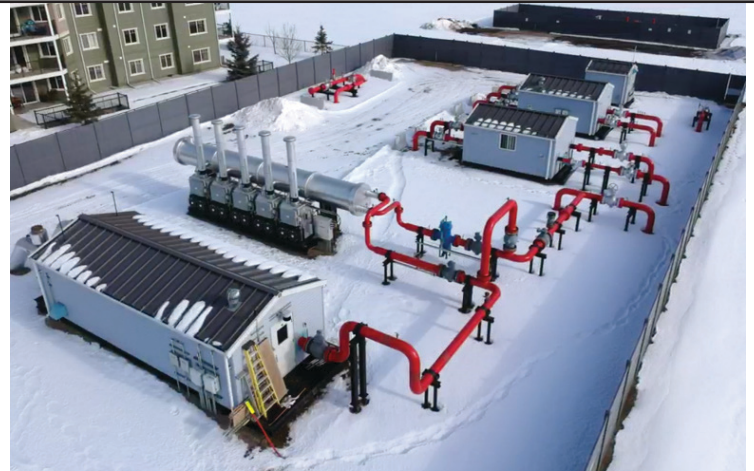


# Canadian gas utility eliminates noise complaints from gate station using Emerson noise attenuation technology

## RESULTS

- Eliminated noise complaints from adjacent condominium with the Type FL with SRSII noise attenuating silencer
- Reduced the maximum noise by 28.5 dBA in side regulator building
- Saved \$90,000 CAD in noise curtains and insulation
- Increased station reliability by upgrading to a plug-style regulator design



## APPLICATION

Natural gas city gate station

## CUSTOMER

A Canadian natural gas distribution company with over 1 million customers

## CHALLENGE

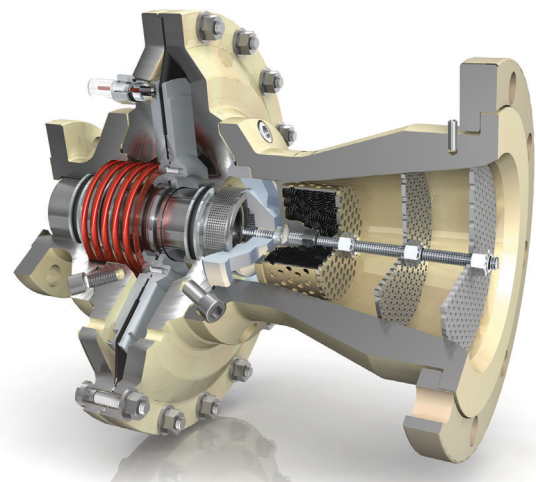
The gas distribution company designed a new gate station as a part of an Urban Pipeline Replacement program to reduce pressure within city boundaries. Unfortunately, the site's location was selected for them within a Transportation Utilities Corridor neighboring a condominium complex. The initial design utilized 6 in. boot-style regulators in a wide-open monitor configuration within a building.

Soon after commissioning the station, they began receiving noise complaints from the nearby residents. "We took measurements at the site and found readings as high as 117 A-weighted decibels (dBA) – very loud. It was a huge safety concern and a big nuisance for the customers," said the Facilities Engineer responsible for the regulating station's design.

After reaching out to various vendors and consultants for help, the gas utility determined that the boot-style regulators were the source of the noise due to the tortuous path through the regulators creating turbulence and therefore noise as well as the vibration from the boot movement itself.

***"With the new bootless regulator installed, there was a huge reduction in the sound level. We had the noise level checked again and the new regulator brought the sound level down to about 85 dBA from 117 dBA."***

**-Facilities Engineer**



Tartarini™ Type FL with SRS noise attenuation

## SOLUTION

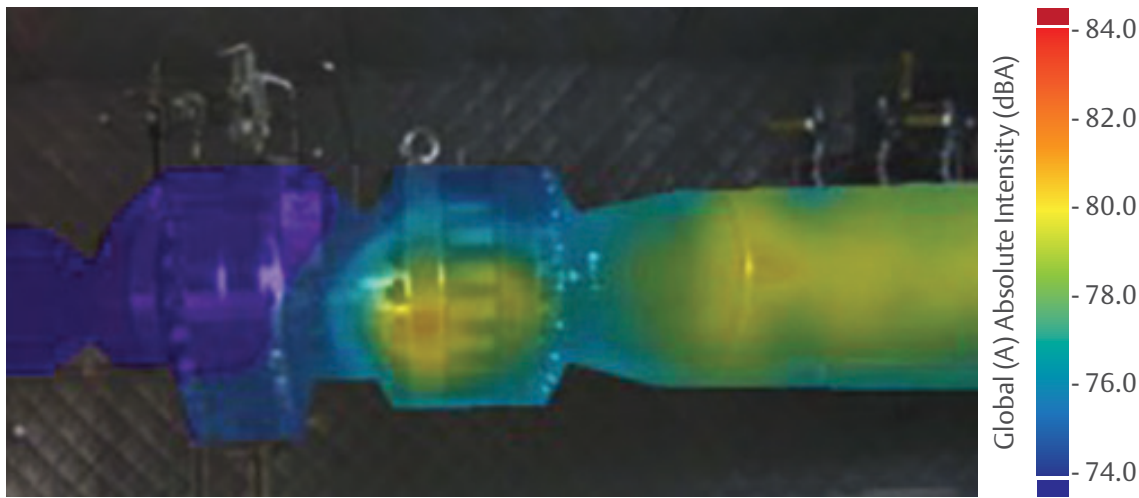
Several possible solutions were considered such as installing noise curtains inside the building, installing pipe insulation and replacing the regulators. They determined that the best solution was to replace the worker with the Tartarini™ Type FL regulator with an integral SRSII noise attenuating silencer.

The Type FL is a bootless regulator design with an unobstructed, straight flow path which increases the flow capacity and reduces the turbulence and noise. In addition to the Type FL's inherent noise reduction, they selected the Type FL's SRSII silencer option which consists of multi-stage noise attenuating plates inside an expansion cone. The Type FL with SRS prevents noise at its source of generation, not only resolving noise complaints by nearby public, but also safeguarding gas utility employees from harmful noise levels while working in the building enclosure.

After installing the new regulator, the gas utility recommissioned the station and there was an immediate noticeable difference. A noise consultant performed an assessment again and determined the noise was reduced by over 28 dBA. Because the Type FL solved the noise, the monitor regulator was also replaced.

“Overall, it was a huge success story and we have plans to use the Type FL's at our next four big UPR stations,” revealed the Facilities Engineer “Not only do the Type FL's attenuate the noise, these bootless regulators are more reliable and require little maintenance, compared to boot regulators.”

The Tartarini Type FL solution saved the gas utility \$90,000 CAD per station by avoiding purchase of noise curtains and pipe insulation.




Noise assessment results showing the gate station's Type FL/SRSII and outlet piping sound level

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