

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

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| PAL HTS-xt-DLW-R | <p>PAL HTS-xt including DLW Option PAL without TraySet or Stack*<br/> Prep and Load System for High Throughput Screening, consisting of:<br/> 1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X<br/> 1 pc HTS Injection unit<br/> 2 pc Standalone support 215mm<br/> 1 pc Control terminal &amp; cable<br/> 1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz &amp; cable<br/> 1 pc PAL VlvDrvR-32 Valve Drive for Rheodyne valve PD 718 series<br/> 1 pc PD 718-313 Rheodyne Injection Valve<br/> (Pressure up to 17'500 psi / 1200 bar, 6 port, 0.20mm bore &amp; sample loop 2µl)<br/> 1 DLW Wash Station (100 ul Syringe)<br/> 1 pc Safety guard<br/> 1 pc PAL Interface Cable 3m<br/> 2 pc PC connection cable (1 Serial, 1 Ethernet)<br/> 1 pc PAL System CD<br/> (*requires PAL TraySet or PAL Stack)</p> |
| PAL HTC9-xt      | <p>PAL HTC-xt without TraySet or Stack, valve drive, injection valve,<br/> fast wash station and syringe kit<br/> Prep and Load System for High Throughput Screening, consisting of:<br/> 1 pc PAL50 X/Y unit with XT Electronics and Firmware 4.X.X<br/> 1 pc HTS Injection unit<br/> 2 pc Standalone support 215mm<br/> 1 pc Control terminal &amp; cable<br/> 1 pc Power supply, Input Voltage 100-240V, 120W,50/60Hz &amp; cable<br/> 1 pc Safety guard<br/> 1 pc PAL Interface Cable 3m<br/> 2 pc PC connection cable (1 Serial, 1 Ethernet)<br/> 1 pc PAL System CD</p>  |
| PAL HTS9-xt      | <p>PAL HTS-xt without TraySet or Stack, valve drive, injection valve,<br/> fast wash station and syringe kit<br/> Prep and Load System for High Throughput Screening, consisting of:<br/> 1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X<br/> 1 pc HTS Injection unit<br/> 2 pc Standalone support 215mm<br/> 1 pc Control terminal &amp; cable<br/> 1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz &amp; cable<br/> 1 pc Safety guard<br/> 1 pc PAL Interface Cable 3m<br/> 2 pc PC connection cable (1 Serial, 1 Ethernet)<br/> 1 pc PAL System CD</p>   |
| PAL HTX9-xt      | <p>PAL HTX-xt without TraySet or Stack, valve drive, injection valve,<br/> fast wash station and syringe kit<br/> Prep and Load System for High Throughput Screening, consisting of:<br/> 1 pc PAL120 X/Y unit with XT Electronics and Firmware 4.X.X<br/> 1 pc HTS Injection unit<br/> 2 pc Standalone support 215mm<br/> 1 pc Control terminal &amp; cable<br/> 1 pc Power supply, Input Voltage 100-240V, 120W,50/60Hz &amp; cable<br/> 1 pc Safety guard<br/> 1 pc PAL Interface Cable 3m<br/> 2 pc PC connection cable (1 Serial, 1 Ethernet)<br/> 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><br>1pc DLW-2 Injection Adapter with sample holding loop and syringe 100µl<br>1pc Wash Station<br>1pc Wash Solvent Pump Station with 2 active micro pumps<br>2 pc 1 Liter Wash Solvent bottles<br>2 pc Solvent bottle transfer line including solvent filter<br>1 pc System CD ROM DLW including Cycles<br><b>requires but does not include xt-Upgrade for PAL and Firmware 4.X or higher</b><br><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><br>1pc DLW-2 Injection Adapter with sample holding loop and syringe 100µl<br>1pc Wash Station<br>1pc Wash Solvent Pump Station with 2 active micro pumps<br>2 pc 1 Liter Wash Solvent bottles<br>2 pc Solvent bottle transfer line including solvent filter<br>1 pc System CD ROM DLW including Cycles<br><b>1 pc Kit HTC-xt (Control Board-xt for PAL System - Firmware 4.X or higher)</b><br><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><br>1pc DLW-2 Injection Adapter with sample holding loop and syringe 100µl<br>1pc Wash Station<br>1pc Wash Solvent Pump Station with 2 active micro pumps<br>2 pc 1 Liter Wash Solvent bottles<br>2 pc Solvent bottle transfer line including solvent filter<br>1 pc System CD ROM DLW including Cycles<br><b>1 pc Kit HTS-xt (Control Board-xt for PAL System - Firmware 4.X or higher)</b><br><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 :<br>DLW-2 Syringe Holder Plate<br>DLW-2 Actuator Control PCB<br>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:<br>1pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRC G10-22S-3  | •   | •   | •  |
| PAL SyrLC25ul  | Kit LC Syringe 25µl for HTX/HTS/HTC/LC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRC G25-22S-3   | •   | •   | •  |
| PAL SyrLCX25ul   | Kit LC X-Syringe 25µl for HTX/HTS/HTC/LC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRX G25-22S-3   | •   | •   | •  |
