

PRODUCT MANUAL

TRENCH ADAPTER



AMERICAN

FLOW CONTROL

THE RIGHT WAY

INDEX



TRENCH ADAPTER

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TRENCH ADAPTER

AMERICAN Flow Control's Trench Adapter is a fully adjustable valve box and extension stem system that is available in trench depths ranging from 3 ft - 20 ft. Both the valve box and the extension stem adjust to grade in a matter of seconds, completely eliminating the need to cut extension stems in the field.

TRENCH ADAPTER - FEATURES AND BENEFITS



Features

AMERICAN Flow Control's Trench Adapter is a fully adjustable valve box and extension stem system that is available in trench depths ranging from 3 ft to 20 ft. Both the valve box and the extension stem adjust to grade in a matter of seconds, completely eliminating the need to cut extension stems in the field. You simply raise the upper pipe to the proper height and lock it into position. Now you have not only adjusted the height of the valve box, but you have also raised the extension stem and operating nut to grade as well. This adjustment is accomplished by the use of a coupling gland, which includes a split O-ring, that when hand tightened, locks the Trench Adapter to the desired depth.

The Trench Adapter eliminates the problems of trying to locate and engage the operating nut on the valve. With conventional valve boxes, the valve operating nut is several feet below grade making it difficult to locate and to align the T-handle wrench on the operating nut.

This is especially difficult if the valve box is filled with debris, mud and water. The Trench Adapter assures that the valve can be operated at ground level. Simply remove the lid and the operating nut is accessible and ready to use.

The grit and stem washers support the extension stem in the top section of the valve box. The grit washer is designed to keep gravel and debris from entering the valve box interior. The valve box locking lid is color coded and includes cast markings to indicate potable water, sewer, re-use water, gas or fire.

Benefits

- Quick and easy height adjustment
- Built-in extension stem automatically adjusts to the same height as the valve box
- Eliminates field cut extension stems
- Operating nut will always be at groundline, so it saves time in operating the valve. This is especially important in emergency situations
- Eliminates the need for long T-handle wrench
- Alignment ring helps prevent the box from resting against the operating nut of the valve during backfill, rendering the valve inoperable
- Extension stem has been proof-of-design tested to 1000 ft-lb of torque without failure
- Valve box is sealed from mud, dirt and gravel
- Top extensions are available for height adjustment should there be a grade change
- Iron, galvanized steel and high-strength, thick-wall polyethylene construction for durability

Added Value

Each Trench Adapter includes AMERICAN Flow Control's self-centering Alignment Ring. This two-piece ring installs in seconds and locks in place under the wrench nut of the main valve. The Alignment Ring centers the valve box over the valve. The sides of the Alignment Ring are 1-1/2 in. high, which aid in keeping

