

Lynx® ST Connectors

Enables Integration of Steamable Hard Piped Process Equipment with Disposable Sterile Fluid Paths

The Lynx® ST (Steam-To) connector is a reliable and validated sterile connector enabling a sterile transfer of process fluids. One of many Mobius® single-use bioprocessing solutions, it is designed to connect steamable hard piped processing systems to sterilized disposable flow paths. The Lynx® ST connector is available in a wide range of sizes and configurations, from sampling to intermediate additions, to bulk liquid transfer into and out of the stainless steel tanks or vessels.

Unlike other couplings that require an aseptic environment and where system sterility is procedure-dependent, the irradiation-sterilized ready-to-use disposable assembly with Lynx® ST connector assures sterility of the overall system.

Safe, Disposable Connectors

The Lynx® ST connector is disposable and intended for single-use in transfer and sampling applications. With the Lynx® ST connector, there are no parts to clean-in-place, improper sterilization is no longer a setback and the risk of cross-contamination is reduced.

Quick and Easy Connectivity

Standard TC fittings connect the disposable fluid path assembly to your piping. Once in place, a quick twist of the Lynx® ST connector starts the flow of your process fluid.

A Range of Configurations

Available in three sizes and four configurations, the ¼ in., ½ in. and 1 in. Lynx® ST connectors can be adapted to a wide range of disposable fluid assembly paths.

Benefits

- Reduces the risk associated with aseptic connections
- Economical, fast, and easy connectivity for maximum flexibility
- Single-use reduces risk of cross-contamination
- Validatable, sterile connections



A Validated Aseptic Connection

Connecting to stainless steel tanks, piping and other fixed process equipment is easy, secure and can be validated. Applications include, but are not limited to:

- Product sampling from tanks or process piping
- Small to large volume fluid transfer or intermediate additions
- Direct connection to high flow fluid filters eliminating the use of expensive stainless steel valves

Robust, Easy-to-Use Design

Constructed of high temperature-resistant polyetherimide (PEI) and silicone seals, the Lynx® ST connector provides the reliability and strength you require. Three silicone seals ensure and maintain the flow path sterility.

The front seal closes the flow path and provides the Steam-To connection to the stainless steel process tank or piping. The middle seal secures the liquid flow path from leaks. The third or rear seal isolates the flow path from outside environmental contamination.

Connect, SIP, Run

1. Remove your sterilized fluid path assembly from the package.
2. Using the recommended sanitary flange gasket and sanitary flange clamp, connect the closed Lynx® ST connector and associated disposable assembly to the stainless steel tank or process piping.
3. Steam-in-place (SIP) of the stainless steel system. The SIP process also sterilizes the Lynx® ST connector sanitary flange clamp interface, ensuring a sterile connection between the disposable fluid path and the stainless steel system.
4. Once the system has been charged with the sterile liquid, open the Lynx® ST connector to start the flow of process fluid through the disposable fluid path.
5. When the fluid transfer is complete, turn the Lynx® ST cam to the closed position or clamp the tubing off.
6. Detailed instruction can be found in Lynx® ST Connectors - Installation and User Guide (00002035EX) and Technical Brief "Guidelines for using the Lynx® ST connector (TB2137EN00).