| PAL SyrLCX50ul   | Kit LC X-Syringe 50µl for HTX/HTS/HTC/LC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRX G50-22S-3   | •   | •   | •  |
| PAL SyrLC100ul   | Kit LC Syringe 100µl for HTX/HTS/HTC/LC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRC G100-22S-3   | •   | •   | •  |
| PAL SyrLCX100ul  | Kit LC X-Syringe 100µl for HTX/HTS/HTC/LC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRX G100-22S-3   | •   | •   | •  |
| PAL SyrLCX100ul-22   | Kit LC X-Syringe 100µl for HTX/HTS/HTC/LC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRX G100-22-3  | •   | •   | •  |
| PAL SyrLC250ul   | Kit LC Syringe 250µl for HTX/HTS/HTC/LC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRC G250-22-3  | •   | •   | •  |
| PAL SyrLC500ul   | Kit LC Syringe 500µl for HTX/HTS/HTC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRC G500-22-3   | •   | •   |    |
| PAL SyrLC1000ul  | Kit LC Syringe 1000µl for HTX/HTS/HTC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRC G1000-22-3   | •   | •   |    |
| PAL SyrLC2500ul  | Kit LC Syringe 2500µl for HTX/HTS/HTC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>2 pc syringe SYRC G2500-22-3   | •   | •   |    |
| PAL SyrLC5000ul  | Kit LC Syringe 5000µl for HTX/HTS/HTC PAL consisting of:<br>1 pc syringe adapter and 1pc plunger holder<br>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<br>Fixed needle, gauge 22S, Pointstyle 3         |  | • | • |
| SYRC G25-22S-3                                     | Liquid Syringe gastight 25µl for HTX/HTS/HTC/LC PAL<br>Fixed needle, gauge 22S, Pointstyle 3         |  | • | • |
| SYRX G25-22S-3                                     | Liquid Syringe X-type gastight 25µl for HTX/HTS/HTC/LC PAL<br>Fixed needle, gauge 22S, Pointstyle 3  |  | • | • |
| SYRX G50-22S-3                                     | Liquid Syringe X-type gastight 50µl for HTX/HTS/HTC/LC PAL<br>Fixed needle, gauge 22S, Pointstyle 3  |  | • | • |
| SYRX G100-22-3                                     | Liquid Syringe X-type gastight 100µl for HTX/HTS/HTC/LC PAL<br>Fixed needle, gauge 22, Pointstyle 3  |  | • | • |
| SYRX G100-22S-3                                    | Liquid Syringe X-type gastight 100µl for HTX/HTS/HTC/LC PAL<br>Fixed needle, gauge 22S, Pointstyle 3 |  | • | • |
| SYRC G100-22-3                                     | Liquid Syringe gastight 100µl for HTX/HTS/HTC/LC PAL<br>Fixed needle, gauge 22, Pointstyle 3         |  | • | • |
| SYRC G100-22S-3                                    | Liquid Syringe gastight 100µl for HTX/HTS/HTC/LC PAL<br>Fixed needle, gauge 22S, Pointstyle 3        |  | • | • |
| SYRC G250-22-3                                     | Liquid Syringe gastight 250µl for HTX/HTS/HTC/LC PAL<br>Fixed needle, gauge 22, Pointstyle 3         |  | • | • |
| SYRC G500-22-3                                     | Liquid Syringe gastight 500µl for HTX/HTS/HTC PAL<br>Fixed needle, gauge 22, Pointstyle 3            |  | • | • |
| SYRC G1000-22-3                                    | Liquid Syringe gastight 1000µl for HTX/HTS/HTC PAL<br>Fixed needle, gauge 22, Pointstyle 3           |  | • | • |
| SYRC G2500-22-3                                    | Liquid Syringe gastight 2500µl for HTX/HTS/HTC PAL<br>Fixed needle, gauge 22, Pointstyle 3           |  | • | • |
| SYRC G5000-22-3                                    | Liquid Syringe gastight 5000µl for HTX/HTS/HTC PAL<br>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<br>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)<br>consisting of:<br>1pc TrayCooler with 84mm legs<br>1pc Tray cover for PAL Tray2ml<br>including 1 pc. Power Supply 100V-240V<br>LED Display, temperature regulation ± 1°C             |  | • | • |   |
| PAL LiqCooler        | Liquid Tray Cooler 4°C to 70°C* for 1 PAL Tray2ml<br>(without sample tray) consisting of:<br>1pc LiqCooler with 84mm legs<br>1pc plastic tray cover for PAL Tray2ml<br>(circulator connection tube OD 8mm)<br>*excluding external heating/cooling circulator |  | • | • |   |
| PAL LiqCooler2       | Liquid Tray Cooler 4°C to 70°C* consisting of:<br>1 pc TrayCooler with 136mm legs<br>1 pc Cooling plate for 20ml vials<br>1 pc plastic tray cover for PAL Tray2ml<br>(* 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<br>6 standard microplates or<br>6 deepwell plates or<br>6 x 54 2ml vials<br>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<br>12 standard microplates<br>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<br>2 pcs Standard Microplates or<br>2 pcs Deepwell plates or<br>2 pcs PAL TrayMT2ml<br>including 1 pc Power Supply 100V-240V<br>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:<br>4 pcs. Valve Drives<br>4 pcs. VICI Cheminert 6-port Injection valves, type C2V-1006D-CTC<br>4 pcs. Sample loops 20µl<br>1 pc PEEK Solvent manifold<br>1 set PEEK tubing kit including PEEK fittings<br>1 set Electrical connection cables |  | • | • |
