

# POOL OPERATION MANAGEMENT

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## VIRGINIA GRAEME BAKER POOL AND SPA SAFETY ACT

### NATIONAL LAW PASSED THAT AFFECTS ALL PUBLIC POOLS AND SPAS

In December 2007, Congress and President Bush signed a new law which requires **ALL PUBLIC POOLS AND SPAS** to comply with the Virginia Graeme Baker Pool and Spa Safety Act (VGB Act) by December 2008. The law states that "each public pool and spa in the United States must be equipped with anti-entrapment devices or systems that comply with the ASME/ANSI 112.19.8 performance standard or any successor standard; and each public pool and spa in the United States with a single main drain other than an unblockable drain shall be equipped, at a minimum, with 1 or more of the following devices or systems designed to prevent entrapment by pool or spa drains".

"Effective 1 year after the date of enactment of this title , each swimming pool or spa drain cover manufactured, distributed or entered into commerce in the United States shall conform to the entrapment protection standards of the ASME/ANSI A 112.19.8 performance standard, or any successor standard regulating such swimming pool or drain cover." To read this law in its entirety, [click here](#):

### WHAT THIS MEANS TO YOUR POOL AND SPA

*(NO ONE is grandfathered on these regulations)*

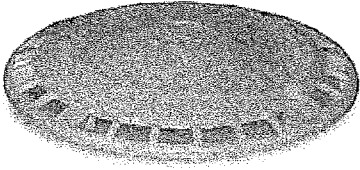
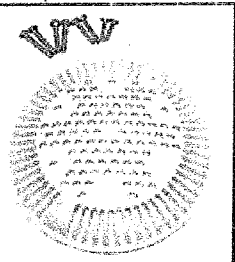
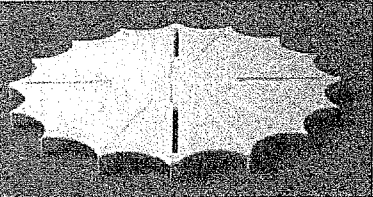
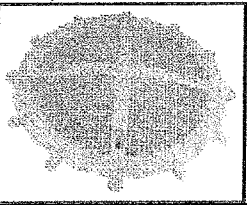
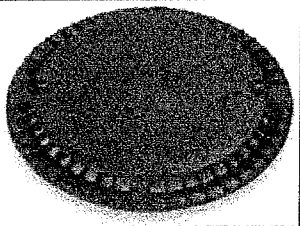
- By December 20, 2008, your pool, whether it has single or multiple drains, needs new anti-entrapment drain covers that must comply with ASME/ANSI A112.19.8 performance standard, which are available [here](#)
- Your public pool or spa that has a single drain must have at least one additional level of entrapment protection which could be:
  - Safety Vacuum Release – a vacuum release system capable of providing vacuum release at a suction outlet caused by a high vacuum occurrence due to a suction outlet flow blockage. (i.e., Stingl Switch, Vac-Alert, Etc.)
  - Suction-Limiting Vent System\* – a suction limiting vent system that utilizes a collector tank.
  - Gravity Drainage\* – a gravity drainage system that utilizes a collector tank.
  - Automatic Pump Shut Off System – An automatic pump shut off system.
  - Drain Disablement- A device or system that disables the drain.

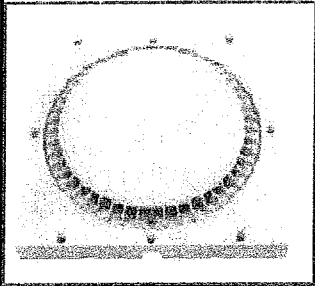
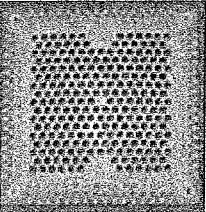
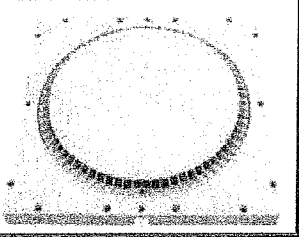

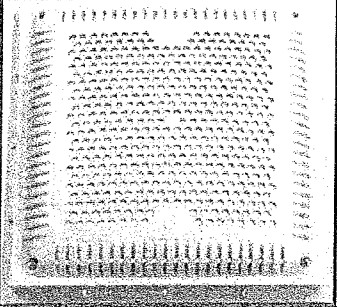
*\*This would have been installed during pool construction. It cannot be added to an already existing pool, only new construction.*

