



CRYOGENICS

CPC-Cryolab

Rockwood  
Swendeman

# INSTALLATION, OPERATING, AND MAINTENANCE INSTRUCTIONS SUPPLEMENT

17/2.5.3B Rev. 1

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ECCN: EAR99

# CV8 SERIES CRYOGENIC VALVES SUPPLEMENT BALANCED PLUG

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## **INTRODUCTION**

This Installation, Operation, and Maintenance Manual is intended to be used as a supplement to IOM 17/2.5.3. It covers installation, operation, and maintenance procedures for a Leslie Controls, Inc. product. CPC-Cryolab reserves right to update this manual and other product information concerning installation, operation, and/or maintenance, at any time and without obligation to notify product owners of such changes.

CPC-Cryolab is not responsible for injury to personnel or product damage due to improper installation, operation, and/or maintenance. All installation, operation, and maintenance procedures should only be performed by trained/certified personnel. All personnel performing these procedures should completely and carefully read and understand all supplied materials before attempting procedures. All personnel should pay strict attention to all Notes, Cautions, and Warnings that appear within procedures detailed in this manual.

CPC-Cryolab welcomes user input as to suggestions for product or manual improvement.

## **CONTACT INFORMATION**

For information concerning warranties, or for questions pertaining to installation, Operation or maintenance of CPC-CRYOLAB products, contact:

CPC-CRYOLAB  
4430 E. Adamo Dr. #305  
Tampa, FL 33605

USA Phone: (813) 644-3764

To order replacement parts, contact CPC-Cryolab at address listed above.

Note: Please include model and serial number of units for which parts are being ordered. If ordering by phone, please have this information readily available.

## **GENERAL NOTES AND WARNINGS**

### **Notes:**

- If questions are not answered by this manual, or if specific installation, operation, and/or maintenance procedures are not clearly understood, contact CPC-Cryolab for clarification before proceeding.
- If unit is damaged during installation, operation, or maintenance, complete following steps:
  1. Turn off and lock out all supply to unit in an approved manner, including incoming valves.
  2. Contact in-house maintenance personnel or CPC-Cryolab for instructions.

NOTE: Throughout this manual, warnings will be denoted by BOXES

### **CAUTION!**

Piping system must be adequately designed and supported to prevent extraordinary loads to pressure equipment.

It is strongly recommended that this document and IOM 17/2.5.3 be reviewed before attempting any installation, operation, or maintenance procedures.

**CAUTION!**

*Serious injury or death can occur if not handled by properly trained personnel. Please consult the manufacturer with any questions prior to conducting work on these*

**MAINTENANCE**

**WARNING!**

*Injury or death can occur due to failure to completely isolate equipment from all sources of pressure before beginning disassembly. Do not proceed until valve has been completely isolated from the process and vented to atmospheric*

**GENERAL NOTES FOR MAINTENANCE**

To remove or install the balanced stem/plug topworks assembly from or into the valve follow the instructions in the maintenance section of IOM 17/2.5.3.

To replace the seat disc on the plug, follow the instructions in the maintenance section of IOM 17/2.5.3.

Apply Krytox® or any other suitable lubricant to all threads and O-rings prior to reassembly. NOTE: Lubricant must be compatible with process fluid.

Please refer to Figure 1, Figure 2, & Figure 3, for a basic illustration of plug assembly and safety wire. The number in parenthesis refers to the item number in the specified Figures

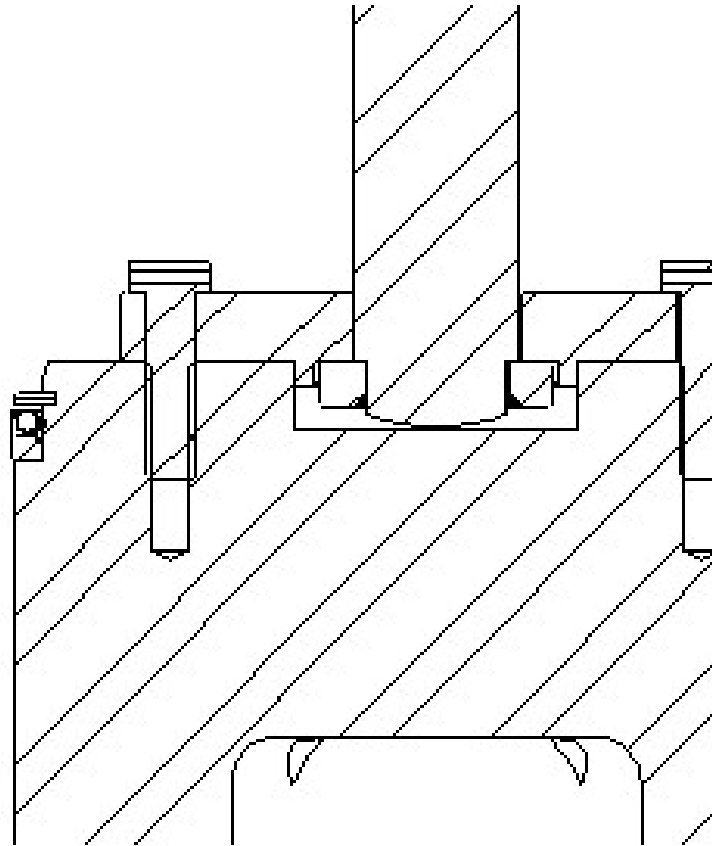
**PLUG SEAL REMOVAL**

To remove the plug seal(s) (5) from the plug (1) (see Figure 1 & Figure 2), remove the safety wire from plug retainer bolts (2) then loosen and remove plug retainer bolts. Next remove the retaining ring(s) (4) then the plug seal(s) (5) by sliding then off the plug (1). Take care not to scratch the plug sealing surfaces.

