

## *Series 3000 Pressure Control Regulators*

**FOR DISTRIBUTION, COMMERCIAL AND INDUSTRIAL APPLICATIONS**

**Maximum inlet pressure 30 psig    Maximum outlet pressure 2 psig    Very high stability and large capacity**

**1¼", 1½", 2", 3" and 4" Sizes**



**AMERICAN<sup>®</sup>**  
**METER COMPANY**

*Measurement Engineers Since 1836*

Series 3000 Regulators are engineered throughout for high sensitivity and accuracy.

These precision regulators feature a patented balanced valve design which overcomes the problems inherent in conventional valves. It is ideally suited for batch ovens, furnaces, boilers and other applications. It has unexcelled lock-up and positive and negative shock characteristics, and is designed for multi-poise operation.

### BALANCED VALVE DESIGN

This unique design overcomes the problems of excessive compounding with large gas flows and the large sag in outlet pressure upon opening. This is accomplished by having the area below the valve seat divided into two separate chambers, the expansion chamber and the siphon chamber. This has the effect of balancing the valve throughout its stroke regardless of inlet pressure. Isolation of the expansion chamber permits the valve to react to the syphon chamber pressure as does the secondary diaphragm.

### EXCELLENT SHOCK CHARACTERISTICS

Positive and negative shock characteristics are unexcelled. The vent has a two-way neoprene flapper, providing full opening. A screened plastic vent cap is provided. When an installation may possibly be subjected to severe and extreme shock, the manufacturer recommends sizing the 3000 between  $\frac{1}{3}$  and  $\frac{1}{2}$  of the published capacity.

### DIAPHRAGMS

The main diaphragm is of cotton inserted Buna N rubber for high sensitivity. The secondary diaphragm is Buna N with Dacron insert for high strength and sensitivity. It is molded to provide a constant area throughout the full stroke.

### VALVE SEATS AND DISCS

Molded Buna N rubber valve seat discs are securely retained to prevent blowing out even under high flow rates. Spherical design is self aligning and provides unexcelled lock-up. The seat discs are easily replaced.

### RUGGED CONSTRUCTION

The pipe section is cast iron — prevents thread galling. Available with  $1\frac{1}{4}$ ",  $1\frac{1}{2}$ " screwed, 2" screwed or ANSI 125 lb. flanged connections, and 3" or 4" ANSI 125 lb. flanged connections. Inlet and outlet  $\frac{1}{8}$ " pressure taps are available on request. The diaphragm chamber is lightweight aluminum. (*The Series 3000 Regulator is designed to withstand emergency inlet pressures of 60 psi.*)

### EASY MAINTENANCE

The V-clamp ring holds the diaphragm chamber to the body. When this is removed, the entire top section, including all internal parts can be removed for servicing. The pipe section remains in the line.

