

Part no.	Description
<b>PAL-xt Instruments - HTC, HTS and HTX Configurations</b>	
PAL HTC-xt-DLW	PAL HTC-xt including DLW Option PAL without TraySet or Stack* Prep and Load System for High Throughput Screening consisting of: 1 pc PAL50 X/Y unit with XT Electronics and Firmware 4.X.X 1 pc HTS Injection unit 2 pc Standalone support 215mm 1 pc Control terminal & cable 1 pc Power supply, Input Voltage 100-240V, 120W, 50/60Hz & cable 1 pc Valve drive 1 pc VICI C72VX-1676D-CTC-K Cheminert UPLC Valve Injection Valve (Pressure up to 15'000 psi/1000 bar, 6 port, 0.25mm bore & sample loop 20µl) 1 DLW Wash Station (100 ul Syringe) 1 pc Safety guard 1 pc PAL Interface Cable 3m 2 pc PC connection cable (1 Serial, 1 Ethernet) 1 pc PAL System CD (*requires PAL TraySet or PAL Stack)
PAL HTS-xt-DLW	PAL HTS-xt including DLW Option PAL without TraySet or Stack* Prep and Load System for High Throughput Screening, consisting of: 1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X 1 pc HTS Injection unit 2 pc Standalone support 215mm 1 pc Control terminal & cable 1 pc Power supply, Input Voltage 100-240V, 120W, 50/60Hz & cable 1 pc Valve drive 1 pc VICI C72VX-1676D-CTC-K Cheminert UPLC Valve Injection Valve (Pressure up to 15'000 psi/1000 bar, 6 port, 0.25mm bore & sample loop 20µl) 1 DLW Wash Station (100 ul Syringe) 1 pc Safety guard 1 pc PAL Interface Cable 3m 2 pc PC connection cable (1 Serial, 1 Ethernet) 1 pc PAL System CD (*requires PAL TraySet or PAL Stack)
PAL HTC-xt-DLW-R	PAL HTC-xt including DLW Option - without TraySet or Stack* Prep and Load System for High Throughput Screening consisting of: 1 pc PAL50 X/Y unit with XT Electronics and Firmware 4.X.X 1 pc HTS Injection unit 2 pc Standalone support 215mm 1 pc Control terminal & cable 1 pc Power supply, Input Voltage 100-240V, 120W, 50/60Hz & cable 1 pc PAL VivDrvR-32 Valve Drive for Rheodyne valve PD 718 series 1 pc PD 718-313 Rheodyne Injection Valve (Pressure up to 17'500 psi / 1200 bar, 6 port, 0.20mm bore & sample loop 2µl) 1 DLW Wash Station (100 ul Syringe) 1 pc Safety guard 1 pc PAL Interface Cable 3m 2 pc PC connection cable (1 Serial, 1 Ethernet) 1 pc PAL System CD (*requires PAL TraySet or PAL Stack)

PAL HTS-xt-DLW-R	<p>PAL HTS-xt including DLW Option PAL without TraySet or Stack*  Prep and Load System for High Throughput Screening, consisting of:  1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X  1 pc HTS Injection unit  2 pc Standalone support 215mm  1 pc Control terminal &amp; cable  1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz &amp; cable  1 pc PAL VlvDrvR-32 Valve Drive for Rheodyne valve PD 718 series  1 pc PD 718-313 Rheodyne Injection Valve  (Pressure up to 17'500 psi / 1200 bar, 6 port, 0.20mm bore &amp; sample loop 2µl  1 DLW Wash Station (100 ul Syringe)  1 pc Safety guard  1 pc PAL Interface Cable 3m  2 pc PC connection cable (1 Serial, 1 Ethernet)  1 pc PAL System CD  (*requires PAL TraySet or PAL Stack)</p>
PAL HTC9-xt	<p>PAL HTC-xt without TraySet or Stack, valve drive, injection valve,  fast wash station and syringe kit  Prep and Load System for High Throughput Screening, consisting of:  1 pc PAL50 X/Y unit with XT Electronics and Firmware 4.X.X  1 pc HTS Injection unit  2 pc Standalone support 215mm  1 pc Control terminal &amp; cable  1 pc Power supply, Input Voltage 100-240V, 120W,50/60Hz &amp; cable  1 pc Safety guard  1 pc PAL Interface Cable 3m  2 pc PC connection cable (1 Serial, 1 Ethernet)  1 pc PAL System CD</p>
PAL HTS9-xt	<p>PAL HTS-xt without TraySet or Stack, valve drive, injection valve,  fast wash station and syringe kit  Prep and Load System for High Throughput Screening, consisting of:  1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X  1 pc HTS Injection unit  2 pc Standalone support 215mm  1 pc Control terminal &amp; cable  1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz &amp; cable  1 pc Safety guard  1 pc PAL Interface Cable 3m  2 pc PC connection cable (1 Serial, 1 Ethernet)  1 pc PAL System CD</p>
PAL HTX9-xt	<p>PAL HTX-xt without TraySet or Stack, valve drive, injection valve,  fast wash station and syringe kit  Prep and Load System for High Throughput Screening, consisting of:  1 pc PAL120 X/Y unit with XT Electronics and Firmware 4.X.X  1 pc HTS Injection unit  2 pc Standalone support 215mm  1 pc Control terminal &amp; cable  1 pc Power supply, Input Voltage 100-240V, 120W,50/60Hz &amp; cable  1 pc Safety guard  1 pc PAL Interface Cable 3m  2 pc PC connection cable (1 Serial, 1 Ethernet)  1 pc PAL System CD</p>

PAL Instruments Options, Accessories and Spare Parts for HPLC PAL System		HTS	HTC	LC
PAL DLW Option				
PAL DLW-2 Option	<b>Dynamic Load and Wash Option for fast and clean LC Cycles</b> 1pc DLW-2 Injection Adapter with sample holding loop and syringe 100µl 1pc Wash Station 1pc Wash Solvent Pump Station with 2 active micro pumps 2 pc 1 Liter Wash Solvent bottles 2 pc Solvent bottle transfer line including solvent filter 1 pc System CD ROM DLW including Cycles <b>requires but does not include xt-Upgrade for PAL and Firmware 4.X or higher</b> <b>Choose this kit if your PAL HTC/HTS is already equipped with the XT-Upgrade</b>	•	•	
PAL DLW-2-HTC-xt	<b>Dynamic Load and Wash Option including HTC-xt Upgrade Kit</b> 1pc DLW-2 Injection Adapter with sample holding loop and syringe 100µl 1pc Wash Station 1pc Wash Solvent Pump Station with 2 active micro pumps 2 pc 1 Liter Wash Solvent bottles 2 pc Solvent bottle transfer line including solvent filter 1 pc System CD ROM DLW including Cycles <b>1 pc Kit HTC-xt (Control Board-xt for PAL System - Firmware 4.X or higher)</b> <b>Choose this kit if you want to upgrade an existing HTC PAL to the DLW Option</b>		•	
PAL DLW-2-HTS-xt	<b>Dynamic Load and Wash Option including HTS-xt Upgrade Kit</b> 1pc DLW-2 Injection Adapter with sample holding loop and syringe 100µl 1pc Wash Station 1pc Wash Solvent Pump Station with 2 active micro pumps 2 pc 1 Liter Wash Solvent bottles 2 pc Solvent bottle transfer line including solvent filter 1 pc System CD ROM DLW including Cycles <b>1 pc Kit HTS-xt (Control Board-xt for PAL System - Firmware 4.X or higher)</b> <b>Choose this kit if you want to upgrade an existing HTS PAL to the DLW Option</b>	•		
PAL TubeDLW	DLW Tubing Kit HTS/HTC	•	•	
SYRC DLW100-R	CTC Syringe gastight DLW 100µl, removable needle, not included	•	•	
PLG DLW100	Replacement Plunger for SYRC DLW100-R, pk of 10 pcs	•	•	
PAL DLW-2Loop	PAL DLW-2 Loop incl. PEEK hex-head nut and lock nut for needle adapter	•	•	
PAL TubeWaste	Tube Waste for Wash Station, length 2m	•	•	
PAL DLW-2 UpgrdKit	PAL DLW-2 Upgrade Kit, includes : DLW-2 Syringe Holder Plate DLW-2 Actuator Control PCB DLW Needle Holder	•	•	
HTX, HTS PAL, HTC PAL and LC PAL Syringe Kits				
PAL SyrLC10ul	Kit LC Syringe 10µl for HTX/HTS/HTC/LC PAL consisting of: 1pc syringe adapter and 1pc plunger holder 2 pc syringe SYRC G10-22S-3	•	•	•
PAL SyrLC25ul	Kit LC Syringe 25µl for HTX/HTS/HTC/LC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRC G25-22S-3	•	•	•
PAL SyrLCX25ul	Kit LC X-Syringe 25µl for HTX/HTS/HTC/LC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRX G25-22S-3	•	•	•
PAL SyrLCX50ul	Kit LC X-Syringe 50µl for HTX/HTS/HTC/LC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRX G50-22S-3	•	•	•
PAL SyrLC100ul	Kit LC Syringe 100µl for HTX/HTS/HTC/LC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRC G100-22S-3	•	•	•
PAL SyrLCX100ul	Kit LC X-Syringe 100µl for HTX/HTS/HTC/LC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRX G100-22S-3	•	•	•
PAL SyrLCX100ul-22	Kit LC X-Syringe 100µl for HTX/HTS/HTC/LC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRX G100-22-3	•	•	•
PAL SyrLC250ul	Kit LC Syringe 250µl for HTX/HTS/HTC/LC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRC G250-22-3	•	•	•
PAL SyrLC500ul	Kit LC Syringe 500µl for HTX/HTS/HTC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRC G500-22-3	•	•	
PAL SyrLC1000ul	Kit LC Syringe 1000µl for HTX/HTS/HTC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRC G1000-22-3	•	•	
PAL SyrLC2500ul	Kit LC Syringe 2500µl for HTX/HTS/HTC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRC G2500-22-3	•	•	
PAL SyrLC5000ul	Kit LC Syringe 5000µl for HTX/HTS/HTC PAL consisting of: 1 pc syringe adapter and 1pc plunger holder 2 pc syringe SYRC G5000-22-3	•	•	

