

# Department of Energy

## Dedicated Purpose Pool Pump (DPPP) Regulations

### Frequently Asked Questions

#### 1. What are DPPP regulations?

Dedicated Purpose Pool Pump regulations are aimed to achieve improved energy efficiency and are being driven by the Department of Energy (DOE). Under the current rules:

- These regulations state that self-priming filtration pumps past a certain horsepower threshold—**whether residential or commercial**—must meet an established performance standard.
- These new minimum efficiency standards take effect July 18, 2021.
- If a pool owner can repair a malfunctioning pump with a new motor, the replacement motor doesn't have to comply with the rules.
- *The DOE regulation applies to complete pumps and the industry is currently proposing similar standards for replacement motors.*

#### 2. What effects do these regulations have on manufacturers and pumps?

Manufacturers will have to comply with new regulations in order to manufacture their products in the United States as of **July 19, 2021**.

- The DOE regulations apply to both residential and commercial pumps up to 2.5 hydraulic horsepower, which is based on flow and is approximately 5 motor horsepower.
- Categories include self-priming (in-ground), non-self-priming (most above-ground), and pressure cleaner booster pumps.
  - i. **Self-priming (in-ground)** variable speed motor driven pumps will become the most common.
  - ii. **Non-self-priming (most above-ground)** and pressure cleaner booster pumps,

higher efficiency single speed motor driven pumps will remain the most common types. This will ultimately even the playing field for manufacturers and the trade, as well as prevent undercutting the sale, and energy savings, of more efficient pumps.

- Requirements do not change based on end application (e.g. does not matter if the pump is used for filtration, water features, etc.) The rules impact the pump as defined by DOE, which may include motor and controls (when applicable).
- Pump testing must comply with specific test procedures and certain information [e.g., Weighted Energy Factor (WEF), hydraulic horsepower (HHP)] must be reported to the DOE.
  - *Pumps must be labeled with WEF to describe their energy efficiency, includes packaging and promotional materials.*

#### 3. What are Hydraulic Horsepower (HHP), Weighted Energy Factor (WEF), and Total Horsepower (THP)?

- **Hydraulic Horsepower** is directly proportional to pump flow and is the amount of hydraulic power produced by the pump's wet-end. HHP is used to size pumps instead of motor horsepower.
- **Weighted Energy Factor** is based on flow divided by power consumption (Higher is better/more efficient). WEF is used to compare energy efficiency of pumps and similar to "miles per gallon" (MPG) of a car - the higher the better.
- **Total Horsepower** or Service Factor Horsepower (SFHP) is required to be labeled on each pump. THP or SFHP is the new HP rating determined by the total horsepower created at the motor shaft.

*continued on next page* ▶

#### 4. What do these regulations mean for minimum performance requirements and Equipment Classes?

##### Minimum Performance Requirements:

- Self-Priming - aka Inground pumps
  - Small size: < 0.711 Hydraulic HP (~1.2 Total Horsepower (THP))
  - Large size: > 0.711 HHP to < 2.5 HHP (~1.2 – 5 THP)
- Non-Self-Priming (Aboveground pumps)
  - Priming defined as a minimum of 5 feet in 10 minutes
- Pressure Cleaner Booster Pump

**Equipment Classes**, per DOE, **cannot** be based on application. i.e. cannot be “in-ground” vs. “above-ground” and there is no difference in requirements between residential vs. commercial. Equipment classes must be based on design, physical features, performance, characteristics, etc. Waterfall pumps (Maximum head less than or equal to 30 feet, max speed less than or equal to 1,800 RPM), filter pumps with integrated sand and cartridge filters, and rigid (permanent) and storable (inflatable) electric spa pumps do not have minimum performance requirements. (See below).

#### 5. Should the installed base of an existing non-compliant pump be replaced, are there exemptions?

No, the regulation does not require all existing installed pumps to be brought to compliance.

- *Pump replacements made after July 19, 2021 will require a compliant model!*
- Three-phase pumps and pumps greater 2.5 HHP (~5 THP) do not have minimum DPPP efficiency requirements.

#### 6. What happens when an existing single-speed pump fails AFTER July 19, 2021? Can I replace it with another single speed pump?

If the replacement is on a **large self-priming pump**, **then no**. However, if the replacement is on a non-self-priming or a small self-priming pump, then an energy efficient single speed replacement could be an option!

#### 7. If my distributor has remaining inventory of non-compliant pumps, can I purchase and install these pumps?

Yes. There is no limit on how long it takes to *filter* through, and purge distribution of, non-compliant pumps.

#### 8. What are some other impacts to the industry?

- Total Horsepower (THP)
  - Will likely **eliminate special-rate (above-ground) and max-rate (up-rate) /full-rate motor horsepower ratings**
  - Must list Total Horsepower with a Service Factor of 1.0
- Regulation is performance based, not prescriptive
  - For example: the regulation does not require variable speed
  - However, variable speed is the only current technology that meets the DOE requirement
  - This allows manufactures to continue to innovate new technologies!

