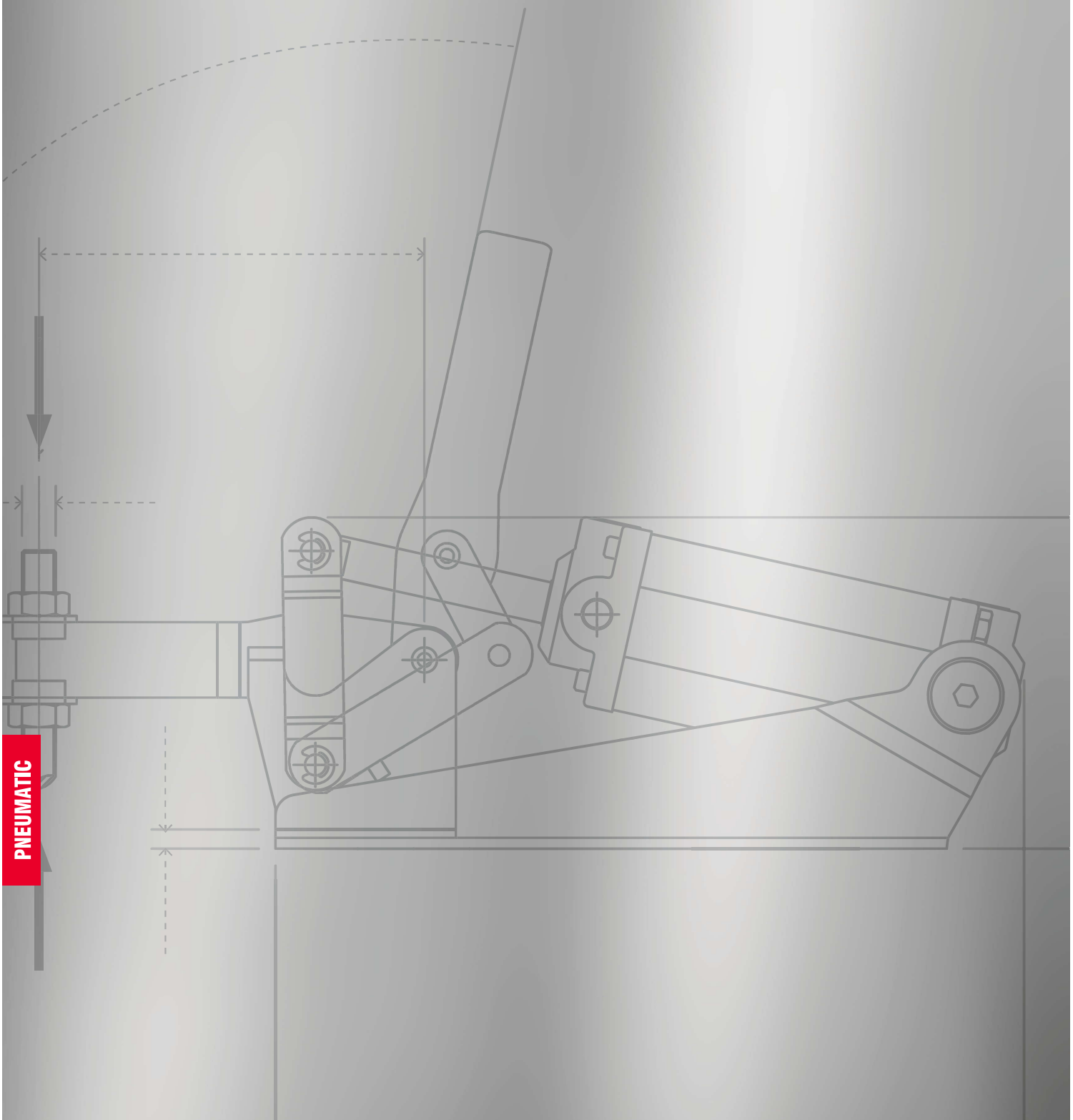
PNEUMATIC SERIES



PNEUMATIC

Here you can download
2D and 3D CAD drawings
of all products.

Pneumatic clamping tools represent an innovative and highly effective solution in the world of industrial assembly and mechanical engineering. They are capable of replacing the manual intervention of the operator for opening and closing with the operation of an appropriate pneumatic cylinder thus offering a variety of advantages.

Speedy Block's pneumatic clamping tools are available in four different executions:
LIGHT SERIES: components in case-hardening sheet steel. Rotation pivots and bushings in hardened and ground steel. Clamping forces Fs from 38 to 552 daN and holding forces Fh from 70 to 2500 daN.

