

Installation, Operation & Maintenance Manual

Sentry RC Series Cation Exchange Resin Columns

S-SW-IOM-00266-12 05-20


sentry-equip.com

966 Blue Ribbon Circle North, Oconomowoc, WI 53066 U.S.A. | +1-262-567-7256 | support@sentry-equip.com

 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.



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.

Copyright

© 2020 by Sentry Equipment Corp. All rights reserved. All product and company names are property of their respective owners. This document contains proprietary information. No part of this document may be photocopied or reproduced without the prior written consent of Sentry Equipment Corp.

Limit of Liability

Sentry Equipment Corp, its employees, agents, and the authors and contributors to this document specifically disclaim all liabilities and warranties, express or implied (including warranties of merchantability and fitness for a particular purpose), for the accuracy, currency, completeness, and/or reliability of the information contained herein and/or for the fitness for any particular use and/or for the performance of any material and/or equipment selected in whole or part with the user of/or in reliance upon information contained herein. Selection of materials and/or equipment is at the sole risk of the user of this publication.

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® Resin Column is a resin filled column that converts positive ions in the solution into hydrogen ions. By measuring the conductivity of the solution immediately before and after it has passed through the resin column, comparisons can be made between specific conductivity (before resin column) and cation conductivity (after resin column). The resin column is made from virgin polycarbonate (RC-100) or PETG (RC-101), acetal, polyethylene, and nitrile selected to ensure accurate sampling. The column is refillable with pre-measured resin bags

Installation

⚠ WARNING

This equipment must not be installed or used in any manner other than that which is specified in this manual. Read and understand all warnings and instructions before proceeding with installation.

Assembly

This package contains:

- (1) resin column
- (2) mounting clamps
- (2) pair of quick disconnect fittings
- the appropriate number of resin refill bags required for the specific model

Remove the quick disconnect fittings from the plastic bag and install them in the column using a liquid type thread sealant. Do not use thread seal tape. The other end of the quick disconnect is designed to be used with 1/8" I.D. tubing.

Locate the (2) quick release mounting brackets as required on required centers (see Figure 1, Dimension B).

Filling

⚠ WARNING

May cause eye irritation. Avoid contact with eyes. Wash thoroughly after handling. Spilled resin may cause falls. Avoid contact with strong oxidants.

1. If refilling, remove old resin from resin column.
2. Cut corner of resin refill bag.
3. Empty contents of the bag into the resin column.
4. Replace resin column cap and shake column to settle resin.
5. Open column and add additional resin until it is approximately 1/4" from the top. Do not fill to the top.
6. Remove any resin from the sealing surface and the threads.
7. Firmly secure the resin column cap and remount the resin column in the brackets.

Sentry Equipment recommends replacing the flow distribution disk and o-ring at every refill. See the "Spare Parts List" for part numbers.

Operation

The resin column is designed for water flow from top to bottom. Color change of the resin will progress from the top to the bottom with use. When the color change reaches the color indicator on the label (Figure 1), it is time to change the resin.

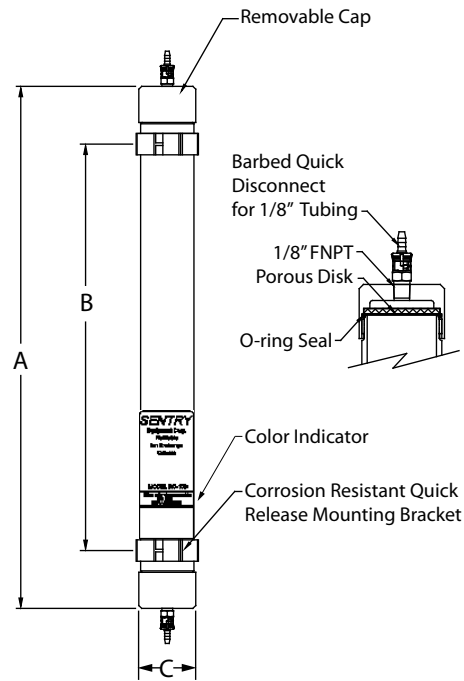
Maintenance

Maintenance consists of changing resin, porous disk and o-rings when color change reaches **Color Indicator**.

See Figure 1.

	DIM A	DIM B	DIM C
RC-100/RC-101	18-15/16" (465 mm)	14-1/4" (362 mm)	2" (51 mm)
RC-200	13-1/4" (337 mm)	8-7/8" (222mm)	3-1/8" (79 mm)
RC-400	23-9/16" (598 mm)	18-15/16" (481 mm)	3-1/8" (79 mm)

Figure 1. Resin Column Dimensions



Spare Parts List

Description	RC-100 RC-101	RC-200	RC-400
Cation Resin Refill Bag	2-03972A	2-03972A	2-03972A
# bags to refill column	1	2	4
Mounting clamp (2 required)	4-04869A	4-05263A	4-05263A
Kit (2 ea Porous disk & O-ring)	6-02503A	6-02503D	6-02503D
Porous disk	2-03892A	2-03892D	2-03892D
O-ring seal	4-04820C	4-05843Z	4-05843Z
Quick disconnect fittings (incl 2 ea male & female couplings)	6-02503B	6-02503B	6-02503B
Stainless steel barbed fittings (incl 2 ea compression fitting & insert)	6-02503C	6-02503C	6-02503C
Standard cap	2-03891D	2-07030C	2-07030C
Screw-on vented column cap	2-03891F	n/a	n/a

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.