

TRUMBULL

Trumbull Manufacturing, Inc.

✓ Composite ✓ Polymer
METER & MANHOLE LIDS

With Related Tools and Accessories





Composite & Polymer Meter Box Lids

Allow Radio Signals to be Read in AMR and AMI Systems

**ADA COMPLIANT
SLIP-RESISTANT SURFACE**

POSTS ON UNDERSIDE
allow for attachment of
retainer bracket (see right),
or snap-in adapter for
Itron 100W ERT or Aclara
MTU (shown on page 7).

RETAINER BRACKET
for installation of
antenna under lid, see
page 7 (for "through
the lid" installations,
see page 5)

**COMPOSITE
LIDS**

**POLYMER
LIDS**

**WORM GEAR
ASSEMBLY**

STAINLESS SCREW
retains worm gear assembly
and allows for easy field
replacement

BRASS SLEEVE
prevents wear and elongation
of hole for pentagon bolt

SQUARE SHANK
and square opening in worm
gear reduce localized stress
on pentagon bolt

ALSO AVAILABLE:

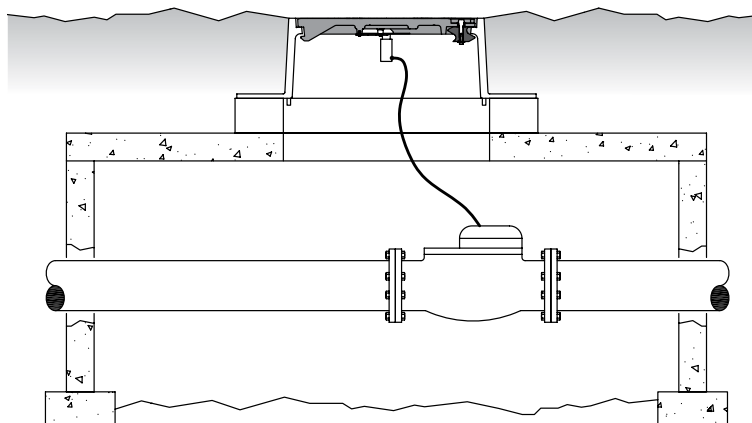
- Other sizes and shapes (oval, rectangular)
- Custom lettering
- Alternate locking mechanisms
- Nylon worm gears
- Snap-in adapter for Itron 100W
- Large pentagon bolt
- Available with optional magnet for use with valve and curb box locators

For dimensions, load ratings and additional options, refer to the product information chart on pages 8 - 17.



Composite Manhole Lids for Large Meter Settings

Vaults for large meters are typically accessed through cast iron Manhole Lids. Trumbull offers a variety of Composite Manhole Lids rated for 40,000 lb. traffic loads up through 36". Composite lids are "radio-friendly" and light weight, reducing back and finger injuries. They also reduce thefts common with cast iron lids. Custom lettering available upon request.



3 LID FASTENING STYLES

1 Worm Gear

Worm gear locks to shelf on frame.

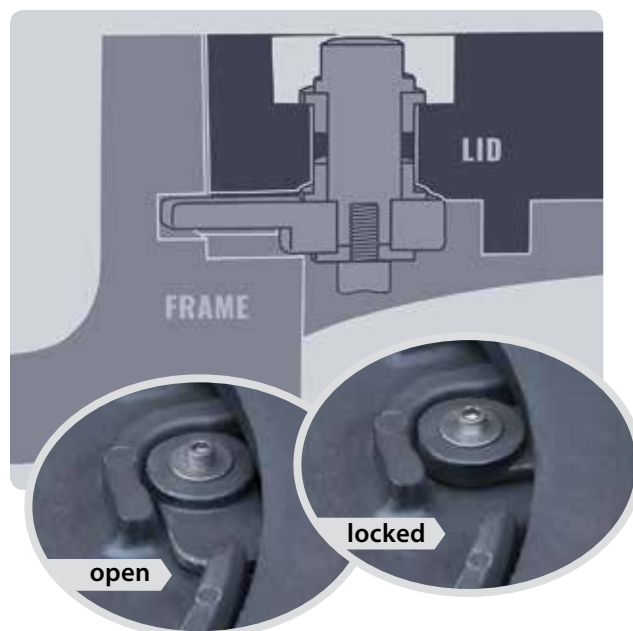


2 Bolt-Down Style

Our Frame and Cover Assemblies have threaded inserts in the frame to accept stainless screws.

3 Quarter-Turn Double Paddle Lock Style

Two paddles on opposite sides of the lid lock into slots in frame. Sizes 18", 24" & 30".
(Baltimore, MD)



For dimensions, load ratings and additional options, refer to the product information chart on pages 8 - 17.



Lids for AY McDonald Coiled Pit Setters*

Worm gears on pit lids typically engage the shelf of an iron frame that covers the entire circumference of the frame. However, coiled pit setters use two brackets that must be engaged to lock the lid in place.

Trumbull Lids are designed with cutouts to clear the brackets of AY McDonald Pit Setters.

*Illustrated on right is an
**18" AY McDonald
Pit Setter Lid****



ALIGNMENT MARKS

*on top of lid help installer find the correct
position for hook and work gear
to lock lids to brackets in pit setter pipe.*

US Patent #9,350,148.

RECESSES ON UNDERSIDE

allow lid to drop into lockable position.

** Lids are designed and manufactured by Trumbull Industries, not AY McDonald.*

For dimensions, load ratings and additional options, refer to the product information chart on pages 8 - 17.



Counterbores for Antenna Mounting

Through the Lid



PROBLEM:

Drilling holes in existing cast iron lids may save money in the short run. However, most iron lids do not have the thickness for a counterbore. If lids are simply drilled without a counterbore, the result is a trip hazard. Drilling iron lids in the field frequently results in cracks in the lid.

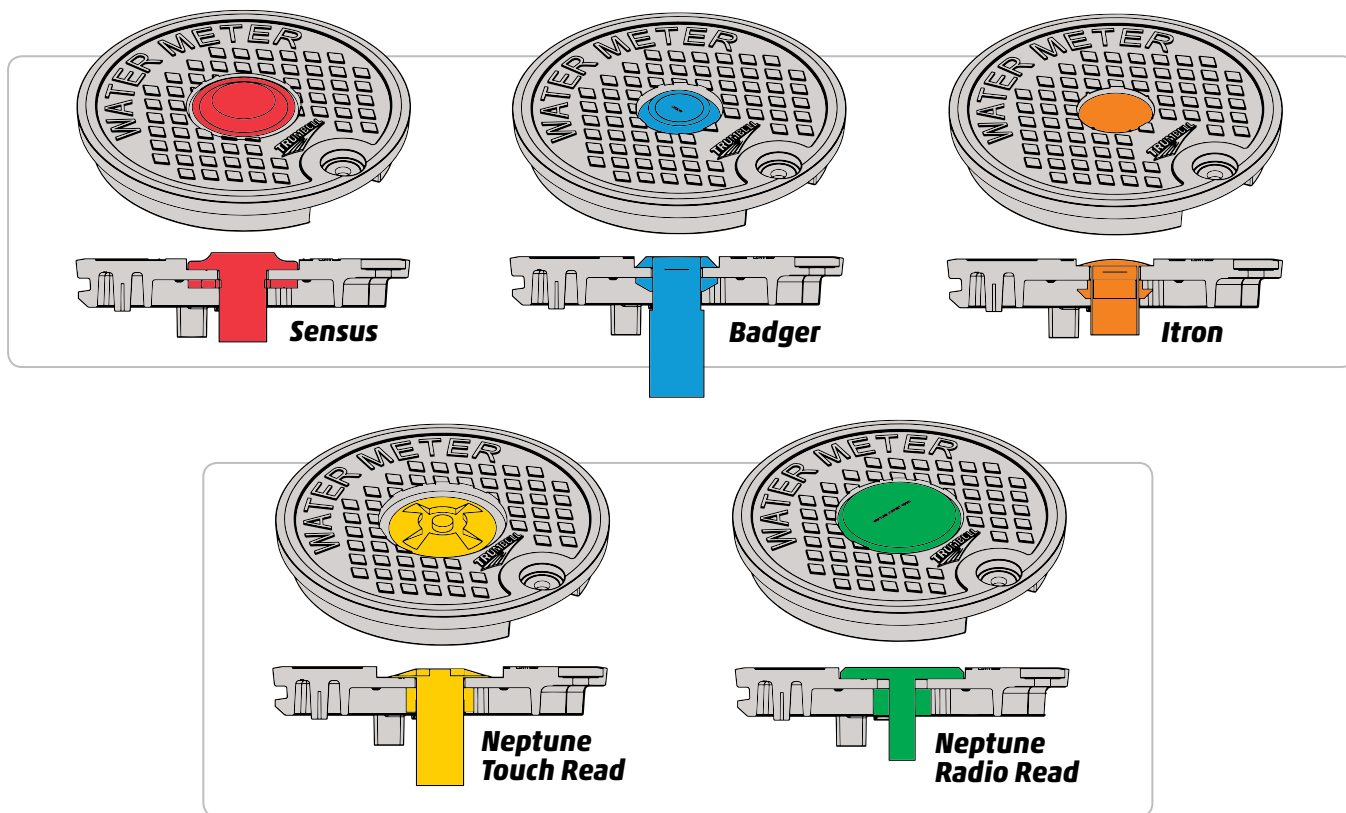
SOLUTION:

Trumbull's lids feature a **COUNTERBORE** allowing recessed installation of antenna to eliminate trip hazard or damage.



SEVERAL OF OUR CURRENT OPTIONS SHOWN BELOW

Inquire about Custom Options



For dimensions, load ratings and additional options, refer to the product information chart on pages 8 - 17.



