



# Zero-Leakage Valve Solutions





## The Real Cost of Valve Leakage

The cost of leaking steam and process fluids is far greater than the total cost of a valve.

The cost of replacing or repairing a valve is small compared to the cost of lost heat-rate efficiency in power plants caused by leaking valves. Minor leaks will grow to major leakage, causing frequent equipment repair or replacement and costly unscheduled plant shutdowns. Valves can have severe leakage that is not visible to the eye as internal valve leakage can go undetected for long periods of time.

With zero-leakage severe service isolation valves, less fuel is burned to produce megawatts, which lowers emissions and overall costs of plant operations. ValvTechnologies' decades of engineering experience have designed a superior severe service isolation valve that exceeds industry standards when it comes to defining zero-leakage.



Leaking valves



Stack emissions



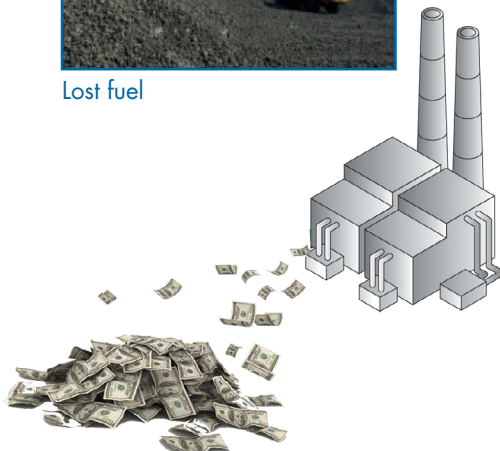
Reduced megawatt output



Lost fuel



Maintenance and repair costs



## Zero-Leakage Defined

ValvTechnologies defines zero-leakage as no detectable leakage of gas or a liquid for a period of three minutes or greater.

### Allowable leakage rates:

MSS SP-61, 4", ASME/ANSI Class 1500, reduced port:

Allowable leakage per hour = 0.010565 gallons

Allowable leakage per year = 92.5 gallons

Leakage over four years assuming constant leak path:



370 gallons

FCI-2 Class V, 4", ASME/ANSI Class 1500, reduced port:

Allowable leakage per hour = 0.069465 gallons

Allowable leakage per year = 608.5 gallons

Leakage over four years assuming constant leak path:



2,434 gallons

**ValvTechnologies'  
allowable leakage = 0**



## Zero-Leakage Solutions

### Guaranteed.

Full four-year zero-leakage warranty.\*

Would you specify a valve that will have a significant leak after one year in service? If not, then what specifications do you use? All ValvTechnologies valves are guaranteed absolute zero-leakage for four-years in steam and power applications.

All other valves in the industry have a defined leakage rate. ValvTechnologies tests every valve according to ANSI procedures. However, we toughen the standard to zero-leakage on both water and gas. Our standard is zero drops and zero bubbles **guaranteed**.



### Qualified.

ValvTechnologies sets the standard for zero-leakage valve solutions.

At ValvTechnologies, we are totally committed to quality. We measure our performance against the standards set in our Integrated Quality Program. Our Quality Assurance department diligently pursues opportunities for improvement, while the entire organization takes ownership of the quality program. In this way, we can improve our processes while increasing manufacturing efficiency.



### Efficient.

Cycle isolation eliminates energy losses attributable to poorly performing or leaking steam, water cycle isolation valves.

ValvTechnologies encourages end users to apply the principles of asset management to their installed valve population. The ValvPerformance Testing™ program, or cycle isolation measurement, utilizes next generation acoustic monitoring instruments to help customers monitor valve performance. These tools allow predictive and preventative maintenance programs to be fine tuned for very large or very small valve populations. Providing cycle isolation services can be as simple as performing a valve survey, or as comprehensive as the management of all valve work during your next outage - from erecting scaffolds to repairing, installing, welding and stress relieving.

#### Features

- Accurate, quantitative results
- Non-intrusive to plant operations
- Low cost, easy to execute
- Fast results

#### Benefits

- Plant efficiency improvement
- Economic payback in just months
- Improved decision making
- Reductions in overall valve maintenance spend
- Cost avoidance of unnecessary valve repairs or replacements

Unlike other testing methods that require the removal of large amounts of insulation, ValvTechnologies requires only small drill holes for access with a 3/8" diameter transducer.

# Zero-leakage Valve Solutions.



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