

# Fig. 235RF Series Gate Valve

## Installation & Maintenance Instructions

The 235RF series is a gate valve used in fuel or potable water handling systems. TTMA Flanged ends with quick-rising stem via hand wheel operation.



**Failure to follow any or all of the warnings and instructions in this document could result in a hazardous liquid spill, which could result in property damage, environmental contamination, fire, explosion, serious injury, or death.**

### Installation



#### WARNINGS

- **Fire Hazard**—Death or serious injury could result from spilled liquids. • Any modification to this valve other than stated in these installation instructions will void the product warranty.
- Install in accordance with all applicable local, state, and federal laws.
- For your safety, it is important to follow local, state, federal and/or OSHA rules that apply to working inside, above, or around the storage tank and piping area. Use all personal protective equipment required for working in the specific environment.
- Tanks could be under pressure. Vapors could be expelled from tank vents, piping, valves or fittings while performing installation. Vapors could catch fire or cause an explosion. Avoid sparks, open flame, or hot tools when working on valves.

#### Steps

1. Inspect unit for shipping damage. Do not use if damage is found.
2. Check valve openings for foreign matter such as packaging material. Remove any that is found.
3. Insure mounting pipe flange is flat.
4. Place gasket between the flange faces.
5. Insert all mounting bolts and washers and hand tighten all.
6. Begin gradually tightening the flange bolts with a wrench in a crisscross pattern.
7. Tighten each bolt to 45 ft-lb.



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### Maintenance

This valve should be maintained according to local codes. Quarterly inspection, by someone familiar with the proper operation of these valves, is required to insure valves are functioning properly before pumping liquid through the valves.



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## Steps

1. Cycle the valve open and closed several times to insure there is no sticking or binding. Make sure this process will not release liquid that is not desired or contaminate other liquids.
2. Replace the unit if sticking or binding occurs during step 1 above.
3. Inspect the valve for leaks around the packing nut. If any are evident, try tightening the packing nut. If the packing nut has been completely tightened, the packing must be replaced. Follow the steps below to replace the packing.
4. Inspect the valve bonnet gasket for leaks or damage. If either is evident the bonnet gasket must be replaced. Follow the steps below to replace the bonnet gasket.
5. Inspect all valve components and surfaces for damage, corrosion or excessive wear. If any is found replace the valve.

## Steps to Replace Packing

1. Make sure the line in which the valve is installed has been drained and depressurized.
2. Close valve completely.
3. Remove the handwheel.
4. Remove the packing nut, packing gland and packing gland spring.
5. Remove the old packing rings (3) using a small pick or screwdriver. Be careful to not scratch the valve stem during this process.
6. Install new packing rings (3) one at a time. Make certain that the slit in each ring is staggered so that the slits in all three rings are not aligned.
7. Between the first and second ring place a couple of drops of light oil. Repeat between the second and third ring.
8. Re-install the packing gland, then packing gland spring and packing nut. Tighten the packing nut only as much as needed to provide a seal. This will allow the nut to be tightened over time as the packing wears.
9. Re-install the handwheel.

## Steps to Replace Bonnet Gasket

1. Make sure the line in which the valve is installed has been drained and depressurized. You must be certain before proceeding.
2. Close the valve completely.
3. Remove the handwheel, packing nut, packing gland spring, and packing rings.
4. Loosen the bonnet bolts using a crisscross pattern and remove.
5. While holding the stem rigid, slowly lift the bonnet.
6. Remove old gasket and clean both sealing surfaces.
7. Place new gasket on body flange and lower bonnet down on top of gasket.
8. Re-install the bonnet bolt and hand tighten all.
9. Begin gradually tightening the flange bolts with a wrench in a crisscross pattern.
10. Tighten each bolt to 45 ft-lb.
11. Replace packing following the steps above.



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