

# B34 SR & SN Medium Duty Commercial & Industrial Regulator

## Benefits

- Economical
- Space-saving design
- Protects equipment from shock damage
- Commercial performance in a compact size

## Description

The B34 S is a spring-loaded self-operated regulator available with or without internal relief. It combines the B31 8" diaphragm case with the B34 valve assembly for an economical solution to mid-range commercial and industrial applications. Among its attributes are an adjustable loading ring for controlled boost at high flows, precision breather opening to ensure proper stability under all conditions, and in the R model, a high capacity internal relief valve. All critical parts are either steel or aluminum, not plastic, to ensure reliability.

## Applications

Appropriate for many commercial and industrial uses such as gas engines, burners, furnaces, and boilers. The rapid response of the B34 S is particularly well-suited for mid-range applications where quick on/off loads cause shock problems.

## Features

- Interchangeable brass orifice
- Molded diaphragm consisting of Buna-N and nylon
- Upper diaphragm plate of plated steel
- Stainless steel lever pin
- Zinc with dichromate plated steel lever
- One piece molded Buna-N valve seat
- Alodined aluminum valve stem
- Dolrin® vent valve with Buna-N seat
- Spring-loaded internal relief valve assembly
- Vent Sizes: 1/4", 3/8", 3/4" and 1"
- Stainless steel vent screen
- Die cast aluminum seal cap
- Field interchangeable adjustment spring
- CGA 6-18 Approved



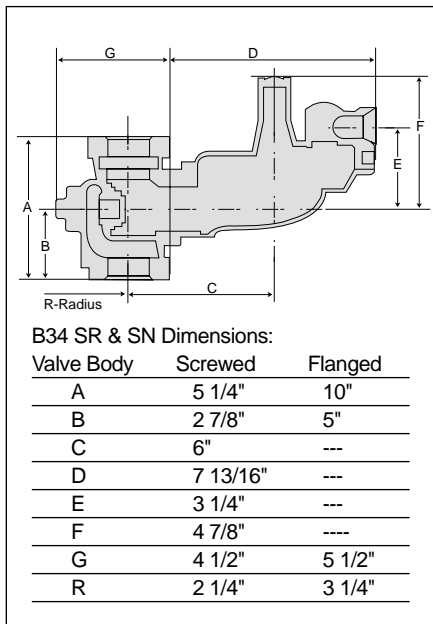
## Construction:

|                       |                                   |
|-----------------------|-----------------------------------|
| Valve Body            | High tensile strength cast iron   |
| Orifice               | Brass                             |
| Valve Seat            | Buna-N or silicone                |
| Valve Stem            | Alodined aluminum                 |
| Lever Pin             | Stainless steel                   |
| Lever                 | Zinc and dichromate plated steel  |
| Stem Guide            | Aluminum                          |
| Upper Diaphragm Plate | Zinc and dichromate plated steel  |
| Lower Diaphragm Plate | Die cast aluminum                 |
| Diaphragm             | Buna-N and nylon, molded to shape |
| Vent Valve/Seat       | Delrin/Buna-N                     |
| Vent Screen           | Stainless Steel                   |
| Adjustment Ferrule    | Delrin                            |
| Seal Cap              | Die cast aluminum                 |
| Diaphragm Case        | Die cast aluminum                 |

## Shipping Weight:

|                      |                                     |
|----------------------|-------------------------------------|
| 8 Regulators per box | Shipping per 8 Regulators: 100 lbs. |
|----------------------|-------------------------------------|