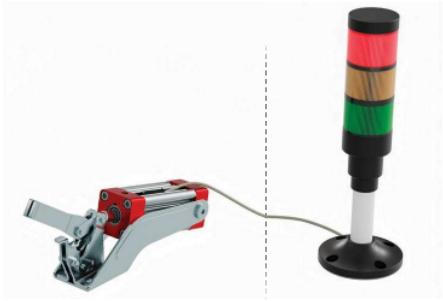
HEAVY SERIES: Spheroidal cast iron base, black painted. Additional parts made of galvanized (weldable) steel. Rotation pivots and bushings in hardened and ground steel. Clamping forces Fs from 320 daN to 432 daN with Fh from 1000 to 2000 daN.

REINFORCED HEAVY SERIES: Base made of black phosphated steel. Rotation pivots and bushings in hardened and ground steel. Double-acting cylinder with adjustable shock absorption. The tools in this series are constructed so that they can be easily disassembled to facilitate possible reworking of the parts according to the needs of use. The support pins are axially secured with seeger rings. Clamping forces Fs from 118 daN to 317 daN with Fh from 220 to 850 daN.

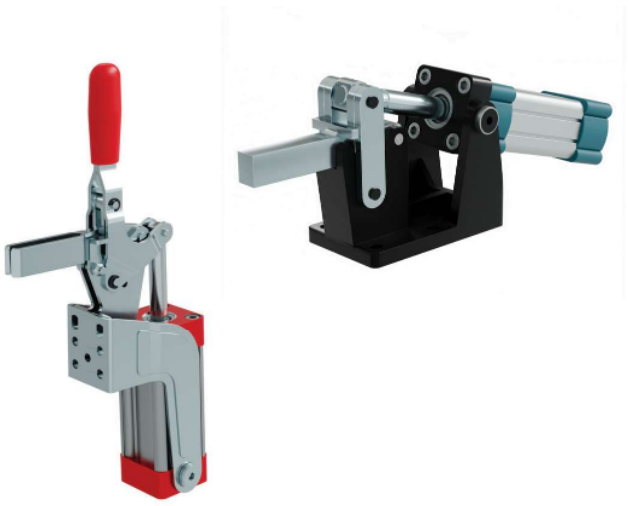
COMPACT SERIES: The toggle mechanism is completely housed within an aluminium body lightweight, which protects it from any contamination. The Clamping with continuous angle adjustment of the opening ensures precise and backlash-free positioning. Clamping forces Fs from 50 daN to 270 daN with holding forces Fh from 80 to 1041 daN.

FEATURES OF SPEEDY BLOCK PNEUMATIC CLAMPING TOOLS

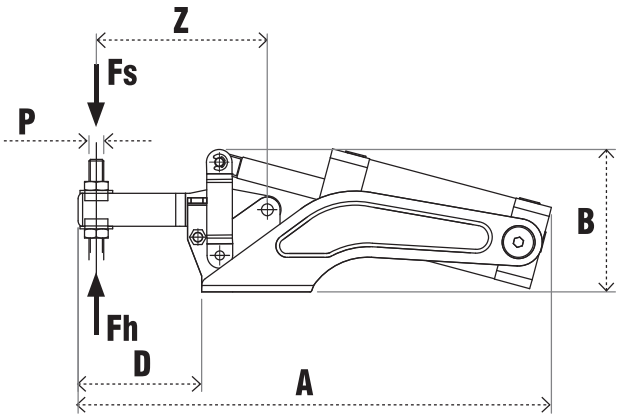
1. PRECISION IN TIGHTENING: Accurate adjustment of air pressure allows meticulous control of the tightening force, minimizing the risk of damage due to excessive pressure.
2. RELIABILITY AND CONSISTENCY: They provide consistent performance, ensuring uniform and repeatable tightening, crucial for the structural stability of the assemblies.
3. OPERATIONAL SPEED: The use of compressed air significantly accelerates tightening processes, enhancing productivity and reducing downtime in production.
4. VERSATILITY: Adaptable to different sequences of closures and openings, allowing easy access from multiple locations.
5. IMPROVED SAFETY: Thanks to magnetic cylinders and sensors, the correct tightening position can be monitored and operated remotely without the need for direct contact.



