



## TECH TIP #27

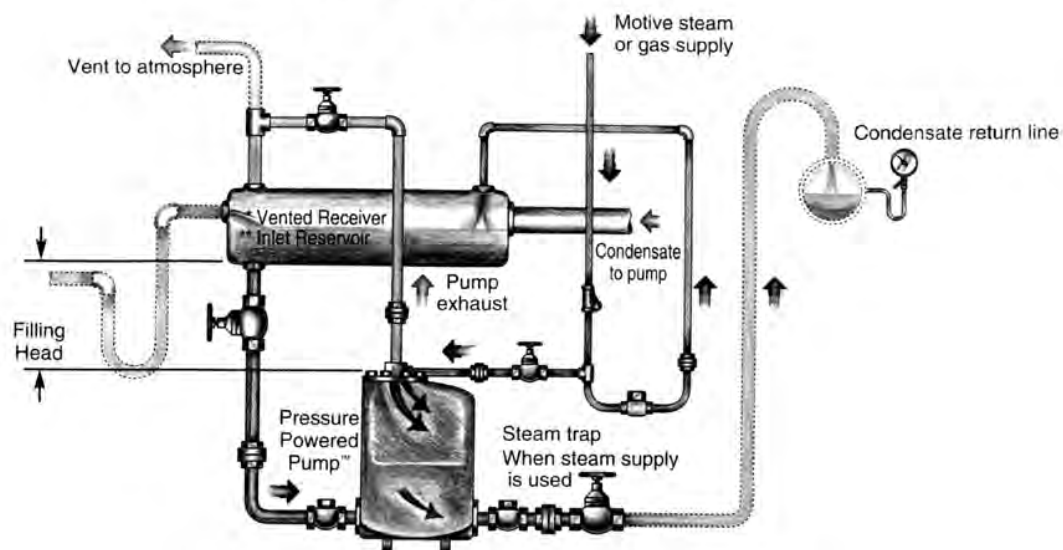
### PRESSURE POWERED CONDENSATE PUMPS

Many engineers and central system owners are beginning to standardize on the Pressure Powered Pump (PPP) for returning hot condensate to the boiler plant. First developed by Spirax Sarco over 30 years ago, Spirax Sarco has over 30,000 PPP located all over the world in some of the toughest applications. No motors to burn out, no seals to replace and able to operate in any hazardous

Operators and repair technicians have come to appreciate the PPP ability to handle extremely hot condensate with the problems typically associated with electric condensate pumps. If you have not installed a PPP in your facility yet, just consider a condensate pump that will handle hot condensate at 212F and hotter without complaining. Take time to look over the user benefits listed on the next page.

ADVANCED TECHTIPS.....Federal Corporation has been selling PPP to military bases, university campuses and industrial facilities for many years with fantastic results. Let us come to your plant, survey your condensate return system and show you how you can save money, maintenance headaches and keep your boiler plant operating smoother than ever before with Spirax Sarco's PPP.

### Typical installation





## TECH TIP #27 (Cont.)

### How it works

The Pressure Powered Pump™ operates on a pressure displacement principle.

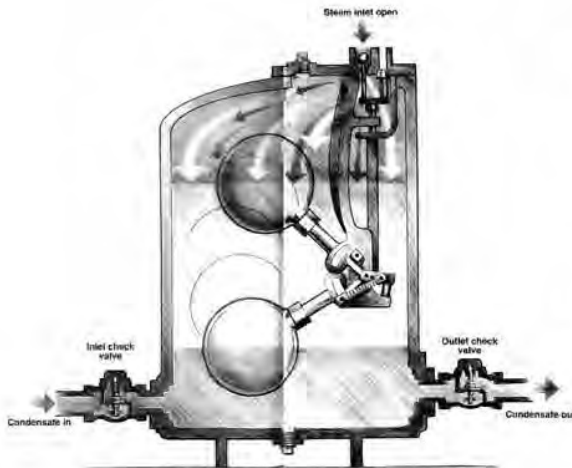
Liquid enters the pump body through the inlet check valve causing the float to rise. As the chamber fills, the valve changeover linkage is engaged opening the steam inlet valve and closing the exhaust valve. This snap action linkage ensures a rapid change from filling to pumping stroke.

As pressure inside the pump increases above

the total back pressure, condensate is forced out through the outlet check valve into the return system.

As the liquid level falls within the pump, the linkage causes the steam inlet valve to close and the exhaust valve to open.

As the pressure inside the pump body falls, condensate re-enters through the inlet check valve and the cycle is repeated.



### User benefits

- Removes condensate under all load conditions, even vacuum, ensuring maximum process efficiency.
- No mechanical seals or packing glands to leak, reducing maintenance costs.
- Requires no electrical power. Single trade for installation and repair.
- Wide range of end connections, compatible with sanitary tubing and piping systems.
- Suitable for hazardous and demanding environments.
- Cavitation problems eliminated, reducing maintenance costs.
- Zero emissions. No motive steam loss when installed in a closed system, reducing operating costs.
- Modular maintenance for reduced plant downtime.
- Rugged design for a trouble-free, long life.
- Minimal steam consumption. 3 pounds of motive steam per 1,000 pounds of liquid pumped.
- Metering capability by addition of optional cycle counter for monitoring plant efficiency.
- Proven reliability. More than 30,000 pumps installed worldwide.
- Six-month payback or less. Call your local sales representative for payback analysis.