

# T-BOLT BAND CLAMPS

*Made-to-Order*



Clampco has manufactured thousands of different clamp styles. Every style reflects a different application requirement. For example, some T-Bolt Clamps are manufactured with permanent latches and heavier gauge stainless steel for tough applications. Others are made with quick release latches for ease of assembly and disassembly. With a wide range of standard latches, hardware, and bands, Clampco can meet the most complicated and demanding clamp requirements.

Our catalog will walk you through the process of determining the right clamp for your application. When your description code matches that of a stock number, Clampco can sell right from inventory. When the description code is unique, we will manufacture the part for you.



## How to Determine your T-Bolt Band Clamp Description Code

Clampco's description code contains 5 segments, each representing a different part of the clamp.

Below is a sample description code:

**C410-C-75-450-S**

It's easy to create your made-to-order T-Bolt Band Clamp description code, just follow these 5 easy steps:

**1. Determine Latch Style Code**

**C410**-C-75-450-S

**2. Determine Bolt Code**

C410-**C**-75-450-S

**3. Determine Band Width Code**

C410-C-**75**-450-S

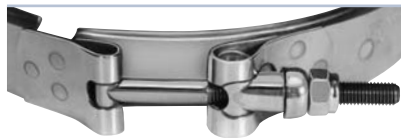
**4. Determine Band Diameter Code**

C410-C-75-**450**-S

**5. Determine Nut, Knob, or T-Handle Code**

C410-C-75-450-**S**

## CLAMPKO LATCH STYLES



### T-BOLT LATCH

The Clampco T-bolt latch is used for permanent or semi-permanent applications and/or safety on pressurized systems. The T-bolt latch is our most economical latch.



### QUICK RELEASE LATCH

The Clampco quick release latch is used for ease of disassembly and is required where the ability to replace bolts is desired.



### SADDLE QUICK RELEASE LATCH

The saddle quick release latch is also used for ease of disassembly and where the ability to replace bolts is desired. It is not recommended for diameters larger than 10 in. [254 mm] due to trunnion/band interference.



### LIGHT-DUTY OVER CENTER LATCH

The light-duty over center latch is used on applications that require frequent assembly or disassembly. No tools are required for opening and closing the clamp after initial installation. This latch style is ideal for light-duty applications on small diameters and requires a 3/16 in. diameter T-bolt.

(Note: Not recommended for pressurized applications)



### MEDIUM-DUTY OVER CENTER LATCH

The medium-duty over center latch is well suited for heavier applications and on larger diameters. No tools are required for opening and closing the clamp after initial installation. It is available with either a 1/4 in. or 3/8 in. diameter T-bolt.

(Note: Not recommended for pressurized applications)



### HEAVY-DUTY OVER CENTER LATCH

The heavy-duty over center latch is well suited for heavy-duty applications and large diameters. It is available with a 3/8 in. diameter T-bolt.

(Note: Not recommended for pressurized applications)



## 1. DETERMINE LATCH STYLE CODE

### C410-C-75-450-S (Sample Description Code)

Stainless steel band material: 301, 302, 304 ¼ hard or ½ hard.

UNF thread form may be supplied without prior notice.

#### T-BOLT LATCH

ENGLISH (inches)						METRIC (millimeters)						
CODE	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT
C310	10-32 UNJF 2.25 Lg.	1.25	.025	.03	.14	.17	57.1 Lg.	31.5	.63	.76	3.5	4.3
C311	10-32 UNJF 2.25 Lg.	3.00	.025	.08	.26	.34	57.1 Lg.	76.2	.63	2.0	6.6	8.6
C410	1/4-28 UNJF 2.75 Lg.	1.25	.025	.09	.22	.31	69.8 Lg.	31.5	.63	2.2	5.5	7.8
C412	1/4-28 UNJF 3.50 Lg.	3.50	.025	.15	.50	.65	88.9 Lg.	88.9	.63	3.8	12.7	16.5
C510	5/16-24 UNJF 3.50 Lg.	3.00	.040	.09	.22	.31	88.9 Lg.	76.2	1.01	2.2	5.5	7.8
C511	5/16-24 UNJF 4.00 Lg.	6.00	.050	.15	.46	.61	101.6 Lg.	152.4	1.27	3.8	11.6	15.4
C610	3/8-16 UNC 4.50 Lg.	8.00	.062	.28	.28	.56	114.3 Lg.	203.2	1.57	7.1	7.1	14.2

