

Thermo Scientific

TRACE GC Ultra

Gas Chromatograph

Spare Parts Catalog

PN 31709210, Revision November 2012



TRACETM GC Ultra Spare Parts Catalog

November 2012 Edition

Part Number 317 092 10

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Printed in Italy

Published by Thermo Fisher Scientific S.p.A., Strada Rivoltana, 20090 Rodano - Milan - Italy

Tel: +39 02 95059373 Fax: +39 02 95059388

Printing History: First Edition, released June 1998; Second Edition, released November 1998; Third Edition, released June 1999
Fourth Edition, released June 2001; Fifth Edition, released January 2002; Sixth Edition, released September 2002
Sevenths Edition, released May 2003; Eighth Edition released, October 2003; Ninth Edition, released April 2004
Tenth Edition, released July 2004; Eleventh Edition, released March 2005; Twelfth Edition, released September 2005
Thirteenth Editions, released January 2006; Fourteenth Edition, released June 2006; Fifteenth Edition, released January 2007
Sixteenth Edition, released May 2007; Seventeenth Edition, released October 2007; Eighteenth Edition, released April 2008
Nineteenth Edition, released July 2008; Twelfth Edition, released April 2009; Twenty-first Edition, released September 2009
Twenty-second Edition, released May 2010; Twenty-third Edition, released December 2010; Twenty-fourth Edition, released October 2011
Twenty-fifth Edition, released November 2012

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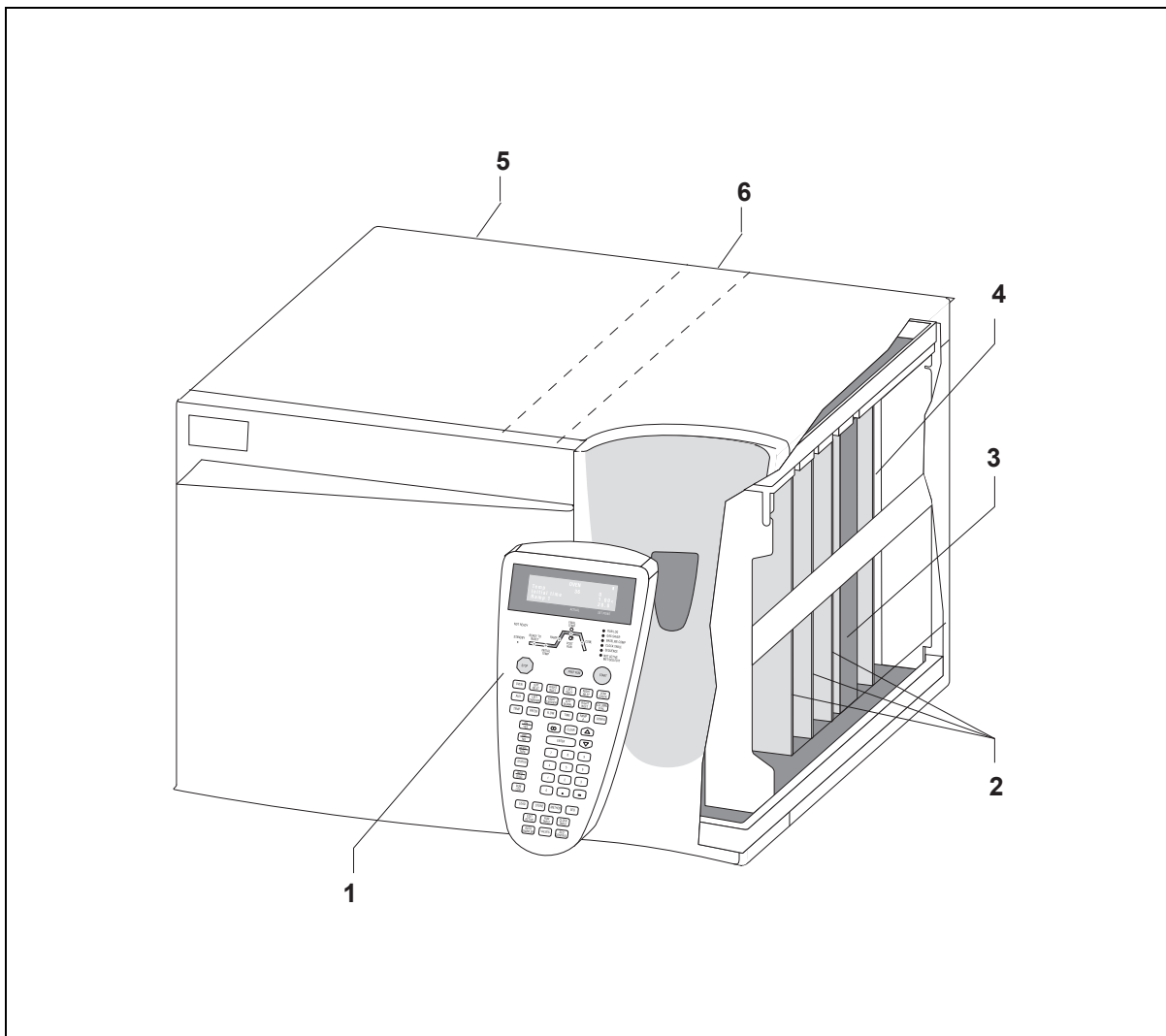
Electronics

Table 1-1. Electronics spare parts

No	Description	Qty.	P/N
1	Keyboard assembly		43210025
	Motherboard with bracket		23648350
2	FID 201 printed circuit board (this board replaces the FID controller printed circuit board PN 236 483 20)		23648580
2	NPD controller printed circuit board		23648355
2	ECD controller printed circuit board		23648325
2	FPD controller printed circuit board		23648365
2	PID controller printed circuit board		23648360
2	TCD controller printed circuit board		23648346
2	PDD controller printed circuit board		23648510
2	DRH 2000 printed circuit board (for Ultra Fast Module applications)		23648600
2	External detector printed circuit board		23648485
3	CPU printed circuit board		23648345
3	CPU/LAN printed circuit board		23648347
4	Analog feedback printed circuit board		23648340
5	EPC printed circuit board		23648330
	Detector simulator printed circuit board		23648420
	Cryo control printed circuit board		23648565
	Thermocouple card adapter for PTV/HOT OC		23648400
	Semiautomatic OC actuator printed circuit board driver		23648395
	PC board Power assy		23699500
6	Power supply assembly without breaker		20806010
	Breaker 16 A (115 V - 230 V) for power supply assembly		23709916
6	Transformer 48 V (FID/ECD/FPD/TCD/PTV) It Includes: protection disk, metal plate, 6 x 30 mm fixing screws, spacer (PN 26801870)		23043443

Table 1-1. Electronics spare parts

	Transformer 48 V (NPD). It includes: protection disk, metal plate, 4 x 20 mm fixing screws, spacer (PN 26800310)		23043444
	Fuse, Slow-blow, 2 A, 5x20 mm		28204019
	Fuse, Slow-blow, 5 A, 5x20 mm		28204023



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Pneumatics

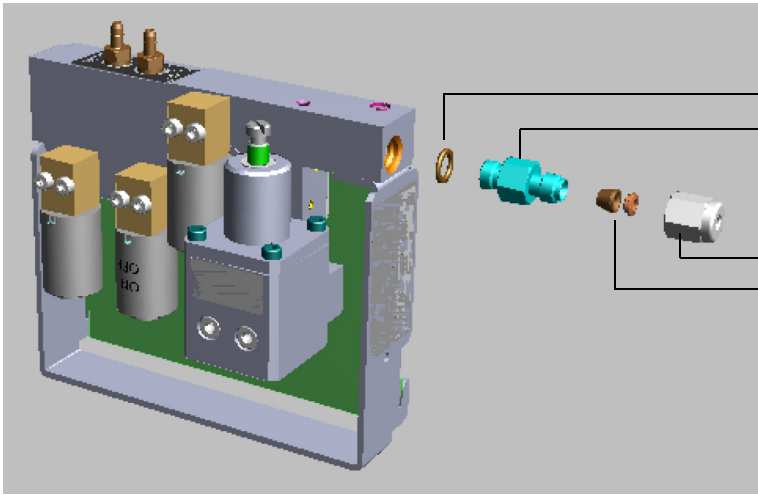
Table 2-1. Digital Carrier Controller (DCC Module) Spare parts

No	Description	Qty.	P/N
1	Flow regulator mod 250 kPa for OC or PKD injector		42509136
1	Flow regulator mod 1000 kPa for OC or PKD injector		42509141
2	Flow regulator mod 250 kPa for PPKD injector		42509137
2	Flow regulator mod 1000 kPa for PPKD injector		42509142
3	Flow regulator mod 250 kPa for S/SL and PTV injectors		42509175
3	Flow regulator mod 1000 kPa for S/SL and PTV injectors		42509176
4	Flow regulator mod ECD only (AA)		42509063
5	Flow regulator mod ECD, PID, FPD, FID w/o make-up (AB)		42509064
5	Flow regulator mod TCD only (AB-HWD)		42509065
6	Flow regulator mod NPD, ECD, PID, FPD, FID w/o make-up (AD)		42509067
6	Flow regulator mod ECD, PID, FPD, FID with make-up (AC)		42509066

Table 2-2. Digital Pressure Flow Controller Miscellanea Spare parts

No	Description	Qty.	P/N
1	Cable for carrier gas flow regulator 26 poles		23030603
2	Cable for detector gas flow regulator 20 poles		23030703
3	O-ring for injector/detector to gas regulator connection		29001303
4	O-ring PARKER COL TYPE V884-75 BROWN		29001301
5	Three-way Solenoid valve for DCC switching		40517124
6	Built in active carbon filter		28113195
7	Column-flow meter connector		24507000
8	Charcoal filter kit		19050198

Table 2-3. Digital Pressure Flow Controller Gas Fittings

No	Description	Qty.	P/N
	Kit DCC Gas Fittings The kit includes: 1. O-ring for 1/8" union to gas regulator connection 2. Joint 5/16" plus filter 3. Conical ferrule 1/8" 4. Nut 5/16" for 1/8" tubing	1	19050625
 The image shows a 3D CAD model of a digital pressure flow controller. The device is a rectangular metal block with a green printed circuit board (PCB) mounted on its bottom. On the top of the block, there are two solenoid valves with yellow and blue coils, and a central pressure sensor with a green top. To the right of the main unit, the components of the gas fitting kit are shown with leader lines: 1. A small O-ring, 2. A blue 5/16" joint with a built-in filter, 3. A small conical ferrule, and 4. A 5/16" nut for 1/8" tubing.			

3

Split/Splitless Injector

Table 3-1. Split/splitless Injector spare parts

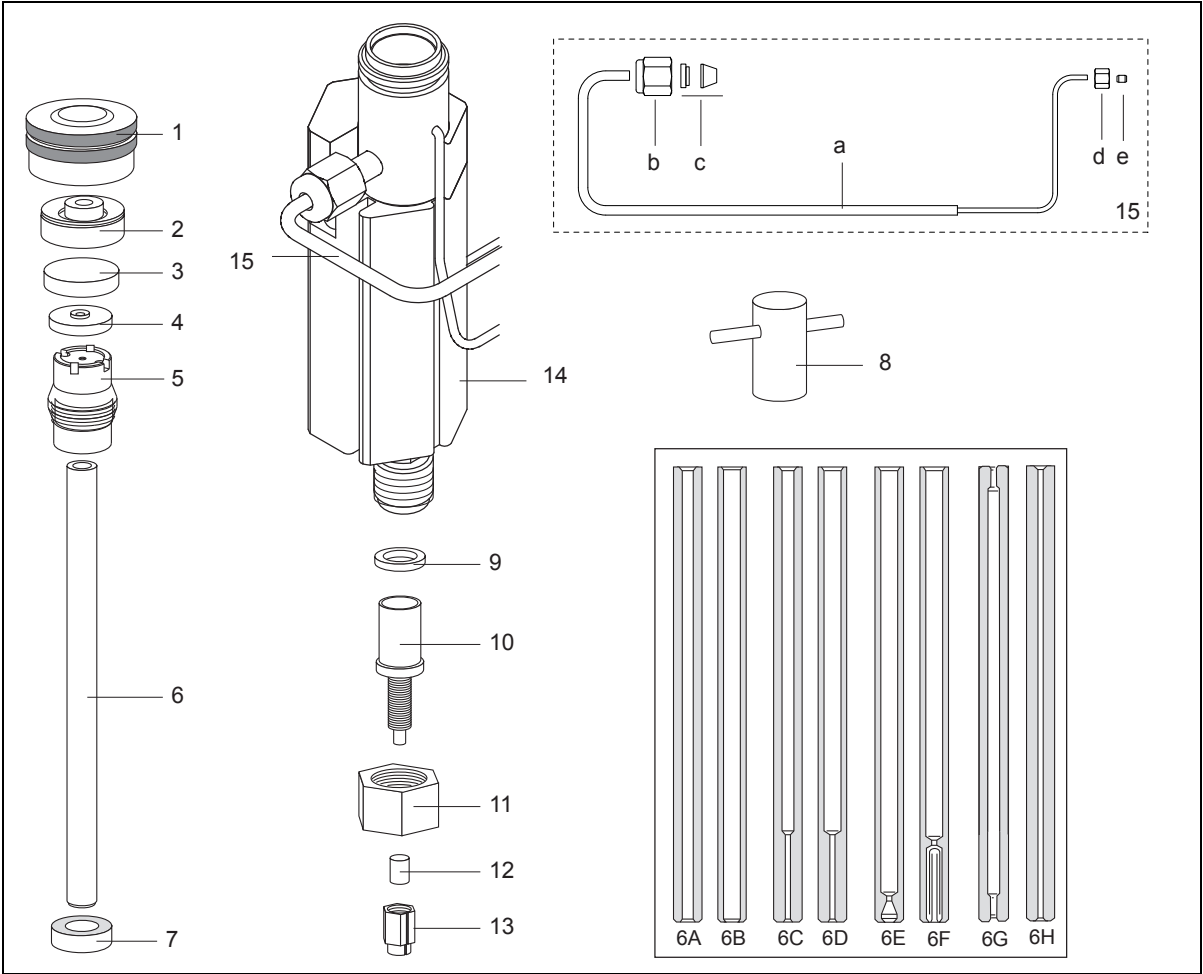
No	Description	Qty.	P/N
1	Septum cap		35001050
1	Septum cap to be used with TriPlus HS		34750004
2	Septum holder		23303015
3	Septum	50	31303211
4	Septum support		35005433
5	Liner cap		29004290
6A	Liner, split 3 mm	5	45350031
6B	Liner, split 5 mm	5	45350030
6C	Liner, splitless 3 mm	5	45350032
6D	Liner, splitless 5 mm	5	45350033
6E	Liner, wide bore columns	5	45300310
6F	Liner, for polar solvent	2	45300320
6G	Liner double gooseneck for nano-volumes injections	2	45322080
6H	Liner, 0.8 mm	5	45352083
7	Liner seal	10	29033406
8	Liner cap removing tool		20507010
9	Silver seal	10	29033629
10	Terminal fitting for capillary columns		34705451
11	Nut for terminal fitting	2	35022125
12	Graphite ferrule for 0.1 and 0.25 mm ID column	2	29013488
12	Graphite ferrule for 0.32 mm ID column	2	29013487
12	Graphite ferrule for 0.53 mm ID column	2	29013486
13	Fixing nut for column	5	35032423
	Brass ferrule, 1.6 mm ID		29004144
	Brass ferrule, 2 mm ID		29004345
14	S/SL main body including heating block without filter		24705230

Table 3-1. Split/splitless Injector spare parts (Continued)

15	Kit Assy Split line 1/8" a: Tubing split 1/8" b: Brass nut 5/16" for 1/8" tubing c: Brass Front/Back ferrule for 1/8" tubing d: Nut M6x0.75 mm e: 1/16" ID Brass ferrule	1	19050700
	Brass front/back ferrule for 1/8" tubing (set of 5)	1	29024666
	Brass nut 5/16" for 1/8" tubing	1	35003062
	Brass ferrule 1.6 mm ID (set of 10)	1	29034144
	Nut M6x0.75 mm		35000403
	Blanking disk for leak test	10	29032655
	S/SL body- Inj/Det cassette fixing nut	1	35002403
	Adapters for packed columns	See Chapter 19	
	Split line filter		28113180
	Carrier filter		28113190
	Heater 115 V		35425058
	Heater 230 V		35425057
	Temperature sensor		40311230
	Assy Double Injector S/SL71 (w/o heater and temp heater)		29902279
	DoublePro injector heating block (it includes two P/N 403 112 30 and two P/N 354 250 57)		22206138
	Kit SSL-BKF (including the Tee holder and 1 Tee connector with ferrules and nuts)		19050244
	Kit Tee Holder for BKF (Tee holder including 1 Tee connector with ferrules and nuts)		19050249
	Assy Tee connector for BKF holder (including Tee connector with ferrules and nuts, clamp and screw)		19050251
	Tee connector		34708447
	Locking nut M4 carved		35002423
	Graphite ferrule 0.8 mm ID	10	29053486
	Graphite ferrule 1.0 mm ID	2	29013485

Table 3-1. Split/splitless Injector spare parts (Continued)

	Deactivated uncoated precolumn, 2 m length; 0.5 mm ID		26060375
	Stainless Steel Tube 0.5 m length; 0.9 mm OD; 0.5 mm ID for Tee connector		39103305



