

# Gas Pressure Regulator SERIES 226



**Technical Data**



R.226.00.0900

# Technical Data

## Introduction

The Series 226 is a range of Low Pressure, Direct Acting, diaphragm operated, spring loaded regulators.

Use with confidence on natural and manufactured gases of non-aggressive nature, including Nitrogen, Carbon Dioxide, Propane, and Butane etc.

## Application

Designed primarily for control of fuel gas feeds to industrial burners, heater units, boilers and other items of equipment where an accurate, safe and reliable controlled pressure supply is required.

## Features

- Quick Response to Rapid Load Changes
- Installation at any angle
- Wide Operational Pressure Range
- Approvals to: DVGW  
GASTEC
- Complies generally with specification BG/PRS 33

## Size Range

Screwed	Flanged
20mm (3/4")	-
25mm (1")	-
32mm (1.1/4")	-
40mm (1.1/2")	-
50mm (2")	50mm
80mm (3")	80mm 100mm 150mm
BS21 Rc, RP	BS4504 PN16*

\* Can be drilled to other standards on request.

## Service Conditions

Size	Model	Max. Inlet Pressure	Outlet Pressure Range
3/4" & 1"	226 Mk2	200 mbarg	3.7 to 75 mbarg
1/4", 1/2", & 2"	226 Mk3	350 mbarg	3.7 to 80 mbarg
DN50	226 Mk2	350 mbarg	3.7 to 80 mbarg
3"/DN80	226 Mk2 226H Mk2	350 mbarg 350 mbarg	3.7 to 80 mbarg 70 to 150 mbarg
DN100	226 Mk2	350 mbarg	7.5 to 150 mbarg
DN150	226 Mk2	350 mbarg	12.5 to 150 mbarg

Temperature Range: -20°C to +60°C

## Options

- Available with or without Inlet & Outlet Pressure Test Points (sizes 1/4" and above)
- Internally or Externally Impulsed (sizes 1/4" and above)
- Angle Type (1/4", 1/2", 2" screwed/80mm Flanged)
- Safety Diaphragm (sizes 1/4" and above)
- Fitting of Lead Wire Seal

## Installation

Any orientation, but moisture or debris must not ingress the vent hole.

# Spring Selection

Outlet Pressure Range (in mbarg)	Spring Colour	SPRING NUMBER						
		20 & 25mm Sc	32 & 40mm Sc	50mm Sc	50mm FL	80mm Sc/FL	100mm FL	150mm FL
3.7 to 7.5	Red	397	-	-	292	545	-	-
3.7 to 10	White	-	1153	1154	-	-	-	-
7.5 to 15	Blue	398	-	-	293	547	-	-
	White/Gold	-	-	-	-	-	409	-
8 to 14	Red	-	1067	1072	-	-	-	-
12 to 25	Green	-	1068	1073	-	-	-	-
12.5 to 25	Self	399	-	-	283	548	-	-
	Black/Gold	-	-	-	-	-	410	-
	Lt. Blue/Dk. Green	-	-	-	-	-	-	419
21 to 35	Blue	-	1069	1074	-	-	-	-
23 to 37	Green	-	-	-	284	549	-	-
	Yellow/Gold	-	-	-	-	-	412	-
	Lt. Green/Red	-	-	-	-	-	-	429
24 to 60	Green	1045	-	-	-	-	-	-
33 to 55	Yellow	-	1070	1075	-	-	-	-
35 to 60	Black	-	-	-	-	550	-	-
	Lt. Green/Brown	-	-	-	-	-	-	430
35 to 75	Yellow	805	-	-	-	-	-	-
35 to 80	Yellow	-	-	-	285	-	-	-
	Brown/Gold	-	-	-	-	-	414	-
50 to 80	Black	-	1071	1076	-	-	-	-
55 to 80	Grey	-	-	-	-	598	-	-
55 to 112	Lt. Green/Grey	-	-	-	-	-	-	431
70 to 112	Brown	-	-	-	-	774*	-	-
70 to 150	Grey/Maroon	-	-	-	-	-	407	-
100 to 150	Orange	-	-	-	-	775*	-	-
	Self	-	-	-	-	-	-	617

\*Applicable to 80mm Series 226H only, connections: Sc=Screwed, FL=Flanged.

Spring Data based on Spring Housing vertically upwards.

