

# TrueClean Vent Check

Installation, Operation, and Maintenance Manual



# TrueClean Vent Check

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# Safety

## Important Safety Information

Read this manual carefully to learn how to install, operate, and maintain this equipment. Failure to do so could result in personal injury and/or equipment damage.




Safety is very important!

### **Do not attempt to modify any TrueClean product.**

Doing so could create unsafe conditions and will void all warranties.

### **Do Not place any TrueClean products in an application where general product service ratings are exceeded.**

The words **DANGER**, **WARNING**, and **CAUTION** and their meanings, as used within these instructions, are listed below:

 <b>DANGER</b>	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. The word Danger is used in only the most extreme at-risk cases and warrants immediate action.
 <b>WARNING</b>	Indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury. This symbol is used for moderately at-risk cases and warrants immediate action.
 <b>CAUTION</b>	Indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. This symbol may also be used to alert against an unsafe operating or maintenance practice.

If, at any point during operation a Danger, Warning, or Caution indication is present, the operator should immediately take steps to resolve the problem and/or seek assistance from a supervisor.

**Do not remove labeling on any TrueClean product.** Immediately replace any missing labels right away.

## Disclaimer of Liability

TrueClean does not assume responsibility and expressly disclaims liability for loss, damage, or expenses that arise in any way from the installation, operation, use, or maintenance performed in accordance with this manual. TrueClean assumes no responsibility for any infringement of patents or other rights of third parties that may result from use of the module. No license is granted by implication or otherwise under any patent or patent rights.

TrueClean reserves the right to make changes to the product, specifications, or this manual without prior notice.

# Introduction

## **Thank you for purchasing a TrueClean Product.**

This manual contains installation, operation, and maintenance instructions for TrueClean's Vent Check.

## **About This Manual**

This manual covers the TrueClean Vent Check. The Vent Check is designed to need little in the way of routine maintenance, but care and attention should be given to the instructions provided in this manual.

If, at any point, you have questions or concerns regarding your Vent Check, please contact your TrueClean distributor.



