

PRODUCT MANUAL

RETROFIT VALVE BOX INSERT



AMERICAN

FLOW CONTROL

THE RIGHT WAY

INDEX



RETROFIT VALVE BOX INSERT

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RETROFIT VALVE BOX INSERT

AMERICAN Flow Control's **Retrofit Valve Box Insert** upgrades previously installed standard cast iron valve boxes with the same features available in the AMERICAN Flow Control Trench Adapter.

The Retrofit features a self-adjusting extension stem system that is available in trench depths ranging from 3 ft - 20 ft.

RETROFIT VALVE BOX INSERT - FEATURES AND BENEFITS



Features

AMERICAN Flow Control's Retrofit Valve Box Insert up-grades previously installed standard cast iron valve boxes with the features of the AMERICAN Flow Control Trench Adapter. The Retrofit features a self-adjusting extension stem system that is available in trench depths ranging from 3 ft to 20 ft. This will eliminate the problem of trying to locate and engage the operating nut on the valve. With conventional valve boxes, the valve operating nut may be several feet below grade making it difficult to locate and 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

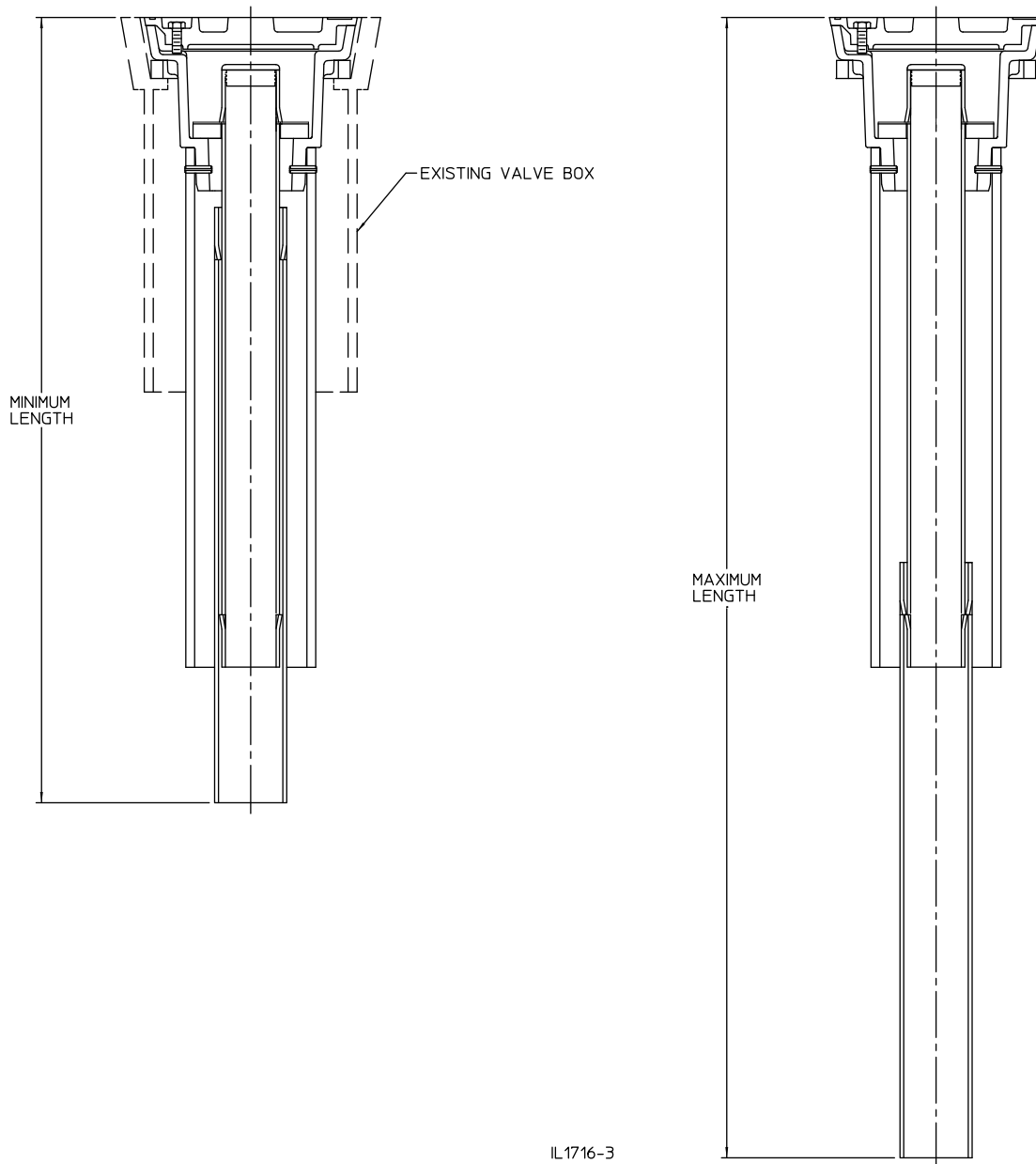
- Built-in extension stem automatically adjusts to the same height as the valve box.
- Eliminates field cut extension stems.
- Operating nut will always be at groundline, so it saves time in operating the valve. This is especially important in emergency situations.
- Eliminates the need for long T-handle wrench.
- Keeps valve box "clean" from debris that could interfere with the operation of the valve.
- Lid locks in place reducing damage or injuries due to lids being loose or missing.
- 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.
- Fits almost any type of valve box.
- Installs in minutes.