7. DURABILITY: Made of high quality materials, they are able to withstand demanding operating conditions and wear.
8. REDUCTION OF OPERATIONAL FATIGUE: Tightening automation allows operators to focus on more critical tasks, improving the quality of work and reducing fatigue.



The choice of the correct pneumatic clamping tool depends first of all on the type of movement and assembly required, while the most suitable size depends on the clamping forces Fs and holding forces Fh required.
These maximum allowed data are indicated in the tables of the different series.

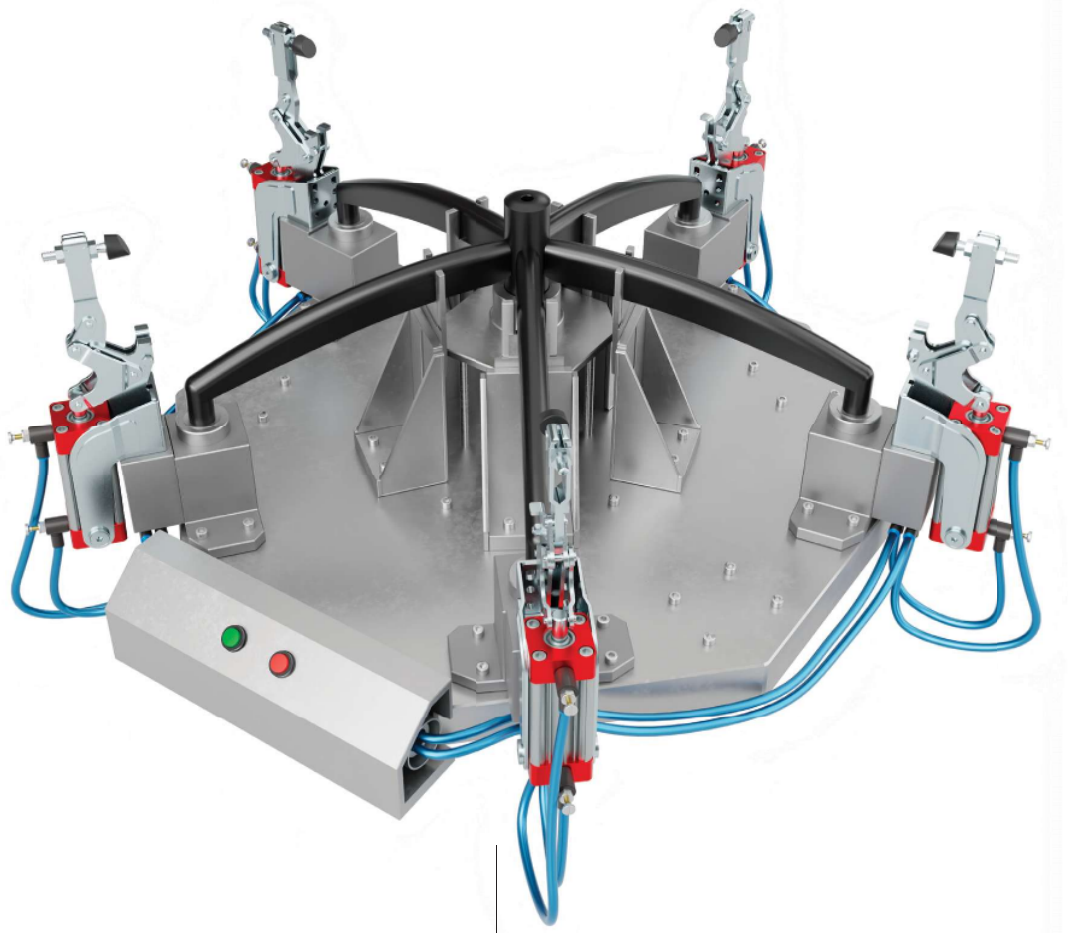


CLAMPING FORCE FS

It is intended as the force that the tool is able to express at the end of the clamping lever during the closing phase. Obviously it depends on the operating air pressure.

HOLDING FORCE FH

It is intended as the maximum resistant force that the closed tool is able to absorb at the end of the clamping lever without undergoing permanent deformation.
The force Fh depends solely on the dimensions and geometry of the tool.



