



Note: Photo of Gas Train Simulator

Major Components

1. Main Gas Shut-Off Valve
2. Sediment Trap
3. Strainer
4. Pilot Gas Manual Valve
5. Pilot Regulator
6. Pilot Solenoid Valves
7. Downstream Shut-Off Valve
8. Main Gas Regulator
9. Low Gas Pressure Switch
10. Safety Shut-Off Valve
11. Double Block and Bleed Valve
12. Blocking Valve
13. High Pressure Switch

How a Light-Off Sequence Works

On a call for heat, the Burner Management System (BMS) checks the Low and High gas pressure switches, the proof of closure switch, and initiates the purge cycle. The purge fan comes on. The purge timing starts when the airflow switch senses that sufficient airflow is being provided. When the purge timing is complete, the BMS verifies that the firing rate valve is in the low fire start position, the igniter sparks, and the pilot solenoid valves open. The BMS timer allows only 10 seconds for the flame detector to prove the pilot flame. Once a pilot is verified, the Safety Shut Off Valve and the Blocking Valve open and the Vent Valve closes. The BMS timer initiates a 10 second period during which the pilot valve and igniter are de-energized and only the main flame must be detected. The BMS then releases control of the burner to the firing rate controller and assumes a monitoring role.