ASSE LEC #2004-2019
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ASSE International

Listing Evaluation Criteria for

Drinking Water Treatment Systems Using Air as a Source

Listing Evaluation Criteria

General Information

No product may be said to be ASSE listed unless the manufacturer has applied to ASSE International, has had its product tested according to the applicable standards or listing evaluation criteria (LEC), and when the product has passed the test, displays the ASSE Seal on the product.

Instructions for receiving the authorization to display the seal are available from the ASSE International office. Organizations wishing to adopt or list to any ASSE standard or LEC should print the ASSE number on the cover page first and in equal or larger type to that of the adopting or listing organization.

ASSE International
Mokena, Illinois

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.

Water conservation continues to be an important role for the plumbing and water treatment industry. As major droughts and deteriorating access to safe drinking water continue to affect countries around the world, new technologies continue to emerge in order to provide safe drinking water. Products that produce drinking water by using humidity as a source are now being used in the market. Creating listing evaluation criteria to help ensure that these products produce potable water is desired by the water treatment industry.

Water-from-air (atmospheric water generation) becomes a real source of water supply in places where tap water is not available, or where the quality of tap water does not meet consumer requirements.

To become a source of drinking water, the water-from-air should meet two primary criteria:
1) The water should be produced for a reasonable cost so that it's affordable to the user. The cost of the water comes from its energy efficiency for atmospheric water generators – electricity consumption per liter of water produced.
2) The water quality produced by the atmospheric water generator shall be safe to consumer.

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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Section I

1.0 General

1.1 Application

Atmospheric water generators are intended to be used to produce drinking water. Typical applications include areas where water is scarce or where water supplies are of unknown water quality.

1.2 Scope

1.2.1 Description

This standard has been created to test point-of-use and commercial drinking water generating systems that are designed to create potable water from humidity. Critical components of these systems include a condenser, storage tank, and disinfection control techniques to address microbiological water contamination. Systems may include filtration to reduce chemical and particulate water contamination. Proper design shall include consideration for the energy efficiency of the atmospheric water generator.

1.2.2 Connections

Pipe threads and other connections shall conform to the applicable standards and local codes.

1.2.3 Potable Connection

A potable water connection inlet is optional for when the water demand exceeds the production rate of air-to-water generation.

1.2.4 Temperature Range

Water may be produced or dispensed at any temperature.

1.3 Reference Documents

Referenced industry standards shall be to the revision stated below.

- AMAM DH-1-2008, *Dehumidifiers*
- ASSE 1087-2018, *Performance Requirements for Commercial and Food Service Water Treatment Equipment Utilizing Drinking water*
- IAPMO PS 65-2019, *Airgap Units for Water Conditioning Installation*
- NSF/ANSI 14-2018, *Plastics Piping System Components and Related Materials*
- NSF/ANSI 42-2016, *Drinking Water Treatment Units – Aesthetic Effects*
- NSF/ANSI 53-2016, *Drinking water Treatment Units – Health Effects*
- NSF/ANSI 55-2016, *Ultraviolet Microbiological Water Treatment Systems*
- NSF/ANSI 58-2016, *Reverse Osmosis Drinking Water Treatment Systems*
- NSF/ANSI 60-2016, *Drinking Water Treatment Chemicals – Health Effects*
- NSF/ANSI/CAN 61-2017, *Drinking Water System Components – Health Effects*
- NSF/ANSI 372-2016, *Drinking Water System Components – Lead Content*