

# Wellmark Series 2001PR “Top Gun” High Pressure Regulator

## Application

In the tradition of providing the best of the best, WellMark has developed the “Top Gun” Series 2001PR for accurate reduction of high pressure gas before it enters the distribution system. It is designed for inlet pressures up to 1500 psi and outlet pressures from 27 to 500 psi.

## Features

- Multiple orifice sizes: Brass or stainless
- Easy maintenance
- 6 spring ranges
- Rugged WCB cast steel body
- NACE compatible option “Only for 1” size models”
- Non-relieving design

## Specifications

Connection ..... 1” and 2” FNPT  
 Seat ring orifices ..... 1/8”, 3/16”, 1/4”, 3/8” or 1/2”  
 Operating temperature ..... -20° F to + 150° F  
 Materials ..... See Parts & Materials  
 Maximum inlet pressure and pressure drop ..... See Table 1  
 Outlet pressure ranges..... See Table 2  
 Flow capabilities..... See Table 3

## Overpressure protection

As is true with most regulators, the WellMark “Top Gun” Series 2001PR Regulator has an outlet pressure rating that is lower than the inlet pressure rating. Overpressure protection is needed to avoid overpressure if the actual inlet pressure can exceed the outlet pressure rating.

**Table 1. Max. inlet pressures and pressure drops**

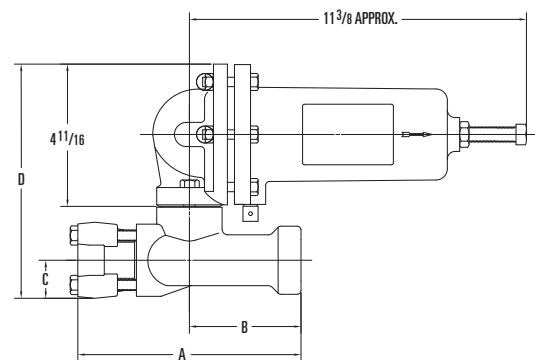
Port Diameter	1/8"	3/16"	1/4"	3/8"	1/2"
MAX. ALLOWABLE INLET PRESSURE, PSIG <sup>(1)</sup>	1500	1500	1500	1000	750
MAX. ALLOWABLE PRESSURE DROP, PSID	1500	1500	1000	500	250

1. The sum of the outlet pressure setting and the maximum allowable pressure drop determines the maximum allowable inlet pressure for a given installation. For example, with a 3/8” seat ring orifice (maximum pressure drop of 500 psi) and a 275 psig outlet pressure setting, the maximum inlet pressure is 775 psig (500 psi + 275 psig).



**Series 2001PR**  
High pressure  
gas regulator

## Dimensional data



## General dimensions

Size	A	B	C	D
1"	1500	1500	1500	1000
2"	1500	1500	1000	500

**Table 2. Outlet pressure ranges**

Port Diameter	1/8"	3/16"	1/4"	3/8"	1/2"
MAX. ALLOWABLE INLET PRESSURE, PSIG <sup>(1)</sup>	1500	1500	1500	1000	750
MAX. ALLOWABLE PRESSURE DROP, PSID	1500	1500	1000	500	250

1. Internal parts of the regulator may be damaged if the outlet pressure exceeds the pressure setting beyond the amounts shown.
2. This applies to outlet pressure settings below 350 psig only. For pressure settings above 350 psig, outlet pressure is limited to 550 psig, the maximum emergency outlet (casing) pressure.

# Model code

## Determining the model code

Example given: A 1" model 2001PR high pressure regulator constructed of cast steel with an outlet pressure range of 46 to 95 psig. Using brass trim with a 1/8" seat ring orifice and no options chosen.



**A**

CODE	BODY SIZE
1	1"
2	2"

**E**

CODE	OPTIONS
B	Brass
S	316 S.S.

