



# B34 Commercial & Industrial Regulator



Advanced Metering  
and Regulation  
Technology at Work



## Features

- Interchangeable brass orifice
- 78 in<sup>2</sup> of diaphragm area
- Spring-loaded internal relief valve assembly
- Field interchangeable adjustment spring
- Controlled size breather orifice eliminates pulsation and provides normal actuation at low flows
- Wide range of valve body sizes including NPT and Flange connections

## Benefits

- Economical
- Light weight
- Protects equipment from shock damage
- Large 12" diaphragm for better outlet pressure control
- Unmatched overpressure protection with Internal Monitor plus Internal Relief (IMR) option

## Applications

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

## Model Descriptions Included in this Bulletin

**B34N** – The B34N is a spring loaded self-operated regulator with no internal relief, an adjustable loading ring for controlled boost at higher flows, and a precision breather opening to ensure proper stability for all conditions. This regulator can be used on low or intermediate inlet pressures where an internal relief, or other type of over-pressure protection device is not required.

**B34R** – The B34R is the internal relief version of the B34 Series. This model features an adjustable loading ring for controlled boost at higher flows, a precision breather opening to ensure proper stability for all conditions, and a 1" internal relief valve.

**B34DN** – The B34DN is a standard B34N with a closed throat, downstream control tap on the bottom of the lower diaphragm case, and no internal relief capabilities. This unit is used when it is desirable to control the regulator from points other than the valve outlet. Since the control point is no longer at the outlet of the valve body the regulator does not boost, but all of the capacity tables are the same as the R and N models.

**B34DR** – The B34DR is the same as the B34DN, except it has internal relief similar to the B34R.

**B34MN** – The B34MN is very similar to the B34DN with a closed throat, downstream control line, and no internal relief capabilities, except for an O-ring seal on the valve stem through the throat to assure positive downstream control when installed ahead of a downstream regulator. Used in a series monitoring installation as the upstream regulator, this unit gives customers an operating device that assumes control over an operating regulator when failure is sensed by the control line of the monitor. This series system assures maximum safety with uninterrupted service. The monitor regulator is set to take over control from the operating regulator with only a slight increase in outlet pressure.

**B34MR** – The B34MR is the same as the B34MN, except it has internal relief similar to the B34R.

## Option Designations

- N** – No Internal Relief
- R** – Internal Relief
- DN** – Downstream Control with no Internal Relief
- DR** – Downstream Control with Internal Relief
- MN** – Monitor with no Internal Relief
- MR** – Monitor with Internal Relief
- IMR** – Internal Monitor with Internal Relief\*
- IMN** – Internal Monitor with no Internal Relief\*
- IMRV** – Internal Monitor with Internal Relief and Vent\*

\* Consult Product Bulletin K10G or your Schlumberger Sales Representative for Internal Monitor Performance Data



# Specifications

## Construction

Valve Body:	High tensile strength cast iron
Orifice:	Brass
Valve Seat:	Buna-N or silicone (for temperatures below -20 F)
Valve Stem:	Plated steel
Lever Pin:	Stainless steel
Lever:	Zinc & dichromate plated steel
Stem Guide:	Stainless steel
Upper Diaphragm	
Plate:	Zinc & dichromate plated steel
Lower Diaphragm	
Plate:	Die cast aluminum
Diaphragm:	Buna-N and nylon
Vent Valve/Seat:	Delrin/Buna-N
Vent Screen:	Stainless Steel
Adjustment Ferrule:	Die cast aluminum
Seal Cap:	Die cast aluminum
Diaphragm Case:	Die cast aluminum

## Shipping Weight:

1 Regulator per box
Shipping per 1 Regulators: 24 lbs.

## Correction factors for non-natural gas applications:

The B34 may be used to control materials other than natural gas. To determine the capacity of the B34 for gases other than natural gas, it will be necessary to multiply the values within the capacity tables by a correction factor. The table below lists the correction factors for some of the more common gases:

Gas Type	Specific Gravity	Correction Factor (CF)
Air	1.0	0.77
Butane	2.01	0.55
Carbon Dioxide (Dry)	1.52	0.63
Carbon Monoxide (Dry)	0.97	0.79
Natural Gas	0.60	1.00
Nitrogen	0.97	0.79
Propane	1.53	0.63
Propane-Air-Mix	1.20	0.71

To calculate the correction factor for gases not listed on the table above, it will be necessary to know the specific gravity of the gas and use it in the formula listed below:

$$\text{Correction Factor (CF)} = \sqrt{\frac{S.G._1}{S.G._2}}$$

Where:

- SG<sub>1</sub> = Specific Gravity of the gas in which the capacity is published.
- SG<sub>2</sub> = Specific Gravity of the gas to be controlled.

## SPRING DATA - Model B34

Spring Color	Outlet Pressure Range
Orange	3.0" W.C. – 5.0" W.C.
Brown	4.0" W.C. – 6.5" W.C.
Green	5.0" W.C. – 8.0" W.C.
Black	6.5" W.C. – 13.0" W.C.
Purple	9.1" W.C. – 20.8" W.C.
Blue	15.0" W.C. – 28.0" W.C.
Silver	1.0 PSIG - 2 PSIG
Yellow	2.0 PSIG – 4.5 PSIG
Red-Nested	4.0 PSIG - 5.5 PSIG
White-Nested	4.8 PSIG - 7.3 PSIG

## ORIFICE DATA - Wide Open Flow Coefficients and Maximum Pressures

Orifice Size	K-Factor Wide Open	Maximum Operating Inlet Pressure			Maximum Emergency Inlet Pressure	Maximum Emergency Outlet Pressure
		In. w.c. Delivery N & R Models	In. w.c. Delivery D & M Models	PSIG Delivery All Models	All Deliveries All Models	All Deliveries All Models
1/4"	125	125 PSIG	175 PSIG	175 PSIG	300 PSIG	60 PSIG
1/4"X3/8"	125	125 PSIG	125 PSIG	175 PSIG	300 PSIG	60 PSIG
3/8"	290	125 PSIG	125 PSIG	175 PSIG	300 PSIG	60 PSIG
3/8"X1/2"	305	125 PSIG	125 PSIG	150 PSIG	300 PSIG	60 PSIG
1/2"	500	75 PSIG	125 PSIG	150 PSIG	300 PSIG	60 PSIG
1/2"X5/8"	550	60 PSIG	125 PSIG	150 PSIG	300 PSIG	60 PSIG
5/8"	700	60 PSIG	125 PSIG	150 PSIG	300 PSIG	60 PSIG
5/8"X3/4"	750	60 PSIG	100 PSIG	150 PSIG	300 PSIG	60 PSIG
3/4"	900	60 PSIG	100 PSIG	150 PSIG	300 PSIG	60 PSIG
3/4"X7/8"	950	60 PSIG	100 PSIG	150 PSIG	230 PSIG	60 PSIG
7/8"	1200	60 PSIG	100 PSIG	150 PSIG	230 PSIG	60 PSIG
7/8"X1"	1245	25 PSIG	100 PSIG	150 PSIG	170 PSIG	60 PSIG

For wide-open orifice flow calculations use the following equations:

$$\text{For } P_1/P_2 < 1.89 \text{ use: } Q = K \sqrt{P_1(P_1 - P_2)}$$

$$\text{For } P_1/P_2 > 1.89 \text{ use: } Q = 1/2KP_1$$

Where: P<sub>1</sub> = absolute inlet pressure (psia)

P<sub>2</sub> = absolute outlet pressure (psia)

Q = flow rate (scfh)

K = orifice coefficient (scfh/psi)

## VALVE BODY SIZES

Inlet	Outlet	Screwed	Flanged
1-1/4"	1-1/4"	X	--
1-1/4"	1-1/2"	X	--
1-1/4"	2"	X	--
1-1/2"	1-1/2"	X	--
1-1/2"	2"	X	--
2"	2"	X	X
3"	3"	--	X

Available Vent Sizes: 1"

Operating Temperature Range: -20 F to 150 F\*

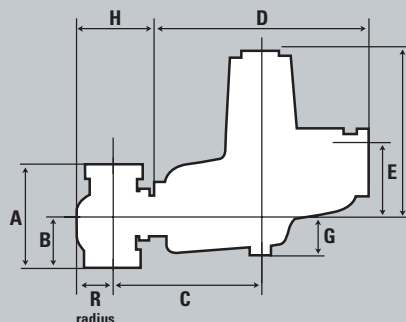
(Silicone valve seats available for applications below -20 F)

Loading Ring Position: M & D Models - 0 degrees;

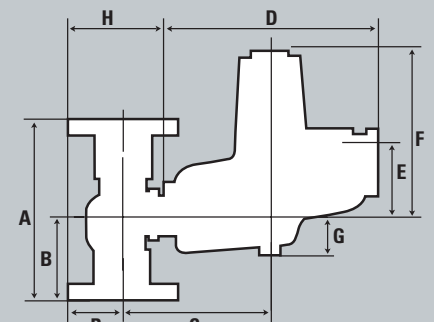
R & N Models for <1 psig set point - 21degrees; >1 psig set point - 0 degrees

## B34 DIMENSIONS:

Valve Body Type	Dimensions								
	A	B	C	D	E	F	G	H	R
1 1/4", 1 1/2", or 2" NPT	5 3/4"	2 7/8"	8 11/16"	12 3/4"	4 5/16"	10"	2 3/16"	4 1/2"	2 1/4"
2" Flanged	10	5	8 11/16"	12 3/4"	4 5/16"	10"	2 3/16"	5 1/2"	3 1/4"
3" Flanged	10	5	8 11/16"	12 3/4"	4 5/16"	10"	2 3/16"	5 1/2"	3 1/4"