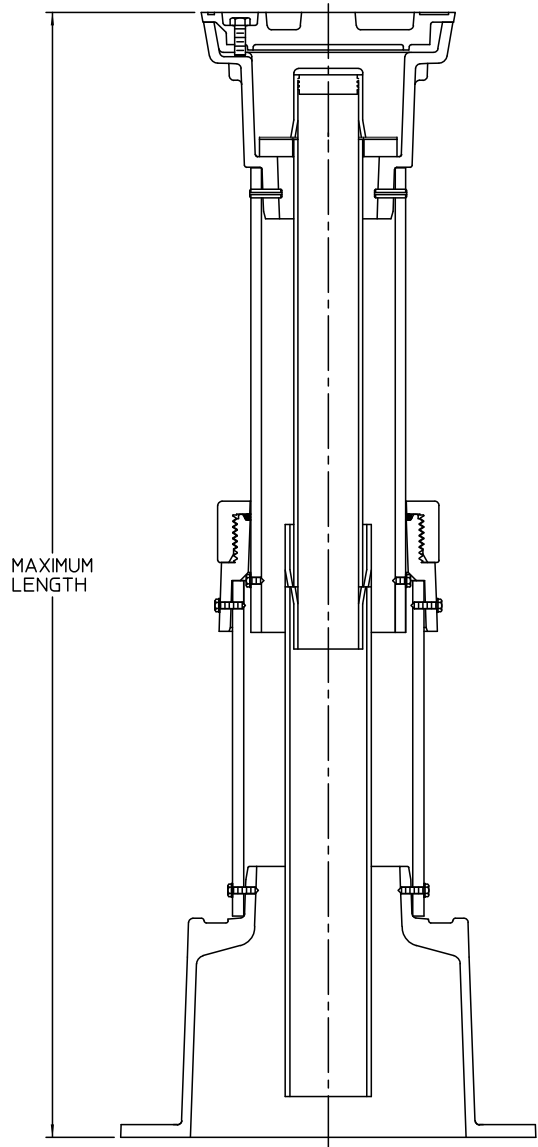
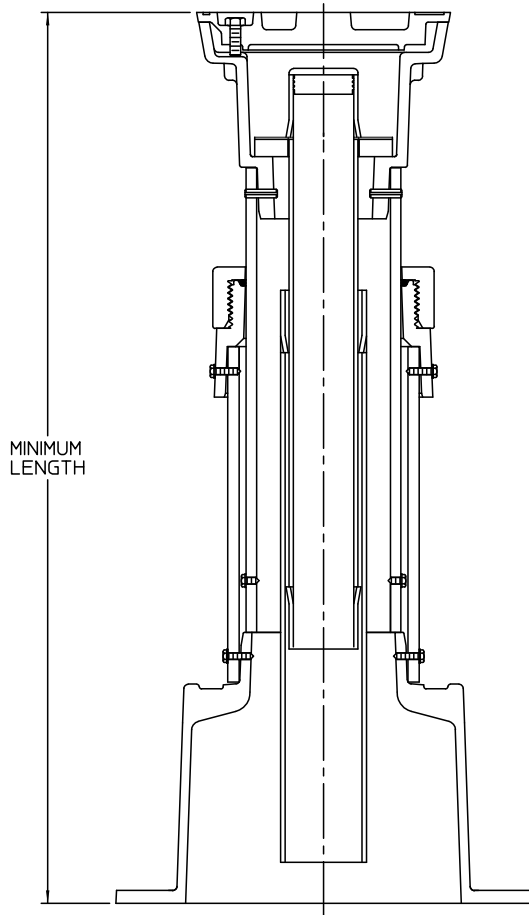
the valve box in a vertical position while backfilling the trench. This makes correct installation of a valve box easier than ever before. The AMERICAN Flow Control Alignment Ring can be purchased separately for use with standard valve boxes.

Specifications

Valve boxes shall be provided for all buried valves. Valve boxes shall be a complete assembled unit composed of the valve box, extension stem, a valve centering ring, debris washer and lockable lid. All moving parts of the extension stem shall be enclosed in a housing to prevent contact with the soil. Valve box assembly shall be adjustable to accommodate variable trench depths without field cutting the box.

The stem assembly shall be of a telescoping design that allows for variable adjustment length. The material shall be galvanized square steel tubing. The stem assembly shall have a built-in device that prevents the stem assembly from disengaging at its fully extended length. The extension stem must be capable of surviving a torque test to 1000 ft-lb without failure. Valve box shall be AMERICAN Flow Control's Trench Adapter.

TRENCH ADAPTER - DIMENSIONS



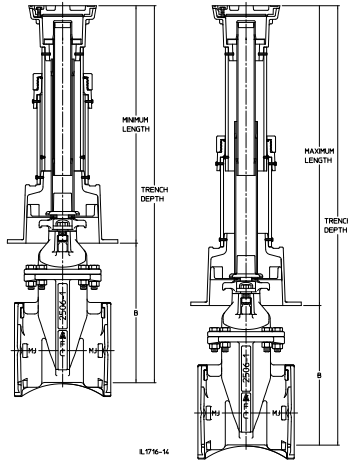
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Model Number	Length		Assembly Weight
	Minimum	Maximum	
1	18.25	20.25	29 LBS
2	22.25	28.25	32 LBS
3	24.75	32.50	35 LBS
4	29.75	40.50	39 LBS
5	37.75	56.50	48 LBS
6	49.75	80.50	54 LBS
7	73.75	128.50	72 LBS
8	127.75	179.75	99 LBS
9	178.75	230.75	127 LBS

NOTE:

