



Desoldering System

For Vapor-Phase Soldering Machines

The ASSCON-desoldering system for the use in vapor-phase soldering machines. Multi-leaded SMD-components, ballgrid-arrays, connectors as well as mechanical components may be desoldered correctly and safely.

Procedure

- 1) Position the desoldering system on the assembly above the component to be desoldered.
- 2) Connect the receiving device with the component to be desoldered.
- 3) A spring pushes the rocker arm upwards.
- 4) At the other end of the rocker arm opposite the component is a small pan in which a positioning pin has been fixed. This pin absorbs the spring energy during the heating process. This pin consists of a low heat capacity material with precisely defined melting point, which lies below the melting temperature of the solder used.

- 5) The assembly with attached desoldering device (and the component to be desoldered) is heated in a vapor-phase soldering machine. During the first process step the solder melts on the assembly. For the duration of this part of process, the assembly dips around 2 cm into the vapor. As the desoldering system is positioned at a distance of 4 cm above the assembly, the positioning pin is not heated at this location. This ensures that the lifting process is not activated prematurely. Only after the reflowing of the solder, the assembly (with the desoldering system) will be conveyed to the actual soldering position. From this moment on the desoldering system will also be in the vapor-zone too. The positioning pin heats up quickly and melts. This releases the lifting process generated by the spring energy therefore smoothly lifting the component from the liquid solder joints.

- 6) After desoldering the deformed positioning pin is taken from its pan and replaced by a new positioning pin. The system is again ready for the next procedure.

Advantages

- Easy to operate
- Economical: purchase and operation
- May be used with every vapor-phase soldering machine
- No damage to components or PCB tracks
- Oxidation-free process during reflow
- Homogeneous and stress-free heating of the assembly
- No over-heating of the component to be desoldered or the assembly
- No wearing parts
- Reproducible process conditions
- After installing a new positioning pin the desoldering system is immediately operational
- Neither special nozzles nor tools needed for different component forms
- Lead-free products may be repaired without problems