

Pump Replacement Parts



Upchurch Check Valves

- Exclusive, patented cartridge design



Pump check valves should be replaced every six months to one year as part of a regularly scheduled preventative maintenance program.

Most of our check valves utilize cartridges having double ruby balls and sapphire seats. This design is more expensive to manufacture but it has proven to be more reliable than the single ball and seat or spring type check valves. In addition, most of our outlet check valves come with a replaceable filter end-cap to trap seal particles.

The Upchurch check valves are identified by CV-XXXX part numbers.

Upchurch Pistons for HPLC Pumps

- Ruby piston shafts
- Guaranteed to function equal to or better than the original manufacturer's parts



Pump pistons or plungers should be inspected as part of a regularly scheduled preventative maintenance program. Although pistons are rugged and do not typically require replacement, look for scratches, flat spots and cracks. Replace any piston that shows signs of wear.

Upchurch Seals for HPLC Pumps

- Increased life UHMWPE and PFA Teflon® seals
- Metal-free, without springs



In general, pump piston seals should be replaced on a semi-annual basis as part of your preventative maintenance program. Harsh operating conditions such as the use of aggressive mobile phases, the formation of salt

precipitants or the presence of particulates may require replacement on a more frequent basis.

Each package of Upchurch Scientific piston seals comes with complete installation instructions. Because Upchurch seals are machined to exacting tolerances, they are guaranteed to function equal to or better than the original manufactured parts.

The Upchurch seals are identified by PS-XX or TPS-XX part numbers.

Seal Installation/Removal Tool

Cat. No.	Description	Price
PS-1T	Seal installation/removal tool, for 1/8"	
PS-2T	Seal installation/removal tool, for 3/16"	

Note:

- Upchurch Scientific check valve cartridges are only compatible with Upchurch Scientific check valve holders.
- Reference to manufacturer's part numbers does not imply their endorsement of our products.

ABI/Kratos/Gynotek 400, 300C/CP, M480, P580

Check Valves

Cat. No.	Description	Price
CV-512	Inlet check valve assembly OEM No. 1400-1999, 7200-0060	
CV-2	Replacement inlet check valve cartridge	
CV-5	Replacement pump head spacer	
CV-501	Outlet check valve assembly OEM No. 1400-2250, 7200-0062	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	
CV-5	Replacement pump head spacer	

Pistons

PS-525 Ruby/Sapphire piston, OEM No. 1400-1970

Seals

PS-25 UHMWPE Seals, 1/8," 6/pk
OEM No. 7200-0088

PS-25-2 UHMWPE Seals, 1/8," 2/pk
OEM No. 7200-0088

Pump Replacement Parts



92-0058



93-0098

Agilent/Hewlett-Packard

• Agilent Manufactured 1100 and 1050 Pump Supplies

Maintenance Kits

Cat. No.	Description	Price
G1311-68710	1100 Maintenance kit: outlet cap, PTFE frits (10), pump seals (4), outlet gold seal, inlet filters (2), valve cartridge	
01018-68724	1050 Pump maintenance kit, outlet caps (5), outlet gold seals (5), cartridge for active inlet valve, teflon frits (10), piston seals (4)	

Seal Wash

01018-68722	Seal wash option kit
0905-1175	Wash seal
5062-2484	Wash seal gasket, 6/pk

Purge Valve and Outlet Ball Valve

01018-22707	PTFE frits, 5/pk
G1311-60012	Outlet ball valve assy (quatarnary, isocratic)
G1312-60012	Outlet ball valve assembly (binary)
5001-3707	Outlet gold seal
5062-2485	Outlet cap, 4/pk
5063-6505	Binary pump outlet valve SS sieve, 10/pk

Active Inlet Valve

G1312-60010	Active inlet valve
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Pistons and Seals

5063-6586	Sapphire piston
5063-6589	Piston seals, 2/pk, graphite-filled Teflon
0905-1420	Piston seals, 2/pk, polyethylene (normal phase)

Solvent Inlet Filters

5062-8517	Frit adapter, 3mm, 4/pk
5041-2168	Glass filter, solvent inlet
01018-60025	Solvent inlet filter
5062-2483	Solvent tubing, 5m, 1.5mm ID, 3mm OD