HTX, HTS PAL, HTC PAL and LC PAL Standard Syringes				
SYRC G10-22S-3	Liquid Syringe gastight 10µl for HTX/HTS/HTC/LC PAL Fixed needle, gauge 22S, Pointstyle 3		•	•
SYRC G25-22S-3	Liquid Syringe gastight 25µl for HTX/HTS/HTC/LC PAL Fixed needle, gauge 22S, Pointstyle 3		•	•
SYRX G25-22S-3	Liquid Syringe X-type gastight 25µl for HTX/HTS/HTC/LC PAL Fixed needle, gauge 22S, Pointstyle 3		•	•
SYRX G50-22S-3	Liquid Syringe X-type gastight 50µl for HTX/HTS/HTC/LC PAL Fixed needle, gauge 22S, Pointstyle 3		•	•
SYRX G100-22-3	Liquid Syringe X-type gastight 100µl for HTX/HTS/HTC/LC PAL Fixed needle, gauge 22, Pointstyle 3		•	•
SYRX G100-22S-3	Liquid Syringe X-type gastight 100µl for HTX/HTS/HTC/LC PAL Fixed needle, gauge 22S, Pointstyle 3		•	•
SYRC G100-22-3	Liquid Syringe gastight 100µl for HTX/HTS/HTC/LC PAL Fixed needle, gauge 22, Pointstyle 3		•	•
SYRC G100-22S-3	Liquid Syringe gastight 100µl for HTX/HTS/HTC/LC PAL Fixed needle, gauge 22S, Pointstyle 3		•	•
SYRC G250-22-3	Liquid Syringe gastight 250µl for HTX/HTS/HTC/LC PAL Fixed needle, gauge 22, Pointstyle 3		•	•
SYRC G500-22-3	Liquid Syringe gastight 500µl for HTX/HTS/HTC PAL Fixed needle, gauge 22, Pointstyle 3		•	•
SYRC G1000-22-3	Liquid Syringe gastight 1000µl for HTX/HTS/HTC PAL Fixed needle, gauge 22, Pointstyle 3		•	•
SYRC G2500-22-3	Liquid Syringe gastight 2500µl for HTX/HTS/HTC PAL Fixed needle, gauge 22, Pointstyle 3		•	•
SYRC G5000-22-3	Liquid Syringe gastight 5000µl for HTX/HTS/HTC PAL Fixed needle, gauge 22, Pointstyle 3		•	•
PLG G10	10 pcs. Replacement syringe plunger for syringe SYRC G10-22S-3		•	•
PLG G25	10 pcs. Replacement syringe plunger for 25µl syringe		•	•
PLG X25	3 pcs. Replacement syringe plunger for SYRX G25 syringe		•	•
PLG X50	3 pcs. Replacement syringe plunger for SYRX G50 syringe		•	•
PLG X100	3 pcs. Replacement syringe plunger for SYRX G100 syringe		•	•
PLG G100	10 pcs. Replacement syringe plunger for 100µl syringe		•	•
PLG G250	10 pcs. Replacement syringe plunger for 250µl syringe		•	•
PLG G500	10 pcs. Replacement syringe plunger for 500µl syringe		•	•
PLG G1000-L	1 pcs. Replacement syringe plunger for 1000µl syringe		•	•
PLG G2500	1 pcs. Replacement syringe plunger for 2500µl syringe		•	•
PLG G5000	1 pcs. Replacement syringe plunger for 5000µl syringe		•	•

	Trays, Traysets, Tray Holders, Thermostatted Tray Holders and Stacks				
PAL Tray1ml	Sample tray for 200 vials 0.7/1ml		•	•	
PAL Tray2ml	Sample tray for 98 vials 2ml or 78 vials 0.7/1ml		•	•	
PAL Tray20ml	Sample tray for 32 vials 10/20ml or 21 vials 2ml		•	•	
PAL TrayMT2ml	Sample tray MT footprint, for 54x2ml vials for PAL Stacks all types or PAL MTHolders all types		•	•	•
PAL TrayMT2ml/6	Set of 6 pcs. PAL TrayMT2ml sample trays		•	•	•
PAL TrayMT10ml/6	Sample tray with Microtiter footprint for 15 vials 10ml, Pack of 6 pcs		•	•	•
PAL Stack8MT	PAL System stack for 8 Microtiter plates		•	•	
PAL Stack12MT	PAL System stack for 12 Microtiter plates		•	•	
PAL Stack4DW	PAL System stack for 4 micro- or deepwell plates		•	•	
PAL Stack6DW	PAL System stack for 6 Deepwell plates or 6 PAL TrayMT2ml		•	•	
PAL MTHolder	Tray Holder 76mm for 2 Microtiter/Deepwell plates or 2 PAL TrayMT2ml		•	•	
PAL MT4Holder	Tray Holder 76mm for 4 Microtiter/Deepwell plates or 4 PAL TrayMT2ml		•	•	
MR 21-00	Tray holder 76mm for standard vial trays 1ml, 2ml, 10ml vials		•	•	
MR 22-00	Tray holder 114mm for standard vial trays 10/20ml vials		•	•	
PAL TraySet1ml	Sample tray for 200 vials 0.7/1ml, including Tray Holder 76mm		•	•	
PAL TraySet2ml	Sample tray for 98 vials 2ml or 78 vials 0.7/1ml, including Tray Holder 76mm		•	•	
PAL TrayCooler-xt	Peltier Cooler 4°C to 70°C for one PAL Tray2ml (without sample tray) consisting of: 1pc TrayCooler with 84mm legs 1pc Tray cover for PAL Tray2ml including 1 pc. Power Supply 100V-240V LED Display, temperature regulation ± 1°C		•	•	
PAL LiqCooler	Liquid Tray Cooler 4°C to 70°C* for 1 PAL Tray2ml (without sample tray) consisting of: 1pc LiqCooler with 84mm legs 1pc plastic tray cover for PAL Tray2ml (circulator connection tube OD 8mm) *excluding external heating/cooling circulator		•	•	
PAL LiqCooler2	Liquid Tray Cooler 4°C to 70°C* consisting of: 1 pc TrayCooler with 136mm legs 1 pc Cooling plate for 20ml vials 1 pc plastic tray cover for PAL Tray2ml (* excluding PAL Tray2ml and external circulator)		•	•	
MC 30-10	Plastic Tray Cover to use 1 PAL Tray1ml in PAL TrayCooler or PAL LiqCooler		•	•	
MC 30-11	Plastic Tray Cover to use 1 PAL Tray2ml in PAL TrayCooler / PAL LiqCooler		•	•	
MC 30-14	Plastic Tray Cover to use 1 96well MT/DW in PAL TrayCooler/PAL LiqCooler		•	•	
MC 50-01	Adapter plate to use 1 96 well MT/DW in PAL TrayCooler / LiqCooler		•	•	
MP 50-031	Cooling plate 32x20 for PAL LiqCooler2 and PAL TrayCooler2		•	•	
PAL StkCooler-xt	Peltier cooled 6 DW Stack 4°C to 40°C for 6 standard microplates or 6 deepwell plates or 6 x 54 2ml vials including LCD display, temperature regulation ±1°C and power supply 100V-240V		•	•	
PAL StkCooler12MT-xt	Peltier cooled 12MT Stack 4°C to 40°C for 12 standard microplates including LCD display, temperature regulation ±1°C and power supply 100V-240V		•	•	
PAL StkCooler2DW-xt	Peltier cooled 2DW Stack 4°C to 40°C for 2 pcs Standard Microplates or 2 pcs Deepwell plates or 2 pcs PAL TrayMT2ml including 1 pc Power Supply 100V-240V LED Display, temperature regulation ±1°C		•	•	

HTX, HTS PAL and HTC PAL Valve Drives				
PAL 4VlvDrv-C2V6	PAL 4-Valve Module, type 2 consisting of: 4 pcs. Valve Drives 4 pcs. VICI Cheminert 6-port Injection valves, type C2V-1006D-CTC 4 pcs. Sample loops 20µl 1 pc PEEK Solvent manifold 1 set PEEK tubing kit including PEEK fittings 1 set Electrical connection cables		•	•
PAL 4VlvDrv	PAL 4-Valve Module, type 2 consisting of: 4 pcs. Valve Drives 1 pc PEEK Solvent manifold 1 set PEEK tubing kit including PEEK fittings 1 set Electrical connection cables (requires VICI Valco LC Valves, type DCxWK, type C or Rheodyne PD)		•	•
PAL ColSel6	Column Switching Valve Module for up to 6 columns 2pc C5-1006 type 6-port Column Selector Valve 0.25mm bore (requires Cycle Composer or PAL ICC-CE Software and PAL 1VlvDrv)		•	•
PAL 1VlvDrv-D	PAL 1Valve Drive Module High Torque consisting of: 1 pc Multiposition Valve Drive with bracket 1 set Electrical connection cable (requires LC Injection Valve, VICI type)		•	•
PAL 1VlvDrv	PAL 1-Valve Drive Module consisting of: 1 pc Multiposition Valve Drive with bracket 1 set Electrical connection cable (requires LC Injection Valve, VICI type)		•	•
PAL 2VlvDrv	PAL 2-Valve Drive Module consisting of: 2 pcs Multiposition Valve Drives with bracket 1 set Electrical connection cable (requires LC Injection Valve, VICI type)		•	•
PAL 3VlvDrv	PAL 3-Valve Drive Module consisting of: 3 pcs Multiposition Valve Drives with bracket 1 set Electrical connection cable (requires LC Injection Valve, all types)		•	•
PAL VlvDrv	PAL Valve Drive for VICI LC valve type WK or C (without Valve) 1 pc 2 Position Valve Drives with bracket 1 set Electrical connection cable (requires LC Injection Valve, VICI type)		•	•
PAL VlvDrvR	Valve drive for PAL System for Rheodyne valve PD7921 and PD7991 (without valve), consisting of: 1 pc Valve drive module 1 pc Connection cable 1300mm (requires LC Injection Valve, Rheodyne type PD7921 / PD7991)		•	•
PAL VlvDrvR-32	Valve drive for PAL System for Rheodyne valve PD718 series (without valve), consisting of: 1pc Valve drive 1pc Connection cable 1300mm (requires LC Injection Valve, Rheodyne type PD 718 series)		•	•

