular electronics

The controller electronics, option cards, and field termination boards are all packaged conveniently in the lower section of the gas chromatograph (GC). Customer-terminated power and output connections are also made in this lower section of the GC.

Local indication and operation panel

You can view analyzer health and valve status through the GC's front cover. The panel displays green (healthy), yellow (warning), and red (failure) LEDs, along with LEDs indicating gas chromatograph valve on/off actuations, power, and central processing unit (CPU) health. Each valve can be actuated manually for simplified troubleshooting and fast system purging after maintenance.

Flexible inputs and outputs (I/O)

The GC offers flexible I/O, including five discrete digital outputs, five discrete digital inputs, two analog inputs, and six analog outputs for digital/analog signal I/O, plus expansion slots to accommodate additional I/O as required.

Optional touch key local operator interface (LOI)

The LOI is a high-resolution color display that is touch key infrared activated and supports all core gas chromatograph (GC) operations. The LOI permits maintenance and operation of a GC without the need of a laptop or personal computer (PC).

Features include:

- 12 in (305 mm) color LCD display with full VGA (640 x 480 pixels) resolution

- Adjustable auto back-lighting for easy viewing

In addition, the LOI:

- Maintains the Rosemount 700XA hazardous area classifications.

- Indicates complete GC status, control, and diagnostics, including full chromatogram display and alarm messages.

Figure 1: Rosemount 700XA LOI
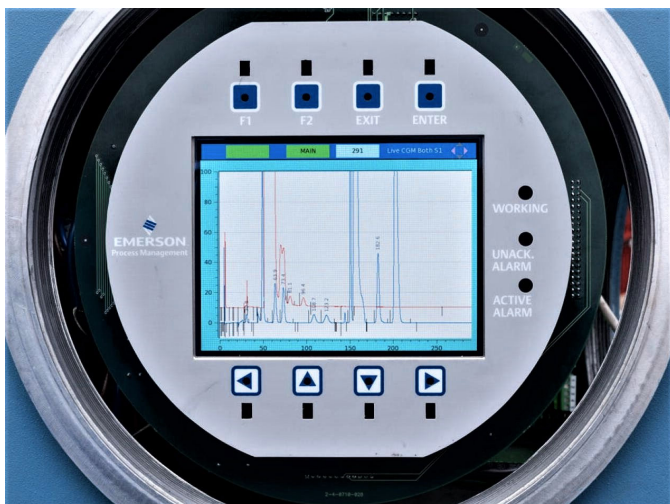
Data archiving and reports

With its expandable, solid-state memory, the gas chromatograph (GC) virtually eliminates the need for external data storage for archiving and reports.

Every analysis is time and date stamped and archived for retrieval via the Rosemount MON2020 software. You can display, print, and/or store pre-configured reports internally. Trend results directly or export them in ASCII format.

Security	Four levels of password-protected security, configurable to read/write or read-only for third party access.
Audit logs	Data and event logging fully conforms to API report 21.1 for metering audit purposes and backup to primary systems (flow computer, SCADA, or DCS).
Event logs	A continuous record of all operator changes, with time, date, and user identification name records.
Alarm logs	A continuous record of all historical alarms, time and date stamped with alarm state and description.
Maintenance log	A scratch pad for tracking maintenance or testing performed on the GC system.
Archiving	Over 31,744 analysis records, 370 final calibration records, and 370 final validation records for 88 days with a four-minute cycle time are archived automatically with time and date stamps.

Standard reports include

|	
Average reports	Hourly, 24-hour, weekly, monthly, every run, and variable averages
Analysis reports	Physical property calculations for component and group analysis and alarms
Raw data report	Retention times, peak areas, detector number, method, integration start/stop, and peak width for analysis
Calibration report	Raw component data, new response factors, retention times, and deviation from last calibration
Final calibration report	Results from the calibration response factors and retention time adjustments
Validation report	Nominal value, percentage deviation, and measured value
Final validation report	Status of validation of nominal value and measured value as well as the difference in value, percent deviation, and allowed percent deviation

Rosemount MON2020

Emerson has designed the Rosemount 700XA Gas Chromatograph (GC) to operate unattended. If adjustments are needed, Emerson's proprietary desktop software, Rosemount MON2020, allows complete control of the GC either locally or remotely.

