

**OPEN FRAME
PROPORTIONAL CONTROLLER
SERIES OF**



OPEN FRAME PROPORTIONAL CONTROLLER FOR INDUSTRY 4.0



The **Open Frame Proportional Controller** provides closed loop control of flow, pressure, and position. It is designed for Industry 4.0 applications. The system is composed of two base modules: Head and Expansion that individually may be combined following the application needs.

Base functions

Flow control by using pressure sensors and calibrated orifices

- The Head module used alone allows the creation of a two-way flow control valve in a closed loop configuration.
- The use of the Head-Expansion combination allows the creation of a three-way flow control valve with the same performance.

Pressure control with a pressure sensor

- The Head module used alone allows the creation of two-way closed-loop pressure control.
- The use of the Head-Expansion combination allows a three-way closed-loop pressure control.

Closed-loop position control for pneumatic cylinders with a position feedback system

- The use of the Head-Expansion combination allows a closed loop position control.

System Solutions

All base functions may be combined to application solutions and communicate amongst each other via CANopen or IO-Link.

MAIN TECHNICAL FEATURES

Closed loop control of flow, pressure or position

Analogue, CANopen or IO-Link interface

Modular

BENEFITS



**Customised,
turnkey solutions**



Reduced set-up times



**Increase of efficiency
& productivity**

Applications

The Open Frame Proportional Controller can be easily configured to meet specific application needs, to provide the most efficient, turnkey solutions, thus reducing assembly times and system complexity. The different Head and Expansion modules can be combined and driven through simple serial communications, making the control of complex applications easier.

Typical applications could include the mixing of different gases, piloting different pressures in different parts of the machine, or the positioning of a pneumatic cylinder through a single control signal.



ANESTHESIA DEVICES

Control and mixing of gases on three channels and nebulisation on two channels, all integrated in one system, controlled in CANopen.



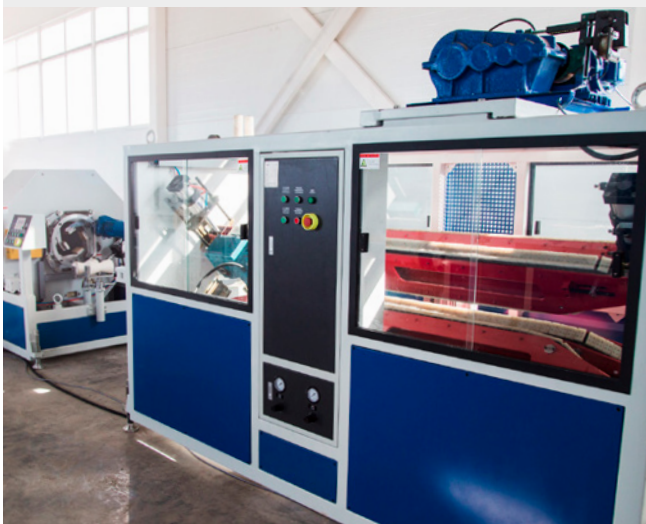
LASER CUTTING MACHINES

High precision pressure control to monitor the position of the laser reflection mirror.



BLOW MOULDING MACHINES

Precise flow control for blow moulding machines or plastic extrusion machines.