Screwed Valve Body



Flanged Valve Body

# B34 Commercial & Industrial Regulator

## 7" w.c. (17.5 mbar) B34 Model Capacity Table - 1" W.C. Droop

### Capacity Table

Set Point: 7" w.c. (17.5 mbar) @ 200 scfh (5.68 m³/h)  
 Green Spring (Range: 5.0-8.0" w.c.(12.5 - 20.0 mbar), Part No. 762353)

Valve Body: 2" x 2" NPT  
 Mounting Position 11

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m³/hr) by Orifice Size							
Psig	Bar	1/4" 6.35 mm	1/4"X3/8" 6.35 X 9.52 mm	3/8" 9.52 mm	3/8"X1/2" 9.52 X 12.7 mm	1/2" 12.7 mm	1/2"X5/8" 12.7 X 15.9 mm		
8" w.c.	20 mbar							325 (9.10)	400 (11.20)
10" w.c.	25 mbar							500 (14.00)	650 (18.20)
12" w.c.	30 mbar		250 (7.00)	400 (11.20)	540 (15.12)	625 (17.50)	800 (22.40)		
14" w.c.	35 mbar	225 (6.30)	300 (8.40)	475 (13.30)	610 (17.08)	750 (21.00)	900 (25.20)		
16" w.c.	40 mbar	250 (7.00)	350 (9.80)	550 (15.40)	700 (19.60)	800 (22.40)	1050 (29.40)		
18" w.c.	45 mbar	275 (7.70)	375 (10.50)	600 (16.80)	740 (20.72)	900 (25.20)	1150 (32.20)		
21" w.c.	52 mbar	300 (8.40)	400 (11.20)	700 (19.60)	800 (22.40)	1050 (29.40)	1350 (37.80)		
24" w.c.	60 mbar	350 (9.80)	400 (11.20)	800 (22.40)	890 (24.92)	1200 (33.60)	1450 (40.60)		
1	69 mbar	400 (11.20)	400 (11.20)	875 (24.50)	1000 (28.00)	1300 (36.40)	1500 (42.00)		
2	0.138	575 (16.10)	575 (16.10)	1300 (36.40)	1500 (42.00)	1900 (53.20)	2000 (56.00)		
3	0.207	775 (21.70)	800 (22.40)	1700 (47.60)	2000 (56.00)	2000 (56.00)	2700 (75.60)		
5	0.345	1000 (28.00)	1100 (30.80)	2000 (56.00)	2400 (67.20)	2400 (67.20)	4000 (112.00)		
10	0.69	1000 (28.00)	1700 (47.60)	3400 (95.20)	3500 (98.00)	3500 (98.00)	5700 (159.60)		
20	1.38	2150 (60.20)	2300 (64.40)	5000 (140.00)	5000 (140.00)	8500 (238.00)	8500 (238.00)		
30	2.07	2750 (77.00)	2900 (81.20)	6500 (182.00)	6500 (182.00)	10000 (280.00)	10000 (280.00)		
40	2.76	3450 (96.60)	3550 (99.40)	8000 (224.00)	8000 (224.00)	10000 (280.00)	10000 (280.00)		
50	3.45	3800 (106.40)	4100 (114.80)	9200 (257.60)	9200 (257.60)	10000 (280.00)	10000 (280.00)		
60	4.14	5000 (140.00)	5000 (140.00)	9500 (266.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)		
70	4.83	4700 (131.60)	5100 (142.80)	10000 (280.00)	10000 (280.00)	10000 (280.00)			
80	5.52	4900 (137.20)	4800 (134.40)	10000 (280.00)					
90	6.21	6800 (190.40)	7000 (196.00)	10000 (280.00)					
100	6.9	7400 (207.20)	7800 (218.40)	10000 (280.00)					
125	8.63	8800 (246.40)	9000 (252.00)	10000					
Change in outlet for a 10 psig (0.69 Bar) inlet change		0.3" w.c. (0.8 mbar)	0.3" w.c. (0.8 mbar)	0.3" w.c. (0.8 mbar)	0.3" w.c. (0.8 mbar)	0.3" w.c. (0.8 mbar)	0.3" w.c. (0.8 mbar)	0.3" w.c. (0.8 mbar)	
Increase in outlet pressure required for no flow		0.3" w.c. (0.8 mbar)	0.3" w.c. (0.8 mbar)	0.3" w.c. (0.8 mbar)	0.5" w.c. (1.3 mbar)	0.5" w.c. (1.3 mbar)	0.6" w.c. (1.5 mbar)		

### Continued

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m³/hr) by Orifice Size							
Psig	Bar	5/8" 15.9 mm	5/8"X3/4" 15.9 X 19.1 mm	3/4" 19.1 mm	3/4"X7/8" 19.1 X 22.2 mm	7/8" 22.2 mm	7/8"X1" 22.2 X 25.4 mm		
8" w.c.	20 mbar	500 (14.00)	635 (17.78)	675 (18.90)	725 (20.30)	850 (23.80)	900 (25.20)		
10" w.c.	25 mbar	750 (21.00)	850 (23.80)	900 (25.20)	1050 (29.40)	1150 (32.20)	1225 (34.30)		
12" w.c.	30 mbar	950 (26.60)	1050 (29.40)	1100 (30.80)	1250 (35.00)	1425 (39.90)	1550 (43.40)		
14" w.c.	35 mbar	1175 (32.90)	1200 (33.60)	1250 (35.00)	1525 (42.70)	1700 (47.60)	1900 (53.20)		
16" w.c.	40 mbar	1175 (32.90)	1350 (37.80)	1550 (43.40)	1700 (47.60)	1950 (54.60)	2050 (57.40)		
18" w.c.	45 mbar	1275 (35.70)	1575 (44.10)	1750 (49.00)	1825 (51.10)	2050 (57.40)	2350 (65.80)		
21" w.c.	52 mbar	2535 (70.98)	1750 (49.00)	1800 (50.40)	2100 (58.80)	2350 (65.80)	2700 (75.60)		
24" w.c.	60 mbar	1700 (47.60)	1950 (54.60)	2100 (58.80)	2250 (63.00)	2700 (75.60)	3000 (84.00)		
1	69 mbar	2200 (61.60)	2200 (61.60)	2300 (64.40)	2400 (67.20)	2700 (75.60)	3200 (89.60)		
2	0.138	3000 (84.00)	3300 (92.40)	3700 (103.60)	4000 (112.00)	4500 (126.00)	4700 (131.60)		
3	0.207	4000 (112.00)	4200 (117.60)	4400 (123.20)	4600 (128.80)	5200 (145.60)	6000 (168.00)		
5	0.345	5100 (142.80)	5700 (159.60)	6800 (190.40)	7000 (196.00)	7500 (210.00)	8000 (224.00)		
10	0.69	8500 (238.00)	9000 (252.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)		
20	1.38	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)		
30	2.07	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)			
40	2.76	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)			
50	3.45	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)			
60	4.14	10000 (280.00)	10000 (280.00)	10000 (280.00)	10000 (280.00)				
70	4.83								
80	5.52								
90	6.21								
100	6.9								
125	8.63								
Change in outlet for a 10 psig (0.69 Bar) inlet change		0.4" w.c. (1.0 mbar)	0.5" w.c. (1.3 mbar)	0.5" w.c. (1.3 mbar)	0.5" w.c. (1.3 mbar)	0.6" w.c. (1.5 mbar)	0.6" w.c. (1.5 mbar)		
Increase in outlet pressure required for no flow		1.0" w.c. (2.5 mbar)	1.0" w.c. (2.5 mbar)	1.1" w.c. (2.8 mbar)	1.1" w.c. (2.8 mbar)	1.1" w.c. (2.8 mbar)	1.1" w.c. (2.8 mbar)		

Inlet pressure is too low to deliver 7" w.c. (17.5 mbar)  
 Do not use this orifice size at this inlet pressure

# B34 Commercial & Industrial Regulator

## 7" w.c. (17.5 mbar) - 1" W.C. Droop

### Typical Performance Curves

Type and Model.....B34 R

Regulator:

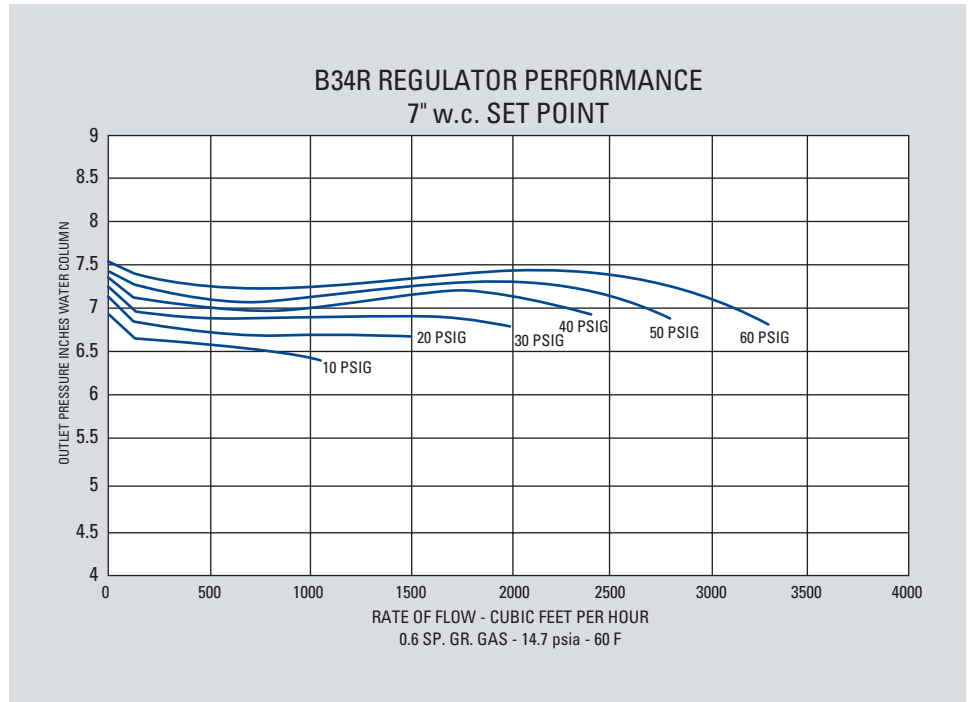
Inlet Size .....2" NPT

Outlet Size.....2" NPT

Orifice Size .....1/4" x 3/8"

Spring .....Green

Set Point 7.0" wc with 40 psig inlet @ 200 scfh. All test results are reported at a base of 14.7 psia and 60 F.



