



*Installation, Operation, and
Maintenance Manual*

***Welker[®] Check Valve
Model
CV-K***

***Drawing No.: AD021AD
Manual No.: IOM-182***

The information in this manual has been carefully checked for accuracy and is intended to be used as a guide for the installation, operation, and maintenance of the Welker[®] equipment described above. Correct operating and/or installation techniques, however, are the responsibility of the end user. Welker[®] reserves the right to make changes to this and all products in order to improve performance and reliability.

This manual is intended to be used as a basic installation and operation guide for the Welker[®] Check Valve, CV-K. For comprehensive instructions, please refer to the IOM Manuals for each individual component. A list of relevant component IOM Manuals is given in the Appendix section of this manual.

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Section 1: SPECIFICATIONS

1.1 INTRODUCTION

We appreciate your business and your choice of Welker[®] products. The installation, operation, and maintenance liability for this product becomes that of the purchaser at the time of receipt. Reading the applicable *Installation, Operation, and Maintenance (IOM) Manual* prior to installation and operation of this equipment is required for a full understanding of its application and performance prior to use.*

If you have any questions, please call 1-800-776-7267 (USA) or 1-281-491-2331.

Notes, Cautions, and Warnings



Notes emphasize information and / or provide additional information to assist the user.



Caution messages appear before procedures that, if not observed, could result in damage to equipment.



Warning messages appear before procedures that, if not observed, could result in personal injury.

*The following procedures have been written for use with standard Welker[®] parts and equipment. Assemblies that have been modified may have additional requirements and specifications that are not listed in this manual.

1.2 PRODUCT DESCRIPTION

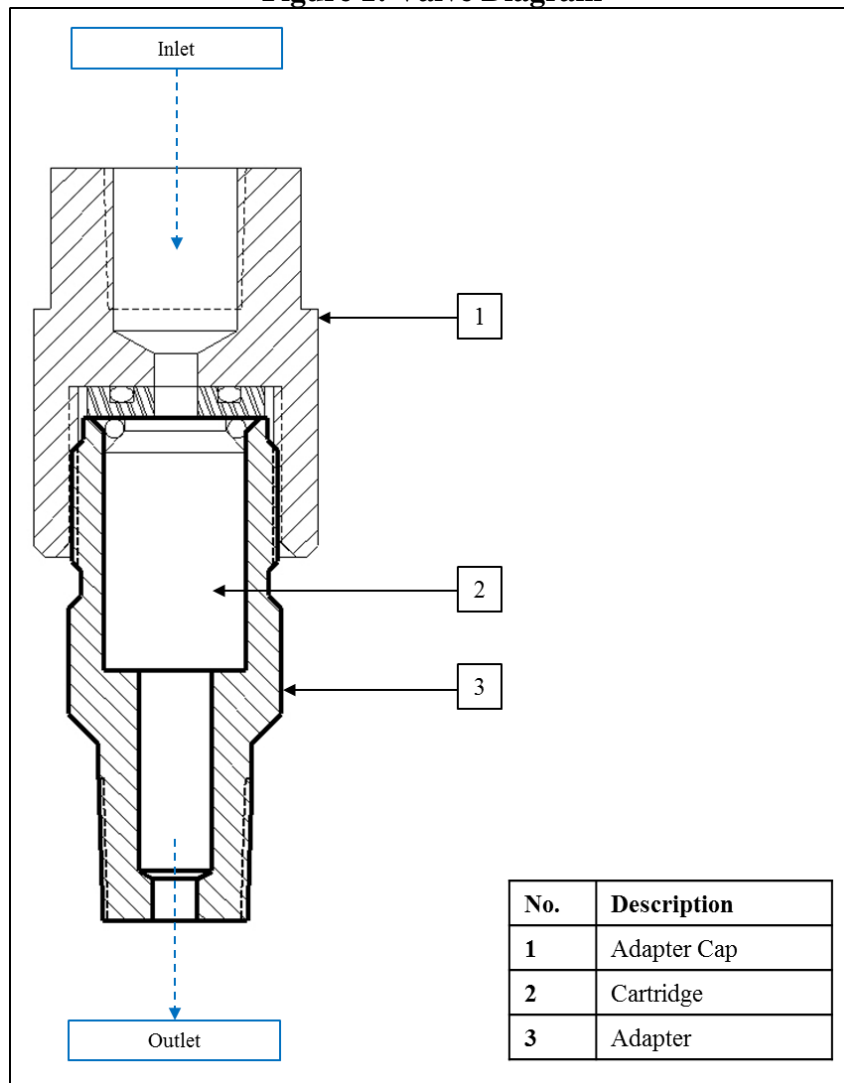
The Welker[®] CV-K Check Valve is a cartridge valve designed to allow product flow in one direction only. The poppet is spring-loaded to remain shut and will only operate once the upstream or inlet pressure exceeds the tension on the poppet; this is referred to as the “cracking pressure.” When the upstream or inlet pressure falls below downstream or outlet pressure, the Flexible Seal Set[™] ensures bubble-tight shutoff of the liquid or gas.

