

# 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
- Delrin® 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



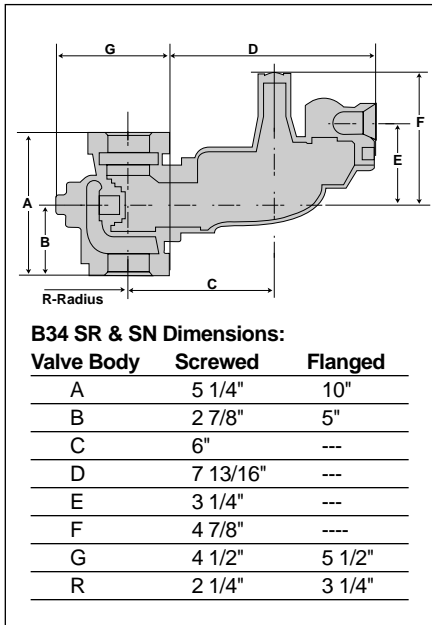
## Construction:

Valve Body	High tensile strength cast iron
Orifice	Brass
Valve Seat	Buna-N or silicone
Valve Stem	Alodined aluminum
Fulcrum 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.
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# 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

Schlumberger Industries, 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 Schlumberger or a period of one year from the date the product is installed by Schlumberger at the original purchaser's site. During such one-year period, provided that the original purchaser continues to own the product, Schlumberger 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.

SCHLUMBERGER 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.

Schlumberger's 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 Schlumberger Service Representative or Schlumberger Industries, 970 Highway 127 North, Owenton, Kentucky 40359-9802.

# Reference Information

- Performance Data K1H: 1 PSIG, 2 PSIG, 7" and 14"
- Ordering Specifications K1J
- Regulator Sizing K1L

- Installation and Maintenance Instructions K1P
- Price Bulletin K1R
- Parts List K1S

**Gas Division Headquarters**  
 970 Highway 127 North  
 Owenton, Kentucky 40359-9302  
 Telephone: (502) 484-5747  
 Fax: (502) 484-6223  
 Customer Service: (800) 490-0657

**Measurement Division Canada**  
 7275 West Credit Avenue  
 Mississauga, Ontario L5N 5M9  
 Telephone: (905) 858-4211  
 Fax: (905) 858-0428  
 Toll Free: (800) 363-7886

# B34 SR & SN Medium Duty Commercial & Industrial Regulator

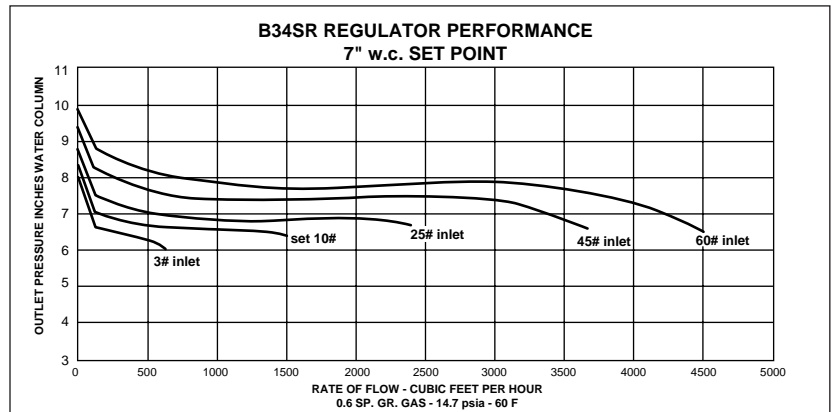
## 7" w.c. Set Point Characteristics

### Capacity Table

7" w.c. Set Point at 100 SCFH Flow Rate: 1" W.C. Droop						
Pressure (PSIG)	Orifice Size					
	1/4" X 3/8"	3/8" X 1/2"	1/2" X 5/8"	5/8" X 3/4"	3/4" X 7/8"	7/8" X 1"
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					