4

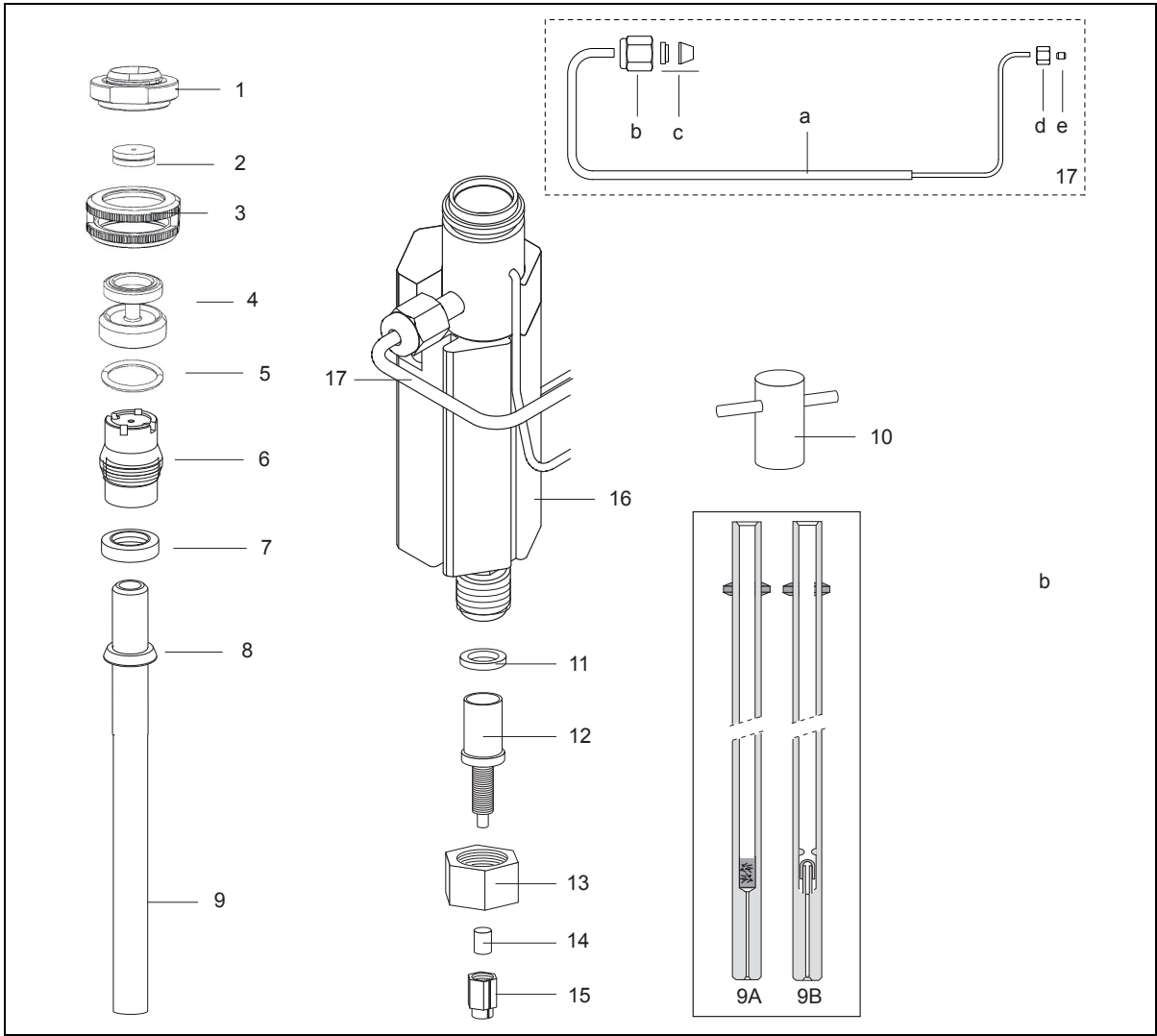
Large Volume Splitless Injector

Table 4-1. Large Volume Splitless Injector spare parts

No	Description	Qty.	P/N
	LVI Analytical kit for SSL The kit comprises: the parts 1, 2, 3, 4, 5, 9A, 17, P/N 260080010, P/N 35003850, P/N 20502152, P/N 36500495	1	19050243
1	Septum Cap		35001325
2	11-mm OD BTO Septum with center guide	10	31303235
3	Ring Nut		35001324
4	Septum Holder		24752026
	LVSL Adapter removing tool		20502152
5	O-ring		29001317
6	Liner Cap		29004290
7	Metal Ring (already installed on the liner; see 9A and 9B)		---
8	Vespel liner seal (already installed on the liner; see 9A and 9B)		---
9A	Glass liner packed with deactivated glass wool	2	45322065
	Deactivated glass wool (10 g)		30206703
9B	Deactivated laminar liner (optional)	2	45322067
10	Liner cap removing tool		20507010
11	Silver seal	10	29033629
12	Terminal fitting for cap. columns		34705451
13	Nut for terminal fitting	2	35022125
	Washer		35604015
14	Graphite ferrule for 0.25 mm ID column	2	29013488
14	Graphite ferrule for 0.32 mm ID column	2	29013487
14	Graphite ferrule for 0.53 mm ID column	2	29013486
	Brass ferrule, 1.6 mm ID		29004144
	Brass ferrule, 2 mm ID		29004345
15	Fixing nut for column	5	35032423
	5 m, 0.32 mm ID, uncoated pre-column	1	26080010

Table 4-1. Large Volume Splitless Injector spare parts (Continued)

	Universal glass press-fit for pre-column /column connection	5	35003850
16	S/SL main body including heating block without filter		24705225
17	Kit Assy Split line 1/16" a: Tubing split 1/8" b: Brass nut 5/16" for 1/8" tubing c: Brass Front/Back ferrule for 1/8" tubing d: Nut M6x0.75 mm e: 1/16" ID Brass ferrule	1	19050710
	Kit assy dummy filters	1	19050690
	Brass front/back ferrule for 1/8" tubing (set of 5)	1	29024666
	Brass nut 5/16" for 1/8" tubing	1	35003062
	Brass ferrule 1.6 mm ID (set of 10)	1	29034144
	Nut M6x0.75 mm		35000403
	100 µL syringe (0.63/50/cone) removable needle		36500495
	S/SL body- Inj/Det cassette fixing nut	1	35002403
	Blanking disk for leak test	10	29032655
	Split line filter		28113180
	Heater 115 V		35425058
	Heater 230 V		35425057
	Temperature sensor		40311230



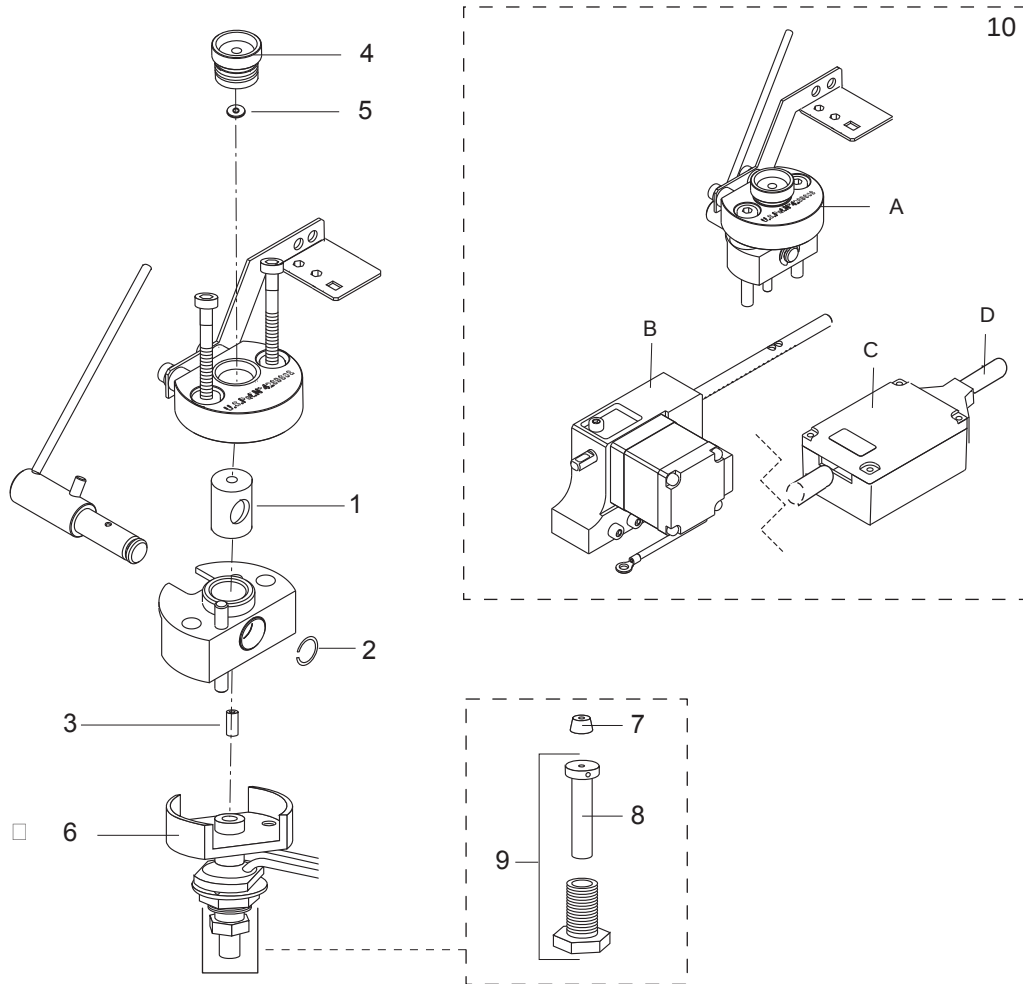
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Cold On-Column Injector for Standard Automatic Injections

This inlet works in combination with the TriPlus autosampler allowing standard injections into a 0.53-mm ID capillary column.

Table 5-1. Cold on-column Injector for TriPlus autosampler spare parts

No	Description	Qty.	P/N
1	Seal, PTFE		29007001
2	Clip		42600357
3	Needle guide	2	45322036
4	Seal Holder		35001471
5	O-ring	2	29011302
6	OC base	1	29902256
7	Vespel ferrule for 0.25 mm ID column	2	29013461
7	Vespel ferrule for 0.32 mm ID column	2	29013460
7	Vespel ferrule for 0.53 mm ID column	2	29013471
8	Backwasher/cooling sleeve for OC		45200001
9	Column retaining nut and backwasher for OC		45210001
	Cooling fan 115 V		40600687
	Cooling fan 230 V		40600682
	Solenoid valve, secondary cooling		40516015
10	Kit On-Column Actuator for TriPlus The kit includes: • A = Cold on-column injector head for TriPlus sample • B = Automatic actuator Assy • C = Control Interface • D = Control interface to TriPlus sampler connecting cable		19050262 29902252



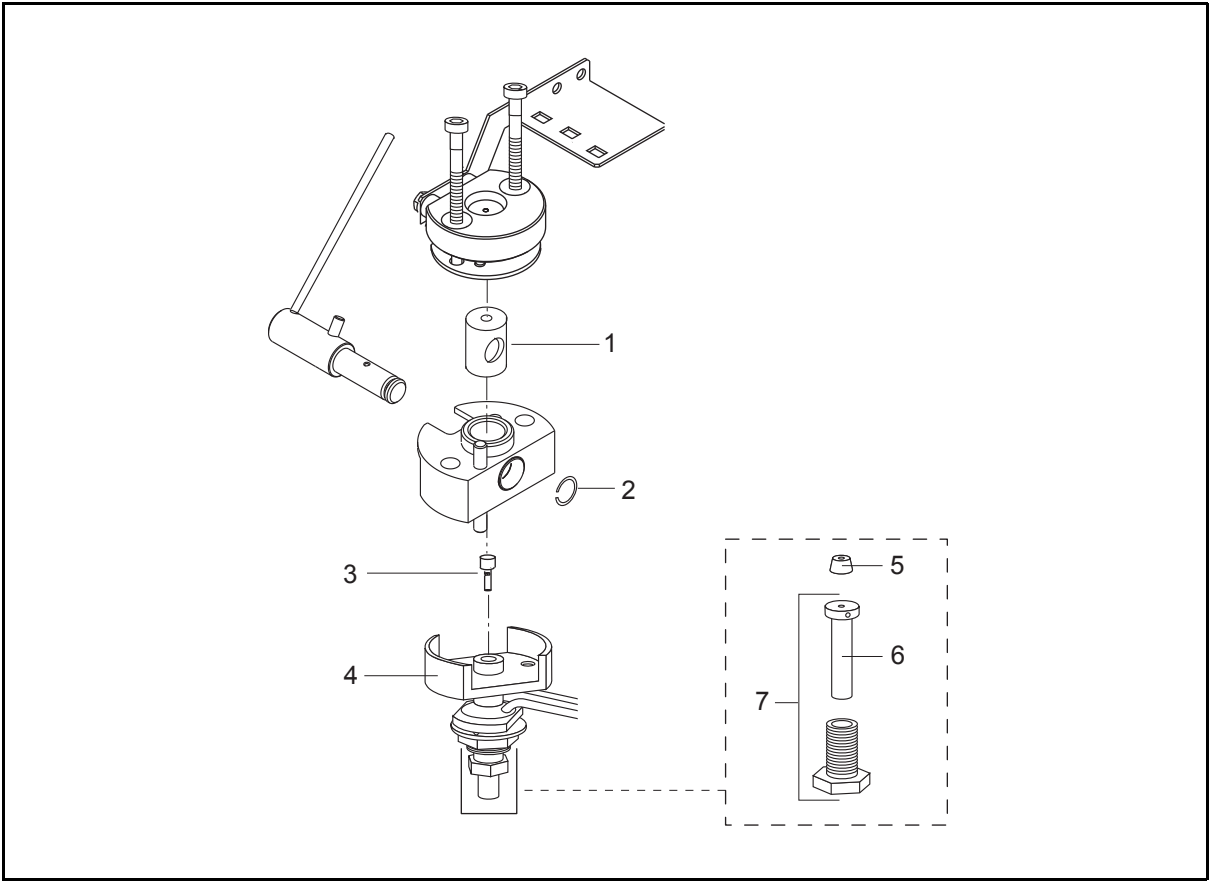
6

Cold On-Column Injector Direct Narrow-bore

This inlet works in combination with the TriPlus autosampler allowing direct injections into a 0.25/0.32-mm ID capillary column without the need of using a pre-column.

Table 6-1. Cold on-column Injector for TriPlus autosampler spare parts

No	Description	Qty.	P/N
1	Seal, PTFE		29007106
2	Clip		42600357
3	Needle guide	2	45322063
4	Seal Holder		35001471
5	Vespel ferrule for 0.25 mm ID column	2	29013461
5	Vespel ferrule for 0.32 mm ID column	2	29013460
5	Vespel ferrule for 0.53 mm ID column	2	29013471
6	Backwasher/cooling sleeve for OC		45200001
7	Column retaining nut and backwasher for OC		45210001
	Kit On-Column direct narrow-bore for TriPlus		19050263
	Cooling fan 115 V		40600687
	Cooling fan 230 V		40600682
	Solenoid valve, secondary cooling		40516015
	On-Column injector head assy		29902248
	Kit upgrade OC direct narrow bore for TriPlus		19050263
	Syringe 10 µL for OC narrow-bore	1	36500497
	Spare needle for syringe PN 36500497	5	36560030
	Crimp caps, 11 mm (set of 100)	1	38606100
	Snap cap, 20 mm (set of 10)	1	38610015
	Rubber o-ring for 11 mm caps (Set of 100)	1	29050013
	Rubber o-ring for 20 mm caps (Set of 10)	1	29030043
	Tin discs (set of 100)	1	25208014
	Crimp-top vial, 2 mL (set of 100)	1	24074003
	Vials, 10 mL (set of 5)	1	24030000

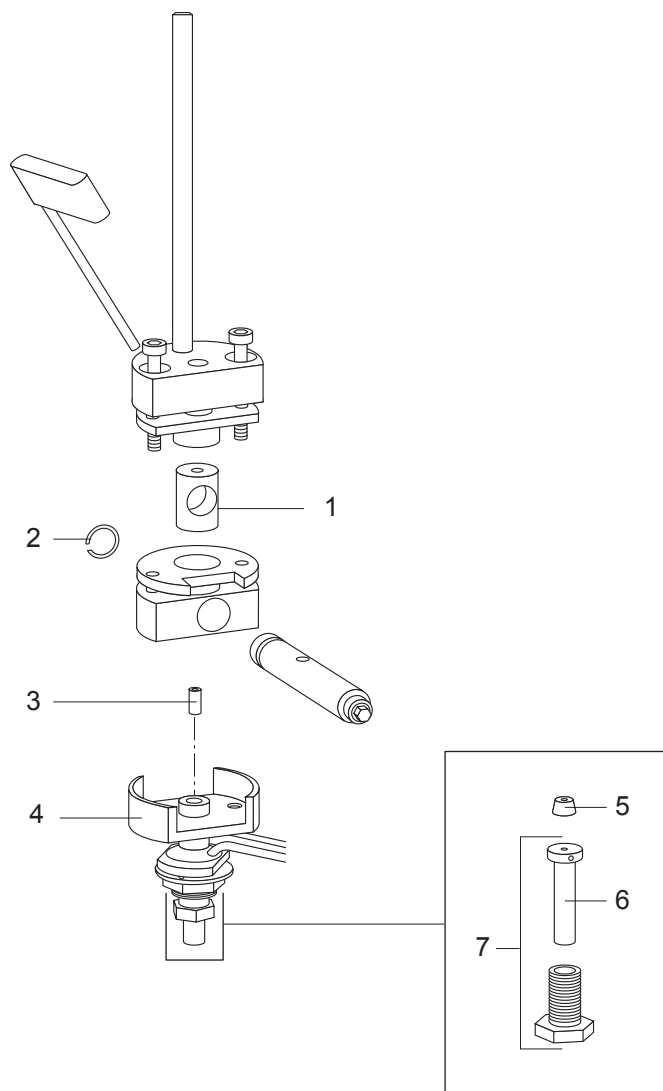


7

Cold On-Column Injector

Table 7-1. Cold on-column Injector spare parts

No	Description	Qty.	P/N
	Manual cold on-column injector head		29902250
1	Seal, PTFE		29007001
2	Clip		42600357
3	Needle guide (manual injections)	2	45322036
4	OC base		29902256
5	Vespel ferrule for 0.25 mm ID column	2	29013461
5	Vespel ferrule for 0.32 mm ID column	2	29013460
5	Vespel ferrule for 0.53 mm ID column	2	29013471
6	Backwasher/cooling sleeve for OC		45200001
7	Column retaining nut and backwasher for OC		45210001
	Cooling fan 115 V		40600687
	Cooling fan 230 V		40600682
	Solenoid valve, secondary cooling		40516015
	HOT OC kit		19050090



