



V-LOK™ Tool Joint Lock

Volant's V-LOK™ tool joint lock is installed over tool joint connections to prevent unintentional connection back-off during drilling and casing running operations and to prevent incremental thread make-up during an over torquing incident. The tool joint lock consists of four segments for an easy and lighter manual rig-up and is designed to handle mismatched tool joint diameters.

Compatible tools¹: All standard CRTi2-8.63 and CRTi4-7.0 models, and all ActiveSET™ CRTi2-8.63 and CRTi4-7.0 models.

Base Tool Characteristics²

| Configuration Options | Axial Length in. (mm) | Span Length ³ in. (mm) | Tool Weight lb. (kg) | Die Length ⁴ in. (mm) |
|-----------------------|--------------------------|--------------------------------------|-------------------------|-------------------------------------|
| 5 x 5 | 10.13 (257.3) | 1.89 (48.0) | 151 (68.5) | 3.5 (88.9) |
| 5 x 8 | 13.13 (333.5) | 4.89 (124.2) | 176 (79.8) | 3.5 (88.9) |

5 x 5 Configuration



5 x 8 Configuration



Connection Characteristics

Recommended Bolt Torques

| Die Size | Minimum Tool Joint OD | Maximum Tool Joint OD | ft.lb. (N.m) | ft.lb. (N.m) | ft.lb. (N.m) | ft.lb. (N.m) | ft.lb. (N.m) |
|---------------|-----------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|
| 1-1/4 (31.75) | 7.5 (190.5) | 8.0 (203.2) | 100 (135) | 200 (270) | 250 (340) | 300 (410) | 350 (475) |

| Die Size | Minimum Tool Joint OD | Maximum Tool Joint OD | Expected Torque Boost ^{5,6} | | | | |
|---------------|-----------------------|-----------------------|--------------------------------------|-----------------|------------------|------------------|------------------|
| in. (mm) | in. (mm) | in. (mm) | ft.lb. (N.m) | ft.lb. (N.m) | ft.lb. (N.m) | ft.lb. (N.m) | ft.lb. (N.m) |
| 1-1/4 (31.75) | 7.5 (190.5) | 8.0 (203.2) | 35,000 (47,454) | 65,000 (88,128) | 75,000 (101,686) | 85,000 (115,245) | 95,000 (128,803) |
| 15/16 (23.81) | 7.875 (200.0) | 8.875 (225.4) | 25,000 (33,895) | 55,000 (74,570) | 65,000 (88,128) | 80,000 (108,465) | 90,000 (122,024) |
| 9/16 (14.29) | 8.75 (222.3) | 9.625 (244.5) | 35,000 (47,454) | 55,000 (74,570) | 70,000 (94,907) | 90,000 (122,024) | N/A ⁷ |

1. 9/16 die size required when running tools listed.
2. TJL1-7.50 tool only accommodates casing from 7.50 in. OD to a maximum OD of 9.63 in. For availability on a larger or smaller range, contact Volant sales at +1 780.784.7099.
3. Span length is defined as the distance between inner die faces. Contact Volant sales to confirm which configuration is needed for your application.
4. For more information on die specifications, contact Volant sales.
5. Dependent on connection size, die size, and bolt makeup torque. Value is the expected torque boost at recommended bolt torques when tested in a controlled environment.
6. Proper bolting sequence and lubrication on the bolt head and threads are required to maintain consistent performance. Bolts were lubricated using Kopr-Kote® for testing.
7. Volant does not recommend to torque bolts above 300 ft.lb. (410 N.m) when using the 9/16 in. die size.

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