

Locking Devices for Manual Ball Valves

Installation, Maintenance and
Operating Instructions

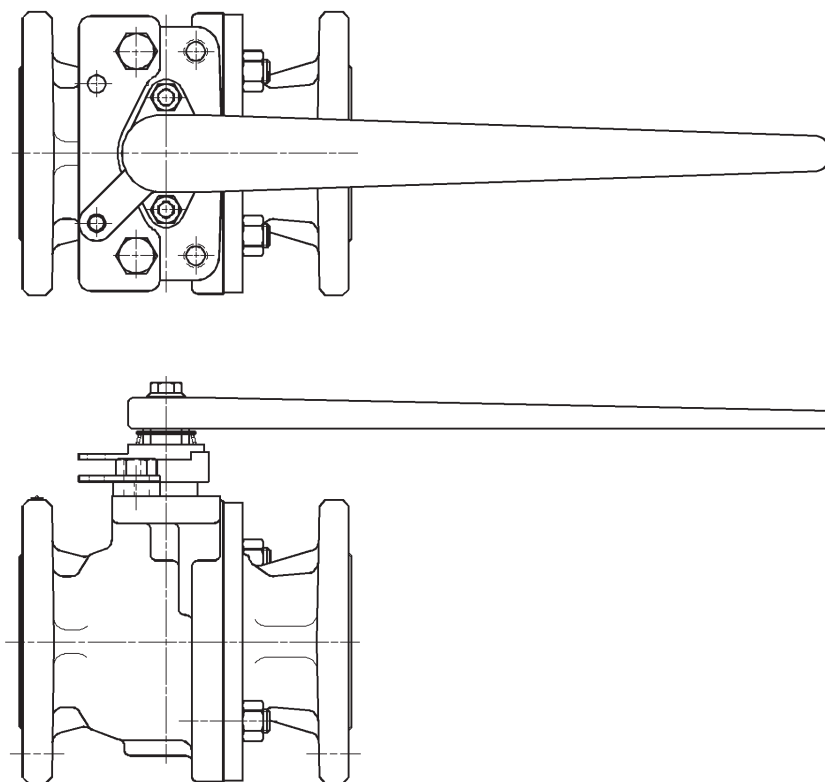


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READ THESE INSTRUCTIONS FIRST!

This instruction manual contains important information regarding the installation, operation, and troubleshooting of the Jamesbury® Locking Devices for Manual Ball Valves. Please read these instructions carefully and save them for future reference.

SAVE THESE INSTRUCTIONS!

1 GENERAL

This instruction manual contains important information regarding the installation, operation and troubleshooting of the *Jamesbury* Locking Devices for Manual Ball Valves. Please read these instructions carefully and save them for future reference.

1.1 WARNING

1. JAMESBURY LOCKING DEVICES ARE DESIGNED FOR PAD-LOCKING LEVER OPERATED VALVES IN THE **OPEN** OR **CLOSED** POSITION. THESE DEVICES ARE NOT DESIGNED TO WITHSTAND INPUT FORCES FROM SUBSTITUTED HANDLES OR FROM EXTERNAL PNEUMATIC, ELECTRIC, HYDRAULIC, OR GEAR ACTUATORS.
2. EACH DEVICE IN THIS IMO HAS INSTALLATION INSTRUCTIONS, AND THE INSTRUCTIONS MAY REQUIRE DEPRESSURIZATION OF THE VALVE. READ THE INSTRUCTIONS CAREFULLY, AND IF IN DOUBT, DEPRESSURIZE THE SYSTEM AND CYCLE THE VALVE SEVERAL TIMES.

