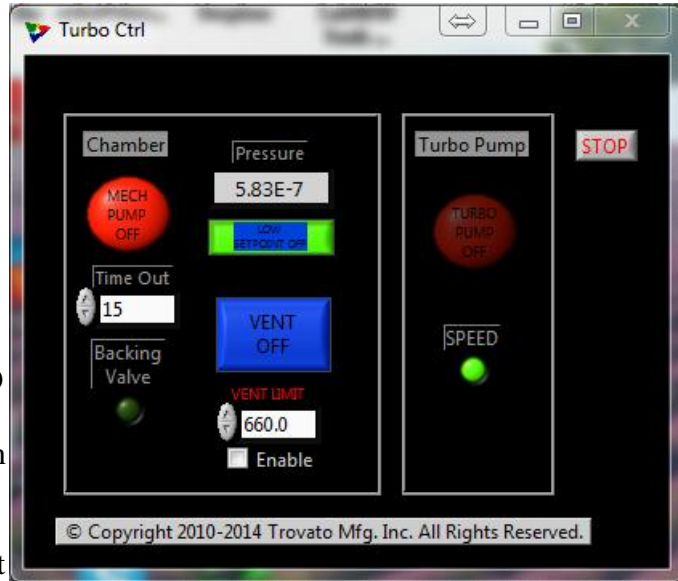


## Turbo Control

Turbo control is used to sequence the turbo pump and valves to put the chamber under vacuum, and once under vacuum, to vent the system to atmospheric pressure.

- **Start-up Sequence** - The pump-down sequence is started by pressing the MECH PUMP ON/OFF button. This will start the backing pump. When the Time Out (15 Sec) has expired for evacuating the roughing line, the Backing Valve will open to the turbo pump. Pressing the TURBO PUMP ON/OFF button starts the turbo pump. When the turbo pump has reached operating speed, the SPEED LED will light up. The front panel of the Osaka turbo pump controller will show the actual RPM value for the pump.



- **Vent Sequence** – To start the vent sequence, the TURBO PUMP ON/OFF button is pressed to turn off the turbo pump. MECH PUMP ON/OFF button is now enabled and can be pressed to close the Backing Valve and turn off the backing pump. The turbo pump should be allowed to spin down for about 9 minutes before venting to be sure that it is not damaged. The turbo pump speed and spin-down time can be monitored on the front panel of the Osaka turbo pump controller. After the spin-down time has expired, the VENT ON/OFF button may be pressed to bring the chamber pressure up. By setting a VENT LIMIT pressure (in Torr) and selecting the Enable checkbox, the vent valve will automatically close upon reaching the final pressure. Be sure the VENT LIMIT value is less than atmosphere, as the vent gas will continue to be expelled from the front door of the chamber into the glovebox. This pressure release will prevent the chamber pressure from rising above atmosphere.