# Specifications



| Spring Data - Model B34 SR and SN Inches Water Column | Spring Color | Outlet Pressure Range   |
|---|--------------|-------------------------|
|   | Brown        | 3.5" W.C. - 5.0" W.C.   |
|   | Dark Green   | 4.5" W.C. - 6.5" W.C.   |
|   | Light Green  | 5.5" W.C. - 7.5" W.C.   |
|   | Black        | 6.0" W.C. - 9.0" W.C.   |
|   | Blue         | 8.5" W.C. - 12.5" W.C.  |
|   | Silver       | 11.0" W.C. - 17.0" W.C. |

| Spring Data - Model B34 SRHP and B34 SNHP P.S.I.G | Spring Color | Outlet Pressure Range |
|---|--------------|-----------------------|
|   | Red/Gray     | 1.0 PSIG              |
|   | Yellow       | 1.2 PSIG - 1.5 PSIG   |
|   | Red          | 1.5 PSIG - 1.9 PSIG   |
|   | White        | 1.75 PSIG - 2.5 PSIG  |

**B34 SR ONLY:** Relief Spring setting of 7" W.C. above set pressure is standard. Special springs available on request. The relief vent is available in 1/4", 3/8", 3/4", and 1" and is threaded with a female NPT connection.

| ORIFICE DATA | Wide Open    |          |               |
|--------------|--------------|----------|---------------|
|              | Orifice Size | K-Factor | Maximum Inlet |
|              | 1/4" x 3/8"  | 125      | 100 PSIG      |
|              | 3/8" x 1/2"  | 305      | 50 PSIG       |
|              | 1/2" x 5/8"  | 530      | 25 PSIG       |
|              | 5/8" x 3/4"  | 750      | 15 PSIG       |
|              | 3/4" x 7/8"  | 950      | 10 PSIG       |
|              | 7/8" x 1"    | 1100     | 10 PSIG       |

| VALVE BODY SIZES | Inlet  | Outlet | Screwed | Flanged |
|------------------|--------|--------|---------|---------|
|                  | 1 1/4" | 1 1/4" | Y       | ---     |
|                  | 1 1/4" | 1 1/2" | Y       | ---     |
|                  | 1 1/4" | 2"     | Y       | ---     |
|                  | 1 1/2" | 1 1/2" | Y       | ---     |
|                  | 1 1/2" | 2"     | Y       | ---     |
|                  | 2"     | 2"     | Y       | Y       |
|                  | 3"     | 3"     | ---     | Y       |

Y indicates that the valve body is available in that configuration

# Warranty

Actaris Metering Systems, 970 Highway 127 North, Owenton, Kentucky 40359-9802, warrants this gas product against defects in materials and workmanship for the earlier of one (1) year from the date the product is shipped by Actaris or a period of one year from the date the product is installed by Actaris at the original purchaser's site. During such one-year period, provided that the original purchaser continues to own the product, Actaris will, at its sole option, repair any defects, replace the product or repay the purchase price.

This warranty will be void if the purchaser fails to observe the procedures for installation, operation or service of the product as set forth in the Operating Manual and Specifications for the product or if the defect is caused by tampering, physical abuse or misuse of the product.

ACTARIS SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. UNDER NO CIRCUMSTANCES WILL SCHLUMBERGER BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND WHATSOEVER.

Actaris' liability for any claim of any kind, including negligence and breach of warranty for the sale and use of any product covered by or furnished, shall in no case exceed the price allocable to the product or part thereof which gives rise to the claim.

In the event of a malfunction of the product, consult your Actaris Service Representative or Actaris Metering Systems, 970 Highway 127 North, Owenton, Kentucky 40359-9802. Ph. (800) 490-0657

