

Differential pressure proportional valve GRCH



GUANGZHOU SINON COMBUSTION

EQUIPMENT CO., LTD.

☎ 020- 84581309

💻 020- 84507159

🌐 www.gzsinon.net

✉ sinon@gzsino.net

CHARACTERISTICS

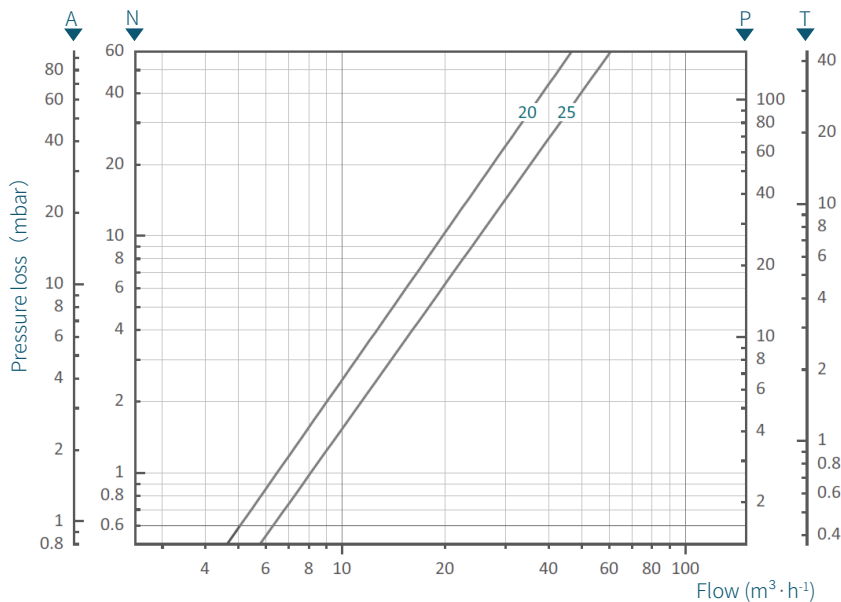
- Automatically adjust the valve outlet pressure according to the differential pressure of two feed-back tubes.
- With pressure compensation, which can eliminate the effects of pressure fluctuations in the inlet medium.
- The ratio of valve outlet pressure and feedback tube differential pressure is 4:1.
- Medium: natural gas, LPG, and other clean gases.

APPLICATIONS

Installed in the gas pipelines in automatic combustion system, the air-gas ratio of burner is controlled according to the feedback air differential pressure. It is more suitable for the continuous proportional control systems with temperature compensation and preheated air.

SPECIFICATIONS

Pressure loss



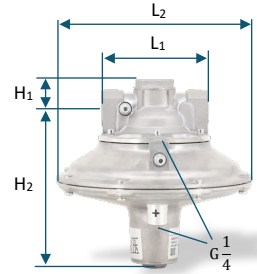
A: Air, 1.2 kg/m³, N: Natural gas, 0.75 kg/m³,
P: LPG, 2.0 kg/m³, T: Town gas, 0.55 kg/m³.
Gas temperature: 20 °C.

Type table

| Type | GRC | 20 | R | -P |
|-----------------|-----------|----------|---|----|
| Dimension | 20: DN20 | 25: DN25 | | |
| Connec- tion | R: Thread | | | |
| Other | P: Bypass | | | |

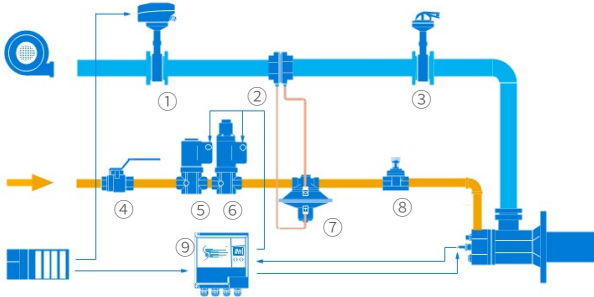
Dimensions

| Type | Connection | L ₁ /mm | L ₂ /mm | H ₁ /mm | H ₂ /mm | Max inlet pressure/mbar |
|----------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------------|
| GRCH 20R | Rp $\frac{3}{4}$ " | 126 | 234 | 34 | 185 | 200 |
| GRCH 25R | Rp 1" | 126 | 234 | 34 | 185 | 200 |



Solutions

For the gas pipelines of DN20 or DN25



① Air solenoid valve SAM+HTB

② Air orifice plate

③ Air valve HK

④ Manual shut-off gas valve

⑤ Gas solenoid valve SG..Q

⑥ Gas solenoid valve SG..S

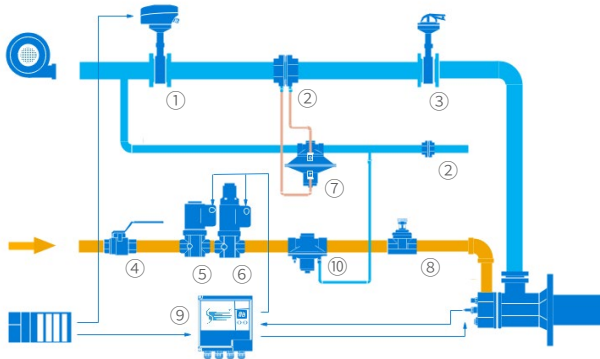
⑦ Differential pressure ratio control valve GRC

⑧ Linear flow control valve KV

⑨ Burner control unit SCU 4.1

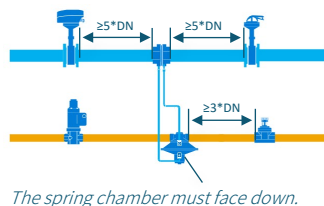
⑩ Ratio control valve GRC

For the gas pipelines with diameter of >DN25



INSTALLATION

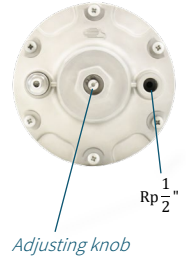
- Installation position: horizontal, with the spring chamber facing down.
- The arrow on the valve body indicates the flow direction, determine the installation direction according to the arrow.
- Ambient temperature: $-15\sim 60\text{ }^{\circ}\text{C}$, install away from heat sources.
- Reserve enough space under the valve for adjustment with an inner hex wrench.
- A straight segment of $5 \times \text{DN}$ should be provided downstream and upstream of the orifice plate.
- Proportional valve: installed in the straight pipe at over $3 \times \text{DN}$ upstream of the HK and downstream of the SG..S.



Attention

- The pipe must be purged before installing the valve, pay attention to the correct use of sealing materials, forbid foreign matters falling into in the valve.
- Do not weld the pipe around the valve after installing to prevent foreign matters from blocking or damaging the valve.
- To facilitate maintenance, install a manual shut-off valve upstream.
- Install the filter SF upstream to protect the GRC from foreign matters.
- Do not exceed the max inlet pressure of 200 mbar.
- The valve inlet gas pressure needs to be over 4 times of the combustion air orifice differential pressure due to the ratio of valve outlet pressure and feedback pipe differential pressure is 4:1.
- The air-gas ratio is adjusted by the air manual butterfly valve installed downstream of the feedback tube inlet and the gas manual control valve installed downstream of the GRCH.

- For low fire rate, the gas ratio is adjusted by the knob at the bottom of the valve. Adjustment range: ± 3 mbar.
- For high/low pulse control, adjust low-fire rate by adjustable bypass, while adjusting the knob to the Max.



Maintenance

Once a year. Increase the times of maintenance as is the case.



Overpressure prohibited!