

Animation Worksheet: Orifice

Name: _____ Date: _____

1. An orifice is a _____ in the fluid path, typically a small opening or a narrowed section of tubing.
2. The primary role of an orifice is to control the _____ rate and manage pressure dynamics before fluid reaches the output piston.
3. In the video's example, the initial system pressure is measured at _____ pounds per square inch (psi).
4. Pressurized hydraulic fluid begins to flow toward the pistons when the _____ valve opens the circuit pathway.
5. Because of its small cross-sectional area, the orifice _____ the flow rate of the fluid.
6. The restriction of fluid flow causes a pressure _____ across the orifice, meaning the downstream pressure is initially lower than the system pressure.
7. The piston does not extend immediately because it needs sufficient pressure to overcome resistance caused by friction and _____ on the piston.
8. The orifice ensures a controlled buildup of pressure, preventing sudden surges that could damage the system or cause _____ piston movement.
9. Once the cylinder chamber is completely full of fluid and the piston stops moving, the applied pressure rises until it equals the _____ pressure.
10. While smaller orifices create larger pressure drops and slower responses, _____ orifices allow for faster pressure equalization.