1.3 SPECIFICATIONS

Table 1: Valve Specifications	
Materials of Construction	316/316L Stainless Steel, 303 Stainless Steel (Cartridge), Viton [®] , Buna, PTFE Other Options Available
Maximum Allowable Operating Pressure	3000 psi @ -20° F to 100° F (207 bar @ -28° C to 37° C)
Cracking Pressure Spring Range	10 PSI (0.7 bar)
Inlet Connection	1/4" FNPT
Outlet Connection	1/4" MNPT

1.4 VALVE DIAGRAM

Figure 1: Valve Diagram



REFER TO *FIGURE 1* AND DRAWING *AD021AD* THROUGHOUT THIS MANUAL.

Section 2:

INSTALLATION & OPERATIONS

2.1 BEFORE YOU BEGIN



After unpacking the unit, check the equipment for compliance and for any damage that may have occurred during shipment. **Claims for damage caused during shipment must be initiated by the receiver and directed to the shipping carrier.** Welker[®] is not responsible for any damage caused by mishandling by the shipping carrier.



When sealing fittings with PTFE tape, refer to the proper sealing instructions for the tape used.

2.2 INSTALLATION

1. Wrap the threads with PTFE tape.
2. Install the check valve in the line where single-direction flow is desired.
3. Install the inlet in the upstream direction.
4. The unit is now installed and operational.

Section 3: MAINTENANCE

3.1 BEFORE YOU BEGIN

1. Welker® recommends that the unit have regular maintenance under normal operating conditions: for *gas sampling* every six (6) months; and for *liquid sampling* every twelve (12) months. In cases of severe service, dirty conditions, excessive usage, or other unique applications that may lead to excess wear on the unit, a more frequent maintenance schedule may be appropriate.
2. Prior to maintenance or disassembly of the unit, it is advisable to have a repair kit available for repairs of the system in case of unexpected wear or faulty seals.

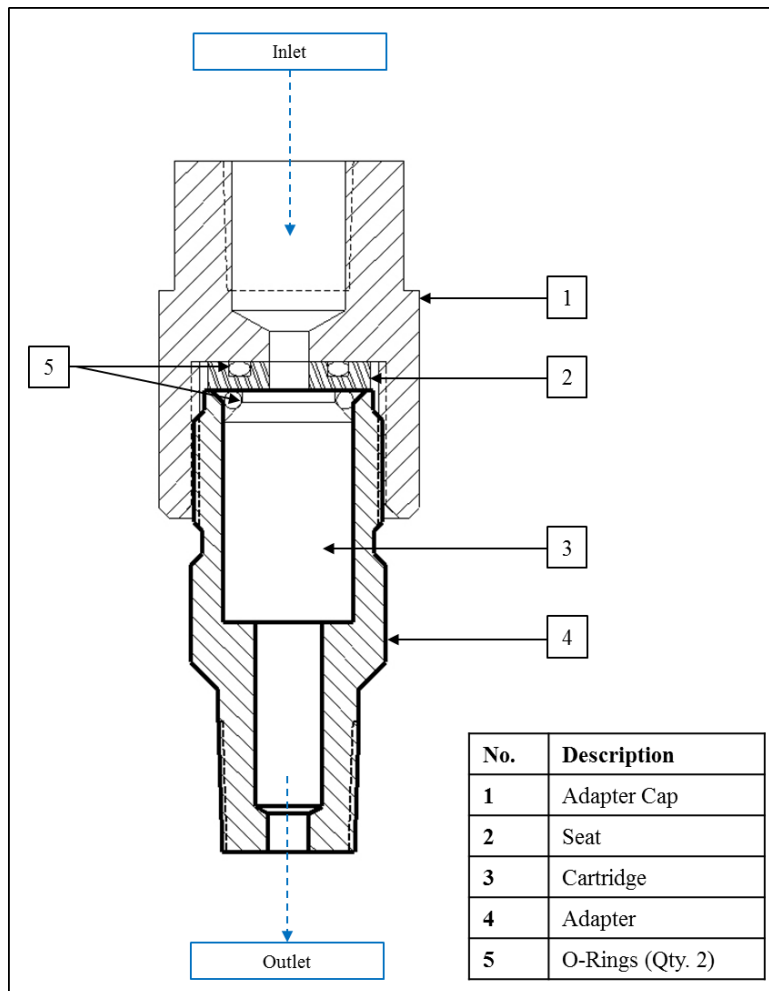


New seals supplied in spare parts kits are not lubricated. They should be lightly lubricated before installation. Welker® recommends Dow Corning® 111 (DC 111) or an equivalent lubricant for use with this unit.

3. All maintenance and cleaning of the unit should be performed on a smooth, clean surface.

3.2 MAINTENANCE

Figure 2: Maintenance Diagram



1. Depressurize the line in which the check valve is installed.
2. Disconnect the upstream and downstream connections.
3. Unscrew the adapter cap from the adapter.
4. Remove the seat from the adapter.
5. Replace the O-ring on the seat.
6. Replace the cartridge.
7. Place a new O-ring on the cartridge.
8. Reattach the seat to the adapter.
9. Screw the adapter cap onto the adapter.
10. Reconnect the upstream and downstream connections.

APPENDIX

ATTACHED DOCUMENTS:

Welker[®] *Installation, Operation, and Maintenance* Manuals suggested for use with this unit:

- None

Other *Installation, Operation, and Maintenance* Manuals suggested for use with this unit:

- Kepner Cartridge Check Valves (Welker[®] IOM-V078)

Welker[®] drawings and schematics suggested for use with this unit:

- Assembly Drawing: AD021AD



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