| PAL 4VlvDrv                           | PAL 4-Valve Module, type 2 consisting of:<br>4 pcs. Valve Drives<br>1 pc PEEK Solvent manifold<br>1 set PEEK tubing kit including PEEK fittings<br>1 set Electrical connection cables<br>(requires VICI Valco LC Valves, type DCxWK, type C or Rheodyne PD)                            |  | • | • |
| PAL ColSel6                           | Column Switching Valve Module for up to 6 columns<br>2pc C5-1006 type 6-port Column Selector Valve 0.25mm bore<br>(requires Cycle Composer or PAL ICC-CE Software and PAL 1VlvDrv)   |  | • | • |
| PAL 1VlvDrv-D                         | PAL 1Valve Drive Module High Torque consisting of:<br>1 pc Multiposition Valve Drive with bracket<br>1 set Electrical connection cable<br>(requires LC Injection Valve, VICI type)   |  | • | • |
| PAL 1VlvDrv                           | PAL 1-Valve Drive Module consisting of:<br>1 pc Multiposition Valve Drive with bracket<br>1 set Electrical connection cable<br>(requires LC Injection Valve, VICI type)  |  | • | • |
| PAL 2VlvDrv                           | PAL 2-Valve Drive Module consisting of:<br>2 pcs Multiposition Valve Drives with bracket<br>1 set Electrical connection cable<br>(requires LC Injection Valve, VICI type)  |  | • | • |
| PAL 3VlvDrv                           | PAL 3-Valve Drive Module consisting of:<br>3 pcs Multiposition Valve Drives with bracket<br>1 set Electrical connection cable<br>(requires LC Injection Valve, all types)  |  | • | • |
| PAL VlvDrv                            | PAL Valve Drive for VICI LC valve type WK or C (without Valve)<br>1 pc 2 Position Valve Drives with bracket<br>1 set Electrical connection cable<br>(requires LC Injection Valve, VICI type)   |  | • | • |
| PAL VlvDrvR                           | Valve drive for PAL System for Rheodyne valve PD7921 and PD7991 (without valve), consisting of:<br>1 pc Valve drive module<br>1 pc Connection cable 1300mm<br>(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:<br>1pc Valve drive<br>1pc Connection cable 1300mm<br>(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<br>incl. Needle Guide, Needle Seal, Kit LCVlv  |  | • | • |
| DC6WK-CTC-K   | 6-Port VICI type WK Injection Valve 0.4mm bore<br>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<br>incl. Needle Guide, Needle Seal, Kit LCVlv  |  | • | • |
| C2V-0006D-CTC-K   | 6-port VICI Cheminert Injection Valve 0.15mm bore<br>incl. Needle Guide, Needle Seal, Kit LCVlv  |  | • | • |
| C2V-0346D-CTC-K   | 6-port VICI Cheminert Injection Valve PAEK 0.15mm bore<br>incl. Needle Guide, Needle Seal, Kit LCVlv   |  | • | • |
| C2V-1006D-CTC-K   | 6-port VICI Cheminert Injection Valve 0.25mm bore<br>incl. Needle Guide, Needle Seal, Kit LCVlv  |  | • | • |
| C2V-1346D-CTC-K   | 6-port VICI Cheminert Injection Valve PAEK 0.25mm bore<br>incl. Needle Guide, Needle Seal, Kit LCVlv   |  | • | • |
| C2V-3006D-CTC-K   | 6-Port Cheminert Injection Valve 0.75mm bore (prep version)<br>incl. Needle Guide gauge 19, Needle Seal gauge 19, Kit LCVlv  |  | • | • |
| C2VH-1000D-CTC-K  | 10-port VICI Cheminert Injection Valve 0.25mm bore<br>incl. Needle Guide, Needle Seal, Kit LCVlv   |  | • | • |
| CN2-4340D-CTC   | 10-port VICI Cheminert Switching Valve PAEK version 0.1mm bore<br>1/32" Connections, no vertical port, can not be used as injection valve  |  | • | • |
| C5F-1004D-CTC   | 8-port VICI Selector Valve 0.25mm bore<br>(requires Valve Drive MV 03-01)  |  | • | • |
| C72VU-6676D-CTC-K   | 6 port VICI injection valve Cheminert<br>Pressure up to 18'500 psi / 1275 bar<br>50°C liq. / ID 0.15 mm<br>incl. 2µl and 20µl loop. 20µl loop already mounted.   |  | • | • |
| C72VX-1676D-CTC-K   | 6-port VICI Cheminert Injection Valve, 0.25mm bore<br>Pressure up to 15'000 psi / 1000 bar<br>incl. Needle Guide, Needle Seal, Kit LCVlv   |  | • | • |
| C72VX-1670D-CTC-K   | 10-port VICI Cheminert Injection Valve, 0.25mm bore<br>Pressure up to 15'000 psi / 1000 bar<br>incl. Needle Guide, Needle Seal, Kit LCVlv<br>(requires PAL 1VlvDrv-D high torque version)  |  | • | • |
| C72X-6670D-CTC  | 10-port VICI Cheminert Valve<br>15'000 psi 75°C<br>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<br>SPC4 (Special plating on Titanium, biocompatible)<br>Pressure up to 15'000 psi / 1000 bar<br>incl. Needle Guide, Needle Seal, Kit LCVlv   |  | • | • |
