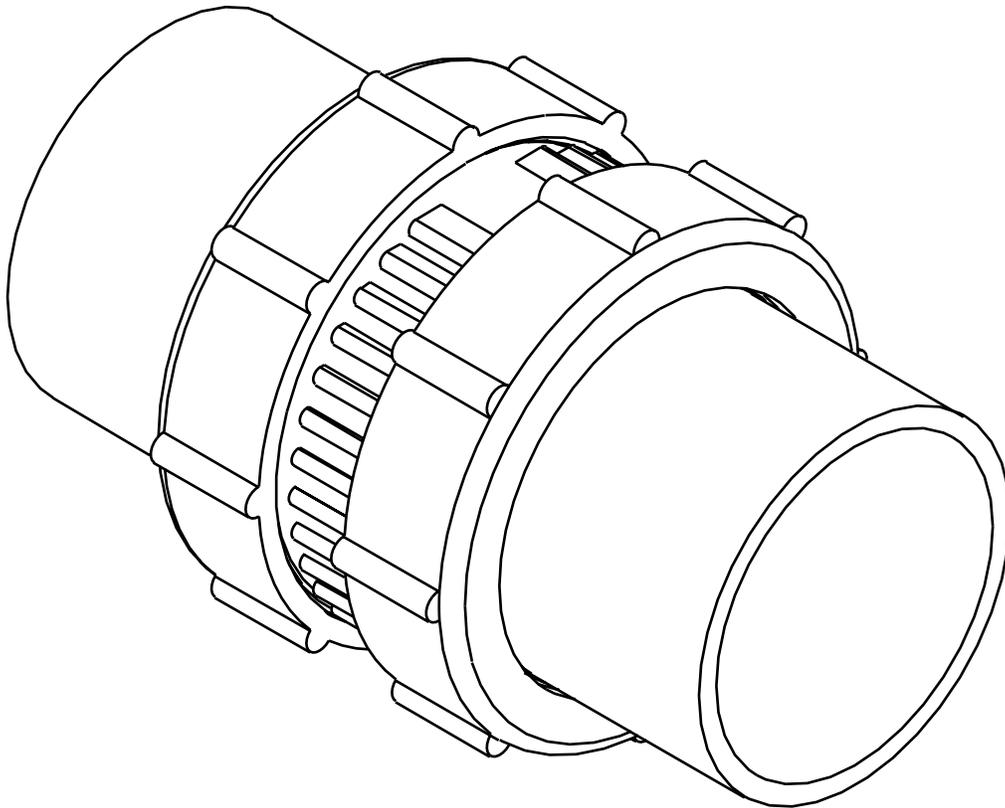


---

# **CHEMICAL DRAINAGE SYSTEMS**

## **MECHANICAL JOINT INSTALLATION INSTRUCTIONS**

---



**NOTE:** *Installation Instructions are also available on VHS video and on a CD ROM. Please write, call or e-mail your request.*

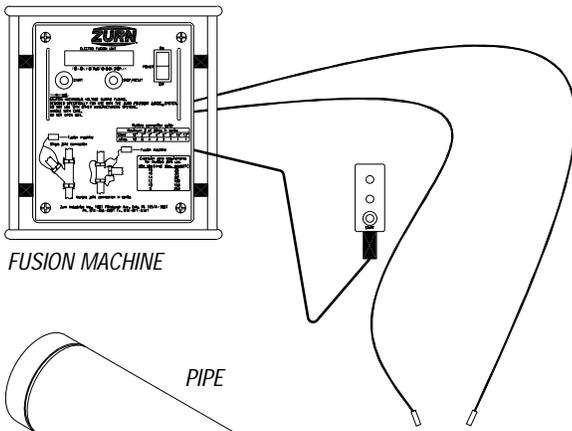
---

**ZURN PLUMBING PRODUCTS GROUP** CHEMICAL DRAINAGE SYSTEMS OPERATION, 1801 PITTSBURGH AVE., ERIE, PA 16502  
PHONE: 814/455-0921 FAX: 814/875-1402 WEBSITE: [www.zurn.com](http://www.zurn.com)

In Canada: **ZURN INDUSTRIES LIMITED** 3544 NASHUA DRIVE, MISSISSAUGA, ONTARIO L4V 1L2 PHONE: 905/405-8272 FAX: 905/405-1292

