| | **PAL DLW Option** |
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|---|---|
| PAL DLW-2 Option | **Dynamic Load and Wash Option for fast and clean LC Cycles**<br><br>1pc DLW-2 Injection Adapter with sample holding loop and syringe 100µl<br>1pc Wash Station<br><br>1pc Wash Solvent Pump Station with 2 active micro pumps<br><br><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>*requires but does not include xt-Upgrade for PAL and Firmware 4.X or higher*<br>**Choose this kit if your PAL HTC/HTS is already equipped with the XT-Upgrade** |
| PAL DLW-2-HTC-*xt* | **Dynamic Load and Wash Option including HTC-*xt* Upgrade Kit**<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>**1 pc Kit HTC-*xt* (Control Board-xt for PAL System - Firmware 4.X or higher)**<br>**Choose this kit if you want to upgrade an existing HTC PAL to the DLW Option** |
| PAL DLW-2-HTS-*xt* | **Dynamic Load and Wash Option including HTS-*xt* Upgrade Kit**<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>**1 pc Kit HTS-*xt* (Control Board-xt for PAL System - Firmware 4.X or higher)**<br>**Choose this kit if you want to upgrade an existing HTS PAL to the DLW Option** |
| 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 |

**autosampler guys** *for PEAK PAL Performance*

| 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<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 |

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|---|---|
| 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 |
| PAL3-VT54 | Sample tray MT footprint, for 54x2ml vials<br>for PAL Stacks all types or PAL MTHolders all types - new part (gray) |
| PAL3-KIT-VT54 | Sample tray MT footprint, for 54x2ml vials for PAL Stacks all types or PAL MTHolders all types - new part (gray) - Set of 3 pcs. |
| 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-*x* | 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 |

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|---|---|
| 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),<br>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<br>(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 | Universal Vlv-Adapter |
| 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 NdlSealP | 10pcs. PEEK Needle seal, gauge 22 for Valco PEAK valve |
| PAL NdlSealP-19 | 10pcs  PEEK Needle seal , gauge 19 for Valco PEAK valve |
| PAL NdlSeal | 10pcs. Needle seal, gauge 22 for Valco valve |
| PAL NdlSeal-19 | 10pcs. Needle seal, gauge 19 for Valco valve |
| PAL NdlSealR | 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 (discontinued) |
| 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 |
| SSACI4W.5/1 | Rotor for DCI4WK.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 TubeDilHTX | 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 |

| HTS PAL, HTC PAL *MALDI Option* | |
|---|---|
| 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<br> 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 |

| HTX, HTS PAL, HTC PAL and LC 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 |

| 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<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 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 |
| PAL Knife | Swiss Army Knife, 32 functions incl. PAL Torx Driver and CTC Logo |

| HTX, HTS PAL, HTC PAL and LC PAL *Brochures* | |
|---|---|
| PAL Broch-HPLC-*xt* | Brochure HPLC-*xt* systems |
| PAL BrochCat | Accessories catalog |
| PAL HintsLC | Poster Application Hints LC |

| HTX, HTS PAL, HTC PAL and LC PAL *Spare Parts* | |
|---|---|
| PAL PMKit1 | Preventative Maintenance (PM) Kit for PAL HPLC Technique |
| PAL PMKitDLW | Preventative Maintenance (PM) Kit for PAL HPLC Technique with DLW Option |
| 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) |
| PAL-POWERSUPPLY | 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)~~ |
| PAL-POWER-STACK | Power supply Peltier-Cooler incl. controller, PALxt |
| PAL-POWER-TRAY | Power supply Tray Cooler incl. controller, PALxt |
| 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 StkRollsSSt | 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 30-21 | Tension Cord 280mm |
| MZ 30-23 | Tension Cord 90-95mm |
| 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 |
| 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 |

| LHX, COMBI PAL and GC PAL    Standard Syringes | |
|---|---|
| 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 (002700)<br>Fixed needle gauge 26, Cone Tip |
| PLG HD1000 | 1 pcs.    **HD-**type replacement syringe plunger for 1ml Headspace syringe |
| PLG HD2500 | 1 pcs.    **HD-**type replacement syringe plunger for 2.5ml Headspace syringe |
| PLG HD5000 | 1 pcs.    **HD-**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 |

**LHX, COMBI PAL and GC PAL    Trays, Traysets, Tray Holders, Thermostatted Tray Holders and Stack**

| | |
|---|---|
| PAL TrayCooler-xt | Peltier tray cooler 4°C to 70°C for one PAL Tray2ml (without tray) 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 |
| PAL3-VT54 | Sample tray MT footprint, for 54x2ml vials <br> for PAL Stacks all types or PAL MTHolders all types - new part (gray) |
| PAL3-KIT-VT54 | Sample tray MT footprint, for 54x2ml vials for PAL Stacks all types or PAL MTHolders all types - new part (gray) - Set of 3 pcs. |
| 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, includingTray 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 |

| LHX, COMBI 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 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 |

| LHX and COMBI PAL    SPME Option | |
|---|---|
| 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<br> **(not to be sold in the USA)** |
| PAL SPME-Kit-USA | 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 |
| | 1 pc alternate bracket 14mm |
| PAL FibCondTube | Gas tube Fiber Conditioning Station - Pressure Regulator,<br> 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) |

| PAL COMBI  and COMBI-*xt*    Mounting Kits | |
|---|---|
| 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 - list prices: *genuine $785, ASG version $695* |
| PAL MR-7890-MQM-x | 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 | 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-x | 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- | 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- | 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- | 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- | 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-x | 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-x | 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-x | 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- | 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 |

| LHX and COMBI PAL and GC PAL    GC Mounting Kits | |
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| 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 | |
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| 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 |

| LHX and COMBI PAL and GC PAL    Accessories | |
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|---|---|
| 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 Knife | Swiss Army Knife, 32 functions incl. PAL Torx Driver and CTC Logo |
| 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) |

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| 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 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 1standard liquid, consisting of: <br> 1 pc Vial holder 5 x ø23mm incl. 5 pcs Vials 10ml, 5pcs Caps and Seals - ASG version |
| 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    Brochures | |
|---|---|
| PAL Broch-COMBI -*xt* | Brochure COMBI-*xt* |
| PAL Broch-GC-*xt* syste | Brochure GC-*xt* |
| PAL BrochCat | Accessories catalog |

| 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 (Alternative US made version available too - call) |
| 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 |
| MX 30-48-3 | PALxt X-Axis Side Cover Right hand side |
| 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 |

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|---|---|
| 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)  e.g. for DLW-2 |
| 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 30-21 | Tension Cord 280mm |
| MZ 30-23 | Tension Cord 90-95mm |
| 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 unti 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 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 |
| 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 |

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| 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) |
| 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 RS3M-2000 | Power cable 2m for PAL all types<br>(Connection between PAL power supply and PAL) |
| 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) |
| Cbl RS4C0-SCIEX | PAL Interface cable 3m for Sciex |
| PAL-POWERSUPPLY | Power supply for PAL-*xt* System<br>Power 150 Watt, Input Voltage 100-240V |
| PAL-POWER-STACK | Power supply Peltier-Cooler incl. controller, PALxt |
| PAL-POWER-TRAY | Power supply Tray Cooler incl. controller, PALxt |
| ~~MN 03-02~~ | ~~Power supply for PAL StkCooler-xt and PAL TrayCooler-xt, all types~~<br>~~Input Voltage 100-240V (specify Cooler type)~~ |
| PAL DLWPump | DLW Pump Kit for CTC PAL DLW Option on HTS- and HTC-xt PAL Autosamplers |
| PAL DilAspKit | Aspiration tube kit, PFA tube and glass filter 40µl pore size |
| PAL DLWPCB | PAL DLW Pump Control Module PCB Kit |
| PAL TubeDLW | DLW Tubing Kit HTS/HTC |
| PAL DLWWash | PAL DLW Wash Station Block |
| PLG DLW100 | Replacement Plunger for SYRC DLW100-R, pk.10 |
| PAL DLW-2Holder | PAL DLW-2 Syringe Holder Assembly |
| PAL DLWNdl | Needle Kit for PAL DLW Option, Gauge 22 |
| SYRC DLW100-R | CTC Syringe gastight DLW 100µl, removable needle, not included |
| PAL DLW-2Loop | PAL DLW-2 Loop incl. PEEK hex-head nut and lock nut for needle adapter |
| PAL DLWAct | PAL DLW Actuator/Solenoid Kit |
| PAL DLW-2ActPCB | PAL DLW-2 Actuator PCB Kit |
| PAL DLWFlwDiv | PAL DLW Flow Diverter |
| PAL DLWManifold | PAL DLW Manifold Kit |
| PAL DLWLoop | DLW Loop Assembly (original style "DLW-1") |

| PAL RSI GC | |
|---|---|
| PAL3-RSI-LG-C-9 | PAL RSI 534 system, without liquid or headspace option<br>1 pc PALbase 534 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RSI 534 system, without liquid or headspace option<br>1 pc PALbase 534 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RSI 534 system, without liquid or headspace option<br>1 pc PALbase 534 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard |

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| PAL3-RSI-LG-S-9 | PAL RSI 850 system, without liquid or headspace option<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RSI 850 system, without liquid or headspace option<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RSI 850 system, without liquid or headspace option<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard |
| PAL3-RSI-LG-S | PAL RSI 850 system, with liquid and without headspace option<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Liquid Syringe Tool D7/ 57<br>2 pc Liquid syringes (PAL3-SYH-207807)<br>1 pc PAL Trayholder<br>3 pc Sample Racks for 54 vials of 2mL<br>1 pc PAL Standard Wash Module<br>1 pc PAL Sample Control software<br><br>(requires Mounting Kit for GC Model)PAL RSI 850 system, with liquid and without headspace option<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Liquid Syringe Tool D7/ 57<br>2 pc Liquid syringes (PAL3-SYH-207807)<br>1 pc PAL Trayholder<br>3 pc Sample Racks for 54 vials of 2mL<br>1 pc PAL Standard Wash Module |

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| PAL3-RSI-LGH-S | "PAL RSI 850 system, with liquid and headspace option<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Liquid Syringe Tool D7/ 57<br>2 pc Liquid syringes (PAL3-SYH-207807)<br>1 pc PAL Headspace Syringe Tool for 2.5 mL syringe<br>2 pc Headspace syringes 2.5mL (PAL3-SYH-207290)<br>2 pc PAL Trayholder<br>3 pc Sample Racks for 54 vials of 2mL<br>1 pc Sample Rack for 60 vials of 10/20 mL, Aluminium<br>1 pc PAL Standard Wash Module<br>1 pc PAL Agitator Module<br>1 pc PAL Sample Control software<br><br>(requires Mounting Kit for GC Model)""PAL RSI 850 system, with liquid and headspace option<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Liquid Syringe Tool D7/ 57 |
| PAL3-RSI-LG-X-9 | PAL RSI 1205 system, without liquid or headspace option<br>1 pc PALbase 1205 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RSI 1205 system, without liquid or headspace option<br>1 pc PALbase 1205 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RSI 1205 system, without liquid or headspace option<br>1 pc PALbase 1205 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard |

| | Please note: The configuration of the initial bundle systems cannot be changed and no items can be removed. Additional modules and accessories can be ordered separately, according to your requirements. |
|---|---|
| PAL3-RSI-LG-to-RTC | "Upgrade for PAL RSI to PAL RTC without flush gas equipment<br>used for upgrading a PAL RSI Headspace version<br>(if Gas Purge Line for Headspace Technique is already built-in)<br>consisting of:<br>1 pc  PALhead<br>1 pc  Park Station<br>Instructions"<br>"Upgrade for PAL RSI to PAL RTC without flush gas equipment<br>used for upgrading a PAL RSI Headspace version<br>(if Gas Purge Line for Headspace Technique is already built-in)<br>consisting of:<br>1 pc  PALhead<br>1 pc  Park Station<br>Instructions"<br>"Upgrade for PAL RSI to PAL RTC without flush gas equipment<br>used for upgrading a PAL RSI Headspace version<br>(if Gas Purge Line for Headspace Technique is already built-in)<br>consisting of:<br>1 pc  PALhead<br>1 pc  Park Station<br>Instructions"<br>"Upgrade for PAL RSI to PAL RTC without flush gas equipment<br>used for upgrading a PAL RSI Headspace version<br>(if Gas Purge Line for Headspace Technique is already built-in)<br>consisting of:<br>1 pc  PALhead<br>1 pc  Park Station |
| **PAL RSI LC** | |

| PAL3-RSI-L-C-9 | PAL RSI system for liquid injection, without PALmodules and accessories, consisting of:<br>1 pc PALbase 534 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc PAL Mounting Kit Standalone for HPLC<br>1 pc PAL Sample Control software<br><br>(Requires Tool(s), Modules, Tray Holders or Stack and Racks)PAL RSI system for liquid injection, without PALmodules and accessories, consisting of:<br>1 pc PALbase 534 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc PAL Mounting Kit Standalone for HPLC<br>1 pc PAL Sample Control software<br><br>(Requires Tool(s), Modules, Tray Holders or Stack and Racks)PAL RSI system for liquid injection, without PALmodules and accessories, consisting of:<br>1 pc PALbase 534 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables |
|---|---|
| PAL3-RSI-L-S-9 | PAL RSI system for liquid injection, without PALmodules and accessories, consisting of:<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc PAL Mounting Kit Standalone for HPLC<br>1 pc PAL Sample Control softwarePAL RSI system for liquid injection, without PALmodules and accessories, consisting of:<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc PAL Mounting Kit Standalone for HPLC<br>1 pc PAL Sample Control softwarePAL RSI system for liquid injection, without PALmodules and accessories, consisting of:<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc PAL Mounting Kit Standalone for HPLC<br>1 pc PAL Sample Control softwarePAL RSI system for liquid injection, without PALmodules and accessories, consisting of:<br>1 pc PALbase 850 X/Y unit with PAL Control Board |

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| | (Requires Tool(s), Modules, Tray Holders or Stack and Racks) |
| PAL3-RSI-LMS-C | PAL RSI 534 system for liquid injection LC |
| | consisting of: |
| | 1 pc PALbase 534 X/Y unit with PAL Control Board |
| | 1 pc PALhead |
| | 1 pc PALterminal |
| | 1 pc Safety guard |
| | 1 pc PALpower and cables |
| | 1 pc PAL Mounting Kit Standalone for HPLC |
| | 1 pc PAL LCMS-P Tool |
| | 1 pc PAL LCMS Wash Module |
| | 1 pc PAL Valve Drive Module |
| | 1 pc Injection Valve (C72VX-1676D-CTC-K) incl. PAL Needle Seals |
| | and Injection Port (Gauge 22) |
| | 1 pc PAL Sample Control software |
| | |
| | (Requires Tray Holders or Stack and Racks)PAL RSI 534 system for liquid injection LC |
| | consisting of: |
| | 1 pc PALbase 534 X/Y unit with PAL Control Board |
| | 1 pc PALhead |
| | 1 pc PALterminal |
| | 1 pc Safety guard |
| | 1 pc PALpower and cables |
| | 1 pc PAL Mounting Kit Standalone for HPLC |
| | 1 pc PAL LCMS-P Tool |
| | 1 pc PAL LCMS Wash Module |
| | 1 pc PAL Valve Drive Module |

