supported by the support structure that allows for one-way blood flow through the valve when the valve is in the first unexpanded configuration.

[0014] The expansion segment may comprise a series of interconnected struts connected end-to-end by hinge-like connections which form a zig-zag accordion-like structure having substantially diamond-shaped cells. In one form, the support ring has an undulating shape with alternating cusps and commissures, and wherein the support ring comprises a plurality of expansion segments located between commissures. The expansion segments may be a substantially serpentine structure formed by metallic struts, wherein the struts are compressed closely together, with minimal distances between adjacent struts in the unexpanded configuration to prevent inward compression of the structure to a smaller diameter. The support ring could also be formed of a plurality of segments connected via hinge-like folds which comprise the expansion segments, wherein the ends of adjacent segments initially overlap at the folds such that the support ring has a minimum diameter, and when the support ring expands, the ends of adjacent segments are pulled apart as the folds at least partially unfold, so that the structure has a maximum inner diameter.

[0014a] Another embodiment disclosed herein is a prosthetic heart valve having a first unexpanded configuration and a second expanded configuration, the prosthetic heart valve comprising a support structure defining a circumference, the support structure having a first inner diameter when the prosthetic heart valve is in the first unexpanded configuration and a second inner diameter when the prosthetic heart valve is in the second expanded configuration, wherein the second inner diameter is larger than the first inner diameter, wherein the support structure resists inward compression when the prosthetic heart valve is in the first unexpanded configuration, the support structure comprising a support band with overlapping free ends with at least one hole each that register and a weakened section comprising a suture passing through the registered holes that maintains the free ends aligned but is configured to structurally fail when the support structure is subjected to a dilation force greater than forces associated with normal cardiac cycling, and a valve portion supported by the support structure that allows for

one-way blood flow through the valve when the valve is in the first unexpanded configuration.

[0015] ~~Another embodiment~~ There is also disclosed herein ~~is~~ a prosthetic heart valve having a first unexpanded configuration and a second expanded configuration, the prosthetic heart valve comprising a support structure defining a circumference. The support structure has a first inner diameter when the prosthetic heart valve is in the first unexpanded configuration and a second inner diameter when the prosthetic heart valve is in the second expanded configuration, wherein the second inner diameter is larger than the first inner diameter. The support structure rigidly resists inward compression when the prosthetic heart valve is in the first unexpanded configuration. The support structure comprises a first support band passing substantially around the circumference of the support structure. The first support band can comprise a polymeric material. A second support band passes substantially around the circumference of the support structure and is arranged concentrically against the first support band. The second support band can comprise a metal, and the second support band has at least one expansion point around its circumference configured to permit expansion of the second support band when the