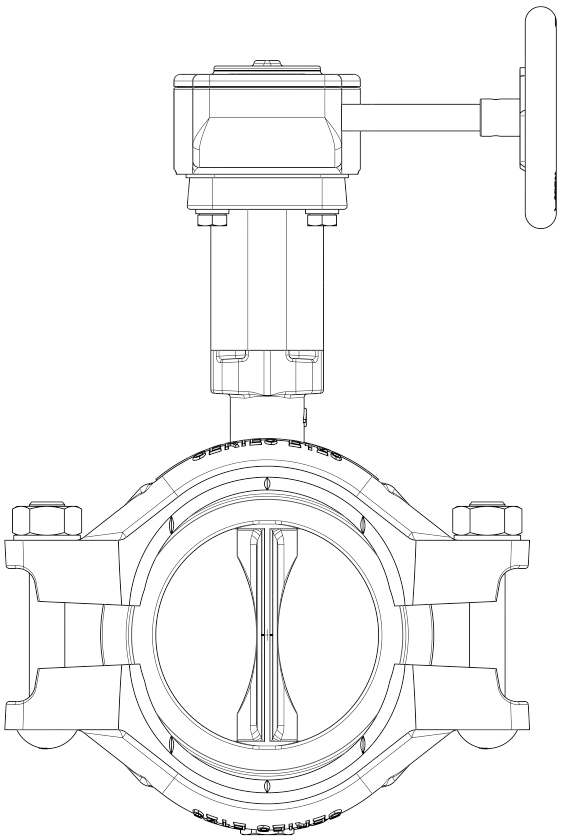
Insulation Extension Kit for Installation-Ready™ Butterfly Valves



⚠ WARNING

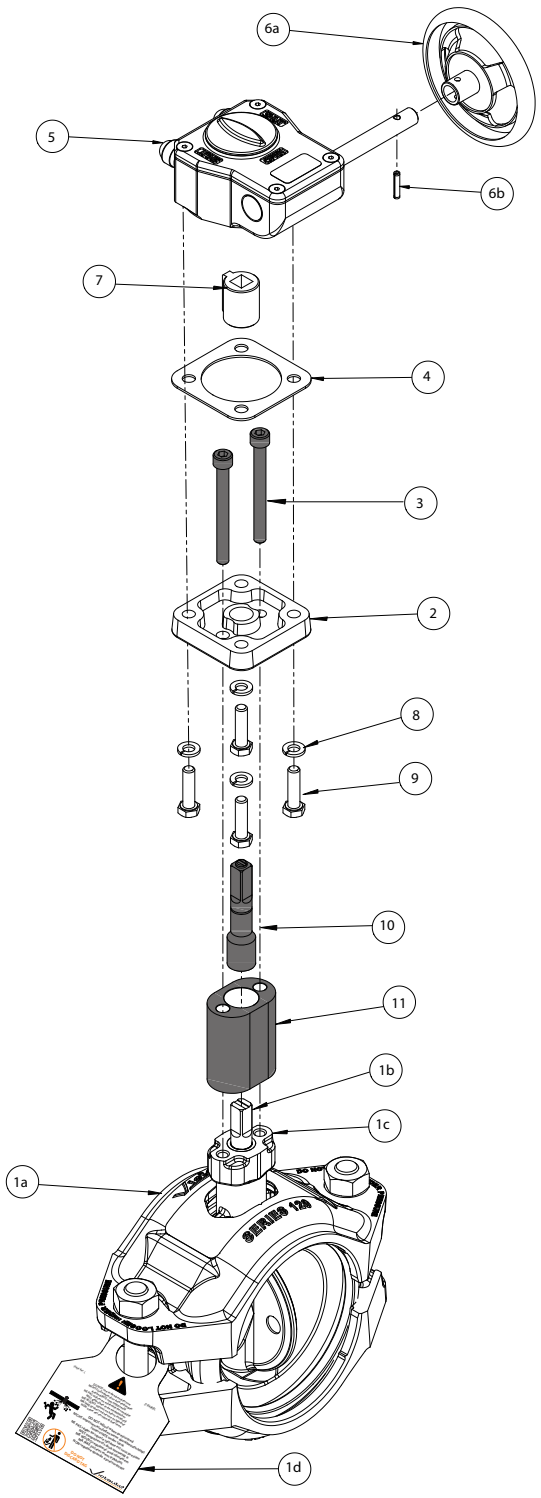
- **Read and understand all instructions contained in this kit installation sheet and in the I-120 installation manual before proceeding.**
- **Prevent flow from passing through the valve, and place the disc in the “shut” position during the following procedures.**
- **Wear safety glasses, hardhat, and foot protection.**

Failure to follow these instructions could result in death or serious personal injury and property damage.