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| PAL3-RSI-LMS-S | PAL RSI 850 system for liquid injection LC<br>consisting of:<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc PAL Mounting Kit Standalone for HPLC<br>1 pc PAL LCMS-P Tool<br>1 pc PAL LCMS Wash Module<br>1 pc PAL Valve Drive Module<br>1 pc Injection Valve (C72VX-1676D-CTC-K) incl. PAL Needle Seals<br>and Injection Port (Gauge 22)<br>1 pc PAL Sample Control software<br><br>(Requires Tray Holders or Stack and Racks)PAL RSI 850 system for liquid injection LC<br>consisting of:<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc PAL Mounting Kit Standalone for HPLC<br>1 pc PAL LCMS-P Tool<br>1 pc PAL LCMS Wash Module<br>1 pc PAL Valve Drive Module |
| PAL3-RSI-to-RTC-G | "Upgrade for PAL RSI to PAL RTC with flush gas equipment<br>used for upgrading a PAL RSI Liquid version<br>(not yet equipped with Gas Purge Line for Headspace Technique)<br>consisting of:<br>1 pc  PALhead<br>1 pc  Park Station<br>1 pc  Pressure regulator<br>1 pc  Gas tube equipment including Tubing Guide<br>1 pc  X-Axis cover left side including flush gas valve<br>Instructions"<br>"Upgrade for PAL RSI to PAL RTC with flush gas equipment<br>used for upgrading a PAL RSI Liquid version<br>(not yet equipped with Gas Purge Line for Headspace Technique)<br>consisting of:<br>1 pc  PALhead<br>1 pc  Park Station<br>1 pc  Pressure regulator<br>1 pc  Gas tube equipment including Tubing Guide<br>1 pc  X-Axis cover left side including flush gas valve<br>Instructions"<br>"Upgrade for PAL RSI to PAL RTC with flush gas equipment<br>used for upgrading a PAL RSI Liquid version<br>(not yet equipped with Gas Purge Line for Headspace Technique)<br>consisting of:<br>1 pc  PALhead<br>1 pc  Park Station<br>1 pc  Pressure regulator |

| PAL RTC |
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| **PAL3-RTC-LG-C-P9** \| PAL RTC system, Basic Unit without PALtools or PALmodules<br>consisting of:<br>1 pc PALbase 534 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc Park Station<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders or Stack and Racks)<br>PAL RTC system, Basic Unit without PALtools or PALmodules<br>consisting of:<br>1 pc PALbase 534 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc Park Station<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders or Stack and Racks)<br>PAL RTC system, Basic Unit without PALtools or PALmodules |

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|---|---|
| PAL3-RTC-LG-S-P9 | PAL RTC system, Basic Unit without PALtools or PALmodules<br>consisting of:<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc Park Station<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders or Stack and Racks)<br>PAL RTC system, Basic Unit without PALtools or PALmodules<br>consisting of:<br>1 pc PALbase 850 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc Park Station<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders or Stack and Racks)<br>PAL RTC system, Basic Unit without PALtools or PALmodules |
| PAL3-RTC-LG-X-P9 | PAL RTC system, Basic Unit without PALtools or PALmodules<br>consisting of:<br>1 pc PALbase 1200 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc Park Station<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RTC system, Basic Unit without PALtools or PALmodules<br>consisting of:<br>1 pc PALbase 1200 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc Park Station<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(Requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RTC system, Basic Unit without PALtools or PALmodules |

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|---|---|
| PAL3-RTC-LG-XL-P9 | PAL RTC system, Basic Unit without PALtools or PALmodules<br>consisting of:<br>1 pc PALbase 1600 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc Park Station<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RTC system, Basic Unit without PALtools or PALmodules<br>consisting of:<br>1 pc PALbase 1600 X/Y unit with PAL Control Board<br>1 pc PALhead<br>1 pc Park Station<br>1 pc PALterminal<br>1 pc Safety guard<br>1 pc PALpower and cables<br>1 pc Gas Purge Line for Headspace Technique built-in<br>1 pc PAL Sample Control software<br><br>(requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders or Stack and Racks)PAL RTC system, Basic Unit without PALtools or PALmodules<br>consisting of:<br>1 pc PALbase 1600 X/Y unit with PAL Control Board |

**PAL DHR**

| PAL3-DHR-X-D1 | PAL Dual Head 120 system (RTC/ RTC) consisting of: 1 pc PALbase 1205 X/Y until with PAL Control Board 2 pc PALhead RTC 1 pc Park Station 1 pc Gas Purge Line for Headspace Technique built-in 1 pc PALterminal 1 pc Safety guard 1 pc PALpower and cables<br><br>(requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders and Stack and Racks, (Chronos 4.4 or PAL Sample Control 2.4)PAL Dual Head 120 system (RTC/ RTC) consisting of: 1 pc PALbase 1205 X/Y until with PAL Control Board 2 pc PALhead RTC 1 pc Park Station 1 pc Gas Purge Line for Headspace Technique built-in 1 pc PALterminal 1 pc Safety guard 1 pc PALpower and cables<br><br>(requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders and Stack and Racks, (Chronos 4.4 or PAL Sample Control 2.4)PAL Dual Head 120 system (RTC/ RTC) |
|---|---|
| PAL3-DHR-X-D2 | PAL Dual Head 120 system (RTC/ RSI) consisting of: 1 pc PALbase 1205 X/Y until with PAL Control Board 1 pc PALhead RTC 1 pc PALhead RSI for liquid Injection 1 pc Park Station 1 pc Gas Purge Line for Headspace Technique built-in 1 pc PALterminal 1 pc Safety guard 1 pc PALpower and cables<br><br>(requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders and Stack and Racks, (Chronos 4.4 or PAL Sample Control 2.4)PAL Dual Head 120 system (RTC/ RSI) consisting of: 1 pc PALbase 1205 X/Y until with PAL Control Board 1 pc PALhead RTC 1 pc PALhead RSI for liquid Injection 1 pc Park Station 1 pc Gas Purge Line for Headspace Technique built-in 1 pc PALterminal 1 pc Safety guard 1 pc PALpower and cables<br><br>(requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders and Stack and |

| PAL3-DHR-X-D4 | PAL Dual Head 120 system (RTC/ RTI) |
| --- | --- |
| | consisting of: |
| | 1 pc PALbase 1205 X/Y until with PAL Control Board |
| | 2 pc PALhead RSI |
| | 1 pc Park Station |
| | 1 pc Gas Purge Line for Headspace Technique built-in |
| | 1 pc PALterminal |
| | 1 pc Safety guard |
| | 1 pc PALpower and cables |
| | |
| | (requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders and Stack and Racks, (Chronos 4.4 or PAL Sample Control 2.4)PAL Dual Head 120 system (RTC/ RTI) |
| | consisting of: |
| | 1 pc PALbase 1205 X/Y until with PAL Control Board |
| | 2 pc PALhead RSI |
| | 1 pc Park Station |
| | 1 pc Gas Purge Line for Headspace Technique built-in |
| | 1 pc PALterminal |
| | 1 pc Safety guard |
| | 1 pc PALpower and cables |
| | |
| | (requires Mounting Kit for GC Model or Mounting Kit Standalone for HPLC, additionally Tools, Syringes, Tray Holders and Stack and Racks, (Chronos 4.4 or PAL Sample Control 2.4)PAL Dual Head 120 system (RTC/ RTI) |
| **Modules** | |
| PAL3-Agitator | Agitator for the incubation and agitation of up to 6x 20mL vials |
| PAL3-BarcodeReader | Barcode Reader with 2 active laser scanners for all standard vials containing 1 dimension (1-D) barcode in a horizontal orientation |

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| PAL3-Decapper | PAL Decapper Module for opening and closing of initially closed 2mL, 10mL or 20mL vials<br>To use with proved PAL Vials (20mL: Vial-20CV-C-100 and Vial-20CV-A-100 / 10mL: Vial-10CV-C-100 and Vial-10CV-A-100  in combination with ReCaps: Cap-10o20CV-ReM-100, 2mL: Vial-2CV-C-100 and Vial-2CV-A-100 in combination with Cap-2CV-M-Norm-100 or Cap-2CV-M-Slit-100) for multiple opening and closing procedures within a workflow<br>Requires FW Version 2.4 or higher<br>PAL Decapper Module for opening and closing of initially closed 2mL, 10mL or 20mL vials<br>To use with proved PAL Vials (20mL: Vial-20CV-C-100 and Vial-20CV-A-100 / 10mL: Vial-10CV-C-100 and Vial-10CV-A-100  in combination with ReCaps: Cap-10o20CV-ReM-100, 2mL: Vial-2CV-C-100 and Vial-2CV-A-100 in combination with Cap-2CV-M-Norm-100 or Cap-2CV-M-Slit-100) for multiple opening and closing procedures within a workflow<br>Requires FW Version 2.4 or higher<br>PAL Decapper Module for opening and closing of initially closed 2mL, 10mL or 20mL vials<br>To use with proved PAL Vials (20mL: Vial-20CV-C-100 and Vial-20CV-A-100 / 10mL: Vial-10CV-C-100 and Vial-10CV-A-100  in combination with ReCaps: Cap-10o20CV-ReM-100, 2mL: Vial-2CV-C-100 and Vial-2CV-A-100 in combination with Cap-2CV-M-Norm-100 or Cap-2CV-M-Slit-100) for multiple opening and closing procedures within a workflow<br>Requires FW Version 2.4 or higher |
| PAL3-DilutorSingle | PAL Dilutor Option, consisting of:<br> 1 pc  Dilutor module<br> 1 pc  Connection cable<br> 1 pc Dilutor Tool<br> 1 pc  Dilutor syringe 1mL<br> 1 pc  PFA Transfer tube 1/16"<br> 1 pc  Solvent bottle 1000ml<br> 1 pc  Aspirating tube 1/8"PAL Dilutor Option, consisting of:<br> 1 pc  Dilutor module<br> 1 pc  Connection cable<br> 1 pc Dilutor Tool<br> 1 pc  Dilutor syringe 1mL<br> 1 pc  PFA Transfer tube 1/16"<br> 1 pc  Solvent bottle 1000ml<br> 1 pc  Aspirating tube 1/8"PAL Dilutor Option, consisting of:<br> 1 pc  Dilutor module<br> 1 pc  Connection cable<br> 1 pc Dilutor Tool<br> 1 pc  Dilutor syringe 1mL<br> 1 pc  PFA Transfer tube 1/16"<br> 1 pc  Solvent bottle 1000ml<br> 1 pc  Aspirating tube 1/8" |

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| PAL3-DilutorMulti | PAL Dilutor Option, consisting of:<br>1 pc  Dilutor module<br>1 pc  Connection cable<br>1 pc  Dilutor Tool<br>1 pc  Dilutor syringe 1mL<br>1 pc  PFA Transfer tube 1/16"<br>5 pc  Solvent bottle 1000ml<br>5 pc  Aspirating tube 1/8"PAL Dilutor Option, consisting of:<br>1 pc  Dilutor module<br>1 pc  Connection cable<br>1 pc Dilutor Tool<br>1 pc  Dilutor syringe 1mL<br>1 pc  PFA Transfer tube 1/16"<br>5 pc  Solvent bottle 1000ml<br>5 pc  Aspirating tube 1/8"PAL Dilutor Option, consisting of:<br>1 pc  Dilutor module<br>1 pc  Connection cable<br>1 pc Dilutor Tool<br>1 pc  Dilutor syringe 1mL<br>1 pc  PFA Transfer tube 1/16"<br>5 pc  Solvent bottle 1000ml<br>5 pc  Aspirating tube 1/8" |
| PAL3-DirectInjection | Holder for two standalone LC Injection Ports |
| PAL3-DirectInjection-Upgr | Upgrade Kit for Direct Injection Port Holder, consisting of<br>2 pc Bulkhead Union 1/16" 0.25mm bore, SS<br>2 pc Needle Guide for direct Injection Ports, PEEK<br>1 pc PAL3-FoilCutter-PE<br>2 pc Needle Seal Peek, Gauge 22Upgrade Kit for Direct Injection Port Holder, consisting of<br>2 pc Bulkhead Union 1/16" 0.25mm bore, SS<br>2 pc Needle Guide for direct Injection Ports, PEEK<br>1 pc PAL3-FoilCutter-PE<br>2 pc Needle Seal Peek, Gauge 22 |
| PAL3-Extension | I/O Extension Module consisting of<br>1 pc I/O Expansion Module<br>1 pc PALbus Cable<br>Requires FW 2.2.x or higherI/O Extension Module consisting of<br>1 pc I/O Expansion Module<br>1 pc PALbus Cable<br>Requires FW 2.2.x or higher |
| PAL3-FlowCell | Flow-Cell for PALSystem to accommodate up to 6 flow cells, consisting of:<br>1 pc Holder 88mm<br>1 pc Flow-Cell Stainless Steel 316<br>with connectors Swagelok 1/4"<br>5 pcs Inlet SeptaFlow-Cell for PALSystem to accommodate up to 6 flow cells, consisting of:<br>1 pc Holder 88mm<br>1 pc Flow-Cell Stainless Steel 316<br>with connectors Swagelok 1/4"<br>5 pcs Inlet Septa |
| PAL3-HeatexStirrer | Heatex Stirrer for heating and stirring of 1x 2/10/20mL vials |