| SS-100 Set-10   | SWAGelok ferrule 1/16" SST, pack of 10 Front and Back Ferrule<br>(required for PD 7991-K fluid connections)  |  | • | • |
| PD718-313-K   | 6 port Rheodyne Injection Valve 0.20mm bore<br>Coated, stainless steel rotor seal (RPC-13)<br>Pressure up to 17'500 psi / 1200 bar, incl. Needle Guide, Needle Seal, Kit LCVlvR,<br>mounted 2ul loop and VHP-200 fittings<br>(requires PAL VlvDrvR-32) |  | • | • |
| PD718-315-K   | 6 port Rheodyne Injection Valve 0.20mm bore and MBB<br>Coated, stainless steel rotor seal (RPC-13)<br>Pressure up to 17'500 psi / 1200 bar, incl. Needle Guide, Needle Seal, Kit LCVlvR,<br>(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:<br>1 pc Dilutor module<br>1 pc Connection cable<br>1 pc Dilutor syringe 2.5ml<br>1 pc Transfer tube 1/16"<br>1 pc Solvent bottle 1000ml<br>1 pc Aspirating tube 1/8"<br>(requires PAL SyrLCSP80µl, PAL SyrLCSP20µl) |  | • |  |
| PALDilutor-HTX                       | PAL Dilutor Option for HTX PAL, consisting of:<br>1 pc Dilutor module<br>1 pc Connection cable<br>1 pc Dilutor syringe 2.5ml<br>1 pc Transfer tube 1/16"<br>1 pc Solvent bottle 1000ml<br>1 pc Aspirating tube 1/8"<br>(requires PAL SyrLCSP80µl, PAL SyrLCSP20µl)              |  |   |  |
| PAL SyrLCSP80ul                      | Kit Dilutor Syringe 80µl for HTS PAL consisting of:<br>1pc Sideport Syringe Plunger Sealing Screw<br>1pc Sideport Syringe Adapter and Plunger Holder<br>1pc Sideport Syringe 80µl SYRC SP80-R<br>3pcs Ndl S-22-3 Needles gauge 22 pointstyle 3 for Sideport Syringe             |  | • |  |
| PAL SyrLCSP20ul                      | Kit Dilutor Syringe 20µl for HTS PAL consisting of:<br>1pc Sideport Syringe Plunger Sealing Screw<br>1pc Sideport Syringe Adapter and Plunger Holder<br>1pc Sideport Syringe 20µl SYRC SP80-R<br>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:<br>1pc Tool parking bracket<br>1pc MALDI spotting tool<br>3pcs. Spotting tips<br>1pc Tool holder<br>1pc Waste tube<br>1pc Microfluidic fitting and tubing accessories<br>1pc CD-ROM PAL firmware 3.0 and CycleComposer cycles<br>(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<br>CD ROM consisting of:<br>Cycle Composer standalone version<br>(Requires PAL Firmware 2.2 or higher and Windows XP/ VISTA)  |  | • | • | • |
| PAL CycCompCD5                                   | Cycle Composer Remote Control Software for PAL System<br>CD ROM, site license for 5 instruments consisting of:<br>Cycle Composer standalone version including 5 serial numbers<br>(Requires PAL Firmware 2.2 or higher and Windows XP/ VISTA) |  | • | • | • |
| PAL CCUpgrd                                      | Cycle Composer Remote Control Software for PAL System<br>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:<br>1pc LogBook<br>1pc Documentation IQ procedure<br>1pc Documentation OQ procedure  |  | • | • | • |
| PAL LC-ReQ                                   | Instrument Requalification for HTS/HTC and LC PAL consisting of:<br>1pc Documentation OQ procedure   |  | • | • | • |
| PAL WashFast-22                              | Wash station HTS PAL for two solvents consisting of:<br>1 pc Double wash station incl. Holder for 2 x 500ml bottles<br>1 pc Electrical Connection cable<br>1 pc Tubing Kit<br>2 pc Solvent bottles 500ml   |  | • |   |   |
| PAL WashFast3-22                             | Wash station HTC PAL for two solvents consisting of:<br>1 pc Double wash station incl. Holder for 2 x 500ml bottles<br>1 pc Electrical Connection cable<br>1 pc Tubing Kit<br>2 pc Solvent bottles 500ml   |  |   | • |   |
| Kit FWash1000                                | 1000ml Solvent Kit consisting of:<br>1 pc Bottle Holder bracket incl. screws<br>2 pcs. 1000ml Solvent Bottles  |  | • | • | • |
| PAL WashLarge                                | LC PAL Wash station for two solvents, consisting of:<br>1 pc Vial holder for 2 x 100ml vials<br>2 pcs Vial 100ml, including Caps and Seals<br>1 pcs Waste port including septa, cap waste tubing   |  | • | • | • |
| PAL 3xSolv100                                | Solvent Reservoir consisting of:<br>1 pc Holder for 3pc 100ml vials<br>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* :<br>1 pc Holder 88mm<br>1 pc Flow-Cell Stainless Steel 316 with connectors Swagelok 1/4"<br>(*required external pump and transfer tubing not included) |  | • | • |   |