1. On model numbers 1 through 9, the extension stem is optional

TRENCH ADAPTER - DIMENSIONS



Valve size	Trench Depth and Model Number																			
	2'0"	2'6"	3'0"	3'6"	4'0"	4'6"	5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"	10'6"	11'0"	11'6"
2"	1	2	3,4	4	5	5	6	6	6	6	7	7	7	7	7	7	7	7	7	8
2-1/2"	-	2	3	4	5	5	5,6	6	6	6	6,7	7	7	7	7	7	7	7	7	8
3"	-	2	2,3	4	5	5	5,6	6	6	6	6,7	7	7	7	7	7	7	7	7	8
4"	-	1	3	4	4,5	5	5,6	6	6	6	6	7	7	7	7	7	7	7	7	8
6"	-	-	2	3	4	5,4	5	5,6	6	6	6	6	7	7	7	7	7	7	7	7
8"	-	-	-	2	3,4	4	5	5	6	6	6	6	6	7	7	7	7	7	7	7
10"	-	-	-	1	2	3,4	4	5	5	6	6	6	6	7	7	7	7	7	7	7
12"	-	-	-	-	1	2,3	3,4	4,5	5	5	6	6	6	6	7	7	7	7	7	7
14"	-	-	-	-	-	-	-	3	4	5	5	5	6	6	6	6	7	7	7	7
16"	-	-	-	-	-	-	-	-	3,4	4	5	5	6	6	6	6	7	7	7	7
18"	-	-	-	-	-	-	-	-	2,3	4	4	5	5	6	6	6	6	7	7	7
20"	-	-	-	-	-	-	-	-	-	2,3	4	4	5	5	6	6	6	6	7	7
24"	-	-	-	-	-	-	-	-	-	-	2	3	4	5	5	5	6	6	6	6

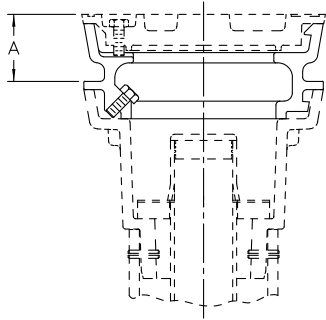
Valve Size	Trench Depth and Model Number																	
	12'0"	12'6"	13'0"	13'6"	14'0"	14'6"	15'0"	15'6"	16'0"	16'6"	17'0"	17'6"	18'0"	18'6"	19'0"	19'6"	20'0"	
2"	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	-	
2-1/2"	8	8	8	8	8	8	8	8,9	9	9	9	9	9	9	9	9	-	
3"	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	-	
4"	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	
6"	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	
8"	7	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	
10"	7	7	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	
12"	7	7	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	
14"	7	7	7	7	8	8	8	8	8	8	8	9	9	9	9	9	9	
16"	7	7	7	7	7	8	8	8	8	8	8	8	8	9	9	9	9	
18"	7	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9	
20"	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	
24"	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	

Where two model numbers are shown for a given valve/trench combination, use the dimensions in the table below to select the best fit.

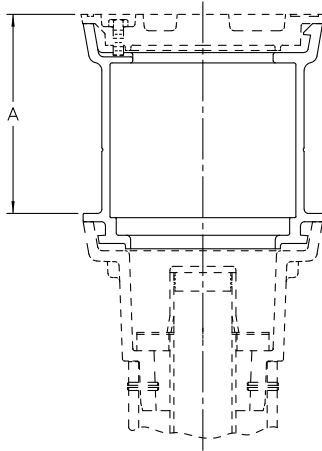
Model Number	Length	
	Minimum	Maximum
1	18.25	20.25
2	22.25	28.25
3	24.75	32.50
4	29.75	40.50
5	37.75	56.50
6	49.75	80.50
7	73.75	128.50
8	127.75	179.75
9	178.75	230.75

Model	Valve Size	Dimension "B"
Series 2500	2"	4.75
	2-1/2"	7.00
	3"	8.13
Series 2500-1	4"	9.78
	6"	13.88
	8"	18.53
	10"	22.94
	12"	27.59
Series 2500	14"	36.50
	16"	41.00
	18"	45.00
	20"	50.50
	24"	61.00

