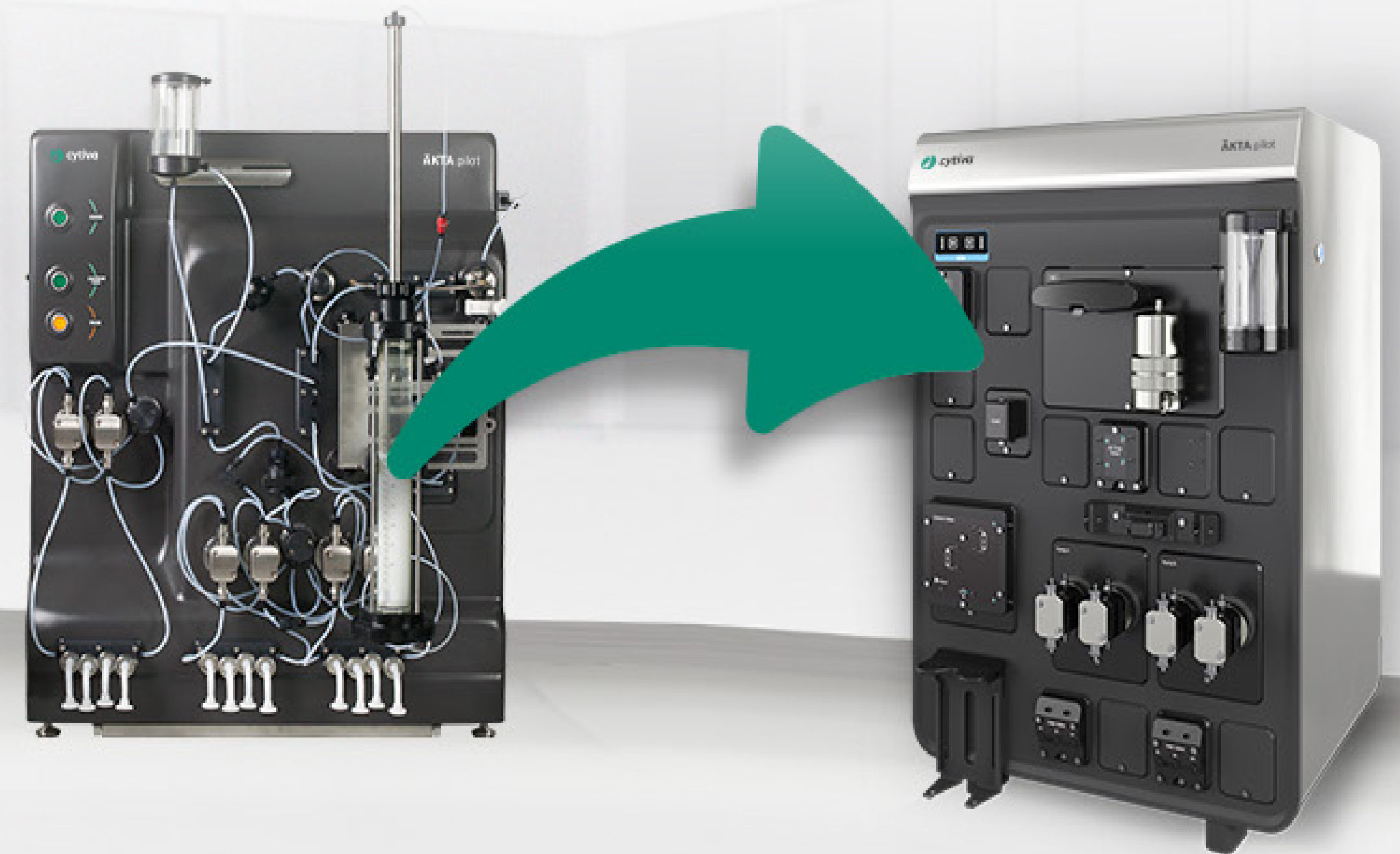


Selection guide

# Comparison: ÄKTA pilot 600 vs ÄKTA pilot chromatography system



# Comparison: ÄKTA pilot 600 vs ÄKTApilot system

## Scaling down size, scaling up capabilities

	ÄKTA™ pilot 600	ÄKTApilot™
Flow rate (mL/min)	4–600 (in gradient mode) 1–1200 (in isocratic mode)	4–400 (in gradient mode) 1–800 (in isocratic mode)
Weight (kg)	77–83 (depending on configuration)	114 kg (monitor arm not included)
Footprint (mm)	575 × 440	750 × 540