# Introduction

## **Warranty**

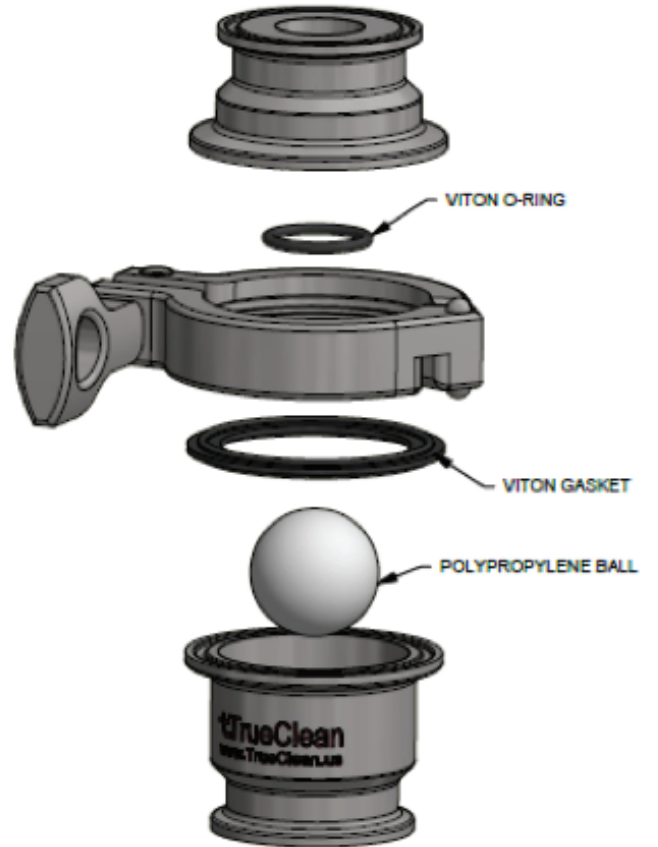
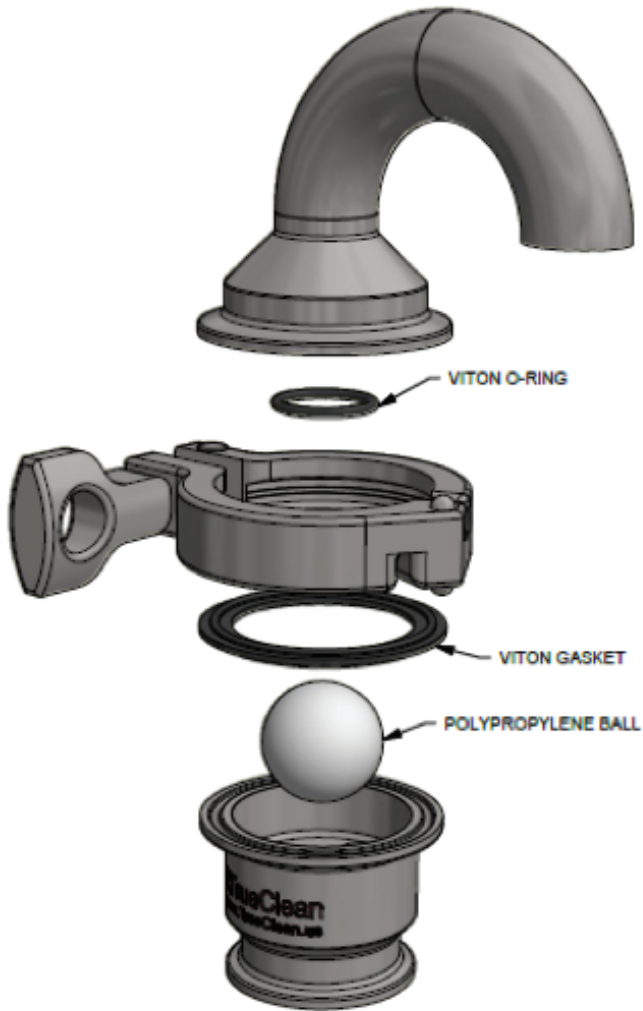
Seller warrants its products to be free from defect in materials and workmanship for a period of one (1) year from the date of shipment. This warranty shall not apply to products which require repair or replacement due to normal wear and tear or to products which are subjected to accident, misuse or improper maintenance. This warranty extends only to the original Buyer. Products manufactured by others but furnished by Seller are exempted from this warranty and are limited to the original manufacturer's warranty.

Seller's sole obligation under this warranty shall be to repair or replace any products that Seller determines, in its discretion, to be defective. Seller reserves the right either to inspect the products in the field or to request their prepaid return to Seller.

Seller shall not be responsible for any transportation charges, duty, taxes, freight, labor or other costs. The cost of removing and/or installing products which have been repaired or replaced shall be at Buyer's expense.

Seller expressly disclaims all other warranties, express or implied, including without limitation any warranty of merchantability of fitness for a particular purpose. The foregoing sets forth Seller's entire and exclusive liability, and Buyer's exclusive and sole remedy, for any claim of damages in connection with the sale of products. In no event shall Seller be liable for any special consequential incidental or indirect damages (including without limitation attorney's fees and expenses), nor shall Seller be liable for any loss of profit or material arising out of or relating to the sale or operation of the products based on contract, tort (including negligence), strict liability or otherwise.

