NEEDLELESS CONNECTOR VALVE

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ABSTRACT

A valve mechanism for a needleless connector employs a deformable piston having a piston head of elliptical cross-section with a marquise-shaped bore formed along its longitudinal axis wherein the major axes of the respective generally elliptical shapes are oriented perpendicular to one another. The piston head is captured within the connector housing and is reciprocal between a section of reduced diameter adjacent the connection port and a section of enlarged diameter. Constraining the piston head into the section of reduced diameter causes the elliptical bore to be squeezed shut while positioning the piston head in the section of enlarged diameter causes the piston head to relax and assume its natural elliptical shape, while the bore similarly regains its natural open shape to provide a fluid path therethrough. A compressible or extendible section affixed to the piston head serves to bias the piston into the section of reduced diameter. A tapered section of the piston contacts the housing to secure the top of the piston flush with the top of the housing for ease in cleaning.

FIG. 2

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