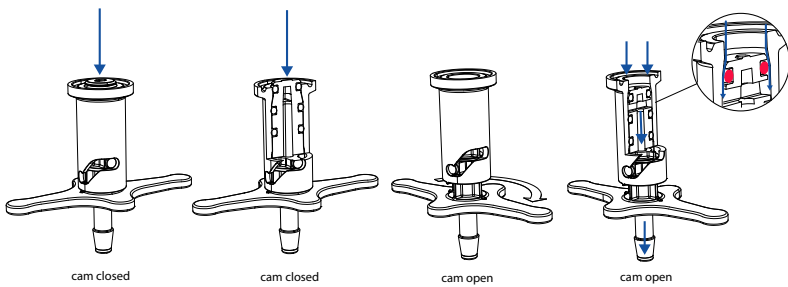


Figure 1.
Lynx® ST 1/4 in. and 1/2 in. connector design features

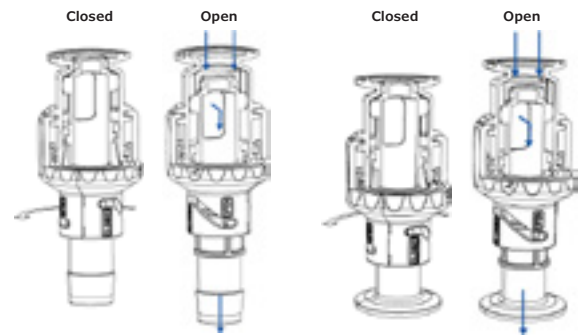


Figure 2.
Lynx® ST 1 in. connector design features

Applications

Ideally suited to a broad range of applications including sterile liquid transfer and microbiological sampling, the Lynx® ST connector provides the optimum solution for making safe, secure connections from stainless steel to single-use fluid paths.

Sterile Liquid Transfer

The Lynx® ST connector can be integrated with assemblies that include single-use capsules, tubing, flexible containers, etc. sterilized by irradiation and ready-to-use, these assemblies are ideal for a wide range of liquid transfer applications and are easily integrated into both the bulk production and final fill process, ensuring the secure transfer of your valuable product.

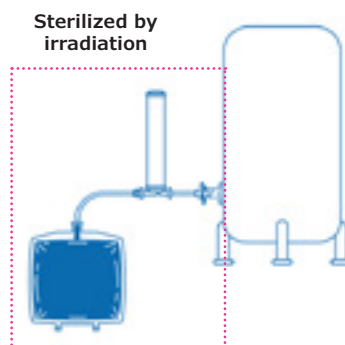


Figure 3.
Process Fluid Transfer Application — Sterile Liquid Transfer with Capsule Filters

Sampling

For large sampling sizes or applications requiring multiple samples such as tanks sampling, the Lynx® ST connector can provide an efficient and secure connection that reduces the risk of contamination.

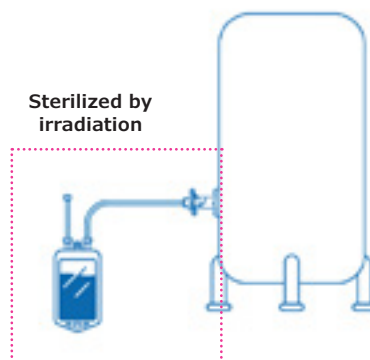


Figure 4.
Sampling Application — Process Sampling with Bioprocess Containers

Specifications

		1/4 in. Lynx® ST Connector	1/2 in. Lynx® ST Connector	1 in. Lynx® ST Connector
Typical Flow Rate (bi-directional)		2 L/min at 0.1 bar (0.5 gpm at 1.5 psi)	8 L/min at 0.10 bar (2.0 gpm at 1.5 psi)	20 L/min at 0.02 bar (5.3 gpm at 0.27 psi)
		4 L/min at 0.4 bar (1.0 gpm at 5.7 psi)	23 L/min at 0.6 bar (6.0 gpm at 8.5 psi)	120 L/m at 0.52 bar (32 gpm at 7.5 psi)
		7 L/min at 1.3 bar (1.85 gpm at 18.3 psi)	38 L/min at 1.8 bar (10 gpm at 26.4 psi)	200 L/min at 1.4 bar (53 gpm at 20.5 psi)
Maximum Differential Pressure (bi-directional)	Before/After Actuation	6.89 bar (100 psi) at 4 to 80 °C	6.89 bar (100 psi) at 4 to 80 °C	2.4 bar (35 psi) at 4 to 40 °C
	During Actuation	1.4 bar (20 psi) at 4 to 80 °C	0.7 bar (10 psi) at 4 to 80 °C	1.4 bar (20 psi) at 4 to 40 °C
Sterilization Capability	Gamma or X-Ray	Up to 45 kGy	Up to 50 kGy	Up to 50 kGy
	Steam-in-Place	4X at 145 °C for 30 min (in closed position)	4X at 145 °C for 30 min (in closed position)	2X at 135 °C for 30 min (in closed position)
	Autoclave	60 min at 126 °C	60 min at 126 °C	45 min at 130 °C
Operating Temperature	Open	4 – 80 °C	4 – 80 °C	4 – 40 °C
Materials of Construction (Flow Path)*	Molded Components	Polyetherimide (PEI)	Polyetherimide (PEI)	Polyetherimide (PEI)
	Seals	Peroxide Cured Silicone	Peroxide Cured Silicone	Platinum Cured Silicone
Dimensions Max Width x Max Length (i.e., Open Position)	3/4 in. sanitary flange inlet; 1/4 in. barb outlet	81.3 mm x 68.6 mm (3.2 in. x 2.7 in.)		
	1½ in. sanitary flange inlet; 1 in. barb outlet			15.8 cm x 6.0 cm (6.2 in. x 2.4 in.)
	1½ in. sanitary flange inlet; 1/2 in. barb outlet		95.3 mm x 91.4 mm (3.8 in. x 3.6 in.)	
	1½ in. sanitary flange inlet; 1½ in. sanitary flange outlet			15.5 cm x 6.0 cm (5.7 in. x 2.4 in.)
Number of Actuations Post Bacteria Challenge		Three	Three	Three
Number of Actuations Post Integrity Test		Three	Three	Five