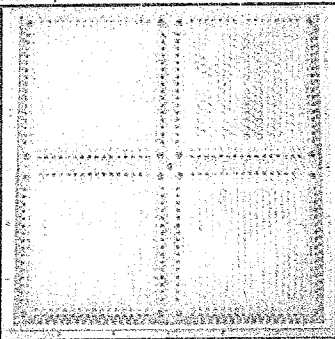


### WHAT YOU SHOULD DO TO BECOME COMPLIANT

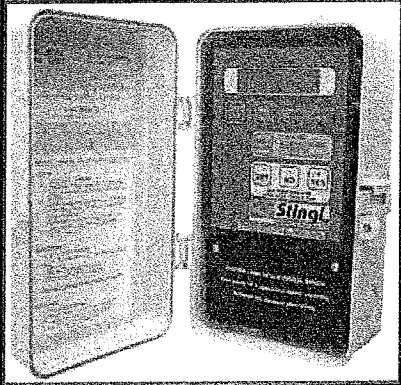
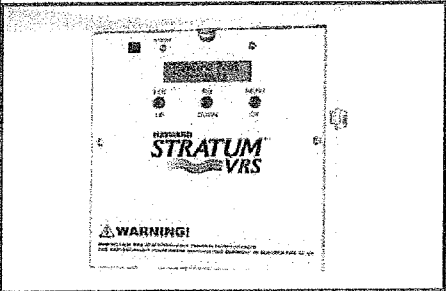
- On all drains, install a NEW ASME/ANSI A112.19.8 performance standard anti-vortex or anti-entrapment cover (currently being developed)
- On all pools or spas that have single drains that are not unblockable OR two main drains measuring less than 36" apart (three-feet from center to center ) per pump **must have at least one additional level of entrapment protection (See above)**
- RESIDENTIAL POOLS – As of December 20, 2008 – it will be AGAINST federal law to make or sell a drain cover in the United States that does not comply with ASME/ANSI 19.8. Thus, all new residential

construction as of December 20, 2008, must comply with the federal law.

IF YOU HAVE:	YOU NEED:
<p>A Hayward Circular 8"x8" Drain Cover, (looks like this)</p> 	<p>Hayward WGX1048E VGB Cover (7 7/8") (125 GPM)                      Fits: Hayward 8" Drain Covers ONLY                      Price: \$30.00</p> 
<p>A circular drain cover between 5" - 10",</p>	<p>World Wide Sports LLC Star 100 (80GPM-1.2fps)                      Fits: 5" to 10" Drain Covers                      Price: \$40.00</p> 
<p>A 5-1/2" - 8" circular drain cover which retrofits,</p>	<p>DrainSafe DS-360 Adaptable Drain Covers (123GPM-1.5fps)                      Fits: 5 1/2"- 8" Drain Covers (With Adaptor Frame, Cover                      Fits Hayward and Pentair 9x9 Grates)                      Price: \$90.00</p> 
<p>Any non- Hayward circular 8"x8" Drain Cover,</p>	<p>Aquastar RLP8AVV101-                      8" Retro-Fit Low Profile Anti-Entrapment Drain Covers                      (100GPM- 4.2fps)                      Fits: Afras, Splash, Swimquip, Caretaker and Hayward                      8" Main Drain Covers (Comes With Three Different Sets of                      Screws)                      Price: \$75.00</p> 
<p>A 9"x9" square drain cover</p>	<p>Aquastar RFS9101-                      9" Square Retro-Fit with 8" Drain Covers (88GPM- 3.2fps)                      Fits: Hayward, Waterway, American (Pentair #2) and                      PacFab 9x9 Square Grate Main Drains                      Price: \$150.00</p>

	 <p>or</p> <p>Hayward 9" x 9" (112 GPM at 1.5 FPS) Fits: Hayward 9" Drain Covers ONLY Price: \$150.00</p> 
<p>A 12"x12" Square drain cover,</p>	<p>Aquastar RFS12101- 12" Square Retro-Fit with 10" Drain Covers (206GPM- 5.8fps) Fits: Hayward, Waterway, American (Pentair #2) and PacFab 12X12 Square Grate Main Drains Price: \$220.00</p> 
<p>A Hayward 12"x12" Square drain cover, (looks like this)</p> 	<p>Hayward WG1032PAK2- 12x12 Frame and Grate Drain Covers (151.4GPM- 1.5fps) Fits: Hayward 12x12 Grate Drain Covers ONLY Price: \$220.00</p> 
<p>An 18"x 18" Drain</p>	<p>Hayward WG1033PAK2- 18x18 Frame and Grate Drain Covers (333.1GPM- 1.5fps) (Cross Bar Not Included) Fits: 18x18 Grate Drain Covers (Presently Can Only</p>