Specifications

A valve box upgrade insert shall be one complete assembled unit composed of a ductile iron insert top, a self-adjusting extension stem, grit washer and locking lid. The valve box top section shall be adaptable to fit inside a standard valve box upper section.

The extension stem assembly shall be of a telescoping design that allows for variable lengths. The material shall be galvanized square steel tubing. The extension stem must be capable of surviving a torque test to 1000 ft-lb without failure. Valve box insert shall be AMERICAN Flow Control's Retrofit Valve Box Insert.

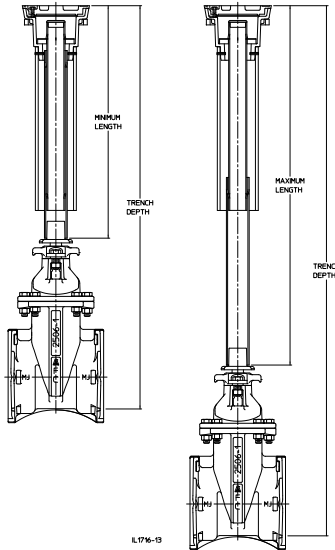
RETROFIT VALVE BOX INSERT - DIMENSIONS



IL1716-3

Model Number	Length		Assembly Weight
	Minimum	Maximum	
2A	19.00	24.00	27 LBS
3A	23.50	31.50	29 LBS
4A	27.50	39.50	32 LBS
5A	35.50	55.50	38 LBS
6A	47.50	79.50	45 LBS
7A	71.50	127.50	60 LBS
8A	122.75	178.75	87 LBS
9A	173.75	229.75	105 LBS

RETROFIT VALVE BOX INSERT - DIMENSIONS



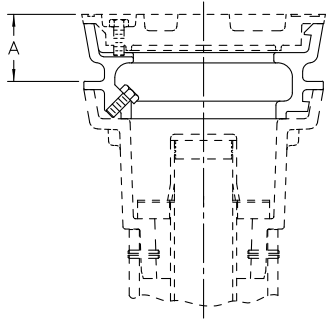
Valve size	Trench Depth and Model Number																			
	2'0"	2'6"	3'0"	3'6"	4'0"	4'6"	5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"	10'6"	11'0"	11'6"
2"	-	2A	3A,4A	4A	5A	5A	6A	6A	6A	6A	7A	7A	7A	7A	7A	7A	7A	7A	7A	8A
2-1/2"	-	2A	3A	4A	5A	5A	5A,6A	6A	6A	6A	6A,7A	7A	7A	7A	7A	7A	7A	7A	7A	8A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

