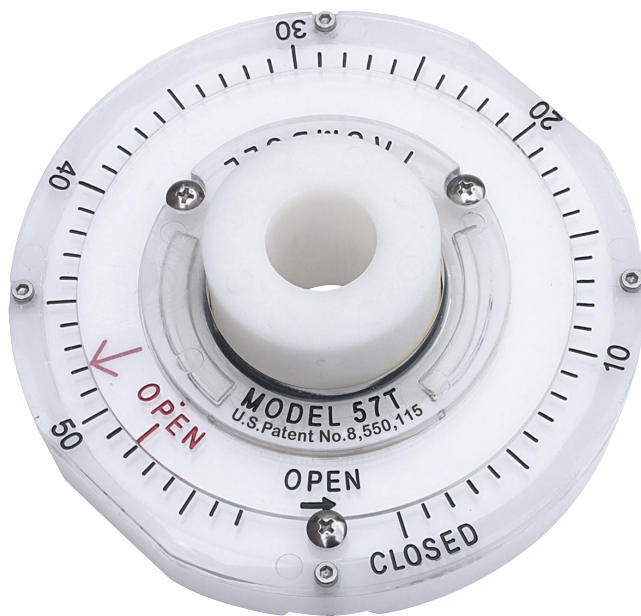


Trumbull Manufacturing

VALVE POSITION INDICATORS

ELIMINATE BROKEN VALVE STEMS DUE TO OVER-OPENING OR OVER-CLOSING

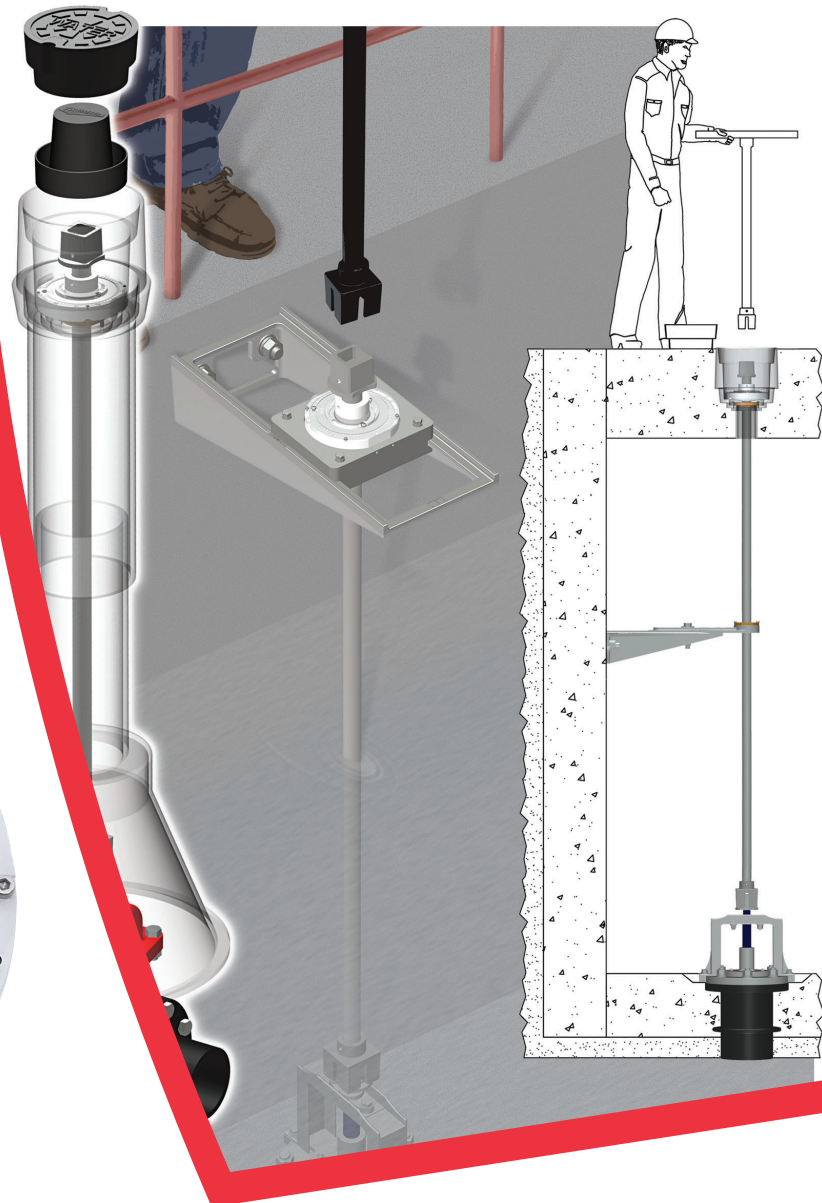
FOR BURIED SERVICE, OR FOR INSTALLATION IN FLOORS, WITH WALL BRACKETS, OR FLOORSTANDS



**IN A
VALVE
BOX**

**ON A
WALL
BRACKET**

**IN A
FLOOR
BOX**



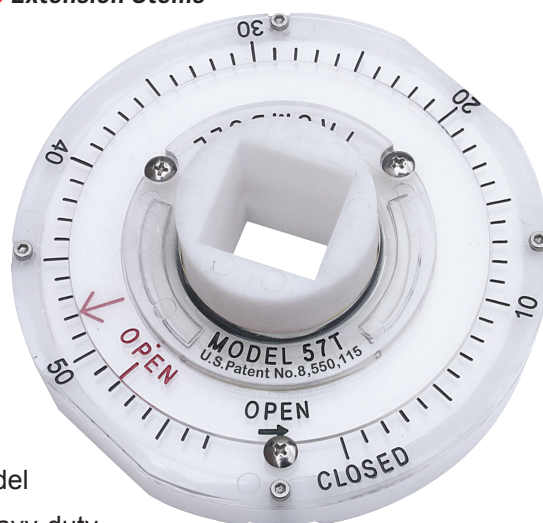
 US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

Valve Position Indicators

For Buried Service with 1-1/4" Square Extension Stems



- Eliminates broken valve stems caused by over-opening or over-closing
- Field-adjustable for any number of turns within the range of each model
- Constructed of heavy-duty, non-corrosive DuPont™ Delrin® polymer, providing high-impact resistance even in cold climates
- Double O-ring seals keep out water and dirt
- Third-party tested to over 1 million revolutions
- Provided with stainless steel hardware
- Also available for use above ground in the floor or with Wall Brackets (see pages 8 - 11)



