

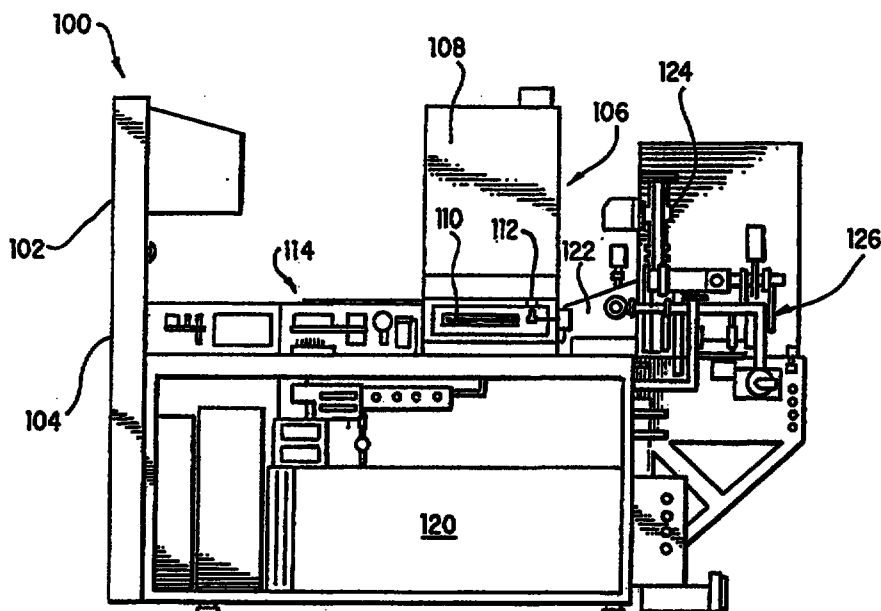


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(54) Title: METHOD AND APPARATUS FOR PRESSURE CONTROL IN VACUUM PROCESSORS**(57) Abstract**

A method and apparatus is disclosed for controlling the pressure of a reaction chamber (106) in wafer processing equipment. The disclosed apparatus and method uses a ballast port (150b) for inserting gas into the evacuation system, thereby controlling the pressure in the reaction chamber. The disclosed apparatus and method further uses estimation curves to estimate the desired position of a controlled gate valve (124) which is located between the reaction chamber and turbo pump (126). The disclosed apparatus and method achieves a set point pressure by prepositioning a throttle valve followed by repositioning the throttle valve based on the difference between a measure pressure and the set point pressure using proportional and integral control, wherein enablement of integral control is delayed for a pre-specified period.