

NOWPak[®] Bottle System

Capping and torquing procedures for NC-W1, NC-W2, Smartcap[™] and Intellicap[™] closures

Following these procedures for capping and torquing closures on NOWPak[®] bottle systems is required for optional performance and safety. The images in this instruction sheet show the Entegris SmartCap closure; however, the same procedures apply to the NC-W1, NC-W2, and IntelliCap closures.

Tools Required

Part number	Description	Quantity
NC-W1 Closure		
NA-02	Torque tool adapter (mates to a 1/2" drive torque wrench)	1
NC-W2 Closure		
NA-03	Torque tool adapter (mates to a 1/2" drive torque wrench)	1
SmartCap and IntelliCap Closure		
NA-51	Torque tool adapter (mates to a 1/2" drive torque wrench [Figure 1])	1

Customer-supplied

NA-33	Torque wrench, 1-150 in•lb (Figure 2) Entegris recommends Tohnichi torque wrench DB150I-3AS, 3/8" drive, 0-150
—	3/8" to 1/2" socket drive adapter

Torque Specifications

Minimum	Maximum	Measurement units
80.00	85.00	in•lb
9.04	9.60	N•m
92.00	98.00	kgf•cm

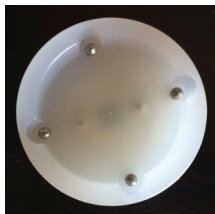


Figure 1. NA-51 SmartCap torque adapter.



Figure 2. NA-33 0-150 in•lb torque wrench.

INSTRUCTIONS: ONE-PERSON CAPPING PROCEDURE

1. Perform all operations within a suitable cleanroom environment with proper personnel gowning.
2. Obtain desired closure for capping.
3. For closures with breakseals, visually confirm that the breakseal membrane is in place in the breakseal closure.
4. Ensure that the 0–150 in•lb torque wrench dial indicator and peak load indicator are zeroed. Rotate the dial indicator adjustment until the black dial indicator is set to zero. Using the black peak load indicator knob, rotate the red peak load indicator counterclockwise until it is at zero (see Figures 3 and 4).

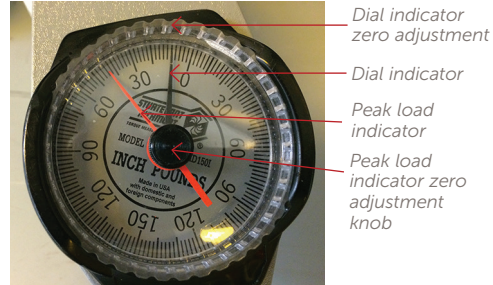


Figure 3. Torque wrench prior to adjusting to zero.



Figure 4. Correctly zeroed torque wrench.

5. Hand tighten the closure onto the NOWPak bottle (Figure 5).



Figure 5.

6. Grasp bottle by the handle as shown and pre-load the closure by moving the torque tool in a clockwise motion until the indicator registers 20 to 30 in•lbs (Figure 6).



Figure 6.

7. Pre-load closure to 20 to 30 in•lbs (Figure 7). Note position of torque wrench after pre-loading SmartCap.

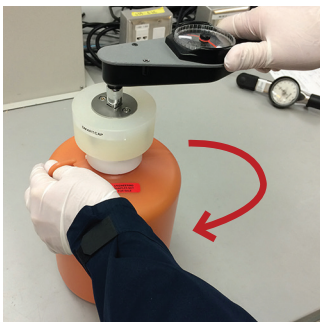


Figure 7.

8. Reposition the torque wrench and hands as shown for the best leverage (Figure 8). Torque wrench and hands need to be in these positions before final loading to 80 to 85 in•lbs.

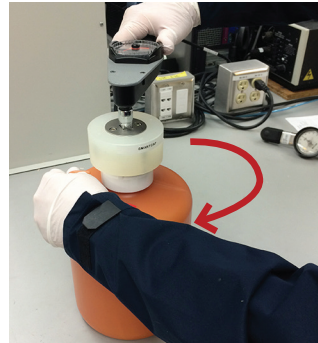


Figure 8.

9. After repositioning the hands and torque wrench, hold the bottle firmly and in one continuous clockwise motion, torque the closure to 80 to 85 in•lbs (Figure 9).

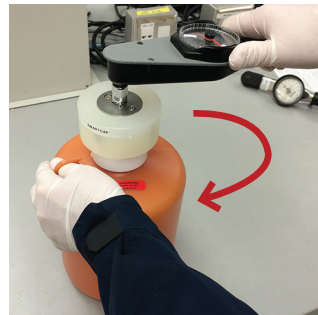


Figure 9.

10. If the NOWPak bottle turns during the final torque to 80 to 85 in•lbs, loosen the closure and restart at the pre-load step.

11. The NOWPak bottle is now ready for appropriate shipping procedures.

INSTRUCTIONS: TWO-PERSON CAPPING PROCEDURE

For best results, Entegris recommends using two people to perform the capping and torquing procedure. In this method, one person holds the NOWPak bottle in place while the other applies the torque (Figures 10 and 11).

Note: Two operators are required for capping and torquing 1-liter size NOWPak bottles (Figure 12).

1. Follow the same capping and torquing procedures as described in instructions for one-person procedure above.

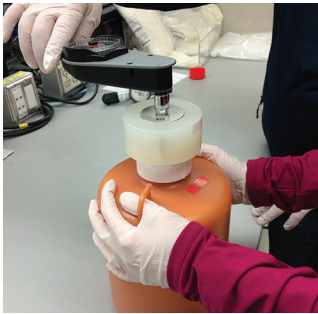


Figure 10.



Figure 12.



Figure 11.

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