From the software, you can:

- Start or stop analysis, calibration, or validation cycles.

- Configure, ignite, and check the status of the flame photometric detector (FPD) or the flame ionization detector (FID) flames.

- Generate and save current and historical analysis and calibration reports.

- Review and modify analytical settings.

- Upload and display multiple chromatograms for comparison.

- Upload and trend any of the measured results.

- Export data to text, HTML, or Microsoft® Excel™ for use in third party applications.

- Check on original calibration against the last calibration.

- Perform GC operation checks and modifications simultaneously.

- Upload and view manuals and drawings stored in the gas chromatograph.

Rosemount MON2020 is a Windows®-based software program that makes it easy to use analyzer configuration, maintenance, and data collection. With intuitive dropdown menus and fill-in-the-blank tables, even new users can quickly navigate through the software.

Figure 2: Rosemount MON2020 interface
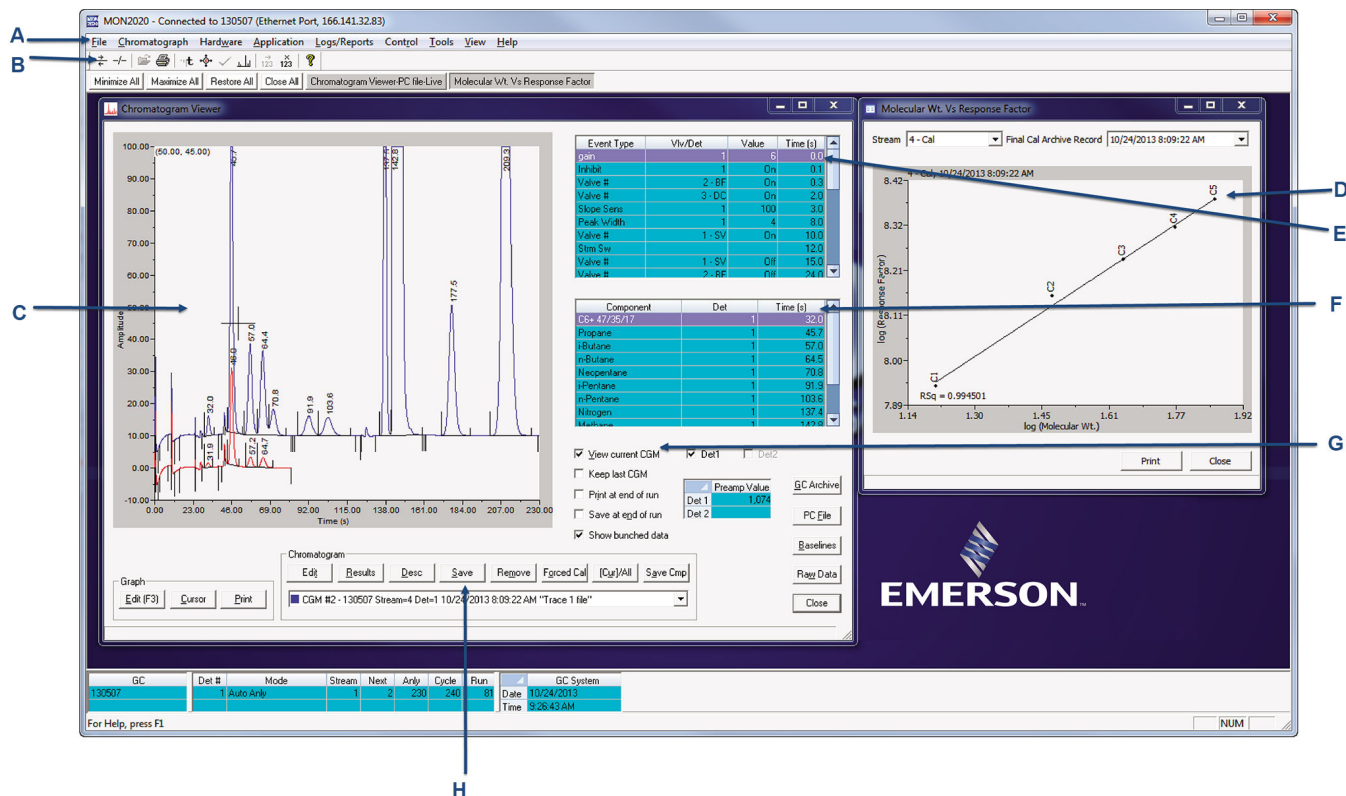
A. Simple dropdown menus

