

AVT™ EZ VALVE®

Product Portfolio



**Advanced Valve
Technologies**

www.AVTFittings.com

Sales@AVTFittings.com

WHO WE ARE

Advanced Valve Technologies® (AVT) is part of ClockSpring|NRI, the high-performance critical infrastructure solutions company. AVT's advanced solutions focus around the EZ Valve™, an inline insertion valve that can be installed on water pipelines sized from 1.5" to 24" (40mm to 600mm) without shutting off the water and in many cases, in under an hour. Our designs are innovative, 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.

AVT's offering is second to none, and we are continuing to add capabilities to deliver even more superior solutions for the repair and maintenance of high-performance critical infrastructure.

Our products are supported by experienced sales, engineering and manufacturing professionals alongside a robust and all-encompassing training curriculum which means water professionals can become fully certified to install the AVT EZ Valve in just one day.

AVT holds and/or is compliant with key certifications and is a member of leading industry associations.



The AVT product and services portfolio

AVT EZ Valve:

- 1.5" to 2" (40mm to 50mm)
- 3" (80mm)
- 4" to 14" (100mm to 350mm)
- 16" to 24" (400mm to 600mm)

AVT EZ Valve Toolkit:

- Nano - 1.5" to 2" (40mm to 50mm)
- Micro - 3" (80mm)
- Small - 4" to 14" (100mm to 350mm)
- Large - 16" to 24" (400mm to 600mm)

Training:

- Online curriculum
- Face to face training
 - Customer location
 - In the field
 - At our Elk Grove Village, IL manufacturing base

RentEZ (low cost or free rental of AVT EZ Valve Toolkit):

- For 4" to 14"
- For 16" to 24"

THE AVT EZ VALVE

The EZ Valve is an inline insertion valve that can be installed on water lines and depending on the pipe material, installation takes anywhere from 45 minutes for our smaller valves to 3 hours for our larger range.

The valve uses an integral isolation gate, which when operated after the slot has been milled into the pipe, allows the EM machine to be removed and the resilient wedge installed. This process means the valve can be installed on a live line while the water is flowing. The resilient wedge needs to be lowered just 2/3 of the way into the pipe to commission the install meaning users have the choice of when to turn off their water.

AVT EZ Valve applications and pipe materials:

The AVT EZ Valve is designed for use on nearly all pipe materials including asbestos concrete, a material commonly known as difficult to cut and prone to disintegrate when worked on. The AVT EZ Valve's low weight and innovative slot milling technology means it is the ideal choice of inline insertion valve. AVT's full range of valves, from sizes 1.5" to 24" can be used on the below relevant pipeline applications:

- High-rise buildings
- Buildings of multiple occupancy
- Hotels
- Factories
- HVAC
- Commercial plumbing and water distribution
- Municipal water networks
- Transmission and distribution lines
- Water treatment plants
- Sewer force mains
- Refining and petrochemicals / fire suppression lines
- Ground storage tank isolation
- Offshore applications
- Commercial buildings/isolation
- Industrial process piping
- Fire hydrant repairs



The Benefits & Values of the AVT EZ Valve

- No water shut off required during installation
- No fines for water shut off
- No boil orders
- No customer notices
- No risk of plugging the line with a cut coupon
- No loss of pipe integrity
- Four times quicker to install
- Only one excavation required

Design features

- Unique, patented technology
- Low-profile design
- Integral isolation gate
- Ductile iron castings
- Corrosion resistant coatings
- Stainless steel fasteners for secure positioning
- Can be installed on PVC and most metallic pipes
- Customizable for special applications (Sleeves to meet irregular pipe ODs)
- Can be installed on Asbestos Cement pipes up to 12"
- Can be installed at any angle
- Valve bonnet can be removed after a repair or remain in place as an inline valve
- EZ Valve Components are WRAS Certified, meet AWWA C509/C515 standards (latest version) and UL Classified to NSF/ANSI Standard 61, Drinking Water System Components - Health Effects



**Advanced Valve
Technologies**

www.AVTFittings.com

Sales@AVTFittings.com

CUT AWAY VALVE WITH KEY



AVT EZ Valve with bonnet installed and wedge gate partially lowered

Actuator
Standard number of turns to open and close valve

Removable Valve Bonnet
Resilient wedge gate and actuation mechanism are contained for fast and easy installation or removal

Resilient Wedge
A wedge gate over a ductile iron frame that effectively seals even tuberculated host pipe

Gasket & Channel
Maintain system pressure while allowing rotation of casting assembly during slot-milling