# Reference Information

- Installation and Maintenance Instructions K1P
- Parts List K1S

# B34 SR & SN Medium Duty Commercial & Industrial Regulator

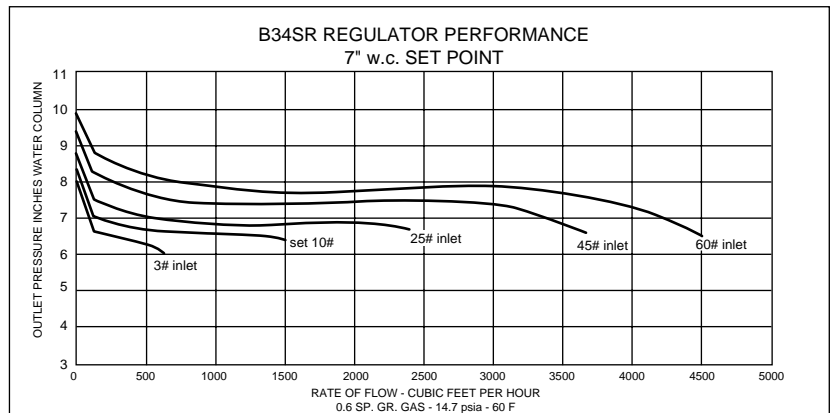
## 7" w.c. Set Point Characteristics

### Capacity Table

| 7" w.c. Set Point at 100 SCFH Flow Rate: 1" W.C. Droop |              |           |           |           |            |          |
|--|--------------|-----------|-----------|-----------|------------|----------|
| Pressure<br>(PSIG)                                     | Orifice Size |           |           |           |            |          |
|  | 1/4"X3/8"    | 3/8"X1/2" | 1/2"X5/8" | 5/8"X3/4" | 3/4" X7/8" | 7/8" X1" |
| 1  | 460          | 720       | 940       | 1180      | 1360       | 1540     |
| 2  | 700          | 1080      | 1520      | 1830      | 2200       | 2300     |
| 3  | 860          | 1420      | 2100      | 2520      | 3000       | 3420     |
| 5  | 1120         | 1960      | 3000      | 3820      | 4550       | 5150     |
| 8  | 1360         | 2860      | 4400      | 5600      | 6600       | 7500     |
| 10   | 1520         | 3280      | 5250      | 6600      | >7500      | >7500    |
| 15   | 1860         | 3980      | 6950      | >7500     |            |          |
| 25   | 2520         | 5250      | >7500     |           |            |          |
| 35   | 3260         | 6600      |           |           |            |          |
| 50   | 4080         | >7500     |           |           |            |          |
| 75   | 5665         |           |           |           |            |          |
| 100  | 7250         |           |           |           |            |          |

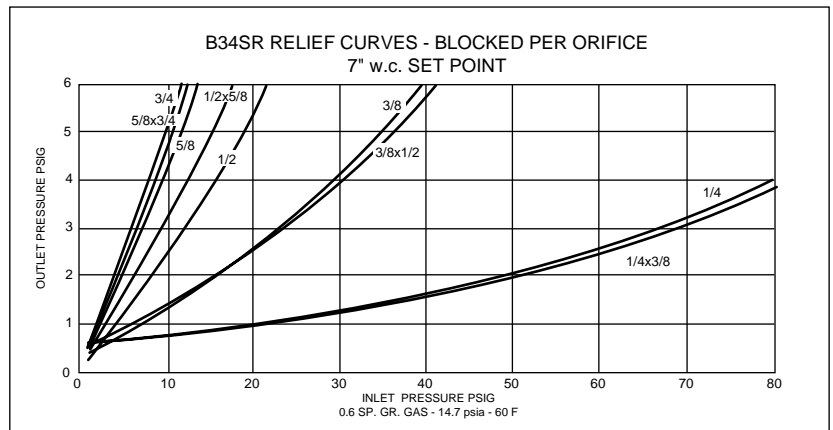
### Typical Performance Curves

Manufacturer . . . . . Actaris  
 Type and Model . . . . . B34SR  
 Regulator: Inlet Size . . . 2" NPT  
                   Outlet Size . . . 2" NPT  
                   Orifice Size . . 1/4" x 3/8"  
 Set Point 7.0" wc with 10 psig inlet @ 100 scfh. All test results are reported at a base of 14.7 psia and 60 F.



