

(S7) Abstract: In a first aspect, a system includes (1) a chamber; (2) a variable speed vacuum pump coupled to the chamber; and (3) a pressure controller coupled to the chamber. The pressure controller compares a set point pressure with a pressure measurement for the chamber and adjusts a flow of gas through the pressure controller based on a difference between the pressure measurement and the set point pressure. The system includes a pressure measurement device coupled to the chamber and to the pressure controller, and a main controller coupled to the variable speed vacuum pump, the pressure controller and the pressure measurement device. The pressure measurement device measures a pressure within the chamber and provides a pressure measurement to the pressure controller and the main controller. The main controller (1) adjusts a speed of the variable speed vacuum pump; and (2) provides the set point pressure to the pressure controller.