



NGC Chromatography Systems

Comprehensive Solutions for Protein Purification



DESIGNED BY YOU. BUILT BY BIO-RAD.

NGC Medium-Pressure Chromatography Systems

The NGC instrument is an automated liquid chromatography system focused on biomolecule purification at the research, process development, and laboratory-scale levels. At the core of the NGC platform is a truly customizable and scalable system combined with a single, intuitive software package for system control and evaluation. Together, the NGC Systems provide a total laboratory solution.



ALIGNS

A single solution that aligns to your needs today and expands to support your future discoveries and throughput requirements.



ADAPTS

A flexible system that adapts to your requirements and can be easily customized to suit your application needs.



ENSURES

An intelligent design that ensures functional simplicity and guides you from experimental setup to analysis and support.





A single laboratory chromatography solution that aligns and scales to fit your throughput requirements

NGC Systems can be selected based on customer needs and can be further customized to fit changing customer requirements through the addition of more modules and capabilities.

Capabilities Included in All NGC Systems

Choice of 10 ml/min or 100 ml/min system pumps, mixer module with multiple mixer barrel options (750 µl, 2 ml, 5 ml, 12 ml), automated sample inject valve, ChromLab Software, and a touch screen.

Enhancements Available for All Systems

Increase automation and functionality by adding modules for different phases of your purification scheme. All systems are compatible with the versatile, high-capacity NGC Fraction Collector and BioFrac Fraction Collector for automated fraction collection (analytical- to preparative-scale). See [bulletin 6326](#) for more details.



NGC Quest System

Designed for the easy, dependable, and all-purpose purification of biomolecules with accurate gradients and high-resolution separations.

Base system includes:

- Single-wavelength (UV) and conductivity detection
- ChromLab Software, for fast and easy automated and manual control — a single platform compatible with all NGC Systems

NGC Quest Plus System

Designed for the all-purpose purification of biomolecules and simultaneous detection of proteins, peptides, nucleic acids, and other chromogenic molecules.

Includes NGC Quest capability, plus:

- Multi-wavelength (UV/Vis) detection of up to 4 wavelengths simultaneously

NGC Scout System

Designed for quick, reliable separation of proteins and peptides. Enables rapid scouting of protein purification conditions with automated gradients and buffer preparation.

Includes NGC Quest capability, plus:

- Buffer blending valve for automated inline buffer preparation
- pH valve to monitor buffer pH and separation by pH gradients

NGC Scout Plus System

Designed for the simultaneous detection of proteins, peptides, nucleic acids, and other chromogenic molecules with expanded automation and scouting.

Includes NGC Scout capability, plus:

- Multi-wavelength (UV/Vis) detection of up to 4 wavelengths simultaneously

NGC Discover System

Designed for higher throughput, rapid and secure methods, and process development. Provides expanded scouting options with the simultaneous detection of proteins, peptides, nucleic acids, and other chromogenic molecules.

Includes NGC Scout Plus capability, plus:

- Integrated sample pump, 100 ml/min
- Inlet valves
- Column switching valve, 10 ml or 100 ml options

NGC Discover Pro System

Designed for higher throughput, rapid and secure methods, and process development.

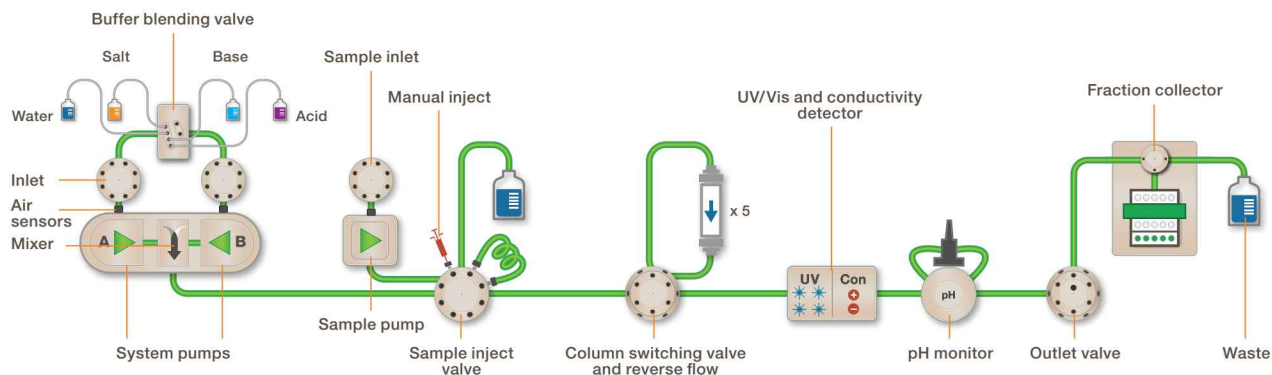
Includes NGC Discover capability, plus:

- Sample inlet valve
- Outlet valve

Options

- Tandem purification with additional column switching valve

NGC SYSTEM CAPABILITIES



System Pumps

Pump selection of up to 10 ml/min or 100 ml/min flow rates with the option to switch out pumps to meet your application requirements.