### Relief Characteristic Curves R Model Only

Manufacturer . . . . . Actaris  
 Type and Model . . . . . B34SR  
 Regulator: Inlet Size . . . 2" NPT  
                   Outlet Size . . . 2" NPT  
                   Vent Size . . . 1" NPT  
 Set Point 7.0" w.c. with 10 psig inlet @ 100 scfh. All test results are reported at a base of 14.7 psia and 60 F.



# B34 SR & SN Medium Duty Commercial & Industrial Regulator

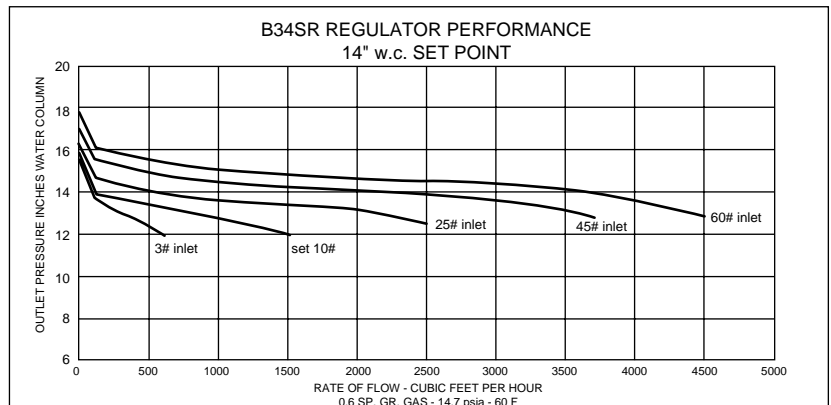
## 14" w.c. Set Point Characteristics

### Capacity Table

| 14" w.c. Set Point at 100 SCFH Flow Rate: 2" W.C. Droop |              |           |           |           |            |          |
|---|--------------|-----------|-----------|-----------|------------|----------|
| Pressure (PSIG)   | Orifice Size |           |           |           |            |          |
|   | 1/4"X3/8"    | 3/8"X1/2" | 1/2"X5/8" | 5/8"X3/4" | 3/4" X7/8" | 7/8" X1" |
| 1   | 330          | 625       | 760       | 830       | 980        | 1100     |
| 2   | 530          | 1010      | 1150      | 1500      | 1620       | 1880     |
| 3   | 665          | 1240      | 1550      | 1800      | 2240       | 2600     |
| 5   | 810          | 1740      | 2200      | 2940      | 3700       | 4300     |
| 8   | 1100         | 2400      | 3620      | 4480      | 6000       | 6850     |
| 10  | 1320         | 3000      | 4550      | 6000      | 7400       | >7500    |
| 15  | 1660         | 3850      | 7000      | >7500     |            |          |
| 25  | 2200         | 5100      | >7500     |           |            |          |
| 35  | 2860         | 6650      |           |           |            |          |
| 50  | 3750         | >7500     |           |           |            |          |
| 75  | 5450         |           |           |           |            |          |
| 100   | 6600         |           |           |           |            |          |

