

ABSTRACT

The present invention relates to a system (100; 200; 300) for purifying a liquid, called liquid to be treated (104), in particular salt water, comprising:

- 5 - a module (112), called treatment module, for treating the liquid to be treated (104) and providing on the one hand a liquid, called purified liquid, and on the other hand a liquid, called residual liquid; and
- a means (102) for pressurizing said liquid to be treated (104) in order to supply said treatment module (112), comprising:
 - 10 ▪ a cylinder, called master cylinder (102_M), provided to be driven by a fluid, called working fluid (130; 314), and
 - at least one cylinder, called slave cylinder (102_E), driven by said master cylinder (102_M), provided to receive said liquid to be treated (104) and supply it to said treatment module (112);
- 15 characterized in that the cross section of said master cylinder (102_M) is greater than the cross section of said at least one slave cylinder (102_E) so that, for a given pressure of said working fluid (130; 314) in the master cylinder (102_M), a greater pressure is generated on the liquid to be treated (104) in the slave cylinder (102_E), and in that it comprises a means (302) for pre-pressurizing the
- 20 liquid to be treated (104), upstream of the pressurizing means (102); said pre-pressurizing means (302) comprising:
 - at least one cylinder, called master cylinder (302_M), connected to the treatment module (112), and driven by the residual liquid provided by the treatment module (112), and
 - 25 - a cylinder, called slave cylinder (302_E), containing the liquid to be treated, driven by said at least one master cylinder (302_M).

Figure for the abstract : Figure 1