# Components



# BOM Part Numbers

<b>Part Number</b>	<b>Replacement Part Number</b>	<b>Description</b>	<b>Qty</b>
TVC-10G-E-316	CS000229	BOTTOM SEAT 1.5" X 2" TC 316L TRUCCLEAN VENT CHECK	1
	CS000600	VENT CHECK TOP ASSEMBLY, 2" TC X 1" TUBE 316L TRUCCLEAN	1
	40MPE-2	GASKET 2" TC EPDM CLASS VI	1
	88117019	BALL 1.25" POLYPROPYLENE FOR GC60ARV AIR VENT	1
	A13MHM-2-S	CLAMP HEAVY TWO PIECE 2" TC	1
	FDA-118-E	O-RING EPDM # 118 70 DURO FDA APPROVED	1
TVC-10G-SFY-316	CS000229	BOTTOM SEAT 1.5" X 2" TC 316L TRUCCLEAN VENT CHECK	1
	CS000600	VENT CHECK TOP ASSEMBLY, 2" TC X 1" TUBE 316L TRUCCLEAN	1
	88117019	BALL 1.25" POLYPROPYLENE FOR GC60ARV AIR VENT	1
	A13MHM-2-S	CLAMP HEAVY TWO PIECE 2" TC	1
	40MP-SFY-2	GASKET 2" TC VITON CLASS VI	1
	FDA-118-SFY	O-RING VITON # 118 70 DURO FDA APPROVED	1
TVC-10M-E-316	CS000229	BOTTOM SEAT 1.5" X 2" TC 316L TRUCCLEAN VENT CHECK	1
	CS000231	TOP OR BOTTOM SEAT 1.5" X 2" TC 316L TRUCCLEAN VENT CHECK	1
	88117019	BALL 1.25" POLYPROPYLENE FOR GC60ARV AIR VENT	1
	A13MHM-2-S	CLAMP HEAVY TWO PIECE 2" TC	1
	40MPE-2	GASKET 2" TC EPDM CLASS VI	1
	FDA-118-E	O-RING EPDM # 118 70 DURO FDA APPROVED	1
TVC-10M-SFY-316	CS000229	BOTTOM SEAT 1.5" X 2" TC 316L TRUCCLEAN VENT CHECK	1
	CS000231	TOP OR BOTTOM SEAT 1.5" X 2" TC 316L TRUCCLEAN VENT CHECK	1
	88117019	BALL 1.25" POLYPROPYLENE FOR GC60ARV AIR VENT	1
	A13MHM-2-S	CLAMP HEAVY TWO PIECE 2" TC	1
	40MP-SFY-2	GASKET 2" TC VITON CLASS VI	1
	FDA-118-SFY	O-RING VITON # 118 70 DURO FDA APPROVED	1

<b>Kit Part Number</b>	<b>Part Number</b>	<b>Description</b>	<b>Qty</b>
TAE-E-SK	40MPE-2	GASKET 2" TC EPDM CLASS VI	1
	88117019	BALL 1.25" POLYPROPYLENE FOR GC60ARV AIR VENT	1
	FDA-118-E	O-RING EPDM # 118 70 DURO FDA APPROVED	2
TVC-E-SK	40MPE-2	GASKET 2" TC EPDM CLASS VI	1
	88117019	BALL 1.25" POLYPROPYLENE FOR GC60ARV AIR VENT	1
	FDA-118-E	O-RING EPDM # 118 70 DURO FDA APPROVED	2

# Installation

## Technical Data:

Maximum pressure: 145 psig  
Maximum temperature: 194°F  
Ball material: Polypropylene  
Ball Density: 0.033 lbs/in<sup>3</sup>

## Chemical Compatibility

To verify Vent Check will work with your specific application, reference our [Chemical Compatibility Chart](#) to help in the selection of elastomers.

## Installation:



### WARNING

Prior to installation verify the piping system is not pressurized and that the system has been completely drained.

For proper function of the TrueClean Vent Check valve, the following items should be observed:

1. Verification of the product density is greater than the ball density listed in the technical data.
2. Vertical installation of the TrueClean Vent Check valve assembly.
3. Use a Tri-Clamp clamp and gasket to attach the TrueClean valve to the piping system.

Note: It is advised to use a short outlet tee for installation. Although this valve is designed to be Cleaned-Out-Of-Place (COP), the tee should be short to ensure proper cleaning during Clean-In-Place (CIP).





# Process of Operation

## Application:



### WARNING

The Vent Check should not be used as a tank vent.

The Vent Check is a sanitary bi-directional air relief valve. It allows air in and out while preventing product from leaking out. The Vent Check may be utilized in various manners, specifically:

*High point vent* – Installed vertically on the top of a pipeline or container. This application can be used to bleed a pipeline of air pockets that have formed on account of new piping installation or other means of air entrainment in the process.

*Check valve* - This occurs when product flows into the valve body, moving the polypropylene ball upwards to form a tight seal with the O-ring.

