

TRUMBULL

TRUMBULL INDUSTRIES, INC.

Phone: 330.799.3333 | 1040 N. Meridian Rd.
Toll Free: 800.677.1799 | P.O. Box 1556
Fax: 330.392.0756 | Youngstown, Ohio 44501

www.trumbull-mfg.com

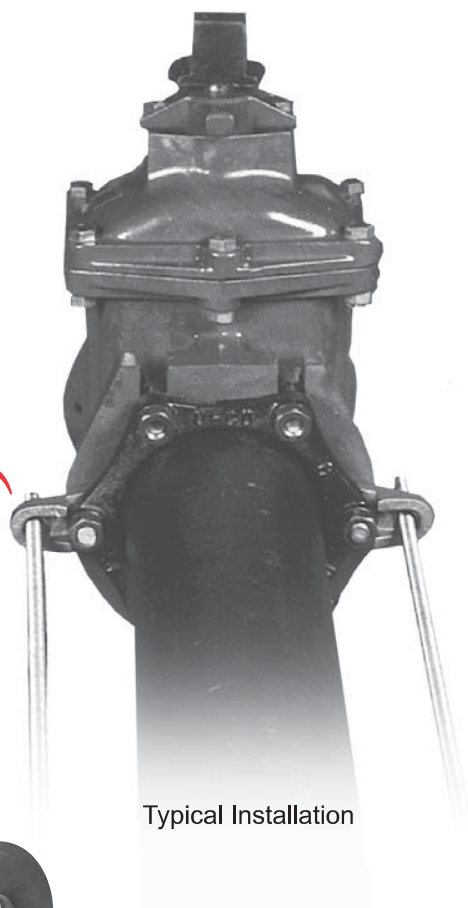
Tie-Lugs

TRUMBULL TIE-LUGS are made from ductile iron for use in restraining mechanical joint valves, fittings, pipe and hydrants with 3/4" threaded rod. Cast from high strength ductile iron with a tensile strength of 80,000 psi and a yield strength of 60,000 psi. Trumbull Tie-Lugs are intended for use between MJ bell and gland in sizes 4" through 16".

Usage Recommendation

Quantity that should be used on each joint depends on pipe diameter, line pressure and other factors; consult your Engineer for quantity required.

	Domestic	Non-Domestic
Description	Trumbull Item No.	Trumbull Item No.
Tie Lug	364-3395	364-9035



Tie-Bolt

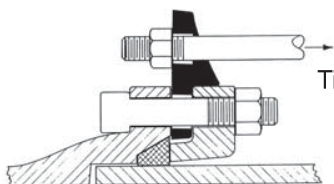
For 4" through 12" Mechanical Joints

Used in place of T-Head Bolt. 3/4" threaded rod passes through eye and is retained with heavy hex nut, sold separately. Made of low carbon steel.

Trumbull Item No.	Product Description	Weight
364-4000	3/4" Tie-Bolt, less nut	0.95 lbs.



Product Information



Tie-Lugs and Tie-Bolts offset threaded rod away from Mechanical Joints to span across valves, fittings and other components. Used in conjunction with Socket Clamps (see page C-2).

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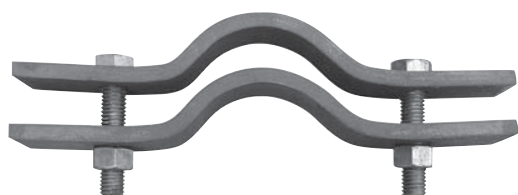
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Socket Clamps

Also known as "Retainer Clamps" or "Friction Clamps"

For use in preventing underground pipe joints from separating.

Designed for use on ductile iron pipe. All Socket Clamps include two steel half clamps, two bolts and nuts and two washers. Used with all-thread rod and Trumbull Tie-Lugs or Tie-Bolts for joint restraint.