1.2 Description

Standard locking devices for Style A valves, Series 5000 valves, Series 6000, Clincher®, and MBV Class 150 Full Ports, MBV Class 300 Full Ports, MBV Class 150 Standard Ports and MBV Class 300 Standard Port valves are as follows per (Table 1):

TABLE 1

For 1/4" – 3/4" (DN 6-20) Style A Valves	LD-1
For 1" – 1-1/4" (DN 25-30) Style A Valves	LD-2
For 1-1/2" – 2" (DN 40-50) Style A Valves	LD-3
For 1/4" – 3/4" (DN 6-20) Clincher Valves	LD-12
For 1" – 1-1/4" (DN 25-30) Clincher Valves	LD-13
For 1-1/2" – 2" (DN 40-50) Clincher Valves	LD-14
For 1/2" – 3/4" (DN 15-20) 5000, 1/2" (DN 15) 6000 & 1/2" (DN 15) 6600	LD-50
For 1" (DN 25) 5000, 3/4" (DN 20) & 1" (DN 25) 6000, 3/4" (DN 20) & 1" (DN 25) 6600	LD-51
For 1-1/2" (DN 40) & 2" (DN 50) 5000, 1-1/2" (DN 40) 6000, 2" (DN 50) 5600 & 1-1/2" (DN 40) 6600	LD-52
For 2" (DN 50) & 3" (DN 80) 6150, 2" (DN 50) 6300, 3" (DN 80) 5300, 3" (DN 80) & 4" (DN 100) 5150	LD-32
For 3" (DN 80) 6300, 4" (DN 100) 5300, 4" (DN 100) 6150, 6" (DN 150) 5150	LD-31
For 6" (DN 150) 6150, 4" (DN 100) 6300, 6" (DN 150) 530S & 5300, 8" (DN 200) 5150	LD-30
For 2" (DN 50) & 3" (DN 80) MBV Class 150 Full Bore, 2" (DN 50) MBV Class 300 Full Bore, 3" (DN 80) & 4" (DN 100) MBV Class 150, and 3" (DN 80) MBV Class 300 Standard Bore	LD-56
For 4" (DN 100) MBV Class 150, 3" (DN 80) MBV Class 300 Full Bore 6" (DN 150) MBV Class 150 and 4" (DN 100) Class 300 Standard Bore	LD-57
For 6" (DN 150) MBV Class 150 and 4" (DN 100) MBV Class 300 Full Bore 6" (DN 150) MBV Class 300 Standard Bore	LD-58

2 INSTALLATION

2.1 LD 12, 13 and 14

To install these locking devices to the brass *Clincher*, Model B and the Series 2000 *Clincher* valves, proceed as follows:

1. Brass Clincher, Model B Only, (Figure 2): (Single stem nut)
 - A. **NOTE:** WHEN INSTALLING A LOCKING DEVICE ON A BRASS MODEL B CLINCHER, THE LINE AND VALVE MUST BE DEPRESSURIZED AND DRAINED. CYCLE VALVE SEVERAL TIMES AFTER DRAINING LINE.
 - B. Remove the stem nut and retain for reassembly.
 - C. Remove the handle and discard.
 - D. Proceed to Paragraph 3, etc.
2. Series 2000 Clincher (Figure 1): (Double stem nut)
 - A. Remove the top stem nut and the lockwasher, retain for reassembly.
 - B. Remove the handle and discard.
3. Place the handle supplied in the locking device kit over the valve stem.
4. Replace stem hardware. On brass model B valves, tighten the stem nut until the spring washers are flat.
5. Position the valve in the desired locking position.
6. Place locking frame over the handle and into position as shown in picture for locking device assembly.

Use padlock with 1/4" - 9/32" (6.35 mm - 7.14 mm) diameter shackle.