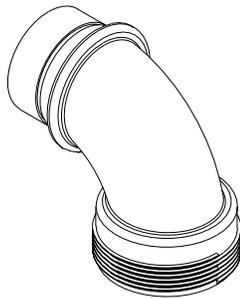
Form No. CDS20-01, 9/02

## Mechanical Joining System: Components

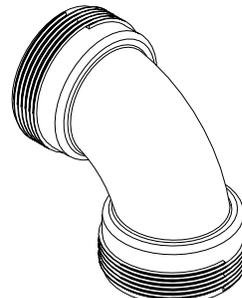


FUSION MACHINE

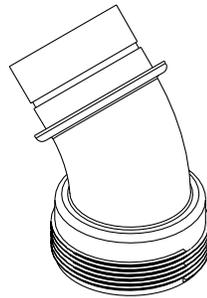
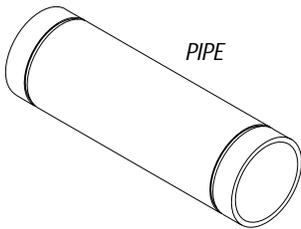
PIPE



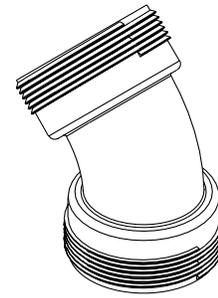
THREADED X SPIGOT  
90° ELBOW



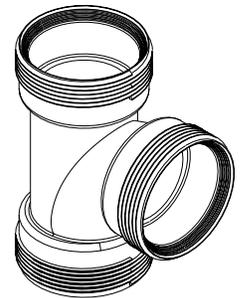
THREADED X THREADED  
90° ELBOW



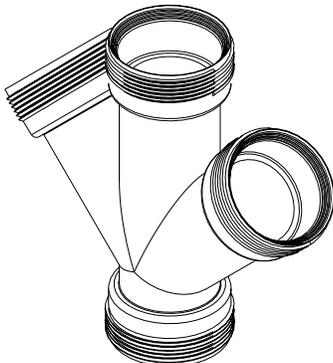
THREADED X SPIGOT  
45° ELBOW



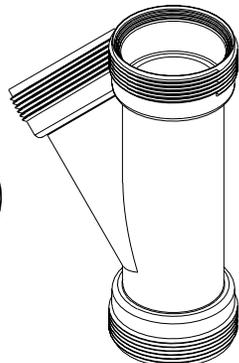
THREADED X THREADED  
45° ELBOW



SANITARY TEE



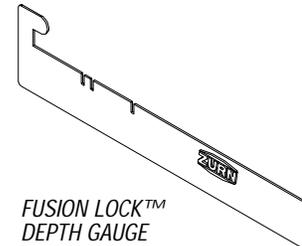
45° DOUBLE WYE



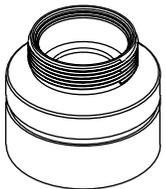
45° WYE



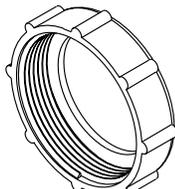
COUPLING



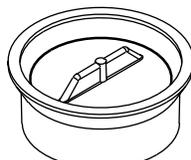
FUSION LOCK™  
DEPTH GAUGE



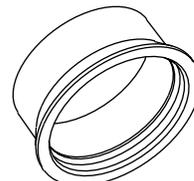
REDUCER



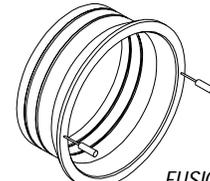
LOCKING NUT



CLEANOUT PLUG



MECHANICAL SEAL



