



A collection of various industrial components, including valves, fittings, and a large circular valve body, arranged on a white background. The components are made of metal and show signs of use. The large circular valve body is on the left, and the other smaller parts are scattered around it. The CTS logo is visible in the bottom right corner.



ORDERING INSTRUCTIONS

BY PHONE

Call toll-free 800.682.6480 or 952.895.8292.
Our normal business hours are 8 a.m. to 5 p.m.
(Central Standard Time).

BY FAX

Dial 952.895.8493 to send your order by fax,
24 hours a day.

BY E-MAIL

sales@sciencix.com

BY MAIL

Sciencix
P. O. Box 1336
Burnsville, MN 55337-0336

Please provide the following
information with your order:

- Purchase order number
- Name of purchaser
- Shipping address
- Billing address
- Telephone number
- Item quantities and part numbers
- Contact person in your accounts payable department

BY CREDIT CARD

Visa, MasterCard, American Express, Discover

BY WEBSITE

www.sciencix.com

TERMS

Various payment options available. Please contact customer relations or your Account Manager for availability and qualification. No minimum order size requirement.

SHIPPING

All packages are shipped according to customer requests. Our default shipping protocol is UPS ground for domestic packages, and UPS express for international shipments.

WARRANTY

We view your business with us as a partnership based on mutual trust.

Our products are made according to the highest standards as a reflection of our commitment to quality, integrity and in accordance with our ISO certification. Therefore, we are glad to extend a Lifetime Warranty against any manufacturing defects on all Sciencix parts. Sciencix defines the lifetime of a part in accordance with the normal expected performance of the equivalent OEM part. Our intention is to provide replacement parts that are equivalent to the corresponding OEM part. On the rare occasion that you experience a problem with a Sciencix part, we invite you to contact us and share your problem with us. Every attempt will be made to bring resolution in a way that enhances our relationship with you, our valued customer.

Our warranty claim process is simple. Below is a brief outline of how to initiate a warranty claim.

CUSTOMER

Contact Customer Relations at 800.682.6480 or 952.895.8292, or contact your Account Manager. Provide as much detail as possible about the part in question, such as part number, lot number, date of purchase, etc. Describe the situation in which the performance of the part was unsatisfactory.

SCIENCIX

We will provide you with a Return Material Authorization (RMA) number and then ship a replacement or credit your account.

SHIP RETURNS TO

Sciencix
14261 W. Burnsville Pkwy
Burnsville, MN 55306

Shipment of returned warranty parts to Sciencix is the responsibility of the customer; shipment of replacement parts to the customer's place of business is the responsibility of Sciencix.



CONTENTS

Ordering Instructions	2
Index/Cross-Reference	4–5
Agilent:	6
1260, 1290	6–9
1100, 1200, 1220	10–11
1100, 1200	12–16
Beckman	17
Dionex	18
PerkinElmer/ABI	18–19
Hitachi/Merck	20
Rheodyne	20
Shimadzu	21–26
Thermo Electron/ Spectra-Physics	27–29
Waters:	30
510, 515, 590, 600, 610, 1515, 1525,	30–34
616, 625, 626, 1515 MICRO	35
717, 2690, 2690D, 2695, 2695D, 2790, 2795, 2796, ALLIANCE	36–42
ACQUITY, nanoACQUITY, H-CLASS, I-CLASS	43–49
470, 474, 486, 996, 2487, 2488, 2996	50
Lamps	51–53
Tools	54
Filters, Fittings & Tubing:	54
Filters	54–55
Tubing	55–57
Fittings	58
Pump Troubleshooting Procedures	59
Acknowledgments	60

OUR PROCESS

MATERIALS. GEOMETRY. PERFORMANCE. APPEARANCE.

Understanding the requirements of our customers and the analytical instrumentation industry is at the core of our process for solid product design. It all starts with listening. With years of experience and discussions with a variety of customers, we have distilled what we've learned into the four pillars of our product design process: materials, geometry, performance, and appearance.

Our intent is to provide CTS replacement parts that are, in each case, equivalent to the corresponding OEM part.

With the product process in mind, Sciencix pursues two possible paths towards offering OEM alternative parts. Sciencix has cultivated relationships with many parts and component manufacturing companies that cater to high tech industries such as analytical instrumentation. Sciencix uses these vendors wherever possible to source parts that match the performance and look of the OEMs. Alternatively, we develop the products in-house. This process includes reverse engineering dimensions and materials, prototyping, and testing.

Our desired outcome from this rigorous process is to provide you with the analytical instrumentation parts and services you need, when you need them — all supplied by friendly, knowledgeable people at a reasonable price. We want you to be completely satisfied with every aspect of your dealings with Sciencix, from order placement through product delivery and performance. Please help us in our pursuit. Let us know of any issues you have had with any order from Sciencix. We will work with you to try and get it satisfactorily resolved whether through warranty claims, product replacement or process improvement.

That is our process and guarantee to you.



INDEX / CROSS-REFERENCE

OEM p/n	CTS p/n	Page	OEM p/n	CTS p/n	Page	OEM p/n	CTS p/n	Page
AGILENT			BECKMAN			SHIMADZU		
—	CTS-10800	12	237162	CTS-7162	17	228-09054-93	CTS-A100	23
0100-1851	CTS-A10678	16	238627	CTS-10391	17	228-16000-17	CTS-21015	22, 26
0100-1852	CTS-11288	16	240619	CTS-A033	17	228-17019-93	CTS-10319	21
0100-1853	CTS-10459	15	240620	CTS-0621	17	228-18523-91	CTS-10320	21
0100-1855	CTS-11419	16	240621	CTS-0620	17	228-21217-91	CTS-A106	26
0100-1859	CTS-A11329	16	240714	CTS-2369	17	228-21217-97	CTS-10942	26
0101-0623	CTS-A019	16	240720	CTS-0720	17	228-21220-91	CTS-A067	26
0101-1416	CTS-12012	9, 14	240721	CTS-0721	17	228-21975-00	CTS-10340	22
01018-22707	CTS-10683	6, 11, 12	728770	CTS-7162	17	228-25237-04	CTS-10578	25
01018-60025	CTS-A11259	12	728770	CTS-10557	17	228-28499-00	CTS-10583	22
01078-87302	11-4059	11, 14	728772	CTS-10391	17	228-32166-91	CTS-A117	23
08452-60104	CTS-00128	51	DIONEX			228-32531-92	CTS-A103	23
0905-1175	CTS-10675	7, 10	063382	11-2587	18	228-32628-00	CTS-10963	22
0905-1420	CTS-11088	7, 10	064946	11-2588	18	228-32628-91	11-4133	22
0905-1503	CTS-0621	6, 10, 14	6822.0002	11-3332	18	228-32784-91	11-2891	21
2140-0590	CTS-10473	16, 51	—	CTS-00246	52	228-33355-01	CTS-11435	25
2140-0605	CTS-10594	51	PERKINELMER/ABI			228-33355-04	CTS-10686	25
2140-0813	CTS-A11218	9, 16, 51	7725-026	CTS-A11329	18	228-33492-91	CTS-A102	23
2140-0820	11-3984	9, 51	02540275	CTS-10757	19	228-34016-02	CTS-00135	26, 52
5021-1816	CTS-11456	8, 14	02540177	CTS-A159	19	228-34976-91	CTS-A121	24
5021-1817	CTS-11457	8, 14	02540197	CTS-A157	19	228-35009-92	CTS-10584	21
5021-1818	CTS-11458	8, 14	02542076	CTS-10759	19	228-35009-93	CTS-11425	21
5021-1819	CTS-11459	8, 14	09902128	CTS-00230-02	19	228-35010-91	CTS-11434	26
5041-2168	CTS-10843	7, 11, 12	09904802	CTS-A019	18	228-35145-00	CTS-10694	22, 26
5062-2418	CTS-11016	7, 13, 58	09907324	CTS-10758	19	228-35146-00	CTS-10693	22
5062-2484	11-3321	6, 11	09907339	CTS-10772	19	228-35281-91	11-4121	21
5062-8562	CTS-10673	12	09907339	CTS-10772	19	228-35281-95	11-3795	21
5062-8517	CTS-21069	7, 13	09923270	CTS-A168	18	228-35601-91	CTS-A138	21
5063-6505	CTS-10807	12	B0114620	11-3343	18, 52	228-35601-93	CTS-11297	21
5063-6586	CTS-10303	7, 10	B0160917	CTS-10854	18, 52	228-35602-91	11-3897	21
5063-6589	CTS-10417	6, 10, 14	ED020005	11-1240	19, 58	228-35871-96	CTS-A11421	24
5063-6591	11-1240	11, 12	L6022728	CTS-10854	18, 52	228-35871-99	11-4129	24
5065-4498	CTS-11287	15	N2600104	CTS-11367	19	228-36923-00	CTS-11313	25
5065-4499	CTS-11284	13	N2600124	CTS-11366	19	228-39093-92	CTS-A145	23
5067-4728	CTS-A11454	6, 11, 12	N2910383	CTS-11265	19	228-41310-92	CTS-11312	25
5068-0005	11-3472	7	N2920149	CTS-00025	18, 52	228-42325-01	CTS-11315	25
5068-0007	11-2312	9	N2930023	CTS-10724	18	228-45590-91	CTS-21045	23
5181-1530	CTS-10827	16, 51	HITACHI/MERCK			228-45590-92	CTS-21044	23
5182-1530	11-4110	16, 51	655-1080	CTS-10394	20	228-45704-92	11-3807	24
5190-0917	11-4109	9, 51	655-1080	CTS-10547	20	228-45705-91	CTS-A11187	24
G1103-60001	CTS-12013	51	810-1004	CTS-A125	20	228-45707-91	CTS-A11316	23
G1310-68730	CTS-11286	13	810-1005	CTS-A126	20	228-48249-91	CTS-A11186	24
G1310-68731	CTS-10814	12	810-1033	CTS-10322	20	228-48607-91	CTS-11305	24
G1310-68741	11-4147	6	ANO-0818	CTS-10573	20	228-51922-00	11-4180	25
G1311-60012	CTS-10674	12	ANO-0835	CTS-10493	20	228-52069-94	11-4073	21
G1311-68710	CTS-10833	13	ANO-0836	CTS-A125	20	228-52139-00	11-4179	25
G1312-60012	CTS-A162	12	ANO-0837	CTS-A126	20	228-52253-00	11-4052	25
G1312-60020	11-4145	6	ANO-2328	CTS-10322	20	228-52711-93	11-4126	22
G1312-60066	11-4101	6, 10	RHEODYNE			228-52964-95	11-4060	23
G1312-60067	11-4093	6, 10, 12	7010-015	CTS-10612	20	228-53178-91	11-4048	25
G1312-68730	CTS-11285	13	7010-039	CTS-A083	20	228-53300-41	11-4152	22
G1312-68741	11-4146	6, 10	7125-047	CTS-A019	20	228-53301-41	11-4150	22
G1312-87303	CTS-A11459	8, 14	7725-026	CTS-A11329	20	228-53334-96	11-4063	24
G1312-87306	CTS-A11456	8, 14	SPECTRA-PHYSICS			228-55272-41	11-4122	21
G1313-68709	CTS-10722	15	9551-0023	CTS-00246	28, 52			
G1313-68719	11-4148	9, 11, 15						
G1313-68730	CTS-11283	15						
G1313-87201	CTS-10835	9, 11, 15						
G1313-87202	CTS-11356	16						
G1314-60100	CTS-10494	16, 51						
G1314-60101	11-4111	9, 51						
G1329-87017	11-2605	9, 11, 14						
ABI/KRATOS								
N2920149	CTS-00025	52						

INDEX / CROSS-REFERENCE

OEM p/n	CTS p/n	Page	OEM p/n	CTS p/n	Page	OEM p/n	CTS p/n	Page
THERMO ELECTRON/ SPECTRA-PHYSICS								
108052	CTS-A123	28,52	700002599	CTS-11119-02	43	WAT045424	CTS-10761	41
2508-0360	CTS-A083	28	700002600	CTS-11093-02	43	WAT045454	CTS-10692	41
3301-0100	CTS-10517	28	700002632	CTS-11116	46	WAT045559	CTS-10324S	42
7010-015	CTS-10612	28	700002633	CTS-11115	46	WAT052586	CTS-10268	50,53
00107-18008	11-1601	29	700002634	11-2525	49	WAT052587	CTS-11010	34
00950-30004	11-1602	29	700002635	11-2526	49	WAT052666	CTS-11065	50
00950-30009	11-1604	29	—	11-2610	33,38,56	WAT052669	CTS-10987	42
00950-30020	11-1597	28	—	11-2611	33,38,56	WAT052670	CTS-11009	34
00950-30021	11-1599	28	—	11-2612	33,38,56	WAT052672	CTS-10986	35
00950-30025	11-1603	29	700002644	CTS-A11151	47	WAT052673	CTS-11026	35
00950-30026	11-1598	28	700002645	11-2529	49	WAT052675	CTS-10985	34
00950-01-00085	11-1600	28	—	11-4134	48	WAT060012	CTS-0012	33
00950-01-00087	11-1596	28	700002791	CTS-11222	41	WAT060037	CTS-0037	32
00950-01-00086	11-3943	28	700002911	CTS-A11135	45	WAT060038	CTS-0038	32
9551-0023	CTS-00246	28,52	700002912	CTS-A11123-02	45	WAT060069	CTS-0069	32
206129001	CTS-20612	27	700002913	CTS-11415	44	WAT060448	CTS-9600	33
206156001	CTS-2061	27	700002968	CTS-A11095-02	45	WAT060476	CTS-5740	33
A2962-010	CTS-2962	27	700003114	11-2414	44	WAT069511	CTS-5656	31
A2963-010	CTS-2963	27	700003563	CTS-A11336-02	45	WAT069583	CTS-6958	32
A3102-010	CTS-3102	27	700003616	CTS-5531-07	44	WAT072324	CTS-2324	40
A3490-010	CTS-3490	27	700004073	CTS-11080	37	WAT073109	CTS-3109	40
A3495-010	CTS-3495	27	700005119	CTS-A11376	45	WAT073195	CTS-3195	40
A3588-020	CTS-A096	28	700005164	CTS-A11095	45	WAT076152	CTS-11092	44
A3990-010	CTS-3990	27	700005165	CTS-A11336	45	WAT077347	CTS-3209	40
A4848-010	CTS-10396	27	700005173	CTS-A11344	44	WAT078800	CTS-10285	40
			700005167	CTS-11370	46	WAT080244	CTS-10328	50
			700005215	11-4116	48	WAT080687	CTS-8068	50
			700005234	11-2569	48	WAT088084	CTS-10919	36,42
			700005269	11-4169	49,53	WAT088726	CTS-11296	35
			—	CTS-8389	50,53	WAT097332	CTS-9733	32,38
			—	CTS-10475	32	WAT097387	CTS-1010T	41
			—	CTS-10548	31	WAT270488	CTS-10476	36
			—	CTS-10611	50,53	WAT270938	CTS-10566	36
			—	CTS-11380	39	WAT270939	CTS-10989	36
			WAS081142	CTS-10465	49,50,53	WAT270940	CTS-10597	36
			WAS081341	CTS-A11184	50	WAT270941	CTS-A094	37
			WAS207069	CTS-10475-1	32	WAT270944	CTS-10988	39
			WAT005063	11-1239	38,58	WAT270959	CTS-10476	36
			WAT005070	CTS-12016	38	WAT271017	CTS-10532	36
			WAT005081	CTS-5669	31	WAT271018	CTS-10560	36
			WAT005139	CTS-10919-5	36,42	WAT271019	CTS-10839	41
			WAT007272	CTS-10984	36	WAT271066	CTS-10711	36
			WAT010106	CTS-1106	33	WAT271067	CTS-10476	36
			WAT011042	CTS-1042	31,54			
			WAT022330	CTS-2330	38			
			WAT022934	CTS-2294	31			
			WAT022946	CTS-2294-04	31			
			WAT024120	CTS-A058	35			
			WAT024960	CTS-A057	35			
			WAT025028	CTS-0200	30			
			WAT025313	CTS-5313	38			
			WAT025464	CTS-5464	32			
			WAT025531	CTS-5531	35,37			
			WAT025559	CTS-5559	33			
			WAT025604	CTS-21012	38			
			WAT025656	CTS-5656	31			
			WAT025746	CTS-5746	33			
			WAT026014	CTS-0310	31			
			WAT026016	CTS-0210	30			
			WAT026613	CTS-6613	31			
			WAT026809	CTS-6809	33,38			
			WAT031788	CTS-10323	35			
			WAT031790	CTS-11032	35			
			WAT034515	CTS-10906	35			
			WAT035190	CTS-10527	37,42			
			WAT045407	CTS-10285	40			
WATERS								
201000113	CTS-11294	34						
201000114	CTS-11282	34						
201000173	CTS-11091	43						
201000174	CTS-11141	47						
201000197	CTS-11371	43						
201000233	CTS-11335	44						
201000234	11-3601	48						
201000273	CTS-21065	49,53						
201000281	11-4143	49,53						
205000362	CTS-A11381	47						
289003547	CTS-A11123	45						
401000501	CTS-11150	49						
405008854	11-2591	48						
405011492	11-2570	48						
401000694	11-3606	49						
430001084	CTS-A11142	47						
430001121	CTS-A11133	46						
430001326	CTS-A11147	47						
430001443	CTS-A11374	46						
430001470	CTS-A11129	46						
430001486	CTS-A11145	46						
430001773	CTS-A11372	46						
430002357	CTS-A11342	46						
430002452	11-3602	48						
700000253	CTS-21011	30,37						
700000254	CTS-10600	30,37						
700000356	CTS-10699	50,53						
700001108	CTS-21010	30						
700001229	CTS-10770	36						
700001247	CTS-7550	41						
700001318	CTS-10788-5	41						
700002332	CTS-A11431-02	37						
700002399	11-2401	30,37						
700002569	11-3595	47						
700002570	CTS-A11167	48						
700002572	CTS-11149	47						
700002596	CTS-A11094-02	45						
700002598	CTS-11121-02	43						

