# **KENCO RETRACTABLE INJECTOR**

## NOTICE

Any operation involving work on pipe containing liquids or gases under pressure is potentially hazardous. It is necessary, therefore, that correct procedures be followed in the use of this equipment to maintain a safe working environment.

No person should use this equipment who is not fully trained in the procedures stated in these instructions, and who is not fully aware of the potential hazards connected with work on pipe containing liquids or gases under pressure.

The user of this equipment is responsible for the manner in which this equipment is used and the training and competence of the operators.

#### Purpose

These instructions are designed to provide the operator with factory recommended operation and maintenance instructions for safe use of the Kenco Retractable Injector. This equipment is designed with adequate safety factors; however, do not exceed factory recommended specifications under any circumstances. Should any special questions arise concerning the Kenco Retractable Injector or its use, contact Kenco Engineering or its nearest factory representative.

The purpose of warnings and cautions in these instructions is to call the operator's attention to possible danger of injury to personnel and/or damage to equipment, and deserve careful attention and understanding.

### **Preliminary Considerations**

- 1. Although all Kenco Retractable Injectors may be installed in any orientation and at any angle around the pipe, it is best to install in a location which will allow operator access. Make sure that adequate clearance is available for insertion and removal.
- 2. This equipment is designed to be installed in a standard 3/4" NPT branch connection.
- 3. Standard insertion depth should be within the center 1/3 of the pipe.
- 4. The Retractable Injector is designed to support its own weight. Do not install in a location where it may be used as a footrest or a hand hold. Do not hang or support any other piping, tubing or electrical equipment from this assembly.
- 5. The Safety Line provided between the Injector Valve and the Injector Nozzle is used to prevent the Injector Nozzle from being completely withdrawn and to prevent blowout. Operation without the Safety Line properly in place may result in a hazardous condition in which pressurized fluids may be released and which may result in injury or damage.

## WARNING

The Kenco Retractable Injector cannot be inserted into high pressure pipelines manually. Attempting to insert this device manually against high pipeline pressure may result in a hazardous condition in which pressurized fluids may be released and which may result in damage to property, personal injury, or death.

### Installation

- 1. Inspect Retractable Injector for any possible damage incurred during shipment.
- 2. Loosen Compression Nut and retract the Injector Nozzle until the Injector valve can be closed.
- 3. Close Injector Valve.
- 4. Apply thread sealant to male pipe threads on closed Injector Valve and install into pipeline.
- 5. Apply thread sealant to male pipe threads on mating component, i.e., pipe nipple, tube fitting, etc. (not included with this assembly) and install into 1/2" FNPT Injector Nozzle Chemical Feed Connection.
- 6. Securely tighten the Compression Nut onto the Compression Seal Adapter threads on the Injector Valve. Note: The pressure containing ability of the seal is directly related to the tightness of the nut.
- Slowly open the Injector Valve. CAUTION: Do not place your hands between Injector Nozzle and Safety Line during this operation. If the Compression Nut is not securely tightened, pressure can cause the Injector Nozzle to suddenly back out and pull Safety Line tight against nozzle.
- 8. Carefully loosen Compression Nut just enough to allow Injector Nozzle to be pushed to the proper insertion depth in pipeline.
- 9. Rotate the Retractable Injector Nozzle so that the engraved "FLOW" arrow is facing in the direction of flow. This positions the aspirator and injector tip angle for optimal chemical dispersion.

**NOTE:** For injectors made of CPVC an orientation groove is provided instead of an engraved arrow. Install the injector so that the orientation groove is facing upstream.

- 10. With the Injector Nozzle at the desired depth in pipeline, securely tighten Compression Nut.
- 11. Increase pressure in process line. If the Injector Nozzle starts to back out, tighten the Compression Nut more.

## Removal

1. Carefully loosen Compression Nut as required to allow Retractable Injector Nozzle to be slowly withdrawn to the point where the Injector Valve can be closed. **CAUTION:** Loosening the Compression Nut can result in a hazardous condition in which pressurized fluids may be released and which may result in injury or damage.



2. Close Injector Valve. **CAUTION:** Removing the Injector Nozzle without completely closing the isolation valve will result in a hazardous condition in which pressurized fluids may be released and which may result in injury or damage.

**NOTE:** A Bleed Plug may have been provided as an option in the body of the Retractable Injector Nozzle Check Valve. The Bleed Plug serves to bleed off pressure after the Injector Nozzle is retracted and the valve is closed. If there is no Bleed Plug go to step 5.

- 3. Make sure that personnel & equipment are a safe distance from the bleeder discharge orifice.
- 4. Slowly turn the Bleed Plug just enough to allow pressure discharge from the Injector Nozzle.
- 5. Remove attached components.
- 6. Remove Retractable Injector by unscrewing the assembly from the process connection.



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