



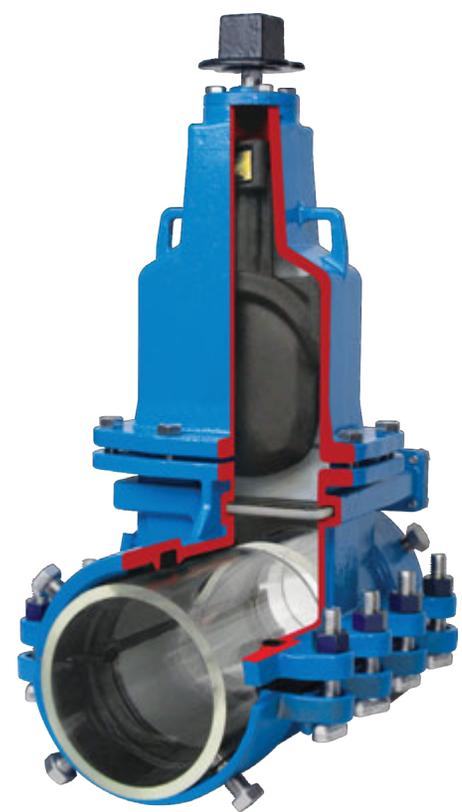
**Advanced Valve
Technologies**

ADVANCED VALVE TECHNOLOGIES

User
Manual



**CRITICAL
INFRASTRUCTURE
UNIVERSITY**





INTRODUCTION

This document takes you through the step-by-step process required to install an AVT EZ Valve™. Advanced Valve Technologies (AVT) manufactures comprehensive solutions for the safe and sustainable repair and rehabilitation of critical water infrastructure. The company is best known for the AVT EZ Valve™, an award-winning inline insertion valve designed for quick and easy installation for emergency water line repair and pipeline maintenance, requiring no disruption in service.

Critical Infrastructure University (CIU) provides education, training, instruction and knowledge on the vital infrastructure resources that help keep the world running. Our curriculum includes general industry education along with user training specific to Fortistructure Solutions' products and services.

1

Clean pipe down to base material. If pits or high points are present, try to avoid them. If you can't, grinding may be required for an end result of a smooth pipe for optimum seal.

2

Check diameter of pipe and select proper gasket set.

3

Using the gasket as a template mark where the valve will be sealing on the pipe.



4

Apply AVT food-grade tape to the pipe. Wrap twice and ensure it is free from wrinkles.

5

Using AVT food grade lubricant. Grease tape liberally. Grease the grooves of the top and bottom section of the valve body where the gaskets will be sealing. Insert gaskets and grease liberally.

6

Place top half of valve on pipe and carefully bolt bottom half of the valve body in place using the T-bolts that came with your valve.





7

Apply pressure to valve body, AVT recommends 10Bar or 1.5 times maximum system pressure.

8

Attach gearbox to appropriate ring. Attach Gear box ring snugly to pipe. Tighten set screws by hand until they touch the pipe, then turn them one-quarter turn with the wrench.

9

Level valve and tighten bolts. DO NOT tighten valve body all the way down! Between $\frac{1}{4}$ (6MM) and $\frac{3}{8}$ (9MM) inch gap is the standard.

10

Attach alignment ring.

11

Fit stop pin over slide gate feed screw and tighten set screws. Close slide gate ensuring 12 turns and open.

12

Level the valve, then fit the stop ring snugly against valve body. Using the U gauge align the ring with the stop pin. Tighten ring making sure the U gauge stays aligned with stop pin.

13

Attach flush port assembly.

14

Attach mounting plate using bonnet bolts. Make sure the transition ring is flush against plate.

15

Attach milling machine.



16

Blow off pressure and attach flush hose.

17

Rotate valve body down to one side until stop pin makes contact with ring ensuring chip flush port is facing upwards.