B. Connect to any GC with a mouse click

C. Full featured chromatogram display

D. Response Factor fidelity chart

E. Fully detailed Timed Events table

F. Automatic listing of measured components

G. Quickly add chromatograms to overlay

H. Save chromatograms to hard drive

With its abilities to communicate with your enterprise network and export to numerous file types, Rosemount MON2020 is a powerful tool that ensures that operators, engineers, maintenance personnel, and management have access to critical data, such as current and archived chromatograms, alarm history, event logs, and maintenance logs.

The software's chromatogram viewer allows you to view and compare both live and archived chromatograms simultaneously. Despite its small size, the chromatogram file includes analysis and calculation results, integration and valve time settings, retention time settings, and raw peak data.

The trend viewer makes it easy to trend multiple variables on a single chart. To help diagnose process or analysis issues, you can select single or multiple points on the trend viewer; the chromatograms associated with these points will open in the chromatogram viewer. You can save the trend files or export them as text, CSV, or Excel files.

Rosemount MON2020 can connect to a Rosemount GC via Ethernet directly or over your local or wide area network. The software is equipped with multi-level username and password security settings to limit and control access to the GC and provide levels of access authority ranging from read-only access to full control of the GC and its data.

Rosemount MON2020's unique Diagnostic File feature makes remote diagnostics and documenting the analyzer performance easy and consistent. The diagnostic data file combines chromatograms, alarm logs, event logs, and configuration details into a single file

that is time and date stamped. The generation of the diagnostic file is a simple menu selection and not only creates the file, but also creates an email with the time stamped file attached, ready for dissemination.

The Rosemount MON2020 software is supplied with the Rosemount 700XA, is common across the XA platforms, and is available to download from the Emerson website, making it easy to access.

Integration with third-party networks

Whether you want to network gas chromatographs (GCs) throughout your network or simply link a single GC to a flow computer, you can configure the Rosemount 700XA to handle almost any scenario.

- Choice of Ethernet, Modbus® Serial, or 4–20 mA analog outputs

- Can use the same network to connect Rosemount 370XA, 700XA, and 1500XA GCs

- Connectivity to plant control systems using industry standard protocols, such as Modbus

The GC supports three types of communication interfaces:

- 10/100 Mbps Ethernet connectivity

- RS-232, RS-422, and RS-485 serial communication links

- 4–20 mA analog outputs

Ethernet connectivity

Two Ethernet interfaces are available on the GC. You can configure each interface with a static Internet protocol (IP) address, subnet mask, and gateway.

The Ethernet interfaces on the GC serve Rosemount MON2020 connections and Modbus TCP requests. The dual Ethernet interfaces can be used in many ways.

Examples:

- Connect one to a plant network for GC maintenance personnel and the other to a control network using Modbus TCP.

- Connect one to a broadband cellular wireless gateway for remote GC access, for data collection and maintenance, and the other for a local laptop connection.

