

## Midas Technologies: Practical Insights

### Midas Technologies.



**Location:** Peterborough, UK

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### Company Profile:

Midas Technologies, set up in 1985, designs, manufactures and installs bespoke fabrications and plant for a wide range of industries, including construction, food and drink, pharmaceutical and automotive.

The company has an annual turnover in excess of £2 million, employs 25-30 highly trained engineers and apprentices and is ISO 9001:2008 registered

Midas Technologies specialises in working with stainless steel, aluminium and other non ferrous and special alloyed materials and provides mechanical, electrical and hydraulically engineered systems. Example products are: stainless steel windows and doors, mesh facades, Living Walls™ and fluidised conveyors.

For the water sector, Midas Technologies developed a novel hydraulic flow modulation device (Aquai Mod®) which is used in conjunction with pressure regulation valves (PRVs) to *monitor and adjust* water pressure and flow in distribution networks.

Conventional PRVs have a main valve that opens and closes to vary the water supply pressure. However, without a modulation device, it is necessary to maintain a high fixed outlet pressure, irrespective of flow rate, in order to ensure that users have sufficient water pressure at the point of use. This means that fixed outlet pressure PRVs cannot take account of variation in demand.

Alternative electronic modulation devices exist, but these require a source of power (usually batteries) and a meter, and are often considered unreliable.

Aquai Mod® allows the PRV to increase or decrease water pressure in response to demand, without the need for a power supply. This results in a significant reduction in water consumption, leakage and burst pipes.



Aquai-mod (silver) installed alongside a pressure regulator valve.

### Practical Insights

During the late 1990s Midas Technologies undertook a considerable amount of R&D into its early stage hydraulic flow modulation device and developed the Aquai Mod<sup>®</sup> prototype (patent pending). Following highly successful early trials the product was launched under a sub-division of Midas Technologies, 'Aquavent UK Ltd'.

Over the last 10 years, Aquavent UK have undertaken numerous trials of the technology with water companies throughout the UK, including offering a trial unit for half price for a three month period. However, despite excellent performance results, they have found it challenging to close out on follow-on sales.

With hindsight, the company has identified a number of key factors that would have improved their success in commercialisation:

- Clear definition of their **value proposition**

The company found that a number of client engineers did not fully understand the value of Aquai Mod<sup>®</sup> in comparison with the main competing devices, or in comparison with the conventional assets already in the ground. Today Aquavent UK have a clearly defined value proposition:

*Convenience and cost:* no requirements for complex and expensive control systems; no power supply needed; can be retrofitted to all type of PRV; extremely reliable with minimal maintenance requirements; no civil engineering costs;

*Performance:* accurate and continuous modulation to user demand; resistance to adverse weather conditions (e.g. freezing)

*Service:* on site pre-sales trial, free maintenance check of existing assets, and post sales optional add-on services such as automatic performance monitoring and incident alerts;

*Environmental:* provides significant water savings through matching user needs, and a reduction in leakage and burst pipes; sustainable production and construction.

- A focus on the most appropriate **launch customers** and provision of a **formalised** pre-sales and trial process

Aquavent UK originally attempted to get product trials with as many water companies as possible, an approach which resulted in resources being stretched within the company and difficulties in following through with any one customer. Today the company focuses on identifying a single launching customer in a new market, completing a successful trial and producing a good case study for use with other potential clients.

In many cases, the launch customer may not be the same as the end user. For example, within the water sector, increasingly complex procurement processes over the last 10 years means that the company is now successfully engaging with leakage and pressure management contractors, first tier suppliers of the water utilities.

In addition, they have clearly articulated a formalised pre-sales trial procedure which includes:

1. Site visit and presentation to the client (adapted for engineers or non-technical audience)
2. Full modelling of the existing network to analyse current flow and leakage, and analysis of current water bills
3. Development of proposal for capital equipment and installation including expected payback
4. Contractual offer of a free 1-3 month trial with pre-defined KPIs and expected outcomes, with a requirement for full payment if results are achieved.

Aquavent UK is currently using these insights to take a new approach to entering new markets within the UK including commercial (e.g. Hospitals) and industrial (e.g. food processors). Early indications are that this is proving to be extremely effective: a new unit was trialled and subsequently acquired by Bath Royal United Hospital within 3 months of contacting their Estates Manager.