**NEW CYLINDER SERIES ELEKTRO EK: SIMPLE AND COMPREHENSIVE**

The increasing demand for a precise and controlled movement of the axes for Smart Manufacturing applications is satisfied by the vast range of cylinders and electric axes offered by Metal Work.

Metal Work S.p.A., an Italian manufacturer of components and systems for automation, will shortly release the new electric cylinder series EK, which features essential design components, excellent price-to-quality ratio, all without sacrificing performance.

Fig. 1 – The new EK extends the range of Metal Work electric cylinders

Ideal for use in applications where motion control or changes to setup and strokes are required, the new EK is currently available only in size 32 with in-line motor and comes with all the accessories that make it interchangeable with an ISO 15552 pneumatic cylinder.

The EK differs from the Metal Work Cylinder in the Elektro Series due to some design choices that has made it possible to reduce weight and costs, with some different technical features. The piston rod is moved by a hardened and tempered screw and a recirculating ball guide or a trapezoidal screw and a bronze nut (for applications where non-reverse motion is required).

In its standard configuration, the cylinder features an internal system that prevents the piston rod from rotating and a magnet sensor on the piston that detects the position. As for the other Metal Work electric cylinders, a greasing system provides periodic lubrication of the screws and nuts.

A series of accessories is provided for fixing the cylinder on the front and on the back, using a guide unit. The cylinder liner has a V-Lock dovetail for safe, quick and adjustable mounting.

The version with a geared motor is available on request. As a standard, the motor can be chosen from among those listed in the catalogue or provided by the customer according to specific technical requirements. In this regard, Metal Work can support the customer in establishing the correct sizing and selecting the motor that most suits to the specific application, including the provision of drivers that can be interfaced directly in the fieldbus.

Fig. 2 – Multiple fixing options for the EK cylinder

The new EK complements the current Metal Work range of cylinders series Elektro, which already provides numerous solutions.

Metal Work has been offering a complete range of electric cylinders with ISO 15552 fixings in the sizes ∅32 to ∅ 100 for a long time, with trapezoidal screws and recirculating ball nuts, with either a brushless or a stepper motor.

It also offers a range of rodless belt-driven (BK, SHAK, SVAK) or screw-driven (SK) gantry in various dimensions and sizes, available with a single axis or pre-assembled and tested assemblies (Gantry).

PHOTO OF A BK GANTRY

Fig. 3 – Multiple axis system by Metal Work

If a PLC is not used for motion control, Metal Work offers the e.Motion programming unit that can control all brushless and stepper motors via a train of pulses and the e.Drive programmable drive for small and medium-sized stepper motors.

e.Motion and e.Drive hardware and software have been developed entirely by Metal Work, which holds the proprietary know-how and is therefore in a position to customize and adapt them to specific requirements.

Metal Work electric cylinders and axes are the right answer for the designer who intends to acquire full control of the movement of the application allowing, among other things, the collection and management of performance and diagnostic data from the field by direct feedback.

Corrado Tamiozzo

Metal Work S.p.A.