



Agilent 1200 Infinity Series Valve Solutions

Features, Specifications and Ordering Details



Extend your LC applications!

A set of valve types specially designed for the Agilent 1200 Infinity Series LC systems allows you to extend your LC applications. New valve offerings give you:

- More flexibility in solvent selection and column selection
- New automation capabilities in sample preparation
- Higher sample throughput through alternating column regeneration
- Higher separation performance with multidimensional chromatography
- Seamless software integration with a single point of control
- Single-vendor solutions

Features

- Micro valves with small internal volumes — designed for minimum peak broadening, for low flow rates in the nL/min and μ L/min range.
- 2-position/10-port valve with Make Before Break (MBB) design — prevents pressure spikes during valve switches, preferred for high flow rates.
- For shortest capillary connections — column/valve organizer to position the valves where they are needed.
- Valve integration in the 1260 Infinity Thermostatted Column Compartment — for 2-position/10-port valve, 2-position/6-port valve and 2-position/6-port micro valve to allow full temperature control from 10 degrees below ambient up to 80 °C.
- Valve integration in the 1290 Infinity Thermostatted Column Compartment — for 2-position/10-port micro valve and 2-position/6-port valve to allow full temperature control from 10 degrees below ambient up to 100 °C and up to 600 bar.
- Valve control integrated in the 1200 Infinity Series Instant Pilot software.
- Solvent selection for up to 12 solvents using the 12-position/13-port selection valve, and column selection for up to 6 columns using the 6-position selection valve, which provide high flexibility for method development or multi-user systems.
- Alternating column regeneration using the 2-position/10-port valves, which reduces the cycle time for higher sample throughput by saving time for column flushing and equilibrating.
- Sample enrichment and sample clean-up using the 2-position/6-port valve, resulting in higher productivity and efficiency.
- Multidimensional chromatography using an additional 2-position/6-port valve, for higher separation performance.



Agilent Technologies

Specifications – Agilent 1200 Infinity Series Valves

Specifications Agilent 1200 Infinity Series Valves	
Agilent 1200 Infinity 2-position / 10-port valve (G1157A)(Dual sided MBBTM)	
Liquid contacts	Stainless steel and PEEK
Port size	Accepts 10–32 male threaded fittings
Flow passage diameters	Stator and stator face assembly 0.60-mm (0.024"), rotor seal 0.60-mm (0.024")
Volume in flow passages	Stator (includes stator face seal) 2.1-µL/hole, rotor seal- 0.7-µL/groove
Maximum pressure	41 MPa (408 bar, 6000 psi)
Agilent 1200 Infinity 6-position selection valve (G1159A)	
Liquid contacts	Stainless steel and PEEK
Port size	Accepts 10-32 male threaded fittings
Flow passage diameters	Stator 0.6-mm (0.024"), stator face assembly and rotor seal 0.4-mm (0.015")
Volume in flow passages	Angled ports 1, 3, 5 (15,6 µl), Radial ports 2, 4, 6 (18,8 µl)
Maximum pressure	35 MPa (345 bar, 5000 psi)
Agilent 1200 Infinity 12-position / 13-port selection valve (G1160A)	
Liquid contacts	Stainless steel and PEEK
Port size	Accepts 10-32 male threaded fittings
Flow passage diameters	1.0-mm (0.040")
Volume in flow passages	Stator (includes stator face seal), 6.4-µL/hole, rotor seal 4.0-µL/groove
Maximum pressure	21 MPa (207 bar, 3000 psi)
Agilent 1200 Infinity 2-position / 6-port valve (G1158A)	
Liquid contacts	Stainless steel, PEEK, and alumina ceramic
Port size	Accepts 10-32 male threaded fittings
Flow passage diameters	0.4-mm (.015") and 0.5-mm (.018")
Volume in flow passages	Stator (includes the stator face assembly) 0.7 µL/hole, rotor seal- 0.3 µL/groove
Maximum pressure	41 MPa, 408 bar, 6000 psi
Agilent 1200 Infinity 2-position / 6-port micro valve (G1162A)	
Liquid contacts	DuraLife processed stainless steel and vespel
Port size	Accepts M4 male threaded fittings
Flow passage diameters	0.20-mm (0.008")
Volume in flow passages	70 nL port to port
Maximum pressure	41 MPa (408 bar, 6000 psi)
Agilent 1200 Infinity 2-position / 10-port micro valve (G1163A)	
Liquid contacts	DuraLife processed stainless steel and vespel
Port size	Accepts M4 male threaded fittings
Flow passage diameters	0.20-mm (0.008")
Volume in flow passages	Stator (20° ports) 27.2 nL, (45 ° ports), 30.5 nL, rotor seal-25.0 nL/groove
Maximum pressure	41 MPa (408 bar, 6000 psi)

Specifications – Agilent 1200 Infinity Series Valves (continued)