Locking Device for Clincher Valves

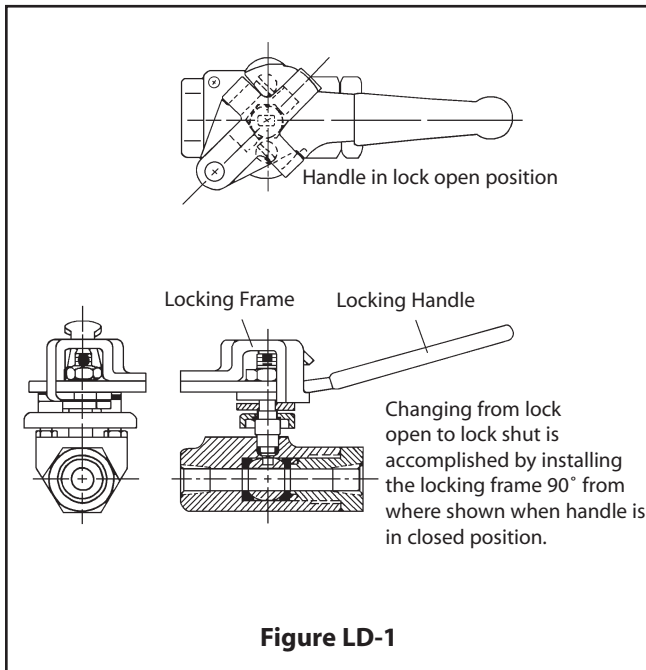
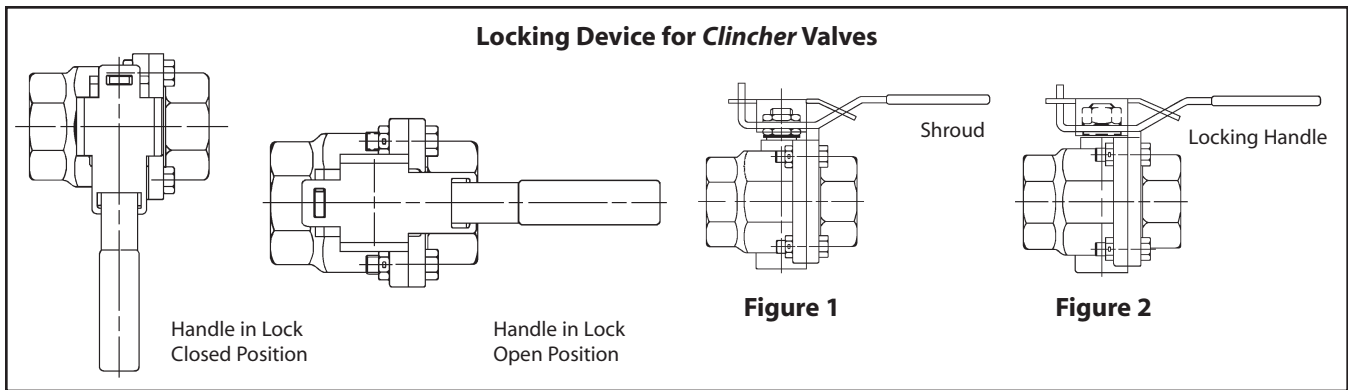


Figure LD-1

2.2 LD-1

To install locking devices on 1/4"–3/4" (DN 6-20) A-style screwed end valves (**Figure LD-1**):

1. Open or close the valve to the desired lock position.
 2. Remove the existing stem nut and handle.
 3. Place the locking handle furnished with the kit on the stem in the proper open or closed position.
 4. Fasten the handle with stem nut.
 5. Fit the locking frame over this assembly so that the lock holes in the handle and locking frame are aligned.
- NOTE:** If stem prevents the locking frame from freely resting flat on the locking handle, it may be necessary to grind the top of the stem to allow proper seating of the frame.

