LAKOS®

SUB-K SUBMERSIBLE PUMP PROTECTION SEPARATORS

INSTALLATION INSTRUCTIONS

APPLICATION

LAKOS SUB-K Series Separators are engineered for the removal of sand and other heavy, suspended particles from domestic and private water well systems with flow rates of 3 - 99 U.S. gpm (.7 - 23 m^3/hr) and well I.D.'s of 5 inches or larger.

OPERATION

When the pump is operating, sandy water is drawn first through the SUB-K Separator's inlet slots. Centrifugal action separates the sand, causing the particles to gently fall to the bottom of the separator. The SUB-K's "flapper valve" remains closed while the pump is in operation. The sand-free water spirals upward, through the center vortex/outlet, into the pump enclosure shell and to the pump. When the pump shuts off, the SUB-K's flapper valve will open, allowing accumulated sand to discharge deep into the well. NOTE: To assure adequate purging of separated particles, SUB-K Separators must be installed on water systems that operate at least somewhat intermittently, typically for no more than two continuous hours. This time may vary, depending on the concentration of sand in the well.

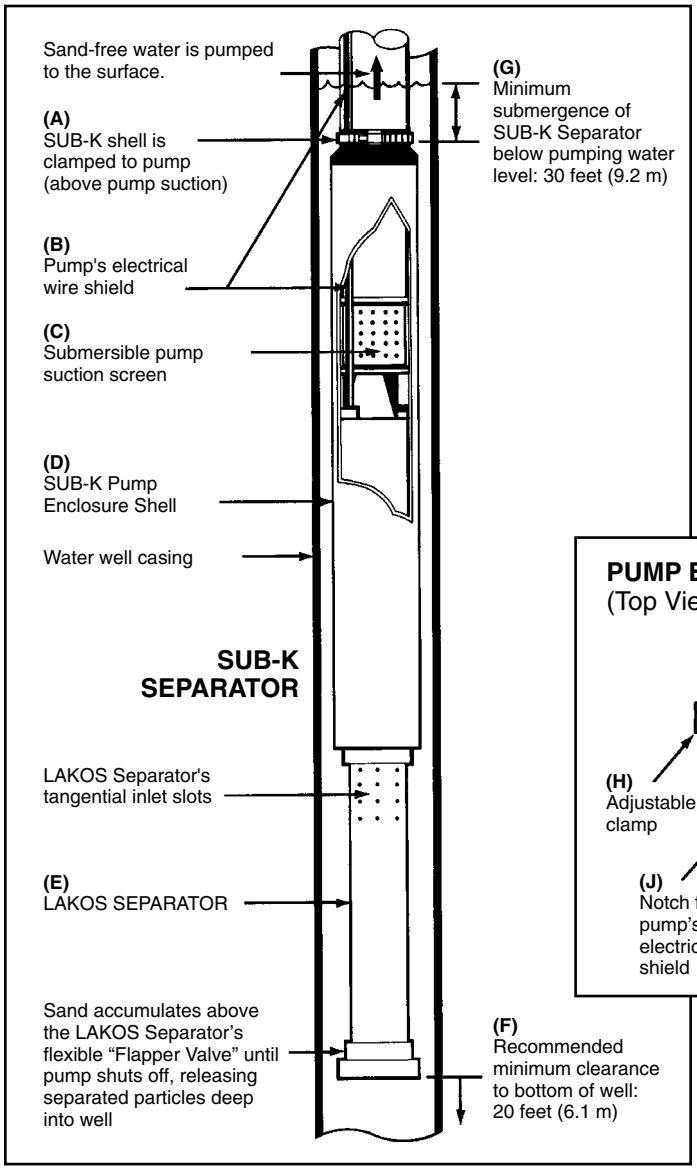
IMPORTANT NOTES

- Installation instructions assume that pump is hanging vertically, attached to column pipe and ready for lowering into the well.
- Use caution during the lowering process. Catching the pump or SUB-K unit on the well casing could cause damage that might affect proper performance.
- All SUB-K models are designed to accommodate the typical pump diameter of 3¾-inches (96 mm). Maximum length of pump motor and inlet screen area (combined) cannot exceed 38 inches (965 mm). Consult factory for special requirements and/or application assistance.
- Should the submersible pump ever need to be pulled or serviced, be sure to inspect the SUB-K Separator, especially for clogged inlet ports or damage to the flapper valve.
- Maximum particle concentration: 550 ppm.

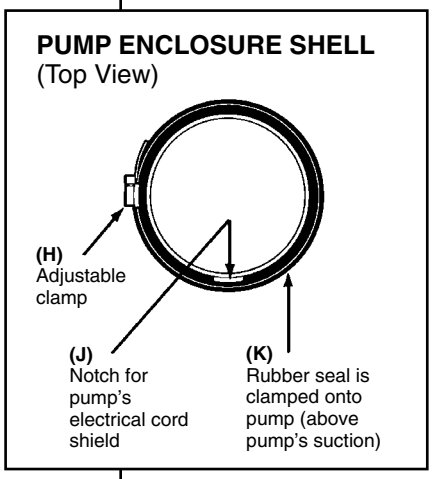
(illustration on reverse)

INSTALLATION

1. Apply a small amount of non-petroleum lubricant to the rubber seal **(K)** on the SUB-K's Pump Enclosure Shell.
2. Slide the Pump Enclosure Shell **(D)** over the submersible pump suction screen **(C)**. A notch **(J)** is provided on the rubber seal to accommodate the pump's drop-wire shield **(B)**. If necessary, trim the rubber seal or cut away the drop-wire shield 4 inches (102 mm) up from the submersible pump suction screen **(C)**.
3. Tighten the rubber seal around the pump using the large, stainless steel adjustable clamp **(H)** at a point 4 inches (102 mm) above the pump's suction **(A)**.



4. The SUB-K Separator **(E)** can now be attached onto the bottom of the Pump Enclosure Shell. Use the self-tapping screws for Model SUB-99-6-K or threaded connections for all other SUB-K models.
5. Lower the pump and SUB-K unit into the well to a depth that allows the Separator to be submerged at least 30 feet (9.2 m) below the pumping water level **(G)** and at least 20 feet (6.1 m) above the bottom of the well **(F)**.
6. Run water system in the normal manner. The LAKOS SUB-K Separator will operate from the flow of the water and will require no routine maintenance.



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