



M100 and M200 - P2, P4 Micropump

TCS MICROPUMPS: M100 and M200 – P2, P2-3, P4, P4-3

(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: 4.0v – 6.0v dc (Nominal 6.0v dc)

Black – Negative

CAUTION: REVERSED OR INCORRECT CONNECTION WILL PERMANENTLY DAMAGE THE ELECTRONICS IN YOUR PUMP!

NEVER EXCEED 7.0v AS THIS WILL DAMAGE THE ELECTRONICS OF YOUR MICROPUMP!

DO NOT immerse your Micropump

Your micropump can be connected to batteries or a low voltage dc power supply > 500mA.

Note. A blue LED located on the rear of the pump flash's when the pump is operating

Materials

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

TUBING

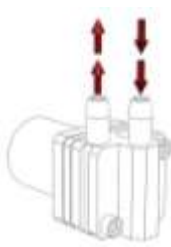
M100P / S-3:	2.4mm (3/32") bore flexible tubing
M200P:	3.2mm (1/8") bore flexible tubing
M200P-3:	3.2mm (1/8") bore flexible tubing
	Vent port – 2.4mm (3/32") bore flexible tubing



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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.



M100P



M200P



All 180 Variants

NOTE Micropumps are required to be filled with liquid (primed) before they can operate.

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

USE OF MICROPUMP 3RD PORT on M100P-3 & M200P-3 ONLY

Sealed fluid circuits can be filled through the “Vent” port on your P3 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	Input Voltage (V)	Current Draw (A)	Power Usage (W)	Pressure (mBar)	Pressure (psi)	Free Flow Rate (ml/min)	Operating Temperature range (C)
M100-P2 & M100-P2-3	6.0	0.043	0.26	45	0.65	68	-20 to 120
	5.0	0.040	0.20	30	0.43	41	
M100-P4 & M100-P4-3	6.0	0.164	0.98	206	2.98	257	
	4.0	0.095	0.38	86	1.24	144	
M200-P2 & M200-P2-3	6.0	0.041	0.25	43	0.62	122	-20 to 120
	5.0	0.031	0.16	31	0.45	75	
M200-P4 & M200-P4-3	6.0	0.163	0.98	185	2.68	458	
	4.0	0.093	0.37	85	1.23	267	