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KOMAC RFQ Vacuum System

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The design of a vacuum pumping system for the KOMAC (Korea Multipurpose Accelerator Complex) RFQ (Radio-Frequency Quadrupole) linac is described. [Fig.] Resulted from the lost proton beam, gas streaming from the LEBT (Low Energy Beam Transport) and out-gassing from the surfaces of the RFQ cavity and vacuum plumbing, the total gas load will be on the order of 7.2×10^4 Torr-liters/sec, consisting mainly of hydrogen. The system designed to pump on a continual basis with redundancy to ensure that the minimal operating vacuum level of 1.0×10^6 Torr is maintained even under abnormal conditions. Details of the design, performance analysis and the preliminary test results of the cryogenic pumps are presented.

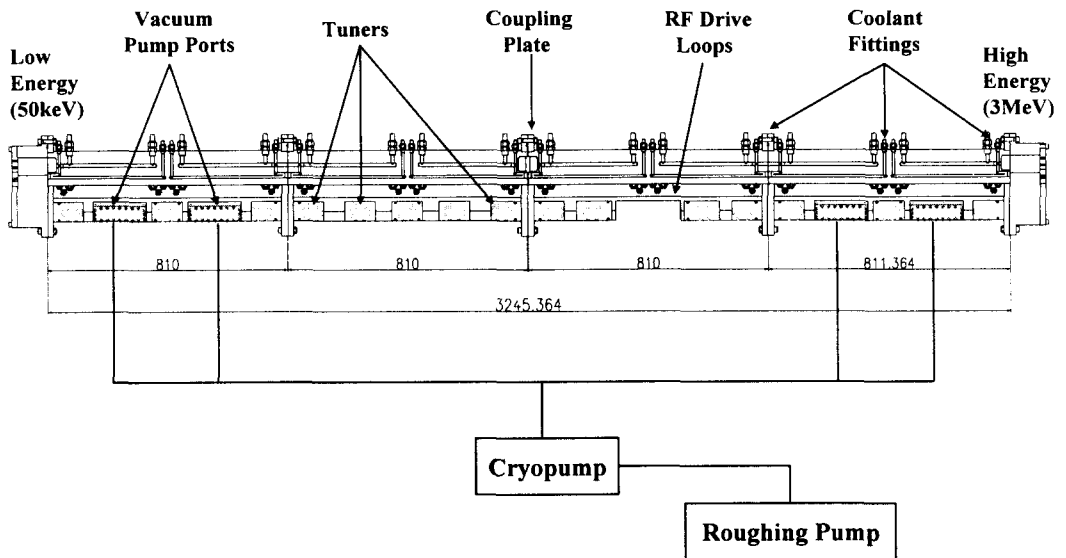


Fig. KOMAC RFQ Vacuum System.