Mitsubishi positioning system is a real gas

A new gas meter, so innovative that it has featured on BBC television’s Tomorrow’s World, will have a key component built by a new machine designed by Acorn Engineering, a dynamic young company in Havant. The new machine is one of the first applications of the innovative Mitsubishi Electric MAPS positioning system.

Gas companies are always seeking to improve the gas metering service they provide to their customers. This work led to the development of the new ultrasonic domestic gas meter which is now being built by Eurometers. At its heart are three sensors, two placed opposite each other that measure the speed of the gas flowing through the meter and the third which measures the speed of sound of the gas. Acorn Engineering has been commissioned to produce an automatic machine to produce the sensors.

A vital part of this machine requires accurate handling and positioning of the sensors as they move around the machine during assembly. With such a sophisticated machine there is also a need for important operator and maintenance information.

Acorn has been using Mitsubishi Electric PLCs for many years, from the micro FX0 up to the large A series for a variety of different applications. As Managing Director Nick Van der Lugt says, “We always use Mitsubishi PLCs unless the customer requests otherwise. They are easy to install and programme and are competitively priced.” It was only recently though, with the introduction of the MAPS positioning system in the UK, that they considered using Mitsubishi servo amplifiers and motors.

The Mitsubishi MAPS system is a package introduced in 1996 offering a simple positioning system that is so easy to programme and use that it is suitable for first time users. The kit consists of an A1S PLC, servo amplifier, servo motor, servo positioning module, colour touch screen HMI, software and all cabling.

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Although cost saving and increased production are major reasons for the new machine, quality is the main motivating factor. This improved efficiency of the new machine is also expected to pay for itself in just over 12 months, with production rising to 6000 sensors per day.