\*Select for all 2" models

**B**

CODE	STYLE
H	High Pressure

**F**

CODE	SEAT RING ORIFICE
12	1/8"
18	3/16"
25	1/4"
38	3/8"
50	1/2"

**C**

CODE	BODY MATERIAL
D	Ductile Iron (2" Only)*
S	Cast Steel

\*Not Available in NACE

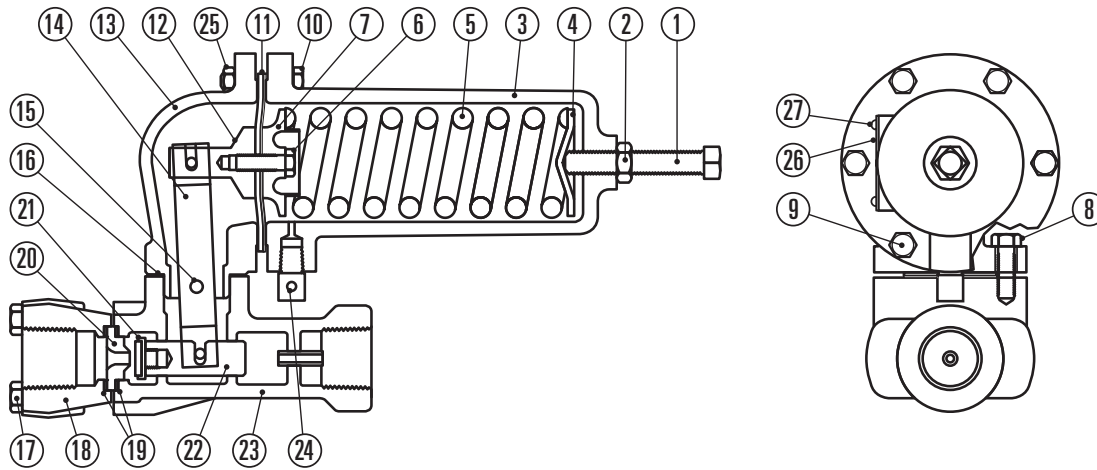
**G**

CODE	TRIM MATERIAL
S	Standard Unit*
N	NACE

**D**

CODE	OUTLET PRESSURE RANGE
1	27 to 50 psig
2	46 to 95 psig
3	90 to 150 psig
4	150 to 200 psig
5	200 to 275 psig
6	275 to 500 psig

# Parts list



Item	Description	Qty.	Part No.
1	ADJ. SCREW, 27-50 OUTLET PRESSURE	1	1117833
	ADJ. SCREW, 46-95 OUTLET PRESSURE	1	1117832
	ADJ. SCREW, 90-500 OUTLET PRESSURE	1	1117819
2	JAM NUT, STEEL	1	1013905
3	SPRING HOUSING, STEEL	1	1117892
4	UPPER SPRING GUIDE, UP TO 275 PSI	1	1117823
	UPPER SPRING GUIDE, ABOVE 275 PSI	1	1117837
5	SPRING, 27-50 OUTLET PRESSURE	1	1118333
	SPRING, 46-95 OUTLET PRESSURE	1	1117835
	SPRING, 90-150 OUTLET PRESSURE	1	1117824
	SPRING, 150-200 OUTLET PRESSURE	1	1118334
	SPRING, 200-275 OUTLET PRESSURE	1	1118335
	SPRING, 275-500 OUTLET PRESSURE	1	1117836
6	CAP SCREW	1	1009329
7	LOWER SPRING GUIDE, UP TO 275 PSI	1	1117897
	LOWER SPRING GUIDE, ABOVE 275 PSI	1	1117898
8	CAP SCREW	2	1117818
9	CAP SCREW	2	1012295
10	CAP SCREW	4	11010
11	DIAPHRAGM, NEOPRENE	1	1117826
	DIAPHRAGM, VITON®**	1	1118336
12	CONNECTOR HEAD ASSEMBLY, BRASS	1	1118346
	CONNECTOR HEAD ASSEMBLY, 316 S.S.**	1	1118347
13	DIAPHRAGM ADAPTER, STEEL	1	1117895
14	LEVER ASSEMBLY	1	1117854
15	PIN, STAINLESS STEEL	1	1117822