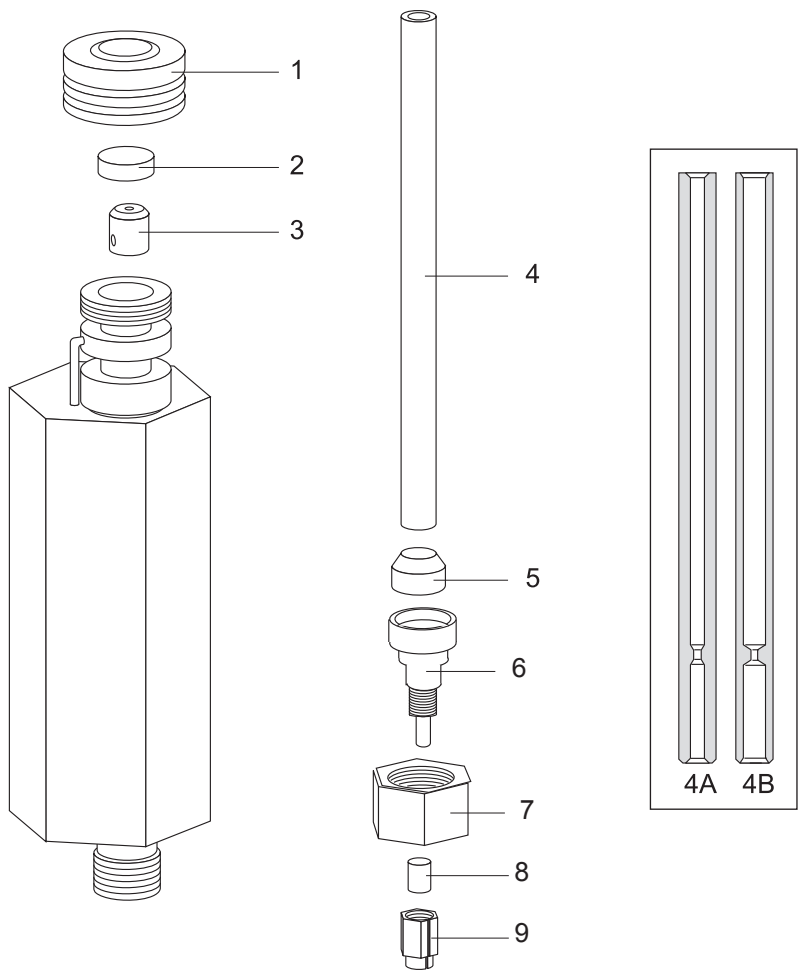
8

Purged Packed Column Injector

Table 8-1. Purged Packed Column Injector spare parts

No	Description	Qty.	P/N
1	Septum cap		35001051
1	Septum cap for TriPlus HS		34750003
2	Septum	50	31303231
3	Septum support		45302048
4A	Liner, wide bore 2 mm	2	45322050
4B	Liner, wide bore 4 mm	2	45322049
5	Liner seal	10	29033405
6	Adapter for wide bore columns		34700303
7	Adapter retaining nut		35002404
8	Graphite ferrule for 0.53 mm ID column	2	29013486
9	Fixing nut for capillary column	5	35032423
	Blanking disk for leak test	10	29032655
	PPKD Heating Block (without heater element and sensor)		29902246
	Heater 115 V		35425058
	Heater 230 V		35425057
	Temperature sensor		40311230
	Kit for capillary columns on packed injector		19050091

Please refer to Packed Column Injector (on page 26) for parts relevant to the use of this injector with packed columns.



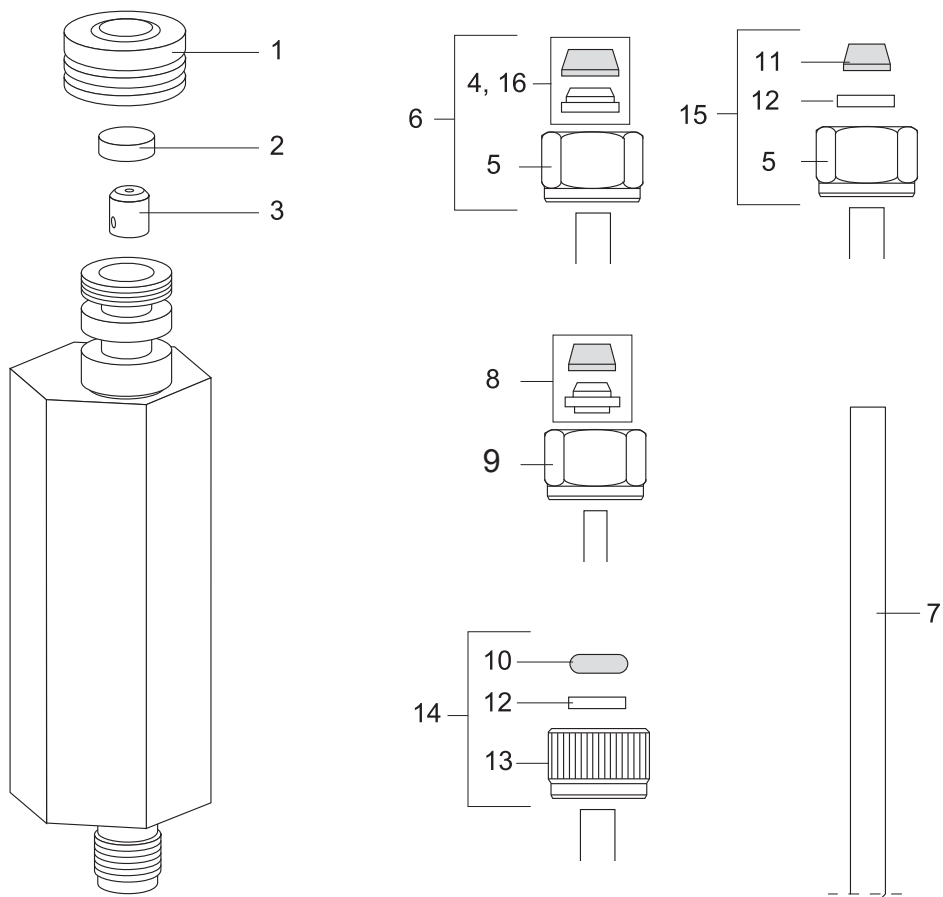
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Packed Column Injector

Table 9-1. Packed Column Injector spare parts

No	Description	Qty.	P/N
1	Septum cap		35001051
1	Septum cap for TriPlus HS		34750003
2	Septum	50	31303230
3	Septum support		453020 48
4	Brass ferrule 6 mm OD metal column	10	29034137
5	Retaining nut for 6 mm OD column	10	35040118
6	Retaining nut for 6 mm OD column and ferrule	2	35020117
7	Adapters for packed columns	See Chapter 19	
8	Brass front/back ferrule for 1/8" OD metal column		29004666
9	Retaining nut for 1/8" mm OD column and ferrule		35003062
10	O-ring, Viton for 6 mm OD glass column	10	29030306
11	PTFE ferrule for 6 mm OD glass column	10	29034571
12	Stainless steel washer	10	35633407
13	Knurled nut	10	35040119
14	Nut, o-ring and washer kit for 6 mm OD glass column	2	35020119
15	Nut, o-ring and washer kit for 6 mm OD glass column	2	35020122
16	Stainless steel ferrule 1/4" OD metal column	5	29024616
	PKD Heating Block (without heater element and sensor)		24705222
	Heater 115 V		35425058
	Heater 230 V		35425057
	Temperature sensor		40311230
	Kit for capillary columns on packed injector		19050091

Please refer to Purged Packed Column Injector (on page 24) for parts relevant to the use of this injector with wide bore (0.53 mm ID) columns.



10

Programmed Temperature Vaporizing Injector

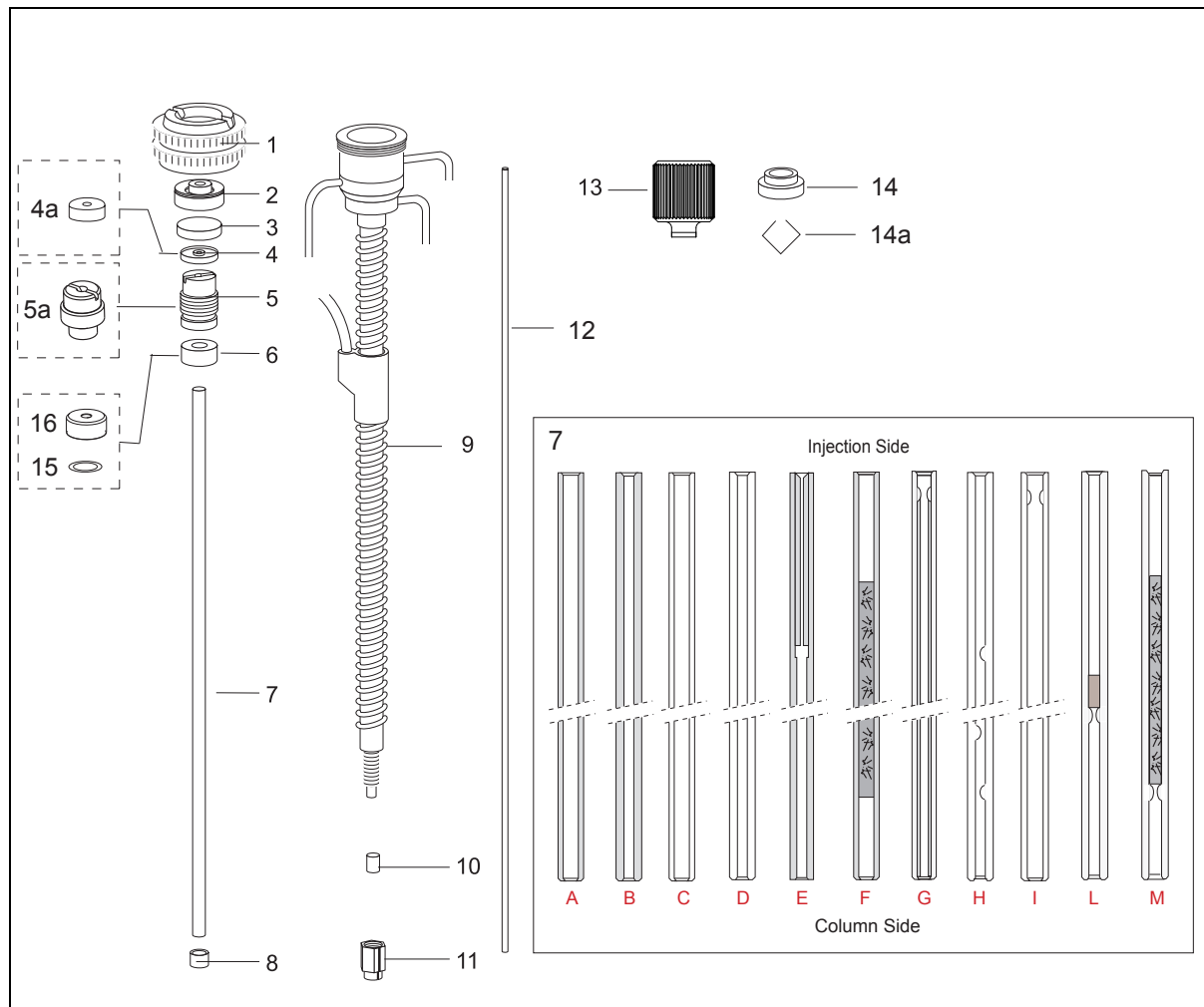
Table 10-1. Programmed Temperature Vaporizing Injector spare parts

No	Description	Qty.	P/N
1	Septum cap		35001047
	Septum cap to be used with TriPlus HS		35001048
2	Septum holder		23303018
3	Septum	10	31313225
4	Septum support		35005435
4a	Septum support for PTV 816 RP-2004		35005436
5	Liner cap		29004277
5a	Liner cap for PTV 816 RP-2004		29004279
6	Liner seal	2	29013417
7A	Silcosteel [®] liner, 2 mm ID	2	45322044
7B	Silcosteel [®] liner, 1 mm ID	2	45322046
7C	Glass liner, 2 mm ID	2	45322045
7D	Deactivated glass liner, 1 mm ID	2	45322054
7E	Silcosteel [®] liner for simile On-column injections	2	45322052
7F	Silcosteel [®] liner for Large Volume Injections	2	45322056
7G	Glass sintered deactivated liner for Large Volume Injections	2	45322060
7H	Deactivated glass liner with baffles	2	45322062
7I	Deactivated glass liner for split and splitless injections	2	45322057
7L	2 mm ID Glass Liner with silica wool	5	45352070
7M	2 mm ID Deactivated Glass Liner with 60 mm of silica wool	5	45352099
8	Spacer	2	29014278
9	PTV 816 (RP-2004) main body, including heater, thermocouple without filter		29902263
10	Graphite ferrule for 0.25 mm ID column	2	29013488
10	Graphite ferrule for 0.32 mm ID column	2	29013487
10	Graphite ferrule for 0.53 mm ID column	2	29013486
11	Fixing nut for column	5	35032423

Table 10-1. Programmed Temperature Vaporizing Injector spare parts (Continued)

	Brass ferrule, 1.6 mm ID		29004144
	Brass ferrule, 2 mm ID		29004345
12	Liner removing tool		39801406
13	Screwdriver		20502603
14	Ceramic washer		34401100
14a	Clip for ceramic washer		42601701
15	Viton [®] O-ring for sintered liner	10	29031305
15	Kalrez [®] O-ring for sintered liner	2	29013702
16	Sealing cup for PTV liner. To be used with 29031305 or 29013702		29003420
	Blanking disk for leak test	10	29032655
	T-shaper connector (PTV backflush)		34708448
	Kit upgrade SVE Valve 230 V without electronic board		19050234
	Kit upgrade SVE Valve 130 V without electronic board		19050233
	Kit PTV-BKF (including the Tee holder and 1 Tee connector with ferrules and nuts)		19050190
	Kit Tee Holder for BKF (Tee holder including 1 Tee connector with ferrules and nuts)		19050249
	Assy Tee connector for BKF holder (including Tee connector with ferrules and nuts, clamp and screw)		19050251
	Tee connector		34708447
	Locking nut M4 carved		35002423
	Graphite ferrule 0.8 mm ID	10	29053486
	Graphite ferrule 1.0 mm ID	2	29013485
	Deactivated uncoated precolumn, 2 m length; 0.5 mm ID		26060375
	Stainless Steel Tube 0.5 m length; 0.9 mm OD; 0.5 mm ID for Tee connector		39103305
	24V/2-way Parker HT SVE valve for PTV Large Volume		40516108
	Solenoid valve heater 115V		35425052
	Solenoid valve heater 230V		35425053
	Solenoid valve Temperature sensor		40311230
	Cooling fan 115 V		40600687
	Cooling fan 230 V		40600682

Chapter 10
Programmed Temperature Vaporizing Injector

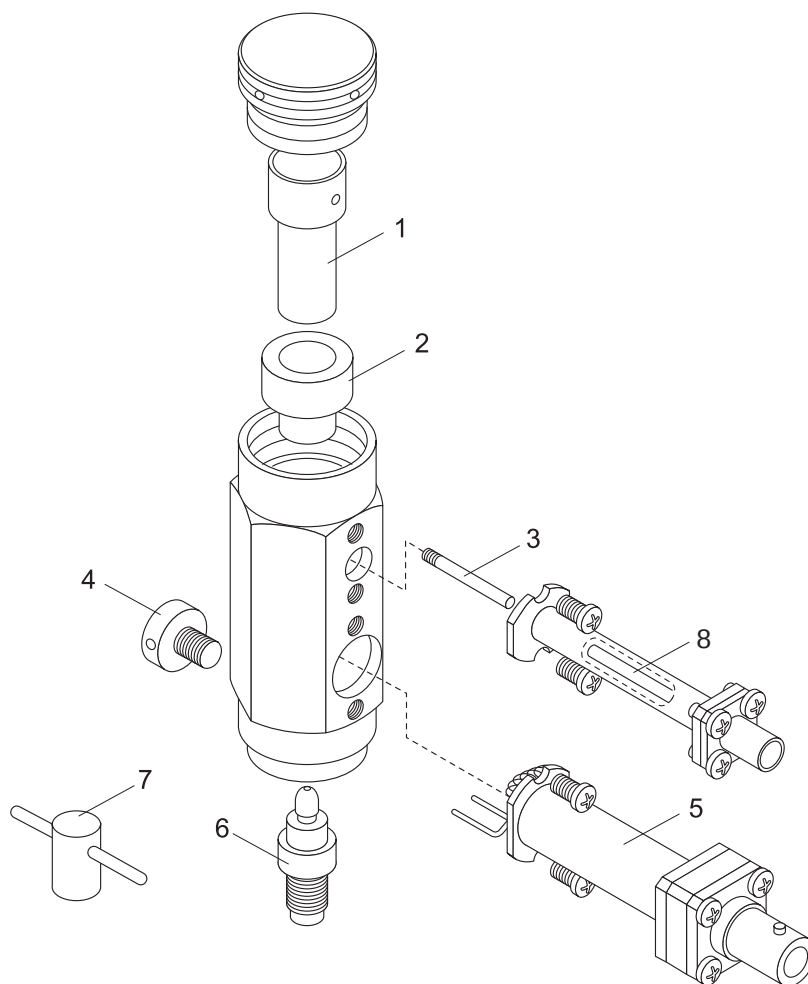


11

Flame Ionization Detector (FID)