Modbus serial

The Modbus protocol is widely used today, because it is simple and effective. It allows full GC database access and analytical control, which provides the greatest level of flexibility when connecting a GC to a DCS or flow measurement system. Modbus uses RS-232, RS-422, and RS-485 to physically connect to the GC.

4–20 mA analog outputs

The GC supports isolated 4–20 mA analog outputs . The analog outputs allow very long connections to traditional DCS measurement points using existing plant wiring infrastructure.

Emerson has built six analog outputs into the Rosemount 700XA as standard features, but we can expand it to 14 analog outputs with optional expansion cards.

Data communication

The GC can provide data to third-party products, such as control systems or flow computers, using Modbus TCP (SIM 2251 and User Modbus), Modbus Serial, and 4-20 mA analog outputs.

Analytical systems and integration services

Emerson offers a comprehensive range of analytical system solutions and third party integration services. From stand-alone panels and cabinets to three-sided shelters and environmentally controlled walk-in enclosures, our complete range of capabilities is backed by over 60 years of analytical expertise across thousands of process installations throughout the world.

From front end engineering design (FEED) and consulting services to manufacturing, integration, and testing to commissioning services and ongoing life cycle support, Emerson provides complete turnkey analytical solutions.

With full scope analytical systems integration centers and regional support facilities strategically located across the world, Emerson has the global resources and analytical expertise to provide localized support.

Engineered sample systems

Any gas chromatograph (GC) is only as good as the quality of the sample it measures.

So, Emerson custom engineers every sample system for process GCs for the specific requirements of the application.

Common features include:

- Heated and open-panel designs
- All components rated for the area classification
- Automatic calibration/validation as an option
- Variety of sample probes to extract a reliable and stable sample from the process
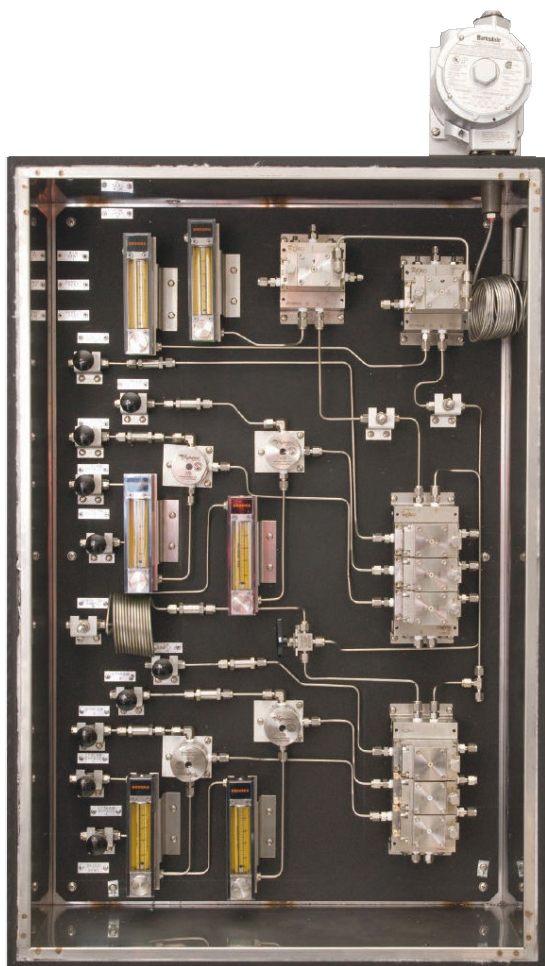
Environmental chamber testing

Every Rosemount GC that leaves an Emerson facility undergoes rigorous testing throughout assembly. Emerson puts the majority of its systems into an 18-hour environmental chamber test, where the systems must operate to specification in an environment where the temperatures cycle between 0 °F (-18 °C) and 130 °F (54 °C).

Figure 3: Environmental testing chamber

Emerson's product testing procedures are much stricter than the industry standard for analytical measurement products. When you purchase an Emerson GC, you can be assured that you are investing in the highest-quality process gas chromatograph available.