| MM 06-00                                     | Single Flow-Cell for PAL System, consisting of:<br>1 pc Flow-Cell Stainless Steel 316 with connectors Swagelok 1/4"<br>1 pc Septa<br>(requires PAL FlowCell)   |  | • | • |   |
| PAL OutExpBox                                | Output Expansion Box for HTS PAL or COMBI PAL System<br>8 x Relay Contact / 8 x 24V (P tot = 12W) consisting of:<br>1 pc Output Expansion Box<br>1 pc Cable DSub25M/F<br>1 pc Cable Power 36V<br>(requires PAL Firmware 2.4 or higher)                 |  | • |   |   |
| PAL BCReader                                 | Barcode Reader<br>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<br>(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.<br>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.<br>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<br>Power 150 Watt, Input Voltage 100V-240V  |  | • | • |   |
| MN 03-02                                     | Power supply for PAL StkCooler-xt and PAL TrayCooler-xt, all types<br>Input Voltage 100V-240V (specify Cooler type)                  |  | • | • |   |
| Cbl RS20R-760                                | Cable 20p shielded, MiniRibbon connectors, 760mm long<br>(Connection cable of COMBI PAL incubation heater , dilutor or valve drive)  |  | • | • | • |
| Cbl RS20R-1300                               | Cable 20p shielded, MiniRibbon connectors, 1300mm long<br>(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<br>(connection of MultiposVlvDrv MV 03-01)                         |  | • |   |   |
| Cbl RS14R-850                                | Cable 14p shielded, MiniRibbon connectors, 850mm long<br>(Connection of MultiposVlvDrv Type 2)                                       |  | • |   |   |
| Cbl RS3M-2000                                | Power cable 2m for PAL all types<br>(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<br>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<br>Wash solvent bottle and Fast wash station module HTS/HTC/LC PAL     |  | • | • | • |
| PAL TubeFWash1                               | 1 pc PFA tube including fittings between<br>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:<br>6 pcs Drawer Front Covers with connecting plate mounted<br>1 pc Kit CStkScrews  | • | • |   |
| Kit DrawFront2DW  | Kit, Drawer Fronts 63mm for Stack Cooler 2DW, consisting of:<br>1 pc Drawer Front Cover with connecting plate mounted<br>1 pc Kit CStkScrews     | • | • |   |
| Kit DrawFront6DW  | Kit, Drawer Fronts 63mm for Stack Cooler 6DW, consisting of:<br>3 pcs. Drawer Front Covers with connecting plate mounted<br>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<br>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<br>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*:<br>1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X<br>1 pc COMBI Injection unit<br>1 pc Control terminal & cable<br>1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz & cable<br>1 pc Wash station for 2 solvents and 1standard liquid<br>1 pc Kit SealCap<br>1 pc Syringe adapter 10µl & plunger holder<br>2 pc Syringe 10 µl SYRC L10-26S-AS<br>1 pc Safety guard<br>2 pc PC connection cable (1 Serial, 1 Ethernet)<br>1 pc PAL System CD<br>(*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*:<br>1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X<br>1 pc COMBI Injection unit<br>1 pc Control terminal & cable<br>1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz & cable<br>1 pc Incubator for vials 2/10/20ml,shaker,temperature up to 200° C<br>1 pc Pressure regulator including connection fittings<br>1 pc Wash station for 2 solvents and 1standard liquid<br>1 pc Kit SealCap<br>2 pc Sample tray holder 114 mm<br>1 pc Sample tray 98x2ml/78x1ml<br>1 pc Sample tray 32x10/20ml<br>1 pc Syringe adapter 10µl & plunger holder<br>2 pc Syringe 10µl SYRC L10-26S-AS<br>1 pc Syringe heater 2.5ml, temperature up to 150°C<br>2 pc Headspace Syringes 2.5ml SYRC HS2.5-23-5<br>1 pc Safety guard<br>2 pc PC connection cable (1 Serial, 1 Ethernet)<br>1 pc PAL System CD<br>(*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*:<br>1 pc PAL120 X/Y unit with XT Electronics and Firmware 4.X.X<br>1 pc COMBI Injection unit<br>1 pc Control terminal & cable<br>1 pc External HS flush gas tubing kit<br>1 pc Power supply, Input Voltage 100-240V, 120W,50/60Hz & cable<br>1 pc Safety guard<br>1 pc PAL Interface Cable 3m<br>2 pc PC connection cable (1 Serial, 1 Ethernet)<br>1 pc PAL System CD<br>(*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*:<br>1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X<br>1 pc GC Injection unit<br>1 pc Control