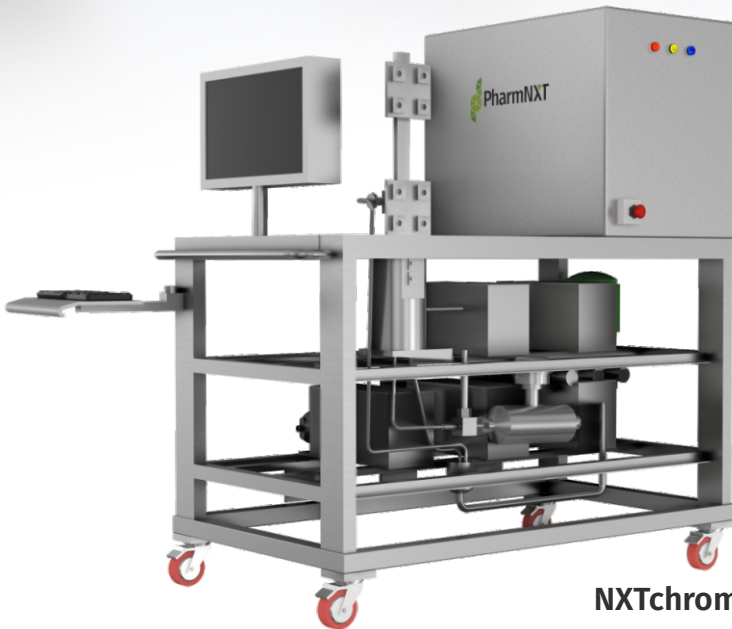


▶ CHROMATOGRAPHY SOLUTIONS

NXTchrom

Solutions for Purification Process



NXTchrom™ is a range of configurable chromatography systems designed to meet all chromatography-based process requirements and the design can handle any column diameter. We use a proven platform that allows you to integrate different options into one core platform. With a self-contained design, the NXTchrom System incorporates pumps, valves, and instruments in a single system. The system's control cabinets include pneumatic and electric components, and the system can be controlled using an easy-to-use touch screen interface.

The NXTchrom system is housed on a sturdy stainless steel frame with a closed construction design. The Stainless steel frame is also used to lift the system for easy connection to the plant drain, the electrical cabinet is installed on the SS frame along with the touchscreen for making the system easy to use for the operator.

Modular Concept

The platform design allows easy customization of the process chromatography system. One or more systems that meet your precise process requirements can be produced by choosing from the required options. You can choose from a variety of sensors and specify the number of valves and ports you need.

Options to choose from

- Additional inlet and outlet valves
- Inline filter housing (1 or 2)
- Pressure sensor (before filter or after column)
- Air sensor (after bubble trap, before pump, or both)
- Additional conductivity and temperature sensors before column)
- Additional pH sensor (before column)
- Sampling valve (after column)
- Position detectors for valves
- Steam-in-place (SIP)
- Clean-in-place (CIP)
- Gradient function (controlled either by flow rate only or by flow rate and conductivity)

Each option includes the required combination of hardware and software modules. All standard features and options have been validated on the platform.

Precise Inline Dilution and Gradient

The NXT chrom system is fully equipped with a second pump and flowmeter adapted to the dilution ratio required for the application. A conductivity probe installed after the pumps ensures gradient or inline dilution with conductivity. Highly accurate instruments and pumps lead to maximum flow rate deviation of 1% at the system nominal

User-Friendly Software

The control unit uses a simple, user-friendly interface via the touchscreen for data input and programming commands. The system is shielded from unauthorized access with password protection (four levels), and all events and actions (alarms, process steps, manual commands, etc.) are recorded in accordance with cGMP guidelines. The program allows you to operate the system manually or automatically.

The automatic mode has

- Multiple operations
- Configurable fluid paths
- Control of inlets/outlets and column valve
- Multiple end conditions
- Pause and hold alarms
- Interactive pausing steps

Full trend review, trend analysis, and printing from the system are all standard. Data export and configurable interfacing to external software is also included.



Hygienic Design

All process piping and valves are made from Stainless Steel 316L (ASTM 1.4404) to conform to ASME BPE requirements. Only membrane valves have been used for the process flow path. Block body valves, compact instruments, and other devices have been used to minimize the holdup volumes. Cables and pneumatic lines are run through stainless steel conduits protecting them from damage or contamination.