NOTICE

- **Victaulic Installation-Ready Butterfly Valves are designed to accept 2 inches/50 mm of insulation. When more than 2 inches/50 mm of insulation is required, the insulation extension kit shall be utilized to provide clearance for the additional insulation.**

INSULATION EXTENSION KIT (2 – 8-INCH/ DN50 – DN200 WITH GEAR OPERATOR) EXPLODED VIEW



4"/DN100 SIZE CONFIGURATIONS SHOWN ABOVE

NOTICE

- **The following gear operator installation instructions also apply to bare valve assemblies. Follow steps 1 – 5, and 10. Steps 6 – 9 do not apply to bare valve assemblies.**

Item	Quantity for 2"/DN50, 2½", DN65, 3"/DN80, and 4"/DN100 Sizes	Quantity for 5"/DN125, 139.7mm, 6"/DN150, and 8"/DN200 Sizes	Description
1a	1	1	Valve Body
1b	1	1	Stem
1c	1	1	Flange
1d	1	1	Warning Tag
2	1	1	Actuator Adapter Plate
3	2	4	Extension Kit Bolts
4	1	1	Thermal Barrier
5	1	1	Gear Operator Assembly
6a	1	1	Handwheel
6b	1	1	Spring Pin
7	1	1	Drive Bushing
8	4	4	Helical Spring-Lock Washer
9	4	4	Hex Cap Screw
10	1	1	Extension Stem
11	1	1	Extension Spacer

REMOVAL OF GEAR OPERATOR

NOTICE

- **Shaded items in the drawing to the left denote components that are provided in the kit. All other components shall be retained for gear operator re-installation.**
- **Removal of the gear operator can be performed without removing the valve from the piping system. THE PUMP SHALL BE SHUT OFF to prevent flow from passing through the valve during the following procedures.**

1. Using the gear operator (Item 5), turn the handwheel (Item 6) until the pointer is pointing toward the "OPEN" position. Using a paint stick or bright-colored marker, place a continuous mark on the gear operator assembly (Item 5), and through the flange (Item 1c). **This step ensures that the gear operator assembly (Item 5) will be re-installed in the correct orientation**.

2. Remove the four existing hex cap screws (Item 9) and lock washers (Item 8) that attach the gear operator assembly (Item 5) to the actuator adapter plate (Item 2). **NOTE**: These hex cap screws (Item 9) and lock washers (Item 8) are required during re-installation.

3. Pull straight upward to remove the gear operator assembly (Item 5) and drive bushing (Item 7) from the actuator adapter plate (Item 2). These items are required for re-installation. **NOTE**: DO NOT REMOVE OR ROTATE THE STEM (Item 1b).

4. Remove any debris from the flange (Item 1c).

5. Verify that the O-ring and backup ring are installed in the recess of the flange (Item 1c) around the stem (Item 1b).
NOTE: The O-ring is installed under the backup ring.

⚠ CAUTION

- **DO NOT attempt to operate an Installation-Ready™ Butterfly Valve without a lever lock handle or gear operator installed.**

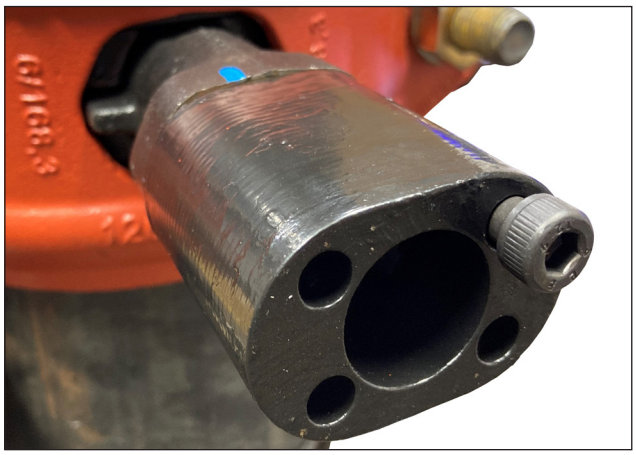
Failure to follow this instruction will cause improper valve operation and damage to the stem.

