

## RRG GAS-AIR RATIO REGULATORS

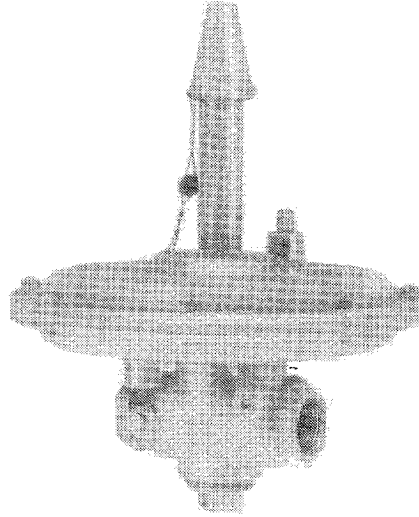


Fig. 1 - RRG Ratio Regulator

The Hauck RRG Gas-Air Ratio Regulators are designed for use with nozzle mix burners of the low pressure air and gas type. These regulators are carefully balanced to maintain a precise gas-air ratio to either a single burner or multiple burners in one air control zone. **The RRG is designed to be used as a balanced regulator, not as a gas shutoff cock.**

### INSTALLATION (For 4" RRG, see **CAUTION** note, page 3)

1. Install the RRG at any convenient location in the gas line, downstream from a gas shutoff cock. The unit must be mounted with the diaphragm chamber in a horizontal position and the tubular spring casing vertically up. Ensure that the gas flow through the valve corresponds to the direction of the arrow on the body assembly.
2. Connect the air line to the regulator air impulse inlet. (See Fig. 2) If the air pressure exceeds the gas pressure, an air bleeder valve must be used. The proper operation of a cross-connected gas regulator requires that the gas supply pressure be equal to the sum of the maximum control air line pressure plus the gas pressure drop through the regulator at high fire. When this condition exists, the air bleeder valve can be omitted. If the gas pressure is too low or the air pressure is too high, an air bleeder valve is required. The air bleeder valve is adjusted as follows:
  - A. Install a U-tube manometer or other suitable air pressure gauge **DOWNSTREAM** of the bleeder valve.
  - B. Calculate the maximum allowable air pressure. Accomplish this by subtracting 4" water column from the maximum input gas pressure. The result is the maximum allowable air pressure.
  - C. Start air flowing through the bleeder valve.
  - D. Adjust the depth of the valve spindle until the pressure gauge indicates the maximum air value calculated in step B. A counterclockwise rotation of the spindle will cause an increase in the air flow while a clockwise rotation will decrease the flow. Loosen the packing nut only if it inhibits the rotation of the spindle.

These instructions are intended to serve as guidelines covering the installation, operation, and maintenance of Hauck equipment. While every attempt has been made to ensure completeness, unforeseen or unspecified applications, details, and variations may preclude covering every possible contingency. **WARNING: TO PREVENT THE POSSIBILITY OF SERIOUS BODILY INJURY, DO NOT USE OR OPERATE ANY EQUIPMENT OR COMPONENT WITH ANY PARTS REMOVED OR ANY PARTS NOT APPROVED BY THE MANUFACTURER.** Should further information be required or desired or should particular problems arise which are not covered sufficiently for the purchaser's purpose, contact Hauck Mfg. Co.

**OPERATION**

At the maximum regulator flow, the gas pressure drop across the regulator can range from 4" to 14" water column. For best operation at the maximum regulator flow, a pressure drop of 10" water column across the regulator is recommended. Do not exceed the maximum inlet gas pressure of 2 psig or (5 psig, if using special high pressure diaphragm).

The RRG is a precision unit properly adjusted at the factory. No additional adjustments are necessary.

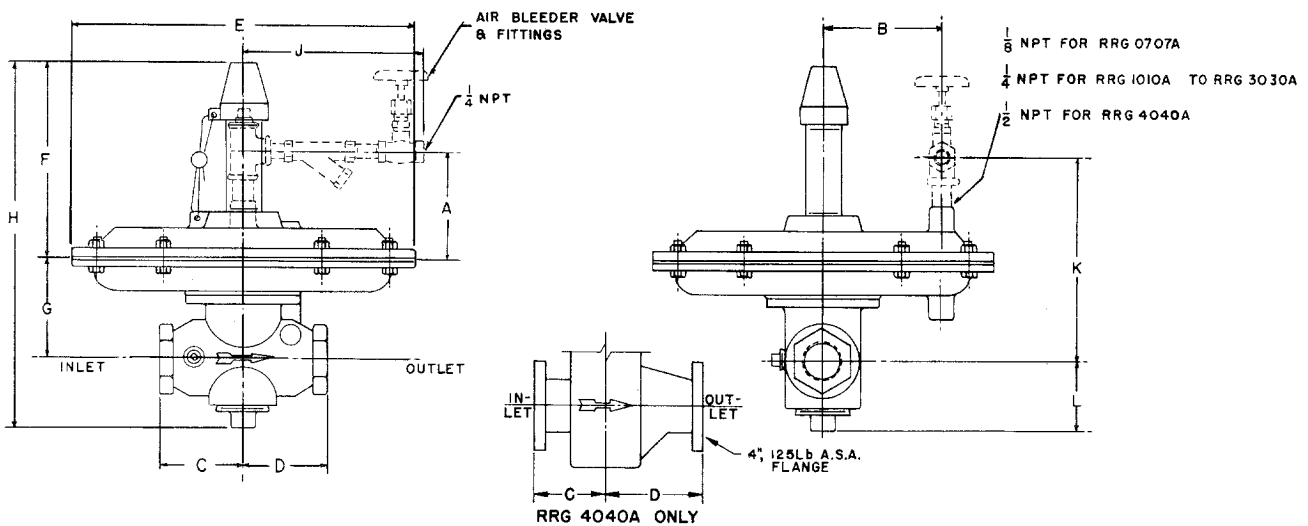
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**MAINTENANCE**

