

# P39 Standard Gas Regulators

- Spare valve disks provided. Each unit comes with a 4 seat valve disk block. This block can be easily rotated 90° to provide a fresh valve disk sealing surface.
- Easily changed from tamper-resistant to T-handle adjustment or vice versa.
- Both adjustment assemblies are supplied with every unit.
- Brass casing material

The BelGAS P39 regulator selection is the largest of its type in the industry. We offer this regulator in three different materials, one of which will ideally suit your application AND your budget. ALL of the P39's are offered with six different spring ranges. Our broad selection of outlet pressure spring ranges allows more precise regulation of downstream pressure, hence, better process control. Piping designs can be simplified by using any one (or all) of the 3 outlet ports that come standard on the regulator. The BelGAS P39 is the ONLY regulator of this type, which has 3 outlet ports. To enhance the versatility of this regulator further, we provide you with a choice of seat materials that allows the designer to custom fit the seat material with the application.



## Applications

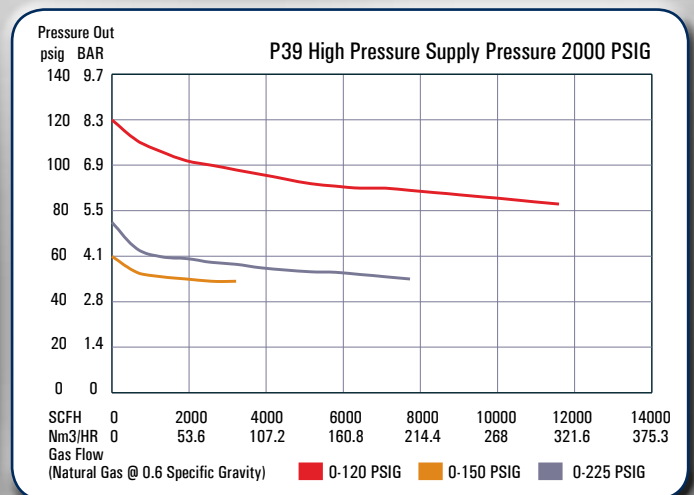
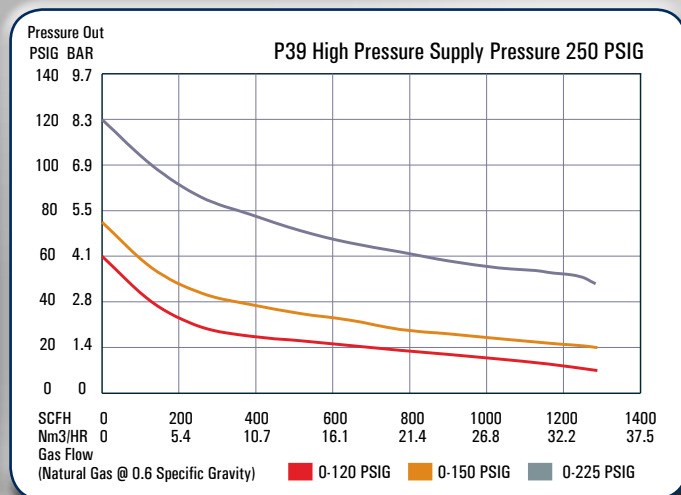
- First cut of high-pressure natural gas to control valve supply
- Natural gas instrumentation columns
- First cuts to any downstream, low flow application, such as catalytic heaters, valve actuators, pressure controllers and chemical injection pumps