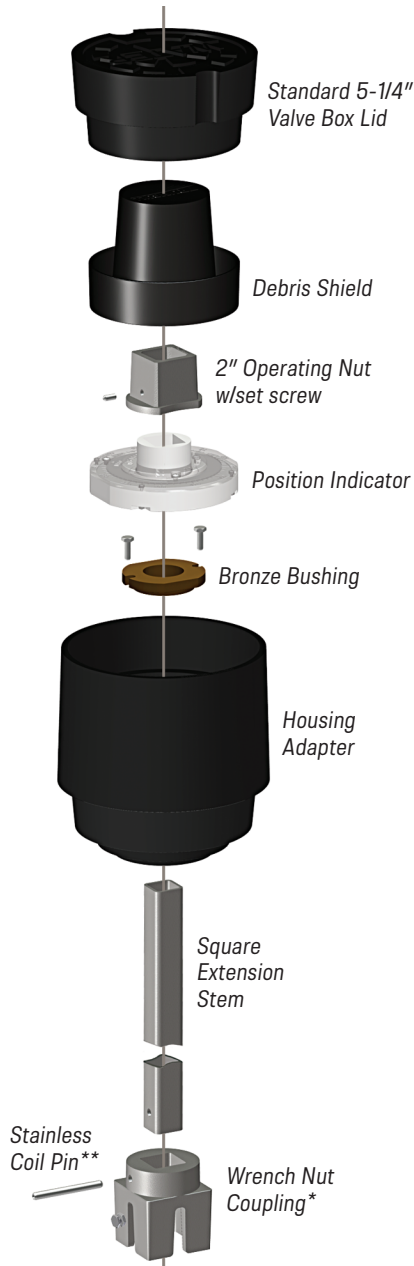
Ordering Instructions

1. Specify direction of open (open left or open right)
2. Model required (available in 57, 275 or 870 turns)

Model Number	Number of Turns	Open Left	Open Right
		Item №	Item №
57T	0 - 57	367-9394	367-9393
275T	0 - 275	367-9396	367-9395
870T	0 - 870	367-9400	367-9399

3. Extension Stem required (1-1/4" square)
 - a. Length required (provide "A" dimension on the illustration shown on right side of page 3)
 - b. Carbon steel or stainless steel
 - c. Tubing or solid bar
4. Debris Shield, item **367-9415** is recommended for buried service

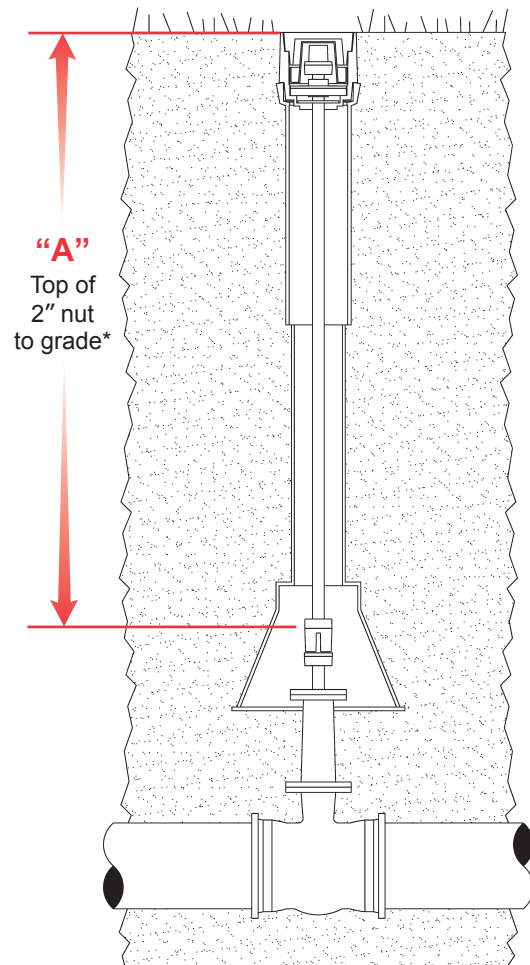
Exploded View of Square Extension Stem for Buried Service



SQUARE EXTENSION STEM

* Wrench nut coupling welded to stem at factory.

** When bottom coupling is purchased separately, pin is provided.



* The dimension from top of 2" valve nut to grade is used to determine Extension Stem length, per ordering instructions on page 2.

i US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

Extension Stem Torque Ratings

Extension Stems rated for a minimum of 300 ft-lb.
For higher torque capacity, consult Trumbull.



Installation animations online:
www.youtube.com/trumbullmfg

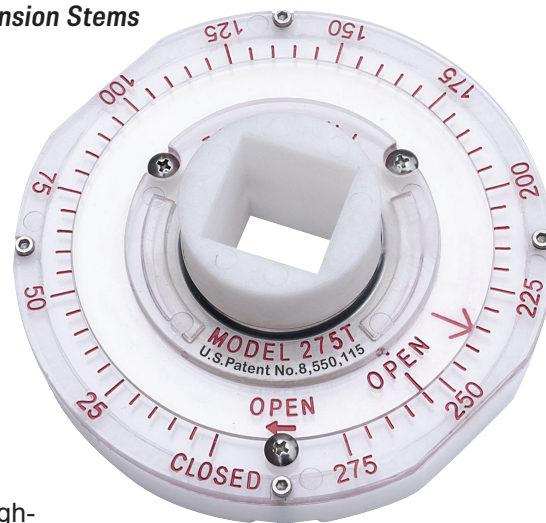
 US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

Valve Position Indicators

For Buried Service with **Telescopic** Extension Stems



- Eliminates broken valve stems caused by over-opening or over-closing
- Field-adjustable for any number of turns within the range of each model
- Constructed of heavy-duty, non-corrosive DuPont™ Delrin® polymer, providing high-impact resistance even in cold climates
- Double O-ring seals keep out water and dirt
- Third-party tested to over 1 million revolutions
- Provided with stainless steel hardware
- Also available for use above ground in the floor or with Wall Brackets (see pages 8 - 11)
- Telescopic stem eliminates the need for precise field measurement of extension stems and provides for ground movement caused by freezing and thawing



Ordering Instructions

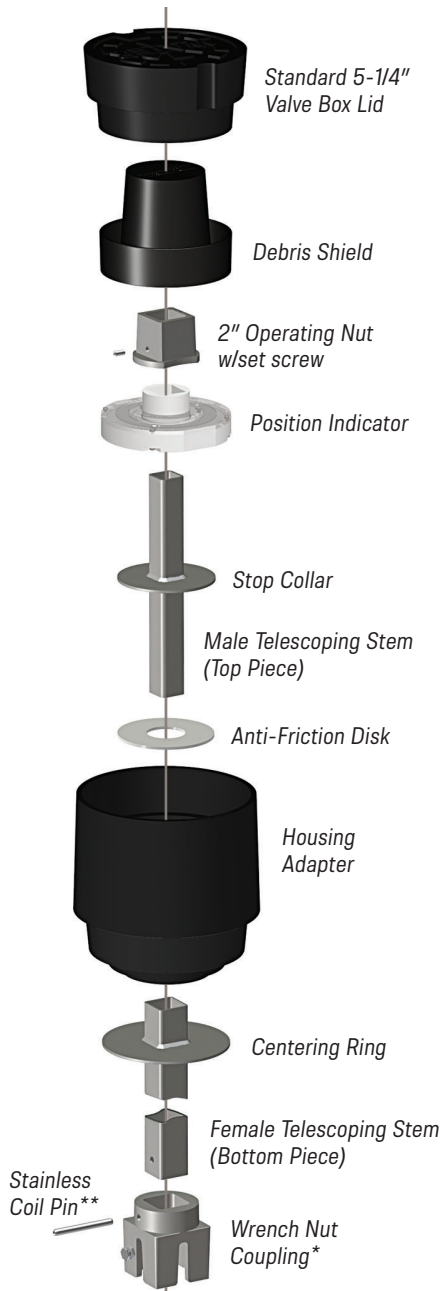
1. Specify direction of open (open left or open right)
2. Model required (available in 57, 275 or 870 turns)

