



# Spider $\mu$ Prop<sup>®</sup>

## Proportional Valves

We have brought all our competencies to embed all the key features of our Spider technology in a new proportional valves series: the Spider  $\mu$ Prop. Already successful used in respiratory, fuel cell systems or in electronic flow regulators, the Spider  $\mu$ Prop may be controlled using DC current or PWM in open or closed loop control.

Small, accurate, with a very long lifetime and easy to embed due to its cartridge design, the Spider  $\mu$ Prop is used for precision dosing of the flow or pressure of gas and liquids in all kind of critical applications.

The Spider  $\mu$ Prop provides a fine, smooth and accurate regulation during the whole lifetime of your product!



**Medical Engineering**

Respiration Systems



**Automotive**

Fuel Cell Technology



**Industry**

Massflow Controller



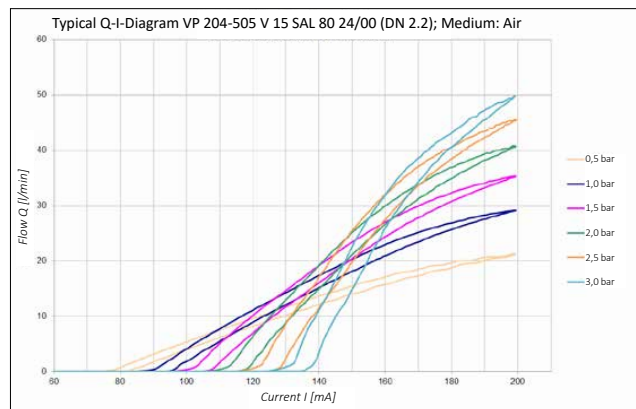
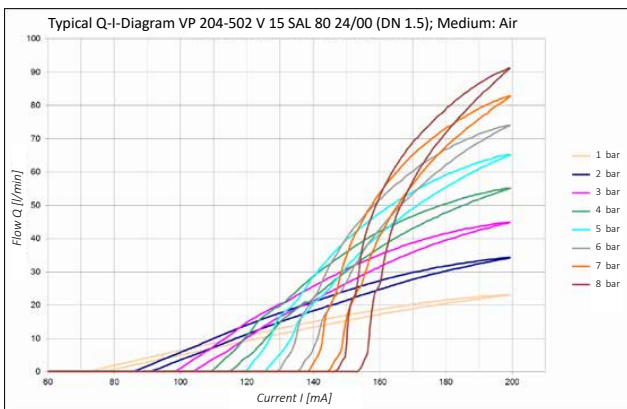
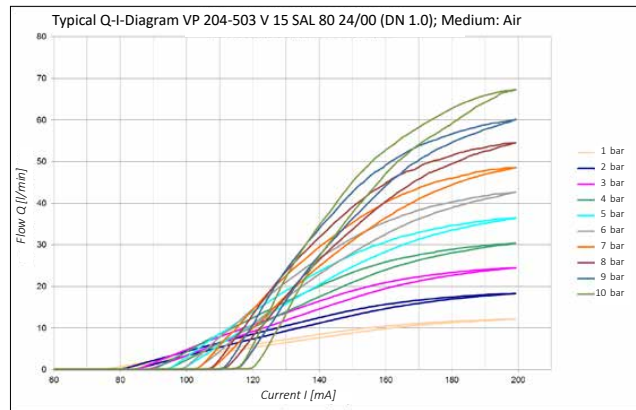
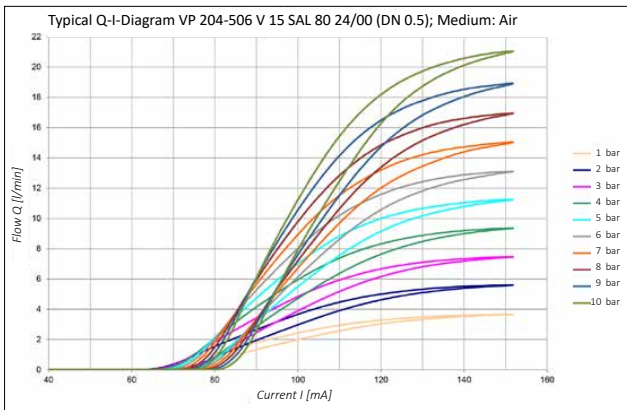
# P15 Spider $\mu$ Prop<sup>®</sup>

These valves have a flat armature that moves between the seat and the solenoid. The flat armature is assembled together with a flat spring which presses the integrated sealing element against the valve seat in the de-energized position.

Flat armature valves distinguish themselves by frictionless movement and very long service life. The Spider  $\mu$ Prop are real proportional valves in which the armature stroke and thus the flow rate can be varied by the applied coil current.