• Agilent Manufactured 1090 Pump Supplies

Check Valves

79835-67101	Check valve cartridge
79835-67102	Check valve cartridge (up to pH 12.5)
79835-65216	Repl. sieve for check valve cartridge

Pistons and Seals

3980-0672	Sapphire piston
5062-2494	Piston seals, 4/pk

Miscellaneous

79835-04123	Diaphragm
01090-60008	Solvent inlet filter
5041-8339	Helium sparger filter

• 1100 and 1050 Supplies - Alternative Manufacture

Pistons

Cat. No.	Description	Price
92-0058	Sapphire piston: 1050/1100 OEM No. 5063-6586	
PS-520	Ruby sapphire piston, OEM No. 5063-6586	

Seals

93-0098	Black seal: 1050/1100 OEM No. 5063-6589
PS-20	UHMWPE seals, 6/pk OEM No. 5063-6589
PS-20-2	UHMWPE seals, 2/pk
TPS-20	PFA Teflon Seals, 1/8," 6/pk
TPS-20-2	PFA Teflon Seals, 1/8," 2/pk

• 1090 Supplies - Alternate Manufacture

Check Valves

95-0023	Inlet/Outlet cartridge: 1090 OEM No. 79835-67101
91-0023	Cartridge holder OEM No.. 79835-25211

Piston and Seal

92-0059	Sapphire piston OEM No. 3980-0672
93-0064	Black seal: 1090 OEM No. 5062-2494

Note:

- Black plunger seals are PTFE with a carbon fill, this seal is a very good general purpose seal for any solvent. If you are having problems due to shedding of small seal particles, try the gold seal.
- Gold plunger seals are made of UHMWPE with a fill that gives it a gold appearance. The seal provides good seal life and does not shed particles like that of other seals. The gold seal is inert to all common HPLC solvent mixes.

Pump Replacement Parts



Altex/Beckman

• Parts for 100/100A/100B Pumps

Check Valves

Cat. No.	Description	Price
CV-322	Inlet check valve assembly OEM No. 102-03, 240720	
CV-2	Replacement inlet check valve cartridge	
CV-301	Outlet check valve assembly OEM No. 100-01, 240721	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters,10/pk	

Seals

PS-10	UHMWPE seals, 3/16", 6/pk OEM No. 887138
93-0003	Black seal, OEM No. 887138

• Parts for 110A/110A, 112/112M, 114/114M Pumps

Check Valves

CV-312	Inlet check valve assy: 110, 112, 114 OEM No. 110-05
CV-2	Replacement inlet check valve cartridge
CV-301	Outlet check valve assembly OEM No. 100-01, 240721
CV-1	Replacement outlet check valve cartridge
CV-3X	Replacement 2µm SS filters,10/pk

Pistons

PS-510	Ruby sapphire piston: 110A/110B, 112/112M OEM No. 243053
92-0012	Sapphire piston: 110A/110B, 112/112M OEM No. 243053
PS-511	Ruby sapphire piston: 112M, 114M, 116, 126 OEM No. 236977
92-0114	Sapphire piston:114M,116,118,125,126,127,128 OEM No. 240714

Seals

PS-10	UHMWPE seals, 6/pk: 110A/110B OEM No. 887138
PS-10T	Seal installation/removal tool: 110A/110B
93-0003	Black seal, each: 110A/110B OEM No. 887138
PS-11	UHMWPE seals, 6/pk: 112/112M OEM No. 236797
93-0005	Black seal, each: 112 OEM No. 236797
PS-12	UHMWPE seals, 6/pk: 114/114M, 116, 126 OEM No. 237162
93-0007	Black seal, each: 114M, 116, 125, 126, 127, 128 OEM No. 241037
93-0008	Gold seal, each: 114M, 116, 118, 125, 126, 127, 128 OEM No. 241037

Altex/Beckman Continued

• Parts for 116 and 126 Pumps

Check Valves

Cat. No.	Description	Price
CV-1122	Inlet check valve assembly, 126 only	
CV-2	Replacement inlet check valve cartridge	
CV-1111	Outlet check valve assembly, 126 only	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters,10/pk	