PUMP PARTS

MODEL: 1260, 1290



MODEL: 1260, G1310B,
G1311B, G1312B

11-4145

OEM G1312-60020

**Active Inlet Valve
Cartridge (600 bar)**

each \$275.00



MODEL: 1260, 1100, 1200,
1220

11-4093

OEM G1312-60067

Outlet Ball Valve (600 bar)

each \$340.00



MODEL: 1260, 1100, 1200,
1220

11-4101

OEM G1312-60066

Passive Inlet Valve

each \$245.00



MODEL: 1260, 1050, 1100,
1120, 1200, 1220, G1310A/B,
G1311A/B/C, G1312A/B/C,
G1376A, G2226A, G4302A

CTS-10417

OEM 5063-6589

Black Piston Seals, 2/pk

\$71.40



MODEL: 1260, 1050, 1100,
1120, 1200, 1220, G7129A

CTS-10621

OEM 0905-1503

Seal, Pump

each \$40.00



MODEL: 1260, 1290, 1050,
1100, 1200, 1220

CTS-A11454

OEM 5067-4728

Seal Cap Assembly

each \$26.01



MODEL: 1260, 1290, 1050,
1100, 1220, G4220A/B

CTS-10683

OEM 01018-22707

PTFE Frits, 5/pk

\$24.97



MODEL: 1260, 1050, 1100,
1120, 1200, 1220

11-3321

OEM 5062-2484

Wash Seal Gasket, 6/pk

\$29.13



MODEL: 1260, 1050, 1090,
1100, 1120, 1200, 1220,
G1310A, G1311A, G1312A,
G1376A

11-4146 KIT

OEM G1312-68741

**PM Kit, G1312 Binary
Pump**

\$192.00

- Black Piston Seals, 2/pk (CTS-10417) 2
- Frit, PTFE, 5/pk (CTS-10683) 1
- Gaskets (CTS-10812) 4
- Seal Cap Assembly (CTS-A11454) 3



MODEL: 1260, 1220

11-4147 KIT

OEM G1310-68741

**PM Kit, 1260 & 1220
Pumps**

\$120.00

- Black Piston Seals, 2/pk (CTS-10417) 1
- Frit, PTFE, 5/pk (CTS-10683) 1
- Seal Cap Assembly (CTS-A11454) 1

PUMP PARTS

MODEL: 1260, 1290



MODEL: 1260, 1050, 1100, 1120, 1200, 1220, G1310A/B, G1311A/B/C, G1312A/B/C, G1376A, G2226A

CTS-10303

OEM 5063-6586

Sapphire Plunger

each \$100.92



MODEL: 1260, 1290, 1050, 1090, 1100, 1200, 1220

CTS-10843

OEM 5041-2168

Glass Solvent Filter

each \$34.33



MODEL: 1290

11-3472

OEM 5068-0005

Rotor Seal, 5-Pos. 7-Port (1200 bar)

each \$560.95



MODEL: 1260, 1290, 1050, 1090, 1100, 1200

CTS-11016 KIT

OEM 5062-2418

Swagelok® Style Compression Fitting Kit, 10/pk

\$124.85

- Nut 10
- Front Ferrule 10
- Back Ferrule 10



MODEL: 1260, 1050, 1100, 1120, 1200, 1220, G1310B, G1311B/C, G1312B/C, G2226A, G4302A

CTS-11088

OEM 0905-1420

Gold Piston Seals, 2/pk

\$71.41



MODEL: 1260, 1290, 1100, 1200

CTS-21069

OEM 5062-8517

Frit Adapter, 4/pk

\$27.00



MODEL: 1260, 1050, 1100, 1120, 1200, 1220

CTS-10675

OEM 0905-1175

Wash Seal

each \$44.63

PUMP PARTS

MODEL: 1260, 1290



MODEL: 1260, 1100, 1200

CTS-11458

OEM 5021-1818

**Capillary, 280mm x
0.17mm ID**
each \$33.66



MODEL: 1260, 1100, 1200,
G1312

CTS-A11459

OEM G1312-87303

**Assy, Capillary, 400mm x
0.17mm ID, w/Fittings**
each \$57.12



MODEL: 1260, 1100, 1200

CTS-11459

OEM 5021-1819

**Capillary, 400mm x
0.17mm ID**
each \$33.66



MODEL: 1260, 1100, 1200

CTS-11456

OEM 5021-1816

**Capillary, 105mm x
0.17mm ID**
each \$33.66



MODEL: 1260, 1100, 1200,
G1312

CTS-A11456

OEM G1312-87306

**Assy, Capillary, 105mm x
0.17mm ID, w/Fittings**
each \$57.12



MODEL: 1260, 1100, 1200

CTS-11457

OEM 5021-1817

**Capillary, 150mm x
0.17mm ID**
each \$33.66

AUTOSAMPLER

MODEL: 1260, 1290



MODEL: 1260, 1100, 1120, 1200, 1220

CTS-10835
OEM G1313-87201

Needle Assembly
each \$53.95



MODEL: 1260, 1100, 1120, 1200, 1220, G1313A, G1329A/B

11-2605
OEM G1329-87017

Needle Seat, Std., PEEK, 0.17mm ID
each \$142.33



MODEL: 1260, 1200

CTS-12012
OEM 0101-1416

2 Position/6 Port Rotor Seal, Vespel (600 bar)
each \$425.00



MODEL: 1290

11-2312
OEM 5068-0007

2 Position/6 Port Rotor Seal (1200 bar)
each \$545.00



MODEL: 1260, 1100, 1120, 1200, 1220, G1313A, G1329A/B

11-4148 KIT
OEM G1313-68719

PM Kit, G1329B
\$475.00

- Seal, Pump (CTS-10621) 1
- Needle Assembly (CTS-10835) 1
- 2 Position/6 Port Rotor Seal, Vespel (600 bar) (CTS-12012) 1
- Needle Seat, Std., PEEK, 0.17mm ID (11-2605) 1

DETECTOR LAMPS

MODEL: 1260, 1290



MODEL: 1260, 1220 DAD, G1315C/D, G1365C/D, G7115A, G7165A

11-3984
OEM 2140-0820

Long Life Deuterium Lamp, RFID (2000 hr)
each \$900.00



MODEL: 1290, G4212A/B, G7117A/B/C/D

11-4109
OEM 5190-0917

Long Life HiS Deuterium Lamp, 8 pin, RFID (2000 hr)
each \$956.00



MODEL: 1260, 1100, 1200, 1220, G1315A/B, G1365A/B

CTS-A11218
OEM 2140-0813

Long Life Deuterium Lamp (2000 hr)
each \$757.25

MODEL: G1314D, G1314E, G1314F G7114A/B



MODEL: G1314D, G1314E, G1314F, G7114A/B

11-4111
OEM G1314-60101

Long Life HiS Deuterium Lamp, RFID, VWD (2000 hr)
each \$590.00

PUMP PARTS

MODEL: 1100, 1200, 1220



MODEL: 1100, 1200, 1220, 1260
11-4093
 OEM G1312-60067
Outlet Ball Valve (600 bar)
 each \$340.00



MODEL: 1100, 1200, 1220, 1260
11-4101
 OEM G1312-60066
Passive Inlet Valve
 each \$245.00



MODEL: 1100, 1200, 1220, 1050, 1120, G1310A/B, G1311A/B/C, G1312A/B/C, G1376A, G2226A, G4302A
CTS-10417
 OEM 5063-6589
Black Piston Seals, 2/pk
 \$71.40



MODEL: 1050, 1100, 1120, 1200, 1220, 1260, G7129A
CTS-10621
 OEM 0905-1503
Seal, Pump
 each \$40.00



MODEL: 1100, 1200, 1220, 1050, 1120, 1260, G1310A/B, G1311A/B/C, G1312A/B/C, G1376A, G2226A
CTS-10303
 OEM 5063-6586
Sapphire Plunger
 each \$100.92



MODEL: 1100, 1200, 1220, 1050, 1120, 1260, G1310B, G1311B/C, G1312B/C, G2226A, G4302A
CTS-11088
 OEM 0905-1420
Gold Piston Seals, 2/pk
 \$71.41



MODEL: 1100, 1200, 1220, 1050, 1120, 1260
CTS-10675
 OEM 0905-1175
Wash Seal
 each \$44.63



MODEL: 1050, 1090, 1100, 1120, 1200, 1220, 1260, G1310A, G1311A, G1312A, G1376A
11-4146 KIT
 OEM G1312-68741
PM Kit, G1312 Binary Pump
 \$192.00

- Black Piston Seals, 2/pk (CTS-10417) 2
- Frit, PTFE, 5/pk (CTS-10683) 1
- Gaskets (CTS-10812) 4
- Seal Cap Assembly (CTS-A11454) 3

PUMP PARTS

MODEL: 1100, 1200, 1220



MODEL: 1100, 1200, 1220, 1050, 1090

11-1240
OEM 5063-6591

Fingertight One Piece 10-32 PEEK Male Nut/ Ferrule for 1/16" OD Tubing, 10/pk
\$34.68



MODEL: 1100, 1200, 1050, 1090, 1220, 1260, 1290

CTS-10843
OEM 5041-2168

Glass Solvent Filter
each \$34.33



MODEL: 1100, 1200, 1220, 1050, 1260, 1290

CTS-A11454
OEM 5067-4728

Seal Cap Assembly
each \$26.01



MODEL: 1100, 1200, 1220, 1050, 1120, 1260

11-3321
OEM 5062-2484

Wash Seal Gasket, 6/pk
\$29.13



MODEL: 1100, 1200, 1220, 1050, 1260, 1290, G4220A/B

CTS-10683
OEM 01018-22707

PTFE Frits, 5/pk
\$24.97

AUTOSAMPLER

MODEL: 1100, 1200, 1220



MODEL: 1100, 1120, 1200, 1220, 1260

CTS-10835
OEM G1313-87201

Needle Assembly
each \$53.95



MODEL: 1100, 1200, 1120, 1220, 1260, G1313A, G1329A/B

11-2605
OEM G1329-87017

Needle Seat, Std., PEEK, 0.17mm ID
each \$142.33



MODEL: 1100, 1200, 1120, 1220, G1313A, G1329A/B

11-4059
OEM 01078-87302

Capillary, Loop, 100µL
each \$120.00



MODEL: 1100, 1200, 1120, 1220, 1260, G1313A, G1329A/B

11-4148 KIT
OEM G1313-68719

PM Kit, G1329B
\$475.00

- Seal, Pump (CTS-10621) 1
- Needle Assembly (CTS-10835) 1
- 2 Position/6 Port Rotor Seal, Vespel (600 bar) (CTS-12012) 1
- Needle Seat, Std., PEEK, 0.17mm ID (11-2605) 1

PUMP PARTS

MODEL: 1100, 1200



MODEL: 1100, 1200, 1220, 1260
11-4093
 OEM G1312-60067
Outlet Ball Valve (600 bar)
 each \$340.00



MODEL: 1100, 1200
CTS-A162
 OEM G1312-60012
Outlet Ball Valve, (400 bar) Binary Pump
 each \$279.48



MODEL: 1100, 1200, 1050
CTS-10674
 OEM G1311-60012
Outlet Ball Valve
 each \$252.96



MODEL: 1100, 1200, 1050, 1090, 1220, 1260, 1290
CTS-10843
 OEM 5041-2168
Glass Solvent Filter
 each \$34.33



MODEL: 1100, 1200, 1050, 1090
CTS-A11259
 OEM 01018-60025
Solvent Inlet Filter, SS
 each \$79.34



MODEL: 1100, 1200, 1050
CTS-10807
 OEM 5063-6505
Outlet Valve Sieves, 10/pk
 \$15.52



MODEL: 1100, 1200, 1050, G1310A, G1311A, G1311C, G1312A/C, G1322A, G1376A,
CTS-10673
 OEM 5062-8562
Active Inlet Valve Cartridge (400 bar)
 each \$168.30



MODEL: 1100, 1200, 1050, 1220, 1260, 1290
CTS-A11454
 OEM 5067-4728
Seal Cap Assembly
 each \$26.01



MODEL: 1100, 1200, 1050, 1220, 1260, 1290, G4220A/B
CTS-10683
 OEM 01018-22707
PTFE Frits, 5/pk
 \$24.97



MODEL: 1100, 1200, 1220, 1050, 1090
11-1240
 OEM 5063-6591
Fingertight One Piece 10-32 PEEK Male Nut/Ferrule for 1/16" OD Tubing, 10/pk
 \$34.68



MODEL: 1100, 1200, 1050
CTS-10800 KIT
Seal Wash Kit, Binary Pump
 \$160.22
 • Seals (CTS-10675) 4
 • Gaskets (CTS-10812) 4



MODEL: 1100, 1200, 1050
CTS-10814 KIT
 OEM G1310-68731
Seal Wash Kit, Binary Pump
 \$160.22
 • Seals (CTS-10675) 4
 • Gaskets (CTS-10812) 4

PUMP PARTS

MODEL: 1100, 1200



MODEL: 1100, 1200, 1050

CTS-10833 KIT

OEM G1311-68710

Pump Maintenance Kit

\$405.76

- Black Piston Seals, 2/pk (CTS-10417) 2
- Active Inlet Cartridge (400 bar) (CTS-10673) 1
- PTFE Frits (CTS-10712) 2
- Glass Solvent Filter (CTS-10843) 2
- Seal Cap Assembly (CTS-A11454) 1



MODEL: 1100, 1200, 1050

CTS-11284 KIT

OEM 5065-4499

Extended Isocratic Pump PM Kit

\$697.73

- Sapphire Plunger (CTS-10303) 2
- Black Piston Seals, 2/pk (CTS-10417) 1
- Active Inlet Cartridge (400 bar) (CTS-10673) 1
- Outlet Ball Valve (CTS-10674) 1
- Frit, PTFE, 5/pk (CTS-10683) 1



MODEL: 1100, 1200

CTS-11285 KIT

OEM G1312-68730

Binary Pump PM Kit

\$263.74

- Black Piston Seals, 2/pk (CTS-10417) 2
- Seal Cap Assembly (CTS-A11454) 3
- PTFE Frits (CTS-10712) 2
- Screen Filter (CTS-10781) 2



MODEL: 1100, 1200

CTS-11286 KIT

OEM G1310-68730

PM Kit for Isocratic/Quaternary Pump

\$151.90

- Black Piston Seals, 2/pk (CTS-10417) 1
- PTFE Frits (CTS-10712) 2
- Seal Cap Assembly (CTS-A11454) 2



