# REGULATORS BALANCED RATIO

MODEL: 5104 - BRR

Revision: 0

BULLETIN 5104

### DESCRIPTION

**BRR - Balanced Ratio Regulators** are designed to provide accurate air/fuel ratio control of cross-connected combustion systems. The delivery pressure of the BRR will match that of the cross-connected signal being applied to the upper diaphragm chamber, as long as the minimum differential is maintained. A turndown ratio of 20 to 1 is possible with the BRR.

The Balanced Ratio Series features large main diaphragms, a balancing diaphragm and soft rubber seat to insure good control at low turndown ratios.

For installation, see Bulletin 5101 Installation.

### **CAPACITY TABLE**

| Model<br>Number | Pipe Size |        | SCFH Gas Flow @ 4.0" W.C. Pressure Drop |                     |                    |             |  |  |
|-----------------|-----------|--------|---|---------------------|--------------------|-------------|--|--|
|                 | Inlet     | Outlet | MFD.<br>0.4 Sp. Gr.                     | NAT.<br>0.6 Sp. Gr. | AIR<br>1.0 Sp. Gr. | L.P.        |  |  |
|                 | 0/48      |        | •                                       |                     |                    | 1.5 Sp. Gr. |  |  |
| 6 - BRR         | 3/4"      | 3/4"   | 790                                     | 650                 | 500                | 410         |  |  |
| 8 - BRR         | 1"        | 1"     | 1,580                                   | 1,290               | 1,000              | 820         |  |  |
| 12 - BRR        | 1-1/2"    | 1-1/2" | 3,160                                   | 2,580               | 2,000              | 1,640       |  |  |
| 16 - BRR        | 2"        | 2"     | 5,530                                   | 4,520               | 3,500              | 2,860       |  |  |
| 20 - BRR        | 2-1/2"    | 2-1/2" | 7,900                                   | 6,450               | 5,000              | 4,100       |  |  |
| 24 - BRR        | 3"        | 3"     | 12,600                                  | 10,300              | 8,000              | 6,500       |  |  |
| 32 - BRR        | 4"        | 4"     | 22,100                                  | 18,100              | 14,000             | 11,400      |  |  |



#### **FEATURES**

- Accuracy: Low - Flow: ± 0.1" W.C. Full - Flow: ± 0.3" W.C.
- Turndown up to 20:1
- Operating temperatures to 150 °F
- All units factory tested and sealed before shipment
- Maximum inlet pressure: 5 psig
- Maximum pressure differential: 4 psig
- Minimum pressure differential: 10" W.C.

CAUTION: Operation of combustion equipment can be hazardous resulting in bodily injury or equipment damage. Each burner should be supervised by a combustion safeguard and only qualified personnel should install, make system adjustments and perform any required service.

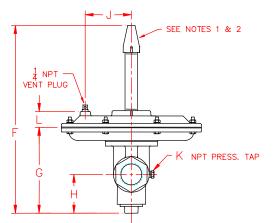


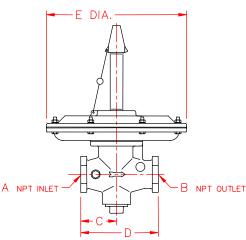
ORDAN THERMAL PRODUCTS LTD Combustion Equipment & Controls for Industry 21 Amber St # 9, Markham Ontario Canada L3R 4Z3 Tel: (905) 475-9292 Fax: (905) 475-3286 www.ordanthermal.com NOTICE: PYRONICS practices a policy of continuous improvement in the design of its products. It reserves the right to change the specifications at any time without prior notice.

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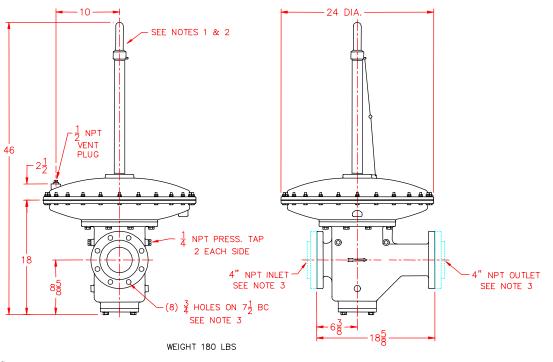
DIMENSIONS: 3/4" - 3" SIZES





| Model<br>Number | Α     | В     | С     | D      | Ε      | F      | G      | Н     | J     | Κ   | L     | Weight<br>Lbs. |
|-----------------|-------|-------|-------|--------|--------|--------|--------|-------|-------|-----|-------|----------------|
| 6 - BRR         | 3/4   | 3/4   | 2-1/2 | 5      | 8-1/4  | 11-1/4 | 4-7/8  | 2     | 2-3/4 | 1/8 | 1-1/4 | 7.0            |
| 8 - BRR         | 1     | 1     | 2-3/8 | 4-3/4  | 9-3/4  | 11-3/4 | 4-3/4  | 2     | 3-3/8 | 1/8 | 1-1/4 | 9.0            |
| 12 - BRR        | 1-1/2 | 1-1/2 | 3     | 6-1/2  | 11-3/4 | 15-3/4 | 7-1/4  | 3-1/4 | 3-7/8 | 1/4 | 1-3/8 | 16.0           |
| 16 - BRR        | 2     | 2     | 3-1/2 | 7-1/2  | 11-3/4 | 16-1/8 | 8-1/8  | 3-7/8 | 3-7/8 | 1/4 | 1-3/8 | 20.5           |
| 20 - BRR        | 2-1/2 | 2-1/2 | 4     | 8-3/4  | 14     | 17-5/8 | 8-3/4  | 3-5/8 | 3-5/8 | 1/4 | 1-7/8 | 50.5           |
| 24 - BRR        | 3     | 3     | 5-3/4 | 11-1/2 | 14     | 20-3/8 | 10-5/8 | 4-5/8 | 3-5/8 | 1/4 | 1-7/8 | 61.0           |

#### **DIMENSIONS: 4" SIZE**



NOTES:

Spring housing must be perpendicular to pipe run in an upright position.
 Gas pipe run must be horizontal and level.
 All dimensions are in inches.

#### **ORDERING INFORMATION**

- 1. Specify Inlet and Outlet Pressure.
- 2. Type of Gas, Flow, Specific Gravity and Temperature.
- 3. Specify Model Number and Quantity.
- 4. Shipping Instructions.