## P15 Spider $\mu$ Prop



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### Technical Data

- Sealing Material: FKM, further on request
- Electrical Connection: Wire 80 mm
- Open-circuit voltage: 24 V, 12 V
- Temperature range, ambient: 5 – 50 °C
- Media: air, inert gases and neutral liquids
- Duty cycle: up to 100 %

### Features

- 2-way proportional valve
- Seat principle, direct acting
- Flat armature drive
- Frictionless movement
- Long lifetime (100 million cycles)
- Small footprint and extremely fast
- Stainless steel

## Spider $\mu$ Prop<sup>®</sup> – Highlights

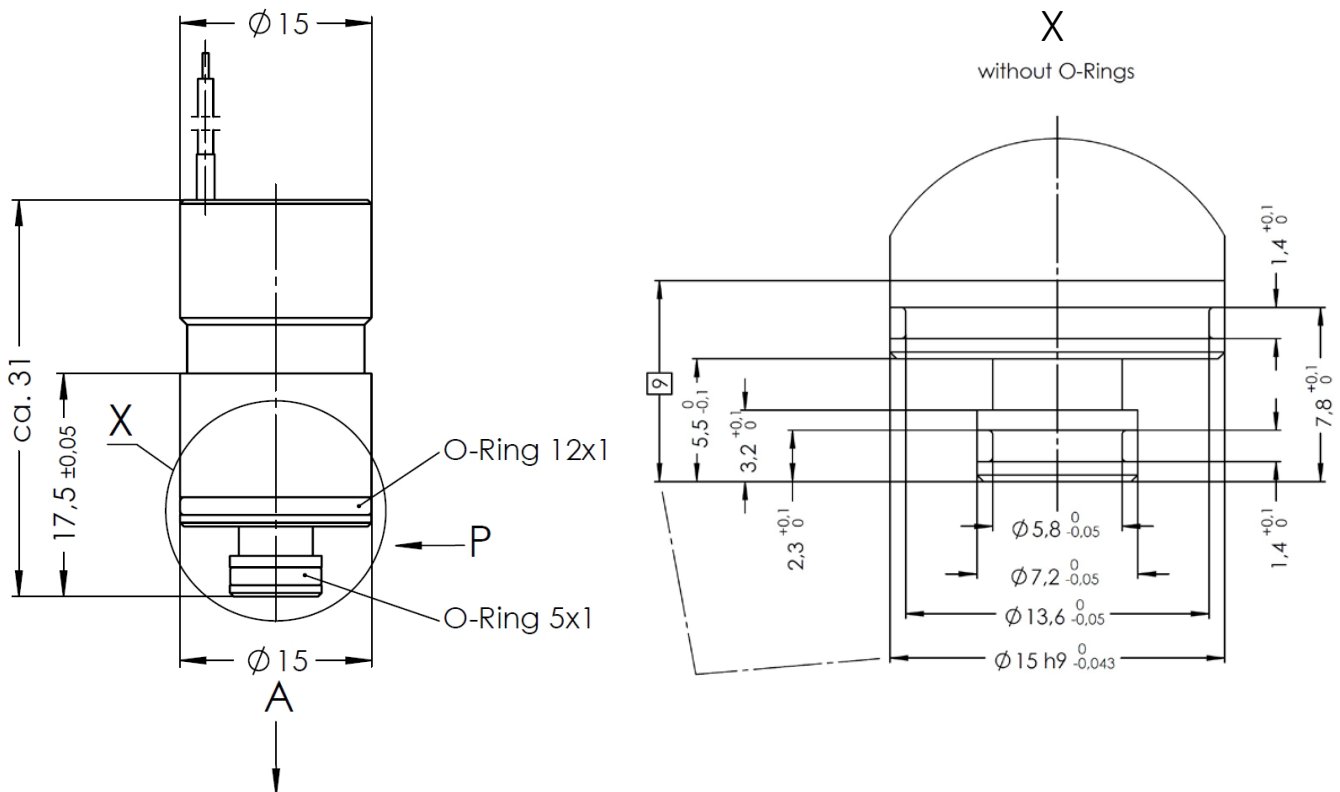
**Stepless regulation:** In combination with a flow or pressure sensor and a PID controller loop, the Spider  $\mu$ Prop offers a very smooth regulation of gases or liquids.

**Accuracy and repeatability:** Like the standard Staiger Spider on/off valves, our registered design enables frictionless operations and movements of the flat plunger. Thus, our Spider  $\mu$ Prop valves offer accurate regulations of flows with a very high repeatability all along its long lifetime.

**Integration:** Its low energy consumption and compact design give real competitive advantages to your transportable products and applications.

**Safety:** Each valve is set, calibrated and controlled automatically during the production process. This gives certainty that each valve leaving our factory matches the specifications. Due to this safety our customers are confident to use these valves in very critical applications such as neonatal incubators.

### P15 Spider $\mu$ Prop



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Designation	Orifice [mm]	Operating pressure [bar(g)]	Flow rate (air) @ max. $\Delta p$ [l/min]	Coil resistance [ $\Omega$ ]		Weight [g]
				12 V	24 V	
VP 204-506	0.5	0 to 10	21	25.8	60.5	23
VP 204-503	1.0	0 to 10	67	25.8	60.5	23
VP 204-502	1.5	0 to 8	90	25.8	60.5	23
VP 204-505	2.2	0 to 3	50	25.8	60.5	23

All values were determined under laboratory conditions and have to be verified by the customer for its specific purpose.