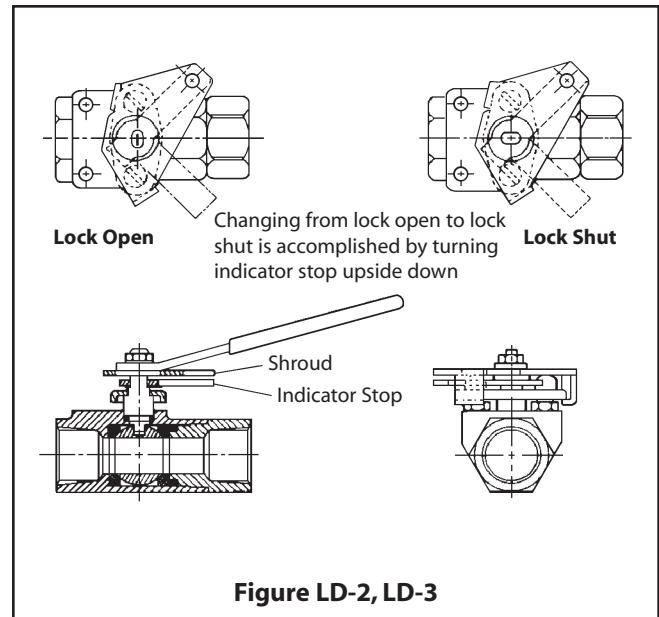


Figure LD-2, LD-3

2.3 LD-2 and LD-3

To install locking devices on 1"–1-1/4" (DN 25-30) style A (**LD-2**), 1-1/2"–2" (DN 40-50) style A (**Figure LD-3**):

1. Open or close the valve to the desired locking position.
2. Remove the stem nut, handle, snap ring and existing indicator stop.
3. Place the indicator stop provided with the kit on the stem with the desired LOCK OPEN or LOCK SHUT facing up. Place the washer on the stem on top of the indicator stop.
4. Fit the locking frame under the bonnet plate and over the stem matching the locking hole in the indicator stop.
5. If the locking device is installed to provide LOCK SHUT operation, the direction of the handle's operation will be reversed. In this case, use a sharp blade or a file to remove the directional arrow and the word "OPEN" from the plastic handle covering.

2.4 LD-30, LD-31 and LD-32

To install locking devices on 2" (DN 50) & 3" (DN 80) 6150, 2" (DN 50) 6300, 3" (DN 80) 5300, 3" (DN 80) & 4" (DN 100) 5150 (**Figure LD-32**), 3" (DN 80) 6300, 4" (DN 100) 5300, 4" (DN 100) 6150 and 6" (DN 150) 5150 (**Figure LD-31**), 6" (DN 150) 6150, 6" (DN 150) 530S and 5300, 8" (DN 200) 5150, 4" (DN 100) 6300 (**Figure LD-30**):

1. Open or close the valve to the desired locking position.
2. Remove the existing valve handle.
3. Install the new handle from the kit.
4. Fit the locking screw through the hole in the handle and screw into the hole in the bonnet pad.

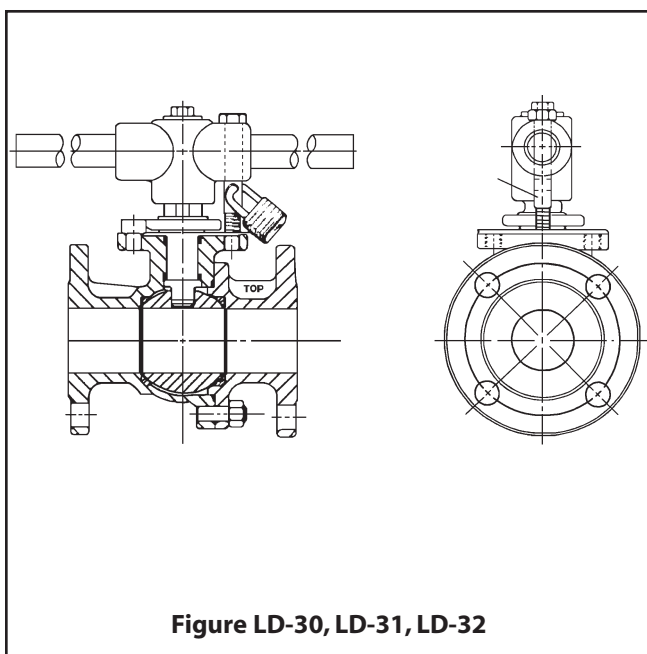


Figure LD-30, LD-31, LD-32

2.5 LD-50

To install locking device 1/2" (DN 15) & 3/4" (DN 20) 5000 Flanged valves (**Figure LD-50**):

CAUTION: When installing a locking device on a flanged valve, existing topwork components have to be removed from the valve stem and replaced by parts from the locking device kit. **DEPRESSURIZE THE LINE AND CYCLE SEVERAL TIMES BEFORE REMOVING THE TOPWORKS.**

