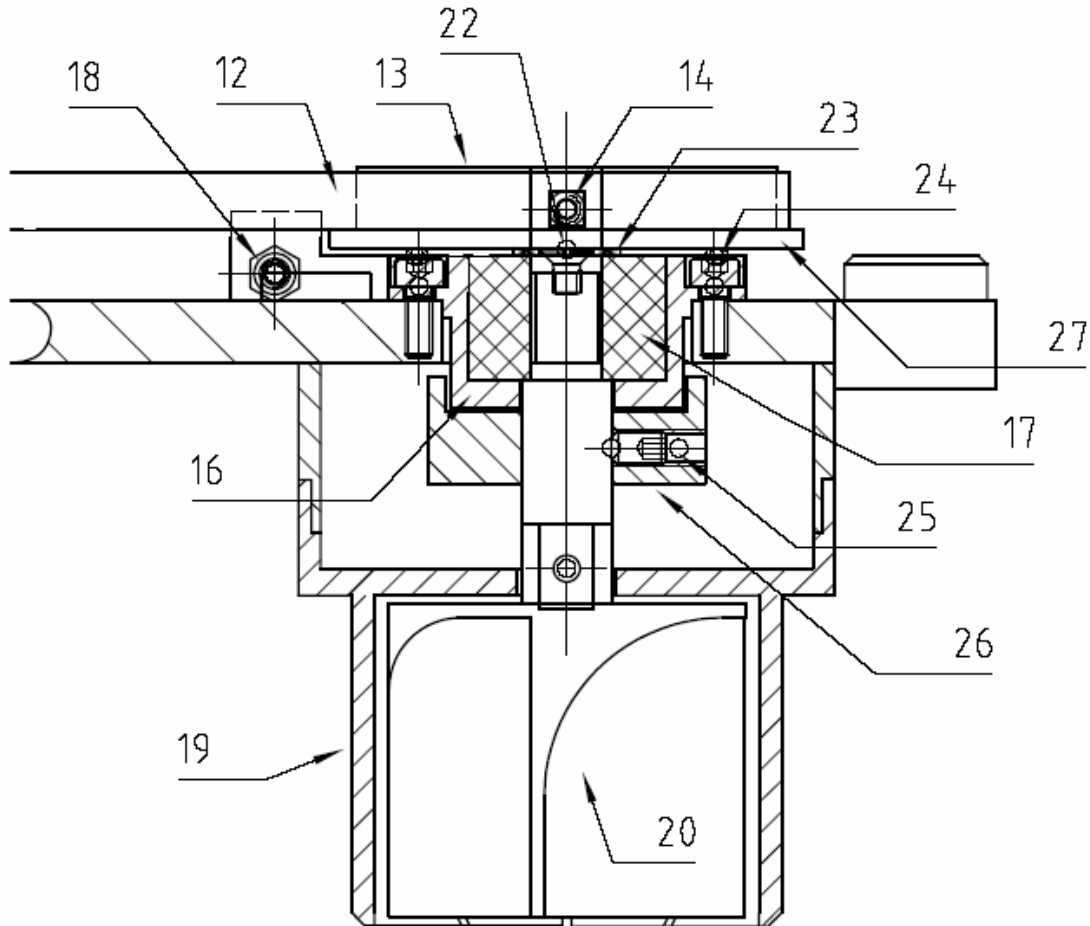
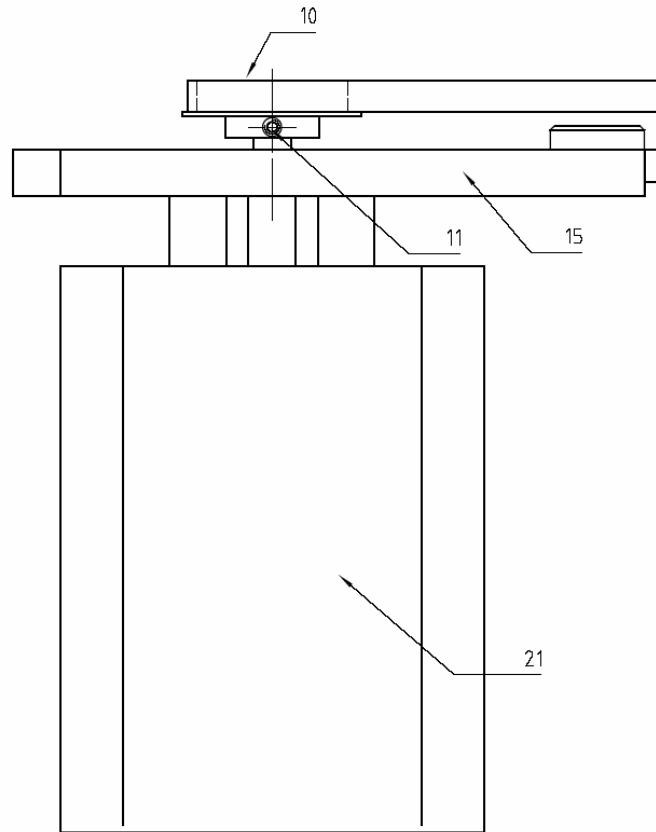


