



# Waterwell and Groundwater Monitoring Newsletter

June 2014

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Canadian Pipe & Pump Supply is an industry leader engaged in the manufacturing and distribution of pipe product used in waterwell and groundwater monitoring applications. In addition, we supply pumps and accessories used in conjunction with our pipe. We firmly believe in helping our customers grow their businesses. Our skilled team of industry experts can help select the proper product for your application or help to design a custom solution.

We have four locations across Ontario to serve your needs. Please visit us at one of our branches located in Toronto, Orillia, Ottawa or Tillsonburg.

## Johnson Screen V - Wire Water Well Screen

Johnson's V-Wire Stainless Steel Screens are made from V shaped profile wire, which is spirally wound around a cage of longitudinal support rods. The wires are fusion welded at each intersecting point and the pitch of the winding gives different spacing between two adjacent turns of wire, which allows water to enter. The manufacturing process for these screens is done on fully computerized machines, which helps to make this product achieve the highest standards for the industry.

Customers around the world continue to use this time tested and trusted product for many reasons, including:

1. Its continuous slot opening, which significantly increases the available open area, thus providing greater access to the water bearing zone.
2. Its "V" shaped profile wire, which avoids clogging and ensures an uninterrupted flow.
3. Its uniform and efficient well development due to the continuous slot opening.
4. Its great strength, precision and long service life.



In order to calculate the transmitting Capacity of screens, we use the Rule of Thumb of  
 $\text{gpm/ft-screen} = \text{Open Area} \times 0.31$

[Click Here](#) to download our Spec Sheet for Johnson Stainless Steel Screens and, as always, speak to your CP&PS representative to learn more about this great product.

**For you math buffs:**

One question we often get is, "Where does the Rule of Thumb for Transmission Capacity come from?"

The answer lies in rearranging the formula used for calculating the entrance velocity. The entrance velocity ( $V$ ) is calculated by dividing the expected or desired yield ( $Y$ ) of the well by the total area ( $A$ ) of openings in the screen ( $V = Y/A$ ). Note that laboratory tests have confirmed the optimal Entrance Velocity for well screens is 0.1 feet per second.

In order to solve the Transmitting Capacity, or yield ( $Y$ ), we need to rearrange the above equation to read as  $Y = V \times A$ . So, if the amount of open area of a screen is known, and the entrance velocity of 0.1 feet per second is used, the Transmitting Capacity of that screen can be calculated. For example, a 16-inch diameter well screen with 175 square inches (1.22 square feet) of open area per linear foot can transmit 55 gpm per foot of screen body at an entrance velocity of 0.1 feet per second ( $Y = V \times A = 0.1\text{ft/sec} \times 1.22\text{ft}^2 = 0.122\text{ft}^3/\text{sec} = 54.8\text{gpm}$ ). The simple rule of thumb that is used, however, is  $\text{Transmitting Capacity in gpm/ft-screen} = \text{Open Area} \times 0.31$ , where the Open Area is expressed in square inches/ft-screen.

We look forward to your business and partnering with you to help drive your growth in 2014.

Sincerely,

Robert Martini  
Vice-President General Manager