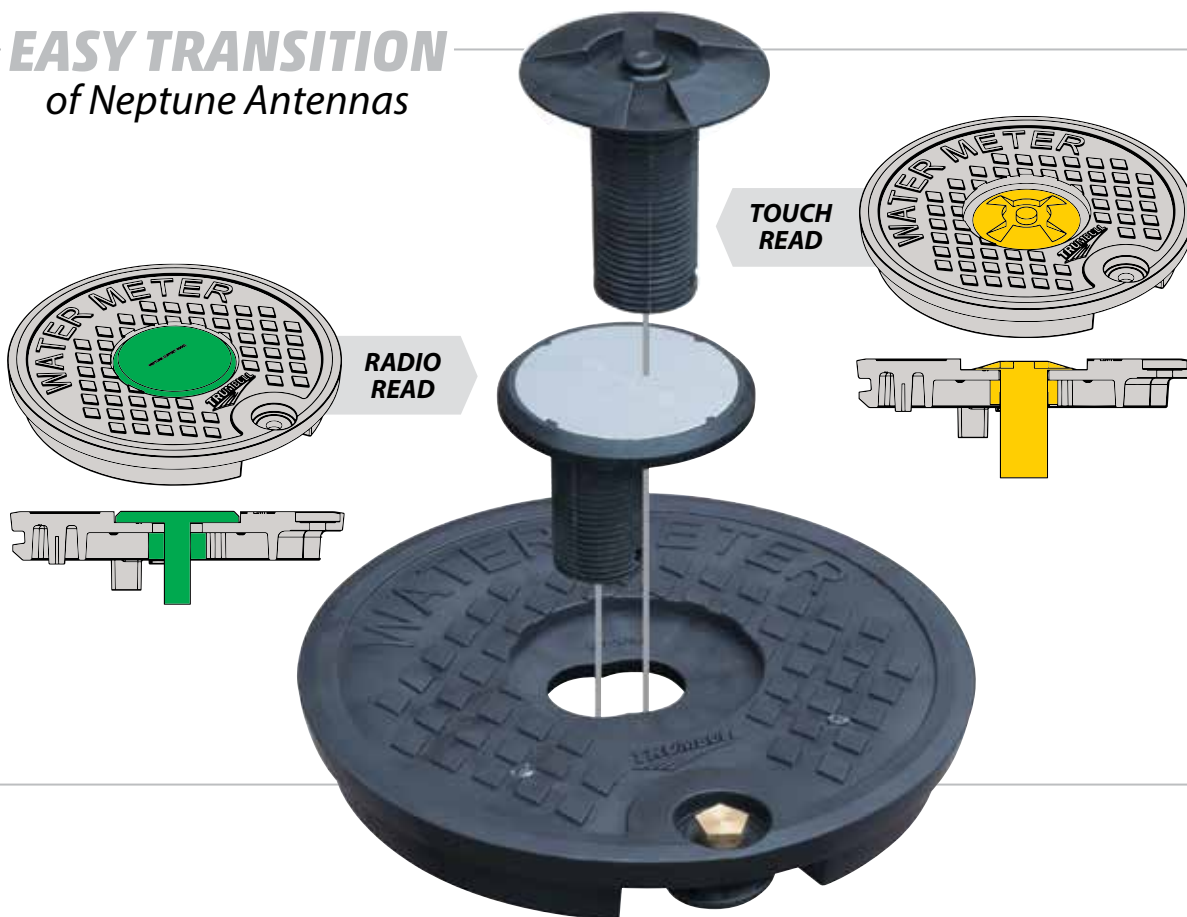
Neptune "Figure 8" Counterbores

"FIGURE 8" SHAPE

UNIQUE "FIGURE 8" SHAPE

allows Neptune users to transition from touch read to radio read antennas.

EASY TRANSITION
of Neptune Antennas



For dimensions, load ratings and additional options, refer to the product information chart on pages 8 - 17.



Antenna Mounting Options

POST ADAPTERS

are made for Itron 100W antennas to "snap-in" to adapter. Stainless screw secures adapter to post.



RETAINER BRACKET

fits popular endpoints. Holds one or two endpoints.

ACLARA POSTS

allow Aclara MTU to be mounted directly with two stainless steel screws.



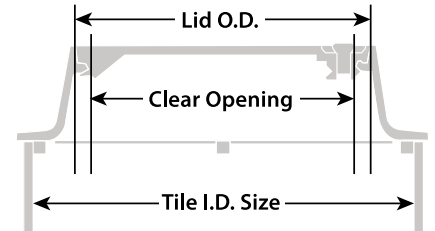
For a variety of **ENDPOINTS**

For dimensions, load ratings and additional options, refer to the product information chart on pages 8 - 17.



20,000 lb Rating "WATER METER" Lids

- 20,000 lb lids normally furnished with nylon worm gear. Also available with ductile worm gear, see chart below.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "WATER METER".
- Special lettering available (requires a minimum quantity), please inquire.
- All lids with counterbore (CBORE) have thru hole diameter of 1.88".
- Bearing washers above and below 20,000 lb lids are UHMWPE.
- Frames shown for illustration purposes only, they are not included with lid.
- For explanation of asterisk points below, see additional notes on page 10.



Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
11"	12-1/8"	5/8"	Mueller A & C	Solid Lid* Retainer Bracket, Itron Post Adapter, & Aclara Posts	----	Nylon	367-5671	3.00 lbs.	
11"	12-1/8"	5/8"	Mueller A & C	Neptune** (Figure 8) Antenna	4.63" x 0.43"	Nylon	367-5672	2.80 lbs.	
11-1/2"	12-1/4"	0.7"	Ford A & C, AY McD A & C	Solid Lid* Retainer Bracket, Itron Post Adapter, & Aclara Posts	----	Nylon	367-5764	3.14 lbs.	
11-1/2"	12-1/4"	0.7"	Ford A & C, AY McD A & C	Neptune** (Figure 8) Antenna	4.63" x 0.40"	Nylon	367-5763	2.92 lbs.	
11-1/2"	12-1/4"	0.7"	Ford A & C, AY McD A & C	Badger Antenna	3.13" x 0.40"	Nylon	367-5762	3.03 lbs.	
11-1/2"	12-1/4"	0.7"	Ford A & C, AY McD A & C	Sensus Antenna	4.13" x 0.40"	Nylon	367-5761	2.97 lbs.	

20,000 lb lids marked "Water Meter" are continued on the following page.



20,000 lb Rating "WATER METER" Lids, continued.

- 20,000 lb lids normally furnished with nylon worm gear. Also available with ductile worm gear, see chart below.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.
- All lids with counterbore (CBORE) have thru hole diameter of 1.88".
- Bearing washers above and below 20,000 lb lids are UHMWPE.
- Frames shown for illustration purposes only, they are not included with lid.
- For explanation of asterisk points below, see additional notes on page 10.



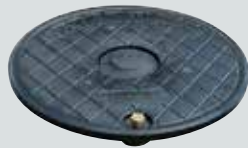
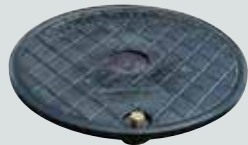
Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
11-1/2"	12-1/4"	0.7"	Ford A & C, AY McD A & C	Itron 60W & 100W Antenna	2.81" x 0.25"	Nylon	367-5760	3.07 lbs.	
11-1/2"	12-1/4"	0.7"	Ford type X (overlapping), Tyler 6150	Solid Lid* Retainer Bracket, Itron Post Adapter, & Aclara Posts	***	Nylon	367-5751	3.04 lbs.	
11-1/2"	12-1/4"	0.7"	Ford type X (overlapping), Tyler 6150	Badger Antenna	3.13" x 0.40"	Nylon	367-5752	2.87 lbs.	
11-1/2"	12-1/4"	0.7"	Ford type X (overlapping), Tyler 6150	Sensus Antenna	3.13" x 0.40"	Nylon	367-5753	2.87 lbs.	
11-1/2"	12-5/8"	9/16"	Type C (Ford, AY McD, Vestal & B&T), Baltimore	Solid Lid* Retainer Bracket, Itron Post Adapter, & Aclara Posts	Single & double holes are machined	Nylon	367-5767	3.08 lbs.	
15"	16-3/16"	21/32"	Vestal type A, Ford type C, AY McD type C	Solid Lid* Retainer Bracket, Itron Post Adapter, & Aclara Posts	----	Nylon	367-5771	6.04 lbs.	

20,000 lb lids marked "Water Meter" are continued on the following page.



20,000 lb Rating "WATER METER" Lids, continued.

- 20,000 lb lids normally furnished with nylon worm gear. Also available with ductile worm gear, see chart below.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.
- All lids with counterbore (CBORE) have thru hole diameter of 1.88".
- Bearing washers above and below 20,000 lb lids are UHMWPE.
- Frames shown for illustration purposes only, they are not included with lid.
- For explanation of asterisk points below, see additional notes below.

Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
15"	16-3/16"	21/32"	Vestal type A, Ford type C, AY McD type C	Neptune** (Figure 8) Antenna ■	4.63" x 0.47"	Nylon	367-5772	5.76 lbs.	
15"	16-3/16"	21/32"	Vestal type A, Ford type C, AY McD type C	Badger Antenna ■	3.13" x 0.40"	Nylon	367-5773	5.96 lbs.	
15"	16-3/16"	21/32"	Vestal type A, Ford type C, AY McD type C	Sensus Antenna ■	4.50" x 0.47"	Nylon	367-5774	5.84 lbs.	
15"	16-3/16"	21/32"	Vestal type A, Ford type C, AY McD type C	Itron 60W & 100W Antenna ■	2.81" x 0.25"	Nylon	367-5775	6.01 lbs.	