Pistons and Seals

PS-511	Ruby sapphire piston: 112M, 114M, 116, 126 OEM No. 236977
92-0114	Sapphire piston: 114M,116,118,125,126,127,128 OEM No. 240714
PS-12	UHMWPE seals, 6/pk: 114/114M, 116, 126 OEM No. 237162
93-0007	Black seal, each: 114M, 116, 125, 126,127, 128 OEM No. 241037
93-0008	Gold seal, each: 114M, 116, 118, 125, 126,127, 128 OEM No. 241037

Bio-Rad 1330 and 1350 Pumps

Check Valves

Cat. No.	Description	Price
CV-812	Inlet check valve assembly OEM No. 125-0306	
CV-2	Replacement inlet check valve cartridge	
CV-801	Outlet check valve assembly OEM No. 125-0307	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters,10/pk	

Pistons and Seals

PS-580	Ruby 1/8" piston, OEM No. 125-0304
PS-50	UHMWPE seals, 6/pk, OEM No. 125-0302

Dionex

Check Valves

Cat. No.	Description	Price
CVB-322	Inlet check valve assembly, OEM No. 38273	
CVB-2	Replacement inlet check valve cartridge	
CVB-321	Outlet check valve assembly OEM No. 42761, 38272	
CVB-1	Replacement outlet check valve cartridge	
CVB-3X	Replacement 2µm Titanium filters,10/pk	

Pistons and Seals

PS-570	Ruby sapphire piston, OEM No. 36904
PS-55	UHMWPE seals, 6/pk, OEM No. 35686
PS-55-2	UHMWPE seals, 2/pk, OEM No. 35686

Pump Replacement Parts

Eldex Models A, B, E

Check Valves

Cat. No.	Description	Price
CV-2212	Inlet check valve assembly	
CV-2002	Replacement inlet check valve cartridge	
CV-2201	Outlet check valve assembly	
CV-2001	Replacement outlet check valve cartridge	

92-0042

93-1057

Eldex Mfg. Check Valves

EL-1369	Inlet valve assembly
EL-1372	Outlet valve assembly
EL-1382	Valve cartridge
EL-1377	PEEK inlet valve assembly
EL-1378	PEEK outlet valve assembly
EL-1383	PEEK valve cartridge

93-0057

Pistons and Seals

EL-1366	Models A, B, AA, and E sapphire piston
PS-585	Ruby piston
EL-1022	Fluoroloy G piston seal kit
EL-1180	Fluoroloy G seal replacement kit 2 seals and 2 backup seals
EL-1181	Fluoroloy G seal replacement kit 5 seals and 5 backup seals
EL-1272	PEEK pump piston seal assembly kit Fluoroloy G metal-free seal, backup seal, aligning rod and hex key
EL-1273	PEEK pump seal replacement kit 2 Fluoroloy G metal-free seals and 2 backup seals

Hitachi

Check Valves

Cat. No.	Description	Price
CV-1062	Inlet check valve assembly	
CV-2	Replacement inlet check valve cartridge	
CV-1051	Outlet check valve assembly	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	

Pistons and Seals

PS-515	Ruby piston, OEM No. 810-1033
92-0042	Ceramic piston, OEM No. 810-1033
93-0057	Black seal, OEM No. 655-1080
93-1057	Gold seal, OEM No. 655-1080

Gilson/Rainin

Check Valves

Cat. No.	Description	Price
CV-212	Inlet check valve assembly OEM No. 3645242 and E50082	
CV-2	Replacement inlet check valve cartridge	
CV-201	Outlet check valve assembly OEM No. 3645245 & E50085	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	

Piston

PS-575	Ruby piston, OEM No. 3650009
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Check Valves

Cat. No.	Description	Price
CV-1082	Inlet check valve assembly	
CV-2	Replacement inlet check valve cartridge	
CV-1071	Outlet check valve assembly	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	

Isco

• Parts for 2300 Pump

Check Valves

Cat. No.	Description	Price
CV-712	Inlet check valve assembly, 2300	
CV-2	Replacement inlet check valve cartridge	
CV-701	Outlet check valve assembly	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	

• Parts for 2350 Pump

Check Valves

CV-1222	Inlet check valve assembly, 2350
CV-2	Replacement inlet check valve cartridge
CV-1211	Outlet check valve assembly, 2350
CV-1	Replacement outlet check valve cartridge
CV-3X	Replacement 2µm SS filters, 10/pk