1. Open or close the valve to the desired locking position.
2. Remove the handle nut, lockwasher, handle, packing nut, compression ring, stop screws, and if present, the indicator stop plate and stop screw spacers.
3. Replace the stop screws without the stop screw spacers.
4. Place the locking frame from the kit (1) on the valve bonnet pad (**See Figure LD-50 for proper orientation**) and fasten using the hex cap screws (7) also from the kit.
5. From the kit, install the compression ring (4), indicator stop (5) and the packing nut (6). The packing nut is to be wrench tightened 1/8 to 1/4 turn.
6. Lift up the floating slotted support plate mounted to the locking frame (1). From the kit, place the handle (3) onto the stem. Let the floating slotted support plate drop down on the tab on the handle. Fasten the handle (3) to the stem using the lockwasher from the existing valve and handle nut (6) from the kit.

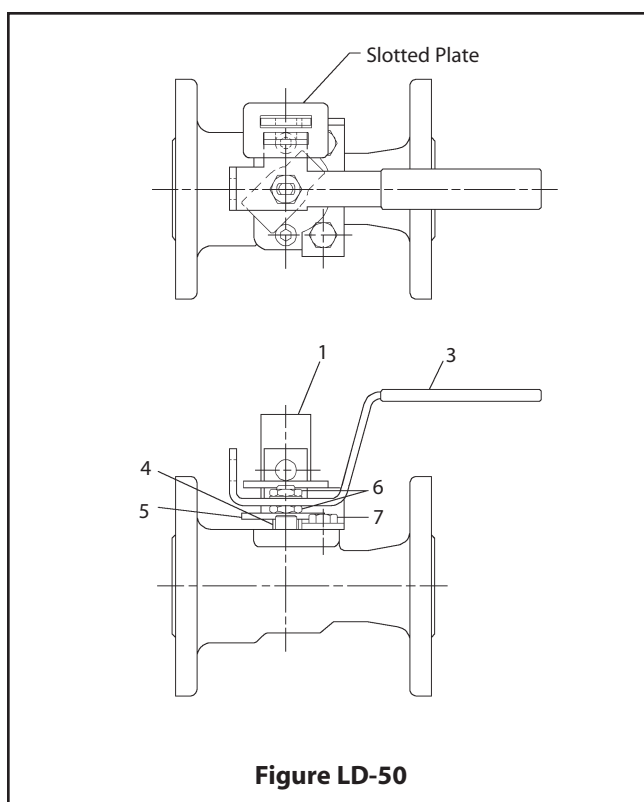


Figure LD-50

2.6 LD-51 and 52

To install locking devices on 1"-2" (DN 25-50) Series 5000 and 3/4"-1-1/2" (DN 20-40) Series 6000 Flanged valves:

CAUTION: When installing a locking device on a flanged valve, existing topwork components have to be removed from the valve stem and replaced by parts from the locking device kit. **DEPRESSURIZE THE LINE AND CYCLE SEVERAL TIMES BEFORE REMOVING THE TOPWORKS.**

1. Open or close the valve to the desired locking position.
2. Remove the handle nut, lockwasher, handle, packing nut, compression ring, stop screws, and if present, the indicator stop plate and stop screw spacers.
3. (See Figure LD-51, 52) Place the locking frame from kit (1) on the valve bonnet pad and reinstall the two stop screws from 2 above. From the kit, install compression ring (4), indicator stop (5), and packing nut (6). The packing nut is to be wrench tightened 1/8 to 1/4 turn. Lift up floating slotted support plate mounted to the locking frame (1). Place the locking tab (2) onto the stem. Let the floating slotted plate drop down on the tab. Mount the handle (3) from the kit, the lockwasher from existing valve, and the handle nut (6) from the kit.

