

A CD with full details in English and Italian is now available for all Metal Work product users.

Each product is identified by code, with a description, technical data, photograph, dimensions, and a reference to the relevant page in the catalogue.

The product can be found as follows:

- by code
- by feature (e.g. identification of the units operating at a maximum pressure of 15 bar and a minimum temperature of -10°C)
- by keyword, identifying all the items containing the selected word or works in the description (e.g. "ISO cylinder" and "flange", or "valve" and "bistable").
- by family of product (e.g. select valves under products, series 70 under valves, pneumatic control under series 70).

The sub-assembly of the products selected can be displayed in a code-description table or a photographic table.



The search procedure for cylinders is different as it is based on a configurator. Following a guided menu, the user selects the series (e.g. ISO 6432), the type (e.g. double-acting), the execution (e.g. standard), the bore (e.g. 20 mm), the stroke (e.g. 100 mm), the material (e.g. stainless steel rod) and the gasket (e.g. polyurethane). This enables the system to define the product code.

The CD also contains two programs, CAD LIBRARY and EASY SIZER, which are described in the following pages.

System requirements:

- Intel and other compatible systems
- Pentium microprocessor
- CD-ROM Multi-session drive
- Video system with 800 x 600 resolution, 65,000 colours or more
- Windows 2000 compatible mouse
- Windows 95 – 98 - NT4.0 – Windows 2000 operating system
- 32 Mb RAM
- Windows page compatible printer (optional)
- Sound Blaster or other compatible audio system (optional)



CAD LIBRARY

The CAD Library is not only a smart library of cylinder drawings but also a practical tool for design, sizing and data search.

With the Consultation pages it is easy to identify the cylinder required. You can carry out the search either by selecting the version, type and stroke via pull-down options or by entering the cylinder code.

A table is displayed showing the main dimensions and the following commonly used technical data is automatically calculated and displayed:

- specific mass and length for the stroke selected;
- useful thrust and traction force referring to the pressure selected (for single-acting cylinders, the force exerted by the return spring is also specified);
- air consumption per cycle.

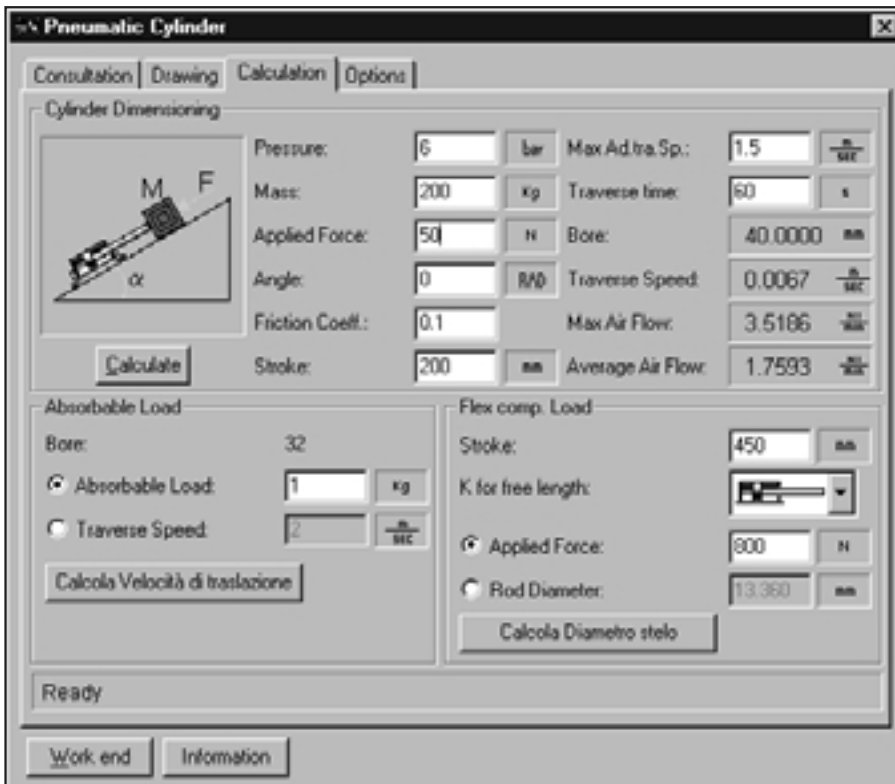
Bore	Rod	Rod Threading	Rod Key	Connectio	Length	Mass	Thrust	Traction	Consumption
mm	mm		mm		mm	kg	kgf	kgf	liters
32	12	M10x1,5	10	G1/8	172	0,5	4,6	4,0	0,1
40	16	M12x1,5	13	G1/4	189	0,8	7,8	6,5	0,1
50	20	M16x1,5	17	G1/4	205	1,2	13,0	10,9	0,2
63	20	M16x1,5	17	G3/8	220	1,5	21,8	19,6	0,3
80	25	M20x1,5	22	G3/8	247	2,9	36,9	33,4	0,5
100	25	M20x1,5	22	G1/2	262	4,1	60,1	56,3	0,8
125	32	M27x1,5	27	G1/2	312	6,7	97,2	90,8	1,2
160	40	M36x2	32	G3/4	356	13,6	164,5	154,2	1,9

The program contains drawings with the four main views of all Metal Work cylinders and their accessories. A smart programming system allows over 9,000 drawings to be stored in a relatively small amount of space. Pull-down menus are available to select the piston rod and body mountings, the limit switch sensors and counter-hinges.