C310 & C311: Light-Duty Applications / C410 & C412: Medium-Duty Applications / C510 & C511: Heavy-Duty Applications / C610: Extra Heavy-Duty Applications

#### QUICK RELEASE LATCH

ENGLISH (inches)						METRIC (millimeters)						
CODE	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT
C320	10-32 UNJF 2.25 Lg.	2.00	.025	.03	.14	.17	57.1 Lg.	50.8	.63	.76	3.5	4.3
C321	10-32 UNJF 2.25 Lg.	3.00	.025	.08	.26	.34	57.1 Lg.	76.2	.63	2.0	6.6	8.6
C420	1/4-28 UNJF 2.75 Lg.	1.50	.025	.09	.22	.31	69.8 Lg.	38.1	.63	2.2	5.5	7.8
C422	1/4-28 UNJF 3.50 Lg.	3.50	.025	.15	.50	.65	88.9 Lg.	88.9	.63	3.8	12.7	16.5
C520	5/16-24 UNJF 3.50 Lg.	3.50	.040	.09	.22	.31	88.9 Lg.	88.9	1.01	2.2	5.5	7.8
C521	5/16-24 UNJF 4.00 Lg.	6.50	.050	.15	.46	.61	101.6 Lg.	165.1	1.27	3.8	11.6	15.4
C620	3/8-16 UNC 4.00 Lg.	6.50	.062	.22	.32	.54	101.6 Lg.	165.1	1.57	5.5	8.1	13.7
C621	3/8-16 UNC 4.50 Lg.	6.50	.062	.37	.32	.69	114.3 Lg.	165.1	1.57	9.3	8.1	17.5

C320 & C321: Light-Duty Applications / C420 & C422: Medium-Duty Applications / C520 & C521: Heavy-Duty Applications / C620 & C621: Extra Heavy-Duty Applications

#### SADDLE QUICK RELEASE LATCH

ENGLISH (inches)						METRIC (millimeters)						
CODE	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT
C330	10-32 UNJF 2.25 Lg.	2.00	.025	.03	.14	.17	57.1 Lg.	50.8	.63	.76	3.5	4.3
C331	10-32 UNJF 2.25 Lg.	3.00	.025	.08	.26	.34	57.1 Lg.	76.2	.63	2.0	6.6	8.6
C430	1/4-28 UNJF 2.75 Lg.	1.25	.025	.09	.22	.31	69.8 Lg.	31.7	.63	2.2	5.5	7.8
C432	1/4-28 UNJF 3.50 Lg.	3.50	.025	.15	.50	.65	88.9 Lg.	88.9	.63	3.8	12.7	16.5
C530	5/16-24 UNJF 3.50 Lg.	3.50	.040	.09	.22	.31	88.9 Lg.	88.9	1.01	2.2	5.5	7.8
C531	5/16-24 UNJF 4.00 Lg.	6.50	.050	.15	.46	.61	101.6 Lg.	165.1	1.27	3.8	11.6	15.4

C330 & C331: Light-Duty Applications / C430 & C432: Medium-Duty Applications / C530 & C531: Heavy-Duty Applications

#### LIGHT-DUTY OVER CENTER LATCH

ENGLISH (inches)						METRIC (millimeters)						
CODE	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT
C360	10-32 UNJF 2.25 Lg.	2.50	.025	.08	.26	.34	57.1 Lg.	63.5	.63	2.0	6.6	8.6
C370	10-32 UNJF 2.25 Lg.	2.50	.025	.08	.26	.34	57.1 Lg.	63.5	.63	2.0	6.6	8.6

C360 & C370: Light-Duty Applications / C360: Captured T-Bolt Head / C370: Uncaptured T-Bolt Head  
See page 33 for photos and safety features.

