

Abstract

DUAL PUMPING ARRANGEMENT FOR A HOLLOW FIBER FILTER

A fluid filtration assembly includes a filter housing having first and second ends and a connector for fluid communication with a fluid storage vessel. A filter element is disposable within the filter housing, and first and second pumps are coupled at the first and second ends of the filter housing. A controller may coordinate the operation of the first and second pumps to induce alternating tangential flow of fluid between the filter housing and the first and second pumps. At least one of the first and second pumps is a diaphragm pump or a plunger pump. The fluid storage vessel can be a bioreactor.

Figure 2