

## 1. Aim:

Insertion and Removal of the Dip Tube and Bung Caps

## 2. Areas of Application:

IBC and Drum Use

## 3. Responsibility:

Mgr. Assembly

## 4. Areas of Function:

Quality Control, Manufacturing, Chemical Dispensing

## 5. Workflow Description:

### 5.1. Tools Needed

- IBC or Drum
- Dip Tube
- Universal Wrench
- Torque Wrench

### 5.2. 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. To remove the plug, take the universal wrench and align the bits on with the plug. Then turn the wrench counter-clockwise 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 in a clockwise manner until it is not too easy to turn. Then while using the torque wrench, tighten to the appropriate torque value. The torque value depends on the manufacturer recommendations and the type of container. Here are some examples based on the container and the dip tube manufacturer:

Type of Container	Dip Tube System	Closing Torque
Drum	Quick Connect	22 ± 4 ft-lb (30 ± 5 N-m)
IBC	Quick Connect	22 ± 4 ft-lb (30 ± 5 N-m)
IBC	Entegris	20 ± 5 ft-lb (25 ± 5 N-m)

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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.

### 5.3. Removal of the Dip Tube

Removal of the dip tube is the same process as the insertion of the dip tube, just in the reverse method. Begin by removing the protective covering of the dip tube and then remove the dip tube with the universal wrench by inserting and aligning it and rotating in a counter-clockwise direction. Once the dip tube is loose, it can then be removed by hand. Once the dip tube is removed, replace the vented 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 the specified torque. The torque values for the closure will be the same as the dip tube, so use the previous table as a guide.

### 5.4. Recommendation for Torquing

During the torquing for the dip tubes and bung caps, it is important to know that the gasket relaxes over time. This is due to the nature of the gasket material. In order to maintain the best sealing performance of gasket and closure, it is recommended as a best practice that the dip tubes and bung closures be re-torqued to their specifications before shipping.

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