Hitachi/Merck 7000 LaChrom Series Pumps

Check Valves

Cat. No.	Description	Price
CV-1042	Inlet check valve assembly	
CV-1003	Replacement inlet check valve cartridge	
CV-1031	Outlet check valve assembly	
CV-1003	Replacement outlet check valve cartridge	

Pump Replacement Parts

Jasco 980 Pump

Check Valves

Cat. No.	Description	Price
CV-1242	Inlet check valve assembly: 980	
CV-2	Replacement inlet check valve cartridge	
CV-1231	Outlet check valve assembly: 980	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	



Knauer 64 Pump

Check Valves

Cat. No.	Description	Price
CV-1022	Inlet check valve assembly	
CV-1400	Replacement inlet check valve assembly	
CV-1011	Outlet check valve assembly	
CV-1400	Replacement outlet check valve cartridge	

Kontron 420 Pump

Check Valves

Cat. No.	Description	Price
CV-912	Inlet check valve assembly	
CV-1003	Replacement inlet check valve cartridge	
CV-901	Outlet check valve assembly	
CV-1003	Replacement outlet check valve cartridge	

Perkin Elmer

• Parts for Series 2, 3 and 10 Pumps

Check Valves

Cat. No.	Description	Price
CV-612	Inlet check valve assembly OEM No. 0254-0546	
CV-2	Replacement inlet check valve cartridge	
CV-7	Replacement pump head spacer	
CV-601	Outlet check valve assembly OEM No. 0254-0547	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	
CV-7	Replacement pump head spacer	

Pistons and Seal

0254-2442	Perkin Elmer piston: Series 10
0254-0851	Perkin Elmer piston: Series 1, 2,3, 3B
93-0030	High pressure, gold seal, OEM No. 0990-7324

Perkin Elmer Continued

• Parts for PE 200 Series, 4, 250, 400, 410, 620 Pumps

Check Valves

Cat. No.	Description	Price
91-0077	Outlet check valve OEM No. 0254-0197	
91-0078	Inlet check valve OEM No. 0254-0177	

Seal

93-0030	High pressure, gold seal, OEM No. 0990-7324
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Pharmacia/LKB 2150 Pump

Check Valves

Cat. No.	Description	Price
CV-1142	Inlet check valve assembly OEM No. 80-1035-19	
CV-2	Replacement inlet check valve cartridge	
CV-1131	Outlet check valve assembly OEM No. 80-1035-20	
CV-1	Replacement outlet check valve cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	

Piston

PS-590	Ruby sapphire piston OEM No. 90013770
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Shimadzu

• Parts for LC-6A, LC-10AS Pumps

Check Valves

Cat. No.	Description	Price
CV-1322	Inlet check valve assy. OEM No. 228-12353-91	
CV-1302	Replacement inlet cartridge	
CV-1321	Outlet check valve assy. OEM No. 228-090540-93	91.80
CV-1301	Replacement outlet cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	

Pistons

PS-565	Ruby piston for LC-6A OEM No. 228-12904-93
92-0017-6A	Sapphire piston: LC6A OEM No. 228-12904-93
92-0017-10AS	Sapphire piston: LC10AS OEM No. 228-17019-93

Seals

93-0034	Black seal: LC-6A, OEM No. 228-11999-00
93-10340	Seal: LC-10AS, OEM No. 228-21975-00

Pump Replacement Parts



Shimadzu Continued

• Parts for LC-10AD and LC-600 Pumps

Check Valves

Cat. No.	Description	Price
CV-1422	Inlet check valve assembly OEM No. 228-18522-91	
CV-1400	Replacement inlet cartridge	
CV-1421	Outlet check valve assembly OEM No. 228-18522-92	
CV-1400	Replacement outlet cartridge	

Pistons and Seal

PS-566	Ruby piston, OEM No. 228-18523-91
92-10320	Sapphire piston, OEM No. 228-18523-91
93-0423	Piston seal, OEM No. 228-18745-00