#### MEDIUM-DUTY OVER CENTER LATCH

ENGLISH (inches)						METRIC (millimeters)						
CODE	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT
C490	1/4-28 UNJF 2.75 Lg.	4.68	.025	.09	.22	.31	69.8 Lg.	118.8	.63	2.2	5.5	7.8
C492	1/4-28 UNJF 3.50 Lg.	4.68	.025	.15	.50	.65	88.9 Lg.	118.8	.63	3.8	12.7	16.5
C590	5/16-24 UNJF 3.50 Lg.	5.50	.040	.09	.22	.31	88.9 Lg.	139.7	1.01	2.2	5.5	7.8
C592	5/16-24 UNJF 4.00 Lg.	5.50	.050	.15	.46	.61	101.6 Lg.	139.7	1.27	3.8	11.6	15.4

C490 & C492: Medium-Duty Applications / C590 & C592: Heavy-Duty Applications  
Styles listed above include Uncaptured T-Bolt Heads. Captured T-Bolt Head styles are available upon request.  
See page 33 for photos and safety features.

#### HEAVY-DUTY OVER CENTER LATCH

ENGLISH (inches)						METRIC (millimeters)						
CODE	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT	T-BOLT SIZE	MIN. NOMINAL DIAMETER	BAND THICKNESS	ADJUSTABLE RANGE PLUS	ADJUSTABLE RANGE MINUS	TOTAL DIAMETRICAL ADJUSTMENT
C690	3/8-16 UNC 4.50 Lg.	10.00	.062	.28	.28	.56	114.3 Lg.	254.0	1.57	7.1	7.1	14.2

C690: Extra Heavy-Duty Applications  
See page 33 for photos and safety features.

# T-BOLT BAND CLAMPS




Made-to-Order



## 2. DETERMINE BOLT CODE

**C410-C-75-450-S** (Sample Description Code)

Clampco offers the following bolts as standard options. Other bolt materials and thread sizes are available upon request. Some bolts may be bent for small diameter applications.

CODE	BOLT DESCRIPTION	THREAD SIZE
C	 4037 Alloy Heat Treated to 125,000 - 145,000 psi, Zinc Plated	10-32 1/4-28 M6 X 1 5/16-24 3/8-16
N	 18-8 Stainless Steel (302 or 305)	10-32 1/4-20 1/4-28 5/16-18 5/16-24 3/8-16
M	 431, 420 or 410 Stainless Steel Heat Treated to 140,000 to 160,000 psi	10-32 1/4-28 5/16-24
A	 A286 Stainless Steel, 130,000 psi minimum	10-32 1/4-28
W	 316 Stainless Steel	1/4-28 M6 X 1 M8 X 1.25