Specifications Agilent 1200 Infinity Series Valves	
Agilent 1200 Infinity 2-position / 6-port valve (G1316A#055) (in 1200 Series thermostatted column compartment)	
Liquid contacts	Stainless steel, vespel, alumina, ceramic
Port size	Accepts 10–32 male threaded fittings
Flow passage diameters	0.4-mm (0.015") and 0.5-mm (0.018")
Volume in flow passages	Stator (includes stator face assembly) 0.7 µL/hole, rotor seal- 0.3 µL/groove
Maximum pressure	41 MPa (408 bar, 6000 psi)
Agilent 1200 Infinity 2-position / 6-port valve (G1316B#055) (in 1200 Series thermostatted column compartment SL)	
Liquid contacts	UltraLife processed stainless steel and Ultralife PEEK-blend
Port size	Accepts 10-32 male threaded fittings
Flow passage diameters	0.30-mm (0.012") and 0.4 mm (0.015")
Volume in flow passages	Stator 0.2 µL/hole, rotor seal 0.1 µL/groove
Maximum pressure	62 MPa (620 bar, 9000 psi)
Agilent 1200 Infinity 2-position / 6-port micro valve (G1316A#056) (in 1260 Infinity Thermostatted Column Compartment)	
Liquid contacts	DuraLife processed stainless steel and vespel
Port size	Accepts M4 male threaded fittings
Flow passage diameters	0.20-mm (0.008")
Volume in flow passages	70 nL port to port
Maximum pressure	41 MPa (408 bar, 6000 psi)
Agilent 1200 Infinity 2-position / 10-port valve (G1316A#057) (in 1200 Series thermostatted column compartment)	
Liquid contacts	Stainless steel (stator) and PEEK (stator-face and rotor seal)
Port size	Accepts 10-32 male threaded fittings for 1/16-inch tubing
Flow passage diameters	Stator and stator face seal- 0.61 mm (.024"), rotor seal-0.46 mm (0.018")
Volume in flow passages	Stator (includes stator face seal)-2.2 µL/hole, rotor seal-0.4µL/groove
Maximum pressure	41MPa (408 bar, 6000 psi)
Agilent 1200 Infinity 2-position / 10-port micro valve (G1316B#057) (in 1290 Infinity Thermostatted Column Compartment)	
Liquid contacts	UltraLife processed stainless steel and Ultralife PEEK-blend
Port size	Accepts M4 male fittings
Flow passage diameters	0.2 mm (0.008")
Volume in flow passages	Stator 24 - 26 nL, rotor seal- 39 nL/groove
Maximum pressure	62 MPa (620 bar, 9000 psi)
Agilent 1260 Infinity Thermostatted Column Compartment (G1316A)	
Temperature range	10 degrees below ambient to 80 °C
Temperature stability	± 0.15 °C
Column capacity	Three 30-cm columns
Agilent 1290 Infinity Thermostatted Column Compartment (G1316B)	
Temperature range	10 degrees below ambient to 100 °C
Temperature stability	± 0.05 °C
Column capacity	Three 30-cm columns

Ordering Details – Agilent 1200 Infinity Series Valves

Description	Product Number
1200 Infinity Series 2-position/10-port valve Includes valve, mounting parts for column organizer G1383A and accessory kit	G1157A
1200 Infinity Series 2-position/6-port valve Includes valve, mounting parts for column organizer G1383A and accessory kit.	G1158A
1200 Infinity Series 6-position selection Valve Includes valve, mounting parts for column organizer G1383A and accessory kit.	G1159A
1200 Infinity Series 12-position/13-port valve Includes valve, mounting parts for column organizer G1383A and accessory kit.	G1160A
1200 Infinity Series 2-position/6-port micro valve Includes valve, mounting parts for column organizer G1383A and accessory kit.	G1162A
1200 Infinity Series 2-position/10-port micro valve Includes valve, mounting parts for column organizer G1383A and accessory kit.	G1163A
Valve Options for Thermostatted Column Compartment (G1316A)	
2-position/6-port valve option Includes column switching valve and connection capillaries with 0.17-mm internal diameter.	G1316A#055
2-position/6-port microvalve option Includes micro column switching valve and connection capillaries.	G1316A#056
2-position/10- port valve option Includes valve and accessory kit	G1316A#057
Valve Options for Thermostatted Column Compartment (G1316A)	
2-position/6-port valve option for pressures up to 600 bar Includes column switching valve and connection capillaries with 0.17-mm internal diameter.	G1316B#055
2-position/10-port micro valve option for pressures up to 600 bar Includes column switching valve and connection capillaries with 0.17-mm internal diameter.	G1316B#057
Additional Kits	
Capillary Kit Column Regeneration (Analytical), for valve G1157A. Includes 0.17-mm capillaries	G1156-68711
Capillary Kit Column Regeneration (Preparative), for valve G1157A Includes 0.5-mm capillaries	G1156-68713
Capillary Kit Column Regeneration (Therm. Column Comp), for valve G1316A#057 Includes 0.17-mm capillaries	G1316-68711
Solvent Selection Tubings for 4 Solvents, for valve G1160A (below 10 mL/min)	G1160-68706
Capillary Kit Column Selection for 6 columns, for valve G1159A. Includes 0.17-mm capillaries.	G1160-68706
Capillary Kit Sample Enrichment/Stripping (Analytical), for valve G1316A#055. Includes 0.17-mm capillaries	G1316-68710
Capillary Kit Sample Enrichment/Stripping (Analytical), for valve G1158A. Includes 0.17-mm capillaries	G1156-68714

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