Model Number	Number of Turns	Open Left	Open Right
		Item No	Item No
57T	0 - 57	367-9394	367-9393
275T	0 - 275	367-9396	367-9395
870T	0 - 870	367-9400	367-9399

3. Extension Stem required (telescopic)
 - a. Length required (provide "A" dimension on the illustration shown on right side of page 5)
 - b. Carbon steel or stainless steel
4. Debris Shield, item **367-9415** is recommended for buried service

Exploded View

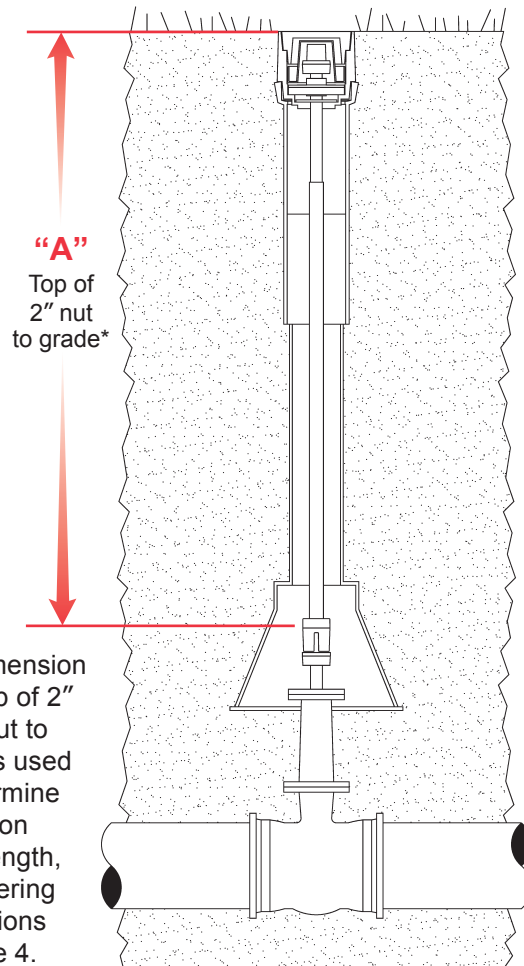
of Telescopic Extension Stem
for Buried Service




TELESCOPIC EXTENSION STEM

* Wrench nut coupling welded to stem at factory.

** When bottom coupling is purchased separately, pin is provided.



* The dimension from top of 2" valve nut to grade is used to determine Extension Stem length, per ordering instructions on page 4.

 US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

Extension Stem Adjustment Ranges and Torque Ratings

for Telescopic Extension Stems

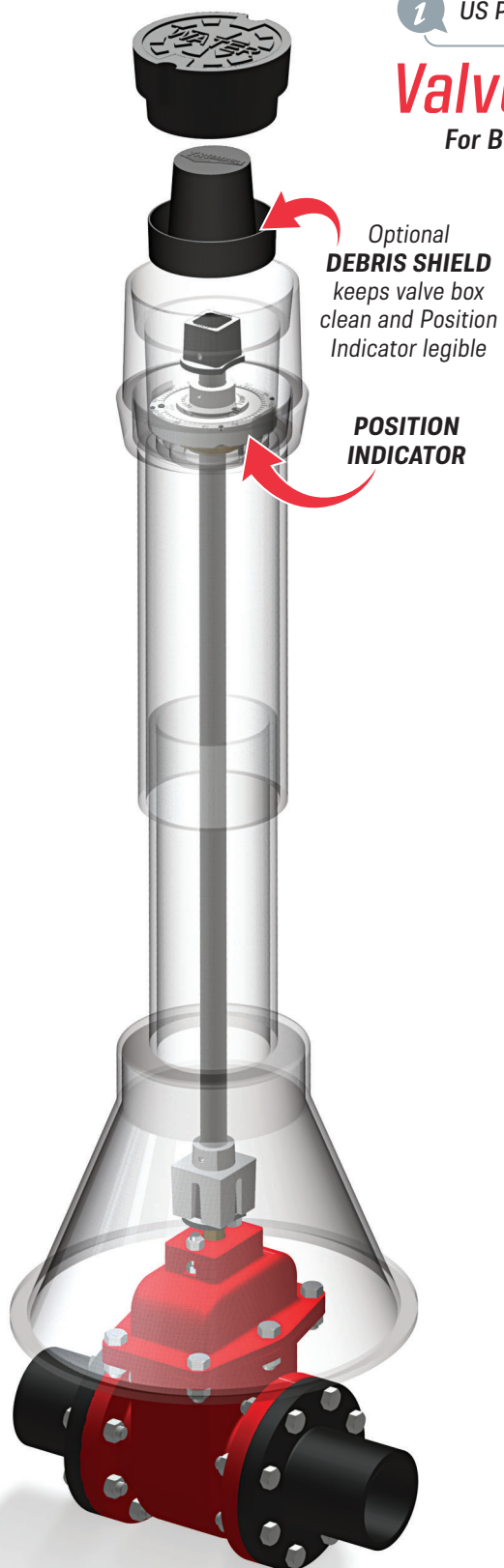
Range of Dimension "A"		Square Telescopic Extension Stems		Torque In ft-lb
Minimum	Maximum	Length of 1-1/4" Top Part	Length of 1-1/2" Bottom Part	
3 ft.	4-1/2 ft.	30"	30"	300 ft-lb
4-1/2 ft.	6 ft.	30"	48"	300 ft-lb
6 ft.	7-1/2 ft.	30"	66"	300 ft-lb
7-1/2 ft.	9 ft.	30"	84"	300 ft-lb
9 ft.	10-1/2 ft.	30"	102"	300 ft-lb

Other stem ranges available upon request.

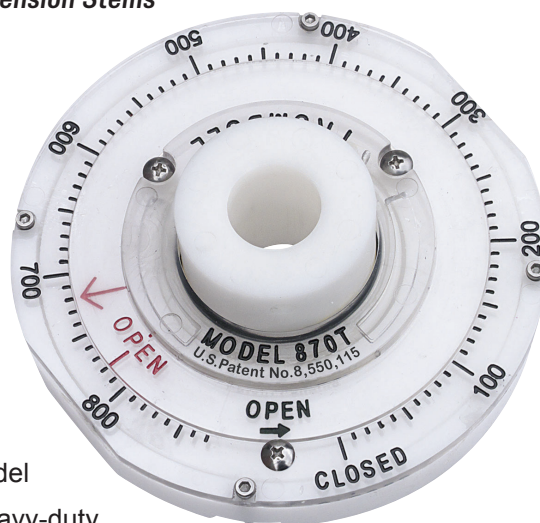
i US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