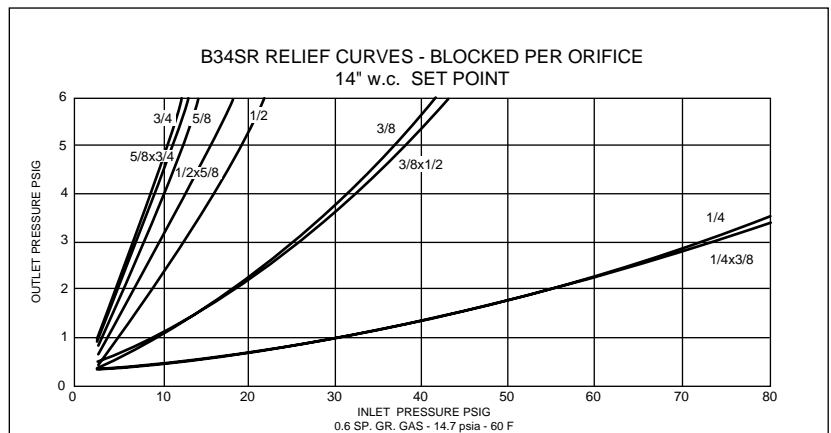
### Typical Performance Curves

Manufacturer . . . . . Actaris  
 Type and Model . . . . . B34SR  
 Regulator: Inlet Size . . . 2" NPT  
                   Outlet Size . . . 2" NPT  
                   Orifice Size . . . 1/4" x 3/8"  
 Set Point 14.0" w.c. with 10 psig inlet @ 100 scfh. All test results are reported at a base of 14.7 psia and 60 F.



### Relief Characteristic Curves R Model Only

Manufacturer . . . . . Actaris  
 Type and Model . . . . . B34SR  
 Regulator: Inlet Size . . . 2" NPT  
                   Outlet Size . . . 2" NPT  
                   Vent Size . . . 1" NPT  
 Set Point 14.0" w.c. with 10 psig inlet @ 100 scfh. All test results are reported at a base of 14.7 psia and 60 F.



# B34 SR & SN HP Medium Duty Commercial & Industrial Regulator

## 1 PSIG Set Point Characteristics

### Capacity Table

| 1PSIG Set Point at 100 SCFH Flow Rate: 1% Droop |              |           |           |           |            |          |
|---|--------------|-----------|-----------|-----------|------------|----------|
| Pressure<br>(PSIG)                              | Orifice Size |           |           |           |            |          |
|   | 1/4"X3/8"    | 3/8"X1/2" | 1/2"X5/8" | 5/8"X3/4" | 3/4" X7/8" | 7/8" X1" |
| 2   | 425          | 580       | 720       | 890       | 1000       | 1120     |
| 3   | 590          | 780       | 940       | 1200      | 1300       | 1540     |
| 5   | 800          | 1080      | 1300      | 1560      | 1840       | 2220     |
| 8   | 1000         | 1440      | 1840      | 2400      | 2800       | 2860     |
| 10  | 1130         | 1720      | 2100      | 2750      | 3640       | 3900     |
| 15  | 1470         | 2300      | 3100      | 4100      |            |          |
| 25  | 1900         | 3620      | 5200      |           |            |          |
| 35  | 2680         | 4400      |           |           |            |          |
| 50  | 3700         | >7500     |           |           |            |          |
| 75  | 5555         |           |           |           |            |          |
| 100   | 6050         |           |           |           |            |          |

### Capacity Table

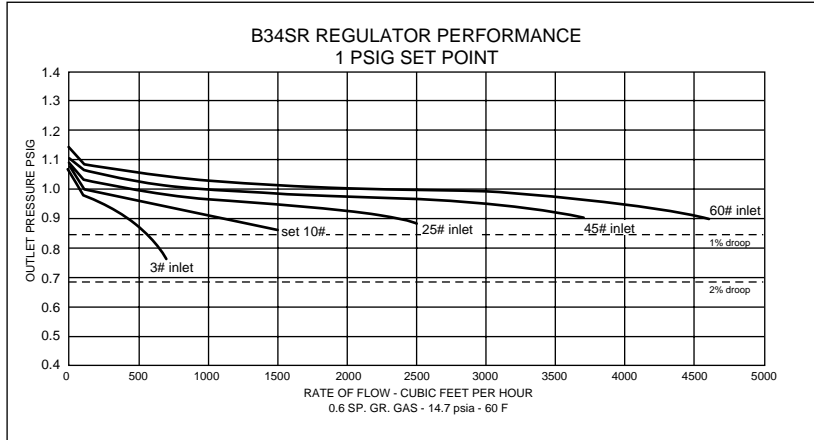
| 1PSIG Set Point at 100 SCFH Flow Rate: 2% Droop |              |           |           |           |            |          |
|---|--------------|-----------|-----------|-----------|------------|----------|
| Pressure<br>(PSIG)                              | Orifice Size |           |           |           |            |          |
|   | 1/4"X3/8"    | 3/8"X1/2" | 1/2"X5/8" | 5/8"X3/4" | 3/4" X7/8" | 7/8" X1" |
| 2   | 560          | 930       | 1180      | 1460      | 1720       | 1920     |
| 3   | 750          | 1250      | 1600      | 1980      | 2300       | 2620     |
| 5   | 970          | 1800      | 2240      | 2820      | 3300       | 3800     |
| 8   | 1240         | 2400      | 3080      | 4020      | 4720       | 5150     |
| 10  | 1390         | 2840      | 3620      | 4750      | 5750       | 6500     |
| 15  | 1700         | 3520      | 5000      | 6400      |            |          |
| 25  | 2300         | 5000      | >7500     |           |            |          |
| 35  | 2900         | 6150      |           |           |            |          |
| 50  | 3700         | >7500     |           |           |            |          |
| 75  | 5555         |           |           |           |            |          |
| 100   | 6670         |           |           |           |            |          |