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"	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	9A	-	
2-1/2"	8A	8A	8A	8A	8A	8A	8A	8A,9A	9A	9A	9A	9A	9A	9A	9A	9A	-	
3"	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	-	
4"	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	9A	
6"	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	9A	
8"	7A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	
10"	7A	7A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	
12"	7A	7A	7A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	
14"	7A	7A	7A	7A	8A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	
16"	7A	7A	7A	7A	7A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	
18"	7A	7A	7A	7A	7A	7A,8A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	
20"	7A	7A	7A	7A	7A	7A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	
24"	7A	7A	7A	7A	7A	7A	7A	7A,8A	8A	8A	8A	8A	8A	8A	8A	8A	9A	

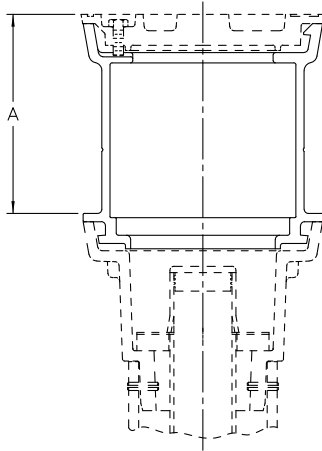
Where two model numbers are shown for a given valve/trench combination, use the dimensions in the table below to select the best fit.

Model Number	Length	
	Minimum	Maximum
2A	19.00	24.00
3A	23.50	31.40
4A	27.50	39.50
5A	35.50	55.50
6A	47.50	79.50
7A	71.50	127.50
8A	122.75	178.75
9A	173.75	229.75

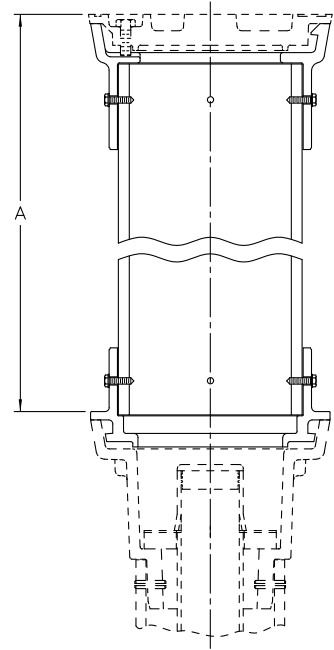
RETROFIT VALVE BOX INSERT ACCESSORIES - DIMENSIONS



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

AMERICAN Flow Control® RETROFIT VALVE BOX INSERT

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"	-	2A	3A,4A	4A	5A	5A	6A	6A	6A	6A	7A	7A	7A	7A	7A	7A	7A	7A	7A	8A
2-1/2"	-	2A	3A	4A	5A	5A	5A,6A	6A	6A	6A	6A,7A	7A	7A	7A	7A	7A	7A	7A	7A	8A
3"	-	2A	2A,3A	4A	5A	5A	5A,6A	6A	6A	6A	6A,7A	7A	7A	7A	7A	7A	7A	7A	7A	8A
4"	-	-	3A	4A	4A,5A	5A	5A,6A	6A	6A	6A	6A	7A	7A	7A	7A	7A	7A	7A	7A	8A
6"	-	-	2A	3A	4A	5A,4A	5A	5A,6A	6A	6A	6A	6A	7A	7A	7A	7A	7A	7A	7A	7A
8"	-	-	-	2A	3A,4A	4A	5A	5A	6A	6A	6A	6A	7A	7A	7A	7A	7A	7A	7A	7A
10"	-	-	-	-	2A	3A,4A	4A	5A	5A	6A	6A	6A	6A	7A	7A	7A	7A	7A	7A	7A
12"	-	-	-	-	-	2A,3A	3A,4A	4A,5A	5A	5A	6A	6A	6A	6A	7A	7A	7A	7A	7A	7A
14"	-	-	-	-	-	-	-	3A	4A	5A	5A	5A	6A	6A	6A	6A	7A	7A	7A	7A
16"	-	-	-	-	-	-	-	-	3A,4A	4A	5A	5A	6A	6A	6A	6A	7A	7A	7A	7A
18"	-	-	-	-	-	-	-	-	2A	3A,4A	4A	5A	5A,6A	6A	6A	6A	6A	7A	7A	7A
20"	-	-	-	-	-	-	-	-	2A	3A	3A,4A	4A	5A	5A	6A	6A	6A	7A	7A	7A
24"	-	-	-	-	-	-	-	-	-	-	2A	3A	4A	5A	5A	5A	6A	6A	6A	6A,7A