Item	Description	Qty.	Part No.
16*	GASKET	1	1117830
17	CAP SCREW, 1"	4	1117831
	CAP SCREW, 2"	4	1118337
18	INLET ADAPTER, 1" STEEL	1	1117894
	INLET ADAPTER, 2" STEEL	1	1118349
19*	INLET BODY GASKET, COPPER	2	1117827
	INLET BODY GASKET, COMPOSITION**	2	1117834
20	ORIFICE, BRASS 1/8"	1	1118342
	ORIFICE, BRASS 3/16"	1	1117882
	ORIFICE, BRASS 1/4"	1	1118338
	ORIFICE, BRASS 3/8"	1	1118340
	ORIFICE, BRASS 1/2"	1	1118341
	ORIFICE, 316 S.S, 1/8"***	1	1118343
	ORIFICE, 316 S.S, 3/16"***	1	1118348
	ORIFICE, 316 S.S, 1/4"***	1	1118344
	ORIFICE, 316 S.S, 3/8"***	1	1117861
	ORIFICE, 316 S.S, 1/2"***	1	1118345
21*	VALVE DISK ASSEMBLY, BRASS/TFE	1	1117857
	VALVE DISK ASSEMBLY, 316 S.S./TFE**	1	1117862
22	VALVE CARRIER, BRASS	1	1117885
	VALVE CARRIER, 316 S.S.**	1	1117886
23	BODY, 1" STEEL WCB	1	1117896
	BODY, 2" DUCTILE IRON	1	1118350
24	BREATHER	1	1117800
25	HEX NUT	4	1039551
26	NAME PLATE	1	1117860
27	DRIVER SCREW	4	1117817
28	PLUG 1/8" NPT, 2" ONLY	1	1118351

\* Parts included on Minor Repair Kit"

\*\*\* Parts NACE MR0175-2002 Compliant



### Table 3. High pressure regulator flow capacities (scfh of 0.6 specific gravity gas; based on 20% drop)

Outlet Pressure Range, psig	Inlet Pressure, psig	Outlet Pressure, psig	Seat Ring Orifice Diameter (Inches)				
			1/8	3/16	1/4	3/8	1/2
27-50	60	50	900	2000	3100	5200	8100
	75		1300	2800	3800	7200	10,000
	100		1700	3500	5700	10,500	13,000
	150		2600	5700	8700	13,000	17,000
	200		3500	11,000	16,000	19,000	
	300		5300	10,500	14,000	20,000	23,000
	400		6900	13,000	17,000	23,000	-
	450		9600	16,000	20,000	26,000	-
	600		9800	17,000	21,000	-	-
	1050		17,000	23,000	27,000	-	-
1500	19,000	25,000	-	-	-		
46-95	60	50	800	1500	2400	4300	6400
	75		1200	2100	3100	5500	8000
	100		1500	3100	4200	7500	10,000
	150		2400	4500	6700	11,000	14,000
	200		3400	6600	9400	14,000	17,000
	300		5200	8900	11,000	16,000	20,000
	400		6800	11,000	15,000	20,000	-
	450		9500	13,000	17,000	23,000	-
	600		9800	14,000	19,000	-	-
	1050		14,000	19,000	22,000	-	-
1500	18,000	24,000	-	-	-		
46-95	100	75	1700	3200	5000	8000	13,000
	125		2200	4300	6700	10,000	15,000
	200		3500	7300	10,000	16,000	22,000
	250		4400	9400	13,000	19,000	24,000
	325		5700	11,000	16,000	23,000	27,000
	400		7100	14,000	19,000	27,000	-
	575		9700	18,000	23,000	30,000	-
	600		9900	19,000	25,000	-	-
	1075		18,000	27,000	32,000	-	-
	1500		23,000	32,000	-	-	-
90-150	125	100	2000	3600	5500	9200	13,000
	150		2500	4600	6800	11,000	16,000
	200		3600	6600	9400	13,000	22,000
	250		4400	8500	11,000	18,000	26,000
	300		5300	9500	14,000	21,000	30,000
	350		6100	10,000	16,000	25,000	32,000
	400		7000	13,000	18,000	27,000	-
	600		9500	18,000	23,000	35,000	-
	1100		19,500	28,000	35,000	-	-
	1500		25,000	35,000	-	-	-
90-150	150	125	2400	4600	6700	11,000	17,000
	200		3500	6800	10,000	15,000	23,000
	250		4300	8900	12,000	19,000	29,000
	300		5200	10,000	15,000	25,000	34,000
	375		6600	13,000	18,500	28,000	39,000
	400		7300	14,500	19,000	29,000	-
	500		7900	15,000	25,000	36,000	-
	625		10,000	22,000	29,000	41,000	-
	1125		18,000	33,000	29,000	-	-
	1500		26,000	43,000	42,000	-	-
90-150	200	150	3400	6800	10,000	16,000	26,000
	250		4400	8800	13,000	20,000	32,000
	300		5300	10,000	15,000	24,000	35,000
	400		7100	14,000	22,000	34,000	42,000
	450		7700	17,000	24,000	36,000	-
	650		9000	24,000	33,000	49,000	-
	800		13,000	29,000	38,000	-	-
	1150		20,000	38,000	49,000	-	-
	1500		26,000	47,000	-	-	-