* Underside of solid lids provide the following options to mount antenna:

1. Trumbull Retainer Bracket, screwed to 3 posts, which will hold the following:

ITRON shelf mount adapter / ITRON through-the-lid adapter; bracket can hold either one or two / BADGER antenna bracket can hold either one or two / NEPTUNE, bracket can hold one R900 antenna / SENSUS, bracket can hold one antenna.

2. A Trumbull retainer bracket can be mounted to the underside of lid to hold a flow monitoring device or other equipment.

** Neptune (figure 8) holes accepts either Neptune Touch Read or Radio Read antennas.

*** X-Frame style lids available with Neptune, Badger, Sensus and Itron holes and counterbore. Lids will seat, but not hinge.



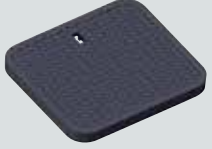

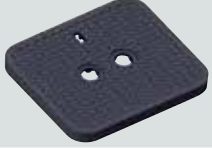

† Slots need to be fabricated in frame in order for the paddle locks to work properly.

■ For 15" Lids requiring "through the lid" mounting, please inquire regarding load rating requirements.



10,000 lb Rating "WATER METER" Lids

- Clark lids furnished with small ductile iron worm gear.
- Clark lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.
- All lids with counterbore (CBORE) have thru hole diameter of 1.88".
- Frames shown for illustration purposes only, they are not included with lid.
- For explanation of asterisk points below, see additional notes on page 10.



Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
10"	11-7/8"	5/8"	Clark Meter Box Frame	Solid Lid* (SMC) Retainer Bracket, Itron Post Adapter	----	Ductile Iron (Small)	367-5639	5.40 lbs.	
10"	11-7/8"	5/8"	Clark Meter Box Frame	MegaNet Antenna (SMC)	3.53" x 0.32"	Ductile Iron (Small)	367-5638	5.00 lbs.	
13" x 15-1/8"	14" x 16" MB Dual Lid	1-1/2"	Brooks MB Dual Frame	Solid Lid* (Polymer) Retainer Bracket, Itron Post Adapter, & Aclara Posts	----	(none)	367-5594	7.70 lbs.	
13" x 15-1/8"	14" x 16" MB Dual Lid	1-1/2"	Brooks MB Dual Frame	Solid Lid* (Polymer) 1 Itron Hole	2.61" x 0.19"	(none)	367-5595	7.60 lbs.	
13" x 15-1/8"	14" x 16" MB Dual Lid	1-1/2"	Brooks MB Dual Frame	Solid Lid* (Polymer) 2 Itron Holes	2.61" x 0.19"	(none)	367-5596	7.50 lbs.	
16-1/8"	17-3/4"	0.5" Cap Style Lid	Owosso Central Castings Co.	Solid Lid* (SMC) Retainer Bracket, Itron Post Adapter, & Aclara Posts	----	(none)	367-5681	12.80 lbs.	



40,000 lb Rating "WATER METER" Lids

- 40,000 lb lids normally furnished with ductile iron worm gear.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.
- All lids with counterbore (CBORE) have thru hole diameter of 1.88".
- Bearing washer below the lid is brass, bronze sleeve supplied above the lid.
- Bronze flanged sleeve protects the hole from elongation. Not furnished with item #367-5670.
- Frames shown for illustration purposes only, they are not included with lid.
- For explanation of asterisk points below, see additional notes on page 10.

See
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for Load Testing

Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
11-1/2"	12-1/4" (with Logo)	0.7"	Ford A & C, AY McD type A	Solid Lid* (SMC) Retainer Bracket, Itron Post Adapter, & Aclara Posts	----	Ductile Iron	367-5518	9.54 lbs.	
11-1/2"	12-1/4" (with Logo)	0.7"	Ford A & C, AY McD type A	Solid Lid* (High Strength Polymer) Retainer Bracket, Itron Post Adapter, & Aclara Posts	----	Ductile Iron	367-5670	3.93 lbs.	
11-1/2"	12-1/4" (with Logo)	0.7"	Ford A & C, AY McD type A	Neptune** (Figure 8) Antenna (High Strength Polymer)	4.63" x 0.40"	Ductile Iron	367-5675	3.67 lbs.	
11-1/2"	12-1/4" (with Logo)	0.7"	Ford A & C, AY McD type A	Badger Antenna (High Strength Polymer)	3.13" x 0.40"	Ductile Iron	367-5676	3.81 lbs.	
11-1/2"	12-1/4" (with Logo)	0.7"	Ford A & C, AY McD type A	Sensus Antenna (High Strength Polymer)	4.13" x 0.40"	Ductile Iron	367-5677	3.73 lbs.	
11-1/2"	12-1/4" (with Logo)	0.7"	Ford A & C, AY McD type A	Itron 60W & 100W Antenna (High Strength Polymer)	2.81" x 0.25"	Ductile Iron	367-5678	3.85 lbs.	







40,000 lb lids marked "Water Meter" are continued on the following page.



40,000 lb Rating "WATER METER" Lids, continued

- 40,000 lb lids normally furnished with ductile iron worm gear.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.
- All lids with counterbore (CBORE) have thru hole diameter of 1.88".
- Bearing washer below the lid is brass, bronze sleeve supplied above the lid.
- Bronze flanged sleeve protects the hole from elongation. Not furnished with item #367-5670.
- Frames shown for illustration purposes only, they are not included with lid.
- For explanation of asterisk points below, see additional notes on page 10.

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Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
11-1/2"	12-1/4" (without Logo)	0.7"	Ford A & C, AY McD type A	Solid Lid* (SMC) Retainer Bracket, Itron Post Adapter, & Aclara Posts	----	Ductile Iron	367-5517	9.54 lbs.	
11-1/2"	12-1/4"	0.7"	Ford A & C, AY McD type A	Neptune** (Figure 8) Antenna (SMC)	4.63" x 0.40"	Ductile Iron	367-5593	8.70 lbs.	
11-1/2"	12-1/4"	0.7"	Ford A & C, AY McD type A	Badger Antenna (SMC)	3.13" x 0.40"	Ductile Iron	367-5591	9.00 lbs.	
11-1/2"	12-1/4"	0.7"	Ford A & C, AY McD type A	Sensus Antenna (SMC)	4.13" x 0.40"	Ductile Iron	367-5592	8.71 lbs.	
11-1/2"	12-1/4"	0.7"	Ford A & C, AY McD type A	Itron 60W & 100W Antenna (SMC)	2.81" x 0.13"	Ductile Iron	367-5519	9.01 lbs.	
11-1/2"	12-5/8"	1"	Type C (B&T, Ford & Vestal), Baltimore	Solid Lid* (SMC) Retainer Bracket, Itron Post Adapter, & Aclara Posts	----	Ductile Iron	367-5669	10.74 lbs.	







40,000 lb lids marked "Water Meter" are continued on the following page.



40,000 lb Rating "WATER METER" Lids, continued

- 40,000 lb lids normally furnished with ductile iron worm gear.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.
- All lids with counterbore (CBORE) have thru hole diameter of 1.88".
- Bearing washer below the lid is brass, bronze sleeve supplied above the lid.
- Bronze flanged sleeve protects the hole from elongation. Not furnished with item #367-5670.
- Frames shown for illustration purposes only, they are not included with lid.
- For explanation of asterisk points below, see additional notes on page 10.

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Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
15"	16-3/16"	1"	Type C (B&T, Vestal, AY McD, Ford), Baltimore	Solid Lid* (SMC) Retainer Bracket	***	Ductile Iron	367-5680	14.20 lbs.	
18"	18-7/8"	0.74"	18" AY McD Pit Setter (See page 4)	Solid Lid* (SMC) Retainer Bracket, Itron Post Adapter	----	Ductile Iron	367-5615	24.60 lbs.	
18"	18-7/8"	0.74"	18" AY McD Pit Setter (See page 4)	Itron 60W & 100W Antenna (SMC)	2.81" x 0.25"	Ductile Iron	367-5614	23.90 lbs.	
18"	19-3/4"	2-3/16"	EJ 1525†, Neenah R-1566†, Baltimore	Solid Lid* (SMC) Retainer Bracket	----	Double Paddle Lock (DI)	367-5688	33.00 lbs.	
18-1/2"	19-13/16"	1"	EJ 2990, Neenah R-1892, CWD 2	Solid Lid* (SMC) Retainer Bracket, Itron Post Adapter	----	Ductile Iron	367-5631	28.30 lbs.	
20"	21-3/16"	0.766"	Ford & AY McD Monitor Covers & Pit Rings	Solid Lid* (SMC) Retainer Bracket	----	Ductile Iron	367-5610	31.30 lbs.	 Pit Ring Frame


40,000 lb lids marked "Water Meter" are continued on the following page.



40,000 lb Rating "WATER METER" Lids, continued

- 40,000 lb lids normally furnished with ductile iron worm gear.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.
- All lids with counterbore (CBORE) have thru hole diameter of 1.88".
- Bearing washer below the lid is brass, bronze sleeve supplied above the lid.
- Bronze flanged sleeve protects the hole from elongation. Not furnished with item #367-5670.
- Frames shown for illustration purposes only, they are not included with lid.
- For explanation of asterisk points below, see additional notes on page 10.