Table 11-1. Flame Ionization Detector spare parts

No	Description	Qty.	P/N
	FID cell, complete		41910646
1	FID collecting electrode		25901115
2	Ceramic insulator		30202310
3	Collecting electrode pin		20601602
4	Retaining screw		31106008
5	Flame ignition coil/polarization electrode assembly		20601603
6	FID jet		40404301
7	Jet removing tool		20501900
8	Spring contact probe		20603100
	Add-on FID kit (cell, board, standard outfit)		19050104
	ECD-stacked FID kit (cell, board, standard outfit, pneumatics)		19050155

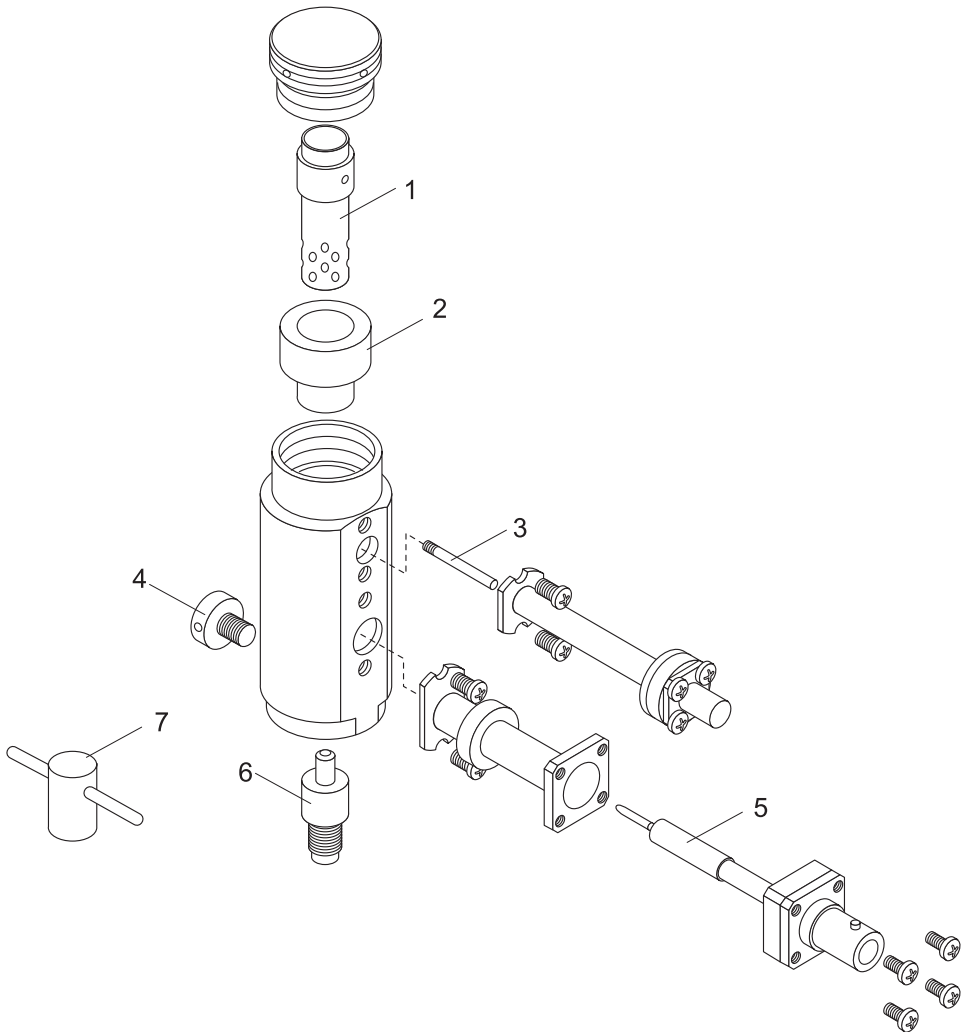


12

Nitrogen Phosphorus Detector (NPD)

Table 12-1. Nitrogen Phosphorus Detector spare parts

No	Description	Qty.	P/N
	NPD cell, complete		41910656
1	NPD collecting electrode		25901110
2	Ceramic insulator		30202310
3	Collecting electrode pin		20601602
4	Retaining screw		31106008
5	TS-2 source (standard)		46500255
5	TS-1 source for ENS mode		46500250
6	NPD jet		40404302
	NPD (deactivated Silcosteel) jet		40404303
7	Jet removing tool		20501900
	Add-on NPD kit (cell, board, standard outfit)		19050107
	ECD-stacked NPD kit (cell, board, standard outfit, pneumatics)		19050156

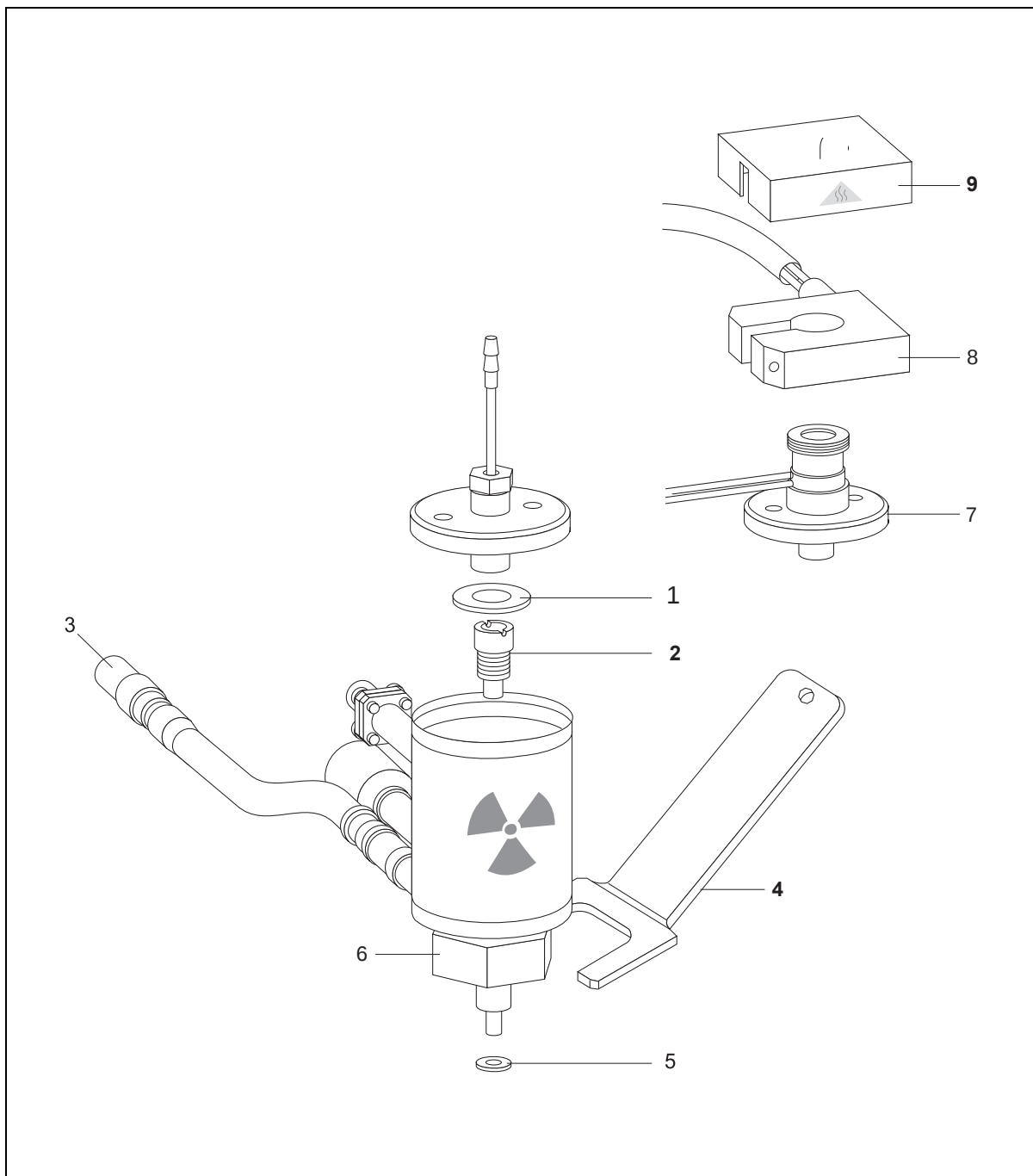


13

Electron Capture Detector (ECD)

Table 13-1. Electron Capture Detector spare parts

No	Description	Qty.	P/N
	ECD cell, complete		41910700
	ECD cell, complete (USA version)		41910640
1	Upper seal, aluminum	10	29032608
2	ECD collecting electrode		27700350
3	Temperature sensor / heater assembly		19050087
4	ECD fixing tool		20502150
	Sleeve AL OD2		29004045
5	Lower seal, silver	2	29015058
6	ECD blocking nut		35001120
	Temperature sensor/heater extension cable		23043447
	ECD simulator connector		23845038
	Add-on ECD kit (board, standard outfit)		19050105
7	Adapter for stack configuration		34709007
	Nut 304 6MB		35000403
	Rubber holder		35004321
8	Heating block for stack configuration (including heater and RTD)		35425064
9	Cover for heating block		24104449
	Kit Carbon Filter for ECD		19050198
	Maintenance Kit		19050221

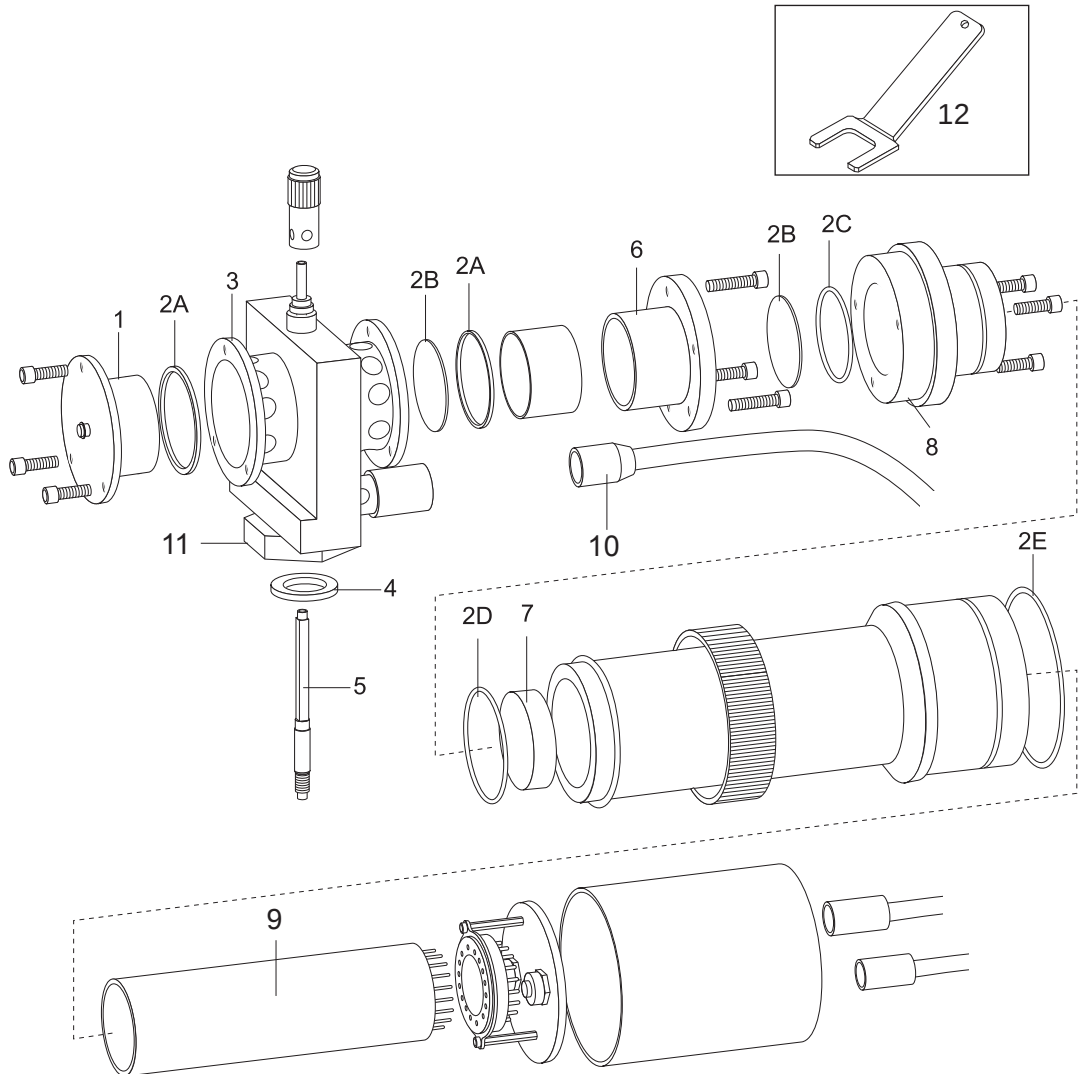


14

Flame Photometric Detector (FPD)

Table 14-1. Flame Photometric Detector spare parts

No	Description		P/N	
	Assy FPD cell		41910695	
1	Mirror plug		35005350	
2A	Maintenance kit for FPD	Graphite seal	2	19004589
2B		Heat shield	2	
2C		Viton™ O-ring	1	
2D		Viton™ O-ring	1	
2E		Viton™ O-ring	1	
3	Detector body		19050111	
4	Aluminium O-ring	10	29032630	
5	FPD jet		40404511	
	FPD (deactivated Silcosteel) jet		40404512	
6	Flange and relevant Viton™ O-ring		36814235	
7	Interferential filter for phosphorus		28107100	
7	Interferential filter for sulphur		28107000	
7	Interferential filter for tin		28107001	
8	Filter Holder		36814295	
9	Photomultiplier		28600450	
10	Heater/sensor/coil cable		23043479	
11	FPD blocking nut		35001125	
12	FPD fixing tool		20502150	
	FPD simulator connector		23845045	
	Add-on FPD kit (cell, board, standard outfit)		19050109	
	ECD-stacked FPD kit (cell, board, standard outfit, pneumatics)		19050157	
	Fixing nut	1	35001125	

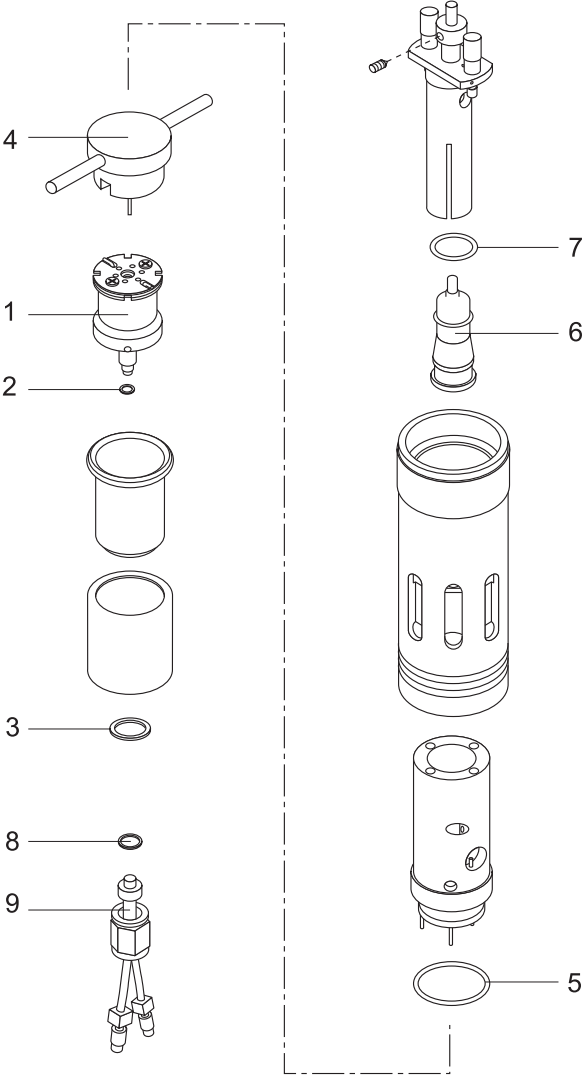


15

Photoionization Detector (PID)

