

2008 Products

Solenoid valves series Minimach: now even smaller

The trend to energy saving provides benefits in terms of heat generation and dimensions of electric organs, with the Metal Work products in the forefront.

The Metal Work **valve series** called Mach has been expanded with a new entry, the smallest of all, therefore called **Minimach**.

Nominal thickness is 10 mm, but the actual construction is 11.2 mm so that also miniature fittings for 6 mm pipes can be mounted, as they have a diameter of 11 mm approximately. Length and height have been minimized, with a 30% reduction as compared to Mach 11 series. The construction solutions are based on the proven Mach family.

The aluminum body with anti-corrosion alodine treatment and painting delivers higher sturdiness and durability as compared to technopolymer solutions.

The FKM seals are compatible with all oils used in compressors or utilities. The solenoid pilot only requires 0.6 W to be driven. Metal Work

is also developing a version with 0.2 W power.

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A very simple solution that allows the customer to select the fitting's diameter and orientation freely. The available versions include 5/2 mono-stable or bistable, 5/ with closed centers, open centers, pressure centers and multiple bases of anodized aluminum.

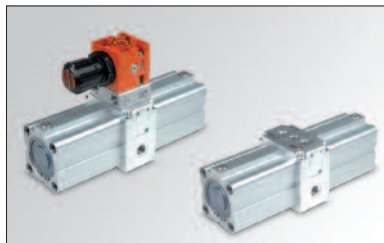
Metal Work also offers a normally open or normally closed 3/2 version. This valve is even smaller and the corresponding aluminum multiple base matches its compact dimensions.



Air-air pressure multipliers: easy to use

Often, higher pressure is needed than the values delivered by the compressed air network. Sometimes it is required to carry out tests on components; sometimes in plants where most users operate at low pressure and a few at high pressure, so - for cost efficiency and energy saving considerations - it is advisable to dimension compressors for low pressure and increase it only when necessary; sometimes you have to compensate for dimensioning errors: if a pneumatic actuator does not deliver enough strength and it cannot be replaced with a larger bore model, you can increase operating pressure. Higher pressure can be useful only for one of both cylinder chambers.

To respond to these needs, Metal Work has developed a **line of air-air pressure multipliers** characterized by easy installation and operation. Just connect the low pressure air supply,



with a value between 2 and 10 bar, adjust the pressure value through the regulator handle, and high pressure will be delivered to the supply connection. The maximum multiplication ratio is 2, i.e. if incoming air is set to 6 bar, it will be increased up to 12

bar. Two sizes are available with different flow capacities. Besides the version with pressure switch, there is also a version without it.

The latter can be used when it is not necessary to adjust the pressure supply value accurately, as well as when the multiplier must be controlled remotely. In this case, the regulator is purchased separately and installed in the control panel; the adjusted air pipe runs to the multiplier, which is mounted on the machine.

The multiplier (or booster) is entirely pneumatic and can be used in environments where electric systems are inadequate or forbidden.

And the family keeps growing...

In 2007 Metal Work developed many more products, and even more are being completed in 2008. This is just a brief summary, although the products mentioned are not less important.

The ISO5599 valves size 3 add to size 1 and 2, to be used when large flow rates are required, especially in the automotive industry. The **valve terminals series HDM**, with AS-Interface bus connection and Profibus-DP interface, expand the fieldbus offer associated to Multimach valve families. Other news include:

- **compact cylinders series two-flat**, equipped with a special rod that has two planes (two-flat) to prevent rotation;
- **valves for progressive inline startup**, to increase flow rate gradually when a plant is started;
- **Teflon-coated fittings**, where the conical thread is covered by a PTFE layer for pneumatic tightness.



Easy Scheme: a mini-CAD to design pneumatic diagrams

In collaboration with a supplier of IT solutions, Metal Work is developing a new mini-CAD specifically conceived for pneumatic companies. The product, called **Easy Scheme** consistently with the existing Easy Sizer, **allows to design pneumatic schemes and functional diagrams easily and quickly**; it can also generate automatically part lists for the components used in the diagram. The user can select sheet sizes from A4 to A0, with landscape or portrait orientation, and create his own custom diagram. Functions include the main graphical elements (lines, circles, ellipses, rectangles...), all editable in shape and color. Notes, texts and labels can be added and modified. The user can design using a snap grid with customizable dimensions. Easy Scheme can import graphical files in dxf format and export files to dxf and tiff.

Over 700 pneumatic symbols...

The program comes with a library including over 700 pneumatic symbols drawn to ISO 1219-1 standard. Efficient tools are available to create new symbols, also starting from existing ones. The symbols are picked from the library and placed on the worksheet with a very intuitive pick-and-place method; then they can be moved, rotated or mirrored as required.

The symbols can be connected to each other automatically or by manually drawing lines. In most cases, a symbol can be associated to a component from the electronic catalog of Metal Work products (e-catalog): in this way, the symbol is added to the part list with the code and description of the selected component.

Easy functions to create drawings and part lists

With Easy Scheme you can automatically generate a part list including all the components used in the diagram. New items can be added manually to the part list, or existing items removed. Each part list can be incorporated in the drawing or exported to a text file and then edited in a spreadsheet.

To check possible mistakes, a specific function checks that the circuit has no open connections and that there are no overlapping symbols. In addition, the program has a dedicated tool for the simplified creation of functional diagrams, i.e. phase-state diagrams that can be inserted into the drawings. Easy Scheme offers a clear and exhaustive hypertext guide where the user can find all information to guide him step-by-step to the creation of the project. The first release will be available in Italian and English.