## Specifications

|                           |                              |                  |
|---------------------------|------------------------------|------------------|
| Inlet                     | 1/4 NPT                      |                  |
| Outlet                    | 1/4 NPT (3 Ports)            |                  |
| Vent                      | 4 holes (5/32" each) (STD)   |                  |
|                           | 1/4 NPT (Tapped Vent Option) |                  |
| Max Inlet                 | 6000 PSIG, 414 BAR           |                  |
| Orifice Size              | 5/64"                        |                  |
|                           | Cv = 0.10                    |                  |
| <b>Outlet Ranges</b>      |                              |                  |
|                           | 0 – 30 PSIG                  | 2.1 BAR          |
|                           | 0 – 60 PSIG                  | 4.1 BAR          |
|                           | 0 – 120 PSIG                 | 8.3 BAR          |
|                           | 0 – 150 PSIG                 | 10.3 BAR         |
|                           | 0 – 225 PSIG                 | 15.5 BAR         |
| Temp. Range               | -40° F to 225° F             | -46° C to 106° C |
| <b>Weight Approximate</b> |                              |                  |
| Standard                  | 3-1/4 lbs                    | 1.46 kg          |

## Flow Charts



## P39 Standard Part Matrix

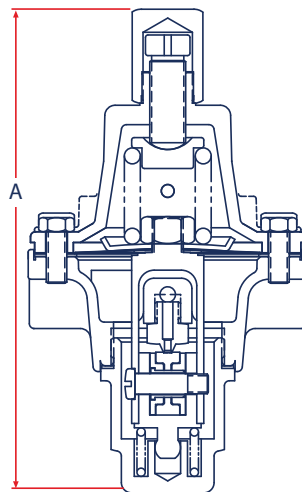
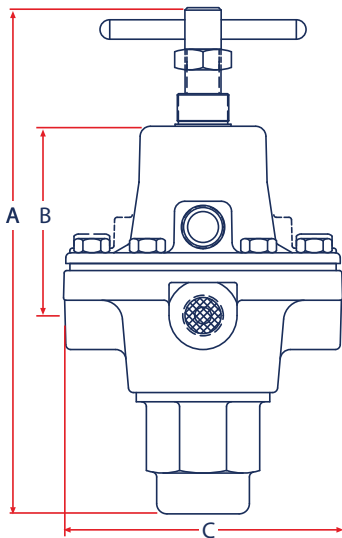
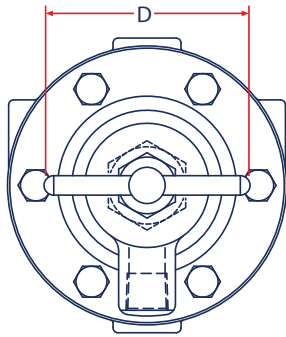
|               |            |          |          |          |          |          |   |
|---------------|------------|----------|----------|----------|----------|----------|---|
| <b>P03902</b> |            | <b>0</b> | <b>X</b> | <b>0</b> |          |          | <b>0</b>  |
|               | ↑          | ↑        | ↑        | ↑        | ↑        | ↑        | ↑   |
|               | <b>030</b> |          |          |          |          |          | Spring Range  |
|               | <b>060</b> |          |          |          |          |          | 0-30 PSIG      0-2.1 BAR  |
|               | <b>120</b> |          |          |          |          |          | 0-60 PSIG      0-4.1 BAR  |
|               | <b>150</b> |          |          |          |          |          | 0-120 PSIG     0-8.3 BAR  |
|               | <b>225</b> |          |          |          |          |          | 0-150 PSIG     0-10.3 BAR   |
|               |            |          |          |          |          |          | 0-225 PSIG     0-15.5 BAR   |
|               |            | <b>0</b> |          |          |          |          | Version   |
|               |            |          |          |          |          |          | Standard  |
|               |            |          | <b>X</b> |          |          |          | Adjustment Method   |
|               |            |          |          |          |          |          | T-Bar and Adjustment Screw (Allen Head) with Tamper Resistant Cover |
|               |            |          |          |          |          |          | Vent  |
|               |            |          |          | <b>0</b> |          |          | Standard Untapped Bonnet Vent                                       |
|               |            |          |          |          |          |          | Seat Material   |
|               |            |          |          |          | <b>1</b> |          | Nylon   |
|               |            |          |          |          | <b>3</b> |          | Teflon  |
|               |            |          |          |          |          |          | Port Configuration  |
|               |            |          |          |          | <b>0</b> |          | Standard  |
|               |            |          |          |          |          |          | Casing Material   |
|               |            |          |          |          |          | <b>0</b> | Brass   |