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| PAL3-ITEX-Kit | PAL3 ITEX Tool, including:<br>1 pc ITEX Syringe 1.3mL (PAL3-SYH-209295)<br>2 pc ITEX Trap TENAX TA 80/100 mesh (PAL3-ITEX-Trap-TXTA100)PAL3 ITEX Tool, including:<br>1 pc ITEX Syringe 1.3mL (PAL3-SYH-209295)<br>2 pc ITEX Trap TENAX TA 80/100 mesh (PAL3-ITEX-Trap-TXTA100) |
| PAL3-LiqCooler | Trayholder and sample tray for housing up to 32 vials of 10/20ml in the temperature range between 4°C- 70°C<br>External circulator bath for heating/cooling not includedTrayholder and sample tray for housing up to 32 vials of 10/20ml in the temperature range between 4°C- 70°C<br>External circulator bath for heating/cooling not included |
| PAL3-MHE-Module | Multiple Headspace Module, consisting of<br>MHE module, MHE tool and MHE needle Gauge 22/5Multiple Headspace Module, consisting of<br>MHE module, MHE tool and MHE needle Gauge 22/5 |
| PAL3-ParkStation-RTC | Park Station for the storage and robotic tool change of up to three PALtools like Liquid, HS, SPME ... consisting of:<br>1 pc Park Station<br>1 pc Electrical connection cable<br>Park Station for the storage and robotic tool change of up to three PALtools like Liquid, HS, SPME ... consisting of:<br>1 pc Park Station<br>1 pc Electrical connection cable |
| PAL3-PeltierStack2DW | Peltier Stack 2 DW 4°C- 40°C for 2pcs Standard Microtiter-, Deepwell Plates, VT15, VT54 or VT70 racks<br>Including Power Supply and cablesPeltier Stack 2 DW 4°C- 40°C for 2pcs Standard Microtiter-, Deepwell Plates, VT15, VT54 or VT70 racks<br>Including Power Supply and cables |
| PAL3-PeltierStack6DW | Peltier Stack 6DW 4°C- 40°C for 6pcs Standard Microtiter-, Deepwell Plates, VT15, VT54 or VT70 racks<br>Including Power Supply and cablesPeltier Stack 6DW 4°C- 40°C for 6pcs Standard Microtiter-, Deepwell Plates, VT15, VT54 or VT70 racks<br>Including Power Supply and cables |
| PAL3-PeltierStack12MT | Peltier Stack 12MT 4°C- 40°C for 12pcs Standard Microtiter Plates<br>Including Power Supply and cables<br>requires firmware version 1.5.0 or higherPeltier Stack 12MT 4°C- 40°C for 12pcs Standard Microtiter Plates<br>Including Power Supply and cables<br>requires firmware version 1.5.0 or higher |
| PAL3-SolventModule | Solvent Module for 3x 100mL solvent bottles |
| PAL3-SPME-Cond | N/A - please refer to PAL3-SPME-ArrowCond |
| PAL3-Stack12MT | Stack 12MT  for 6pcs Standard Microtiter plates |
| PAL3-Stack6DW | Stack 6DW  for 6pcs Standard Microtiter-, Deepwell Plates, VT15, VT54 or VT70 racks |
| PAL3-SPME-Cond | SPME Fiber Conditioning Module for the conditioning of SPME fibers<br>Second fiber position for a replacement fibreSPME Fiber Conditioning Module for the conditioning of SPME fibers<br>Second fiber position for a replacement fibre |

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| PAL3-System-SPME-Kit | SPME Kit, consisting of:<br>1 pc  SPME Tool<br>1 pc  SPME Fiber Holder<br>1 pc  SPME Fiber Assortment Kit<br>1 pc  SPME Performance Evaluation Mix<br>(not to be sold in the USA) |
| PAL3-SPME-Kit-USA | SPME Kit USA, consisting of:<br>1 pc  SPME Tool<br>1 pc  SPME Fiber Holder<br>1 pc  SPME Fiber Assortment Kit<br>1 pc  SPME Performance Evaluation Mix<br>1 pc  SPME CD<br>1 pc  SPME Application Documentation<br>(including patent royalty for USA) |
| PAL3-Terminal | Terminal for PAL 3 |
| **Tools** | |
| **Liquid tool** | |
| PAL3-TH-D757 | Universal Liquid Syringe Tool for syringes of 1.2µL, 5µL, 10µL, 25µL, 50µL or 100µL with a needle length of 57mm<br>Syringes not included |
| PAL3-TH-D785 | Universal Liquid Syringe Tool for syringes of 1.2µL, 5µL, 10µL, 25µL, 50µL or 100µL with a needle length of 85mm<br>Syringes not included |
| PAL3-TH-D857 | Universal Liquid Syringe Tool for syringes of 250µL, 500µL or 1000µL with a needle length of 57mm<br>Syringes not included |
| PAL3-TH-D885 | Universal Liquid Syringe Tool for syringes of 250µL, 500µL or 1000µL with a needle length of 85mm<br>Syringes not included |
| PAL3-TH-D1857 | Liquid Syringe Tool for a syringe of 10000µL with a needle length of 57mm<br>Syringe not included |
| PAL3-TH-Dilutor | Tool Holder for Dilutor Option.<br>Attention: Does not include needles and tubing. |
| **Generic tool** | |
| PAL3-TH-GT-D785 | **Generic tool** based on Universal Liquid Syringe Tool for syringes of 1.2µL, 5µL, 10µL, 25µL, 50µL or 100µL with a needle length of 85mm<br>(FW 2.2 and higher)<br>Syringes not included. |
| PAL3-TH-GT-D885 | **Generic tool** based on Universal Liquid Syringe Tool for syringes of 200, 500 and 1000 µL with a needle length of 85mm<br>(FW 2.2 and higher)<br>Syringes not included |
| PAL3-TH-GT-Dilutor | Generic tool based on Tool Holder for Dilutor Option.<br>(FW 2.2 and higher)<br>Attention: Does not include needles and tubing. |
| **HS tool** | |

| PAL3-TH-HS1000 | Headspace Syringe Tool for a 1000µL syringe with a needle length of 65mm<br>Syringe not includedHeadspace Syringe Tool for a 1000µL syringe with a needle length of 65mm<br>Syringe not includedHeadspace Syringe Tool for a 1000µL syringe with a needle length of 65mm<br>Syringe not includedHeadspace Syringe Tool for a 1000µL syringe with a needle length of 65mm<br>Syringe not included |
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| PAL3-TH-HS2500 | Headspace Syringe Tool for a 2500µL syringe with a needle length of 65mm<br>Syringe not includedHeadspace Syringe Tool for a 2500µL syringe with a needle length of 65mm<br>Syringe not includedHeadspace Syringe Tool for a 2500µL syringe with a needle length of 65mm<br>Syringe not includedHeadspace Syringe Tool for a 2500µL syringe with a needle length of 65mm<br>Syringe not included |
| PAL3-TH-HS5000 | Headspace Syringe Tool for a 5000µL syringe with a needle length of 65mm<br>Syringe not includedHeadspace Syringe Tool for a 5000µL syringe with a needle length of 65mm<br>Syringe not includedHeadspace Syringe Tool for a 5000µL syringe with a needle length of 65mm<br>Syringe not includedHeadspace Syringe Tool for a 5000µL syringe with a needle length of 65mm<br>Syringe not included |
| PAL3-TH-LCMS-P | LCMS-P Tool consisting of:<br> 1 pc  LCMS-P Tool incl. Syringe, Needle and FEP Loop<br> 1 pc Pump Module and Connection Cable<br> 1 pc  PFA Transfer tube 1/16"<br> 2 pc  Solvent bottle 1000ml<br> 2 pc  Aspirating tube 1/8"<br>Attention: LCMS Wash Module not included.LCMS-P Tool consisting of:<br> 1 pc  LCMS-P Tool incl. Syringe, Needle and FEP Loop<br> 1 pc Pump Module and Connection Cable<br> 1 pc  PFA Transfer tube 1/16"<br> 2 pc  Solvent bottle 1000ml<br> 2 pc  Aspirating tube 1/8"<br>Attention: LCMS Wash Module not included.LCMS-P Tool consisting of:<br> 1 pc  LCMS-P Tool incl. Syringe, Needle and FEP Loop<br> 1 pc Pump Module and Connection Cable<br> 1 pc  PFA Transfer tube 1/16"<br> 2 pc  Solvent bottle 1000ml<br> 2 pc  Aspirating tube 1/8"<br>Attention: LCMS Wash Module not included.LCMS-P Tool consisting of:<br> 1 pc  LCMS-P Tool incl. Syringe, Needle and FEP Loop<br> 1 pc Pump Module and Connection Cable<br> 1 pc  PFA Transfer tube 1/16"<br> 2 pc  Solvent bottle 1000ml<br> 2 pc  Aspirating tube 1/8"<br>Attention: LCMS Wash Module not included. |

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| PAL3-TH-Pip1000 | Pipette tool for 1000uL Tips<br>To use with PAL Disposable Tips: PAL3-PipTip-1000 and PAL3-PipTip-1000F<br>Tips and Racks for tips are not included<br>requires firmware version 2.4.x or higher **and PAL RTC**Pipette tool for 1000uL Tips<br>To use with PAL Disposable Tips: PAL3-PipTip-1000 and PAL3-PipTip-1000F<br>Tips and Racks for tips are not included<br>requires firmware version 2.4.x or higher **and PAL RTC**Pipette tool for 1000uL Tips<br>To use with PAL Disposable Tips: PAL3-PipTip-1000 and PAL3-PipTip-1000F<br>Tips and Racks for tips are not included<br>requires firmware version 2.4.x or higher **and PAL RTC**Pipette tool for 1000uL Tips<br>To use with PAL Disposable Tips: PAL3-PipTip-1000 and PAL3-PipTip-1000F<br>Tips and Racks for tips are not included<br>requires firmware version 2.4.x or higher **and PAL RTC** |
| PAL3-TH-Pip200 | Pipette tool for 200uL Tips<br>To use with PAL Disposable Tips: PAL3-PipTip-200 and PAL3-PipTip-200F<br>Tips and Racks for tips are not included<br>requires firmware version 2.4.x or higher **and PAL RTC**Pipette tool for 200uL Tips<br>To use with PAL Disposable Tips: PAL3-PipTip-200 and PAL3-PipTip-200F<br>Tips and Racks for tips are not included<br>requires firmware version 2.4.x or higher **and PAL RTC**Pipette tool for 200uL Tips<br>To use with PAL Disposable Tips: PAL3-PipTip-200 and PAL3-PipTip-200F<br>Tips and Racks for tips are not included<br>requires firmware version 2.4.x or higher **and PAL RTC**Pipette tool for 200uL Tips<br>To use with PAL Disposable Tips: PAL3-PipTip-200 and PAL3-PipTip-200F<br>Tips and Racks for tips are not included<br>requires firmware version 2.4.x or higher **and PAL RTC** |
| **Tray Holder** ||
| PAL3-Trayplate | Tray Holder for MTP and DW Plates, VT54, VT15 (CTC) |
| PAL3-Trayholder | Tray Holder for up to 3 different MTP, DW plates or sample racks VT12, VT15, VT54, VT70 or 1 sample rack R60 |
| PAL3-ValveDrive-R | Valve Drive Module for Rheodyne valve (without valve) consisting of:<br>1 pc Valve Drive Module<br>1 pc PAL Bus connection cableValve Drive Module for Rheodyne valve (without valve) consisting of:<br>1 pc Valve Drive Module<br>1 pc PAL Bus connection cableValve Drive Module for Rheodyne valve (without valve) consisting of:<br>1 pc Valve Drive Module<br>1 pc PAL Bus connection cableValve Drive Module for Rheodyne valve (without valve) consisting of:<br>1 pc Valve Drive Module<br>1 pc PAL Bus connection cable |

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| PAL3-ValveDrive-V | Valve Drive Module for Valco valve (without valve) consisting of:<br>1 pc Valve Drive Module<br>1 pc PAL Bus connection cableValve Drive Module for Valco valve (without valve) consisting of:<br>1 pc Valve Drive Module<br>1 pc PAL Bus connection cableValve Drive Module for Valco valve (without valve) consisting of:<br>1 pc Valve Drive Module<br>1 pc PAL Bus connection cableValve Drive Module for Valco valve (without valve) consisting of:<br>1 pc Valve Drive Module<br>1 pc PAL Bus connection cable |
| PAL3-VortexMixer | Vortex Mixer for the intensive mixing of 1x 2mL, 10 or 20mL vials with an agitation speed between 0-2000 rpm |
| <center>**Wash Module**</center> | |
| PAL3-WashFast | Fast Wash Module for two solvents (Needle Gauge 19 to 26), consisting of:<br>1 pc Wash Module with two wash positions and one Waste position<br>1 pc Pump Module with two solvent pumps<br>2 pc 1 liter solvent bottles with tubings and frits<br>1 pc PALbus connection cableFast Wash Module for two solvents (Needle Gauge 19 to 26), consisting of:<br>1 pc Wash Module with two wash positions and one Waste position<br>1 pc Pump Module with two solvent pumps<br>2 pc 1 liter solvent bottles with tubings and frits<br>1 pc PALbus connection cableFast Wash Module for two solvents (Needle Gauge 19 to 26), consisting of:<br>1 pc Wash Module with two wash positions and one Waste position<br>1 pc Pump Module with two solvent pumps<br>2 pc 1 liter solvent bottles with tubings and frits<br>1 pc PALbus connection cableFast Wash Module for two solvents (Needle Gauge 19 to 26), consisting of:<br>1 pc Wash Module with two wash positions and one Waste position<br>1 pc Pump Module with two solvent pumps<br>2 pc 1 liter solvent bottles with tubings and frits<br>1 pc PAL bus connection cable |
| PAL3-WashLCMS | Wash Module for LCMS Tool. with two wash positions and one waste position |
| PAL3-WashLarge | Large Wash Module for 2x 100mL solvent vials and one waste position |
| PAL3-WashStd | Standard Wash Module for up to 4x 10mL solvent vials and 1x 10mL waste vial |

