TCS 'F' Flexible Impeller pump range.

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

Capabilities and Key Features
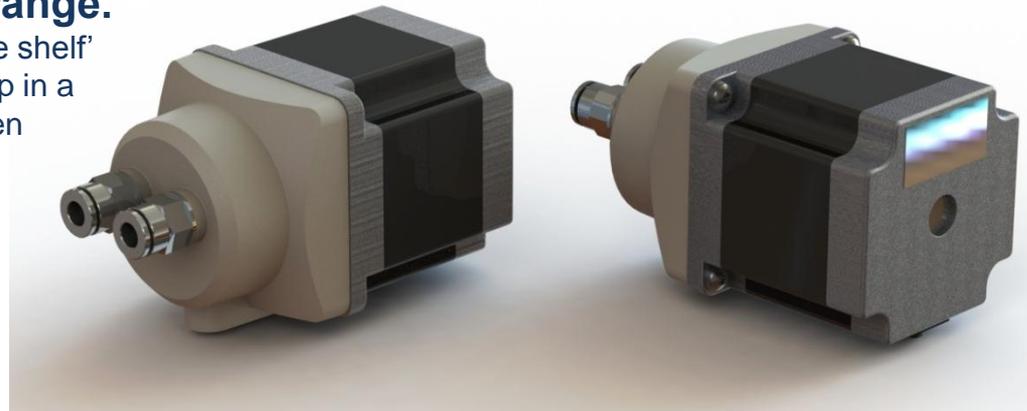
High flow capability

Smooth, almost pulseless flow

Self-priming

When used in combination with TCS's EQi controller they are able to deliver

    Infinitely adjustable flow rates from zero to max performance

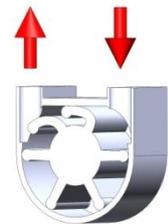   Repeatable flow rate.

    Accurate dosing capability

Working Principle

Flexible impeller pumps are a positive displacement technology that uses a rotating elastomeric impeller inside of an "off centre" or distorted volute.

This technology can be ideal for dosing and high flow applications with lower back pressures.

Flow can be reversed, but this should only be done occasionally as reversing requires that the flexible blades are flipped over from their usual position.

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	400 mLpm	0.5 Bar	21W	1,000 hrs	Excessive wear on volute end plates