

AccuVol Investor Pitch Deck

September '25



Positive Displacement Pump Market

Global Positive Displacement (PD) pump market is worth 4-7 Bln USD annually.

Compound Annual Growth Rate is forecast at between 5-7 % pa.

Sales and manufacturing are spread equally across the Americas, Europe and Asia with 30 companies active in the market.

No specific type; large specialists, main divisions of major companies, niche entities.

Conservatism and reputational inertia are the only significant barriers to entry.

Accuvol has had discussion with a range of entities with active market experience. All suggest that the market will be open to an improved pump such as Accuvol expects to offer.



Current Technology

Uses optical encoder

- requires a 'dry space' which

- requires a super precise seal

Delivers, according to industry technical specification,

- sub 1% Coefficient of Variance (precision/accuracy measurement)

- over speeds from 300 to 3500 rpm

Does not accurately control pumping at low and start speeds

Costs 8 – 10 k USD



AccuVol Innovations

AccuVol uses a digital magnetic sensor to measure pumping. The sensor has a higher sensitivity than the optoelectronics allowing for tighter control.

AccuVol places the sensor outside of the pump cavity obviating the need for the expensive seal.

AccuVol uses a patented control process that delivers three/two times current precision benchmarks from the first turn of the pumps.

Combined, AccuVol offers a more precise pump from the first turn at a lower cost.

These statements are confirmed under externally reviewed testing, advanced simulations and actual costings.



Accuvol Patents

AccuVol's primary patent has been granted in the UK, EU, US, China and India.

AccVol has a second patent filed under PST in the UK.

AccuVol has a third patent in late stage of preparation.

MAGP001GB	GB2541031B	Granted
MAGP001EP	EP332122B1	Granted
MAGP001CN	CN108138767A	Granted
MAGP001US1	US17132314 CIP	Granted
MAGP001IN	IN2018 1700 7362	Granted



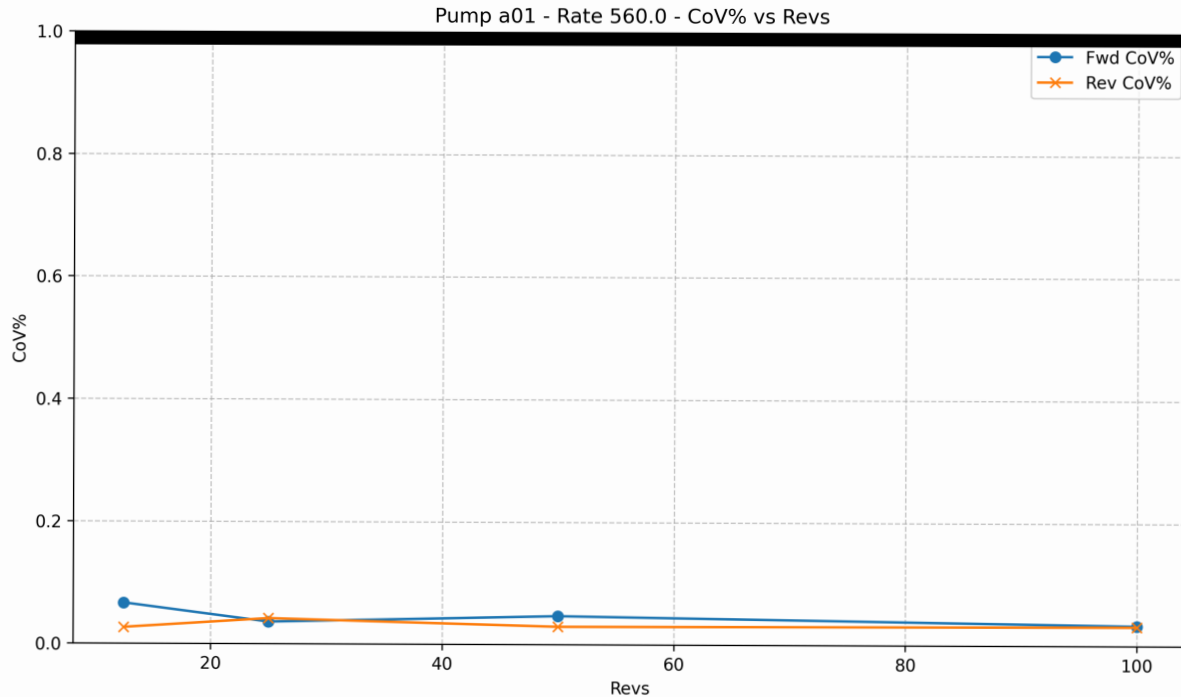
Accuvol Situation

We have

- settled on a design and manufacturing process for a preproduction prototype
- identified a complete range of suppliers and process partner companies
- completed a sophisticated external review and simulation of the design
- completed an initial manufacturing test run of core parts
- completed its assembly process and machinery
- fully completed the patent process globally for our 1st patent
- Built and tested a small pre-production batch of MVP pumps



Sample Test Performance



This image shows a typical result from our own, externally vetted, test suite on our MVP pump. We are happy submit our pumps to external testing.

The 1% CoV topline is the main cited industry benchmark. We are at least 5x better from the very first turns of the pump.



AccuVol Ambition

AccuVol will have PD pumps that will have, compared to current models;

- better precision and accuracy
- better longevity
- lower purchase cost
 - due to
- having fewer & simpler moving parts
- the use of digital sensors

AccuVol knows that;

- its cost of materials is low compared to competitors,
- its sensors are more precise,
- longevity is designed in from the outset.