## Materials of Construction

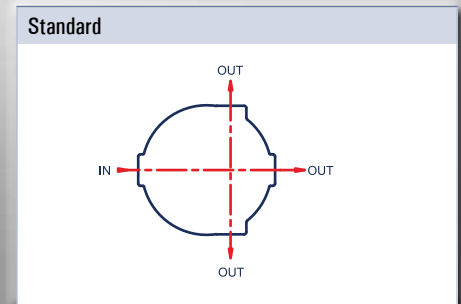
|                           |                                    |
|---------------------------|------------------------------------|
| Brass Unit                |                                    |
| Body, Bonnet, Bottom Plug | Brass                              |
| Tamper Resistant Cover    | Brass                              |
| Diaphragm                 | 302 Stainless                      |
| Seals                     | TFE, Nitrile                       |
| Valve Spring              | 17-7 <sup>PH</sup> Stainless Steel |
| Range Spring              | Spring Steel, Chrome Silicon       |
| Seat Material             | Nylon or TFE                       |

## P39 Standard Dimensions

| Dimensions Table   |        | A    | B    | C    | D    |
|--|--------|------|------|------|------|
| P39 w/T-Handle<br>0-30, 0-60,<br>0-120, 0-150,<br>0-225 PSIG range   | mm     | 156  | 58   | 85   | 64   |
|  | inches | 6.14 | 2.3  | 3.33 | 2.50 |
| P39 w/Allen Head<br>0-30, 0-60,<br>0-120, 0-150,<br>0-225 PSIG range | mm     | 150  | 58   | 85   | 19   |
|  | inches | 5.90 | 2.30 | 3.33 | 0.75 |



## Ports



# P39 Special Build Gas Regulators

## Specials include these models:

- 500 PSI Outlet
- Dual Inlet Ports
- Nickel Plated and Stainless Steel
- Tapped Vent Models  
(Standard on all Stainless Steel units)
- Stainless Steel Version complies with NACE MR0175



## Applications

- First cut of high-pressure natural gas to control valve supply
- Natural gas instrumentation columns
- First cuts to any downstream, low flow application, such as catalytic heaters, valve actuators, pressure controllers and chemical injection pumps

## P39 Special Build Part Matrix

| P03902             |            | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | Spring Range   |
|--------------------|------------|---|---|---|---|---|---|---|--|
|                    | <b>030</b> |   |   |   |   |   |   |   | 0-30 PSIG 0-2.1 BAR  |
|                    | <b>060</b> |   |   |   |   |   |   |   | 0-60 PSIG 0-4.1 BAR  |
|                    | <b>120</b> |   |   |   |   |   |   |   | 0-120 PSIG 0-8.3 BAR   |
|                    | <b>150</b> |   |   |   |   |   |   |   | 0-150 PSIG 0-10.3 BAR  |
|                    | <b>225</b> |   |   |   |   |   |   |   | 0-225 PSIG 0-15.5 BAR  |
|                    | <b>500</b> |   |   |   |   |   |   |   | 0-500 PSIG 0-34.5 BAR  |
| Versions           |            |   |   |   |   |   |   |   |  |
|                    | <b>0</b>   |   |   |   |   |   |   |   | Standard   |
|                    | <b>3</b>   |   |   |   |   |   |   |   | PED (for EU)   |
|                    | <b>4</b>   |   |   |   |   |   |   |   | ENVIRO-Cap* (Water Jacket)<br>*Not available in Stainless Steel              |
| Adjustment Method  |            |   |   |   |   |   |   |   |  |
|                    | <b>0</b>   |   |   |   |   |   |   |   | T-Bar  |
|                    | <b>1</b>   |   |   |   |   |   |   |   | Adjustment Screw (Allen Head) with Tamper Resistant Cover                    |
| Vent Options       |            |   |   |   |   |   |   |   |  |
|                    | <b>0</b>   |   |   |   |   |   |   |   | Standard Bonnet<br>*Not available in Brass or Nickel 500 PSIG units.         |
|                    | <b>1</b>   |   |   |   |   |   |   |   | Tapped Vent Bonnet*<br>Tapped vent is standard on all Stainless Steel units. |
| Seat Material      |            |   |   |   |   |   |   |   |  |
|                    | <b>1</b>   |   |   |   |   |   |   |   | Nylon  |
|                    | <b>3</b>   |   |   |   |   |   |   |   | Teflon (Brass units only)<br>*Nickel and Stainless Steel only                |
|                    | <b>4</b>   |   |   |   |   |   |   |   | PTFE*  |
| Port Configuration |            |   |   |   |   |   |   |   |  |
|                    | <b>0</b>   |   |   |   |   |   |   |   | Standard<br>**Not available in Stainless Steel                               |
|                    | <b>1</b>   |   |   |   |   |   |   |   | Dual Inlet**   |
| Casing Material    |            |   |   |   |   |   |   |   |  |
|                    | <b>0</b>   |   |   |   |   |   |   |   | Brass  |
|                    | <b>1</b>   |   |   |   |   |   |   |   | Electroless Nickel   |
|                    | <b>2</b>   |   |   |   |   |   |   |   | Stainless Steel  |

