

Heavy Duty Brass Final Line Pressure Regulator BR-1780 Series

Application

BR-1780 Series Regulators are designed for final line pressure regulation on medical oxygen systems. They are equally suitable for a variety of gases in medical or industrial applications. The BR-1780 Series Regulators have a balanced seat, are constructed with oxygen compatible materials, and offer a tamper resistant adjustment screw cap. Flow performance is impressive as well offering up to 30,000 SCFH for the ¾" and 1" model and up to 20,000 SCFH for the ½" model.

Features

- Maintains a steady downstream pressure across a range of inlet pressures commonly provided by a cryogenic bulk tank.
- Large seat and diaphragm areas provide high capacity with sensitive control of delivery pressure with low falloff.
- Two ¼" FNPT plugged delivery pressure gauge ports are located on each side of the valve.
- Two bonnet drain/vent holes to allow for various mounting orientations.
- Bonnet cap covering adjusting screw for tamper protection.
- Maximum inlet pressure is 500 psig (34 Bar).
- Available in four delivery pressure ranges. (A-D)
- Temperature range: -40° F to +165° F. (-40°C to +74°C)
- Cleaned per CGA G-4.1 for oxygen service.
- 100% Factory Tested

Materials

Body Forged Brass
 Bonnet Forged brass
 Diaphragm Nitrile with PTFE liner
 Springs, fasteners, and adjusting screw Stainless Steel
 Other valve parts Brass
 Seat Disc & O-Rings Viton is standard

For Carbon Dioxide and Nitrous Oxide Service: Specify EPDM material for seat disc and O-Rings, add "E" to end of part number.

Ordering Information

| Part Number | Delivery Pressure Range | Pressure Gauge* | | Inlet & Outlet (F.N.P.T.) | Dimensions | | | | C _v |
|-------------|-------------------------|-----------------|-------|---------------------------|------------|-------|-------|-------|----------------|
| | | Range (PSI) | P/N | | "A" | "B" | "C" | "D" | |
| BR-1784A | 5-55 psig | 1-100 | 1286 | ½" | 2.82" | 3.62" | 1.38" | 5.21" | 3.1 |
| BR-1784B | 40-110 psig | 1-200 | S1679 | | | | | | |
| BR-1784C | 100-200 psig | 1-400 | 15578 | | | | | | |
| BR-1784D | 175-300 psig | | | | | | | | |
| BR-1786A | 5-55 psig | 1-100 | 1286 | ¾" | 3.31" | 4.69" | 1.60" | 6.46" | 4.8 |
| BR-1786B | 40-110 psig | 1-200 | S1679 | | | | | | |
| BR-1786C | 100-200 psig | 1-400 | 15578 | | | | | | |
| BR-1786D | 175-275 psig | | | | | | | | |
| BR-1788A | 5-55 psig | 1-100 | 1286 | 1" | 3.31" | 4.69" | 1.60" | 6.46" | 5.5 |
| BR-1788B | 40-110 psig | 1-200 | S1679 | | | | | | |
| BR-1788C | 100-200 psig | 1-400 | 15578 | | | | | | |
| BR-1788D | 175-275 psig | | | | | | | | |

*Regulator sold without gauge. Order gauge separately.



BR-1784



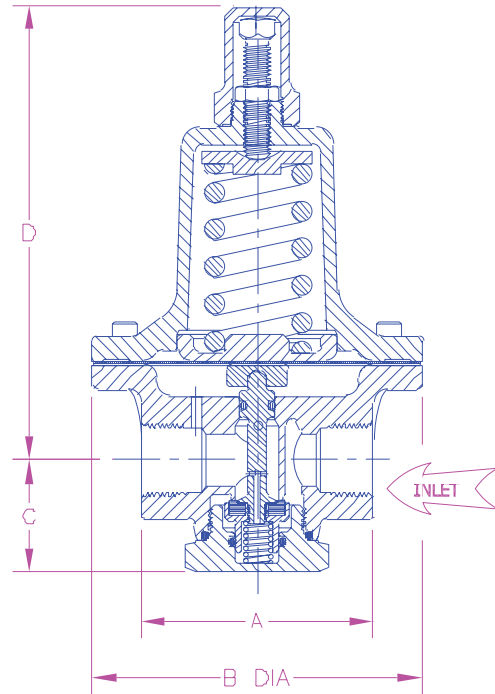
BR1786 and BR1788

Heavy Duty Brass Final Line Pressure Regulator BR-1780 Series

Flow Performance

See the Rego Flow Performance Curves section of the catalog for more detailed flow curves.

