Critical to the performance of a sand filter is its ability to create uniform flow across the entire sand bed surface and provide maximum backwash characteristics. Compare, for example, the specifications of a 48-inch sand filter tank and consider:

**LAKOS Underdrain**
- Total length of 1¼-inch dia. open screen material: at least 12½ feet
- Total open area of screen: at least 45½ in²*
- Screen-to-inlet ratio: at least 3.6:1 more open area than inlet size*

**Hub & Spoke Underdrain**
- Total length of 1¼-inch dia. open screen material: 6 feet
- Total open area of screen: 17 in²
- Screen-to-inlet ratio: 1.4:1 more open area than inlet size

**Flat Lateral Underdrain**
- Total length of 1¼-inch dia. open screen material: 3 feet
- Total open area of screen: 8 ¾ in²
- Screen-to-inlet ratio: 0.7:1 less open area than inlet size

**Key LAKOS Advantages**
- LAKOS media filters do NOT require multi-layering, so a single grade of sand may be used.
- LAKOS Underdrain features 285% more than a Hub & Spoke design and 554% more open area than the Flat Lateral design.
- LAKOS Underdrain features the industry’s lowest pressure loss: 0 to 1.5 psi (0 to 0.1 bar) through a clean filter system.
- LAKOS Underdrain makes maximum use of the filter’s entire surface area, avoiding contaminant build-up residual/continuous “dead spots” and premature/excessive backwashing.
- LAKOS Underdrain delivers optimum backwashing to lift and flush the sand bed with maximum efficiency, returning the sand filter to its lowest pressure loss for longer operating cycles, less water loss and reduced moving parts fatigue.

* Differs slightly by LAKOS model