# Capacities

## Set Point: 12.5 mbarg

Capacities in sm<sup>3</sup>/hr (SG 0.6)

Inlet Pressure mbarg			25	50	75	100	150	200	350
Droop 10%									
20mm	226 MK2	Sc	7.5	7.5	4	4	2	1	
25mm	226 MK2	Sc	14	16	7	7	5	2	
32mm	226 MK3	Sc	22	27	27	27	14	8	
40mm	226 MK3	Sc	30	36	36	36	27	16	
50mm	226 MK3	Sc	80	128	260	310	350	450	485
80mm	226 MK2	Sc	182	255	329	354	405	550	580
50mm	226 MK2	FL	80	128	260	310	350	450	485
80mm	226 MK2	FL	260	260	350	435	520	650	750
100mm	226 MK2	FL	390	390	500	650	780	960	1000
150mm	226 MK2	FL	780	780	1000	1300	1560	1920	2000

## Set Point: 20 mbarg

Capacities in sm<sup>3</sup>/hr (SG 0.6)

Inlet Pressure mbarg			25	50	75	100	150	200	350
Droop 10%									
20mm	226 MK2	Sc	5.5	8	5	5	5	3	
25mm	226 MK2	Sc	6	11	13	13	9	5	
32mm	226 MK3	Sc	19	32	39	37	30	25	
40mm	226 MK3	Sc	36	70	77	32	60	40	
50mm	226 MK3	Sc	56	126	160	218	260	375	685
80mm	226 MK2	Sc	74	189	304	347	400	500	855
50mm	226 MK2	FL	56	126	160	218	260	375	635
80mm	226 MK2	FL	130	300	465	610	720	750	830
100mm	226 MK2	FL	435	580	700	790	940	1050	1250
150mm	226 MK2	FL	780	1160	1400	1580	1830	2050	2470

## Set Point: 30 mbarg

Capacities in sm<sup>3</sup>/hr (SG 0.6)

Inlet Pressure mbarg			25	50	75	100	150	200	350
Droop 10%									
20mm	226 MK2	Sc		8.5	8.5	8.5	6	5	
25mm	226 MK2	Sc		13	17	20	15	10	
32mm	226 MK3	Sc		28	36	36	36	33	
40mm	226 MK3	Sc		65	82	100	113	124	
50mm	226 MK3	Sc		126	178	210	355	440	625
80mm	226 MK2	Sc		240	360	404	493	581	930
50mm	226 MK2	FL		126	178	210	355	440	625
80mm	226 MK2	FL		260	650	730	670	830	1040
100mm	226 MK2	FL		610	760	930	1100	1250	1450
150mm	226 MK2	FL		1220	1520	1850	2140	2430	2850

### Set Point: 45 mbarg

Capacities in sm<sup>3</sup>/hr (SG 0.6)

Inlet Pressure mbarg			25	50	75	100	150	200	350
Droop 10%									
32mm	226 MK3	Sc		22	32	36	50	43	
40mm	226 MK3	Sc		43	73	87	108	137	
50mm	226 MK3	Sc		80	97	159	226	375	580
80mm	226 MK2	Sc		227	341	400	496	545	901
50mm	226 MK2	FL		80	97	159	226	375	580
80mm	226 MK2	FL		252	433	575	700	900	1200
100mm	226 MK2	FL		440	730	900	1150	1350	1750
150mm	226 MK2	FL		870	1440	1800	2220	2700	3500

### Set Point: 50 mbarg

Capacities in sm<sup>3</sup>/hr (SG 0.6)

Inlet Pressure mbarg			25	50	75	100	150	200	350
Droop 10%									
32mm	226 MK3	Sc			31	36	56	60	
40mm	226 MK3	Sc			70	92	115	140	
50mm	226 MK3	Sc			114	178	226	380	600
80mm	226 MK2	Sc			379	430	536	632	930
50mm	226 MK2	FL			114	178	226	380	600
80mm	226 MK2	FL			380	550	75	950	1200
100mm	226 MK2	FL			720	950	1200	1400	1800
150mm	226 MK2	FL			1440	1900	2350	2680	3600

### Set Point: 60 mbarg

Capacities in sm<sup>3</sup>/hr (SG 0.6)

Inlet Pressure mbarg			25	50	75	100	150	200	350
Droop 10%									
32mm	226 MK3	Sc			30	37	58	64	
40mm	226 MK3	Sc			60	95	125	142	
50mm	226 MK3	Sc			126	192	283	400	620
80mm	226 MK2	Sc			279	430	536	632	930
50mm	226 MK2	FL			126	192	283	400	620
80mm	226 MK2	FL			295	570	710	800	900
100mm	226 MK2	FL			640	860	1050	1200	1350
150mm	226 MK2	FL			1280	1700	2070	2270	2650

## Set Point: 70 mbarg

Capacities in sm<sup>3</sup>/hr (SG 0.6)

Inlet Pressure mbarg	25	50	75	100	150	200	350
Droop 10%							
32mm 226 MK3 Sc			27	50	62	73	
40mm 226 MK3 Sc			55	90	140	146	
50mm 226 MK3 Sc			97	170	270	425	630
80mm 226 MK2 Sc			238	437	562	740	761
50mm 226 MK2 FL			97	170	270	425	630
80mm 226 MK2 FL			235	470	660	955	1000
100mm 226 MK2 FL			600	850	1100	1350	1450
150mm 226 MK2 FL			1200	1700	2060	2640	2850

