

preeflow® eco-PEN Precision Volumetric Dosing Pump, for Highly Accurate Repeatable Dispensing



Description

The **preeflow eco-PEN** is a precision volumetric, positive displacement, dosing/dispensing system that gives you accuracy and repeatability by means of a rotor which turns inside a stator. The preeflow eco-PEN uses a progressive cavity pump principle which doses and dispenses a wide range of material viscosities with no stress to the material, and absolute control.

We can integrate the preeflow eco-PEN into any [robotic dispensing system](#). The preeflow eco-PEN delivers optimum results when used with [Micron-S Precision Nozzles](#).

Features & Benefits

- Precise, process-stable dosing as small as 0.001ml (1µl)
- Accuracy of ±1%, >99% of the time
- Gentle product dosing process
- Linearly proportional control characteristics
- Wide control and application range
- Controlled reverse flow and clean product break
- Easy system integration

Applications

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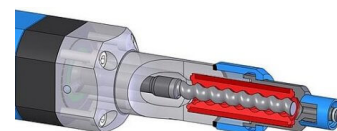
- Electronics packaging
- SMD/SMT
- Semiconductor
- LCD/LED
- Medical
- Biological chemistry
- Laboratory
- Photovoltaic
- Optics and photonics

preeflow eco-PEN selector guide

The new eco-PEN precision-volume dosing unit covers many applications from the lowest to the highest material viscosities, where the highest volumetric accuracy is required.

Usage

Dot-dosing, bead application with dispensing rate adjustable to the run speed, encapsulation



Model	Smallest dose	Adjustable flow rate	Weight
eco-PEN300	0.001 ml (1 μ l)	0.12 – 1.48 ml/min	380g

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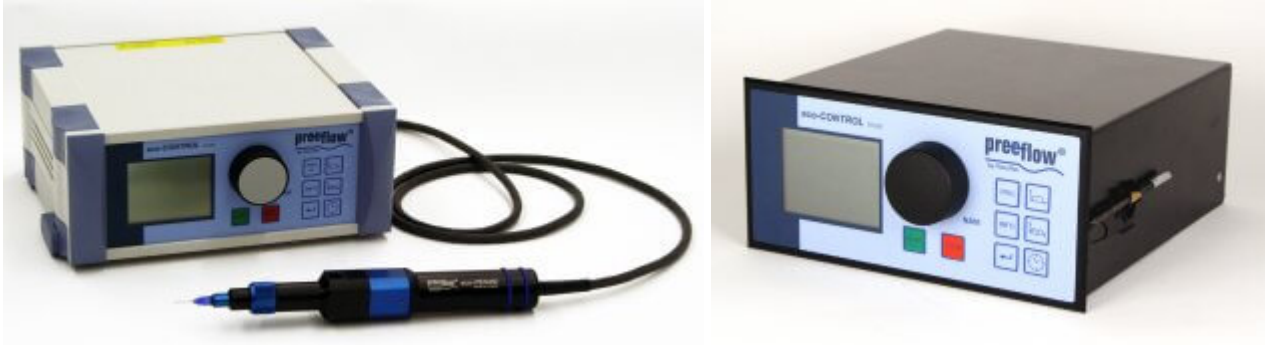


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eco-PEN330	0.002 ml (2µl)	0.2 – 3.30 ml/min	410g
eco-PEN450	0.004 ml (4µl)	0.5 – 6.00 ml/min	410g
eco-PEN600	0.015 ml (15µl)	1.4 – 16.00 ml/min	750g
eco-PEN700	0.060 ml (60µl)	5.3 – 60.00 ml/min	750g
eco-DUO330 For two part formulations	0.005 ml (5µl)	0.1 to 6.6 ml/min	1100g
eco-DUO450 For two part formulations	0.010 ml (10µl)	0.2 – 12.00 ml/min	1100g
eco-DUO600 For two part formulations	0.030 ml (30µl)	0.6 – 32.00 ml/min	1600g

Controllers

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The **eco-CONTROL EC200 control system** provides total control of the dispensing process. It is designed for either benchtop or rack mounted location, dependent on the model.

Operating principle

The unit is microprocessor-controlled. It is simple to operate, without submenu, and has graphic support. External signals can be connected via I/O ports to a PLC for control in automated lines. A wide variety of dosing programs with part management can be stored.

The supply pressure (with pressure sensor kit) is monitored and can be displayed digitally in bar or psi.

Error messages for filling level and motor current are also monitored (an RS232 interface is provided).

It is possible to control two eco-PEN precision-volume dosing units (as a factory-fit option).

