

# Installation, Operation & Maintenance Manual

## Sentry Carbon Canister Manual Sampling Accessories

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[sentry-equip.com](http://sentry-equip.com)

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 COMPANY WITH  
 QUALITY SYSTEM  
 CERTIFIED BY DNV GL  
 = ISO 9001 =


### Standard Warranty

Sentry Equipment Corp ("Seller") warrants products manufactured by it and supplied hereunder ("Products") to be free from defects in workmanship and, to the extent materials are selected by Seller, to be free from defects in materials, in each case for a period as defined in the table below:

Brand	Product Line	Warranty Period
Sentry®	1. Automatic Sampling 2. Corrosion Monitoring 3. Manual Sampling 4. Sample Conditioning 5. Sampling & Analysis Systems 6. Replacement Parts (without expiration dates)	Eighteen months from date of shipment or twelve months from startup, whichever occurs first
Waters Equipment	1. Sampling & Analysis Systems 2. Replacement Parts (without expiration dates)	Twelve months from date of shipment

To view the full warranty, go to [www.sentry-equip.com/warranty](http://www.sentry-equip.com/warranty).



Do not install, maintain, or operate this equipment without reading, understanding, and following the appropriate Sentry Equipment Corp instructions. Otherwise, injury, damage, or both may result.

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### Limit of Liability

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### Note

The information contained in this document is subject to change without notice.

## Safety Information

Please read the entire manual before attempting to unpack, set up, or operate this product. Pay careful attention to all Warnings, Cautions, and Notes. Failure to do so could result in serious personal injury and/or equipment damage.

### Use of Hazard Information

If multiple hazards exist, the signal word corresponding to the greatest hazard shall be used.

### Definitions

#### ⚠ DANGER

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

#### ⚠ WARNING

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

#### ⚠ CAUTION

**CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

#### NOTICE

**NOTICE** is used to address practices not related to personal injury.

#### NOTE

Information that requires special emphasis.

#### TIP

Alternate techniques or clarifying information.

**SHALL:** This word is understood to be mandatory.

**SHOULD:** This word is understood to be advisory.

## General Safety Precautions

### Product Selection, Installation, and Use

#### ⚠ WARNING

Improper selection, installation, or use can cause personal injury or property damage. It is solely the responsibility of users, through their own analysis and testing, to select products suitable for their specific application requirements, ensure they are properly maintained, and limit their use to their intended purpose.

Follow proper local, state, and federal regulations for proper installation and operational requirements.

Always use caution and common sense when working with any chemical. Read the product label and Material Safety Data Sheets (MSDS) carefully and follow the instructions exactly.

### Potential Equipment Hazards

#### ⚠ WARNING

**Hot surfaces!** This equipment may have very hot surfaces. If an operator contacts a hot surface, injury may occur. Use protective clothing to prevent injury. If other equipment comes in contact with a hot surface, damage to the equipment may occur. Ensure the area around this equipment is kept clear to prevent this damage from occurring.

**High pressures!** This equipment may contain fluids at very high pressures. Prior to installing, removing, or maintaining this equipment, ensure that the equipment is isolated from all connecting piping, the equipment is depressurized, the contents have been drained, and the equipment is cool.

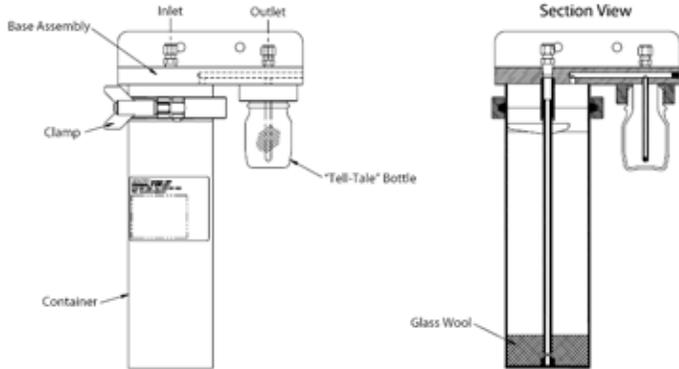
## General Description

The Sentry® carbon canister with telltale assembly is designed to absorb hydrocarbon gases vented from Sentry manual low-emission samplers.

