

MGD1000 RANGE

Overview:



PUMP TECHNOLOGY

The MGD1000 series micropump, delivers consistent pulseless flow with high or low pressure. They are suitable for a wide range of liquids and are self-priming. The MGD1000 can be used with all common liquids and will also resist most chemicals and solvents. The pump has two connection options; stainless steel threaded tubing connectors for quick and easy connection to tubing, or for directly mounting to your manifold. Its flow direction is reversible. This pump is powered by our EQI-MG1 Controller (12v/24v) and can be found on our accessories page.

Delivering a smooth consistent, almost pulseless flow, throughout the pressure range, these pumps are particularly suitable for systems where pressure and flow consistency are key requirements.

KEY FEATURES

- High pressure capability
- Self-Priming
- High and low viscosity fluid
- Smooth almost pulseless flow
- Reversible flow
- High chemical resistance
- Small size 65 x 32 x 30mm
- 1/8BSP connector and manifold
- No dynamic seals

CONNECTOR VARIANT



TYPICAL APPLICATIONS

- Dosing
- Medical devices
- Fuel cells
- High pressure fuel pump
- Precision Flow
- Cooling systems
- Lubrication

MANIFOLD VARIANT



MGD1000 RANGE

Performance:

The MGD1000 RANGE come in 3 different options that can make your pump more suited to your requirements, these variants are known as our High Pressure (P), Standard flow (S) and High Flow (F).

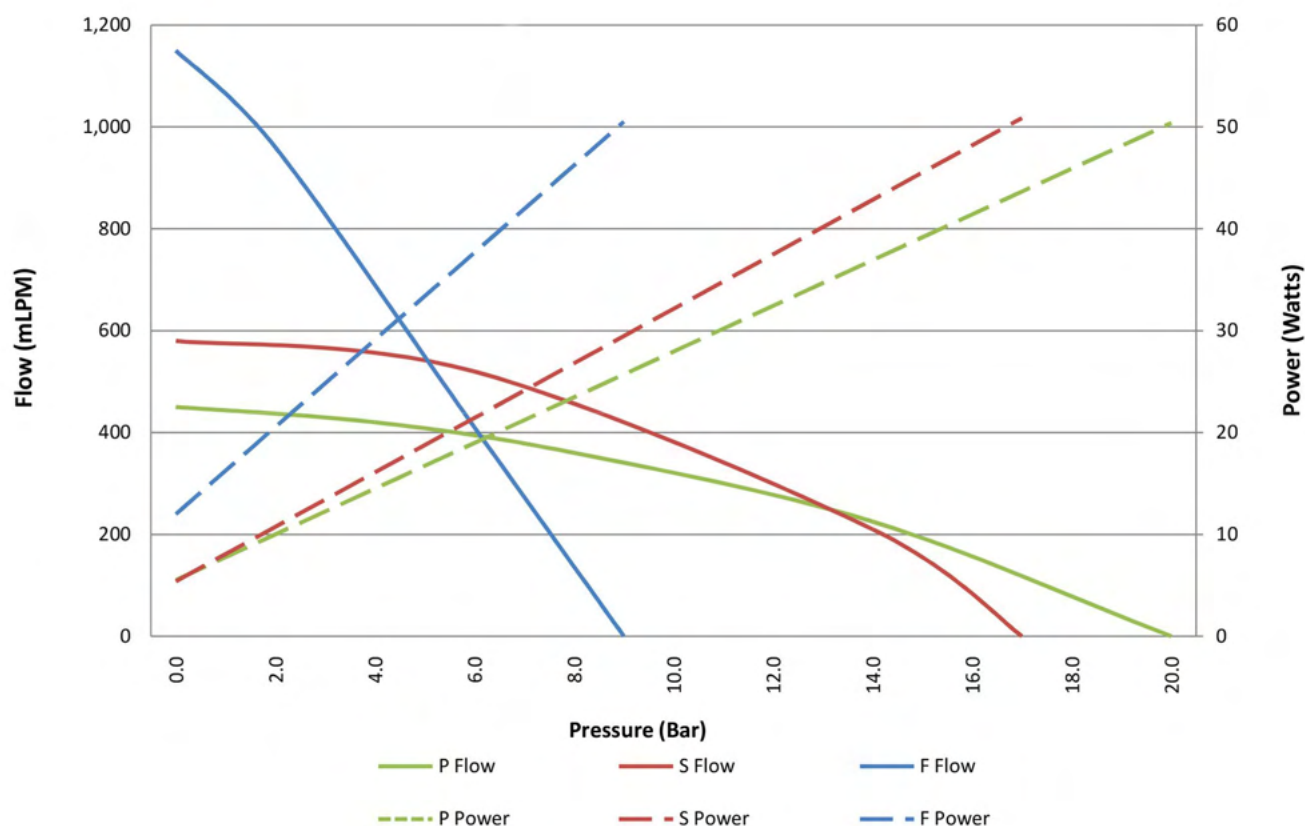
- **Small size:** 25 x 26 x 40mm
- **Weight** 125 grams
- **Operating temp:** 0-100 deg C
- **Maximum viscosity** 500cSt
- **Typical life** >10,000 hours
- **IP Rating - Standard** IP45
- **IP Rating - Waterproof** IP67
- **Noise levels** 15dB (above ambient)
- **Filter recommendations** 10 Microns
- **Max system pressures** 25Bar