## Materials of Construction

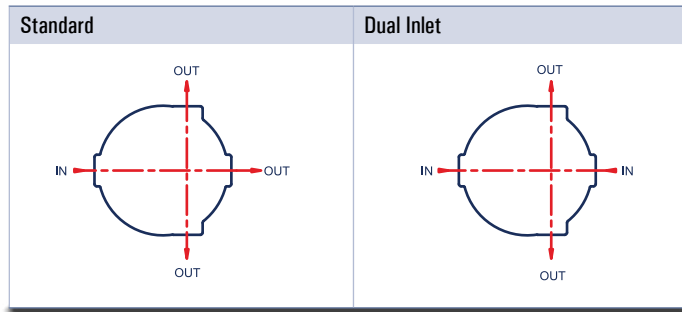
| Brass Unit                             |  |
|--|--|
| Body, Bonnet, Bottom Plug              | Brass  |
| Tamper Resistant Cover                 | Brass  |
| Diaphragm                              | 302 Stainless                                      |
| Seals                                  | TFE, Nitrile                                       |
| Valve Spring                           | 17-7 <sup>th</sup> Stainless Steel                 |
| Range Spring                           | Spring Steel, Chrome Silicon                       |
| Seat Material                          | Nylon or TFE                                       |
| Nickel Plated Unit                     |  |
| Body, Bonnet, Bottom Plug              | Nickel Plated Brass                                |
| Tamper Resistant Cover                 | Nickel Plated Brass                                |
| Diaphragm                              | 302 Stainless Steel                                |
| Seals                                  | TFE, Nitrile                                       |
| Valve Spring                           | 17-7 <sup>th</sup> Stainless Steel (Nickel Plated) |
| Range Spring                           | Spring Steel or Chrome Silicon                     |
| Seat Material                          | Nylon or PTFE (316 SS Block)                       |
| Stainless Steel Unit                   |  |
| Body, Bonnet, Bottom Plug              | 316 Stainless Steel                                |
| Tamper Resistant Cover                 | 316 Stainless Steel                                |
| Diaphragm                              | Monel 400  |
| Seals                                  | TFE, Neoprene                                      |
| Valve Spring                           | MP35N (UNS30035)                                   |
| Range Spring                           | Spring Steel                                       |
| Seat Material                          | Nylon or PTFE (316 SS block)                       |
| Only the P39SS Conforms to NACE MR0175 |  |