SOCKET CLAMP
Shipped as illustrated

Trumbull Item No.	Size*	Bolt Size	Stock Size	Pipe OD**	Weight
364-3401	3"	5/8" x 3"	3/8" x 2"	3.96	5.65 lbs.
364-3402	4"	5/8" x 3"	1/2" x 2"	4.80	7.15 lbs.
364-3403	6"	5/8" x 3"	1/2" x 2"	6.90	8.75 lbs.
364-3404	8"	5/8" x 3"	1/2" x 2"	9.05	10.60 lbs.
364-3405	10"	5/8" x 3"	1/2" x 2"	11.10	12.35 lbs.
364-3406	12"	5/8" x 3-1/2"	1/2" x 2"	13.20	13.80 lbs.
364-3428	14"	7/8" x 4"	3/4" x 3"	15.80	48.00 lbs.
364-3429	16"	1" x 4-1/2"	3/4" x 4"	17.40	70.00 lbs.
364-3430	18"	1-1/4" x 4-1/2"	3/4" x 4"	19.50	79.00 lbs.
364-3431	20"	1-1/4" x 4-1/2"	3/4" x 4-1/2"	21.60	91.00 lbs.
364-3432	24"	1-1/2" x 5"	3/4" x 5"	25.80	118.00 lbs.

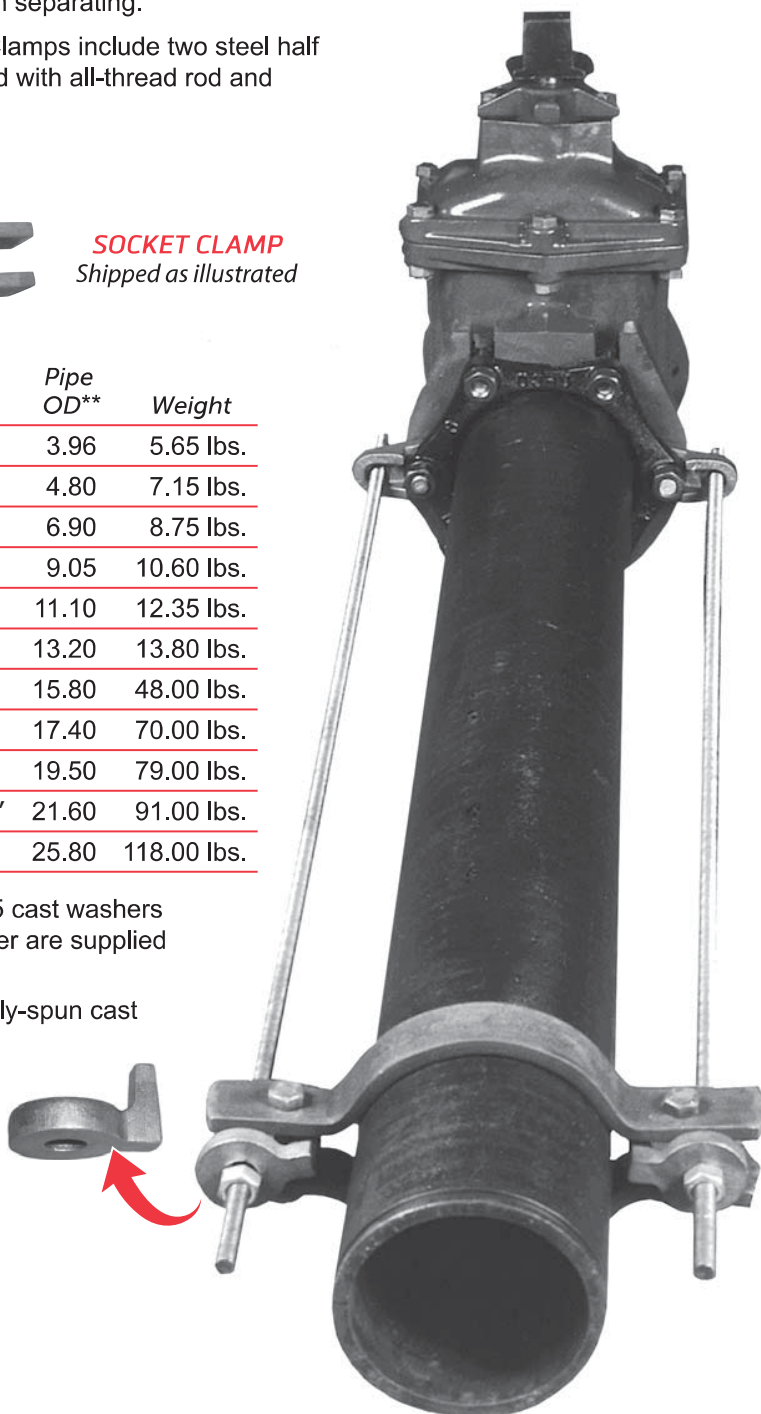
* Sizes 3" through 12" are supplied with #585 cast washers which are shown below. Sizes 14" and larger are supplied with two fabricated carbon steel washers.