HTX, HTS PAL and HTC PAL Injection Valves, Valve Adaptors				
DC10WK-CTC-K	10-Port VICI type WK Injection Valve 0.4mm bore incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
DC6WK-CTC-K	6-Port VICI type WK Injection Valve 0.4mm bore incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
DCI4WK.5/1-CTC-K	4-Port VICI type WK Injection Valve 0.4mm bore, internal loop 0.5/1.0µl incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
C2V-0006D-CTC-K	6-port VICI Cheminert Injection Valve 0.15mm bore incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
C2V-0346D-CTC-K	6-port VICI Cheminert Injection Valve PAEK 0.15mm bore incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
C2V-1006D-CTC-K	6-port VICI Cheminert Injection Valve 0.25mm bore incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
C2V-1346D-CTC-K	6-port VICI Cheminert Injection Valve PAEK 0.25mm bore incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
C2V-3006D-CTC-K	6-Port Cheminert Injection Valve 0.75mm bore (prep version) incl. Needle Guide gauge 19, Needle Seal gauge 19, Kit LCVlv		•	•
C2VH-1000D-CTC-K	10-port VICI Cheminert Injection Valve 0.25mm bore incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
CN2-4340D-CTC	10-port VICI Cheminert Switching Valve PAEK version 0.1mm bore 1/32" Connections, no vertical port, can not be used as injection valve		•	•
C5F-1004D-CTC	8-port VICI Selector Valve 0.25mm bore (requires Valve Drive MV 03-01)		•	•
C72VU-6676D-CTC-K	6 port VICI injection valve Cheminert Pressure up to 18'500 psi / 1275 bar 50°C liq. / ID 0.15 mm incl. 2µl and 20µl loop. 20µl loop already mounted.		•	•
C72VX-1676D-CTC-K	6-port VICI Cheminert Injection Valve, 0.25mm bore Pressure up to 15'000 psi / 1000 bar incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
C72VX-1670D-CTC-K	10-port VICI Cheminert Injection Valve, 0.25mm bore Pressure up to 15'000 psi / 1000 bar incl. Needle Guide, Needle Seal, Kit LCVlv (requires PAL 1VlvDrv-D high torque version)		•	•
C72X-6670D-CTC	10-port VICI Cheminert Valve 15'000 psi 75°C ID 0.15 mm (requires PAL 1VlvDrv-D High Torque Version)		•	•
C2-Adptr	Adaptor to mount C2V valve on PAL VlvDrv old style (MV 10-00)		•	•
MV 36-01	Valve-Adapter for VICI Valco valves		•	•
Kit LCVlv	Kit Waste-Tubing for Valve		•	•
PD7991-K	6-port Rheodyne Injection Valve 0.20mm bore SPC4 (Special plating on Titanium, biocompatible) Pressure up to 15'000 psi / 1000 bar incl. Needle Guide, Needle Seal, Kit LCVlv		•	•
SS-100 Set-10	SWAGelok ferrule 1/16" SST, pack of 10 Front and Back Ferrule (required for PD 7991-K fluid connections)		•	•
PD718-313-K	6 port Rheodyne Injection Valve 0.20mm bore Coated, stainless steel rotor seal (RPC-13) Pressure up to 17'500 psi / 1200 bar, incl. Needle Guide, Needle Seal, Kit LCVlvR, mounted 2ul loop and VHP-200 fittings (requires PAL VlvDrvR-32)		•	•
PD718-315-K	6 port Rheodyne Injection Valve 0.20mm bore and MBB Coated, stainless steel rotor seal (RPC-13) Pressure up to 17'500 psi / 1200 bar, incl. Needle Guide, Needle Seal, Kit LCVlvR, (requires PAL VlvDrvR-32)		•	•

HTX, HTS PAL, HTC PAL and LC PAL Stators, Rotors, Sample Loops					
SL1KCW	Sample loop 1000µl for VICI, type WK		•	•	
SL500CW	Sample loop 500µl for VICI, type WK		•	•	
SL250CW	Sample loop 250µl for VICI, type WK		•	•	
SL200CW	Sample loop 200µl for VICI, type WK		•	•	
SL100CW	Sample loop 100µl for VICI, type WK		•	•	
SL50CW	Sample loop 50µl for VICI, type WK		•	•	
SL20CW	Sample loop 20µl for VICI, type WK		•	•	
CSL5K	Sample loop 5000µl for Cheminert Injection valve		•	•	
CSL2K	Sample loop 2000µl for Cheminert Injection valve		•	•	
CSL1K	Sample loop 1000µl for Cheminert Injection valve		•	•	
CSL500	Sample loop 500µl for Cheminert Injection valve		•	•	
CSL250	Sample loop 250µl for Cheminert Injection valve		•	•	•
CSL100	Sample loop 100µl for Cheminert Injection valve		•	•	•
CSL50	Sample loop 50µl for Cheminert Injection valve		•	•	•
CSL20-CTC	Sample loop 20µl for Cheminert Injection valve		•	•	•
CSL10-CTC	Sample loop 10µl for Cheminert Injection valve		•	•	•
CSL5-CTC	Sample loop 5µl for Cheminert Injection valve		•	•	•
CSL2-CTC	Sample loop 2µl for Cheminert Injection valve		•	•	•
CZSL20PK	Sample loop PEEK 20µl for Cheminert Injection valve		•	•	•
CZSL10PK	Sample loop PEEK 10µl for Cheminert Injection valve		•	•	•
CZSL5PK	Sample loop PEEK 5µl for Cheminert Injection valve		•	•	•
CZSL2PK	Sample loop PEEK 2µl for Cheminert Injection valve		•	•	•
TR050306B	Sample Loop 5ul Stainless Steel for Rheodyne type PD 7991		•	•	
TR050306C	Sample Loop 10ul Stainless Steel for Rheodyne type PD 7991		•	•	
TR050306D	Sample Loop 20ul Stainless Steel for Rheodyne type PD 7991		•	•	
TR050306E	Sample Loop 50ul Stainless Steel for Rheodyne type PD 7991		•	•	
TR050306F	Sample Loop 100ul Stainless Steel for Rheodyne type PD 7991		•	•	
PD718SL2	Rheodyne Sample loop 2ul for PD 718-313 and PD718-315 type valves		•	•	
PD718SL10	Rheodyne Sample loop 10ul for PD 718-313 and PD718-315 type valves		•	•	
PD718SL20	Rheodyne Sample loop 20ul for PD 718-313 and PD718-315 type valves		•	•	
PAL NdiSealP	10pcs. PEEK Needle seal, gauge 22 for Valco PEAK valve		•	•	•
PAL NdiSealP-19	10pcs PEEK Needle seal , gauge 19 for Valco PEAK valve		•	•	•
PAL NdiSeal	10pcs. Needle seal, gauge 22 for Valco valve		•	•	•
PAL NdiSeal-19	10pcs. Needle seal, gauge 19 for Valco valve		•	•	
PAL NdiSealR	10pcs. Needle seal, gauge 22 for Rheodyne valves		•	•	
C2-00R6	Rotor for C2V-0006D-CTC and C2-0006D-CTC		•	•	
C2V-0C06	Stator for C2V-0006D-CTC		•	•	
C2-13R0H	Rotor for C2VH-1340D-CTC		•	•	
C2V-1C40H	Stator for C2VH-1340D-CTC		•	•	
C2-10R0H	Rotor for C2VH-1000D-CTC		•	•	
C2V-1C00H	Stator for C2VH-1000D-CTC		•	•	
C2-03R6	Rotor for C2V-0346D-CTC		•	•	
C2V-0C46	Stator for C2V-0346D-CTC		•	•	
C72-16R6	Rotor for C72VX-1676D-CTC and C72VX-1696D-CTC		•	•	
C72V-1C76	Stator for C72VX-1676D-CTC		•	•	
C72V-1C96	Stator for C72VX-1696D-CTC		•	•	
C72-16R0	Rotor for C72VX-1670D-CTC and C72VX-1690D-CTC		•	•	
C72V-1C70	Stator for C72VX-1670D-CTC		•	•	
C72V-1C90	Stator for C72VX-1690D-CTC		•	•	
C2-13R6	Rotor for C2V-1346D-CTC		•	•	
C2V-1C46	Stator for C2V-1346D-CTC		•	•	
C2-30R6	Rotor Valcon-H for C2V-3006D-CTC		•	•	
C2V-3C06	Stator C2V-3006D-CTC		•	•	
C2-03R6	Rotor for C2-0346D-CTC		•	•	
C-0C46	Stator for C2-0346D-CTC		•	•	
C2-10R6	Rotor for C2V-1006D-CTC		•	•	•
C2V-1C06	Stator for C2V-1006D-CTC		•	•	•
C2-20R6	Rotor for C2V-2006D-CTC		•	•	•
C2V-2C06	Stator for C2V-2006D-CTC		•	•	•
C2-23R6	Rotor for C2V-2346D-CTC		•	•	•
C2V-2C46	Stator for C2V-2346D-CTC		•	•	•
C72-66R6	Rotor for C72VX-6696D-CTC, C72VU-6696D-CTC and for C72VU-6676D-CTC		•	•	
C72V-6C76	Stator for C72VU-6676D-CTC		•	•	
C5F-10R4	Rotor for PAL SelVlv C5 Selector Valve		•	•	
C5-1C28	Stator for PAL SelVlv C5 Selector Valve		•	•	
SSAC14W.5/1	Rotor for DC14WK.5/1-CTC, internal loop 0.5/1µl		•	•	
SSAC6W	Rotor for DC6WK-CTC		•	•	
SSAC10W	Rotor for DC10WK-CTC		•	•	
7991-999	RheBuild Kit Rotor for PD 7991		•	•	
7990-005	Stator for PD 7991		•	•	
PD718-RPC13-6	Rotor for PD718-313 Rheodyne 1200 Bar Valve		•	•	
PD718-SPC3	Stator for PD718-313 Rheodyne 1200 Bar Valve		•	•	
PD718-315-RPC	Rotor for PD718-315 Rheodyne 1200 Bar MBB Valve		•	•	
PD718-315-SPC3	Stator for PD718-315 Rheodyne 1200 Bar MBB Valve		•	•	



HTX, HTS PAL, HTC PAL Dilutor Option				
PAL Dilutor	PAL Dilutor Option for HTS PAL or COMBI PAL, consisting of: 1 pc Dilutor module 1 pc Connection cable 1 pc Dilutor syringe 2.5ml 1 pc Transfer tube 1/16" 1 pc Solvent bottle 1000ml 1 pc Aspirating tube 1/8" (requires PAL SyrLCSP80µl, PAL SyrLCSP20µl)		•	
PALDilutor-HTX	PAL Dilutor Option for HTX PAL, consisting of: 1 pc Dilutor module 1 pc Connection cable 1 pc Dilutor syringe 2.5ml 1 pc Transfer tube 1/16" 1 pc Solvent bottle 1000ml 1 pc Aspirating tube 1/8" (requires PAL SyrLCSP80µl, PAL SyrLCSP20µl)			
PAL SyrLCSP80ul	Kit Dilutor Syringe 80µl for HTS PAL consisting of: 1pc Sideport Syringe Plunger Sealing Screw 1pc Sideport Syringe Adapter and Plunger Holder 1pc Sideport Syringe 80µl SYRC SP80-R 3pcs Ndl S-22-3 Needles gauge 22 pointstyle 3 for Sideport Syringe		•	
PAL SyrLCSP20ul	Kit Dilutor Syringe 20µl for HTS PAL consisting of: 1pc Sideport Syringe Plunger Sealing Screw 1pc Sideport Syringe Adapter and Plunger Holder 1pc Sideport Syringe 20µl SYRC SP80-R 3pcs Ndl S-22S-3 Needles gauge 22S pst 3 for Sideport Syringe		•	
SYRC DIL1.0	PAL Dilutor Syringe 1ml		•	
SYRC DIL2.5	PAL Dilutor Syringe 2.5ml		•	
SYRC DIL5.0	PAL Dilutor Syringe 5ml		•	
SYRC DIL10	PAL Dilutor Syringe 10ml		•	
SYRC SP80-R	Sideport Syringe 80µl gastight without needle		•	
SYRC SP20-R	Sideport Syringe 20µl gastight without needle		•	
PLG DIL1.0	Replacement Dilutor Syringe Plunger 1ml		•	
PLG DIL2.5	Replacement Dilutor Syringe Plunger 2.5ml		•	
PLG DIL5	Replacement Dilutor Syringe Plunger 5.0ml		•	
PLG DIL10	Replacement Dilutor Syringe Plunger 10ml		•	
PLG SP80	10pcs Replacement syringe plunger for 80µl Sideport Syringe		•	
PLG SP20	10pcs Replacement syringe plunger for 20µl Sideport Syringe		•	
Ndl S-22-3	3pcs Replacement needle gauge 22 pst 3 for Sideport Syringe 80µl		•	
Ndl S-22S-3	3pcs Replacement needle gauge 22S pst 3 for Sideport Syringe 20µl		•	
PAL SyrOringSP20	1pc Perfluor O-Ring for SYRC SP20-R		•	
PAL SyrOringSP80	1pc Perfluor O-Ring for SYRC SP80-R		•	
PAL TubeDilHTX	1pc PAL Dilutor Transfer Tubing Kit for 120cm X-axis		•	
PAL TubeDilutor(B)	1pc PAL Dilutor Transfer Tubing Kit for 50cm or 80cm X-axis		•	
PAL DilAspKit	Aspiration tube kit, PFA tube and glass filter 40µl pore size		•	
1000-SV	1pc Dilutor Solvent bottle 1000ml		•	
MM 30-36	1pc Dilutor Syringe Screw		•	
PAL DilWasher	10pcs PTFE Dilutor Syringe Washer		•	
MM 90-02	3-way Dilutor Valve, PCTFE		•	
MM 90-03	3-way Dilutor Valve, PTFE		•	

