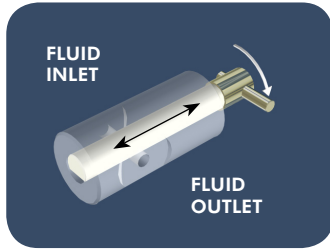
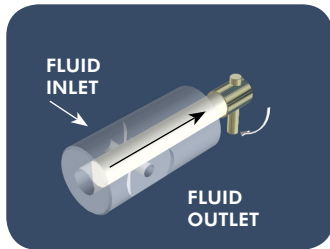


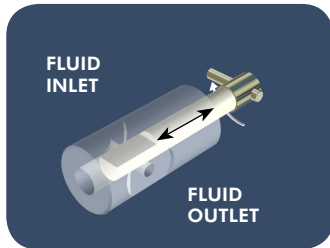
ROTARY*



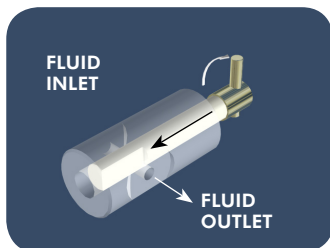
THE PISTON IS SHOWN AT BOTTOM DEAD CENTER OF ITS STROKE. BOTH INLET AND OUTLET PORTS ARE CLOSED AND PISTON FLAT IS ROTATING TOWARD THE INLET PORT.



SUCTION IS CREATED DURING THE INTAKE STROKE BY THE PISTON RETRACTING INSIDE THE CYLINDER. THE PISTON FLAT OPENS THE INLET PORT TO THE PUMP CHAMBER AND THE OUTLET PORT IS CLOSED.

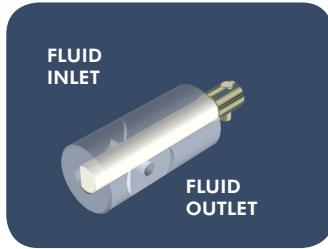


THE PISTON IS SHOWN AT TOP DEAD CENTER OF ITS STROKE. BOTH THE INLET AND OUTLET PORTS ARE CLOSED AND PISTON FLAT IS ROTATING TOWARD THE OUTLET PORT.

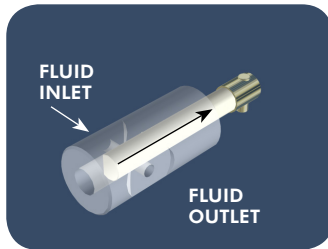


POSITIVE DISPLACEMENT IS CREATED DURING THE DISCHARGE STROKE AS THE PISTON ADVANCES INSIDE THE CYLINDER. THE PISTON FLAT OPENS THE OUTLET PORT TO THE PUMP CHAMBER AND THE INLET PORT IS CLOSED.

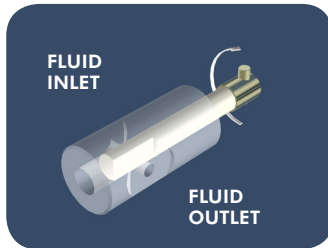
**DIGISPENSE/
MULTISPENSE 2000***



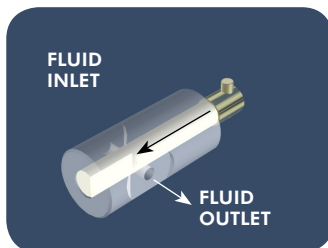
THE PISTON IS SHOWN AT THE BEGINNING OF THE INTAKE STROKE. THE FLAT ON THE PISTON OPENS THE INLET PORT TO THE PUMP CHAMBER AND THE OUTLET PORT IS CLOSED.



SUCTION IS CREATED DURING THE INTAKE STROKE BY THE LINEAR MOTION OF THE PISTON.

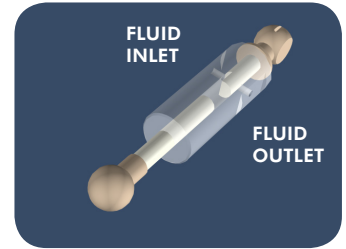


THE PISTON ROTATES 180° AND THE FLAT ON THE PISTON OPENS THE OUTLET PORT TO THE PUMP CHAMBER – THE INLET PORT IS CLOSED.

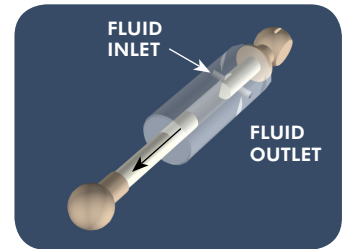


POSITIVE DISPLACEMENT IS CREATED DURING THE DISCHARGE STROKE BY LINEAR MOTION OF THE PISTON.

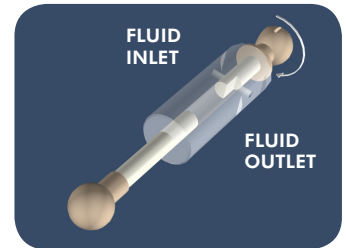
MULTIPLEX



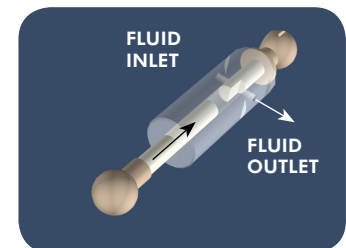
THE MODULE IS SHOWN AT THE BEGINNING OF THE INTAKE STROKE. THE FLAT ON THE VALVE OPENS THE INLET PORT TO THE PUMP CHAMBER AND THE OUTLET PORT IS CLOSED.



SUCTION IS CREATED DURING THE INTAKE STROKE BY THE LINEAR MOTION OF THE PISTON.



THE VALVE ROTATES 180° AND THE FLAT OPENS THE OUTLET PORT TO THE PUMP CHAMBER – THE INLET PORT IS CLOSED.



IN THE DISCHARGE STROKE POSITIVE DISPLACEMENT IS CREATED BY THE LINEAR MOTION OF THE PISTON.

*CYLINDER END SEAL REMOVED FOR ILLUSTRATION.