### CONTROL

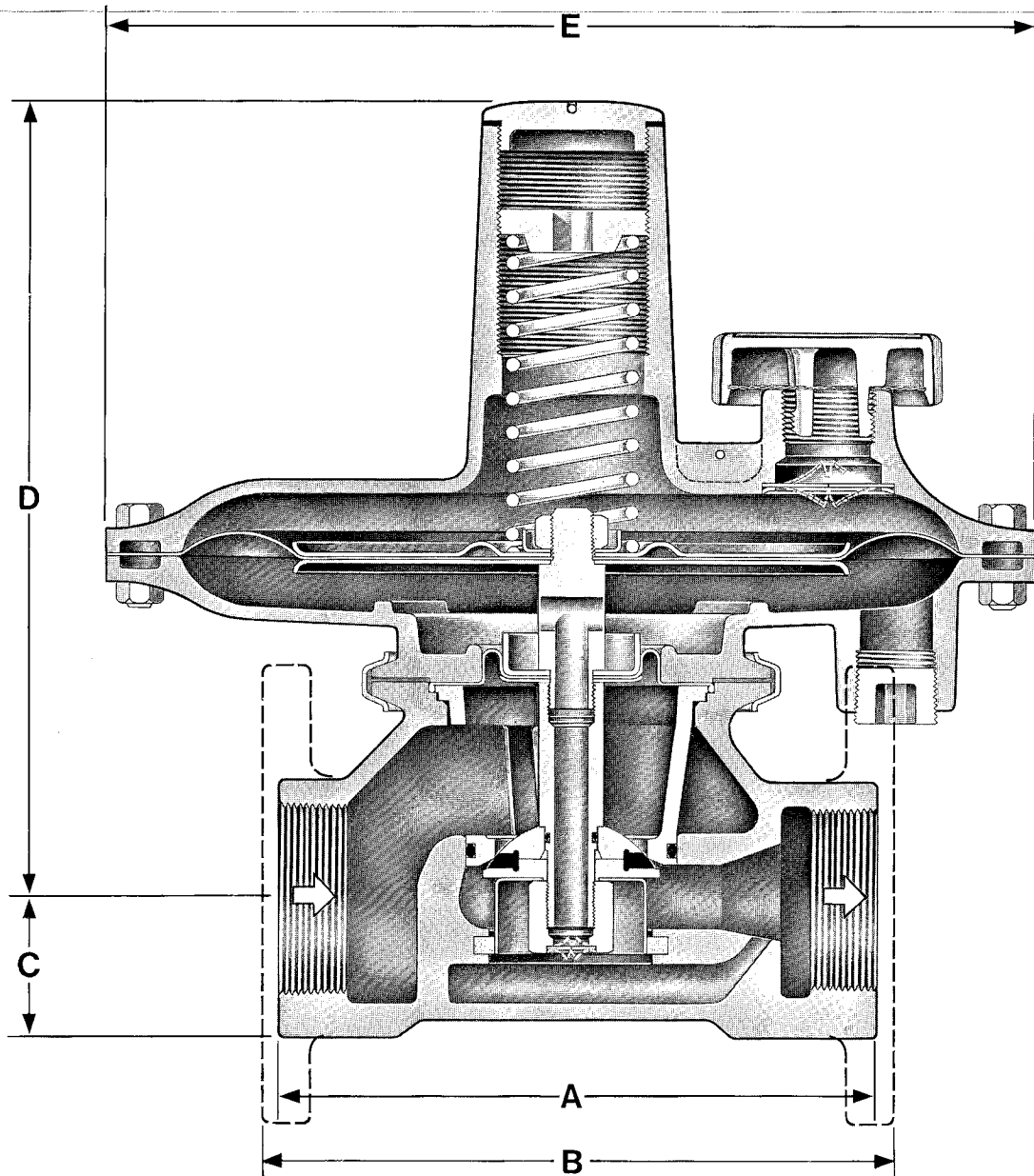
The Series 3000 regulators provide excellent control up to 48" downstream without the need for enlarged pipe. Pressure elevation characteristics are unexcelled.

### MONITOR MODEL

The Model 3010 is a monitor regulator. By sealing off the internal static port an external static line is then used.

### STOCK MODELS

To assure quickest delivery the following regulators are stock. Series 3000 Regulators with 3" to 7" wc springs:  $1\frac{1}{2}$ " screwed, 2" screwed, 3" flanged ANSI 125 lb., 4" flanged ANSI 125 lb.



### DIMENSIONS

SIZE, INCHES	DIMENSIONS, INCHES					SHIPPING WEIGHT
	A	B	C	D	E	
1 1/4" Screwed	6 1/4	—	1 29/32	8 1/4	9 3/8	9 1/2 lbs.
† 1 1/2" Screwed	6 1/4	—	1 29/32	8 1/4	9 3/8	9 1/4 lbs.
† 2" Screwed	7 13/16	—	1 13/16	10 13/32	12 1/8	22 lbs.
2" Flanged ANSI 125 lb.	—	8 3/4	3	10 13/32	12 1/8	30 lbs.
† 3" Flanged ANSI 125 lb.	—	10 1/4	3 3/4	12 7/8	15	47 lbs.
† 4" Flanged ANSI 125 lb.	—	12 3/8	4 1/2	19 1/6	17 1/4	77 lbs.

† Stock Regulator with 3" to 7" wc springs

# CAPACITIES IN SCFH GAS (0.60 sp. gr.)

## 1 1/4" SERIES 3000 REGULATOR

### OUTLET PRESSURE

Spring No.	70157P033	70157P034		70157P035		70157P036			70157P037		
Inlet Press.	2" wc .5" Droop	4" wc 1" Droop	6" wc 1" Droop	9" wc 1" Droop	12" wc 2" Droop	16" wc 2" Droop	20" wc 2" Droop	24" wc 2.5" Droop	28" wc 3" Droop	42" wc 4" Droop	56" wc 5" Droop
8" wc	2,700	2,300	1,700								
14" wc	3,800	3,500	2,900	1,900	2,000						
21" wc	4,800	4,600	3,900	2,700	3,400	2,200					
1.0 PSIG	5,600	5,400	4,800	3,800	4,200	3,200	2,400	2,100			
1.5 PSIG	6,800	6,800	6,100	5,300	5,700	4,400	3,300	3,600	3,600		
2.0 PSIG	8,000	7,900	7,200	6,500	6,600	5,700	4,600	4,700	4,700	2,900	
3.0 PSIG	8,000	9,000	9,000	8,500	8,400	7,000	6,500	6,000	6,000	4,400	4,300
5.0 PSIG	10,000	11,000	9,200	9,100	9,000	9,100	8,400	8,400	8,400	7,000	6,500
10.0 PSIG			9,500	9,300	9,500	9,200	9,200	9,300	9,400	8,800	9,000
15.0 PSIG			9,600	9,500	10,000	10,000	10,000	10,000	10,100	10,100	10,400
20.0 PSIG			11,500	11,000	12,000	12,000	12,000	12,500	12,500	13,000	14,000
25.0 PSIG			11,500	11,000	12,000	12,000	12,000	12,500	12,500	13,000	14,000
30.0 PSIG			11,500	11,000	12,000	12,000	12,000	12,500	12,500	13,000	14,000

