



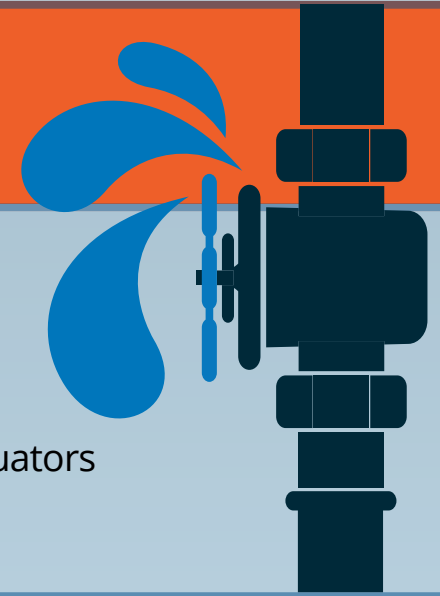
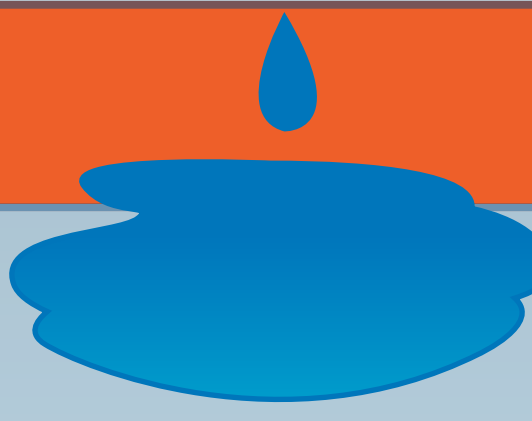
3 Ways

to Fight the Damaging Drip of High-Pressure Water Valve Leakage

Don't let a poorly designed and maintained hydraulic system leak profits out of your plant. Applying principles from the following three areas will help you minimize valve leakage while increasing efficiency, decreasing costs and protecting your workers from potentially harmful conditions.

1

Understand Unintentional Internal vs. External Leakage

Internal	External
 <p>What is it? Leaks in the pump, valves or actuators</p>	 <p>What is it? Drips and puddles on plant floors or equipment</p>
<p>Why is it harmful?</p> <ul style="list-style-type: none"> • Inefficient operation impacts the pressure, temperature, flow and velocity of the hydraulic circuit • Leads to inconsistency in the processes that rely on the hydraulic circuit 	<p>Why is it harmful?</p> <ul style="list-style-type: none"> • Risk of exposure to hazardous flow media • Risk of slips, trips and falls • Hazardous to workers, general public and environment <div data-bbox="1156 1856 1363 2052" style="border: 1px solid black; padding: 5px;"> <p>OSHA reports that slips & falls are among the top 5 causes of lost-time injuries at work.</p> </div>
<p>What are the long-term effects?</p> <ul style="list-style-type: none"> • System continues operating at less than optimal performance unbeknownst to plant personnel • Scrap is being produced and profits are being lost 	<p>What are the long-term effects?</p> <ul style="list-style-type: none"> • Inefficient system operation • Lower operating pressure can lead to vibration and excessive stress on system components • Added cost of replacing the flow media that has leaked

2

Review Industry Standards for Leakage Tolerance

Manufacturers Standard Society (MSS) Standard SP-61

Establishes allowable leakage in valves that operate as isolation or check valves



American National Standards Institute (ANSI) Standard 70-2

Sets different leakage classifications for control valves, ranging from Class I (unspecified amount of leakage) to Class V (zero leakage)

3

Choose the Right Hydraulic Valve

SELECT	AVOID	BEWARE	IDENTIFY
<p>Size and select the proper valve at the beginning of hydraulic system design</p>	<p>Avoid oversized valves that are incompatible with certain flow velocities</p>	<p>Beware of additives in the flow media that can damage valve components</p>	<p>Identify potential incompatibilities between the flow media and the materials of construction of the valve (consult incompatibility charts from valve manufacturers)</p>

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