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Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
20"	21-3/16"	0.766"	Ford & AY McD Monitor Covers & Pit Rings	Neptune** (Figure 8) Antenna (SMC)	4.63" x 0.47"	Ductile Iron	367-5785	30.50 lbs.	
20"	21-3/16"	0.766"	Ford & AY McD Monitor Covers & Pit Rings	Badger Antenna (SMC)	3.13" x 0.40"	Ductile Iron	367-5786	30.60 lbs.	
20"	21-3/16"	0.766"	Ford & AY McD Monitor Covers & Pit Rings	Sensus Antenna (SMC)	4.13" x 0.63"	Ductile Iron	367-5787	30.30 lbs.	
20"	21-3/16"	0.766"	Ford & AY McD Monitor Covers & Pit Rings	Itron 60W & 100W Antenna (SMC)	2.81" x 0.25"	Ductile Iron	367-5788	30.70 lbs.	
21"	22-3/4"	1-11/16"	EJ 1020, Neenah R-1580	Solid Lid* (SMC) Retainer Bracket	----	Ductile Iron	367-8905	45.70 lbs.	
21-1/2"	23-3/4"	1"	EJ 1450, Neenah R-1771, Neenah R-1785	Solid Lid* (SMC) Retainer Bracket	----	Ductile Iron	367-8908	44.80 lbs.	






40,000 lb lids marked "Water Meter" are continued on the following page.



40,000 lb Rating "WATER METER" Lids, continued

- 40,000 lb lids normally furnished with ductile iron worm gear.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.
- All lids with counterbore (CBORE) have thru hole diameter of 1.88".
- Bearing washer below the lid is brass, bronze sleeve supplied above the lid.
- Bronze flanged sleeve protects the hole from elongation. Not furnished with item #367-5670.
- Frames shown for illustration purposes only, they are not included with lid.
- For explanation of asterisk points below, see additional notes on page 10.




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Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
22-3/4"	25-1/4"	2"	EJ 1700	Solid Lid* (SMC) Retainer Bracket	----	Ductile Iron	367-5685	63.50 lbs.	
24"	25-3/4"	2-1/2"	EJ 1543/1545†, Neenah R-1565†, Baltimore	Solid Lid* (SMC) Retainer Bracket	----	Double Paddle Lock (DI)	367-5698	64.00 lbs.	
24-3/16"	25-1/2"	1-1/4"	EJ 1040, 1045, 1048 & 1705 (CWD)	Solid Lid* (SMC) Retainer Bracket	----	Ductile Iron	367-5527	54.00 lbs.	
30"	31-13/16"	2-1/2"	Neenah R-1568†, Baltimore	Solid Lid* (SMC) Retainer Bracket	----	Double Paddle Lock (DI)	367-5710	108.7 lbs.	
34"	35-27/32"	1-1/2"	EJ 1585, Neenah R-1752	Solid Lid* (SMC) Retainer Bracket	----	Drop-In Style, no Worm Gear	spec/ord.	131.3 lbs.	



50,000 lb Rating "WATER METER" Frame & Cover Assemblies


- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.
- Frame & Cover Assemblies are EPDM elastomerically sealed.
- Lids are secured to frames with four Xylan coated stainless screws, inquire about optional tamper-resistant screws.
- Custom lettering and logos available, please inquire.
- For explanation of asterisk points below, see additional notes on page 10.

Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
21-1/2" ID	23-3/4"	1"	Trumbull Frame Only 367-5468	(SMC) Retainer Bracket	----	Bolt Down	367-5790	66.1 lbs. Lid & Frame	
30" ID	32"	1-1/4"	Trumbull Frame Only 367-5794	(SMC) Retainer Bracket	----	Bolt Down	367-5793	129.0 lbs. Lid & Frame	
36" ID	38"	1-1/2"	Trumbull Frame Only 367-5784	(SMC) Retainer Bracket	----	Bolt Down	367-5465	185.0 lbs. Lid & Frame	



25,000 lb Rating "WATER METER" Lids

- Lids normally furnished marked "WATER METER". Special lettering available, please inquire.

Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
----	13" x 17-9/32"	0.79"	MB-10 Oval	Solid Lid (SMC)	----	(none)	367-5650	14.80 lbs.	



Composite Manhole Lids



RATED FOR TRAFFIC LOADS
Tested in excess of 40,000 lbs.



LIGHT WEIGHT
Reduces finger and back injuries



NO SCRAP VALUE
Reduces theft problem common to cast iron lids

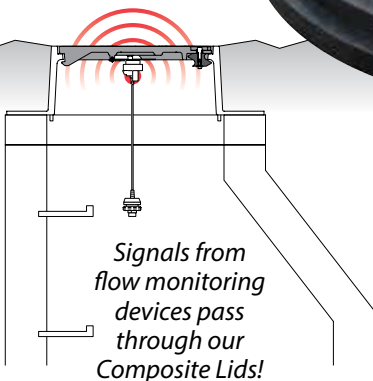
TRUMBULL COMPOSITE MANHOLE LIDS are today's smart choice for highway use in place of cast iron lids. They have been successfully tested to a minimum of 40,000 lb. proof load per AASHTO M-306, H-20. Test report from independent lab is available upon request.

Composite lids have no scrap value, deterring theft common to iron lids. These lids are much lighter than cast iron lids, yet are rated for traffic loads. Use composite lids to avoid back and finger injuries associated with cast iron lids. Lids also have a slip-resistant surface.

LOAD TESTED PER AASHTO M-306, H-20
(See page 24 for details)



CUSTOM MOUNTING
available for flow monitoring devices



Signals from flow monitoring devices pass through our Composite Lids!

WORM GEAR
secures lid to frame and is operated with a bronze pentagon bolt; other locking options available upon request

For dimensions, load ratings and additional options, refer to the product information chart on pages 22 - 23.



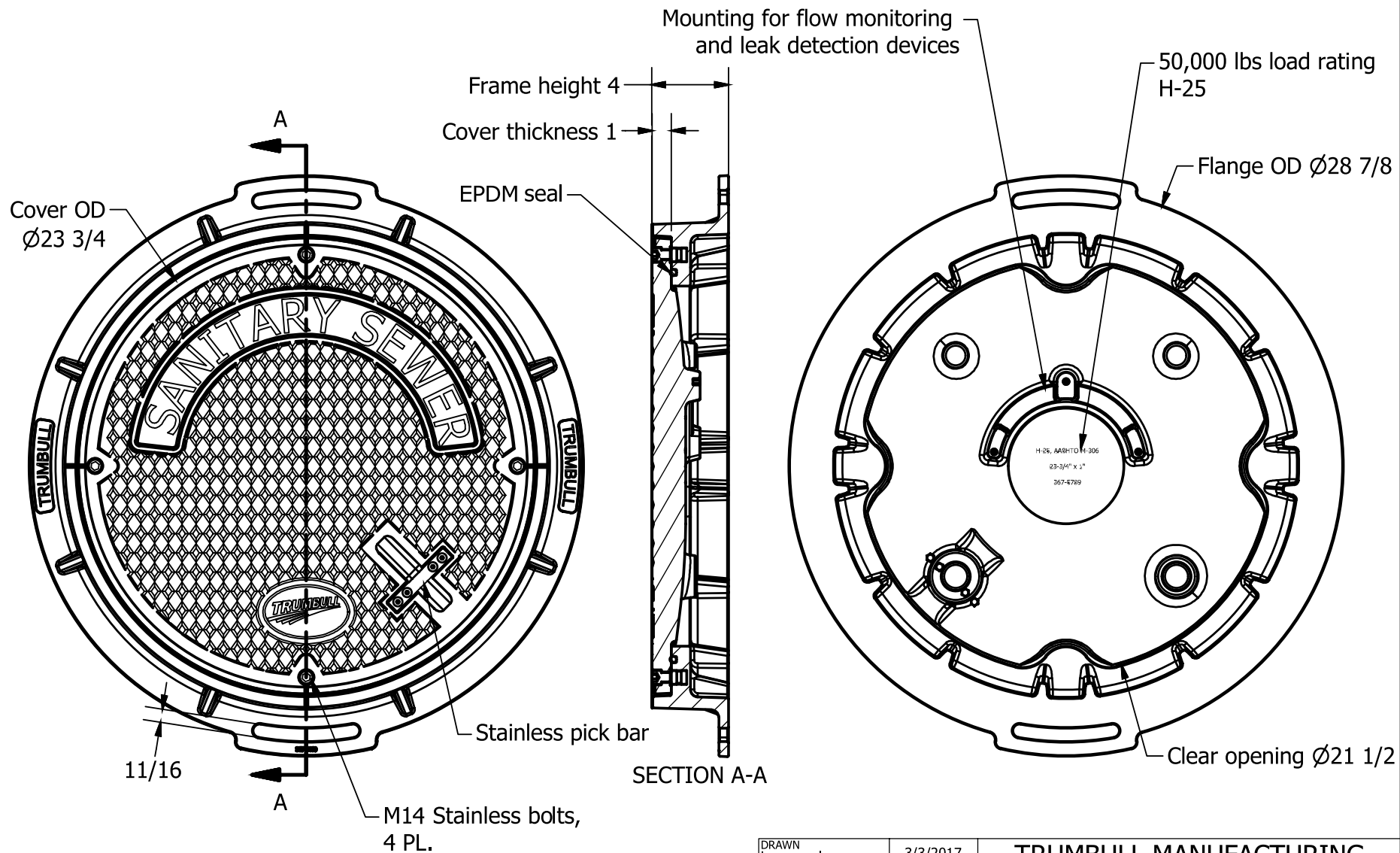
Composite Manhole Frame & Cover Assemblies

EPDM Elastomerically Sealed

- Composite design can pass a 50,000# proof load test per AASHTO M-306, H-25, yet weighs only one-third of comparable cast iron frame and lid, reducing back and finger injuries.
- Corrosion resistant.
- Studs on underside to attach flow monitoring/leak detection devices.
- Optional custom lettering available.