MODEL: 1100, 1200, 1260, 1290

CTS-21069

OEM 5062-8517

Frit Adapter, 4/pk

\$27.00



MODEL: 1100, 1200, 1050, 1090, 1260, 1290

CTS-11016 KIT

OEM 5062-2418

Swagelok Style Compression Fitting Kit, 10/pk

\$124.85

- Nut 10
- Front Ferrule 10
- Back Ferrule 10

PUMP PARTS

MODEL: 1100, 1200



MODEL: 1100, 1200, 1260

CTS-11456

OEM 5021-1816

**Capillary, 105mm x
0.17mm ID**
each \$33.66



MODEL: 1100, 1200, 1260

CTS-11457

OEM 5021-1817

**Capillary, 150mm x
0.17mm ID**
each \$33.66



MODEL: 1100, 1200, 1260

CTS-11458

OEM 5021-1818

**Capillary, 280mm x
0.17mm ID**
each \$33.66



MODEL: 1100, 1200, 1260

CTS-11459

OEM 5021-1819

**Capillary, 400mm x
0.17mm ID**
each \$33.66



MODEL: 1100, 1200, 1260,
G1312

CTS-A11456

OEM G1312-87306

**Assy, Capillary, 105mm x
0.17mm ID, w/Fittings**
each \$57.12



MODEL: 1100, 1200, 1260,
G1312

CTS-A11459

OEM G1312-87303

**Assy, Capillary, 400mm x
0.17mm ID, w/Fittings**
each \$57.12

AUTOSAMPLER

MODEL: 1100, 1200



MODEL: 1100, 1200, 1120,
1220, G1313A, G1329A/B

11-4059

OEM 01078-87302

Capillary, Loop, 100µL
each \$120.00



MODEL: 1100, 1200, 1220,
1050, 1120, G1310A/B,
G1311A/B/C, G1312A/B/C,
G1376A, G2226A, G4302A

CTS-10417

OEM 5063-6589

Black Piston Seals, 2/pk
\$71.40



MODEL: 1050, 1100, 1120,
1200, 1220, 1260, G7129A

CTS-10621

OEM 0905-1503

Seal, Pump
each \$40.00



MODEL: 1200, 1260

CTS-12012

OEM 0101-1416

**2 Position/6 Port
Rotor Seal, Vespel (600
bar)**
each \$425.00



MODEL: 1100, 1200, 1120,
1220, 1260, G1313A,
G1329A/B

11-2605

OEM G1329-87017

**Needle Seat, Std., PEEK,
0.17mm ID**
each \$142.33

AUTOSAMPLER

MODEL: 1100, 1200



MODEL: 1100, 1120, 1200, 1220, 1260

CTS-10835
OEM G1313-87201

Needle Assembly
each \$53.95



MODEL: 1100, 1200

CTS-10459
OEM 0100-1853

**Rotor Seal, Vespel,
2-Groove, 7750-040**
each \$64.54



MODEL: 1100, 1200, G1313, G1313A, G1327A G1329A

CTS-11287 KIT
OEM 5065-4498

**Extended PM Kit for
Standard Autosamplers**
\$457.78

- Isolation Seal (CTS-11288) 1
- Rotor Seal Assy (CTS-10459) 1
- Stator Face Assy (CTS-A10678) 1
- Needle Assembly (CTS-10835) 1
- Needle Seat, Std., PEEK, 0.17mm ID (11-2605) 1



MODEL: 1100, 1200, G1313, G1313A, G1327A G1329A

CTS-11283 KIT
OEM G1313-68730

**PM Kit for Standard
Autosamplers**
\$262.18

- Rotor Seal Assy (CTS-10459) 1
- Needle Assembly (CTS-10835) 1
- Needle Seat, Std., PEEK, 0.17mm ID (11-2605) 1



MODEL: 1100, 1200, 1120, 1220, 1260, G1313A, G1329A/B

11-4148 KIT
OEM G1313-68719

PM Kit, G1329B
\$475.00

- Seal, Pump (CTS-10621) 1
- Needle Assembly (CTS-10835) 1
- 2 Position/6 Port Rotor Seal, Vespel (600 bar) (CTS-12012) 1
- Needle Seat, Std., PEEK, 0.17mm ID (11-2605) 1



MODEL: 1100, 1200, G1313, G1327A

CTS-10722 KIT
OEM G1313-68709

Autosampler Preventative Maintenance Kit
\$288.19

- Rotor Seal Assy (CTS-10459) 1
- Black Piston Seals, 2/pk (CTS-10417) 1
- Needle Assembly (CTS-10835) 1
- Needle Seat, Std., PEEK, 0.17mm ID (11-2605) 1
- Finger Caps, 3/pk (CTS-10834) 1

AUTOSAMPLER

MODEL: 1100, 1200



MODEL: 1100, 1200

CTS-11419

OEM 0100-1855

**Rotor Seal, Vespel
for p/n 0101-0921**
each \$108.12



MODEL: 1100, 1200

CTS-A10678

OEM 0100-1851

**Stator Face Assembly
for 0101-0921 Valve**
each \$187.27



MODEL: 1100, 1200

CTS-11288

OEM 0100-1852

**Isolation Seal for
0101-0921 Valve**
each \$22.95



MODEL: 1100, 1200

CTS-11356

OEM G1313-87202

Needle, 900µL
each \$96.55



MODEL: 1100, 1200

CTS-A019

OEM 0101-0623

**Manual Injection Valve
Rotor Seal, Vespel**
each \$67.32



MODEL: 1100, 1200

CTS-A11329

OEM 0100-1859

**Stator Face Assembly for
5063-6502 Valve**
each \$137.87

DETECTOR LAMPS

MODEL: 1100, 1200



MODEL: 1100, 1200 DAD,
G1315A/B, G1365A/B

CTS-10473

OEM 2140-0590

Deuterium Lamp (1000 hr)
each \$545.40



MODEL: 1100, 1200 VWD,
1120, 1220 VWD, G1314A,
G1314B, G1314C

CTS-10494

OEM G1314-60100

**Long Life Deuterium Lamp
(2000 hr)**
each \$487.56



MODEL: 1100, 1200 DAD,
G1315A/B, G1365A/B

CTS-10827

OEM 5181-1530

**Long Life Deuterium Lamp
(2000 hr)**
each \$770.10



MODEL: 1100, 1200, 1220,
1260, G1315A/B, G1365A/B

CTS-A11218

OEM 2140-0813

**Long Life Deuterium Lamp
(2000 hr)**
each \$757.25



MODEL: 1100 DAD, 1200
DAD

11-4110

OEM 5182-1530

**Long Life Deuterium Lamp
(2000 hr)**
each \$865.30

PUMP PARTS



MODEL: 100A, 110A,
110B, 112, 114M, 116,
118, 125, 126, 127, 128

CTS-0620

OEM 240621

Outlet Check Valve Cartridge

each \$127.50



MODEL: 100A, 110A,
110B, 112, 114M, 116,
118, 125, 126, 127, 128

CTS-0621

OEM 240620

Inlet Check Valve Cartridge

each \$127.50



MODEL: 100A, 110A,
110B, 112, 114M, 116,
118, 125, 126, 127, 128

CTS-0721

OEM 240721

Outlet Check Valve Assembly

each \$168.30



MODEL: 100A, 110A,
110B, 112, 114M, 116,
118, 125, 126, 127, 128

CTS-0720

OEM 240720

Inlet Check Valve Assembly

each \$168.30



MODEL: 110A, 110B, 112,
114M, 116, 118, 125, 126,
127, 128

CTS-A033

OEM 240619

Check Valve Filter Replacement Kit

each \$23.46



MODEL: 114M, 116,
118, 125, 126, 127, 128

CTS-2369

OEM 240714

Sapphire Plunger

each \$183.60



MODEL: 114M, 116,
118, 125, 126, 127, 128

CTS-7162

OEM 237162, 728770

Plunger Seal, Black

each \$58.14



MODEL: 114M, 116,
118, 125, 126, 127, 128

CTS-10557

OEM 728770

Plunger Seal, Gold

each \$54.06



MODEL: 125, 126, 127, 128

CTS-10391

OEM 728772, 238627

Plunger Wash Seal

each \$65.28

PUMP PARTS



MODEL: ICS-3000,
ICS-5000
11-2587
OEM 063382
**Piston Seal Wash
Seal/Priming Valve Seal**
each \$43.25



MODEL: ICS-3000,
ICS-5000
11-2588
OEM 064946
Main Piston Seal
each \$96.90

AUTOSAMPLER



MODEL: WPS-3000
11-3332
OEM 6822.0002
**100µL Syringe for
WPS-3000 Series**
each \$306.00

PERKINELMER/ABI

DETECTOR LAMPS



MODEL: 200 SERIES, 785A
CTS-00025
OEM N2920149
Deuterium Lamp (1000 hr)
each \$372.30



MODEL: BIO 19, LAMBDA
2, 5, 7, 9, 10, 11, 12, 14, 15, 16,
17, 18, 19, 20, 25, 35, 40, 45,
800, 900
CTS-10854
OEM L6022728, Old# B0160917
Deuterium Lamp (1500 hr)
each \$504.90



MODEL: LC-480 PDA,
LAMBDA BIO, LAMBDA 2,
10, 11, 12, 14, 15, 16, 17, 18, 19,
20, 25, 35, 40, 45, 550, 551,
552, 552A, 553, 559, 559A,
800, 900
11-3343
OEM B0114620
Tungsten Lamp
each \$95.00

AUTOSAMPLER



MODEL: 200 SERIES
CTS-A168
OEM 09923270
250µL Syringe
each \$88.74



MODEL: 200 SERIES
CTS-A019
OEM 09904802
Rotor Seal
each \$67.32



MODEL: 200 SERIES
CTS-A11329
OEM 7725-026
Stator Face Assembly
each \$137.87



MODEL: 200 SERIES
CTS-10724
OEM N2930023
Injector Needle
each \$81.60

PUMP PARTS



MODEL: 200 SERIES,
1, 2, 3, 3B, 4, 10, 250, 400,
410, 620, INT. 4000

CTS-10758
OEM 09907324

**Pump Seal,
High Pressure**
each \$41.82



MODEL: 200 SERIES,
1, 2, 3, 3B, 4, 10, 250, 400,
410, 620, INT. 4000

CTS-10772
OEM 09907339

**Pump Seal,
Low Pressure**
each \$43.35



MODEL: 200 SERIES,
1, 2, 3, 3B, 4, 10, 250, 400,
410, 620, INT. 4000

CTS-10757
OEM 02540275

**High Pressure
Seal Kit **KIT****
\$137.94

- Pump Seal (CTS-10758) 4
- Backup Ring (CTS-10759) 4
- O-Ring (CTS-00230-02) 4



MODEL: 200 SERIES,
1, 2, 3, 3B, 4, 10, 250, 400,
410, 620, INT. 4000, SERIES
200 MICROPUMP

CTS-A159
OEM 02540177

Inlet Check Valve
each \$293.98



MODEL: 200 SERIES,
1, 2, 3, 3B, 4, 10, 250,
400, 410, 620, INT. 4000,
SERIES 200 MICROPUMP

CTS-A157
OEM 02540197

Outlet Check Valve
each \$293.98



MODEL: 200 SERIES
CTS-11265 **KIT**
OEM N2910383

**S200 Standard
Pump Seals Kit**
\$143.06



MODEL: 200 SERIES,
1, 2, 3, 3B, 4, 10, 250, 400,
410, 620, INT. 4000

11-1240
OEM ED020005

**Fingertight One Piece
10-32 PEEK Male Nut/
Ferrule for 1/16" OD
Tubing, 10/pk**
\$34.68



MODEL: SERIES 4, INT. 4000,
SERIES 200, 400, 410, MODEL
250 AND 620 PUMPS BUILT
AFTER DECEMBER 1989

CTS-11367
OEM N2600104

Piston, Low Pressure
each \$224.40



MODEL: SERIES 4, INT. 4000,
SERIES 200, 400, 410, MODEL
250 AND 620 PUMPS BUILT
AFTER DECEMBER 1989

CTS-11366
OEM N2600124

Piston, High Pressure
each \$259.06



MODEL: 200 SERIES,
1, 2, 3, 3B, 4, 10, 250, 400,
410, 620, INT. 4000

CTS-00230-02
OEM 09902128

O-Ring, PTFE
each \$2.08



MODEL: 200 SERIES,
1, 2, 3, 3B, 4, 10, 250, 400,
410, 620, INT. 4000

CTS-10759
OEM 02542076

Piston Seal Backup Ring
each \$3.44

HITACHI/MERCK

PUMP PARTS



MODEL: 655, 6000, 6200,
6200A, L-7100, L-7110, L-7120,
L-2130, L-2160U, L-8800,
L-8800A, L-8900

CTS-10322

OEM ANO-2328, 810-1033

Ceramic Plunger

each \$76.50



MODEL: 655, 6000, 6200,
6200A, L-2130, L-7100,
L-7110, L-7120

CTS-10394

OEM 655-1080

Pump Seal, Black

each \$35.06



MODEL: 655, 6000, 6200,
6200A, L-2130, L-7100,
L-7110, L-7120

CTS-10547

OEM 655-1080

Pump Seal, Gold

each \$36.19



MODEL: 655, 6000,
6200, 6200A, L-2130,
L-7100, L-7110

CTS-10493

OEM ANO-0835

Check Valve Cartridge, 2/pk

\$174.13



MODEL: L-2130,
L-7100, L-7110

CTS-A125

OEM ANO-0836, 810-1004

Inlet Check Valve Assembly

each \$153.98



MODEL: L-2130,
L-7100, L-7110

CTS-A126

OEM ANO-0837, 810-1005

Outlet Check Valve Assembly

each \$153.98

AUTOSAMPLER



MODEL: AS-7200,
AS-7250

CTS-10573

OEM ANO-0818

Injection Valve Rotor Seal

each \$67.84

RHEODYNE

INJECTOR VALVE



MODEL: 7000,
7010, 7040, 7067

CTS-A083

OEM 7010-039

Rotor Seal, Vespel

each \$67.68



MODEL: 7125, 7126,
7725, 7725i, 9725

CTS-A019

OEM 7125-047

Rotor Seal, Vespel

each \$67.32



MODEL: 7010, 7725, 7725i,
9725, 9725i, 3725-038,
3725i-038, 3725, 3725i

CTS-10612

OEM 7010-015

Isolation Seal

each \$13.48



MODEL: 7725, 7725i, 7726,
9725, 9725i

CTS-A11329

OEM 7725-026

Stator Face Assembly

each \$137.87

PUMP PARTS



MODEL: LC-6AD, LC-7A,
LC-10AS, LC-20AR

CTS-10319

OEM 228-17019-93

Sapphire Plunger
each \$163.20



MODEL: LC-9A,
LC-10AD, LC-600

CTS-10320

OEM 228-18523-91

Sapphire Plunger
each \$106.08



MODEL: LC-10ADvp,
LC-20AD/AB, LC-20ADXR,
LC-30ADSF, LC-2010

CTS-11297

OEM 228-35601-93,
Old# 228-34498-91,
228-35601-92

Sapphire Plunger
each \$135.25



MODEL: LC-10ADvp,
LC-20AD/AB, LC-20ADXR,
LC-30ADSF, LC-2010

11-3795

OEM 228-35281-95

**Sapphire Plunger
w/Holder**
each \$255.00



MODEL: LC-10ADvp

11-4121

OEM 228-35281-91

**Ceramic Plunger Holder
Assembly, LC-10ADvp**
each \$240.00



MODEL: LC-10ADvp,
LC-20AD/AB, LC-20ADvp

CTS-A138

OEM 228-35601-91,
Old# 228-34498-92

**Ceramic Plunger
Assembly**
each \$111.32



MODEL: LC-10ADvp,
LC-20AB, LC-20AD,
LC-20ADXR, LC-30AD,
LC-2010

11-3897

OEM 228-35602-91

Plunger Holder
each \$122.40



MODEL: LC-10ATvp

CTS-10584

OEM 228-35009-92

**Ceramic Plunger
Assembly**
each \$98.84



MODEL: LC-20Ai, LC-20AT

CTS-11425

OEM 228-35009-93

Sapphire Plunger
each \$124.85



MODEL: LC-30AD

11-4073

OEM 228-52069-94

**LC-30AD Plunger Holder
Assembly, UHP2
(w/Diaphragm)**
each \$315.00



MODEL: LC-10AD,
LC-10ADvp, LC-20AD/AB,
LC-20ADXR, LC-30ADSF,
LC-2010, LC-2010 HT

11-2891

OEM 228-32784-91,
Old# 228-24311-01,
228-31828-00

PTFE Diaphragm, 2/pk
\$106.12



MODEL: i-Series, LC-30AD

11-4122

OEM 228-55272-41

**PTFE Diaphragm, LC30AD/
i-Series, 2/pk**
\$110.00

PUMP PARTS



MODEL: LC-30AD

11-4126

OEM 228-52711-93,
Old# 228-52711-92

Plunger Seal and Back Up Ring

each \$220.00



MODEL: LC-7A,
LC-10Ai, LC-10AS,
LC-10AT, LC-10ATvp,
LC-20AR

CTS-10340

OEM 228-21975-00

Plunger Seal

each \$55.42



MODEL: LC-30AD

11-4150

OEM 228-53301-41

Tubing D-R Assembly

each \$165.00



MODEL: LC-10ATvp, LC-20AT,
LC-2010 A/C HT, LC-HT,
SIL-HTa, SIL-HTc, SIL-10ADvp,
SIL-20A/AC, SIL-20ACHT,
SIL-20ACXR, SIL-30AC,
SIL-30ACMP, SIL-2010 A/C HT

