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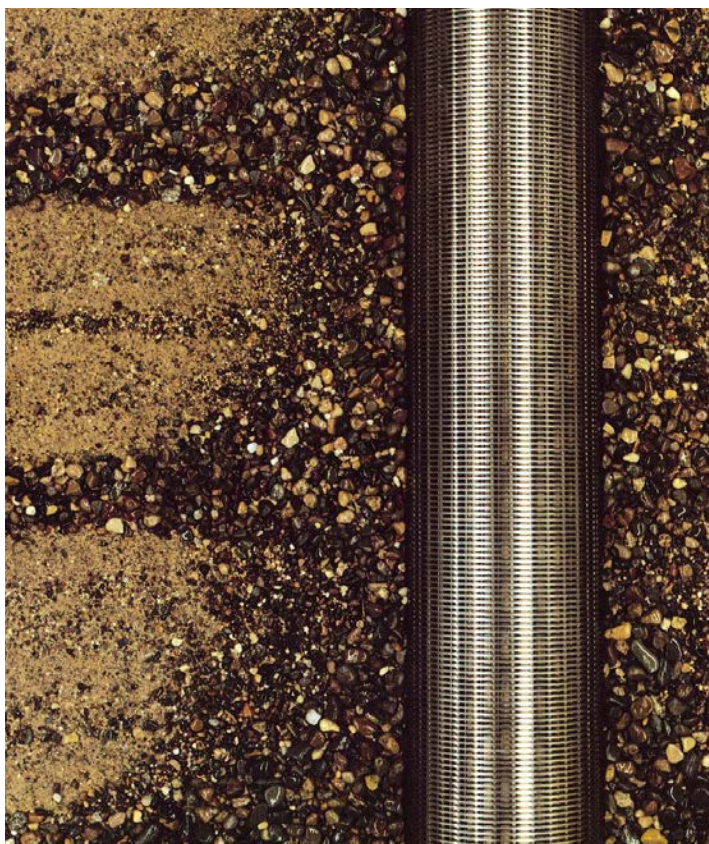
## Well Screens Make a Difference in a Water Well



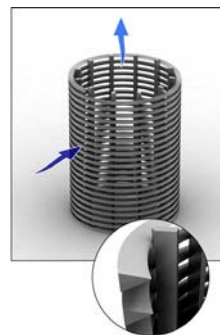
To understand how a water well works, you will need to know how it is made, what makes some wells better than others and what it takes to design a water well best suited for the owner.

If you were able to look down through the earth, you would not find an underground river flowing into a well. In some cases, water seeps through cracks in rock formations. In most cases, groundwater is found in the tiny spaces between sand and gravel particles in a water bearing zone, known as an aquifer.

This aquifer is the well driller's target. Once you drill into the aquifer, a screen must be installed at the bottom of the casing to keep sand and gravel out and let the water into the well. With no screen, the sand could quickly destroy the pump and plug the well.



At one time, well screens might have nothing more than a length of casing with a few slots "torch-cuts" into it. In practice, the screen failed to keep sand and gravel out or let the water in. In fact, it kept most of the water out and the crude slots let a lot of sand and gravel in — the opposite of what a good well screen should do.



The Johnson Screens water well screen keeps gravel out and lets the water in.

**A properly developed water well using a Johnson Screens' water well screen.**

# Using a Johnson Screens Well Screen

While screen designs offered some improvements, the Johnson Screens' well screen design revolutionized the industry.

Unlike other types of screen that are available, the Johnson Screens design uses a series of support rods, around which a continuous length of v-shaped wire (Vee-Wire®) is wrapped. Each intersection of wire and rod is welded, making a very strong, cage-like cylinder with one continuous slot, spiraling along its full length of the well screen.

## Pump protection

Well screen slots can be very narrow and precisely sized to keep out even fine sand grains, which could destroy a pump.

## Lower pumping costs

Even with very narrow slots, the total open area for the water to enter is far higher than other screen designs. This design allows for more water with lower pumping costs.

## Longer well life

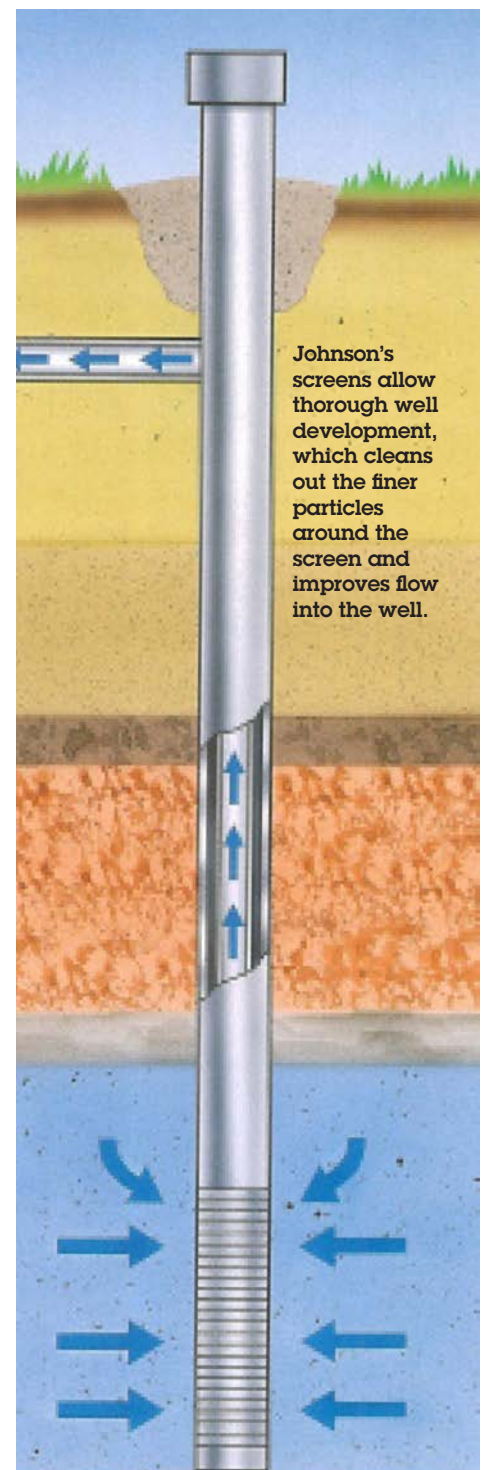
The slots widen inward, so sand grains do not wedge and plug. Screens can be constructed from stainless steel for maximum corrosion resistance. The high open area of a Johnson Screens water well screen lets the water enter slowly, avoiding problems which can happen when water is pumped at high velocity. (If water passes into the screen too quickly, pressure drops and gases are released, allowing minerals to drop out of solution and form encrustations on the screen surface. High velocity water can also erode the screen, causing the slots to widen and allow sand to enter the well.)

## A more efficient well

Part of well construction involves a process called well development, in which finer sand grains are pumped into the well and removed. By the end of the process, only the larger sand and gravel particles are left next to the well screen. Water then passes freely around these coarse particles and enters the well through the screen.

There are more factors to consider when designing and constructing a water well. Your driller will be happy answer your questions. Remember, every drop of water from your well must first pass through the well screen.

A Johnson Screens water well screen is stronger, more plug-resistant, longer lasting and more efficient than any other screen design available, resulting in more water for you, for a longer time and at less cost.



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