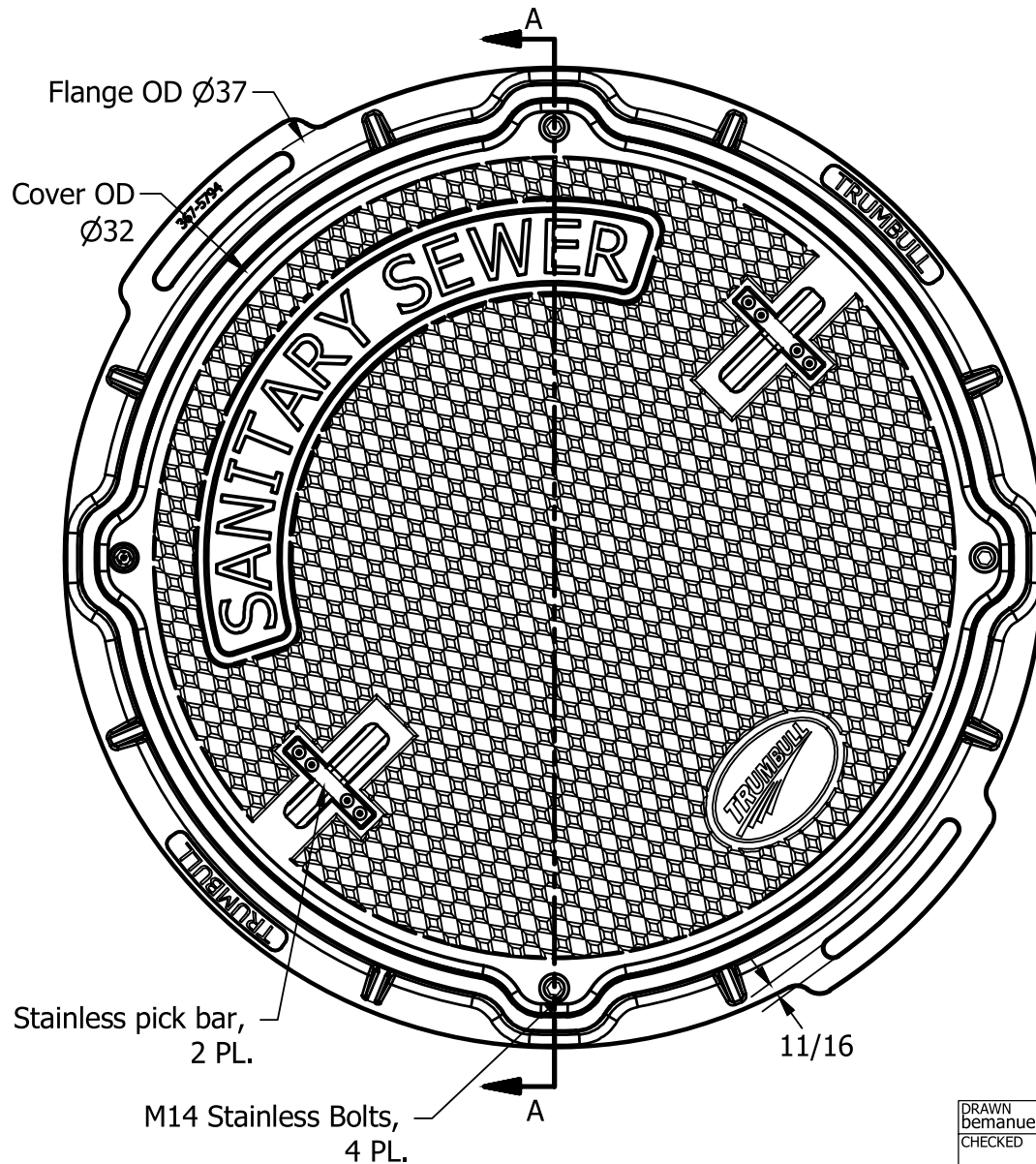


For dimensions, load ratings and additional options, refer to the product information chart on pages 22 - 23.

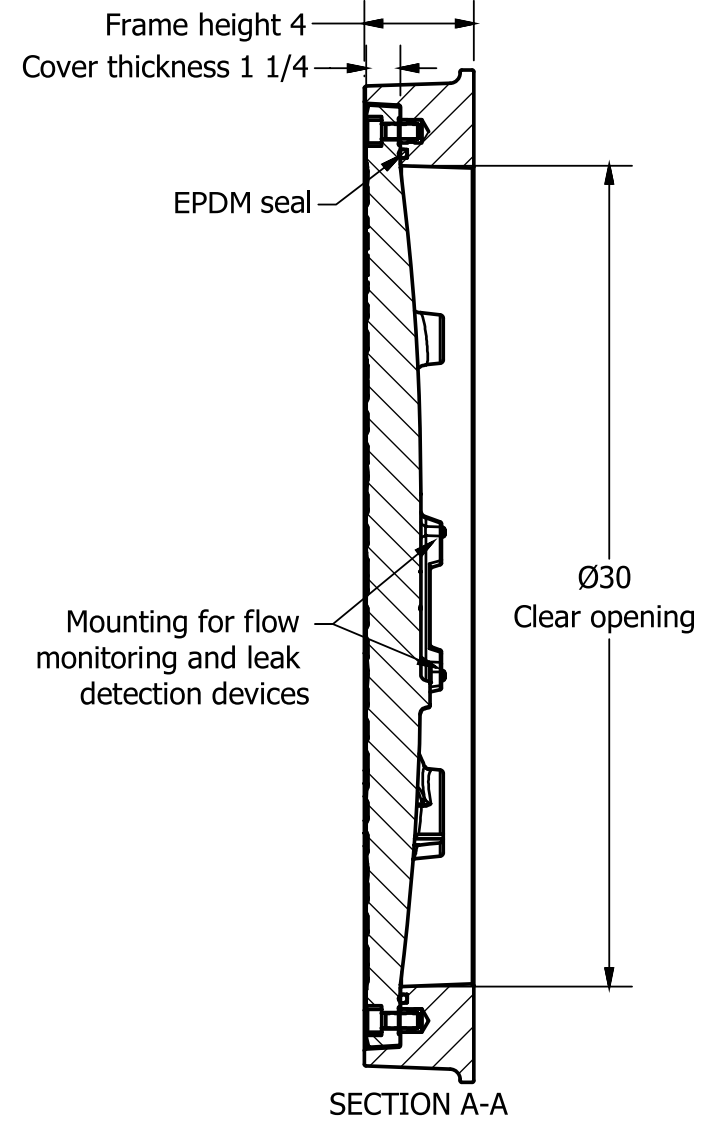


Overall weight: 66 lbs.

DRAWN bemanuel	3/3/2017	TRUMBULL MANUFACTURING 3850 Hendricks Road Youngstown, Ohio 44515 PH. 330-270-7888 FAX 330-392-0756		
CHECKED				
QA				
PRODUCT FAMILY Lids & Frames 50,000 lbs. load rating, H-25		TITLE Frame and Cover Assembly, 24" OD		
PRODUCT SIZE 24" lid OD 21-1/2" Frame Clear Opening		DWG NO 367-5790 Lid (w/367-5468 Frame)	REV --	
SCALE NTS		Molded	Submittal	



Overall weight: 129 lbs.









DRAWN bemanuel	3/3/2017	TRUMBULL MANUFACTURING 3850 Hendricks Road Youngstown, Ohio 44515 PH. 330-270-7888 FAX 330-392-0756		
CHECKED				
QA				
PRODUCT FAMILY Lids & Frames 50,000 lbs load rating, H-25		TITLE Frame and Cover Assembly, 32" OD		
PRODUCT SIZE 32" lid OD 30" Frame Clear Opening		DWG NO 367-5793 Lid (w/367-5794 Frame)	REV --	
SCALE	NTS	Molded	Submittal	



40,000 lb Rating "SANITARY SEWER" Lids

- 40,000 lb lids normally furnished with ductile iron worm gear.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "SANITARY SEWER". Special lettering available, please inquire.
- Bearing washer below the lid is brass, bronze sleeve supplied above the lid.
- Bronze flanged sleeve protects the hole from elongation.
- Frames shown for illustration purposes only, they are not included with lid.


Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
19-13/16"	21-3/8"	15/16"	Capital Foundry #14000-10 (Richmond, VA)	Solid Lid Retainer Bracket	----	Drop-In Style, no Worm Gear	367-5695	28.60 lbs.	
21"	22-3/4"	1-11/16"	EJ 1020, Neenah R-1580	Solid Lid Retainer Bracket	----	Ductile Iron	367-5619	45.70 lbs.	
21-1/2"	23-3/4"	1"	EJ 1450, Neenah R-1771, Neenah R-1785	Solid Lid Retainer Bracket	----	Ductile Iron	367-5622	44.80 lbs.	
22-3/4"	25-1/4"	2"	EJ 1700 Marked "SANITARY SEWER"	Solid Lid Retainer Bracket	----	Ductile Iron	367-5686	63.50 lbs.	
22-3/4"	25-1/4"	2"	EJ 1700 Marked "CONFINED SPACE NEORS"	Solid Lid Retainer Bracket	----	Ductile Iron	367-5687	63.50 lbs.	
24-3/16"	25-1/2"	1-1/4"	EJ 1040, 1045, 1048 & 1705	Solid Lid Retainer Bracket	----	Ductile Iron	367-5625	54.00 lbs.	

40,000 lb. sanitary sewer lids are continued on the following page.



40,000 lb Rating "SANITARY SEWER" Lids, continued




- 40,000 lb lids normally furnished with ductile iron worm gear.
- All lids are normally furnished with standard (27/32") pentagon bolt. Also available with large (1-1/32") pentagon bolt.
- Lids normally furnished marked "SANITARY SEWER". Special lettering available, please inquire.
- Bearing washer below the lid is brass, bronze sleeve supplied above the lid.
- Bronze flanged sleeve protects the hole from elongation.
- Frames shown for illustration purposes only, they are not included with lid.

Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
34"	35-27/32"	1-1/2"	EJ 1585, Neenah R-1752 Marked "CONFINED SPACE NEORS"	Solid Lid Retainer Bracket	----	Drop-In Style, no Worm Gear	367-5714	131.3 lbs.	