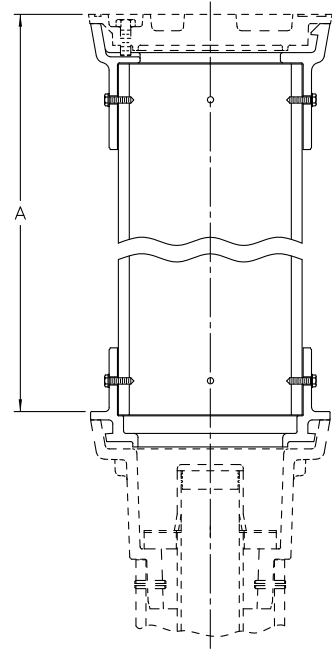
TRENCH ADAPTER ACCESSORIES - DIMENSIONS



2-INCH TOP EXTENSION



6-INCH TOP EXTENSION



12-INCH, 18-INCH AND 24-INCH
TOP EXTENSION ASSEMBLIES

IL1716-10

Extension Size	A	Extension Weight
2"	2.00	8 LBS
6"	6.00	12 LBS
12"	12.00	14 LBS
18"	18.00	15 LBS
24"	24.00	16 LBS

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TRENCH ADAPTER (ADJUSTABLE VALVE BOX AND STEM EXTENSION SYSTEM)

SUBMITTAL SHEET



Valve size	Trench Depth and Model Number																			
	2'0"	2'6"	3'0"	3'6"	4'0"	4'6"	5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"	10'6"	11'0"	11'6"
2"	1	2	3,4	4	5	5	6	6	6	6	7	7	7	7	7	7	7	7	7	8
2-1/2"	-	2	3	4	5	5	5,6	6	6	6	6,7	7	7	7	7	7	7	7	7	8
3"	-	2	2,3	4	5	5	5,6	6	6	6	6,7	7	7	7	7	7	7	7	7	8
4"	-	1	3	4	4,5	5	5,6	6	6	6	6	7	7	7	7	7	7	7	7	8
6"	-	-	2	3	4	5,4	5	5,6	6	6	6	6	7	7	7	7	7	7	7	7
8"	-	-	-	2	3,4	4	5	5	6	6	6	6	6	7	7	7	7	7	7	7
10"	-	-	-	1	2	3,4	4	5	5	6	6	6	6	7	7	7	7	7	7	7
12"	-	-	-	-	1	2,3	3,4	4,5	5	5	6	6	6	6	7	7	7	7	7	7
14"	-	-	-	-	-	-	-	3	4	5	5	5	6	6	6	6	7	7	7	7
16"	-	-	-	-	-	-	-	-	3,4	4	5	5	6	6	6	6	7	7	7	7
18"	-	-	-	-	-	-	-	-	2,3	4	4	5	5	6	6	6	6	7	7	7
20"	-	-	-	-	-	-	-	-	-	2,3	4	4	5	5	6	6	6	6	7	7
24"	-	-	-	-	-	-	-	-	-	-	2	3	4	5	5	5	6	6	6	6

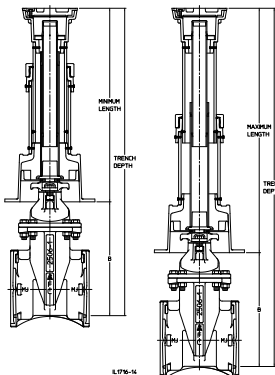
Valve Size	Trench Depth and Model Number																			
	12'0"	12'6"	13'0"	13'6"	14'0"	14'6"	15'0"	15'6"	16'0"	16'6"	17'0"	17'6"	18'0"	18'6"	19'0"	19'6"	20'0"			
2"	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	-			
2-1/2"	8	8	8	8	8	8	8	8	8,9	9	9	9	9	9	9	9	-			
3"	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	-			
4"	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9			
6"	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9			
8"	7	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9			
10"	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9			
12"	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9			
14"	7	7	7	7	8	8	8	8	8	8	8	8	9	9	9	9	9			
16"	7	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9			
18"	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9			
20"	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9			
24"	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8			

Where two model numbers are shown for a given valve/trench combination, use the dimensions in the table below to select the best fit.

Model	Valve Size	Dimension "B"
Series 2500	2"	4.75
	2-1/2"	7.00
	3"	8.13
Series 2500-1	4"	9.78
	6"	13.88
	8"	18.53
	10"	22.94
Series 2500	12"	27.59
	14"	36.50
	16"	41.00
	18"	45.00
	20"	50.50
	24"	61.00

AMERICAN Flow Control

Model Number	Length		Quantity Required
	Minimum	Maximum	
1	18.25	20.25	
2	22.25	28.25	
3	24.75	32.50	
4	29.75	40.50	
5	37.75	56.50	
6	49.75	80.50	
7	73.75	128.50	
8	127.75	179.75	
9	178.75	230.75	