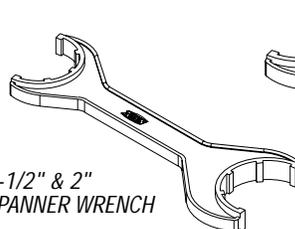
FUSION LOCK™ SEAL



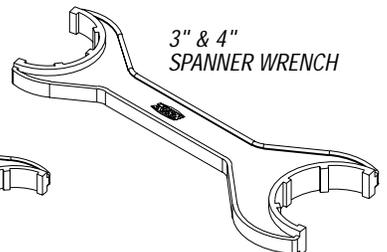
3", 4" & 6" GROOVER



1-1/2" & 2" GROOVER



1-1/2" & 2"  
SPANNER WRENCH

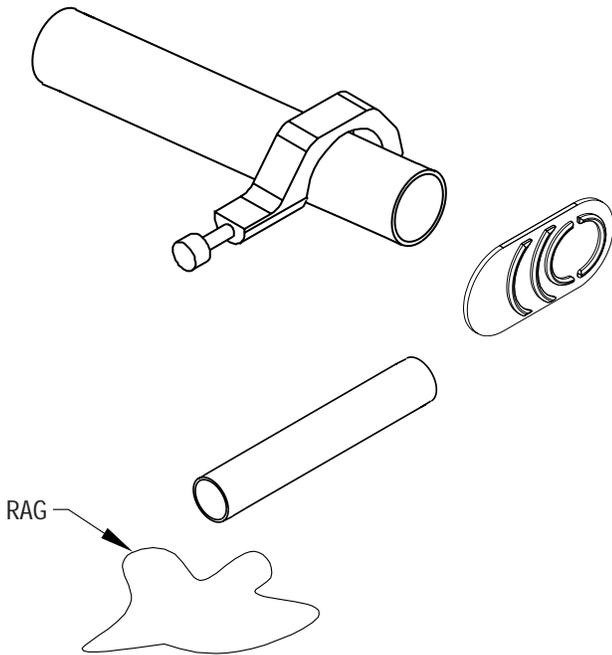


3" & 4"  
SPANNER WRENCH

## Mechanical Joining System

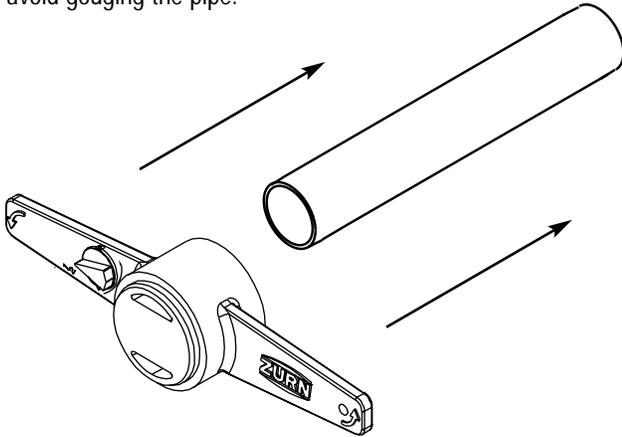
### STEP 1

Cut pipe square to appropriate length and deburr ends.  
Note: Be certain pipe is visibly free of any dirt or debris.  
Chop saw or pipe cutting tool will ensure square cuts.



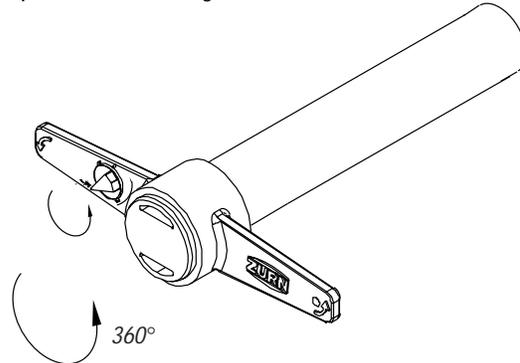
### STEP 2

Secure pipe and position groover onto end of pipe.  
Caution: Be certain groover blade is in the retracted position to avoid gouging the pipe.



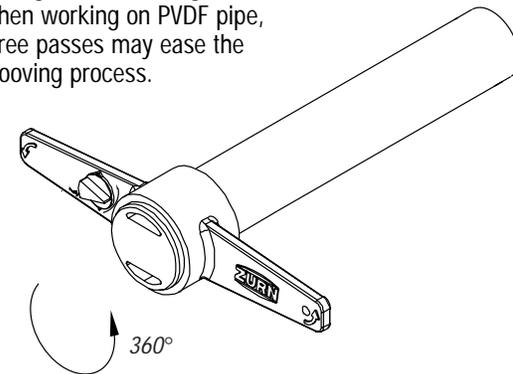
### STEP 3

Turn groover knob counterclockwise until knob point is at the "1/2" depth position as indicated on the groover. Upon completion, rotate the groover counterclockwise 360°.