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| PAL3-WashPip | Wash Module for pipette tool, consisting of:<br>1 pc Valve Wash Module Pipette Tool<br>1 pc Pump Module<br>1 pc Cheminert Injection Valve PAL3-C2V-2006-CTC<br>2 pc PAL3 DilAsp Kits<br>2 pc 1000mL Solvent Bottles<br>requires firmware version 24 or higher<br>requires injection loop and PAL3-ValveDrive-VWash Module for pipette tool, consisting of:<br>1 pc Valve Wash Module Pipette Tool<br>1 pc Pump Module<br>1 pc Cheminert Injection Valve PAL3-C2V-2006-CTC<br>2 pc PAL3 DilAsp Kits<br>2 pc 1000mL Solvent Bottles<br>requires firmware version 24 or higher<br>requires injection loop and PAL3-ValveDrive-VWash Module for pipette tool, consisting of:<br>1 pc Valve Wash Module Pipette Tool<br>1 pc Pump Module<br>1 pc Cheminert Injection Valve PAL3-C2V-2006-CTC<br>2 pc PAL3 DilAsp Kits<br>2 pc 1000mL Solvent Bottles<br>requires firmware version 24 or higher<br>requires injection loop and PAL3-ValveDrive-V |

| ITSP KIT | |
|---|---|
| PAL3-Kit-ITSP | ITSP Kit for  PAL RTC consisting of::          NET PRICE!<br> 1pc  Needle Guide for ITSP (HWP3-NG)<br> 1pc  Trayholder<br> 1pc  Waste Receptacle (HW-WR)<br> 1pc  Prep Tray, 96 Position Aluminum (HW-96P)<br> 1pc  Single Cartridge Holder, 5/Pack (HW-SCH)<br> 1pc  Jump Drive for Applications Notes, Programming & Manuals (HW-JD)<br>(requires PAL RTC System)ITSP Kit for  PAL RTC consisting of::<br>NET PRICE!<br> 1pc  Needle Guide for ITSP (HWP3-NG)<br> 1pc  Trayholder<br> 1pc  Waste Receptacle (HW-WR)<br> 1pc  Prep Tray, 96 Position Aluminum (HW-96P)<br> 1pc  Single Cartridge Holder, 5/Pack (HW-SCH)<br> 1pc  Jump Drive for Applications Notes, Programming & Manuals (HW-JD)<br>(requires PAL RTC System)ITSP Kit for  PAL RTC consisting of::<br>NET PRICE!<br> 1pc  Needle Guide for ITSP (HWP3-NG)<br> 1pc  Trayholder<br> 1pc  Waste Receptacle (HW-WR)<br> 1pc  Prep Tray, 96 Position Aluminum (HW-96P)<br> 1pc  Single Cartridge Holder, 5/Pack (HW-SCH)<br> 1pc  Jump Drive for Applications Notes, Programming & Manuals (HW-JD)<br>(requires PAL RTC System) |

| Accessories | |
|---|---|
| PAL3-Adap-7890/6890 | Adapter for Agilent GC 7890/6890 |
| PAL3-Adap-GC2010 | Adapter for Shimadzu GC2010 Plus |

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| PAL3-Adap-Trace1300-GC | Adapter for Thermo Trace 1300 GC injectors, suitable for SSL or PTV injector |
| PAL3-Adap-TraceUltra | Adapter for Thermo Trace 1300 Ultra injector |
| PAL3-AdapStdWash-2ml | Adapter for Standard Wash Module to place 2mL vial instead of the 10mL wash vial |
| PAL3-AdapStdWash-Waste | Waste Adapter for Standard Wash Module |
| PAL3-Adapters-FocusGC | Adapter kit for Thermo Focus GC injectors: consists of one adapter for SSL/packed/purge packed injector |
| PAL3-Adapters-TraceGC | Kit of adapters for Thermo Trace GC Ultra injectors: consists of one adapter for SSL/packed/purge packed injector and one adapter for PTV |
| PAL3-Agi-InsSet-10ml | Set of 6x inserts for the Agitator to place 10mL vials instead of the 20mL vials |
| PAL3-Agi-InsSet-2ml | Set of 6x inserts for the Agitator to place 2mL vials instead of the 20mL vials |
| PAL3-C2V-2006D-CTC-K | 6-port Cheminert Injection Valve 0.40mm bore size<br>incl. Needle Guide, Needle Seal G22, PAL3-Kit LCVlv6-port Cheminert Injection Valve 0.40mm bore size<br>incl. Needle Guide, Needle Seal G22, PAL3-Kit LCVlv6-port Cheminert Injection Valve 0.40mm bore size<br>incl. Needle Guide, Needle Seal G22, PAL3-Kit LCVlv |
| PAL3-C2V-3606D-CTC-K | 6-port Cheminert Injection Valve, 0.75mm bore size<br>incl. Needle Seal (Gauge 22) and PAL3-KitLCVlv<br>Prep Application, Flow Rate 5 to 100mL/min6-port Cheminert Injection Valve, 0.75mm bore size<br>incl. Needle Seal (Gauge 22) and PAL3-KitLCVlv<br>Prep Application, Flow Rate 5 to 100mL/min |
| PAL3-C72VU-6676D-CTC-K | 6-port Cheminert Injection Valve<br>18'500 psi 50C liq,<br>0.15 mm bore size,<br>incl. 2µL and 20µL loop. 20uL loop already mounted.<br>incl. Needle Guide, Needle Seal, PAL3-Kit LCVlv6-port Cheminert Injection Valve<br>18'500 psi 50C liq,<br>0.15 mm bore size,<br>incl. 2µL and 20µL loop. 20uL loop already mounted.<br>incl. Needle Guide, Needle Seal, PAL3-Kit LCVlv |
| PAL3-C72VX-1670D-CTC-K | 10 port Cheminert injection valve<br>15'000 psi 75°C<br>0.25 mm bore size10 port Cheminert injection valve<br>15'000 psi 75°C<br>0.25 mm bore size |
| PAL3-C72VX-1676D-CTC-K | 6-port Cheminert Injection Valve<br>15'000 psi 75°C<br>0.25 mm bore size6-port Cheminert Injection Valve<br>15'000 psi 75°C<br>0.25 mm bore size |
| PAL3-C5F-1004D-CTC | Selector Valve 8-port 0.25mm, 1000psi |

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| PAL3-ColSel6 | Column Selector Valve for up to 6 columns, consists of<br>2 pc 6-port Cheminert valves, bore size 0.25mmColumn Selector Valve for up to 6 columns, consists of<br>2 pc 6-port Cheminert valves, bore size 0.25mm |
| PAL3-ColumnHolder | Column Holder for Valve Drive with clamps for columns OD 4.6mm |
| PAL3-DCI4WK.5/1-CTC-K | Valco W-Type LC-Valve 4-Port<br>Internal sample loop 0.5/1.0 µL<br>5000 psi 50°C, 0.40 mm bore size<br>incl. Needle Guide, Needle Seal and Kit LCVlvValco W-Type LC-Valve 4-Port<br>Internal sample loop 0.5/1.0 µL<br>5000 psi 50°C, 0.40 mm bore size<br>incl. Needle Guide, Needle Seal and Kit LCVlv |
| PAL3-DilAspKit | Aspiration Tubing Kit, consisting of:<br>1 pc Tube PFA<br>1 pc 28mm VitraPOR Glass Frit 40um pore size<br>1 pc Plug with Feed-through Holes Aspiration Tubing Kit, consisting of:<br>1 pc Tube PFA<br>1 pc 28mm VitraPOR Glass Frit 40um pore size<br>1 pc Plug with Feed-through Holes |
| PAL3-FoilCutter | Foil cutter to pierce either aluminum or plastic foils prior to the needle penetration into Microtiter or Deep Well plates (Requires PAL3-LCInj20mL-G19 or PAL3-LCInj20mL-G22) |
| PAL3-GC-QDoc | Instrument Qualification for GC Applications PAL3 RSI, RTC<br>Documentation for IQ/ OQ procedures Instrument Qualification for GC Applications PAL3 RSI, RTC<br>Documentation for IQ/ OQ procedures |
| PAL3-GC-ReQ | Instrument Requalification for GC Applications PAL3 RSI, RTC<br>Documentation for OQ proceduresInstrument Requalification for GC Applications PAL3 RSI, RTC<br>Documentation for OQ procedures |
| PAL3-ITEX-Trap-Carb1000 | PAL3 ITEX Trap Carboxen 1000 -60/ 80 mesh |
| PAL3-ITEX-Trap-CarbC | PAL3 ITEX Trap Carbopack - C 80/100 mesh |
| PAL3-ITEX-Trap-Carb-S3 | PAL3 ITEX Trap Carbosieve SIII -60/ 80 mesh |
| PAL3-ITEX-Trap-Mix-1 | PAL3 ITEX Trap Mix1 Tenax TA : Carboxen1000 (Bottom: Top - 1: 1) |
| PAL3-ITEX-Trap-Mix-2 | PAL3 ITEX Trap Mix2 Carbopack C : Carbosieve SIII (Bottom: Top - 2: 1) |
| PAL3-ITEX-Trap-Mix-3 | PAL3 ITEX Trap Mix3 Tenax GR : Carbosieve SIII (Bottom: Top - 1: 1) |
| PAL3-ITEX-Trap-TxGR | PAL3 ITEX Trap Tenax GR - 80/100 mesh |
| PAL3-ITEX-Trap-TXTA100 | PAL3 ITEX Trap Tenax TA 80/100 mesh |
| **Mounting Kits** | |
| PAL3-Kit-5890 | Mounting Kit for Agilent GC model 5890 |
| PAL3-Kit-5975T | Mounting Kit for Agilent GC model 5975T |
| PAL3-Kit-6850 | Mounting Kit for Agilent GC model 6850 |
| PAL3-Kit-7820-D | Mounting Kit for Agilent GC model 7820 |
| PAL3-Kit-7890-D | Mounting Kit for Agilent GC models 6890 / 7890 |
| PAL3-Kit-7890-S | Mounting Kit for Agilent GC models 6890 / 7890 ( side mounting ) |

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| PAL3-Kit-Bruker-436 | Mounting Kit for Bruker GC model 436 |
| PAL3-Kit-Bruker-451 | Mounting Kit for Bruker GC model 451 |
| PAL3-Kit-Bruker-456 | Mounting Kit for Bruker GC model 456 |
| PAL3-Kit-DW-96Grabber | Standard Support PAL3, 320mm, 2pcs (for use with Grabber* DW-96 configuration) * Item separately available from www.brechbuehler.ch |
| PAL3-Kit-Focus | Mounting kit for Thermo Focus GC |
| PAL3-Kit-MasterGC | Mounting kit for DANI Master GC |
| PAL3-Kit-MasterSHS | Mounting Kit for DANI Master SHS/DHS in combination with DANI Master GC |
| PAL3-Kit-PEC500 | Mounting Kit for PERKIN ELMER Clarus 500 |
| PAL3-Kit-PEC600 | Mounting Kit for PERKIN ELMER Clarus 600 |
| PAL3-Kit-S17A | Mounting Kit for Shimadzu GC-S17A model |
| PAL3-Kit-S2014 | Mounting Kit for Shimadzu GC model 2014 |
| PAL3-Kit-S2010 | Mounting Kit for Shimadzu GC model 2010 |
| PAL3-Kit-S2010-SHS | Mounting Kit for DANI Master SHS/DHS in combination with Shimadzu S2010 GC |
| PAL3-Kit-S2025 | Mounting Kit for Shimadzu GC model 2025 |
| PAL3-Kit-Standalone | 2 pcs Standard Support PAL RTC, 215mm, incl. PAL Interface Cable |
| PAL3-Kit-Trace | Mounting Kit for Thermo Trace GC Ultra |
| PAL3-Kit-Trace1300 | Mounting Kit for Thermo Trace 1300/1310 GC |
| PAL3-Kit-Varian-3800 | Mounting Kit for Varian GC model 3800 |
| PAL3-Leg667 | Single support leg 667 mm for Thermo GC (left or right side) |
| PAL3-Leg710 | Single support leg 707 - 720 mm (left or right side) |
| PAL3-Leg780 | Single support leg 774 - 787 mm (left or right side) |
| PAL3-Kit-WashVial-10ml | 10mL solvent vial for Standard Wash Module completed with snap caps and seals (set of 10)10mL solvent vial for Standard Wash Module completed with snap caps and seals (set of 10)10mL solvent vial for Standard Wash Module completed with snap caps and seals (set of 10)10mL solvent vial for Standard Wash Module completed with snap caps and seals (set of 10)10mL solvent vial for Standard Wash Module completed with snap caps and seals (set of 10)10mL solvent vial for Standard Wash Module completed with snap caps and seals (set of 10)10mL solvent vial for Standard Wash Module completed with snap caps and seals (set of 10) |

| PAL3-Kit-WashVial-Caps | Snap cap (PE) and septum (Silicon/PTFE) for 10mL/100mL vials for Standard Wash Module (set of 10)Snap cap (PE) and septum (Silicon/PTFE) for 10mL/100mL vials for Standard Wash Module (set of 10)Snap cap (PE) and septum (Silicon/PTFE) for 10mL/100mL vials for Standard Wash Module (set of 10)Snap cap (PE) and septum (Silicon/PTFE) for 10mL/100mL vials for Standard Wash Module (set of 10)Snap cap (PE) and septum (Silicon/PTFE) for 10mL/100mL vials for Standard Wash Module (set of 10)Snap cap (PE) and septum (Silicon/PTFE) for 10mL/100mL vials for Standard Wash Module (set of 10)Snap cap (PE) and septum (Silicon/PTFE) for 10mL/100mL vials for Standard Wash Module (set of 10) |
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| PAL3-LCInj-G22 | Standard Needle Guide for Rheodyne/ Vici valves, Gauge 22 |
| PAL3-LCInj-V-G19 | Standard Needle Guide for Vici valves, Gauge 19 |
| PAL3-LCInj20mL-G19 | Needle Guide for Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutter |
| PAL3-LCInj20mL-G22 | Needle Guide for Rheodyne/ Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Rheodyne/ Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Rheodyne/ Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Rheodyne/ Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Rheodyne/ Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Rheodyne/ Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutterNeedle Guide for Rheodyne/ Vici valves, Gauge 19 Designed for tools with 20mL magnet or foil cutter |

| PAL3-LCMS-Ndl | Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut) |
|---|---|
| PAL3-LCMS-Ndl-C | Coated Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Coated Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Coated Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Coated Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Coated Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut)Coated Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm<br>for syringes 5µl - 100µl<br>(3 pcs per pack,  incl. Needle Retaining Nut) |

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|---|---|
| PAL3-LCMS-Ndl-T | Titanium Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (3 pcs per pack, incl. Needle Retaining Nut) CAUTION: FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USETitanium Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (3 pcs per pack, incl. Needle Retaining Nut) CAUTION: FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USETitanium Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (3 pcs per pack, incl. Needle Retaining Nut) CAUTION: FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USETitanium Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (3 pcs per pack, incl. Needle Retaining Nut) CAUTION: FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USETitanium Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (3 pcs per pack, incl. Needle Retaining Nut) CAUTION: FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USETitanium Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (3 pcs per pack, incl. Needle Retaining Nut) CAUTION: FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USETitanium Needle for PAL LCMS Tool, gauge 22 PST 3, length 51 mm (3 pcs per pack, incl. Needle Retaining Nut) CAUTION: FOR LABORATORY USE ONLY - NOT FOR HUMAN IN VIVO USE |
| PAL3-LC-QDoc | Instrument Qualification for LC  Applications PAL3 RSI, RTC Documentation for IQ/ OQ proceduresInstrument Qualification for LC Applications PAL3 RSI, RTC Documentation for IQ/ OQ proceduresInstrument Qualification for LC Applications PAL3 RSI, RTC Documentation for IQ/ OQ proceduresInstrument Qualification for LC Applications PAL3 RSI, RTC Documentation for IQ/ OQ proceduresInstrument Qualification for LC Applications PAL3 RSI, RTC Documentation for IQ/ OQ proceduresInstrument Qualification for LC Applications PAL3 RSI, RTC Documentation for IQ/ OQ proceduresInstrument Qualification for LC Applications PAL3 RSI, RTC Documentation for IQ/ OQ procedures |
| PAL3-LC-ReQ | Instrument Requalification for LC Applications PAL3 RSI, RTC Documentation for OQ proceduresInstrument Requalification for LC Applications PAL3 RSI, RTC Documentation for OQ proceduresInstrument Requalification for LC Applications PAL3 RSI, RTC Documentation for OQ proceduresInstrument Requalification for LC Applications PAL3 RSI, RTC Documentation for OQ proceduresInstrument Requalification for LC Applications PAL3 RSI, RTC Documentation for OQ proceduresInstrument Requalification for LC Applications PAL3 RSI, RTC Documentation for OQ proceduresInstrument Requalification for LC Applications PAL3 RSI, RTC Documentation for OQ proceduresInstrument Requalification for LC Applications PAL3 RSI, RTC Documentation for OQ procedures |