Service Type (Lid Color)	
<input type="checkbox"/>	Potable Water (Blue)
<input type="checkbox"/>	Sewer (Green)
<input type="checkbox"/>	Re-Use Water (Lavender)
<input type="checkbox"/>	Gas (Yellow)
<input type="checkbox"/>	Fire (Red)

Top Extensions		
2" Extension	<input type="checkbox"/> Yes	<input type="checkbox"/> No
6" Extension	<input type="checkbox"/> Yes	<input type="checkbox"/> No
12" Extension	<input type="checkbox"/> Yes	<input type="checkbox"/> No
18" Extension	<input type="checkbox"/> Yes	<input type="checkbox"/> No
24" Extension	<input type="checkbox"/> Yes	<input type="checkbox"/> No

NOTES:

- On model numbers 1 through 9, the extension stem is optional.
- AFC valves are not suitable for use on gas service.

TRENCH ADAPTER - INSTALLATION



Installation

The Trench Adapter is a fully-adjustable valve box and extension stem system. The valve box and the built-in extension stem adjust to grade in a matter of seconds, completely eliminating the need to cut extension stems in the field.

The Trench Adapter's base is sized to fit over the top of most gate valves, butterfly valves, plug valves, etc. If the valve has a post indicator flange, the Trench Adapter can be bolted directly to the post flange. Please follow these instructions to install the Trench Adapter:

1. Check the length of the Trench Adapter to be sure the correct model is being used. Allow for adequate adjustment for trench depth.

CAUTION

The Trench Adapter is provided with a removable cover on the "Base" (7) for shipping purposes. Use CAUTION when removing this cover. When the cover is removed, the internal stem can drop below the base.

2. Remove the 2-piece AMERICAN "Self-Centering Alignment Ring with Sliding Adjuster" (26 and 27) from the "Base" of the Trench Adapter.
3. Remove the "Sliding Adjuster" (27) from the "Alignment Ring". Place "Alignment Ring" (26) under the wrench nut of the valve. Replace the "Sliding Adjuster" on the "Alignment Ring".
4. Lower the bottom of the "Lower Stem" (17) of the Trench Adapter onto the wrench nut of the valve, so the extension stem engages the square wrench nut. Lower the "Base" of the Trench Adapter over the "Self-Centering Alignment Ring".
5. Position and hold the Trench Adapter in the vertical position. Backfill up to the bottom of the "Reducer Coupling" (5).
6. Loosen, by turning counterclockwise, the "Reducer Gland" (4) and lift the top section by sliding the "Upper Pipe" (16) to the desired height. Securely tighten the "Reducer Coupling Gland" to hold the top section in the desired position.
7. Make sure the Trench Adapter maintains vertical alignment and backfill to grade.

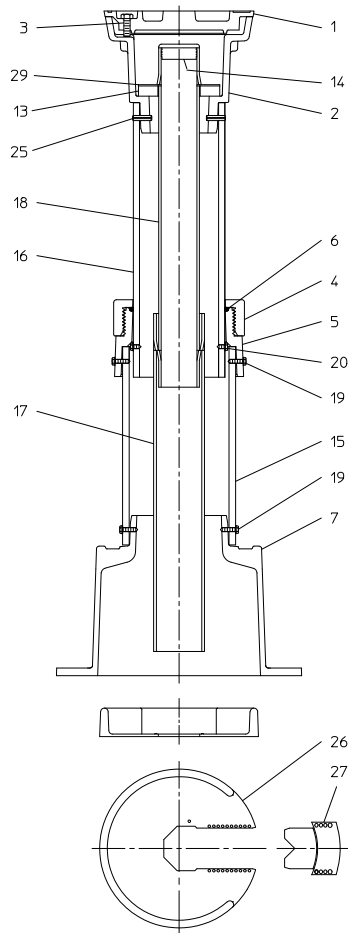
8. Loosen "Locking Bolt" (3) and remove "Lid" (1) by turning counterclockwise. Verify Trench Adapter is engaged and can properly operate the valve by placing a valve wrench onto the "Upper Stem" (18) and "Cap" (14) and turning. Care should be taken to leave the valve in its proper position.
9. Make sure the "Locking Bolt" is clear of the bottom of the "Lid". Replace the "Lid" and turn clockwise. Use a valve key to make sure the "Lid" has been turned into the fully locked position. Tighten the "Locking Bolt" and using the valve key make sure it is securely engaged in the locking recess, found in the "Top" (2) of the Trench Adapter.

