TECHNICAL NOTE

RVM - CARRYOVER AND DEAD VOLUMES

Advanced MicroFluidics
Innovative automation solutions

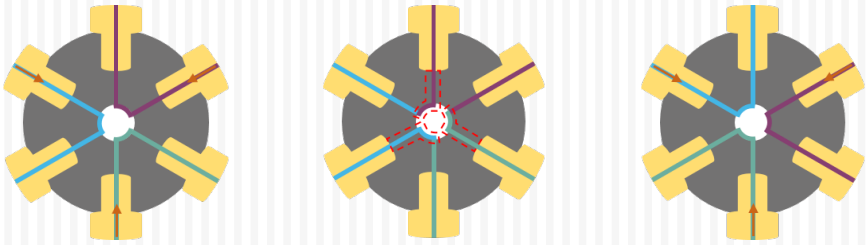
GLOSSARY

Internal volume:	Volume inside the valve, from entrance to exit.
Dead volume:	Volume that is "stuck" in the system (dead end), which is not cleanly swept and relies on diffusion to clear out.
Carryover volume:	Volume of liquid that will be mixed with the next liquid. It is not stuck, but will be swept next time a liquid passes.

DISTRIBUTION VALVE - CUT VIEW

Primed system | Send liquid through port 1 | Valve rotation | Send liquid through port 2

SWITCH VALVE - CUT VIEW



Primed system | Valve rotation | Valve refilled after switch

In our systems, valve carryover volume = volume in plug + volume from plug to port

WHAT ARE WE DOING?

Our rotary valves have no dead volumes, whatever the geometry. They do however have carryover volumes.
Our distribution and switch series are illustrated above. For the on/off series, it makes no sense to talk about carryover volume, as it always the same liquid that is connected. If you change the connected liquid, the whole volume inside the valve will need to be flushed.

WHAT'S IN IT FOR YOU?

- A view of the insides of the valves
- An indepth comprehension
- A non-existant dead volume in all geometries
- A limited carryover volume in all geometries

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