VARIANTS		P	S	F
Voltage (Volts)	Minimum	12v	12v	12v
	Maximum	30v	30v	30v
POWER (Watts)	Minimum	30-35	28-33	35-40
	Maximum	52	52	52
FLOW (ml/min)	Minimum	100ml	130ml	250ml
	Maximum	450ml	580ml	1150ml
MAX PRESSURE (BAR)	RECOMMENDED	10	8	6
	ABSOLUTE	20	17	9

DEPENDING ON MEDIUM & TEMPERATURE

MGD Series Operating range:

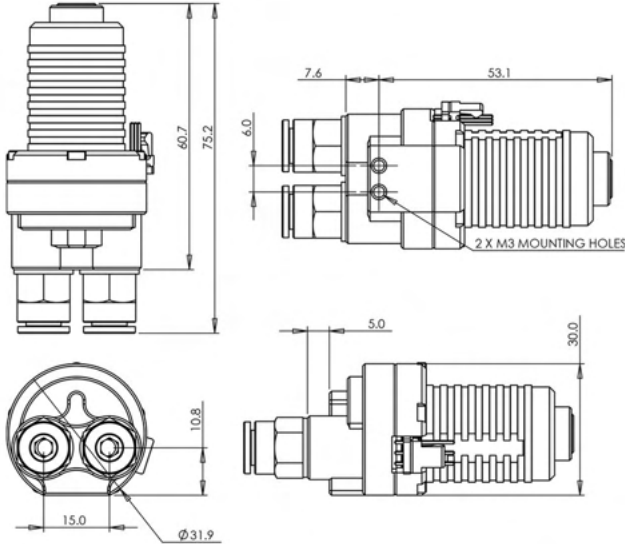
All MGD1000 pump variants are capable of more than indicated, but exceeding these recommended operating ranges may result in damage to the pump and controller. These results were obtained with an EQI-MG1 being powered at 12v on TCS coolant. The graph below is displaying the **ABSOLUTE** performance figures compared against each variant.



MGD1000 RANGE

Mounting/Dimensions:

CONNECTOR VARIANT:



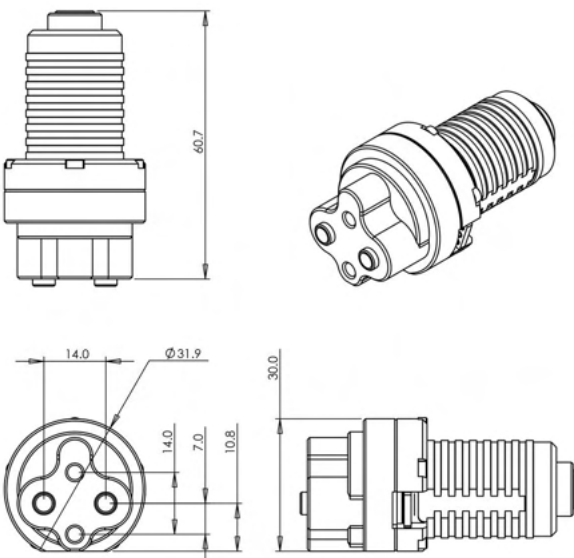
The connector variant comes standard with a head that has 1/8th BSP threads tapped into it. This ensures that you can fit what ever connector fitting you require to this pump's inlet and outlet to best suite you.

We fit as standard 6mm Push-fit connectors to our stock MGD1000's.

NOTE:

Please be aware that restricting the outlet too much will cause high back pressure that will damage and reduce the life span of the pump!

MANIFOLD VARIANT:



The manifold version comes with a bespoke mounting head that can be mated with your system and eliminates the use of connector fittings. Please see the drawing at the top left of the page that shows interface dimension requirements.