For Carbon Dioxide or Nitrous Oxide Service, add "E" to end of part number.

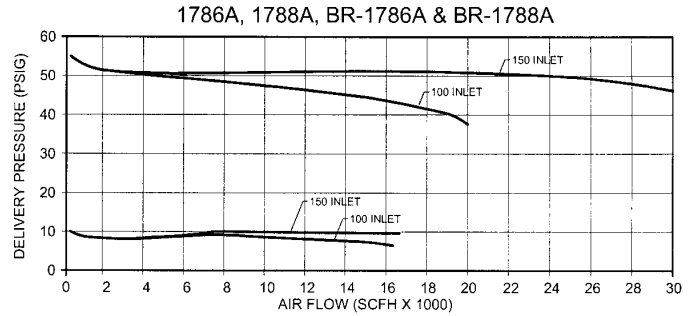
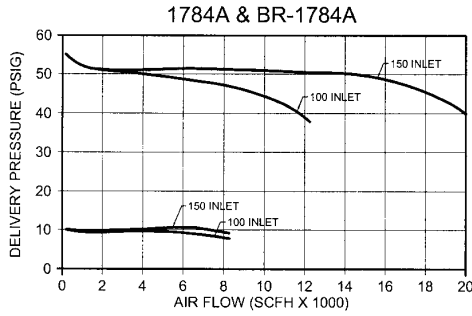


Maintenance and Options Kits

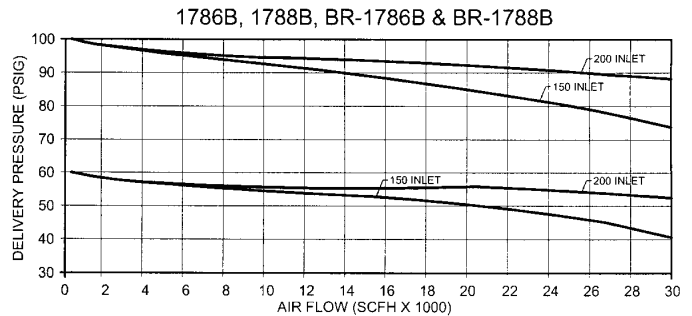
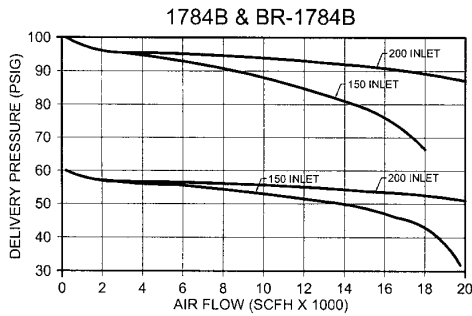
| Regulator Models | BR1784 | BR1786 | BR1788 |
|---------------------------------|--------------|--------------|--------------|
| Repair Kit Part Number | BR-1784-80 | BR-1786-80 | BR-1786-80 |
| Spring Kit Part Numbers: | | | |
| "A" spring 5-55 psig | BR-1784-7SKA | BR-1786-7SKA | BR-1788-7SKA |
| "B" spring 40-110 psig | BR-1784-7SKB | BR-1786-7SKB | BR-1788-7SKB |
| "C" spring 100-200 psig | BR-1784-7SKC | BR-1786-7SKC | BR-1788-7SKC |
| "D" spring 175-275 psig | BR1784-7SKD | BR-1786-7SKD | BR-1788-7SKD |
| T-Handle Screw Option Kit | BR-1784ST | BR-1786ST | BR-1786ST |

