TITLE OF INVENTION: PRESSURE CONTROL GASKETS FOR OPERATING PUMP CASSETTE MEMBRANES

ABSTRACT

A pump cassette comprising an outer flexible membrane covering flowpaths, valve chambers and pump chambers of the cassette is designed to be actuated by a control gasket on a base unit arranged to move designated valve and pump portions of the cassette membrane. The configuration of the valve control region is optimized to improve the performance of a cassette valve. The gasket valve control or actuation region is at least partially bounded by a vacuum channel facing the outside of the gasket so that a constant vacuum can be applied between the gasket valve control or actuation region and the adjacent portion of the cassette membrane. An improved version of the vacuum channel comprises a flexible inner wall flexes or partially collapses away from the cassette valve seat, while still maintaining patency of the vacuum channel during the application of negative pressure.

FIG: 17B