

Application report

Project: Potting / filling and sealing of electrical components with 2-component-fluids

Customer / Branch: cable & connector assembly / electronic and sensor industry

Description

In the electronic industry it is getting more and more important to seal special components on e.g. PCB-boards or fill connector / cable connections with 2-component-materials e.g. silicone, polyurethane or epoxide. The reason for this is, to protect these connections and get special features, for example water tightness or durability against outside influences. This filling has to be automated mainly because of process / -time and –safety and costs.



Examples of filled sensor and PCB-board

ViscoTec Solution

ViscoTec offers for this issue a perfect solution: a machine-combination of a cartridge-emptying unit ViscoMT-C (for e.g. sealing silicone) or a barrel-emptying unit (ViscoMT-XS), and ViscoDuo-V-2K-dispenser with drives and a special control ViscoDos-2K. The two dispensers for each component are assembled in a V-head. The mixing itself is done with a static mixer. An automated process is more safe and convenient now. The product supply is done with the help of the cartridge-/ barrel emptying system. Through a constant movement of the cartridge-emptying-piston, every component is smoothly conveyed to the dispenser and through the V-head. Both components are brought together in the static mixer. The dispenser and the V-head could also be mounted on a robot-system for automated processes. The control of speed and quantity during the process is done with a ViscoDos-2K-unit, which could be installed in a cabinet, too.



Complete 2K-system



ViscoDos-2K



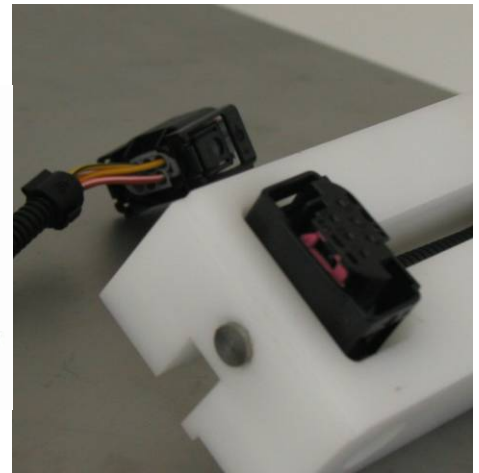
Barrel-Emptying-System
(ViscoMT-XS)

ViscoTec Advantages

Especially in the electronic industry a process-safe and repeatable process is very important. With the ViscoTec system the customer gets the possibility to handle his processes in the best way. Normally all relevant fluids for filling or sealing connectors or sensors could be dosed with ViscoTec units. The big advantage of ViscoTec-equipment is that the process itself is repeatable with the highest accuracy (+/- 1%). So every connector gets the same amount of fluid. Also the handling of highly filled fluids (with abrasive solids) does perfectly fit for ViscoTec equipment. The 2K-system from ViscoTec offers here a clever solution as the mixing itself is done only in the static mixer, and not in the V-head which has two separate channels for each component. So the process could be stopped without any special cleaning because of curing materials. Just the static mixer has to be changed. Even this system is very clean as also through a controlled suck-back in the dispenser no fluid drips or contaminates the connector or sensor. So the customer gets a clean, repeatable, high accurate and process-safe perfectly dosed solution!



Example connector filling



Customer potential

Electronic industry: cable harness and assembling, connector manufacturer / PCB-board- manufacturer, sensor- industry