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"	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	9A	-	
2-1/2"	8A	8A	8A	8A	8A	8A	8A	8A,9A	9A	9A	9A	9A	9A	9A	9A	9A	-	
3"	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	-	
4"	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	9A	
6"	8A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	
8"	7A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	
10"	7A	7A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	9A	
12"	7A	7A	7A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	9A	9A	9A	
14"	7A	7A	7A	7A	8A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	
16"	7A	7A	7A	7A	7A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	9A	
18"	7A	7A	7A	7A	7A	7A,8A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	
20"	7A	7A	7A	7A	7A	7A	8A	8A	8A	8A	8A	8A	8A	8A	9A	9A	9A	
24"	7A	7A	7A	7A	7A	7A	7A	7A,8A	8A	8A	8A	8A	8A	8A	8A	8A	9A	

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		Quantity Required
	Minimum	Maximum	
2A	19.00	24.00	
3A	23.50	31.40	
4A	27.50	39.50	
5A	35.50	55.50	
6A	47.50	79.50	
7A	71.50	127.50	
8A	122.75	178.75	
9A	173.75	229.75	

AMERICAN Flow Control®

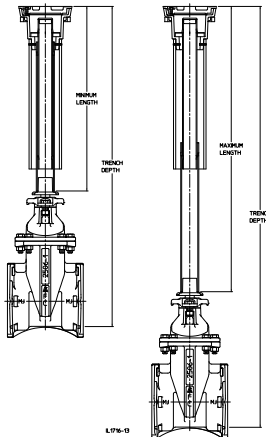
Service Type (Lid Color)

- Potable Water (Blue)
- Sewer (Green)
- Re-Use Water (Lavender)
- Gas (Yellow)
- 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 |

NOTE: AFC Valves are not suitable for use on gas service



Visit our web site at <http://www.american-usa.com/afc>

RETROFIT VALVE BOX INSERT - INSTALLATION



Installation

1. Check the opening direction of the valve. When installing the AFC Retrofit Valve Box Insert on an open-right (clockwise opening direction) valve, the cap (14) should be painted red.
2. Loosen the locking bolt (3), remove the lid (1) and grasp the top of the upper stem. Pull the stem assembly including the upper and lower stems (17 and 18), the grit washer (13) and the stem washer (29) to separate the stem assembly from the top and upper pipe (2 and 16).
3. Insert the top and upper pipe assembly and the top spacer (28) into the existing valve box. Install the lid and check to be sure that the lid is at the desired elevation.
4. Grasping the upper stem, lift the stem assembly into a vertical position and raise the upper stem to allow the lower stem to gently extend until fully extended.