### Relief Characteristic Curves R Model Only

Type and Model.....B34 R

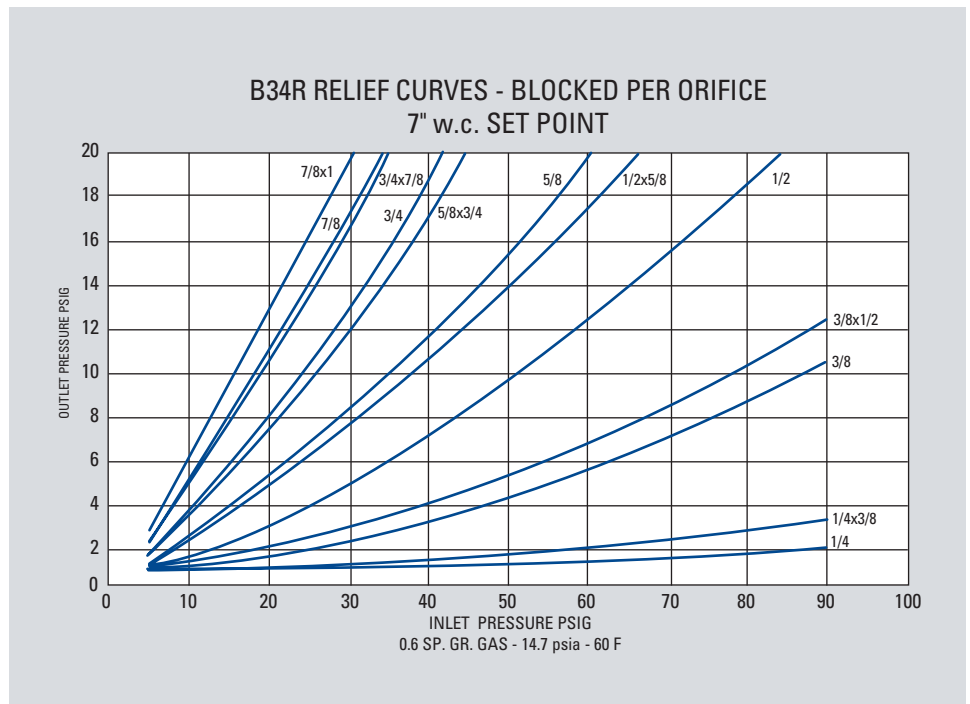
Regulator:

Inlet Size .....2" NPT

Outlet Size.....2" NPT

Vent Size .....1" NPT

Set Point 7.0" w.c. with 40 psig inlet @ 200 scfh. All test results are reported at a base of 14.7 psia and 60 F.



# B34 Commercial & Industrial Regulator

## 14" w.c. (35 mbar) B34 Model Capacity Table - 2" W.C. Droop

### Capacity Table

Set Point: 14" w.c. (35 mbar) @ 50 scfh (1.42 m³/h)  
 Purple Spring (Range: 9.1" - 20.8" w.c.(22.8 - 52.0 mbar), Part No. 762323)

Valve Body: 2" x 2" NPT  
 Mounting Position 11

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m³/hr) by Orifice Size											
Psig	Bar	1/4" 6.35 mm		1/4"X3/8" 6.35 X 9.52 mm		3/8" 9.52 mm		3/8"X1/2" 9.52 X 12.7 mm		1/2" 12.7 mm		1/2"X5/8" 12.7 X 15.9 mm	
16" w.c.	40 mbar					350	(9.80)	400	(11.20)	450	(12.60)	500	(14.00)
18" w.c.	45 mbar			250	(7.00)	400	(11.20)	520	(14.56)	600	(16.80)	700	(19.60)
21" w.c.	52 mbar	220	(6.16)	300	(8.40)	500	(14.00)	600	(16.80)	750	(21.00)	850	(23.80)
24" w.c.	60 mbar	260	(7.28)	370	(10.36)	550	(15.40)	750	(21.00)	800	(22.40)	1100	(30.80)
1	69 mbar	300	(8.40)	430	(12.04)	700	(19.60)	800	(22.40)	900	(25.20)	1200	(33.60)
2	0.138	550	(15.40)	600	(16.80)	1200	(33.60)	1400	(39.20)	1700	(47.60)	1900	(53.20)
3	0.207	700	(19.60)	750	(21.00)	1600	(44.80)	2200	(61.60)	2400	(67.20)	3000	(84.00)
5	0.345	900	(25.20)	1000	(28.00)	2000	(56.00)	2300	(64.40)	2500	(70.00)	4000	(112.00)
10	0.69	1300	(36.40)	1500	(42.00)	3000	(84.00)	3200	(89.60)	4700	(131.60)	6000	(168.00)
20	1.38	2100	(58.80)	2300	(64.40)	4800	(134.40)	5000	(140.00)	8300	(232.40)	8500	(238.00)
30	2.07	2700	(75.60)	2800	(78.40)	6700	(187.60)	6900	(193.20)	10000	(280.00)	10000	(280.00)
40	2.76	3400	(95.20)	3600	(100.80)	7600	(212.80)	7800	(218.40)	10000	(280.00)	10000	(280.00)
50	3.45	3900	(109.20)	4200	(117.60)	8700	(243.60)	9000	(252.00)	10000	(280.00)	10000	(280.00)
60	4.14	4500	(126.00)	4700	(131.60)	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)
70	4.83	4900	(137.20)	5100	(142.80)	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)
80	5.52	5400	(151.20)	5600	(156.80)	10000	(280.00)	10000	(280.00)				
90	6.21	6500	(182.00)	6700	(187.60)	10000	(280.00)	10000	(280.00)				
100	6.9	7000	(196.00)	7500	(210.00)								
125	8.63	8500	(238.00)	9000	(252.00)								
Change in outlet for a 10 psig (0.69 Bar) inlet change		0.3" w.c. (0.8 mbar)		0.3" w.c. (0.8 mbar)		0.3" w.c. (0.8 mbar)		0.4" w.c. (1 mbar)		0.4" w.c. (1 mbar)		0.4" w.c. (1 mbar)	
Increase in outlet pressure required for no flow		0.4" w.c. (1 mbar)		0.4" w.c. (1 mbar)		0.5" w.c. (1.3 mbar)		0.5" w.c. (1.3 mbar)		0.5" w.c. (1.3 mbar)		0.6" w.c. (1.5 mbar)	

### Continued

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m³/hr) by Orifice Size											
Psig	Bar	5/8" 15.9 mm		5/8"X3/4" 15.9 X 19.1 mm		3/4" 19.1 mm		3/4"X7/8" 19.1 X 22.2 mm		7/8" 22.2 mm		7/8"X1" 22.2 X 25.4 mm	
16" w.c.	40 mbar	600	(16.80)	700	(19.60)	750	(21.00)	900	(25.20)	950	(26.60)	1050	(29.40)
18" w.c.	45 mbar	750	(21.00)	850	(23.80)	900	(25.20)	1050	(29.40)	1200	(33.60)	1300	(36.40)
21" w.c.	52 mbar	900	(25.20)	1100	(30.80)	1250	(35.00)	1400	(39.20)	1450	(40.60)	1500	(42.00)
24" w.c.	60 mbar	1150	(32.20)	1350	(37.80)	1400	(39.20)	1500	(42.00)	1550	(43.40)	1700	(47.60)
1	69 mbar	1350	(37.80)	1450	(40.60)	1550	(43.40)	1650	(46.20)	1800	(50.40)	2150	(60.20)
2	0.138	2550	(71.40)	2800	(78.40)	3100	(86.80)	3200	(89.60)	4200	(117.60)	4400	(123.20)
3	0.207	3400	(95.20)	3600	(100.80)	3800	(106.40)	3900	(109.20)	4500	(126.00)	5200	(145.60)
5	0.345	4200	(117.60)	5000	(140.00)	5500	(154.00)	6000	(168.00)	6300	(176.40)	6500	(182.00)
10	0.69	7000	(196.00)	7600	(212.80)	8800	(246.40)	9000	(252.00)	9100	(254.80)	10000	(280.00)
20	1.38	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)
30	2.07	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)		
40	2.76	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)		
50	3.45	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)		
60	4.14	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)	10000	(280.00)		
70	4.83												
80	5.52												
90	6.21												
100	6.9												
125	8.63												
Change in outlet for a 10 psig (0.69 Bar) inlet change		0.5" w.c. (1.3 mbar)		0.5" w.c. (1.3 mbar)		0.5" w.c. (1.3 mbar)		0.5" w.c. (1.3 mbar)		0.6" w.c. (1.5 mbar)		0.6" w.c. (1.5 mbar)	
Increase in outlet pressure required for no flow		1.1" w.c. (2.8 mbar)		1.1" w.c. (2.8 mbar)		1.2" w.c. (3.0 mbar)		1.2" w.c. (3.0 mbar)		1.2" w.c. (3.0 mbar)		1.2" w.c. (3.0 mbar)	

 Inlet pressure is too low to deliver 14" w.c. (35 mbar)