Features

- Quantity program
- Start/stop program
- Time program

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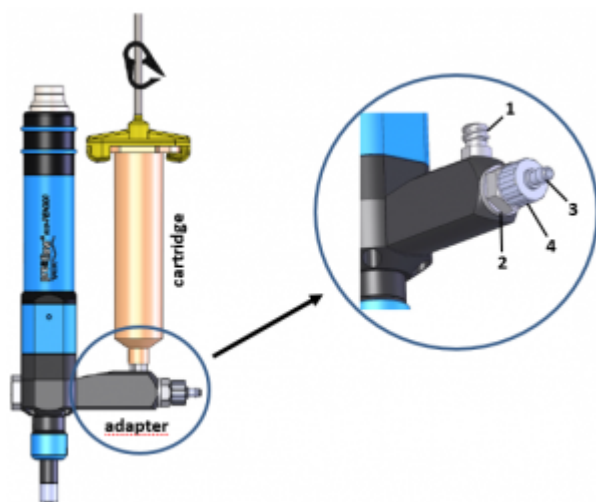
- Teach IN function (external and navi)
- Set-volume readout in g or ml
- Dosing flow readout in ml/min and g/min
- Storage of dosing programs with part management
- Set pressure / actual pressure reading in bar/psi

Other Information

Cartridge adapter

For applications where the material is supplied in syringe barrels, an optional cartridge adapter with an integrated ventilation system allows for direct dispensing from the syringe. With a 1/8 inch external thread, the adapter is ideally suited for the eco-PEN and eco-DUO series 300, 330 and 450. With the help of a reducer the adapter can also be used with the 600 and 700 series.

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Made of black anodized aluminium and stainless steel, and FFKM sealing elements, the cartridge adapter is compatible with almost all materials. By means of a standardized Luer-lock connection (1), the material cartridge can be quickly attached to the adapter. The adapter itself can be turned by 360° without resistance until the final lock with the help of the hexagon screw (2), and thus allows the user a maximum degree of mobility and flexibility. With the aid of a small piece of hose (\varnothing 4mm) which is plugged onto the hose nipple (3) and by opening the bleed screw (4), the air can escape from the pump housing and any excess material can be quickly and cleanly disposed of together with the hose piece. In this way, air bubble-free dispensing can continue even after several cartridge changes.



Self-sealing rotor/stator design

See also our [Technical Articles and White papers](#) page to download [“The “Endless Piston” Pump – Technology for Precision Dispensing”](#) – a whitepaper about this technology.

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See the **preeflow eco-PEN** as part of a real application in these dispensing and robotics [Case Studies](#):

<p>CASE STUDY</p> <p>intertronics adhesives, coatings, sealants & equipment for your manufacturing and technology applications</p> <p>Fisnar Dispensing robot preeflow® eco-PEN 600 Precision volumetric dosing pump flowplus¹⁶ Inline fluid sensor</p> 	<p>Automated dispensing helps security manufacturer increase throughput and quality</p> <p>GJD Manufacturing switched to an automated method of dispensing silicone for sealing a plastic lens to aluminium housing. By doing this, they improved the throughput and quality of their white-light and infra-red LED illuminators for the security industry.</p>
<p>CASE STUDY</p> <p>intertronics adhesives, coatings, sealants & equipment for your manufacturing and technology applications</p> <p>Fisnar 4200N.1 Benchtop dispensing robot Preeflow® eco-PEN450 Volumetric dispensing pump</p> 	<p>Precision dispensing helps electrical manufacturer to reduce waste by improving quality and yield</p> <p>By switching to an automated dispensing system, this electrical manufacturer reduced scrappage and therefore improved quality and yield of their product.</p>

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Ordering Information

Part number	Description
VIS20505	preeflow eco-PEN300
VIS21529	preeflow eco-PEN330
VIS20092	preeflow eco-PEN450
VIS20048	preeflow eco-PEN600
VIS20723	preeflow eco-PEN700
VIS21529	preeflow eco-DUO330
VIS20081	preeflow eco-DUO450
VIS20048	preeflow eco-DUO600
VIS20120	preeflow eco-CONTROL EC200-K desktop unit
VIS20121	preeflow eco-CONTROL EC200-B built in/rack-mounted unit

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Part number	Description
VIS20143	preeflow eco-PEN stand
VIS20145	preeflow holder for eco-PEN 300/450
VIS21750	Cartridge/syringe adapter for eco-PEN and eco-DUO 300/330/450
VIS21811	Cartridge/syringe adapter with vent valve

Supplied by:

intertronics

INTERTRONICS

12a Station Field Industrial Estate, Banbury Road, Kidlington

Oxfordshire England OX5 1JD

t 01865 842842 e info@intertronics.co.uk

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