eco-
DUOMIX

preflow
by ViscoTec
eco-PEN450
eco
DUO
MIX
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HOW IT WORKS

Instead of a mixing helix, the eco-DUOMIX is equipped with a mixing capsule optimized for dead space, which can be used for dynamic mixing for the first time. Materials with the same and/or different viscosities were developed and evaluated.

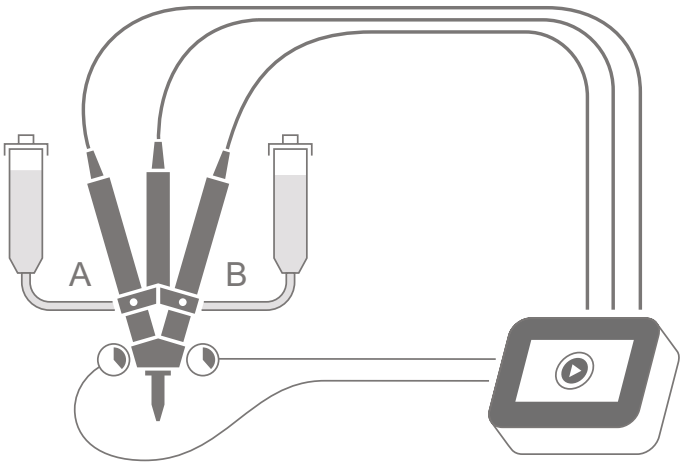
The dead space optimized mixing capsule used, instead of a mixing spiral, is available as a consumable and is installed directly at the outlet of the dispenser. Inside the capsule, the motor-driven mixer ensures optimum mixing, even of components that are difficult to process, despite the small volume.

An exact application of even the smallest sealing beads is achieved by means of a replaceable metal dispensing needle, which is mechanically connected to the mixing capsule.

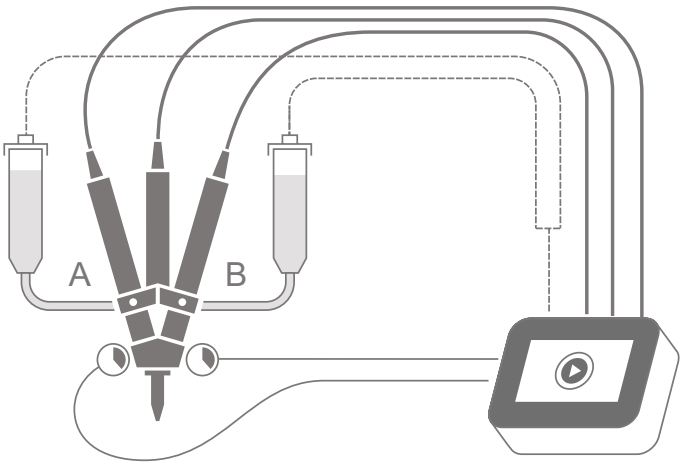
Description	eco-DUOMIX450
Art. No.	22108
Measurements	228 mm x 163 mm
Weight	1800 g
Operating pressure (5)	20 bar
Max. dispensing pressure (1)	20 bar
Viscosity	watery to pasty
Volume flow (3)	0.2 – 12 ml/min (at 1:1)
Min. dispensing quantity	0.008 ml
Dispensing accuracy (2)	± 1 %
Mix ratio	1:1 – 10:1
Stator material	VisChem (optional VisLas)
Material inlet	G 1/8“ DIN/ISO 228
Material outlet	LuerLock
Wetted parts	Anodized aluminium / Stainless steel / VisChem / FFKM / POM / PE-HD
Operating conditions	10 – 40 °C
Repeat accuracy	> 99 %
Speed mixer (3)	10 to 1000 rev/min

(1) Max. dispensing pressure and self-sealing decrease with decreasing viscosity, increase with increasing viscosity. Consult the manufacturer.
(2) Volumetric dispensing as absolute deviation related to one revolution of the dispenser. Depends on the viscosity of the material dispensed.
(3) Max. flow rate depends on viscosity, inlet pressure and mixing ratio.
(5) Non-self-levelling-fluid

SYSTEM PRESENTATION



Self-levelling liquid, low-viscosity material, incl. sensor technology



Non-self-levelling liquids, medium to high viscosity material, incl. sensor technology and pressure feed

DISPENSING TEST

Comparison of mixing results at static and dynamic mixing with the same volume flow and identical laboratory conditions:

The samples were run with the same control unit (calibration and program were identical) and the same base pump (drives, pump housing, rotor and stator, etc.). Only the way of mixing the material was changed. For the dosing tests, a difficult to process 2-component epoxy adhesive was used. The mixing ratio is 10:1 (A:B) by weight. The samples were prepared at different dosing speeds (0.5 ml/min - 6 ml/min). As can be seen in Figure 1, the test material with the static mixing is not processable by default – the material is only partially mixed and does not cure completely.

For the tests of the dynamic mixture, speeds of ~80 rpm, up to ~800 rpm were used. As can be seen in Figure 2, this material is already homogeneously mixed at the minimum speed, which optically does not differ from the samples with higher dosing speeds and mixer speeds.

Result: The 2-component epoxy adhesive, which could not be processed by static mixing, is reliably mixed by dynamic mixing even at the lowest mixer speed and can be processed optimally.

Comparison: Mixing result static mixing (left), mixing result dynamic mixing (right)

Mixing result eco-DUOMIX (dynamic mixing)

TECHNICAL FEATURES

- Dynamic mixing
- Genuine volumetric dispensing
- Dispensing regardless of viscosity
- Dosing independent of input pressure
- Pressure-tight without valve
- Suck-back effect
- Easy cleaning
- Dispensing pressures from 0 to 20 bar

MORE INFORMATION CAN BE FOUND AT

www.preeflow.com/en/products/2k-dispenser/