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|---|---|
| PAL3-PD718-110-K | 6-port Rheodyne Injection Valve 0.28mm bore size and MBB functionality, stainless steel rotor seal (RPC-13 coated)<br>Pressure up to 1200 bar, incl. Needle Guide, Needle Seal<br>without Sample Loop6-port Rheodyne Injection Valve 0.28mm bore size and MBB functionality, stainless steel rotor seal (RPC-13 coated)<br>Pressure up to 1200 bar, incl. Needle Guide, Needle Seal<br>without Sample Loop6-port Rheodyne Injection Valve 0.28mm bore size and MBB functionality, stainless steel rotor seal (RPC-13 coated)<br>Pressure up to 1200 bar, incl. Needle Guide, Needle Seal<br>without Sample Loop6-port Rheodyne Injection Valve 0.28mm bore size and MBB functionality, stainless steel rotor seal (RPC-13 coated)<br>Pressure up to 1200 bar, incl. Needle Guide, Needle Seal<br>without Sample Loop6-port Rheodyne Injection Valve 0.28mm bore size and MBB functionality, stainless steel rotor seal (RPC-13 coated)<br>Pressure up to 1200 bar, incl. Needle Guide, Needle Seal<br>without Sample Loop6-port Rheodyne Injection Valve 0.28mm bore size and MBB functionality, stainless steel rotor seal (RPC-13 coated)<br>Pressure up to 1200 bar, incl. Needle Guide, Needle Seal<br>without Sample Loop6-port Rheodyne Injection Valve 0.28mm bore size and MBB functionality, stainless steel rotor seal (RPC-13 coated)<br>Pressure up to 1200 bar, incl. Needle Guide, Needle Seal<br>without Sample Loop |
| PAL3-PD718-202 | 10-port Rheodyne Injection Valve 0.15mm bore size<br>SPC3 coated stator and RPC-13 coated rotor seal<br>Pressure up to 1200 bar10-port Rheodyne Injection Valve 0.15mm bore size<br>SPC3 coated stator and RPC-13 coated rotor seal<br>Pressure up to 1200 bar10-port Rheodyne Injection Valve 0.15mm bore size<br>SPC3 coated stator and RPC-13 coated rotor seal<br>Pressure up to 1200 bar10-port Rheodyne Injection Valve 0.15mm bore size<br>SPC3 coated stator and RPC-13 coated rotor seal<br>Pressure up to 1200 bar10-port Rheodyne Injection Valve 0.15mm bore size<br>SPC3 coated stator and RPC-13 coated rotor seal<br>Pressure up to 1200 bar10-port Rheodyne Injection Valve 0.15mm bore size<br>SPC3 coated stator and RPC-13 coated rotor seal<br>Pressure up to 1200 bar10-port Rheodyne Injection Valve 0.15mm bore size<br>SPC3 coated stator and RPC-13 coated rotor seal<br>Pressure up to 1200 bar |
| **Pipette Tips** | |
| PAL3-PipTip-1000 | Pipette Tips 1000uL without Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL without Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL without Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL without Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL without Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL without Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL without Filter<br>10 pcs with 96 tips each |
| PAL3-PipTip-1000F | Pipette Tips 1000uL with Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL with Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL with Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL with Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL with Filter<br>10 pcs with 96 tips eachPipette Tips 1000uL with Filter<br>10 pcs with 96 tips each |

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| PAL3-PipTip-200 | Pipette Tips 200uL without Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL without Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL without Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL without Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL without Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL without Filter |
| | 10 pcs with 96 tips each |
| PAL3-PipTip-200F | Pipette Tips 200uL with Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL with Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL with Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL with Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL with Filter |
| | 10 pcs with 96 tips eachPipette Tips 200uL with Filter |
| | 10 pcs with 96 tips each |
| PAL3-Rack-Pip-Tip | Tip rack for 96 PAL pipette tips |
| | Tips not includedTip rack for 96 PAL pipette tips |
| | Tips not includedTip rack for 96 PAL pipette tips |
| | Tips not includedTip rack for 96 PAL pipette tips |
| | Tips not includedTip rack for 96 PAL pipette tips |
| | Tips not includedTip rack for 96 PAL pipette tips |
| | Tips not included |
| **Racks** | |
| PAL3-Rack-R60 | Sample Rack for 60 vials of 10/20mL, Aluminum |
| | Vials not includedSample Rack for 60 vials of 10/20mL, Aluminum |
| | Vials not includedSample Rack for 60 vials of 10/20mL, Aluminum |
| | Vials not includedSample Rack for 60 vials of 10/20mL, Aluminum |
| | Vials not includedSample Rack for 60 vials of 10/20mL, Aluminum |
| | Vials not includedSample Rack for 60 vials of 10/20mL, Aluminum |
| | Vials not included |
| PAL3-Rack-VT12 | Sample Rack for 12 vials of 40mL. Vials are not included |
| PAL3-Rack-VT15 | Sample Rack for 15 vials of 10/20mL. Vials are not included |
| PAL3-Kit-VT15 | Sample Rack for 15 vials of 10/20mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 15 vials of 10/20mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 15 vials of 10/20mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 15 vials of 10/20mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 15 vials of 10/20mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 15 vials of 10/20mL, pack of 3 pcs |
| | Vials are not included |
| PAL3-Rack-VT54 | Sample Rack for 54 vials of 2mL. Vials are not included |
| PAL3-Kit-VT54 | Sample Rack for 54 vials of 2mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 54 vials of 2mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 54 vials of 2mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 54 vials of 2mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 54 vials of 2mL, pack of 3 pcs |
| | Vials are not includedSample Rack for 54 vials of 2mL, pack of 3 pcs |
| | Vials are not included |
| PAL3-Rack-VT70 | Sample Rack for 70 vials of 1mL. Vials are not included |
| **Vials** | |
| Vial-0.3-ND9-PP-1 | PAL System Micro-Vial 2CV, 0.3mL Clear PP, designed for the PAL Autosampler. 12x32mm, with conical insert, fits ND9 Screw Caps, Pk of 100 Pcs |
| Vial-1.5-ND9-PP-1 | PAL System Vial 2CV, 1.5mL Clear PP, designed for the PAL Autosampler. 12x32mm, with filling lines, fits ND9 Screw Caps, Pk of 100 Pcs |

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| Vial-1.5-ND9-CG-1 | PAL System Vial 2CV, 1.5ml Clear Glass with Label, designed for the PAL Autosampler. 12x32mm, 1st Class Hydrolytic Glass, fits ND9 Screw Caps, Pk of 100 Pcs |
| Vial-1.5-ND9-AG-1 | PAL System Vial 2CV, 1.5ml Amber Glass with Label, designed for the PAL Autosampler. 12x32mm, 1st Class Hydrolytic Glass, fits ND9 Screw Caps, Pk of 100 Pcs |
| Vial-20-ND18-CG- | PAL System Vial 20CV, 20ml Clear Glass with Label, designed for the PAL Autosampler. 75.5x22.5mm, 1st Class Hydrolytic Glass with flat finish for better sealing, fits ND18 Screw Caps, Pk of 100 Pcs |
| Vial-20-ND18-AG- | PAL System Vial 20CV, 20ml Amber Glass with Label, designed for the PAL Autosampler. 75.5x22.5mm, 1st Class Hydrolytic Glass with flat finish for better sealing, fits ND18 Screw Caps, Pk of 100 Pcs |
| Vial-10-DC20-CG- | PAL System Vial 10CV, 10ml Clear Glass with Label, for PAL Wash Modules. 46x22.5mm, 1st Class Hydrolytic Glass, DIN-Crimp Neck, Pk of 100pcs |
| Vial-10-ND18-CG- | PAL System Vial 10CV, 10ml Clear Glass with Label, designed for the PAL Autosampler. 46x22.5mm, 1st Class Hydrolytic Glass, with flat finish for better sealing, fits ND18 Screw Caps, Pk of 100 Pcs |
| Vial-10-ND18-AG- | PAL System Vial 10CV, 10ml Amber Glass with Label, designed for the PAL Autosampler. 46x22.5mm, 1st Class Hydrolytic Glass, with flat finish for better sealing, fits ND18 Screw Caps, Pk of 100 Pcs |
| Cap-DC20-PE-SP | PAL System Clip Cap for PAL Wash Modules. 22mm PE, Silicone/PTFE/Y-Slitted Septa 1.3mm, Pk of 100 pcs |
| Cap-ND9-St-SP10 | PAL System Screw Cap 2CV, designed for the PAL Autosampler. ND9, Magnetic, Gold, Silicone/PTFE/I-Slitted Septa 1.0mm, Pk of 100 pcs |
| Cap-ND9-St-SP10 | PAL System Screw Cap 2CV, designed for the PAL Autosampler. ND9, Magnetic, Gold, Silicone/PTFE Septa 1.0mm, Pk of 100 pcs |
| Cap-ND18-StC-SP | PAL System Screw Re-Cap 10CV and 20CV, designed for the PAL Autosampler. ND18 Magnetic, PTFE Metal Coating for optimized screw and sealing performance, Silicone/PTFE Septa 2.0mm, Pk of 100 pcs |
| Cap-ND18-St-SP1 | PAL System Screw Cap 10CV and 20CV, designed for the PAL Autosampler. ND18 Magnetic, Silver, Silicone white/PTFE blue Septa 1.5mm, Pk of 100 pcs |
| **1,2 µl / 5,0µl Liquid Syringes for GC Injection** | |
| PAL3-SYH-207887 | 1,2uL Syringe for Tool D7/57: Needle length 57mm, Gauge 23P, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY1,2uL Syringe for Tool D7/57: Needle length 57mm, Gauge 23P, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY1,2uL Syringe for Tool D7/57: Needle length 57mm, Gauge 23P, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY1,2uL Syringe for Tool D7/57: Needle length 57mm, Gauge 23P, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY1,2uL Syringe for Tool D7/57: Needle length 57mm, Gauge 23P, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYH-207800 | 5µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY, Hamilton5µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY, Hamilton5µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY, Hamilton5µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY, Hamilton5µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>CAUTION: FOR LABORATORY USE ONLY, Hamilton |
| **10 µl Liquid Syringes for GC Injection** | |

| PAL3-SYH-207803 | **10uL Syringe for Tool D7/57**: Needle length 57mm, Gauge 23S, Point Style AS, Scale 54mm<br>Hamilton, CAUTION: FOR LABORATORY USE ONLY10uL Syringe for Tool D7/57: Needle length 57mm, Gauge 23S, Point Style AS, Scale 54mm<br>Hamilton, CAUTION: FOR LABORATORY USE ONLY10uL Syringe for Tool D7/57: Needle length 57mm, Gauge 23S, Point Style AS, Scale 54mm<br>Hamilton, CAUTION: FOR LABORATORY USE ONLY10uL Syringe for Tool D7/57: Needle length 57mm, Gauge 23S, Point Style AS, Scale 54mm<br>Hamilton, CAUTION: FOR LABORATORY USE ONLY10uL Syringe for Tool D7/57: Needle length 57mm, Gauge 23S, Point Style AS, Scale 54mm<br>Hamilton, CAUTION: FOR LABORATORY USE ONLY |
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| PAL3-SYH-207807 | **10uL Syringe for Tool D7/57**: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>Hamilton, CAUTION: FOR LABORATORY USE ONLY10uL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>Hamilton, CAUTION: FOR LABORATORY USE ONLY10uL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>Hamilton, CAUTION: FOR LABORATORY USE ONLY10uL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>Hamilton, CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYS-002865 | **10µL Syringe for Tool D7/57**: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>SGE, CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>SGE, CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>SGE, CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 54mm<br>SGE, CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYH-207189 | **10µL Syringe for Tool D7/85**: Needle length 85mm, Gauge 26S, Point Style AS, Scale 54mm<br>SGE, CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/85: Needle length 85mm, Gauge 26S, Point Style AS, Scale 54mm<br>SGE, CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/85: Needle length 85mm, Gauge 26S, Point Style AS, Scale 54mm<br>SGE, CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/85: Needle length 85mm, Gauge 26S, Point Style AS, Scale 54mm<br>SGE, CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYH-207837 | **10µL Syringe for Tool D7/57**: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm<br>Hamilton, Gastight. CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm<br>Hamilton, Gastight. CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm<br>Hamilton, Gastight. CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm<br>Hamilton, Gastight. CAUTION: FOR LABORATORY USE ONLY |

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| PAL3-SYH-207839 | **10µL Syringe for Tool D7/57**: Needle length 57mm, Gauge 23S, Point Style AS, Scale 60mm<br>Hamilton, Gastight. CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/57: Needle length 57mm, Gauge 23S, Point Style AS, Scale 60mm Hamilton, Gastight. CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/57: Needle length 57mm, Gauge 23S, Point Style AS, Scale 60mm Hamilton, Gastight. CAUTION: FOR LABORATORY USE ONLY10µL Syringe for Tool D7/57: Needle length 57mm, Gauge 23S, Point Style AS, Scale 60mm Hamilton, Gastight. CAUTION: FOR LABORATORY USE ONLY |
| <td colspan="2" align="center">**25 µl Liquid Syringes for GC Injection**</td> |
| PAL3-SYH-207817 | 25µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm<br>Gastight. CAUTION: FOR LABORATORY USE ONLY25µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm Gastight. CAUTION: FOR LABORATORY USE ONLY25µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm Gastight. CAUTION: FOR LABORATORY USE ONLY25µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm Gastight. CAUTION: FOR LABORATORY USE ONLY |
| <td colspan="2" align="center">**100 µl Liquid Syringes for GC Injection**</td> |
| PAL3-SYH-207840 | 100µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm<br>Gastight. CAUTION: FOR LABORATORY USE ONLY100µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm Gastight. CAUTION: FOR LABORATORY USE ONLY100µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm Gastight. CAUTION: FOR LABORATORY USE ONLY100µL Syringe for Tool D7/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm Gastight. CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYH-207827 | 100µL Syringe for Tool D7/85: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm<br>Gastight. CAUTION: FOR LABORATORY USE ONLY100µL Syringe for Tool D7/85: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm Gastight. CAUTION: FOR LABORATORY USE ONLY100µL Syringe for Tool D7/85: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm Gastight. CAUTION: FOR LABORATORY USE ONLY100µL Syringe for Tool D7/85: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm Gastight. CAUTION: FOR LABORATORY USE ONLY |
| <td colspan="2" align="center">**250 µl Liquid Syringes for GC Injection**</td> |
| PAL3-SYH-207829 | 250µL Syringe for Tool D8/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY250µL Syringe for Tool D8/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm CAUTION: FOR LABORATORY USE ONLY250µL Syringe for Tool D8/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm CAUTION: FOR LABORATORY USE ONLY250µL Syringe for Tool D8/57: Needle length 57mm, Gauge 26S, Point Style AS, Scale 60mm CAUTION: FOR LABORATORY USE ONLY |

