

Engineering Specification PS-103

Stem Seating Torque For Packed and O-Ring Style Steel Valves

Purpose:

Provide a specification that addresses stem torque requirements for steel shutoff valves.

Scope:

This specification applies to and assures refrigerant tight seals* in steel shutoff valves with front and back seating designs. This specification extends to both packed and o-ring style valves

Process:

Prior to applying recommended torque to a the front or back seat of a valve, lightly oil the stem button and or stem seat to prevent galling/fretting of seat sealing surfaces.

After applying torque and actuating valve stem, it is absolutely necessary to re-tighten the packing gland nut. Refer to Engineering Specification PS-104 for gland nut torque requirements.

Torque Recommendations:


Valve Body Size	Valve Body Style	Front & Back Seating Torque
3/4 Hex or Sq.	Packed or O-Ring	7 - 10 Ft. - Lb.
7/8 Hex or Sq.	Packed or O-Ring	12 to 15 Ft. - Lb.
1-1/8 Sq.	Packed	22 to 25 Ft. - Lb.
1-3/8 Sq.	Packed	30 to 35 Ft. - Lb.
1-3/4 Sq.	O-ring Gland	50 to 60 Ft.-Lb. front seat 30 to 40 Ft.-Lb. back seat

Caution:

- Construction of steel valves requires seating surfaces to be brought together at slow speeds/rpm's. Torque drivers of constant drive design must not exceed 360 rpm and are to be used only on 3/4 and 7/8 size valves.

Recommended Power Torque Tool:	Chicago Pneumatic Model 3017 TADSUM or equivalent
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- *Leak Test per Electronic Leak Test, Specification PS - 105

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