



#### **Houston, TX**

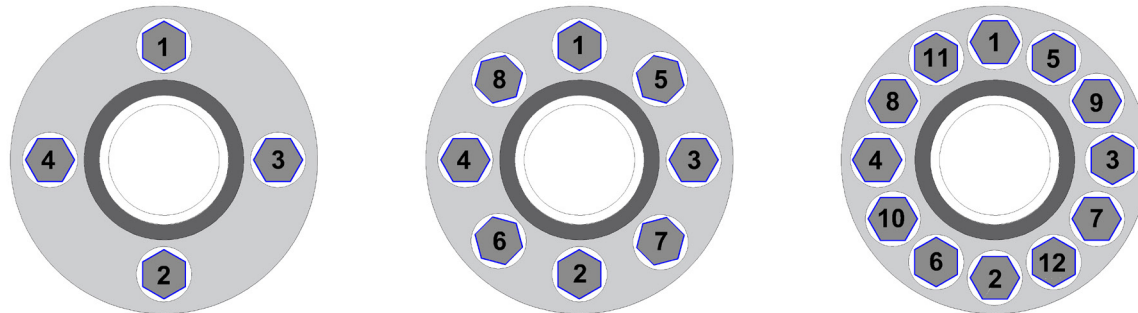
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### **Star or Legacy Bolting Sequence Pattern**



- Number bolts or flange holes with a “marker” as shown in the figure.
- Install each bolt with their nuts, washers and hand tighten the nuts following the numerical sequence of the figure. The flanges should be parallel and contacting uniformly across the gasket. If tools are used to bring the flanges together the maximum force should be equal to or less than 10% of the target force. The stud length should be such that at least two threads protrude beyond the nut.
- Tighten all studs in the numerical sequence of the figure in incremental steps of 30%, 70%, 100% of the final torque or force. Ensure that the flanges are parallel.
- Tighten all studs with 100% of the final torque or force in a circular pass. Ensure that the flanges are parallel.
- Repeat this step until the nuts no longer turn.

## **ELECTRON™ FSS Isolation Kit**

### **■ Installation Procedure**





- Make sure that the ELECTRON™ FSS Gasket Isolation Kit is complete. It should contain: ELECTRON™ FSS sealing gasket; and, per bolt, 2 metallic washers; 1 TerMica™ isolating washer; and epoxy laminated fiberglass(G10) isolation sleeve.
- Ensure that the flange faces, studs, steel washers and nuts are free of any contamination such as oil, grease, pits, rust, debris and gouges.
- Apply a **non-conductive lubricant**, such as PTFE based lubricants, on all the bolt/studs, flange side of nuts and both side of the steel washers.
- Slide one isolation sleeve over each stud/bolt.
- Perform the following installation steps. Install the set as shown in Figure 1 with 2 metallic washers under the nut, and 1 isolation washer between the metallic washers and the flange, on only one side of the pair of flanges. The other side of the pair of flanges does not contain any type of washer.
- Ensure that the flanges and bolt holes are correctly aligned.
- Tightening of studs/bolts. The flanged joint must be tightened accordingly, such as what is found in ASME PCC-1. Use the following Torque Tables for Torque Value.

## Torque Values

Suggested Torque Values for use with Teadit ELECTRON™ FSS Isolation Kit and Standard ASME B16.5 Raised Face Pipe Flanges with ASTM A193 B7 bolting or equal yield strength bolt material.

**IMPORTANT: Install all washers on one flange side only**

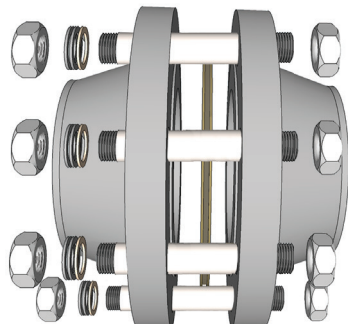


Figure 1

NPS	150#	NPS	300#	NPS	400#	NPS	600#	NPS	900#	NPS	1500#	NPS	2500#
	Torque FT. LB		Torque FT. LB		Torque FT. LB		Torque FT. LB		Torque FT. LB		Torque FT. LB		Torque FT. LB
1/2	28	1/2	28	1/2	No flanges	1/2	28	1/2	No Flanges	1/2	80	1/2	85
3/4	43	3/4	43	3/4	No flanges	3/4	57	3/4	No Flanges	3/4	100	3/4	85
1	50	1	72	1	No flanges	1	86	1	No Flanges	1	160	1	125
1 1/4	57	1 1/4	101	1 1/4	No flanges	1 1/4	86	1 1/4	No Flanges	1 1/4	200	1 1/4	220
1 1/2	57	1 1/2	151	1 1/2	No flanges	1 1/2	159	1 1/2	No Flanges	1 1/2	275	1 1/2	320
2	122	2	108	2	No flanges	2	86	2	No Flanges	2	200	2	220
2 1/2	122	2 1/2	144	2 1/2	No flanges	2 1/2	122	2 1/2	No Flanges	2 1/2	300	2 1/2	320
3	122	3	173	3	No flanges	3	180	3	265	3	400	3	450
3 1/2*	122	3 1/2*	202	3 1/2*	No flanges	3 1/2*	300	4	500	4	650	4	750
4	122	4	202	4	325	4	296	5	840	5	1000	5	1300
5	202	5	202	5	325	5	448	6	590	6	900	6	2000
6	202	6	202	6	325	6	448	8	950	8	1400	8	2000
8	202	8	325	8	506	8	614	10	950	10	2400	10	3500
10	325	10	506	10	614	10	867	12	1130	12	2500	12	5000
12	325	12	723	12	867	12	867	14	1330	14	3200		
14	506	14	614	14	867	14	1193	16	1830	16	4500		
16	506	16	867	16	1193	16	1410	18	3000	18	6000		
18	723	18	1012	18	1193	18	1880	20	3000	20	7730		
20	723	20	1012	20	1410	20	1880	24	5000	24	12750		
24	1012	24	1410	24	2603	24	3471						

\*Available non-ASME size