Table 15-1. Photoionization Detector spare parts

No	Description	Qty.	P/N
	PID cell, complete		41910685
1	Detection cell assembly for PID		23105020
2	Seal	2	29015058
3	Seal	2	29014701
4	Fixing tool		20503100
5	Viton™ O-ring for lamp holder	5	29020325
6	UV lamp 9.6 eV (including 2 Viton™ O-rings)		30503014
6	UV lamp 10.6 eV (including 2 Viton™ O-rings)		30503015
6	UV lamp 11.8 eV (including 2 Viton™ O-rings)		30503016
7	Viton™ O-ring for UV lamp	5	29020338
8	Silver seal		29015059
9	Capillary adapter	2	35043825
	Jet and metal cell body		19004802
	Lamp polishing kit		19004800
	Add-on PID kit (cell, board, standard outfit)		19050108



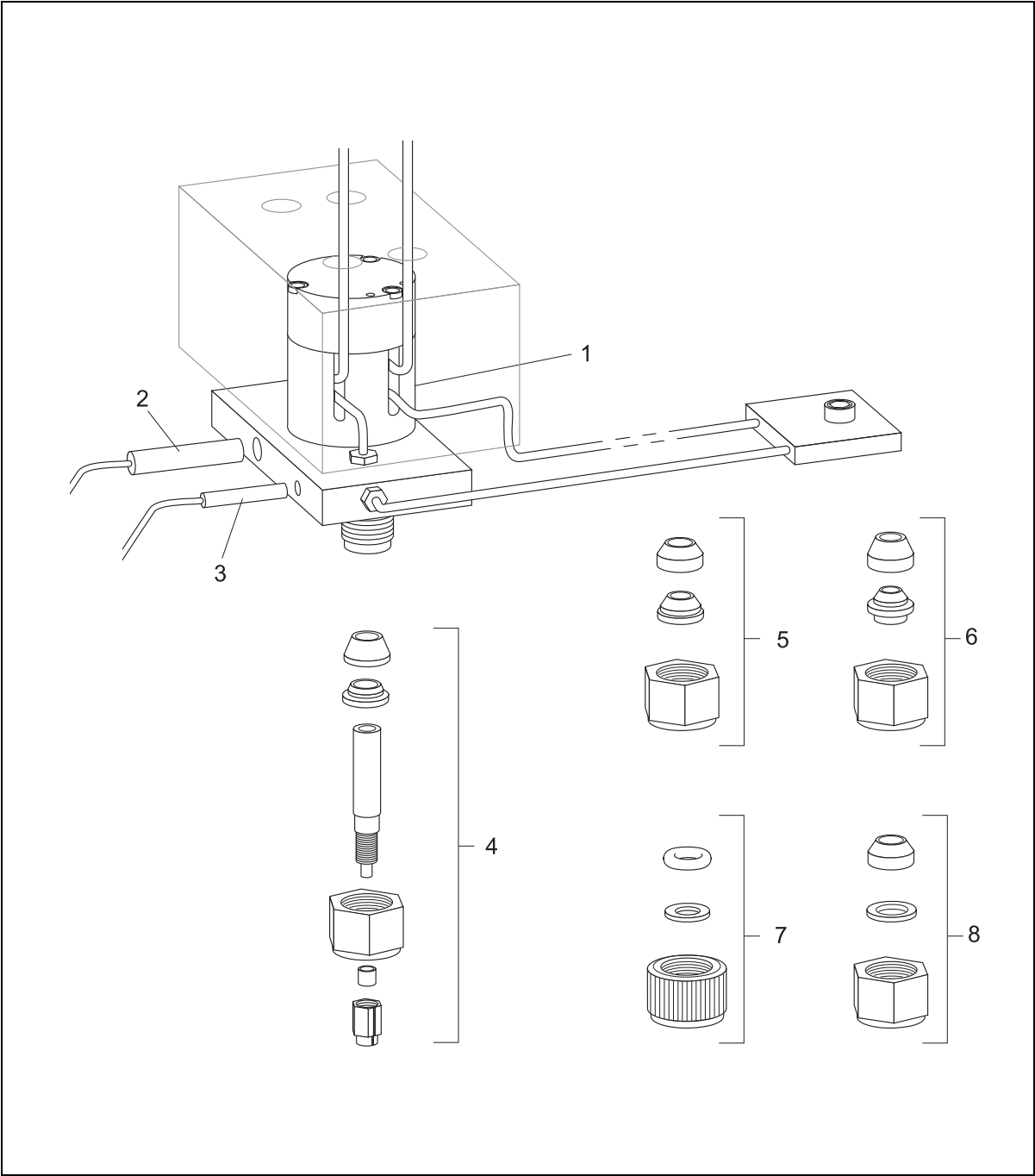
16

Thermal Conductivity Detector (TCD)

Table 16-1. Thermal Conductivity Detector spare parts

No	Description	Qty.	P/N
1	TCD cell, complete		41910505
	TCD cell with coated filament		41910507
	Heater and temperature sensor assembly for TCD cell		23043471
2	Heater for TCD base 230 V		35425036
2	Heater for TCD base 115 V		35425037
3	Temperature sensor for TCD base		40311230
4	Adapter for capillary columns (kit)		34709542
5	Retaining nut for 6 mm OD metal column and ferrule		35020117
6	Brass front/back ferrule for 1/8" OD metal column		29004666
7	Retaining nut for 1/8" mm OD column and ferrule		35003062
8	Knurled nut, O-ring and washer for 6 mm OD glass column		35020119
9	Nut, ferrule and washer for 6 mm OD glass column		35020122
10	Transfer heating base		22206137
11	Inlet fitting base		35008415

Please refer to Detector Base Bodies for further details on parts for column connection.



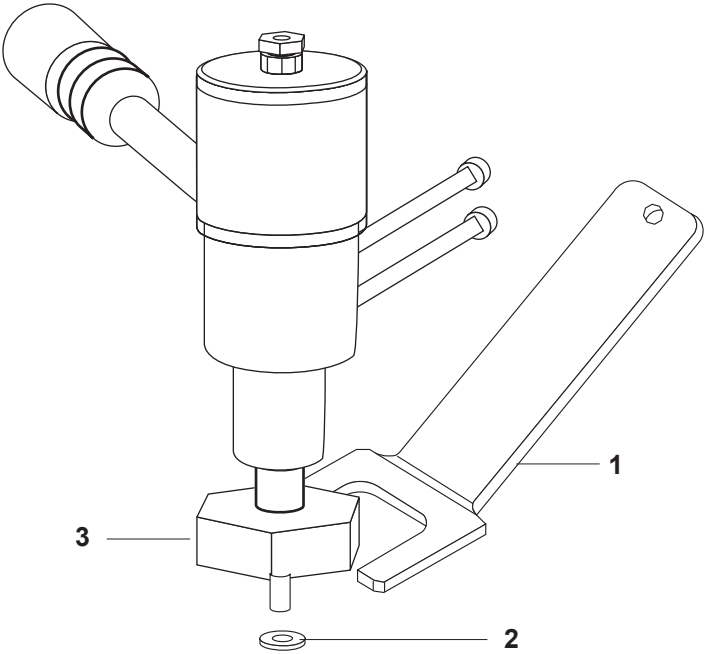
17

Discharge Pulsed Detector (PDD)

Table 17-1. Discharge Pulsed Detector spare parts

No	Description	Qty.	P/N
	PDD detector cell		41910715
1	PDD fixing tool		20502150
2	Lower seal, silver	2	29015058
3	PDD blocking nut		35001120
	PDD pulse module		43210075
	PDD fitting kit		19050214
	PDD He purifier 220 V power supply		43210076
	PDD He purifier 110 V power supply		43210077
	High voltage discharge cable		23043545

Please refer to Detector Base Bodies for further details on parts for column connection.



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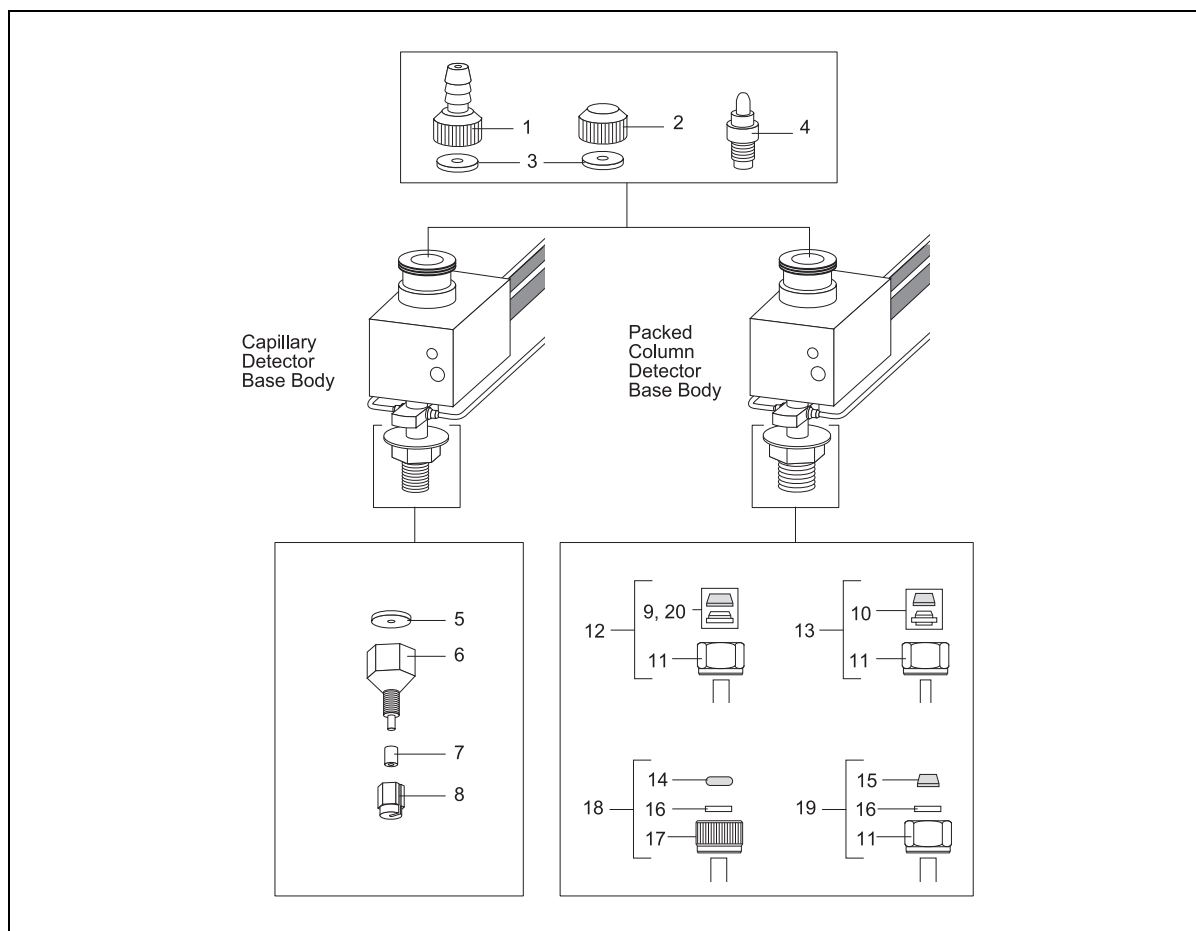
Detectors Base Bodies

Table 18-1. Spare parts for Detectors Base Bodies

No	Description	Qty.	P/N
	CB71 CAP		29902281
	CB70 PKD/WB		29902286
	Heating Block for CB71		22206150
1	Adapter for flow measurement		35004107
2	Brass blind cap		35006101
3	Silicon seal	10	29033037
4	Blind jet	2	40401900
5	Seal, silver	10	29037100
6	Adapter for capillary column	2	34725436
7	Graphite ferrule for 0.25 mm ID column	2	29013488
7	Graphite ferrule for 0.32 mm ID column	2	29013487
7	Graphite ferrule for 0.53 mm ID column	2	29013486
8	Fixing nut for column	5	35032423
	Adapters for packed column on capillary column base body	See Chapter 19	
9	Brass ferrule 6 mm OD metal column	10	29034137
10	Brass front/back ferrule for 1/8" OD metal column		29004666
11	Retaining nut for 6 mm OD column	10	35040118
12	Retaining nut for 6 mm OD column and ferrule	2	35020117
13	Retaining nut for 1/8" OD column		35003062
14	Viton o-ring for 6 mm OD glass column	10	29030306
15	PTFE ferrule for 6 mm OD glass column	10	29034571
16	Stainless steel washer	10	35633407
17	Knurled nut	10	35040119
18	Nut, o-ring and washer kit for 6 mm OD glass column	2	35020119
19	Nut, o-ring and washer kit for 6 mm OD glass column	2	35020122
20	Stainless steel ferrule 1/4" OD metal column	5	29024616
	Anti-turn fixing plate for capillary and packed injector base body	3	33412119

Table 18-1. Spare parts for Detectors Base Bodies (Continued)

	Nut, 1/4" for PKD detector base body	1	35002403
	Aluminium seal for PKD detector base body	1	35603403
	Nut, 1/8" for capillary detector base body	1	35002418
	Aluminium seal for capillary detector base body	1	35603448
	Wide bore kit for packed column detector base body		19004810
	Heater 115 V		35425052
	Heater 230 V		35425053
	Temperature sensor		40311230