50,000 lb Rating "SANITARY SEWER" Frame & Cover Assemblies

- Lids normally furnished marked "SANITARY SEWER". Special lettering available, please inquire.
- Frame & Cover Assemblies are EPDM elastomerically sealed.
- Lids are secured to frames with four Xylan coated stainless screws, inquire about optional tamper-resistant screws.
- Custom lettering and logos available, please inquire.

Clear Opening	Lid OD	Rim Thickness	Fits Frame Types	Antenna Mounting	CBORE Dim.	Worm Gear	Trumbull Item No.	Weight	
21-1/2" ID	23-3/4"	1"	Trumbull Frame Only 367-5468	Retainer Bracket for flow monitoring*	----	Bolt Down	367-5789	66.1 lbs. Lid & Frame	
30" ID	32"	1-1/4"	Trumbull Frame Only 367-5794	Retainer Bracket for flow monitoring*	----	Bolt Down	367-5792	129.0 lbs. Lid & Frame	
36" ID	38"	1-1/2"	Trumbull Frame Only 367-5784	Retainer Bracket for flow monitoring*	----	Bolt Down	367-5795	185.0 lbs. Lid & Frame	

* Underside of solid lids can accept a Trumbull retainer bracket to hold a flow monitoring device or other equipment.



Proof Load Testing per AASHTO M-306

The M-306 Standard

The American Association of State Highway and Transportation Officials (AASHTO) developed a standard, M-306, that calls for proof load testing of iron castings.

For an H-20 proof load test, that standard requires a 40,000 lb. load to be applied to a 9" x 9" square plat for one minute. Any cracks or permanent deformation greater than 1/8" are cause for rejection.

Polymer Lids

In recent years, polymer lids have been used for a variety of applications, such as:

- Water meter pits & manholes, where existing cast iron lids blocked radio signals.
- Flow monitoring devices in manholes, where signals of rising levels are likewise blocked by cast iron lids.
- Theft, due to the scrap value of iron.
- In industrial and sanitary manholes to reduce finger and back injuries, due to their light weight.



How the M-306 Standard Relates to Polymer Lids

Municipalities and Engineers wanting a traffic rated polymer lid frequently specify an "H-20" rating in their specifications. There can be confusion since AASHTO published bridge design criteria, known as H-20, which calls for truck axle loading of 32,000 lbs., or 16,000 per wheel load. The AASHTO M-306 standard calls for a safety factor of 2.5 to be applied to the 16,000 lb. wheel load ($2.5 \times 16,000 = 40,000$ lbs.). Therefore, for H-20 rated lids, a 40,000 lb. proof load test is required. For H-25 rated lids, a 50,000 lb. proof load test is required.

Explanation of the Confusion

Many water departments began to install radio read meters but couldn't get a good read through cast iron lids. Frequently, many were only thinking of a radio-friendly material such as polymer, without giving much thought to its strength. As a result, many municipalities received thin plastic lids that could only withstand a proof load test of 5,000 lbs., or less. Frequently, breakage occurred from lawn tractors and other loads. To be conservative and have an industry standard they can specify, many municipalities require a 40,000 lb. proof load test, even where a lid is not in the roadway. Some suppliers advertise their lids as H-20, but are referring to a 16,000 lb. wheel load and not a 40,000 lb. proof load test. Some furnish lids that cannot even meet the 16,000 lb. load they advertise as "H-20".

How to Avoid the Confusion

To avoid confusion, your specs should require the proof load test you require, conducted per AASHTO M-306. To be safe, require a report from an independent test lab. Simply specifying "H-20" may not provide the safety factor you need, particularly where traffic loads are involved. The AASHTO M-306 standard requires the load to be placed at the center of the lid and not transfer any of the load directly to the frame. For smaller lids, such as 12" diameter, a plate smaller than 9" x 9" must be used. If you would like a proof load test performed on the lids you are using, contact Trumbull.

MANHOLE & METER LID FIELD SURVEY FORM

All Dimensions to be Taken from Frame

Customer Information

Name _____

Company _____

Project Location _____

Email _____

Phone _____

Frame Manufacturer Information

Frame Make & Model No. _____

Lid Make & Model No. _____

Lettering On Lid _____



New Cover Details

LETTERING

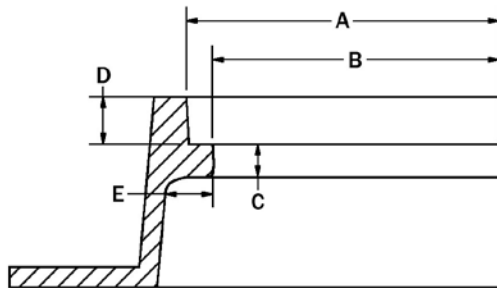
- ☐ "SANITARY SEWER"
☐ "WATER METER"
☐ Other _____

LOAD RATING REQUIRED

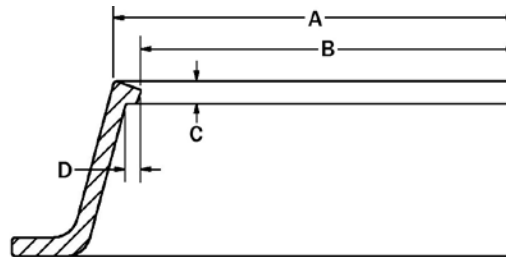
- ☐ Heavy Duty AASHTO M306, H-20; 40,000 lbs.
☐ Medium Duty; 20,000 lbs.
☐ Light Duty; 5,000 lbs.

AMI/AMR Antenna & Leak Detection Mounting

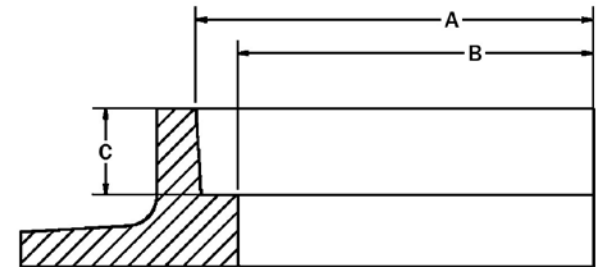
- ☐ Bracket mounting on underside
☐ Through-the-lid, flush with grade
☐ Mfg & model of endpoint _____



Inset Style



Overlapping Style



Straight Wall ID Style

Lid Style

Address

A

B

C

D

E



Meter Pit Frames



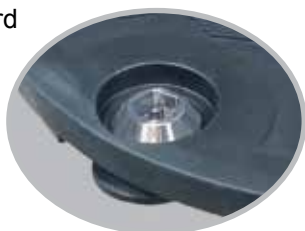
- Polymer Frame accepts all Trumbull 12-1/4" type-A lids. Fits on 18", 20" and 21" pits.
- T4-21 Ductile Iron Frame is double lid style, fits 21" pits, for use with 12-1/4" OD lids, 11-1/2" clear opening.

Trumbull Item No.	Frame	Weight
367-5464	Polymer Frame	8.10 lbs.
367-5466	T4-21 Ductile Iron Frame	64.50 lbs.

Meter & Manhole Lid Accessories

Worm Gear Security Bolts

Use in place of standard brass pentagon bolts. Made from type 316 SS, for use with 12" and 15" Trumbull lids, as well as 21" Monitor covers.



Trumbull Item No.	Frame	Weight
167-0069	Security Bolt	0.08 lbs.
167-0070	Security Bolt Key	0.15 lbs.
spec/ord.	Key, with t-handle	----

Security Screws for Frame & Covers

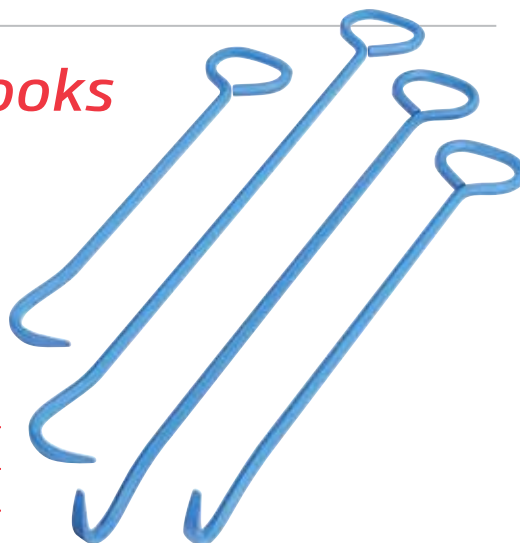
Security Screws are Xylan coated. M14 x 30MM for use with 24" Frame and Covers, M14 x 35MM for use with 30" and 36" Frame and Covers.



Trumbull Item No.	Frame	Weight
167-0146	M14-2.0 x 30MM Security Screw	0.10 lbs.
167-0148	M14-2.0 x 35MM Security Screw	0.10 lbs.
167-0152	Security Screw Key	0.15 lbs.
spec/ord.	Key, with t-handle (specify length)	----

Manhole Cover Hooks

TRUMBULL MANHOLE COVER HOOKS are made of 5/8" hexagonal steel. The 1/2" point engages the lid of the manhole cover. Hooks are painted in Safety Blue enamel paint for safety and durability.



In-Line Handle

Trumbull Item No.	Overall Length	Weight
367-4286	24"	3.35 lbs.
367-4290	36"	4.50 lbs.

90° Handle

Trumbull Item No.	Overall Length	Weight
367-4288	30"	3.85 lbs.
367-4289	36"	4.45 lbs.