Valve Position Indicators

For Buried Service with **Round** Extension Stems



- Eliminates broken valve stems caused by over-opening or over-closing
- Field-adjustable for any number of turns within the range of each model
- Constructed of heavy-duty, non-corrosive DuPont™ Delrin® polymer, providing high-impact resistance even in cold climates
- Double O-ring seals keep out water and dirt
- Third-party tested to over 1 million revolutions
- Provided with stainless steel hardware
- Also available for use above ground in the floor or with Wall Brackets (see pages 8 - 11)



Ordering Instructions

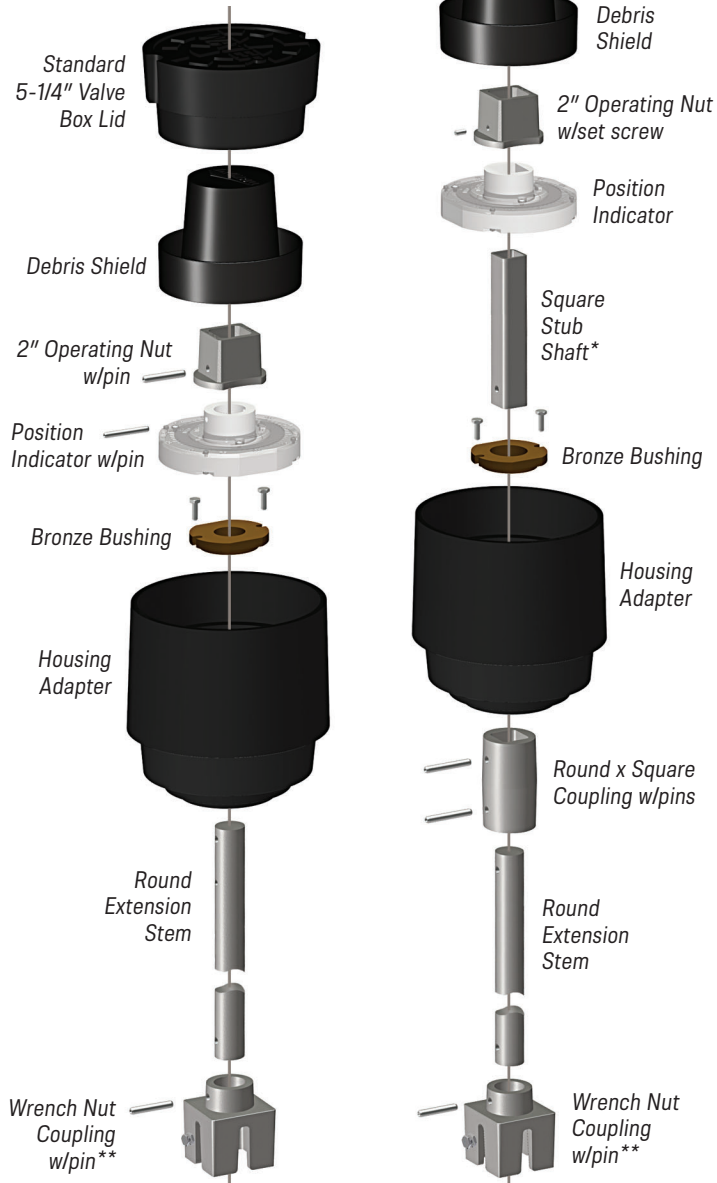
1. Specify direction of open (open left or open right)
2. Model required (available in 57, 275 or 870 turns)

Model Number	Number of Turns	Open Left	Open Right
		Item №	Item №
57T	0 - 57	367-9404	367-9403
275T	0 - 275	367-9406	367-9405
870T	0 - 870	367-9410	367-9409

3. Extension Stem required (round)
 - a. Length required (provide "A" dimension on the illustration shown on right side of page 7)
 - b. OD required (maximum OD of 1.75")
 - c. Carbon steel or stainless steel
4. Debris Shield, item **367-9415** recommended for buried service

Exploded Views

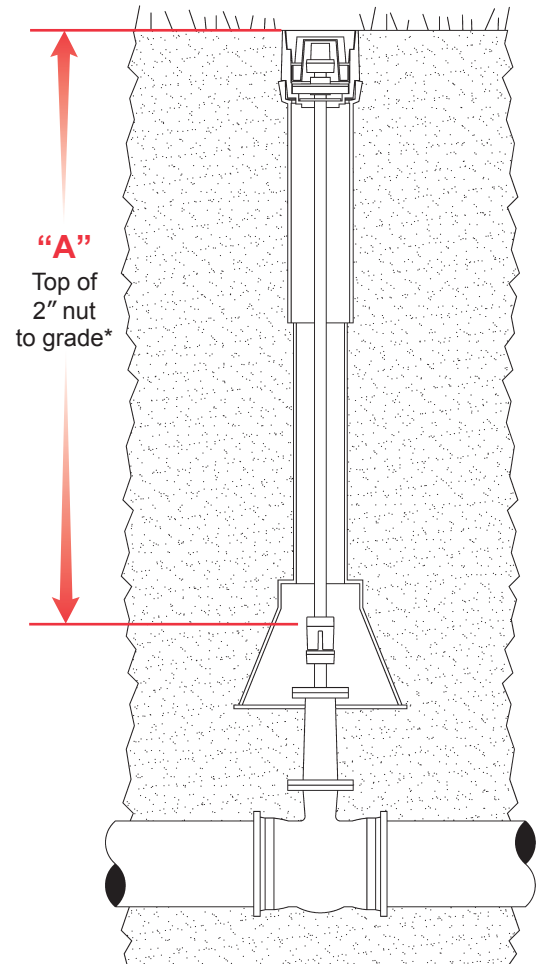
of Round Extension Stems
for Buried Service



ROUND EXTENSION STEM or **ROUND EXTENSION STEM with Square Stub Shaft***

* Using a square stub shaft saves field drilling and installation of pins inside housing adapter.

** Wrench nut coupling normally furnished pinned to stem.



* The dimension from top of 2" valve nut to grade is used to determine Extension Stem length, per ordering instructions on page 6.

i US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

Extension Stem Torque Ratings

Consult your Trumbull Rep for torque ratings.



YouTube

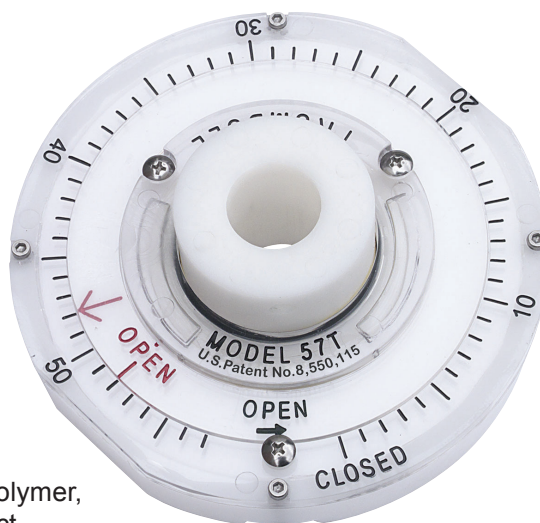
Installation animations online:
www.youtube.com/trumbullmfg

