

Series LFB6800

Installation, Operation and Repair Manual

⚠ WARNING



Read this Manual **BEFORE** using this equipment.
Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment.
 Keep this Manual for future reference.



Installation

I. Threaded-end (LFB6800):

1. The above listed standard valves are bidirectional and as such, can be installed for flow in either direction.
2. When installing threaded-end valves, be sure that the threads on the mating pipe are free from excessive grit, dirt or burrs. Take care to assure that any pipe sealants used are not so excessively applied to the pipe threads that the valve cavity becomes fouled.

- ### II. Sweat-end (LFB6801):
- To protect seats and seals from high temperatures encountered while soldering, these valves must be disassembled prior to soldering.

LFB6801 Series

1. Remove body center section from adapters by removing one body bolt and loosening others.
2. Solder end adapters onto copper tubing system, orienting adapters to required valve position. One of the two adapter/tubing assemblies must allow rotation to match alternate adapter bolt pattern.

3. After soldering and cool-down, install body assembly using new body seals provided and re-torque bolts as follows: (Use sequence shown on back page).

TABLE 1

Series LFB6800

Valve Size	Body Bolt Torque (in.-lbs.)
1/4", 3/8", 1/2"	30 ± 5
3/4"	100
1"	200
1 1/4"	200
1 1/2"	300
2"	400

Valve Operation

1. All series Watts ball valves feature 1/4 turn operation. Turning the valve handle 90° clockwise will fully close the valve while a 90° counterclockwise rotation will fully open the valve. The valve handle also serves as a ball orifice position indicator. When the valve handle is parallel to the pipe, the valve is open, when perpendicular to the pipe, the valve is closed.
2. All series Watts ball valves are designed to provide optimum bubble-tight performance when properly selected in accordance with the valve's pressure/temperature rating, unless otherwise noted in seat material selection chart.
3. To provide the longest possible service-life, a hand-operated ball valve should be operated in either it's fully open or fully closed position. If an intermediate operating position is to be utilized, consult your Watts agent. Excessive pressure drops could adversely affect service life of the valve.
4. All Watts valves are factory assembled using an F.D.A. approved lubricant. Valves can be ordered from the factory without lubricant. The standard factory lubricant can be removed, if objectionable, by disassembling the valve and solvent washing.
5. The below listed torques are the normal expected maximum break-away torques. These values represent the force required to begin to open the valve. Typically, this break-away

value is the maximum torque requirement of the valve during a closed to open, opened to closed cycle. Bear in mind that these values have been confirmed by laboratory testing of each valve while pressurized with water to the valve's maximum pressure rating. Certain highly viscous or abrasive services could cause an increase in torque requirements.

Maintenance

During it's service life, the only maintenance that may be required by your Watts ball valve should be periodic stem seal adjustment. If leakage at the stem is noted, simply tighten the valve stem gland nut until leakage subsides. It is impractical to predict frequency of stem adjustment as it is influenced by such factors as frequency of cycling and service media.

IMPORTANT

As is the case with **any** valve on the market today, it is important that stem leaks do not go unattended. Lack of maintenance of stem leakage could cause a premature need to replace stem seals.

NOTICE

If operating temperature of system is substantially lower or higher than 80°F (27°C), initial stem packing adjustment may be required to prevent leakage.



Rebuilding

⚠ WARNING

Most standard bidirectional ball valves available on the market today, regardless of manufacturer, can trap fluids in the valve cavity when closed. If your Watts ball valve has been used to conduct hazardous media, the following steps should be taken **prior** to removal from line and disassembly.

1. Relieve line pressure.
2. Place the valve in a half-open position and flush the line to remove hazardous material from the cavity. The valve can now be removed from the line.

NOTICE

Always advise maintenance personnel when they are maintaining or rebuilding a valve that has been conducting hazardous material. Proper protective clothing and eye protection should always be utilized.

3. To replace seats and seals:
 - a. For the LFB6800 series, remove 1 top bolt, loosen other 3 body bolts, slide body center section out.
 - b. Once the center section has been removed, close the valve and remove the seats, ball and body seals.

NOTICE

If condition of the ball surface allows for its reuse, be careful to handle and store the ball in such a manner so as to prevent subsequent damage to the ball's critical surfaces.

- c. Remove valve handle nut, handle, gland packing nut and remove the valve stem through the body cavity.
- d. Remove the stem thrust-washer from the stem or the valve body cavity, if the washer did not come free from the cavity with the stem. Remove stem seal.
- e. Examine all metallic sealing surfaces such as ball, stem shank and pipe-ends for damage such as scratches or nicks. In some cases, slight scratches across the sealing surface of pipe ends can be removed using a light emery cloth. If pipe end damage is excessive, the **valve** must be replaced. If the ball or stem is excessively damaged, ball and stem kits can be ordered. Consult your Watts agent.
- f. Having assured that all critical surfaces have been inspected, cleaned and/or replaced, reassembly can begin.

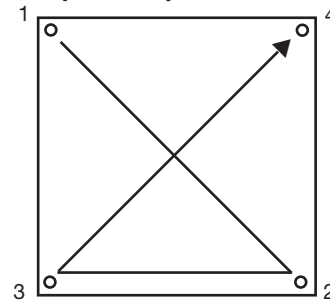
- g. Place new thrust-washer on stem and install stem through body cavity. Place new stem seal in position. Reinstall gland nut and tighten to the torque listed on Table 2.
- h. Lightly lubricate seats and body seals using a lubricant that is compatible for the service media.
- i. Reinstall ball, seats and body seals.
- j. Reinstall center section between pipe-ends and retighten bolts in torquing sequence shown to the values listed on Table 1.
- k. Reinstall handle and secure with handle nut.

TABLE 2

Packing Nut Torques Series LFB6800

Valve Size	Torque (in.-lbs.)
1/4", 3/8", 1/2"	25-60
3/4"	30-60
1"	180-300
1 1/4"	200-300
2"	300-350

Torque Sequence



WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information: www.watts.com/prop65

Limited Warranty: Watts Regulator Co. (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.

THE WARRANTY SET FORTH HEREIN IS GIVEN EXPRESSLY AND IS THE ONLY WARRANTY GIVEN BY THE COMPANY WITH RESPECT TO THE PRODUCT. THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE COMPANY HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product. Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights. **SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT.**

WATTS®

A Watts Water Technologies Company

ISO 9001-2008
CERTIFIED