• Parts for LC-10AT, LC-10ATvp Pumps

Check Valves

CV-1432	Inlet check valve assembly OEM No. 228-32166-91
CV-1302	Replacement inlet cartridge
CV-1421	Outlet check valve assembly: LC-10AT OEM No. 228-18522-92
CV-1425	Outlet check valve assembly: LC-10ATvp OEM No. 228-34976-91
CV-1400	Replacement outlet cartridge: LC-10AD, LC-600, 65.00 LC-10ADvp, LC-10AT, LC-10ATvp

Piston and Seal

92-0019	Ceramic piston: LC-10ATvp only OEM 228-35009-92
93-10340	Piston seal, OEM No. 228-21975-00

• Parts for LC-10ADvp Pumps

Check Valves

CV-1424	Inlet check valve assembly OEM No. 228-39093-92
CV-1003	Replacement inlet cartridge
CV-1425	Outlet check valve assembly OEM No. 228-34976-91\
CV-1400	Replacement outlet cartridge

Pistons and Seals

92-0018	Ceramic piston, OEM No. 228-35601-91
93-0036	PE piston seal (for sapphire or ceramic) ea OEM No. 228-32628-00
93-0035	Graphite filled PTFE piston seal (sapphire) ea OEM No. 228-35146-00

SSI/Lab Alliance/Chrom Tech

Pistons and Seals

Seal kits include: Self flush seal; O-ring; Primary seal; Removal tool.

• For 5-6 mL/min pump heads:

P-1500, Q-Grad, Essence, P-0104MB, P-2500

Cat. No.	Description	Price
P-1597	Piston assembly (5-6mL)	
P-1595	Standard piston seal kit (5-6mL)	
P-1591	Standard piston seals, 10/pk (5-6mL)	
P-1599	Piston seal kit, organic (5-6mL)	

• For 10-12mL/min pump heads:

P-1010 (B), P-2010 (B), P-1524CP, P-2024 (B) Series 2, Series 3, Constant Pressure, Flash 2000

Cat. No.	Description	Price
P-1097	Piston assembly (10-12mL)	
P-1095	Standard piston seal kit (10-12mL)	
P-1090	Standard piston seals, 10/pk (10-12mL)	
P-1099	Piston seal kit, organic (10-12mL)	

• For 10mL/min pump heads: P-010(S), Series 1

Cat. No.	Description	Price
P-0101	Piston assembly (10mL, P-010)	
P-0103	Standard piston seal kit (10mL, P-010)	
P-0109	Piston seal kit, organic (10mL, P-010)	

• For 30-50mL/min pump heads:

P-1040(B), P-2040(B), P-2100 (B), P-1100 Series 2, 3, Flash 2000, Prep 100

Cat. No.	Description	Price
P-1198	Piston assembly (30-50mL)	
P-1096	Standard piston seal kit (30-50mL)	
P-3003	Standard piston seals, 10/pk (30-50mL)	
P-3009	Piston seal kit, organic (30-50mL)	

• For 40mL/min pump heads: P-040(S), Series 1

Cat. No.	Description	Price
P-1298	Piston assembly (40mL, P-040)	
P-1295	Standard piston seal kit (40mL, P-040)	

Check Valves - All pumps

P-1085	Check valve kit, SS (inlet and outlet)
P-1086	Check valve kit, PEEK (inlet and outlet)
P-1088	Self flush check valves (P-010 & P-030 only)
P-1087	Self flush check valves (all other models)
P-1075	Replacement check valve capsules, SS, 10/pk
P-1076	Replacement check valve capsules, PEEK, 10/pk

Filter Elements - All pumps

P-1170	Inlet solvent filter element, 2/pk
P-1175	0.5µm SS outlet filter (analytical pump heads)
P-1172	2.0µm SS outlet filter (prep pump heads)
P-1171	Glass 4µm outlet

Prime Purge Valve Rebuild Kits - All pumps

P-1177	Prime purge valve rebuild kits for SS pumps
P-1178	Prime purge valve rebuild kits for PEEK pumps

Pump Replacement Parts

Thermo Finnigan/LDC

Check Valves

Cat. No.	Description	Price
CV-1172	Inlet check valve assembly: Constametric	
CV-412	Inlet check valve assembly: Minipumps	
CV-2	Replacement inlet check valve cartridge	
CV-6	Replacement pump head spacer	
CV-1161	Outlet check valve assembly: Constametric	
CV-401	Outlet check valve assembly: Minipump	
CV-1	Replacement outlet check valve cartridge	