# B34 SR & SN HP Medium Duty Commercial & Industrial Regulator

## 1 PSIG Set Point Characteristics

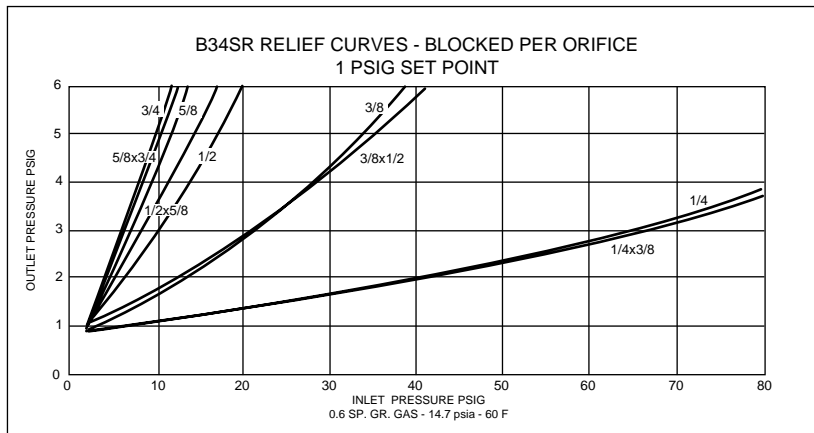
### Typical Performance Curves

Manufacturer . . . . . Actaris  
 Type and Model . . . . . B34SR  
 Regulator: Inlet Size . . . 2" NPT  
                   Outlet Size . . . 2" NPT  
                   Orifice Size . . . 1/4" x 3/8"  
 Set Point 1 psig with 10 psig inlet @ 100 scfh. All test results are reported at a base of 14.7 psia and 60 F.



### Relief Characteristic Curves R Model Only

Manufacturer . . . . . Actaris  
 Type and Model . . . . . B34SR  
 Regulator: Inlet Size . . . 2" NPT  
                   Outlet Size . . . 2" NPT  
                   Vent Size . . . 1" NPT  
 Set Point 1 psig with 10 psig inlet @ 100 scfh. All test results are reported at a base of 14.7 psia and 60 F.



