IMPROVEMENTS IN, OR RELATING TO, SLIDING SPOOL VALVES, AND METHODS THEREFOR

Abstract

Disclosed is a spool valve to valve a fluid between at least one inlet port and at least one outlet port, having a bore with a spool operably associated therein. The bore has one or more inlet ports and at least one outlet port. Located in the bore is at least one in-bore seal, the seal fluidly sealing on a seal outer diameter to an inside diameter of the bore, and selectively fluidly sealing on a seal inside diameter to a spool outside diameter. Present also is at least one spacer located in the bore, adjacent the at least one in-bore seal having a fluid communication from a spacer internal diameter to a spacer external diameter with at least one inlet port, or the at least one outlet port. The spool moves to allow or prevent flow from an inlet port to outlet port.

Fig. 3