THE APPLICATIONS OF SPEEDY BLOCK PNEUMATIC CLAMPING TOOLS

With a wide range of models available, which vary according to power, size and technical specifications, the Speedy Block pneumatic clamping tools are perfectly adapted to the needs of each project, offering tailor-made solutions that significantly improve production processes. These products combine the advantages of knee locking (even in the event of a drop in pressure, the tool remains closed) with the possibilities offered by pneumatics

Applications for pneumatic clamps

- **ASSEMBLY:** They can be used to hold the components together during the assembly process.
- **FIXING AND TESTING:** Can be used to fix workpieces in place for testing and inspection.
- **FOOD INDUSTRY:** They are used in the food industry to hold components together during processing and packaging.
- **AUTOMOTIVE INDUSTRY:** Pneumatic clamps are used in the automotive industry for a variety of activities, including welding and assembly.

GENERAL NOTES FOR THE USE OF SPEEDY BLOCK PNEUMATIC CLAMPING TOOLS

- The use of a filter - reducer - lubricator unit is essential for a good prolonged operation of the cylinder.
- To ensure a prolonged life of the mechanical parts, it is advisable to equip yourself with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.
- On heavy series cylinders (1000-2000/EPM/EPVM) these flow regulators are already inserted in the heads and can be adjusted by means of a screw placed next to the air supply; for all other cylinders a pneumatic brake is inserted in the rear head to slow down the stroke of the same when opening.

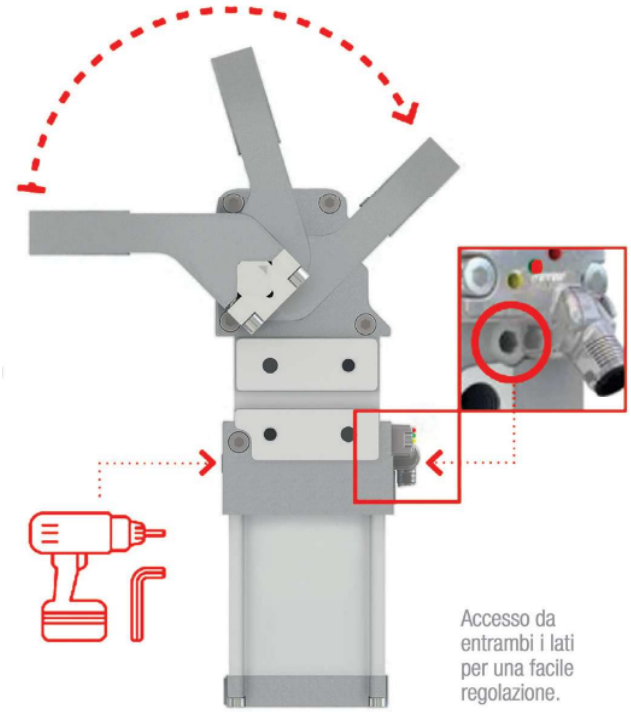
PNEUMATIC CLAMPING TOOLS
POWER CLAMPS SERIES

Pneumatic Power Clamps are designed with a small aluminium body that incorporates the components of the clamping mechanism. This structure offers protection against contamination from welding splashes, debris and refrigerants, allowing the clamps to operate effectively even in extreme working conditions.
They are ideal for the automotive industry, but their versatility makes them suitable for any type of locking application.

MAIN FEATURES:

- **CONTINUOUS ADJUSTMENT OF THE OPENING ANGLE:** Thanks to a patented system integrated into the tool body, the opening position can be easily adjusted and is always repeatable.

- **EASY ACCESS FOR ADJUSTMENT:** Adjusting the opening can be done without disassembling the clamping lever from the tool by using built-in access keys on both the rear and front sides of the body, thus ensuring the fastest installation times on the market.

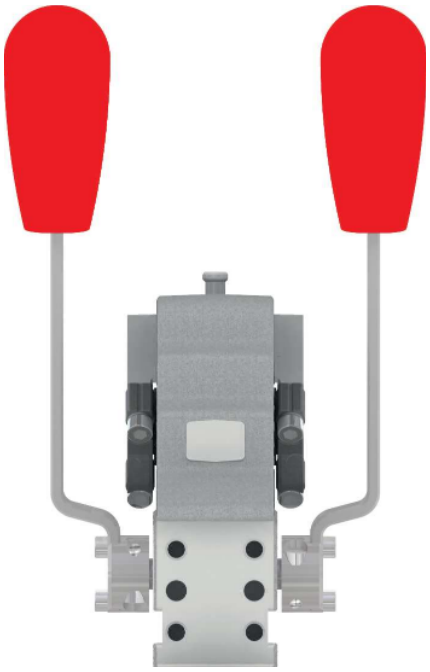


- **LIGHTNESS AND COMPACTNESS:** Designed to be extremely light and easy to handle without compromising strength and durability.