CTS-10694

OEM 228-35145-00

Plunger Seal

each \$64.50



MODEL: LC-30AD

11-4152

OEM 228-53300-41

Tubing D-L Assembly

each \$165.00



MODEL: LC-10Ai, LC-10AS,
LC-10AT, LC-10ATvp

CTS-10583

OEM 228-28499-00

Plunger Rinse Seal

each \$64.45



MODEL: LC-9A, LC-10AD,
LC-10ADvp, LC-20AD/AB,
LC-600, LC-2010 A/C HT

CTS-10693

OEM 228-35146-00,
Old# 228-18745-00

Plunger Seal

each \$54.10



MODEL: LC-20AD, LC-20AT,
SIL-AC

CTS-21015

OEM 228-16000-17,
Old# 228-16000-10,
228-16000-84

Ferrule, 1/16", SS, 3/pk

each \$20.00



MODEL: LC-10ADvp,
LC-20AD/AB

CTS-10963

OEM 228-32628-00

Gold Plunger Seal

each \$39.33



MODEL: LC-20ADXR,
LC-30ADSF, Nexera-i

11-4133

OEM 228-32628-91

Gold Plunger Seal

each \$95.00

PUMP PARTS



MODEL: LC-6A, LC-6AD,
LC-10AS, LC-20AR

CTS-A100

OEM 228-09054-93

Outlet Check Valve
each \$135.25



MODEL: LC-9A,
LC-10AD, LC-600

CTS-A102

OEM 228-33492-91,
Old# 228-18522-91

Inlet Check Valve
each \$161.26



MODEL: LC-9A, LC-10AD,
LC-10AT, LC-600

CTS-A103

OEM 228-32531-92,
Old# 228-18522-92

Outlet Check Valve
each \$143.58



MODEL: LC-20AD

CTS-21045

OEM 228-45590-91

SUS Tubing A
each \$40.00



MODEL: LC-20AD

CTS-21044

OEM 228-45590-92

SUS Tubing B
each \$40.00



MODEL: LC-30AD

11-4060

OEM 228-52964-95,
Old# 228-52964-91,
228-52964-93

Inlet Check Valve
each \$295.00



MODEL: LC-10ADvp, LC-10AT,
LC-10ATvp, LC-20AD/
AB, LC-20ADXR, LC-20AT,
LC-20AR, LC-30AD

CTS-A11316

OEM 228-45707-91

**Suction Filter,
Stainless Improved**
each \$71.58



MODEL: LC-10AT,
LC-10ATvp

CTS-A117

OEM 228-32166-91

Inlet Check Valve
each \$137.33



MODEL: LC-10ADvp

CTS-A145

OEM 228-39093-92

Inlet Check Valve
each \$135.25

PUMP PARTS



MODEL: LC-10ADvp,
LC-10ATvp

CTS-A121

OEM 228-34976-91

Outlet Check Valve
each \$135.25



MODEL: LC-30AD,
LC-30ADSF

11-4063

OEM 228-53334-96

Outlet Check Valve
each \$277.00



MODEL: LC-20AD/AB XR,
LC-20AT, LC-30ADSF

CTS-A1186

OEM 228-48249-91,
Old# 228-45704-91,
228-45557-91

Inlet Check Valve
each \$208.08



MODEL: LC-30AD

11-4129

OEM 228-35871-99

SS Line Filter
each \$144.00



MODEL: i-SERIES,
LC-10ADvp, LC-10ATvp,
LC-20AD/AB XR,
LC-30ADSF

CTS-A1187

OEM 228-45705-91,
Old# 228-45563-95

Outlet Check Valve
each \$225.56



MODEL: i-SERIES,
LC-10ADvp,
LC-10AT, LC-10ATvp,
LC-20AD/AB, LC-20ADXR,
LC-20AR, LC-20AT,
LC-30ADSF, LC-2010

CTS-A11421

OEM 228-35871-96

Line Filter Assembly
each \$62.42



MODEL: LC-20AT

11-3807

OEM 228-45704-92

Inlet Check Valve, Primary
each \$209.10



MODEL: LC-10AD,
LC-10ADvp, LC-10ATvp,
LC-20AD/AB, LC-20Ai,
LC-20AT, LCMS-2020,
LCMS-8030, LCMS-8040,
LCMS-8045, LCMS-8050

CTS-11305

OEM 228-48607-91,
Old# 228-32744-00

PEEK 5µm Filter
each \$19.97

AUTOSAMPLER



MODEL: SIL-10A,
SIL-10Ai, SIL-10AXL

CTS-10578

OEM 228-25237-04

Syringe, 500 μ L
each \$83.10



MODEL: LC-2010,
SIL-10ADvp, SIL-10AXL

CTS-10686

OEM 228-33355-04

Needle Seal, Vespel
each \$54.10



MODEL: SIL-10ADvp,
SIL-10AXL/vp, SIL-HT,
SIL-HTa, SIL-HTc

CTS-11435

OEM 228-33355-01

Seal, Needle PEEK
each \$40.78



MODEL: SIL-30AC,
SIL-30ACMP

11-4179

OEM 228-52139-00

**HPV Rotor, SIL-30AC,
SIL-30ACMP**
each \$415.00



MODEL: SIL-30AC,
SIL-30ACMP

11-4180

OEM 228-51922-00

**LPV Rotor, SIL-30AC,
SIL-30ACMP**
each \$187.00



MODEL: SIL-20 A/C,
SIL-20ACHT, SIL-HT,
SIL-HTa, SIL-HTc

CTS-11312

OEM 228-41310-92

PEEK Rotor, HPV
each \$313.14



MODEL: LC-2010,
LC-2010 HT, SIL-20 A/C,
SIL-20ACHT, SIL-20ACXR,
SIL-HT, SIL-20HTa,
SIL-20HTc

CTS-11313

OEM 228-36923-00

PEEK Rotor, LPV
each \$121.73



MODEL: SIL-20 A/C,
SIL-20ACHT

CTS-11315

OEM 228-42325-01

**Needle Seal,
PEEK SIL-20**
each \$108.20



MODEL: SIL-30AC,
SIL-30ACMP

11-4048

OEM 228-53178-91

**PEEK Needle Seal,
SIL-30AC, SIL-30ACMP**
each \$160.00



MODEL: SIL-30AC,
SIL-30ACMP

11-4052

OEM 228-52253-00

**Needle Seal, SIL-30AC,
SIL-30ACMP**
each \$153.00

AUTOSAMPLER



MODEL: SIL-10ADvp

CTS-10942
OEM 228-21217-97

Rotor Seal
each \$146.78



MODEL: SIL-10A,
SIL-10Ai, SIL-10AXL

CTS-A106
OEM 228-21217-91

Rotor Seal
each \$108.12



MODEL: SIL-10A,
SIL-10Ai, SIL-10AXL

CTS-A067
OEM 228-21220-91

Stator Assembly
each \$168.30



MODEL: LC-2010 A/C HT,
LC-HT, SIL-10ADvp,
SIL-20A/AC, SIL-30AC,
SIL-30ACMP

CTS-11434
OEM 228-35010-91

Sapphire Plunger
each \$83.23



MODEL: LC-10ATvp, LC-20AT,
LC-2010 A/C HT, LC-HT,
SIL-HTa, SIL-HTc, SIL-10ADvp,
SIL-20A/AC, SIL-20ACHT,
SIL-20ACXR, SIL-30AC,
SIL-30ACMP, SIL-2010 A/C HT

CTS-10694
OEM 228-35145-00

Plunger Seal
each \$64.50



MODEL: LC-20AD, LC-20AT,
SIL-AC

CTS-21015
OEM 228-16000-17,
Old# 228-16000-10,
228-16000-84

Ferrule, 1/16", SS, 3/pk
each \$20.00

DETECTOR LAMPS



MODEL: SPD-10A,
SPD-10AV, SPD-10AVvp,
SPD-20AV

CTS-00135
OEM 228-34016-02

Deuterium Lamp (2000 hr)
each \$546.72

THERMO ELECTRON/ SPECTRA-PHYSICS

PUMP PARTS

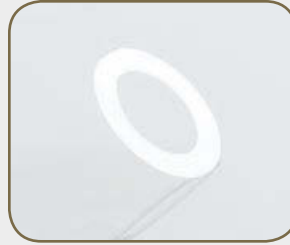


MODEL: 8800, 8810, P1000,
P2000, P4000

CTS-3102

OEM A3102-010

Sapphire Plunger
each \$117.30



MODEL: P1000, P2000,
P4000

CTS-10396

OEM A4848-010

Washer
each \$4.59



MODEL: 8800, 8810, P1000,
P2000, P4000

CTS-2962

OEM A2962-010

Plunger Seal, Gold
each \$27.40



MODEL: CONSTAMETRIC
I, II, III, CM3000, CM3200,
CM3500, CM4000, CM4100

CTS-2061

OEM 206156001

Plunger Seal, Gold
each \$40.80



MODEL: 8800, 8810, P1000,
P2000, P4000

CTS-2963

OEM A2963-010

Backup Seal
each \$30.82



MODEL: CONSTAMETRIC
I, II, III, CM3000, CM3200,
CM3500, CM4000, CM4100

CTS-20612

OEM 206129001

Plunger Seal, Black
each \$40.80



MODEL: 8800, 8810, P1000,
P2000, P4000

CTS-3495

OEM A3495-010

Inlet Check Valve
each \$180.00



MODEL: P1000, P2000,
P4000

CTS-3990

OEM A3990-010

**Transducer Check
Valve Assembly**
each \$186.00



MODEL: 8700, 8800,
8810, ISOCHROM

CTS-3490

OEM A3490-010

Outlet Check Valve
each \$186.00

THERMO ELECTRON/ SPECTRA-PHYSICS

AUTOSAMPLER



MODEL: 8800

CTS-10517

OEM 3301-0100

Syringe, 500µL

each \$84.29



MODEL: AS100, AS300,
AS1000, AS3000, AS3500,
8875, 8880

CTS-A096

OEM A3588-020

**Syringe Assembly,
250µL**

each \$127.78



MODEL: AS100, AS300,
AS1000, AS3000, AS3500,
8800, 8875, 8880

CTS-A083

OEM 2508-0360

Rotor Seal, Vespel

each \$67.68



MODEL: AS100, AS300,
AS1000, AS3000, AS3500,
8800, 8875, 8880

CTS-10612

OEM 7010-015

**Isolation Seal,
Rheodyne 7010**

each \$13.48

DETECTOR LAMPS



MODEL: 200, 201, 203, 204, 205,
206, 206PH, CE100, CE500,
CE1000, CE2000, SP100, SP200,
SPECTRACHROM 200, UV100,
UV150, UV200, UV1000,
UV2000, UV3000

CTS-00246

OEM 9551-0023

Deuterium Lamp (1000 hr)

each \$445.00



MODEL: UV6000

CTS-A123

OEM 108052

**Lamp Assembly, TSP
UV6000 Detector (1000 hr)**

each \$504.90

SURVEYOR PLUS SYSTEMS



MODEL: SURVEYOR PLUS

11-1596

OEM 00950-01-00087

Piston Assembly, Sapphire

each \$124.85



MODEL: SURVEYOR PLUS

11-1597

OEM 00950-30020

Piston Assembly, TZP

each \$98.84



MODEL: SURVEYOR PLUS

11-1598

OEM 00950-30026

**Check Valve Assembly,
Inlet**

each \$132.13



MODEL: SURVEYOR PLUS

11-1599

OEM 00950-30021

**Check Valve Assembly,
Outlet**

each \$132.13



MODEL: SURVEYOR PLUS

11-1600

OEM 00950-01-00085

**Check Valve, Secondary
Inlet**

each \$208.08



MODEL: SURVEYOR PLUS

11-3943

OEM 00950-01-00086

Check Valve, Primary Inlet

each \$209.10

THERMO ELECTRON/ SPECTRA-PHYSICS

SURVEYOR PLUS SYSTEMS



MODEL: SURVEYOR PLUS

11-1601

OEM 00107-18008

**Seal, GFP, High Pressure,
Piston**

each \$64.50



MODEL: SURVEYOR PLUS

11-1603

OEM 00950-30025

Seal, Wash

each \$64.45



MODEL: SURVEYOR PLUS

11-1602

OEM 00950-30004

**Seal, Polyethylene, High
Pressure, Piston**

each \$55.42



MODEL: SURVEYOR PLUS

11-1604

OEM 00950-30009

Line Filter Frit

each \$19.97

PUMP PARTS

MODEL: 510, 515, 590, 600, 610, 1515, 1525



MODEL: 510, 515, 525, 600, 610, 1515, 1525

CTS-21010
OEM 700001108

Cartridge Check Valve Housing, 2/pk
\$95.72



MODEL: 510, 515, 600, 610, 1515, 1525, 2690, 2690D, 2695, 2695D, 2795

11-2401
OEM 700002399

Check Valve Cartridge, Ceramic Ball & Seat, 2/pk
\$208.08



MODEL: 510, 515, 600, 610, 1515, 1525, 2690, 2690D, 2695, 2695D, 2795

CTS-10600
OEM 700000254 (2 of 289000144)
Check Valve Cartridge, 2/pk
\$163.86



MODEL: 510, 590, 600

CTS-0200
OEM WAT025028

Outlet Check Valve Assembly - Actuator Style
each \$135.25



MODEL: 510, 515, 525, 600, 610, 1515, 1525, 2690, 2690D, 2695, 2695D, 2795

CTS-21011 KIT
OEM 700000253
Cartridge Check Valve System Kit
\$259.58

- Cartridge Check Valve Housing, 2/pk (CTS-21010) 1
- Check Valve Cartridge, 2/pk (CTS-10600) 1



MODEL: 510

CTS-0210
OEM WAT026016

Outlet Check Valve Rebuild Kit - Actuator Style
rebuilds 2 valves
\$60.34

PUMP PARTS

MODEL: 510, 515, 590, 600, 610, 1515, 1525



MODEL: 510, 515, 600, 610, 1525EF

CTS-0310 KIT

OEM WAT026014

Outlet Check Valve Rebuild Kit – Ball & Seat

rebuilds 2 valves
\$123.60



MODEL: 510, 515, 600, 610, 1515, 1525

CTS-10548

Gold Plunger Seal, Analytical Heads

each \$35.39



MODEL: 510, 515, 600, 610, 1515, 1525

CTS-2294

OEM WAT022934

Plunger Seal

each \$35.56



MODEL: 510, 590, 600, 610, 1515, 1525

CTS-5656

OEM WAT025656, WAT069511

Sapphire Plunger

each \$147.90



MODEL: 510, 515, 590, 600, 610, 1515, 1525

CTS-2294-04

OEM WAT022946

Plunger Seals

each \$142.24



MODEL: 510, 515, 590, 600, 610, 1515, 1525

CTS-1042

OEM WAT011042

Plunger Insertion Tool

each \$52.02



MODEL: 510, 515, 600, 610, 1515, 1525

CTS-6613

OEM WAT026613

Plunger Seal, Black

each \$29.68



MODEL: 510, 515, 590, 600, 626, 1515, 1515 MICRO, 1525, 1525EF

CTS-5669

OEM WAT005081,

Old# WAT025669

Oil Seal

each \$10.92

WATERS

PUMP PARTS

MODEL: 510, 515, 590, 600, 610, 1515, 1525



MODEL: 515, 1515, 1525

CTS-10475

Sapphire Plunger Kit
each \$156.90



MODEL: 515, 1515, 1525

CTS-10475-1

OEM WAS207069,
Old# WAT20769

Sapphire Plunger
each \$140.45



MODEL: 510, 590, 600

CTS-5464

OEM WAT025464

**Clip Ring,
Plunger Retainer**
each \$5.71



MODEL: 510, 515, 600, 610

CTS-0069

OEM WAT060069

Tubing, Head to Tee
each \$14.85



MODEL: 510, 515, 590, 600

CTS-0037

OEM WAT060037

Tube, Left Inlet Pigtail
each \$20.55



MODEL: 510, 515, 590, 600

CTS-0038

OEM WAT060038

Tube, Right Inlet Pigtail
each \$20.55



MODEL: 510, 515, 600,
610, 1515, 1525, 1525EF,
1525 MICRO

CTS-6958

OEM WAT069583

Indicator Rod Kit
each \$10.57



MODEL: 2690, 2690D,
2695, 2695D, nanoACQUITY
HDX MGR

CTS-9733

OEM WAT097332

**SS Union,
Zero Dead Volume**
each \$29.41

PUMP PARTS

MODEL: 510, 515, 590, 600, 610, 1515, 1525



11-2610
Tubing Stainless Steel
1/16" OD x 0.50mm (0.020")
ID x 10ft
each \$41.25



11-2611
Tubing Stainless Steel
1/16" OD x 1mm (0.040")
ID x 10ft
each \$41.25



11-2612
Tubing Stainless Steel
1/16" OD x 250µm (0.010")
ID x 10ft
each \$41.25



CTS-6809
OEM WAT026809
Mobile Phase Transfer
Line, TFE, 3/16" OD x
1/8" OD x 25'
each \$42.84