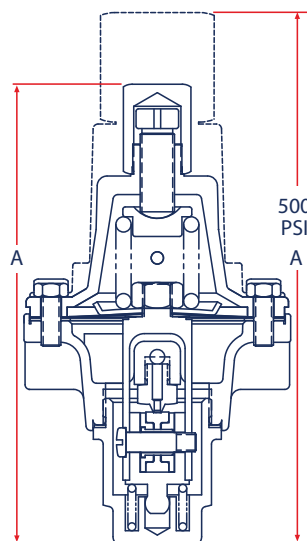
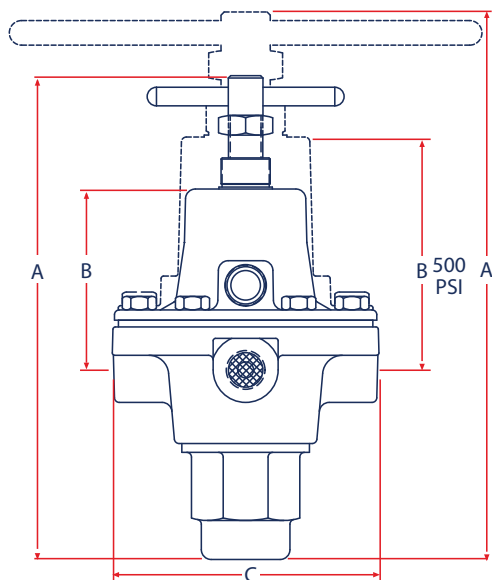
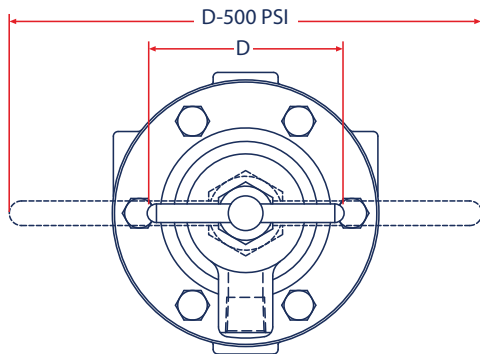
## Specifications

|                    |                              |                |
|--------------------|------------------------------|----------------|
| Inlet              | 1/4 NPT                      |                |
| Outlet             | 1/4 NPT (3 Ports)            |                |
| Vent               | 4 holes (5/32" each) (STD)   |                |
|                    | 1/4 NPT (Tapped Vent Option) |                |
| Max Inlet          | 6000 PSIG, 414 BAR           |                |
| Orifice Size       | 5/64"                        |                |
| Outlet Ranges      |                              |                |
|                    | 0 – 30 PSIG                  | 2.1 BAR        |
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|                    | 0 – 120 PSIG                 | 8.3 BAR        |
|                    | 0 – 150 PSIG                 | 10.3 BAR       |
|                    | 0 – 225 PSIG                 | 15.5 BAR       |
|                    | 0 – 500 PSIG                 | 34.5 BAR       |
| Temp. Range        | -40°F to 225°F               | -46°C to 106°C |
| Weight Approximate |                              |                |
| Standard           | 3-1/4 lbs                    | 1.46 kg        |
| 500 PSIG           | 3-3/4 lbs                    | 1.69 kg        |
|                    | Cv=0.10                      |                |

## Ports



## P39 Special Build Gas Dimensions



| Dimensions Table   |        | A    | B    | C    | D    |
|--|--------|------|------|------|------|
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|  | inches | 6.14 | 2.3  | 3.33 | 2.50 |
| P39 w/Allen Head<br>0-30, 0-60,<br>0-120, 0-150,<br>0-225 PSIG range | mm     | 150  | 58   | 85   | 19   |
|  | inches | 5.90 | 2.30 | 3.33 | 0.75 |
| P39 w/T-Handle<br>0-500 PSIG range                                   | mm     | 177  | 75   | 85   | 152  |
|  | inches | 6.98 | 2.96 | 3.33 | 6.0  |
| P39 w/Allen Head<br>0-500 PSIG range                                 | mm     | 172  | 75   | 85   | 32   |
|  | inches | 6.78 | 2.96 | 3.33 | 1.25 |