Meter Couplings & Flanges

With Rubber Gasket

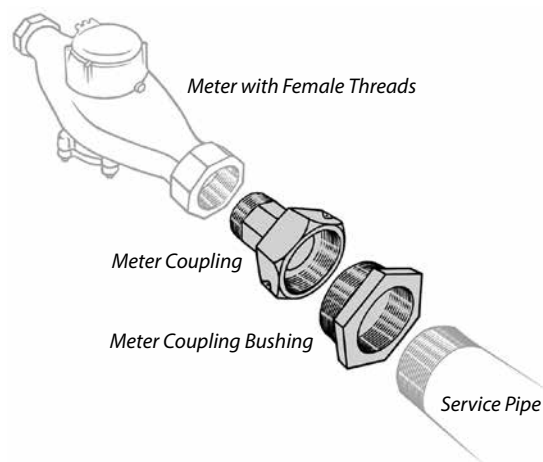
"Low Lead" Meter Couplings

- Barrel is in contact with water and is cast brass to meet UNS C89833. Lead content is less than .25%, in compliance with the Reduction of Lead in Drinking Water Act.
- Swivel nut does not contact water and is cast from UNS C83600.

Trumbull Item No.	Male Thread	Fits Meter Size	Lining Length	Weight
368-0590	1/2"	5/8" x 3/4" and 3/4"	2-3/8"	0.44 lbs.
368-0591	1/2"	5/8" x 1/2"	2-3/8"	0.25 lbs.
368-0646	1/2"	5/8" x 3/4" and 3/4"	1-5/8"	0.40 lbs.
368-0593	3/4"	5/8" x 3/4" and 3/4"	2"	0.45 lbs.
368-0592	3/4"	5/8" x 3/4" and 3/4"	2-1/2"	0.50 lbs.
368-0595	1"	1"	2-5/8"	0.70 lbs.
368-0597	1-1/2"	1-1/2"	2-7/8"	1.85 lbs.
368-0598	2"	2"	3"	2.65 lbs.

"Low Lead" Bushings

For use with 1-1/2" or 2" meters with female threads, as shown below.



Trumbull Item No.	Size	Fits Coupling	Weight
368-0618	1-1/2"	1-1/2"	0.85 lbs.
368-0619	2"	2"	1.20 lbs.

"Low Lead" Meter Flange Kits

- Cast brass to meet UNS C89833
- Boxed kit includes 2 flanges, 2 gaskets & 4 zinc-plated bolts and nuts
- Also available with stainless steel or brass fasteners



Trumbull Item No.	Size	Fits Meter	Fastener Material	Weight
379-2015	1-1/2"	1-1/2"	zinc-plated	5.40 lbs.
379-2025	1-1/2"	1-1/2"	brass	5.40 lbs.
379-2030	1-1/2"	1-1/2"	stainless steel	5.40 lbs.
379-2016	2"	2"	zinc-plated	7.10 lbs.
379-2026	2"	2"	brass	7.10 lbs.
379-2031	2"	2"	stainless steel	7.10 lbs.

"Low Lead" Meter Flanges

Sold Individually

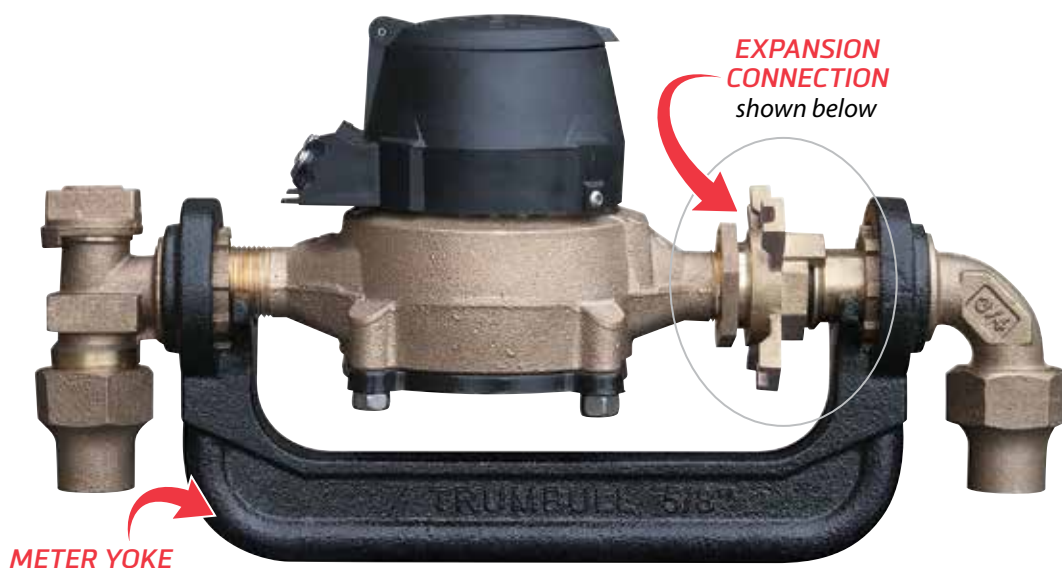
- Cast brass to meet UNS C89833
- Includes one flange and one gasket



Trumbull Item No.	Size	Fits Meter	Weight
379-1015	1-1/2"	1-1/2"	2.00 lbs.
379-1016	2"	2"	2.45 lbs.



Cast Iron Meter Yokes & Expansion Connections



TRUMBULL METER YOKES provide uniform spacing and alignment for setting water meters. Used in conjunction with Expansion Connections for easy installation and removal of meters.

Cast of gray iron, Class 25, with a rust-preventative black coating.

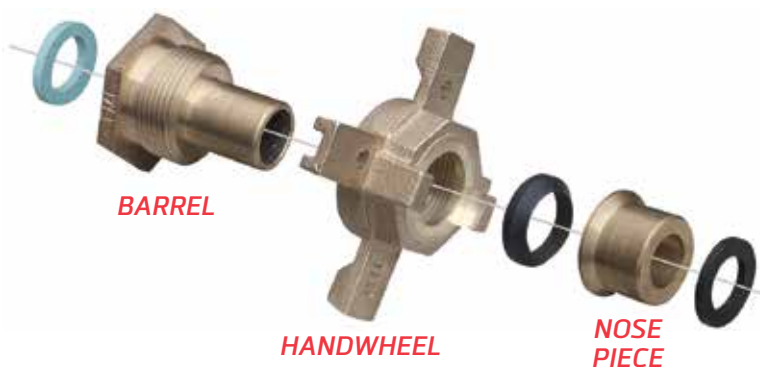
EXPANSION CONNECTIONS are screwed onto one end of a meter and allow for easy installation and removal from Meter Yoke. Turning the Handwheel causes expansion into the rubber gaskets in the Yoke, creating a water-tight seal.

Nose Piece and Barrel are in contact with water and are cast from UNS C89833 brass. Lead content is less than .25%, in compliance with the Reduction of Lead in Drinking Water Act.

Handwheel does not contact water and is cast from UNS C83600. Both the flat seal yoke gaskets and bevelled seal gasket are EPDM. Expansion seal gasket between barrel and meter is fiber. All gaskets are NSF-61.

Dimensions of Yokes & Expansion Connections are consistent and interchangeable with other industry manufacturers.

Trumbull Item No.	Meter Size	Length	Height	Weight
367-5470	5/8"	10-15/16"	4-1/8"	3.65 lbs.
367-5469	5/8" x 3/4"	10-15/16"	4-1/8"	4.20 lbs.
367-5471	3/4"	12-1/2"	4-1/8"	4.60 lbs.
367-5472	1"	14-3/4"	5-1/4"	7.30 lbs.



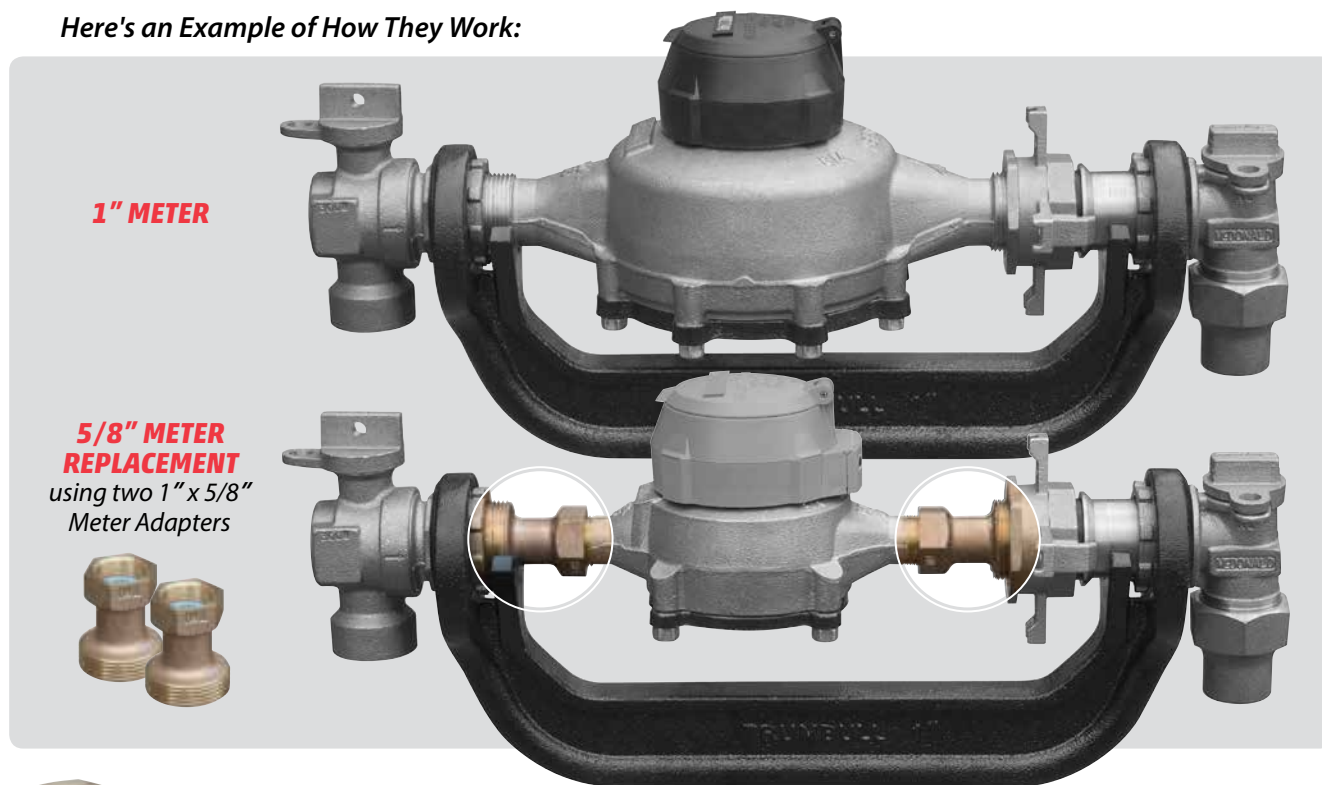
Trumbull Item No.	Meter Size	Size	Type	Weight
368-0630	5/8"	5/8"	Handwheel	0.72 lbs.
368-0632	5/8" x 3/4" & 3/4"	3/4"	Handwheel	0.93 lbs.
368-0635	1"	1"	Handwheel	1.61 lbs.