Outlet Pressure Range, psig	Inlet Pressure, psig	Outlet Pressure, psig	Seat Ring Orifice Diameter (Inches)						
			1/8	3/16	1/4	3/8	1/2		
150-200	200	150	3400	6200	9300	16,000	24,000		
	250		4300	8800	12,000	20,000			
	300		5300	10,000	15,000	24,000			
	400		7100	14,000	21,000	32,000			
	450		7600	15,000	24,000	36,000			
	650		9000	21,000	33,000	48,000			
	800		13,000	27,000	37,000	-			
	1150		19,500	34,000	49,000	-			
	1500		26,000	44,000	-	-			
	26,000		44,000	-	-	-			
150-200	250	200	4200	8300	12,000	20,000	30,000		
	300		5200	10,000	16,000	25,000	35,000		
	450		7800	16,000	26,000	43,000	50,000		
	600		9500	22,000	34,000	55,000	-		
	700		11,000	25,000	40,000	61,000	-		
	800		13,000	30,000	43,000	-	-		
	1000		16,000	37,000	50,000	-	-		
	1200		20,000	41,000	59,000	-	-		
	1500		26,000	53,000	-	-	-		
	26,000		53,000	-	-	-			
200-275	250	200	4200	8200	11,000	20,000	29,000		
	300		5200	10,000	14,500	25,000	35,000		
	450		7700	16,000	24,000	40,000	50,000		
	600		9500	22,000	31,000	51,000	-		
	700		11,000	25,000	35,000	55,000	-		
	800		13,000	29,000	42,000	-	-		
	1000		16,000	36,000	50,000	-	-		
	1200		19,000	41,000	55,000	-	-		
	1500		26,000	51,000	-	-	-		
	51,000		-	-	-	-			
200-275	300	250	4900	9000	15,000	28,000	42,000		
	400		7000	14,000	23,000	40,000	56,000		
	500		8500	18,000	29,000	51,000	65,000		
	600		9500	22,000	34,000	59,000	-		
	750		12,500	28,000	44,000	69,000	-		
	1000		16,000	39,000	58,000	-	-		
	1250		21,000	49,000	69,000	-	-		
	1500		26,000	59,000	-	-	-		
	59,000		-	-	-	-			
	200-275		300	275	4700	9000	15,000	28,000	39,000
400		6900	14,000		25,000	40,000	54,000		
525		8600	18,000		35,000	68,000	94,000		
775		11,000	28,000		51,000	95,000	-		
1000		16,000	39,000		67,000	-	-		
1275		21,000	50,000		87,000	-	-		
1500		26,000	60,000		-	-	-		
60,000		-	-		-	-			
275-500		300	275		4500	7500	10,000	20,000	31,000
		400			6600	12,000	16,000	31,000	43,000
	525	8600		16,000	21,000	39,000	56,000		
	775	11,000		24,000	32,000	55,000	-		
	1000	17,000		32,000	43,000	-	-		
	1275	21,000		40,000	53,000	-	-		
	1500	26,000		46,000	-	-	-		
	46,000	-		-	-	-			
	275-500	400		300	6600	11,000	16,000	31,000	42,000
		550			9700	18,000	23,000	44,000	63,000
600		9900	19,000		26,000	48,000	-		
700		11,000	23,000		30,000	54,000	-		
800		13,000	26,000		35,000	61,000	-		
900		15,000	29,000		39,000	-	-		
1300		22,000	43,000		58,000	-	-		
43,000		-	-		-	-			
275-500		500	400		8300	16,000	24,000	44,000	62,000
		650			10,000	24,000	33,000	61,000	86,000
	800	13,000		30,000	41,000	76,000	-		
	900	15,000		34,000	49,000	85,000	-		
	1000	17,000		38,000	54,000	-	-		
	1200	20,000		46,000	63,000	-	-		
	1400	24,000		55,000	76,000	-	-		
	1500	26,000		60,000	-	-	-		
	60,000	-		-	-	-			
	275-500	550		500	8700	16,000	26,000	50,000	77,000
750		12,000	28,000		40,000	78,000	100,000		
900		15,000	34,000		52,000	92,000	-		
1000		17,000	39,000		60,000	100,000	-		
1500		26,000	59,000		72,000	-	-		
72,000		-	-		-	-			

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