

Fig. 137: Standard U-bolt

Fig. 137S*: Special U-bolt (non-standard)

U-Bolts

Size Range: 1/2" through 36"

Material: Carbon steel U-bolt and four finished hex nuts

Finish: Plain or Galvanized

Service: Recommended for support, or guide of heavy loads; often employed in power, process plant and marine service.

Approvals: Complies with Federal Specification A-A-1192A (Type 24), WW-H-171-E (Type 24), ANSI/MSS SP-69 and MSS SP-58 (Type 24).

Ordering Fig. 137: Specify pipe size x rod size (e.g., 6 x 5/8), figure number, name.

U-bolt will be furnished with longer tangents D or with longer threads E if so required and ordered. If hex nuts are not required, specify "without hex nuts".

Ordering Fig. 137S: Specify figure number, name, material specification, dimensions A, B, C, D, and E, and "with hex nuts" or "without hex nuts".

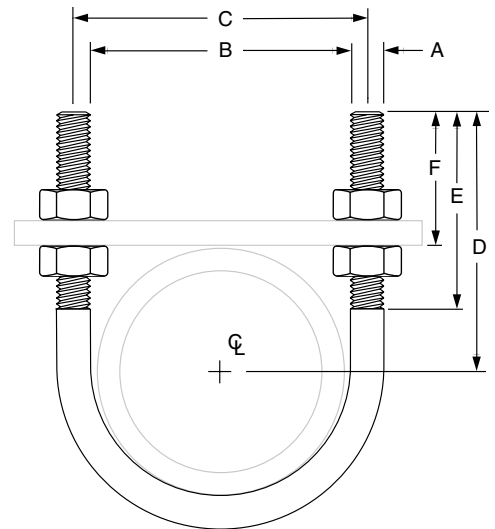
Note: The acceptability of galvanized coatings at temperatures above 450°F is at the discretion of the end user.



FIG. 137: LOADS (LBS) • WEIGHTS (LBS) • DIMENSIONS (IN) ■

| Pipe Size | Rod Size A | Max Normal Load | | 650° F Max Side Load | Wt. | B | C | D | E | F |
|-----------|------------|-----------------|--------|----------------------|------|---------|---------|--------|-------|---------|
| | | 650° F | 750° F | | | | | | | |
| 1/2 | 1/4 | 580 | 454 | 145 | 0.11 | 15/16 | 1 1/16 | 2 3/4 | 2 1/8 | 2 5/16 |
| 3/4 | | | | | 0.12 | 1 1/8 | 1 3/8 | | | 2 7/32 |
| 1 | | | | | 0.12 | 1 3/8 | 1 5/8 | | | 2 3/32 |
| 1 1/4 | 3/8 | 1,460 | 1,144 | 365 | 0.28 | 1 11/16 | 2 1/16 | 2 7/8 | 2 1/2 | 2 1/32 |
| 1 1/2 | | | | | 0.30 | 2 | 2 3/8 | 3 | | 2 1/16 |
| 2 | | | | | 0.33 | 2 1/16 | 2 13/16 | 3 1/4 | | 2 1/16 |
| 2 1/2 | 1/2 | 2,700 | 2,114 | 675 | 0.73 | 2 5/16 | 3 7/16 | 3 3/4 | 3 | 2 5/16 |
| 3 | | | | | 0.78 | 3 9/16 | 4 1/16 | 4 | | 2 1/4 |
| 3 1/2 | | | | | 0.84 | 4 1/16 | 4 9/16 | 4 1/4 | | 2 7/32 |
| 4 | | | | | 0.90 | 4 9/16 | 5 1/16 | 4 1/2 | | |
| 5 | | | | | 1.0 | 5 5/8 | 6 1/8 | 5 | | |
| 6 | 5/8 | 4,320 | 3,382 | 1,080 | 2.0 | 6 3/4 | 7 3/8 | 6 1/8 | 3 3/4 | 2 13/16 |
| 8 | | | | | 2.3 | 8 3/4 | 9 3/8 | 7 1/8 | | |
| 10 | 3/4 | 6,460 | 5,060 | 1,615 | 4.9 | 10 7/8 | 11 5/8 | 8 3/8 | 4 | 3 |
| 12 | 7/8 | 8,960 | 7,016 | 2,490 | 7.7 | 12 7/8 | 13 3/4 | 9 5/8 | | 4 1/4 |
| 14 | | | | | 8.3 | 14 1/8 | 15 | 10 1/4 | | |
| 16 | | | | | 9.2 | 16 1/8 | 17 | 11 1/4 | | |
| 18 | 1 | 11,800 | 9,240 | - | 13.5 | 18 1/8 | 19 1/8 | 12 5/8 | 4 3/4 | 3 5/8 |
| 20 | | | | | 14.6 | 20 1/8 | 21 1/8 | 13 3/8 | | |
| 24 | | | | | 16.9 | 24 1/8 | 25 1/8 | 15 5/8 | | |
| 30 | | | | | 19.1 | 30 1/8 | 31 1/8 | 18 5/8 | | |
| 36 | | | | | 23.2 | 36 1/8 | 37 1/8 | 21 5/8 | | |

■ Loads, weights and dimensions shown do not apply for Fig. 137S. Max load rating for carbon steel is based on 2 x load rating for rod. Max load rating for stainless steel is 0.85 times the maximum stated load ratings listed above.



*When the combination of a normal load and a side load occurs, a straight line interaction formula may be used to determine if the Fig. 137 is still within the allowable stress range:

$$P_n/P_{na} + P_s/P_{sa} \leq 1$$

Where:

P_n = actual applied normal load;

P_{na} = allowable normal load for the Fig. 137;

P_s = actual applied side load;

P_{sa} = allowable side load for the Fig. 137

Nuts must be snug tight in installation to achieve side loads shown.

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