F10 Pumps

- Flow rate of 0.001–10 ml/min at 3,650 psi (25.2 MPa)
- Ideal for small-scale preparative purifications
- Can also be used for analytical HPLC separations

F100 Pumps

- Flow rate of 0.01–100 ml/min at 1,450 psi (10 MPa)
- Flexible flow rate range
- Ideal for scale-up applications

Sample Pump

For automated sample application with the ability to load large sample volumes. Includes an integrated pressure sensor. Add a sample inlet valve or connect a third-party autosampler with a signal import module for increased automated sample loading capabilities.

Mixer

Homogenizes buffers from two system pumps and can accommodate varying volumes (different sized barrels are available). Includes a mixer motor and integrated pressure sensor.

Detectors

Ensure accurate detection of biomolecules such as proteins, peptides, nucleic acids, and chromophores. Include an integrated conductivity monitor (0.01–999 mS/cm) and an optional pH monitor (pH 1–14).

Single-Wavelength (UV) Detector

For the detection of standard proteins (280 nm) or nucleic acids (255 nm).

Multi-Wavelength (UV/Vis) Detector

For greater sensitivity and flexible detection of any biomolecules and chromophores (190–800 nm). Simultaneous multi-wavelength (UV/Vis) detection of up to four wavelengths.

Connect external detectors to the NGC System via the signal import module.

Air Sensors

Detects end of buffer and sample to protect against column damage. Air sensor mapping and real-time status displays on fluidic scheme. Air sensor extension enables use of up to four additional air sensors (eight total).

Valves

Sample Inject Valve

For accurate sample loading (μ l to L volumes) with a low internal volume for minimal sample loss.

Buffer Blending Valve

For fast pH scouting with automated inline buffer preparation and the ability to double the fluid output to 20 ml/min or 200 ml/min.

pH Valve

For accurate inline pH monitoring (pH 1–14). Includes integrated bypass valve and calibration port for in situ calibration.

Buffer Inlet Valve

Automated switching between buffers (up to eight inlets per valve) for accelerated method development, column cleaning, and regeneration. Option to include two inlet valves, one for each system pump.

Column Switching Valve and Reverse Flow

Automated column/media scouting of up to five columns without replumbing. Includes reverse flow for rapid elution, sample concentration, and column cleaning. Internal bypass allows automated system priming and cleaning with integrated pressure sensors that measure pre- and delta-column pressures.

Outlet Valve

For enhanced automated fraction collection of large volume fractions with up to 12 vessels.

Accessories

NGC Fraction Collector (catalog #17002070)

Provides automated collection options for discovery to small-scale batch production at flow rates up to 200 ml/min. It supports multiple rack and vessel collection combinations from microplates and tubes to bottles and carboys.

BioFrac Fraction Collector (#7410002)

Reliable fraction collection from analytical to preparative scale with versatile capability to collect from 96-well plates to 30 mm tubes.



PERSONALIZE AND EXPAND YOUR SYSTEM CAPABILITIES TO SUIT YOUR APPLICATION NEEDS AND WORKFLOW

Tier Rotate Feature (3rd and 4th tiers)

Flexible system design enables optimal placement of valves and detectors to minimize hold-up volume

Magnetic column holders for optimal column placement

Add a tier for more capabilities

Touch screen

Enables manual control for on-the-fly editing, real-time status updates, and calibration. Can be tethered to the left or right side