DRINKS DISPENSERS

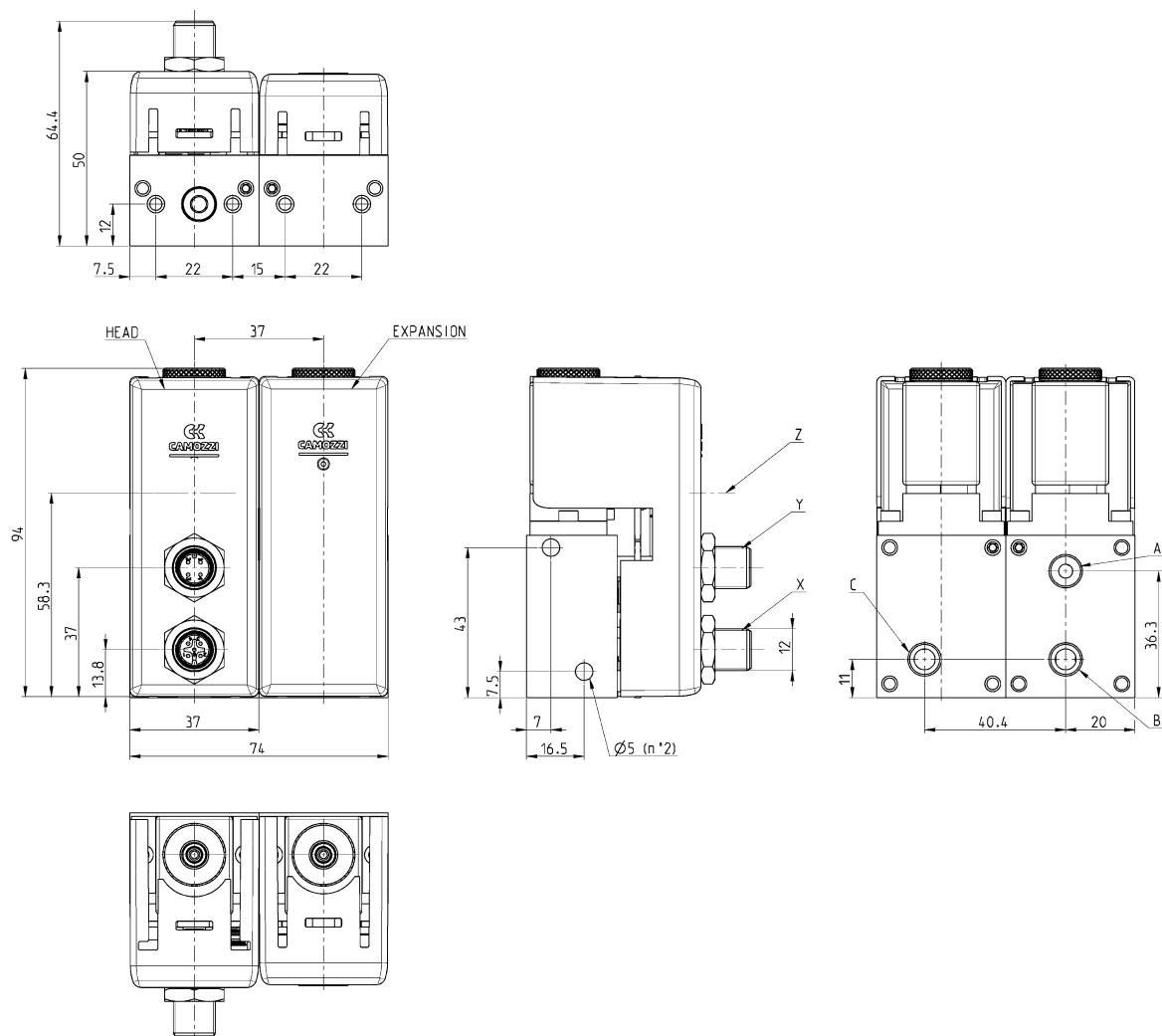
Combination of pressure control, fluid pumping and pressure control for carbon dioxide lines.



