

LabSmith Automated and Manual Valve

- Automated or manually switched fluid routing
- Low swept volume
- Fast switching
- Innovative software for coordinated control
- Direct connection to 360 mm, 1/32" or 1/16" tubing



| Model | Swept Volume (nl) | Valve Volume (nl) | Through Hole Diameter (μm) | Capillary or Tubing Interface |
|--------------------------|-------------------|-------------------|--|---|
| AV201-C360 MV201-C360 | 130 | 170 | 0.01" (250 μm) | 360 μm OD (via p/n C360-100) |
| AV201-T132 MV201-T132 | 130 | 170 | 0.01" (250 μm) | 1/32" OD (via p/n T132-100) |
| AV201-T116 MV201-T116 | 130 520 | 170 1100 | 0.01" (250 μm) 0.02" (500 μm) | 1/16" OD (via p/n T116-100) |
| AV202-C360 MV202-C360 | 90* | 130* | 0.01" (250 μm) | 360 μm OD (via p/n C360-100) |
| AV202-T132 MV202-T132 | 90* | 130* | 0.01" (250 μm) | 1/32" OD (via p/n T132-100) |
| AV303-C360 MV303-C360 | 60* | 100* | 0.01" (250 μm) | 360 μm OD (via p/n C360-100) |
| AV303-T132 MV303-T132 | 60* | 100* | 0.01" (250 μm) | 1/32" OD (via p/n T132-100) |

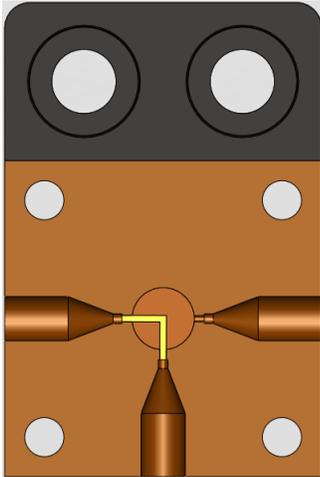
* per leg

| Model | Port Configuration | Typical Application |
|-------|--|---|
| 201 | 3 port, 2 position (+ closed), "L" pattern flow | redirecting flow |
| 202 | 4 port, 2-position (+ closed), two simultaneous flow streams between adjacent ports. | continuous dispensing/refilling (with breadboard reservoir and two SPS01 syringe pumps) |
| 303 | 6 port, 2-position (no closed option), three simultaneous flow streams between adjacent ports. | sample injection |

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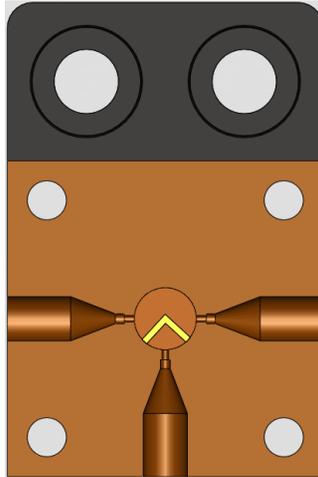
AV201 and MV201 Valve Configurations:

Position A



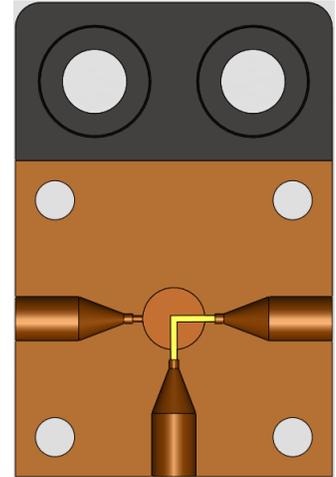
Yellow indicates "valve volume"

Closed



Yellow indicates "swept volume"

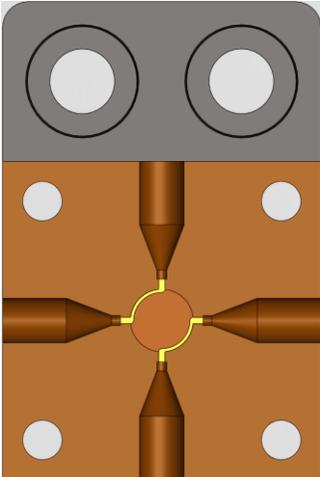
Position B



Yellow indicates "valve volume"

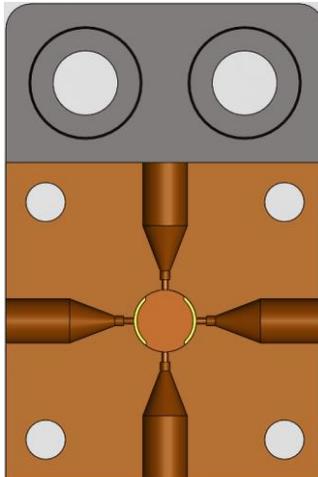
AV202 and MV202 Valve Configurations:

Position A



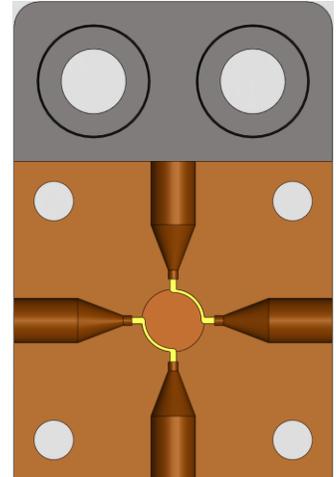
Yellow indicates "valve volume"