Buffer tray

Outlet valve

Inlet valve — sample

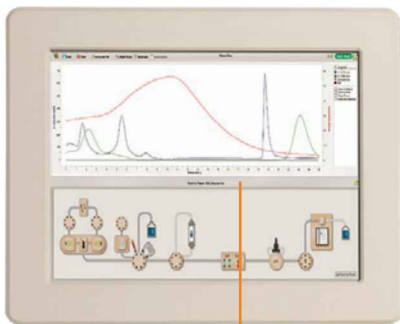


Real-time status display

pH valve

UV/Vis and conductivity detector

Sample pump, 100 ml/min



Inlet valve — buffer

Column switching valve with reverse flow

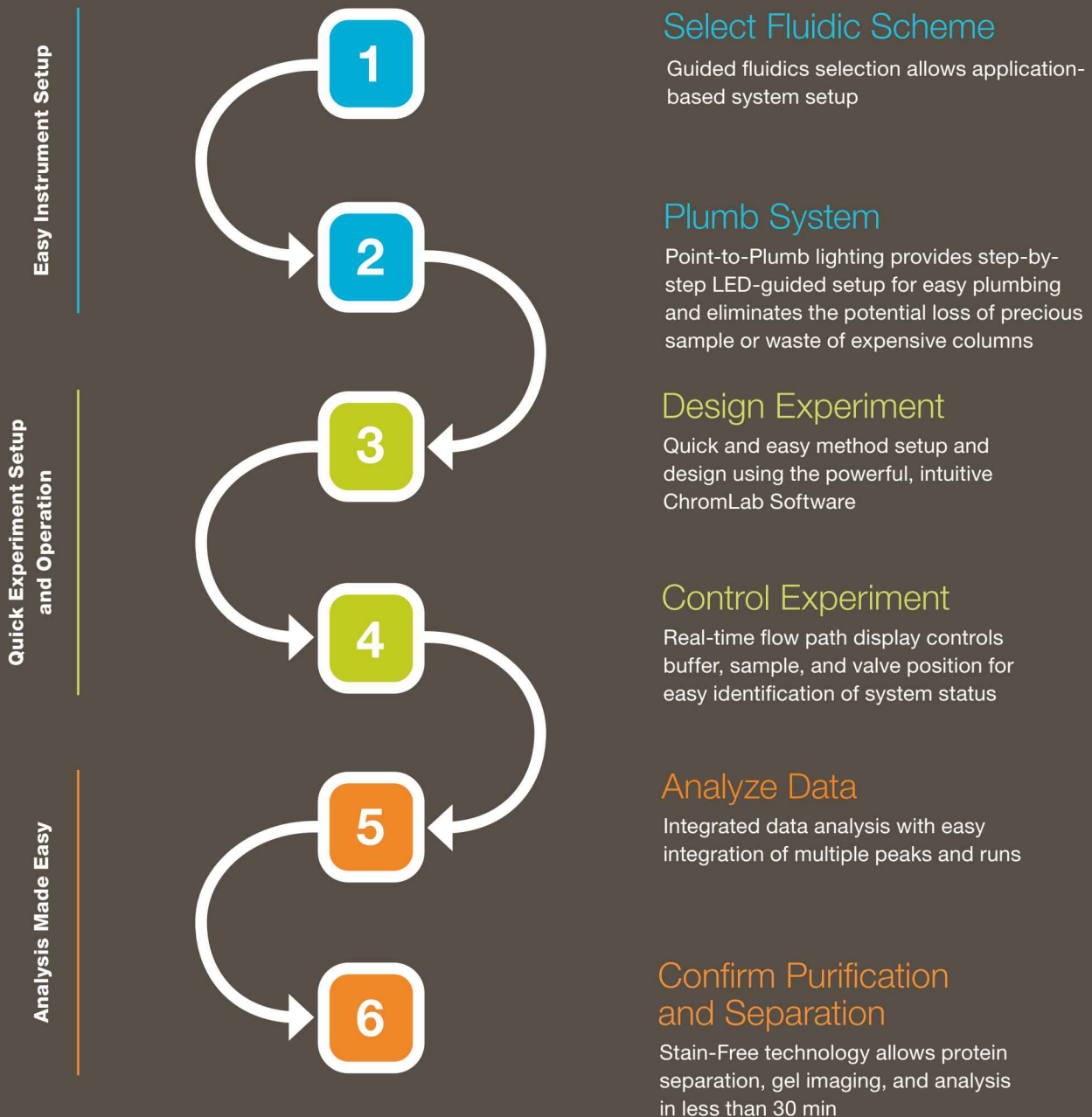
Buffer blending valve

System gradient pumps, 10 ml/min or 100 ml/min

Mixer



Powerful ChromLab Software control, transferable across all NGC Systems, enables minimal training and fast setup to analysis.



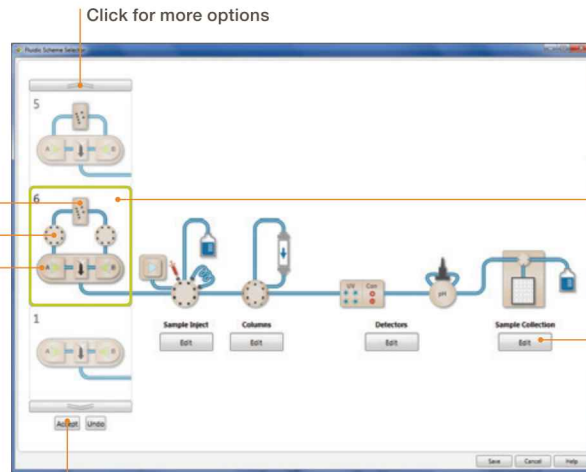
EASY INSTRUMENT SETUP

1

Select Fluidic Scheme

Select the fluidic scheme that best fits your application, set a default path, and optimize your module placement

To view the complete module library see bulletin 6326 or the NGC System Tour at bio-rad.com/NGCSystems



Buffer blending valve
Inlet valve
Pumps

Scroll, select, and customize each component of your fluidic scheme to fit your unique application

Click to edit or adjust your fluidic scheme

Make a selection that fits your application

Choose new modules to add to your system capabilities (for example, add a sample pump for loading large sample volumes)

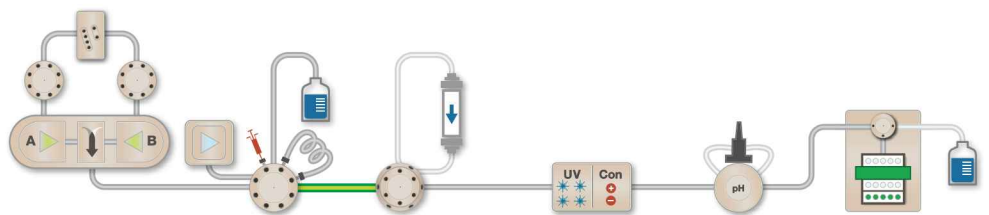
Change module locations to adjust to your application and achieve optimal results



2

Plumb System

Point-to-Plumb intuitive graphical indicators for simple, guided LED plumbing setup



Click on each step in the flow path to guide system plumbing. Then, appropriate LEDs will light up to guide plumbing (as shown above).

