

# Precision-Made Hygienic Clamps for Pharmaceutical & Biotech Industries

Data Sheet 06-0030 Rev. 10/10



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, 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**, the high-pressure 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, ranges from 1" to 12". This clamp 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 opposite 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.

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



SHX Type II



SSH High Pressure



ASME Code

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.		

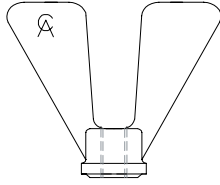


L.J. Star Incorporated, P.O. Box 1116, Twinsburg, OH 44087

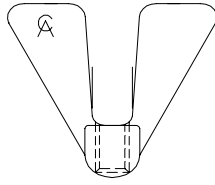
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## CLAMP FASTENER OPTIONS

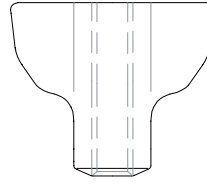
### WING NUT OPTIONS



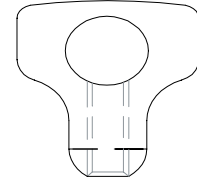
ERGONOMIC  
STANDARD



ERGONOMIC  
DOME

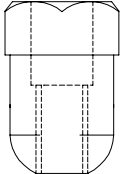


CONVENTIONAL  
NO HOLE

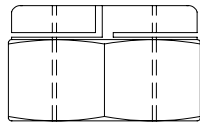


CONVENTIONAL  
WITH HOLE

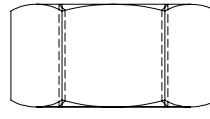
### HEX NUT OPTIONS



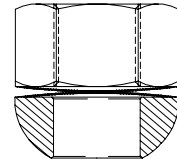
DOME NUT



LOCK NUT



STANDARD NUT



SPRING LOADED

## STANDARD TUBING SIZES

### PRESSURE (PSIG) / TEMPERATURE RATINGS

TUBE OD SIZE	TYPE SH & SHX*			TYPE SSH			TYPE ASME**		
	100°F	250°F	450°F	100°F	250°F	450°F	100°F	250°F	450°F
1/2", 3/4"	870	725	580	1160	928	783	/	/	/
1", 1 1/2"	870	725	580	1450	1189	983	2480	2450	2393
2"	870	725	580	1450	1228	983	1595	1334	1087
2 1/2"	870	725	580	1305	1106	885	/	/	/
3"	696	580	464	1160	983	786	1595	1566	1276
3 1/2"	696	580	464	1015	910	774	/	/	/
4"	610	508	398	870	737	589	1015	855	696
5"	522	435	348	/	/	/	/	/	/
6"	522	435	348	725	613	492	493	420	333
8"	348	290	218	/	/	/	/	/	/
10"	278	232	186	/	/	/	174	145	116
12"	174	145	116	/	/	/	116	101	72

## PIPE SCHEDULE SIZES

### PRESSURE (PSIG) / TEMPERATURE RATINGS

PIPE SIZE	TYPE SH & SHX*			TYPE SSH			TYPE ASME**		
	100°F	250°F	450°F	100°F	250°F	450°F	100°F	250°F	450°F
4"	513	435	348	798	676	541	/	/	/
5"	513	435	348	/	/	/	/	/	/
6"	428	363	290	580	492	393	391	333	275
8"	342	290	218	435	368	294	/	/	/
10"	268	232	186	/	/	/	/	/	/
12"	171	145	116	/	/	/	/	/	/

\* Includes both Type I (single bolt) and Type II (double bolt) styles

\*\* The published design ratings are based upon specific ferrule dimensions and gasket materials. Using alternative dimensions or materials may alter these ratings. Contact L.J. Star for details.