Closed



Yellow indicates "swept volume"

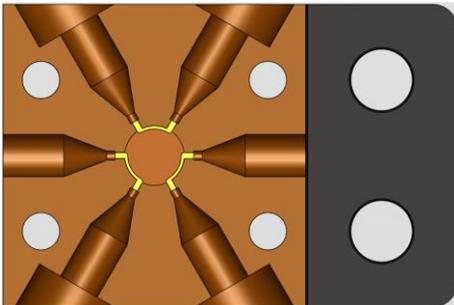
Position B



Yellow indicates "valve volume"

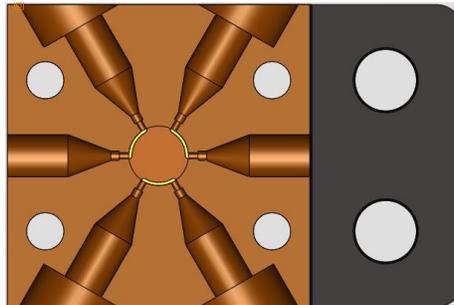
AV303 and MV303 Valve Configurations:

Position A

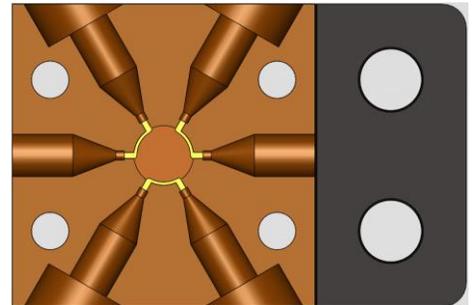


Yellow indicates "valve volume"

Position B



Yellow indicates "swept volume"



Yellow indicates "valve volume"

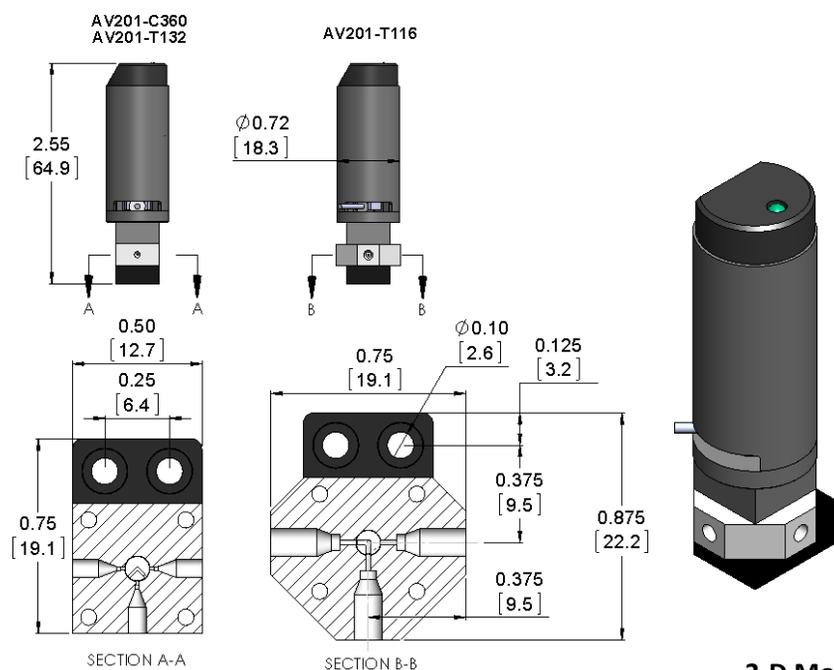
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| Specifications | |
|------------------------------------|--|
| Wetted material | Vespe [®] |
| Switch time ⁺ | 0.65—0.78 s (A—B or B—A) 0.25—0.50 s (closed—A or closed—B) |
| Actuation method ⁺ | gear motor |
| Cleaning | flush valve ports with DI water or solvent |
| Service temperature range | 50 — 176°F (10 — 80°C) |
| Maximum pressure | 5000 psi (34 MPa) |
| Electrical connection ⁺ | connects to 4VM valve manifold via flat flex ribbon cable |

⁺ applicable for automated valves only

| Valve Accessories | |
|--|--|
| 4VM01 or 4VM02 ⁺ | manifold for connecting up to 4 automated valves (AV201 or AV202); includes 4 flat flex connector cables |
| EIB100 or EIB200 ⁺ | for control of 4VM01 valve manifold and other uProcess devices; includes uProcess™ software, LabVIEW™ drivers, and SDK |
| uProcess breadboard ⁺ uPB-05, uPB-08, uPB-12, or iBB | optional platform for mounting AV-series valves, 4VM, and other microfluidic devices |
| LS-SCREWS.25 | optional breadboard for MV series valves and other CapTite devices: LS600 or LS600-CH |
| One-piece fittings C360-100, T132-100, or T116-100 | set of 20 thread-forming screws (2-28-1/4") to mount 10 valves or reservoirs to breadboard |
| | required for connection to capillary or tubing |

⁺ applicable for automated valves only



3-D Model available upon request