## Bridging transitions from non-GMP to GMP

	ÄKTA pilot 600S*	ÄKTA pilot 600R*	ÄKTApilot
Sanitizable	Yes	Yes	Yes
Material qualities	USP<88>Class VI, CFR part 177, Free from animal-derived components or compliance with EMA 410/01, Rev 3		USP<88>ClassVI
IQ/OQ documentation	Yes	Yes	Yes
Configurations and documentation	<ul style="list-style-type: none"> <li>Standard configuration</li> <li>Additional functionality ordered in parallel, or when needed</li> <li>Generic product documentation</li> <li>Validation services available</li> </ul>	<ul style="list-style-type: none"> <li>Configured at point of order</li> <li>System mounted, calibrated, and tested prior to delivery</li> <li>Configuration specific, ASME-BPE complying documentation for GMP</li> <li>Validation and change notification services available</li> <li>Custom upgrade kits including certificates and updated documentation</li> </ul>	<ul style="list-style-type: none"> <li>Standard configuration</li> <li>Up to six external valve blocks can be ordered separately</li> <li>Validation services available</li> </ul>
System design	<ul style="list-style-type: none"> <li>Smooth surface</li> <li>One functional side</li> <li>Modular design. Modules not in use can be disconnected to simplify sanitization procedures. Clear distinction between wetted and functional parts.</li> </ul>		<ul style="list-style-type: none"> <li>Smooth, but lacquered, surface</li> <li>Several functional sides</li> <li>Not modular</li> </ul>
Connectors	<ul style="list-style-type: none"> <li>Novel SNAP connector to speed up exchange of tubing</li> <li>Easily adapted to, for example, TC connector on both inlet and outlet</li> </ul>		<ul style="list-style-type: none"> <li>Screw connectors precut with molded ends and O-ring seals</li> <li>TC connectors on inlet</li> </ul>

\* ÄKTA pilot 600 is available in two versions. ÄKTA pilot 600S is suitable for non-GMP environments and 600R is suitable for GMP environments. Both versions can be modified to fit specific needs thanks to the modular design.

## Flow accuracy and gradient performance

	ÄKTA pilot 600	ÄKTApilot
Flow rate accuracy (%)	< ±2% in the range 1–1200 mL/min	< ±2% (4–400 mL/min, 0.1–2 MPa)
Viscosity (cP)	Max. 10	Max. 5
Hold-up volume	30 mL	31 mL
Restrictor	Yes <ul style="list-style-type: none"> <li>– Improved gradient performance at low flow rate</li> <li>– Optimized siphoning</li> <li>– Optimized for minimal carryover from A to B</li> </ul>	No
Mixer	Optional <ul style="list-style-type: none"> <li>– 5 mL mixer and mixer valve, possible to bypass</li> </ul>	Yes <ul style="list-style-type: none"> <li>– 5 mL mixer</li> </ul>
Air trap	Yes <ul style="list-style-type: none"> <li>– Improved manual handling</li> <li>– Improved software support for filling/draining</li> <li>– Improved mixing</li> </ul>	Yes <ul style="list-style-type: none"> <li>– Manual handling</li> </ul>
Sample application	<ul style="list-style-type: none"> <li>• Optimized flow path to reduce tubing length</li> <li>• A-inlet and system pump for loading directly onto the column</li> <li>• Air trap and mixer (optional), inline or bypassed</li> <li>• Superloop™ 150 for small sample volumes</li> </ul>	<ul style="list-style-type: none"> <li>• Separate sample pump</li> <li>• A-inlet for loading through air trap</li> </ul>
Fraction collection	<ul style="list-style-type: none"> <li>• Up to 15 outlets in chassis</li> <li>• Improved software support for outlet fractionation</li> <li>• Optimized volumes, automatic delay volume handling, combined straight- and peak fractionation and phase independency</li> </ul>	<ul style="list-style-type: none"> <li>• Up to 22 outlets with external valve blocks</li> <li>• Compatible with Frac-950 (discontinued) up to 100 mL/min</li> </ul>
Inlets	Total number of inlets: 15 (12 for ÄKTA pilot 600R) 9 combined A-inlets and sample-inlets (3 A-inlet valves) 6 B-inlets (2 B-inlet valves)	Total number of inlets: 24 (including external valve block) 4 to 8 A-inlets 4 to 8 B-inlets 4 to 8 sample inlets (Max numbers if external valve block is included)
Max. number of outlets	15	8 included, 22 with external valve block

## Column packing and column life cycle management

	ÄKTA pilot 600	ÄKTApilot
Column valve	1 multi-functional valve <ul style="list-style-type: none"> <li>– 2 columns</li> <li>– 2 columns in series</li> <li>– Intelligent packing functionality</li> </ul>	3 valves <ul style="list-style-type: none"> <li>– 2 columns or Intelligent packing functionality</li> </ul>
Intelligent packing support	Yes <ul style="list-style-type: none"> <li>– Dedicated AxiChrom™ column packing port on the column valve</li> <li>– Interactive graphical packing workflows in UNICORN™ software</li> </ul>	Yes (limited compared to ÄKTA pilot 600 support)
General column packing support	<ul style="list-style-type: none"> <li>• Integrated column performance test in UNICORN</li> <li>• Column logbook to store and track packed columns</li> </ul>	Limited support for UNICORN versions 6 or higher

## Sensors at a glance

	ÄKTA pilot 600	ÄKTApilot
Air sensors	One built-in, precolumn Optional: 4 external air sensors for inlets	One external, to place on optional inlet
Precolumn conductivity monitor	Optional	No
UV detection	UV cells: 2 or 5 mm <ul style="list-style-type: none"> <li>– Easily changed</li> <li>– Automatic reading of cell length, factory calibrated</li> <li>– Automatic compensation for cell length</li> </ul>	UV cells: 1, 2, or 5 mm <ul style="list-style-type: none"> <li>– Changeable with shim plates</li> </ul>
pH monitor	Optional <ul style="list-style-type: none"> <li>– Calibration in-line</li> <li>– Improved electrode with lower salt memory effect</li> </ul>	Included <ul style="list-style-type: none"> <li>– Calibration off-line</li> </ul>

[Learn more about ÄKTA pilot 600.](#)

## [cytiva.com/aktapilot600](https://www.cytiva.com/aktapilot600)

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CY16043-10Dec20-SG