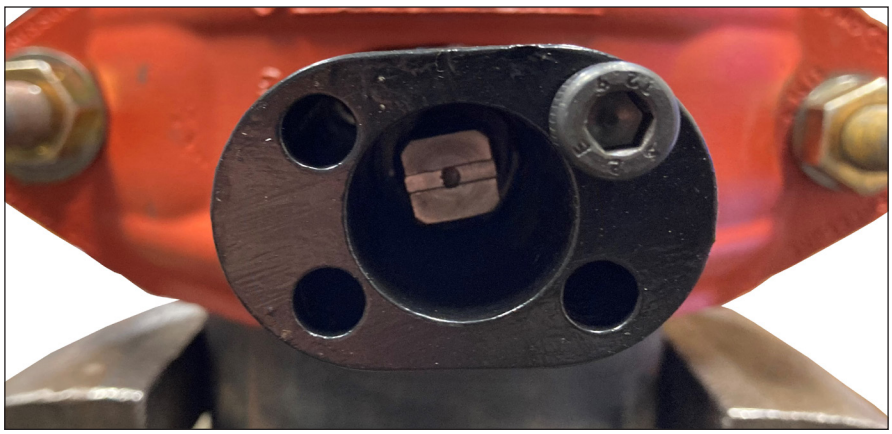
INSTALLATION OF INSULATION EXTENSION KIT

NOTICE
• **Position the extension spacer before installation of extension stem. It is critical that the extension stem is pressed on top of the spacer.**

1. Place the extension spacer (Item 11) onto the stem (Item 1b), so that the end of the extension spacer with the larger hole faces away from the valve body. To align the extension spacer (Item 11) for installation, partially thread at least one of the extension kit bolts (Item 3) through the extension spacer (Item 11) and into the valve body (1a).

2. Insert the extension stem (Item 10) through the bore of the extension spacer (Item 11) and onto the existing stem (Item 1b). Verify that the extension stem (Item 10) is oriented so that the rectangular reference mark on the top of the extension stem (Item 10) is parallel to the identical mark on the stem (Item 1b).

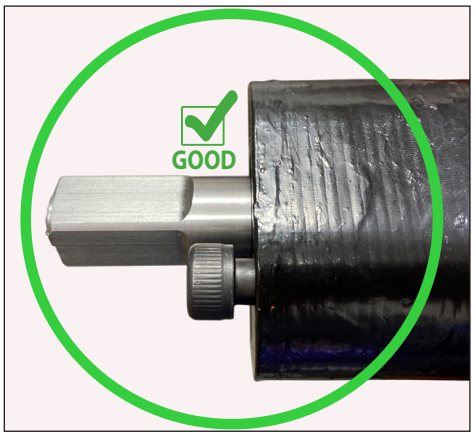




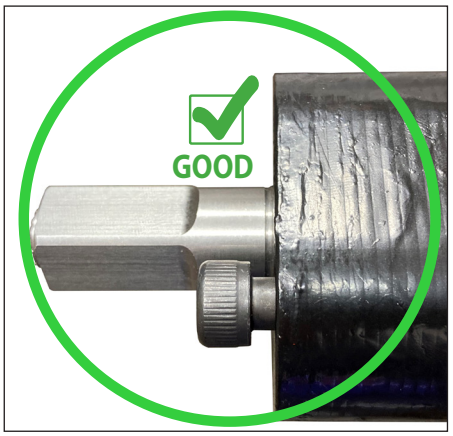
3. Using at least a 3-pound mallet, hammer the extension stem (Item 6) onto the stem (Item 1b). Impact the cylindrical button on the end of the extension stem (Item 10). Continue to hammer the extension stem (Item 10) onto the stem (Item 1b) until the shallow groove on the circumference of the extension stem (Item 10) is at or below grade of the extension spacer (Item 11).

4. When the extension stem (Item 10) is properly engaged with the stem (Item 1b) to meet the visual criteria, remove the extension kit bolts (Item 3) and then set aside. Position the actuator adapter plate (Item 2) over the extension spacer (Item 11).