*Air Eliminator* - To act as an air eliminator, the valve is installed ahead of a pump on top of the inlet pipe. This prohibits the pump from drawing a vacuum because of the spontaneous release of air on the suction side of the pump which prevents cavitation caused by air bubbles that would otherwise be drawn in by the pump.

*Vacuum breaker/low CFM breather* – The unique lower seat design allows the Vent Check to allow air into the pipeline preventing vacuum conditions. The airflow is equivalent to that of 1" tubing.

## Working Principle:

The Vent Check is composed of a vent top clamped to a vent bottom with a freely moving polypropylene ball. The ball seals or opens the Vent Check depending on process conditions.

In **Figure A**, the ball rests against the lower seat, air can flow in and out of the valve due to the specially designed vent bottom.

In **Figure B**, the ball, which is lighter than water, closes against the upper seat when encountering product. This seals air from entering and product from escaping the vent.

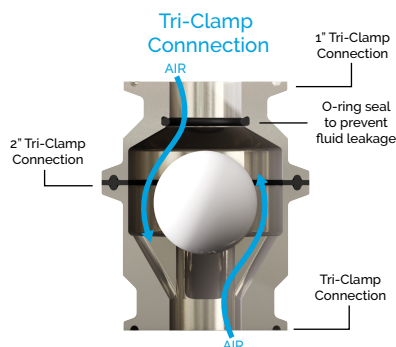


Figure A

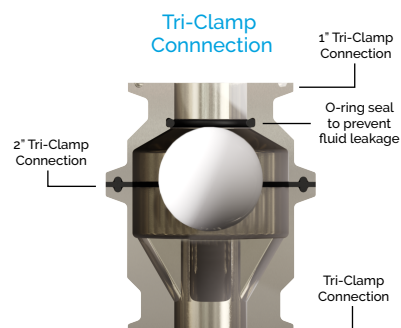


Figure B

# Maintenance



## WARNING

Prior to any maintenance, depressurize and drain the piping system.

1. Disconnect the TrueClean Vent Check from the piping system. To do this remove the process line clamp by turning the line clamp wingnut counter-clockwise, and remove the gasket connecting the Vent Check to the process tubing.
2. Use a 1" cap and clean gasket to close the process.
3. Before disassembling, visually check the valve for any corrosion or damage.
4. Disassemble the Vent Check by removing the valve body clamp. Turn the body clamp wingnut counter-clockwise until the clamp can be removed. Then remove the clamp and gasket.
5. Inspect the valve surfaces for damage. If there is damage to the surface, polishing or replacement may be required depending on the severity of damage. If in doubt, contact your TrueClean distributor for assistance.
6. Remove the O-ring from the groove in the vent top.



## CAUTION

An O-ring pick tool is necessary to safely remove the O-ring without causing damage to the O-ring or the vent top. Failure to do this may void the warranty.

7. Inspect the gasket, O-ring and ball. Replace them if there are any signs of damage.
8. Complete a final inspection, looking for corrosion or damage within the device.
9. Apply a food-grade FDA approved lubricant to the O-ring and install it in the proper O-ring groove inside the vent top using the O-ring pick tool to assist with install.
10. Reassemble the Vent Check.
11. Ensure the process is not operating and the area is safe. Remove the cap installed earlier from the process line.
12. Install the Vent Check and line clamp back into the piping system.

# Cleaning

The TrueClean Vent Check is designed for COP cleaning only. Therefore, follow all steps outlined in the maintenance section above, paying special attention to the warning and caution. While the valve is disassembled, standard operation procedures at the respective facilities should be followed to clean the valve.

# Chemical Compatibility

To verify Vent Check will work with your specific application, reference our [Chemical Compatibility Chart](#) to help in the selection of elastomers.

# Spare Parts List

O-ring, viton part number FDA-118-SFY  
Gasket, viton part number 40MP-SFY-2  
Ball, polypropylene part number 88117019

O-ring, EPDM part number FDA-118-E  
Gasket, EPDM part number 40MPE-2

# Customer Notes

A large, empty rectangular box with a thin grey border, intended for customer notes.