

ASSE International

Listing Evaluation Criteria for

Point of Entry Reverse Osmosis Systems

Listing Evaluation Criteria

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Foreword

This foreword shall not be considered a part of the listing evaluation criteria (LEC); however, it is offered to provide background information.

ASSE standards and LECs are developed in the interest of consumer safety.

Point of entry reverse osmosis systems are being used to improve the drinking water quality in homes and businesses. This LEC complements ASSE 1087, *Performance Requirements for Commercial and Food Service Water Treatment Equipment Utilizing Drinking Water*, by providing test protocols to evaluate the contaminant reduction performance of the point of entry system.

Recognition is made of the time volunteered by members of the working group and of the support of the manufacturers who also participated in meetings for this LEC.

This LEC does not imply ASSE International's endorsement of a product that conforms to these requirements.

Compliance with this LEC does not imply acceptance by any code body.

It is recommended that these devices be installed consistent with local codes by qualified and trained professionals. It is recommended that these devices be maintained and serviced per the manufacturer's recommendations, and filters be replaced at regular intervals per the manufacturer's instructions.

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Table of Contents

Section I	1
1.0 General	1
1.1 Application	1
1.2 Scope	1
1.3 Reference Documents	2
Section II	3
2.0 Test Specimens and Test Laboratory	3
2.1 Samples Submitted	3
2.2 Samples Tested	3
2.3 Documentation	3
2.4 Rejection	3
Section III	4
3.0 Performance Requirements and Compliance Testing	4
3.1 Chemical Reduction Claims (Membrane)	4
Table 1	5
Table 2	5
Table 3	6
Section IV	8
4.0 Detailed Requirements	8
4.1 Materials and Hardware	8
4.2 Documentation	8
4.3 Markings	9
Section V	10
5.0 Definitions.....	10
Appendix A	11

Listing Evaluation Criteria for Point of Entry Reverse Osmosis Systems

Section I

1.0 General

1.1 Application

Point of Entry (POE) Reverse Osmosis (RO) systems are used to treat drinking water. RO water treatment equipment reduce total dissolved solids, heavy metals, microbes, inorganics, and organic water contaminants. POE ROs are typically installed after the water meter in residences or businesses.

1.2 Scope

1.2.1 Description

This listing evaluation criteria (LEC) covers contaminant reduction claims for POE RO systems. The following components are typically used as part of POE RO systems.

- System manifold
- RO membrane
- Pre- and post-filtration assemblies
- Supply connection
- Drain connection
- Storage tank
- Shut-off valves
- Check valves
- Push fit fittings
- Tubing
- Tank backpressure reduction mechanism (optional)
- Booster pump (optional)
- TDS monitor (optional)

1.2.2 Flow Range

POE RO systems use a variety of membrane sizes based on the design of the system. This LEC covers systems that produce a product (permeate) flow rate of at least 2.0 gpm (7.6 L/min) out of the system.

1.2.3 Line Pressure Range

The product shall be designed for an incoming line pressure of 30 - 120 psi (138 - 827 kPa).

1.2.4 Temperature Range

The product shall be designed for an incoming cold water temperature of 32 - 113 °F (0 - 45 °C).

1.2.5 Service Bypass

The product shall include a bypass valve to divert the incoming cold water supply while the product is undergoing service or maintenance.