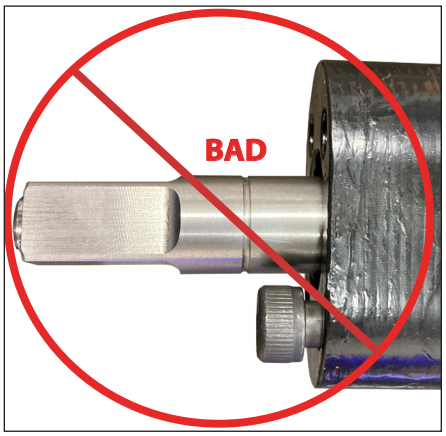
SHALLOW GROOVE VISUAL CRITERIA



The shallow groove is below the top of the extension spacer.



The shallow groove is at the top of the extension spacer.



The shallow groove is too far above the extension spacer.

5. Apply thread locking compound to the extension kit bolts (Item 3). Insert the extension kit bolts (Item 3), and tighten to 28 – 30 ft-lbs/38 – 41 N•m.

6. Insert the drive bushing (Item 7) into the gear operator assembly (Item 5).

7. Place the gear operator assembly (Item 5) onto the flange (Item 1c) in the same orientation as previously installed using the reference marks created previously.

8. Re-install the four existing hex cap screws (Item 9) with lock washers (Item 8) into the holes of the actuator adapter plate (Item 2) and into the gear operator assembly (Item 5).

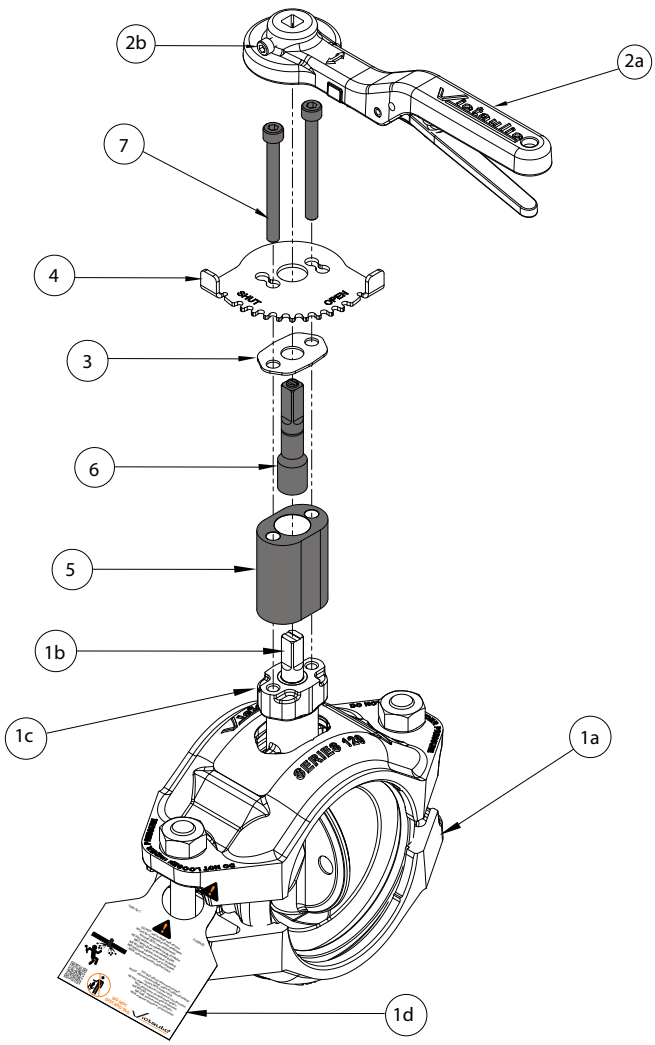
9. Using a wrench, tighten the four hex cap screws (Item 9) evenly until the lock washers (Item 8) become flattened.

