

Michael Smith Engineers are one of the UK's leading pump and pumping systems suppliers, specialising in seal-less pump technology.

Established in 1971, the company offers an extensive in-house design and engineering capability, fully equipped work shops, test-bed facilities, in-house and on-site repairs, servicing and trouble-shooting.

The company is ISO9000 accredited for the distribution of specialist pumping equipment. With comprehensive stocks, we are able to offer customers a fast and reliable service with next day delivery on many products.

This brochure provides brief details of the pumps and systems we supply. For further information please contact us

■ Ismatec Peristaltic Pumps

An extensive range of peristaltic tubing pumps capable of accurate, trouble free, continuous pumping of almost any media including highly viscous liquids, fluids with up to 60% solids concentration, corrosive fluids and sterile media.

- Range covers flow rate from 0.001 ml/min up to 13000 ml/min at discharge pressures up to 2 Bar
- Ten different tubing materials available
- Pumps can be dry run without problems
- All units are reversible and are self-priming
- A wide choice of drives, motors and controllers and multi-head options are available



■ FMI Piston Pumps

FMI rotary piston pumps are ideally suited for dispensing, filling and sampling duties. With only one moving part and no valves to block, these compact units give continuous, accurate, positive displacement pumping over millions of cycles.

- The range covers capacities from micro-litres to 4600 ml/min at discharge pressures up to 6.9 Bar
- Available in a choice of inert wetted materials
- Instantly reversible and viscosity independent
- Large selection of drives, motors and controllers



■ HNP MZR Micro-Annular Gear Pumps

These ultra low-flow, miniature, positive displacement pumps are designed for precise, accurate, smooth, pulse-free pumping and dispensing of a wide variety of liquids. The compact size and low mass of the MZR pump/motor units ensure they can easily be incorporated into the designs of many systems.

- Accurate dispensing of volumes as small as 0.25 microlitres
- Flow rates from 0.15 to 1150 ml/min at differential pressures up to 150 Bar
- Accurate smooth pumping within +/- 1%
- Choice of drive options and wetted materials



■ Micropump Gear Pumps

These compact, lightweight, magnet drive gear pumps are leak free and give positive displacement pumping without any pulsations.

- Standard models cover capacities from 0.5 to 720 lit/hr at discharge pressures up to 6.9 Bar
- Pumps are available in Stainless Steel, Hastelloy, Titanium and Alloy 20
- All the pumps can be close coupled to a wide range of drives and motors
- High capacity models up to 2500 lit/hr and high differential pressure models up to 80 Bar are also available



■ Liquiflo Gear Pumps

When you need reliable and accurate pumping of aggressive, corrosive or hazardous fluids. Liquiflo gear pumps are perfect for pumping small volumes of thin or viscous liquids at high pressures, delivering smooth, pulseless flows.

- Maximum capacities from 0.5 to 200 lit/min at maximum differential pressures up to 24 Bar
- Self-priming and extremely accurate
- Can handle liquids at temperatures up to 300°C
- Wide choice of wetted materials and drive options available
- Sealed and seal-less configurations



■ Liquiflo PFA-Lined Gear Pumps

Liquiflo PFA Lined Gear Pumps are an excellent choice for pumping chemicals that require expensive alloys in metallic pumps, such as inorganic acids, bases and salts. They are also the first choice for high purity services where contact with metallic components must be avoided. Wetted materials include PFA pressure components with Silicon Carbide shafts and a choice of non-metallic materials for the bearings, wearplates and gears.

- Flows up to 47 l/min
- Differential pressures up to 6.9 bar
- Magnet drive so zero leakage
- Pulseless flow – easy to monitor
- Accurate output
- Simple to service – minimises downtime



■ Viking Gear Pumps

Viking pumps provide an unmatched combination of application expertise and positive displacement pumping to meet your pumping needs. Choose from a wide range of models which meet the most challenging pumping applications.

- Capacities to 345 m³/hr and differential
- pressures to 103 Bar
- Wide choice of material options
- Sealed and sealless configurations available
- Positive displacement with smooth, low pulse output



■ Codip Air Operated Diaphragm Pumps

Codip pumps combine an innovative pump design with a robust construction using durable materials.

The result is a pump providing safe and reliable liquid transfer even when handling the most aggressive media. These tubular diaphragm pumps resist the effects of viscous, abrasive and corrosive fluids.



- Maximum flow rates from 20 lit/min to 300 lit/min at discharge pressures up to 10 Bar
- Pure PTFE wetted construction available for ultra-pure pharmaceutical applications or for maximum corrosion resistance
- Codip pumps can be run dry, are self-priming and offer double containment as standard

■ Hydra-Cell Seal-less Diaphragm Pumps

The simple, durable design of Hydra-Cell pumps make them able to handle fluids that can destroy other pumps. These positive displacement pumps give smooth, near pulse-free output accurately, reliably and repeatedly.

- Heavy duty industrial construction for long service life in harsh conditions
- Hydraulically balanced, unstressed diaphragms
- Wide range of flow rates from 0.4 to 128 l/min and pressures up to 172 Bar
- Repeatable, accurate output, ideal for metering and dosing



■ Hydra-Cell P Series Pumps

Hydra-Cell P Series metering solutions are compact, cost-effective pump systems for high-performance metering applications. Used in place of ordinary metering pumps to provide superior performance at a lower cost, Hydra-Cell metering solutions give virtually pulse-less linear flow accurately and repeatedly.

- Electronic flow control is more accurate and reliable
- Greater choice of materials enhance capability
- Reduced pulsations improve operation
- Capacities from 1 lit/hr to 2600 lit/hr at discharge pressures up to 170 bar



■ Finish Thompson Plastic Centrifugal Pumps

These non-metallic, reliable, leak-free, magnet drive pumps are designed for pumping aggressive, hard to handle fluids. By using rare earth magnetic technology, DB pumps give high performance from a compact, robust unit.