9. Spare parts

9.1 Spare parts – Pump



| Position | Bezeichnung | Bestellnummer |
|----------|--------------------------------|---------------|
| 12 | Belt | 1017-0004 |
| 13 | Synchronous belt pulley | 1017-0006 |
| 14 | Screw (M4x16) Din 913 | 1019-0014 |
| 16 | Bearing seat | 1029-0004 |
| 17 | Hight temperature ball bearing | 1016-0014 |
| 18 | N2 connection | 1032-0001 |
| 19 | Propeller acceptance | 1029-0003 |
| 20 | Propeller with axle | 1029-0002 |
| 22 | Screw (M3x5) Din 963 | 1019-0006 |
| 23 | Safty plate Din 6799 Mass RS7 | 1019-0032 |
| 24 | Screw (M3x8) Din 912 | 1019-0012 |
| 25 | Screw (M4x6) Din 913 | 1019-0013 |
| 26 | Washer | 1054-0009 |
| 27 | Teflon plate | 1054-0010 |



| Position | Bezeichnung | Bestellnummer |
|----------|-------------------------|---------------|
| 10 | Synchronoud belt pulley | 1017-0005 |
| 11 | Screw (M4x6) Din 913 | 1019-0013 |
| 15 | Flange for motor | 1029-0001 |
| 21 | Motor soldering shaft | 3001-0001 |

9.2 Nozzles

| Jet- Nozzles | |
|---|------------|
| Solder nozzle exteriorØ5mm interiorØ4mm height 72mm | 125-001-00 |
| Solder nozzle exteriorØ6mm interiorØ5mm height 72mm | 125-002-00 |
| Solder nozzle exteriorØ8mm interiorØ7mm height 72mm | 125-003-00 |
| Solder nozzle exteriorØ10mm interiorØ9mm height 72mm | 125-004-00 |
| Solder nozzle exteriorØ12mm interiorØ11mm height 72mm | 125-005-00 |
| Solder nozzle exteriorØ14mm interiorØ13mm height 72mm | 125-006-00 |
| Solder nozzle exteriorØ16mm interiorØ15mm height 72mm | 125-007-00 |
| Solder nozzle exteriorØ20mm interiorØ19mm height 72mm | 125-008-00 |
| Solder nozzle exteriorØ6mm interiorØ5mm height 77mm | 125-009-00 |
| Solder nozzle exteriorØ8mm interiorØ7mm height 77mm | 125-010-00 |
| Solder nozzle exteriorØ10mm interiorØ9mm height 77mm | 125-011-00 |
| Solder nozzle exteriorØ12mm interiorØ11mm height 77mm | 125-012-00 |
| Solder nozzle exteriorØ14mm interiorØ13mm height 77mm | 125-013-00 |
| Solder nozzle exteriorØ16mm interiorØ15mm height 77mm | 125-014-00 |
| Solder nozzle exteriorØ20mm interiorØ19mm height 77mm | 125-015-00 |
| Solder nozzle exteriorØ6mm interiorØ5mm height 82mm | 125-016-00 |
| Solder nozzle exteriorØ8mm interiorØ7mm height 82mm | 125-017-00 |
| Solder nozzle exteriorØ10mm interiorØ9mm height 82mm | 125-018-00 |
| Solder nozzle exteriorØ12mm interiorØ11mm height 82mm | 125-019-00 |
| Solder nozzle exteriorØ14mm InteriorØ13mm height 82mm | 125-020-00 |
| Solder nozzle exteriorØ16mm interiorØ15mm height 82mm | 125-021-00 |
| Solder nozzle exteriorØ20mm interiorØ19mm height 82mm | 125-022-00 |
| Solder nozzle manufactured to customer specifications | by request |
| Gassing shank height 28mm with 28mm bore | 1030-0001 |