<b>HTS PAL, HTC PAL MALDI Option</b>					
PAL MALDIOpt	PAL MALDI Option - Fraction Collection system consisting of: 1pc Tool parking bracket 1pc MALDI spotting tool 3pcs. Spotting tips 1pc Tool holder 1pc Waste tube 1pc Microfluidic fitting and tubing accessories 1pc CD-ROM PAL firmware 3.0 and CycleComposer cycles (requires PAL firmware 3.0 or higher and Cycle Composer or preferably PAL-xt System and Firmware 4.1.X or higher)		•	•	
MSpoTip3	3 pcs. Coated Fused Silica Spotting Tips, 360µm OD, 20µm ID		•	•	
MP 52-01	MALDI Target Adapter for 2pcs. Waters 96/384 Targets		•	•	
MP 52-02	MALDI Target Adapter for 2pcs. ABI Opti-TOF or ABI 4700 / Voyager		•	•	
MP 52-04	MALDI Target Adapter for 1pc Bruker AnChor Chip		•	•	
MP 52-05	MALDI Target Adapter for 1pc ABI 4800 Target		•	•	

<b>HTX, HTS PAL, HTC PAL and LC PAL Software</b>					
PAL CycCompCD	Cycle Composer Remote Control Software for PAL System CD ROM consisting of: Cycle Composer standalone version (Requires PAL Firmware 2.2 or higher and Windows XP/ VISTA)		•	•	•
PAL CycCompCD5	Cycle Composer Remote Control Software for PAL System CD ROM, site license for 5 instruments consisting of: Cycle Composer standalone version including 5 serial numbers (Requires PAL Firmware 2.2 or higher and Windows XP/ VISTA)		•	•	•
PAL CCUpgrd	Cycle Composer Remote Control Software for PAL System CD Upgrade Version 1.6 (requires Cycle Composer license number)		•	•	•
PAL CycEdit	PAL Cycle Editor License		•	•	•
PAL ICC-CE	CTC Instrument Control Components incl. Cycle Editor		•	•	•
PAL DrvEmp	PAL Driver License for Waters Empower2 Software		•	•	•
PAL DrvEmp3	PAL Driver License for Waters Empower3 Software		•	•	•

HTX, HTS PAL, HTC PAL and LC PAL Accessories					
PAL LC-QDoc	Instrument Qualification for HTS/HTC and LC PAL consisting of: 1pc LogBook 1pc Documentation IQ procedure 1pc Documentation OQ procedure		•	•	•
PAL LC-ReQ	Instrument Requalification for HTS/HTC and LC PAL consisting of: 1pc Documentation OQ procedure		•	•	•
PAL WashFast-22	Wash station HTS PAL for two solvents consisting of: 1 pc Double wash station incl. Holder for 2 x 500ml bottles 1 pc Electrical Connection cable 1 pc Tubing Kit 2 pc Solvent bottles 500ml		•		
PAL WashFast3-22	Wash station HTC PAL for two solvents consisting of: 1 pc Double wash station incl. Holder for 2 x 500ml bottles 1 pc Electrical Connection cable 1 pc Tubing Kit 2 pc Solvent bottles 500ml			•	
Kit FWash1000	1000ml Solvent Kit consisting of: 1 pc Bottle Holder bracket incl. screws 2 pcs. 1000ml Solvent Bottles		•	•	•
PAL WashLarge	LC PAL Wash station for two solvents, consisting of: 1 pc Vial holder for 2 x 100ml vials 2 pcs Vial 100ml, including Caps and Seals 1 pcs Waste port including septa, cap waste tubing		•	•	•
PAL 3xSolv100	Solvent Reservoir consisting of: 1 pc Holder for 3pc 100ml vials 3 pcs Solvent vials 100ml including caps and seals		•	•	
PAL FlowCell	Flow-Through Cell for PAL System, new design to accommodate up to 6 flow cells, consisting of* : 1 pc Holder 88mm 1 pc Flow-Cell Stainless Steel 316 with connectors Swagelok 1/4" (*required external pump and transfer tubing not included)		•	•	
MM 06-00	Single Flow-Cell for PAL System, consisting of: 1 pc Flow-Cell Stainless Steel 316 with connectors Swagelok 1/4" 1 pc Septa (requires PAL FlowCell)		•	•	
PAL OutExpBox	Output Expansion Box for HTS PAL or COMBI PAL System 8 x Relay Contact / 8 x 24V (P tot = 12W) consisting of: 1 pc Output Expansion Box 1 pc Cable DSub25M/F 1 pc Cable Power 36V (requires PAL Firmware 2.4 or higher)		•		
PAL BCReader	Barcode Reader Laser scanner for barcode labels on 2ml/10ml/20ml vials with magnetic caps including adapter and connection cables (PAL and PAL-xt Systems)		•	•	
PAL BCAdapter	Barcode Adapter for PAL-xt System including cable - only required when upgrading existing PAL to PAL-xt System (Requires PAL firmware version 4.1.2 or higher)		•	•	
USB-Ser2	USB to 2 RS232 Converter (connects PAL SER ports to USB port)		•	•	•
MSZ 02-01	Microtiter Plate Foil Cutter for needles Gauge 22 max.		•	•	•
PAL TwinKit1-xt	Mounting kit for two PAL-xt cross rails		•		
PAL TwinSafetyGuard	Safety Guard for PAL Twin Kit with 126 mm displacement		•		
PAL XExtL-xt	PAL-xt X-Axis Extension Left hand side, 126mm		•		
PAL XExtR-xt	PAL-xt X-Axis Extension Right hand side, 126mm		•		
PAL Toolkit	Tool Kit for PAL System		•	•	•

HTX, HTS PAL, HTC PAL and LC PAL Spare Parts					
PAL PMKit1	Preventative Maintenance (PM) Kit for PAL HPLC Technique		•	•	•
PAL MR-Std-xt	Standard Support Leg PAL-xt, 215mm, 2pcs		•	•	
PAL LubKit	PAL Lubrication Kit		•	•	•
PAL PaintCTC	Paint for PAL System 20ml including brush (white)		•	•	•
MSB6.3AT/10	Fuse 6.3AT for PAL CPU and Control Boards, pkg of 10pcs		•	•	•
SFC 4/10	SupraFuse 4A for PAL CPU and Control Boards, pkg of 10pcs		•	•	•
BAT VL2330	Backup Battery for PAL CPU/Control Board (1pc)		•	•	•
Kit HTS-xt	Upgrade Kit for HTS PAL to PAL HTX-xt, incl. 1 pc Control Board-xt for PAL System - Firmware 4.X.X, back cover, cables, CD		•		
Kit HTC-xt	Upgrade Kit for HTC PAL to PAL HTC-xt, incl. 1 pc Control Board-xt for PAL System - Firmware 4.X.X, back cover, cables, CD			•	
APR Control-xt	Control Board for all PAL Models		•	•	•
APR Control-HTC	Control Board for HTC PAL (non-xt)			•	
APR Control-LC	Control Board for LC PAL (non-xt)				•
APR CPU	CPU Board for PAL System (non-xt)		•		
APR MOTIO	Motor Driver and Input/Output Processing Board for PAL System (non-xt)		•		
MN 01-02	Power supply for PAL-xt System Power 150 Watt, Input Voltage 100V-240V		•	•	
MN 03-02	Power supply for PAL StkCooler-xt and PAL TrayCooler-xt, all types Input Voltage 100V-240V (specify Cooler type)		•	•	
Cbl RS20R-760	Cable 20p shielded, MiniRibbon connectors, 760mm long (Connection cable of COMBI PAL incubation heater , dilutor or valve drive)		•	•	•
Cbl RS20R-1300	Cable 20p shielded, MiniRibbon connectors, 1300mm long (Connection cable of COMBI PAL incubation heater , dilutor or valve drive)		•	•	•
Cbl RS2MR-2500	Power Cable for MultiposVlvDrv MV 03-01		•		
Cbl RS3JR-850	Signal Cable for MultiposVlvDrv MV 03-01, 850mm		•		
Cbl RS3JR-1200	Signal Cable for MultiposVlvDrv MV 03-01, 1200mm		•		
Cbl RS14R-250	Daisy chain Cable 14p shielded, MiniRibbon connectors, 250mm long (connection of MultiposVlvDrv MV 03-01)		•		
Cbl RS14R-850	Cable 14p shielded, MiniRibbon connectors, 850mm long (Connection of MultiposVlvDrv Type 2)		•		
Cbl RS3M-2000	Power cable 2m for PAL all types (Connection between PAL power supply and PAL)		•	•	•
Cbl RS4EX-1300	Cable for dual Fast Wash Station HTX PAL		•		
Cbl RS4EX-800	Cable for dual Fast Wash Station HTS PAL		•		
Cbl R4LX-700	Cable for dual Fast Wash Station HTC PAL and LC PAL			•	•
Cbl R4LX-1300	Cable for PAL-xt Wash Station, Round Connector (Length: 1300 mm)		•	•	
Cbl RS4C0-3000	PAL Interface cable 3m long 15 pin connector - open wires		•	•	•
Cbl RS9B-3000	Cable RS-232 with connector DB9 3m long (Connection PAL - PC)		•	•	•
Cbl RS9B-6000	Cable RS-232 with connector DB9 6m long (Connection PAL - PC)		•	•	•
Cbl SS8J-700	Cable 8p shielded, RJ45 connectors, 700mm long, LCD Terminal		•	•	•
PAL CblSerPrtr	Cable and adapter to connect a PAL System to a serial printer with DB 25 connector (requires Printer with serial interface)		•	•	•
PAL 3Ferrule	1pc Flangeless Trio Ferrule PTFE 3 x 1/16" for ActiveWashStation		•	•	•
PAL AWOring	Perfluor O-Ring for ActiveWashStation (set of 2 pcs)		•	•	•
PAL TubeWasteAct	Waste Tube for Active Wash, 2m		•	•	•
CV-3315	1pc 174-28 Waste Check Valve 0.2bar, for ActiveWashStation		•	•	•
PAL TubeWashAct	Tubing Kit for Active WashStation with 1 Injection Valve		•	•	•
MM 012-01	PTFE solvent overflow collector incl. ActiveWash Station needle guide		•	•	•
MM 91-01	1pc PTFE Solenoid Micropump, for ActiveWashStation		•	•	•
MB 20-00	Holder Assembly for PAL Control Terminal		•	•	•
PAL TermCTC	Control terminal for PAL system all types		•	•	•
PAL TermCTC-xt	Control terminal for PAL-xt system all types		•	•	•
Kit LCD Repl	Replacement Kit for PAL Control Terminal, incl. LCD-Module, flat cable, screws		•	•	•
MM 01-01	Fast wash module for two solvents, without holder and cable		•	•	•
MM 11-00	Fast wash module valve assembly		•	•	•
MM 30-21	Glas tube for fast wash station, gauge 22, ID 0.8mm, length 57mm		•	•	•
MM 30-19	Viewing glass OD 20mm for Fast wash module		•	•	•
PAL ORingFWS	O-ring Perfluor white, kit of 4pcs. Fast wash module		•	•	•
PAL TubeWaste	Waste Tube for Fast Wash Station, 2m		•	•	•
PAL TubeFWash	1 pc Connection tube incl. fittings and shutoff valve between Wash solvent bottle and Fast wash station module HTS/HTC/LC PAL		•	•	•
PAL TubeFWash1	1 pc PFA tube including fittings between Solvent bottle shutoff valve and Fast wash valve assembly		•	•	•