- Capacities up to 50 m³/hr and differential head up to 43 metres
- Available in a choice of wetted materials, certain models can run dry for up to 30 minutes without damage
- Can handle liquids at temperatures up to 105°C with specific gravities to 1.8
- Vertical configuration available for sump and tank emptying



■ SP Series Self-Priming Magnetic Drive Pumps

SP Series pumps are seal-less, leak-free, magnet drive self-priming centrifugal pumps. The SP Series offer deep lift capabilities and lightning fast priming and can handle the most difficult applications with no seal replacement, no leaks and the capability to run dry without damage.

- 4 series of pumps cover flow rates up to 45 m³/hr and heads up to 37 metres
- Capable of lifting fluids from 5.5 m in less than 90 seconds
- Use only a fraction of the energy AOD pumps require
- Corrosion resistant polypropylene or PVDF to handle most corrosive chemicals



■ Finish Thompson Ultra-Chem Lined Centrifugal Pumps

Ideal for pumping hazardous, hard to handle chemicals, Ultra-Chem magnetically driven pumps use a ductile iron casing and incorporate a Tefzel (ETFE) lining for high corrosion resistance. The Ultra-Chem product has been designed with a range of features to minimise wear on the pump components so maximising the time between routine service.

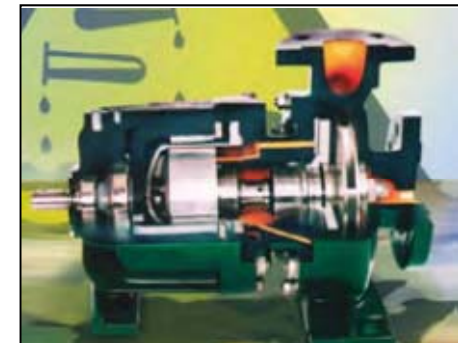
- Maximum capacities up to 60 m³/hr
- Differential heads up to 67 metres
- Powerful Neodymium magnet drive guarantees leak free operation
- Non metallic wetted parts for maximum corrosion resistance
- Dry-Coat shaft and bushing options for occasional dry running



■ Dickow Magnet Drive Centrifugal Pumps

Magnet drive centrifugal pumps which are leakfree by design, so particularly suited to handling toxic, flammable or other dangerous liquids. Generous internal clearances and Silicone Carbide bearings maximise pump life and increase maintenance intervals.

- Close-coupled or frame mounted configurations available
- 26 sizes covering capacities to 300 m³/hr and differential heads up to 145 metres
- High temperature design available for pumping fluids up to 400°C without cooling



■ Nikkiso Seal-less Canned Motor Centrifugal Pumps

These compact, self contained, leak-free, sealless centrifugal pumps are ideal for handling corrosive, aggressive or expensive liquids which must not come into contact with the atmosphere. Canned motor pumps require no on-site alignment and offer primary and secondary fluid containment as standard making them the ideal choice for the toughest applications.

- Capacities up to 1000 m³/hr and maximum discharge heads up to 210 metres
- High speed and multi-stage options for differential heads up to 420 metres
- Wide choice of wetted materials and options for high temperatures, slurries, volatile and high melting point liquids

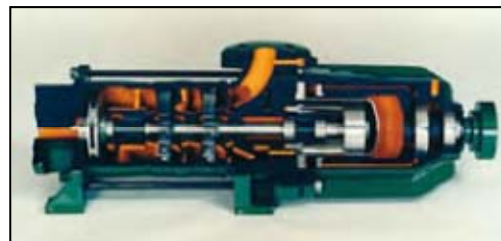
- Electric bearing wear detection can be specified on all models
- ATEX flameproof canned motor pumps are available



■ Dickow Magnet Drive Side Channel Pumps

Dickow side channel pumps are specifically designed for efficient, economical pumping of low volumes of liquids at high differential pressures. They are leak free and can pump large amounts of entrained gas without any problems. Maximum capacities to 32 m³/hr and differential heads up to 300 metres.

- Self priming, with very low NPSH requirements
- Trouble free pumping of boiling liquids and volatile liquids
- Frame mounted options available for horizontal or vertical mounting



■ 3M Peripheral Regenerative Turbine Pumps

The 3M range of seal-less magnet drive turbine pumps are ideal for low flow/high head applications and can be a very efficient and cost effective alternative to multistage centrifugal pumps. Available in a wide range of wetted materials, these pumps are ideal for pumping corrosive and hazardous liquids.

- Flows up to 12 m³/hr at differential heads up to 500 metres
- Material options include 316 stainless steel, polypropylene or PVDF
- Self priming versions available
- Low and high temperature configurations for -100°C to +350°C



■ 3M Sliding Vane Pumps

3M vane pumps are pulse free, accurate positive displacement pumps suitable for metering, dosing, transferring and circulating small amounts of liquids. Available with metallic or plastic wetted parts, these seal-less leak free magnet drive pumps can self prime up to 4 metres.

- Flows up to 3m³/hr at differential heads up to 210 metres
- Material options include 316 stainless steel, polypropylene or PVDF
- Self priming dry lift up to 4 metres
- Accurate, pulse free, leak free pumping



■ Finish Thompson Drum Pumps

A complete range of lightweight, robust, portable pumps for emptying barrels, drums and carboys. These reliable units are ideal for handling a wide range of liquids including corrosives, solvents and viscous fluids.

- Capacities up to 150 lit/min
- Viscosities up to 10,000 centipoise
- Wide choice of wetted materials available in
- different tube lengths
- Motor options include electric and air drives



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