Pistons and Seals

801306	LDC Sapphire piston
93-0009	LDC Gold seal (206156001)

Thermo Finnigan/Spectra-Physics

• 8700, 8800 and 8810 Pumps

Check Valves

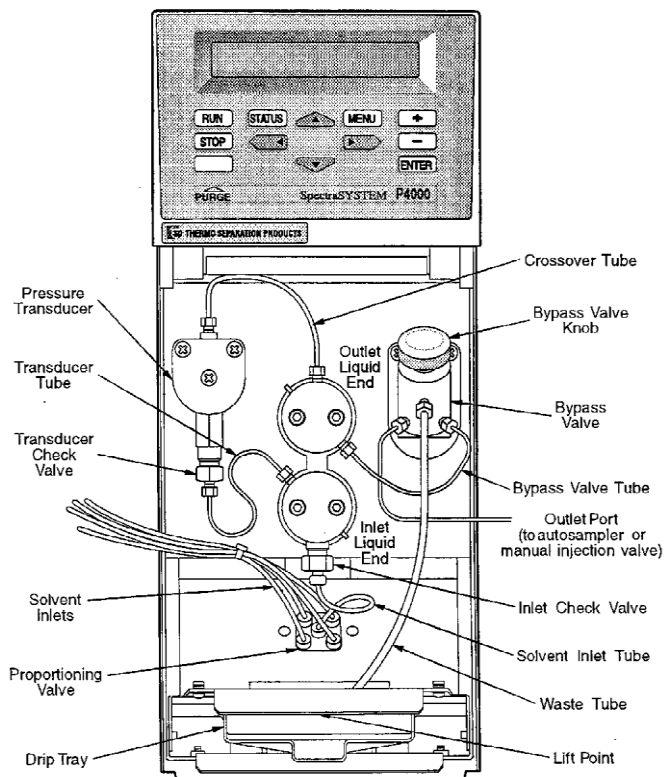
Cat. No.	Description	Price
CV-2112	Inlet check valve assy, w/1/4-28 coned (1/8") OEM No. A1595-020	
CV-2122	Inlet check valve assembly, w/1/4-28 flat bottom OEM No. A3495-010	
CV-2002	Inlet/Transducer replacement cartridge	
CV-2101	Outlet check valve assy, w/1/4-28 coned (1/16") OEM No. A1590-010	
CV-2111	Outlet check valve assembly, w/10-32 threads OEM No. A3490-010	
CV-2001	Outlet replacement cartridge	
CV-3X	Replacement 2µm SS filters, 10/pk	

Pistons

A3102-010	Sapphire piston: 8800, 8810, IsoChrom
PS-530	Ruby/Sapphire piston: 8800, 8810
PS-531	Ruby piston: 8700

Seals

A2962-010	Yellow seal: all except 8700
A3070-010	10 pack of A2962-010
A4848-010	Kel-F seals
A2963-010	Back-up seal: 8800, 8810, IsoChrom
PS-30	UHMWPE seals, 6/pk: 8800, 8810
TPS-30	PFA Teflon seals, 6/pk: 8800, 8810
PS-31	UHMWPE seals, 6/pk: 8700
PS-30T	Seal installation/removal tool and guide: 8800, 8810



Thermo Finnigan/Spectra-Physics Continued

• SpectraSystem/Spectra Series (P-Series) Pumps

Check Valves

Cat. No.	Description	Price
CV-2122	Inlet check valve assembly, w/1/4-28 flat bottom OEM No. A3495-010	
CV-2123	Transducer check valve assembly	
CV-2002	Inlet/Transducer replacement cartridge	

Pistons (Same as 8800)

A3102-010	Sapphire piston: P-Series
PS-530	Ruby/Sapphire piston: P-Series

Seals (Same as 8800)

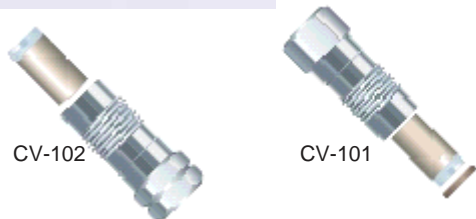
A2962-010	Yellow seal: P-Series
A3070-010	10 pack of A2962-010
A4848-010	Kel-F seals
A2963-010	Back-up seal: P-Series
PS-30	UHMWPE seals: P-Series, 6/pk
TPS-30	PFA Teflon Seals: P-Series, 6/pk
PS-30T	Seal installation/removal tool and guide