Heavy Duty Line Regulators Performance Curves 1780 Series & BR-1780 Series

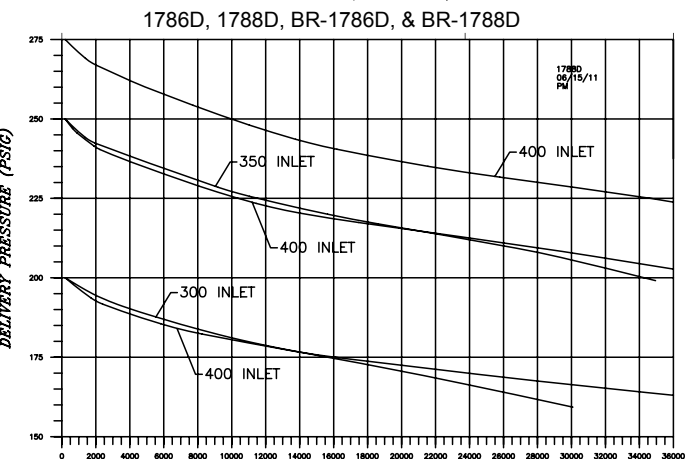
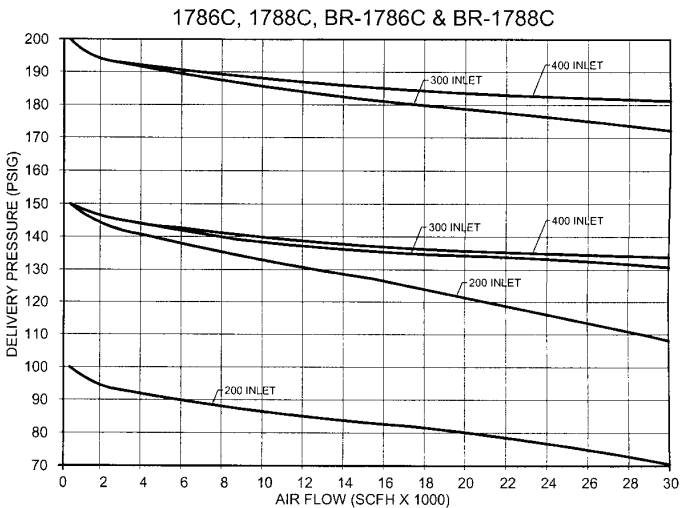
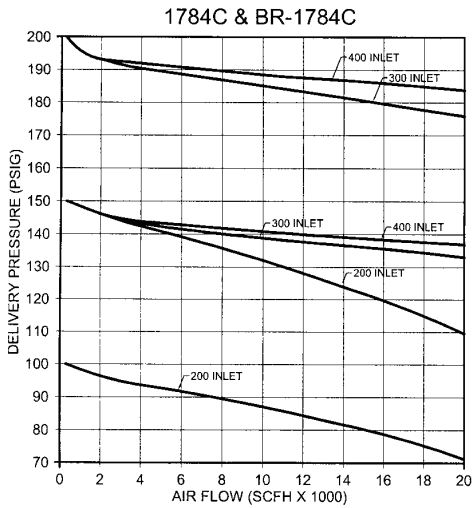
"A" spring range 5 - 55 psig



"B" spring range 40 - 110 psig



"C" spring range 100 - 200 psig



Gas Conversion Table

| Service | Multiply Air Capacity By: |
|-------------------------|---------------------------|
| Acetylene (15 psi max.) | 1.06 |
| Argon | 0.85 |
| Carbon Dioxide | 0.81 |

| Service | Multiply Air Capacity By: |
|-------------|---------------------------|
| Fuel Gases | 0.86 |
| Helium | 2.69 |
| Hydrogen | 3.79 |
| Nitrogen | 1.02 |
| Natural Gas | 1.25 |

| Service | Multiply Air Capacity By: |
|---------------|---------------------------|
| Nitrous Oxide | 0.81 |
| Oxygen | 0.95 |