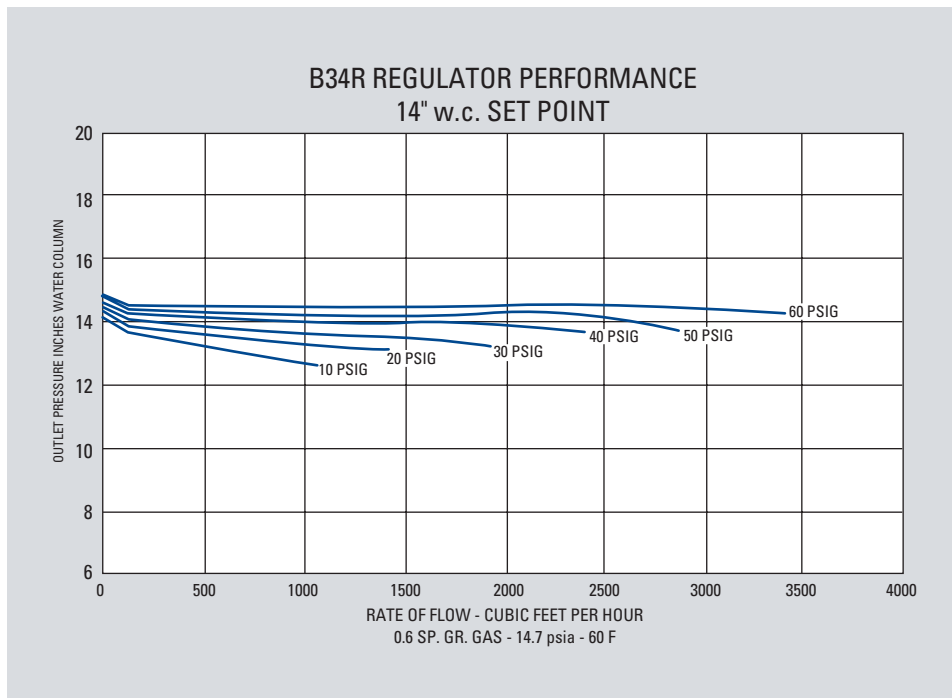
 Do not use this orifice size at this inlet pressure

# B34 Commercial & Industrial Regulator

## 14" w.c. (35 mbar) - 2" W.C. Droop

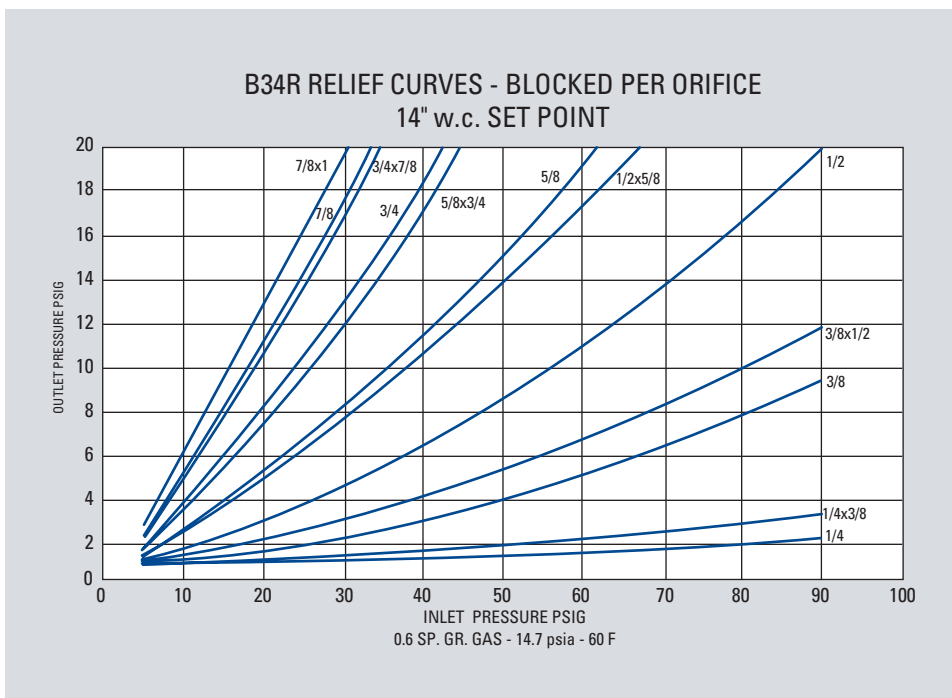
### Typical Performance Curves

Type and Model . . . . .B34 R  
 Regulator:  
 Inlet Size . . . . .2" NPT  
 Outlet Size . . . . .2" NPT  
 Orifice Size . . . . .1/4" x 3/8"  
 Spring . . . . .Purple  
 Set Point 14.0" w.c. with 40 psig inlet @  
 200 scfh. All test results are reported at a  
 base of 14.7 psia  
 and 60 F.



### Relief Characteristic Curves R Model Only

Type and Model . . . . .B34 R  
 Regulator:  
 Inlet Size . . . . .2" NPT  
 Outlet Size . . . . .2" NPT  
 Vent Size . . . . .1" NPT  
 Set Point 14.0" w.c. with 40 psig inlet @ 200  
 scfh. All test results are reported at a base  
 of 14.7 psia and 60 F.



# B34 Commercial & Industrial Regulator

## 1 PSIG (69 mbar) B34 Model Capacity Table - 1% Abs. Droop

### Capacity Table

Set Point: 1 psig (69 mbar) @ 200 scfh (5.68 m<sup>3</sup>/h)

Silver Spring (Range: 1.00 - 2.00 psig (69 - 138 mbar), Part No. 762359)

Valve Body: 2" x 2" NPT

Mounting Position 11


Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size											
Psig	Bar	1/4" 6.35 mm		1/4"X3/8" 6.35 X 9.52 mm		3/8" 9.52 mm		3/8"X1/2" 9.52 X 12.7 mm		1/2" 12.7 mm		1/2"X5/8" 12.7 X 15.9 mm	
2	0.138												
3	0.207	550	(15.40)	575	(16.10)	1250	(35.00)	1300	(36.40)	1400	(39.20)	1500	(42.00)
5	0.345	600	(16.80)	1000	(28.00)	1500	(42.00)	1500	(42.00)	1800	(50.40)	2000	(56.00)
10	0.69	1000	(28.00)	1500	(42.00)	2000	(56.00)	2800	(78.40)	3000	(84.00)	4300	(120.40)
20	1.38	1700	(47.60)	2200	(61.60)	4000	(112.00)	4700	(131.60)	6300	(176.40)	8000	(224.00)
30	2.07	2400	(67.20)	2800	(78.40)	5600	(156.80)	6400	(179.20)	10000	(280.00)	11000	(308.00)
40	2.76	2800	(78.40)	3600	(100.80)	7000	(196.00)	7800	(218.40)	12500	(350.00)	13000	(364.00)
50	3.45	3700	(103.60)	4200	(117.60)	9000	(252.00)	9000	(252.00)	14000	(392.00)	15500	(434.00)
60	4.14	4000	(112.00)	4700	(131.60)	10000	(280.00)	10000	(280.00)	16000	(448.00)	17000	(476.00)
70	4.83	4800	(134.40)	5200	(145.60)	10800	(302.40)	11800	(330.40)	16500	(462.00)	18000	(504.00)
80	5.52	5150	(144.20)	5500	(154.00)	11400	(319.20)	13000	(364.00)	17000	(476.00)	19000	(532.00)
90	6.21	5300	(148.40)	5600	(156.80)	12300	(344.40)	14000	(392.00)	17500	(490.00)	20000	(560.00)
100	6.9	7000	(196.00)	7300	(204.40)	13500	(378.00)	15000	(420.00)	18000	(504.00)	21000	(588.00)
125	8.63	8400	(235.20)	8700	(243.60)								


Change in outlet for a 10 psig (0.69 Bar) inlet change	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)
Increase in outlet pressure required for no flow	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)

### Continued

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size											
Psig	Bar	5/8" 15.9 mm		5/8"X3/4" 15.9 X 19.1 mm		3/4" 19.1 mm		3/4"X7/8" 19.1 X 22.2 mm		7/8" 22.2 mm		7/8"X1" 22.2 X 25.4 mm	
2	0.138	1300	(36.40)	1350	(37.80)	1400	(39.20)	1425	(39.90)	1500	(42.00)	2000	(56.00)
3	0.207	1800	(50.40)	1900	(53.20)	2000	(56.00)	2050	(57.40)	2100	(58.80)	2200	(61.60)
5	0.345	2100	(58.80)	2700	(75.60)	2700	(75.60)	3200	(89.60)	3500	(98.00)	4000	(112.00)
10	0.69	4600	(128.80)	5800	(162.40)	6000	(168.00)	7500	(210.00)	8000	(224.00)	8500	(238.00)
20	1.38	8500	(238.00)	11000	(308.00)	11300	(316.40)	12000	(336.00)	12500	(350.00)	14000	(392.00)
30	2.07	12500	(350.00)	16200	(453.60)	16500	(462.00)	17500	(490.00)	18000	(504.00)	19000	(532.00)
40	2.76	14500	(406.00)	17200	(481.60)	17600	(492.80)	18500	(518.00)	20000	(560.00)	21000	(588.00)
50	3.45	16300	(456.40)	18000	(504.00)	18400	(515.20)	19300	(540.40)	22000	(616.00)	23000	(644.00)
60	4.14	17300	(484.40)	18200	(509.60)	18700	(523.60)	20100	(562.80)	23200	(649.60)	24400	(683.20)
70	4.83												
80	5.52												
90	6.21												
100	6.9												
125	8.63												

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)
Increase in outlet pressure required for no flow	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.05 psig (3.45 mbar)

 Inlet pressure is too low to deliver 1 PSIG (69 mbar)

