PRODUCT DESCRIPTION

- Designed to allow product flow in one direction only.
- Ball is spring-loaded to remain shut. Will only operate once the upstream or inlet pressure exceeds the tension on the spring—a physical state called "cracking pressure."
- Liquid or gas shutoff is achieved when the upstream or inlet pressure falls below the downstream or outlet pressure and the ball seats on an O-ring, forming a positive seal.

For inquiries regarding check valve calculations, please contact our Service Department: 281.207.1887

SPECIFICATIONS

Materials of Construction
316/316L Stainless Steel, Ceramic, PTFE, FKM (Others Available)

Maximum Allowable Inlet Pressure
6000 psig (*413.6 barg*)

Temperature Range
-20 °F to 120 °F *(-28.8 °C to 48.8 °C)*
Temperature Range Might Vary Based on Seal Material Selection

Spring Range Options
Up to 50 psig (*0–3.4 barg*)

Connections
Inlet: ¼" or ½" MNPT or FNPT
Outlet: ¼" MNPT or FNPT

Approximate Dimensions
$3\frac{3}{8}$" x ¾" x ¾" (L x W x H)

Approximate Weight
½ lb

Maintenance Schedule
Every 12 Months
Severe Service, Dirty Conditions, Excessive Usage: More Frequently

Options
No Spring
CE Compliance

The following procedures have been written for use with standard Welker® parts and equipment. Assemblies that have been modified might have additional requirements and specifications that are not listed in this document.

If you received a damaged CV-1 Check Valve, please contact a Welker® representative immediately.

For all product inquiries, please contact our Service Department: 281.207.1887

INSTALLATION AND MAINTENANCE MANUAL
WELKER® CV-1 CHECK VALVE
IOM-267 | REV. 0 | 02/17/2025

The installation, operation, and maintenance liability for this equipment becomes that of the purchaser at the time of receipt. Reading the instructions that comprise IOM-267 prior to installation and operation of this equipment is required for a full understanding of its application and performance prior to use.

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

CV-1: INSTALLATION

Installing the CV-1 Check Valve

1. Wrap the threads with PTFE tape.
2. Install the CV-1 Check Valve in the line where single-direction flow is desired.

For models WITHOUT a spring, vertical installation is required.

3. Install the inlet in the upstream direction (see *Flow d*irection in *Figure 1*).
4. The CV-1 is now installed and operational.

CV-1: MAINTENANCE

Before You Start

1. Prior to maintenance or disassembly of the unit, it is advisable to have a repair kit available in case of unexpected wear or faulty seals.
2. All maintenance and cleaning of the unit should be performed on a smooth, clean surface.
3. Welker® recommends having an adjustable wrench and seal pick available for use during maintenance.

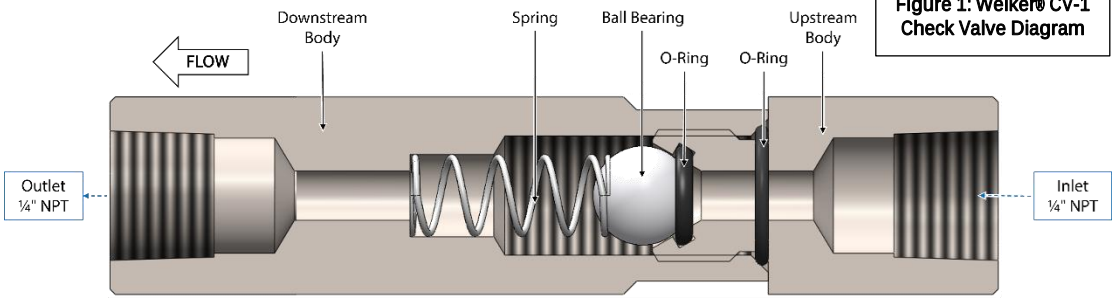


Figure 1: Welker® CV-1 Check Valve Diagram

New seals supplied in spare parts kits should be lightly lubricated before being installed to ease the installation of the seals and reduce the risk of damage when positioning them on parts. Wipe excess lubricant from the seals, because it might adversely affect analytical results.