- **ADVANCED PROTECTION:** Maximum resistance to external contamination and extremely harsh working conditions.

PNEUMATIC

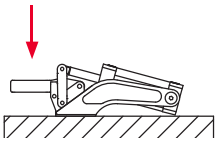
- **EFFICIENCY OF THE DAMPING SYSTEM:** Reduces noise, cycle time, and impact forces, improving the duration and accuracy of the positioning without backlash.



- **ROBUST AND VERSATILE MANUAL LEVER:** Innovative design that requires minimal effort for irreversible locking. The lever can be applied on both sides of the tool.

- **ELECTRONIC SENSOR:** All models are equipped with an electronic sensor, resistant to magnetic fields and with a metal body, which increases the reliability of operations.

- **STRUCTURAL AND FATIGUE RESISTANCE:** Tested up to 3 million cycles, these tools guarantee excellent durability and reliability.



AP - EP

PNEUMATIC TOGGLE CLAMPS

Base, levers, and riveted pivots:
Galvanized steel.

Rotation pivots and bushings:
Hardened and ground steel.

Executions:
- **A:** Open clamping lever with two folded washers, included in the supply.
- **E:** Full clamping lever and bolt retainer, included in the supply, to be welded in the desired position and angle.

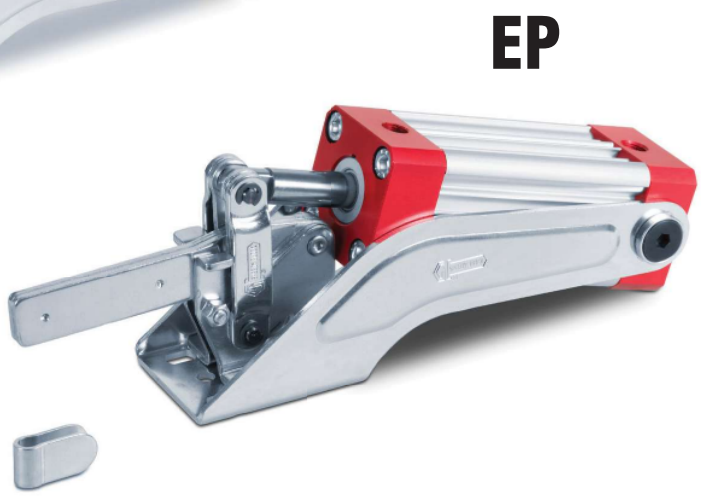
Pneumatic cylinder:
Aluminium, magnetic type, with pneumatic brake in the rear head.