QUICK EXPERIMENT SETUP AND OPERATION

3

Design Experiment

The ChromLab Method Editor enables confident, automated walk-away purification

Extensive column library selection and intuitive interface for custom self-packed columns

Scouting and multivariable scouting for rapid, automated purification optimization

Phase-based method editing

Drag and adjust %B for quick fine-tuning of the gradient phase

4

Control Experiment

Manual controls, conveniently located for quick and easy access, provide total graphical user control of the NGC System with a coldroom-compatible touchscreen or a computer

Active flow path (green) is clearly highlighted for both sample and buffer

Real-time status displays of flow path devices

Graphical manual control panel allows complete, accessible control of the system

Use the touch screen for making quick adjustments while in the coldroom or at your deli fridge

On-the-fly method editing during a run

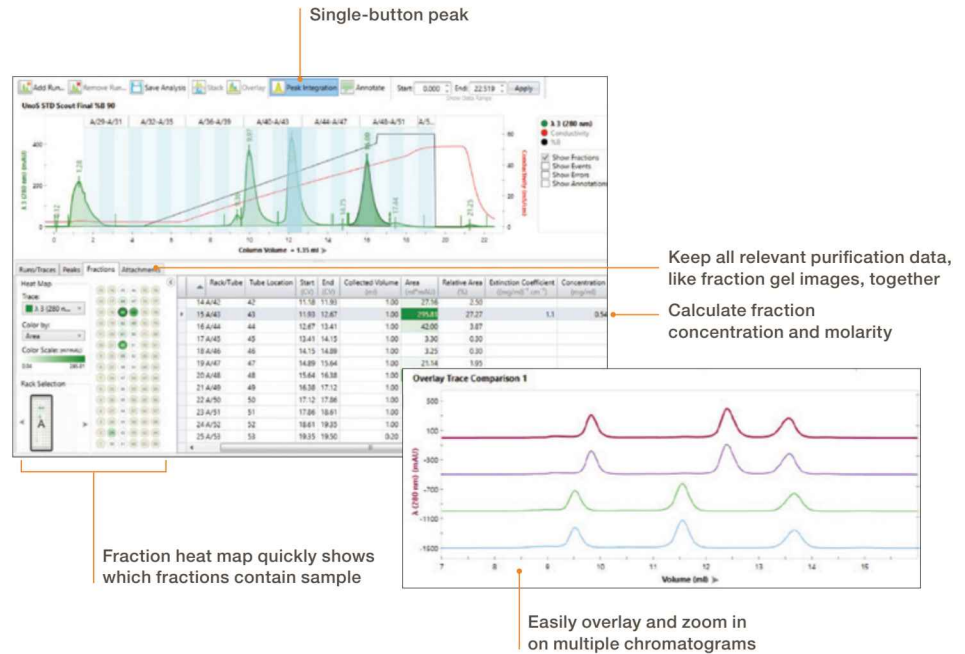
For further details see the NGC System Tour at bio-rad.com/NGCSystems

ANALYSIS MADE EASY

5

Analyze Data

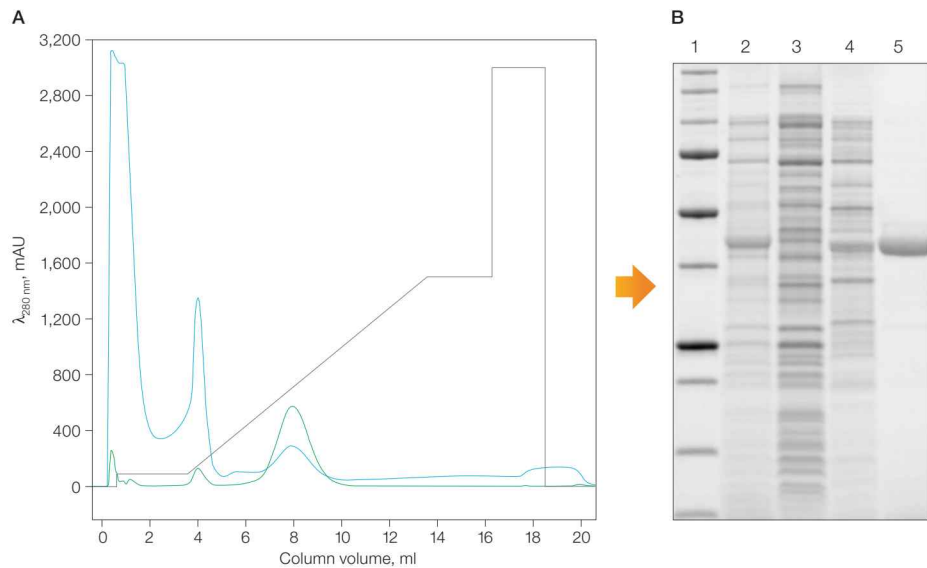
Comprehensive data analysis that enables fast, accurate data comparison



