

ABSTRACT

INLINE DIAFILTRATION WITH MULTI-CHANNEL PUMP

A diafiltration system comprises a fluid treatment assembly comprising two or more fluid treatment modules, the fluid treatment assembly comprising a feed inlet, a permeate outlet, and a retentate outlet; each module comprising a cross flow treatment assembly including an ultrafiltration membrane and having a feed side and a permeate side, and a diafiltration fluid distribution plate comprising a diafiltration fluid feed inlet and a common feed permeate/diafiltration fluid permeate outlet port; two or more diafiltration fluid conduits, each conduit in fluid communication with a respective single diafiltration fluid feed inlet; and, a diafiltration fluid pump comprising at least a first multiple channel pump head having at least two channels including separate channels for separate conduits in fluid communication with respective single diafiltration fluid feed inlets, wherein the pump provides simultaneously controlled diafiltration fluid flow rates through each of the conduits to the respective diafiltration fluid feed inlets.

(Figure 1A)