As a result of rigorous lab and chamber testing, 100 percent of all GCs that we ship will operate to the performance specifications across the quoted temperature range.

The Emerson process gas difference

- Low power consumption

- Low installation cost

- Small footprint

- Remote connectivity

- Built tough to stand up against any environment

- Rigorously tested to ensure performance

- Field-mountable technology means solid performance at reduced cost

- High-sensitivity thermal conductivity detectors (TCDs) can often replace more complex detectors

- Micro-packed columns that are made to last

- Capillary columns support, option when needed

- Diaphragm valves with a lifetime warranty

- Broad application scope with single-or dual-detector capability

- Easy-to-use Rosemount MON2020 software for advanced diagnostics and simplified troubleshooting

Specifications

Consult Emerson if your requirements are outside the specifications listed in this section. Depending on the application, there may an availability for improved performance, other products, and material offerings.

Construction

Hazardous area certified for:

Environmental temperature	-4 °F (-20 °C) to 140 °F (60 °C)
Enclosure protection rating	IP66
Corrosion protection	Gas chromatograph (GC) enclosure material: Copper-free aluminum coated with industrial grade powder coat suitable for high humidity and salt-laden environments
	Process wetted materials: stainless steel. Where the function of an item excludes the use of stainless steel (e.g. glass rotameter tubes), corrosion-resistant materials are used.
	Electronics: All electronic circuit boards are covered with a clear, conformal coating.
Mounting	Floor-standing (standard), wall, or pipe-mount (optional)
Approximate weight (without sample system)	110 lb (50 kg)

Related information

Recommended installation

Certifications and approvals

The Rosemount 700XA has the following certifications and approvals.

Refer to the Rosemount 700XA product page for product certificates and approvals.
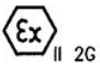
Follow all safety markings on the analyzer.

Type	Specifications
Environment	Operating temperature ■ Thermal conductivity detector (TCD): -4 °F (-20 °C) to 140 °F (60 °C) ■ Flame ionization detector (FID): 40 °F (4 °C) to 130 °F (54 °C) ■ Micro flame photometric detector (μFPD): 32 °F (0 °C) to 122 °F (50 °C) ■ Hazardous area certified: -4 °F (-20 °C) to 140 °F (60 °C) ■ 0 to 95% relative humidity (non-condensing) ■ Indoor/outdoor ■ Pollution - degree 2 (The gas chromatograph can withstand some non conductive environmental pollutants, such as humidity.) ■ Vibration: Conforms to ASTM D4169
Hazardous area certifications (hardware dependent)	 CE 2813 $\langle Ex \rangle$ II 2G CSA C US IECEx USA and Canada ■ Class I, Zone 1, Ex/AEx db IIC, Gb T6/T4/T3 ■ Class I, Division 1, Groups B, C, and D, IP66 EU ATEX and IECEx ■ Ex db IIC Gb T6/T4/T3 ■ Ta = -4 °F (-20 °C) to 140 °F (60 °C) ■ SIRA 08ATEX 1328X ■ IECEx SIR 08.0093X Consult factory for additional product certifications available.
Safety precautions	 ⚠ **WARNING** **EXPLOSION HAZARD** Do not open when energized or explosive atmosphere is present. Keep cover tightly closed while circuits are energized. Use cables or wires suitable for the marked "T" ratings. Clean cover joints before replacing the cover. Ensure that conduit runs have sealing fitting adjacent to enclosure. **NOTICE** The Rosemount 700XA is CSA-certified and ATEX-certified. See the certification tag on the GC for specific details about its agency approvals. **NOTICE** When the vapor regulators and flow switches are fitted, they must be suitably certified with the ratings **Ex d IIC Gb T6/T4/T3** and for a minimum ambient temperature range **Ta =** -4 °F (-20 °C) to 140 °F (60 °C).