Extending

Extensions are available in 2-, 6-, 12-, 18-, and 24- in. lengths. To extend, simply remove the lid. Install the extension into the top section of the Trench Adapter. The 2 in. extension locks into place in the same manner as the lid. Lock the lid into the extension piece.



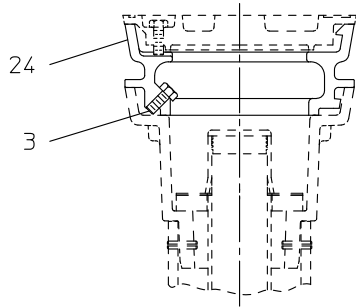
TRENCH ADAPTER - PARTS LIST



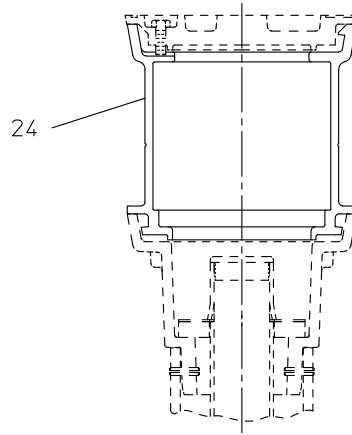
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Ref No.	Description	Material	Qty
1	Lid	Ductile Iron	1
2	Top	Ductile Iron	1
3	Locking Bolt	Stainless Steel	1
4	Reducer Coupling Gland	High Density Polyethylene	1
5	Reducer Coupling	High Density Polyethylene	1
6	O-ring	Rubber	1
7	Base	High Density Polyethylene	1
13	Grit Washer	High Density Polyethylene	1
14	Cap	Plastic	1
15	Lower Pipe	High Density Polyethylene	1
16	Upper Pipe	High Density Polyethylene	1
17	Lower Stem	Galvanized Steel Tubing	1
18	Upper Stem	Galvanized Steel Tubing	1
19	Screw	Stainless Steel	8
20	Screw	Stainless Steel	2
25	Spring Pin	Stainless Steel	2
26	Alignment Ring	Glass Filled Polyethylene	1
27	Alignment Ring Guide	Glass Filled Polyethylene	1
29	Stem Washer	Stainless Steel	1

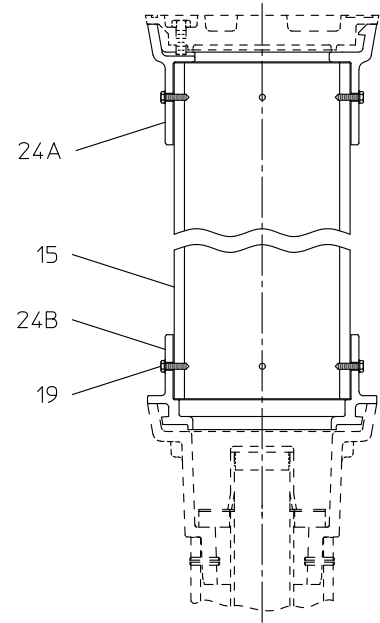
TRENCH ADAPTER ACCESSORIES - PARTS LIST



2-INCH TOP EXTENSION



6-INCH TOP EXTENSION



12-INCH, 18-INCH AND 24-INCH
TOP EXTENSION ASSEMBLIES

IL1716-11

Ref No.	Description	Material	Quantity				
			2"	6"	12"	18"	24"
3	Locking Bolt	Stainless Steel	1	-	-	-	-
15	Pipe	High Density Polyethylene	-	-	1	1	1
19	Screw	Stainless steel	-	-	8	8	8
24	Top Extension	Ductile Iron	1	1	-	-	-
24A	Top Extension	Ductile Iron	-	-	1	1	1
24B	Top Extension	Ductile Iron	-	-	1	1	1

Note:

1. Ref. number 24A & 24B are not available individually for repairs.



AMERICAN

FLOW CONTROL

THE RIGHT WAY

AMERICAN Flow Control

P.O. Box 2727
Birmingham, AL 35202-2727
Phone: 800-326-8051
Fax: 800-610-3569
Email: afcsales@american-usa.com

Waterous Company

125 Hardman Avenue South
South St. Paul, MN 55075-2421
Phone: 888-266-3686
Fax: 800-601-2809
Email: afcsales@american-usa.com

WWW.AMERICAN-USA.COM

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