

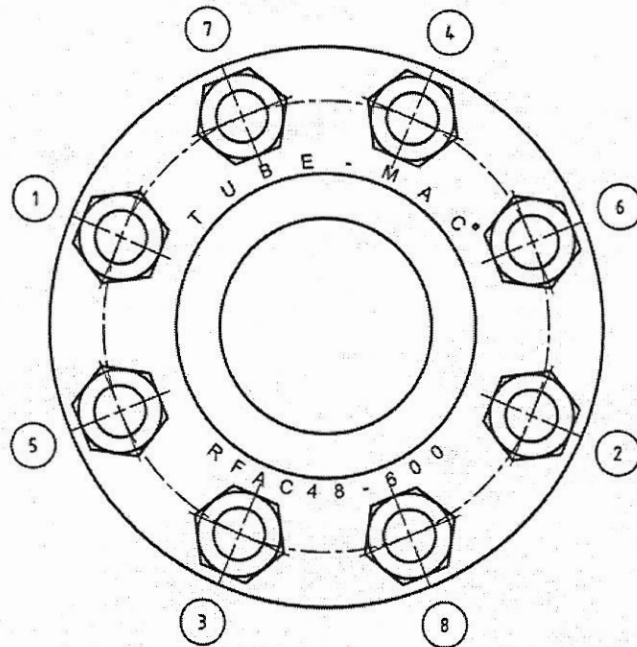
4 BOLT FLARE FLANGE UNION

1. Hold both pipes on the correct centerline, preferably in the pipe clamps, during assembly.
2. Align the bolt holes to straddle the horizontal and vertical centerlines of the pipe.
3. Both flanges are through bolt style*, with a cone o-ring, “ CO “ in one pipe, and a cone flat face, “ CF “, in the other pipe. Use a small amount of grease to lubricate the o-ring** and keep in groove.
4. Install the 4 bolts through the clearance holes in both flanges. Lubricate all contact areas of the bolts with medium viscosity machine oil or thread lubricant.
5. Keeping the flanges parallel, install the nuts onto the bolts finger tight.
6. Tighten the nuts to approximately 25% of the final torque value in a cross sequence pattern, 1 to 4. Repeat the tightening sequence, increasing the torque applied with each pass until all bolts are fully tightened to the required torque value..
Use the correct combination wrench's, or ratchet wrench's only. No cheaters.
7. To confirm applied torque, use a torque wrench.
8. Mark each flange assembly with paint (or a permanent marker) in a visible location, to indicate the flange has been fully tightened.

FLANGE SIZE	BOLT SIZE (UNC)	TORQUE (foot pounds)	METRIC BOLT SIZE	TORQUE (Nm)
34-050	5/16"	15 – 18	M8	20 – 22
34-075	3/8"	20 – 30	M10	40 – 43
34-100	3/8"	20 – 30	M10	40 – 43
34-125	7/16"	40 – 50	M10	40 – 43
34-150	1/2"	55 – 60	M12	70 – 75
34-200	1/2"	80 – 90	M12	70 – 75
34-250	1/2"	80 – 90	M12	70 – 75
34-300	5/8"	110 - 120	M16	175 – 180
34-350	5/8"	110 - 120	M16	175 – 180
34-400	5/8"	110 - 120	M16	175 – 180
FLANGE SIZE	BOLT SIZE (UNC)	TORQUE foot pounds	METRIC BOLT SIZE	TORQUE (Nm)
64-050	5/16"	16 - 18	M8	20 – 22
64-075	3/8"	20 - 30	M10	40 – 43
64-100	7/16"	40 - 50	M12	70 – 75
64-125	1/2"	55 - 60	M12	70 – 75
64-150	5/8"	110 - 120	M16	175 – 180
64-200	3/4"	120 - 130	M20	220 – 230
74-250	3/4"	120 - 130	M20	220 – 230
74-300	1"	350 - 400	M24	550 – 567
74-400	1-1/8"	500 - 550	M30	830 – 840

*Union and Component flanges are through hole style. Flanges connecting to Split Flange Ends are threaded style.

**Standard o-rings are buna. Viton o-rings are required for certain fluids.



6, 8 & 12 BOLT RETAIN RING FLANGE UNION

1. Hold both pipes on the correct centerline, preferably in the pipe clamps, during assembly.
2. Align the bolt holes to straddle the horizontal and vertical centerlines of the pipe.
3. All flanges are through bolt style, with an o-ring seal retainer between the pipe ends to contain the o-rings. Use a small amount of grease to lubricate the o-rings* and help hold them in the groove.
4. Install the 6 or 8 studs through the clearance holes in both flanges. Lubricate all contact areas of the bolts with medium viscosity machine oil or thread lubricant.
5. Keeping the flanges parallel, install the nuts onto the studs finger tight.
6. Tighten the nuts to approximately 25% of the final torque value in a cross sequence pattern, 1 to 8. Repeat the tightening sequence, until all bolts are fully tightened to this torque value.
7. Increase the torque applied to 50%, 75%, 100%, of the final torque, and repeat step 6.
8. Mark each flange assembly, date and initial, with paint (or a permanent marker) in a visible location, to indicate the flange has been fully tightened.

TMI® (8) BOLT Hi PRESSURE FLANGES				
FLANGE SIZE	BOLT SIZE (UNC)	TORQUE foot pounds	METRIC BOLT SIZE	TORQUE (Nm)
RFAC48-450	3/4"	190 - 200	M20	320 - 350
RFAC48-500	1"	350 - 400	M24	550 - 567
RFAC48-600	1-1/8"	500 - 550	M30	830 - 840
RFAC48-800	1-1/2"	1100-1200	M36	1550 - 1619

TMI® LOW PRESSURE FLANGES				
FLANGE SIZE	BOLT SIZE (UNC)	TORQUE foot pounds	METRIC BOLT SIZE	TORQUE (Nm)
RFC16-400	5/8"	110 - 120	M16	90 - 110
RFC16-500	5/8"	110 - 120	M16	90 - 110
RFC16-600	5/8"	110 - 120	M16	90 - 110
RFC18-800	3/4"	120 - 130	M20	190 - 200

*Standard o-rings are buna. Viton o-rings are required for certain applications. Check with the TMI field technician before installing.