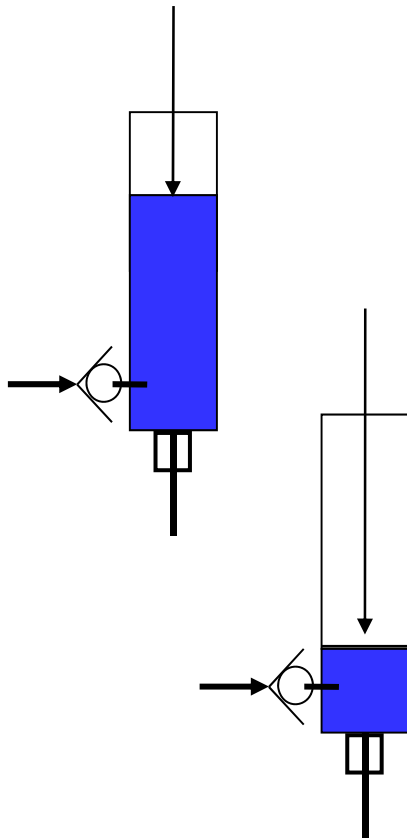


## piston pump



### functionality

- press in of medium in geometric defined pistons
- press in of medium in dosing needle by downpress of piston crown
- modern technologie: driven by servo motor or proportional valves  
=> control of output speed by immersion depth possible

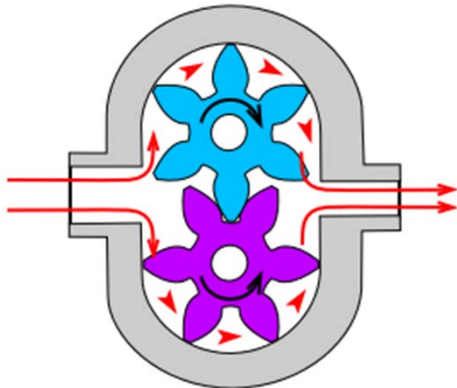
### benefits

- very high repetition accuracy

### penalties

- influence of piston-filling-time to cycle time
- partially high streaming-speed => high shear rate in medium

## gear pump



### functionality

- dosing of geometric defined chamber-volume within gear-combination
- electrical driven gears => endless, nearly pulsation-free dosing

### benefits

- flow rate control by speed
- no valves => direction of flow invertible => suck bag of medium possible

### penalties

- leakage depending on construction inducted gap determined by viscosity and speed
- only suitable to a limited extend for high abrasive mediums

# benefits and penalties of main dosing technologies

## gear pump – output characteristics