terminal & cable<br>1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz & cable<br>1 pc Wash station for 2 solvents and 1standard liquid<br>1 pc Kit SealCap<br>1 pc Sample tray holder 76mm<br>1 pc Sample tray 98x2ml/78x1ml<br>1 pc Syringe adapter 10µl & plunger holder<br>2 pc Syringe 10 µl SYRC L10-26S-AS<br>1 pc Safety guard<br>2 pc PC connection cable (1 Serial, 1 Ethernet)<br>1 pc PAL System CD<br>(*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*:<br>1 pc PAL80 X/Y unit with XT Electronics and Firmware 4.X.X<br>1 pc GC Injection unit<br>1 pc Control terminal & cable<br>1 pc Power supply, Input Voltage 100-240V,120W,50/60Hz & cable<br>1 pc Safety guard<br>2 pc PC connection cable (1 Serial, 1 Ethernet)<br>1 pc PAL System CD<br>(*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:<br>1 pc syringe adapter and 1 pc plunger holder<br>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:<br>1 pc syringe adapter and 1 pc plunger holder<br>2 pc Syringe SYRC L5-26S-AS                                |  | •     | •  |
| PAL SyrGC10ul                                      | Kit GC Syringe 10µl for COMBI PAL and GC1 PAL consisting of:<br>1 pc syringe adapter and 1 pc plunger holder<br>2 pc Syringe SYRC L10-26S-AS                              |  | •     | •  |
| PAL SyrGC10ul-G                                    | Kit GC Syringe 10µl gastight for COMBI PAL and GC1 PAL consisting of:<br>1 pc syringe adapter and 1 pc plunger holder<br>2 pc Syringe SYRC G10-26S-AS                     |  | •     | •  |
| PAL SyrGC25ul                                      | Kit GC Syringe 25µl for COMBI PAL and GC1 PAL consisting of:<br>1 pc syringe adapter and 1 pc plunger holder<br>2 pc Syringe SYRC G25-26S-AS                              |  | •     | •  |
| PAL SyrGC100ul                                     | Kit GC Syringe 100µl for COMBI PAL and GC1 PAL consisting of:<br>1 pc syringe adapter and 1 pc plunger holder<br>2 pc Syringe SYRC G100-26S-AS                            |  | •     | •  |
| PAL SyrGC250ul                                     | Kit GC Syringe 250µl for COMBI PAL and GC1 PAL consisting of:<br>1 pc syringe adapter and 1 pc plunger holder<br>2 pc Syringe SYRC G250-26-AS                             |  | •     | •  |
| PAL SyrGC500ul                                     | Kit GC Syringe 500µl for COMBI PAL and GC1 PAL consisting of:<br>1 pc syringe adapter and 1 pc plunger holder<br>2 pc Syringe SYRC G500-26-AS                             |  | •     | •  |
| PAL SyrHS1.0ml                                     | Kit HS Syringe 1.0ml for COMBI PAL consisting of:<br>1 pc syringe heater and 1 pc plunger holder<br>2 pc Syringe SYRC HS1.0-23-5  |  | •     |    |
| PAL SyrHS2.5ml                                     | Kit HS Syringe 2.5ml for COMBI PAL consisting of:<br>1 pc syringe heater and 1 pc plunger holder<br>2 pc Syringe SYRC HS2.5-23-5  |  | •     |    |
| PAL SyrHS5.0ml                                     | Kit HS Syringe 5.0ml for COMBI PAL consisting of:<br>1 pc syringe heater and 1 pc plunger holder<br>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<br>Sideport for gas flushing, fixed needle gauge 23, Pointstyle 5   |  | •     |    |
| SYRC HS2.5-23-5                                    | Headspace Syringe HD-type 2.5ml for COMBI PAL<br>Sideport for gas flushing, fixed needle gauge 23, Pointstyle 5   |  | •     |    |
| SYRC HS5.0-23-5                                    | Headspace Syringe HD-type 5.0ml for COMBI PAL<br>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<br>Fixed needle gauge 26P, Pointstyle AS   |  | •     | •  |
| SYRC L5-26S-AS                                     | Liquid syringe 5µl for COMBI PAL and GC1 PAL<br>Fixed needle gauge 26S, Pointstyle AS   |  | •     | •  |
| SYRC L10-26S-AS                                    | Liquid syringe 10µl for COMBI PAL and GC1 PAL<br>Fixed needle gauge 26S, Pointstyle AS  |  | •     | •  |
| SYRC G10-26S-AS                                    | Liquid syringe gastight 10µl for COMBI PAL and GC1 PAL<br>Fixed needle gauge 26S, Pointstyle AS   |  | •     | •  |
| SYRC L10-26S-2                                     | Liquid syringe 10µl for COMBI PAL and GC1 PAL<br>Fixed needle gauge 26S, Pointstyle 2   |  | •     | •  |
| SYRC L10-23S-AS                                    | Liquid syringe 10µl for COMBI PAL and GC1 PAL<br>Fixed needle gauge 23S, Pointstyle AS  |  | •     | •  |
| SYRC G25-26S-AS                                    | Liquid syringe gastight 25µl for COMBI PAL and GC1 PAL<br>Fixed needle gauge 26S, Pointstyle AS   |  | •     | •  |