Item designation: Mini-wave 80mm with N2 cover Order No.: 125-302-00



80mm

* Commendable for his item is a Standard pallet 250 for wave soldering Order No.131-011-00
or Standard pallet 460 for wave soldering Order No.131-004-00

9.3 Wet able nozzles

| | | |
|---|---|------------|
|  | Body for wettable nozzle for inserts from 5 - 16mm diameter | 125-024-00 |
|  | Wetable nozzle insert 6/3/29 for Standard length 72mm | 1031-0012 |
|  | Wetable nozzle insert 8/4/29 for Standard length 72mm | 1031-0006 |
|  | Wetable nozzle insert 10/5/29 for Standard length 72mm | 1031-0007 |
|  | Wetable nozzle insert 12/7/29 for Standard length 72mm | 1031-0014 |
|  | Wetable nozzle insert 14/9/29 for Standard length 72mm | 1031-0023 |
|  | Wetable nozzle insert 16/11/29 for Standard length 72mm | 1031-0008 |
|  | Body for wettable nozzle for inserts from 17 - 25mm diameter | 125-029-00 |
|  | Wetable nozzle insert 17/12/29 for Standard length 72mm | 1031-0016 |
|  | Wetable nozzle insert 25/20/29 for Standard length 72mm | 1031-0022 |
| | Cleaning set for wet able nozzles with brush for high temperature and 1 liter 2235. | 147-005-00 |

Wetable nozzles (inserts) are wearing parts. Take care on the surface and don't touch it. It acts like a solder iron tip.

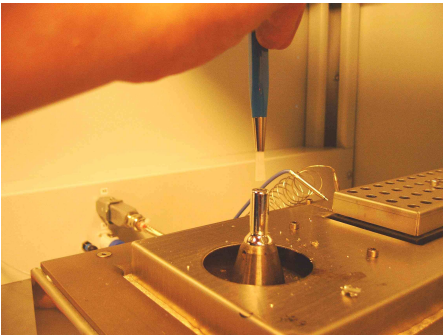
If you use wetable nozzles never switch off the nitrogen or the wave by it self. If you switch off the machine leave the nitrogen on until the temperature drop down under 170°.

If you get problems during the soldering process have a look at the nozzle, if the solder does not runs around the nozzle insert clean the insert under the running wave with the brush and use the special soldering flux R11-36/38 (2235).

