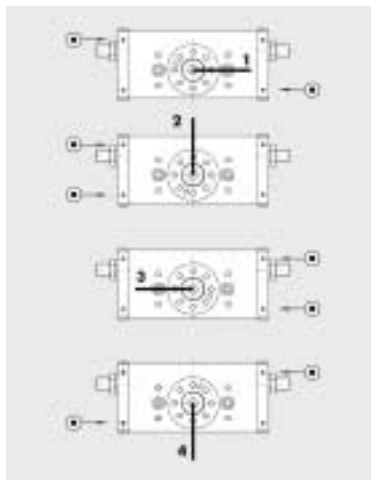


The new R3 series is ready Multi-functional, rotating actuators

The rotating pneumatic actuators are a central and critical point in automation systems and there is a great deal of difference in stress with respect to linear actuators.



In fact, the kinetic energy of the masses in rotation must be absorbed at the end of the movement by elements located very close to the rotating axis.

“The news? A double pneumatic-feed system, in double sensor cable, a large passage hole, a version with several positions,,

These devices are suddenly required to absorb large amounts of energy in reduced spaces and at very low linear speeds. This means that extremely high forces develop.

Recently, Metal Work improved and expanded its range of R3-series rotating actuators. Taking into consideration the fact that the critical point is the pinion gear, the teeth of which break under excessive stress, the unit was re-sized, leading to an increase in the tooth module and to a correction of the involute's primitive diameter. A new surface treatment was also introduced, leading to enormous increase in the breaking load when the tooth flexes.

Support of the pinion shaft is entrusted to double-shielded ball bearings that are stronger than those used previously. These actuators, for which two versions of the rotating axis are planned (shaft or flange) are mounted on machines where accessibility is particularly limited. For this reason, the new R3 series allows connections from several sides, so the customer uses the most convenient part. The pneumatic connections are duplicated towards

the axis and towards the sides, while the sensor cables are doubled and located on both sides.

The version with external hydraulic

decelerators has an interesting innovation - attached to an arm integral with the body, they act against a mechanical stop locked at the rotating flange.

With this version, which is equipped with hydraulic decelerators that act directly on rack pistons, the kinetic energy allowed is 5 to 8 times more

than that with the traditional version. The new R3-series includes a version with 3 or 4 positions, making it truly innovative.

The maximum rotation angle is 275°. Each of the positions is adjustable, and the user can therefore decide the values according to requirements. This version is also much smaller.



A new accessory for compressed-air units An innovative and practical pressure switch for pneumatics

Metal Work has developed a new pressure switch for compressed-air units. In these applications, the pressure

“The miniaturisation, the use of strong, non-toxic technopolymers, its attractive design and its ease of use make it symbolic of the new approach to pneumatic design,,

switch is normally used as a safety measure, sending a signal to the machine's control unit if the pressure drops. It is therefore essential that the signal be given even if the pressure switch has been inactive for long periods of time. As a pneumatic actuator, the new Metal Work product

uses a piston with a large diameter, so that it will move even with small pressure variations and so that it does not react when the gasket is glued in place. The pressure switch is supplied integrated in the Skillair-line air intakes. This means that the assembly position inside the unit is free, thanks to Skillair modularity and that the unit can be oriented upwards or downwards. In addition, an extra air-

intake is available. Overall, the high degree of protection means that the group can also be installed in dusty areas or in places where water sprays in all directions.

The pressure switch, which signals both opening and closing, has three electrical contacts. The electrical

commutator accepts current up to 2 amperes and tension of 250 volts. It is guaranteed for 5 million commutations. Much attention was paid to simplicity of installation and regulation. The pressure switch, which is supplied pre-cabled with a 2.5-meter electrical cable (other lengths available on request), saves the user time. There are two pressure regulation systems, both very practical.

Once regulated, by pressing a control knob with a push-lock system, the device locks, avoiding calibration changes caused by accident or vibrations. In order to prevent the calibration being modified deliberately, the customer can opt for the anti-tampering version. After regulation, the operator presses the control knob which, from that moment on, can no longer be turned unless a special tool is used to unlock it. The miniaturisation, the use of



strong, non-toxic technopolymers, its attractive design and its ease of use make this pressure switch symbolic of the new approach to pneumatic design.