

Media Sand Filters Comparison of Underdrains

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:



Total length of 1½-inch dia. open screen material: at least 12½ feet

Total open area of screen: at least 451/2 in2*

Screen-to-inlet ratio: at least 3.6:1 more open area than inlet size*

Hub & Spoke Underdrain

Total length of 11/4-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 11/4-inch dia. open screen material: 3 feet

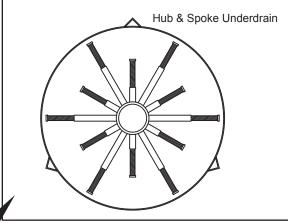
Total open area of screen: 8 ¾ in²

Screen-to-inlet ratio: 0.7:1 less open area than inlet size

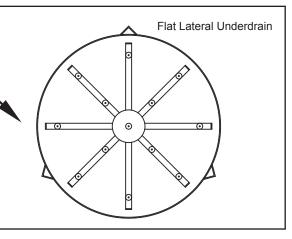
Key LAKOS Advantages

- 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.

area than



LAKOS Underdrain



LAKOS: Performance. Efficiency. Value



^{*} Differs slightly by LAKOS model