Varian 5000 Pump

Piston and Seals

Cat. No.	Description	Price
PS-560	Ruby piston, OEM No. 03-905337-00	
PS-45	UHMWPE seals, 6/pk	
PS-45-2	UHMWPE seals, 2/pk	

Pump Replacement Parts for Waters Instrumentation



Waters

Check Valves

Cat. No.	Description
CV-102	Inlet check valve assembly OEM No. WAT033679, WAT025214
CV-2	Replacement inlet check valve cartridge
CV-101	Outlet check valve assy with CV-4 spacer OEM No. WAT025216, WAT025030
CV-1	Replacement outlet check valve cartridge
CV-3X	Replacement 2µm SS filters, 10/pk
CV-4	Replaceable outlet pump head spacer
CV-5	Replaceable outlet pump head spacer, 510
91-0001	Inlet ball/seat check valve, OEM No. 33679
91-0002	Inlet ball/seat check valve rebuild kit OEM No. 60495
91-0003	Spring outlet check valve, OEM No. 25030
91-0004	Spring outlet check valve rebuild kit OEM No. 26016

Pistons

PS-541	Ruby piston: 510, 590, 600/600E, 610, 6000/6000A, OEM No. WAT025656
92-0001	Sapphire piston: 510, 590, 600/600E, 610, 6000/6000A, OEM No. WAT025656
PS-540	Ruby piston: 45G, M45, 501
92-0002	Sapphire piston: M45, 501 Equivalent to Part No. 26524
92-0515	Sapphire piston: 515

Waters (Continued)

Seals

Cat. No.	Description
93-0021	Clear Super Seal™ for analytical heads OEM No. 22946, 22934
93-0019	Gold seal for analytical heads, OEM No.22934
93-6613	Black seal and Teflon washer, OEM No. 26613
93-0013W	Replacement Teflon washer
93-0017	Red seal, OEM No. 25638
93-0017T	93-0017, 10/pk
PS-40	Metal free UHMWPE seals, 6/pk
PS-40-2	Metal free UHMWPE seals, 2/pk
TPS-40	PFA Teflon seals, 1/8," 6/pk
TPS-40-2	PFA Teflon seals, 1/8," 2/pk
PS-40T	Seal installation/removal tool and guide

• Parts for Alliance 2690 Pumps

Pistons and Seals

PS-542	Ruby piston, OEM No. WAT270959
92-2690	Sapphire piston, OEM No. WAT270959
93-2690	Seal kit, 2/pk, OEM No. WAT270938

• Parts for Waters 616, 625, 626 Pumps

Pistons, Seals, and Check Valve Cartridges

92-10323	Sapphire piston, OEM No. 31788
93-10906	Seal kit, includes: 2 seals, 2 slipper seals, 4 back-up washers, 2 o-rings
91-A057	Cartridge check valve, 616, SS, OEM No. 24960
A058	Cartridge check valve, 625, 626, PEEK (34430)

• Parts for Extended Flow Pumps

Check Valves, Pistons and Seals

91-0005	Ball/seat inlet check valve/ext. flow Equivalent to Part No. 60307
91-0028	Ball/seat outlet check valve rebuild kit Equivalent to Part No. 26014
93-0018	Black seal/ext. flow models Equivalent to Part No. 26644
92-0005	Sapphire piston/ext. flow models Equivalent to Part No. 60304

Note:

- Black plunger seals are PTFE with a carbon fill, this seal is a very good general purpose seal for any solvent. If you are having problems due to shedding of small seal particles, try the gold seal.
- Gold plunger seals are made of UHMWPE with a fill that gives it a gold appearance. The seal provides good seal life and does not shed particles like that of other seals. The gold seal is inert to all common HPLC solvent mixes.

International Co. for Lab. Instruments

45 Shalhoub st. Ain Shams, Cairo, Egypt+ Post Code 11311



+202 24916139 or +202 24916139



+202 24953441