 Do not use this orifice size at this inlet pressure



# B34 Commercial & Industrial Regulator

## 1 PSIG (69 mbar) B34 Model Capacity Table - 2% Abs. Droop

### Capacity Table

Set Point: 1 psig (69 mbar) @ 200 scfh (5.68 m<sup>3</sup>/h)

Silver Spring (Range: 1.00 - 2.00 psig (69 - 138 mbar), Part No. 762359)

Valve Body: 2" x 2" NPT

Mounting Position 11

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size											
Psig	Bar	1/4" 6.35 mm		1/4"X3/8" 6.35 X 9.52 mm		3/8" 9.52 mm		3/8"X1/2" 9.52 X 12.7 mm		1/2" 12.7 mm		1/2"X5/8" 12.7 X 15.9 mm	
2	0.138												
3	0.207	700	(19.60)	750	(21.00)	1500	(42.00)	1600	(44.80)	2300	(64.40)	2400	(67.20)
5	0.345	800	(22.40)	1000	(28.00)	1900	(53.20)	2000	(56.00)	3400	(95.20)	3700	(103.60)
10	0.69	1500	(42.00)	1500	(42.00)	3000	(84.00)	3200	(89.60)	5000	(140.00)	6000	(168.00)
20	1.38	1650	(46.20)	2200	(61.60)	4500	(126.00)	4800	(134.40)	8500	(238.00)	9000	(252.00)
30	2.07	2700	(75.60)	2900	(81.20)	6300	(176.40)	6500	(182.00)	11000	(308.00)	11500	(322.00)
40	2.76	3340	(93.52)	3500	(98.00)	7400	(207.20)	7600	(212.80)	13000	(364.00)	13500	(378.00)
50	3.45	3950	(110.60)	4100	(114.80)	8500	(238.00)	9000	(252.00)	15500	(434.00)	16000	(448.00)
60	4.14	4700	(131.60)	4700	(131.60)	10500	(294.00)	10800	(302.40)	16500	(462.00)	17000	(476.00)
70	4.83	4750	(133.00)	5000	(140.00)	11000	(308.00)	11600	(324.80)	17500	(490.00)	18000	(504.00)
80	5.52	4950	(138.60)	5400	(151.20)	12000	(336.00)	13000	(364.00)	18000	(504.00)	19000	(532.00)
90	6.21	5500	(154.00)	6500	(182.00)	12500	(350.00)	13500	(378.00)	19000	(532.00)	20000	(560.00)
100	6.9	7000	(196.00)	7250	(203.00)	13250	(371.00)	14000	(392.00)	20500	(574.00)	21000	(588.00)
125	8.63	8500	(238.00)	9000	(252.00)								


Change in outlet for a 10 psig (0.69 Bar) inlet change	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)									
Increase in outlet pressure	0.02 psig	0.02 psig	0.02 psig	0.02 psig									

### Continued

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size											
Psig	Bar	5/8" 15.9 mm		5/8"X3/4" 15.9 X 19.1 mm		3/4" 19.1 mm		3/4"X7/8" 19.1 X 22.2 mm		7/8" 22.2 mm		7/8"X1" 22.2 X 25.4 mm	
2	0.138	2200	(61.60)	2300	(64.40)	2400	(67.20)	2500	(70.00)	2700	(75.60)	4200	(117.60)
3	0.207	2800	(78.40)	3000	(84.00)	3400	(95.20)	3800	(106.40)	4000	(112.00)	6000	(168.00)
5	0.345	4000	(112.00)	5000	(140.00)	5200	(145.60)	6000	(168.00)	7000	(196.00)	7500	(210.00)
10	0.69	7000	(196.00)	8900	(249.20)	9000	(252.00)	10000	(280.00)	11500	(322.00)	13000	(364.00)
20	1.38	10000	(280.00)	12000	(336.00)	13000	(364.00)	15000	(420.00)	15500	(434.00)	19000	(532.00)
30	2.07	13000	(364.00)	16000	(448.00)	18000	(504.00)	19000	(532.00)	20500	(574.00)	21800	(610.40)
40	2.76	16000	(448.00)	16500	(462.00)	19000	(532.00)	19500	(546.00)	20000	(560.00)	23700	(663.60)
50	3.45	19000	(532.00)	21000	(588.00)	22000	(616.00)	22500	(630.00)	24000	(672.00)	26000	(728.00)
60	4.14	20500	(574.00)	21900	(613.20)	22800	(638.40)	23500	(658.00)	25000	(700.00)	27000	(756.00)
70	4.83												
80	5.52												
90	6.21												
100	6.9												
125	8.63												

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)
Increase in outlet pressure required for no flow	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.05 psig (3.45 mbar)	0.05 psig (3.45 mbar)

 Inlet pressure is too low to deliver 1 PSIG (69 mbar)

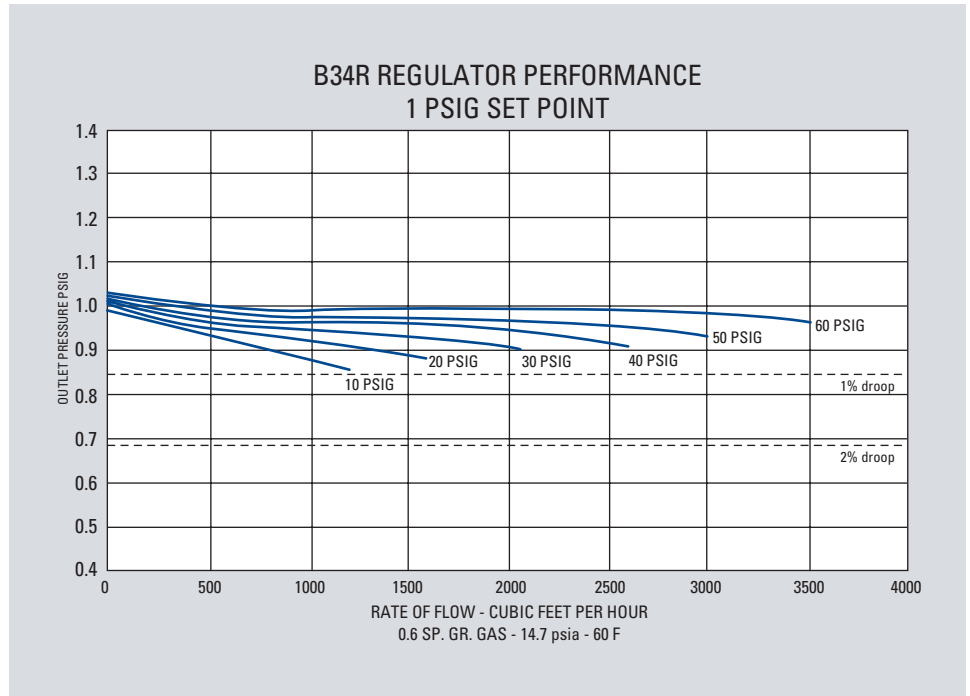
 Do not use this orifice size at this inlet pressure

# B34 Commercial & Industrial Regulator

## 1 PSIG (69 mbar)

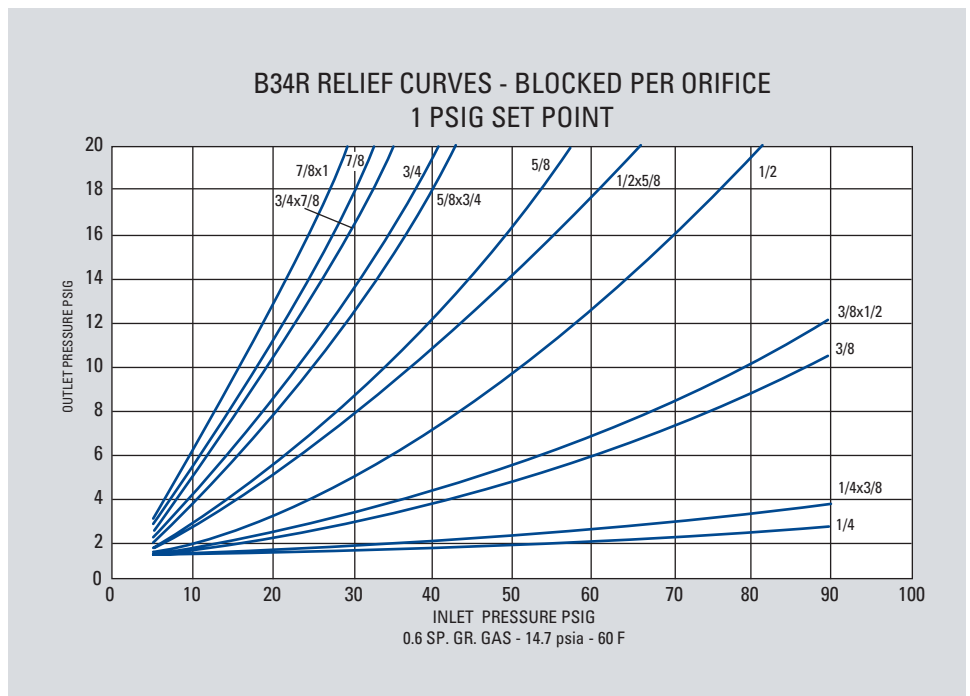
### Typical Performance Curves

Type and Model . . . . . B34 R  
 Regulator:  
 Inlet Size . . . . . 2" NPT  
 Outlet Size . . . . . 2" NPT  
 Orifice Size . . . . . 1/4" x 3/8"  
 Spring . . . . . Silver  
 Set Point 1 psig with 40 psig inlet @ 200 scfh. All test results are reported at a base of 14.7 psia and 60 F.



