Steam-Thru® Connections allow a quick and easy sterile connection between biopharmaceutical processing equipment and disposable bag and tube assemblies. The single-use design saves time and money by eliminating unnecessary cleaning procedures and reducing validation burden associated with reusable components.

### Features
- Innovative three-port design
- Patented valve design
- Thumb latch/ Tear-away sleeve
- Industry standard terminations
- BSE/TSE free materials

### Benefits
- Allows a true steam-through SIP process which eliminates "dead legs" and the need for laminar flow hoods
- Allows sterile connection and disconnection and permits high media flow rate
- Secures valve position, provides visual indicator of process stage
- Speed connect to the process equipment and connect to popular sizes of flexible tubing
- Meet ADCF requirements

### Specifications

**Pressure:**
- **Steam position:**
  - Up to 30 psi, 2.07 bar (Steam-Thru)
  - Up to 35 psi, 2.41 bar (Steam-Thru II)
- **Flow position:** Vacuum to 20 psi, 1.38 bar

**Temperature:**
- **Steam position:**
  - Up to 266°F (130°C) for 60 minutes (Steam-Thru)
  - Up to 275°F (135°C) for 60 minutes (Steam-Thru II)
- **Flow position:** 39°F to 104°F (4°C to 40°C)

**Materials:**
- **Connection:** Polysulfone, USP Class VI, ADCF
- **O-rings:** Silicone (clear), platinum-cured, USP Class VI, ADCF
- **Tear-away sleeve:** Polyethylene or polycarbonate (Steam-Thru only), USP Class VI, ADCF

**Typical Flow Rate:**
- $C_v = 4.2 - 4.6$ (Steam-Thru)
- $C_v = 5.2 - 8.0$ (Steam-Thru II)

**Sterilization:**
- **Gamma:** Up to 50 kGy gamma irradiation
- **Autoclave:** Up to 265°F (129°C) for 60 minutes, up to two cycles (applies only to part numbers STC1700500-STC1700800 and STC2020000-STC2021000)
- **SIP process:**
  - Up to 266°F (130°C) for 60 minutes (Steam-Thru)
  - Up to 275°F (135°C) for 60 minutes (Steam-Thru II)

**Termination Sizes:**
- 3/8” to 1/2” ID, 9.5mm to 12.7mm ID hose barb (Steam-Thru)
- 3/8” to 1/2” ID, 9.5mm to 12.7mm ID hose barb and 3/4” sanitary (Steam-Thru II)
Steam-Thru® Configurations
Steam-Thru® Connection’s patented three-port design allows steam to pass directly through the lower ports to “steam on” to stainless equipment. After the SIP cycle is completed, the connector’s valve is actuated, creating a sterile flow path to single-use systems.

Steam-Thru II Configurations
Steam-Thru II Connections offer the flexibility of “steam on” and “steam off” functionality. The innovative design allows the valve to be returned to the steam position enabling a second SIP cycle following media transfer. The “steam off” disconnection of single-use systems minimizes cross-contamination risks associated with reusable components.

POLYETHYLENE SLEEVE

POLYSULFONE

TERMINATION | PART NO. | TERMINATIONS | A | B | F | G | H
--- | --- | --- | --- | --- | --- | --- | ---
STC1700000 | 3/4” x 3/4” sanitary x 1/2” HB | 1.20 (30.5) | 5.09 (129.3) | 4.44 (112.8) | 2.00 (50.8) | 0.89 (22.6)
STC1700100 | 3/4” x 3/4” sanitary x 3/8” HB | 1.20 (30.5) | 4.80 (121.9) | 4.15 (105.4) | 2.00 (50.8) | 0.60 (15.2)
STC1700200 | 3/4” x 1-1/2” sanitary x 1/2” HB | 1.20 (30.5) | 5.09 (129.3) | 4.44 (112.8) | 2.00 (50.8) | 0.89 (22.6)
STC1700300 | 3/4” x 1-1/2” sanitary x 3/8” HB | 1.20 (30.5) | 4.80 (121.9) | 4.15 (105.4) | 2.00 (50.8) | 0.60 (15.2)
STC1700500 | 3/4” x 3/4” sanitary x 1/2” HB | 1.20 (30.5) | 5.09 (129.3) | 4.44 (112.8) | 2.00 (50.8) | 0.89 (22.6)
STC1700600 | 3/4” x 3/4” sanitary x 3/8” HB | 1.20 (30.5) | 4.80 (121.9) | 4.15 (105.4) | 2.00 (50.8) | 0.60 (15.2)
STC1700700 | 3/4” x 1-1/2” sanitary x 1/2” HB | 1.20 (30.5) | 5.09 (129.3) | 4.44 (112.8) | 2.00 (50.8) | 0.89 (22.6)
STC1700800 | 3/4” x 1-1/2” sanitary x 3/8” HB | 1.20 (30.5) | 4.80 (121.9) | 4.15 (105.4) | 2.00 (50.8) | 0.60 (15.2)

These graphs are intended to give you a general idea of the performance capabilities of each product line. The shaded area of each graph represents the operating range of the product family, i.e., upper and lower values are shown. Therefore, depending on the exact coupling configurations selected, you can reasonably expect values to fall within the shaded area.
Steam-Thru Process

STEAM POSITION

Steam flows from the process equipment through the Steam-Thru to sterilize the connection. With the tear-away sleeve in place, the transfer of fluid to or from the bioreactor is prevented.

FLOW POSITION

When the tear-away sleeve is removed, the Steam-Thru is actuated, the connection to the steam trap is disabled and a sterile flow path is established between the process equipment and the disposable system.

DID YOU KNOW ... there are many advantages of single-use systems?

☑ Increase Productivity
The reliability of single-use systems results in increased productivity through the reduction of system downtime associated with cleaning and cleaning validation.

☑ Add Flexibility
Single-use systems can be easily modified for alternative media handling.

☑ Minimize Risk
The integration of single-use systems can help minimize the risk of media contamination in multi-product manufacturing.

☑ Reduce Cost
Cost savings include the reduced chemical and utility expenses of cleaning and labor.

Don’t forget: you can access many feature articles on Single-Use technology at www.colder.com.
Steam-Thru II Process: An audible "click" and the visual indicator of the raised thumb latch provide assurance that the valve is locked in the flow or steam position.

**Steam on Position**
Steam flows from the process equipment through the Steam-Thru II creating a "steam on" sterile connection.

**Flow Position**
Once the valve is locked in the flow position a sterile flow path has been created allowing media transfer.

**Steam off Position**
Once the valve is locked in the steam position, complete a second SIP cycle to "steam off" the connection.

**Transition to Flow**
Once the "steam on" cycle is complete and the steam trap has been closed, simply press the thumb latch to allow the valve to be moved down to the flow position.

**Transition to Steam**
Once media transfer is complete, simply press the thumb latch to allow the valve to be moved back up to the steam position.

 Courtesy of CMA/Flodyne/Hydradyne Motion Control Hydraulic Pneumatic Electrical Mechanical (800) 426-5480 www.cmafh.com