** Socket Clamps are designed for centrifugally-spun cast & ductile iron pipe with OD's as shown.

#585 Washer

- For 3" through 12" Socket Clamps
- Usage for 3/4" rod
- Two are required for each Socket Clamp

Trumbull Item No.	Bore Size	Weight
364-9000	1"	0.80 lbs.



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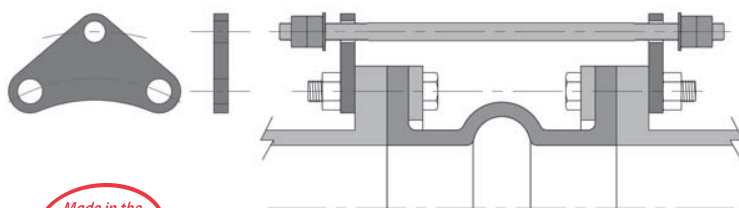
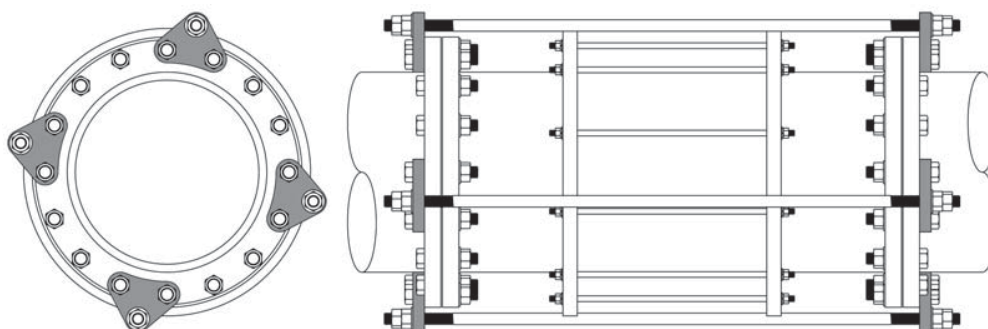
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Flange Lugs

Also known as "Thrust Plates", "Harness Lugs" or "Gusset Plates"

TRUMBULL FLANGE LUGS are used to prevent separation of plain-end piping components. They are installed on the back sides of ANSI Class 125 B16.1 and Class 150 B16.5 flanges to allow tie rods to span across an unrestrained piping component. One example is with a flexible coupling as illustrated below.



