

Laboratory Gas Safety System for Hydrogen from 750°C to T_{max}

The laboratory gas safety system is required for safe operation when using hydrogen gas in Carbolite Gero tube furnaces or metallic chamber retorts.

The system is suitable for use with either tube furnaces using a suitable work tube package or chamber furnaces using an A105 retort up to a maximum internal volume of 50 litres.

The system is supplied with its own control cabinet, off gas burner and flexible pipes with fittings to connect directly to a gas atmosphere work tube package or chamber A105 retort.

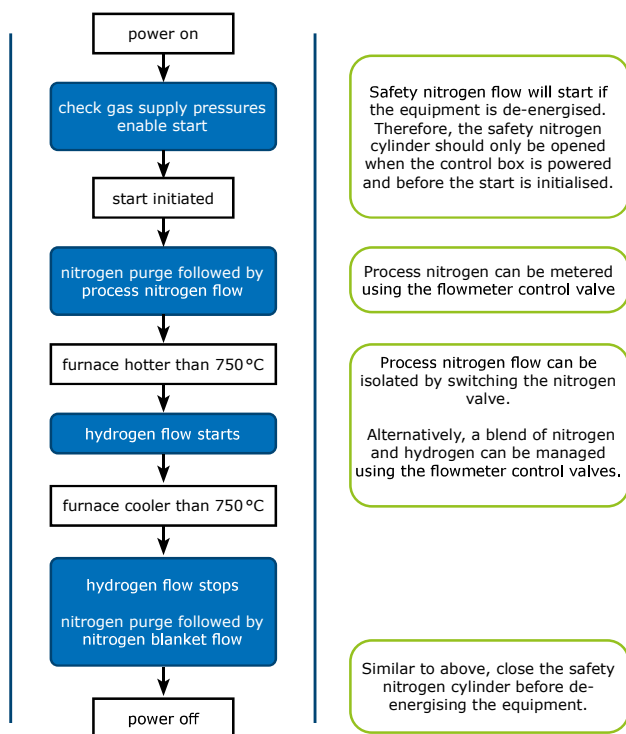
The system automatically purges the work tube or chamber with nitrogen, ensures hydrogen is only introduced to the furnace above a safety temperature of 750°C, and provides an end purge of nitrogen. A nitrogen purge also occurs in the event of unplanned shutdowns.

Two adjustable flow meters provide the facility for hydrogen and nitrogen flows to be blended to suit the process.

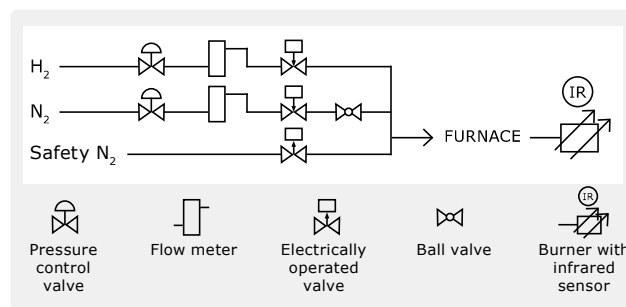
A monitored electrically heated gas ignitor ensures the hydrogen is fully consumed.

Safety features include:

- Over-pressure protection for the work tube or retort
- Excess flow (rupture) protection
- Purge timer
- Independent safety purge
- Supply gas monitoring
- Furnace temperature monitoring
- Electric ignitor



Simplified piping schematic



Technical data

Model	Dimensions of control box H x W x D [mm]	Dimensions of burner assembly H x W x D [mm]	Power [W]
LGSS	440 x 430 x 490	650 x 300 x 335	300

The Laboratory Gas Safety System can be used in combination with:

- CWF chamber furnaces with A105 retort
- All TF tube furnaces
- All TS tube furnaces
- All FHA & FHC tube furnaces
- All FST & FZS tube furnaces
- All HTRH & HTRV tube furnaces
- All HTRV-A tube furnaces