

ESK1

Electrospinning Starter Kit

This data sheet relates to the Electrospinning syringe pump. For details on the 7xx30 series high voltage power supply please see the specific data sheet for that product.

[7xx30 Datasheet](#)

Specification Summary



Utilising our versatile 7xx30 series high voltage bench power supply, and combining that with a digitally set infusion pump, our starter kit gives the user a precise high voltage power supply and a syringe pump for easily controlled continuous production in an electrospinning environment.

The 7XX30 series high voltage bench power supply is available with one output or dual output (single control) and an LED digital voltage metre to ensure accurate high voltage adjustment.

This variable high voltage dc power supply is available with either positive or negative output polarity and 1kV, 2kV, 5kV, 10kV, 20kV or 30kV (or voltage in-between) maximum output voltage. HV output can be set accurately with the voltage adjustment dial.

Key Benefits of Syringe Pump

- Syringe purge mode.
- Easy-to-use keypad interface.
- Precise reproducible flow rates.
- Remembers previous settings on power up.
- Pumps continuously till you stop the pump.
- Infusion rate can be changed while pumping.
- Power failure mode allows pump to continue pumping after a reset.
- Syringe pumps are known for their capability in delivering a precise and smooth flow.

Electrospinning Equipment Description

Capacity	1 Syringe from micro-litre size up to 60ml. (140ml partially filled)
Infusion Rate	From 0.73 $\mu\text{L/hr}$ (1 mL syringe) to 1500 mL/hr (60 mL syringe)
Volume Dispensed	Displays total in mL or μL units
Selectable Infusion Rates	Units in mL/hr, $\mu\text{L/hr}$, mL/min, $\mu\text{L/min}$
Footprint Size	5 3/4" x 8 3/4" (14.61cm x 20.32cm)

Mechanical and Electrical

Syringe Sizes	Up to 140 cc
Number of Syringes	1
Motor Type	Step motor
Motor Steps per Revolution	400
Micro-stepping	1/8 to 1/2 depending on motor speed
Advance per step	0.2126 μm to 0.8504 μm depending on motor speed
Motor to Drive Screw Ratio	15/28
Drive Screw Pitch	20 revolutions/inch
DC Connector	2.1 mm, centre positive
Voltage at DC Connector	12V DC at full load
Amperage	750 mA at full load
Power Supply Type	Unregulated linear external wall adapter
Power Supply Output Rating	12V DC @ 800 mA
Dimensions	8 3/4" x 5 3/4" x 4 1/2" High (22.86 cm x 14.605 cm x 11.43 cm)
Weight	3.6 lbs. (1.63 kg)

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Operational

Maximum Speed	3.7742 cm/min
Minimum Speed	0.004205 cm/hr
Maximum Pumping Rate	1,257 mL/hr with a B-D 60 mL syringe
Minimum Pumping Rate	0.73 μ L/hr with a B-D 1 mL syringe
Maximum Force	35 lbs. at minimum speed, 18 lbs. at maximum speed
Syringe I.D. Range	0.100 to 50.00 mm