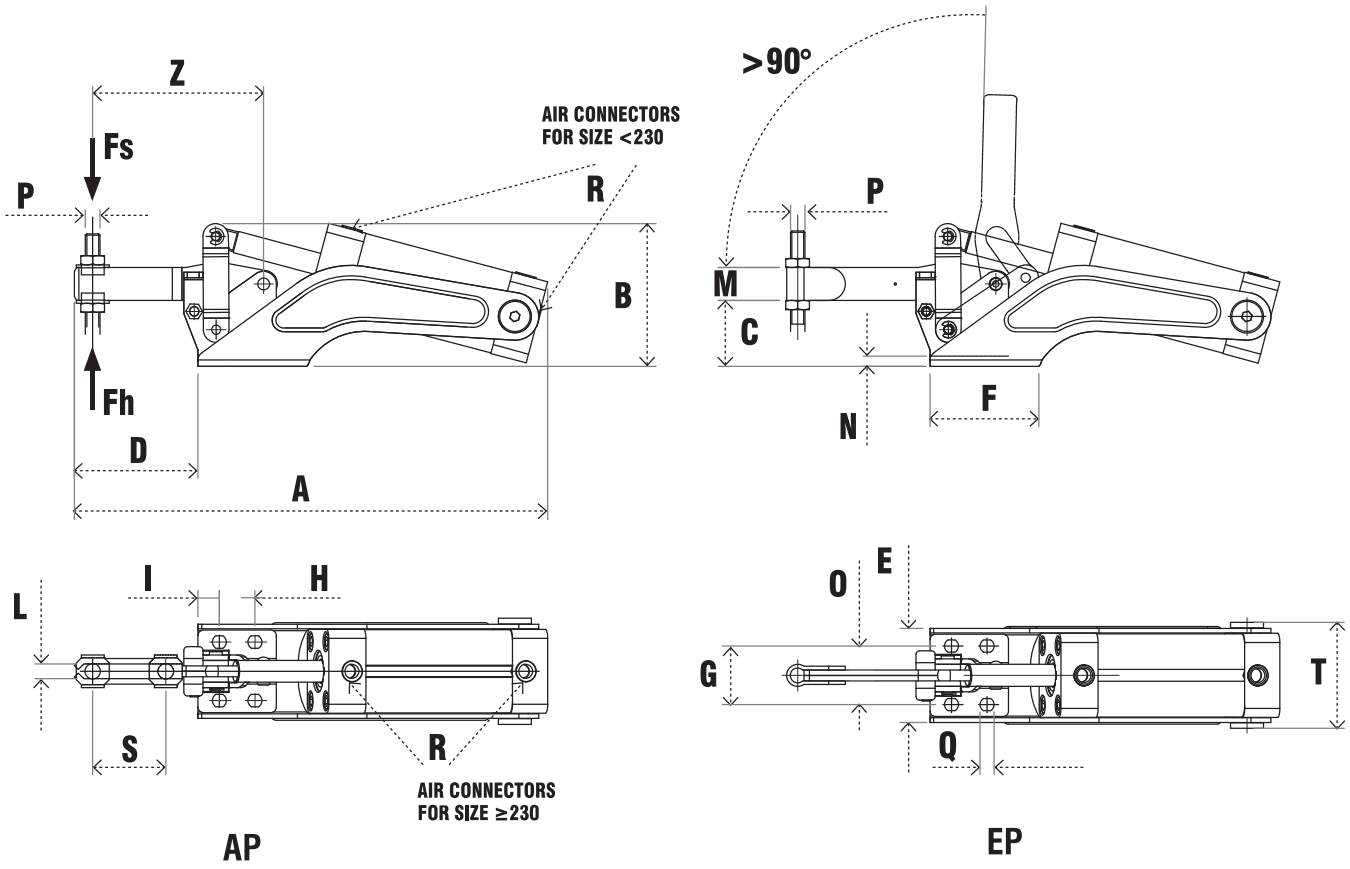
Operating pressure:
6 bar.

Maximum temperature:
70°C.

Features and applications:
A filter-lubricator-reducer assembly is recommended for proper cylinder operation.
To ensure a prolonged life of the mechanical parts, it is advisable to be equipped with appropriate flow regulators and to calibrate the speed of execution of the movements starting from a low speed and gradually increasing the air flow.
The values of the clamping force Fs shown in the table were detected at a pressure of 6 bar.
A special grease is placed between the contacting surfaces during assembly.

Accessories (to be ordered separately):
- Spindles (see page 152).
- Lever crossbars for AP (see page 155).
- Safety sensor type AU570 (see page 143).





Code	Description	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	Z	Fh (daN)	Fs (daN)	Gr.
A0400	75/AP	162	54	22	38	40	40	24	14.5÷16.5	6.5÷7	5.2	11	4		M5	4.5	M5	20	47	56	75	38	400
A0402	75/EP	163	54	22	39	40	40	24	14.5÷16.5	6.5÷7		11	4	4	M5	4.5	M5		47		75	38	400
A0408	130/AP	195	66	30	50	47.5	45	27÷29	12.5÷19	8÷11.2	6.2	16	5		M6	5.6	1/8"	28	51	71	105	80	650
A0410	130/EP	196	66	30	51	47.5	45	27÷29	12.5÷19	8÷11.2		16	5	5	M6	5.6	1/8"		51		105	80	650
A0416	230/AP	259	78	36	67	52	55	32	18.5÷20.5	11.5÷12	8.2	18	6		M8	6.7	1/8"	40	58	94	200	118	1130
A0418	230/EP	261	78	36	69	52	55	32	18.5÷20.5	11.5÷12		18	6	6	M8	6.7	1/8"		58		200	118	1130
A0428	330/AP	308	96	46	78	74	64	45÷46	29÷32	8.5÷10.5	10.5	22	7		M10	8.6	1/4"	45	70	110	240	173	1850
A0430	330/EP	310	96	46	80	74	64	45÷46	29÷32	8.5÷10.5		22	7	7	M10	8.6	1/4"		70		240	173	1900
A0440	430/AP	364	115	55	89	73	78	45	32	14	12.5	26	8		M12	8.5	1/4"	48	82.5	124	400	325	3300
A0442	430/EP	365	115	55	90	73	78	45	32	14		26	8	10	M12	8.5	1/4"		82.5		400	325	3300