

## With HDM and CM, two revolutionary series of intelligent and expandable valves. The new winning cards in the great Multimach family

Many types of applications are now possible in the same system. With major advantages.

The family of Multimach valves is proud to announce two new and extremely innovative series: HDM (Heavy Duty Multimach) and CM (Clever Multimach). But why did Metal Work feel the need to increase the range, designing valves that have the same pneumatic performances as the current Multimach valves? According to Giorgio Guzzoni, chief engineer, "the fact is that valve islands are the heart of pneumatics for automation, one of the principal areas in which a manufacturer's ability to match up to both market demands and the most innovative competitors is measured. But not all customers have the same requirements and not all competitors offer the same solutions. In recent years, when presenting Multimach to customers,



our company has met with admiration and success. It has also, however, met those who have requested certain characteristics that Metal Work was not in a position to provide. With the extensive increase in the Multimach range, it will now be very unlikely that a customer will be unable to find the right solution for every one of its needs", Guzzoni underlines. "In other words, if, yesterday, our sales staff had an ace up their sleeves, from now on they have three winning cards". What are the performances that make Multimach unique in the market? "Above all, the incomparable modularity, thanks to which valve islands can be assembled on the basis of a minimum of one, by simply adding or removing valves,

without needing to replace any components", explains Guzzoni. "All that is required for the operation is to unscrew two threaded fixing pins. And then, the integration: each valve includes the connections, the electrical contacts, etc. There is no need for a pneumatic base, because the valve body also includes the air passages for the

**"With the expansion of the Multimach range, each customer will find the right solution for every need",**



following valves. In the Multimach island, valves having different capacities can be freely inserted, beginning from 200 NI/min for a 4-mm diameter tube up to 800 NI/min for an 8-mm diameter tube". According to Guzzoni, the new HDM-

and CM- series have all of the basic performances of Multimach valves and use the same "motor", that is the same spools, gaskets and controls, but are fundamentally different when it comes to the electrical and application aspects.

### The special qualities of the two series of valves. The island grows according to need

The new HDM, Heavy Duty Multimach, series is intended especially for applications that require particular mechanical sturdiness from the island. Each valve is enclosed in a protective shell of reinforced technopolymer that gives maximum protection against blows and infiltration of dirt.

The external form is so clean and rounded, without any niches or cavities, that the HDM is ideal for applications in the alimentary field, where frequent washing, without residual deposits, is required. Thanks to contacts, the electrical connection between the valves occurs automatically when the valves are aligned.

The new CM, Clever Multimach series, has all of the characteristics of HDM, with the addition of intelligence and expandability. In fact, a chip on each valve manages the signals and diagnostics, indicating if the control is active, if a contact has been interrupted, if a pilot has short-circuited.

The CM island also has an extremely interesting capacity for expansion, enabling it to manage, in addition to electrical valves, also input such as from cylinder sensors. Input-management modules are provided by means of connectors integrated in the island.

The axis of the connectors is parallel to that of the pneumatic connections, allowing cables and tubes to be arranged in an orderly manner and

with minimum space. For those who would like to subdivide the island into two in order to arrange the valves closer to the actuators, Clever Multimach is ideal, because the two islands can be connected with a simple cable for serial transmission. The electropilot has exceptional performances: the valve is activated with a speed-up electronic system,



which supplies current peak for a few milliseconds before stabilising at very low power. The device guarantees a double advantage: on one hand, a record response time in operation for the type of valves adopted; on the other hand, minimal absorbed power and no heating. Colour has been used in order to distinguish the Metalwork products.

Hence, Multimach is bright grey (the classic bright cream-grey of the Metal Work valves), Heavy Duty Multimach is black, while the Clever Multimach is orange.

"But, we didn't stop here", points out Guzzoni. "Aware that we also need to assist the customer during the choice, sizing and design phases, we will develop a number of simple but very effective software tools, from the so-called choice graph to configuration, from the solid model to multimedia instructions. This way, the client is guided to the choice of the type of island most suitable for its needs, referring to a virtual graph on which, by answering a series of questions, we arrive at a definition of the best product for the customer.

basis of the list of valves required, the complete description of the Multimach island is generated, along with the list of codes involved.

The configuration provides output that yields a three-dimensional plan of the valve island, and, finally, with the help of drawings, photographs and animation, we are able to explain how to carry out assembly and maintenance".