MODEL: 510, 515, 590, 600,
610, 1515, 1525, 1525 MICRO
CTS-5559
OEM WAT025559
Priming Syringe Needle
each \$26.52



MODEL: 510, 515, 590, 600,
610
CTS-5740
OEM WAT060476
Draw-Off
Tube Assembly
each \$51.38



MODEL: 500, 515, 600,
1515, 1525, 1525EF,
1525 MICRO
CTS-5746 KIT
OEM WAT025746
Reference Valve
Rebuild Kit
\$39.78

- Button, Reference Valve 1
- Spacer, Valve Disk 1
- Diaphragm, Reference Valve 1



MODEL: 510
CTS-0012 KIT
OEM WAT060012
Insert Seal Parts Kit
\$33.92

- Manifold Insert (CTS-0015) 1
- Insert Seal, PTFE (CTS-0016) 1
- Belleville Washer (CTS-9503) 2
- Flat Washer (CTS-9854) 1



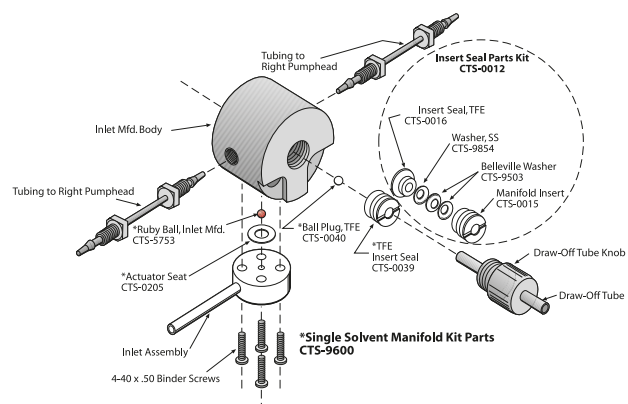
MODEL: 510
CTS-1106
OEM WAT010106
Inlet Tube Assembly
w/Ball & Seat
each \$43.58



MODEL: 510, 515, 590, 600,
610
CTS-9600 KIT
OEM WAT060448
Inlet Manifold Kit
\$63.93

- Insert Seal Parts Kit, (CTS-0012) 1
- Ball, Plug, TFE (CTS-0040) 1
- Inlet Tube Assembly w/Ball & Seat (CTS-1106) 1

SINGLE SOLVENT MANIFOLD



PUMP PARTS

MODEL: 510, 515, 590, 600, 610, 1515, 1525



MODEL: 510

CTS-11009 KIT

OEM WAT052670

510 Performance Maintenance Kit

\$681.46

- Actuator Outlet Rebuild Kit (CTS-0210) 1
- PP Check Valve Cartridge, 2/pk (CTS-10600) 1
- Plunger Seal (CTS-2294) 2
- Solvent Reservoir Filter, 10µm (CTS-5531) 1
- Sapphire Plunger (CTS-5656) 2
- Reference Valve Rebuild Kit (CTS-5746) 1
- Inlet Manifold Kit (CTS-9600) 1



MODEL: 515

CTS-11010 KIT

OEM WAT052587

515 Performance Maintenance Kit

\$780.30

- Solvent Reservoir Filter, 10µm (CTS-5531) 1
- PP Check Valve Cartridge, 2/pk (CTS-10600) 2
- Sapphire Plunger Kit (CTS-10475) 2
- Plunger Seal (CTS-2294) 2
- Sparge Diffuser (CTS-10984) 1



MODEL: 1515

CTS-11294 KIT

OEM 201000113

1515 Performance Maintenance Kit

\$721.00

- Sapphire Plunger (CTS-10475-1) 2
- PP Check Valve Cartridge, 2/pk (CTS-10600) 2
- Plunger Seal (CTS-2294) 2
- Solvent Reservoir Filter, 10µm (CTS-5531) 1
- Reference Valve Rebuild Kit (CTS-5746) 1



MODEL: 600, 610

CTS-10985 KIT

OEM WAT052675

600/610 Performance Maintenance Kit

\$861.45

- Solvent Reservoir Filter, 10µm (CTS-5531) 4
- PP Check Valve Cartridge, 2/pk (CTS-10600) 2
- Sapphire Plunger (CTS-5656) 2
- Plunger Seal (CTS-2294) 2
- Sparge Diffuser (CTS-10984) 4
- Reference Valve Rebuild Kit (CTS-5746) 1
- Inlet Manifold Kit (CTS-9600) 1



MODEL: 1525

CTS-11282 KIT

OEM 201000114

1525 Performance Maintenance Kit

\$1,406.62

- Sapphire Plunger (CTS-10475-1) 4
- PP Check Valve Cartridge, 2/pk (CTS-10600) 4
- Plunger Seal (CTS-2294) 4
- Solvent Reservoir Filter, 10µm (CTS-5531) 2
- Reference Valve Rebuild Kit (CTS-5746) 1

PUMP PARTS

MODEL: 616, 625, 626, 1515 MICRO



MODEL: 616
CTS-A057
OEM WAT024960
Check Valve Cartridge
each \$67.63



MODEL: 625, 626
CTS-A058
OEM WAT024120
Check Valve Cartridge, PEEK
each \$67.63



MODEL: 616, 625, 626
CTS-11032 KIT
OEM WAT031790
Plunger and Wash Seal, Rebuild Kit
\$152.64



MODEL: 616, 625, 626, 1525 MICRO
CTS-11296
OEM WAT088726
Seal Insertion/Extraction Tool
each \$83.23



MODEL: 616, 625, 626, 1525 MICRO
CTS-10323
OEM WAT031788,
Old# WAT030547
Sapphire Plunger
each \$150.39
Note: Does not include compression spring, plunger spring, and indicator rod.



MODEL: 616, 1525 MICRO
CTS-10906 KIT
OEM WAT034515
Seal Kit
\$139.41

- Plunger Seals 2
- Plunger Wash Seals 2
- O-Rings 2
- Backup Rings 2



MODEL: 616
CTS-10986 KIT
OEM WAT052672
616 Performance Maintenance Kit
\$951.57

- Sapphire Plunger (CTS-10323) 2
- Sparge Diffuser (CTS-10984) 4
- Solvent Reservoir Filter, 10µm (CTS-5531) 4
- Pump Seal Kit (CTS-10906) 1
- Check Valve Cartridge (CTS-A057) 4

Note: Does not include compression spring, plunger spring, and indicator rod.



MODEL: 626
CTS-11026 KIT
OEM WAT052673
626 Performance Maintenance Kit
\$951.97

- Sapphire Plunger (CTS-10323) 2
- Sparge Diffuser (CTS-10984) 4
- Solvent Reservoir Filter, 10µm (CTS-5531) 4
- Pump Seal Kit (CTS-11032) 1
- Check Valve Cartridge (CTS-A058) 4

Note: Does not include compression spring, plunger spring, and indicator rod.



MODEL: 600, 610, 510, 515, 1515, 1525, 1525EF, 1525 MICRO, 2535, 2545, 2555, 2690, 2690D, 2695, 2695D, 2700, ACQUITY UPLC BSM
CTS-5531
OEM WAT025531
Solvent Reservoir Filter, 10µm
each \$36.53

PUMP PARTS

MODEL: 2690, 2690D, 2695, 2695D, 2790, 2795, 2796, ALLIANCE



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796
CTS-10566
OEM WAT270938, (2 of WAT270789)
**Head Plunger
Seal Kit, Alliance, 2/pk**
\$62.24



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796
CTS-10711
OEM WAT271066
**Head Plunger Seal Kit,
Black, Alliance, 2/pk**
\$61.06



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796
CTS-10560
OEM WAT271018, (2 of WAT270160)
**Seal Wash Plunger
Seal, Alliance, 2/pk**
\$57.63



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796
CTS-10989
OEM WAT270939, (4 of WAT270163)
Face Seals, 4/pk
\$139.41



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796
CTS-10597
OEM WAT270940, (4 of WAT270668)
Wash Tube Seal Kit, 4/pk
\$109.24



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796
CTS-10532
OEM WAT271017
Seal Wash Face Seal
each \$35.70



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796, 515, 600, 610, 626
CTS-10984
OEM WAT007272
Sparge Diffuser
each \$14.71



MODEL: 2690, 2690D,
2695, 2695D, 2790,
2795, 2796
CTS-10476
OEM WAT270959, WAT271067,
Old# WAT270488
Sapphire Plunger, Alliance
each \$151.48



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796, 717, 600
CTS-10919
OEM WAT088084
**2µm Precolumn
Filter Insert**
each \$16.55



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796, 717, 717 PLUS
CTS-10919-5
OEM WAT005139
**2µm Precolumn
Filter Insert, 5/pk**
\$82.76



MODEL: 2690, 2690D,
2695, 2695D
CTS-10770
OEM 700001229
**Waste Valve, V3
(2-Way Solenoid Valve)**
each \$224.40

PUMP PARTS

MODEL: 2690, 2690D, 2695, 2695D, 2790, 2795, 2796, ALLIANCE



MODEL: 2690, 2690D,
2695, 2695D, 2795, 510,
515, 600, 610, 1515, 1525

CTS-10600
OEM 700000254 (2 of 289000144)
**Check Valve
Cartridge, 2/pk**
\$163.86



MODEL: 510, 515, 525,
600, 610, 1515, 1525, 2690,
2690D, 2695, 2695D, 2795

CTS-21011 KIT
OEM 700000253
**Cartridge Check Valve
System Kit**
\$259.58

- Cartridge Check Valve Housing, 2/pk (CTS-21010) 1
- Check Valve Cartridge, 2/pk (CTS-10600) 1



MODEL: 2690, 2690D,
2695, 2695D, 2795 510,
515, 600, 610, 1515, 1525

11-2401
OEM 700002399
**Check Valve Cartridge,
Ceramic Ball & Seat, 2/pk**
\$208.08



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796

CTS-A094
OEM WAT270941
**Check Valve Cartridge,
2/pk**
\$174.13



MODEL: 2690, 2690D, 2695,
2695D, 2790, 2795, 2796

CTS-A11431-02
OEM 700002332
**Cartridge Check Valve
Housing, 2/pk**
\$202.88



MODEL: 2690, 2690D, 2695,
2695D, 2700, 2535, 2545,
2555, 510, 515, 600, 610,
1515, 1525, 1525EF, 1525
MICRO, ACQUITY UPLC
BSM,

CTS-5531
OEM WAT025531
**Solvent Reservoir Filter,
10µm**
each \$36.53



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
2796, 600, 717

CTS-10527
OEM WAT035190,
Old# WAT084561
Precolumn Filter Assembly
each \$74.29



MODEL: 2690, 2690D, 2695, 2695D, 2790, 2795

CTS-11080 KIT
OEM 700004073

**Alliance Solvent Manager Performance Maintenance
Kit**

- | | | |
|--|---|--|
| \$931.16 | | |
| • Sapphire Plunger (CTS-10476) | 2 | • 2µm Precolumn Filter Insert (CTS-10919) |
| • Seal Wash Plunger Seal Kit, 2/pk (CTS-10560) | 1 | • Face Seal, 4/pk (CTS-10989) |
| • Head Plunger Seal Kit, 2/pk (CTS-10566) | 1 | • PP Check Valve Cartridge, 2/pk (CTS-10600) |
| • Wash Tube Seal Kit, 4/pk (CTS-10597) | | • Seal Wash Face Seal (CTS-10532) |
| | | |

PUMP PARTS

MODEL: 2690, 2690D, 2695, 2695D, 2790, 2795, 2796, ALLIANCE



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
717

CTS-5313
OEM WAT025313

**Compression Screw, 1/16",
SS**
each \$3.54



11-2610

Tubing Stainless Steel
1/16" OD x 0.50mm
(0.020") ID x 10ft
each \$41.25



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
717

CTS-12016
OEM WAT005070

Compression Screw, 1/16"
SS, 10/pk
\$34.70



11-2611

Tubing Stainless Steel
1/16" OD x 1mm
(0.040") ID x 10ft
each \$41.25



MODEL: 2690, 2690D,
2695, 2695D

CTS-2330
OEM WAT022330

Ferrule, SS
each \$3.75



11-2612

Tubing Stainless Steel
1/16" OD x 250µm
(0.010") x 10ft
each \$41.25



MODEL: 2690, 2690D,
2695, 2695D

11-1239
OEM WAT005063

Ferrule, 1/16", SS, 10/pk
\$37.50



CTS-6809

OEM WAT026809

Mobile Phase Transfer
Line, TFE, 3/16" OD x
1/8" OD x 25'
each \$42.84



MODEL: 2690, 2690D,
2695, 2695D, 2790, 2795,
717

CTS-21012 KIT
OEM WAT025604

Compression Screws &
Ferrules, 5/pk
\$35.75

- Ferrule, SS (CTS-2330) 5
- Compression Screw, 1/16", SS (CTS-5313) 5



MODEL: 2690, 2690D,
2695, 2695D, 432,
nanoACQUITY HDX MGR

CTS-9733
OEM WAT097332

SS Union,
Zero Dead Volume
each \$29.41

PUMP PARTS & AUTOSAMPLER

MODEL: 717, 717 PLUS, 2690, 2690D, 2695, 2695D, 2790, 2795, 2796, ALLIANCE



MODEL: 2690, 2690D, 2695, 2695D

CTS-10988 KIT

OEM WAT270944

2690/2695 Performance Maintenance Kit

\$1,169.26

• Sapphire Plunger (CTS-10476)	2	• PP Check Valve Cartridge, 2/pk (CTS-10600)	1
• Seal Wash Plunger Seal Kit, 2/pk (CTS-10560)	1	• Seal Pack Rebuild Kit: (CTS-10839)	1
• Head Plunger Seal Kit, 2/pk (CTS-10566)	1	- Wash Tube Seal (CTS-10598)	1
• Wash Tube Seal Kit, 4/pk (CTS-10597)	1	- Tube, Seal Wash (CTS-10739)	1
• Sparge Diffuser (CTS-10984)	1	- PTFE Washer (CTS-10741-01)	1
• Face Seal, 4/pk (CTS-10989)	1	- Filter Retainer (CTS-10785)	1
• Solvent Reservoir Filter, 10µm (CTS-5531)	4	- Lower Wash Seal Frit (CTS-10788)	1
• 250µL Syringe (CTS-3109)	1	- Needle Wash Frit (CTS-2324)	1
• 2µm Precolumn Filter Insert (CTS-10919)	1	- TFE Washer (CTS-7321)	1
• Seal Wash Face Seal (CTS-10532)	2	- Needle Assembly (CTS-7550)	1
		- Gold Injector Seal (CTS-A047)	2
		- Ferrule, SS (CTS-2330)	1
		- Compression Screw, 1/16", SS (CTS-5313)	1



MODEL: 2690, 2690D, 2695, 2695D

CTS-11380 KIT

2690/2695 Performance Maintenance Kit w/Seal Pack

\$1,499.74

• Sapphire Plunger (CTS-10476)	2	• Face Seal, 4/pk (CTS-10989)	1
• Seal Wash Plunger Seal Kit, 2/pk (CTS-10560)	1	• Seal Pack Assembly Kit (CTS-11222)	1
• Head Plunger Seal Kit, 2/pk (CTS-10566)	1	• 250µL Syringe (CTS-3109)	1
• Wash Tube Seal Kit, 4/pk (CTS-10597)	1	• Solvent Reservoir Filter, 10µm (CTS-5531)	4
• 2µm Precolumn Filter Insert (CTS-10919)	1	• PP Check Valve Cartridge, 2/pk (CTS-10600)	1
• Sparge Diffuser (CTS-10984)	1		

