

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

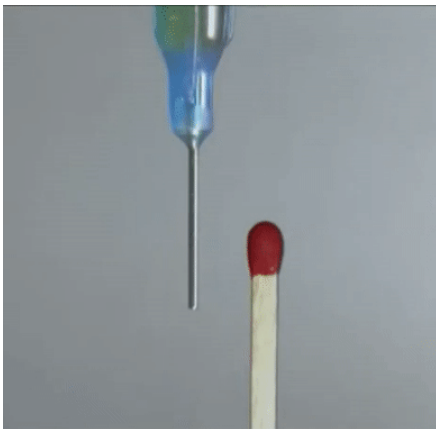


Description

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.

preeflow eco-PENs can be integrated into any of our [robotic dispensing systems](#). The preeflow eco-PEN delivers optimum results when used with [Preci-Tips Precision Dispensing Tips](#).

Features & Benefits



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



Demonstration of controlled
suck-back

- Precise, process-stable dispensing as small as 0.001ml (1µl)
- Highly repeatable and consistent dispensing, with an accuracy of $\pm 1\%$, >99% of the time
- Gentle product dosing process using positive displacement
- Linearly proportional control characteristics
- Wide control and application range
- Controlled reverse flow and clean product break
- Easy system integration, including as part of our [archytas series of robot integrations](#)

Applications

The preeflow eco-PEN is designed for dot-dispensing, bead application with dispensing rate adjustable to the run speed, and encapsulation applications for:

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

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Accurate Repeatable Dispensing**



Model	Smallest dose	Adjust flow rate	Weight
eco-PEN XS 180	0.00025 ml (0.25µl)	0.0044 – 0.35 ml/min	175g
eco-PEN300	0.001 ml (1µl)	0.12 – 1.48 ml/min	280g
eco-PEN330	0.002 ml (2µl)	0.2 – 3.30 ml/min	300g
eco-PEN450	0.004 ml (4µl)	0.5 – 6.00 ml/min	300g
eco-PEN600	0.015 ml (15µl)	1.4 – 16.00 ml/min	650g
eco-PEN700	0.060 ml (60µl)	5.3 – 60.00 ml/min	650g
eco-DUO330 For two part formulations	0.005 ml (5µl)	0.1 – 6.60 ml/min	1230g

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Model	Smallest dose	Adjust flow rate	Weight
eco-DUO450 For two part formulations	0.010 ml (10µl)	0.2 – 12.00 ml/min	1230g
eco-DUO600 For two part formulations	0.030 ml (30µl)	0.6 – 32.00 ml/min	1880g

Controllers



The **eco-CONTROL EC200 2.0 control system** provides total control of preeflow volumetric valves

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during the dispensing process. It's designed for either benchtop or rack-mounted location, dependent on the model.

Operating principle

The unit is operated via a bright, 7" touch screen, making it simple to use. External signals can be connected via I/O ports to a PLC for control in automated lines. Up to 100 dosing programs, with part management can be stored locally.

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

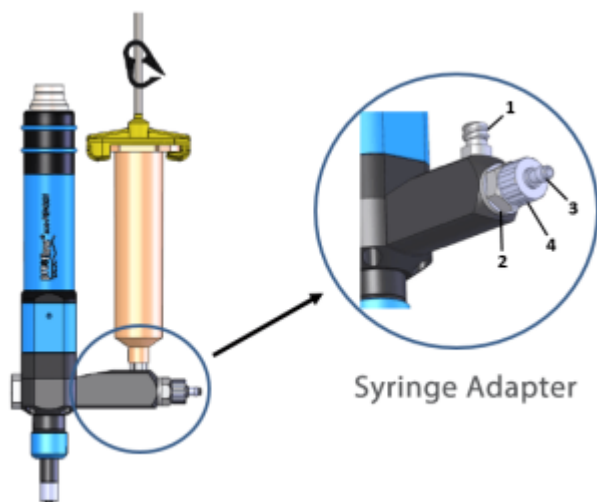
- Quantity and start/stop program
- Set-volume readout in g or ml
- Dosing flow readout in ml/min and g/min
- Storage of up to 100 dosing programs with part management
- Set pressure and actual pressure readings in bar/psi

Other Information

Syringe adapter with integrated bleed valve

For use in applications where the chosen material is supplied in syringe barrels, an optional adapter with an integrated bleed valve allows for direct dispensing without the risk of air bubble formation.

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Made of black anodized aluminium and stainless steel, and FFKM sealing elements, the syringe adapter is compatible with almost all materials and allows for air bubble-free dispensing, even after several syringe barrel changes.

With a 1/8-inch external thread, the adapter is well suited for the eco-PEN, eco-DUO series 300, 330 and 450 and eco-DUOMIX450.

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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Stainless Steel Housing Kit

For applications which require the dispensing of aggressive materials such as solvents or plasticisers or abrasive compounds, a stainless steel housing kit is available. Offering improved resistance to fluxes and oxidants as well as organic and inorganic acids below pH4, the robust design of the steel kit extends the lifetime of the eco-PEN 300 and 450, whilst maintaining the accuracy and repeatability of the unit.

Hardwearing by design, the housing kit can withstand repeated cleaning making it suitable for applications carried out within a cleanroom environment.



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Set-up and maintenance

Setting up your eco-PEN is fast and straightforward. preeflow have put together an [easy to follow video](#) which will guide you during your first set up.

For information on how to maintain and clean your eco-PEN watch preeflows [video tutorial](#).

Case studies

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

<div><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>Click here to watch a video of this case study</p></div>	<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>
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CASE STUDY

intertronics
adhesives, coatings, sealants & equipment
for your manufacturing and technology applications

Fisnar 4200N.1
Benchtop
dispensing robot

Preeflow® eco-
PEN450
Volumetric
dispensing pump





Precision dispensing helps electrical manufacturer to reduce waste by improving quality and yield

By switching to an automated dispensing system, this electrical manufacturer reduced scrappage and therefore improved quality and yield of their product.

Ordering Information

Part number	Description
VIS20505	preeflow eco-PEN300
VIS21529	preeflow eco-PEN330
VIS20092	preeflow eco-PEN450
VIS20048	preeflow eco-PEN600

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Part number	Description
VIS20723	preeflow eco-PEN700
VIS21529	preeflow eco-DUO330
VIS20639	preeflow eco-DUO450
VIS21175	preeflow eco-DUO600
VIS22402	preeflow eco-CONTROL EC200-2.0
VIS20326	preeflow eco-REMOTE 232 port for external channel selection
VIS20143	preeflow eco-PEN stand
VIS20145	preeflow holder for eco-PEN 300/450
VIS21750	Syringe adapter for eco-PEN and eco-DUO 300/330/450
VIS21811	Syringe adapter with integrated bleed valve

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Let's start by talking about your application



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orders@intertronics.co.uk

- Name*
- Company*
- Phone*
- Email*
- Post code*

If you're in the UK, knowing your postcode would help us get in touch even more quickly. If you're outside the UK, please indicate your country.

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■

Tell us about your application

Any information that you submit using this form will be processed according to our [privacy policy](#).

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