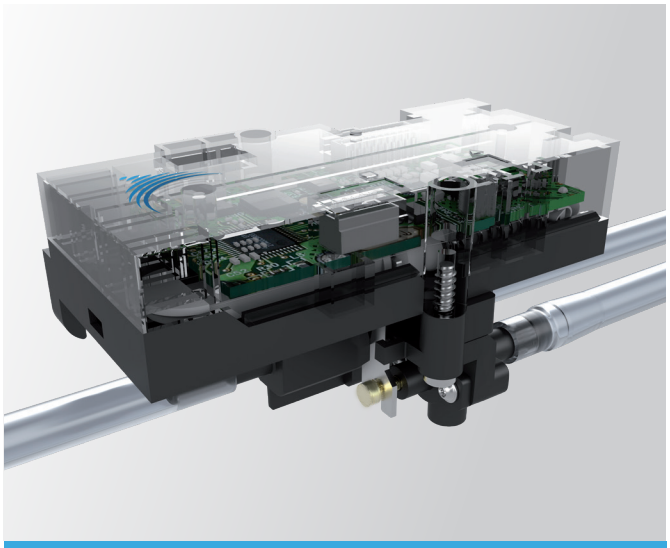
Emulsion control valves

Find out more

Smart proportional valves from Dolphin Fluidics are 2-way medium separated, normally closed, valves for precision dosing, dispensing and mixing.
The emulsion control valve has 2 independent channels.
Channel 1 proportionally controls the air intake flow rate, channel 2 proportionally controls a liquid/steam flow.
Each product can be fully customized according to application needs, in terms of interfaces, fluidics performance and electronic control input.

Advantages:

- Air/liquid dosing and dispensing valve
- Closed loop proportional control
- Simple and light, 10 times lighter than existing valves
- Reliable sealing system with medium separation
- Low power actuator, 10 times less than existing valves
- Noiseless operation
- Wireless data communication, remote control and maintenance
- Patented design
- NSF/FDA material compliancy



MAIN APPLICATIONS

- Milk frothing

TECHNICAL INFORMATION

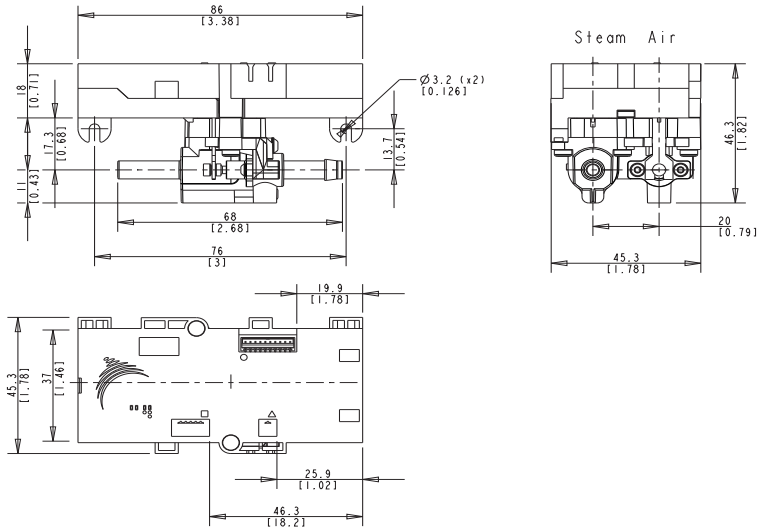
DFD.DSA.000.020
2 indipendent channels proportional direct operated valve
Dual 2/2 NC or 2/2 NC; 3/2 NC
Medium separated valve
Closed loop proportional control
100% duty cycle and continuous duty
CH1 Air, CH2 liquid or steam
Body materials: POM, PEEK, PPS, PP, PPO, PA
Seal materials : EPDM, FPM, VMQ, PTFE, SBR, FFPM, NBR

FLUIDIC PERFORMANCE

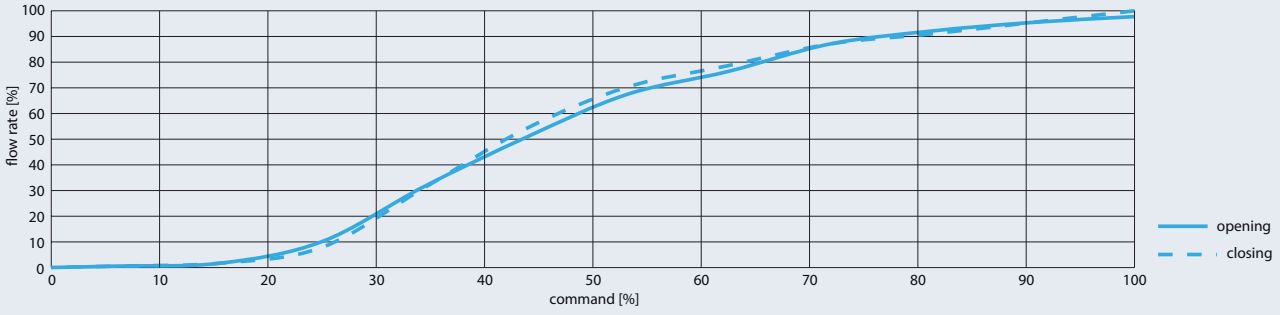
Minimum ΔP	CH1 0 bar, CH2 0 bar (CH1 0 psi, CH2 0 psi)
Maximum ΔP	CH1 1 bar, CH2 2 bar (CH1 14.5, CH2 29 psi)
Orifice diameter	CH1 1.7 mm, CH2 3.2 mm
Mounting details	Any direction
Fluid connections	Barbed (other upon request)
Fluid temperature	≤ 130°C (≤ 266 °F)
Environmental temperature	-10°C… +60°C (+14 °F... +140 °F)

ELECTRONIC CHARACTERISTICS

Operating voltage	5 - 24 VDC
Steady-state power	< 1.00 W per channel @ 5 VDC
Stand-by power	0.15 W @ 5 VDC
Actuation time	300 ms
Expected life	Million cycles (depending on application)
Proportional control input	Analog / PWM / Serial RS-485 / I²C / BLE
Sensor input	Analog / Pulses / I²C
Communication and user interface	Serial RS-485 / I²C / BLE / Digital I/Os / Status LEDs



Dimensions in mm [inches]



Dolphin Fluidics reserves the right to alter the specifications indicated in this catalogue at any time and without prior notice.

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