AUTOSAMPLER

MODEL: 717, 717 PLUS, 2690, 2690D, 2695, 2695D, 2790, 2795, 2796, ALLIANCE



MODEL: 717, 717 PLUS,
2690, 2690D, 2695, 2695D,
2790, 2795

CTS-3109
OEM WAT073109

250 μ L Syringe
each \$118.54



MODEL: 717, 717 PLUS,
2690, 2690D, 2695, 2695D,
2790, 2795

CTS-3195
OEM WAT073195

250 μ L Syringe Tip
each \$3.65



MODEL: 717, 2690, 2690D,
2695, 2695D

CTS-2324
OEM WAT072324

Needle Wash Frit
each \$3.26



MODEL: 717, 717 PLUS,
2690, 2690D, 2695, 2695D,
2790, 2795

CTS-3209
OEM WAT077347

**Syringe Seal,
250 μ L/2500 μ L**
each \$4.39



MODEL: 717, 2690, 2690D

CTS-10285
OEM WAT045407, WAT078800

TFE 3-Way Valve 4 (V4)
each \$211.20

AUTOSAMPLER

MODEL: 717, 717 PLUS, 2690, 2690D, 2695, 2695D, 2790, 2795, 2796, ALLIANCE



MODEL: 2690, 2690D,
2695, 2695D, 2795
CTS-10788-5
OEM 70001318, (5 of 415000230)
Needle Wash Frit, 5/pk
\$71.01



MODEL: 717, 717 PLUS,
2690, 2690D, 2695, 2695D
CTS-7550
OEM 700001247,
Old# WAT075507, WAT077233
**Performance Autosampler
Needle**
each \$138.37



MODEL: 717, 717 PLUS, 2690,
2690D, 2695, 2695D
CTS-10761 KIT
OEM WAT045424
**HPMV 1 & 2 Rebuild Kit
w/Spool**
\$157.30

- O-Ring, TFE (CTS-1010T) 1
- HPMV Gold Seals,
2/pk (CTS-10692) 1
- Spool Assembly (CTS-A155) 1
- Bullet, Seal Insertion (CTS-11281) 1



MODEL: 2690, 2690D,
2695, 2695D
CTS-11222 KIT
OEM 700002791
Seal Pack Assembly Kit
\$750.00



MODEL: 717, 2690, 2690D,
2695, 2695D
CTS-10692
OEM WAT045454
HPMV Gold Seals, 2/pk
\$85.96



MODEL: 717, 2690,
2690D, 2695, 2695D
CTS-1010T
OEM WAT097387
O-Ring, TFE
each \$1.83



MODEL: 2690, 2690D, 2695, 2695D

CTS-10839 KIT
OEM WAT271019

Seal Pack Rebuild Kit
\$222.65

- | | | | |
|------------------------------------|---|---|---|
| • Wash Tube Seal (CTS-10598) | 1 | • TFE Washer (CTS-7321) | 1 |
| • Tube, Seal Wash (CTS-10739) | 1 | • Needle Assembly (CTS-7550) | 1 |
| • PTFE Washer (CTS-10741-01) | 1 | • Gold Injector Seal (CTS-A047) | 2 |
| • Filter Retainer (CTS-10785) | 1 | • Ferrule, SS (CTS-2330) | 1 |
| • Lower Wash Seal Frit (CTS-10788) | 1 | • Compression Screw, 1/16" SS
(CTS-5313) | 1 |
| • Needle Wash Frit (CTS-2324) | 1 | | |

WATERS

AUTOSAMPLER

MODEL: 717, 717 PLUS, 2690, 2690D, 2695, 2695D, 2790, 2795, 2796, ALLIANCE



MODEL: 717, 717 PLUS

CTS-10987 **KIT**

OEM WAT052669

717 Performance Maintenance Kit \$644.01

- Seal Pack Kit (CTS-10324S) 1
- 250µL Syringe (CTS-3109) 1
- Filter, Foam 45 Ppi, 2.3x11.5" (CTS-11063-02) 1
- Filter, Foam 45 Ppi, 2x7" (CTS-11063-03) 2



MODEL: 717

CTS-10324S

OEM WAT045559

Seal Pack w/Needle each \$494.19



MODEL: 717, 600, 2690, 2690D, 2695, 2695D, 2790, 2795, 2796

CTS-10919

OEM WAT088084

2µm Precolumn Filter Insert each \$16.55



MODEL: 717, 717 PLUS, 2690, 2690D, 2695, 2695D, 2790, 2795, 2796

CTS-10919-5

OEM WAT005139

2µm Precolumn Filter Insert, 5/pk \$82.76



MODEL: 717, 600, 2690, 2690D, 2695, 2695D, 2790, 2795, 2796

CTS-10527

OEM WAT035190,

Old# WAT084561

Precolumn Filter Assembly each \$74.29

PUMP PARTS

MODEL: ACQUITY, nanoACQUITY, H-CLASS, I-CLASS



MODEL: ACQUITY
H-CLASS QSM, ACQUITY
UPLC I2V BSM, ACQUITY
UPLC BSM, nanoACQUITY
UPLC BSM/ASM

CTS-11121-02
OEM 700002598

Wash Seal, 2/pk
\$98.88



MODEL: ACQUITY
H-CLASS QSM, ACQUITY
UPLC I2V BSM, ACQUITY
UPLC BSM, nanoACQUITY
UPLC BSM/ASM

CTS-11119-02
OEM 700002599

Head Plunger Seal, 2/pk
\$114.44



MODEL: ACQUITY
H-CLASS BIO QSM,
ACQUITY H-CLASS QSM,
ACQUITY I-CLASS BSM,
ACQUITY ISOCRATIC
SOLVENT MGR, ACQUITY
M-CLASS μASM, ACQUITY
M-CLASS μBSM, ACQUITY
UPLC I2V BSM, ACQUITY
UPLC BSM, nanoACQUITY
UPLC BSM/ASM

CTS-11093-02
OEM 700002600

Plunger, 2/pk
\$174.93



MODEL: ACQUITY UPLC BSM

CTS-11091 KIT

OEM 201000173

Acquity BSM Performance Maintenance Kit
\$2,218.50

- | | | | |
|--|---|---|---|
| • O-Ring, PTFE (CTS-11092) | 4 | • Wash Seal, 2/pk (CTS-11121-02) | 2 |
| • Plunger, 2/pk (CTS-11093-02) | 2 | • SS Primary Inlet CV Filter (CTS-A11123) | 2 |
| • UPLC Primary Check Valves, 2/pk (CTS-A11094-02) | 1 | • Tube Assy, SSV to In-line Filter (CTS-A11129) | 2 |
| • UPLC Check Valve, Double Ball & Seat, 2/pk (CTS-A11095-02) | 1 | • Tube Assembly, Transducer to Check Valve (CTS-A11133) | 2 |
| • Filter, Air, Pump Handle (CTS-11115) | 1 | • 50μL Std. Zirconia Mixer (CTS-A11135) | 1 |
| • Filter, Air, Acquity Pump (CTS-11116) | 1 | • Solvent Bottle Filter, 7/pk (CTS-5531-07) | 1 |
| • Head Plunger Seal, 2/pk (CTS-11119-02) | 2 | | |



MODEL: ACQUITY UPLC BSM, ACQUITY UPLC I2V BSM

CTS-11371 KIT

OEM 201000197

Acquity I2V BSM Performance Maintenance Kit
\$2,121.60

- | | | | |
|---|---|--|---|
| • O-Ring, PTFE (CTS-11092) | 4 | • SS Filter Frit Replacement Cartridge, 2/pk (CTS-11415) | 1 |
| • Plunger, 2/pk (CTS-11093-02) | 2 | • 50μL Std. Zirconia Mixer (CTS-A11135) | 1 |
| • UPLC Check Valves, Double Ball & Seat, 2/pk (CTS-A11095-02) | 1 | • Cartridge, Intelligent Valve, 2/pk (CTS-A11336-02) | 1 |
| • Filter, Air, Pump Handle (CTS-11115) | 1 | • Tube Assy, Transducer to Check Vlv, I2V (CTS-A11372) | 2 |
| • Filter, Air, Acquity Pump (CTS-11116) | 1 | • Tube Assy, SSV to I2V (CTS-A11374) | 2 |
| • Head Plunger Seal, 2/pk (CTS-11119-02) | 2 | • Solvent Bottle Filter, 7/pk (CTS-5531-07) | 1 |
| • Wash Seal, 2/pk (CTS-11121-02) | 2 | | |

PUMP PARTS

MODEL: ACQUITY, nanoACQUITY, H-CLASS, I-CLASS



MODEL: ACQUITY I-CLASS BSM, ACQUITY UPLC BSM

CTS-11415
OEM 700002913

SS Filter Frit Replacement Cartridge, 2/pk
\$102.00



MODEL: ACQUITY H-CLASS QSM

CTS-A11344
OEM 700005173

Filter, GPV, 4/pk
\$83.64



MODEL: ACQUITY I-CLASS BSM, ACQUITY I-CLASS SM-FTN, ACQUITY UPLC I2V BSM, ACQUITY UPLC BSM

CTS-5531-07
OEM 700003616

Solvent Bottle Filter, 7/pk
\$255.70



MODEL: ACQUITY H-CLASS QSM, ACQUITY I-CLASS BSM, ACQUITY ISOCRATIC SOLVENT MGR, ACQUITY M-CLASS μASM, ACQUITY M-CLASS μBSM, ACQUITY UPLC I2V BSM, ACQUITY UPLC BSM, nanoACQUITY UPLC BSM/ASM

CTS-11092
OEM WAT076152

O-Ring, PTFE
each \$4.16



MODEL: ACQUITY UPLC HIGH TEMPERATURE COLUMN HEATER, ACQUITY UPLC COLUMN HEATER MODULE, ACQUITY UPLC COLUMN HEATER/COOLER, ACQUITY UPLC COLUMN MGR

11-2414
OEM 700003114

PEEK Ferrule, 1/16", 10/pk
\$25.50



MODEL: ACQUITY H-CLASS QSM

CTS-11335 KIT
OEM 201000233

Acquity H-Class QSM Performance Maintenance Kit
\$1,165.86

- | | | | |
|--|---|---|---|
| • O-Ring, PTFE (CTS-11092) | 2 | • Tube Assembly, Transducer to Check Valve (CTS-A11342) | 1 |
| • Plunger, 2/pk (CTS-11093-02) | 1 | • Filter, GPV, 4/pk (CTS-A11344) | 1 |
| • Check Valve, Double Ball & Seat (CTS-A11095) | 1 | • Filter, Air, Door (CTS-11370) | 1 |
| • Head Plunger Seal, 2/pk (CTS-11119-02) | 1 | • Mixer Assembly, 100μL (CTS-A11376) | 1 |
| • Wash Seal, 2/pk (CTS-11121-02) | 1 | • Solvent Reservoir Filter, 10μm (CTS-5531) | 5 |
| • Cartridge, Intelligent Valve (CTS-A11336) | 1 | | |

PUMP PARTS

MODEL: ACQUITY, nanoACQUITY, H-CLASS, I-CLASS



MODEL: ACQUITY I-CLASS BSM, ACQUITY UPLC BSM, nanoACQUITY UPLC BSM/ASM

CTS-A11094-02

OEM 700002596

UPLC Primary Check Valve Assy, 2/pk
\$269.28



MODEL: ACQUITY UPLC I2V BSM, ACQUITY UPLC BSM

CTS-A11135

OEM 700002911

50µL Std. Zirconia Mixer
each \$244.49



MODEL: ACQUITY H-CLASS QSM

CTS-A11095

OEM 700005164

Check Valve, Double Ball & Seat
each \$156.06



MODEL: ACQUITY H-CLASS QSM

CTS-A11376

OEM 700005119

Mixer Assembly, 100µL
each \$168.30



MODEL: ACQUITY H-CLASS BIO QSM, ACQUITY I-CLASS BSM, ACQUITY UPLC I2V BSM, ACQUITY UPLC BSM, nanoACQUITY UPLC BSM/ASM

CTS-A11095-02

OEM 700002968

UPLC Check Valve, Double Ball & Seat
2/pk \$312.12



MODEL: ACQUITY I-CLASS BSM, ACQUITY ISOCRATIC SOLVENT MGR, ACQUITY M-CLASS µASM, ACQUITY M-CLASS µBSM, ACQUITY UPLC I2V BSM, ACQUITY UPLC BSM, nanoACQUITY UPLC BSM/ASM

CTS-A11123

OEM 289003547

SS Primary Inlet Check Valve Filter
each \$91.80



MODEL: ACQUITY H-CLASS QSM

CTS-A11336

OEM 700005165

Cartridge, Intelligent Valve
each \$144.84



MODEL: ACQUITY I-CLASS BSM, ACQUITY ISOCRATIC SOLVENT MGR, ACQUITY M-CLASS µASM, ACQUITY M-CLASS µBSM, ACQUITY UPLC I2V BSM, ACQUITY UPLC BSM, nanoACQUITY UPLC BSM/ASM

CTS-A11123-02

OEM 700002912

SS Primary Inlet Check Valve Filter Kit, 2/pk
\$183.60



MODEL: ACQUITY I-CLASS BSM, ACQUITY UPLC I2V BSM

CTS-A11336-02

OEM 700003563

Cartridge, Intelligent Valve, 2/pk
\$289.68

PUMP PARTS

MODEL: ACQUITY, nanoACQUITY, H-CLASS, I-CLASS



MODEL: ACQUITY I-CLASS BSM, ACQUITY UPLC BSM, ACQUITY UPLC I2V BSM

CTS-A11372
OEM 430001773

Tube Assy, Transducer to Check Valve, I2V
each \$43.25



MODEL: ACQUITY UPLC BSM, OPEN ARCHITECTURE UPLC, UPLC W/ONLINE SPE TECHNOLOGY

CTS-A11145
OEM 430001486

Tube Assy, System Outlet, SDS
each \$120.36



MODEL: ACQUITY I-CLASS BSM, ACQUITY UPLC BSM, ACQUITY UPLC I2V BSM

CTS-A11374
OEM 430001443

Tube Assy, SSV to I2V
each \$26.52



MODEL: ACQUITY H-CLASS QSM, ACQUITY ISOCRATIC SOLVENT MGR, ACQUITY M-CLASS μ ASM, ACQUITY M-CLASS μ BSM

CTS-A11342
OEM 430002357

Tube Assembly, Transducer to Check Valve
each \$41.62



MODEL: nanoACQUITY UPLC BSM/ASM, nanoACQUITY UPLC w/2D TECHNOLOGY

CTS-A11129
OEM 430001470

Tube Assy, SSV to In-line Filter
each \$54.06



MODEL: ACQUITY I-CLASS BSM, ACQUITY UPLC I2V BSM, ACQUITY UPLC BSM

CTS-11115
OEM 700002633

Filter, Air, Pump Handle
each \$5.10



MODEL: ACQUITY UPLC BSM, nanoACQUITY UPLC BSM/ASM

CTS-A11133
OEM 430001121

Tube Assembly, Transducer to Check Valve
each \$36.33



MODEL: ACQUITY I-CLASS BSM, ACQUITY UPC² BSM, ACQUITY UPLC I2V BSM, ACQUITY UPLC BSM

CTS-11116
OEM 700002632

Filter, Air, Acquity Pump
each \$6.12



MODEL: ACQUITY H-CLASS BIO QSM, ACQUITY H-CLASS QSM

CTS-11370
OEM 700005167

Filter, Air, Door
each \$18.16

AUTOSAMPLER

MODEL: ACQUITY, nanoACQUITY, H-CLASS, I-CLASS



MODEL: ACQUITY UPLC
SAMPLE MGR
CTS-A11151
OEM 700002644
Needle Assembly, PEEK
each \$106.08



MODEL: ACQUITY
UPLC SAMPLE MGR,
nanoACQUITY UPLC
SAMPLE MGR, OPEN
ARCHITECTURE UPLC
CTS-A11147
OEM 430001326
Sample Loop, 10µL
each \$68.54



MODEL: ACQUITY UPLC
SAMPLE MGR,
nanoACQUITY UPLC
SAMPLE MGR
CTS-A11381
OEM 205000362
Needle, SS, 30µL
each \$245.82



MODEL: ACQUITY
UPLC SAMPLE MGR,
nanoACQUITY UPLC
SAMPLE MGR
11-3595
OEM 700002569
2.5mL Wash Syringe
each \$171.87



MODEL: ACQUITY UPLC
SAMPLE MGR
CTS-A11142
OEM 430001084
Tube Assy, Inject Outlet
each \$72.42



MODEL: ACQUITY
UPLC SAMPLE MGR,
nanoACQUITY UPLC
SAMPLE MGR
CTS-11149
OEM 700002572
**Needle Seal O-Ring,
002 Kalrez**
each \$45.90



MODEL: ACQUITY UPLC SAMPLE MGR

CTS-11141 KIT

OEM 201000174

Acquity SM Performance Maintenance Kit

***Injector Valve Cartridge (700005236) not included**

***Rotor Seal & Pod Repair Kit included**

\$1,309.00

- | | | | |
|--|---|--|---|
| • 2.5mL Wash Syringe (11-3595) | 2 | • Tube Assy, Inject Outlet (CTS-A11142) | 1 |
| • Rotor Seal & Pod Repair Kit, Vespel 3-Groove for Acquity Everflow Injector Pod/Cartridge (700002765) (11-4134) | 1 | • Tube Assy, System Outlet, SDS (CTS-A11145) | 1 |
| • Needle Seal O-Ring, 002 Kalrez (CTS-11149) | 1 | • Sample Loop, 10µL (CTS-A11147) | 1 |
| • Filter, Air Chassis (CTS-11150) | 1 | • Needle Assembly, PEEK (CTS-A11151) | 1 |
| | | • 100µL Sample Metering Syringe, HP (CTS-A11167) | 1 |

