

# Air/gas proportional valve GRC



GUANGZHOU SINON COMBUSTION

EQUIPMENT CO., LTD.

☎ 020- 84581309

💻 020- 84507159

🌐 [www.gzsinon.net](http://www.gzsinon.net)

✉ [sinon@gzsinon.net](mailto:sinon@gzsinon.net)



## CHARACTERISTICS

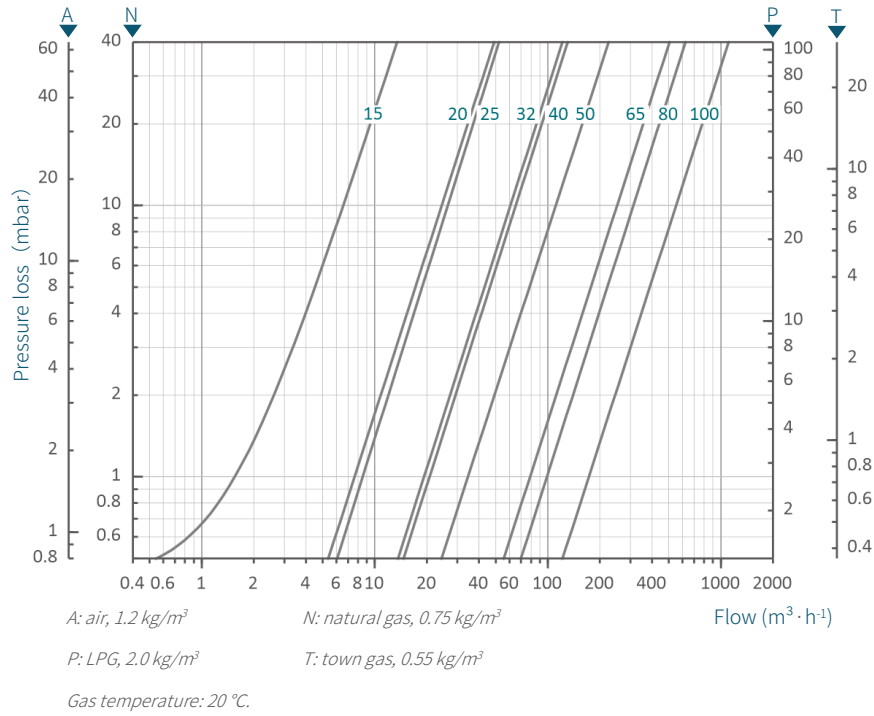
- Automatically adjust the valve outlet pressure according to the pressure of feedback tube.
- With pressure compensation, which can eliminate the effects of pressure fluctuations in the inlet medium.
- Feedback tube and valve outlet pressure ratio of 1:1, adjusting range of 1:10.
- Medium: natural gas, LPG, and other clean gases.

## APPLICATIONS

For the gas pipelines in automatic combustion system, the air-gas ratio of burner is controlled according to the feedback air pressure. It could be used in continuous proportional control systems or high/low pulse control systems, or be used as zero pressure valves in premixed combustion systems with Venturi tubes.

# SPECIFICATIONS

## Pressure loss

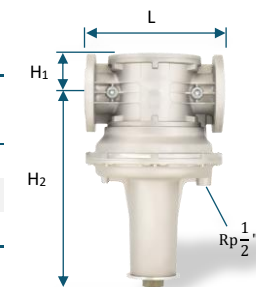
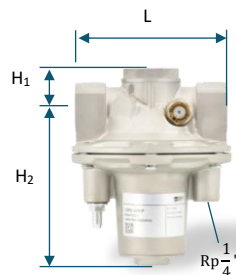


## Type table

Type	GRC				20	R	-P
Dimension	15: DN15	20: DN20	25: DN25	32: DN32	40: DN40		
	50: DN50	65: DN65	80: DN80	100: DN100			
Access	R: thread	F: flange (DN65~DN100)					
Other	P: bypass						

## Dimensions

Type	Access	L/m m	H <sub>1</sub> /mm	H <sub>2</sub> /mm	Max inlet pressure /mbar
GRC 15R	Rp $\frac{1}{2}$ "	126	32	132	200
GRC 20R	Rp $\frac{3}{4}$ "	126	33	132	200
GRC 25R	Rp1"	126	33	132	200
GRC 32R	Rp1 $\frac{1}{4}$ "	157	46	149	200
GRC 40R	Rp1 $\frac{1}{2}$ "	157	46	149	200
GRC 50R	Rp2"	202	52	168	200

