

Technology Offer CSIC/ME/023

## Pneumatic, monolithic and flexible valve for flow control in fluid circuits



**Resistant and flexible valve for pneumatic flow control in fluid circuits. Its monolithic structure prevents failures caused by defective parts, and is also cheap to produce and easy to install and replace. It can be used without the need for a direct electrical connection.**

### Intellectual Property

Priority patent application filed

### Stage of Development

Prototype developed and successfully tested in laboratory

### Intended Collaboration

License

### Contact

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### Market need

The flow control valves currently available on the market are generally made of metal and need of several parts to function. This makes them susceptible to mechanical failure or breakage, requiring a complete replacement when one of these parts fails. Additionally, due to the manufacturing materials and processes, they tend to be relatively expensive. This is why there is a need to have cheap and effective valves that can reduce or avoid the risk of mechanical failure.



### CSIC solution

This valve is manufactured in a single block, thus eliminating the possibility of mechanical failure of the parts, and allows controlling the main fluid circuit through a secondary pneumatic system (therefore avoiding the risk of fire in circuits with flammable fluids). The size and configuration of the valve can be easily adapted to each circuit's flow and pressure needs, and its manufacture is simple and cheap, making it a competitive alternative to valves currently available on the market.

### Competitive advantages

- Its monolithic design eliminates the risk of failure caused by broken parts.
- The use of a non-electric, pneumatic opening/closing control system allows it to be used in circuits with flammable fluids.
- It can be easily adapted to any pressure and flow requirements.
- Its manufacturing process is simple, fast, cheap and scalable.