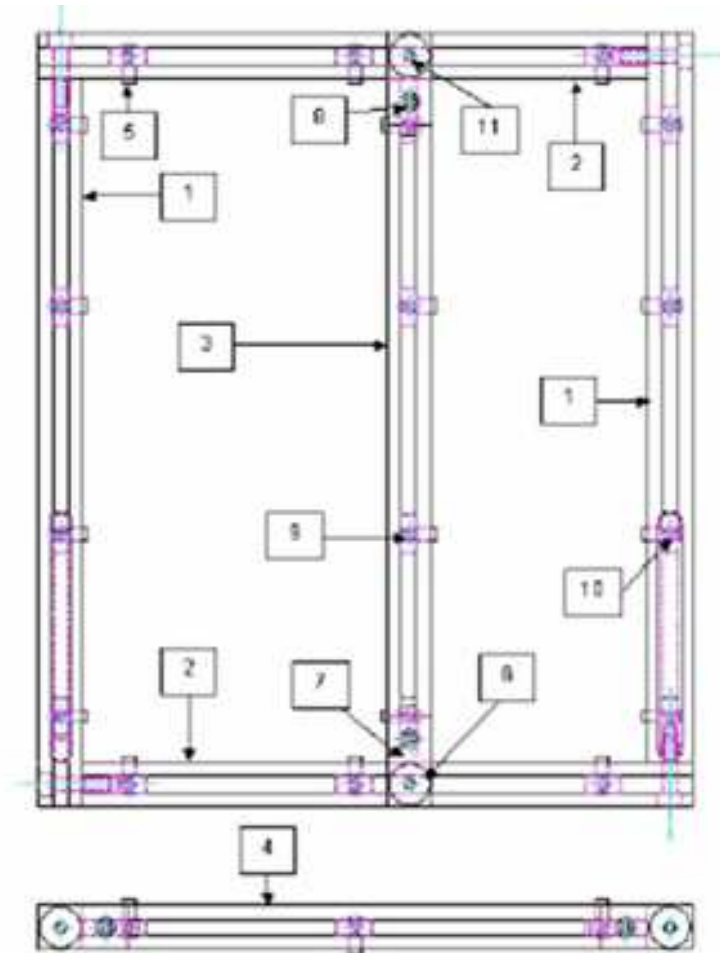
After some times you (time depend on your boards, flux and so far) have to change the nozzle (insert) and replaced with a new one.

Send back the used one to us for refurbish.

Item designation: Up to 5 pcs. wetable nozzles for exchange for this set price.
Order No.: 1031-0001