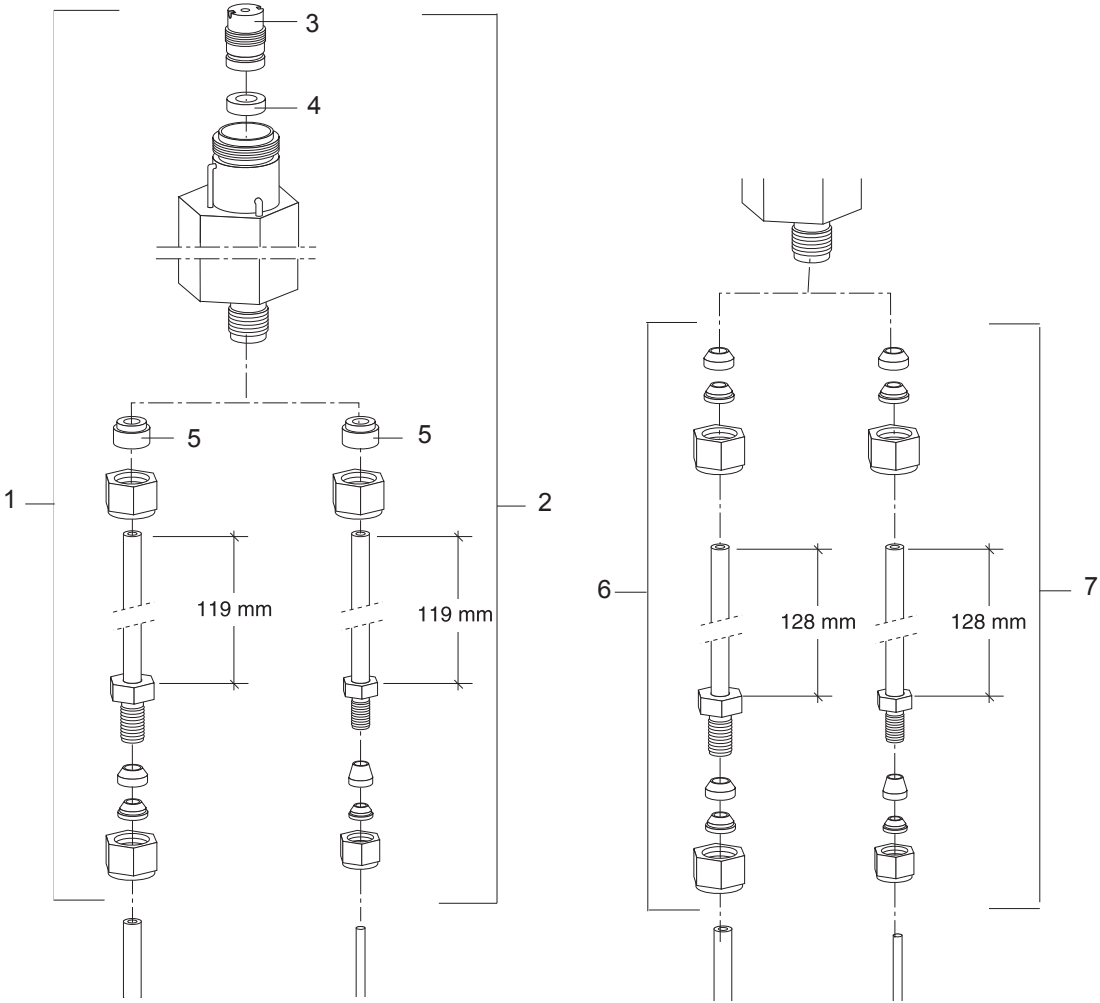


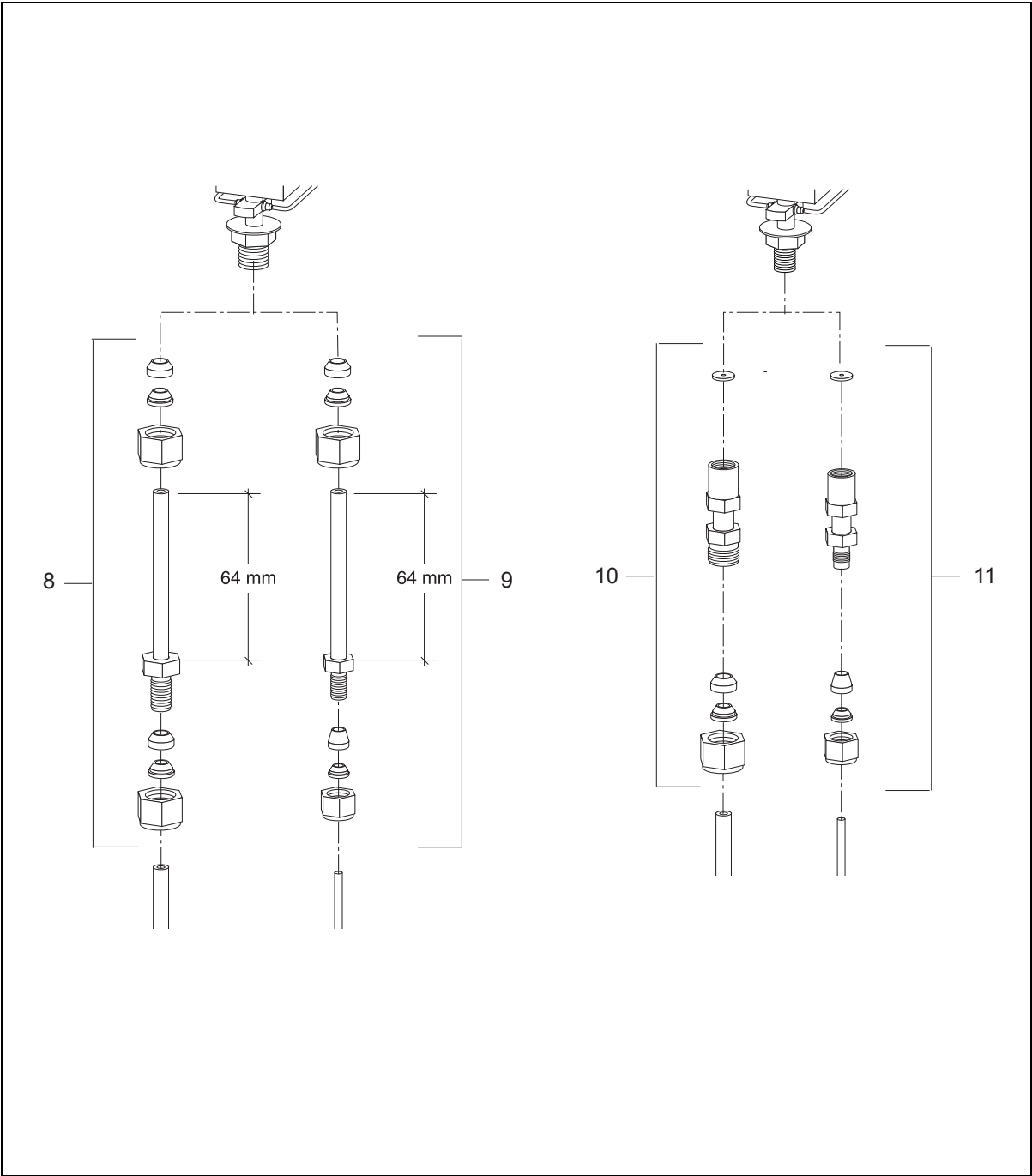
19

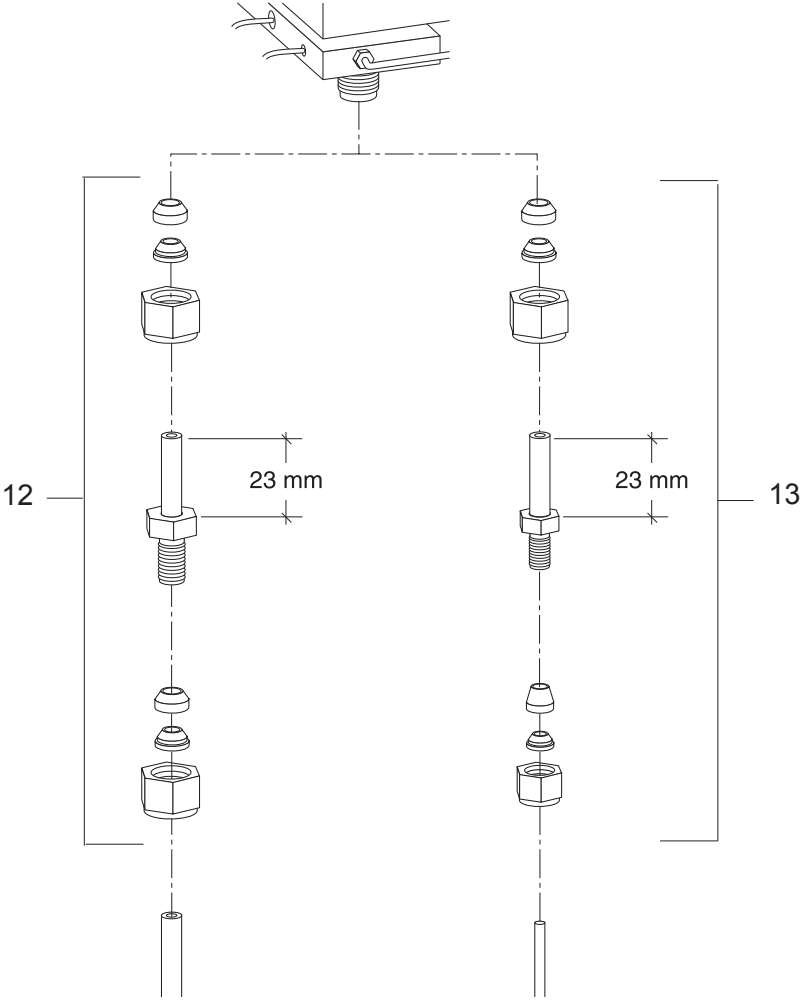
Adapters for Packed Columns

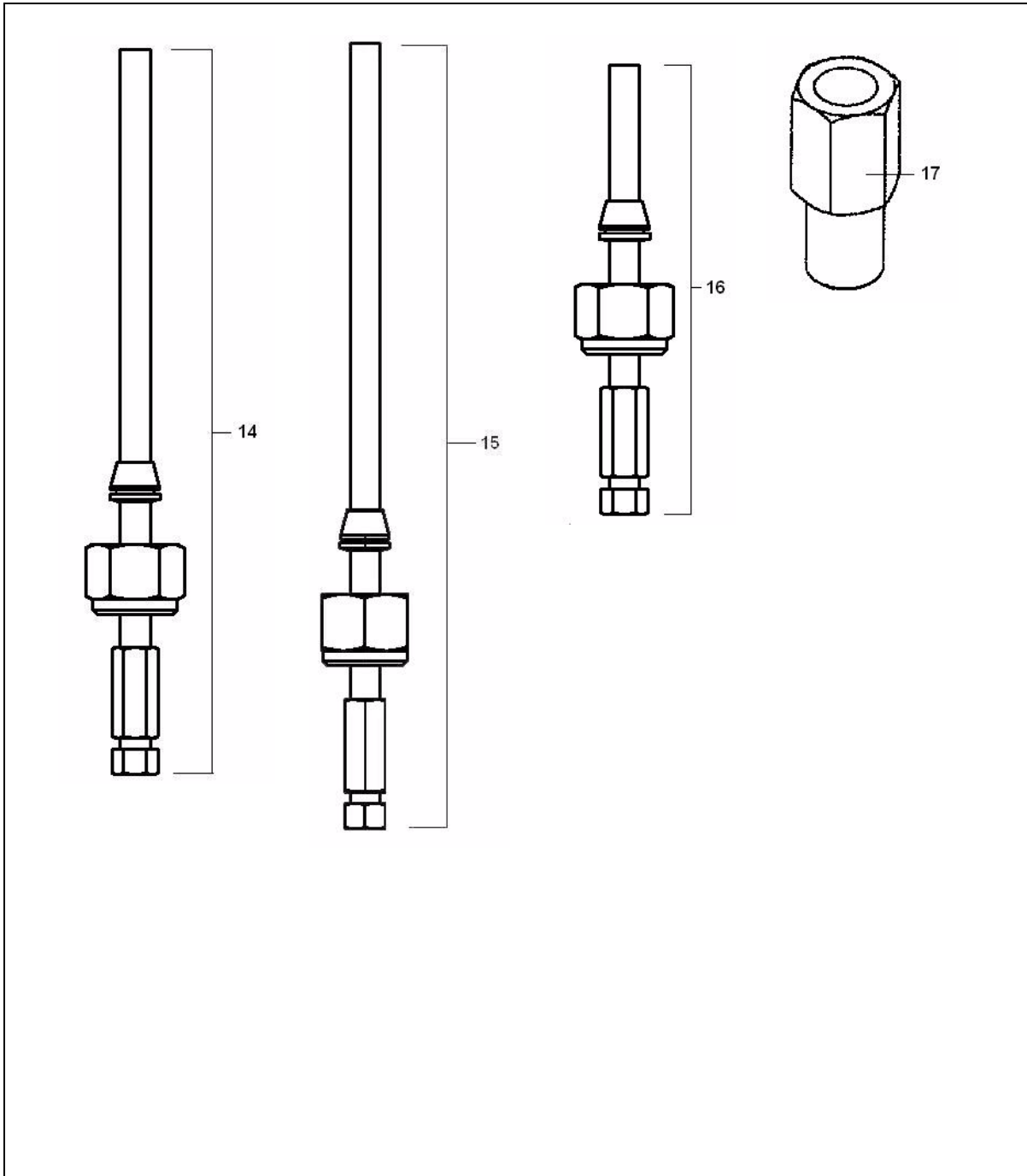
Table 19-1. Spare parts for Adapters for Packed Columns

No	Description	Qty.	P/N
1	Adapter for S/SL 6 mm and 1/4" columns		34709337
2	Adapter for S/SL 1/8" columns		34709323
14	Adapter for S/SL 1/16" columns		34709375
3	Adapter cap for S/SL		29004292
4	Adapter seal for S/SL	2	29013416
5	Adapter PTFE ferrule	2	29014576
6	Adapter for PKD/PPKD 6 mm and 1/4" columns		34709325
7	Adapter for PKD/PPKD 1/8" columns		34709320
15	Adapter for PKD/PPKD 1/16" columns		34709377
8	Adapter for capillary base body 6 mm and 1/4" columns		34709339
9	Adapter for packed base body 1/8" columns		34709321
16	Adapter for packed base body 1/16" columns		34709379
10	Adapter for packed base body 6 mm and 1/4" columns		34709327
11	Adapter for capillary base body 1/8" columns		34709324
17	Adapter for capillary base body 1/16" columns		35008430
12	Adapter for TCD base body 6 mm and 1/4" columns		34709329
13	Adapter for TCD base body 1/8" columns		34709322
	Adapter kit for packed columns on capillary injector and base body (includes items 1, 2, 8, 11, 13)		19050096







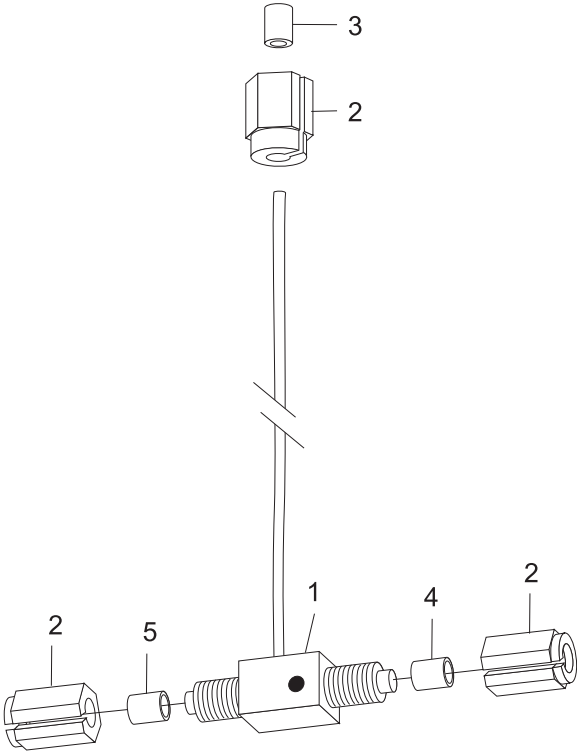


20

On-Column Large Sample Volume Injection

Table 20-1. Spare parts for On-Column Large Volume Injection

No	Description	Qty.	P/N
1	T-shaped connector		34708448
2	Fixing nut for column	5	35032423
3	Vespel ferrule 0.9 mm hole (for connecting the T-piece to SVE)	10	29033498
4	Graphite ferrule for 0.25 mm ID column	2	29013488
	Graphite ferrule for 0.32 mm ID column	2	29013487
5	Graphite ferrule for 0.53 mm ID column	2	29013486
	Temperature sensor		40311230
	Solenoid valve HT for solvent vapor exit with connector (without heater)		40516112
	Heater 115 V, solvent vapor exit valve		35425052
	Heater 230 V, solvent vapor exit valve		35425053
	Restrictor for solvent vapor exit valve, 25 cm x 25 µm ID		26060388
	Disposable filter for solvent vapor exit bottle		28113160
	UNCORET column, 15 m, 3 m coated with SE-54, 0.25 µm f.t.		26060427
	UNCORET column, 15 m, 3 m coated with SE-54, 0.45 µm f.t.		26060425
	Syringe for LVI, 250 µl, with set of 6 x 80 mm needles		36504015
	Needle for syringe PN 365 040 15	6	36566798
	Syringe for LVI, 250 µl (0.47/80/cone) removable needle		36500490
	Needle for syringe PN 365 004 90	5	36566480
	Membrane UNISSET - compatible with vials P/N 240 700 05	100	31301102
	Membrane UNISSET - compatible with vials P/N 240 700 10 P/N 240 700 15 and P/N 240 740 41	100	31301103

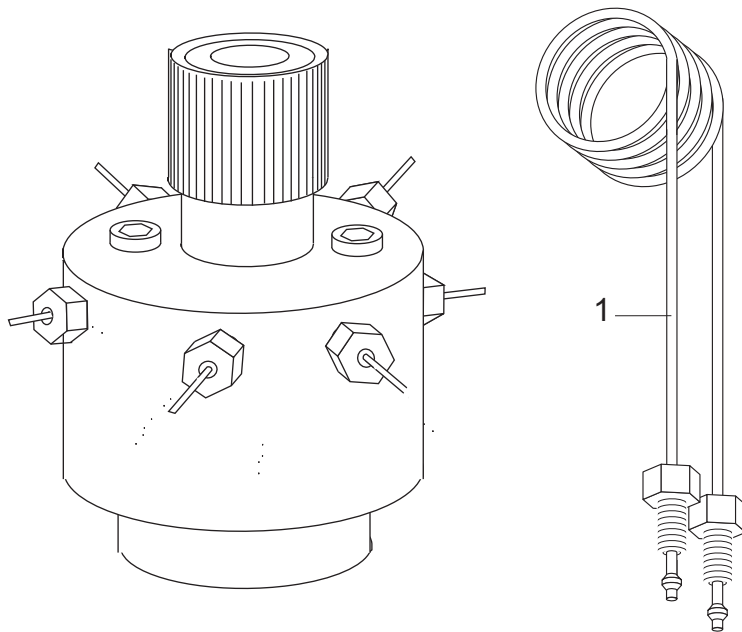


21

Automatic Gas Sampling Valve

Table 21-1. Spare parts for Automatic Gas Sampling Valve

No	Description	Qty.	P/N
1	Loop 250 µl		27207029
	Loop 500 µl		27207025
	Loop 1 ml		27207026
	Loop 5 ml		27207030



22

Miscellanea

Table 22-1. Oven spare parts

Description	Qty.	P/N
Heater with diaphragm and temperature sensor (230 V)		35408030
Heater with diaphragm and temperature sensor (115 V)		35408020
Oven temperature sensor		40311232
Replacement oven blower motor with bracket		15599000
Stepping motor for flapper		31807046
Door switch assembly		23043482
Column support		36816845
Oven Fan		41003510
Hydrogen sensor		27605002

Table 22-2. Cables

Description	Qty.	P/N
Generic start/stop cable (integrator)		23043457
Autosampler start/stop cable		23043446
RS232 cable for TRACE/PC communication, 2.5 m		23043454
RS232 cable for TRACE/Autosampler communication, 1.5 m		23043453
Analog cable for detector connection to integrator		23038071
Connector, 4 positions, for cable 230 380 71		23809602
Loop-back for multi-run		23845040
Power cable 16A; 250 Vac		23033025
Power cable 20A; 125 Vac		23033030
Door switch cable assembly		23043482

Table 22-3. Fans

Description	Qty.	P/N
Rear fan 115 V		19098031
Rear fan 230 V		19098030

Table 22-4. Cryo Spare Parts

Description	Qty.	P/N
Solenoid valve assembly for CO ₂ Oven cryo option (External Cryo Module)		23043466
Solenoid valve assembly for N ₂ Oven cryo option (External Cryo Module)		23043465
Solenoid valve [A2012-S 83A-24/60] assembly for CO ₂ Oven cryo option (Cryo Control pcb)		23043535
Solenoid valve [A2016-S 271-24/60] assembly for N ₂ Oven cryo option (Cryo Control pcb)		23043533
Solenoid valve [A2012-S 83A-24/60] assembly for CO ₂ PTV cryo option (Cryo Control pcb)		23043536
Solenoid valve [A2016-S 271-24/60] assembly for N ₂ PTV cryo option (Cryo Control pcb)		23043534
Tube for CO ₂		39102910
Tube for N ₂		39102911

Table 22-5. Test mixtures

Description	Qty.	P/N
Test mix for FID		33819020
Test mix for FID with LVSL injector		33819032
Test mix for UFM		33819035
Test mix for NPD/FPD/PID		33819006
Test mix for ECD		33819011
Test mix for TCD		33819016
Test mix for PDD (1 mL ampoule of C12, C14, C16 in quantity of 1µg/ml each)		33819032
Column (TR-5, 7 m x 0.32 mm) for GC test		26080001