| SYRC G100-26S-AS                                   | Liquid syringe gastight 100µl for COMBI PAL and GC1 PAL<br>Fixed needle gauge 26S, Pointstyle AS  |  | •     | •  |
| SYRC G250-26-AS                                    | Liquid syringe gastight 250µl for COMBI PAL and GC1 PAL<br>Fixed needle gauge 26, Pointstyle AS   |  | •     | •  |
| SYRC G500-26-AS                                    | Liquid syringe gastight 500µl for COMBI PAL and GC1 PAL<br>Fixed needle gauge 26, Pointstyle AS   |  | •     | •  |
| SYRSGE L10-26S-AS                                  | Liquid syringe SGE 10µl for COMBI PAL and GC1 PAL<br>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)<br>consisting of:<br>1 pc Tray Cooler with 84mm legs<br>1 pc Tray cover for PAL Tray2ml<br>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:<br>1pc TrayCooler with 136mm legs<br>1pc Cooling plate for 20ml vials<br>1pc Tray cover for PAL Tray2ml<br>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:<br>1pc LiqCooler with 84mm legs<br>1pc plastic tray cover for PAL Tray2ml<br>(circulator connection tube OD 8mm)<br>(*excluding PAL Tray2ml and external heating/cooling circulator)                          |  | • | • |
| PAL LiqCooler2   | Liquid Tray Cooler 4°C to 70°C* consisting of:<br>1 pc TrayCooler with 136mm legs<br>1 pc Cooling plate for 20ml vials<br>1 pc plastic tray cover for PAL Tray2ml<br>(* 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<br>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<br>(can not be used for 20ml vials)  |  | • | • |
| PAL TraySet20ml  | Sample tray for 32 vials 10/20ml or 21 vials 2ml, incl. Holder 114mm<br>(positioned 38mm lower than standard holder)   |  | • | • |
| PAL TraySet2ml-2   | Sample tray for 98 vials 2ml or 78 vials 0.7/1ml, incl. Holder 114mm<br>(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<br>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<br>2 pcs Standard Microplates or<br>2 pcs Deepwell plates or<br>2 pcs PAL TrayMT2ml<br>including 1 pc Power Supply 110-240V<br>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:<br>1 pc Dilutor module<br>1 pc Connection cable<br>1 pc Dilutor syringe 2.5ml<br>1 pc Transfer tube 1/16"<br>1 pc Solvent bottle 1000ml<br>1 pc Aspirating tube 1/8"<br>(requires PAL PAL SyrGCSP80µl, PAL SyrGCSP20µl) |  | • |  |
| PAL SyrGCSP80ul                      | Kit Dilutor Syringe 80µl for COMBI PAL consisting of:<br>1pc Sideport Syringe Plunger Sealing Screw<br>1pc Sideport Syringe Adapter incl. Plunger Holder<br>1pc Sideport Syringe 80µl SYRC SP80-R<br>3pcs Ndl S-26-AS Needles gauge 26, pst AS for Sideport Syringe                |  | • |  |
| PAL SyrGCSP20ul                      | Kit Dilutor Syringe 20µl for COMBI PAL consisting of:<br>1pc Sideport Syringe Plunger Sealing Screw<br>1pc Sideport Syringe Adapter incl. Plunger Holder<br>1pc Sideport Syringe 20µl SYRC SP80-R<br>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:<br>1 pc SPME Holder Adapter<br>1 pc Plunger Holder<br>1 pc SPME Fiber Holder<br>1 pc Fiber Assortment Kit containing 4 different Fibers<br>1 pc SPME Performance Evaluation Mix<br>1 pc SPME CD<br>1 pc SPME Application Documentation |  | • |  |
| PAL FibCond                         | SPME Fiber Conditioning Station consistig of:<br>1 pc heater up to 350°C with connection cable and bracket 40mm<br>1 pc flush gas connection<br>1 pc fitting for COMBI PAL flush gas regulator incl. tubing<br>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<br>1pc Replacement plunger 1.3 ml<br>2pc ITEX-2 trap TENAX TA 80/100mesh incl. O-Ring<br>1pc Trap heater incl. electrical connections<br>1pc Syringe Heater incl. Plunger holder<br>1pc Syringe Heater side bracket<br>1pc CD-ROM with ITEX Cycle<br>(requires PAL LHS2 and Cycle Composer)  |  | • |  |
| PAL ITEX-2Opt-LHX             | ITEX-2 Option for PAL LHX, consisting of:<br>1 pc 1.3 ml ITEX Syringe with M7 x 0.5 Fitting<br>1 pc Replacement plunger 1.3 ml<br>2 pcs ITEX-2 trap TENAX TA 80/100 mesh incl. O - Ring<br>1 pc Trap Heater LHX incl. electrical connections<br>1 pc Syringe Heater incl. Plunger holder<br>1 pc Syringe Heater side bracket<br>1 pc Mounting kit LHX<br>1 pc CD Rom with ITEX software<br>( 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<br>1pc MHE Tool<br>1pc MHE Parkstation<br>1pc Needle MHE Gauge 22/5<br>1pc MHE Tool CD<br>(requires PAL LHS2, COMBI PAL Firmware 3.0.5 or preferably<br>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 |  | • | • |