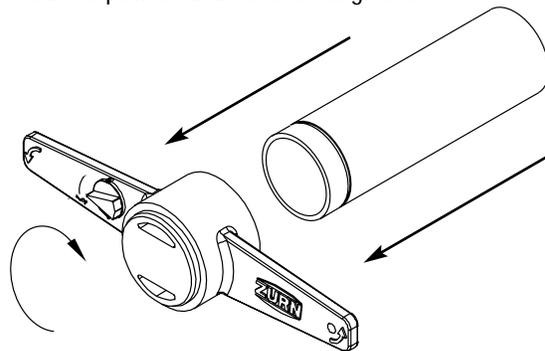
### STEP 4

Turn the groover knob counterclockwise until tab hits the stop pin. Again, rotate the groover unit counterclockwise 360°.  
When working on PVDF pipe, three passes may ease the grooving process.



### STEP 5

Turn the groover knob clockwise until it hits the stop pin or retracted position and remove the groover.

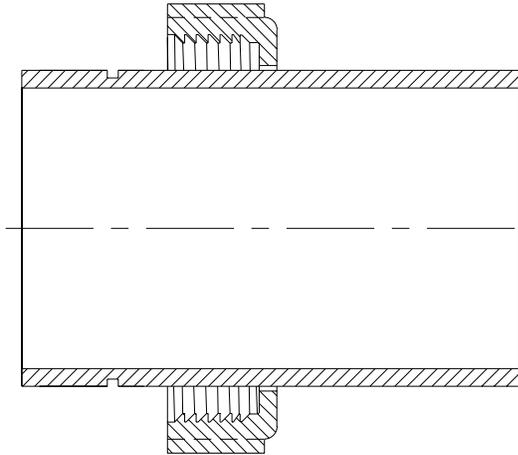


## Mechanical Joining System

### STEP 6

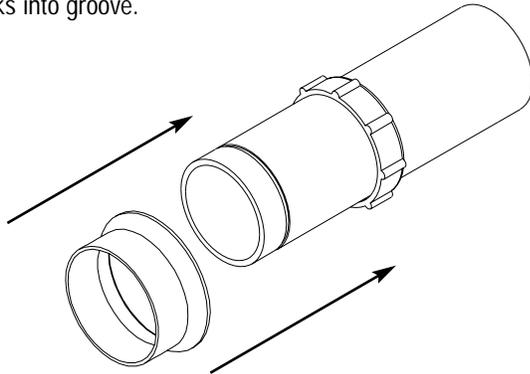
Insert locking nut onto the pipe.

Note: Insert nut **before** putting on the seal.



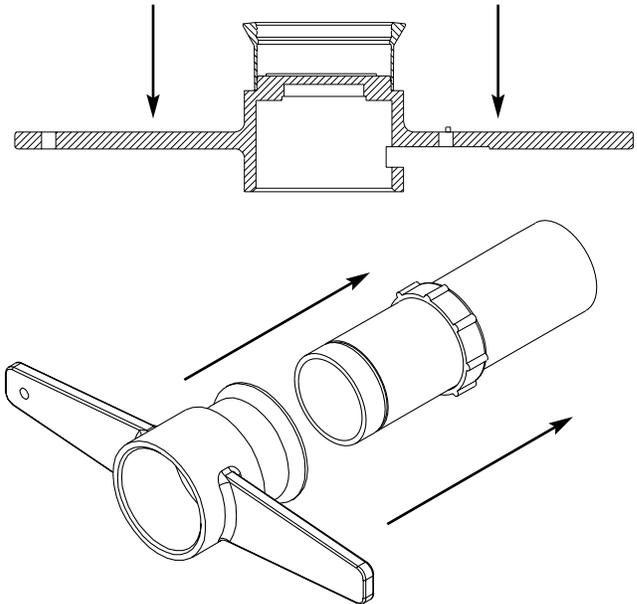
### STEP 7

Put seal on the pipe and/or fitting. For 1-1/2" and 2" seals, put "fat" end of the seal on first and push it over the pipe until it locks into groove.



### STEP 7 (continued)

For 3" and 4" seals, place the "thin" end of the seal onto topside (milled portion) of the grooving tool. Push the seal onto the pipe/fitting making sure equal force is applied so that the seal goes on square and locks in place.



Heat treatment of the seal may help facilitate the installation process. Water should not exceed 140°F.

### STEP 8

Lubricate fitting threads with a teflon paste or petroleum-based jelly. Insert the pipe assembly into the fitting and hand tighten the nut. Use spanner wrench provided to further tighten the nut until snug to complete the joint.