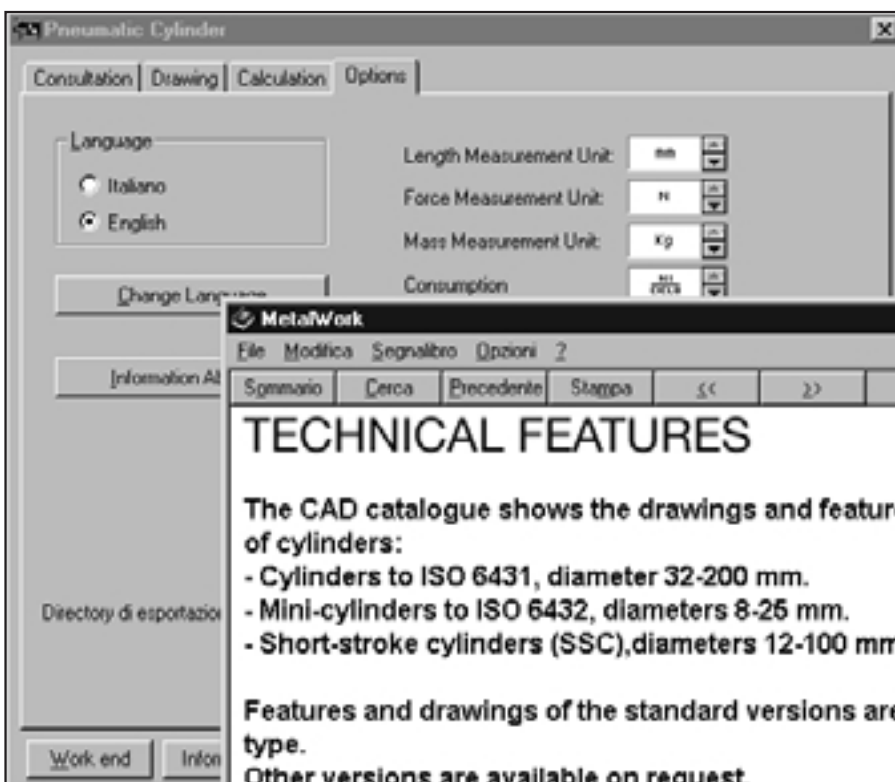
The program automatically positions them on all the cylinder views and updates the image.

By means of special commands, you can set the angle of the counter-hinges and position the intermediate hinge along the jacket.

In the graphic we have made a compromise between completing the drawing and reducing in the number of geometric elements.



The program makes cylinder sizing calculations using sophisticated algorithms that take into account internal friction, acceleration and braking transients and so on. An important point to note is that the cylinder bore meets input requirements, and the traverse speed, the maximum air flow required along the stroke and the average values are also calculated. Other checks, such as absorbable load and peak load, can be carried out.



The program generates a list containing a description, the codes and the quantities referring to the cylinder and accessories selected. Numerous other technical data are stored, including the work limits and the cylinder materials. There are also instructions on how to use the program, although everything is so user-friendly that you don't really need to study anything.

There is a choice of language, and also unit of measurement - international, technical or British.

EASY SIZER

System for the automatic sizing of components in compressed air circuits Easy sizer was developed for designers who do not have the time or specific knowledge to size compressed air circuits optimally. Today there is specific literature containing fairly complex formulae that put off the majority of users. There are also computerized programs that are designed to provide a theoretical solution to complicated

sizing problems. So anyone designing simple compressed air circuits tends to select components at random. The result is that the system is often:

- oversized, with a waste of money and space, or
- undersized, with reduced performance, or
- partly oversized and partly undersized, with means high costs and low performance.

With Easy Sizer the user defines a minimum number of input data and the program selects the most suitably sized cylinders, valves, pipes, fittings and air treatment unit.

1. SIZING A COMPRESSED AIR CIRCUIT (screen A):

The components of a typical circuit are selected – valve, pipes, fittings, cylinders and FRLs. The main input data are :

- mass to move, forces applied to the cylinder;
- stroke;
- stroke time;
- valve input pressure;
- length of pipe from valve to cylinder;
- number of fittings mounted between valve and cylinder.

The program uses a sophisticated algorithm that takes into account the current pressures and speeds and gives the following outputs:

- maximum and average flow rate;
- cylinder bore;
- nominal flow rate of the valve;
- recommended types and sizes of valve;
- pipe diameter.

Descrizione	Valore	Unità di misura	Note
Portata media	92,5	Nl/min	
Portata massima	112,3	Nl/min	
Velocità media del pistone	0,2	m/s	
Alargaggio del cilindro	40	mm	
Diametro tubo (est.int)	6/4	mm	
Valvola Mach 11			
Portata	200	Nl/min	
Conduttanza	64	Nl/minbar	
Rapporto critico	0,34		
Valvole alternative			
Serie 70 1/8"			
Serie 70 1/8" su base			

2. SIZING AN AIR TREATMENT UNIT (screen B):

The sizes of the components in the unit are selected.

The main input data are:

- mains supply and operating pressure;
- flow rate;
- list of components in the unit – filter, regulator, lubricator, etc;
- length of pipe from unit to point of use.

The program gives the following outputs:

- air treatment unit - recommended types and sizes;
- pipe diameter.

Descrizione	Valore	Unità di misura
Gruppo Trattamento Aria	6xBar 400 2"	
Diametro interno del tubo:	100	mm