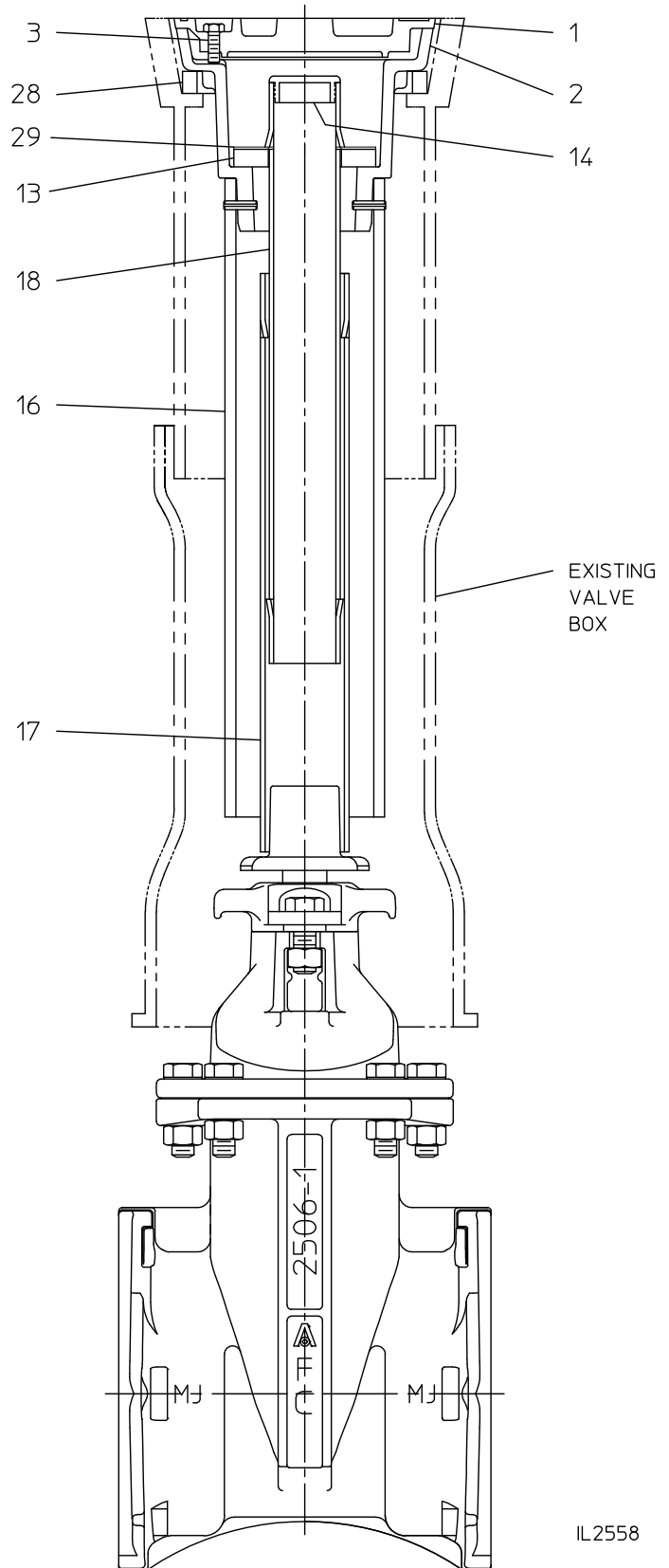
CAUTION

Do not release the lower stem to fall uncontrolled into the valve box. Dropping the stem into the valve box may damage the valve and/or stem assembly.

5. Place the lower stem of the fully-extended stem into the top (2) and carefully lower the stem assembly towards the valve.
6. Engage the end of the lower stem onto the valve operating nut and carefully lower the upper stem, stem washer and grit washer into the top.
7. Install a valve key onto the top of upper stem and operate the valve to verify that the lower stem is properly engaged with the valve operating nut. Care should be taken to leave the valve in its proper position.
8. 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 Retrofit Valve Box Insert.