Meter Adapters

When changing meter sizes in an existing setting, use Trumbull Meter Adapters to make up the difference in length and thread size. Our Meter Adapters are cast from UNS C89833 brass with Lead content < than .25%, in compliance with the Reduction of Lead in Drinking Water Act.

Here's an Example of How They Work:



Trumbull Item No.	Weight	Ford No.	Original Meter		New Meter		Quantity Required
			Thread Size	Laying Length	Thread Size	Laying Length*	
368-0642	0.4 lbs.	A13	5/8"	7-1/2"	3/4"	9"	2
368-0643	0.4 lbs.	A14	5/8"	7-1/2"	1"	10-3/4"	2
368-0639	0.4 lbs.	A23	5/8" x 3/4"	7-1/2"	3/4"	9"	1
368-0641	0.6 lbs.	A24	5/8" x 3/4" & 3/4"**	7-1/2"	1"	10-3/4"	2
368-0644	0.4 lbs.	A34	3/4"	7-1/2"	1"	10-3/4"	2
368-0640	0.7 lbs.	A44	3/4" x 1"	9"	1"	10-3/4"	1
379-1022	3.2 lbs.	A47	1"	10-3/4"	2" Flg.	17"	2

* All Meter Adapters are provided with a hard fiber gasket to maintain existing laying lengths.

** 3/4" Meters have been made with 7-1/2" and 9" laying lengths; adapter 368-0641 is designed for 3/4" meters with 7-1/2" laying length.



Pentagon Hand Keys

Medium Carbon Steel Investment Casting - Plated Finish

Model HK-0

Fits standard pentagon heads.

The socket cavity retains the head during removal, for ease in lifting the lid of a meter box from the frame.

The convenient hammer and pick ends assist in breaking ice and clearing debris. A square shank is provided on the socket for applying extra torque.



Model HK-1

Fits standard pentagon heads.

Slot in socket operates T-heads of curb and meter stops. The socket cavity also retains the head during removal,

for ease in lifting the lid of a meter box from the frame. The tee-handle has a blunt rounded end for pounding, and a curved, tapered end to assist in breaking ice and clearing debris.



Model HK-2

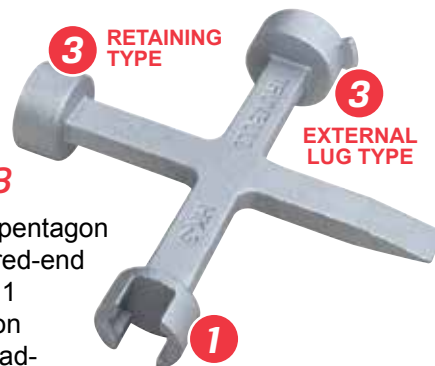
The HK-2 has two pentagon sockets, plus a tapered-end prying blade. Socket 1 fits standard pentagon heads, and has a slot to operate T-head of curb and meter stops.

Socket 2 fits large pentagon heads. Both sockets have cavities to retain the pentagon head during removal, for ease in lifting the lid of a meter box from the frame. The tapered blade end is designed for prying, or for use as a chisel.



Model HK-3

The HK-3 has three pentagon sockets, plus a tapered-end prying blade. socket 1 fits standard pentagon heads, and has a head-retention cavity. It also has a slot to operate T-heads of curb and meter stops. The other two sockets both fit the 1-1/16" pentagon head used on Mueller meter boxes. One socket has the head-retention cavity to retain the pentagon head during removal; the other socket has the external lug which engages the lid recess. Both methods assist in lifting the lid of a meter box from the frame. The tapered blade end is designed for prying, or for use as a chisel.

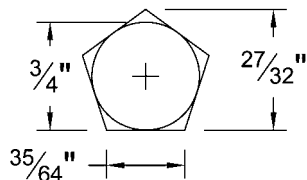


See page 31 for Curb Box Keys.

Trumbull Item No.	Product Description	Weight
367-4298	Model HK-0 Pentagon Key	0.85 lbs.
367-4331	Model HK-1 Pentagon Key	0.60 lbs.
367-4332	Model HK-2 Pentagon Key	0.90 lbs.
367-4333	Model HK-3 Pentagon Key	1.00 lbs.

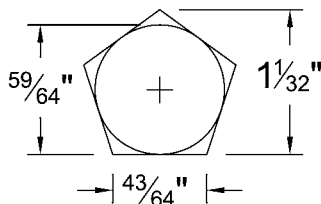
1

STANDARD Waterworks Pentagon Head



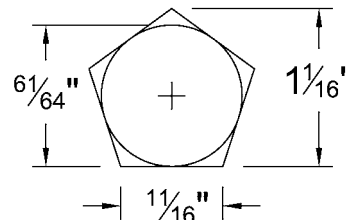
2

LARGE Waterworks Pentagon Head



3

MUELLER Meter Box Cover Pentagon Head



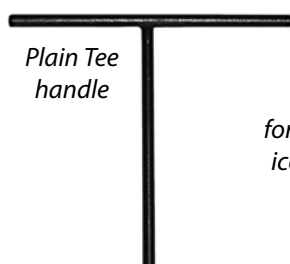


#1305 & #1321 Combination Curb Box Keys

For **BUFFALO** Type Boxes

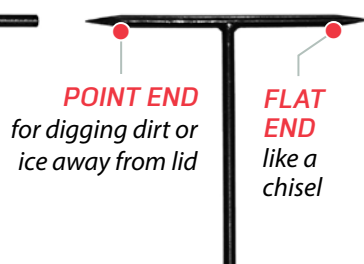
Made of 5/8" round carbon steel with cast steel combo casting.

#1305 Style



Plain Tee
handle

#1321 Style



POINT END
for digging dirt or
ice away from lid

**FLAT
END**
like a
chisel

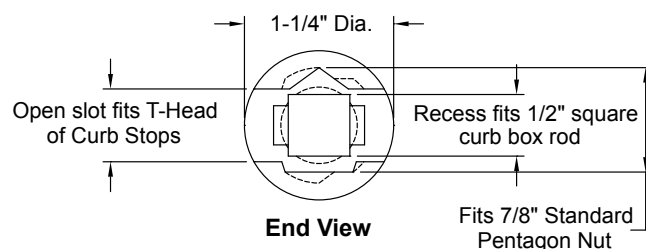
Length	Weight	#1305 Item No.	#1321 Item No.
1 ft.	3.00 lbs.	367-4295	367-5295
3 ft.	5.00 lbs.	367-4291	367-5291
4 ft.	6.00 lbs.	367-4292	367-5290
6 ft.	8.00 lbs.	367-4297	367-5297
8 ft.	9.00 lbs.	367-4302	spec/ord.

NOT for use with 1" Erie Style Boxes.

THE COMBINATION SOCKET

is a multi-purpose tool. It can be used on a pentagon nut as well as a 1/2" square rod, and will fit directly on the t-head of a curb or meter stop through 2".

When used on pentagon bolt of meter box covers, automatically attaches to lift and hold the lid.



Meter Wrench

TRUMBULL'S METER WRENCH is used to install and remove meter couplings in buried meter boxes and meter pits. The 16" handle allows worker easy access into these confined areas. Works with 1/2" through 1-1/2" meter couplings. Special features include resilient grip on handle and replaceable jaws.



**SLIP-RESISTANT
RESILIENT GRIP**

STEEL TUBING
EDP Coating

INVESTMENT STEEL CASTING
EDP Coating

**HEAT TREATED
TOOL STEEL JAWS**
Bright Zinc Plating

Trumbull Item No.	Weight
368-0620	2.50 lbs.

SPECIALTY PRODUCTS FOR THE WATERWORKS AND VALVE INDUSTRIES

Our product categories include waterworks tools, valve position indicators, polywrap, joint restraints products, meter pit lids and couplings, valve and curb box accessories, as well as valves and accessories for water/wastewater treatment plants.

We specialize in unique and customized accessories for the valve market. We have pioneered cast stainless valve accessories such as stainless chainwheels, floorstands, wall brackets and stem guides. Other innovations include our valve position indicators and cast stainless mud valves that have been thoughtfully designed to meet the highest expectations of Engineers and Operators. Trumbull Manufacturing is a leader in providing thermoplastic and composite lids for water meter changeout programs, as well as composite manhole frames and covers.

We stand behind our product with experienced Engineering, Quality Control and Field Service personnel. Our products are designed for long life, and are rigorously tested, in-house and at independent labs. Our inside sales staff is passionate about customer satisfaction, contact them today.