## 1 1/2" SERIES 3000 REGULATOR

### OUTLET PRESSURE

Spring No.	70157P033	70157P034		70157P035		70157P036			70157P037		
Inlet Press.	2" wc .5" Droop	4" wc 1" Droop	6" wc 1" Droop	9" wc 1" Droop	12" wc 2" Droop	16" wc 2" Droop	20" wc 2" Droop	24" wc 2.5" Droop	28" wc 3" Droop	42" wc 4" Droop	56" wc 5" Droop
8" wc	2,900	2,600	1,700								
14" wc	3,900	3,700	3,200	1,900	2,000						
21" wc	4,800	4,700	4,000	2,700	3,400	2,300					
1.0 PSIG	5,300	5,500	4,800	3,200	4,300	3,100	2,400	2,200			
1.5 PSIG	5,500	6,500	6,200	3,700	5,500	3,700	3,500	3,500	3,500		
2.0 PSIG	7,200	7,300	7,100	5,300	6,000	4,700	4,200	4,200	4,200	3,000	
3.0 PSIG	8,600	9,000	8,000	8,000	8,000	7,300	6,400	6,400	6,400	4,000	4,500
5.0 PSIG	10,000	11,000	8,300	8,100	8,100	8,000	8,000	8,000	8,000	6,500	7,000
10.0 PSIG			8,400	8,200	8,200	8,300	8,300	8,000	8,000	7,500	8,000
15.0 PSIG			8,500	8,300	9,000	8,900	8,900	8,900	9,000	9,000	9,400
20.0 PSIG			10,000	9,500	10,000	11,000	10,500	11,000	11,000	11,000	11,000
25.0 PSIG			9,000	8,500	10,000	10,000	9,500	10,000	11,000	11,000	12,000
30.0 PSIG			4,500	4,500	4,500	4,500	4,500	4,500	10,000	10,500	11,000

†† For optimum performance use with inlet pressures above line.

## 2" SERIES 3000 REGULATOR

### OUTLET PRESSURE

Spring No.	70157P025		70157P027		70157P035		70157P017			70157P024	
Inlet Press.	2" wc .5" Droop	4" wc 1" Droop	6" wc 1" Droop	9" wc 1" Droop	12" wc 2" Droop	16" wc 2" Droop	20" wc 2" Droop	24" wc 2.5" Droop	28" wc 3" Droop	42" wc 4" Droop	56" wc 5" Droop
8" wc	5,000	4,000	2,300								
14" wc	7,000	6,000	5,000	2,800							
21" wc	8,000	8,000	7,600	4,000	5,800						
1.0 PSIG	10,000	8,500	9,200	5,000	6,600	4,000					
1.5 PSIG	12,500	11,500	12,500	7,400	10,000	6,500	5,000	5,000			
2.0 PSIG	15,000	13,500	14,800	10,500	13,000	8,500	6,500	7,000	7,000	5,000	
3.0 PSIG	18,000	16,500	18,500	16,000	17,500	11,500	9,500	9,500	10,000	8,200	6,100
5.0 PSIG	18,500	19,000	24,200	24,000	24,000	14,500	13,000	13,500	14,500	13,000	12,000
10.0 PSIG	19,000	21,000	21,800	20,000	22,000	21,000	20,500	21,000	20,500	20,800	20,500
15.0 PSIG	19,500	24,000	26,000	27,000	30,000	29,000	25,500	25,000	27,500	21,500	22,000
†† 20.0 PSIG			17,500	25,000	26,000	26,000	24,000	25,000	26,000	22,000	24,000
25.0 PSIG			15,500	22,000	25,000	24,000	24,000	24,000	25,000	23,000	25,000
30.0 PSIG			14,000	20,000	24,000	22,000	22,000	22,000	23,000	23,000	24,500

