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Automate

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Rapid payback for Millipore



Custom built SCHMIDT Technology servo presses are helping Millipore cut downtime on its membrane filter cutting lines at its facility in Ireland. The presses are also enabling the company to minimise scrap, by optimising the number of elements produced from each roll of filter media, with the result that machine payback for the presses has been achieved in around nine months.

Millipore is one of the world's leading producers of advanced products and services for the bioscience research and biopharmaceutical sectors. Among the company's products are specialised filtration media components, many of which are produced at the facility in Ireland.

Vincent Smith, Senior Project Engineer, explains, "We manufacture membrane filter media and complete filter units for use in critical blood diagnostics and laboratory procedures. In recent years we have invested heavily in our manufacturing facilities in Ireland and have automated many aspects of the production process, to minimise our

costs while increasing productivity, quality and the level of service to our customers".

A key part of the automation programme has been the installation of eight SCHMIDT servo presses, for cutting individual filter discs from rolls of specialised media. The presses have been installed over

several years as production requirements have increased, and have to provide high levels of accuracy and repeatability, to within $\pm 0.1\text{mm}$, and handle a variety of media measuring between 150 and 320mm in width.

The first automatic SCHMIDT press was installed five years ago and replaced an existing multi-stage press tool. "This had an immediate impact on productivity", said Vincent Smith, "Perhaps as importantly, the reliability of the system has been excellent as the machine is still operating today, having completed well over 40 million cycles with no downtime apart from routine maintenance".

More recently, SCHMIDT has installed presses that are integrated with robot handling systems, enabling Millipore to shorten production times and make significant reductions in scrap material.

Although standard SCHMIDT servo presses are designed as modular systems, the production requirements at Millipore required SCHMIDT to carry out considerable development and

engineering work at its customer support centre in the UK. This work included the design of dedicated tooling, plus robotic loading and unloading stations, and machine safety and guarding systems. SCHMIDT UK also provided programming expertise for the dedicated press controls, providing an advanced operator interface with sophisticated monitoring, control and analysis functions.

Vincent Smith concludes, "Without the expertise of SCHMIDT in the UK we would not have been able to carry out these production improvements. They have provided an excellent standard of support and have taken the time to understand the particular challenges of our operation and integrate members of our team in their design and build processes. This has enabled us jointly to develop effective solutions which, combined with the level of reliability of SCHMIDT's machine systems, have had a real and measurable impact on our business."



Enhanced press control

We've launched an innovative SpeedControl device that provides constant stroke rates on our entry level manual and direct acting pneumatic presses.

SpeedControl is a self-contained, closed loop hydraulic resistance unit, which further improves the accuracy and smoothness of each press, while enabling the rate of travel to be infinitely adjustable over the distance of the entire ram stroke.

When used with our standard presses, SpeedControl eliminates possible errors caused by variations in manual control, while with pneumatic presses the system minimises the potential for effects of air compression or sticktion within cylinders.

The SpeedControl system is ideal for applications in which a lower level of end-of-stroke control is needed but where the higher cost of a servo or electro-mechanically controlled press cannot be justified.

For example, when incorporated into our 300 Series press systems, SpeedControl can offer ram retraction based on a programmable force or distance, with accuracies of better than +/-0.1mm for distance or +/- 20N (5 lbs).

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Automate

Custom design and engineering



To help you develop the most efficient press and automation solutions, our UK based design and engineering team provides comprehensive support for both new and retro-fit installations.

We have a fully equipped CAD studio, with advanced 3D solid modelling facilities. This enables us quickly to create initial designs for new and modified machine systems and tooling, and then to work with you to develop working virtual models that can be tested and evaluated to ensure that they meet your exact specifications.

Once the virtual designs have been approved, our engineering team in the UK, supported by our world leading manufacturing centre in Germany, can construct, install and commission complete press systems.

Our combined skills, knowledge and resources enable us to develop press solutions that meet the exact needs of each application, machines being built around our modular pneumatic, hydro-pneumatic and servo press systems and control technology.



Investment in R&D

As one of Europe's leading manufacturer of precision press solutions we have a high and continuous level of investment in research and development, with an average of 11% of operating revenues being reinvested in this crucial area.

Over the years continued investment in R&D has led to the introduction of many new and innovative developments in press technology, culminating in the recent launch of our 5000 Series press control system. This offers unrivalled levels of performance and functionality,

providing intelligent real time process control in a wide range of applications.



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