1000-WV	1000ml Wash solvent bottle for PAL Fast Wash Station	•	•	•
500-WV	500ml Wash solvent bottle for PAL Fast Wash Station	•	•	•
100-WV	100ml Solvent bottle for LC PAL Wash Station PAL WashLarge or PAL 3xSolv100 Solvent Reservoir, including cap and seal	•	•	•
Kit SealCap	10 caps and 10 seals for 100-WV Solvent bottle	•	•	•
CV-3345	1pc Check valve for MUX Kit	•		
PAL StkDrwMag	Stack Drawer Magnet Assembly, Kit	•	•	
Kit StkRollsSSst	12pcs rolls stainless steel incl. screws for stack drawer	•	•	
Kit DrawFront12MT	Kit, Drawer Fronts 31mm for Stack Cooler 12MT, consisting of: 6 pcs Drawer Front Covers with connecting plate mounted 1 pc Kit CStkScrews	•	•	
Kit DrawFront2DW	Kit, Drawer Fronts 63mm for Stack Cooler 2DW, consisting of: 1 pc Drawer Front Cover with connecting plate mounted 1 pc Kit CStkScrews	•	•	
Kit DrawFront6DW	Kit, Drawer Fronts 63mm for Stack Cooler 6DW, consisting of: 3 pcs. Drawer Front Covers with connecting plate mounted 1 pc. Kit CStkScrews	•	•	
Kit CStkScrews	Kit of replacement Nylon screws for PAL StkCooler front cover all types	•	•	
PAL UprNdlGde	Upper Needle Guide Assembly (Gauge 19)	•	•	
PAL UprNdlGde108	Upper Needle Guide Assembly 108mm (Gauge 19)	•	•	
MZ 23-01	Needle Guide Replacement Kit for HTS/HTC/LC PAL	•	•	•
MZ 20-45	Lower Needle Guide with chemical resistant coating. Without transport magnets installed, hole size for needles Gauge 19	•	•	•
MZ 20-46	Upper Needle Guide with chemical resistant coating Hole size for Gauge 19 needles	•	•	•
MV 30-16	PEEK Needle guide for valve type C PAEK versions	•	•	•
MV 30-12	Needle guide gauge 22, stainless steel for VICI type C or type WK	•	•	•
MV 30-52	Needle guide gauge 19, stainless steel for VICI type C or type WK	•	•	•
MZ 32-00	Safety Shield for PAL Injection Unit	•	•	•
MX 32-00	Plexiglas Safety Guard for PAL80	•		
MX 33-00	Plexiglas Safety Guard for PAL50		•	•
MX 36-00	Plexiglas Safety Guard for PAL120			
MX 37-00	Screw Kit for Safety Guard all types	•	•	•
PAL TCord280	Tension Cord 280mm (set of 5 pcs)	•	•	•
PAL TCord90	Tension Cord 90-95mm (set of 5 pcs)	•	•	•
MZ 06-00	Injection unit for GC1 PAL or LC PAL	•		•
MZ 01-00	Injection unit for HTX, HTS PAL or HTC PAL with needle guide Gauge 19	•	•	
MZ 017-00	Injection unit for HTX, HTS or HTC PAL-xt with needle guide Gauge 19	•	•	
PAL FlexBandKit	PAL Flexband for standard PAL50/80 Models, 1pc	•	•	•
PAL FlexBandKit2	PAL Flexband for PAL Models 120cm length, single Z-Axis installed, 1pc			
MX 20-15	Metal Angle Bracket for Ribbon Cable	•	•	•
PAL XYSens	X-Y-Axis Position Sensor PCB's, Kit	•	•	•
PAL XYSensDual	X-Y-Axis Position Sensor PCB's, Dual Kit for Dual Injection Unit PAL Models			
MX 52-00	Grounding Conductor for X/Y Carriage	•	•	•
PAL MZCovTop	Top Cover for Z-Axis, Kit	•	•	•
PAL SlidStopKit	Slider Stopper Assembly ( Z-Axis )	•	•	•
PAL RCbl50	Ribbon Cable Kit for X-Axis 50cm		•	•
PAL RCbl80	Ribbon Cable Kit for X-Axis 80cm	•		
PAL RCbl120	Ribbon Cable Kit for PAL X-Axis 120cm, for Single Injection Unit PAL Models			
PAL RCblDual	Ribbon Cable Kit for PAL X-Axis 120cm, for Dual Injection Unit PAL Models			
MZ 50-00	Ribbon Cable Z-Axis, 500mm	•	•	•
MZ 51-00	Ribbon Cable Z-Axis, 450mm	•	•	•
PAL MZCovCtrl	Cover for Control Module Z-Axis, Kit	•	•	•
PAL MZCovCbl	Cover for Motors and Ribbon Cable Z-Axis, Kit, (Rev. B or higher)	•	•	•
MZ 20-11	Lower Needle Guide Gauge22, transport magnets installed	•	•	•
MZ 20-14	Mechanical Stop for Needle Guide	•	•	•
MZ 20-15	Adapter for Short Tension Cord ( Z-Axis )	•	•	•
PAL MZCtrl	PCB Assembly for PAL Injection Unit, Kit, (Rev. D or higher)	•	•	•
PAL NdlBlkMag	Solenoid for Needle Guide Blocking Assembly, Kit	•	•	•
PAL MotPlg	PAL Stepper Motor Plunger, Kit, (For Injection Rev.B or higher only)	•	•	•
PAL MotZ	PAL Stepper Motor Z-Axis, Kit	•	•	•
PAL MZTRack350	Toothed Rack, 350mm, Kit	•	•	
PAL MZTRack300	Toothed Rack, 300mm, Kit			•
PAL MZZMag	Switching Magnet for Z-Sensor, Kit	•	•	•
BN4851 M4x25	Screws for X-Axis Side Covers, 10pcs	•	•	•
BN4851 M3x20	Screws for Y-Axis Side Covers, 10pcs	•	•	•

Part no.	Description
<b>PAL-xt Instruments - COMBI, LHX and GC Configurations</b>	
PAL LHS0-xt	PAL COMBI-xt for Liquid Injection, without Headspace option, Trayset consisting of*: 1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X 1 pc COMBI Injection unit 1 pc Control terminal & cable 1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz & cable 1 pc Wash station for 2 solvents and 1standard liquid 1 pc Kit SealCap 1 pc Syringe adapter 10µl & plunger holder 2 pc Syringe 10 µl SYRC L10-26S-AS 1 pc Safety guard 2 pc PC connection cable (1 Serial, 1 Ethernet) 1 pc PAL System CD (*requires PAL Trayset and GC mounting kit)
PAL LHS2-xt	PAL COMBI-xt for Liquid and Headspace Injection, with 2ml and 10/20ml vial tray, consisting of*: 1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X 1 pc COMBI Injection unit 1 pc Control terminal & cable 1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz & cable 1 pc Incubator for vials 2/10/20ml,shaker,temperature up to 200° C 1 pc Pressure regulator including connection fittings 1 pc Wash station for 2 solvents and 1standard liquid 1 pc Kit SealCap 2 pc Sample tray holder 114 mm 1 pc Sample tray 98x2ml/78x1ml 1 pc Sample tray 32x10/20ml 1 pc Syringe adapter 10µl & plunger holder 2 pc Syringe 10µl SYRC L10-26S-AS 1 pc Syringe heater 2.5ml, temperature up to 150°C 2 pc Headspace Syringes 2.5ml SYRC HS2.5-23-5 1 pc Safety guard 2 pc PC connection cable (1 Serial, 1 Ethernet) 1 pc PAL System CD (*requires GC mounting kit)
PAL LHX9-xt	PAL COMBI-xt without Liquid Injection option, Headspace option, Vial Tray, Tray Holder or Wash Station, consisting of*: 1 pc PAL120 X/Y unit with XT Electronics and Firmware 4.X.X 1 pc COMBI Injection unit 1 pc Control terminal & cable 1 pc External HS flush gas tubing kit 1 pc Power supply, Input Voltage 100-240V, 120W,50/60Hz & cable 1 pc Safety guard 1 pc PAL Interface Cable 3m 2 pc PC connection cable (1 Serial, 1 Ethernet) 1 pc PAL System CD (*requires PAL Trayset, Syringe Kit and GC mounting kit)
PAL GC1-xt	PAL GC-xt for Liquid Injection only (no upgrade possibility to LHS models) consisting of*: 1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X 1 pc GC Injection unit 1 pc Control terminal & cable 1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz & cable 1 pc Wash station for 2 solvents and 1standard liquid 1 pc Kit SealCap 1 pc Sample tray holder 76mm 1 pc Sample tray 98x2ml/78x1ml 1 pc Syringe adapter 10µl & plunger holder 2 pc Syringe 10 µl SYRC L10-26S-AS 1 pc Safety guard 2 pc PC connection cable (1 Serial, 1 Ethernet) 1 pc PAL System CD (*requires GC mounting kit)
PAL GC9-xt	PAL GC-xt for Liquid Injection only, without Washstation, Trayset and Syringe Kit (no upgrade possibility to LHS models) consisting of*: 1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X 1 pc GC Injection unit 1 pc Control terminal & cable 1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz & cable 1 pc Safety guard 2 pc PC connection cable (1 Serial, 1 Ethernet) 1 pc PAL System CD (*requires GC mounting kit)