General data

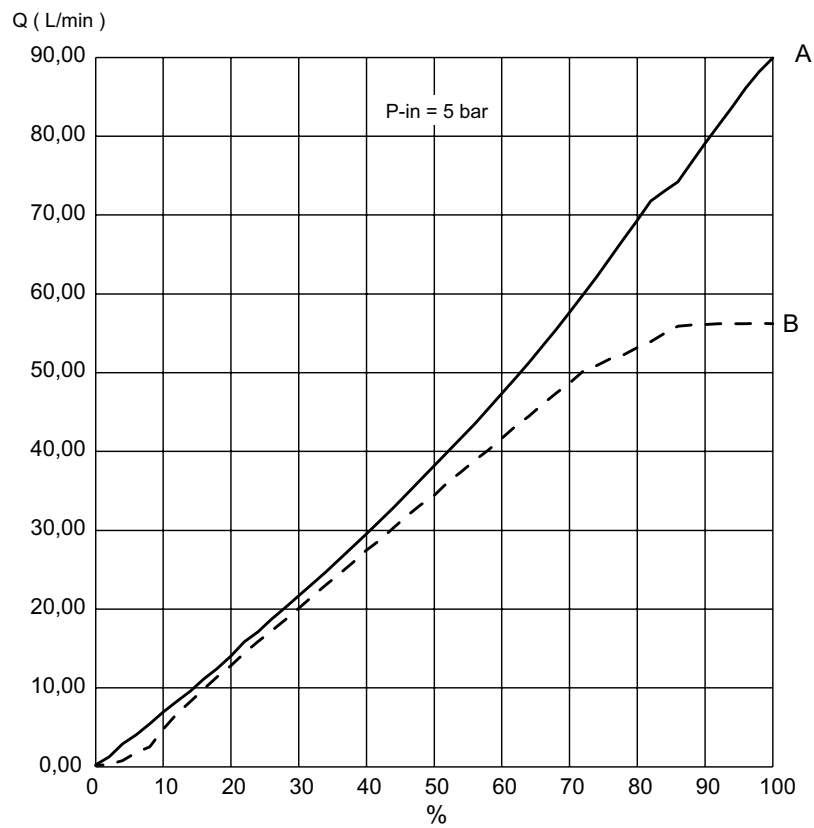
Construction	modular, compact, directly operated
Number of ways	2/2-way 3/3-way Parallel
Flow	max. 90 NL/min
Media	compressed air, inert gases and oxygen. Filtering according to ISO 8573-1 class 7.4.4
Supply pressure	-1 ÷ 10 bar
Operating pressure	-1 ÷ 10 bar
Ports	G1/8
Materials	seals: FKM
Mounting position	any position
Analogical input	0-10 V or 4-20 mA
Analogical output	0-10 V
Supply voltage, Current absorbed	24 VDC 0,3A or 12 VDC 0,6A (Head or Expansion Module)
BUS interface	CANopen CiA 301 IO-Link (connection type portclass B)
Protection class	IP20
Hysteresis	Pressure control version $\leq 3\%FS$; Flow control version $\leq 2\%FS$
Repeatability	Pressure control version $\leq 1\%FS$ for pressures less than 1 Bar $\leq 2\%FS$; Flow control version $\leq 2\%FS$
Resolution	Flow control version $\leq 2\%FS$
Linearity	Pressure control version $\leq 2\%FS$; Flow control version $\leq 5\%FS$
Environmental temperature (min and max °C)	0 ÷ 60°C For low temperature on request
Weight	300 g Single module

Dimensional characteristics



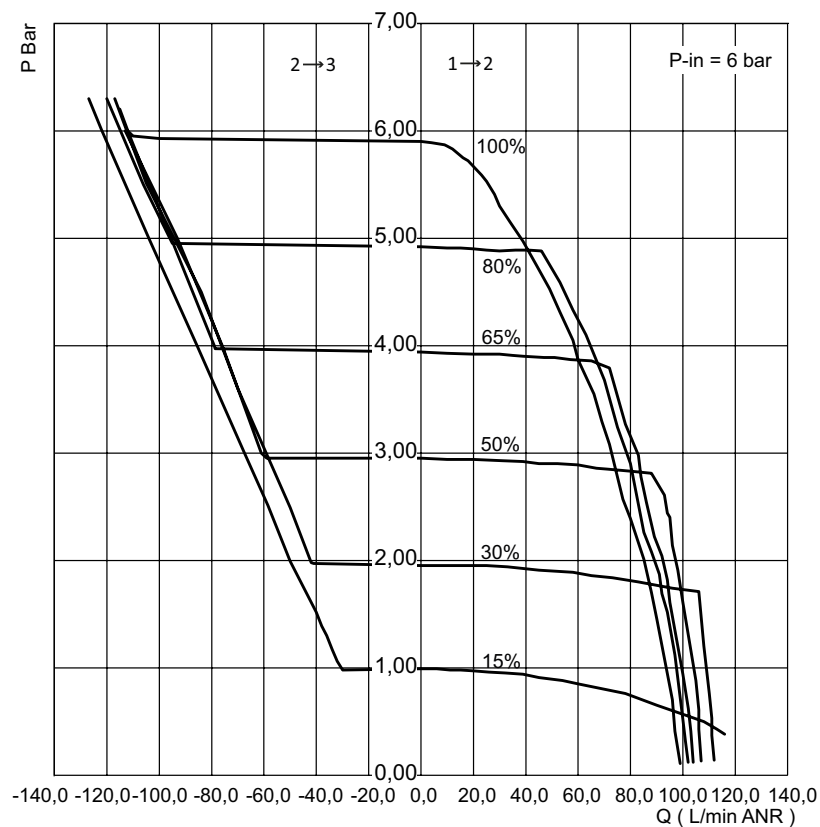
Flow diagrams

FLOW CONTROL



Q = Flow (L/min)
 % = Percentage
 of the command signal
 A = P out flow = P atmosphere
 B = Delta flow P 1 bar

PRESSURE REGULATION



Operating pressure 6 bar

Contacts

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