| LHX and COMBI PAL and GC PAL Software |   |  |   |   |
|---------------------------------------|---|--|---|---|
| PAL CycCompCD                         | Cycle Composer Remote Control Software for PAL System<br>CD ROM consisting of:<br>Cycle Composer standalone version<br>(Requires PAL Firmware 2.2 or higher and Windows XP/ VISTA)  |  | • | • |
| PAL CycCompCD5                        | Cycle Composer Remote Control Software for PAL System<br>CD ROM, site license for 5 instruments consisting of:<br>Cycle Composer standalone version including 5 serial numbers<br>(Requires PAL Firmware 2.2 or higher and Windows XP/ VISTA) |  | • | • |
| PAL CCUpgrd                           | Cycle Composer Remote Control Software for PAL System<br>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   |  | • | • |

| LHX and COMBI PAL and GC PAL Accessories |  |  |   |   |
|--|--|--|---|---|
| PAL GC-QDoc                              | Instrument Qualification for COMBI PAL and GC PAL consisting of:<br>1pc LogBook<br>1pc Documentation IQ procedure<br>1pc Documentation OQ procedure  |  | • | • |
| PAL GC-ReQ                               | Instrument Requalification for COMBI PAL and GC PAL consisting of:<br>1pc Documentation OQ procedure   |  | • | • |
| PAL Toolkit                              | Tool Kit for PAL System  |  | • | • |
| PAL LHSUpgrd                             | Headspace Upgrade for LHS0 COMBI PAL Liquid only version<br>consisting of:<br>1 pc Incubator for 10ml/20ml vials, shaker, temperature up to 200°C<br>1 pc Syringe heater 2.5ml<br>2 pc Headspace Syringes 2.5ml SYRC HS 2.5-23-5<br>1 pc PAL TraySet20ml Tray for 32 vials 10/20ml incl. holder 114mm<br>1 pc Pressure regulator and 1 pc Magnetic transport ring<br>1 pc Vial transport teaching kit and 6 pcs Adapter to use 10ml vials<br>1 pc PAL System CD<br>(requires model PAL LHS0) |  | • |   |
| PAL FlowCell                             | Flow-Through Cell for PAL System, new design to accommodate up to 6 flow cells,<br>consisting of* :<br>1 pc Holder 88mm<br>1 pc Flow-Cell Stainless Steel 316 with connectors Swagelok 1/4"<br>(*required external pump and transfer tubing not included)  |  | • | • |
| MM 06-00                                 | Single Flow-Cell for PAL System, consisting of:<br>1 pc Flow-Cell Stainless Steel 316 with connectors Swagelok 1/4"<br>1 pc Septa<br>(requires PAL FlowCell)   |  | • | • |
| PAL BCReader                             | Barcode Reader<br>Laser scanner for barcode labels on 2ml/10ml/20ml vials with magnetic caps<br>including adapter and connection cables (PAL and PAL-xt Systems)   |  | • | • |
| PAL BCAdapter                            | Barcode Adapter for PAL-xt System including cable - only required when upgrading<br>existing PAL to PAL-xt System<br>(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:<br>1pc Holder for 3pc 100ml vials<br>3pcs Solvent vials 100ml including caps and seals   |  | • | • |
| PAL WashStd1                             | Wash station for 2 solvents and 1 standard liquid, consisting of:<br>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,<br>consisting of:<br>1 pc Double wash station incl. Holder for 2 x 500ml bottles<br>1 pc Electrical Connection cable<br>2 pc Solvent bottles 500ml incl. 1 pc Tubing Kit  |  | • |   |
| Kit FWash1000                            | 1000ml Solvent Kit consisting of:<br>1pc Bottle Holder bracket incl. screws<br>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<br>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.<br>1 pc Control Board-xt for PAL System - Firmware 4.1.X or higher<br>1 pc side cover with gas flush valve for PAL Combi-xt<br>1 pc back cover (for 80cm standard rail version) including screws<br>cables, CD Rom | • |   |
| Kit GC-xt      | Upgrade Kit for GC PAL to PAL GC-xt, incl.<br>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<br>(Connection cable of COMBI PAL incubation heater , dilutor or valve drive)   | • |   |
| Cbi RS20R-1300 | Cable 20p shielded, MiniRibbon connectors, 1300mm long<br>(Connection cable of COMBI PAL incubation heater , dilutor or valve drive)  | • |   |
| Cbi RS3M-2000  | Power cable 2m for PAL all types<br>(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<br>with DB 25 connector (requires Printer with serial interface)  | • | • |
| MN 01-02       | Power supply for PAL-xt System<br>Power 150 Watt, Input Voltage 100-240V  | • | • |
| MN 03-02       | Power supply for PAL StkCooler-xt and PAL TrayCooler-xt, all types<br>Input Voltage 100-240V (specify Cooler type)  | • | • |