



V4000 Brushless Micropump

TCS MICROPUMPS: V4000 (all models)

(Patents Pending, Quality Assured ISO 9001, RoHS compliant)

INTRODUCTION

The TCS V4000 Micropump is a high-quality vane pump for liquids. It is highly efficient, small, and lightweight and is a self-priming pump by design.



ELECTRICAL CONNECTION

The V4000 Micropump is driven by sensor less brushless 'Out-runner' motor technology. This drive system requires an electronic driver circuit to be used, and for optimal thermal efficiency this drive controller has been mounted to the pumps casing. This reduces wire lengths, and any electrical losses to a minimum and enables any heat build up to be dissipated through the system.

Cabling

Power supply - Twin core, Grey Sheathed Cable
Positive (Marked RED) – 1
Negative (Unmarked) - 2
Normal Operating Voltage - 12-24VC

Additional Controls – View EQi-V3 document IM166

MATERIALS

Wetted Parts

Housing	Anodised Aluminium
Tubing Connectors	Nickel Plated Brass
Rotor	Stainless Steel
Volute	Carbon Graphite
Vanes	Carbon Graphite
Static Seals	Viton
Dynamic seals	Stainless, Nitrile, and Ceramic



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TUBING & CONNECTORS

(Standard flow direction shown)

The pump comes with two G1/4 Threaded Ports which are factory fitted as standard with 10mm OD 'Push Fit' tubing connectors.



Notes on Operation

The V4000's controller is preset to run the V4000's motor at 3300 RPM at 12V which equates to maximum capable performance. Increasing voltage past 12V will increase capable performance with increased back pressure.

Pump life is increased at lower operating voltage/speed/pressure.

The motor that can be seen through the vent on the end plate rotates when the pump is operating. Keep all loose components and fingers away from this.

The V4000 pump electronics are not sealed against water and every effort should be made to keep the pump and its controller dry.

It is not advised to run your Micropump completely dry. Operating life can be significantly improved by ensuring that there is always some water in the pump body.

Maximum Operating Criteria

(Not to exceed limits)

Pressure	- 16 Bar
Power	- 270 Watts
Operating Voltage	- 30 Volts

CAUTION

Do not exceed the maximum operating criteria for the pump

Do not run the pump completely dry

The motor that can be seen beneath the vents on the end plate rotates during operation. Ensure fingers and loose components are kept away.