# B34 SR & SN HP Medium Duty Commercial & Industrial Regulator

## 2 PSIG Set Point Characteristics

### Capacity Table

| 2 PSIG Set Point at 100 SCFH Flow Rate: 1% Droop |              |           |           |           |            |          |
|--|--------------|-----------|-----------|-----------|------------|----------|
| Pressure<br>(PSIG)                               | Orifice Size |           |           |           |            |          |
|  | 1/4"X3/8"    | 3/8"X1/2" | 1/2"X5/8" | 5/8"X3/4" | 3/4" X7/8" | 7/8" X1" |
| 3  | 305          | 490       | 510       | 600       | 650        | 770      |
| 5  | 445          | 700       | 760       | 860       | 1030       | 1170     |
| 8  | 520          | 890       | 965       | 1290      | 1500       | 1780     |
| 10   | 560          | 990       | 1220      | 1420      | 1940       | 2040     |
| 15   | 720          | 1240      | 1310      | 1780      |            |          |
| 25   | 975          | 1850      | 2100      |           |            |          |
| 35   | 1200         | 2060      |           |           |            |          |
| 50   | 1500         | 3550      |           |           |            |          |
| 75   | 2130         |           |           |           |            |          |
| 100  | 2730         |           |           |           |            |          |

### Capacity Table

| 2 PSIG Set Point at 100 SCFH Flow Rate: 2% Droop |              |           |           |           |            |          |
|--|--------------|-----------|-----------|-----------|------------|----------|
| Pressure<br>(PSIG)                               | Orifice Size |           |           |           |            |          |
|  | 1/4"X3/8"    | 3/8"X1/2" | 1/2"X5/8" | 5/8"X3/4" | 3/4" X7/8" | 7/8" X1" |
| 3  | 470          | 800       | 920       | 1120      | 1230       | 1480     |
| 5  | 775          | 1200      | 1440      | 1690      | 2100       | 2300     |
| 8  | 930          | 1670      | 1960      | 2450      | 2980       | 3500     |
| 10   | 1020         | 1920      | 2320      | 2760      | 3750       | 4200     |
| 15   | 1400         | 2700      | 2950      | 3780      |            |          |
| 25   | 1960         | 3850      | 4950      |           |            |          |
| 35   | 2400         | 4950      |           |           |            |          |
| 50   | 3300         | >7500     |           |           |            |          |
| 75   | 4250         |           |           |           |            |          |
| 100  | 5440         |           |           |           |            |          |

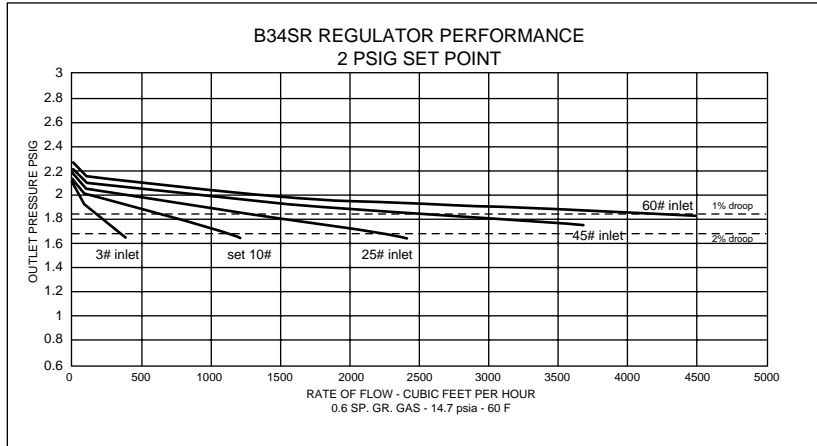
# B34 SR & SN HP Medium Duty Commercial & Industrial Regulator

## 2 PSIG Set Point Characteristics

### Typical Performance Curves

Manufacturer . . . . . Actaris  
Type and Model . . . . . B34SR  
Regulator: Inlet Size . . . 2" NPT  
Outlet Size . . . 2" NPT  
Orifice Size . . . 1/4" x 3/8"

Set Point 2 psig with 10 psig inlet @ 100 scfh. All test results are reported at a base of 14.7 psia and 60 F.



### Relief Characteristic Curves R Model Only

Manufacturer . . . . . Actaris  
Type and Model . . . . . B34SR  
Regulator: Inlet Size . . . 2" NPT  
Outlet Size . . . 2" NPT  
Vent Size . . . 1" NPT

Set Point 2 psig with 10 psig inlet @ 100 scfh. All test results are reported at a base of 14.7 psia and 60 F.