6

Confirm Purification and Separation

Stain-Free technology allows protein separation, gel imaging, and analysis in less than 30 min

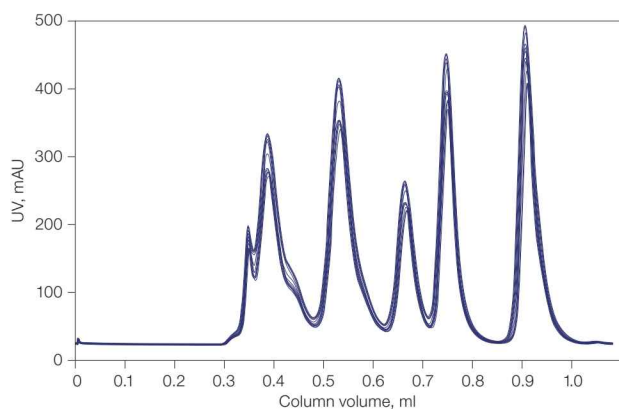


Visual confirmation of chromatography results using Stain-Free gels and imaging. **A**, isolation of a histidine-tagged green fluorescent protein (GFP) from a crude *Escherichia coli* lysate by affinity chromatography using an IMAC column; **B**, purification was confirmed by SDS-PAGE using a Criterion TGX Stain-Free Gel run for 20 min and directly visualized on the Gel Doc EZ Imaging System without the need for Coomassie staining. Samples in lanes 2 (crude *E. coli* lysates), 3 (flowthrough from the IMAC column), 4 (10% imidazole column wash), and 5 (purified histidine-tagged GFP) were compared against Precision Plus Protein Unstained Standards (lane 1).

Intelligent design that guides your setup and operation

Preplumbed System

Quality control (QC)-validated performance optimized for low hold-up volume translates to more reproducible results and sharper peaks.



High-quality results with reproducible separations. Eleven overlaid separations of a Bio-Rad size exclusion standard — composed of thyroglobulin, γ -globulin, ovalbumin, myoglobin, and vitamin B₁₂ — performed on the NGC Quest System with a 10 x 300 mm size exclusion column.

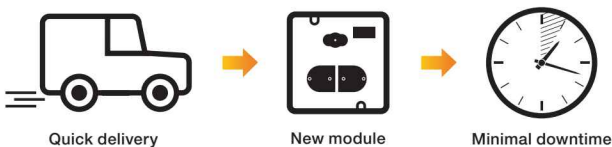
Real-Time Status Displays

Provide immediate status of important parameters for clear diagnostics of key NGC instrument modules.



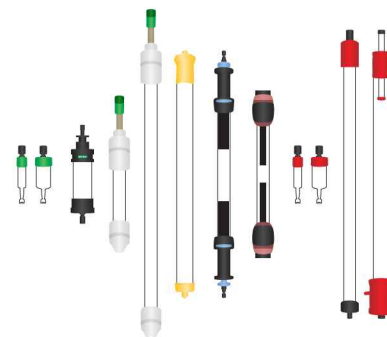
Module Replacement Service

User-replaceable modules eliminate lengthy downtime and costly service visits.

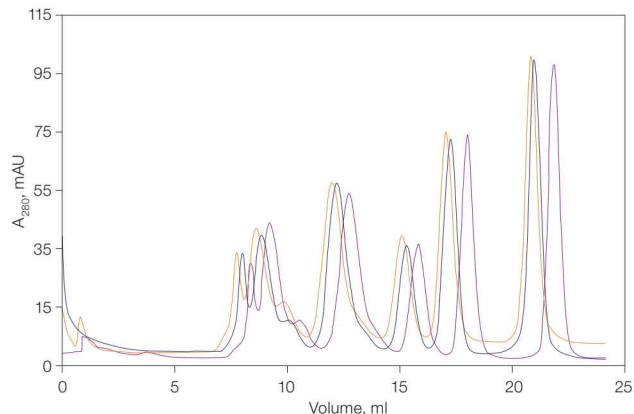


Open Platform

Compatible with all medium-pressure columns and ChromLab Software, includes method templates with column libraries.



Validated column applications on the NGC System.



Completely transferable applications. Identical comparisons of a Bio-Rad Gel Filtration Standard (#1511901) performed on a Superdex 200 10/300 GL Size Exclusion Column with separations performed on the NGC Quest (---), ÅKTApurifier (—), and ÅKTA avant (···) Systems.

