



**Advanced Valve  
Technologies**



**AVT EZ VALVE®**

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# Rangeline and AVT Ensured City Maintained its Water Supply

## San Antonio, Texas

### SUMMARY

- Valve required to isolate leaking header.
- 18" ductile iron pipe.
- Team of two technicians took six hours to complete the install.

#### Background

San Antonio Water System (SAWS) identified a rusting and leaking header at its main pump station. The corroded equipment could have caused major issues with the output of the pump station so needed to be repaired, but first, it needed to be isolated.

#### The Issue

Due to the configuration of the pipes feeding the pump station, an isolation point was required on a narrow section of pipe. On either side of the pipe section was the leaking header and a branched off tee that was still continually feeding parts of the city. The new isolation point would enable the pump station to continue to produce the pressures (80 to 90 PSI) and volumes required to maintain its normal water supply to the city, while the header repair was taking place.

#### The Solution

SAWS approached AVT distributor and installer Rangeline Group to assist in the isolation of the header. Rangeline has worked with SAWS for several years and has completed several critical projects for the organization. A relationship has been built between the two groups over a number of years so when SAWS needed assistance with the repair to their pump station, Rangeline was their obvious partner.

Rangeline recommended the installation of an AVT EZ Valve. The EZ Valve, an insertion valve for water pipes, has proved itself to be quick to install and uses an innovative cutting technique which means it can be installed when the line is at full pressure and with no need to shut off the water supply.

The cutting technique uses an EM (end milling) machine to mill a 120° slot across the pipe. Once this is complete an integrated isolation gate is closed meaning the EM machine can be removed and a bonnet, which contains the gate valve, can be installed. The isolation gate is then opened allowing the wedge to be lowered into the pipe shutting off the flow when required by the water system operator.



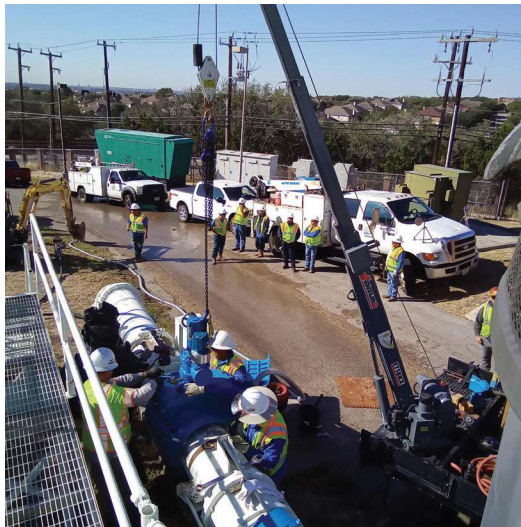
## INSTALLATION IN PICTURES



The pipe was prepared to receive the AVT EZ Valve, and the valve body was fit to the pipe.



Once in place the EM machine was fitted to the top of the valve.

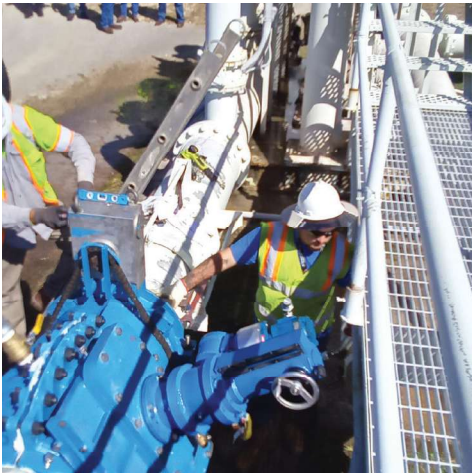


The gearbox was secured to the pipe.





The EM machine was prepared for operation.



The EM machine then milled a 120° slot across the top of the pipe.



The blow off hose carried swarf created from the milling, away from the water inside the pipe.



With the integral gate closed, the EM machine was removed.





The bonnet was lifted into the valve body and secured in place.



The wedge gate was closed.



And the installation was complete.

Advanced Valve Technologies (AVT) is part of ClockSpring|NRI, the high-performance critical infrastructure solutions company. AVT's advanced solutions are based on simple designs that minimize risk to the environment and reduce costly downtime. Our primary focus is on disruptions in water service that cost providers money and leave end users without service.

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