Table 22-6. Syringes

Description	Qty.	P/N
Syringe 10 µl, 50 mm needle for packed and split injection		36500525
Syringe 10 µl, 70 mm needle for splitless injection		36500103
Syringe 10 µl, 75 mm needle for manual OC injection		36502007

Table 22-7. Merlin Microseal™ High Pressure Valve Option Spare Parts

Description	Qty.	P/N
Microseal Valve for SSL and PTV inlets systems		40523053
Syringe 10 µl, 50 mm needle for injections in SSL inlet - split mode		36520060
Syringe 10 µl, 80 mm needle for injections in SSL inlet - splitless mode		36520061
Syringe 100 µl for Large Volume injections in PTV inlet		36520050
Syringe 250 µl for Large Volume injections in PTV inlet		36520051
Merlin septum cap for the PTV injector P/N 299 022 63		35001055
Merlin Vespel Seal		35603450
Merlin Vespel Seal (set of 5)		35603450

Table 22-8. PTV Backflush Option Spare Parts

Description	Qty.	P/N
Solenoid valve assembly		40517124
Graphite ferrule 0.8 mm ID	2	29013486
Graphite ferrule 1 mm ID	2	29013485
T-shaper connector		37408449

Table 22-9. Large Volume

Description	Qty.	P/N
Solvent Waste bottle assy	1	15520287

Table 22-10. Insulation Cassettes

Description	Qty.	P/N
Insulation Bottom cassette		30200109
Insulation Top cassette		30200110

Table 22-11. Nuts and Ferrules

Description	Qty.	P/N
Nut 6MB		35000403
Aluminium ferrule, 1.6 mm ID		29004044
Aluminium ferrule, 2 mm ID		29004045
Stainless steel ferrule, 1.6 mm ID		29004607
Brass ferrule, 1.6 mm ID		29004144
Brass ferrule, 2 mm ID		29004345

Table 22-12. Tools

Description	Qty.	P/N
Flow meter: Thermo Scientific GFM Pro Flowmeter		66002-010
Leak detector: Thermo Scientific GLD Pro		66002-001

Table 22-13. SSL Purge & Trap

Description	Qty.	P/N
Adapter Purge & Trap		34709547
Adapter P&T Silcosteel SSL		34709548
Septum Cap for Large Volume Splitless Injector		35001055
Septa BTO 9 mm OD for Large Volume Splitless Injector	50	31303240
Septum Holder for Large Volume Splitless Injector		23303020

23

AI/AS 3000 & AI/AS 3000 II Autosamplers

Table 23-1. Tower Assy

Description	Qty.	P/N
Complete tower assy for AI/AS 3000		37001430
Complete tower assy for AI/AS 3000 II		37001440
Complete top cover assy		24105570
AS 3000 M/S printing circuit boards assy		15220050
AS 3000 II M/S printing circuit boards assy		15220070
Slide stepping motor for AI/AS 3000		31802917
Slide stepping motor for AI/AS 3000 II		31802920
Flat Cable H-FLEX 26F/16F+10F (FC1389) for AI/AS 3000		23043610
Flat Cable H-FLEX 26F/16F+10F (FC1526) for AI/AS 3000 II		23045617
Elastic for injection head		31505260
Front door AI 3000		33330942
Front door AS 3000		33330944
Front door AI 3000 II		33330948
Front door AS 3000 II		33330949
10 µL syringe (Standard)		36500525
5 µL, 50 mm needle syringe for microvolumes S/SL injector		36500505
10 µL syringe (for Merlin Microseal Valve)		36520060
0.5 µL syringe for nano-volumes injections		36504045

Table 23-2. Base Assy (Sheet 1 of 2)

Description	Qty.	P/N
Complete Base assy for AI/AS 3000		22107100
Complete Base assy for AI/AS 3000 II		22107110
Waste bottle complete with septum and cap (Set of 5)		19004646
Tray 8-position assy		24010140
Tray 105-position assy		24010145
Tray 105-position with holder		25117545

Table 23-2. Base Assy (Sheet 2 of 2)

Power supply 100-240Vac/24Vdc		20806060
Round cable H-FLEX 34-pin (FC1377) for AI/AS 3000		23045612
Round cable H-FLEX 34-pin (FC1524) for A/AS 3000 II		23045615

Table 23-3. Vials and Septa

Description	Qty.	P/N
2 mL screw top vials, set of 100 (require screw top cap with septa PN 38606092)		24014021
2 mL screw top vials plus screw-top caps with septa. (Thermo Scientific brand combination of vials P/N 24014021 and caps/septa P/N 38606092)		
2 ml Crimp-top vials, 11 mm finish, set of 100 (require 11 mm aluminum caps and seals P/N 38606040)		24074003
4 mL screw top solvent vials, set of 100 (require screw top cap with septa P/N 38606092)		24014031
300 µL micro-volume sampling vials, set of 100 (require screw top cap with septa P/N 38606092)		24014026
Screw top caps 2 mL, 4 mL and 300 µL vials complete with septa, set of 100		38606092
11 mm aluminum caps, with teflon faced septa, set of 100		38606040
Septa for Waste bottle, set of 100		31303217
Screw caps for Waste bottle, set of 100		38606074

Table 23-4. Cables

Description	Qty.	P/N
RS232 cable (9-pin)		23043453
GC - AI/AS 3000 and AI/AS 3000 II cable (6-pin)		23043577
Power cable 10A/250V		23033000
Power cable 10A/125V		23033035

Table 23-5. Alignment Brackets with Centering Plate

	Qty.	P/N
Centering Plate for S/SL injector		36812738
Centering Plate for Merlin Adapter on S/SL injector		36812734
Centering Plate for PTV injector and Merlin Adapter on PTV injector		36812736

Table 23-6. Autosampler Brackets

Description	Qty.	P/N
Bracket for mounting AI/AS 3000 and AI/AS 3000 II on right side		36812730
Bracket for mounting AI/AS 3000 and AI/AS 3000 II on left side		36812740

Table 23-7. Upgrade kits

Description	Qty.	P/N
Kit Merlin Microseal Valve for AI/AS 3000 and AI/AS 3000 II (requires P/N 19050205)		19050225
AS 3000 Upgrade kit for AI 3000 II		19050294
Nano-volumes kit for S/SL inlet system (includes 0.5 µl syringe P/N 36504045 and the double gooseneck liner P/N 45302080)		19050275
Kit AS 3000 II Gemini		19050637

24

TriPlus Autosampler

Consumables and Accessories

Table 24-1. Sample Vials

Description	Qty.	P/N
Adapters for 1 mL Crimp-top vials; set of 100		29064690
Adapters for 1 mL Crimp-top vials; set of 10		29034690
1 mL Crimp-top vials, 8 mm finish; set of 100 (require 8 mm aluminum caps and seals P/N 38606031; compatible also with LVI enhanced performance seals P/N 31301103)		24070015
2 mL Screw-top vials, 8 mm finish, set of 100 (require 8 mm plastic screw-top caps P/N 38606074 and teflon faced seals P/N 31303217; compatible also with LVI enhanced performance seals P/N 38610055)		24074041
2 mL Crimp-top vials, 11 mm finish, set of 100 (require 11 mm aluminum caps and seals P/N 38606040)		24074003
2 mL screw top vials plus screw-top caps with septa. (Thermo Scientific brand combination of vials P/N 24014021 and caps/septa P/N 38606092)		24014019
2 ml Screw-top vials, set of 100 (require screw-top caps with septa P/N 386 060 92)		24014021
300 µL micro-volume sampling vials, set of 100 (require screw top cap with septa PN 386 060 92)		24014026
2.5 mL Crimp-top vials, 11 mm finish, set of 100 (require 11 mm aluminum caps and seals P/N 386 060 40; compatible also with ring shaped silicon septa with Teflon membrane for LVI P/N 38610050, set of 100)		24070005
8 mm aluminum caps with teflon faced septa, set of 100		38606031
8 mm plastic screw-top caps, set of 100		38606074
8 mm teflon faced seals set of 100		31303217

Table 24-1. Sample Vials (Continued)

Description	Qty.	P/N
Screw-top caps for 2 ml vials P/N 24014021 complete with septa, set of 100		38606092
11 mm aluminum caps, with teflon faced septa, set of 100		38606040
LVI enhanced performance seals for crimp-top vials P/N 24070005 and P/N 24074003, with 11 mm aluminium caps, set of 100		38610050
LVI enhanced performance seals for vials P/N 24070015 and P/N 240 740 41, set of 100		31301103
LVI enhanced performance seals for vials P/N 24070015 and P/N 24074041 with 8mm screw-top caps, set of 100		38610055
10 mL Crimp-top vials, 20 mm finish, set of 125 (require 20 mm aluminum caps and seals and spacers only for the HS oven)		24074020
20 ml Crimp-top vials, 20 mm finish, set of 125 (require 20 mm aluminum caps and seals)		24006305
20 mm aluminum crimp-top caps with buthyl rubber seals, set of 100 Suitable for low temperatures applications		38603800
20 mm aluminium crimp-top caps with teflon-coated buthyl rubber seals, set of 100. Suitable for temperature up to 100°C.		38603600
20 mm aluminium crimp-top caps with high performance septa, set of 100. Suitable for high temperature applications or when multiple samplings are performed from the same vials.		38609410
20 mm snap caps and teflon faced septa for liquid applications, set of 100		38610040
20 mm teflon faced septa for liquid applications, set of 100		31303250
20 mm ring shaped silicon septa, and 20mm crimp-top aluminum caps, (set of 100) suitable for LVI liquid applications		38610030
Stainless steel spacers for 10 ml vials, set of 6 (used only in the HS oven).		34709540
Accessories		
Hand crimper for 8 mm vials		20511001
Hand crimper for 11 mm vials		20511000

Table 24-1. Sample Vials (Continued)

Description	Qty.	P/N
Hand crimper for 20 mm vials		20500700
Decapping tool for septum removal from glass vials		20500710

Magnetic caps for Bar Code Reader, assembled with 9 mm caps and septa, set of 100		38606095
Labels for bar code reading, set of 1000		38706782

Table 24-2. Washing Station Vials

Description	Qty.	P/N
10 mL Crimp-top washing solvent vials, complete of 20 mm snap-cap seals and teflon faced septa, set of 5		19004647
100 ml washing solvent bottle		24014085
10 mL Crimp-top waste vial with 2m long drain tube and fittings		19050550
20 mm snap caps with teflon faced septa, set of 5		38610045
20 mm ring shaped silicon septa with 20 mm crimp-top aluminum caps, set of 5		38610035

Table 24-3. Syringe Holders

Description	Qty.	P/N
TriPlus AS		
Syringe holder for 50 mm needle length for 5, 10, 100 250 µL syringes		25401010
Syringe holder for 50 mm needle length for 0.5, 10, 100 500 µL syringes		25401015
Syringe holder for 80 mm needle length for 5, 10, 100 250 µL syringes		25401020
Syringe holder for 80 mm needle length for 0.5, 10, 100 500 µL syringes		25401025
TriPlus HS		
Syringe holder		36503008
TriPlus SPME		
SPME fiber holder		25401080
SPME syringe adapter		34709360

Table 24-4. Syringes and needles

Description	Qty.	P/N
TriPlus AS		
5 µL syringe (0.47/50/cone) fixed needle, suitable for Split injections		36504047
10 µL syringe (0.5/50/cone) fixed needle, suitable for Split injections		36500525
10 µL syringe (0.47/80/cone) fixed needle, suitable for Splitless and OC injections		36502019
10 µL syringe (0.63/50/cone) suitable for Merlin valve, suitable for Split injections		36520060
10 µL syringe (0.63/80/cone) suitable for Merlin valve, suitable for Splitless injections		36520061
10 µL syringe (dual gauge: 0.63-0.47/50/cone) suitable for PTV-simil OC with Merlin Valve		36500580
100 µL syringe (0.63/50/side hole) removable needle, suitable for PTV-LVI		36520050
250 µL syringe (0.63/50/side hole) removable needle, suitable for PTV-LVI		36520051
100 µL syringe (0.63/50/cone) removable needle, suitable for LV-SL		36500495
250 µL syringe (0.47/80/cone) removable needle, suitable for OC-LVI		36500490
Set of 2 needles (0.63/50/side hole) suitable for PTV-LVI		36550040
Set of 5 needles (0.47/80/cone) suitable for OC-LVI		36566480
Set of 5 needles (0.63/50/cone) suitable for LV-SL		36566485
TriPlus HS		
Gas tight syringe 1.0 mL capacity, without plunger (0.72/80/side hole)		36503005
Gas tight syringe 2.5 mL capacity, without plunger (0.72/80/side hole)		36503006
Gas tight syringe 5.0 mL capacity, without plunger (0.72/80/side hole)		36503007
Gas tight syringe 2.5 mL capacity, without plunger (0.64/80/side hole), suitable for Merlin valve		36503010
Gas tight syringe 1.0 mL capacity, complete with plunger and adapter		19005326
Gas tight syringe 2.5 mL capacity, complete with plunger and adapter		19005327
Gas tight syringe 5.0 mL capacity, complete with plunger and adapter		19005328

Table 24-4. Syringes and needles (Continued)

Description	Qty.	P/N
PTFE seal for plunger of 1.0 mL syringe		29003197
PTFE seal for plunger of 2.5 mL syringe		29003198
PTFE seal for plunger of 5.0 mL syringe		29003199

Table 24-5. Trays

	Qty.	P/N
Tray holder, configurable in field as Primary or Secondary		36812755
Primary Tray, positions 1-150, for 1, 2, 2.5 mL vials		24010150
Primary Tray, positions 1-54, for 10, 20 mL vials		24010160
Secondary Tray, positions 151-300, for 1, 2, 2.5 mL vials		24010155
Secondary Tray, positions 55-108, for 10, 20 mL vials		24010165
Cooled/heated tray holder		24010190
Primary cooled/heated tray 1-96 positions		24010195
Primary cooled/heated tray 1-33 positions		24010200
Secondary cooled/heated tray 97-192 positions		24010215
Secondary cooled/heated tray 34-66 positions		24010220

Spare Parts

Table 24-6. Print Circuit Boards

Description	Qty.	P/N
MFS_XY motor driver board	1	23648780
MFS_XY 1200 motor driver board	1	23648781
MFS_ZP ASSY motor driver board	1	23648785
MFS_ZP HS motor driver board	1	23648790
MFS_TC temperature controller board	1	23648655
MFS_SY syringe identification	1	23648660
MFS_CP main CPU board	1	23648815

Table 24-6. Print Circuit Boards (Continued)

Description	Qty.	P/N
MFS_FN incubation oven and stirrer board	1	23648795
MFS_HS hs syringe board	1	23648680
MFS_PI power interface board	1	23648685
MFS_EI external interface board	1	23648690
MFS_TI tray identifier board	1	23648695
MFS_CR bar code reader board	1	23648820
MFS_TR tray reader board MFS_TR W.A. programmed for Washing Station 4 solvents MFS_TR W.B. programmed for Washing Station 2 solvents MFS_TR TRAY programmed for Tray Holders	1	23648812 23648813 23648814
MFS_OC on-column presence board	1	23648710
MFS_OD on-column driver board MFS_OD ACT “A” programmed for Actuator A MFS_OD ACT “B” programmed for Actuator B	1	23648800 23648805

Table 24-7. Fuses

Description	Qty.	P/N
2A time-lag IEC127/III (5 x 20 mm) for 230 V ac power supply		28214019
4A time-lag IEC127/III (5 x 20 mm) for 115 V ac power supply		28214022

Table 24-8. Assembled Parts

Description	Qty.	P/N
Truck motor assy		25401030
XY crossrails assy		25401040
XY extended crossrail assy		25401070
Turret AS assy		25401050
Turret HS assy		25401060
External power module		20806070

Table 24-8. Assembled Parts (Continued)

Description	Qty.	P/N
External power module + LAN		20806080
Incubation Oven/Agitator		35408070
Pressure regulator modulator (it is a part of P/N 354 080 70)		42507230
Assy front door for TriPlus AS		33930950
Assy front door for TriPlus HS		33930951
Heated Syringe Holder for TriPlus HS		36503008
Fast Washing Station		43210175
4-solvents Washing Station		43210180
2-solvents Washing Station		43210185

Table 24-9. Cables

Description	Qty.	P/N
Autosampler 9M/F cable		23043453
6-pin M-DIN M/M cable		23043577

Table 24-10. Miscellanea

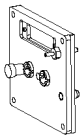
Description	Qty.	P/N
2-m Black plastic tube		42001002
Spring injection head AS		31505667
Spring injection head HS		31505668
 Crossrail Y - Guide pin with washer	2	21200410
 Crossrail Y - Plate assy for Z axis connection	1	33413052
 Label for Y axis	1	38706790

Table 24-10. Miscellanea (Continued)

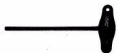
Description		Qty.	P/N
	Needle Guide assembly for 50 mm and 80 mm syringe needle (AS)	1	29301310
	Screwdriver for 3-mm Allen screw		20502606
	Phillips screwdriver		20502607

Table 24-11. Installation Kits

Description	Qty.	P/N
Kit External Tube (for TriPlus HS)		19050560
OC actuator		19050262

TriPlus HS

Table 24-12. TriPlus for HS Spare Parts

Description	Qty.	P/N
Septum cap for S/SL suitable for HS and SPME	1	34750004
Septum cap for PTV suitable for HS and SPME	1	35001048
Septum cap for Merlin Valve - S/SL-PTV	1	35001056

