

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

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Part Number	T18557 eco-PEN450 Dispensing Valve T40500 EC-200K Controller 2.0
Dimensions	Length 210 mm, 29 x 29 mm, ø 33 mm
Weight	Approx. 410 gram
Material Infeed	1/8" cylindrical whitworth pipe thread DIN/ISO 228
Material Outfeed	Luer lock with o-ring, patented
Min. Operating Pressure	0 bar, self-leveling-fluid
Max. Operating Pressure	0 to 6 bar input pressure, non-self-leveling fluid
Max. Dosing Pressure	16 to 20 bar
Intrinsic Tightness*	Approx. 2 bar (reference medium approx. 10 mPas at 20°C)
Parts in Contact with the Media	HD-POM / stainless steel
Seals	High-molecular PE, Vischem
Static Seals	fluoroelastomer o-ring (medium) NBR (dust)
Motor	18 - 24 V DC, incremental encoder, planetary gears
Operating Conditions	+10°C to +40°C, air pressure 1 bar
Medium Temperature	+10°C to +40°C
Storage Environment	Dry & dust-free, -10°C to +40°C
Approx. Dosing Volume per Revolution	0.05 milliliters per revolution
Accuracy of Dosing**	± 1%
Repeat Accuracy	> 99%
Min. Dosing Quantity	0.004 milliliters
Volume Flow***	0.5 to 6.0 milliliters per minute
Accessories	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

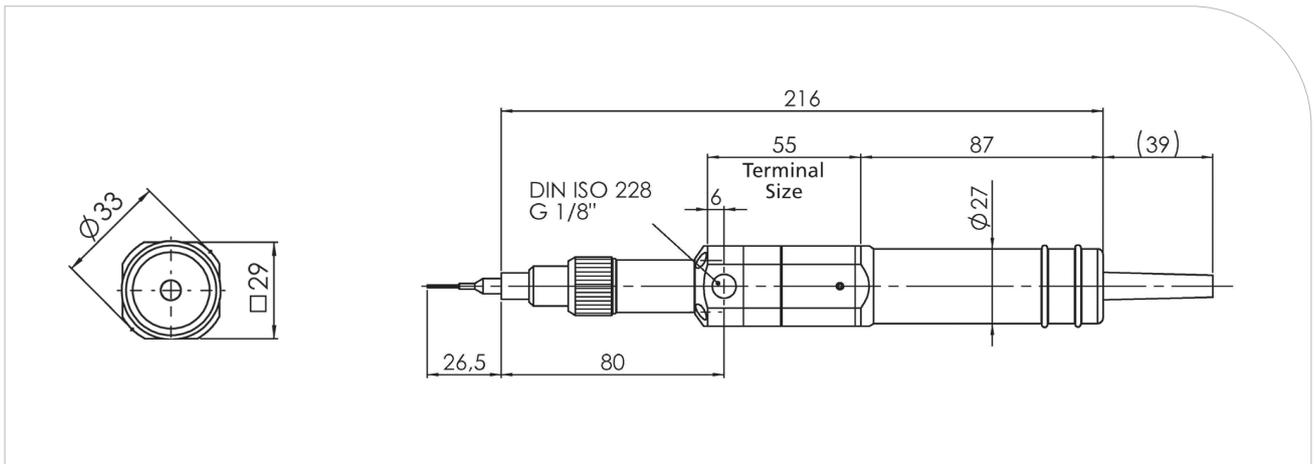
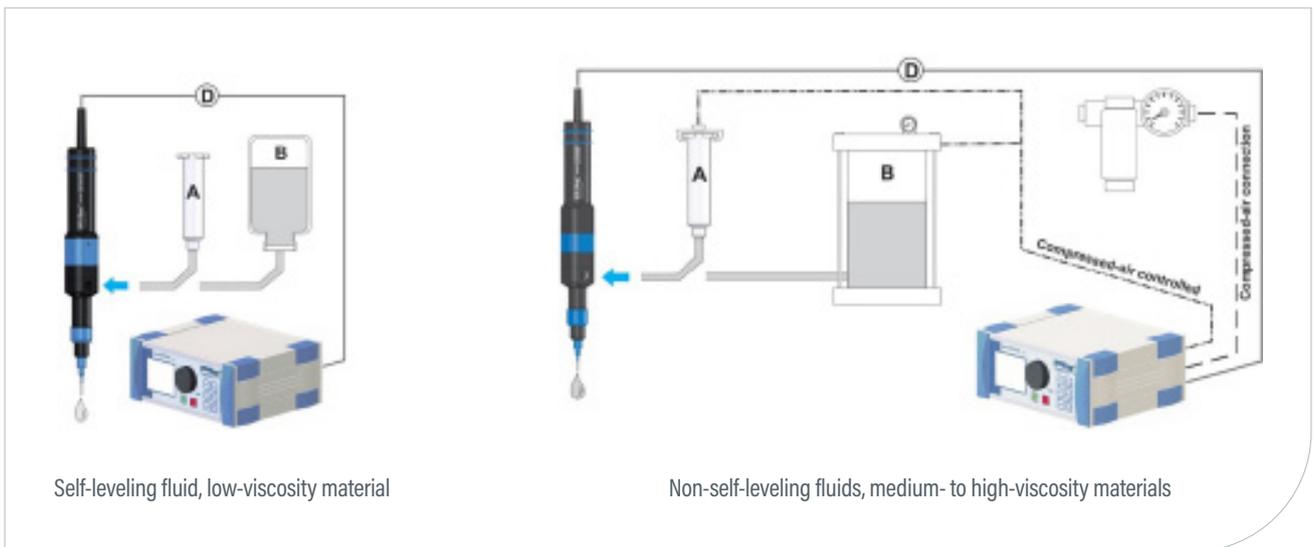


Figure 2. System Set Up with EC-200K Controller





www.dymax.com

Americas

USA | +1.860.482.1010 | info@dymax.com

Europe

Germany | +49 611.962.7900 | info_de@dymax.com
Ireland | +353 21.237.3016 | info_ie@dymax.com

Asia

Singapore | +65.67522887 | info_ap@dymax.com
China | +86.755.83485759 | dymaxasia@dymax.com
Hong Kong | +852.2460.7038 | dymaxasia@dymax.com
Korea | +82.31.608.3434 | info_kr@dymax.com