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A new scheme and first results for the implementation of a low-cost Gas recirculation system for the RPCs chamber.

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An efficient and safe Recirculation System for the gas target inside RPCs detector is a crucial item for planning any future application.

The system is based on a special valve that decouples a suction pump from the RPCs, with the aim to keep the pressure inside the chamber in the range of 1-3 mbar, regardless of variations in atmospheric pressure, recirculated flow, and temperature. The circulating gas is flushed in pure water where the impurities developed inside the detector are expected to be soluble and trapped.

A small prototype capable to flush few liters per hour was built and first result are reported.

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