i US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

Valve Position Indicators

Installation in Floor

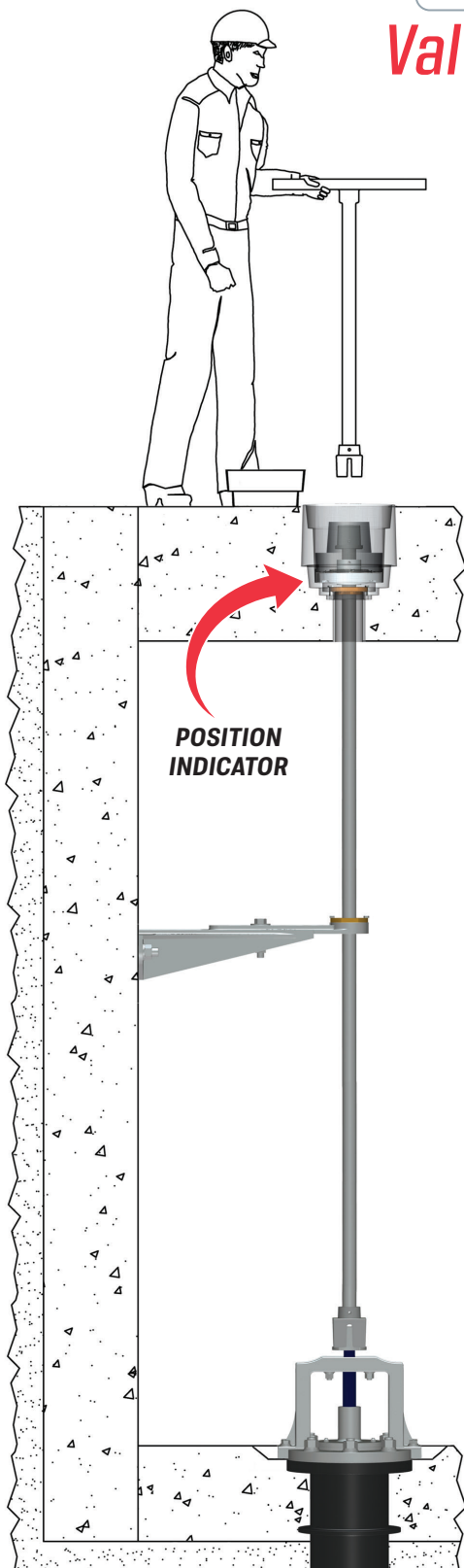
- Eliminates broken valve stems caused by over-opening or over-closing
- Field-adjustable for any number of turns within the range of each model
- Constructed of heavy-duty, non-corrosive DuPont™ Delrin® polymer, providing high-impact resistance even in cold climates
- Double O-ring seals keep out water and dirt
- Third-party tested to over 1 million revolutions
- Provided with stainless steel hardware
- Also available w/Wall Bracket for mounting to tank walls (pages 10 to 11), and in Valve Boxes for buried service (pages 2 to 7)



Ordering Instructions

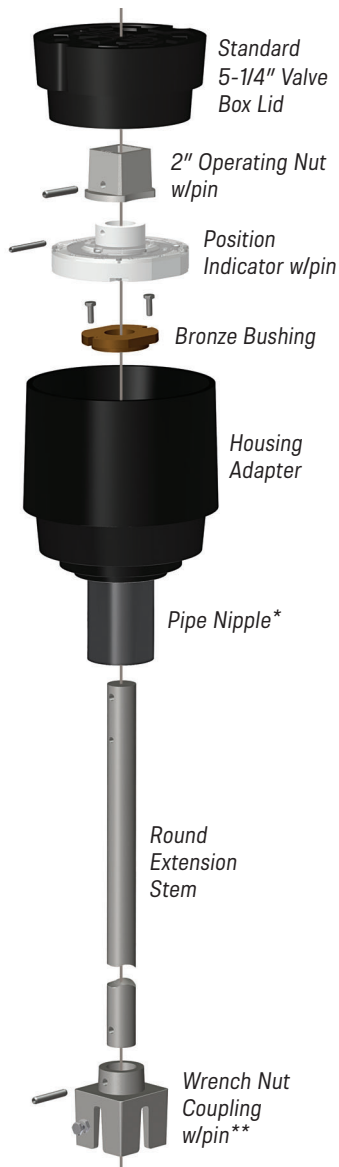
1. Specify direction of open (open left or open right)
2. Model required (available in 57, 275 or 870 turns, shown below)
3. Extension Stem required
 - a. Length required
 - b. Round (maximum OD of 1.75"), 1-1/4" square, or round x square stem (see reverse for details)
 - c. Carbon steel or stainless steel
4. Housing Adapter - Floor Box style
 - a. Cast iron housing (unsealed)
 - b. Carbon steel or stainless steel (sealed)

Model Number	Square Ext. Stem		Round Ext. Stem	
	Open Left	Open Right	Open Left	Open Right
	Item No	Item No	Item No	Item No
57T	367-9394	367-9393	367-9404	367-9403
275T	367-9396	367-9395	367-9406	367-9405
870T	367-9400	367-9399	367-9410	367-9409