Table 2: Approval temperature ratings

T6	Basic system, no alternative options included
T5	Liquid sample injection valve (LSIV) option included

Table 2: Approval temperature ratings *(continued)*

T4	Heat trace option with a maximum 176 °F (80 °C) temperature switch set point
T3	Heat trace option with a maximum 230 °F (110 °C) temperature switch set point

Performance capabilities

Oven	Airless, maximum 248 °F (120 °C)
Valves	Six-port and ten-port diaphragm chromatograph valves. Other types of valves, such as liquid injection or rotary valves, may be used depending on the application.
Carrier gas	Application-dependent. Typically zero-grade helium, nitrogen, or hydrogen.
Sample and calibration gas input pressure range	3 psig (0 barg) to 30 psig (2 barg) 15 psig (1 barg) recommended
Gas input pressures (maximums)	Sample gas: 90 psig (6 barg) Carrier gas: 90 psig (6 barg) Actuation gas: 110 psig (8 barg)
Detectors	Thermal conductivity detector (TCD) Flame ionization detector (FID) Micro flame photometric detector (μFPD) Available in multiple configurations
Streams	Up to 20 externally controlled streams or up to 8 internal (includes calibration stream)
Gating options	Fixed-time, slope sensing gating of peaks
Chromatograms stored/archived internally	■ Analysis results: over 88 days ■ Analysis chromatogram: 31,744 records

Electronics

Power range	125 to 250 W

Standard communication methods

■ Ethernet: Two available connections: one RJ-45 port and one 4-wire terminal with 10/100 Mbps

■ Analog inputs: Two standard inputs filtered with transient protection, 4-20 mA (user scalable and assignable)

■ Analog outputs: Six self-powered isolated outputs, 4-20 mA

■ Digital inputs: Five inputs, user assignable, optically isolated, rated to 30 Vdc at 0.5 A

■ Digital outputs: Five user-assignable outputs, Form C and electro-mechanically isolated, 24 Vdc

■ Serial: Three termination blocks, configurable as RS-232, RS-422, or RS-485 and one RS-232 D-sub (9-pin) Modbus®/personal computer (PC) connection

Optional additional communication methods

Two expansion slots available for additional communication options.

Each slot has the capacity to add one of the following:

- Four analog inputs (isolated) card
- Four analog outputs (isolated) card
- Eight digital inputs (isolated) card
- Five digital outputs (isolated) card
- One RS-232, RS-422, or RS-485 serial connection card

Memory capacity: Two GB of flash memory for data storage; 256 MB of SDRAM system memory with 2 MB static RAM (battery-backed)

Airless analytical oven

Type	Specification
Valves	6-port and 10-port XA valves; piston-operated diaphragms with pneumatic actuation
Columns	Maximum of 90 ft (27 m) of micro-packed columns; 1/16-in outside diameter or 300 ft (91 m) of capillary columns
Solenoid actuation	- 24 Vdc - Maximum 100 psig (7 barg)
Temperature control	- 24 Vdc - 2 heaters - 2 optional heaters - Maximum oven operating temperature of 302 °F (150 °C)

Software

Type	Specification
Software	Windows™-based Rosemount MON2020
Firmware	Embedded firmware
Methods	8 *Timed Event* tables and 8 *Component Data* tables
Analysis clocks	Multiple analysis clock configurations
Peak Integration	▪ Fixed time or auto slope and peak identification ▪ Update retention time upon calibration or during analysis
Cyber security	Encrypted SSL communication between gas chromatograph (GC) and Rosemount MON2020

Archived data storage capabilities

Type of record	Number of records	Remarks
Analysis results	31,744	88 days with 4-minute cycle time
Final calibration results	370	1 year
Calibration results	100	N/A
Final validation results	370	1 year
Validation results	100	N/A
Analysis chromatograms	8,515[1]	Approximately 22.5 days assuming running 4-minute analysis and 1 analysis clock
Final calibration chromatograms	370	1 year[2]
Final validation chromatograms	370	1 year[2]
Protected chromatograms	100	User-selectable
Hourly averages[3]	250[1]	Approximately 9 days, assuming 4-minute cycle time
Daily averages	365	1 year
Weekly averages	58	1 year
Monthly averages	12	1 year
Variable averages	250[1]	N/A
Every run (up to 250 variables)	250[1]	N/A
Alarm logs	1000	N/A
Event logs	1000	N/A