*All wetted component materials were tested and meet the criteria for Biological Reactivity Testing. These tests can be any one or a combination of the following test methods: USP <88> Class VI (in vivo), USP <87> (in vitro), ISO 10993-5 (in vitro). All component materials meet the FDA Indirect Food Additive requirements cited in 21 CFR 177-182 based on information provided by raw material suppliers.

Ordering Information

Description	Fittings	Qty/Pkg	Cat No.
1/4 in. Lynx® ST Connector	Inlet: 3/4 in. sanitary flange; Outlet: 1/4 in. hose barb	1	STC 11 FHA 01
		10	STC 11 FHA 10
1/2 in. Lynx® ST Connector	Inlet: 1 1/2 in. sanitary flange; Outlet: 1/2 in. hose barb	1	STC 21 THN 01
		10	STC 21 THN 10
1 in. Lynx® ST Connector	Inlet: 1 1/2 in. sanitary flange; Outlet: 1 in. hose barb	1	STC 31 THN 01
	Inlet: 1 1/2 in. sanitary flange; Outlet: 1 1/2 in. sanitary flange	1	STC 41 TTN 01
Accessories			
Lynx® Clamp (nylon)	3/4 in. sanitary flange for Lynx® ST 1/4 in.	1	P83062
	1 1/2 in. sanitary flange for Lynx® ST 1/2 in. and 1 in.	1	P83063
Gasket (silicone)	3/4 in. sanitary flange for Lynx® ST 1/4 in.	4	XX42 T19 01-1
	1 1/2 in. sanitary flange for Lynx® ST 1/2 in. and 1 in.	10	YY 2004 055
Concentric Reducer (stainless steel)	3/4 in. sanitary flange x 1 1/2 in. sanitary flange	1	P84415

Lynx® ST Connecters are Supported by the Emprove® Program – The Smart Way to Master Compliance and Control

Complementing our product portfolio, the Emprove® Program provides convenient access to reliable technical, regulatory and supply information in Emprove® Dossiers to support your risk assessment continuum. A subscription to our Emprove® Suite can help you stay current: In addition to accessing the Emprove® Dossiers, you can also receive notification updates to document changes, as well as generate metrics and reports.

For more information, please visit:

SigmaAldrich.com/emprove

To Place an Order or Receive Technical Assistance

Please visit

MerckMillipore.com/contactPS

For additional information, please visit

MerckMillipore.com

Merck KGaA
Frankfurter Strasse 250
64293 Darmstadt, Germany

We have built a unique collection of life science brands with unrivalled experience in supporting your scientific advancements.

Millipore® **Sigma-Aldrich®** **Supelco®** **Milli-Q®** **SAFC®** **BioReliance®**