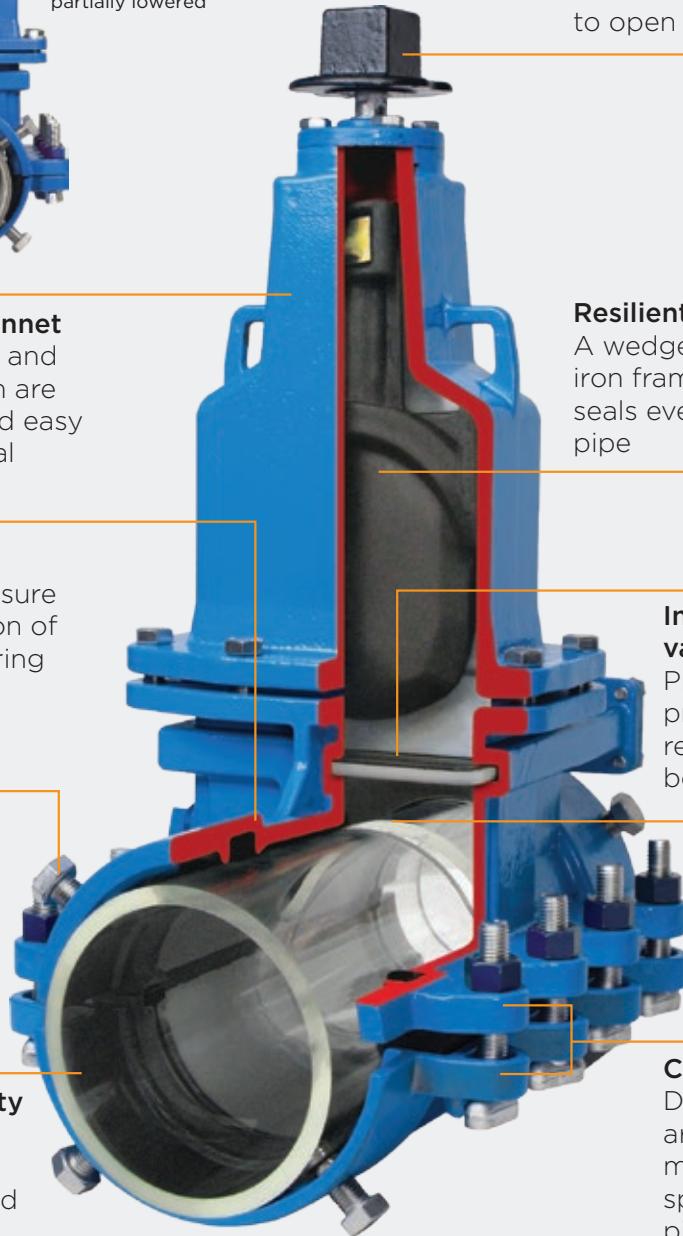
Integrated isolation valve
Provides “under pressure” installation or removal of valve bonnets or blind flanges

Fasteners
Stainless steel components secure casting assembly and provide final positioning on pipe

Insertion Slot
One narrow slot over a 120° path maintains pipe integrity and creates resilient wedge access

Pipeline Compatibility
The EZ Valve design works with most metallic pipes, AC and PVC materials

Castings
Ductile iron castings are precision machined to fit project specifications and pipe material



AVT EZ Valve with bonnet removed and blind flange installed

THE AVT EZ VALVE TOOLKIT

The AVT EZ Valve Toolkit comes complete with all the tools and equipment required to install our innovative, award-winning valve, including end milling (EM) machine which mills the unique 120° slot across pipe which has no negative effect on the pipe integrity.

Sizes available:

- Nano - 1.5" to 2" (40mm to 50mm)
- Micro - 3" (80mm)
- Small - 4" to 14" (100mm to 350mm)
- Large - 16" to 24" (400mm to 600mm)

The toolkit includes:

- EM (End Milling) Machine
- Fasteners
- Cutterhead
- Spare cutterhead /teeth
- Power pack
- Measurement calipers
- Pressure test plate
- Pressure source
- End rings & U-gauge (size specific)
- Combination wrenches (various sizes)
- Allen wrenches (various sizes)
- Ratchet wrench
- Sockets
- Adjustable wrench
- AVT assembly grease and tape
- Level
- Other items as required



**Advanced Valve
Technologies**

www.AVTFittings.com

Sales@AVTFittings.com

INSTALLATION PROCESS

1

Prepare Insertion Site

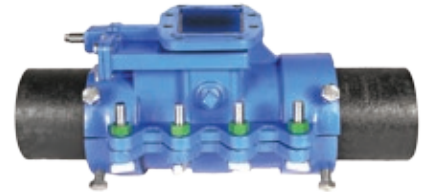
Prepare insertion site by lubricating the gasket and contact areas



2

Lubricate Gasket Sets & Channels

Lubricate gasket sets and gasket channels in casting bodies



3

Assemble Ductile Iron Castings

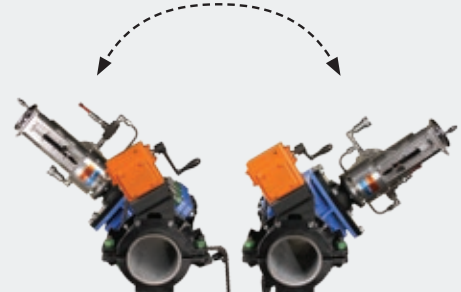
Assemble ductile iron castings with stainless steel fasteners to accept a pressure test and temporarily allow rotation for milling