TriPlus for SPME

Table 24-13. TriPlus for SPME Spare Parts

Description	Qty.	P/N
Liners 0.8 mm ID for S/SL (Set of 5)	1	45352083
Liners 1 mm ID for PTV (Set of 2)	1	45322054
Septum cap for S/SL suitable for HS and SPME	1	34750004

Table 24-13. TriPlus for SPME Spare Parts

Description	Qty.	P/N
Septum cap for PTV suitable for HS and SPME	1	35001048
Septum cap for Merlin Valve - S/SL-PTV	1	35001056

Consumables and Accessories

Table 25-1. Kits

Description	Qty.	P/N
Headspace upgrade Kit	1	1R77010-1039
Preventive Maintenance Kit	1	1R77010-1040
Gas Tube Replacement kit	1	1R77010-1041
Complete Z-Head for Direct Exchange	1	1R77010-1042
Kit motor assy for X-axis	1	1R77010-1043
Kit motor assy for Y-axis	1	1R77010-1044
Kit motor assy for Z-axis	1	1R77010-1045
Kit motor assy for Needle Guide	1	1R77010-1046
Kit motor assy for Syringe Plunger	1	1R77010-1047
Kit motor assy for Agitator		1R77010-1048
Kit motor assy for Vortexer	1	1R77010-1049
CPU Board	1	1R77010-1050
Security Key	1	1R77010-1051
Electronic Mainboard Kit	1	1R77010-1052
Electronic Board Kit of the Z-Head	1	1R77010-1053
Electronic Board Kit of the Agitator	1	1R77010-1054
Electronic Board Kit of the ATC Station	1	1R77010-1055
Electronic Board Kit of the Cooled Stack	1	1R77010-1056
Main Power Supply	1	1R77010-1057

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Valve Oven

Table 26-1. Valve Oven Spare Parts

Description	Qty.	P/N
Heather flexible	1	35425070
Temperature sensor	1	40311245
Valve oven assy PCB	1	23648550
Solenoid valve SMC 24 Vcc	1	40519029
Portable power supply 24V 45W	1	20806030

Table 26-2. Pneumatic Valves Spare Parts

Description	Qty.	P/N
Pneumatically actuated, 4-ports valve (Valco Valve, UWP type, 175 °C max, for 1/16" fittings)	1	40524130
Pneumatically actuated, 6-ports valve (Valco Valve, UWP type, 175 °C max, for 1/16" fittings)	1	40524131
Pneumatically actuated, 8-ports valve (Valco Valve, UWP type, 175 °C max, for 1/16" fittings)	1	40524132
Pneumatically actuated, 10-ports valve (Valco Valve, UWP type, 175 °C max, for 1/16" fittings)	1	40524133
Pneumatically actuated, 4-ports liquid valve (Valco Valve, W type, with 0.1 µl internal sample loop, for 1/16" fittings)	1	40524140
Adjustable restrictor	1	40527097

Table 26-3. Purged Gas Valves Spare Parts

Description	Qty.	P/N
Pneumatically actuated, 6-ports purged valve, installed and unplumbed (Valco Valve, UWE-PH type, 175 °C max, for 1/16" fittings)	1	40524136
Pneumatically actuated, 8-ports purged valve, installed and unplumbed (Valco Valve, UWE-PH type, 175 °C max, for 1/16" fittings)	1	40524138

Table 26-3. Purged Gas Valves Spare Parts (Continued)

Pneumatically actuated, 10-ports purged valve, installed and unplumbed (Valco Valve, UWE-PH type, 175 °C max, for 1/16" fittings)	1	40524134
Pneumatically actuated, 12-ports purged valve, installed and unplumbed (Valco Valve, UWE-PH type, 175 °C max, for 1/16" fittings)	1	40524135

Table 26-4. Pressure Regulator 500 kPa Spare Parts

Description	Qty.	P/N
Auxiliary gas controls for precise and constant pressure operations in the range 0 to 500 kPa consisting of: - manual pressure regulator - pressure gauge	1	42506800 36716041

Table 26-5. Loops Spare Parts

Description	Qty.	P/N
Loop 250 µl	1	27207029
Loop 500 µl	1	27207025
Loop 1 ml	1	27207026
Loop 5 ml	1	27207030

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Ultra Fast Module Option

UFM S/SL-FID Configuration

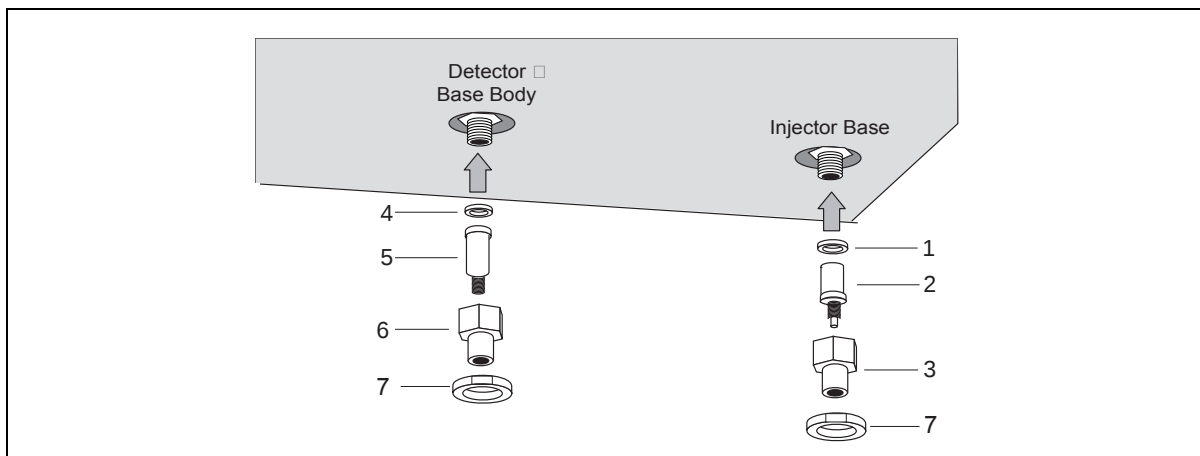


Table 27-1. UFM S/SL-FID Configuration Spare Parts

No	Description	Qty.	P/N
	Heated block assy complete for UFM-FID		22206153
1	Silver seal for injector base	10	29033629
2	Terminal fitting for capillary column		34705458
3	1/4-inch retaining nut for injector base		35002132
4	Silver seal for detector base	10	29037100
5	Terminal fitting for detector base		34705456
6	M8x1 retaining nut for detector base		35002134
7	Threaded locking ring		35001468

UFM PTV-FID Configuration

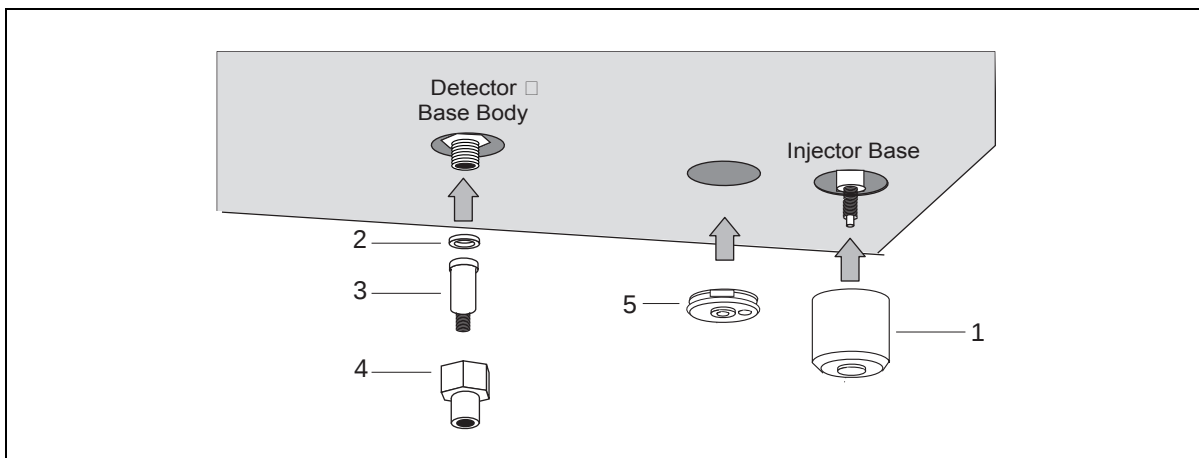


Table 27-2. UFM PTV-FID Configuration Spare Parts

No	Description	Qty.	P/N
	Heated block assy complete for UFM-FID	1	22206148
1	Injector guide	1	24104482
2	Silver seal for detector base	10	29037100
3	Terminal fitting for detector base	1	34705457
4	M8x1 PTV retaining nut for detector base	1	35002130
5	Supporting Disk	1	36812760

UFM-MS Configuration

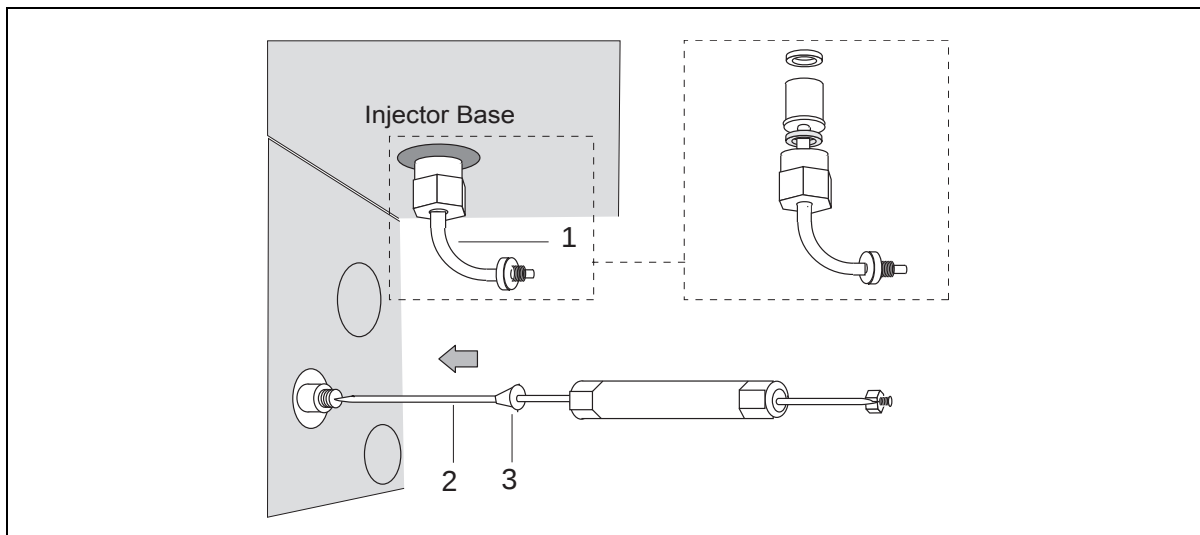


Table 27-3. UFM-MS Configuration Spare Parts

No	Description	Qty.	P/N
	Heated block assy complete for UFM-MS		22206147
1	Elbow fitting		35008115
2	UFM-MS TEMPUS Inner tube		41803010
3	Vespel ferrule		29033407

UFM Miscellanea

Table 27-4. UFM Miscellanea

Description	Qty.	P/N
DRH 2000 printed circuit board	See Chapter 1	
FID 201 printed circuit board	See Chapter 1	
UFM column cable		23043572
Power Module connecting cable		23043574
Heating block extension cable		23043447

Table 27-4. UFM Miscellanea

Detector simulation connector		23845038
External Power Module		20806050
UFM test mix		33819035

UFM Columns

Table 27-5. UFM-FID Columns

Specification	Description	P/N
UFM 1 (100% Dimethyl Polysiloxane); 5 m long; 0.1 mm ID; 0.1 μ m f.t.	Non polar, thin film, general purposes	UFMC00001010401
UFM 1 (100% Dimethyl Polysiloxane); 5 m long; 0.32 mm ID; 0.1 μ m f.t.	Non polar, suitable for SimDist ASTM D-2887	UFMC00001070401
UFM 1 (100% Dimethyl Polysiloxane); 5 m long; 0.32 mm ID; 0.25 μ m f.t.	Non polar, suitable for ISO 9377-2 (DIN H53)	UFMC00001070404 (fused silica column)
UFM M-1 (100% Dimethyl Polysiloxane); 5 m long; 0.32 mm ID; 0.25 μ m f.t.	Non polar, suitable for ISO 9377-2 (DIN H53)	UFMC00001070904 (metal column)
UFM 1 (100% Dimethyl Polysiloxane); 10 m long; 0.32 mm ID; 3 μ m f.t.	Non polar, very thick film, suitable for ASTM D-3710	UFMC00002070414
UFM 1 (100% Dimethyl Polysiloxane); 2.5 m long; 0.32 mm ID; 0.1 μ m f.t.	Non polar, thin film, suitable for ASTM D-2887 extended to n-C60 (PTV Injector)	UFMC00000070401 (fused silica column)
UFM M-1 (100% Dimethyl Polysiloxane); 2.5 m long; 0.32 mm ID; 0.1 μ m f.t.	Non polar, thin film, suitable for ASTM D-2887 extended to n-C60 (PTV Injector)	UFMC00000070901 (metal column)
UFM 5 (5% Diphenyl / 95% Dimethyl Polysiloxane); 2.5 m long; 0.1 mm ID; 0.4 μ m f.t.	Low polarity, suitable for simplest separations	UFMC00100000000
UFM 5 (5% Diphenyl / 95% Dimethyl Polysiloxane); 5 m long; 0.1 mm ID; 0.4 μ m f.t.	Low polarity, thick film, suitable for volatile and semi-volatile compounds	UFMC00200000000
UFM 5 (5% Diphenyl / 95% Dimethyl Polysiloxane); 5 m long; 0.1 mm ID; 0.1 μ m f.t.	Low polarity, thin film, general purposes	UFMC00300000000

Table 27-5. UFM-FID Columns (Continued)

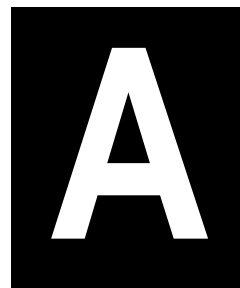
UFM 1701 (14% Cyanopropyl / 86% Dimethyl Polysiloxane); 5 m long; 0.1 mm ID; 0.1 µm f.t.	Mid polarity, thin film, general purposes	UFMC00400000000
UFM WAX (Carbowax); 5 m long; 0.1 mm ID; 0.1 µm f.t.	Highly polar, thin film, suitable for Essential Oils and FAMES	UFMC00001010501
UFM WAX (Carbowax); 5 m long; 0.1 mm ID; 0.2 µm f.t.	Highly polar, medium film thickness, suitable for FAMES	UFMC00001010503
UFM 5 (5% Diphenyl / 95% Dimethyl Polysiloxane); 10 m long; 0.1 mm ID; 0.4 µm f.t.	Low polarity, thick film, high resolution, suitable for volatile compounds	UFMC00002010006
UFM 264 (5% Diphenyl / 1% Methylvinyl / 94% Dimethyl Polysiloxane); 10 m long; 0.1 mm ID; 0.5 µm f.t.	Low polarity, thick film, high resolution, suitable for volatile compounds	UFMC00002010207
UFM 200 (100% Trifluoropropyl / Methyl Polysiloxane); 10 m long; 0.18 mm ID; 0.4 µm f.t.	Mid polarity, thick film, suitable for alcohols, solvents, ketones	UFMC00002030306
UFM 23; (50% Cyanopropyl / 50% Dimethyl Polysiloxane); 10 m long; 0.18 mm ID; 0.2 µm f.t.	Highly polar, mid film thickness, suitable for FAMES	UFMC00002030603

Table 27-6. UFM-MS Columns

Specification	Description	P/N
UFM 5 (5% Diphenyl / 95% Dimethyl Polysiloxane); 2.5 m long; 0.1 mm ID; 0.4 µm f.t.	Low polarity, suitable for simplest separations	UFMC10100000000
UFM 5 (5% Diphenyl / 95% Dimethyl Polysiloxane); 5 m long; 0.1 mm ID; 0.4 µm f.t.	Low polarity, thick film, suitable for volatile and semi-volatile compounds	UFMC10200000000
UFM 5 (5% Diphenyl / 95% Dimethyl Polysiloxane); 5 m long; 0.1 mm ID; 0.1 µm f.t.	Low polarity, thin film, general purposes	UFMC10300000000

Table 27-6. UFM-MS Columns (Continued)

UFM 1701 (14% Cyanopropyl / 86% Dimethyl Polysiloxane); 5 m long; 0.1 mm ID; 0.1 μ m f.t.	Mid polarity, thin film, general purposes	UFMC10400000000
Column UFM WAX (Carbowax); 5 m long; 0.1 mm ID; 0.1 μ m f.t.	Highly polar, thin film, suitable for Essential Oils and FAMES	UFMC10001010501



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Reader Survey

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Manual: Spare Parts Catalog
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	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The manual is well organized.	1	2	3	4	5
The manual is clearly written.	1	2	3	4	5
The manual contains all the information I need.	1	2	3	4	5
The instructions are easy to follow.	1	2	3	4	5
The instructions are complete.	1	2	3	4	5
The technical information is easy to understand.	1	2	3	4	5
Examples of operation are clear and useful.	1	2	3	4	5
The figures are helpful.	1	2	3	4	5
I was able to install the system using this manual.	1	2	3	4	5

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