AccuVol 'Go To Market' Strategy

We are looking for both investment and industry partners.

The immediate tasks include:

- establishing a sales and marketing team
- establishing a manufacturing base and solid supplier networks
- researching miniaturisation via high precision injection moulded plastics
- optimising pump materials for the food, pharmaceutical & chemical industries

AccuVol will offer a significant equity stake to secure this investment.

AccuVol expects positive cashflow within 2 yrs & high capital growth at yr 5

The proposed program requires an initial investment of £0.75 million.



Competitors & Characteristics

- [HNPMicro](#)
- [JONSN](#)
- [Diener](#)
- [Suofu](#)
- [Fluid-o-tech](#)
- [Iwaki](#)
- CoV of 1% or +/- 0.5%
 - Accuvol has 0.10%
- CoV cited from 300 RpM
 - Accuvol is accurate at 10 RpM
- Costs are in 000s €
 - AccuVol is substantially cheaper



Accuvol Risk Analysis

Micron precise manufacturing is not new but it is hard.

This is Accuvol's first time doing this though all of our manufacturing partners work to this standard constantly. Accuvol's 'design error stack' is 75 microns (millionths of a metre, width of a human hair).

This level of accuracy and precision is required to minimise seepage across the pump parts so as to be able to deal with a wide range of pressure differentials across the pump.



Accuvol Details

- Accuvol is the trade mark of Magpumps Ltd., an English registered company
- Magpumps Ltd. is wholly privately owned and carries no net debt
- The founders are Leo Dearden & Arthur Doohan; bios below
- Ian Grigg is an angel investor and board member; bio below
- BASCK are the patent agents
- Mr S Macdonald of Malvern is its accountant



Founders

- Leo Dawn (née Dearden) graduated from Cambridge University with honours in Computer Science (with Materials Science). He has done software engineering for companies such as CSR, Google, YouView, Moore Capital, Solarflare Communications and G-research. In 2010 he left Google to found RepRapKit.com, transitioning from pure software to multidisciplinary engineering synthesis of open source 3D printers. Development of a groundbreaking 3D printer led to AccuVol's first pump prototype.
- Arthur Doohan graduated from Trinity, Dublin with a joint honours degree in Economics and Engineering. He spent 16 years as a capital markets trader covering all form of interest rate risk. Leaving the City for moral reasons he did several residential redevelopment projects in south London. He now works as a consultant and founder with involvement in software and blockchain development in addition to this hardware project.



Investor

- Ian Grigg is one of the longest standing participants in the digital finance field now known as blockchain. In 1995, he embarked on the world's first cryptographically secured digital cash and assets exchange. Along the way, he invented the Ricardian contract, a way of expressing all issuable and tradable financial obligations as a contract online, and was one of the discoverers of triple entry accounting, a concept that does for events between firms what double entry accounting did to accounts inside the firm. He has consulted with EOS, Knabu, Mattereum, and R3 and currently works in the area of social savings and identity.

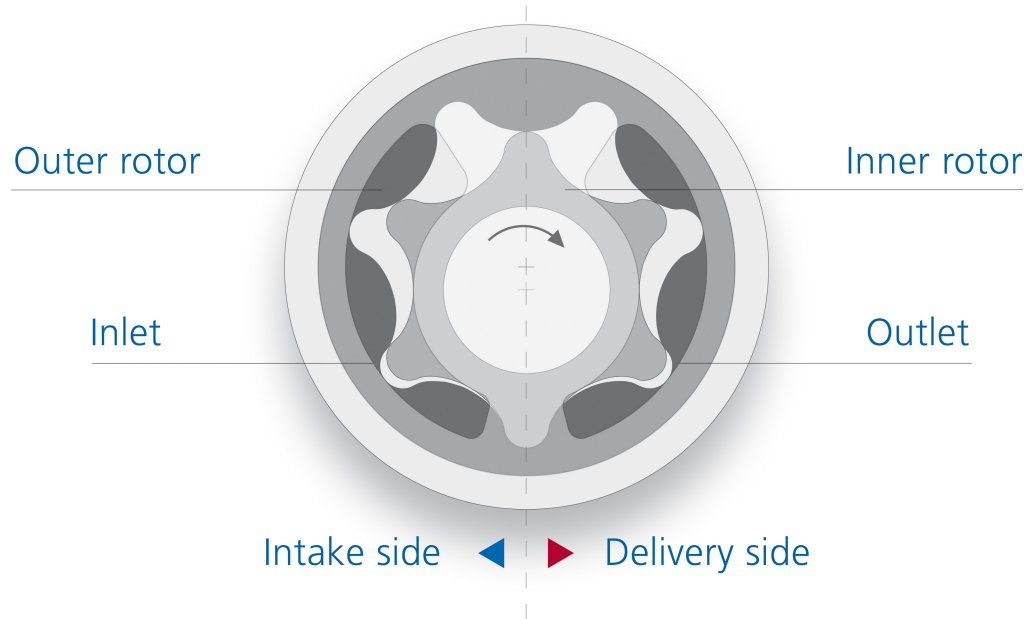


References & Links

- [MichaelSmith Engineers Briefing notes](#)
- [Technavio market report](#)
- [Fortune Bus Insight market report](#)
- [Basck patent agents site](#)



Example Positive Displacement Gerotor Pump



Pumping (clockwise) starts at “6” as space starts to open between the inner and outer gerotors over the inlet (blue) port

This expands to a maximum at “12”

This volume then passes over the outlet port and is squeezed out

Pumping finishes at “6” and restarts