Carbon Steel	Stainless Steel	Flange Size	Plate Thickness	Tie-Rod Size	Weight
364-4104	364-4124	4"	1/2"	5/8"	0.94 lbs.
364-4106	364-4126	6"	1/2"	5/8"	1.26 lbs.
364-4107	364-4127	8"	1/2"	5/8"	1.56 lbs.
364-4108	364-4128	10"	3/4"	3/4"	2.91 lbs.
364-4109	364-4129	12"	3/4"	3/4"	3.27 lbs.
364-4110	364-4130	14"	3/4"	3/4"	3.90 lbs.
364-4111	364-4131	16"	1"	1"	5.09 lbs.
364-4112	364-4132	18"	1"	1"	5.68 lbs.
364-4113	364-4133	20"	1"	1"	5.31 lbs.
364-4114	364-4134	24"	1-1/8"	1-1/8"	7.44 lbs.
364-4115	spec/ord	30"	1-1/8"	1-1/8"	10.90 lbs.
364-4116	spec/ord	36"	1-1/4"	1-1/4"	12.10 lbs.
364-4117	spec/ord	42"	1-1/2"	1-1/4"	14.50 lbs.
364-4118	spec/ord	48"	1-1/2"	1-1/4"	16.50 lbs.

Trumbull flange lugs are also used with rubber expansion joints to limit their expansion. Uncontrolled expansion can lead to failure of rubber expansion joints.

When using threaded ductile iron flanges, check for clearance of the Flange Lug inner radius with the flange hub O.D.

Two flange lugs are used in conjunction with a tie rod, two flat washers and four hex nuts to comprise one set. At least two sets are required per joint. Longer flange bolts are required at the flange lug to accept the plate thickness.

Note The total number of flange lugs required should be determined by the project Engineer, or the expansion joint manufacturer.

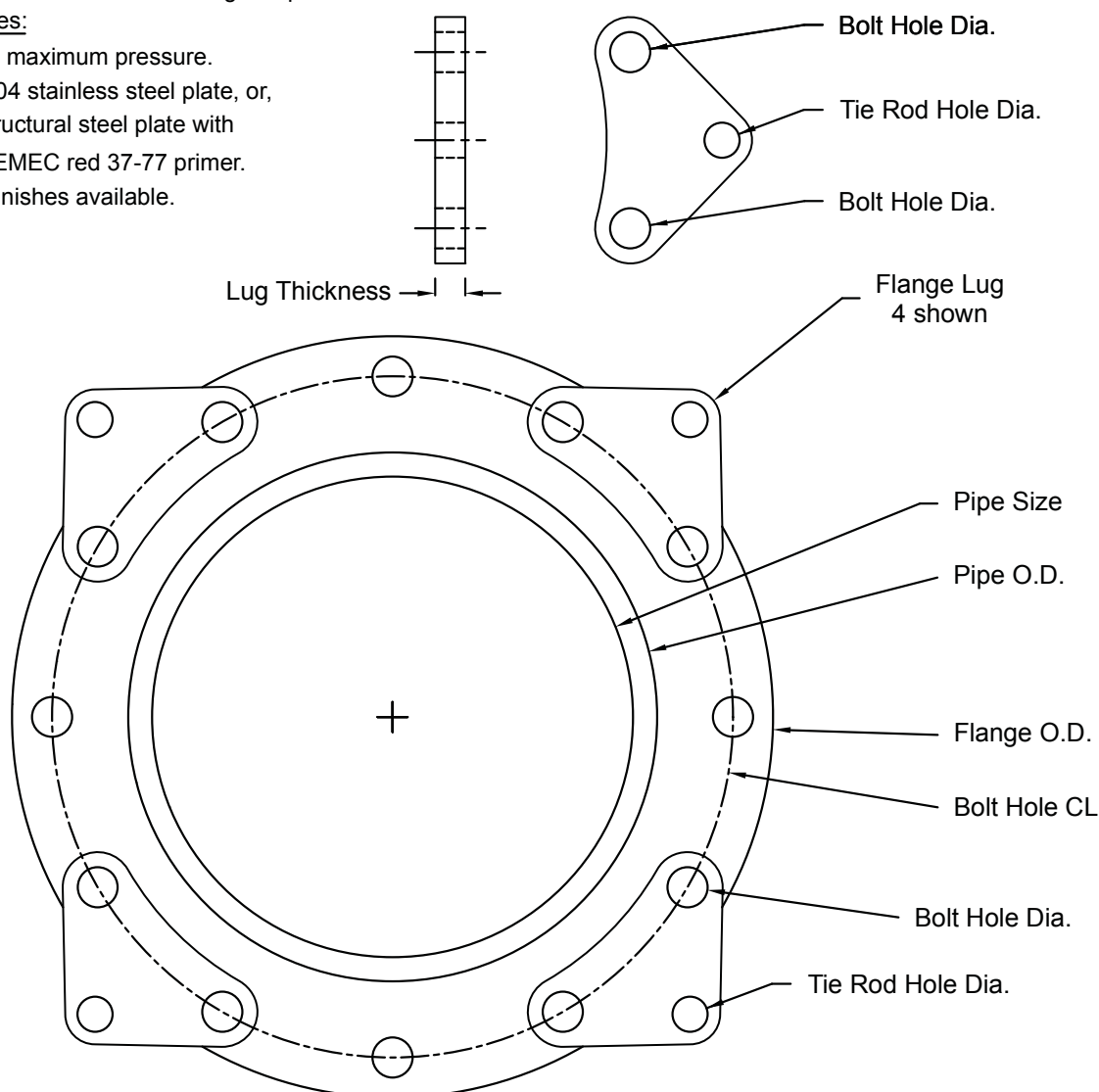
Available in ASTM A36 carbon steel plate and 304 stainless steel. Carbon steel lugs are supplied with a Tnemec 37-77 red primer coating; other coatings and finishes are available upon request. Flange Lugs for Class 250 / 300 are available upon request.