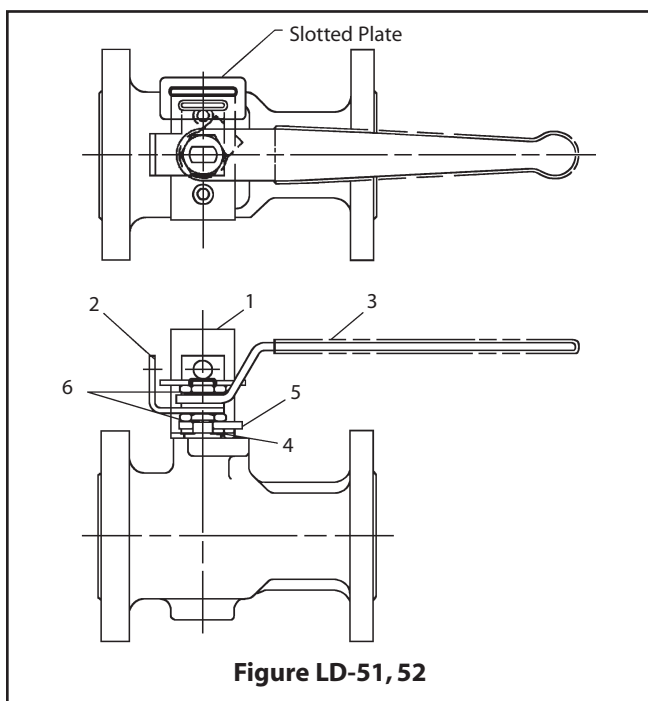


Figure LD-51, 52

2.7 LD-56, LD-57 and LD-58

To install locking devices on MBV 2"-6" (DN 50-150) Class 150 Full Ports, 2"-4" (DN 50-100) MBV Class 300 Full Ports, 2"-8" (DN 50-200) MBV Class 150 Standard Ports and 2"-6" (DN 50-150) MBV Class 300 Standard Ports:

1. Open or close the valve to the desired position.
2. Place the locking plate on the valve bonnet under the locking arm of the indicator stop (see Figure LD-56, 57, 58). Install the two hex head cap screws from the kit, and torque to values listed in (Table 2).

Use padlock with 1/4" or 9/32" (6.35 mm - 7.14 mm) diameter shackle.

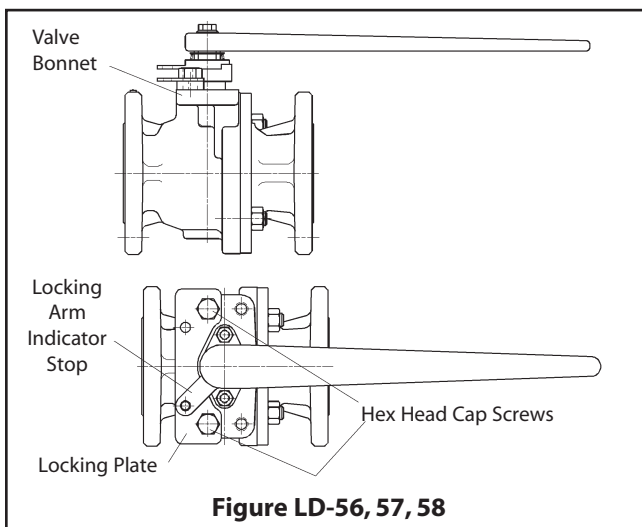


Figure LD-56, 57, 58

3 REPAIR KITS/SPARE PARTS

For further information on spare parts and service or assistance visit our web-site at www.metso.com/valves.

TABLE 1		
Valve Size	Full Port	
	2" (DN-50)-150/300	4" (DN-100)-300
	3" (DN-80)-150/300	6" (DN-150)-150
	4" (DN-100)-150	
	Standard Port	
Valve Size	3" (DN-80)-150/300	6"(DN 150)-300
	4" (DN 100)-150/300	8"(DN 200)-150
	6"(DN 150)- 150	
Bolt Size	1/2 – 13 UNC	5/8 – 11 UNC
Torque lb.-ft. (Nm)	75 (100)	150 (200)

Subject to change without prior notice.

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