



## **M100 and M200 Micropump**

### **TCS MICROPUMPS: M100 and M200 (S, W, 180 and SUB versions)**

(Patents Pending, Quality Assured ISO 9001, RoHS compliant, IP45 and IP67 protection rating)

#### **INTRODUCTION**

The TCS M100 and M200 Micropumps are a high-quality miniature pump for liquids. They are highly efficient, small and lightweight. The solid construction and wide temperature tolerance, enable them to perform reliably even in hostile environments. Your Micropump can be quickly and easily installed into the smallest spaces, in a vast range of laboratory, prototype and production equipment.

#### **ELECTRICAL CONNECTION**

Red + Positive                      Voltage: dc (Nominal 3.0v dc)  
Black – Negative

Your micropump can be connected to batteries or a low voltage dc power supply > 600mA. Pumping rate can be fine tuned by using input voltages between 1.0v – 3.0v dc. Micropump life is increased at lower operating voltage/speed.

**DO NOT immerse your Micropump  
(unless you have a Waterproof or Submersible version)**

#### **MATERIALS**

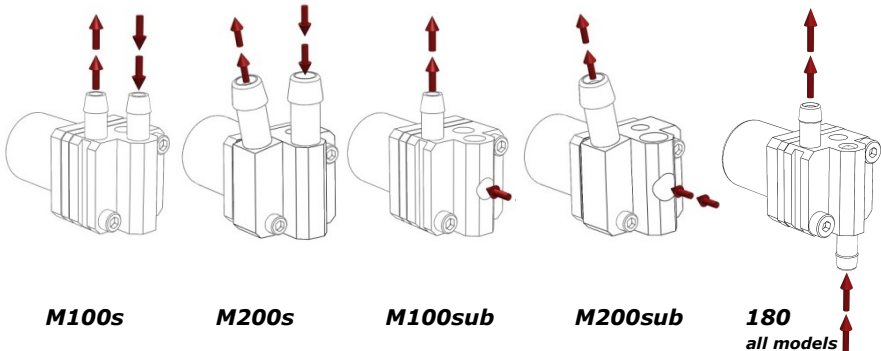
Housing	Anodised Aluminium
Tubing Connectors	Stainless Steel 316
Impeller	Polyacetal
Seals	Viton

#### **TUBING**

M100S / S-3:	2.4mm (3/32") bore flexible tubing
M200S:	3.2mm (1/8") bore flexible tubing
M200S-3:	3.2mm (1/8") bore flexible tubing
	Vent port – 2.4mm (3/32") bore flexible tubing

## NOTES ON OPERATION

The M100 and M200 series Micropumps require the pump and suction side of the fluid circuit to be filled with liquid (primed) before they can operate. The pump will not operate correctly if any air remains within the fluid circuit.



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**DO NOT run your Micropump dry. Ensure that the pump has been primed before use.**

## USE OF MICROPUMPS 3RD PORT on M100S-3 & M200S-3 ONLY

Sealed fluid circuits can be filled through the “Vent” port on your S3 Micropump. The circuit should be fitted with a “T” connector at the point furthest from the Micropump. To fill the circuit with liquid fill through the vent port of the Micropump using for example a flexible fill bottle allowing excess liquid to exist through the “T” Tubing. Once your liquid circuit is filled, with no air bubbles evident in the excess liquid the Micropump “Vent” and “T” tubing can be plugged.

Additionally if the “Vent” and “T” tubing are positioned vertically, they will help to collect any small air/gas bubbles which are trapped or form in your liquid circuit during use.

TCS Micropump Performance Data	DC Input Voltage (V)	Current Draw (A)	Power Usage (W)	Pressure (mBar)	Pressure (psi)	Free Flow Rate (ml/min)	Operating Temperature range (C)
M100-S & M100S-3	1.5 3.0	0.20 0.40	0.3 1.2	60 230	0.8 3.2	180 430	0 to 100 0 to 100
M200S & M200S-3	1.5 3.0	0.20 0.42	0.3 1.3	60 230	0.8 3.2	330 700	0 to 100 0 to 100