SELECTION GUIDE

NGC Chromatography Systems

| Catalog # | Product Description | NGC Quest 10 7880001 | NGC Quest 10 Plus 7880003 | NGC Quest 100 7880002 | NGC Quest 100 Plus 7880004 | NGC Scout 10 7880005 | NGC Scout 10 Plus 7880007 | NGC Scout 100 7880006 | NGC Scout 100 Plus 7880008 | NGC Discover 10 7880009 | NGC Discover 100 7880010 | NGC Discover 10 Pro 7880011 | NGC Discover 100 Pro 7880012 |
|-----------|--|-------------------------|------------------------------|--------------------------|-------------------------------|-------------------------|------------------------------|--------------------------|-------------------------------|----------------------------|-----------------------------|--------------------------------|---------------------------------|
| 7884002 | NGC F10 Pump Module | ● | ● | | | ● | ● | | | ● | | ● | |
| 7884003 | NGC F100 Pump Module | | | ● | ● | | | ● | ● | | ● | | ● |
| 7884018 | NGC Mixer Module | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 7884007 | NGC Sample Inject Valve Module | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 7884008 | NGC Single-Wavelength Detector Module, includes conductivity monitor | ● | | ● | | ● | | ● | | | | | |
| 12010343 | NGC Multi-Wavelength Detector II Module, includes conductivity monitor | ○ | ● | ○ | ● | ○ | ● | ○ | ● | ● | ● | ● | ● |
| 7884010 | NGC Buffer Blending Valve Module | ○ | ○ | ○ | ○ | ● | ● | ● | ● | ● | ● | ● | ● |
| 7884011 | NGC pH Valve Module, includes pH probe | ○ | ○ | ○ | ○ | ● | ● | ● | ● | ● | ● | ● | ● |
| 7884004 | NGC Sample Pump Module, integrated | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | ● | ● | ● |
| 7884006 | NGC Inlet Valve Module | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ●● | ●● | ●●● | ●●● |
| 7884012 | NGC Column Switching Valve Module, 10 ml | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | ○ | ● | ○ |
| 7884026 | NGC Column Switching Valve Module, 100 ml | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | ○ | ● |
| 7884013 | NGC Outlet Valve Module | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ● | ● |
| 12009390 | ChromLab Software | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

● Standard ○ Optional

More than one dot indicates that a system comes with more than one valve module.

Note: All NGC Systems include a touch screen and NGC Fittings Kit (#7884017) and are compatible with the NGC Fraction Collector and BioFrac Fraction Collector.

Visit bio-rad.com/NGCChromSystems for more information.



Specifications

System Specifications

| | |
|--|---|
| Control system | ChromLab Software (compatible across all NGC Systems) |
| Dimensions (W x D x H) | 49 x 61 x 56 cm (NGC Quest and NGC Scout Systems) 49 x 61 x 74 cm (NGC Discover System) |
| Weight (excluding computer) | 41–46 kg (NGC Quest and NGC Scout Systems) 64 kg (NGC Discover System) |
| Power supply | 100–240 V, 50–60 Hz |
| Power consumption | 750 W maximum |

System Pump

| | |
|---------------------------|--|
| Pump type | Reciprocating piston |
| Flow rate setting | 10 ml/min pumps: 0.001 to 10 ml/min (normal range) 100 ml/min pumps: 0.01 to 100 ml/min (normal range) |
| Flow rate accuracy | ±2% (conditions: F10 pump — 0.1 to 10 ml/min, F100 pump — 1.0 to 100 ml/min; pressure: <600 psi [4.1 MPa, 41 bar]; viscosity: 0.5–3.7 cP) |
| Pressure range | 10 ml/min pumps: 0 to 25.2 MPa (3,650 psi) 100 ml/min pumps: 0 to 10 MPa (1,450 psi) |
| Viscosity range | 0.5–10.8 cP (for 10 ml/min and 100 ml/min pumps) |

Sample Pump

| | |
|---------------------------|----------------------------|
| Pump type | Piston pump, metering type |
| Flow rate setting | 0.01 to 100 ml/min |
| Flow rate accuracy | ±2% |
| Pressure range | 0 to 10 MPa (1,450 psi) |
| Viscosity range | 0.5–10.8 cP |

Mixer

| | |
|--|---|
| Mixing principle | Chamber with magnetic stirrer |
| Mixer volume | 263 µl (included), 750 µl (included), 2 ml, 5 ml (F10) 750 µl (included), 2 ml (included), 5 ml, 12 ml (F100) |
| Gradient composition accuracy | ±0.5% (conditions: 3 to 97%B, 0.25 to 10 ml/min F10 pumps) ±0.8% (conditions: 5 to 95%B, 1 to 100 ml/min F100 pumps) |

Valves

| | |
|-------------------------|--|
| Type | Rotary valves and rocker solenoid |
| Number of valves | 1 inject valve, up to 2 x 8-port sample inlet valves, and 2 x 8-port buffer inlet, 2 x 12-port outlet, and 3 x 5-port column switching valves |
| Functions | Loop selection (PEEK Loop and DynaLoop offerings) |

Pressure Sensors

| | |
|-----------------------------|---|
| Placement of sensors | Standard: after system pump Options: precolumn, postcolumn, sample pump |
| Range | 0–3,650 psi |
| Accuracy | ±2 psi or 2%, whichever is greater |

Inlet Valves

| | |
|---------------------|----------|
| Inlet A | 8 inlets |
| Inlet B | 8 inlets |
| Sample inlet | 8 inlets |

Single-Wavelength

| | |
|---|--|
| Wavelength | 255 nm (nucleic acids) 280 nm (proteins) |
| Absorbance range | 0 to >2.8 AU* |
| Linearity | 0 to 2 AU within ±5% |
| Operating pressure | 750 psi (5.2 MPa) |
| Flow cells | Preparative: 2 mm (volume: 20 µl) Analytical: 5 mm (volume: 16 µl) Analytical: 10 mm (volume: 18 µl) |
| Conductivity reading range | 0.01–999 mS/cm |
| Accuracy | ±2% |
| Operating pressure | 0–800 psi (0–5.5 MPa) |
| Flow cell volume | 6 µl |
| Temperature monitor range | 4–50°C |
| Temperature monitor accuracy | ±2% |

* For 5 mm and 10 mm flow cells.