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| PAL3-SYH-207831 | 250µL Syringe for Tool D8/85: Needle length 85mm, Gauge 26S, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY250µL Syringe for Tool D8/85: Needle length 85mm, Gauge 26S, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY250µL Syringe for Tool D8/85: Needle length 85mm, Gauge 26S, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY250µL Syringe for Tool D8/85: Needle length 85mm, Gauge 26S, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY |
| **500 µl Liquid Syringes for GC Injection** | |
| PAL3-SYH-207833 | 500µL Syringe for Tool D8/57: Needle length 57mm, Gauge 26, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY500µL Syringe for Tool D8/57: Needle length 57mm, Gauge 26, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY500µL Syringe for Tool D8/57: Needle length 57mm, Gauge 26, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY500µL Syringe for Tool D8/57: Needle length 57mm, Gauge 26, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY |
| **Headspace Syringes for GC Injection** | |
| PAL3-SYH-207853 | Headspace Syringe 1000µL: Needle length 65mm, Gauge 23, Point Style 5 Hamlton, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 1000µL: Needle length 65mm, Gauge 23, Point Style 5 Hamlton, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 1000µL: Needle length 65mm, Gauge 23, Point Style 5 Hamlton, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 1000µL: Needle length 65mm, Gauge 23, Point Style 5 Hamlton, CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYH-207290 | Headspace Syringe 2500uL: Needle length 65mm, Gauge 23, Point Style 5 Hamilton, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 2500uL: Needle length 65mm, Gauge 23, Point Style 5 Hamilton, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 2500uL: Needle length 65mm, Gauge 23, Point Style 5 Hamilton, CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYH-207854 | Headspace Syringe 5000µL: Needle length 65mm, Gauge 23, Point Style 5 Hamilton, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 5000µL: Needle length 65mm, Gauge 23, Point Style 5 Hamilton, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 5000µL: Needle length 65mm, Gauge 23, Point Style 5 Hamilton, CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYS-008155 | Headspace Syringe 1000uL for HS Tool D8/85th 65mm, Gauge 23, Point Style 5<br>SGE, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 1000uL for HS Tool D8/85th 65mm, Gauge 23, Point Style 5<br>SGE, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 1000uL for HS Tool D8/85th 65mm, Gauge 23, Point Style 5<br>SGE, CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYS-008655 | Headspace Syringe 2500µL for Tool D8/85: Needle length 65mm, Gauge 23, Point Style 5<br>SGE, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 2500µL for Tool D8/85: Needle length 65mm, Gauge 23, Point Style 5<br>SGE, CAUTION: FOR LABORATORY USE ONLYHeadspace Syringe 2500µL for Tool D8/85: Needle length 65mm, Gauge 23, Point Style 5<br>SGE, CAUTION: FOR LABORATORY USE ONLY |
| **Dilutor Syringes from Norgren** | |

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| PAL3-SYDIL-21834 | Dilutor Syringe 100µL |
| PAL3-SYDIL-21835 | Dilutor Syringe 1000uL |
| PAL3-SYDIL-21836 | Dilutor Syringe 5.000µL |
| PAL3-SYDIL-21837 | Dilutor Syringe 10.000uL |
| **Syringes for ITEX Tool** | |
| PAL3-SYH-209295 | Hamilton 1,3mL |
| **LCMS Tool** | |
| PAL3-TH-LCMS-P | LCMS-P Tool consisting of:<br> 1 pc  LCMS-P Tool incl. Syringe, Needle and FEP Loop<br> 1 pc Pump Module and Connection Cable<br> 1 pc  PFA Transfer tube 1/16"<br> 2 pc  Solvent bottle 1000ml<br> 2 pc  Aspirating tube 1/8"<br>Attention: LCMS Wash Module not included.LCMS-P Tool consisting of:<br> 1 pc  LCMS-P Tool incl. Syringe, Needle and FEP Loop<br> 1 pc Pump Module and Connection Cable<br> 1 pc  PFA Transfer tube 1/16"<br> 2 pc  Solvent bottle 1000ml<br> 2 pc  Aspirating tube 1/8"<br>Attention: LCMS Wash Module not included.LCMS-P Tool consisting of:<br> 1 pc  LCMS-P Tool incl. Syringe, Needle and FEP Loop<br> 1 pc Pump Module and Connection Cable<br> 1 pc  PFA Transfer tube 1/16"<br> 2 pc  Solvent bottle 1000ml<br> 2 pc  Aspirating tube 1/8"<br>Attention: LCMS Wash Module not included. |
| PAL3-SYH-207128 | 100µl Syringe for LCMS |
| **X-Line Syringes for HPLC Injection** | |
| PAL3-SYH-208304 | CTC X-Line Syringe Gastight 25µL<br>For High-Throughput Application and Minimized Carry Over<br>OD 6.6mm, Scale 60mm<br>Fixed Needle Gauge 22s<br>Point Style 3<br>(LC Applications)<br>CAUTION: FOR LABORATORY USE ONLYCTC X-Line Syringe Gastight 25µL<br>For High-Throughput Application and Minimized Carry Over<br>OD 6.6mm, Scale 60mm<br>Fixed Needle Gauge 22s<br>Point Style 3<br>(LC Applications)<br>CAUTION: FOR LABORATORY USE ONLYCTC X-Line Syringe Gastight 25µL<br>For High-Throughput Application and Minimized Carry Over<br>OD 6.6mm, Scale 60mm<br>Fixed Needle Gauge 22s<br>Point Style 3<br>(LC Applications)<br>CAUTION: FOR LABORATORY USE ONLY |

| PAL3-SYH-208312 | CTC X-Line Syringe Gastight 100µL<br>For High-Throughput Application and Minimized Carry Over<br>OD 6.6mm, Scale 60mm<br>Fixed Needle Gauge 22s<br>Point Style 3<br>(LC Applications)<br>CAUTION: FOR LABORATORY USE ONLYCTC X-Line Syringe Gastight 100µL<br>For High-Throughput Application and Minimized Carry Over<br>OD 6.6mm, Scale 60mm<br>Fixed Needle Gauge 22s<br>Point Style 3<br>(LC Applications)<br>CAUTION: FOR LABORATORY USE ONLY |
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| PAL3-SYH-208311 | CTC X-Line Syringe Gastight 100µL<br>For High-Throughput Application and Minimized Carry Over<br>OD 6.6mm, Scale 60mm<br>Fixed Needle Gauge 22<br>Point Style 3<br>(LC Applications)<br>CAUTION: FOR LABORATORY USE ONLYCTC X-Line Syringe Gastight 100µL<br>For High-Throughput Application and Minimized Carry Over<br>OD 6.6mm, Scale 60mm<br>Fixed Needle Gauge 22<br>Point Style 3<br>(LC Applications)<br>CAUTION: FOR LABORATORY USE ONLY |
| **C-Line Syringes for HPLC Injection** | |
| PAL3-SYH-207813 | CTC C-Line Syringe gastight 10µL<br>OD 6.6 mm, Scale 60mm<br>Fixed needle Gauge 22s<br>Pointstyle 3<br>(LC applications)<br>CAUTION: FOR LABORATORY USE ONLYCTC C-Line Syringe gastight 10µL<br>OD 6.6 mm, Scale 60mm<br>Fixed needle Gauge 22s<br>Pointstyle 3<br>(LC applications)<br>CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYH-207828 | CTC C-Line Syringe gastight 250µL<br>OD 7.7mm, Scale 60mm<br>Fixed needle Gauge 22<br>Pointstyle 3<br>(LC applications)<br>CAUTION: FOR LABORATORY USE ONLYCTC C-Line Syringe gastight 250µL<br>OD 7.7mm, Scale 60mm<br>Fixed needle Gauge 22<br>Pointstyle 3<br>(LC applications)<br>CAUTION: FOR LABORATORY USE ONLY |

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| PAL3-SYH-207832 | CTC C-Line Syringe gastight 500µL<br>OD 7.7mm, Scale 60mm<br>Fixed needle Gauge 22<br>Pointstyle 3<br>(LC applications)<br>CAUTION: FOR LABORATORY USE ONLYCTC C-Line Syringe gastight 500µL<br>OD 7.7mm, Scale 60mm<br>Fixed needle Gauge 22<br>Pointstyle 3<br>(LC applications)<br>CAUTION: FOR LABORATORY USE ONLY |
| PAL3-SYH-207836 | CTC C-Line Syringe gastight 1000µL<br>OD 7.7mm, Scale 60mm<br>Fixed needle Gauge 22<br>Pointstyle 3<br>(LC applications)<br>CAUTION: FOR LABORATORY USE ONLYCTC C-Line Syringe gastight 1000µL<br>OD 7.7mm, Scale 60mm<br>Fixed needle Gauge 22<br>Pointstyle 3<br>(LC applications)<br>CAUTION: FOR LABORATORY USE ONLY |
| **GC 1000 µl Liquid Syringe for Sample Prep / Dilution** ||
| PAL3-SYH-207849 | 1000µL Syringe for Tool D8/57: Needle length 57mm, Gauge 23, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY1000µL Syringe for Tool D8/57: Needle length 57mm, Gauge 23, Point Style AS, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY |
| **GC/LC 10'000 µl Liquid Syringe for Sample Prep / Dilution** ||
| PAL3-SYH-207292 | 10.000µL Syringe for Tool D18/57: Needle length 57mm, Gauge 19, Point Style 3, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY10.000µL Syringe for Tool D18/57: Needle length 57mm, Gauge 19, Point Style 3, Scale 60mm<br>CAUTION: FOR LABORATORY USE ONLY |
| **SPME Arrow Tools and Modules** ||

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| PAL3-ARR-Start-GC2010 | Starter Kit SPME Arrow for Shimadzu GC 2010 consisting of:<br>1x Adaptation for the split/splitless injector of SHIMADZU GC 2010 (ARR-SSL-Inj-GC2010)<br> 1 pc Liner Nut<br> 1 pc Screw Cap<br> 2 pcs SPME Arrow Liner<br>1x PAL SPME Arrow Kit (PAL3-SPME-Arrow-Kit)<br> 1 pc SPME Arrow Tool<br> 1 pc SPME Arrow Holder<br> 1 pc SPME Arrow Assortment Kit (ARR-SEL5-S1)<br> 1 pc SPME Performance Evaluation Mix |
| PAL3-ARR-Start-GC6890 | Starter Kit SPME Arrow for Agilent GC 6890 consisting of:<br>1 Adaptation for the split/splitless injector of AGILENT GC 6890 (ARR-SSL-Inj-GC6890)<br>2 SPME Arrow Liner for SSL Injector of Agilent GC 6890<br>1x PAL SPME Arrow Kit (PAL3-SPME-Arrow-Kit)<br> 1 pc SPME Arrow Tool<br> 1 pc SPME Arrow Holder<br> 1 pc SPME Arrow Assortment Kit (ARR-SEL5-S1)<br> 1 pc SPME Performance Evaluation Mix |

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|---|---|
| PAL3-ARR-Start-GC7890 | Starter Kit SPME Arrow for Agilent GC 7890 consisting of:<br>1 Adaptation for the split/splitless injector of AGILENT GC 7890 (ARR-SSL-Inj-GC7890)<br>2 SPME Arrow Liner for SSL Injector of Agilent GC 7890<br>1x PAL SPME Arrow Kit (PAL3-SPME-Arrow-Kit)<br> 1 pc SPME Arrow Tool<br> 1 pc SPME Arrow Holder<br> 1 pc SPME Arrow Assortment Kit (ARR-SEL5-S1)<br> 1 pc SPME Performance Evaluation Mix |
| PAL3-ARR-Start-Tr1300 | Starter Kit SPME Arrow for Thermo GC Trace1300/1310<br>consisting of:<br>1 Adaptation for the split/splitless injector of Thermo GC Trace1300/1310 (ARR-SSL-Inj-Trace1300)<br>1 SPME Arrow Liner for SSL Injector of Thermo GC Trace1300/1310 Pk of 2 pcs<br>1x PAL SPME Arrow Kit (PAL3-SPME-Arrow-Kit)<br> 1 pc SPME Arrow Tool<br> 1 pc SPME Arrow Holder<br> 1 pc SPME Arrow Assortment Kit (ARR-SEL5-S1)<br> 1 pc SPME Performance Evaluation Mix |