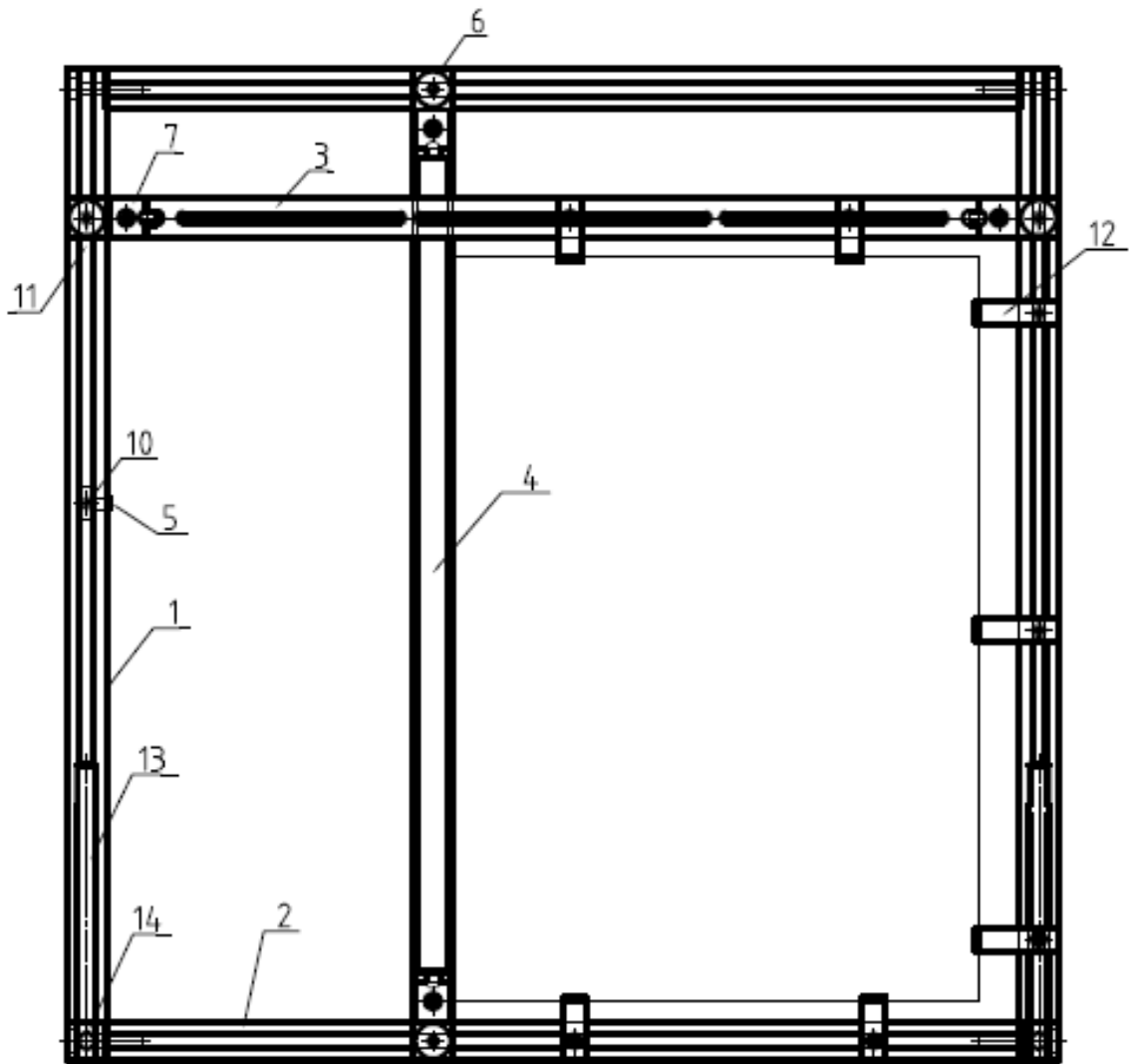
9.4 Spare parts solder frame



Important: Indicate the serial number (see nameplate) when ordering replacement parts.

| Item | Description | Order number |
|---------------------------------------|---|-------------------|
| Select 250 | | |
| Frame complete | | 131-001-00 |
| 1 | Profile track single | 1028 – 0004 |
| 2 | Profile track single | 1028 – 0005 |
| 3 | Profile track complete Center support complet with 4 pcs board holder | 131-008-00 |
| 3 | Profile track single | 1028 – 0006 |
| 4 | Profile track complete Center support complet with 8 pcs board holder | 131-016-00 |
| 4 | Profile track single | 1028 – 0007 |
| Select 460 | | |
| Frame complete | | 131-002-00 |
| 1 | Profile track single | 1028 – 0012 |
| 2 | Profile track single | 1028 – 0013 |
| 3 | Profile track complete Center support complet with 8 pcs board holder | 131-006-00 |
| 3 | Profile track single | 1028 – 0015 |
| 4 | Profile track complete Center support complet with 8 pcs board holder | 131-006-00 |
| 4 | Profile track single | 1028 – 0015 |
| Select 610 | | |
| Frame complete | | 131-017-00 |
| 1 | Profile track single | 1028 – 0028 |
| 2 | Profile track single | 1028 – 0029 |
| 3 | Profile track complete Center support complet with 10 pcs board holder | 131-013-00 |
| 3 | Profile track single | 1028 – 0030 |
| 4 | Profile track complete Center support complet with 10 pcs board holder | 131-014-00 |
| 4 | Profile track single | 1028 – 0031 |
| Select 250 / 460 / 610 | | |
| 5 | PCB holder | 1003 – 0007 |
| 6 | Knurled thumb screw | 1019 – 0007 |
| 7 | Connecting strap | 1003 – 0008 |
| 8 | Screw M4x6 | 1019 – 0008 |
| 9 | Screw M3x6 | 1019 – 0006 |
| 10 | Sliding block M3 | 1028 – 0008 |
| 11 | Sliding block M4 | 1028 – 0002 |
| | Handles (<i>no illustration</i>) | 1028 – 0009 |
| | Mounting set for handles (<i>no illustration</i>) | 1028 – 0010 |

