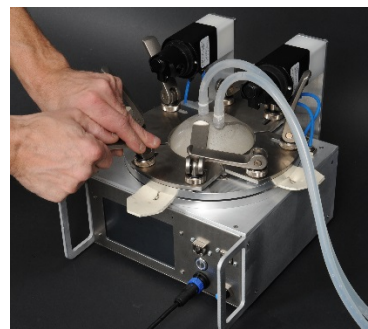
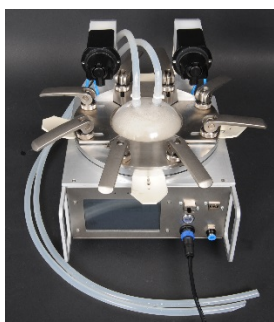


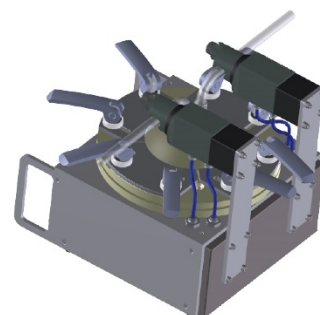
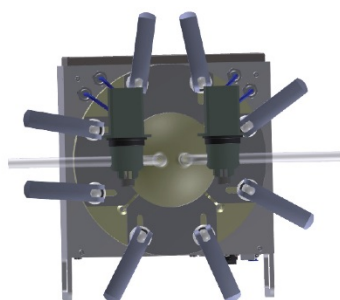
Erato – world premiere

One OD 100 mm diaphragm **Single-Use-Pump** from the Mnemosyne family. True metering pump, controlled volumetric flow, intelligent and self-learning performance, 5 bar working pressure, ACRO controlled inlet/outlet hose pinch valves. IP51 protection and CE marking designed.

Erato is unique as NO nano size silicone particles is added to the fluid stream.



Erato mounted with Thorax dome/Pericardium membrane in Hephaestus cabinet. 8 stainless steel quick release couplings gives easy access for exchange. The hoses connected to Thorax dome perform as hose valves controlled by two ACRO 933 pneumatic pinch valves (Mitral and Aortic).



The wetted part's being the Thorax dome with the thin Pericardium membrane. Inexpensive and quite simple to attach to Erato. The two 10 mm silicone hoses fit smoothly into the ACRO pinch valves.

Erato integrate a 5" TFT touch sensitive graphical display with a fast 900MHz quad-core ARM Cortex-A7 CPU and 1 GB Ram. A range of 15 bit high speed in/out analogue and digital channels corresponding with various sensors / actuators. The CPU run Linux and features a build-in webserver. The webhost allow the user to access the pump directly or via Wi-Fi as well as via IP/TCP from many devices via Ethernet, USB connection (for data export).

Product, model name	Erato from Mnemosyne family
Layout, number of diaphragms	Single
Pump capacity, mL/min	1 – 4,000
Hose connection, OD / ID mm	10 / 6
Air usage at max pulse rate, L/m	50
Air pressure required, Bar	6 - 8
Electrical power supply, VDC	24, 1 amp
Weight, kilo	9.5

Physical feature

No expensive housing materials in order to reach traditional steam cleaning requirements
No mechanical or liquid seals to an axle, no rotating parts such as electrical motor, coupling or gearing
No ball valves, but controlled hose valves / pinch valves requiring no cleaning
No pumped media contact to pump body parts – contamination not possible
Low weight and compact design gives OEM manufactures freedom to design equipment
Able to pump controlled volumes of any fluid, liquid independent of reasonable inlet and outlet pressure
Able to measure accurately the pumped volume, no in-line flow-sensor is needed
A true Positive Displacement pump, a true metering pump
All pumps offer infinite turn-down, turn-up scale

Operating features

Working pressure as much as 5 Bar makes the pump suitable for connection with filtration devices
Choose from various membrane materials according to needs
Single-use, low-cost, disposable wetted parts eliminate cleaning issues – just un-pack and exchange
Self-emptying, drain on inlet and purge on outlet and the pump will convey gas as well
Self-priming and able to run dry for extended periods
Zero spallation / shedding of materials as no shear is introduced between the used polymeric materials
NO silicone nano particles introduced into the fluid stream like from peristaltic pumps

Programming features - Micro-processor controlled

Choose one pulse/stroke per day or one pulse per second or any set of pulses in between
Choose any stroke length and any fraction of a pulse again and again
Any imaginable operation sequence, cycle for each diaphragm (pulse ramp, pulse train, pulse length, pulse pause, stroke start, stroke length, stroke distance)
Choose the fluid pressure you want to create – 5-6 Bar (depending on supply air pressure)
Choose the volume you want to pump – (well, according to pump size)
Real-time information about pumped volume from each individually diaphragm
Data logging, data acquisition for each membrane used
Pump operation based selectively on constant pressure, constant mass flow, desired volume

Maintenance features

No lubrication needed
No need for strip down pump for cleaning
Controlled hose pinch valves - not part of single-use membrane assembly (wetted parts)
Longevity – diaphragm tested to last + 6 month at full stroke length and pulse speed

Installation features

Single-Use-Pump parts may be part of an all sterile process package with hoses, connectors, etc.
No serious tooling needed for Single-Use-Pump part replacement – well, a scissor to open the bag!
8 stainless steel quick release couplings offer easy access for wetted part replacement

Data Collection features

On-line operation pressure from build-in sensor
On-line metering, the pump measures volume pumped accurately without external flow sensors

Communication features

Re-usable pump body requires only pressurized air and 24 VDC electrical power
TCP/IP bus connection and Wi-Fi connection
All Mnemosyne kids are stand alone and share the same Apollon communication module
Software upgradable via the Internet

November 2015



www.pumpcell.com