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| PAL3-ARR-Start-TrUltra | Starter Kit SPME Arrow for Thermo GC TraceUltra<br>consisting of:<br>1 Adaptation for the split/splitless injector of Thermo GC TraceUltra (ARR-SSL-Inj-TraceUltra)<br>2 SPME Arrow Liner for SSL Injector of Thermo GC TraceUltra<br>1x PAL SPME Arrow Kit (PAL3-SPME-Arrow-Kit)<br> 1 pc SPME Arrow Tool<br> 1 pc SPME Arrow Holder<br> 1 pc SPME Arrow Assortment Kit (ARR-SEL5-S1)<br> 1 pc SPME Performance Evaluation Mix |
| ARR-Man-Inj-Kit | Manual Injection Kit for SPME Arrow, consisting of:<br>1x Manual SPME Holder<br>1x Manual SPME Extraction Guide<br>1x Manual SPME Injection Guide |
| PAL3-AgiHeatex-Kit | Agitator and Heatex Stirrer Kit<br>consisting of:<br>1 pc Agitator for the incubation and agitation of up to 6x 20mL vials<br>1 pc Heatex Stirrer for intensive heating and stirring of 1x 20mL vial without stir bar<br>Specific Heatex Stirrer insert for 10mL vial available (not included)<br>Specific Agitator insert for 10 mL vials available (not included)<br>requires firmware version 2.3 or higher and adapters for 10mL vials |
| PAL3-HeatexStirrer | Heatex Stirrer for intensive heating and stirring of 1x 20mL vial without stir bar<br>Specific Heatex Stirrer insert for 10mL vial available (not included)<br>requires firmware version 2.3 or higher<br>(use in combination with existing PAL3-Agitator) |
| PAL3-Heatex-Ins-10mL | Specific insert for the Heatex Stirrer to stir one 10mL vial |
| PAL3-SPME-ArrowCond | SPME Arrow Conditioning Module for the conditioning of SPME arrows and SPME fibers<br>**Includes a second position for conditioning a replacement SPME arrow or SPME fiber**<br>requires firmware version 2.3 or higher |
| PAL3-SPME-Arrow-Kit | SPME Arrow Kit<br>consisting of:<br>1 pc SPME Arrow Tool<br>1 pc SPME Arrow Holder<br>1 pc SPME Arrow Assortment Kit (ARR-SEL5-S1)<br>1 pc SPME Performance Evaluation Mix |
| ARR-SSL-Inj-GC2010 | Adaptation for the split/splitless injector of SHIMADZU GC-2010 Plus<br>Mandatory for the injection with a SPME Arrow<br>**(only for SHIMADZU GC-2010 Plus, not suitable for use with GC-2010)** |
| ARR-SSL-Inj-GC6890 | Adaptation for the split/splitless injector of AGILENT GC 6890<br>Mandatory for the injection with a SPME Arrow |
| ARR-SSL-Inj-GC7890 | Adaptation for the split/splitless injector of AGILENT GC 7890<br>Mandatory for the injection with a SPME Arrow |
| ARR-SSL-Inj-Trace1300 | Adaptation for the split/splitless injector of Thermo GC Trace1300/1310<br>Mandatory for the injection with a SPME Arrow |
| ARR-SSL-Inj-TraceUltra | Adaptation for the split/splitless injector of Thermo GC TraceUltra<br>Mandatory for the injection with a SPME Arrow |

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| ARR11-A-100/20-P1 | SPME Arrow 1.10mm: Acrylate (Polyacrylate) Phase thickness 100µm, Phase length 20mm, color code: grey, pack of 1 pc |
| ARR11-A-100/20-P3 | SPME Arrow 1.10mm: Acrylate (Polyacrylate) Phase thickness 100µm, Phase length 20mm, color code: grey, pack of 3 pcs |
| ARR11-A-100/20-P5 | SPME Arrow 1.10mm: Acrylate (Polyacrylate) Phase thickness 100µm, Phase length 20mm, color code: grey, pack of 5 pcs |
| ARR11-C-WR-120/20-P1 | SPME Arrow 1.10mm: Carbon WR/PDMS (Carbon Wide Range) Phase thickness 120µm, Phase length 20mm, color code: light blue, pack of 1 pc |
| ARR11-C-WR-120/20-P3 | SPME Arrow 1.10mm: Carbon WR/PDMS (Carbon Wide Range) Phase thickness 120µm, Phase length 20mm, color code: light blue, pack of 3 pcs |
| ARR11-C-WR-120/20-P5 | SPME Arrow 1.10mm: Carbon WR/PDMS (Carbon Wide Range) Phase thickness 120µm, Phase length 20mm, color code: light blue, pack of 5 pcs |
| ARR11-DVB-120/20-P1 | SPME Arrow 1.10mm: DVB/PDMS (Divinylbenzene) Phase thickness 120µm, Phase length 20mm, color code: violett, pack of 1 pc |
| ARR11-DVB-120/20-P3 | SPME Arrow 1.10mm: DVB/PDMS (Divinylbenzene) Phase thickness 120µm, Phase length 20mm, color code: violett, pack of 3 pcs |
| ARR11-DVB-120/20-P5 | SPME Arrow 1.10mm: DVB/PDMS (Divinylbenzene) Phase thickness 120µm, Phase length 20mm, color code: violett, pack of 5 pcs |
| ARR11-P-100/20-P1 | SPME Arrow 1.10mm: PDMS (Polydimethylsiloxane) Phase thickness 100µm, Phase length 20mm, color code: red, pack of 1 pc |
| ARR11-P-100/20-P3 | SPME Arrow 1.10mm: PDMS (Polydimethylsiloxane) Phase thickness 100µm, Phase length 20mm, color code: red, pack of 3 pcs |
| ARR11-P-100/20-P5 | SPME Arrow 1.10mm: PDMS (Polydimethylsiloxane) Phase thickness 100µm, Phase length 20mm, color code: red, pack of 5 pcs |
| ARR15-P-250/20-P1 | SPME Arrow 1.5mm: PDMS (Polydimethylsiloxane) Phase thickness 250µm, Phase length 20mm, color code: black, pack of 1 pc |
| ARR15-P-250/20-P3 | SPME Arrow 1.5mm: PDMS (Polydimethylsiloxane) Phase thickness 250µm, Phase length 20mm, color code: black, pack of 3 pc |
| ARR15-P-250/20-P5 | SPME Arrow 1.5mm: PDMS (Polydimethylsiloxane) Phase thickness 250µm, Phase length 20mm, color code: black, pack of 5 pc |

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| ARR1115-SEL5-S1 | Collection of five different SPME Arrows with phase length of 20mm:<br>1 pc SPME Arrow 1.10mm Acrylate (Polyacrylate), Phase thickness 100µm<br>1 pc SPME Arrow 1.10mm Carbon WR/PDMS (Carbon Wide Range), Phase thickness 120µm<br>1 pc SPME Arrow 1.10mm DVB/PDMS (Divinylbenzene) , Phase thickness 120µm<br>1 pc SPME Arrow 1.10mm PDMS (Polydimethylsiloxan) , Phase thickness 100µm<br>1 pc SPME Arrow 1.5mm PDMS (Polydimethylsiloxan) , Phase thickness 250µm |
| ARR-Liner-CondModule | Liner for SPME Arrow Conditioning Module, Pk of 3 pcs |
| ARRLIN13-GC2010-3 | SPME Arrow Liner ID 1.3mm, for SSL Injector of SHIMADZU GC 2010,<br>Pk of 3 pcs<br>Only for SMPE Arrow OD 1.1mm |
| ARRLIN13-GC6890-3 | SPME Arrow Liner ID 1.3mm, for SSL Injector of AGILENT GC 6890,<br>Pk of 3 pcs<br>Only for SPME Arrow with OD 1.1mm |
| ARRLIN13-GC7890-3 | SPME Arrow Liner ID 1.3mm, for SSL Injector of AGILENT GC 7890,<br>Pk of 3 pcs<br>Only for SMPE Arrow with OD 1.1mmSPME Arrow Liner ID 1.3mm, for SSL Injector of AGILENT GC 7890,<br>Pk of 3 pcs<br>Only for SMPE Arrow with OD 1.1mmSPME Arrow Liner ID 1.3mm, for SSL Injector of AGILENT GC 7890,<br>Pk of 3 pcs<br>Only for SMPE Arrow with OD 1.1mmSPME Arrow Liner ID 1.3mm, for SSL Injector of AGILENT GC 7890,<br>Pk of 3 pcs<br>Only for SMPE Arrow with OD 1.1mm |
| ARRLIN13-Trace1300-3 | SPME Arrow Liner ID 1.3mm, for SSL Injector of Thermo GC Trace1300,<br>Pk of 3 pcs<br>Only for SPME Arrow with OD 1.1mmSPME Arrow Liner ID 1.3mm, for SSL Injector of Thermo GC Trace1300,<br>Pk of 3 pcs<br>Only for SPME Arrow with OD 1.1mmSPME Arrow Liner ID 1.3mm, for SSL Injector of Thermo GC Trace1300,<br>Pk of 3 pcs<br>Only for SPME Arrow with OD 1.1mmSPME Arrow Liner ID 1.3mm, for SSL Injector of Thermo GC Trace1300,<br>Pk of 3 pcs<br>Only for SPME Arrow with OD 1.1mmSPME Arrow Liner ID 1.3mm, for SSL Injector of Thermo GC Trace1300,<br>Pk of 3 pcs<br>Only for SPME Arrow with OD 1.1mm |

| ARRLIN17-GC2010-3 | SPME Arrow Liner ID 1.7mm, for SSL Injector of SHIMADZU GC 2010, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of SHIMADZU GC 2010, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of SHIMADZU GC 2010, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of SHIMADZU GC 2010, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of SHIMADZU GC 2010, Pk of 3 pcs For any SPME Arrow |
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| ARRLIN17-GC6890-3 | SPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 6890, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 6890, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 6890, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 6890, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 6890, Pk of 3 pcs For any SPME Arrow |
| ARRLIN17-GC7890-3 | SPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 7890, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 7890, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 7890, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 7890, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of AGILENT GC 7890, Pk of 3 pcs For any SPME Arrow |

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| ARRLIN17-Trace1300-3 | SPME Arrow Liner ID 1.7mm, for SSL Injector of Thermo GC Trace1300, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of Thermo GC Trace1300, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of Thermo GC Trace1300, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of Thermo GC Trace1300, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 1.7mm, for SSL Injector of Thermo GC Trace1300, Pk of 3 pcs For any SPME Arrow |
| ARRLIN20-TraceUltra-3 | SPME Arrow Liner ID 2.0mm, for SSL Injector of Thermo GC TraceUltra, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 2.0mm, for SSL Injector of Thermo GC TraceUltra, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 2.0mm, for SSL Injector of Thermo GC TraceUltra, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 2.0mm, for SSL Injector of Thermo GC TraceUltra, Pk of 3 pcs For any SPME ArrowSPME Arrow Liner ID 2.0mm, for SSL Injector of Thermo GC TraceUltra, Pk of 3 pcs For any SPME Arrow |
| **SPME Fibers** | |
| FIB-A-85/10-P1 | Acrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 1pcAcrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 1pcAcrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 1pcAcrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 1pcAcrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 1pc |
| FIB-A-85/10-P3 | Acrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 3pcsAcrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 3pcsAcrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 3pcsAcrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 3pcsAcrylate SPME fiber (Polyacrylate) Fiber thickness 85µm, Fiber length 10mm, color code: gray, pack of 3pcs |

| FIB-A-85/10-P5 | Acrylate SPME fiber (Polyacrylate)<br>Fiber thickness 85µm, Fiber length 10mm,<br>color code: gray, pack of 5pcsAcrylate SPME fiber (Polyacrylate)<br>Fiber thickness 85µm, Fiber length 10mm,<br>color code: gray, pack of 5pcsAcrylate SPME fiber (Polyacrylate)<br>Fiber thickness 85µm, Fiber length 10mm,<br>color code: gray, pack of 5pcsAcrylate SPME fiber (Polyacrylate)<br>Fiber thickness 85µm, Fiber length 10mm,<br>color code: gray, pack of 5pcsAcrylate SPME fiber (Polyacrylate)<br>Fiber thickness 85µm, Fiber length 10mm,<br>color code: gray, pack of 5pcs |
|---|---|
| FIB-C-WR-95/10-P1 | Carbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 1pcCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 1pcCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 1pcCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 1pcCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 1pc |
| FIB-C-WR-95/10-P3 | Carbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 3pcsCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 3pcsCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 3pcsCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 3pcsCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 3pcs |

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|---|---|
| FIB-C-WR-95/10-P5 | Carbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 5pcsCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 5pcsCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 5pcsCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 5pcsCarbon WR SPME fiber (Carbon Wide Range)<br>Fiber thickness 95µm, Fiber length 10mm,<br>color code: dark blue, pack of 5pcs |
| FIB-P-100/10-P1 | PDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 1pc |
| FIB-P-100/10-P3 | PDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 3pcs |
| FIB-P-100/10-P5 | PDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 5pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 5pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 5pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 100µm, Fiber length 10mm,<br>color code: red, pack of 5pcs |
| FIB-P-30/10-P1 | PDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 1pc |

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|---|---|
| FIB-P-30/10-P3 | PDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 3pcs |
| FIB-P-30/10-P5 | PDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 5pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 5pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 5pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 30µm, Fiber length 10mm,<br>color code: golden, pack of 5pcs |
| FIB-P-7/10-P1 | PDMS SPME fiber (Polydimethylsiloxane )<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane )<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane )<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 1pcPDMS SPME fiber (Polydimethylsiloxane )<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 1pc |
| FIB-P-7/10-P3 | PDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 3pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 3pcs |
| FIB-P-7/10-P5 | PDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 5pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 5pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 5pcsPDMS SPME fiber (Polydimethylsiloxane)<br>Fiber thickness 7µm, Fiber length 10mm,<br>color code: green, pack of 5pcs |

| FIB-SEL5-S1 | Collection of five different SPME fibers with fiber length of 10mm and fiber thickness of:<br>PDMS: 7µm, 30µm & 100µm<br>Acrylate: 85µm<br>Carbon WR: 95µmCollection of five different SPME fibers with fiber length of 10mm and fiber thickness of:<br>PDMS: 7µm, 30µm & 100µm<br>Acrylate: 85µm<br>Carbon WR: 95µmCollection of five different SPME fibers with fiber length of 10mm and fiber thickness of:<br>PDMS: 7µm, 30µm & 100µm<br>Acrylate: 85µm<br>Carbon WR: 95µmCollection of five different SPME fibers with fiber length of 10mm and fiber thickness of:<br>PDMS: 7µm, 30µm & 100µm<br>Acrylate: 85µm<br>Carbon WR: 95µm |
|---|---|
| **Spare Parts** | |
| PAL3-AgiORing | Driving belt for PAL3 Agitator 6 x 20ml<br>(Set of 3 pcs)Driving belt for PAL3 Agitator 6 x 20ml<br>(Set of 3 pcs)Driving belt for PAL3 Agitator 6 x 20ml<br>(Set of 3 pcs)Driving belt for PAL3 Agitator 6 x 20ml<br>(Set of 3 pcs) |
| PAL3-Agi-TeachAdap | Agitator Teaching Tool, 2pcs |
| PAL3-AgiTopCover | Agitator Top Cover |
| PAL3-AgiTopSPME | Agitator Top Cover SPME |
| PAL3-BusCable-250mm | Spare for all autosampler configurations, consisting of:<br>1pc Standard PALbus cable (14 pin), length 250mmSpare for all autosampler configurations, consisting of:<br>1pc Standard PALbus cable (14 pin), length 250mmSpare for all autosampler configurations, consisting of:<br>1pc Standard PALbus cable (14 pin), length 250mmSpare for all autosampler configurations, consisting of:<br>1pc Standard PALbus cable (14 pin), length 250mm |
| PAL3-BusCable-1500mm | Standard PALbus cable (14 pin), length 1500mm |
| PAL3-BusCable-850mm | Spare for all autosampler configurations, consisting of:<br>1pc Standard PALbus cable (14 pin), length 850mmSpare for all autosampler configurations, consisting of:<br>1pc Standard PALbus cable (14 pin), length 850mmSpare for all autosampler configurations, consisting of:<br>1pc Standard PALbus cable (14 pin), length 850mmSpare for all autosampler configurations, consisting of:<br>1pc Standard PALbus cable (14 pin), length 850mm |
| PAL3-DC-Cable-2m | PAL DC-cable for PAL System<br>1pc Power cable (3 pin, shielded) for connection between PAL Power Supply and PAL System. Cable length 2m.PAL DC-cable for PAL System<br>1pc Power cable (3 pin, shielded) for connection between PAL Power Supply and PAL System. Cable length 2m.PAL DC-cable for PAL System<br>1pc Power cable (3 pin, shielded) for connection between PAL Power Supply and PAL System. Cable length 2m. |
| PAL3-DilValve3P | 3 / 2 Position PTFE Valve for Dilutor Module 1/4 28 Version |

