In brief

Electric actuators
The DA Series of electromechanical linear actuators is designed around an integrated motor and roller screw, a compact configuration that provides excellent performance. They are used as alternatives to hydraulic and pneumatic cylinders, doing away with the need for power packs and compressors.

Magnetic plugs
Elesa's new range of magnetic plugs collect ferrous/magnetic particles inside machinery such as gearboxes, engines, pumps and so on, which are subject to wear. Once collected about the magnetic core of the plug, these particles are separated from lubricating/hydraulic oil and are thus not able to cause further wear or damage.

Evaporative cooler
ICS Cool Energy has launched a high-efficiency portable evaporative cooler to deliver fast and effective cooling to a variety of commercial workspaces. The robust new Com Cool evaporative cooling unit can deliver temporary, long-term and emergency temperature control to all types of buildings and for manufacturing processes.

Condition monitoring
Precision bearing manufacturer Schaeffler has launched a standalone system for monitoring the condition of rotating plant and equipment with fixed or variable speeds from 100 to 15,000 rpm. The FAG SmartIQB is a ready-to-use, pre-configured condition monitoring system for electric motors, pumps, fans, compressors and gearboxes, which is simple to install (commissioning takes just five minutes, it is reported) and requires no specific skills or knowledge of vibration diagnosis.

Large screw compressor offers improved flow and energy savings

Atlas Copco has added three new models to its range of oil-injected rotary screw compressors to give larger industrial air users a 20 per cent average improvement in free air delivery and energy savings of up to 35 per cent.

The adoption of smart design principles has improved airflow, measured as free air delivered (FAD). Operators can now select smaller compressors for the same applications, thus saving money and energy.

With the use of variable speed drive technology, energy savings of up to 35 per cent are achievable by automatically adjusting the motor speed to match the air demand. Additionally, the optional energy recovery system can recoup up to 75 per cent of the compressor's shaft power as hot water, which can be re-used for process operations or premise's heating applications.

Specific Energy Requirement (SER) is a measure of how efficiently electrical power is used to produce compressed air. The new compressors' combination of a high efficiency IP55 motor and optimised, gear-driven transmission system constitutes to increased energy efficiency and results in an overall improvement in SER [illegible] per cent, against comparable compressors.

They are designed for standard operating conditions of up to 46°C/115°F. With an integrated dryer, the full feature GA FF models provide dry, compressed air at a pressure dew point of +3°C/37°F, while ensuring low pressure drop.

Driving innovations in wireless torque measuring technologies

Sensor Technology has continued to develop its product range, offering users new options for measuring power in drive shafts and other rotating machine elements. A technological breakthrough has occurred in the world of sensors that will almost certainly grab the attention of machine designers.

Conventional torque measuring solutions for rotating shafts introduce as many problems as they solve. Sensor Technology's solution in the core of its TorqSense products is to use the properties of surface acoustic waves, by measuring the resonant frequency change of surface acoustic wave (SAW) devices in a non-contacting manner when strain is applied to a shaft to which SAWs are fixed. The applied torque causes a deformation of the quartz substrate of the SAW device, which, in turn, causes a change in its resonant frequency.

Practical torque sensors use two tiny SAWs made of ceramic piezoelectric material, containing frequency resonating combs. These are glued onto the drive shaft at 90 degrees to one another. As the torque increases, the combs expand or contract proportionally to the torque being applied. In effect, the combs act similarly to strain gauges, but measure changes in resonant frequency.

Aqueous degreasers clean up manufacturing

NCH Europe has launched Aqua-Sol, a new range of aqueous water-based degreasers, designed for the industrial removal of grease, dirt and soil from machinery, parts and food processing equipment. The new range includes versions with pH neutral formulas, foaming aerosols, low foaming liquids for closed systems and the latest surfactant technology, providing what is described as an environmentally-friendly alternative to solvent-based products. The entire range is NSF A1 certified, making it suitable for general cleaning on all surfaces in food processing areas. The water-based formulation is non-flammable, low odour and does not pose any inhalation risks. The range contains either zero or very low volatile organic compounds (VOCs).