

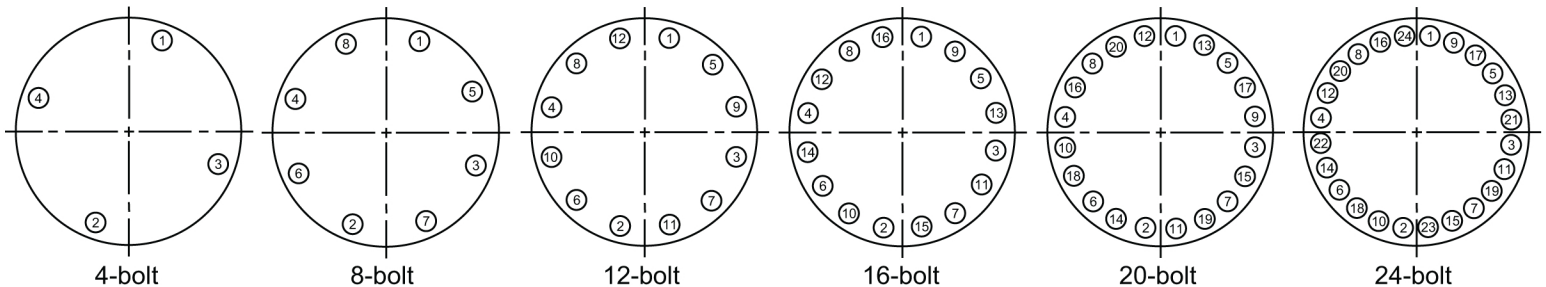
# DURLON® GASKETING - BOLT TIGHTENING WORK SHEET

Location/Identification: \_\_\_\_\_ Nominal Bolt Size: \_\_\_\_\_

Gasket Contact Surface Finish on Flange: \_\_\_\_\_ Lubricant Used: \_\_\_\_\_

**(Initial each step)**

- \_\_\_ 1. Be sure system is at ambient temperature and depressurized. Follow local safety rules.
- \_\_\_ 2. Visually examine and clean flanges, bolts, nuts, and washers. Replace components if necessary.
- \_\_\_ 3. **Lubricate bolts, nuts, and nut bearing surfaces.** Use of hardened steel washers are recommended.
- \_\_\_ 4. Install new gasket. **DO NOT REUSE OLD GASKET OR USE MULTIPLE GASKETS.**
- \_\_\_ 5. Number bolts in cross-pattern sequence according to the appropriate sketch below.
- \_\_\_ 6. **IMPORTANT! HAND TIGHTEN NUTS, then use a hand wrench, SNUG BOLTS 1/8 to 1/4 turn, following the appropriate cross-pattern tightening sequence for the number of bolts below.**
- \_\_\_ 7. Starting at the #1 bolt, use the appropriate cross-pattern tightening sequence in the sketch below for Rounds 1, 2, and 3 (each sequence constitutes a "Round").



\_\_\_ **Final Torque:** \_\_\_\_\_ ft-lbs

## **LUBRICATE, HAND TIGHTEN, PRE-TIGHTEN BOLTS**

- \_\_\_ **Round 1** - Tighten to \_\_\_\_\_ ft-lbs - **1st torque** value in torque chart (30% of final torque)
- \_\_\_ **Round 2** - Tighten to \_\_\_\_\_ ft-lbs - **2nd torque** value in torque chart (60% of final torque)
- \_\_\_ **Round 3** - Tighten to \_\_\_\_\_ ft-lbs - **Final torque** value in torque chart (100% of final torque)

Check gap at 90° intervals around the flange between each of these rounds. Larger flanges may require checking the gap in smaller intervals. If the gap is not reasonably uniform, make the appropriate adjustments by selective bolt tightening before proceeding.

- \_\_\_ **Rotational Round** - 100% of Final Torque (same as Round 3). Use ROTATIONAL, clockwise tightening sequence, starting with Bolt No. 1, for at least two complete rounds and continue until no further nut rotation occurs at 100% of the Final Torque value for any nut.

- \_\_\_ **Retorque** - Short-term bolt preload loss can occur between four to twenty-four hours after initial tightening due to bolt relaxation and/or gasket creep. Repeating the Rotational Round recovers this loss. This is especially important for PTFE gaskets.

Joint Assembler: \_\_\_\_\_ Date: \_\_\_\_\_

**For torque questions, or tightening patterns for large diameter flanges, contact TFC: [tech@trianglefluid.com](mailto:tech@trianglefluid.com) or call (613) 968-1100, or GRI: [tech@durlon.com](mailto:tech@durlon.com) or call (866) 707-7300**

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