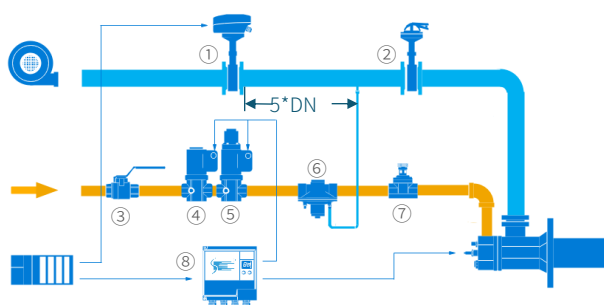


Type	Access	L/mm	H <sub>1</sub> /mm	H <sub>2</sub> /mm	Max inlet pressure/mbar
GRC 65F	DN 65	310	89	440	200
GRC 80F	DN 80	310	100	440	200
GRC 100F	DN 100	350	115	495	200

When the interfaces are flange connections, the paired flanges conform to GB/T9119-2010 in PN 1.6 MPa.

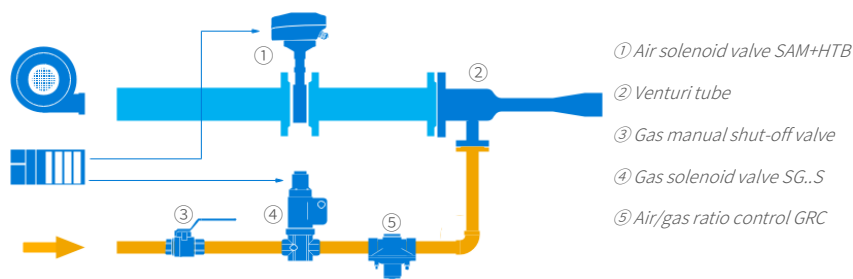
## SOLUTIONS

For continuous control or pulse control



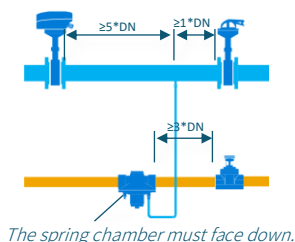
- ① Air Solenoid valve SAM+HTB
- ② Air manual butterfly valve HK
- ③ Gas manual shut-off valve
- ④ Gas solenoid valve SG..Q
- ⑤ Gas solenoid valve SG..S
- ⑥ Air/gas ratio control GRC
- ⑦ Manual linear flow control KV
- ⑧ Burner controller SCU 4.1

- In continuous control system, the valve is controlled by a 3-point step controller or 4~20 mA current controller (SAM).
- In pulse control system, the valve is controlled by a 2-point step controller (SAM).



## INSTALLATION

- Installation position: horizontal, with the spring chamber facing down.
- Pay attention to the flow direction when installing.
- Ambient temperature:  $-15 \sim 60^{\circ}\text{C}$ , keep away from heat source.
- Reserve enough space under the valve for adjustment with an inner hex wrench.
- Feedback tube inlet: installed on the straight pipe between over  $5 \times \text{DN}$  downstream of the SAM and over  $1 \times \text{DN}$  upstream of the HK.
- 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.
- Welding pipes and flanges precede the assembly of flanges and valves to prevent foreign matters from falling into the valve.

- To facilitate maintenance, install a manual shut-off valve upstream.
- Install the filter SF upstream to protect the GRC from foreign matters.
- The valve inlet gas pressure needs to be greater than combustion air pressure due to the valve outlet pressure and feedback pipe pressure ratio is 1:1.
- The air-gas ratio is adjusted by the air manual butterfly valve and the gas manual control valve.
- For low fire rate, the gas ratio is adjusted by the knob at the bottom of the valve, adjustment range:  $\pm 3$  mbar.
- For high/low pulse control, adjust low-fire rate by adjustable bypass, while adjusting the knob to the Max.



*Adjusting knob*

 Overpressure prohibited!

## Maintenance

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