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**New line of compact guided cylinders in the Multifix series**

Metal Work Spa, the Italian manufacturer of components for electric and pneumatic automation systems, has recently launched the new line of compact guided cylinders in the Multifix series.

The Multifix cylinders are the result of Metal Work’s lengthy experience in the design and manufacture of guided cylinders and pneumatic slides in various sizes and configurations. In particular, this new line consists of compact cylinders with a single central body that accommodates the piston and piston rod and two columns guided by sliding blocks at the sides.

Let’s see some of the characteristics of this new range.

The body can be fixed to the support in four different ways: by using the 4 threaded holes on the main side, the screws passing through the body or the screws engaging the threads at the rear side or by placing inserts into the T-slots on one side.

The pneumatic supply ports are situated on both the large side and the narrow side of the body. The cylinder comes with two of the four ports closed with a threaded plug and seal so as to allow the user to decide which one to choose.

All the Multifix cylinders have a magnet for sensors. Two T-slots are obtained on each of the two main sides of the body to accommodate the sensors. The two double slots facilitate the insertion of the sensors on the most accessible and visible side.

There are two alternative column guiding systems: with sintered bronze bushings that are coupled with chromed and ground carbon steel columns or with recirculating ball bearing bushings that are coupled with hardened and tempered, chromed and ground steel rods. The version with ball bearing bushes is preferable for use in applications that require either high speeds and cycles or reduced end play. The version with bronze bushes is preferable in the case of medium or low speeds and is cost-effective. With short strokes, there is one bushing only for each column, which saves space. With long strokes, two bushings are provided for each column, while for strokes exceeding 250mm, the bushings are spaced to increase the guiding length.

As to the end-of-stroke stop, two versions are available as well: the silenced one, which uses elastomer elements fixed to the piston, and the pneumatic cushioned one with needles for adjusting the braking force. The version with pneumatic cushioning is recommended when the kinetic energy to be absorbed is high, i.e. when both the speed and mass applied are high. The silenced version is recommended for use with low speeds and/or small masses. In any case, there are no benefits to using pneumatic cushioning with strokes of less than 25 mm.

The bodies are made of extruded anodized aluminium sections that allow to build cylinders with standard strokes of up to 400 mm, higher strokes are available on request, however, since the piston seat and the holes for the columns are ready provided in the extruded section.

Corrado Tamiozzo

Metal Work SpA

Pictures

Figure 1

Metal Work actuators. The traditional pneumatic cylinders are increasingly flanked by versions that incorporate the guide systems.

Figure 2

The new family of Multifix compact guides cylinders

Figure 3

Multifix compact guided cylinders can be fixed in various ways and on different sides. The pneumatic supplies and seats of the magnet sensors are also placed on different sides, which means increased flexibility in operation.