Part no.	PAL Instruments Options, Accessories and Spare Parts for GC/Combi PAL Systems		COMBI	GC
<b>LHX, COMBI PAL and GC PAL Syringe Kits</b>				
PAL SyrGC1.2ul	Kit GC Syringe 1.2µl for COMBI PAL and GC1 PAL consisting of: 1 pc syringe adapter and 1 pc plunger holder 2 pc Syringe SYRC L1.2-26P-AS (plunger in needle design)		•	•
PAL SyrGC5ul	Kit GC Syringe 5µl for COMBI PAL and GC1 PAL consisting of: 1 pc syringe adapter and 1 pc plunger holder 2 pc Syringe SYRC L5-26S-AS		•	•
PAL SyrGC10ul	Kit GC Syringe 10µl for COMBI PAL and GC1 PAL consisting of: 1 pc syringe adapter and 1 pc plunger holder 2 pc Syringe SYRC L10-26S-AS		•	•
PAL SyrGC10ul-G	Kit GC Syringe 10µl gastight for COMBI PAL and GC1 PAL consisting of: 1 pc syringe adapter and 1 pc plunger holder 2 pc Syringe SYRC G10-26S-AS		•	•
PAL SyrGC25ul	Kit GC Syringe 25µl for COMBI PAL and GC1 PAL consisting of: 1 pc syringe adapter and 1 pc plunger holder 2 pc Syringe SYRC G25-26S-AS		•	•
PAL SyrGC100ul	Kit GC Syringe 100µl for COMBI PAL and GC1 PAL consisting of: 1 pc syringe adapter and 1 pc plunger holder 2 pc Syringe SYRC G100-26S-AS		•	•
PAL SyrGC250ul	Kit GC Syringe 250µl for COMBI PAL and GC1 PAL consisting of: 1 pc syringe adapter and 1 pc plunger holder 2 pc Syringe SYRC G250-26-AS		•	•
PAL SyrGC500ul	Kit GC Syringe 500µl for COMBI PAL and GC1 PAL consisting of: 1 pc syringe adapter and 1 pc plunger holder 2 pc Syringe SYRC G500-26-AS		•	•
PAL SyrHS1.0ml	Kit HS Syringe 1.0ml for COMBI PAL consisting of: 1 pc syringe heater and 1 pc plunger holder 2 pc Syringe SYRC HS1.0-23-5		•	
PAL SyrHS2.5ml	Kit HS Syringe 2.5ml for COMBI PAL consisting of: 1 pc syringe heater and 1 pc plunger holder 2 pc Syringe SYRC HS2.5-23-5		•	
PAL SyrHS5.0ml	Kit HS Syringe 5.0ml for COMBI PAL consisting of: 1 pc syringe heater and 1 pc plunger holder 2 pc Syringe SYRC HS5.0-23-5		•	
<b>LHX, COMBI PAL and GC PAL Standard Syringes</b>				
SYRC HS1.0-23-5	Headspace Syringe HD-type 1.0ml for COMBI PAL Sideport for gas flushing, fixed needle gauge 23, Pointstyle 5		•	
SYRC HS2.5-23-5	Headspace Syringe HD-type 2.5ml for COMBI PAL Sideport for gas flushing, fixed needle gauge 23, Pointstyle 5		•	
SYRC HS5.0-23-5	Headspace Syringe HD-type 5.0ml for COMBI PAL Sideport for gas flushing, fixed needle gauge 23, Pointstyle 5		•	
SYRC L1.2-26P-AS	Liquid syringe 1.2µl for COMBI PAL and GC1 PAL Fixed needle gauge 26P, Pointstyle AS		•	•
SYRC L5-26S-AS	Liquid syringe 5µl for COMBI PAL and GC1 PAL Fixed needle gauge 26S, Pointstyle AS		•	•
SYRC L10-26S-AS	Liquid syringe 10µl for COMBI PAL and GC1 PAL Fixed needle gauge 26S, Pointstyle AS		•	•
SYRC G10-26S-AS	Liquid syringe gastight 10µl for COMBI PAL and GC1 PAL Fixed needle gauge 26S, Pointstyle AS		•	•
SYRC L10-26S-2	Liquid syringe 10µl for COMBI PAL and GC1 PAL Fixed needle gauge 26S, Pointstyle 2		•	•
SYRC L10-23S-AS	Liquid syringe 10µl for COMBI PAL and GC1 PAL Fixed needle gauge 23S, Pointstyle AS		•	•
SYRC G25-26S-AS	Liquid syringe gastight 25µl for COMBI PAL and GC1 PAL Fixed needle gauge 26S, Pointstyle AS		•	•
SYRC G100-26S-AS	Liquid syringe gastight 100µl for COMBI PAL and GC1 PAL Fixed needle gauge 26S, Pointstyle AS		•	•
SYRC G250-26-AS	Liquid syringe gastight 250µl for COMBI PAL and GC1 PAL Fixed needle gauge 26, Pointstyle AS		•	•
SYRC G500-26-AS	Liquid syringe gastight 500µl for COMBI PAL and GC1 PAL Fixed needle gauge 26, Pointstyle AS		•	•
SYRSGE L10-26S-AS	Liquid syringe SGE 10µl for COMBI PAL and GC1 PAL Fixed needle gauge 26, Cone Tip		•	•
PLG HD1000	1 pcs. <b>HD</b> -type replacement syringe plunger for 1ml Headspace syringe		•	
PLG HD2500	1 pcs. <b>HD</b> -type replacement syringe plunger for 2.5ml Headspace syringe		•	
PLG HD5000	1 pcs. <b>HD</b> -type replacement syringe plunger for 5ml Headspace syringe		•	
PLG G25	10 pcs. Replacement syringe plunger for 25µl syringe		•	•
PLG G100	10 pcs. Replacement syringe plunger for 100µl syringe		•	•
PLG G250	10 pcs. Replacement syringe plunger for 250µl syringe		•	•
PLG G500	10 pcs. Replacement syringe plunger for 500µl syringe		•	•

<b>Trays, Traysets, Tray Holders, Thermostatted Tray Holders and Stack</b>				
PAL TrayCooler-xt	Peltier tray cooler 4°C to 70°C for one PAL Tray2ml (without tray) consisting of: 1 pc Tray Cooler with 84mm legs 1 pc Tray cover for PAL Tray2ml 1 pc Power supply 100-240V incl. Temperature Regulator		•	•
PAL TrayCooler2-xt	Peltier Tray Cooler 4°C to 70°C for one PAL Tray2ml or one Cooling plate 20ml MP 50-031 consisting of: 1pc TrayCooler with 136mm legs 1pc Cooling plate for 20ml vials 1pc Tray cover for PAL Tray2ml 1pc Power Supply 100-240V incl. Temperature Regulation ± 1°C		•	•
PAL LiqCooler	Liquid Tray Cooler 4°C to 70°C* for 1 PAL Tray2ml consisting of: 1pc LiqCooler with 84mm legs 1pc plastic tray cover for PAL Tray2ml (circulator connection tube OD 8mm) (*excluding PAL Tray2ml and external heating/cooling circulator)		•	•
PAL LiqCooler2	Liquid Tray Cooler 4°C to 70°C* consisting of: 1 pc TrayCooler with 136mm legs 1 pc Cooling plate for 20ml vials 1 pc plastic tray cover for PAL Tray2ml (* excluding PAL Tray2ml and external circulator)		•	•
MC 30-10	Plastic Tray Cover to use 1 PAL Tray1ml in PAL Tray Coolers		•	•
MC 30-11	Plastic Tray Cover to use 1 PAL Tray2ml in PAL Tray Coolers		•	•
MC 30-14	Plastic Tray Cover to use 1 96 well MT/DW in PAL Tray Coolers		•	•
MC 50-01	Adapter plate to use 1 96 well MT/DW in PAL TrayCooler or LiqCooler		•	•
MP 50-031	Cooling plate 32x20 for PAL LiqCooler2 and PAL TrayCooler2		•	•
PAL Tray1ml	Sample tray for 200 vials 0.7/1ml		•	•
PAL Tray2ml	Sample tray for 98 vials 2ml or 78 vials 0.7/1ml		•	•
PAL Tray20ml	Sample tray for 32 vials 10/20ml or 21 vials 2ml		•	•
PAL TrayMT2ml	Sample tray MT footprint, for 54x2ml vials for PAL Stacks all types or PAL MTHolders all types		•	•
PAL TrayMT2ml/6	Set of 6 pcs. PAL TrayMT2ml sample trays		•	•
PAL TrayMT10ml/6	Sample tray with Microtiter footprint for 15 vials 10ml, Pack of 6 pcs		•	•
PAL TraySet1ml	Sample tray for 200 vials 0.7/1ml, including Tray Holder 76mm		•	•
PAL TraySet2ml	Sample tray for 98 vials 2ml or 78 vials 0.7/1ml, including Tray Holder 76mm		•	•
PAL TraySet10ml	Sample tray for 32 vials 10ml or 21 vials 2ml, incl. Tray Holder 76mm (can not be used for 20ml vials)		•	•
PAL TraySet20ml	Sample tray for 32 vials 10/20ml or 21 vials 2ml, incl. Holder 114mm (positioned 38mm lower than standard holder)		•	•
PAL TraySet2ml-2	Sample tray for 98 vials 2ml or 78 vials 0.7/1ml, incl. Holder 114mm (Holder may be alternatively used for 20ml vial trays)		•	•
PAL MTHolder	Tray Holder 76mm for 2 Microtiter/Deepwell plates or 2 PAL TrayMT2ml		•	•
PAL MT4Holder	Tray Holder 76mm for 4 Microtiter/Deepwell plates or 4 PAL TrayMT2ml		•	•
MR 21-00	Tray holder 76mm for standard vial trays 1ml, 2ml, 10ml vials		•	•
MR 22-00	Tray holder 114mm for standard vial trays 10/20ml vials		•	•
PAL Stack4DW	PAL System stack for 4 micro- or deepwell plates for deepwell plate GC operation (1 stack per GC may be used)		•	•
PAL StkCooler2DW-xt	Peltier cooled 2DW Stack 4°C to 40°C for 2 pcs Standard Microplates or 2 pcs Deepwell plates or 2 pcs PAL TrayMT2ml including 1 pc Power Supply 110-240V LED Display, temperature regulation ±1°C		•	•



