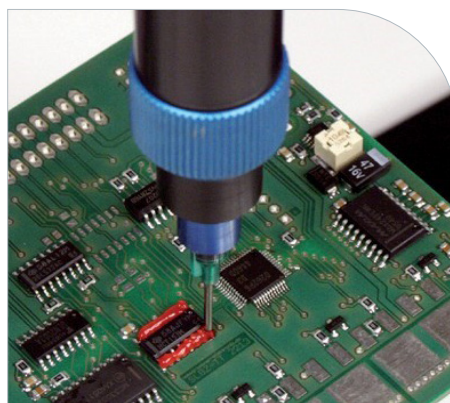


## Eco-PEN450 Dosing System

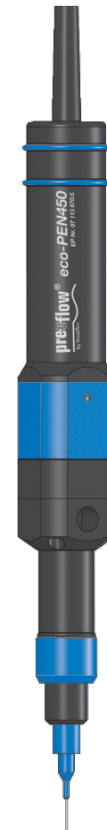
- Genuine volumetric dosing
- Viscosity-autonomous dosing
- Primary pressure-independent dosing
- Pressure-tight without valve
- Suck-back feature for clean shut-off
- Easy to clean
- Controllable dosing flow
- Range of dosing pressures 16 - 20 bar

The ViscoTec eco-PEN450 dispensing system is a rotating and perfectly pressure-tight displacement system ideally suited for dispensing precise volumes of low- to medium-viscosity materials. This dispensing pen has a self-sealing, rotor/stator design. Conveyance is by medium displacement in the stator through tightly controlled rotor rotation, assuring accurate dispensing without any changes to the dispense material. The progressive cavity mechanism exhibits minimal shear stress upon the medium compared to alternative positive displacement platforms such as gear pumps, auger pumps, and rod driven metering systems. In addition, the suck-back feature of the eco-PEN450 ensures clean and controlled material or medium cut-off, while preventing post-dripping. It offers maximum volumetric precision for both dot and bead applications. Application speeds are adaptable to track speeds and provide precise joint sealing.



# Specifications

| Specifications                              |   |
|---|---|
| <b>Part Number</b>                          | T18557 eco-PEN450 Dispensing Valve<br>T18558 EC-200K Controller |
| <b>Dimensions</b>                           | Length 210 mm, 29 x 29 mm, ø 33 mm                              |
| <b>Weight</b>                               | Approx. 410 gram  |
| <b>Material Infeed</b>                      | 1/8" cylindrical whitworth pipe thread DIN/ISO 228              |
| <b>Material Outfeed</b>                     | Luer lock with o-ring, patented                                 |
| <b>Min. Operating Pressure</b>              | 0 bar, self-leveling-fluid                                      |
| <b>Max. Operating Pressure</b>              | 0 to 6 bar input pressure, non-self-leveling fluid              |
| <b>Max. Dosing Pressure</b>                 | 16 to 20 bar  |
| <b>Intrinsic Tightness*</b>                 | Approx. 2 bar (reference medium approx. 10 mPas at 20°C)        |
| <b>Parts in Contact with the Media</b>      | HD-POM / stainless steel  |
| <b>Seals</b>                                | High-molecular PE, Vischem                                      |
| <b>Static Seals</b>                         | Viton o-ring (medium) NBR (dust)                                |
| <b>Motor</b>                                | 18 - 24 V DC, incremental encoder, planetary gears              |
| <b>Operating Conditions</b>                 | +10°C to +40°C, air pressure 1 bar                              |
| <b>Medium Temperature</b>                   | +10°C to +40°C  |
| <b>Storage Environment</b>                  | Dry & dust-free, -10°C to +40°C                                 |
| <b>Approx. Dosing Volume per Revolution</b> | 0.05 milliliters per revolution                                 |
| <b>Accuracy of Dosing**</b>                 | ± 1%  |
| <b>Repeat Accuracy</b>                      | > 99%   |
| <b>Min. Dosing Quantity</b>                 | 0.004 milliliters   |
| <b>Volume Flow***</b>                       | 0.5 to 6.0 milliliters per minute                               |
| <b>Accessories</b>                          | T18560 ViscoTec Valve Mounting Fixture                          |



\* Max. dosing pressure and intrinsic tightness will decrease in direct proportion to a decrease in viscosity and increase in direct proportion to an increase in viscosity. Please contact Dymax Application Engineering for more information.

\*\* Volumetric dosing as absolute deviation in relation to one dispenser revolution. This depends on the viscosity of the dosing medium.