## 3" SERIES 3000 REGULATOR

### OUTLET PRESSURE

Spring No.	70157P028		70157P029		70157P030		70157P031			70157P032	
Inlet Press.	2" wc .5" Droop	4" wc 1" Droop	6" wc 1" Droop	9" wc 1" Droop	12" wc 2" Droop	16" wc 2" Droop	20" wc 2" Droop	24" wc 2.5" Droop	28" wc 3" Droop	42" wc 4" Droop	56" wc 5" Droop
8" wc	8,400	8,750	6,000								
14" wc	12,500	12,800	8,400	6,100							
21" wc	14,100	16,300	10,550	8,050	9,900						
1.0 PSIG	15,050	18,100	11,900	10,100	11,050	8,300					
1.5 PSIG	17,600	23,000	18,500	13,100	18,000	12,500	11,800	11,800			
2.0 PSIG	20,400	25,000	20,700	19,400	21,000	16,000	15,200	14,850	14,700	9,150	
3.0 PSIG	22,500	28,800	24,000	23,500	24,500	22,000	21,000	21,000	20,900	14,600	13,650
5.0 PSIG	23,400	33,900	29,000	28,750	29,000	27,500	26,300	26,300	26,150	23,950	23,800
10.0 PSIG		35,100	33,500	32,100	32,300	30,000	30,400	32,000	32,850	32,500	32,500
15.0 PSIG			33,500	33,100	34,200	32,900	33,300	33,600	33,800	34,400	34,000
20.0 PSIG			39,000	35,000	37,000	35,000	38,000	40,000	40,000	40,000	40,000
25.0 PSIG			39,000	35,000	40,000	40,000	40,000	40,000	42,000	45,000	45,000
30.0 PSIG			45,000	40,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000

†† For optimum performance use with inlet pressures above line.

# CAPACITIES IN SCFH GAS (0.60 sp. gr.)

## 4" SERIES 3000 REGULATOR

\*\*OUTLET PRESSURE

Spring No.	71411P036		71411P034		71411P037				71411P038	
Inlet Press.	4" wc 1 Droop	6" wc 1 Droop	9" wc 2 Droop	12" wc 2 Droop	16" wc 4 Droop	20" wc 4 Droop	24" wc 4 Droop	28" wc 4 Droop	42" wc 8 Droop	52" wc 8 Droop
8" wc	12,500	8,500								
14" wc	18,000	13,000	14,000							
21" wc	23,500	20,000	21,000	18,000						
1.0 PSIG	24,000	22,000	28,000	23,000	21,000					
1.5 PSIG	29,000	25,000	34,000	28,000	26,000	24,000	18,000			
2.0 PSIG	32,000	28,000	44,000	37,100	37,500	37,000	26,000	16,000	26,000	
3.0 PSIG	40,000	50,000	55,000	56,000	56,000	55,000	44,000	30,000	43,000	38,000
5.0 PSIG	45,000	50,000	55,000	60,000	70,000	72,000	62,000	56,000	60,000	55,000
10.0 PSIG	45,000	50,000	55,000	60,000	70,000	75,000	75,000	75,000	90,000	90,000
15.0 PSIG	45,000	50,000	55,000	60,000	70,000	75,000	75,000	75,000	90,000	90,000
20.0 PSIG		50,000	55,000	55,000	65,000	65,000	65,000	60,000	80,000	75,000
25.0 PSIG		55,000	57,000	55,000	65,000	65,000	65,000	60,000	80,000	75,000
30.0 PSIG		55,000	58,000	55,000	65,000	65,000	65,000	60,000	80,000	75,000

\*\* Outlet pressure registration taken in 6" diameter header with 48" length of 4" pipe between regulator and header.

## SPRING PART NUMBERS

OUTLET, IN. WATER COLUMN	SERIES 3000 REGULATOR			
	1 1/4" AND 1 1/2"	2"	3"	4"
1" TO 3"	70157P033	70157P025	70157P028	—
† 3" TO 7"	70157P034	70157P027	70157P029	—
4" TO 8"	—	—	—	71411P036
7" TO 14"	70157P035	70157P006	70157P030	71411P034
14" TO 28"	70157P036	70157P017	70157P031	71411P037
1 PSIG TO 2 PSIG	70157P037	70157P024	70157P032	71411P038

† Stock Spring

### ORDERING INFORMATION

- 1 Type and size
- 2 Volume, scfh
- 3 Inlet pressure
- 4 Outlet pressure
- 5 Fluid to be controlled —  
specific gravity and temperature
- 6 Pressure taps, if desired.
- 7 Specify if Stock Regulator (See Page 2)



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