For sample-exposed seals, Welker® recommends non-hydrocarbon-based lubricants such as Krytox®.
For non-sample-exposed seals, Welker® recommends lubricants such as Molykote® 111.

Maintaining the CV-1

1. Depressurize the line in which the CV-1 Check Valve is installed.
2. Disconnect the upstream and downstream connections.
3. Unscrew the upstream body from the downstream body (*Figure 1*).
4. Remove the ball bearing (*Figure 1*).
5. Remove the spring (*Figure 1*).
6. Replace the O-rings on the upstream body (*Figure 1*).
7. Inspect the ball bearing for scratches or other damage. If scratches or other damage are present, replace the ball bearing.
8. Inspect the spring for scratches or other damage. If scratches or other damage are present, replace the spring.
9. Install the spring to the downstream body.
10. Place the ball bearing in the downstream body and on top of the spring (*Figure 1*).
11. Screw the upstream body into the downstream body.
12. Maintenance is now complete and the CV-1 can be reinstalled. See *Installation*, above, for instructions on installing the CV-1 and returning it to operation.

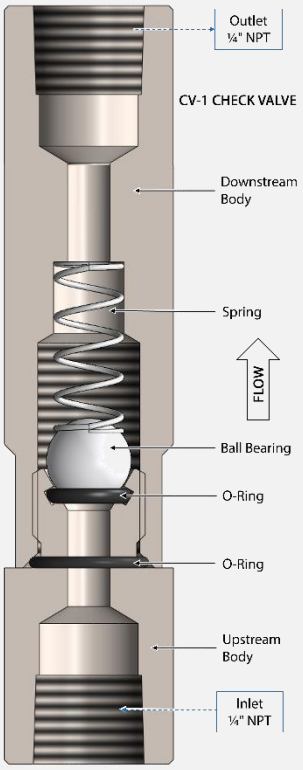
PRODUCT DESCRIPTION

- Designed to allow product flow in one direction only.
- Ball is spring-loaded to remain shut. Will only operate once the upstream or inlet pressure exceeds the tension on the spring—a physical state called "cracking pressure."
- Liquid or gas shutoff is achieved when the upstream or inlet pressure falls below the downstream or outlet pressure and the ball seats on an O-ring, forming a positive seal.

For inquiries regarding check valve calculations, please contact our Service Department: 281.207.1887

The installation, operation, and maintenance liability for this equipment becomes that of the purchaser at the time of receipt.
Reading the instructions that comprise IOM-267 prior to installation and operation of this equipment is required for a full understanding of its application and performance prior to use.

Welker® CV-1 Check Valve Diagram



If you received a damaged CV-1 Check Valve, please contact a Welker® representative immediately.

For all product inquiries, please contact our Service Department: 281.207.1887

WELKER

IMPORTANT SAFETY INSTRUCTIONS
WELKER® CV-1 CHECK VALVE
IOM-267 | REV. 0 | 02/17/2025

BEFORE YOU BEGIN
Read These Instructions Completely and Carefully

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

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

STOP

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

The instructions that comprise IOM-267 are intended to be used as basic setup and installation guidelines for the Welker® Check Valve, Model CV-1. The information in IOM-267 has been carefully checked for accuracy and is intended to be used as guidelines for the setup and installation of the Welker® equipment described in IOM-267. Correct setup, installation, and operation, however, are the responsibility of the end user. Welker® reserves the right to make changes to IOM-267 and all products in order to improve performance and reliability.

SAVE INSTRUCTIONS
Save these Safety instructions and the instructions that comprise IOM-267 for local inspectors' use.

OBSERVE
Observe all governing codes and ordinances.

NOTE TO INSTALLER
Leave these Safety instructions and the instructions that comprise IOM-267 with the end user.

NOTE TO END USER
Keep these Safety instructions and the instructions that comprise IOM-267 for future reference.

NATURE OF INSTALLATION
Installation of this check valve is of a mechanical nature.

INSTALLATION RESPONSIBILITY
Proper installation is the responsibility of the installer. Product failure due to improper installation is not covered under the warranty.

WELKER

13839 West Bellfort Street
Sugar Land, Texas 77498
281.491.2331 | welker.com