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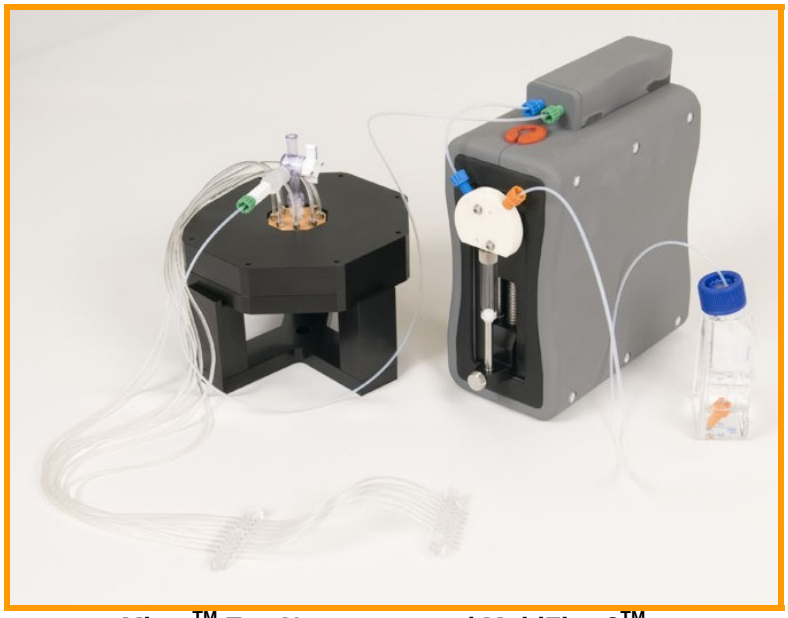
Mirus™ Evo Nanopump
Accurate shear stresses / flow rates for cell analysis

Mirus™ Evo is a patented, precision, microfluidic, **8-channel syringe pump** for cell analysis under shear flow mimicking physiological flow in the human vasculature. Includes **MultiFlow8™**, a manifold that enables the flow from the Mirus™ Evo to be split equally into 8 separate tubes to conduct 8 assays simultaneously in the Vena8™ range of biochips, resulting in higher throughput with this **8-channel syringe pump**. Mirus™ Evo is PC-controlled by ***VenaFluxAssay*™ Software.**



Mirus™ Evo Nanopump and MultiFlow8™

Performance Specifications	
Includes MultiFlow8™:	Capable of executing up to 8 assays in parallel in Vena8™ biochips resulting in an **8-channel syringe pump**.
Shear Stress Range for cell suspension:	0.05 - 10 dyne/cm^2; steps of 0.05 dyne/cm^2 (100 µL syringe)
Shear Stress Range for whole blood*:	2.25 - 450 dyne/cm^2 (1 mL syringe)
Volumetric Flow Rates:	100 nL/minute - 20 µL/minute (100 µL syringe)
Dead Volume:	600 µL
Sample Volume Increments:	Freely adjustable
Valve Switching Time:	30 ms max (at 20°C, 2Hz, with air under 10psi pressure)
Working Pressure:	30 psi – 2 bars maximum
Linear Velocity Range**:	10 µm/s to 10 cm/s
Flow Direction:	Reversible
Sample Volume Aspiration Accuracy:	±1%
Shear Stress Accuracy:	±0.5%
Sample Volume Aspiration Precision:	<1% CV
Shear Stress Precision:	<0.5% CV
External Trigger	2 inputs and 2 outputs external trigger for better operation with external units and softwares

*Considering human whole blood with a viscosity of 4.5 cP
**Given for the flow of distilled water in a microcapillary with dimensions: 400 µm (W) x 100 µm (D) x 20 mm (L)

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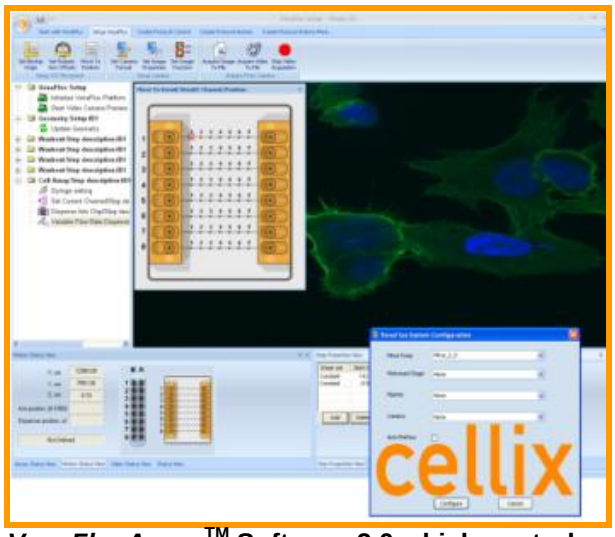
Technical Specifications	
Software Control:	Integrated *VenaFluxAssay*™ software facilitates pumping of cell suspensions through biochips.
Dimensions:	84 mm (W) x 180 mm (D) x 192.5 mm (H)
Weight:	Approx. 2kg
Power Requirements:	110 / 220V - 50 / 60Hz - 60W
PC Requirements:	Pentium II or higher, 256MB RAM, 40GB Hard disk, USB port, CD-ROM drive Windows 2000, ME, XP, Vista and 7 Operating Systems.

Technical Specifications MultiFlow8	
Software Control:	Plug and play connection to the Mirus Evo Nanopump and controlled by VenaFluxAssay™ software
Features	Splits flow from 1 input to 8 outputs 8 outputs fully controlled for single to multiple assays
Dead volume	< 2ml
Max pressure	30 psi – 2 bars maximum
Dimensions:	140 mm(H) x 35 mm(D) x 140 mm(W)
Weight:	< 0.5 kg
Power Requirements:	24V, Max 12W

Mirus™ Evo Nanopump and MultiFlow8 connected to Vena8 biochip on inverted microscope



***VenaFluxAssay*™ Software 2.0 which controls the Mirus™ Evo Nanopump**