mTV Modular

The heart of all marco dispensing systems beats fast, precisely and persistently. With its unique piezo drive, the Torque-Block®, and its modular design, it is perfectly adapted to our highly specialised systems. It communicates via RS485 bus technology with auxiliary devices such as heaters, pressure controllers, sensors etc. The system’s easy handling, its adaptability to meet a large variety of dispensing requirements and the complete replaceability of all parts subject to regular wear, keep set-up costs, maintenance and overall cost of operation, to a minimum.

Polyurethane Hot Melt System With 30 ccm Tank

The Polyurethane hot melt system is designed for dispensing of reactive polyurethane-based hot melt adhesives. It is composed of a modular dispensing valve and a special tank for hot melt media with a capacity of 30 ccm.

The system is divided into three heating zones to ensure optimum medium processing. The medium melts progressively as it passes through the zones of increasing temperature. Once it has reached the dispensing area, the medium is at the perfect temperature. This careful processing is further improved by the optional use of a desiccant cartridge to reduce contact with humidity. The media tank is fitted with an ultrasound based level measurement system which can determine both level and melting state of the medium.

These features ensure high process reliability. Like all systems from mts range, the Polyurethane hot melt system is a modular system. This modular design has a crucial advantage: all parts which are in contact with the medium can be removed, cleaned or replaced individually. The modular dispensing valve can be operated with a continuous dispensing frequency of up to 500 Hz to allow for high path speed when dispensing hot melt media, achieving line widths or dot diameters of 0.5 mm.

The Polyurethane hot melt system system is suited for applications in the field of electronics manufacturing.
Constant Continuous Lines System

The **Constant continuous lines system** for dispensing of UV or light curing adhesives consists of a modular dispensing valve, a media pump without pressure peaks and a media tank. It features an exceptionally high dispensing volume accuracy, 1000 mg of medium can be dispensed at a high volume flow rate of up to 100 mg/s with a volume accuracy of at least 99.5%.

The flow rate is adjustable and dynamically variable thanks to the extremely precise piston position measurement system integrated in the pump. The pump is available with a pressure amplification ratio of 3:1 or 12:1. The pump provides pressure amplification of the adhesive without contact to air or gas, avoiding bubbles in the media, an important criterion for sensitive adhesives.

The **Constant continuous lines system** system offers great advantages in the field of display manufacturing. The application of adhesives between the layers of the display requires a very high volume accuracy.

### Bubble-Free Seal System

The **Bubble-free seal system** is composed of the same components as the **Constant continuous lines system**: a modular dispensing valve, a media pump without pressure peaks and a media tank. The tank is fitted with a floating piston. Adhesives such as the commonly used coatings for humidity protection (well known as “Tuffy” products) tend to absorb gas when pneumatic pressure is applied, so contact to air or gas must be avoided. Achieve this by mounting a piston in the tank and ensuring the medium is conveyed and pressure generated mechanically with a pump. A switching valve between the two 32 oz cartridges with G1/4” thread allows for uninterrupted production.

A special PTFE hose enables operation with an output pressure of up to 18 bar. A further feature of the valve is the possibility of heating it to 60°C to positively influence the flow properties. A special fluid body is used as a temperature separation between media supply and valve. For permanent monitoring of the tank fill level both cartridges are fitted with a level measurement.

The system can be extended with an optional 10” touch-screen terminal with user-friendly software for monitoring and visualisation.

### Conformal Coating System

The **Conformal coating system** is composed of a modular dispensing valve with a special coating valve insert and a spring accumulator combined with a heat exchanger. It is used in production lines and available for sale, for covering any surfaces with thin protective coating. The function of the spring accumulator and heat exchanger is to ensure the properties of the coating medium - primarily pressure and temperature - remain constant despite the high flow rate. The system allows a coat thickness of approximately 250 μm depending on the medium and the process parameters. Each layer of coating is delimited by a clean-cut edge.

A further significant advantage of the system is the avoidance of a spray mist. The medium is completely dispensed in the form of a liquid curtain. As an alternative to the special coating valve insert, we also provides the **Conformal coating system** with a block of valve drives connected in parallel at 10 mm intervals. The coating is dispensed as a tight grid of drops which also results in a continuous layer. Each valve can be controlled individually, ensuring maximum flexibility. The layer thickness does not depend on the path speed but on the flow of the medium on the component. High process reliability is ensured by the well-established jet method. As in all modular dispensing valve systems, a great variety of valve inserts is available. The **Conformal coating system** can be extended by an optional 10” touchscreen terminal with user-friendly software for monitoring and visualisation.

The **Conformal coating system** is used for numerous applications in the field of coating electronic components and PCBs.