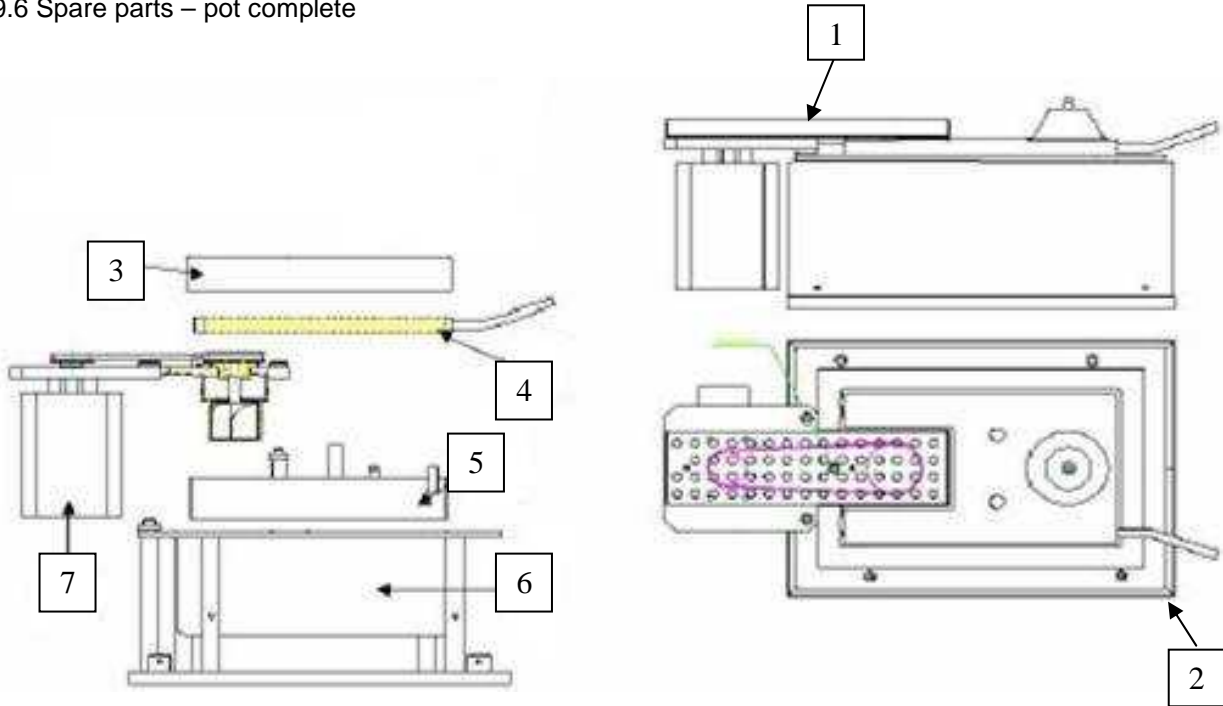
9.5 Spare parts special solder frame



| Item | Description | Order number |
|---------------------------------------|--|--------------------|
| Select 250 | | |
| Frame complete | | 131-010-00 |
| 1 | Profile track single | 1028 – 0004 |
| 2 | Profile track single | 1028 – 0005 |
| 3 | Profile track With screw without Board holder | 131-0022-00 |
| 3 | Profile track single | 1028 – 0034 |
| 4 | Profile track complete With screw | 131-021-00 |
| 4 | Profile track single | 1028 – 0033 |
| Select 460 | | |
| Frame complete | | 131-009-00 |
| 1 | Profile track single | 1028 – 0012 |
| 2 | Profile track single | 1028 – 0013 |
| 3 | Profile track With screw without Board holder | 131-020-00 |
| 3 | Profile track single | 1028 – 0032 |
| 4 | Profile track complete With screw | 131-019-00 |
| 4 | Profile track single | 1028 – 0018 |
| Select 610 | | |
| Frame complete | | 131-015-00 |
| 1 | Profile track single | 1028 – 0028 |
| 2 | Profile track single | 1028 – 0029 |
| 3 | Profile track With screw without Board holder | 131-024-00 |
| 3 | Profile track single | 1028 – 0036 |
| 4 | Profile track complete With screw | 131-023-00 |
| 4 | Profile track single | 1028 – 0035 |
| Select 250 / 460 / 610 | | |
| 5 | PCB holder | 1003 – 0007 |
| 6 | Knurled thumb screw | 1019 – 0007 |
| 7 | Connecting strap | 1003 – 0008 |
| 8 | Screw M4x6 | 1019 – 0008 |
| 9 | Screw M3x6 | 1019 – 0006 |
| 10 | Sliding block M3 | 1028 – 0008 |
| 11 | Sliding block M4 | 1028 – 0002 |
| 12 | Board holder 5mm distance* | 1028 – 0020 |
| 12 | Board holder 10mm distance* | 1028 – 0021 |
| 12 | Board holder 15mm distance* | 1028 – 0022 |
| 13 | Handles | 1028 – 0009 |
| 14 | Mounting set for handles | 1028 – 0010 |