Pipe Size	Pipe O.D.	Flange O.D.	Bolt Holes			Bolt Dia.	Lug Thickness	Tie Rods		Weight pounds
			Hole CL	Qty.	Hole D.			Hole D.	Rod D.	
4"	4.80"	9"	7.5"	8	3/4"	5/8"	1/2"	3/4"	5/8"	0.94
6"	6.90"	11"	9.5"	8	7/8"	3/4"	1/2"	3/4"	5/8"	1.26
8"	9.05"	13.5"	11.75"	8	7/8"	3/4"	1/2"	3/4"	5/8"	1.56
10"	11.10"	16"	14.25"	12	1"	7/8"	3/4"	7/8"	3/4"	2.91
12"	13.20"	19"	17"	12	1"	7/8"	3/4"	7/8"	3/4"	3.27
14"	15.30"	21"	18.75"	12	1-1/8"	1"	3/4"	7/8"	3/4"	3.90
16"	17.40"	23.5"	21.25"	16	1-1/8"	1"	1"	1-1/8"	1"	5.09
18"	19.50"	25"	22.75"	16	1-1/4"	1-1/8"	1"	1-1/8"	1"	5.68
20"	21.60"	27.5"	25"	20	1-1/4"	1-1/8"	1"	1-1/8"	1"	5.31
24"	25.80"	32"	29.5"	20	1-3/8"	1-1/4"	1-1/8"	1-1/4"	1-1/8"	7.44
30"	32.00"	38.75"	36"	28	1-3/8"	1-1/4"	1-1/4"	1-3/8"	1-1/4"	10.90
36"	38.30"	46"	42.75"	32	1-5/8"	1-1/2"	1-1/4"	1-3/8"	1-1/4"	12.10
42"	44.50"	53"	49.5"	36	1-5/8"	1-1/2"	1-1/4"	1-3/8"	1-1/4"	14.50
48"	50.80"	59.5"	56"	44	1-5/8"	1-1/2"	1-1/2"	1-5/8"	1-1/2"	16.50

ANSI Class 125 B16.1 Drilling Template

Notes:

250 psi maximum pressure.
Type 304 stainless steel plate, or,
A36 structural steel plate with
TNEMEC red 37-77 primer.
Other finishes available.



Drawn:	Drawing Revision:	
Date	Rev.	Date
1/14/11	C	4/29/2015

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Drawn to Scale

FLANGE LUGS