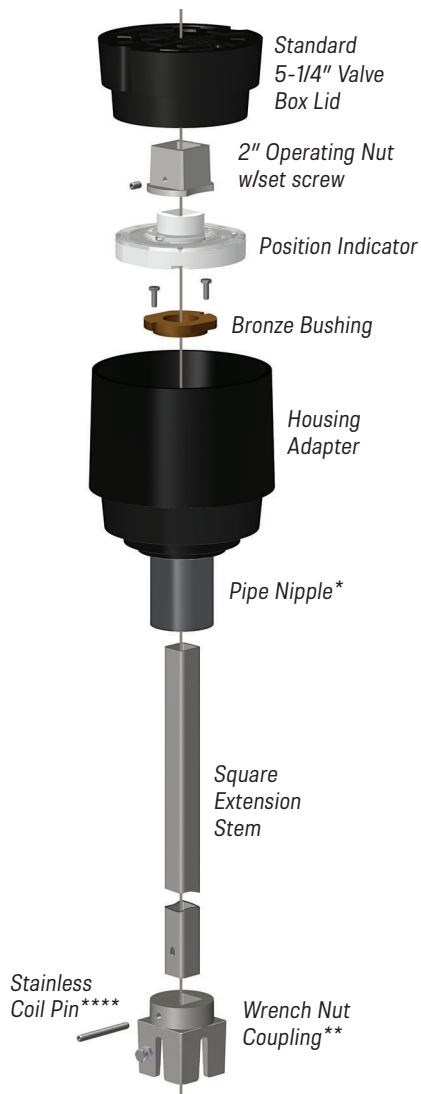


Exploded Views

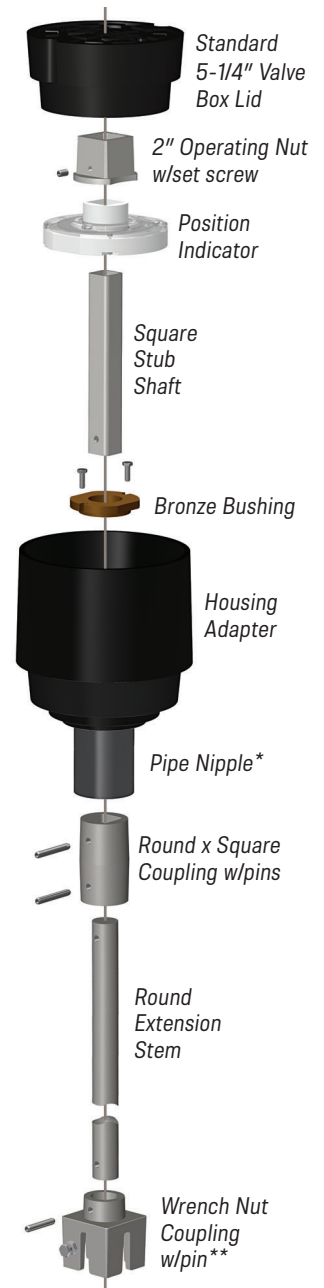
Extension Stem Installation in Floor



ROUND EXTENSION STEM



SQUARE EXTENSION STEM***



ROUND EXTENSION STEM*
with Square Stub Shaft**

* Use a pipe nipple 5/8" longer than the increase in floor slab thickness required, as the tapped thread is 5/8" deep.

** Wrench nut coupling normally furnished pinned to round stems, and factory welded on square stems.

*** Using a square Extension Stem, or a round Extension Stem with a square stub shaft saves field drilling and installation of pins inside floor box.

**** When bottom coupling is purchased separately, pin is provided.



US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

 US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

Valve Position Indicators

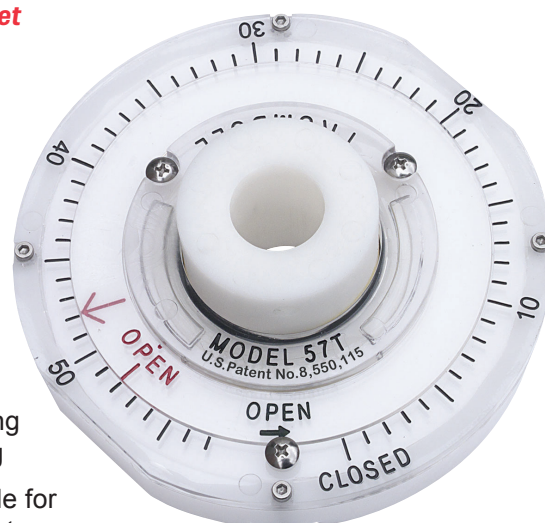
Installation with **Wall Bracket**



WALL BRACKET

DUCTILE IRON
Item No. **367-2450**

CAST 316 STAINLESS
Item No. **367-2460**



- Eliminates broken valve stems caused by over-opening or over-closing
- Field-adjustable for any number of turns within the range of each model
- Constructed of heavy-duty, non-corrosive DuPont™ Delrin® polymer, providing high-impact resistance even in cold climates
- Double O-ring seals keep out water and dirt
- Third-party tested to over 1 million revolutions
- Provided with stainless steel hardware
- Also available for use in the floor (pages 8 - 9), and in Valve Boxes for buried service (pages 2 - 7)

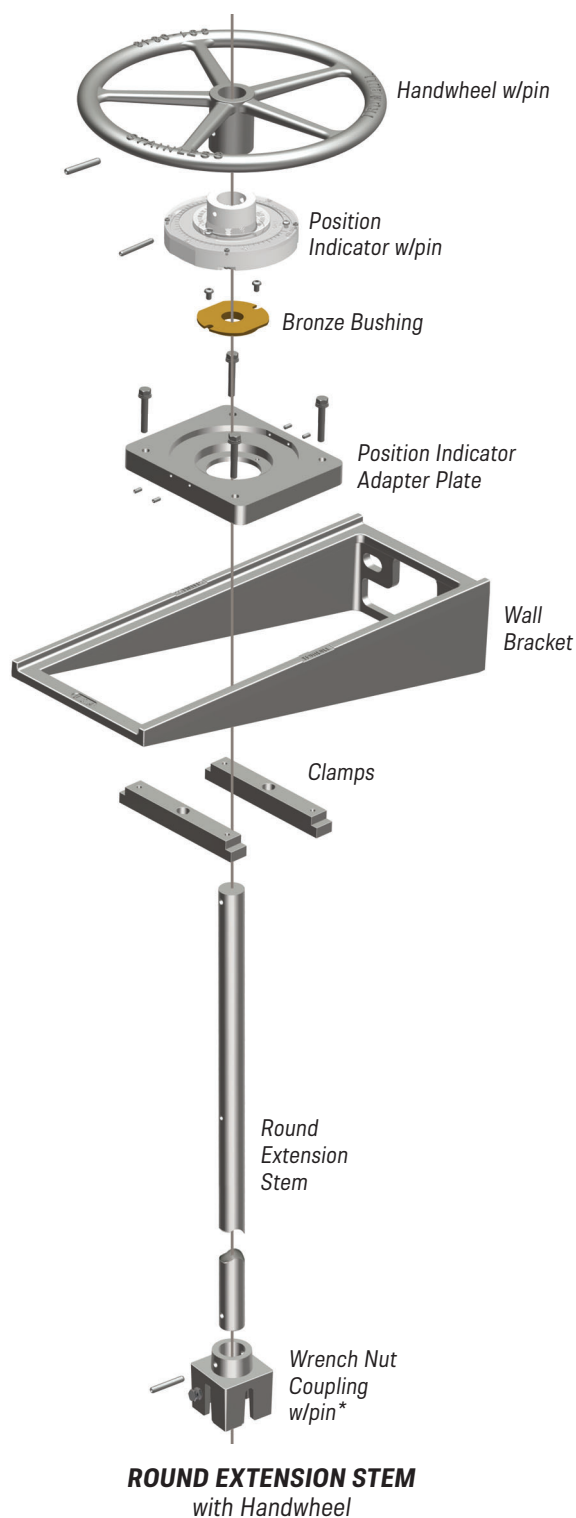
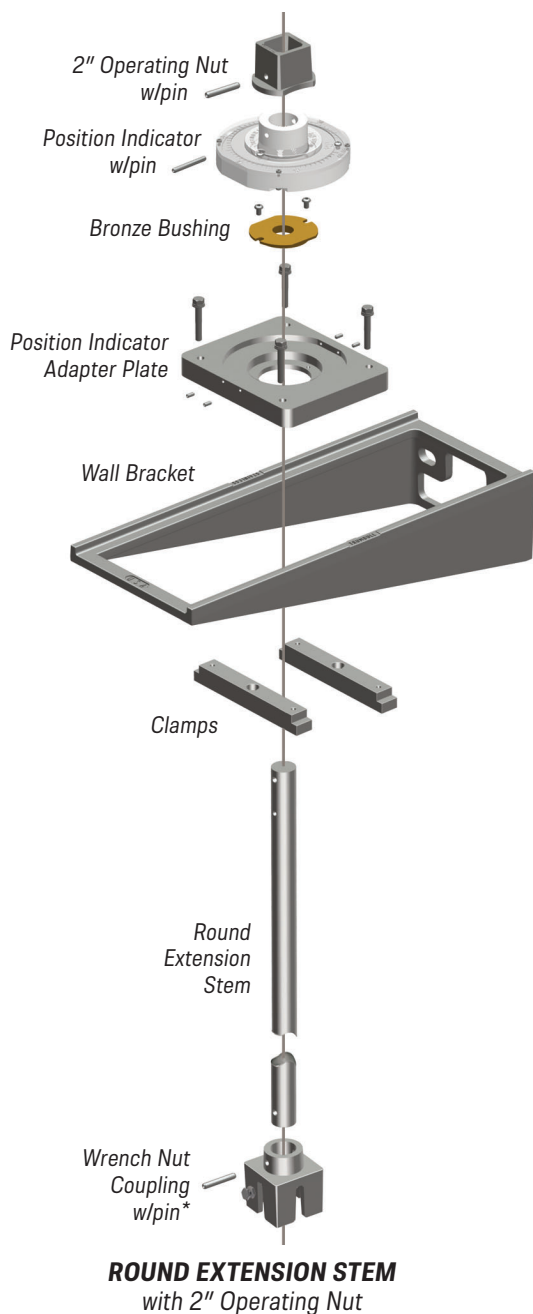
Ordering Instructions

