

## Expansion Tank Bladder Sensor Includes New Features

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GREENWOOD, INDIANA - Wessels Company has updated one of their most popular accessories, the WessGuard® Smart Tank expansion bladder monitor, with a new and improved sensor.

The WessGuard® is a patented alarm and sensor package that monitors the removable butyl bladder inside pre-charged expansion vessels. The new and improved sensor is conductive, rather than pressure sensitive, so it can detect both the presence of the bladder and water.

If the monitor detects over-extended movement of the bladder inside the vessel, it sends out an audible alert and an LED alarm, which is designed to warn maintenance of a potential system issue.

Justin Workman, Wessels Company's Quality Control Manager, explains the benefit of the new WessGuard system.

"The sensor itself lights up green, there's three little green dots and it will light up when everything is good. And it'll just show the power button on the box," Workman says. "When it's triggered, the sensor will show amber dots and the red alarm light will be on the box and you can hook that into your emergency management system and have it do whatever your system is doing to alert you."

The bladder movement in the vessel is typically less than 50% of the total tank volume. Bladders are designed to fully contour to the tank, but if it extends to 75% or beyond, it can be an indication of an internal misalignment such as loss of air-charge, misapplied installation, bladder fatigue or other issues. The presence of water on the air-side may also signal a maintenance issue.

"If it's too full, it could mean there is something wrong with the tank, it could mean there is something else wrong in your system," he says. "Maybe your pump isn't kicking on and off when it should be, there's a relief valve that's not going on when it should, just safety. Make sure that you're protecting your investment. So, you always want to make sure that everything is running correctly and properly."

Boyle's Law dictates that under typical system pressure, a relatively small percentage of the total tank volume is used to store water.

"You could put a secondary monitor at the lowest the tank will ever be, just so you make sure there is a buffer there and if it goes below that your alarm could sound to alert you that your tank is dry and there's probably something wrong," Workman says.

"You could set it so that if your bladder ruptured, it would alarm, even if it was just for a brief second," he says. "It would trigger the alarm because that bladder wouldn't be there."

The WessGuard® is a patented Smart Tank add-on for Wessels pressure vessels and works on tanks orientated for both horizontal and vertical positions.

The biggest benefit of adding the WessGuard to your system of course is peace of mind in protecting your system.

“Make sure that you’re protecting your investment,” Workman adds. “You always want to make sure that everything is running correctly and properly.”

Workman suggests calling Wessels Company at 317-888-9800 if you’d like to add a WessGuard to your system. You can also visit [www.westank.com](http://www.westank.com) or stop by Wessels Company booth #1661 at ASHRAE 2019.

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