4 Attach EM Machine

Check integral isolation gate is fully open, fit rotation assembly, attach EM machine and pressure test



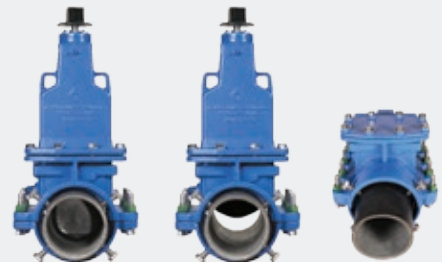
5 Mill A Slot Over a 120° Path

Maintaining system line pressure, mill a slot over a 120° path (Note: The slot normally is cut to provide for vertical valve alignment, but the installer can select any position.)



6 Retract The Milling Head

Retract the milling head, close the integral isolation gate. Replace the EM Machine with the resilient wedge bonnet, remove the rotation assembly and tighten casting fasteners to specified torque values



7 Open and Operate

Open the integral isolation gate and operate the AVT EZ Valve. For line stop applications, replace the valve bonnet with a blind flange using the integral isolation gate

TRAINING

AVT has created a robust training program aimed at ensuring all AVT EZ Valve installers are fully prepared to safely and efficiently install our valves. Our training program is split into two sections: online curriculum and face to face training.

Online curriculum

Our online curriculum gives new installers an overview of all the materials used and actions required to install the AVT EZ Valve in order to fully prepare them for their face to face training. Trainee installers simply need to sign up via our website contact us page, or liaise with your AVT representative to gain access. The online curriculum includes:

Pre-installation:

- Parts overview
- Supplies required to install the valve
- Excavation and pipe access
- Valve placement

Installation Process:

- Surface preparation
- Pre-install checks
- Pipe preparation
- Measuring, taping, and greasing
- Mounting the valve and machine equipment
 - End rings
 - Gear box
 - Level and set
- Pressure testing
- Cutting and swarf removal
- Milling assembly
- Slot milling and swarf removal
- Installing the bonnet

Operation & Maintenance:

- Maintenance
- Storage
- Installation equipment maintenance

Process Safety and Assurance:

- Trained staff
- Risk assessment
- Safe work practices
- PPE



Face to face training

Our face to face training can take place in a number of locations: at our customer specified location, in the field or at our Elk Grove Village, IL, AVT training facility. Depending on the setting, this training includes the chance to witness an install from start to finish and hands on experience of installing an AVT EZ Valve, all delivered by members of our experienced training team.

Once installers are fully trained, they receive AVT certification which enables them to install for one year before a short recertification process takes place. This usually involves re-taking the online curriculum section of the AVT training program.



Image of valve install demonstration taking place, not full training session



www.AVTFittings.com

Sales@AVTFittings.com

RENTEZ

AVT's RentEZ programs enables users to access the AVT EZ Valve Toolkit, either free of charge or for a low rental price. For the 4" to 14" (100mm to 350mm) AVT EZ Valve, a small, up-front investment in valves gives customers a rent-free lease of the AVT EZ Valve Toolkit with a commitment to purchase a further six valves every six weeks. For the 16" to 24" (400mm to 600mm) valves, the toolkit is available via a low-cost daily rent with no commitment to purchase further valves.

To learn more, contact your local AVT Regional Account Representative or email sales@AVTFittings.com

THE INSTALL PROCESS IN PICTURES



1 | **Pipe**
Preparation



2 | **Fitting**
the bottom (part B) of the AVT EZ Valve



3 | **Fitting**
the top (part A) of the AVT EZ Valve



4 | **Milling**
the 120° slot across the pipe



5 | **Integral Isolation Gate**
is closed to prevent water loss



6 | **Installing**
the bonnet



7 | **Completed**
Install

CONTACT DETAILS

United States:

621 Lockhaven Drive
Houston, TX 77073
P: +1 281 590 8491
F: +1 281 590 9528

800 Busse Road
Elk Grove Village, IL 60007
P: +1 847 364 3700
F: +1 847 364 8883

United Kingdom:

4A The Causeway
Godmanchester
Cambridgeshire, England
PE29 2HA
P: +44 (0)148 041 4703
F: +44 (0)148 041 4705

Unit R4 Capital Business Park,
Parkway, Cardiff,
CF3 2PU
P: +029 2079 2007

www.AVTFittings.com

Sales@AVTFittings.com

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.



www.AVTFittings.com

Sales@AVTFittings.com



Advanced Valve Technologies

www.AVTFittings.com
Sales@AVTFittings.com

EZ Valve® is a registered trademark of Advanced Valve Technologies LLC.

V: 06.10.2020

AVT holds and/or is compliant with key certifications and is a member of leading industry associations.