1. Specify direction of open (open left or open right)
2. Model required (available in 57, 275 or 870 turns)
3. Extension Stem required
 - a. Length required
 - b. Round (maximum OD of 1.75") see next page for details
 - c. Carbon steel or stainless steel

Model Number	Number of Turns	Open Left Item No	Open Right Item No
57T	0 - 57	367-9404	367-9403
275T	0 - 275	367-9406	367-9405
870T	0 - 870	367-9410	367-9409

Exploded Views

Round Extension Stems
Installation with Wall Bracket



* Wrench nut coupling normally furnished pinned to stem.



US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

TRUMBULL

Trumbull Manufacturing

3850 Hendricks Road, Youngstown, Ohio 44515

Phone:
330.270.7888

Toll Free:
877.504.1507

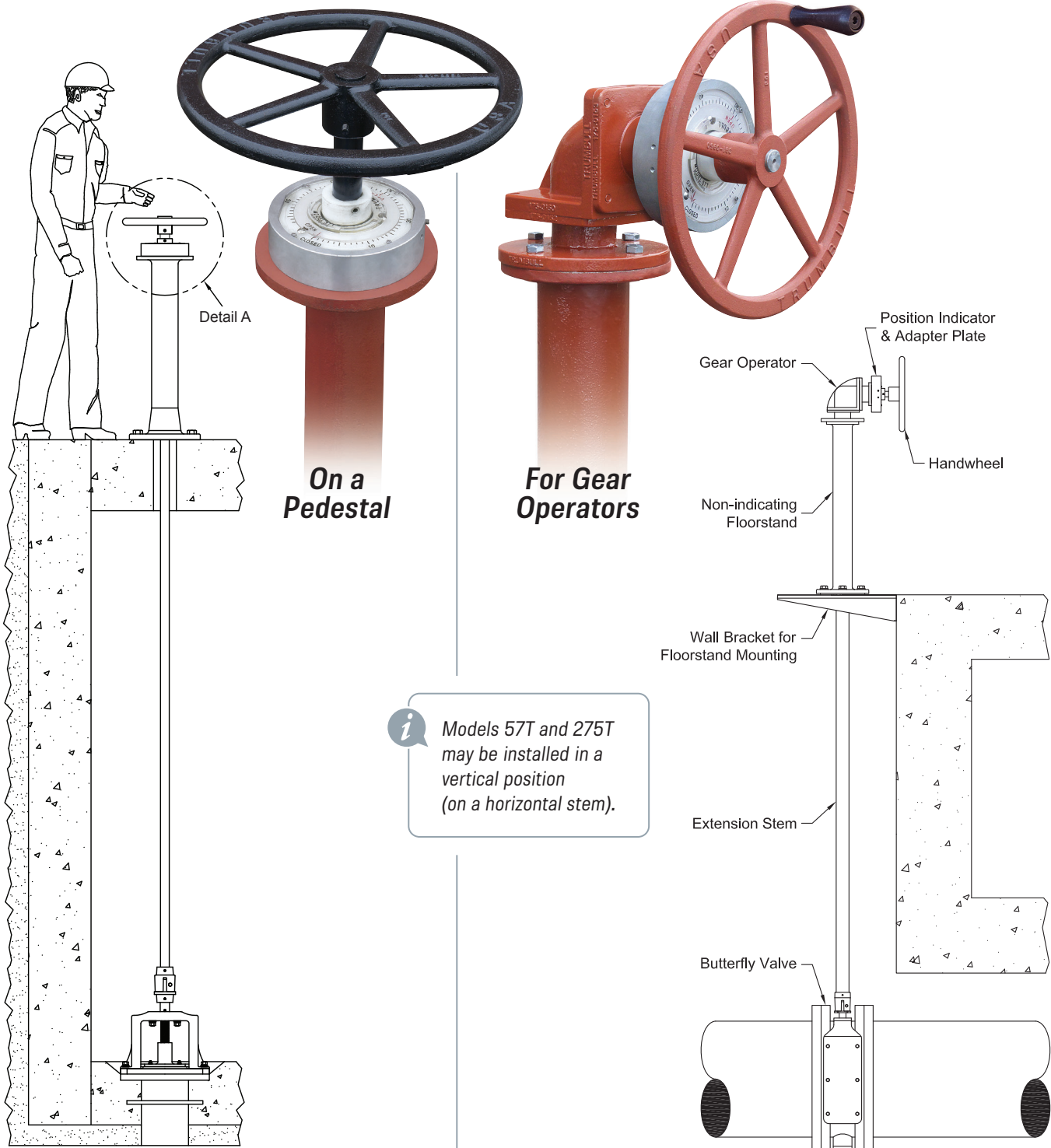
Fax:
330.392.0756

www.trumbull-mfg.com

 US Patent No.'s 8,550,115 / 9,347,583 / 10,066,760

Valve Position Indicators

Installation with **Floorstands**



TRUMBULL

Trumbull Manufacturing

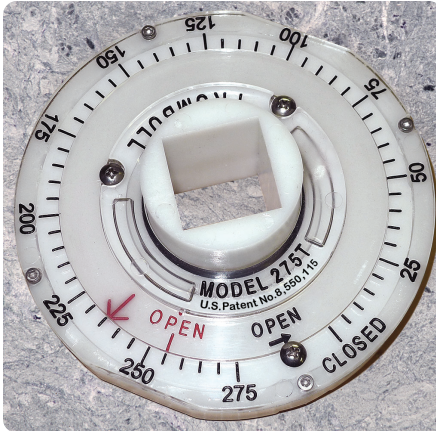
3850 Hendricks Road, Youngstown, Ohio 44515