### Relief Characteristic Curves R Model Only

Type and Model . . . . . B34 R  
 Regulator:  
 Inlet Size . . . . . 2" NPT  
 Outlet Size . . . . . 2" NPT  
 Vent Size . . . . . 1" NPT  
 Set Point 1 psig with 40 psig inlet @ 200 scfh. All test results are reported at a base of 14.7 psia and 60 F.



# B34 Commercial & Industrial Regulator

## 2 PSIG (69 mbar) B34 Model Capacity Table - 1% Abs. Droop

### Capacity Table

Set Point: 2 psig (138 mbar) @ 200 scfh (5.68 m<sup>3</sup>/h)  
 Silver Spring (Range: 1.00 - 2.00 psig (69 - 138 mbar), Part No. 762359)

Valve Body: 2" x 2" NPT  
 Mounting Position 11

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size											
Psig	Bar	1/4" 6.35 mm		1/4"X3/8" 6.35 X 9.52 mm		3/8" 9.52 mm		3/8"X1/2" 9.52 X 12.7 mm		1/2" 12.7 mm		1/2"X5/8" 12.7 X 15.9 mm	
3	0.207												
5	0.345	500	(14.00)	900	(25.20)	1000	(28.00)	1500	(42.00)	1700	(47.60)	1900	(53.20)
10	0.69	1000	(28.00)	1700	(47.60)	1800	(50.40)	2500	(70.00)	2700	(75.60)	3000	(84.00)
20	1.38	1050	(29.40)	2200	(61.60)	2300	(64.40)	4700	(131.60)	5200	(145.60)	5400	(151.20)
30	2.07	2200	(61.60)	2800	(78.40)	3700	(103.60)	6500	(182.00)	7000	(196.00)	9500	(266.00)
40	2.76	2700	(75.60)	3500	(98.00)	6000	(168.00)	7500	(210.00)	10800	(302.40)	12500	(350.00)
50	3.45	3500	(98.00)	4100	(114.80)	7600	(212.80)	8800	(246.40)	13300	(372.40)	14500	(406.00)
60	4.14	4000	(112.00)	4700	(131.60)	9500	(266.00)	10000	(280.00)	14000	(392.00)	16000	(448.00)
70	4.83	4400	(123.20)	5000	(140.00)	10900	(305.20)	11300	(316.40)	16000	(448.00)	16500	(462.00)
80	5.52	4800	(134.40)	5400	(151.20)	12500	(350.00)	13000	(364.00)	20000	(560.00)	21000	(588.00)
90	6.21	5500	(154.00)	5600	(156.80)	12300	(344.40)	13500	(378.00)	21000	(588.00)	21500	(602.00)
100	6.9	6400	(179.20)	7000	(196.00)	12800	(358.40)	14800	(414.40)	22000	(616.00)	23000	(644.00)
125	8.63	7000	(196.00)	7400	(207.20)								

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)
Increase in outlet pressure required for no flow	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)

### Continued

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size											
Psig	Bar	5/8" 15.9 mm		5/8"X3/4" 15.9 X 19.1 mm		3/4" 19.1 mm		3/4"X7/8" 19.1 X 22.2 mm		7/8" 22.2 mm		7/8"X1" 22.2 X 25.4 mm	
3	0.207			1300	(36.40)	1500	(42.00)	1600	(44.80)	1700	(47.60)	2000	(56.00)
5	0.345	2000	(56.00)	2250	(63.00)	2500	(70.00)	3000	(84.00)	3000	(84.00)	3200	(89.60)
10	0.69	3200	(89.60)	4800	(134.40)	5000	(140.00)	6500	(182.00)	6800	(190.40)	7500	(210.00)
20	1.38	5500	(154.00)	8500	(238.00)	9000	(252.00)	9000	(252.00)	10600	(296.80)	11200	(313.60)
30	2.07	10000	(280.00)	13000	(364.00)	14500	(406.00)	16000	(448.00)	17000	(476.00)	17400	(487.20)
40	2.76	13000	(364.00)	16500	(462.00)	17900	(501.20)	18300	(512.40)	18900	(529.20)	20600	(576.80)
50	3.45	15000	(420.00)	19000	(532.00)	20000	(560.00)	20500	(574.00)	21000	(588.00)	22400	(627.20)
60	4.14	17000	(476.00)	19500	(546.00)	20500	(574.00)	21000	(588.00)	21500	(602.00)	23100	(646.80)
70	4.83												
80	5.52												
90	6.21												
100	6.9												
125	8.63												

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)
Increase in outlet pressure required for no flow	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.06 psig (4.14 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)

- Inlet pressure is too low to deliver 2 PSIG (138 mbar)
- Do not use this orifice size at this inlet pressure

# B34 Commercial & Industrial Regulator

## 2 PSIG (69 mbar) B34 Model Capacity Table - 2% Abs Droop

### Capacity Table

Set Point: 2 psig (138 mbar) @ 200 scfh (5.68 m<sup>3</sup>/h)  
Silver Spring (Range: 1.00 - 2.00 psig (69 - 138 mbar), Part No. 762359)

Valve Body: 2" x 2" NPT  
Mounting Position 11


Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size											
Psig	Bar	1/4" 6.35 mm		1/4"X3/8" 6.35 X 9.52 mm		3/8" 9.52 mm		3/8"X1/2" 9.52 X 12.7 mm		1/2" 12.7 mm		1/2"X5/8" 12.7 X 15.9 mm	
3	0.207												
5	0.345	700	(19.60)	900	(25.20)	1800	(50.40)	2000	(56.00)	2800	(78.40)	3100	(86.80)
10	0.69	1300	(36.40)	1500	(42.00)	2800	(78.40)	3000	(84.00)	4500	(126.00)	5800	(162.40)
20	1.38	1650	(46.20)	2200	(61.60)	4500	(126.00)	4800	(134.40)	8500	(238.00)	9000	(252.00)
30	2.07	2700	(75.60)	2900	(81.20)	6300	(176.40)	6500	(182.00)	11000	(308.00)	11500	(322.00)
40	2.76	3340	(93.52)	3500	(98.00)	7450	(208.60)	7600	(212.80)	13200	(369.60)	13500	(378.00)
50	3.45	3950	(110.60)	4100	(114.80)	8700	(243.60)	9000	(252.00)	15500	(434.00)	16000	(448.00)
60	4.14	4500	(126.00)	4700	(131.60)	10200	(285.60)	10500	(294.00)	17000	(476.00)	17000	(476.00)
70	4.83	4740	(132.72)	5000	(140.00)	10900	(305.20)	11600	(324.80)	19000	(532.00)	20500	(574.00)
80	5.52	4950	(138.60)	5400	(151.20)	12500	(350.00)	13000	(364.00)	21000	(588.00)	22500	(630.00)
90	6.21	5800	(162.40)	6000	(168.00)	13000	(364.00)	14000	(392.00)	22300	(624.40)	23400	(655.20)
100	6.9	6900	(193.20)	7500	(210.00)	13500	(378.00)	15500	(434.00)	23500	(658.00)	24900	(697.20)
125	8.63	8300	(232.40)	8800	(246.40)								

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)
Increase in outlet pressure required for no flow	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)

### Continued

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size											
Psig	Bar	5/8" 15.9 mm		5/8"X3/4" 15.9 X 19.1 mm		3/4" 19.1 mm		3/4"X7/8" 19.1 X 22.2 mm		7/8" 22.2 mm		7/8"X1" 22.2 X 25.4 mm	
3	0.207			2500	(70.00)	2800	(78.40)	3500	(98.00)	3700	(103.60)	4000	(112.00)
5	0.345	3200	(89.60)	3600	(100.80)	4100	(114.80)	5000	(140.00)	5000	(140.00)	6000	(168.00)
10	0.69	6000	(168.00)	7000	(196.00)	7500	(210.00)	9500	(266.00)	9800	(274.40)	12000	(336.00)
20	1.38	10000	(280.00)	12000	(336.00)	13000	(364.00)	14000	(392.00)	15500	(434.00)	19000	(532.00)
30	2.07	13000	(364.00)	16000	(448.00)	18500	(518.00)	19500	(546.00)	20500	(574.00)	21800	(610.40)
40	2.76	16000	(448.00)	19000	(532.00)	20000	(560.00)	21000	(588.00)	22000	(616.00)	23700	(663.60)
50	3.45	20500	(574.00)	21000	(588.00)	24000	(672.00)	25000	(700.00)	26500	(742.00)	27500	(770.00)
60	4.14	21300	(596.40)	22800	(638.40)	25700	(719.60)	26400	(739.20)	28000	(784.00)	28300	(792.40)
70	4.83												
80	5.52												
90	6.21												
100	6.9												
125	8.63												

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)
Increase in outlet pressure required for no flow	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.04 psig (2.76 mbar)	0.06 psig (4.14 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)

 Inlet pressure is too low to deliver 2 PSIG (138 mbar)