<b>LHX, COMBI PAL Dilutor Option</b>				
PAL Dilutor	PAL Dilutor Option for HTS PAL or COMBI PAL consisting of: 1 pc Dilutor module 1 pc Connection cable 1 pc Dilutor syringe 2.5ml 1 pc Transfer tube 1/16" 1 pc Solvent bottle 1000ml 1 pc Aspirating tube 1/8" (requires PAL PAL SyrGCSP80µl, PAL SyrGCSP20µl)		•	
PAL SyrGCSP80ul	Kit Dilutor Syringe 80µl for COMBI PAL consisting of: 1pc Sideport Syringe Plunger Sealing Screw 1pc Sideport Syringe Adapter incl. Plunger Holder 1pc Sideport Syringe 80µl SYRC SP80-R 3pcs Ndl S-26-AS Needles gauge 26, pst AS for Sideport Syringe		•	
PAL SyrGCSP20ul	Kit Dilutor Syringe 20µl for COMBI PAL consisting of: 1pc Sideport Syringe Plunger Sealing Screw 1pc Sideport Syringe Adapter incl. Plunger Holder 1pc Sideport Syringe 20µl SYRC SP80-R 3pcs Ndl S-26S-AS Needles gauge 26S pst AS for Sideport Syringe		•	
SYRC DIL1.0	PAL Dilutor Syringe 1ml		•	
SYRC DIL2.5	PAL Dilutor Syringe 2.5ml		•	
SYRC DIL5.0	PAL Dilutor Syringe 5ml		•	
SYRC DIL10	PAL Dilutor Syringe 10ml		•	
SYRC SP80-R	Sideport Syringe 80µl gastight without needle		•	
SYRC SP20-R	Sideport Syringe 20µl gastight without needle		•	
PLG DIL1.0	Replacement Dilutor Syringe Plunger 1ml		•	
PLG DIL2.5	Replacement Dilutor Syringe Plunger 2.5ml		•	
PLG DIL5	Replacement Dilutor Syringe Plunger 5.0ml		•	
PLG DIL10	Replacement Dilutor Syringe Plunger 10ml		•	
PLG SP80	10pcs Replacement syringe plunger for 80µl Sideport Syringe		•	
PLG SP20	10pcs Replacement syringe plunger for 20µl Sideport Syringe		•	
Ndl S-26-AS	3pcs Replacement needle gauge 26 pst AS Sideport Syringe 80µl		•	
Ndl S-26S-AS	3pcs Replacement needle gauge 26S pst AS Sideport Syringe 20µl		•	
PAL SyrOringSP80	1pc Perfluor O-Ring for SYRC SP80-R		•	
PAL SyrOringSP20	1pc Perfluor O-Ring for SYRC SP20-R		•	
PAL TubeDilHTX	1pc PAL Dilutor Transfer Tubing Kit for 120cm X-axis		•	
PAL TubeDilutor(B)	1pc PAL Dilutor Transfer Tubing Kit for 50cm or 80cm X-axis		•	
PAL DilAspKit	Aspiration tube kit, PFA tube and glass filter 40µl pore size		•	
1000-SV	1pc Dilutor Solvent bottle 1000ml		•	
MM 30-36	1pc Dilutor Syringe Screw		•	
PAL DilWasher	10pc PTFE Dilutor Syringe Washer		•	
MM 90-02	3-way Dilutor Valve, PCTFE		•	
MM 90-03	3-way Dilutor Valve, PTFE		•	

<b>HX and COMBI PAL SPME Option</b>				
PAL SPME-Kit	PAL SPME option, consisting of: 1 pc SPME Holder Adapter 1 pc Plunger Holder 1 pc SPME Fiber Holder 1 pc Fiber Assortment Kit containing 4 different Fibers 1 pc SPME Performance Evaluation Mix 1 pc SPME CD 1 pc SPME Application Documentation		•	
PAL FibCond	SPME Fiber Conditioning Station consistig of: 1 pc heater up to 350°C with connection cable and bracket 40mm 1 pc flush gas connection 1 pc fitting for COMBI PAL flush gas regulator incl. tubing 1 pc alternate bracket 14mm		•	
PAL FibCondTube	Gas tube Fiber Conditioning Station - Pressure Regulator, incl.SwageLok fittings and flow reduction		•	

LHX and COMBI PAL ITEX Option				
PAL ITEX-2Option	1pc 1.3 ml ITEX Syringe with M7 x 0.5 Fitting 1pc Replacement plunger 1.3 ml 2pc ITEX-2 trap TENAX TA 80/100mesh incl. O-Ring 1pc Trap heater incl. electrical connections 1pc Syringe Heater incl. Plunger holder 1pc Syringe Heater side bracket 1pc CD-ROM with ITEX Cycle (requires PAL LHS2 and Cycle Composer)		•	
PAL ITEX-2Opt-LHX	ITEX-2 Option for PAL LHX, consisting of: 1 pc 1.3 ml ITEX Syringe with M7 x 0.5 Fitting 1 pc Replacement plunger 1.3 ml 2 pcs ITEX-2 trap TENAX TA 80/100 mesh incl. O - Ring 1 pc Trap Heater LHX incl. electrical connections 1 pc Syringe Heater incl. Plunger holder 1 pc Syringe Heater side bracket 1 pc Mounting kit LHX 1 pc CD Rom with ITEX software ( requires PAL LHX and Cycle Composer )		•	
ITEX-2 TrapTXTA	1pc ITEX-2 Trap Tenax TA 80/100 mesh		•	
ITEX-2 TrapTXTA3	Set of 3pcs. ITEX-2 Trap Tenax TA 80/100 mesh		•	
SYRC ITEX-2.-1.3	1pc replacement ITEX-2 Syringe 1.3ml with Adapter M7x0.5		•	
PLG ITEX-2.-1.3	Replacement Plunger for ITEX-2 Syringe		•	
ITEX-2 HT	ITEX-2 Trap Heating Unit		•	
ITEX TrapTXTA	1pc ITEX Trap Tenax TA 80/100 mesh		•	
ITEX TrapTXTA3	Set of 3pcs. ITEX Trap Tenax TA 80/100 mesh		•	
SYRC ITEX2.5	1pc replacement ITEX Syringe 2.5ml		•	
PLG G2500	1pc Replacement syringe plunger for 2.5ml syringe		•	
PAL MHETool	MHE Tool for COMBI PAL 1pc MHE Tool 1pc MHE Parkstation 1pc Needle MHE Gauge 22/5 1pc MHE Tool CD (requires PAL LHS2, COMBI PAL Firmware 3.0.5 or preferably PAL COMBI-xt and Firmware 4.1.X or higher)		•	

<b>PAL COMBI and COMBI-xt Mounting Kits</b>				
PAL MR-5890-xt	Mounting hardware and interconnection cable to install a PAL / PAL-xt on an Agilent 5890 GC		•	•
PAL MR-7890-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Agilent 6890 / 7890 GC		•	•
PAL MR-7890-MQM-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Agilent 6890 / 7890 Micromass Quattro GC		•	•
PAL MR-Trace1310GC-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Thermo Trace 1310 GC		•	•
PAL MR-TRACE-OC-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Thermo GC Trace 2000 (Thermo On-column Injector only, requires Kit Trace-OC)		•	•
PAL MR-TRACE-SSL-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Thermo GC Trace 2000 (215mm legs, for Thermo Split/Splitless and PTV Injector)		•	•
PAL MR-V3800/V450-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Varian GC 3800 or 450		•	•
PAL MR-V3900/V43x-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Varian GC 3900 or 43x		•	•
PAL MR-S2014-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Shimadzu GC S2014		•	•
PAL MR-S2010-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Shimadzu GC S2010		•	•
PAL MR-S2025-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Shimadzu GC S2025		•	•
PAL MR-Focus-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Thermo GC Focus		•	•
PAL MR-PEC600-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a PE Clarus600		•	•
PAL MR-DANI-Master-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a DANI Master GC		•	•
PAL MR-Bruker-436-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Bruker GC 436		•	•
PAL MR-Bruker-451-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Bruker GC 451		•	•
PAL MR-Bruker-456-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Bruker GC 456		•	•
PAL MR-B3800/B450-xt	Mounting hardware and interconnection cable to install a PAL COMBI-xt, PAL GC-xt, GC1, LHS0, LHS2 or LHX9 on a Bruker 3800 GC or 450-GC		•	•
PAL MR-Std-xt	Standard Support Leg PAL-xt, 215mm, 2pcs		•	•
PAL MR-260mm-xt	Standalone support 260.4 mm, 1 pcs		•	•
PAL TwinKit1-xt	Mounting kit for two PAL-xt cross rails		•	•
PAL TwinSafetyGuard	Safety Guard for PAL Twin Kit with 126 mm displacement		•	•
PAL XExtL-xt	PAL-xt X-Axis Extension Left hand side, 126mm		•	•
PAL XExtR-xt	PAL-xt X-Axis Extension Right hand side, 126mm		•	•

<b>LHX and COMBI PAL and GC PAL GC Mounting Kits</b>				
PAL MR-6850	Mounting hardware and interconnection cable to install a GC1, LHS0, LHS2 and LHX9 on a Agilent 6850 GC		•	•
PAL MR-6850-Dual	MR-6850 add-on mounting hardware to align 2 Agilent 6850 GC's (requires 1 PAL MR-6850)		•	•
PAL MR-S17A	Mounting hardware and interconnection cable to install a GC1, LHS0, LHS2 and LHX9 on a Shimadzu GC 17A		•	•
PAL MR-S14B	Mounting hardware and interconnection cable to install a GC1, LHS0, LHS2 and LHX9 on a Shimadzu GC 14B		•	•
PAL MR-PEXL	Mounting hardware and interconnection cable to install a GC1, LHS0, LHS2 and on PE Autosystem XL or Clarus500		•	•

<b>LHX and COMBI PAL and GC PAL Software</b>				
PAL CycCompCD	Cycle Composer Remote Control Software for PAL System CD ROM consisting of: Cycle Composer standalone version (Requires PAL Firmware 2.2 or higher and Windows XP/ VISTA)		•	•
PAL CycCompCD5	Cycle Composer Remote Control Software for PAL System CD ROM, site license for 5 instruments consisting of: Cycle Composer standalone version including 5 serial numbers (Requires PAL Firmware 2.2 or higher and Windows XP/ VISTA)		•	•
PAL CCUpgrd	Cycle Composer Remote Control Software for PAL System CD Upgrade Version 1.6 (requires Cycle Composer license number)		•	•
PAL CycEdit	PAL Cycle Editor License		•	•
PAL ICC-CE	CTC Instrument Control Components incl. Cycle Editor		•	•
PAL DrvEmp	PAL Driver License for Waters Empower2 Software		•	•
PAL DrvEmp3	PAL Driver License for Waters Empower3 Software		•	•