Phone: 330.270.7888 | Toll Free: 877.504.1507 | Fax: 330.392.0756

www.trumbull-mfg.com

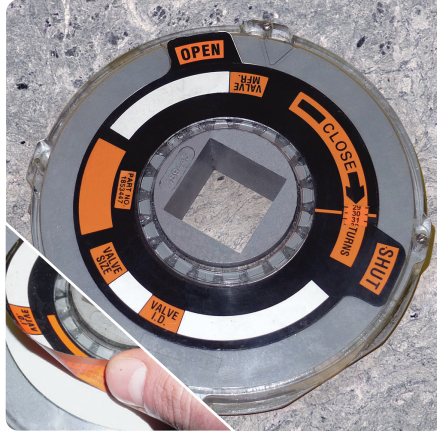
Feature Comparison of "Turn Count" Scales

TRUMBULL



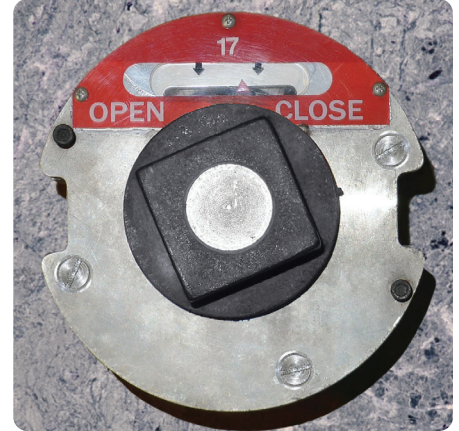
Permanently molded markings.
Large numerals and characters make
it easy to see the valve's position.

Other Design "A"



Adhesive labels can peel off in
high temperature or humidity.

Other Design "B"



Precise position of valve is difficult
to determine.



Debris Shield

TRUMBULL



DEBRIS SHIELD keeps dirt off of
Position Indicator, as the composite
image shows above. Note how white
color illuminates inside valve box!

Other Design "A"



Other Design "B"



The two simulations above show how dirt and debris can accumulate
on the Position Indicator **WITHOUT** a Debris Shield.

Cyclic Environmental Testing

Independent Testing



- Coarse Arizona sand mixed with water and aerated for 4 hours.
- Mixture heated to 110°F for 4 days.
- Above process repeated several times, attempting to pass debris through the o-ring seals.
- Disassembly conducted after 302,500 revolutions.

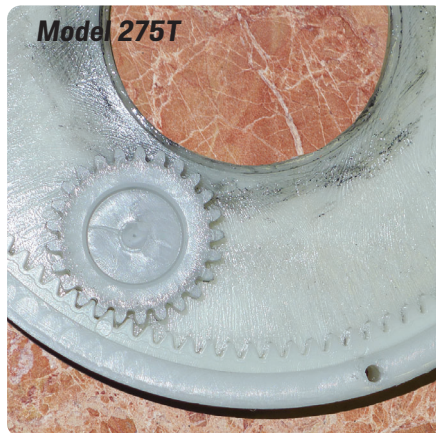
RESULTS: Only minimal particles of sand were present, with no effect on function!
Double O-ring seals keep out water and debris (see image on the next page).

Life Cycle Testing

Independent Testing



RESULTS:
After 1,026,000 revolutions,
no sign of wear on any component.



RESULTS:
After 1,204,500 revolutions,
no sign of wear on any component.



RESULTS:
After 1,131,000 revolutions,
no sign of wear on any component.

Submersion Testing In-House Testing

TRUMBULL POSITION INDICATOR

Indicator Submerged



After 24 Hours



Disassembly

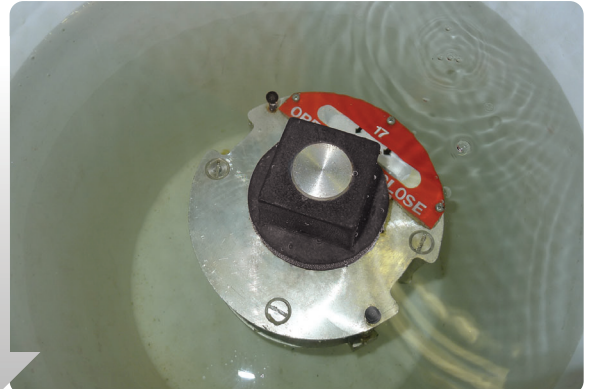


RESULTS:

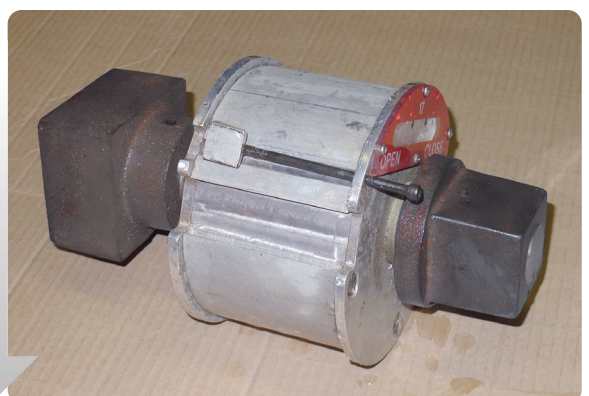
- No corrosion, due to POLYMER CONSTRUCTION
- No debris, due to DOUBLE O-RING SEALS
- Only a few drops of water were present inside the assembly

Other Design

Indicator Submerged



After 24 Hours



Disassembly



RESULTS:

- Aluminum housing showed oxidation
- Iron castings showed corrosion
- No debris
- Several ounces of water were present inside the assembly (potential freezing hazard)

Sealed Floor Boxes

Product that Can be Used together with Valve Position Indicators

Ideal to prevent fluids from penetrating the floor slab from either direction.
Available in cast stainless steel and carbon steel.

BUNA-N O-RING

Seals Floor Box at top of floor; furnished standard, other materials available upon request



**OVERALL HEIGHT
11-1/8" WITH LID**

Optional Accessories

Available as special order

PACKING GLAND

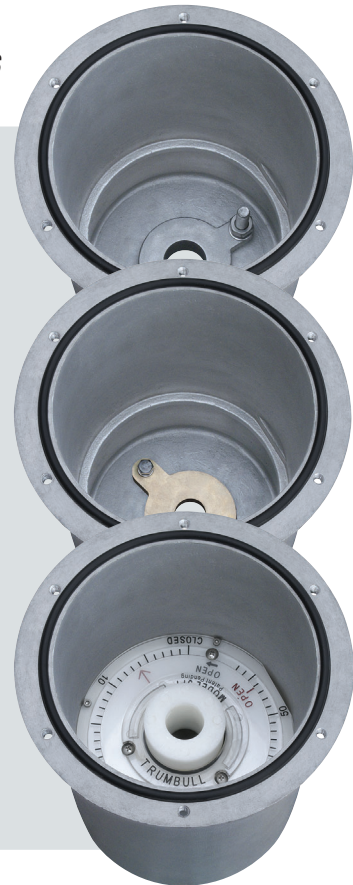
with stainless steel follower
seals bottom of Floor Box

BRASS BUSHING

aligns extension stem when
bottom seal is not utilized

POSITION INDICATOR

can be used with either brass
bushing or packing gland,
see Pages F-7 and F-8 for
Trumbull Valve Position
Indicator installation in floors.



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