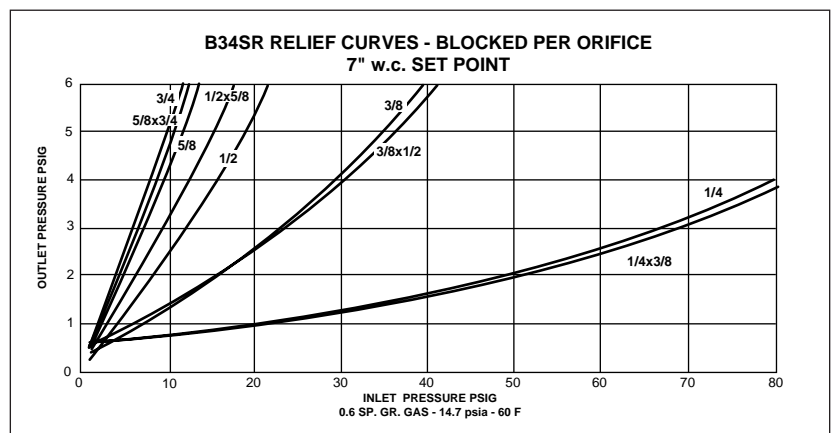
### Typical Performance Curves

Manufacturer . . . . . Schlumberger Gas  
 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 . . . . . Schlumberger Gas  
 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

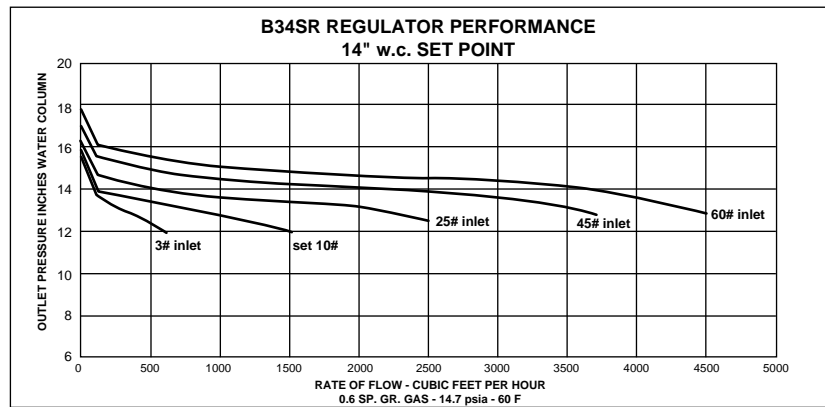
## 14" w.c. Set Point Characteristics

### Capacity Table

14" w.c. Set Point at 100 SCFH Flow Rate: 2" W.C. Droop						
Pressure (PSIG)	Orifice Size					
	1/4" X 3/8"	3/8" X 1/2"	1/2" X 5/8"	5/8" X 3/4"	3/4" X 7/8"	7/8" X 1"
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					

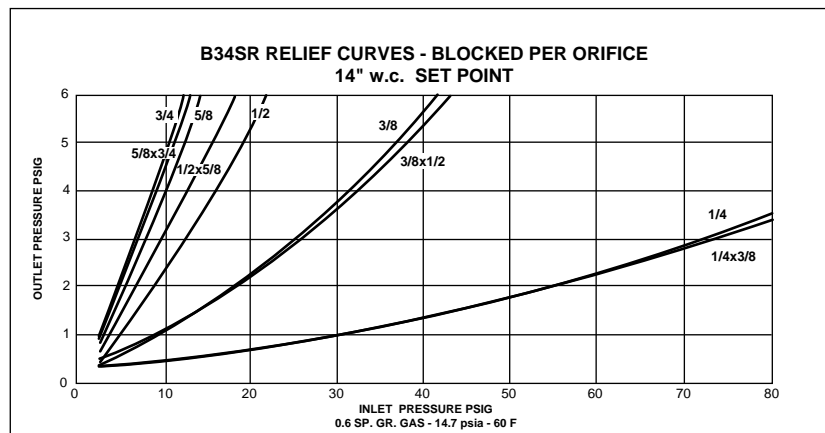
### Typical Performance Curves

Manufacturer . . . . . Schlumberger Gas  
 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 . . . . . Schlumberger Gas  
 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	Orifice Size					
(PSIG)	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

