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An effective method for measuring the stiffness of a sealed vessel that can be applied to RPC gas volumes.

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A known volume of air is injected into or aspirated from a sealed vessel. In the ideal gas approximation, the corresponding vessel deformation is measurable. The linear correlation between pressure and deformation in the measurements carried out demonstrate the vessel elastic response. Measurements of several RPC gas volumes are reported. Different expansion and compression slopes of pressure vs volume plots, highlight a structure problem, as for example unglued spacers. Defective stiffness values of the electrode materials are also highlighted by anomalous slope values.

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