The NXT chrom system can be cleaned in place with NaOH. The option for automated cleaning in place is available on request which includes a specialized program with additional valves. A Steam in Place system option is also available upon request.

Flexibility

The NXT chrom system operates with a wide range of column diameters and process flow rates, making it easy for system designers to select the appropriate system category for gradient or isocratic applications. The application ranges of the system categories overlap, meaning that one or more systems can handle specific requirements in certain situations.

It can be used for multiple flow rates and other column diameter ranges, and therefore it will remain useful for different processes and process conditions and for future applications.

Quality Assurance

Our NXT chrom systems are designed, developed, and manufactured in accordance with 9001:2015 certified Quality Management System. They undergo extensive testing before shipping. We make sure our products are manufactured according to cGMP requirements and are suitable for cleanroom process.

Support

PharmNXT supports users from the design to the execution phase of a new and existing production facility with the most comprehensive support program, that ensures the successful design, implementation, and validation of the manufacturing facility. PharmNXT offers end-to-end solutions for Pharmaceutical, Bio-pharmaceutical and Vaccine manufacturing.



Technical Specifications for 600LPH system:

Description	Specification
Piping ID	½ Inch (Half Inch), SS316L (1.4404)
Maximum Operating Flow Rate	600LPH (Overall)
Minimum Operating Flow Rate	15 LPH (Overall)
Control Mode	Flow Control Mode + Conductivity
Pump	2 Nos, Quatraflow (QF1200S)
pH Monitor & Sensor	2 Nos, Mettler Toledo / Optek / E&H Conducta
Conductivity Monitor and Sensor	2 Nos, Mettler Toledo / Optek / E&H Conducta
Flow Meter	1 Nos, Mass, E&H / Emerson (Rosemount)
Pressure Sensor	2 Nos, Flush, E&H / Keller
UV	1 No, Dual Wavelength, Optek / E&H Conducta
Temperature Sensor	Integrated in conductivity sensor
Maximum Operating Pressure	6 barg (at ambient Temperature)
Air Sensor	2 (Before Inlet and Pre-Column)
Number of Inlets	4 Inlets per pump (Configurable)
Number of Outlets	4 outlets (Configurable)
Column Connections	1
Number of Filters	Configurable to 2 (Single-Use Capsules or Filter Housing)
Static Mixers	Optional, GMP Static Mixer, KoFlo/equivalent
Heat Exchanger	Can be made available if temperature needs to be maintained
Automated CIP	Can be made available with 4 inlet Block Valves
SIP	Can be made available
ATEX	Can be made available

Sr.no	Capacity (Flow rate)	Process pipe (Size)	Bulk transfer	Surface Finish
1	150LPH	1/4" (0.25 in)	5-150LPH	Ra 0.4 µm
2	600LPH	1/2" (0.5 in)	15-600LPH	Ra 0.4 µm
3	1000LPH	3.4" (0.75 in)	30-1000LPH	Ra 0.4 µm
4	2000LPH	1" (1.0 in)	45-2000LPH	Ra 0.4 µm
5	5000LPH	2" (2.0 in)	100-5000LPH	Ra 0.4 µm



NXTchrom System



INDIA (HQ)

PharmNXT Biotech LLP

Corporate Office:
705, Lodha Supremus, Kolshet Road
Thane (W) – 400607, India
info@pharmnxtbiotech.com

PharmNXT Ekuse Private Limited

Manufacturing Plant:
Gate No.48/1A, 48/3,48/4,48/5,
Plot No.44, Varale, Khed
Chakan, Pune 410501
Maharashtra, India
enquiries@pharmxtbiotech.com

SINGAPORE

PharmNXT Biotech Pte Limited

8, Burn Road #12 – 12, Trivex
Singapore – 369977
lalit.indulkar@pharmnxtbiotech.com

SOUTH KOREA

Skybioscience, Inc

2-1008, 495, Parang-ro
Seo-gu, Incheon
South Korea
mahesh.s@pharmnxtbiotech.com

PharmNXT and its monogram are trademarks of PharmNXT Biotech LLP. NXTchrom is a trademark of PharmNXT Biotech LLP or one of its subsidiaries.

All goods and services are sold subject to the terms and conditions of sale of the company within PharmNXT Biotech LLP which supplies them. A copy of these terms and conditions is available on request. Contact your local PharmNXT Biotech LLP representative for the most current information.