

**ROGERS WATER UTILITIES WATER SYSTEM
ROGERS, ARKANSAS**

**SPECIFICATIONS FOR
JOINT RESTRAINT SYSTEMS
REVISED FEBRUARY 2006**

1. **SCOPE**

This product specification covers pipe joint restraint systems to be used on water mains for nominal pipe sizes of 6 inch, 8 inch, 12 inch, 18 inch, 24 inch and 30 inch through 64 inch.

2. **GENERAL REQUIREMENTS FOR RETAINER GLANDS**

- a. Radial type bolt retainer gland system shall be made of ductile iron and shall be in conjunction with mechanical joint (MJ) fittings or pipe. Split-ring retainer glands are not allowed on new construction. The retainer gland system shall conform to ANSI/AWWA C110/A21.10-98 and C111/A21.11.
- b. The retainer gland system shall utilize a standard mechanical joint gasket with a ductile iron replacement gland conforming to ASTM A 536-80. The gland dimension shall conform to standard mechanical joint bolt circle criteria.
- c. The wedge screws shall be compressed to the outside wall of the pipe using bolt and/or twist-off nuts to insure proper actuating of the retainer gland system.
- d. Standard mechanical joint tee-bolts and nuts shall be high strength steel conforming to AWWA C111/A21.11-90 and C153/A21.53-88.
- e. Coating of the retainer gland system shall be provided with a petroleum asphaltic coating in accordance with the latest revision of ANSI/AWWA C151/A21.51 or shall be provided with epoxy coating. The epoxy shall have a minimal dry film thickness of 8 mils, and shall be in accordance with AWWA C550, latest revision.
- f. The retainer gland system shall be designed for a minimum working pressure of 350 psi for nominal pipe sizes of 6 inch through 12 inch and a minimum working pressure of 250 psi for nominal pipe sizes of 18 inch through 54 inch.

3. **GENERAL REQUIREMENTS FOR LOCK GASKET JOINTS**

- a. Lock gasket joints shall conform to ANSI/AWWA C111/A21.95.

JOINT RESTRAINT SYSTEMS
02-08 SPECIFICATIONS

- b. Lock gasket joints are required for carrier pipe installation in casings/tunnels and water mains for nominal pipe sizes of 18 inch, 24 inch and 30 inch through 64 inch (away from the ductile iron MJ fitting).

4. **GENERAL REQUIREMENTS FOR TIE RODS**

- a. Tie rods shall ¾ inch diameter (all thread) ASTM grade 304 (18-8) stainless steel rods.
- b. Eye Bolts shall be ¾ inch national coarse roll thread, high strength low alloy steel conforming AWWA C111-80. The installation of tie rods through the MJ flange bolt holes is not allowed.

5. **GENERAL REQUIREMENTS FOR FITTING ADAPTERS**

- a. Mechanical joint (MJ) valves and fittings shall be connected using a bolt-through positive restrain system (adaptor) with a working pressure of 350 psi.
- b. The adapters shall be ductile iron conforming to ASTM A 80-55-06 and provided for nominal pipe sizes of 6 inch, 8 inch and 12 inch.
- c. The adapters shall be asphaltic coating in accordance with ANSI/AWWA C153/A21.53 and ANSI/AWWA C104/A21.4.

6. **QUALITY ASSURANCE**

- a. The Rogers Water Utilities may, at no cost to the manufacturer subject random restraint systems to testing by an independent laboratory for compliance with these standards. Any visible defect or failure to meet the quality standards herein will be grounds for rejecting.
- b. All restraint systems shall be domestic manufactured.

The following manufactures are approved for restraint systems.

APPROVED RETAINER GLAND MANUFACTURERS LIST

EBBA, Inc.
Ford Meter Company
Tyler Pipe Company
Mueller Company
Romac Industries, Inc.

JOINT RESTRAINT SYSTEMS
02-08 SPECIFICATIONS

APPROVED LOCK GASKET JOINTS MANUFACTURERS LIST

Griffin Pipe Company
US Pipe Company
American Cast Iron Pipe Company

APPROVED TIE RODS MANUFACTURERS LIST

Star National Products	¾" Stainless Steel, all thread, Rods
Romac Industries, Inc.	¾" Eye Bolts
All-Pro Fasteners	¾" Stainless Steel, all thread, Rods
All-Pro Fasteners	¾" Eye Bolts

APPROVED FITTING ADAPTERS MANUFACTURERS LIST

Infact (Foster) Corporation