

## TCS 'V' Vane pump range.

TCS Micropumps manufacture a single 'off the shelf' vane pump but this is just one pump in a range of vane pumps that have been developed by the company.

## Capabilities and Key Features

High flow and pressure capability

Smooth, almost pulseless flow

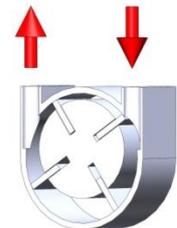
Self-priming

When used in combination with TCS's EQi controller they are able to deliver high and consistent flow rates against high, low or changing back pressure.



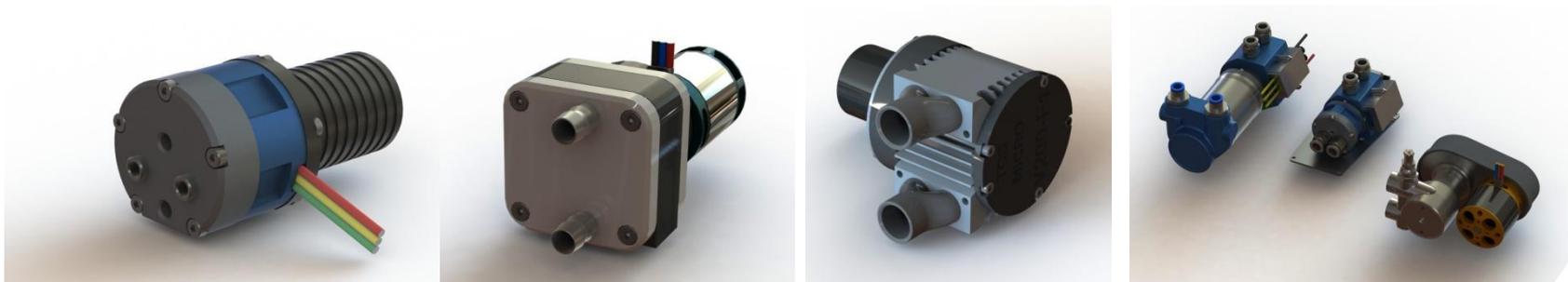
## Working Principle

Rotary vane pumps are positive displacement and have multiple sliding vanes, mounted within slots in a rotor. The rotor is fixed off-centre, causing the vanes to slide in and out as the rotor turns. The volume between vanes expands at the inlet and reduces near the outlet, creating a pumping action.



## Special Variants

Customers with unique requirements, that are not covered by the stock range, can engage with the in-house R&D team. TSO (TCS Special Operations) can develop bespoke OEM systems that are precisely tailored to the requirement. TSO examples ....



TCS Micropumps test the performance and life expectancy of all pumps in house. Unless otherwise specified all tests are run using TCS Coolant (90% water + biocide + detergent), with the pump subjected to standard atmospheric pressure at 20-24deg C. Note : The life of all pumps can be increased by running at a reduced performance / power point.

Failure mode in these tests, is defined as the point at which the pump is unable to deliver the set flow/pressure point regardless of the power supplied.

### Maximum Performance Characteristics

Model	Voltage Range	Max Flow	Max Pressure	Max Power	Weight
F2k	24V	1500 mLpm	2Bar	30W	792 grms

### Life expectancy under typical example operating conditions

Model	Voltage	Flow	Pressure	Power	Life	Failure Mode
F2k	24V	2000 mLpm	0.5 Bar	21W	5,000 hrs	Excessive wear on vanes or volute end plates