This pump is sent with M4 fixings as well as 5.0 ID x 2.0 OD seals for the inlet and outlet ports.

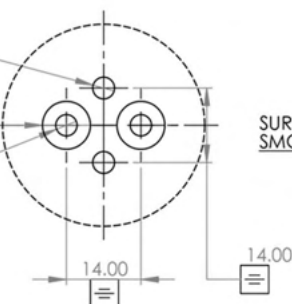
NOTE:

Please be aware MOUNTING threads on backside of pump and mount with the head assembly at the highest point, NOT the drive unit side of the pump!

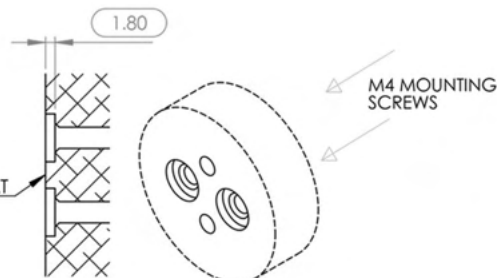
2 X Ø4.10
THROUGH HOLE FOR M4
MOUNTING SCREWS

2 X Ø9.00
O RING GROOVE

2 X Ø4.00
MIN PORT SIZE



SURFACE TO BE
SMOOTH AND FLAT



DESIGNED FOR USE WITH :-
5.0 ID - 2.0 WALL O RINGS
M4 FIXINGS

MGD1000 RANGE

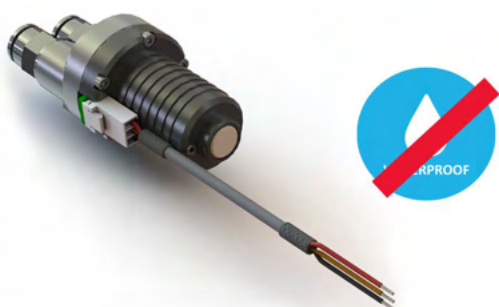
Different Specifications:

Standard Materials: Standard Wetted Parts

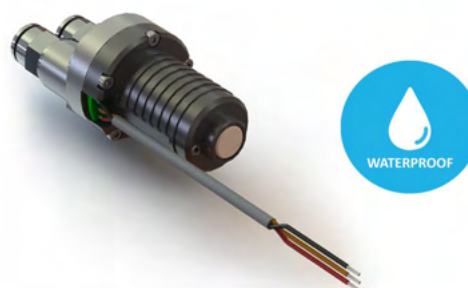
- 316 Stainless Steel
- PEEK
- PET
- Nickel
- FFKM

The MGD1000 Range can come in a range of configurations to best suite your application. This can go from changing the wire to be suited for your wiring in your system, connector options being either manifold or 1/8 BSP thread, changing seal material for chemical compatibility or changing the rotor specification.

Cable options:



As standard, our MGD1000 comes with a 3-pin header fly lead. This cable can be removed from the PCB of the pump whenever required and doesn't compromise the dimensions due to th unique design. (NOT WATER RESISTANT)



A waterproof option is available for the MGD range that features a hard-wired 3 core wire being mated directly to the PCB board and then covered in a flexible sealant.

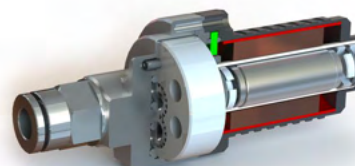
Seal options:



As standard, the MGD Range comes with Viton seals, but we can offer different options like EPDM, FFKM, KALREZ and possibly others if a custom pump is required (*additional charge may be made*)

PLEASE CHECK OUR CHEMICAL COMPATIBILITY CHART ON OUR WEBSITE!

Rotor options:



Different rotor options can be applied to these pumps, this includes our standard rotor, a high temperature rotor and a fully sleeved rotor for certain chemical applications.

TSO: Bespoke and custom solutions:

TCS Micropumps offers an innovative, 'outside-the-box' approach to designing and developing pumps that puts the company in a unique position to fulfil almost any client pump requirements via a bespoke design service, whether they be for small or large projects.

'TSO' (TCS SPECIAL OPERATIONS) is our significant and growing R&D department that is driving the company's future forward, providing solutions ranging from a simple modification to a product from our core range, through to a new, unique solutions developed and tailored exactly to meet the client's needs. Custom & Bespoke solutions are offered as an aim to always meet all the client's specifications.

TSO bespoke solutions may be subject to an NRE charge and this is calculated on the cost for us to develop, source, build, test and supply fully operational prototypes.

if you have a specific requirement that demands a unique pump or system, contact us at Enquires@micropumps.co.uk



www.micropumps.co.uk