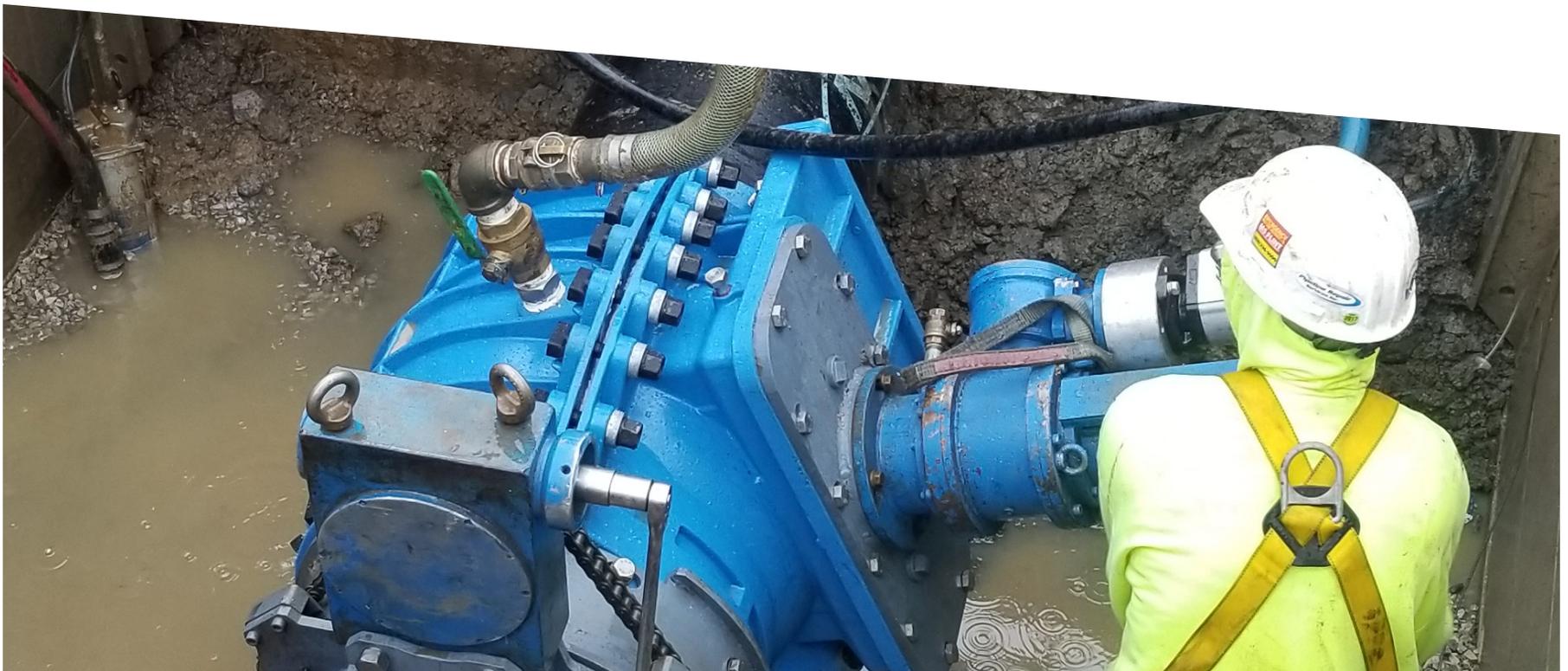
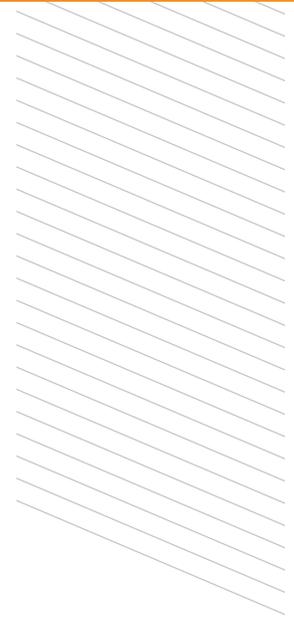


18

Lower cutting head to the pipe. Set the top arrow of travel gauge to the red depth indicator.

The arrows with the longer travel range are for 4" to 8" and the shorter travel range is for 10" to 12". Back cutting head off of pipe and start motor.

Slowly pierce pipe until the red depth indicator is between the bottom arrows. Lock feed with black knob.





19

Slowly rotate valve from one side of the stop ring to the other.

20

Bring the cutting head all the way up and rotate valve body back up to centre. Close flush hose.

21

Close slide gate. Blow off pressure and remove mounting plate with end milling machine attached.

22

Attach bonnet and open slide gate. Lower gate $\frac{3}{4}$ of the way down.

23

Remove chain, rings and stop pin.

24

Tighten valve down to 100 ft lb of torque.



25

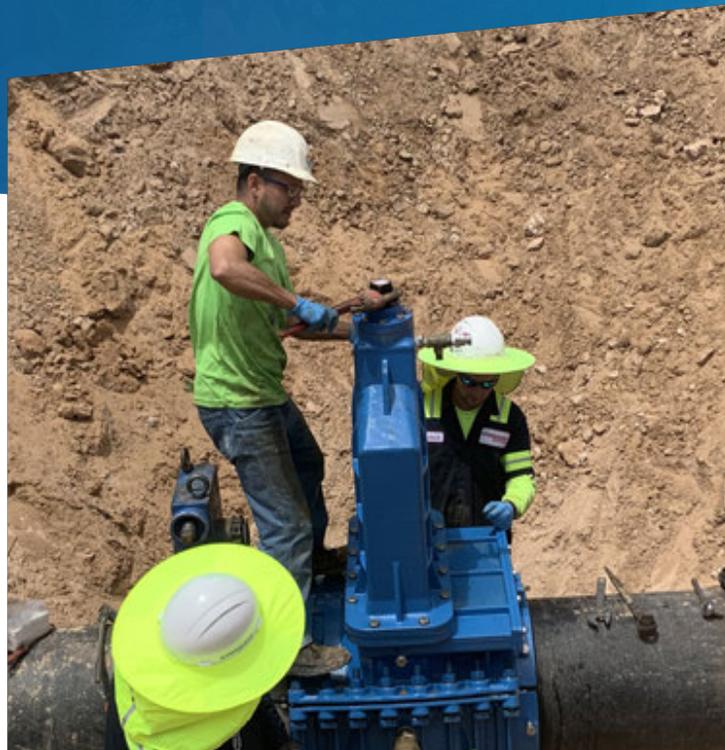
Install restraint bolts and tighten. turn in a lug nut pattern. (Opposite sides tightened in succession).

26

Retract valve to open position.

27

Close valve completely as you count turns.



28

Close valve the rest of the way down. This cuts off pressure to the valve body. Remove flush hose setup and plug hole with 1" plug for 4" to 8", or 1 ½" plug for 10" to 12".

29

Bring gate to the fully open position ensuring the correct number of turns.

30

Congratulations you have completed your EZ Valve insertion.





Advanced Valve Technologies

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