(1)   *Changed from 2.0.x release.*
(2)   *The gas chromatograph (GC) can store final calibration and validation chromatograms for a year, provided that no more than one calibration/validation is run per day and the cycle time is less than 15 minutes. If the cycle time exceeds 15 minutes, the oldest final calibration/validation chromatograms are deleted to make room for newer ones.*
(3)   *You can have a total of 256 averages, including hourly, 24-hour, weekly, monthly, variable, and every run averages.*
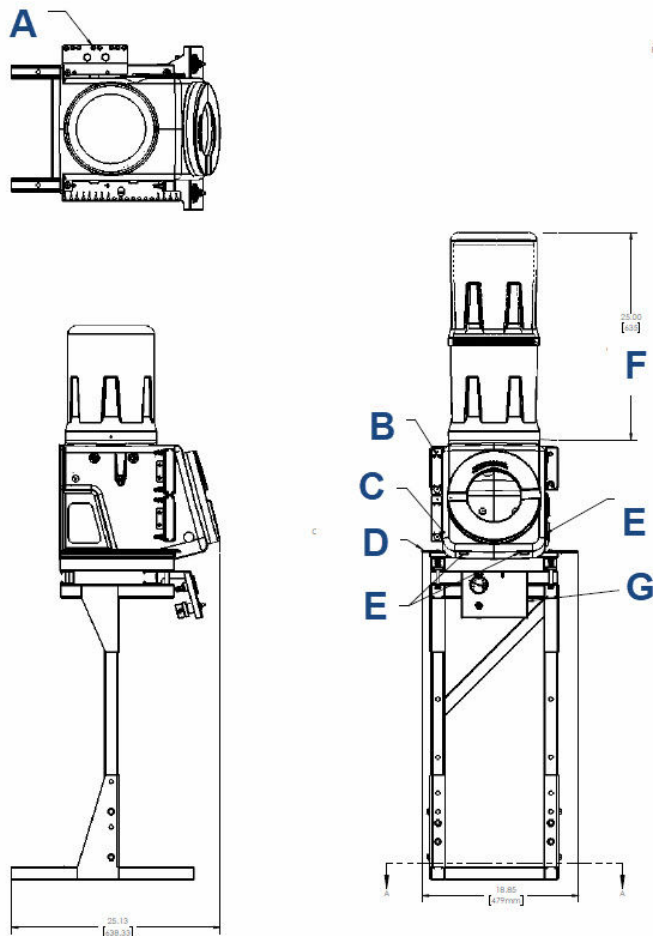
Recommended installation

Figure 4 and Figure 5 represent the minimum recommended installation guidelines for the Rosemount 700XA Gas Chromatograph. Please consult Emerson for detailed installation recommendation of your application.

Dimensions are in inches (mm).

Floor mount details

Figure 4: Floor mount side and front views

A. Carrier input plate 0.375 in (9.5 mm) tube connections
B. Optional sample flow rate indicators
C. Field interconnect (power)[1]
D. Sample in and out bulkhead connection plate 0.375 in (9.5 mm) tube
E. Field interconnect[1]
F. Removal clearance typical
G. Regulator panel varies with application (one to five regulators).

(1) Field interconnect entries of in/out (Ethernet, flow switch) wiring are M32 for ATEX and ¾-in for CSA.