	<p>Purchase 4 single 9x9 Grates (as pictured) for replacement on the 18x18 Grates ONLY!                  Price: \$600.00</p> 
<p>A frame without a Cross Bar</p>	<p>Cross Bar                  \$210.00                  A crossbar is needed when the existing frame does not have a crossbar present. Four Hayward 9x9 frames sit inside of the crossbar and are fixated with 4 attachment screws. Then, 4 9x9 covers fixate onto the frames.</p>
<p>A pool or spa that has single drains that are not unblockable OR two main drains measuring less than 36" apart (three-feet from center to center) per pump</p>	<p>Vacless                  \$650.00                  Automatic reset with center port installation for Suction Lift or Submerged Suction installations. Upon entrapment, the vacuum level inside the pot is elevated creating a differential pressure across the seal. Atmospheric air pushes the seal compressing a spring until the O-Ring crosses grooves that allow atmospheric air to rapidly fill the pot making the pump loose prime quickly freeing the entrapment. After the entrapment is freed, the seal resets itself for re-priming. For use on .5 to 3.0 horsepower pumps.</p> 
<p>A pool or spa that has single drains that are not unblockable OR two main drains measuring less than 36" apart (three-feet from center to center) per pump</p>	<p>Vac-Alert System                  \$675.00                  The Vac-Alert SVRS (Safety Vacuum Release System) provides a rapid vacuum release when a drain becomes blocked, quickly freeing anyone whose body or limb is trapped on the drain.</p> 
<p>A pool or spa that has single drains that are not unblockable OR two main drains measuring less than 36" apart (three-feet from center to center) per pump</p>	<p>Stingl Switch                  \$699.00                  The Stingl Switch is a Safety Vacuum Release System</p>

	<p>(SVRS) which works by monitoring the vacuum on the suction side of the pool or spa pump. When a blockage occurs in the main drain or skimmer a sudden rise in vacuum will cause the it to shut down pump operation and activate an audible alarm. The pump will remain off with the alarm sounding until manually reset.</p> 
<p>A pool or spa that has single drains that are not unblockable OR two main drains measuring less than 36" apart (three-feet from center to center) per pump</p>	<p>Hayward Stratum VRS \$1250.00 The Hayward Stratum VRS is vents the pump suction line to atmosphere and turn off the power to the pump motor. It also emits a puff of air into the line as well to help the blocked party off of the drain.</p> 

#### TERMS

**UNBLOCKABLE DRAIN** – The Act defines unblockable drain as a drain of “any size or shape that a human body cannot sufficiently block to create a suction entrapment issues”. The ANSI/APSP-7 2006 standard requires that to be considered unblockable, a drain must be at least 31” in one dimension and at least 3” in the other dimension or must be larger than 18” in one dimension and larger than 23” in the other dimension with 4 in. radius corners.

**SAFETY VACUUM RELEASE SYSTEM** – The term ‘safety vacuum release system’ means a vacuum release system capable of providing a vacuum release at a suction outlet caused by a high vacuum occurrence due to a suction outlet flow blockage.

**GRAVITY DRAINAGE SYSTEM** - A gravity drainage system utilizes a collector tank meaning that the water flowing from the pool/spa to the circulation system does not connect directly to the pump. The water collects in a collection tank or basin open to the atmosphere and the pump pulls the water from it for circulation back into the pool.

**SUCTION LIMITING VENT SYTSEM** – A suction-limiting vent system has a “tamper resistant atmospheric opening”, which is a pipe vented to the atmosphere that connects to a suction pipe between the pool and the pump. When an entrapment of vacuum occurs, air from the vent pipes replaces the water in the suction pipe by breaking the vacuum.

**AUTOMATIC PUMP SHUT-OFF** – An automatic pump shut-off system is a device that shuts off the pump/motor in a vacuum or entrapment occurrence.

**DRAIN DISABLEMENT** – Drain disablement cannot be done on new construction, as single blockable drains are not permitted by code. To disable the main drain, it needs to be plugged and filled with concrete. It then needs to be permanently disconnected from pool pump suction and circulation systems and to reverse the flow of the water.