OPERATING INSTRUCTIONS MANUAL

MUELLER®

2300 Series Resilient Wedge Gate Valve

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⚠ WARNING:

1. Read and follow instructions carefully. Proper training and periodic review regarding the use of this equipment is essential to prevent possible serious injury and/or property damage. The instructions contained herein were developed for using this equipment on fittings manufactured by Mueller Co. only, and may not be applicable for any other use.
2. Do not exceed the pressure ratings of any components or equipment. Exceeding the rated pressure may result in serious injury and/or property damage.
3. Safety goggles and other appropriate protective gear should be used. Failure to do so could result in serious injury.

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APPLICATION

Mueller® 2300 Series Resilient Wedge Gate Valves are intended for use in potable water distribution or fire protection systems. One or more of the following publications may be applicable to the installation or testing of the valve:

1. AWWA C-509 Thick Wall Resilient Seated Gate Valves 2" through 12" Nominal Pipe Size

2. AWWA C-515 Thin Wall Resilient Seated Gate Valves 3" through 54" Nominal Pipe Size

3. AWWA C-600 Installation of Ductile Iron Water Mains and Main Appurtenances

4. All installation, operation and maintenance instructions issued by the manufacturer of the pipe and the valves.

5. Valve user guide as published by MSS.

6. AWWA M-44 Distribution Valves: Selection, Installation, Field Testing and Maintenance.

7. NFPA-24 – Standard for the installation of Private Fire Service Mains and their appurtenances.

ROUTINE MAINTENANCE

Mueller® Resilient Wedge Valves include design features that ease operation, minimize wear on the working parts of the valve, and contribute to a long service life without routine maintenance – other than following the recommendations in AWWA Publication M-44, Distribution Valves: Selection, Installation, Field Testing and Maintenance for valves in water works applications. As recommended by that publication, every valve should be operated through a full close and open cycle on a regular schedule to clear the operating stem and wedge guides of naturally occurring encrustation or other debris.

For valves in fire protection applictions, guidelines from the National Fire Protection Association (NFPA) should be followed.

INSTALLATION

Adhere to guidelines provided by AWWA M-44 or NFPA publications, depending upon the valve application, as they might be amended by the distribution or fire protection system owner.

Inspection On Delivery

1. Check for possible damage in shipment, conformance to specifications, opening direction, shortages, etc.

2. Carefully unload all valves - do not drop valve – do not lift valve using gearing, bypass or other appendage as a hook.

3. Valve should be opened and then closed to make sure it works properly. Also check opening direction against the order instruction.

4. Any problems should be reported immediately to Trucker and noted on bill of lading, and signed by the driver on customer's copy.

Storage

1. Valves should be stored in a partially open position.

2. When possible, keep valves out of the weather.

3. In cold climates the inside of the valve must be kept drained of any water to prevent freezing.

4. When stored outside, valve stem should be in a vertical position, and whenever possible, valves should be covered with a water-proof covering.

5. Protect all parts of the valve at all times.

6. Protect rubber seat of resilient wedge valves from ozone and hydrocarbons (solvents, paints and oils, etc.).

INSTALLATION (cont.)

Inspection Before Installation

1. Check to see the valve end-joints are clean.

2. Check valve for damage.

3. Open and close valve - make sure it works properly.

4. Keep valve closed when placing in trench.

5. Inspect casting for damage.

6. Inspect epoxy coating and repair breaks using compatible coating material.

Installation

1. Flush the water line completely.

2. Handle valve carefully.

3. Prepare pipe ends in accordance with pipe manufacturers' instructions.

4. Install valve using appropriate instructions for the specified joint (flanged, mechanical joint, slip-on, etc.).

5. Water piping should be properly supported to avoid line stress on valve.

6. In buried applications, make sure that the valve box does not transmit traffic loads or other stress to the valve.

7. Do not use valves to force a pipeline into position.

8. Do not deflect any valve/pipe joint.

9. Protect exterior epoxy coating during backfill.

Testing

1. Do not backfill valves before hydrostatic system test. Leave the valves exposed while the pipeline is being pressurized. Check to see that all valve joints and pressure containing bolting, including bonnet bolts, are tight.

2. Valves can be shell tested (but not operated) at two times the rated pressure of the valve.

3. After testing, steps should be taken to relieve any trapped pressure in body of valves.

OPERATION

The operation of a resilient wedge valve will "feel" different to the valve operator compared to an older style double-disc gate valve. In normal circumstances, less operating torque is required as the resilient wedge valve just closes, or on opening. Valve operators should be instructed to adhere to the 'number of turns to open' for the size of valve in question rather than rely only upon the feel of the valve.

Number of Turns & *Max. Torque in ft.-lbs.* to Close Mueller Resilient Wedge Gate Valves*

Valve Size	2"	2½"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"	54"
	8 *20*	11 *28*	11 *52*	14 *75*	21 *110*	27 *150*	33 *185*	39 *225*	44 *225*	49 *275*	57 *275*	63 *300*	75 *325*	93 *450*	111 *550*	131 *700*	149 *800*	149 *1000*
Spur Gearing	-- --	-- --	-- --	28 *41*	41 *60*	53 *82*	66 *101*	77 *123*	178 *61*	201 *75*	234 *75*	258 *81*	308 *88*	381 *122*	455 *149*	524 *199*	596 *227*	596 *284*
Bevel Gearing	-- --	-- --	22 *31*	28 *44*	41 *65*	53 *88*	66 *109*	77 *132*	174 *66*	196 *81*	228 *81*	252 *88*	300 *96*	372 *132*	444 *162*	524 *206*	596 *235*	596 *294*

*Always refer to the current catalog for accurate "turns to close" information – all numbers in chart are for valves without actuators. All valves 30" and larger require the use of actuators. Torque values are for dry (no flow) conditions per accepted industry practice – and refer to torque required to affect a seal. Torque under flow conditions are typically less than the values shown.