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Hydronic System Feeders



There are plenty of applications out there which could benefit from the addition of a hydronic system feeder, though you don't see them all that often.

If you haven't seen one, let me explain what a system feeder is before you Google it. Generally speaking, it's a self-contained unit that includes a pump, pressure control, and liquid storage vessel, and is installed in place of a system's fill valve. This way, the system isn't drawing water from the building's potable water supply, but rather from the system feeder's tank.

Initially, these devices were designed almost exclusively for use in hydronic systems that included antifreeze. The tank is filled with the correct ratio of water and glycol, so that if and when the system leaks, the glycol levels wouldn't be diluted by adding fresh water.

But in recent past, installers and building owners have realized the many other benefits offered by these pieces

of equipment, whether for boiler systems, chillers, solar-thermal or geothermal applications.

First of all, a properly designed and installed system feeder provides damage avoidance in the case of a catastrophic leak. Because the presence of a system feeder means that the hydronic system is isolated from the building's plumbing system, a system with a major leak can only lose the volume of liquid within the feeder's reservoir. This way, the system leaks a few gallons, the low water cutoff trips, and the boiler stops. The homeowner will figure it out when the house starts getting cooler, instead of going downstairs to find the basement flooded up over the boiler's burner.

Most system feeders feature a translucent tank, so a service tech or maintenance staff can monitor system levels, easily determining if there's a leak. Also, if a liquid cleaner or corrosion inhibiting product – like Rhomar Pro-Tek or Fernox Protector F1 - is used in a system, it can easily be added to the feeder tank during fill.

With legislation changing in various states across the country, there's been more interest in system feeders lately. Code in certain areas

can require the installation of an expensive dual check valve in addition to a pressure reducing valve any time that a hydronic system is connected to a potable water line. In this case, or even in the average American home where only a PRV is present, the cost of a system feeder is offset by the components it replaces.

Despite the many benefits and a growing market, there aren't many feeders on the market to choose from; three or four at most. When I was still a contractor, I wasn't happy with the selection of feeders available. After starting Neutrasafe Corp, I knew I could "build a better mousetrap", and wanted to add a system feeder to our line of products. Over three-and-a-half years of research and testing, I think we've done just that.

Our system feeder is designed to maintain pressure in closed loop systems with a glycol solution of 50 percent or less, and can be installed on systems of almost any size.

When looking at what was on the market, my main complaints were inadequate pumps

and inaccurate, arduous controls. So we focused on improving those areas.

The pumps on some feeders were known to burn out, especially when used to fill hydronic systems. So we include a robust diaphragm pump that can handle the abuse of extended runtimes and the high operating pressures we were looking to provide.

The unit also includes a digital pressure control that allows individually-adjustable cut-in and cut-out pressures points between 1 and 50 PSI, with a secondary pressure switch cut-out at 60 PSI. Both the pump and controls allow the Neutrasafe feeder to serve buildings up to 110 ft. tall.

The six-gallon tank is equipped with a set of dry contacts to connect to a remote alarm if the fluid level gets too low. The result is an easily-used, industrial-duty system feeder that can be installed in about half an hour.

Not every job in the country needs a system feeder, but for those that do, our goal is to make the contractor's work easier and more profitable.

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