

**State of Oregon  
Building Codes Division  
Interpretive Ruling No. 97-3  
USE OF ACORN/EVAC VACUUM TOILET SYSTEM**

**Requested By:** JIM WOMBLE  
ACORN/EVAC VACUUM TOILET SYSTEMS  
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**QUESTION**

Should the ACORN/EVAC Vacuum Toilet System be permitted as an alternate material and method of installation in place of a conventional gravity drain waste and vent plumbing system?

**BACKGROUND**

EVAC has been involved with vacuum sewage systems since 1973. This is the first request made for use of the system in Oregon. The systems are in use in various installations in Europe and in other states. Southern Building Code Congress International and Building Officials and Code Administrators have approved these systems. Testing data has been provided by Stevens Institute certifying compliance with American Society of Mechanical Engineers (ASME) A112.19.2M-1990, Vitreous China Plumbing Fixtures, and ASME A112.19.6-1990, Hydraulic Requirements for Water Closets and Urinals.

**FINDINGS**

Installation and design information have also been provided by the manufacturer. This is a complete plumbing system and includes the use of piping and fittings approved for use within a building.

Engineering and design data provided by the manufacturer show the proposed design is satisfactory and complies with the intent of the code and the material offered is for the purpose intended, in quality, strength, effectiveness, durability and safety to that specifically prescribed in the Plumbing Code under Section 301.0.

**DISCUSSION AND CONCLUSIONS**

**Authority.** ORS 455.060 authorizes the Division to issue binding interpretive rulings on the building codes and on acceptability of materials, design or method of construction. Advice received from the Attorney General in OP #5208, October 1, 1981.

**Code or factual issues to be resolved.** Current Plumbing Code Section 709.0 requires gravity drainage wherever practicable. However, many advantages may be realized for this type of system when installed in a penal institution. Due to the above technical and scientific facts, the Plumbing Board finds the materials and construction of the ACORN/EVAC Vacuum Toilet System, manufactured to the specifications submitted and designed by an Oregon-registered engineer, is equivalent in quality, strength, effectiveness, durability and safety as other approved plumbing systems.

**ANALYSIS**

The ACORN/EVAC Vacuum Toilet System, when designed for installation by an Oregon-registered engineer for installation in a penal institution, is an acceptable alternative method in place of a gravity drainage waste and vent system installed under the provisions of the Oregon State Plumbing Specialty Code.

**CONCLUSION**

When designed and installed within the limitations of this ruling, the use of the ACORN/EVAC Vacuum Toilet System is equivalent to other code approved methods for gravity drainage waste and vent installations.

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(signed February 21, 1997)

Arthur G. Atchison  
Chairman, Plumbing Board

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Date

The recommendations and findings of the Board are accepted and the Interpretation is adopted effective immediately.

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(signed March 18, 1997)

Joseph A. Brewer III, Administrator  
Building Codes Division

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Date