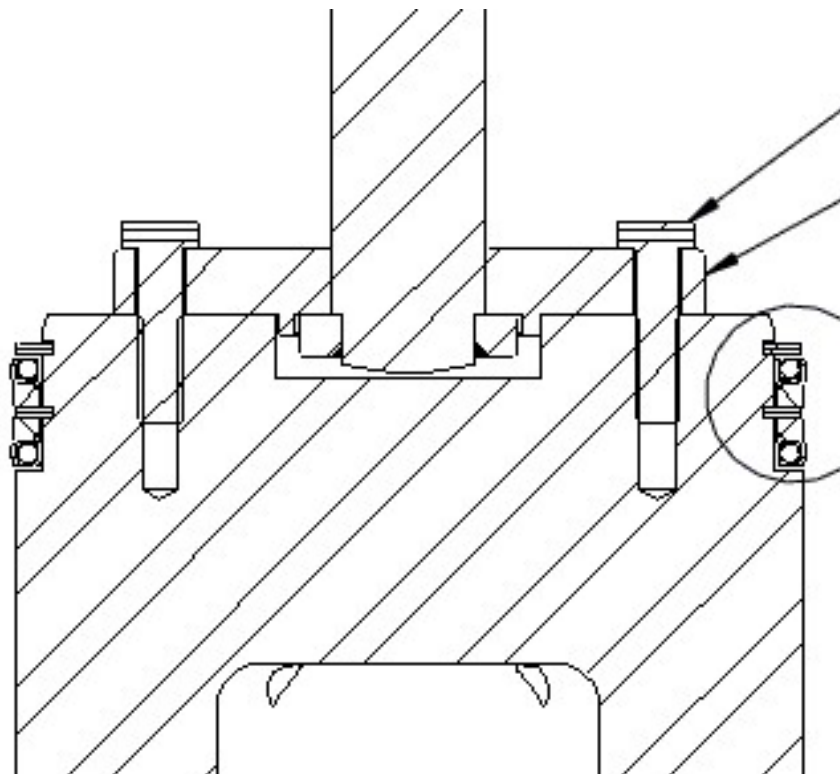
**PLUG SEAL INSTALLATION**

*Verify plug seal (5) orientation per Figure 1 (for single seal configuration) or Figure 2 (for dual seal configuration) prior to installation, proper orientation is critical to valve shut-off performance.*

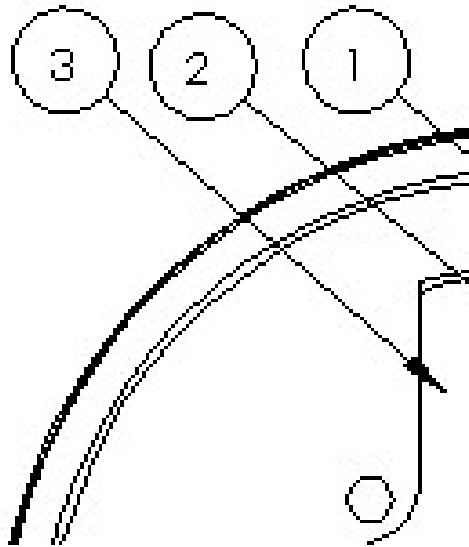
To install the plug seal(s) (5) onto the plug (1) (see Figure 1 & Figure 2), slide plug seal(s) over plug (1) then install retaining ring(s) (4). Next align plug retainer (3) holes with plug (1) holes and install plug retainer bolts (2). Take care not to scratch the plug sealing surfaces. Tighten plug retainer bolts (2) to 60 in-lbs then safety wire per Figure 3.



**Figure 1 - Plug Seal Orientation View**



**Figure 2 - Dual Plug Seals Orientation View**



**Figure 3 - Safety Wire of Plug Retainer Bolts**

*It is solely the responsibility of the system designer and the user to select products and materials suitable for their specific application requirements and to ensure proper installation, operation, and maintenance of these products. Assistance shall be afforded with the selection of the materials based on the technical information supplied to CPC-Cryolab™; however, the system designer and user retain final responsibility. The designer should consider applicable Codes, material compatibility, product ratings and application details in the selection and application. Improper selection, application or use of the products described herein can cause personal injury or property damage. If the designer or user intends to use the product for an application or use other than originally specified, he must reconfirm that the selection is suitable for the new operating conditions.*