10. Turn the handwheel (Item 6a) of the gear operator assembly (Item 5) to ensure proper operation.

NOTICE

- **Victaulic Installation-Ready Butterfly Valves are designed to accept 2 inches/50 mm of insulation. When more than 2 inches/50 mm of insulation is required, the insulation extension kit shall be utilized to provide clearance for the additional insulation.**

INSULATION EXTENSION KIT (2 – 8-INCH/ DN50 – DN200 WITH LEVER LOCK HANDLE) EXPLODED VIEW



4"/DN100 SIZE CONFIGURATION SHOWN ABOVE

Item	Quantity for All Sizes	Description
1a	1	Valve Body
1b	1	Stem
1c	1	Flange
1d	1	Warning Tag
2a	1	Lever Lock Handle
2b	1	Set Screw
3	1	Thermal Barrier
4	1	Indexing Plate
5	1	Extension Spacer
6	1	Extension Stem
7	2	Extension Kit Bolts

REMOVAL OF LEVER LOCK HANDLE

NOTICE

- **Shaded items in the drawing on this page denote components that are provided in the kit. All other components shall be retained for lever lock handle re-installation.**
- **Removal of the lever lock handle can be performed without removing the valve assembly from the piping system. THE PUMP SHALL BE SHUT OFF to prevent flow from passing through the valve during the following procedures.**

1. Using the lever lock handle (Item 2a), place the valve disc in the "OPEN" position. **This step ensures that the lever lock handle (Item 2a) will be re-installed in the correct orientation. NOTE**: There is a position indicator on top of the stem (Item 1b).

2. Loosen the set screw (Item 2b) from the side of the lever lock handle (Item 2a).

3. Pull the lever lock handle (Item 2a) to remove it from the indexing plate (Item 4).

4. Remove the existing bolts, washers, and split washers. These will **NOT** be re-installed on the extension assembly. Remove the indexing plate (Item 4) and the thermal barrier (Item 3) from the flange (Item 1c).

5. Remove any debris from the flange (Item 1c).

6. Verify that the O-ring and backup ring are installed in the recess of the flange (Item 1c) around the stem (Item 1b). **NOTE**: The O-ring is installed under the backup ring.

⚠ CAUTION

- **DO NOT attempt to operate an Installation-Ready™ Butterfly Valve without a lever lock handle or gear operator installed.**

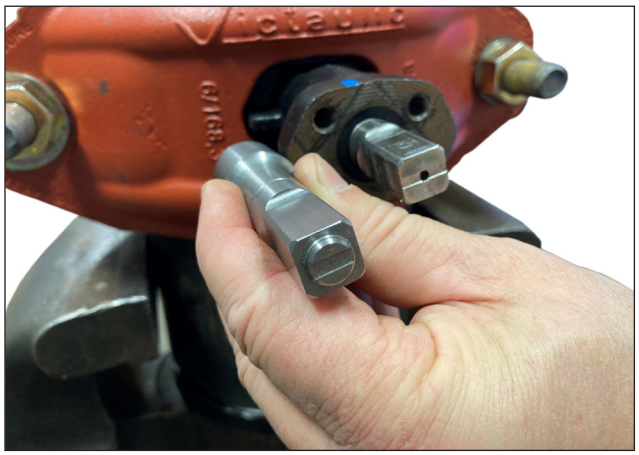
Failure to follow this instruction will cause improper valve operation and damage to the stem.

INSTALLATION OF INSULATION EXTENSION KIT

NOTICE
• **Position the extension spacer before installation of extension stem. It is critical that the extension stem is pressed on top of the spacer.**

1. Place the extension spacer (Item 5) onto the stem (Item 1b) so that the end of the extension spacer with the larger hole faces away from the valve body (Item 1a). To align spacer for installation, partially thread at least one of the extension kit bolts (Item 7) through the extension spacer (Item 5) and into the valve body (Item 1a).

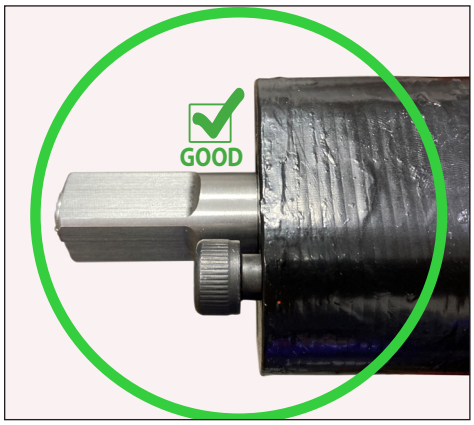
2. Insert the extension stem (Item 6) through the bore of the extension spacer (Item 5) and onto the stem (Item 1b). Verify that the extension stem (Item 6) is oriented so the rectangular reference mark on top of the extension stem (Item 6) is parallel to the identical mark on the stem (Item 1b).