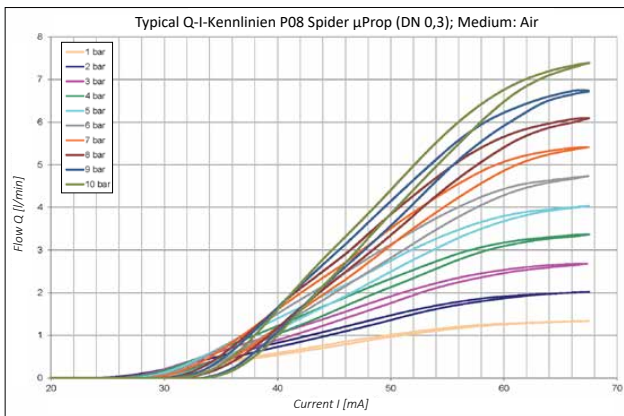
## Optimal solution for each application: P08 and P21 Spider $\mu$ Prop<sup>®</sup>

The compact design and the ability to finely discharge low flow rates, create new innovative deployment possibilities, e.g. in portable appliances (analysis devices, ventilators, massflow controllers, ...).

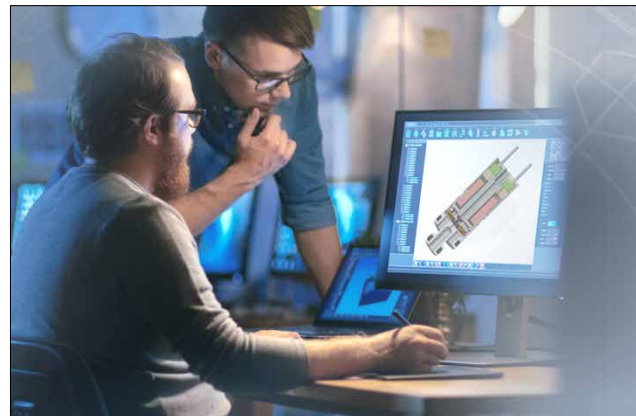
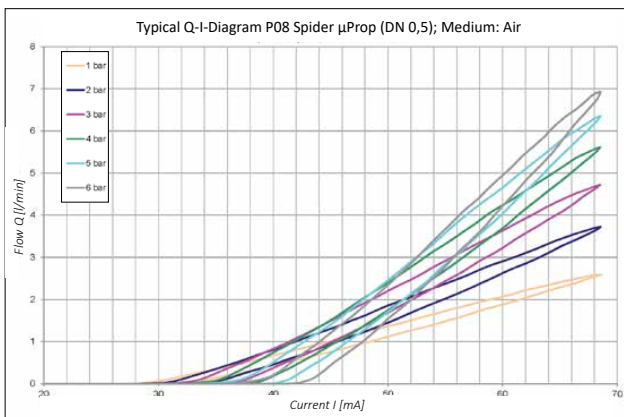
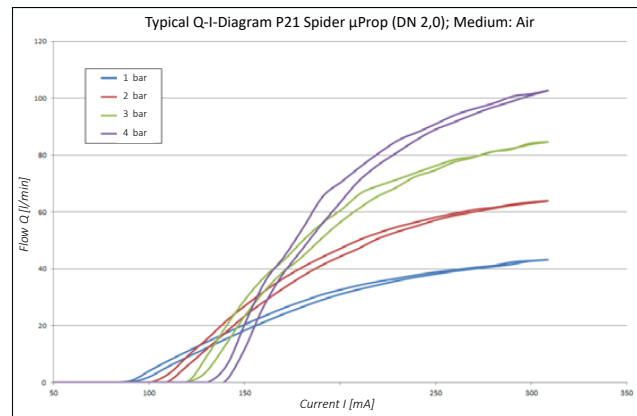
The valve can still be adapted to the application and the requirements like all Staiger valves. Hence, e. g. any sealing materials or voltages can be deployed.



### P08 Spider $\mu$ Prop<sup>®</sup>



### P21 Spider $\mu$ Prop<sup>®</sup>



## COMPANY PORTRAIT

For more than 40 years we have been developing and producing with about 200 highly qualified employees innovative solenoid valves and valve manifolds according to customer requirements here in Germany.

At our site in Erligheim (nearby Stuttgart) we manufacture everything, from one single piece, over serial production up to mass production. Hereby we also create all necessary

manufacturing and testing devices in house. This unique know how enables us to develop cost efficient high-tech solutions, which create a real competitive advantage for our customers.

It is therefore no coincidence that our customers are global market leaders of the industries Medical Technology, Automotive, Industrial, Pneumatics, Aeronautics and last but not least Drinking Water.

## PERSONALIZED SERVICE & INDIVIDUAL SOLUTIONS



Phone: +49 (0) 7143 2707-0

We gladly provide you with more information about special designs and customized products according to your demands and standards. We look forward to receiving your request.

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