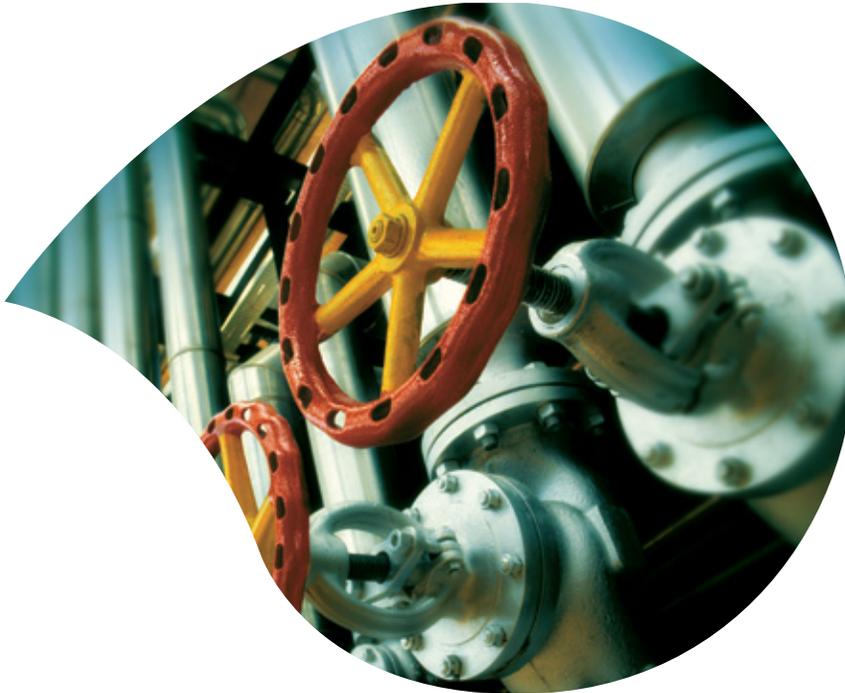


# Ultrasonic leak testing



## Identifies:

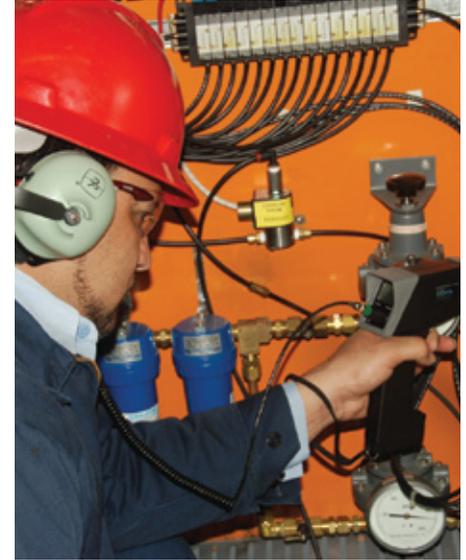
- Failed steam traps
- System leaks
- Process cooling leaks

## Results:

- Lower operating costs
- Quantified energy savings
- Increased system performance

## Energy conservation and cost savings

Ultrasound surveys identify compressed air leaks, failed or failing steam traps and process gas leaks with precise location and quantifiable numbers. Identifying these leaks or failed steam traps will allow for the creation of detailed reports that show cost savings and the associated greenhouse gases prevented by making the corrective actions. Just one air leak at 100 psi of air pressure and at 5.5 CFM (1/64" size leak) will cost you \$1,106 per year, assuming a power cost of \$.06 per kWh. Many states in the US offer cost rebate programs for having ultrasound surveys performed. The energy conservation and cost savings potential makes this a very attractive service.



## Deployment

A trained Johnson Controls technician will scan areas where compressed air or process gas is present with a device that is sensitive only to a high frequency range. This allows for ambient noise to be filtered out so the primary focus is on the sound created by compressed gas or air leaks. Once a leak has been identified, the amplitude of the leak is recorded by the device and is combined with the system pressure, the cost of energy and the type of gas being surveyed. These are detailed in the report with a cumulative total of the amount of dollars lost annually along with the greenhouse gas emissions total as a result of those leaks.

For steam traps, the same technology is used to identify failing or failed steam traps. Using the orifice size and cost of steam, we can calculate an approximate cost on an annual basis of the steam traps not performing correctly.

Type of gas	Pressure at leak	dB reading	Problem description	Identified leaks cost avoidance per year	Size of leak CFM	Energy Avoidance (kWh) per year	CO <sub>2</sub> Avoidance (lbs) per year	NO Avoidance (lbs) per year	SO <sub>2</sub> Avoidance (lbs) per year
Air	100	78	work station #8 air regulator	\$605.14	6.2	10806	8534	11	20
Air	100	81	work station #8 air tool supply hose quick disconnect	\$637.98	6.6	11393	8997	11	22
Air	100	93	air hoist #1 supply line	\$774.16	8.0	13824	10917	14	26

### Enterprise-wide service consistency

Johnson Controls has more than 150 service offices located across North America. As a result, we can deliver consistent service expertise and technologies to support your HVAC services needs, no matter where your facilities are located.