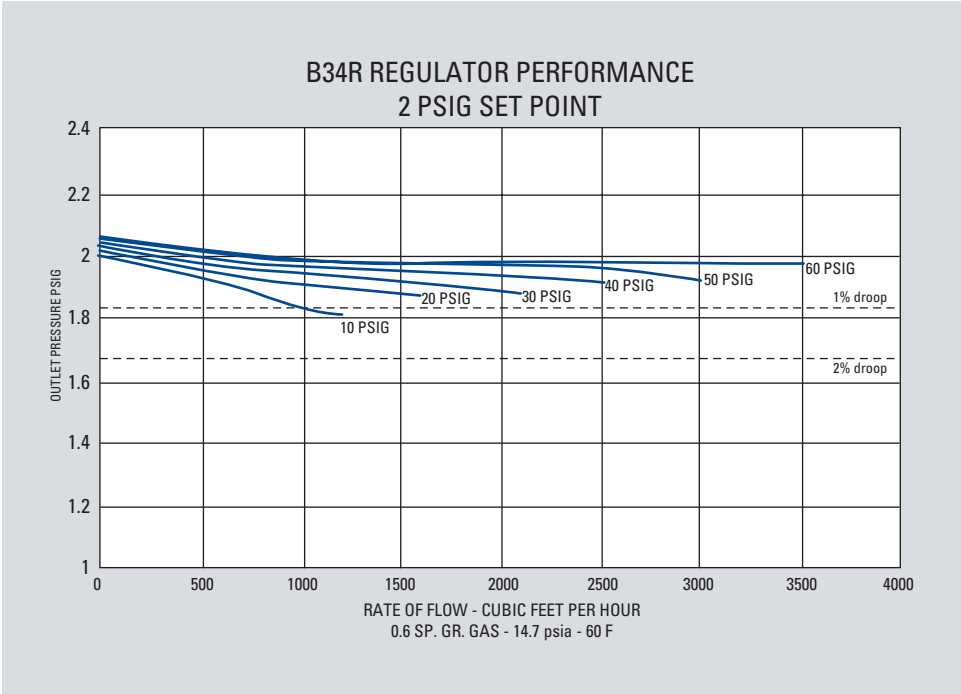
 Do not use this orifice size at this inlet pressure

# B34 Commercial & Industrial Regulator

## 2 PSIG (69 mbar)

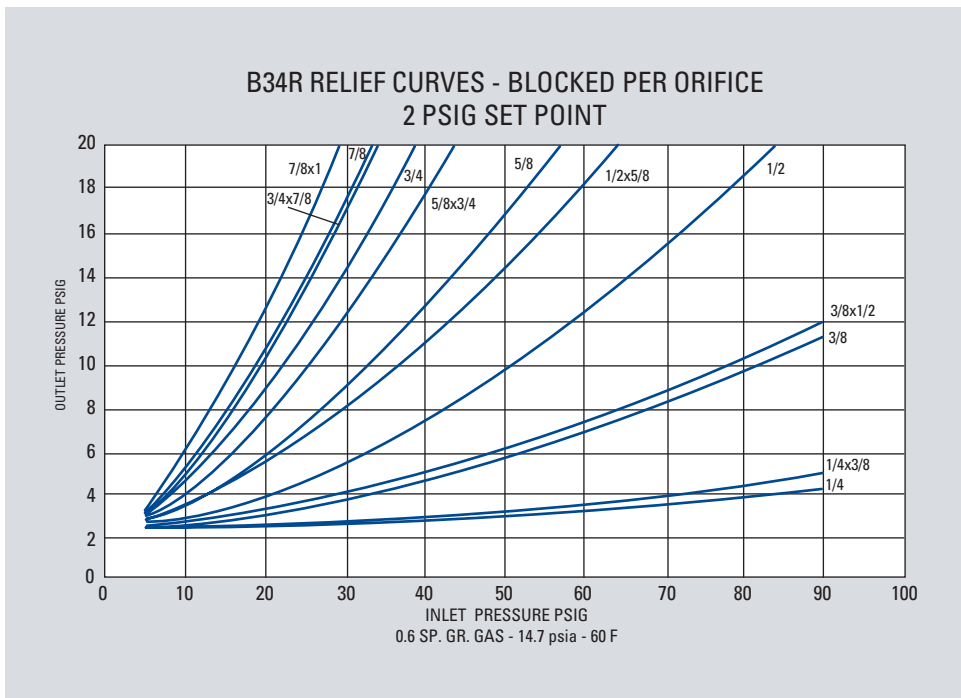
### Typical Performance Curves

Type and Model . . . . .B34 R  
 Regulator:  
 Inlet Size . . . . .2" NPT  
 Outlet Size . . . . .2" NPT  
 Orifice Size . . . . .1/4" x 3/8"  
 Spring . . . . .Silver  
 Set Point 2 psig with 40 psig inlet @ 200 scfh.  
 All test results are reported at a base of 14.7 psia and 60 F.



### Relief Characteristic Curves R Model Only

Type and Model . . . . .B34 R  
 Regulator:  
 Inlet Size . . . . .2" NPT  
 Outlet Size . . . . .2" NPT  
 Vent Size . . . . .1" NPT  
 Set Point 2 psig with 40 psig inlet @ 200 scfh.  
 All test results are reported at a base of 14.7 psia and 60 F.



# B34 Commercial & Industrial Regulator

## 5 PSIG (345 mbar) B34 Model Capacity Table - 1% Abs. Droop

### Capacity Table

Set Point: 5 psig (345 mbar) @ 200 scfh (5.68 m<sup>3</sup>/h)  
 Red Nested Spring (Range: 5.0 psig (345 mbar), Part No. 762671)

Valve Body: 2" x 2" NPT  
 Mounting Position 11

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size							
Psig	Bar	1/4" 6.35 mm	1/4"X3/8" 6.35 X 9.52 mm	3/8" 9.52 mm	3/8"X1/2" 9.52 X 12.7 mm	1/2" 12.7 mm	1/2"X5/8" 12.7 X 15.9 mm		
10	0.69	500 (14.00)	700 (19.60)	800 (22.40)	900 (25.20)	900 (25.20)	1000 (28.00)		
20	1.38	800 (22.40)	1100 (30.80)	1100 (30.80)	1300 (36.40)	1500 (42.00)	1900 (53.20)		
30	2.07	1100 (30.80)	1300 (36.40)	1400 (39.20)	1500 (42.00)	1700 (47.60)	2000 (56.00)		
40	2.76	1200 (33.60)	1400 (39.20)	1500 (42.00)	1700 (47.60)	2000 (56.00)	2700 (75.60)		
50	3.45	1300 (36.40)	1500 (42.00)	1700 (47.60)	2000 (56.00)	2500 (70.00)	3500 (98.00)		
60	4.14	1400 (39.20)	1700 (47.60)	1800 (50.40)	3200 (89.60)	3500 (98.00)	4400 (123.20)		
70	4.83	1500 (42.00)	1800 (50.40)	1900 (53.20)	2350 (65.80)	3600 (100.80)	4800 (134.40)		
80	5.52	1600 (44.80)	1900 (53.20)	2000 (56.00)	4200 (117.60)	4500 (126.00)	5100 (142.80)		
90	6.21	2000 (56.00)	2800 (78.40)	3000 (84.00)	4400 (123.20)	4800 (134.40)	6500 (182.00)		
100	6.9	2600 (72.80)	3200 (89.60)	3700 (103.60)	4550 (127.40)	5100 (142.80)	7300 (204.40)		
125	8.63	3200 (89.60)	3400 (95.20)						

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)		
Increase in outlet pressure required for no flow	0.05 psig (0.8 mbar)	0.05 psig (0.8 mbar)	0.05 psig (0.8 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)

### Continued

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size							
Psig	Bar	5/8" 15.9 mm	5/8"X3/4" 15.9 X 19.1 mm	3/4" 19.1 mm	3/4"X7/8" 19.1 X 22.2 mm	7/8" 22.2 mm	7/8"X1" 22.2 X 25.4 mm		
10	0.69	1100 (30.80)	1200 (33.60)	1300 (36.40)	1350 (37.80)	1400 (39.20)	1500 (42.00)		
20	1.38	1950 (54.60)	2000 (56.00)	2200 (61.60)	2300 (64.40)	2500 (70.00)	2700 (75.60)		
30	2.07	2300 (64.40)	2600 (72.80)	2700 (75.60)	3000 (84.00)	3500 (98.00)	3800 (106.40)		
40	2.76	2800 (78.40)	3200 (89.60)	3300 (92.40)	3700 (103.60)	4500 (126.00)	4750 (133.00)		
50	3.45	3600 (100.80)	3800 (106.40)	4200 (117.60)	4300 (120.40)	5500 (154.00)	6250 (175.00)		
60	4.14	4700 (131.60)	6000 (168.00)	8000 (224.00)	8500 (238.00)	10000 (280.00)	11500 (322.00)		
70	4.83								
80	5.52								
90	6.21								
100	6.9								
125	8.63								

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)
Increase in outlet pressure required for no flow	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.08 psig (5.52 mbar)	0.09 psig (6.21 mbar)	0.09 psig (6.21 mbar)

## 5 PSIG (345 mbar) B34 Model Capacity Table - 2% Abs. Droop

### Capacity Table

Set Point: 5 psig (345 mbar) @ 200 scfh (5.68 m<sup>3</sup>/h)  
 Red Nested Spring (Range: 5.0 psig (345 mbar), Part No. 762671)

Valve Body: 2" x 2" NPT  
 Mounting Position 11

Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m <sup>3</sup> /hr) by Orifice Size							
Psig	Bar	1/4" 6.35 mm	1/4"X3/8" 6.35 X 9.52 mm	3/8" 9.52 mm	3/8"X1/2" 9.52 X 12.7 mm	1/2" 12.7 mm	1/2"X5/8" 12.7 X 15.9 mm		
10	0.69	800 (22.40)	950 (26.60)	1000 (28.00)	1200 (33.60)	1300 (36.40)	1550 (43.40)		
20	1.38	1100 (30.80)	1600 (44.80)	1700 (47.60)	2300 (64.40)	2750 (77.00)	2850 (79.80)		
30	2.07	1500 (42.00)	2100 (58.80)	2200 (61.60)	2800 (78.40)	3300 (92.40)	3500 (98.00)		
40	2.76	2000 (56.00)	2400 (67.20)	2700 (75.60)	3900 (109.20)	4300 (120.40)	5000 (140.00)		
50	3.45	2500 (70.00)	3250 (91.00)	3400 (95.20)	4800 (134.40)	5700 (159.60)	7000 (196.00)		
60	4.14	2800 (78.40)	4000 (112.00)	4500 (126.00)	5500 (154.00)	6500 (182.00)	7500 (210.00)		
70	4.83	2900 (81.20)	4200 (117.60)	4600 (128.80)	5700 (159.60)	7300 (204.40)	8600 (240.80)		
80	5.52	3100 (86.80)	4500 (126.00)	4800 (134.40)	8200 (229.60)	8600 (240.80)	9500 (266.00)		
90	6.21	3600 (100.80)	5300 (148.40)	5700 (159.60)	9000 (252.00)	10000 (280.00)	15000 (420.00)		
100	6.9	4100 (114.80)	6000 (168.00)	6500 (182.00)	10200 (285.60)	11000 (308.00)	15900 (445.20)		
125	8.63	4900 (137.20)	6800 (190.40)						

