

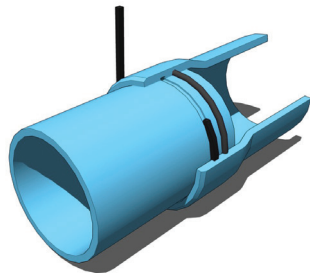
## TECHNICAL BULLETIN

# ASSEMBLY ADVANTAGES OF CERTA-LOK® JOINTS

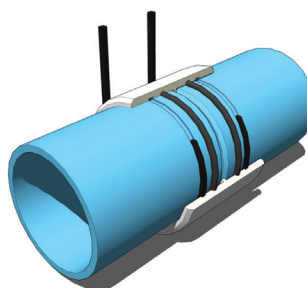
## What is a Certa-Lok® Restrained Joint?

Westlake Pipe & Fittings' Certa-Lok PVC pipe is an internally restraining, non-metallic, joint system that is offered in two different joint styles across multiple product lines. Certa-Lok joint types:

*Restrained Joint Integral Bell (RJIB)*



*Restrained Joint (RJ) Coupling*



Metallic external joint restraints have been around for years and have been the standard option for restraining pipe joints. However, Westlake Pipe & Fitting's Certa-Lok joints have the following advantages when compared to the standard metallic external joint restraint assembly:

- Quicker assembly time
- Less laborers needed
- Less on-site equipment needed
- Potentially Safer Environment

## Assembly time differences

### CERTA-LOK TIME BREAKDOWN CONSIDERATIONS (STRAIGHT JOINT DIA. <14")

- 30 seconds - Alignment of joint
- 30 seconds - Insertion of spline
- Total time = 1 minute**

*NOTE: The time to assemble a Certa-Lok joint is less time it takes to brush your teeth.*



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## ESTIMATED EXTERNAL RESTRAINT TIME BREAKDOWN CONSIDERATION (STRAIGHT JOINT LESS THAN 14")

- 2 minutes - Assemble temporary harness so pipe can be elevated via mechanical means
- 2 minutes - Connect harness and raise pipe with excavator/back hoe, so laborers can access all bolt locations on external restraint
- 3 minutes - Assemble external restraint collar on each pipe end
- 3 minutes - Assemble tie-rods between each collar
- 5 minutes - Tighten all bolts with Pneumatic tooling (add 5 minutes if using wrench)
- Total Time = 15-20 minutes**

*NOTE: The average time it takes to assemble an external joint restraint is approximately the same time it takes for the average human to walk one mile (15-22 minutes according to the Centers of Disease Control and Prevention)!*

## Labor Differences

### CERTA-LOK ASSEMBLY = 2 LABORERS

- (1) Spline Insertion = 1 laborer
- (2) Pipe alignment and assembly = 1 laborer



### EXTERNAL RESTRAINT ASSEMBLY = ~4 LABORERS

- (1) Situate pipe and joint such that there is 360° access to restraint and joint = 1 laborer/operator
- (2) Operation of the wrench / aligning assembly = 1 laborer
- (3) Align restraint, tie-rods, and/or bolts in place during assemble = 1 laborer
- (4) Transportation of additional bolts, tie-rods, harnesses, maintaining assemble equipment and also helping align restraint for assemble = 1 laborer



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## Other Assembly Considerations:

### LESS ON-SITE EQUIPMENT

- Certa-Lok joints only require a spline insertion tool (smaller diameters can be assembled by hand).
- External restraints require the following tools and equipment
  - A wrench to assemble associated bolts/rods,
    - If using a pneumatic wrench, then will need: generator, compressor, air hose
  - Corrosion protection materials (if applicable),
  - Back-hoe or excavator to suspend pipe in air to allow for 360° access during assemble.

### SAFETY

External restraints require laborers in a trench, or underneath a suspended pipe, for longer periods of time. Resulting in more exposure to higher risk environments and scenarios when compared to the typical Certa-Lok assembly.



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