

# Precision-Made Hygienic Clamps for Pharmaceutical & Biotech Industries

Data Sheet 06-0030 Rev. 07/19



A complete line of hygienic clamps made specifically for the Pharmaceutical and Biotech Industries where joint cleanliness and efficiency are of paramount importance. These stainless steel clamps are made from investment castings to produce a high quality, precision fit assembly. They are designed to provide quick access to the joint for cleaning and inspection without sacrificing safety.

**The SH Style Clamp:** Standard in 316 Stainless Steel, it incorporates a two-pin hinge that allows for a more uniform compression on the gasket. Sizes range from 1/2" to 12" and are available in a two-bolt system (Type II in sizes 6" and larger) with either wing nuts or hex nuts (SHX) for greater torque control and more compact assembly.

**The SSH Clamp:** This high-pressure clamp is available in 304 or optional 316 Stainless Steel. Available tubing sizes range from 1/2" to 6". Hex nut material is available in the standard brass or stainless steel.

**The ASME Clamp:** Designed for pressure vessels, filter housings and other applications, this clamp ranges from 1" to 12". It is designed to meet the requirements of ASME section VIII Appendix 24 of the Pressure Vessel Code. All components of the ASME Clamp are made from fully traceable 316 Stainless Steel.

**Schedule Pipe Clamps** are also available for each of these clamp styles. Compared to common pipe flange connections, sanitary pipe connections cost less, provide lower maintenance costs, quicker & easier access, and greater cleanability. A list of pipe sizes for each clamp type can be found on the next page.

**Fasteners** for the SH Clamp are available in a wide variety of styles to meet the vast requirements of the industry. The standard ergonomic wing nut allows easy hand torquing while the conventional wing nut provides coverage of the bolt threads. This conventional style is also available with a hole for torque assistance and storage. Hex nut options include the standard dome nut, hex nut and spring loaded dome nut that keeps tension on the gasket during expansion and contractions of the ferrules due to temperature fluctuations. Non-galling options are also available.

All clamps are **CE compliant** per the Pressure Equipment Directive 97/23/EC and the Machinery Directive 98/37/EC. Please contact L.J. Star for gasket and ferrule options.

- Variety of fastener options
- Delivery from stock
- High pressure ratings
- Superior surface finish
- 316 stainless steel standard
- Large wing nuts for easy, accurate torquing
- Precision-manufactured for uniform gasket compression
- Unique groove profile provides higher clamping efficiency



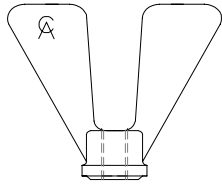
Clamp Style	Number Description	
	Wing Nut	Hex Nut
Single Bolt	SH Type I	SHX Type I
Double Bolt	SH Type II	SHX Type II

SH Denotes wing nut fastener.  
 SHX Denotes hex nut fastener.  
 Type I Denotes single bolt.  
 Type II Denotes double bolt.

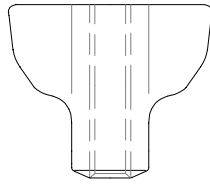


## CLAMP FASTENER OPTIONS

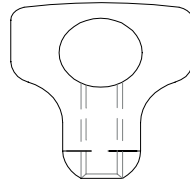
### WING NUT OPTIONS



ERGONOMIC  
STANDARD

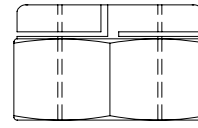


CONVENTIONAL  
NO HOLE

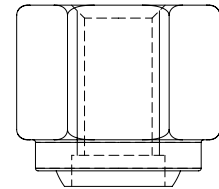


CONVENTIONAL  
WITH HOLE

### HEX NUT OPTIONS



LOCK NUT



STANDARD NUT

## STANDARD TUBING SIZES

### PRESSURE RATINGS (PSIG)

CLAMP SIZE		MAX WORKING PRESSURE @ 300°F				MAX TEST PRESSURE			
TUBE OD	METRIC	S	SH	SSH	ASME	S	SH	SSH	ASME
1/2", 3/4"	-	363	725	1088	-	725	1450	2175	-
1", 1-1/2"	25-40	363	725	1088	2422	725	1450	2175	12108
2"	50	363	725	1088	1305	725	1450	2175	6525
2-1/2"	-	363	725	1088	-	725	1450	2175	-
3"	65	290	580	870	1305	580	1160	1740	6525
3-1/2"	80	290	580	870	-	580	1160	1740	-
4"	100	247	508	769	827	493	1015	1523	4133
5"	-	-	435	653	-	-	870	1305	-
6"	-	218	435	653	406	435	870	1305	2030
8"	-	-	290	464	218	-	580	928	1088
10"	250	-	232	-	145	-	464	-	725
12"	300	-	145	-	102	-	290	-	508

## PIPE SCHEDULE SIZES

### PRESSURE RATINGS (PSIG)

CLAMP SIZE		MAX WORKING PRESSURE 300°F				MAX TEST PRESSURE			
TUBE OD	METRIC	S	SH	SSH	ASME	S	SH	SSH	ASME
4"	-	218	435	653	-	435	870	1305	-
5"	125	-	435	653	-	-	870	1305	-
6"	150	-	363	551	319	-	725	1088	1595
8"	200	-	290	435	174	-	580	870	870
10"	-	-	232	-	-	-	464	696	-
12"	-	-	145	-	-	-	290	-	-

Note: ASME Clamp pressure ratings are calculated under the strict guidelines in the ASME Section VIII Code and incorporate a safety factor of 5.

### Ask about our popular Specialty Clamps:

**Safety Clamp:** Based on the SH clamp design, the safety clamp incorporates an added security feature: a stepped eyebolt. Releasing the clamp is only possible when the wing nut has been significantly loosened to enable the smaller diameter of the eyebolt to swing and pass through the sectioned gate. This feature ensures the clamp cannot be knocked or accidentally opened.

**Lockout Clamp:** This clamp ensures the process / piping line can only be accessed by designated personnel with a padlock key or number combination. The wing-nut is replaced with a shroud & domed nut. The shroud with holes extends past the nut allowing enough room for the padlock to pass through, preventing access to the nut to unauthorized personnel.

**Anti-Gall Clamp:** The new anti-galling option is constructed with a bolt formed from Nitronic 60 stainless steel alloy to withstand over-torquing and sodium hydroxide-based cleaning solutions that have the propensity to gall.