

## 1. Aim:

Insertion and Removal of Quick Connect and Entegris Dip Tubes

## 2. Tools Needed

- IBC or Drum
- Dip Tube
- Universal Wrench (Quick Connect) or Entegris Adapter
- Torque Wrench

## 3. Insertion of the Dip Tube

Each IBC comes with 3 bung closures: one vented and two non-vented closures. The vented closure is the closure nearest the edge of the IBC (if looking from the lid, it will be next to the RIKUTEC logo). For drums, there are only 2 bung closures, one vented (on the dispense side) and one non-vented (on the recirculation side). The dip tube will go into the bung with the vented plug in both cases. To remove the plug, take the universal wrench and align the bits on with the plug. The side of the wrench will be the side where the bits are more inward from the edge. Then turn the wrench counterclockwise to remove the plug.

With the dip tube, insert the dip tube into the opened bung and hand tighten or tighten using the universal wrench (side with bits at end of wrench) in a clockwise manner until it is not too easy to turn. If working with an Entegris Dip Tube, you will need the Entegris wrench adapters (153-366-2 for Sentry II, 01-030940 for Sentry III). Then while using the torque wrench (and 15/16 socket for Universal Wrench), tighten to the appropriate torque value. The torque value depends on the manufacturer recommendations based on the thread size. The following below lists the torque values per dip tube as well as the bung size and threading.

| Dip Tube System | Size and Bung Threading | Closing Torque            |
|-----------------|-------------------------|---------------------------|
| Quick Connect   | S56X4                   | 18 + 4 ft-lb (25 + 5 N-m) |
| Quick Connect   | S62X5, S64X5. G2"       | 22 + 4 ft-lb (30 + 5 N-m) |
| Quick Connect   | S70X6                   | 26 + 4 ft-lb (35 + 5 N-m) |
| Entegris        | Entegris Threading      | 25 ft-lb (35 N-m)         |

After the proper torque has been applied, place the protective cap onto the dip tube, either by hand or by screwing it in with the universal wrench (torque is 5 – 7 ft-lb (6 – 8 N-m)).

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## 4. Removal of the Dip Tube

Removal of the dip tube is the same process as the insertion of the dip tube, just reverse. Begin by removing the protective covering of the dip tube and then remove the dip tube with the universal wrench, or Entegris adapter, by inserting and aligning it and rotating in a counterclockwise direction using the torque wrench. Once the dip tube is loose, it can then be removed by hand. Once the dip tube is removed, replace the bung closure in the same manner by using the universal wrench to move it in a clockwise direction and the torque wrench with it to tighten it up to **30 + 5 Nm (22 + 4 ft-lb)**.

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