Pole and wall mount details

Figure 5: Pole mount side vies and wall mount side and front views
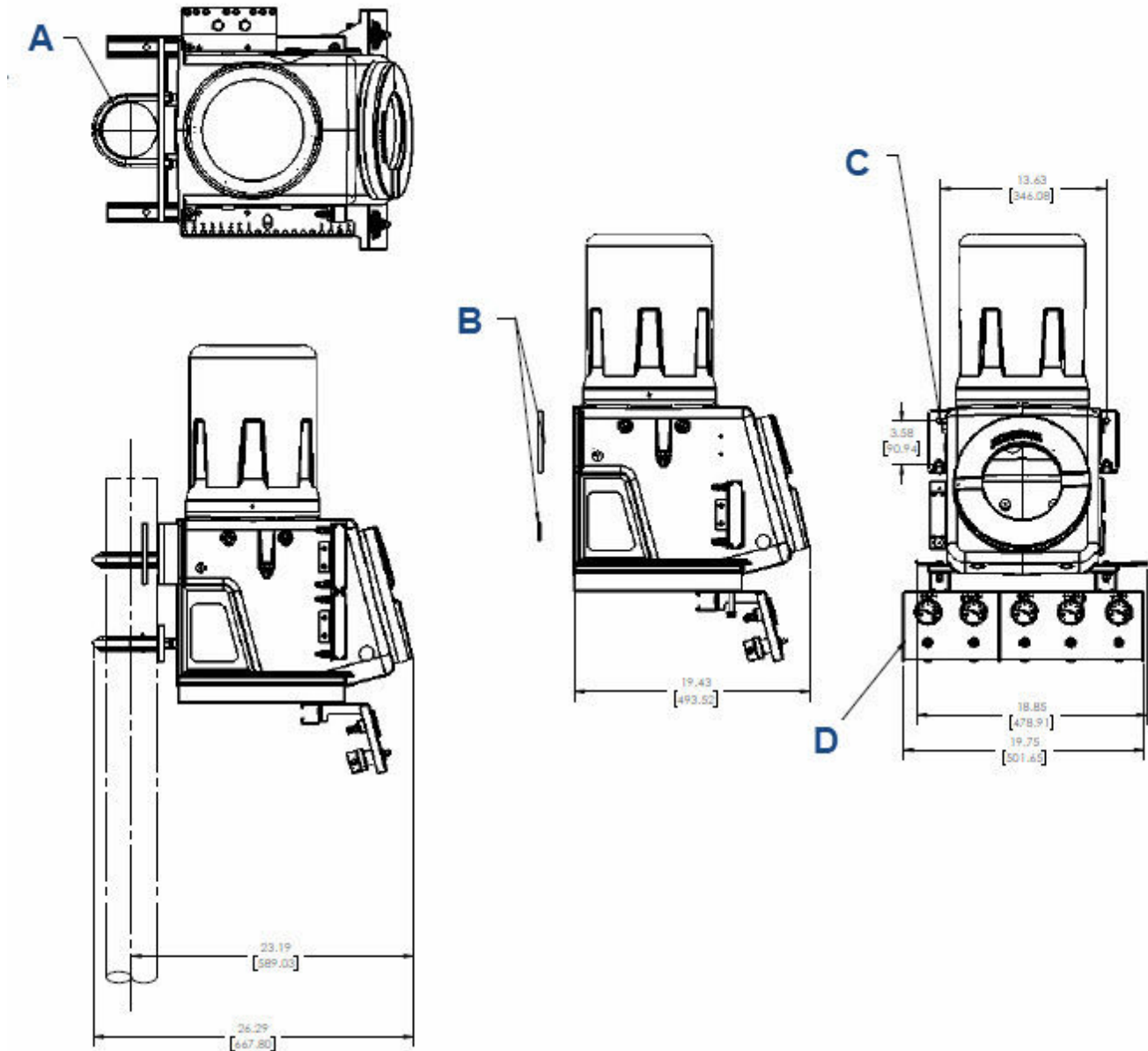
A. *4 in (102 mm) pole mount option*
B. *Wall mounting kit*
C. *0.5 in (13 mm) thru mounting holes*
D. *Regulator panel varies with application (one to five regulators).*

For more information: **Emerson.com**

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