

**TECHNICAL BULLETIN**

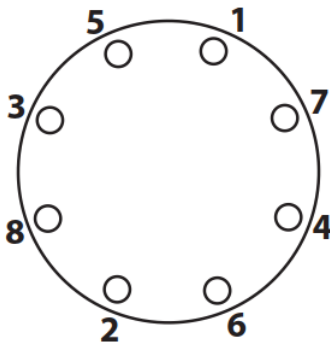
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**Rubber Lined Butterfly Valves  
 Used With Thermoplastic Flanges**

This bulletin addresses Milwaukee Valve Iron, Rubber Lined, Lugged Butterfly Valves used in piping systems where thermoplastic flanges are used for piping connections. Thermoplastic type pipe materials include Polyethylene (PE), Polypropylene (PP), PVC/CPVC, and all others within this same market.

Milwaukee Valve (as well as most major plastic flange manufacturers) recommends the use of a 1/8" thick full face elastomer gasket, compatible with system/media requirements, with a Shore "A" Durometer hardness of 70 +/- 5.

The recommended bolt torque and tightening sequence is detailed below. **Always read the flange manufacturer's installation instructions prior to performing any work.**



| SIZE VALVE | SIZE FASTENERS | TORQUE (FT - LBS) |
|------------|----------------|-------------------|
| 2 - 4      | 5/8            | 15 - 45           |
| 5 - 8      | 3/4            | 25 - 75           |
| 10 - 12    | 7/8            | 40 - 140          |
| 14 - 16    | 1              | 56 - 58           |
| 18 - 20    | 1 1/8          | 78 - 80           |
| 24 - 30    | 1 1/4          | 114 - 116         |
| 32 - 48    | 1 1/2          | 198 - 200         |

**⚠ Important Note:**  
*Do not exceed the plastic flange manufacturer's recommended torque values. Over-torquing may cause damage to the flange.*

**Installation:**

The following procedures are consistent with stated installation methods of major thermoplastic flange manufacturers.

1. Bolting should be clean and well lubricated.
2. With gasket in place, align bolt holes and insert all bolts and flat washers.
3. Be certain flange mating surfaces are flush with gasket prior to bolting down the flanges.
4. Prior to tightening any flange bolts, the valve should be carefully cycled to the open position to check for possible disc interference.

5. Tighten all nuts by hand until snug using the crossover method following the sequence shown above.
6. The installer must use a calibrated torque wrench to ensure uniform pressure of the flange face against the gasket and valve liner.
7. Starting on the side of the valve marked "Inlet", tighten all bolts in several increments using the same crossover method. Tighten bolts from one side of the valve to the other for each increment. No less than 3 progressive stages should be used to reach final torque.
8. Do not exceed the flange manufacturer's recommended final torque as this can cause flange deformation or fracturing.

Contact the factory with any additional questions.

*Milwaukee Valve reminds our customers and end users that we manufacture valve products to industry specifications; all decisions regarding valve installation are job specific and the responsibility of the end user or the engineering designee to resolve.*