## Bolt Performance and Torque Chart

THREAD SIZE	BOLT MATERIAL	MAXIMUM RECOMMENDED TORQUE IN.-LBS. [NEWTON-METERS]	ULTIMATE TENSILE STRENGTH LBS. [KILOGRAMS]
10-32	300 Series Stainless Steel	50 [5.7]	1815 [823]
10-32	Type 420 or 431 Stainless Steel	65 [7.3]	2390 [1084]
10-32	Type A286 Stainless Steel	65 [7.3]	2390 [1084]
10-32	Plated Alloy Steel	65 [7.3]	2390 [1084]
1/4-20	300 Series Stainless Steel	75 [8.5]	3322 [1508]
1/4-28	300 Series Stainless Steel	75 [8.5]	3322 [1508]
M6 X 1	300 Series Stainless Steel	75 [8.5]	3322 [1508]
1/4-28	Type 420 or 431 Stainless Steel	90 [10.2]	4370 [1983]
1/4-28	Type A286 Stainless Steel	90 [10.2]	4370 [1983]
1/4-28	Plated Alloy Steel	90 [10.2]	4370 [1983]
M6 X 1	Plated Alloy Steel	90 [10.2]	4370 [1983]
5/16-18	300 Series Stainless Steel	180 [20.3]	5320 [2414]
5/16-24	300 Series Stainless Steel	180 [20.3]	5320 [2414]
M8 X 1.25	300 Series Stainless Steel	180 [20.3]	5320 [2414]
5/16-24	Type 420 or 431 Stainless Steel	240 [27.1]	7000 [3177]
5/16-24	Type A286 Stainless Steel	240 [27.1]	7000 [3177]
5/16-24	Plated Alloy Steel	240 [27.1]	7000 [3177]
3/8-16	300 Series Stainless Steel	390 [44.1]	7100 [3221]
3/8-16	Plated Alloy Steel	480 [54.2]	9350 [4241]
1/2-13	Plated Alloy Steel	550 [62.1]	17200 [7802]

300 series stainless steel bolt strength based on 95,000 psi minimum tensile strength. Type 420-431 stainless steel bolt strength based on 125,000 psi minimum tensile strength. Type A286 stainless steel bolt strength based on 125,000 psi minimum tensile strength. Plated alloy steel bolt strength based on 125,000 psi minimum tensile strength. Torque coupling or band to a level where joints are properly closed. Maximum torque levels are not required for proper joint function.

## 3. DETERMINE BAND WIDTH CODE

**C410-C-75-450-S** (Sample Description Code)

Clampco clamps are available with a wide variety of band widths. Locate the band width required, then verify availability based on the Latch Style Code you determined from page 5.



ENGLISH (inches)			METRIC (millimeters)
CODE	LATCH STYLE CODE FROM PAGE 5	BAND WIDTH	BAND WIDTH
62	C310, C320, C330, C311, C321, C331, C360, C370	.625	15.9
75	C310, C320, C330, C311, C321, C331, C360, C370, C410, C420, C430, C412, C422, C432	.750	19.1
88	C310, C320, C330, C311, C321, C331, C360, C370, C410, C420, C430, C412, C422, C432, C490, C492, C510, C520, C530, C511, C521, C531, C590, C592	.875	22.2
100	C310, C320, C330, C311, C321, C331, C360, C370, C410, C420, C430, C412, C422, C432, C490, C492, C510, C520, C530, C511, C521, C531, C590, C592	1.000	25.4
112	C410, C412, C420, C422, C430, C432, C490, C492, C510, C511, C520, C521, C530, C531, C590, C592	1.125	28.6
125	C410, C412, C420, C422, C430, C432, C490, C492, C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	1.250	31.8
138	C410, C412, C420, C422, C430, C432, C490, C492, C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	1.375	34.9
150	C410, C412, C420, C422, C430, C432, C490, C492, C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	1.500	38.1
162	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	1.625	41.3
175	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	1.750	44.5
188	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	1.875	47.6
200	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	2.000	50.8
212	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	2.125	54.0
225	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	2.250	57.2
238	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	2.375	60.3
250	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	2.500	63.5
262	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	2.625	66.7
275	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	2.750	69.9
288	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	2.875	73.0
300	C510, C511, C520, C521, C530, C531, C590, C592, C610, C620, C621, C690	3.000	76.2



#### 4. DETERMINE BAND DIAMETER CODE

**C410-C-75-450-S** (Sample Description Code)

The nominal band diameter is based on the outside diameter (O.D.) of the final hose or tube assembly. The last 2 digits of the code are represented as a two place decimal number without the decimal point. Band diameters are available in increments of .0625 in. [1.6 mm].