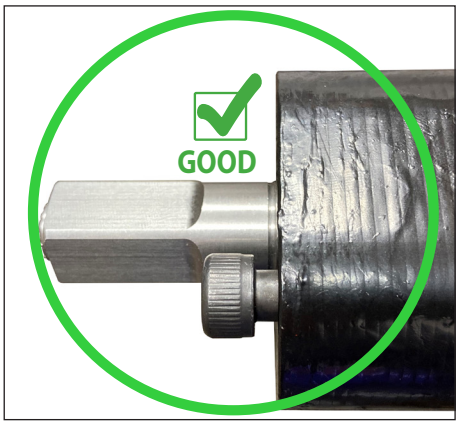
3. Using at least a 3-pound mallet, hammer the extension stem (Item 6) onto the stem (Item 1b). Impact the cylindrical button on the end of the extension stem (Item 6). Continue to hammer the extension stem (Item 6) onto the stem (Item 1b) until the shallow groove on the circumference of the extension stem (Item 6) is at or below grade of the extension spacer (Item 5).

4. When the extension stem (Item 6) is engaged with the stem (Item 1b) and visual criteria has been met, remove the extension kits bolts (Item 7) and set them aside. Position the thermal barrier (Item 3) over the extension spacer (Item 5), followed by the indexing plate (Item 4).

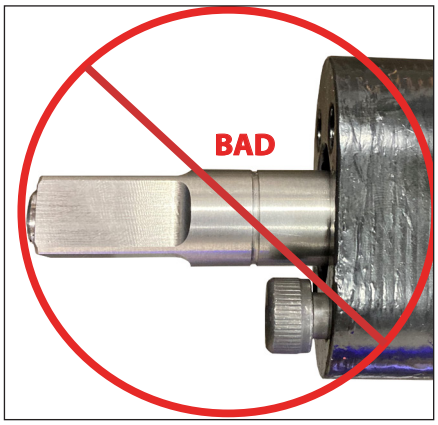
SHALLOW GROOVE VISUAL CRITERIA



The shallow groove is below the top of the extension spacer.



The shallow groove is at the top of the extension spacer.

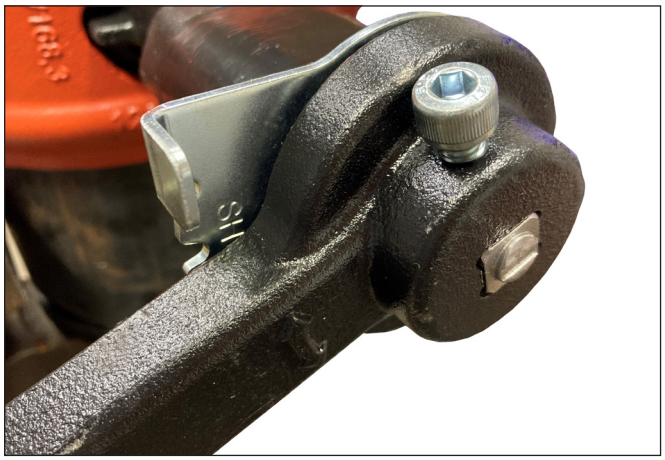


The shallow groove is too far above the extension spacer.

5. Apply thread locking compound to the extension kit bolts (Item 7). Insert the extension kit bolts (Item 7) and tighten to 28 – 30 ft-lbs/38 – 41 N•m.

6. Re-install the lever lock handle (Item 2a) onto the extension stem (Item 6). Locate the top grade of the lever lock handle (Item 2a) with the top square of the extension stem (Item 6). Verify that the lever lock handle (Item 2a) latches into the indexing plate (Item 4). **NOTE**: This may require lowering the handle.

7. Verify that the pointer of the lever lock handle (Item 2a) is pointing towards the OPEN marking on the indexing plate (Item 4).



8. Tighten the set screw (Item 2b) on the side of the lever lock handle (Item 2a).

9. Turn the lever lock handle (Item 2a) to ensure proper operation.

Insulation Extension Kit for Installation-Ready™ Butterfly Valves