The gas vent of the sampler panel is connected to the inlet of the carbon canister assembly. The gases then pass through a volume of activated carbon, where hydrocarbons such as benzene, H<sub>2</sub>S (hydrogen sulfide) and others are absorbed. To remove these, specially designed products such as activated carbon or impregnated activated carbon are used. In these instances, the carbon canister assembly is filled with activated carbon or impregnated activated carbon; both have a finite ability to remove hydrocarbons and other gases.

The carbon canister with telltale assembly is designed to let the operator know when the carbon has been spent. The carbon canister has a small bottle connected to its system which contains potassium permanganate. The telltale assembly runs from the canister to the bottle. The potassium permanganate is purple, and when the carbon is spent, it turns a brownish color, indicating that the operator needs to recharge the carbon canister. The carbon canister assembly is designed for easy recharging. See the recharging instructions in this manual.

The life of the product is dependent on usage, gas concentrations and the volumetric flow of the gas.



## Installation

1. Mount the carbon canister assembly securely to a stand or wall.
2. Connect the sampler vent tube to the inlet of the carbon canister.
3. Connect the tube to the outlet of the carbon canister and direct it to a location defined by local protocol.

## Operation

1. Remove the clamp from the carbon canister, allowing the container to be removed from the base assembly.
2. Place approximately 2 in (uncompressed thickness) of glass wool at the bottom of the container.
3. Fill the container with activated carbon (or impregnated activated carbon) to about 1 in from the top of the container.
4. Replace the container.

### NOTICE

Prior to reinstalling the container, inspect the o-ring located at the top of the center tube of the canister. If there is visible wear or damage, replace the o-ring. When attaching the canister to the base assembly, use caution to prevent o-ring damage.

5. Reinstall the clamp.
6. Remove the glass telltale bottle from the base assembly.
7. Fill with telltale material to about 1 in from the bottom of the bottle.
8. Reinstall the bottle.
9. Place the unit into operation.
10. The activated carbon (or impregnated activated carbon) will remove substances from gases entering via the inlet. This media has a finite ability to remove these substances. When the media is no longer able to remove the substances, the substances are free to continue to the telltale bottle.
11. At the telltale bottle, the substances react with the telltale material and cause it to change color.
12. When this material is observed to change color, replace all materials (activated carbon or impregnated activated carbon, and telltale material).
13. Dispose of spent material in accordance with local protocol and per the advice of Material Safety Data Sheets.

## Parts & Accessories

The following parts are recommended.

Description	7-02989A & B (Viton® seals)	7-02989C (Kalrez® seals)
Glass bottle	4-05033D	4-05033D
Glass wool	4-04825A	4-04825A
O-ring (bottle adapter)	4-05138A	4-05138C
O-ring (inlet tube)	4-01970B	4-04820V
Gasket	4-05698C	4-06192A

## Customer Support

With proven sampling expertise since 1924, Sentry products and services provide business operations the critical insights to optimize process control and product quality. We deliver true representative sampling and analysis techniques to customers around the globe, empowering them to accurately monitor and measure processes for improved production efficiency, output, and safety. Standing behind our commitments, we are determined to tackle any application, anywhere.

We know that running an efficient operation isn't easy. It requires thorough, careful analysis of controlled, real-time data achieved through reliable, accurate, and repeatable process monitoring and measuring. By effectively conditioning, sampling, and measuring gas, liquid, slurry, powder, solids, steam, or water within their production environments, our customers obtain the critical insights they need to control and optimize their processes.

Yet, controlling your processes also means reliable customer support throughout the life cycle of your equipment.

- Customer Service—General information, warranty claims, order management.
- Installation Service—For systems that require specialized expertise upon installation.
- Technical Support—Troubleshooting, training, and technical manuals.
- Field Service & Retrofits—When a problem needs immediate attention.
- Replacements Parts & Consumables—Order your replacement parts and consumables.
- Sentry ProShield Services—Select from four ProShield Guardian service plans providing different levels of support to protect your large system investments with regularly scheduled maintenance.

To learn more, go to [www.sentry-equip.com/support](http://www.sentry-equip.com/support).