<b>LHX and COMBI PAL and GC PAL Accessories</b>				
PAL GC-QDoc	Instrument Qualification for COMBI PAL and GC PAL consisting of: 1pc LogBook 1pc Documentation IQ procedure 1pc Documentation OQ procedure		•	•
PAL GC-ReQ	Instrument Requalification for COMBI PAL and GC PAL consisting of: 1pc Documentation OQ procedure		•	•
PAL Toolkit	Tool Kit for PAL System		•	•
PAL LHSUpgrd	Headspace Upgrade for LHS0 COMBI PAL Liquid only version consisting of: 1 pc Incubator for 10ml/20ml vials, shaker, temperature up to 200°C 1 pc Syringe heater 2.5ml 2 pc Headspace Syringes 2.5ml SYRC HS 2.5-23-5 1 pc PAL TraySet20ml Tray for 32 vials 10/20ml incl. holder 114mm 1 pc Pressure regulator and 1 pc Magnetic transport ring 1 pc Vial transport teaching kit and 6 pcs Adapter to use 10ml vials 1 pc PAL System CD (requires model PAL LHS0)		•	
PAL FlowCell	Flow-Through Cell for PAL System, new design to accommodate up to 6 flow cells, consisting of* : 1 pc Holder 88mm 1 pc Flow-Cell Stainless Steel 316 with connectors Swagelok 1/4" (*required external pump and transfer tubing not included)		•	•
MM 06-00	Single Flow-Cell for PAL System, consisting of: 1 pc Flow-Cell Stainless Steel 316 with connectors Swagelok 1/4" 1 pc Septa (requires PAL FlowCell)		•	•
PAL BCReader	Barcode Reader Laser scanner for barcode labels on 2ml/10ml/20ml vials with magnetic caps including adapter and connection cables (PAL and PAL-xt Systems)		•	•
PAL BCAdapter	Barcode Adapter for PAL-xt System including cable - only required when upgrading existing PAL to PAL-xt System (Requires PAL firmware version 4.1.2 or higher)		•	•
USB-Ser2	USB to 2 RS232 Converter (connects PAL SER ports to USB port)		•	•
PAL 3xSolv100	Solvent Reservoir and LVI Wash Station consisting of: 1pc Holder for 3pc 100ml vials 3pcs Solvent vials 100ml including caps and seals		•	•
PAL WashStd1	Wash station for 2 solvents and 1 standard liquid, consisting of: 1 pc Vial holder 5 x ø23mm incl. 5 pcs Vials 10ml, 5pcs Caps and Seals		•	•
PAL WashFast-22	COMBI PAL Washstation for two solvents for high sample throughput, consisting of: 1 pc Double wash station incl. Holder for 2 x 500ml bottles 1 pc Electrical Connection cable 2 pc Solvent bottles 500ml incl. 1 pc Tubing Kit		•	
Kit FWash1000	1000ml Solvent Kit consisting of: 1pc Bottle Holder bracket incl. screws 1pcs. 1000ml Solvent Bottles		•	

LHX and COMBI PAL and GC PAL Spare Parts				
PAL PMKit2	Preventative Maintenance (PM) Kit for PAL GC Technique		•	•
PAL LubKit	PAL Lubrication Kit		•	•
PAL PaintCTC	Paint for PAL System 20ml including brush (white)		•	•
PAL Incub6x20	Incubator for 10ml/20ml vials, with shaker, temperature up to 200°C		•	
PAL Ins20/2ml	6 pcs 2ml inserts to use 2ml vials in PAL Incub6x20		•	
PAL Ins20/10ml	6 pcs 10ml inserts for PAL Incub6x20		•	
PAL AgiORing	6 pcs. Drive belt for Incubator COMBI PAL		•	
MSH 01-00	Syringe heater 1.0ml for PAL		•	
MSH 02-00	Syringe heater 2.5ml for PAL		•	
MSH 03-00	Syringe heater 5.0ml for PAL		•	
PAL SyrOring1ml	10 pcs O-Ring for PAL SyrHS1.0ml		•	
PAL SyrOring2.5ml	10 pcs O-Ring for PAL SyrHS2.5ml		•	
PAL SyrOring5ml	10 pcs O-Ring for PAL SyrHS5.0ml		•	
MSH 30-23	Safety Clamp for COMBI PAL syringe heater		•	
100-WV	100ml Solvent bottle for LC PAL Wash Station PAL WashLarge or PAL 3xSolv 100 Solvent Reservoir including cap and seal		•	•
Kit Wash 10-CV	Kit wash vial 10-CV for standard wash station 10 vials, 10 caps, 10 seals		•	•
Kit SealCap	10 caps and 10 seals for 100-WV Solvent bottle or PAL WashStd1		•	•
PAL TubeFlushX	Replacement Kit for Flush Tube-X in PAL80 crossrail		•	
PAL TubeFlushXY	Replacement Kit for Gas Flush Tube for X-Y-Axis, complete Tube		•	
PAL TubeFlush LHX	Replacement Kit for Gas Flush Tube LHX PAL		•	
Kit Flush LHX	Gas Flush Kit for LHX PAL, field upgrade kit		•	
PAL KitFlush-Ext800	Gas Flush Kit external for Combi PAL 800mm, field installation kit		•	
MM 03-01	Pressure regulator 0 - 2.5 Bar (0-35psi), including pressure gauge and fittings		•	
MM 09-01	Fitting assembly PAL Adapter / Tube Connector for Pressure Regulator		•	
MM 015-01	Tube Connector from Pressure Regulator to Tubing, 1/8"		•	
Kit SealFlush	Kit Sealing Gaskets for Pressure Regulator, 10 pcs		•	
Kit FlushVlv	Kit Gas Flush Valve for all PAL GC models		•	
Kit FlushVlv-xt	Kit Gas Flush Valve for PAL COMBI-xt and PAL LHX-xt models			•
KJL23-M3	Elbow Adapter for Gas Flush Tube		•	
M-3ALU-3	Gas Tube Adapter, 90°		•	
MX 30-27	PAL X-Axis Side Cover Right hand side			•
PAL FlexBandKit	PAL Flexband for standard PAL50/80 Models, 1pc		•	•
MX 20-15	Metal Angle Bracket for Ribbon Cable		•	•
MX 52-00	Grounding Conductor for X/Y Carriage		•	•
MX 30-34	Blind Cover for GC PAL			•
MX 30-42	Blind Cover for LHX PAL		•	
MB 20-00	Holder Assembly for PAL Control Terminal		•	•
PAL TermCTC	Control terminal for PAL system all types		•	•
PAL TermCTC-xt	Control terminal for PAL-xt system all types		•	•
Kit LCD Repl	Replacement Kit for PAL Control Terminal, incl. LCD-Module, flat cable, screws		•	•
BN4851 M4x25	Screws for X-Axis Side Covers, 10pcs		•	•
BN4851 M3x20	Screws for Y-Axis Side Covers, 10pcs		•	•
MSZ 01-00	Magnetic Adapter Ring for 20ml vials		•	
MZ 23-02	Needle Guide Replacement Kit for COMBI PAL		•	
PAL UprNdlGde	Upper Needle Guide Assembly (Gauge 19)		•	•
PAL UprNdlGde108	Upper Needle Guide Assembly 108mm (Gauge 19)		•	•
MZ 32-00	Safety Shield for PAL Injection Unit		•	•
MX 32-00	Plexiglas Safety Guard for PAL80		•	•
MX 37-00	Screw Kit for Safety Guard all types		•	•
PAL TCord280	Tension Cord 280mm (set of 5 pcs)		•	•
PAL TCord90	Tension Cord 90-95mm (set of 5 pcs)		•	•
MZ 02-00	Injection unit for LHX and COMBI PAL		•	
MZ 06-00	Injection unit for GC1 PAL or LC PAL			•
MZ 019-00	Injection unit for COMBI PAL-xt		•	
MZ 018-00	Injection unit for GC PAL-xt			•
PAL MZCovTop	Top Cover for Z-Axis, Kit		•	•
PAL SlidStopKit	Slider Stopper Assembly ( Z-Axis )		•	•
PAL StkDrwMag	Stack Drawer Magnet Assembly, Kit		•	•
MZ 50-00	Ribbon Cable Z-Axis, 500mm		•	•
MZ 50-01	Ribbon Cable for ITEX Z-Axis, 560mm		•	
PAL MZCovCtrl	Cover for Control Module Z-Axis, Kit		•	•
PAL MZCovCbl	Cover for Motors and Ribbon Cable Z-Axis, Kit, (Rev. B or higher)		•	•
MZ 20-11	Lower Needle Guide Gauge22, transport magnets installed		•	•
MZ 20-14	Mechanical Stop for Needle Guide		•	•
MZ 20-15	Adapter for Short Tension Cord ( Z-Axis )		•	•
PAL MZCtrl	PCB Assembly for PAL Injection Unit, Kit, (Rev. D or higher)		•	•
PAL NdlBlkMag	Solenoid for Needle Guide Blocking Assembly, Kit		•	•
PAL TubeFlushZ	Gas Flush Tube for Z-Axis, Replacement Kit		•	
PAL MotZ	PAL Stepper Motor Z-Axis, Kit		•	•
PAL MotPlg	PAL Stepper Motor Plunger, Kit, (For Injection Rev.B or higher only)		•	•
PAL MZTRack350	Toothed Rack, 350mm, Kit		•	
PAL MZTRack300	Toothed Rack, 300mm, Kit			•

PAL MZZMag	Switching Magnet for Z-Sensor, Kit	•	•
PAL MZAgiOpen	Bumper for PAL Injection Unit, Kit	•	
PAL RCbi80	Ribbon Cable Kit for X-Axis 80cm	•	•
PAL RCbi120	Ribbon Cable Kit for PAL X-Axis 120cm, for Single Injection Unit PAL Models	•	
PAL RCbiDual	Ribbon Cable Kit for PAL X-Axis 120cm, for Dual Injection Unit PAL Models	•	
PAL XYSens	X-Y-Axis Position Sensor PCB's, Kit	•	•
MSB6.3AT/10	Fuse 6.3AT for PAL CPU and Control Boards, pkg of 10pcs	•	•
SFC 4/10	SupraFuse 4A for PAL CPU and Control Boards, pkg of 10pcs	•	•
BAT VL2330	Backup Battery for PAL CPU/Control Board (1pc)	•	•
Kit COMBI-xt	Upgrade Kit for COMBI PAL to PAL COMBI-xt, incl. 1 pc Control Board-xt for PAL System - Firmware 4.1.X or higher 1 pc side cover with gas flush valve for PAL Combi-xt 1 pc back cover (for 80cm standard rail version) including screws cables, CD Rom	•	
Kit GC-xt	Upgrade Kit for GC PAL to PAL GC-xt, incl. 1 pc Control Board-xt for PAL System - Firmware 4.1.X, back cover, cables, CD		•
APR Control-xt	Control Board for all PAL Models	•	•
APR Control-GC	Control Board for GC PAL (non-xt)		•
APR CPU	CPU Board for PAL System (non-xt)	•	
APR MOTIO	Motor Driver and Input/Output Processing Board for PAL System (non-xt)	•	
Cbi RS20R-760	Cable 20p shielded, MiniRibbon connectors, 760mm long (Connection cable of COMBI PAL incubation heater , dilutor or valve drive)	•	
Cbi RS20R-1300	Cable 20p shielded, MiniRibbon connectors, 1300mm long (Connection cable of COMBI PAL incubation heater , dilutor or valve drive)	•	
Cbi RS3M-2000	Power cable 2m for PAL all types (Connection between PAL power supply and PAL)	•	•
Cbi RS4C0-3000	PAL Interface cable 3m long 15 pin connector - open wires	•	•
Cbi RS9B-3000	Cable RS-232 with connector DB9 3m long (Connection PAL - PC)	•	•
Cbi RS9B-6000	Cable RS-232 with connector DB9 6m long (Connection PAL - PC)	•	•
Cbi SS8J-700	Cable 8p shielded, RJ45 connectors, 700mm long, LCD Terminal	•	•
PAL CbiSerPrtr	Cable and adapter to connect a PAL System to a serial printer with DB 25 connector (requires Printer with serial interface)	•	•
MN 01-02	Power supply for PAL-xt System Power 150 Watt, Input Voltage 100-240V	•	•
MN 03-02	Power supply for PAL StkCooler-xt and PAL TrayCooler-xt, all types Input Voltage 100-240V (specify Cooler type)	•	•