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# Vacuum Performance of the Prototype Chamber for the Korea-4GSR

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The performance of the main vacuum chamber of the Korea 4th generation storage ring (Korea-4GSR) was evaluated. The hydrogen outgassing rate of the aluminum extrusion chamber was measured using the gas accumulation method. After heat treatment for 150℃-48 hours, the outgassing rate is approximately 1E-13 mbar l/s cm². The pumping speed of the pill-type getters was measured under various activation conditions before inserting them into the chamber. The results were compared with the pumping speed of the getters which underwent ultrasonic cleaning using isopropyl alcohol for particle removal. The pumps were arranged using the distributed pumping scheme. Nine hundred pill-type getters were inserted into 3 slots of the 3 m-long chamber proto-type. The base pressure of this chamber after 180℃-24 hours getter activation is 5E-11 mbar. We also measured the pumping capacity of this chamber by injecting hydrogen gas until saturation of the getters. This result will be used to optimize the design of the vacuum system as well as to predict the reactivation timing of the getters during the commissioning stage.

## Summary

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