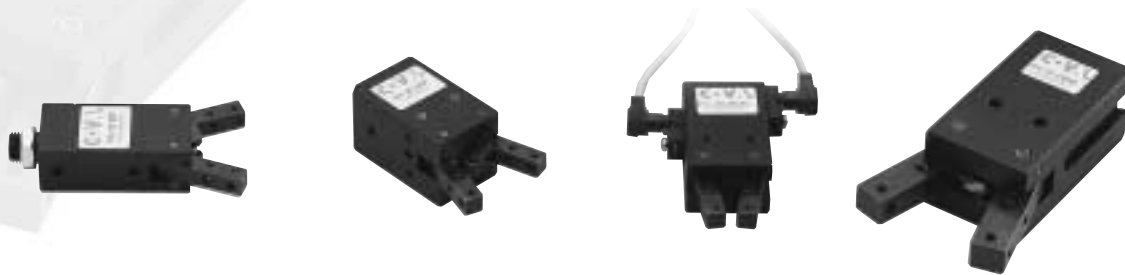


Angular jaw type clamps, series PA



Applications:

Angular jaw type clamps in series PA are widely used in robotics and plastic technology. In a more general context, they are used on all types of manipulator.

They are especially recommended for injection moulding press unloading robots for parts or sprues.

A clamp should be selected with a theoretical force at least equal to twice the effective force required.

The clamping forces specified in the table below are theoretical forces and are given for a pressure of 6 bars.

The gripping force is inversely proportional to the distance between the gripping point and the bearing point.

For example, for a clamp of type PA 20 with a gripping point 25 mm away from the bearing point, the clamping force will be:

$$F = 10.1 \text{ (table below)} \times 15/25 = 6.06 \text{ kg.}$$

The weight of the objects to be manipulated is to be added to the weight of the clamp and must not exceed 1/20th of the force exerted on the gripping point.

It is possible to adjust the opening and closing speed of the fingers with the compressed air regulator.

DE: dual-action clamp operated by compressed air

SEF: closing by compressed air, opening by return spring (single action on closing)

SEO: opening by compressed air, closing by return spring (single action on opening).

Characteristics:

Models	Clamping force in kg	Min. pressure in bars	Weight in g	Optional magnetic sensor
PA 16 SEF	4	2.5	120	
PA 16 SEO	5.2	2.5	120	
PA 16 DE *	5.5 to 6.5	1.5	120	
PA 20 SEF	7.5	2	190	Yes
PA 20 SEO	8.5	2	190	Yes
PA 20 DE *	10.1 to 12.2	1.2	190	Yes
PA 32 SEF	16.5	1.8	490	Yes
PA 32 SEO	19.5	1.8	490	Yes
PA 32 DE *	22 to 24	1	490	Yes
PA 50 DE *	52 to 60	0.8	1660	Yes

* The clamping force specified above is given in bars for a distance of 15 mm from the bearing point for models PA 16 - 20 - 32 and of 30 mm from the bearing point for models PA 50.

Specifications:

Compressed air	Filtered, lubricated or not
Maximum pressure	10 bars
Material	Anodized aluminium
Seal	Nitrile (NBR)
Heat treatment	On pins and fingers
Operating temperature	-10° to 70°C

PA

1

1: Models*
From PA 16 to PA 50

2

2: Actions
SEF Single-action on closing
SEO Single-action on opening
DE Dual action

3

3: Magnetic sensors
- None
M For PA 20 - 32 - 50