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.02 psig (1.38 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)
Increase in outlet pressure required for no flow	0.05 psig (3.45 mbar)	0.05 psig (3.45 mbar)	0.05 psig (3.45 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)

# B34 Commercial & Industrial Regulator

## 5 PSIG (345 mbar) B34 Model Capacity Table - 2% Abs. Droop

**Continued**

Set Point: 5 psig (345 mbar) @ 200 scfh (5.68 m³/h)  
 Red Nested Spring (Range: 5.0 psig (345 mbar), Part No. 762671)

Valve Body: 2" x 2" NPT  
 Mounting Position 11

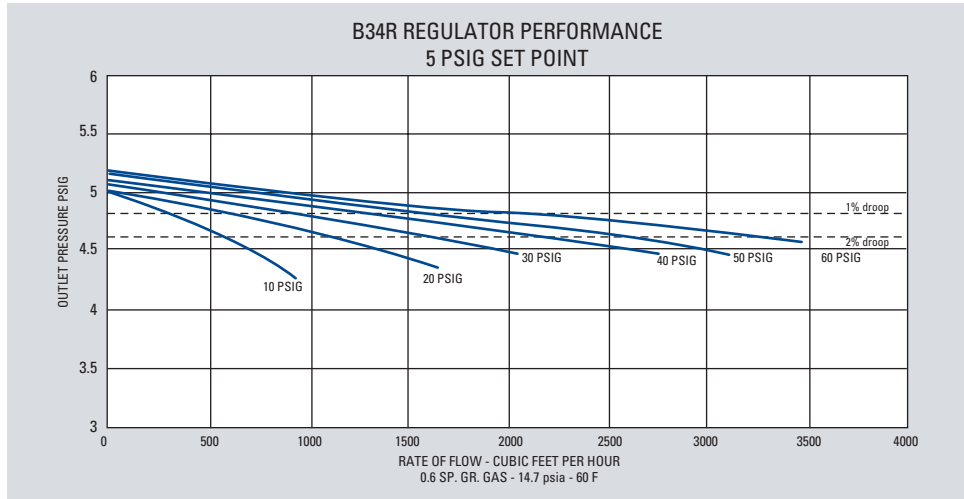
Inlet Pressure		Capacities of 0.6 S.G. Gas in scfh (m³/hr) by Orifice Size											
Psig	Bar	5/8" 15.9 mm		5/8"X3/4" 15.9 X 19.1 mm		3/4" 19.1 mm		3/4"X7/8" 19.1 X 22.2 mm		7/8" 22.2 mm		7/8"X1" 22.2 X 25.4 mm	
10	0.69	1600	(44.80)	2000	(56.00)	2200	(61.60)	2300	(64.40)	2450	(68.60)	2500	(70.00)
20	1.38	3000	(84.00)	3500	(98.00)	3800	(106.40)	4000	(112.00)	4300	(120.40)	4500	(126.00)
30	2.07	4100	(114.80)	4400	(123.20)	4500	(126.00)	5700	(159.60)	6800	(190.40)	7200	(201.60)
40	2.76	5300	(148.40)	6400	(179.20)	7000	(196.00)	7500	(210.00)	8000	(224.00)	10500	(294.00)
50	3.45	7200	(201.60)	7500	(210.00)	8300	(232.40)	9500	(266.00)	10600	(296.80)	11500	(322.00)
60	4.14	8800	(246.40)	13300	(372.40)	15000	(420.00)	15800	(442.40)	16500	(462.00)	17000	(476.00)
70	4.83												
80	5.52												
90	6.21												
100	6.9												
125	8.63												

Change in outlet for a 10 psig (0.69 Bar) inlet change	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)	0.03 psig (2.07 mbar)
Increase in outlet pressure required for no flow	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.07 psig (4.83 mbar)	0.08 psig (5.52 mbar)
						0.09 psig (6.21 mbar)

Do not use this orifice size at this inlet pressure

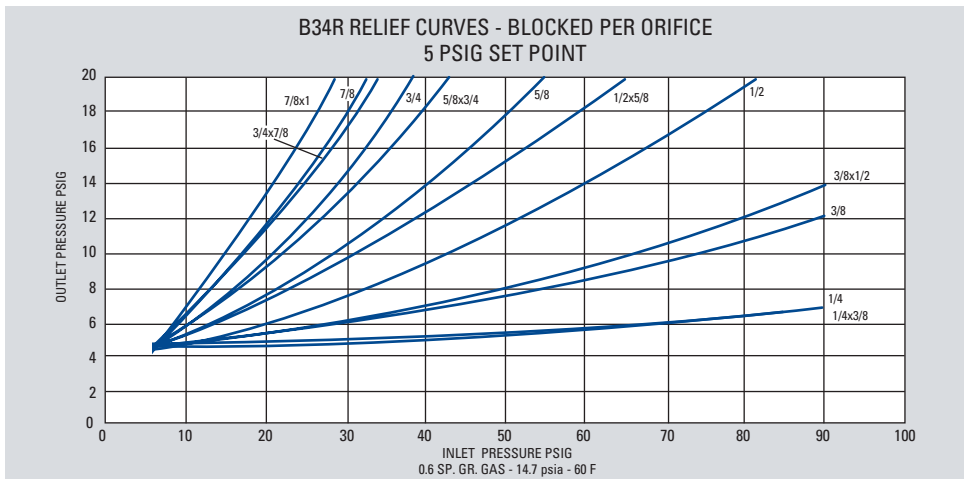
### Typical Performance Curves

Type and Model . . . . . B34 R  
 Regulator:  
 Inlet Size . . . . . 2" NPT  
 Outlet Size . . . . . 2" NPT  
 Orifice Size . . . . . 1/4" x 3/8"  
 Spring . . . . . Red-Nested  
 Set Point 2 psig with 40 psig inlet @ 200 scfh.  
 All test results are reported at a base of 14.7 psia and 60 F.



### Relief Characteristic Curves R Model Only

Type and Model . . . . . B34 R  
 Regulator:  
 Inlet Size . . . . . 2" NPT  
 Outlet Size . . . . . 2" NPT  
 Vent Size . . . . . 1" NPT  
 Set Point 2 psig with 40 psig inlet @ 200 scfh.  
 All test results are reported at a base of 14.7 psia and 60 F.



## Ordering Information

Specify:

1. Inlet and outlet connection size and body type
2. Model number
3. Outlet pressure desired
4. Inlet pressure range
5. Type of gas and maximum capacity in scfh required
6. Assembly position number
7. Vent Size
8. Special requirements such as tagging, 1/8" pipe, tap, wire seal, etc.

## 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 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 Actaris be liable for incidental or consequential damages of any kind whatsoever.

The 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.

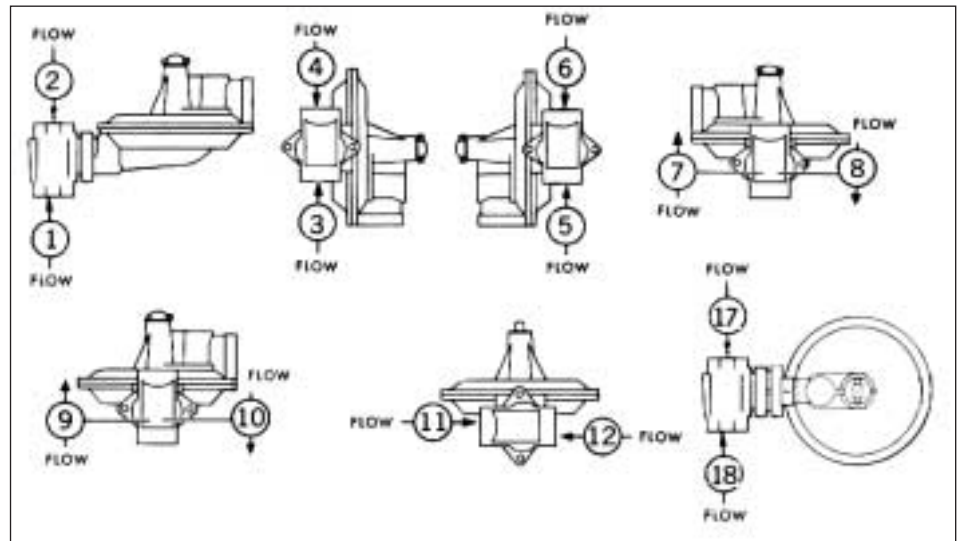
In the event of a malfunction of the product, consult your Actaris Service Representative or Actaris Metering Systems, 970 Highway 127 North, Owenton, Kentucky 40359-9802.

## Actaris Metering Systems

970 Highway 127 North  
Owenton, Kentucky 40359-9302  
Telephone: (502) 484-5747  
Fax: (502) 484-6223  
Customer Service: (800) 490-0657  
www.ActarisUSgas.com

## Assembly Positions - All Models

Shown are 12 basic positions for assembling the B-34 models. Specify the assembly position desired by number when ordering.



## Reference Information

- Installation and Maintenance Instructions K5P
- Parts List K5S