\*\*\* Volume flow depends on viscosity and primary pressure.

Figure 1. eco-PEN 450 Dimensions

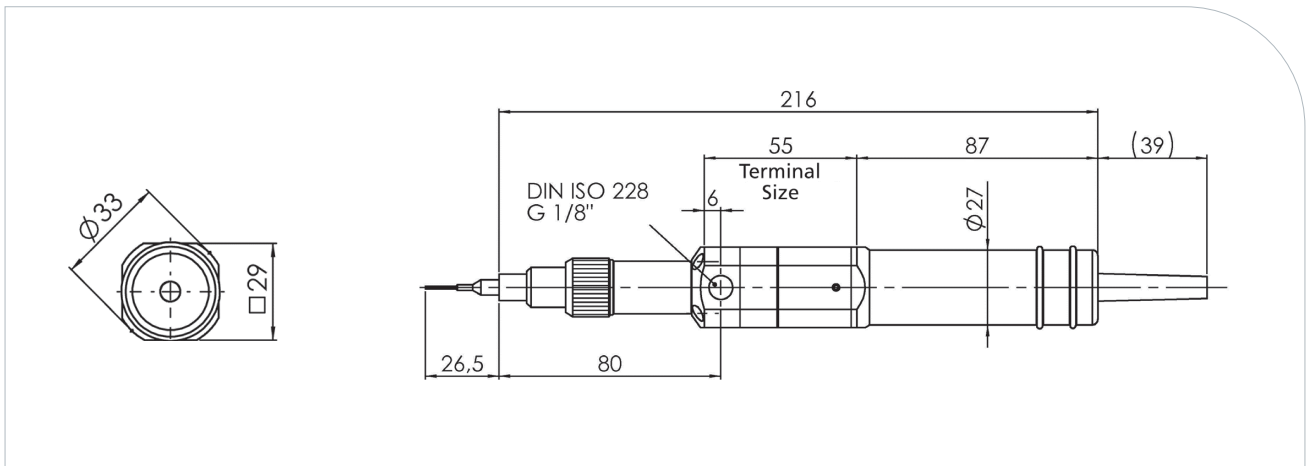
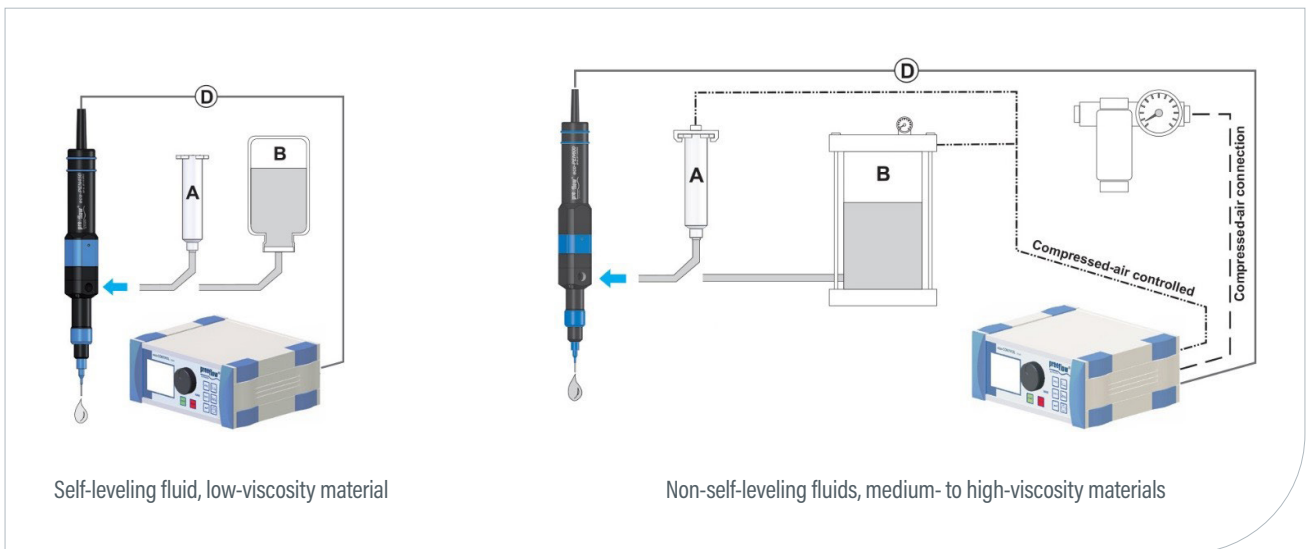


Figure 2. System Set Up with EC-200K Controller





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