

Swagelok® N Series and HN Series Severe-Service Union-Bonnet Needle Valve Packing Adjustment

This valve is adjusted for factory testing at 1000 psig (69 bar) nitrogen unless optional test parameters are specified.

⚠ Warning A packing adjustment is recommended at initial install and may be required periodically to increase service life and to prevent leakage.

⚠ Warning Before servicing any installed valve, you must

- depressurize the system
- cycle the valve
- purge the valve.

⚠ Warning Residual system media may be left in the valve.

Swagelok®

Tool Requirements

- Torque wrench, capable of applying up to 250 in.·lb (28.2 N·m) of torque
- Crow's foot for packing bolt in size listed in table
- Open-ended wrench for lock nut in size listed in table



Valve Series	Lock Nut Hex Size, in.	Packing Bolt Hex Size, in.
3N	11/16	3/8
3HN	7/8	
6N	7/8	7/16
6HN	1 1/8	
12N	1 1/8	5/8

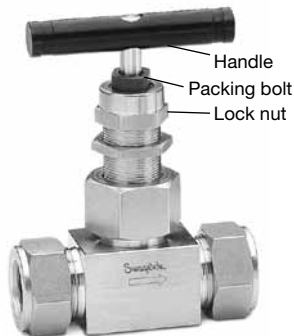
Packing Adjustment

1. Turn the **handle** counterclockwise to actuate the valve to the fully open position. Then turn the handle clockwise two 360° turns.
2. Hold the **packing bolt** stationary with a wrench and loosen the **lock nut**.
3. Tighten the **packing bolt** to the specified torque.

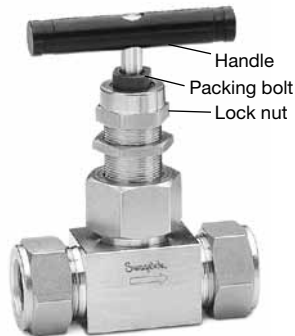
Packing Bolt Torque Chart

Valve Series	Grafoil® Packing	PTFE, UHMWPE, and PEEK Packing
	Torque, in.-lb (N·m)	
3N, 3HN	25 (2.8)	30 (3.4)
6N, 6HN	110 (12.4)	75 (8.5)
12N	150 (17.0)	250 (28.2)

Note: Depending on system pressure and fluid viscosity, additional packing bolt adjustment may be required.



4. Thread the lock nut fingertight against the packing bolt.
5. Hold the packing bolt stationary with a wrench and tighten the lock nut 1/8-turn past fingertight.
6. Test the valve for proper operation.



Swagelok—TM Swagelok Company
Grafoil—TM GrafTech International Holdings Inc.

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