

## **Unblockable Drain**

There are some models of trench drains that are certified as unblockable because their size and shape make it impossible for a body the size of the 99<sup>th</sup> percentile of human torso to be entrapped on the drain. The ASME/ANSI A112.19.8-2007 does not specifically define what an unblockable drain is, but the standard for certification of field-built drains says “They shall be of such size that the 18 in. X 23 in. body blocking element will not cause a differential pressure that could cause body entrapment...” The standard contains a formula for determining the entrapment force based on the dimensions of the cover/grate. Some trench drains as small as 3 in. X 31 in. have been certified as unblockable. Rectangular drains with a diagonal measurement of more than 29 in. may be eligible for certification under the standard. Such a certification must be made by a Registered Design Professional, which in North Carolina means a licensed or registered Engineer or Architect.

In March 2010 the U.S. Consumer Product Safety Commission adopted an interpretive rule defining an unblockable drain as follows:

### **§ 1450.2 Definitions.**

(a) [Reserved.]

(b) *Unblockable drain* includes a suction outlet defined as all components, including the sump and/or body, cover/grate, and hardware such that its perforated (open) area cannot be shadowed by the area of the 18" x 23" Body Blocking Element of ASME/ANSI A112.19.8-2007 and that the rated flow through the remaining open area (beyond the shadowed portion) cannot create a suction force in excess of the removal force values in Table 1 of that Standard. All suction outlet covers, manufactured or field-fabricated, shall be certified as meeting the applicable requirements of the ASME/ANSI A112.19.8 standard.

Dated:

Todd A. Stevenson, Secretary Consumer Product Safety Commission