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| PAL3-DilValve6P | 6 / 2 Position ceramic Valve for Dilutor Module 1/4 28 Version |
| PAL3-HS1000-Oring-kit | Spare for Headspace Tool,consisting of:<br>4pc  O-ring 7x1.5 MVQ for syringe fixation<br>2pc  O-ring 3x1.0 MVQ for gas connection<br>1pc syringe removing tool<br>1pc syringe O-ring removing toolSpare for Headspace Tool,consisting of:<br>4pc  O-ring 7x1.5 MVQ for syringe fixation<br>2pc  O-ring 3x1.0 MVQ for gas connection<br>1pc syringe removing tool<br>1pc syringe O-ring removing toolSpare for Headspace Tool,consisting of:<br>4pc  O-ring 7x1.5 MVQ for syringe fixation<br>2pc  O-ring 3x1.0 MVQ for gas connection<br>1pc syringe removing tool<br>1pc syringe O-ring removing tool |
| PAL3-HS2500-Oring-kit | Spare for Headspace Tool, consisting of:<br>4pc  O-ring 9.25x1.78 MVQ for syringe fixation<br>2pc  O-ring 3x1.0 MVQ for gas connection<br>1pc syringe removing tool<br>1pc syringe O-ring removing toolSpare for Headspace Tool, consisting of:<br>4pc  O-ring 9.25x1.78 MVQ for syringe fixation<br>2pc  O-ring 3x1.0 MVQ for gas connection<br>1pc syringe removing tool<br>1pc syringe O-ring removing toolSpare for Headspace Tool, consisting of:<br>4pc  O-ring 9.25x1.78 MVQ for syringe fixation<br>2pc  O-ring 3x1.0 MVQ for gas connection<br>1pc syringe removing tool<br>1pc syringe O-ring removing tool |
| PAL3-HS5000-Oring-kit | Spare for Headspace Tool, consisting of:<br>4pc  O-ring 13x1.5 MVQ for syringe fixation<br>2pc  O-ring 3x1.0 MVQ for gas connection<br>1pc syringe removing tool<br>1pc syringe O-ring removing toolSpare for Headspace Tool, consisting of:<br>4pc  O-ring 13x1.5 MVQ for syringe fixation<br>2pc  O-ring 3x1.0 MVQ for gas connection<br>1pc syringe removing tool<br>1pc syringe O-ring removing toolSpare for Headspace Tool, consisting of:<br>4pc  O-ring 13x1.5 MVQ for syringe fixation<br>2pc  O-ring 3x1.0 MVQ for gas connection<br>1pc syringe removing tool<br>1pc syringe O-ring removing tool |
| PAL3-ITEX-Fan | PAL3 ITEX - replacement fan |
| PAL3-ITEX-Trap-Heater | PAL3 ITEX Replacement Trap Heater |
| PAL3-KIT LCVlv | Kit Waste-Tubing for VICI and Rheodyne Valves |
| PAL3-LCMSLoop | Kit PAL3 LCMS Holding Loop with Fittings |
| PAL3-LCMSPLG | Replacement plunger for LCMS syringe PAL3-SYH-207128<br>Package of 10 pcsReplacement plunger for LCMS syringe PAL3-SYH-207128<br>Package of 10 pcsReplacement plunger for LCMS syringe PAL3-SYH-207128<br>Package of 10 pcs |

| PAL3-LCMS-PumpMod | PAL3 LCMS Pump Module consisting of:<br>2x Pumps<br>1x Electronic board<br>1x Aluminum housing with PALbus connectors<br>(without cable, bracket and tubing)<br>PAL3 LCMS Pump Module consisting of:<br>2x Pumps<br>1x Electronic board<br>1x Aluminum housing with PALbus connectors<br>(without cable, bracket and tubing)PAL3 LCMS Pump Module consisting of:<br>2x Pumps<br>1x Electronic board<br>1x Aluminum housing with PALbus connectors<br>(without cable, bracket and tubing)<br>PAL3 LCMS Pump Module consisting of:<br>2x Pumps<br>1x Electronic board<br>1x Aluminum housing with PALbus connectors<br>(without cable, bracket and tubing)PAL3 LCMS Pump Module consisting of:<br>2x Pumps<br>1x Electronic board<br>1x Aluminum housing with PALbus connectors<br>(without cable, bracket and tubing)<br>PAL3 LCMS Pump Module consisting of:<br>2x Pumps<br>1x Electronic board<br>1x Aluminum housing with PALbus connectors |
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| PAL3-LowNdlGdeRepl | Needle Guide Replacement Kit (round rod type needle guide) without needle transport magnet for PAL3 Tools D7, D8<br>Without nut for SPME-Fibcond valveNeedle Guide Replacement Kit (round rod type needle guide) without needle transport magnet for PAL3 Tools D7, D8<br>Without nut for SPME-Fibcond valveNeedle Guide Replacement Kit (round rod type needle guide) without needle transport magnet for PAL3 Tools D7, D8<br>Without nut for SPME-Fibcond valve |
| PAL3-LowNdlGdeReplMG | Needle Guide Replacement Kit (round rod type needle guide) with magnet for PAL3 Tools D7, D8<br>Without nut for SPME-Fibcond valveNeedle Guide Replacement Kit (round rod type needle guide) with magnet for PAL3 Tools D7, D8<br>Without nut for SPME-Fibcond valveNeedle Guide Replacement Kit (round rod type needle guide) with magnet for PAL3 Tools D7, D8<br>Without nut for SPME-Fibcond valve |
| PAL3-LubKit | PAL Lubrication Kit including brush |
| PAL3-MM-015-01 | Tube connector from Pressure regulator to tubing 1/8" |
| PAL3-MM-09-01 | Connector PAL3 x-rail to pressure regulator |
| PAL3-MountClaw29 | Mounting claw standard 29 mm for PAL3 legs |
| PAL3-MountClaw63 | Mounting claw extended 63 mm for PAL3 legs |
| PAL3-NdlSeal | Peek Needle seal gauge 22 for Valco and Rheodyne valves<br>(use together with needle guide MV 30-12)<br>Pack of 5 pcsPeek Needle seal gauge 22 for Valco and Rheodyne valves<br>(use together with needle guide MV 30-12)<br>Pack of 5 pcs |

| PAL3-PALcontrol | Replacement Control PCB for PAL3 CTC edition, consisting of:<br>1pc Control Board<br>1pc PAL SDcard<br>1pc Security keyReplacement Control PCB for PAL3 CTC edition, consisting of:<br>1pc Control Board<br>1pc PAL SDcard<br>1pc Security key |
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| PAL3-PM-GC-KIT | Preventive Maintenance Kit for PALSystem GC configuration,<br>consisting of:<br> 1pc Vial Teaching Kit<br> 2pc Driving Belt Agitator<br> 1pc Test Label Barcode<br> 1pc Lubricant<br> 1pc Brush<br> 1pc Spare Screw for fixation of PALhead cover<br> 1pc Spare Screw for fixation of PALhead with O-Ring<br> 1pc Kit Wash Vials<br> Soft Tissue for outer surface cleaning<br> Rough Tissue for degreasing X-,Y-,Z-Axes or Guide RollersPreventive<br>Maintenance Kit for PALSystem GC configuration,<br>consisting of:<br> 1pc Vial Teaching Kit<br> 2pc Driving Belt Agitator<br> 1pc Test Label Barcode<br> 1pc Lubricant<br> 1pc Brush<br> 1pc Spare Screw for fixation of PALhead cover<br> 1pc Spare Screw for fixation of PALhead with O-Ring<br> 1pc Kit Wash Vials<br> Soft Tissue for outer surface cleaning<br> Rough Tissue for degreasing X- Y- Z-Axes or Guide Rollers |

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| PAL3-PM-LC-KIT | Preventive Maintenance Kit for PALSystem LC configuration, consisting of:<br> 1pc  Vial Teaching Kit<br> 1pc  Test Label Barcode<br> 1pc  Lubricant<br> 1pc  Brush<br> 5pc  PALseal<br> 1pc  Spare Screw for fixation of PALhead cover<br> 1pc  Spare Screw for fixation of PALhead with O-Ring<br> 1pc  Kit Waste-Tubing for VICI and Rheodyne Valves<br> Soft Tissue for outer surface cleaning<br> Rough Tissue for degreasing X-,Y-,Z-Axes or Guide RollersPreventive Maintenance Kit for PALSystem LC configuration,<br>consisting of:<br> 1pc  Vial Teaching Kit<br> 1pc  Test Label Barcode<br> 1pc  Lubricant<br> 1pc  Brush<br> 5pc  PALseal<br> 1pc  Spare Screw for fixation of PALhead cover<br> 1pc  Spare Screw for fixation of PALhead with O-Ring<br> 1pc  Kit Waste-Tubing for VICI and Rheodyne Valves<br> Soft Tissue for outer surface cleaning<br> Rough Tissue for degreasing X-,Y-,Z-Axes or Guide Rollers |
| PAL3-POWERSUPPLY | Main Power supply for PALSystem.  Input Voltage 90-254 VAC. Power 200W |
| PAL3-PressureRegulator | Pressure Regulator |
| PAL3-TubeDilutor | Transfer tubing kit for Dilutor |
| PAL3-TubeFastWash | Tubing Kit for Fast Wash Module |
| PAL3-WashVial-100ml | 100mL solvent vial for Large Wash Module or Solvent Module completed with snap cap (PE) and septum (Silicon/PTFE, one piece)100mL solvent vial for Large Wash Module or Solvent Module completed with snap cap (PE) and septum (Silicon/PTFE, one piece) |
| PAL3-RTC-Verp-S | PAL RTC Shipping box with inserts (850mm) |
| PAL3-RTC-Verp-X | PAL RTC Shipping box with inserts (1205mm) |
| PAL3-RTC-Verp-Z | Replacement box for PAL RTC Z-Head |
| PAL3-RSI-Verp-S | PAL RSI/PAL LSI Shipping box with inserts (850mm/534mm) |
| PAL3-RSI-Verp-X | PAL RSI/PAL LSI Shipping box with inserts (1205mm) |
| PAL3-RSI-Verp-Z | Replacement box for PAL RSI/PAL LSI Z-Head |
| **ITSP (Net price)** | |

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| PAL3-Kit-ITSP | uSPE basic hardware kit for PAL RTC,<br>consisting of:<br> 1pc Needle Guide for ITSP (HW3-NG)<br> 1pc Trayholder<br> 1pc Waste Receptacle (HW-WR)<br> 1pc Prep Tray, 96 Position polypropylene<br> 1pc Single Cartridge Holder, 1 (HW-SCH)<br> 4 pc sample cartridges for initial installation<br> 1pc Torx T8 Screwdriver<br> 1pc Jump Drive for Applications Notes, Programming & Manuals (HW-JD)<br>(requires PAL RTC System)<br>requires Firmware 2.1.0 |
| PAL3-Kit-QuEChERS-GC | PAL3 Kit for uSPE QuEChERS, PAL RTC<br>1pc VT-54 Rack<br>1pc Vial Lock (HW-54P)<br>1pc 45-UMPCX-T GC QuEChERS Cartridges (96/Tray)<br>1pc. 2.0ml Crimp-Top Vial (clear), 100 pcs<br>1pc. Crimp (blue) with Starburst Septa, 100 pcs<br><br>(requires PAL3-Kit-ITSP) |
| PAL3-uSPE-30-UC18HX-T | ITSP LC QuEChERS Cartridges, 30mg<br>1 pc 30-UMPCG-T GC QuEChERS Cartridges (96/Tray) |
| PAL3-uSPE-45-UMPCX-T | ITSP GC QuEChERS Cartridges, 45mg<br>1 pc 45-UMPCX-T GC QuEChERS Cartridges (96/Tray) |
| **Chronos Software (Net price)** | |
| Chronos4-A | Chronos4 Software<br>Online Activation license - Computer bound registration<br>- upgrading PAL Sample Control to a full version of Chronos4 Software<br>- additional function to PAL Sample Control: integration of 3rd party devices, possibility of extended error handling, execute program, Smart Auto Sampling, and more<br>- for the control of PAL RTC, PAL RSI und PAL LSI Autosampler |
| Chronos4-D | Chronos4 Software<br>USB Dongle License - Single place license, independent from Computer<br>- upgrading PAL Sample Control to a full version of Chronos4 Software<br>- additional function to PAL Sample Control: integration of 3rd party devices, possibility of extended error handling, execute program, Smart Auto Sampling, and more<br>- for the control of PAL RTC, PAL RSI und PAL LSI Autosampler |
| Chronos4-upgrd-A | Upgrade of PAL Sample Control to Chronos4 Software<br>Online Activation license - Computer bound registration<br>- upgrading PAL Sample Control to a full version of Chronos4 Software<br>- additional function to PAL Sample Control: integration of 3rd party devices, possibility of extended error handling, execute program, Smart Auto Sampling, and more<br>- for the control of PAL RTC, PAL RSI und PAL LSI Autosampler<br>Download: http://software.axel-semrau.de/chronos/ |
| Chronos4-upgrd-D | Upgrade of PAL Sample Control to Chronos4 Software<br>USB Dongle license - Single place license, independent from Computer<br>- upgrading PAL Sample Control to a full version of Chronos4 Software<br>- additional function to PAL Sample Control: integration of 3rd party devices, possibility of extended error handling, execute program, Smart Auto Sampling, and more<br>- for the control of PAL RTC, PAL RSI und PAL LSI Autosampler |