**For Example:**

**4½ in. = 4.50 in. = 450**

**5 in. = 5.00 in. = 500**

**6¾ in. = 6.375 in. = 638**

**24 9/16 in. = 24.562 in. = 2456**

When starting with a metric unit, convert millimeters to inches rounded to two decimal places and then drop the decimal point.

**For Example:**

**60 mm = (60 mm/25.4) = 2.36 in. = 236**

Note: Minimum nominal diameter is determined by the latch style you have chosen. Refer to Latch Style Code from page 5 for minimum nominal diameter requirements.
















See page 34 for additional information on how to determine the nominal size for your hose clamp application.

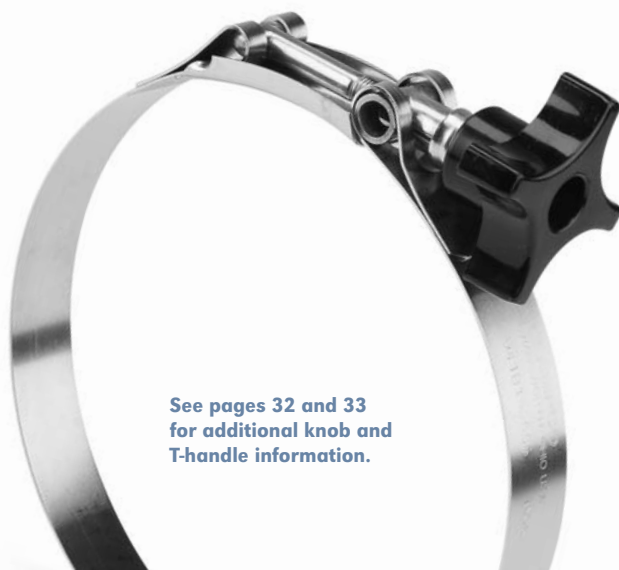
#### 5. DETERMINE NUT, KNOB, OR T-HANDLE CODE

**C410-C-75-450-S** (Sample Description Code)

Clampco provides the following nuts, knobs, and T-handles as standard options. Choose the nut, knob, or T-handle that is best suited to your application, or contact our sales department with your special request.

CODE	KNOB AND T-HANDLE DESCRIPTION	
K		Knob for hand tightening, plastic with Brass insert, 1 in. long [25.4 mm]
K1		Knob for hand tightening, plastic with Brass insert, 1.75 in. long [44.5 mm]
T		T-Handle for hand tightening, Steel, Cadmium or Zinc Plated, 3 in. long [76.2 mm]

CODE	NUT DESCRIPTION		TEMP RATING	SELF-LOCKING
S		Steel, self-locking, nylon insert, Cadmium or Zinc Plated	250° F [120° C]	Yes
S1		All metal, Steel, self-locking, collar or short beam design, Cadmium or Zinc Plated	550° F [290° C]	Yes
S2		All metal, 18-8 Stainless Steel*, self-locking, collar or short beam design, Silver Plated	800° F [425° C]	Yes
S3		All metal, 347 Stainless Steel*, self-locking, collar or short beam design, Silver Plated	1200° F [650° C]	Yes
S4		18-8 Stainless Steel, self-locking, nylon insert, Silver Plated	250° F [120° C]	Yes
S6		All metal, 347 Stainless Steel, self-locking, long beam design, Silver Plated	1200° F [650° C]	Yes
S14		316 Stainless Steel, self-locking, nylon insert, Silver Plated	250° F [120° C]	Yes
H		Stainless Steel Hex Nut, Silver Plated	800° F [425° C]	No
H6		Steel Hex Nut, Zinc Plated	--	No
H8		Brass Hex Nut	--	No



See pages 32 and 33 for additional knob and T-handle information.

\*We reserve the right to substitute with A286 stainless steel and/or other equivalent locknuts unless otherwise specified.