



May 18, 2023

Greetings Pool Owners and Operators,

This letter is to inform you of important changes to the swimming pool industry regarding Suction Outlet Fitting Assemblies (SOFA), often referred to as main drain covers/grates and equalizer covers and recent Department of Energy (DOE) regulations that may affect swimming pool pumps.

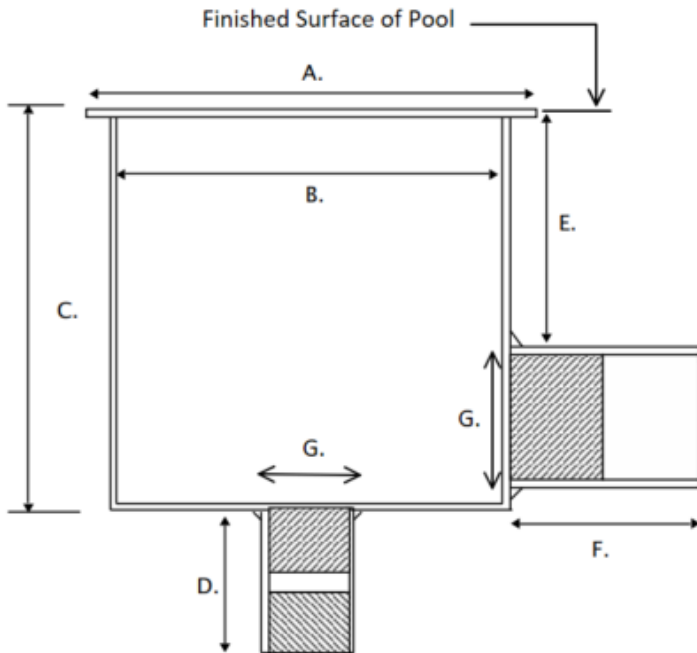
In 2017, the DOE established the first national energy efficiency standards for pool pump regulations. The standard impacts most in-ground pools, by requiring VARIABLE SPEED TECHNOLOGY on pumps greater than 1 HP. While the rule does not require existing pool pumps to be replaced; does not prohibit the use of previously produced new pumps; and allows pumps smaller than 1 HP to continue to be single speed, we are seeing that as old pumps burn out, they are being replaced with variable speed pumps. These pumps tend to have higher maximum flows than traditional pumps.

Additionally, in 2020, new testing standards and SOFA installation requirements were upgraded nationally to the current standards for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins. Due to the upgraded standards, drain covers that were manufactured on or after May 24, 2021, have very different flow ratings than their predecessors. In addition to flow rating changes, drain cover flow ratings are now based on the size of the suction pipe, the distance between the top of that pipe and the finished floor of the pool, the sump dimensions, and whether or not the SOFA is located on the floor or the wall of the pool. **Therefore, replacing a drain cover that was manufactured prior to May 2021 with the same model that was manufactured after May 2021 is no longer a like-for-like replacement.** It has become increasingly difficult to verify that the new drain covers are properly installed, and we are finding that years of transferring the sump information over and over again on subsequent drain safety data sheets has led to errors in documented measurements and suction pipe sizes. Essentially, what has been documented on the current drain safety data sheet is not what is actually under the drain cover when it is exposed in the field.

Due to these recent national changes coupled with issues regarding the information on datasheets being incorrect, we are requiring photo evidence of sump measurements to be taken and submitted to our department when the drain covers are replaced. **Therefore, if the drain covers in your pool are replaced on or after the date of this letter, May 18, 2023, the paperwork submitted to this department must include photo evidence of the following sump measurements, or a permit will not be issued (see diagram on the following page for a visual aid of required sump measurements):**

- **Sump dimensions (shown by letter B) (note-letter A shows dimensions of a drain cover for covers mounted directly to the pool floor)**
  - Round sumps: diameter
  - Square/rectangle sumps: length x width
- **Sump depth-the total depth of the sump (shown by letter C)**
- **Outlet pipe diameter (ex. 2", 3", etc.) (shown by letter G, depending on the orientation of the suction pipe to the sump)**
- **Orientation of suction pipe to sump**
  - Bottom outlet (shown by letter D)
  - Side outlet (shown by letter F)
- **Distance between the top of the outlet pipe to the finished floor of the pool (shown by either letter E or C depending on orientation of outlet pipe)**





Along with the photos of the sump dimensions, if the main drain covers in your pool were manufactured on or after May 24, 2021, you must provide documentation from the manufacturer (ex: Owner’s Manual, Installation Instructions, Certificate of Conformity or Compliance with VGBA 2017), identifying the flow rating of that cover based on the dimensions of your sump, suction pipe size and suction pipe orientation. Please keep in mind that in order to avoid draining your pool to capture the required images, you may utilize a diver to measure sump dimensions with the connecting pump turned off. If you opt to drain your pool and are serviced by MSD, you must contact that agency at 828-255-0061 to notify them prior to releasing a large amount of water into the metropolitan sewerage system. For additional information on changes regarding drain cover installation please visit <https://www.aquamagazine.com/service/article/15279813/the-drain-cover-law-has-changed>.

Due to higher flow ratings on pumps and lower flow ratings on drain covers, we are finding that newly installed pumps or covers may require a documented flow reduction on the pump. **A flow reduction simply identifies the true operating flow of the pump system of the pool or spa by using a properly installed flow meter reading.** True flow is read after backwash, with the skimmer or gutter valve closed and the main drain line fully open. Alternatively, you can calculate true flow as a last resort by reaching out to a pool professional or registered design professional who is familiar with commercial pool design.

Please feel free to reach out to your inspector with any additional questions by calling our front desk at 828-250-5016 or emailing [ehrequest@buncombecounty.org](mailto:ehrequest@buncombecounty.org). Alternatively, you may search for your current inspector by visiting our website at <https://www.buncombecounty.org/governing/depts/health/EnvironmentalHealth.aspx> and scrolling to the “Public Swimming Pool,” section and clicking on “Find Your Assigned Pool Inspector Here.”

Thank you,

Melissa Bennett, REHS  
 Environmental Health Supervisor  
 Buncombe County HHS

