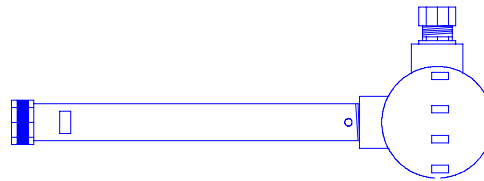


PUMP SPEED

The pump speed is determined from proximity sensors that detect the movement of the mud pump piston. These sensors are non-contact and thus require little or no maintenance. Up to four pumps can be monitored simultaneously, which allows the overseeing of cementing or leak off test pumps. Parameters calculated with absolute accuracy from pump speed include:

- Total strokes (can be zeroed).
- Flow rates.
- Displacement rates and volumes for the hole.
- Lag times.
- Pressure losses.
- Flow regimes (from Reynolds numbers).



Proximity Sensor