

Bulletin 701-5

Rotary Valve Filler – Operating Principle

- A top plate **stator** receives the customer's product from the filler tank/metering pump.
- A lower **rotor** automatically divides the continuous flow of product into equal parts as it rotates.
- The product passes directly into the container from the filling ports under the rotor.
- The rotor speed is adjustable to obtain the containers per minute fill speed desired.
- The filler pump is adjustable to achieve the exact fill volume desired.
- The rotor ports continually enter and exit several radial-filling slots in the stator plate.

An empty container starts to fill at the first slot and has the required volume when it exits the last slot. All of the containers receive product from the same slots and therefore receive the same volume.

- The flow is automatically shut off at the machine front by the rotation of the ports on the rotor.
- Each slot length in the stator is equal to the circular pitch of the ports in the rotor.
- The product metered into each slot can be varied to produce the ideal flow rate going into the containers.
- Automatic opening and closing cutoff nozzles can be added to prevent drip and stringing where the containers pass on and off the filler. The automatic closing nozzles do not affect the fill volume; they only prevent unwanted discharge of liquid products at the machine front.
- All nozzles close when the filler is stopped to control the fill volume.
- There is no seal on the container and no re-circulation of the products being filled.

(Refer to companion Bulletin 702)