Extending

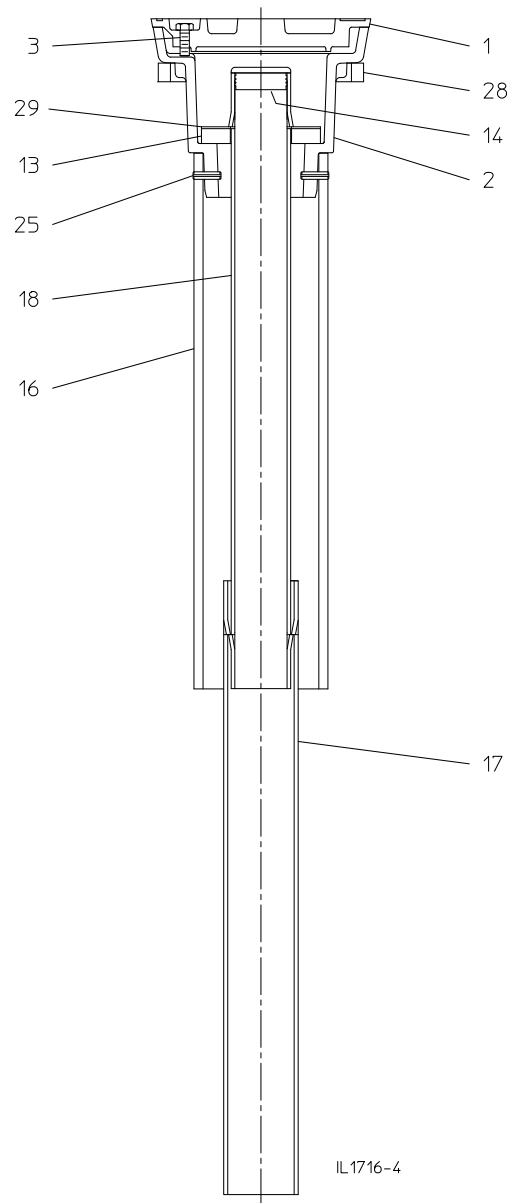
Extensions are available in 2 in., 6 in., 12 in., 18 in. and 24 in. lengths. To extend, simply remove the lid. Install the extension into the top section of the Trench Adapter. The 2 in. extension locks into place in the same manner as the lid. Lock the lid into the extension piece.



IL2558



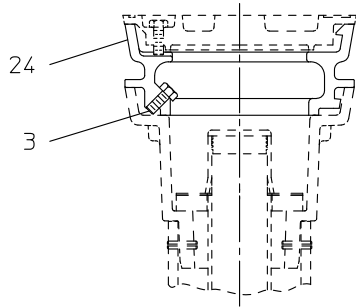
RETROFIT VALVE BOX INSERT - PARTS LIST



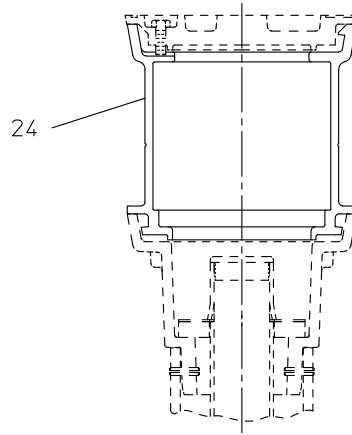
IL1716-4

Ref No.	Description	Material	Qty
1	Lid	Ductile Iron	1
2	Top	Ductile Iron	1
3	Locking Bolt	Stainless Steel	1
13	Grit Washer	High Density Polyethylene	1
14	Cap	Plastic	1
16	Upper Pipe	Galvanized Steel Tubing	1
17	Lower Stem	Galvanized Steel Tubing	1
18	Upper Stem	Galvanized Steel Tubing	1
25	Spring Pin	Stainless Steel	2
28	Top Spacer	Ductile Iron	1
29	Stem Washer	Stainless Steel	1

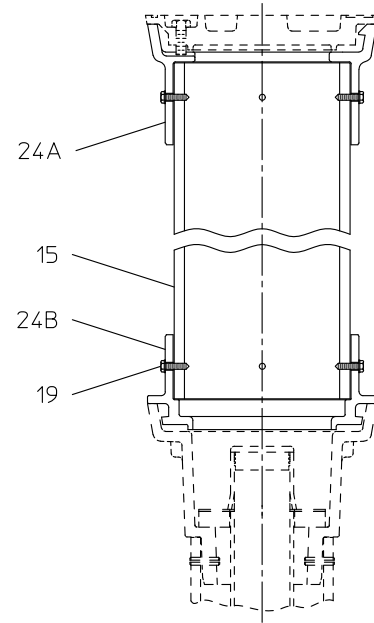
RETROFIT VALVE BOX INSERT ACCESSORIES - PARTS LIST



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 (1)	Ductile Iron	-	-	1	1	1
24B	Top Extension (1)	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

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