Balanced regulators are precision units constructed to extremely close tolerances. The diaphragm positions, diaphragm slack and spring tension are quite critical. These are preset at the factory and require no maintenance or adjustment.

If it should ever become necessary to replace the diaphragm assembly, follow the instructions which accompany the replacement parts.

Periodically remove and clean the air filter in the air bleeder assembly (if present). The filter is removed by unscrewing and removing the bolt-head restraining device on the underside of the valve.



MODEL NO.	PIPE SIZE IN & OUT NPT	CAPACITY C.F.H. OF .60 S.G. GAS *	DIMENSIONS IN INCHES										
			A	B	C	D	E	F	G	H	J	K	L
RRG 0707A	3/4 x 3/4	1025	3 5/16	2 3/4	2 1/2	2 1/2	8 1/4	6 1/2	2 7/8	11 1/4	7	6 3/16	1 7/8
RRG 1010A	1 x 1	2040	2 13/16	3 3/8	2 3/8	2 3/8	9 3/4	7	2 3/4	11 3/4	7	5 9/16	2
RRG 1515A	1 1/2 x 1 1/2	4080	2 15/16	3 7/8	3	3 1/2	11 3/4	8 5/8	4	15 7/8	7	6 15/16	3 1/4
RRG 2020A	2 x 2	7145	2 15/16	3 7/8	3 5/8	4	11 3/4	8 3/8	4	16	7	6 15/16	3 5/8
RRG 2525A	2 1/2 x 2 1/2	10200	3 7/16	3 5/8	4	4 1/2	14	8 7/8	5 1/4	17 5/8	7	8 1/16	3 1/2
RRG 3030A	3 x 3	16285	3 7/16	3 5/8	5 3/4	5 3/4	14	9 7/8	6	20 1/4	7	9 7/16	4 3/8
RRG 4040A	4 x 4 FLG	28620	4 1/16	10	6 3/8	12 1/4	24	27 1/4	9 3/8	45 1/8	7 7/16	13 7/8	8 1/2

\* BASED ON 10 W.C. DROP THRU REGULATOR.

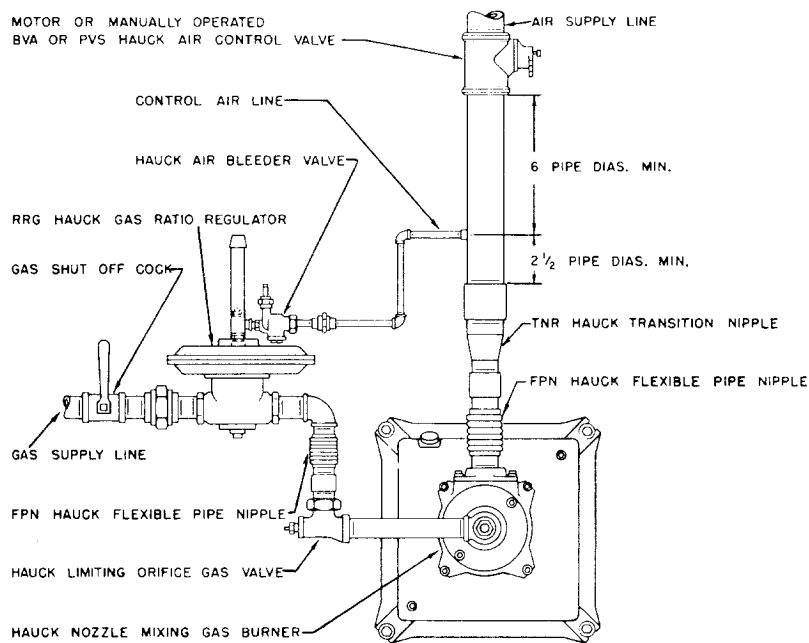
FLOW CAPACITY GRAVITY CORRECTION TABLE	
SPECIFIC GRAVITY	CAPACITY FACTOR
.40	1.23
.56	1.03
.60	1.00
1.00	.77
1.52P	.63
2.07B	.54

P = PROPANE  
B = BUTANE

GX249

Fig. 2 - Dimensions

### TYPICAL PIPING SCHEMATIC



Typical installation arrangement for a single burner. For a multiple burner system, write for Drawing GY303.

GW253

Fig. 3

#### CAUTION

##### Applicable To 4" RRG REGULATORS ONLY

1. Remove Bottom Plug or Cover.
2. Remove Wooden Plug Shipping Spacer.
3. Check the pipe thread sealing compound on bottom plug, or gasket sealer on bottom cover gasket, and, if necessary, add sealing compound.

*On high temperature regulators use no-lock or equivalent high temperature sealing compound.*

4. Replace Bottom Plug or Cover.