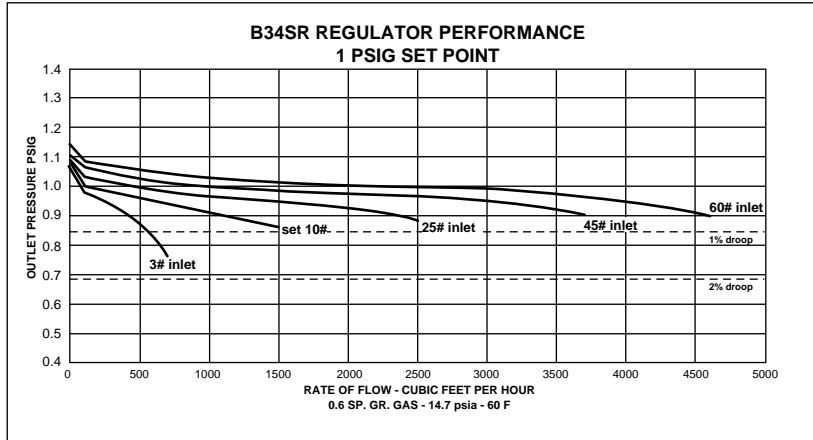
1PSIG Set Point at 100 SCFH Flow Rate: 2% Droop						
Pressure	Orifice Size					
(PSIG)	1/4"X3/8"	3/8"X1/2"	1/2"X5/8"	5/8"X3/4"	3/4" X7/8"	7/8" X1"
2	560	930	1180	1460	1720	1920
3	750	1250	1600	1980	2300	2620
5	970	1800	2240	2820	3300	3800
8	1240	2400	3080	4020	4720	5150
10	1390	2840	3620	4750	5750	6500
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

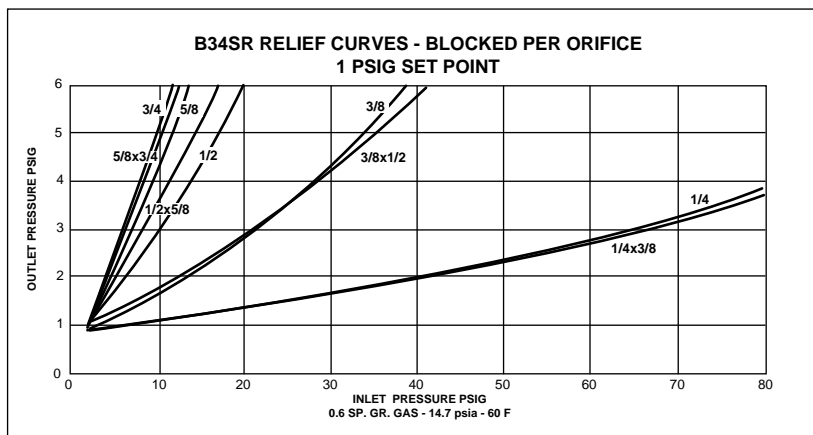
### Typical Performance Curves

Manufacturer . . . . . Schlumberger Gas  
 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 . . . . . Schlumberger Gas  
 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

2PSIG Set Point at 100 SCFH Flow Rate: 1% Droop						
Pressure (PSIG)	Orifice Size					
	1/4" X 3/8"	3/8" X 1/2"	1/2" X 5/8"	5/8" X 3/4"	3/4" X 7/8"	7/8" X 1"
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

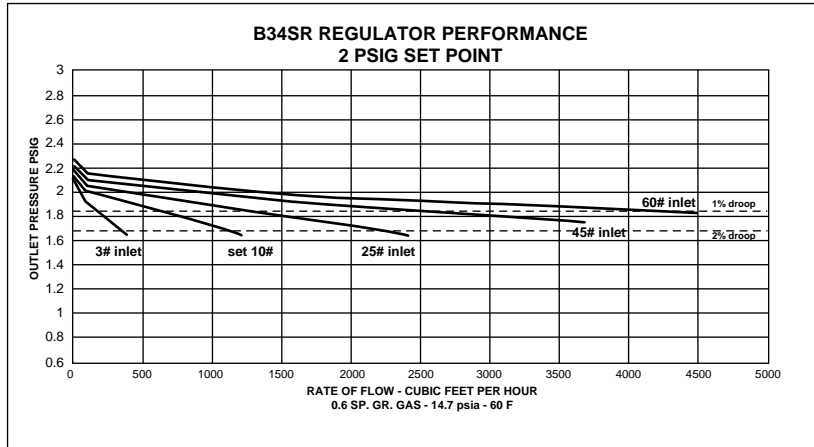
2PSIG Set Point at 100 SCFH Flow Rate: 2% Droop						
Pressure (PSIG)	Orifice Size					
	1/4" X 3/8"	3/8" X 1/2"	1/2" X 5/8"	5/8" X 3/4"	3/4" X 7/8"	7/8" X 1"
3	470	800	920	1120	1230	1480
5	775	1200	1440	1690	2100	2300
8	930	1670	1960	2450	2980	3500
10	1020	1920	2320	2760	3750	4200
15	1400	2700	2950	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 . . . . . Schlumberger Gas  
 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 . . . . . Schlumberger Gas  
 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.