*With sliding block and screw M4x10

9.6 Spare parts – pot complete



| Item | Description | Order number |
|------|---|--------------|
| 1 | Cover sheet - pump | 1003 - 0001 |
| 2 | Complete Titan pot | 122-002-00 |
| 3 | Gassing hood | 1003 - 0002 |
| 4 | Gassing tube complete | 118-001-00 |
| 5 | VA nozzle chamber complete | 134-001-00 |
| 5 | Titanium nozzle chamber complete | 134-002-00 |
| 6 | VA tin container | 1012-0001 |
| 6 | Titanium tin container | 1012-0002 |
| 7 | Solder pump complete | 117-001-00 |
| | Heating element selectiv pot (<i>no illustration</i>) | 126-001-00 |
| | Heating element wave pot(<i>no illustration</i>) | 126-005-00 |
| | Nozzle key (<i>no illustration</i>) | 134-000-00 |

Important: Indicate the serial number (see nameplate) when ordering replacement parts.

| | |
|------------------------|-----------|
| 9.7 Temperature sensor | 3007-0002 |
|------------------------|-----------|



| | |
|------------------------------------|-----------|
| 9.7.1 Thermocouple circuit breaker | 3007-0004 |
|------------------------------------|-----------|



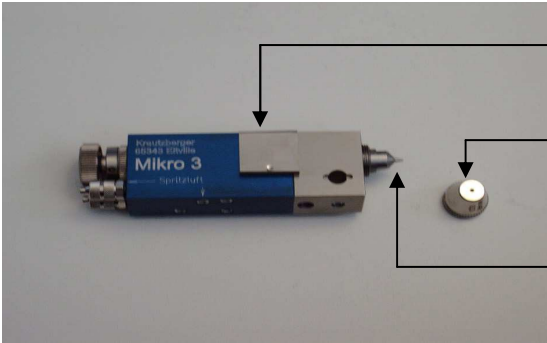
| | |
|---|------------|
| 9.7.2 Preheater complete with blower and air nozzle 70mm x 4mm. | 139-001-00 |
|---|------------|



Air nozzle
Order number: 3011-0002

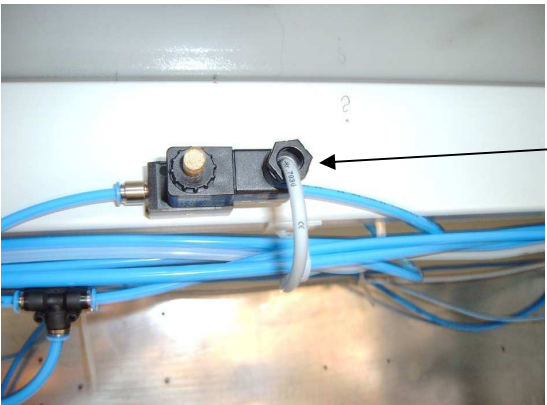
Air heater
Order number: 3011-0001

| | |
|--|-----------|
| 9.7.4 Spray head complete with material / air nozzle | 1024-0001 |
|--|-----------|



Air nozzle
Order number: 1024-0007

Material nozzle
Order number: 1024-0006



3/2 way solenoid valve
Order number: 1024-0002

| | |
|---------------------------------|-----------|
| 9.7.4 Fluxer Micro Drop/Airless | 1024-0009 |
|---------------------------------|-----------|



| | |
|---------------------------|-----------|
| 9.7.5 Valve for MircoDrop | 1024-0013 |
|---------------------------|-----------|



Important: Indicate the serial number (see nameplate) when ordering replacement parts.

9.8 Accessories

| Item designation | Item number |
|--|-------------|
| Machine options | |
| Automatic tin feed | 130-001-00 |
| Preheater convection Select 250 | 139-001-00 |
| Preheater convection Select 460 | 139-004-00 |
| Preheater convection quartz emitter Select 250 | 139-002-00 |
| Preheater convection quartz emitter Select 460 | 139-003-00 |
| Insertion workstation | by request |

Important: Indicate the serial number (see nameplate) when ordering replacement parts.