Multi-Wavelength II

| | |
|---|---|
| Wavelength | 190–800 nm Up to 4 simultaneously |
| Absorbance range | 0 to 3.0 AU |
| Linearity | 0 to 2.5 AU within ±5% |
| Operating pressure | 700 psi (4.8 MPa) |
| Flow cells | Preparative: 2 mm (volume: 140 µl) Analytical: 5 mm (volume: 51 µl) Analytical: 10 mm (volume: 24 µl) |
| Conductivity reading range | 0.01–999.9 mS/cm |
| Accuracy | ±2% |
| Operating pressure | 0–700 psi (0–4.8 MPa) |
| Flow cell volume | Included in flow cell volume |
| Temperature monitor range | 4–60°C |
| Temperature monitor accuracy | ±2% |

pH Monitor

| | |
|---------------------------|--|
| pH reading range | 0 to 14 |
| Accuracy | ±0.1 pH unit within pH 2–12 |
| Operating pressure | 0 to 70 psi with pH probe inline and 0–500 psi in bypass mode |
| Flow cell volume | 100 µl (210 µl including internal flow paths) |

NGC Fraction Collector

| | |
|--------------------------------|--|
| Collection modes | Collect All, Threshold, and Time/Volume windows |
| Flow rate | 0.01–200 ml/min |
| Collection rack options | (each NGC Fraction Collector can accommodate 4 racks) |
| | 96 x 13 mm tubes, 75 x 16 mm tubes, 75 x 18 mm tubes, 27 x 50 ml tubes, 2 x deep well microplates (24-/48-/96-well), 96 x 1.5–2 ml capless tubes, 16 x 250 ml bottles, and 40 x unlimited volume prep-rack adaptors |
| Peltier cooling option | Yes |
| Operating temperature | 4–40°C |
| Dimensions (W x D x H) | 42 x 60 x 54.5 cm |

Note: All NGC Systems include a touch screen and are compatible with the NGC Fraction Collector and BioFrac Fraction Collector.

Specifications (cont.)

BioFrac Fraction Collector

Collection modes

| | |
|-----------|-----------------|
| Time | 0.02–99,999 min |
| Volume | 0.02–99,999 ml |
| Flow rate | 0.01–100 ml/min |

Collection rack options

180 x 12–13 mm tubes, 120 x 15–16 mm tubes, 80 x 18–20 mm tubes, 168 x 1.5 ml microtubes, 24 x 30 mm tubes, 4 x 96-, 48-, 24-, or 12-position microplates, 4 x 250 ml bottles, and 20 x unlimited volume prep-rack adaptors

Operating temperature

4–40°C

Dimensions (W x D x H)

44.5 x 35.6 x 38.7 cm

Column Switching Valve

Five-column valve

Can connect up to 5 columns with forward and reverse flow and bypass capability

Buffer Blending Valve

Standard in the NGC Scout and NGC Discover Systems

Air Sensor Module

Number of sensors

Up to 8 total air sensors (1 for end of sample detection, remaining are buffer)

Placement of built-in sensors

End of buffer, end of sample

Sensing principle

Acoustic

Ordering Information

NGC Medium-Pressure Chromatography Systems

| Catalog # | Description |
|-----------|-------------|
|-----------|-------------|

NGC Quest Chromatography Systems

For the all-purpose purification of biomolecules:

| | |
|---------|----------------------------------|
| 7880001 | NGC Quest 10 System |
| 7880003 | NGC Quest 10 Plus System |
| 7880002 | NGC Quest 100 System |
| 7880004 | NGC Quest 100 Plus System |

NGC Scout Chromatography Systems

For rapid scouting of proteins, peptides, and nucleic acids:

| | |
|---------|----------------------------------|
| 7880005 | NGC Scout 10 System |
| 7880007 | NGC Scout 10 Plus System |
| 7880006 | NGC Scout 100 System |
| 7880008 | NGC Scout 100 Plus System |

NGC Discover Chromatography Systems

For method development:

| | |
|---------|------------------------------------|
| 7880009 | NGC Discover 10 System |
| 7880011 | NGC Discover 10 Pro System |
| 7880010 | NGC Discover 100 System |
| 7880012 | NGC Discover 100 Pro System |

ChromLab Software

| | |
|----------|--|
| 12009390 | ChromLab Software |
| 17000099 | ChromLab Software, User Management Edition , allows networking of all NGC systems to a centralized database, 1 license |
| 17000098 | ChromLab Software, User Management Edition , 3 licenses |
| 17000097 | ChromLab Software, User Management Edition , 5 licenses |
| 7886001 | ChromLab Software, Security Edition , U.S. FDA 21 CFR Part 11 module for ChromLab Software, maintains security logs and allows networking of all NGC systems to a centralized database, 1 license |
| 7886003 | ChromLab Software, Security Edition , 3 licenses |
| 7886005 | ChromLab Software, Security Edition , 5 licenses |

