

Monday, February 25, 2019

Point of Use Pressure Boosting

Monday Morning Minutes | by Norm Hall, February 25, 2019

There are terms developed inside the walls of R L Deppmann which may not be commonly used in the plumbing industry. When it comes to pressure boosting in plumbing or process systems there are two terms we often refer to; 'point of use pressure boosting' and 'poor man pressure boosters'. These terms are used when there is a small requirement, a specific machine or instrument with a requirement for more pressure, or simply, someone who is looking for an inexpensive solution.

When I started in the industry, I was blessed with many mentors at R L Deppmann Company. Two of those mentors were Mac Wallace and Bob Whymer. They introduced this young engineering college graduate to phrases such as; *"Do you really need a new pump, or do you have a problem with your existing pump and you need a solution?"* or *"Do you need a complete pressure boosting system, or are you having problems with pressure somewhere in the system?"*.

This is the type of statement that leads to point of use pressure boosting options. There are as many solutions in this category as there are application problems, but let's look at three simple solutions we use on many occasions.

A Simple and Basic Pressure Booster

Gould Water Technologies, a Xylem company, is well known for their submersible and well pumping. They also offer simple and small pressure boosting solutions.

Here is an example of a simple 30 GPM at 30 PSIG self-contained booster system. All we need to do is add a small tank for low flow conditions.





A Machine with a Pressure Problem

We often get requests from contractors to solve a pressure problem affecting a process piece of equipment. The scenario goes something like this; *“The tube washer works well most of the time, but when the plumbing demand is high in the hospital, the pressure drops too low and the system shuts down.”*



There are a number of solutions and a great deal of the options depend on the symptoms. Often times, the simple solution is to add a Bell and Gossett small in-line “PL” bronze booster pump and have it activate when the bottle washer is started. As long as the

combination of the maximum pressure in the plumbing system and the additional pump head is less than the working pressure of the process, no other controls are needed.

Sometimes, control of this type of system for the correct result might be a challenge. If you need a better solution, contact your R L Deppmann sales engineer for the rest of the story.

At Times, The Best Pump is No Pump

As mentioned above, when someone asks for a pump or pressure booster they are really searching for a solution. Many times the piping run out in the system is so long that a short duration but large load increases the pressure drop dramatically.



The pressure is adequate most of the time, but once in a while, the volume of water needed is so great that the pressure drops at the fixture. The solution is the installation of a small tank with an adequate volume of storage from the minimum pressure to the required pressure. Remember, although a flush valve may only use 1.4 L of water, it uses it at 20 GPM or more for a couple seconds.

These simple point of use pressure boosting examples are typical situations you may run into. If you're having a problem coming up with the right solution, give [R L Deppmann](#) or your [local B&G representative](#) a call.