9.9 Spare parts list - control components

| BMK | description | item no. |
|------------|--|------------------|
| A2 | Frequency converter | 3009-0007 |
| A3 | Stepper motor driver | 3002-0001 |
| A4 | Stepper motor driver | 3002-0001 |
| A5 | Stepper motor driver | 3002-0001 |
| A10 | PC/PPI adapter | 3018-0002 |
| A11 | S7-200 CPU | 3009-0010 |
| A12 | Positioning module | 3009-0002 |
| A13 | Positioning module | 3009-0002 |
| A14 | Analog I/O | 3009-0003 |
| A21 | Transducer | 3007-0001 |
| A31 | Touch panel | 3009-0004 |
| A41 | Isolating circuit amplifier | 3015-0001 |
| B1 | Temperature sensor | 3007-0002 |
| B2 | Fill level sensor | 1024-0004 |
| B21 + B22 | Proximity switch combination with plug | 137-001-00 |
| B23 | Proximity switch | 137-003-00 |
| B31 + B32 | Proximity switch combination with plug | 137-004-00 |
| B41 + B42 | Proximity switch combination with plug | 137-005-00 |
| B61 | Safety sensor | 3004-0008 |
| C1 | Electrolyte condenser | 3019-0001 |
| D1 | Bridge rectifier | 3023-0001 |
| F1 | Fuse | 3005-0010 |
| F2 | Fuse | 3005-0006 |
| F3 | Fuse | 3005-0006 |
| F4 | Fuse | 3005-0010 |
| F5 | Fuse | 3005-0006 |
| F6 | Fuse | 3005-0001 |
| F11 | Fuse | 3005-0003 |
| F11 | Fuse | 3005-0007 |
| F12 | Fuse | 3005-0003 |
| F12 | Fuse | 3005-0007 |
| F21 | Fuse | 3005-0003 |
| F21 | Fuse | 3005-0008 |
| F22 | Fuse | 3005-0003 |
| F22 | Fuse | 3005-0008 |
| F23 | Fuse | 3005-0003 |
| F23 | Fuse | 3005-0008 |
| F24 | Fuse | 3995-0004 |
| H1 | Fluorescent tube | 3003-0007 |
| H2 | Lamp buttons | 3003-0008 |
| H3 | Indicator light red | 3003-002 |

| BMK | description | item no. |
|------------|------------------------------|------------------|
| H4 | Indicator light yellow | 3003-0004 |
| H5 | Indicator light green | 3003-0003 |
| H3-H5 | Indicator light | 3003-0005 |
| K1 | Safety relay | 3006-0003 |
| K11 | Relay | 3006-0005 |
| K12 | Relay | 3006-0005 |
| K13 | Relay | 3006-0005 |
| K14 | Relay | 3006-0005 |
| K15 | Relay | 3006-0005 |
| K16 | Relay | 3000-0016 |
| M1 | Stepper motor | 3001-0003 |
| M2 | Stepper motor | 3001-0002 |
| M3 | Stepper motor | 3001-0002 |
| M4 | Direct current motor | 3001-0004 |
| M5 | 3-phase motor | 3001-0001 |
| S1 | Master switch | 3004-0003 |
| S2 | Buttons | 3004-0002 |
| S3 | EMERGENCY-STOP palm button | 3006-0002 |
| S6 | Pressure switch | 3014-0001 |
| S7 | Pressure switch | 3014-0001 |
| S9 | Exhaust air sensor | 3007-0003 |
| T1 | Switchable power supply | 3016-0005 |
| T2 | Transformer | 3016-0001 |
| U1 | Solid-state relay | 3000-0001 |
| X4 | N disconnect terminal strips | 3020-0003 |
| X5 | Terminal strips | 3020-0004 |
| X9 | PE power outlet | 3026-0002 |
| X11 | Two-tier terminal strips | 3020-0006 |
| Y1 | Solenoid valve | 1024-0002 |
| Y2 | Solenoid valve | 3017-0001 |
| Y3 | Solenoid valve | 3017-0003 |

Important: Indicate the serial number (see nameplate) when ordering replacement parts.

We recommend to order the black marked parts.