AUTOSAMPLER

MODEL: ACQUITY, nanoACQUITY, H-CLASS, I-CLASS



MODEL: ACQUITY H-CLASS
BIO QSM, ACQUITY H-CLASS
SM-FTN, ACQUITY I-CLASS
SM-FTN

11-2570
OEM 405011492
Needle Seat
each \$174.42



MODEL: ACQUITY H-CLASS
SM-FTN, ACQUITY I-CLASS
SM-FTN

11-2591
OEM 405008854
Needle Guide
each \$13.26



MODEL: ACQUITY UPLC
SAMPLE MGR

11-4134 KIT
OEM Acquity Everflow Injector Pod/
Cartridge (700002765)
**Rotor Seal & Pod Repair
Kit, Vespel, 3-Groove for
Acquity Everflow Injector
Pod/Cartridge (700002765)**
\$350.00



MODEL: ACQUITY H-CLASS
BIO SM-FTN, ACQUITY
H-CLASS SM-FTN,
ACQUITY I-CLASS SM-FL,
ACQUITY I-CLASS SM-FTN,
ACQUITY M-CLASS µSM,
ACQUITY UPC² SM-FL,
ACQUITY UPLC SAMPLE
MGR, nanoACQUITY UPLC
SAMPLE MGR

CTS-A11167
OEM 700002570

**100µL Sample Metering
Syringe, HP**
each \$193.80



MODEL: ACQUITY H-CLASS

11-3602
OEM 430002452

Tubing, Pump Outlet, GP
each \$61.20



MODEL: ACQUITY H-Class
SM-FTN

11-2569 KIT
OEM 700005234

Seal Extension Tube
each \$128.00



MODEL: ACQUITY H-Class
SM-FTN

11-4116 KIT
OEM 700005215

Sample Needle Kit, 15µL
\$575.00



MODEL: ACQUITY H-CLASS SM-FTN

11-3601 KIT
OEM 201000234

Acquity H SM-FTN Performance Maintenance Kit
***Injector Valve Cartridge (700005236) not included**

***Rotor Seal & Pod Repair Kit included**
\$1,423.00

- | | | | |
|--|---|--|---|
| • Seal Extension Tube (11-2569) | 1 | • Rotor Seal & Pod Repair Kit,
Vespel, 3-Groove for Acquity
Everflow Injector Pod/Cartridge
(700002765) (11-4134) | 1 |
| • Tubing, Pump Outlet, GP
(11-3602) | 1 | | |
| • Filter, Air, Side Panel (11-3606) | 1 | • 100µL Sample Metering Syringe,
HP (CTS-A11167) | 1 |
| • Sample Needle Kit, 15µL
(11-4116) | 1 | | |

PUMP PARTS & AUTOSAMPLER

MODEL: ACQUITY, nanoACQUITY, H-CLASS, I-CLASS



MODEL: ACQUITY H-CLASS BIO QSM, ACQUITY H-CLASS BIO SM-FTN, ACQUITY I-CLASS BSM, ACQUITY UPLC BSM, OPEN ARCHITECTURE UPLC, nanoACQUITY UPLC SAMPLE MGR

11-2525

OEM 700002634

1/4" Short Comp. Screw (Gold-Plated), 10/pk

\$98.94



MODEL: ACQUITY CM-30S, ACQUITY H-CLASS BIO QSM, ACQUITY H-CLASS BIO SM-FTN, ACQUITY H-CLASS QSM, ACQUITY I-CLASS BSM, ACQUITY UPLC BSM, OPEN ARCHITECTURE UPLC, nanoACQUITY HDX MGR, nanoACQUITY UPLC BSM/ASM

11-2526

OEM 700002635

Ferrule Set, 1/16" ID, Two-Piece, 10/pk

\$85.00



MODEL: ACQUITY H-CLASS BIO QSM, ACQUITY I-CLASS BSM, ACQUITY UPLC BSM, OPEN ARCHITECTURE UPLC, nanoACQUITY HDX MGR, nanoACQUITY UPLC BSM/ASM

11-2529

OEM 700002645

Screw, Comp., 10-32, 304SS, (Gold-Plated), 10/pk

\$148.92



MODEL: ACQUITY UPLC SAMPLE MGR, nanoACQUITY UPLC SAMPLE MGR

CTS-11150

OEM 401000501

Filter, Air, Chassis

each \$8.16



MODEL: ACQUITY H-CLASS BIO SM-FTN, ACQUITY H-CLASS SM-FTN, ACQUITY I-CLASS SM-FTN

11-3606

OEM 401000694

Filter, Air, Side Panel

each \$12.24

DETECTOR LAMPS

MODEL: ACQUITY, nanoACQUITY



MODEL: 2489 DUAL WAVELENGTH UV, 2998 PDA, ACQUITY eLAMBDA PDA, ACQUITY UPLC PDA, ACQUITY UPLC TUV

11-4143

OEM 201000281

Lamp, Acquity PDA/TUV 2489/2998 Performance Maintenance Kit (2000 hr)

each \$688.00



MODEL: ACQUITY UPC² PDA, ACQUITY UPLC PDA, ACQUITY UPLC TUV

11-4169

OEM 700005269

Deuterium Lamp, High Brightness w/Intelligent Chip (2000 hr)

each \$780.00



MODEL: 2487, 2488, ACQUITY UPLC TUV, nanoACQUITY TUV

CTS-10465

OEM WAS081142

Deuterium Lamp (2000 hr)

each \$493.30



MODEL: ACQUITY eLambda PDA, ACQUITY UPLC PDA, ACQUITY UPLC TUV

CTS-21065

OEM 201000273

Deuterium Lamp, PDA/TUV w/Intelligent Chip (2000 hr)

each \$780.00

DETECTOR LAMPS

MODEL: 470, 474, 486, 996, 2487, 2488, 2996



MODEL: 486
CTS-8068
OEM WAT080687
Quartz Lens
each \$172.05



MODEL: 470
CTS-8389
Xenon Lamp, w/o Holder or Mirror
each \$443.41



MODEL: 486
CTS-10328
OEM WAT080244
Optics Cover Window
each \$28.82



MODEL: 474
CTS-10611
Xenon Lamp
each \$443.41



MODEL: 2487, 2488
CTS-A11184
OEM WAS081341
Lamp Housing Window Assembly
each \$150.86



MODEL: 996, 2996
CTS-10268
OEM WAT052586
Deuterium Lamp (2000 hr)
each \$586.50



MODEL: 486
CTS-10699
OEM 700000356
Deuterium Lamp, Long Life (2000 hr)
each \$571.20



MODEL: 2487, 2488, ACQUITY UPLC TUV, nanoACQUITY TUV
CTS-10465
OEM WAS081142
Deuterium Lamp (2000 hr)
each \$493.30



MODEL: 486
CTS-11065 KIT
OEM WAT052666
486 Performance Maintenance Kit
\$781.86

- D2 Long-Life Lamp (CTS-10699) 1
- Filter Foam (CTS-11063-01) 1
- Quartz Lens (CTS-8068) 1
- Slo-Blow Fuse 0.5A (CTS-11064-01) 1

DETECTOR LAMPS

AGILENT



MODEL: 8452A
CTS-00128
OEM 08452-60104
Deuterium Lamp (2000 hr)
each \$525.00



MODEL: 1100, 1200 DAD,
G1315A/B, G1365A/B
CTS-10473
OEM 2140-0590
Deuterium Lamp (1000 hr)
each \$545.40



MODEL: 1100, 1120, 1200
VWD, 1220 VWD, G1314A,
G1314B, G1314C
CTS-10494
OEM G1314-60100
**Long Life Deuterium Lamp
(2000 hr)**
each \$487.56



MODEL: G1314D, G1314E,
G1314F, G7114A/B
11-4111
OEM G1314-60101
**Long Life HiS Deuterium
Lamp, RFID, VWD (2000 hr)**
each \$590.00



MODEL: 1100, 1200 DAD,
G1315A/B, G1365A/B
CTS-10827
OEM 5181-1530
**Long Life Deuterium Lamp
(2000 hr)**
each \$770.10



MODEL: 8453, 8454
CTS-10594
OEM 2140-0605
Deuterium Lamp (1000 hr)
each \$545.40



MODEL: 1260, 1220 DAD,
G1315C/D, G1365C/D,
G7115A, G7165A
11-3984
OEM 2140-0820
**Long Life Deuterium Lamp,
RFID (2000 hr)**
each \$900.00



MODEL: 1290, G4212A/B,
G7117A/B/C/D
11-4109
OEM 5190-0917
**Long Life HiS Deuterium
Lamp, 8 pin, RFID
(2000 hr)**
each \$956.00



MODEL: 1100, 1200, 1220,
1260, G1315A/B, G1365A/B
CTS-A11218
OEM 2140-0813
**Long Life Deuterium Lamp
(2000 hr)**
each \$757.25



MODEL: 8453A, G1315A/B/
C/D, G1365A/B/C/D
CTS-12013
OEM G1103-60001
Tungsten Lamp (1000 hr)
each \$185.00



MODEL: 1100 DAD, 1200
DAD
11-4110
OEM 5182-1530
**Long Life Deuterium Lamp
(2000 hr)**
each \$865.30

LAMPS

DETECTOR LAMPS

APPLIED BIOSYSTEMS (ABI), KRATOS



MODEL: 120, 120A, 130, 130A, 230A, 1000S, SF757, SF759, SF759A, SF773, SF775, SF783, SF783A, SF785A

CTS-00025

OEM N2920149

Deuterium Lamp (1000 hr)
each \$372.30

SHIMADZU



MODEL: SPD-10, SPD-10AV, SPD-10AVP, SPD-20A, SPD-20AV

CTS-00135

OEM 228-34016-02

Deuterium Lamp (2000 hr)
each \$546.72

DIONEX



MODEL: DSA-1, VDM-1

CTS-00246

Deuterium Lamp (1000 hr)
each \$445.00

SPECTRA-PHYSICS



MODEL: 200, 201, 203, 204, 205, 206, 206PH, CE100, CE500, CE1000, CE2000, SP100, SP200, SPECTRACHROM 200, UV100, UV150, UV200, UV1000, UV2000, UV3000

CTS-00246

OEM 9551-0023

Deuterium Lamp (1000 hr)
each \$445.00

PERKINELMER



MODEL: BIO 19, LAMBDA 2, 5, 7, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 40, 800, 900

CTS-10854

OEM Old B0160917, L6022728

Deuterium Lamp (1500 hr)
each \$504.90

THERMO SCIENTIFIC (TSP)



MODEL: 200, 201, 203, 204, 205, 206, 206PH, CE100, CE500, CE1000, CE2000, SP100, SP200, SPECTRACHROM 200, UV100, UV150, UV200, UV1000, UV2000, UV3000

CTS-00246

OEM 9551-0023

Deuterium Lamp (1000 hr)
each \$445.00



MODEL: LC-480 PDA, LAMBDA BIO, LAMBDA 2, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 25, 35, 40, 45, 550, 551, 552, 552A, 553, 559, 559A, 800, 900

11-3343

OEM B0114620

Tungsten Lamp
each \$95.00



MODEL: UV6000

CTS-A123

OEM 108052

**Lamp Assembly, TSP
UV6000 Detector**
each \$504.90



MODEL: 200 SERIES, 785A

CTS-00025

OEM N2920149

Deuterium Lamp (1000 hr)
each \$372.30

DETECTOR LAMPS

WATERS



MODEL: 470
CTS-8389
Xenon Lamp, w/o Holder or Mirror
each \$443.41



MODEL: 474
CTS-10611
Xenon Lamp
each \$443.41



MODEL: 486
CTS-10699
OEM 700000356
Deuterium Lamp, Long Life (2000 hr)
each \$571.20



MODEL: 996, 2996
CTS-10268
OEM WAT052586
Deuterium Lamp (2000 hr)
each \$586.50



MODEL: 2487, 2488,
ACQUITY UPLC TUV,
nanoACQUITY TUV
CTS-10465
OEM WAS081142
Deuterium Lamp (2000 hr)
each \$493.30



MODEL: ACQUITY UPC²
PDA, ACQUITY UPLC PDA,
ACQUITY UPLC TUV
11-4169
OEM 700005269
Deuterium Lamp, High Brightness w/Intelligent Chip (2000 hr)
each \$780.00



MODEL: 2489 DUAL
WAVELENGTH UV, 2998
PDA, ACQUITY eLAMBDA
PDA, ACQUITY UPLC PDA,
ACQUITY UPLC TUV
11-4143
OEM 201000281
Lamp, Acquity PDA/TUV 2489/2998 Performance Maintenance Kit (2000 hr)
each \$688.00



MODEL: ACQUITY eLambda
PDA, ACQUITY UPLC PDA,
ACQUITY UPLC TUV
CTS-21065
OEM 201000273
Deuterium Lamp, PDA/TUV w/Intelligent Chip (2000 hr)
each \$780.00

TOOLS

TOOLS



CTS-00089
5/16" x 3/8" Open End Wrench,
each \$17.01



CTS-00090
1/4" x 5/16" Open End Hex Wrench
each \$17.36



CTS-00091
6" Adjustable Wrench
each \$32.78



CTS-1059
Microprobe - Straight
each \$11.74



CTS-1060
Microprobe - Arched
each \$11.74



CTS-1042
OEM WAT011042
Plunger Insertion Tool
each \$52.02



CTS-TT-1001
Terry Tool Tubing Cutter
each \$111.32



CTS-TT-1003
Replacement Cutting Wheels, 3/pk
\$26.25



11-2574
Tubing Cutter for Polymeric
1/16" to 1/8" OD Tubing
each \$23.85



11-2585
Tubing Cutter for Polymeric
3/16" to 5/16" OD Tubing
each \$23.94



44-1786
Tubing Cutter for Polymeric
1/8" to 3/4" OD Tubing
each \$12.25

FILTERS, FITTINGS & TUBING

MOBILE PHASE SOLVENT FILTERS & FEP TUBING



CTS-A11259
Solvent Filter 10µm SS with 1/16" Stem
each \$79.34



CTS-5531
Solvent Filter 10µm SS with 1/8" Stem
each \$36.53



11-1414
Solvent Filter 10µm SS with 1/16" Stem
each \$19.73



11-1418
Solvent Filter 10µm SS with 1/4-28
Nut/Ferrule for 1/8" OD Tubing
each \$24.89



11-1419
Solvent Filter 20µm SS with 5/16-24
Nut/Ferrule for 3/16" or 4mm OD Tubing
each \$34.84



11-1420
Solvent Filter 10µm SS with 1/4-28
Nut/Ferrule for 1/16" OD Tubing
each \$27.68

FILTERS, FITTINGS & TUBING

MOBILE PHASE SOLVENT FILTERS & FEP TUBING



11-1421
Solvent Filter 10µm SS with 1/4-28
Nut/Ferrule for 2mm OD Tubing
each \$25.87



11-1422
Solvent Filter 10µm SS with 1/4-28
Nut/Ferrule for 3mm OD Tubing
each \$25.87



11-1888
Adapter ETFE with 1/4-28 Female Port
for use with CTS-10843 (adapts glass
filter for use with Mobile Phase tubing
1mm to 1/8" OD)
each \$7.14



