




# OpenSpritzer Specifications

Valve	114mA Fast switching Solenoid MHE2-MS1H-32G-M7 Festo Valve
Power supply	24V DC supply for solenoid
Control	1mA/5V Internally generated pulses from Arduino Nano microcontroller/externally delivered TTL pulses via BNC connector
Foot switch	Yes
Shortest command pulse	2ms (to reliably generate a detectable puff)  • in comparison with 4ms for Picospritzer III
Integrated Pressure regulator	Festo LRP-1/4-4
Puff pressure	0-4 bar
Line Pressure	1.4 bar
Precision	Millisecond precision with highly conserved puff volumes
Tested Use-Cases	<ul style="list-style-type: none"><li>• Evoking and suppression of action potentials</li><li>• In vitro whole cell patch clamp recordings</li><li>• Microinjections of infectious agents</li><li>• Viral delivery of opsins for optogenetics</li><li>• Single molecules to whole bacteria</li><li>• Inoculate brain tissue slices with BCG-GFP</li><li>• In rodent and human brain slices</li></ul>

Full DIY build-description in  
<https://github.com/BadenLab/Openspritzer>

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