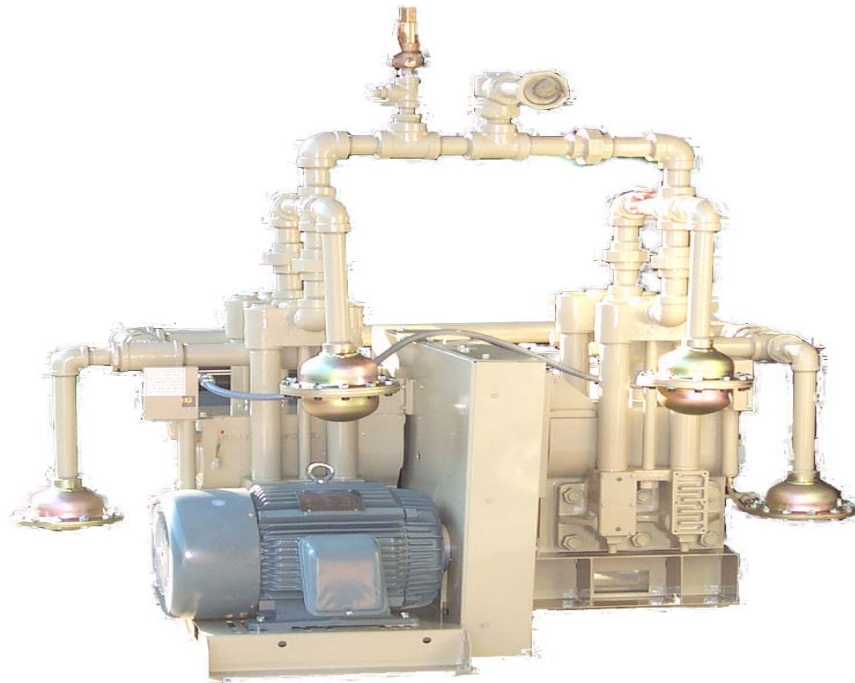


The Clayton Feedwater Pump



The Clayton feedwater pump is a packless/seal-less, positive displacement type, oil reservoir, diaphragm pump that utilizes the diaphragm to isolate the feedwater in the pump column from the hydraulic oil in the crankcase. Water is drawn through the inlet and discharged through the outlet check valves as the column of water is moved by the diaphragm.

For modulating units, feedwater flow is controlled by varying the speed of the feedwater pump using a variable speed drive. Since this is a positive displacement pump, flow varies linearly with speed. For example, at 40% of boiler output, the pump runs at 40% of full/maximum speed. For step-fired units, flow is varied within the pump itself, or by operating in speed steps.

SPECIFICATIONS

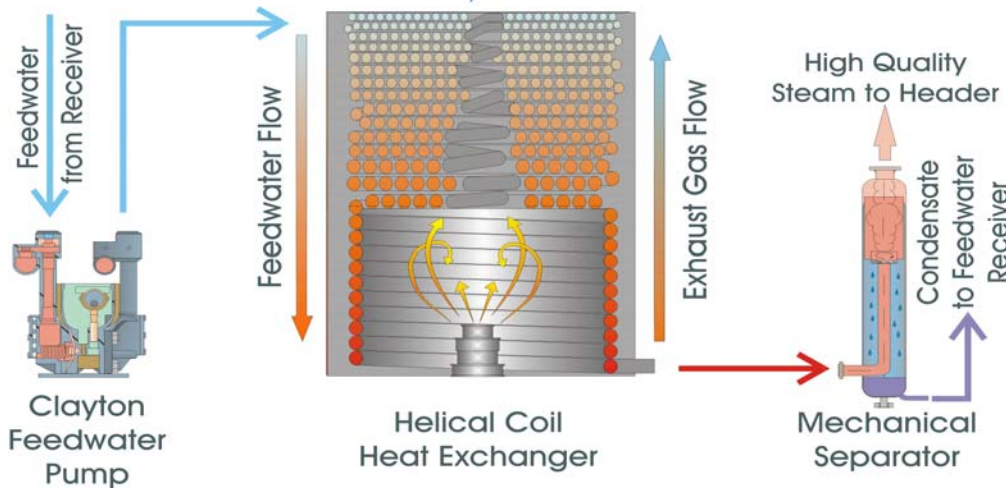


Figure 1

The Clayton, designed and manufactured, pump (Figure 1) is a volumetric, diaphragm type designed to deliver a fixed volume of water into the heating coil during operational loads, sufficiently to maintain a wet tube heating coil under all load conditions. The pump contains no packing box and can handle water up to 464° F (240° C). Output is linear with the pump speed and not affected by back pressure.



Figure 2

The pump diaphragms are operated hydraulically by oil displaced by reciprocating pistons (Figure 2) within the pump crankcase. The pistons are in contact with hydraulic oil and not with the water.

Long life, corrosion resistant springs, discs and seats are used in the check valve housings (Figure 3). Tubular columns separate the check valve housings from the pump heads to keep excessive temperature from the diaphragms. Low speed design ensures long term continuous duty with a minimum amount of maintenance.



Figure 3

Snubbers absorb pressure pulsations to ensure stabilized water flow. A relief valve protects the pump against excessive pressure.

An optional, float operated, pump oil level switch is mounted on the water pump to protect the pumps against too low or too high oil level. Optional pump head cooling provides additional protection to the feedwater pump heads and diaphragms. Pump head cooling is used on all deaerator, semi-closed receiver (SCR) and high pressure (+500 PSIG) applications.

Clayton
INDUSTRIES

Your Single Source for Steam Technology Since 1930

World Headquarters*

4213 N. Temple City Blvd. • El Monte, CA 91731
800.423.4585 tel • 626.442.1701 fax
email: sales@claytonindustries.com

Europe, Africa & Middle East Headquarters

Rijksweg 30 • B-2880 Bornem • Belgium
32.3.890.5700 tel • 32.3.890.5701 fax
email: sales@clayton.be

Latin American Headquarters

Manual E. Stampa 54 • Nueva Industrial Vallejo
Mexico D.F., 07700 Mexico
(55) 55.86.51.00 tel • (55) 55.86.23.00 fax
email: claytonmexico@clayton.com.mx

*We are moving into a new World Headquarters Fall '05. Check our website for the new address.

www.claytonindustries.com