CTS-10843
Glass Solvent Filter
each \$34.33



11-1117
Tubing FEP 1/16" OD x 0.020" ID x 10ft
each \$17.39



11-1118
Tubing FEP 1/16" OD x 0.020" ID x 20ft
each \$32.68



11-1119
Tubing FEP 1/16" OD x 0.020" ID x 50ft
each \$79.28



11-2559
Tubing FEP 1/16" OD x 0.030" ID x 10ft
each \$17.39



11-1107
Tubing FEP 1/8" OD x 1/16" ID x 10ft
each \$26.19



11-1108
Tubing FEP 1/8" OD x 1/16" ID x 20ft
each \$49.20



11-1109
Tubing FEP 1/8" OD x 1/16" ID x 50ft
each \$119.40



11-1127
Tubing FEP 3mm OD x 2mm ID x 3m
each \$30.39



11-1128
Tubing FEP 3mm OD x 2mm ID x 6m
each \$57.08



11-1129
Tubing FEP 3mm OD x 2mm ID x 15m
each \$138.50



11-1112
Tubing FEP 3/16" OD x 1/8" ID x 10ft
each \$31.74



11-1113
Tubing FEP 3/16" OD x 1/8" ID x 20ft
each \$59.64



11-1114
Tubing FEP 3/16" OD x 1/8" ID x 50ft
each \$144.71



11-1122
Tubing FEP 1/4" OD x 0.188" ID x 10ft
each \$50.20



11-1123
Tubing FEP 1/4" OD x 0.188" ID x 20ft
each \$94.29



11-1124
Tubing FEP 1/4" OD x 0.188" ID x 50ft
each \$228.81

FILTERS, FITTINGS & TUBING

TUBING

Stainless Steel Tubing

	Part No.	Description	
	11-2612	Tubing Stainless Steel 1/16" OD x 250µm (0.010") ID x 10ft	each \$41.25
	11-2610	Tubing Stainless Steel 1/16" OD x 0.50mm (0.020") ID x 10ft	each \$41.25
	11-1201	Tubing Stainless Steel 1/16" OD x 0.75mm (0.030") ID x 10ft	each \$41.25
	11-2611	Tubing Stainless Steel 1/16" OD x 1mm (0.040") ID x 10ft	each \$41.25

PEEK Tubing (Black) – 0.004" ID x 1/16" OD

	Part No.	Description	
	11-1173	Tubing PEEK Black 1/16" OD x 0.004" ID x 5ft	each \$21.92
	11-1174	Tubing PEEK Black 1/16" OD x 0.004" ID x 10ft	each \$42.43
	11-1175	Tubing PEEK Black 1/16" OD x 0.004" ID x 20ft	each \$79.72
	11-1176	Tubing PEEK Black 1/16" OD x 0.004" ID x 50ft	each \$193.42
	11-1177	Tubing PEEK Black 1/16" OD x 0.004" ID x 100ft	each \$375.78

PEEK Tubing (Red) – 0.005" ID x 1/16" OD

	Part No.	Description	
	11-1151	Tubing PEEK Red 1/16" OD x 0.005" ID x 5ft	each \$21.92
	11-1152	Tubing PEEK Red 1/16" OD x 0.005" ID x 10ft	each \$42.43
	11-1153	Tubing PEEK Red 1/16" OD x 0.005" ID x 20ft	each \$79.72
	11-1154	Tubing PEEK Red 1/16" OD x 0.005" ID x 50ft	each \$193.42
	11-1155	Tubing PEEK Red 1/16" OD x 0.005" ID x 100ft	each \$375.78

PEEK Tubing (Yellow) – 0.007" ID x 1/16" OD

	Part No.	Description	
	11-1156	Tubing PEEK Yellow 1/16" OD x 0.007" ID x 5ft	each \$15.21
	11-1157	Tubing PEEK Yellow 1/16" OD x 0.007" ID x 10ft	each \$29.44
	11-1158	Tubing PEEK Yellow 1/16" OD x 0.007" ID x 20ft	each \$55.30
	11-1159	Tubing PEEK Yellow 1/16" OD x 0.007" ID x 50ft	each \$134.20
	11-1160	Tubing PEEK Yellow 1/16" OD x 0.007" ID x 100ft	each \$260.73

FILTERS, FITTINGS & TUBING

TUBING

PEEK Tubing (Blue) – 0.010" ID x 1/16" OD

	Part No.	Description	
	11-1136	Tubing PEEK Blue 1/16" OD x 0.010" ID x 5ft	each \$15.21
	11-1137	Tubing PEEK Blue 1/16" OD x 0.010" ID x 10ft	each \$29.44
	11-1138	Tubing PEEK Blue 1/16" OD x 0.010" ID x 20ft	each \$55.30
	11-1139	Tubing PEEK Blue 1/16" OD x 0.010" ID x 50ft	each \$134.20
	11-1140	Tubing PEEK Blue 1/16" OD x 0.010" ID x 100ft	each \$260.73

PEEK Tubing (Orange) – 0.020" ID x 1/16" OD

	Part No.	Description	
	11-1141	Tubing PEEK Orange 1/16" OD x 0.020" ID x 5ft	each \$15.21
	11-1142	Tubing PEEK Orange 1/16" OD x 0.020" ID x 10ft	each \$29.44
	11-1143	Tubing PEEK Orange 1/16" OD x 0.020" ID x 20ft	each \$55.30
	11-1144	Tubing PEEK Orange 1/16" OD x 0.020" ID x 50ft	each \$134.20
	11-1145	Tubing PEEK Orange 1/16" OD x 0.020" ID x 100ft	each \$260.73

PEEK Tubing (Green) – 0.030" ID x 1/16" OD

	Part No.	Description	
	11-1146	Tubing PEEK Green 1/16" OD x 0.030" ID x 5ft	each \$15.21
	11-1147	Tubing PEEK Green 1/16" OD x 0.030" ID x 10ft	each \$29.44
	11-1148	Tubing PEEK Green 1/16" OD x 0.030" ID x 20ft	each \$55.30
	11-1149	Tubing PEEK Green 1/16" OD x 0.030" ID x 50ft	each \$134.20
	11-1150	Tubing PEEK Green 1/16" OD x 0.030" ID x 100ft	each \$260.73

PEEK Tubing (Natural) – 0.040" ID x 1/16" OD

	Part No.	Description	
	11-1162	Tubing PEEK Natural 1/16" OD x 0.040" ID x 5ft	each \$15.21
	11-1163	Tubing PEEK Natural 1/16" OD x 0.040" ID x 10ft	each \$29.44
	11-1164	Tubing PEEK Natural 1/16" OD x 0.040" ID x 20ft	each \$55.30
	11-1165	Tubing PEEK Natural 1/16" OD x 0.040" ID x 50ft	each \$134.20
	11-1166	Tubing PEEK Natural 1/16" OD x 0.040" ID x 100ft	each \$260.73

FILTERS, FITTINGS & TUBING

HIGH PRESSURE FITTINGS

Stainless Steel Nut/Ferrules

	Part No.	Description	
	11-1237	Nut 10-32 Stainless Steel Male for 1/16" OD Tubing, 10/pk	\$42.13
	11-1239	Ferrule Stainless Steel for 1/16" OD Tubing, 10/pk	\$37.50
	11-2629	Ferrule 303 Stainless Steel for 1/16" OD Tubing, 10/pk	\$21.63
	Part No.	Description	
	CTS-11016 KIT	Swagelok Style Compression Fitting Kit, 10/pk • Nut 10 • Front Ferrule 10 • Back Ferrule 10	\$124.85

Plug 10-32 PEEK

	Part No.	Description	
	CTS-1820	Grip-tight PEEK 10-32 HPLC Column Plug	each \$3.37

Fingertight One-Piece Nut/Ferrules

	Part No.	Description	
	11-1240	Fingertight One-Piece 10-32 PEEK Male Nut/Ferrule for 1/16" Tubing, 10/pk	\$34.68

Fingertight Two-Piece Nut/SealTight Ferrules

	Part No.	Description	
	11-1257	Fitting 10-32 Fingertight PEEK Short Male Nut/SealTight PEEK Ferrule for 1/16" OD Tubing, 10/pk	\$62.33
	11-1259	Fitting 10-32 Fingertight PEEK Long Male Nut/SealTight PEEK Ferrule for 1/16" OD Tubing, 10/pk	\$64.27
	11-1269	Ferrule SealTight PEEK for 1/16" OD Tubing, 10/pk	\$43.37

Fingertight Two-Piece Nut/Ferrules

	Part No.	Description	
	11-1213	Fitting 10-32 Fingertight PEEK Double Wing-Nut Male Nut/PEEK Ferrule for 1/16" OD Tubing, 10/pk	\$62.33
	11-1217	Fitting 10-32 Fingertight PEEK Long Male Nut/PEEK Ferrule for 1/16" OD Tubing, 10/pk	\$62.33
	11-1255	Ferrule PEEK for 1/16" OD Tubing, 10/pk	\$44.29

Fingertight RheFlex Two-Piece Nut/Split Ferrules

	Part No.	Description	
	11-1271	Fitting 10-32 RheFlex PEEK Male Nut/Split Ferrule for 1/16" OD Tubing, 10/pk	\$77.21
	11-1274	Ferrule Split PEEK for 1/16" OD Tubing, 10/pk	\$40.75

PUMP TROUBLESHOOTING PROCEDURES

You can troubleshoot most Waters M6000, 510, 590, 600, and 610 pumping problems in a short time by observing the pressure meter on your pump. The following procedures will show you how.

RAMP TEST

This is the first test to try, as it involves the least amount of work and disassembly, and it will find most pumping problems.

1. Disconnect the outlet of the pump from the rest of your HPLC system.
2. Connect a short piece of tubing to the pump outlet, and put the other end of this tube into a beaker.
3. Prime the pump thoroughly with methanol. Make sure you have drawn enough methanol through the solvent inlet line to ensure the pump is pumping methanol.
4. Remove the tubing at the pump outlet and install a plug fitting to stop flow.
5. Set the pressure limit for 4000-5000 psi.
6. Set the flow rate for 0.3-1.0 ml/min and observe the psi meter and the indicator rods. With a properly-operating pump, you will see a smooth increase in pressure until the pressure limit is reached.

Below are two examples of the most common symptoms of Ramp Test failure and how to resolve them. The examples use the left and right side to describe the symptoms: interchange the left and right in the text if needed to match your symptoms.

SYMPTOM #1

While watching the left indicator rod coming out, the pressure increases. When the right indicator rod comes out, the pressure stops increasing and stays about the same. When the left indicator rod again begins coming out, the pressure again begins increasing.

ANALYSIS

The right inlet check valve is not working. This symptom is fairly easy to understand. The inlet check valve is either stuck open, and the mobile phase is sloshing back and forth as the plunger goes in and out, or it is stuck shut, never allowing mobile phase into the pump head.

Possible Problem	Solution
Check valve dirty	Clean and rebuild
Seat worn out	Clean and rebuild

SYMPTOM #2

While watching the left indicator rod coming out, the pressure increases. When the right indicator rod comes out, the pressure drops almost back to zero. When the left indicator rod again begins coming out, the pressure again increases.

ANALYSIS

The left outlet check valve is leaking back. This symptom is more difficult to understand, until you think about where the mobile phase is going. When the left plunger comes out, the pressure increases. When the right plunger comes out, it pumps mobile phase out, into the reference valve or tee fitting, and over to the left side. The left outlet check valve is leaking backwards, allowing what the right side is pumping to enter and fill the left side as the left plunger is going in.

Possible Problem	Solution
Check valve dirty	Clean in ultrasonic cleaner; flush thoroughly with methanol in priming syringe; disassemble and rebuild check valve
Air bubble trapped in check valve	Reprime with methanol

OTHER SYMPTOMS

If your symptoms differ from these, you may have multiple problems and should use the Modified Ramp Test. This test is also useful if you want to verify your troubleshooting from the above steps or you are unsure of your diagnosis.

MODIFIED RAMP TEST

(Perform steps 1 - 5 from the standard Ramp Test.)

1. Disconnect the outlet of the pump from the rest of your HPLC system.
2. Connect a short piece of tubing to the pump outlet and put the other end of this tube into a beaker.
3. Prime the pump thoroughly with methanol. Make sure you have drawn enough methanol through the solvent inlet line to ensure the pump is pumping methanol.
4. Remove the tubing at the pump outlet and install a plug fitting, to stop flow.
5. Set the pressure limit for 4000-5000 psi.
6. Disconnect the tube between the outlet check valve and the reference valve or tee fitting, at the reference valve or tee, on the side of the pump not being tested (if you are testing the left side, disconnect the right side).
7. Put a plug fitting into the reference valve or tee where you removed the tube. You may want to put a towel under the open end of the disconnected tube; it will drip a little during the following steps. Do not cap the dripping tube.
8. Set the flow to 1 ml/min, and observe the psi meter and the indicator rod on the side being tested.

SYMPTOM #1

The pressure increases steadily while the plunger is coming out and holds pressure while the plunger is retracting. Analysis: This pump head is pumping okay.

SYMPTOM #2

The pressure never increases above 0 psi. Analysis: The inlet check valve is not working. Reprime this pump head and try again. If this fails, see Symptom #1 of the Ramp Test to repair.

SYMPTOM #3

The pressure increases steadily while the plunger is coming out, but drops abruptly while the plunger is retracting. Analysis: The outlet check valve is leaking back. See symptom #2 of the Ramp Test to repair.

SYMPTOM #4

The pressure increases steadily during the first plunger out stroke, but increases less during the next out strokes; the pressure holds while the plunger is retracting solution. The plunger seal is beginning to leak, or the inlet check valve is leaking back slightly. To repair, look at the weep hole at the bottom of the support bushing, or between the pump head and the support bushing, and see if the mobile phase has been leaking past the plunger seal. If so, slightly tighten the two allen head screws holding the pump head and retest. If the pump head is tight against the support bushing, it is time to replace the plunger seal. If the inlet check valve is leaking back, see symptom #1 of the Ramp Test to repair.

OTHER SYMPTOMS

If you need any further assistance, please feel free to call 952.895.8292 or toll-free at 800.682.3295 during the hours of 8 a.m. to 5 p.m. CST. Thanks for calling!

ACKNOWLEDGMENTS

Sciencix is not a distributor of OEM products.

OEM part numbers provided for cross reference purposes only.

ABI™ is a trademark of Kratos International, Inc., a division of PerkinElmer, Inc.

Acquity UPLC® is a registered trademark of Waters Corporation

Agilent® is a registered trademark of Agilent Technologies, Inc.

Agilent Technologies® is a registered trademark of Agilent Technologies, Inc.

Alliance® is a registered trademark of Waters Corporation

Beckman® is a registered trademark of Beckman Coulter, Inc.

Delta-Prep™ is a trademark of Waters Corporation

Dionex™ is a trademark of Thermo Fisher Scientific, Inc.

Gilson® is a registered trademark of Gilson

Grip-tight™ is a trademark of Chromatography Technology Services Corp.

Hitachi® is a registered trademark of Kabushiki Kaisha Hitachi Seisakusho DBA Hitachi, Ltd.

Kalrez® is a registered trademark of E.I. DuPont de Nemours and Company

NanoAcquity UPLC® is a registered trademark of Waters Corporation

PEEK™ is a registered trademark of Victrex, PLC

PerformancePLUS™ is a trademark of Waters Corporation

PerkinElmer® is a registered trademark of PerkinElmer, Inc.

Rheodyne® is a registered trademark of IDEX Health & Science, LLC

Shimadzu® is a registered trademark of Shimadzu Corporation

Spectra-Physics® is a registered trademark of Spectra-Physics, Inc.

Super Seal™ is a trademark of Chromatography Technology Services Corp.

Swagelok® is a registered trademark of Swagelok Company

System Gold® is a registered trademark of Beckman Coulter, Inc.

TSP® was previously a registered trademark of Thermo Separation Products, Inc.

VespeL® is a registered trademark of E.I. DuPont de Nemours and Company

Waters® is a registered trademark of Waters Corporation

WISP® is a trademark of Waters Corporation



14261 W. Burnsville Pkwy
Burnsville, MN 55306

ISO 9001 : 2015

BGB GC|LC
MS|CE

www.bgb-shop.com

Switzerland:	BGB Analytik AG • Rohrmattstrasse 4 • 4461 Böckten • Phone +41 61 991 00 46 • Fax +41 61 991 00 25 • sales@bgb-analytik.com BGB Analytik SA • Route de Pré-Bois 20 • 1215 Genève 15 • Phone +41 22 788 49 43 • Fax +41 22 788 49 45 • sales.fr@bgb-analytik.com
Benelux:	BGB Analytik Benelux B.V. • Drielandendreef 42-44 • 3845 CA Harderwijk • Phone +31 341 700270 • Fax +31 341 700271 • sales.benelux@bgb-analytik.com
France:	BGB Analytik France S.A.S. • 81 Vie de l'Etraz • 01630 St. Jean de Gonville • Phone +33 450 488567 • Fax +33 450 562378 • sales.fr@bgb-analytik.com
Germany:	BGB Analytik Vertrieb GmbH • Mühlestraße 1 • 79539 Lörrach • Phone +49 7623 7173110 • Fax +49 7623 7173199 • sales.de@bgb-analytik.com
Turkey:	BGB Analytik Laboratuvar Malzemeleri Ticaret A.Ş. • Cevizli Mah. 30 Ağustos Cad. No: 13 • B-Blok, Kat: 14 Daire 127 • 34846 Maltepe, İstanbul Phone +90 2169092048 • sales.tr@bgb-analytik.com
USA:	BGB Analytik USA LLC • 8407 F Richmond Hwy • Alexandria, VA 22309 • Phone 1-703-780-1500 • Fax 1-703-991-9131 • sales.usa@bgb-analytik.com