NGC System Modules and Accessories

All NGC pumps, detectors, and valves include necessary tubing and fittings.

| Catalog # | Description |
|-----------|-------------|
|-----------|-------------|

System Pumps

| | |
|---------|---|
| 7884002 | NGC F10 Pump Module , pkg of 1, 10 ml/min system pump kit for creating buffer gradients; for use with the buffer blending valve to generate flow rates of up to 20 ml/min |
| 7884003 | NGC F100 Pump Module , pkg of 1, 100 ml/min system pump kit for creating buffer gradients; for use with the buffer blending valve to generate flow rates of up to 200 ml/min |

Sample Pump

| | |
|---------|--|
| 7884004 | NGC Sample Pump Module , pkg of 1, 100 ml/min sample pump kit for automated large-volume sample application via sample inject valve |
|---------|--|

Detectors

| | |
|----------|---|
| 7884008 | NGC Single-Wavelength Detector Module , pkg of 1, UV/conductivity detector kit for nucleotide and protein detection, salt gradient generation |
| 12010343 | NGC Multi-Wavelength Detector II Module , pkg of 1, UV/Vis and conductivity detector kit for simultaneous 4-wavelength monitoring of elution fractions between 190 and 800 nm and salt gradient generation |

Valves

| | |
|---------|--|
| 7884010 | NGC Buffer Blending Valve Module , pkg of 1, for inline buffer preparation and generating pH gradients for quick pH scouting |
| 7884006 | NGC Inlet Valve Module , pkg of 1, for automated switching between multiple buffers and samples during method development |
| 7884011 | NGC pH Valve Module , pkg of 1, kit includes pH valve kit, pH probe, tubing, and fittings, for accurate inline pH measurement |
| 7884012 | NGC Column Switching Valve Module (10 ml) , holds 5 columns or sample loops; for use with F10 systems for quick column scouting, automated multicolumn, and reverse flow applications |
| 7884026 | NGC Column Switching Valve Module (100 ml) , holds 5 columns or sample loops; for use with F100 systems for quick column scouting, automated multicolumn, and reverse flow applications |
| 7884013 | NGC Outlet Valve Module , pkg of 1, for automated fraction collection of large-volume fractions with up to 12 vessels |
| 7884016 | NGC Signal Import Module , pkg of 1, enables analog to digital signal conversion and connection to third-party autosamplers and detectors |

Air Sensors

| | |
|---------|---|
| 7885017 | NGC Air Sensor Module , pkg of 1, kit includes 2 large-bore air sensors to detect end of buffer and sample to protect against air entering pumps and columns; supports up to 4 large- and small-bore air sensors |
| 7885018 | NGC Air Sensor Extension Module , pkg of 1, connects to the base air sensor module to support 4 additional air sensors; does not include any air sensors, optional part |
| 7885020 | NGC Small Air Sensor , pkg of 1 air sensor to exclude air from system and columns; detects air in small-diameter PEEK Tubing |
| 7885021 | NGC Large Air Sensor , pkg of 1 air sensor to exclude air from system and columns; detects air in large-diameter PTFE tubing |

Ordering Information (cont.)

Catalog # Description

Fraction Collectors

Compatible with all NGC Systems

- 17002070 **NGC Fraction Collector with Racks**, 100/240 V, includes power cord, rack set (two 13 mm tube racks), tubing, union
- 7410002 **BioFrac Fraction Collector**, 100/240 V, includes power cord, rack set F1 (2 x flatpack, 13 mm), BioFrac Diverter Valve, PEEK tubing, standard dropper head

Mixers

- 7884018 **NGC Mixer Module**, pkg of 1, includes a mixer motor assembly and an integrated system pressure sensor; can be extended with mixing barrels of various sizes; does not include mixer base or barrels
- 7884019 **NGC F100 Mixer**, pkg of 1, 750 µl base and top assembly, included with all 100 ml/min NGC Systems
- 7884020 **NGC F10 Mixer**, pkg of 1, 263 µl base and top assembly, included with all 10 ml/min NGC Systems
- 7884021 **NGC F10 Mixer Barrel Kit**, pkg of 1, 750 µl extension barrel for F10 263 µl mixer, part of NGC Scout 10, NGC Discover 10 Systems
- 7884022 **NGC F10 Mixer Barrel Kit**, pkg of 1, 2 ml extension barrel for F10 263 µl mixer, optional part
- 7884028 **NGC F100 Mixer Barrel Kit**, pkg of 1, 2 ml extension barrel for F100 750 µl mixer, part of NGC Scout 100, NGC Discover 100 Systems
- 7884023 **NGC F100 Mixer Barrel Kit**, pkg of 1, 5 ml extension barrel for F100 750 µl mixer, optional part
- 7884024 **NGC F100 Mixer Barrel Kit**, pkg of 1, 12 ml extension barrel for 750 µl mixer, optional part

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