## Set Point: 100 & 150 mbarg

Capacities in sm<sup>3</sup>/hr (SG 0.6)

Inlet Pressure mbarg	100 mbarg			150 mbarg	
	150	200	350	200	350
Droop 10%					
80mm 226H MK2 FL	550	750	1200	550	1000
100mm 226 MK2 FL	1050	1150	1750	1250	1800
150mm 226 MK2 FL	2040	2280	3500	2450	3600

## Correction Factors

The capacities given in the above tables are calculated in terms of natural gas of SG 0.6. To find the equivalent capacities of other gases, multiply the figures given by the appropriate correction factor listed below.

Type of Gas	Specific Gravity	Correction Factor
Air	1.0	0.77
Propane	1.53	0.63
Propane/Air (1350 BthU)	1.2	0.71
Butane	2.0	0.55
Nitrogen	0.97	0.79

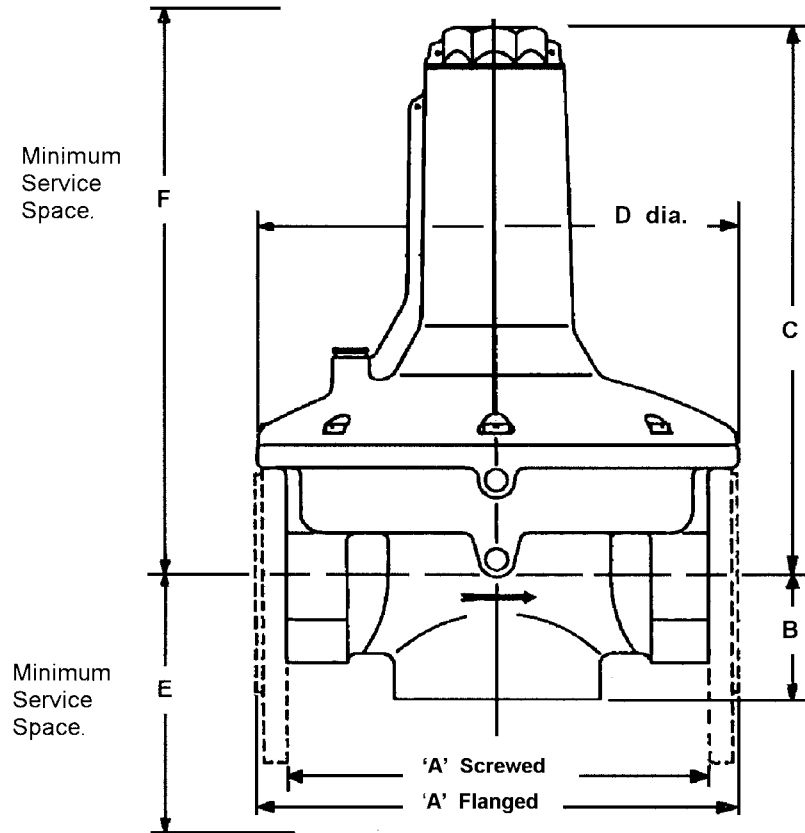
For all other Gases,  
multiply by the following correction factor:

$$\sqrt{\frac{0.6}{\text{SG of Gas handled}}}$$

# Materials of Construction

Regulator Size	20 & 25mm Screwed	32, 40 & 50mm Screwed	50mm Flanged	80mm Screwed/Flanged	100 & 150mm Flanged
	226 Mk2	226 Mk3	226 Mk2	226 Mk2	226 Mk2
Body	Aluminium: BS 1490 LM24	Aluminium: BS 1490 LM24	Aluminium: BS 1490 LM24	Aluminium: BS 1490 LM25	Cast Iron: BS 1452 GR.220
Diaphragm Casing	Aluminium: BS 1490 LM24	Aluminium: BS 1490 LM24	Aluminium: BS 1490 LM24	Aluminium: BS 1490 LM25	Aluminium: BS 1490 LM25
Top Cap	Aluminium: BS 4300 2011TD	Aluminium: BS 1490 LM24	Zinc Die Cast: BS 1004A	Aluminium: BS 1490 LM25	Polypropylene
Bottom Plug/ Cover	Aluminium: BS 4300 2011TD	Aluminium: BS 1490 LM24	Aluminium: BS 1490 LM24	Aluminium: BS 1490 LM25	Cast Iron: BS 1452 GR.220
Main Diaphragm	Nitrile	Nitrile	Nitrile	Reinforced Nitrile	Reinforced Nitrile
Balancing Diaphragm	Nitrile	Nitrile	Nitrile	Reinforced Nitrile	Reinforced Nitrile
Main Diaphragm Plates	Carbon Steel: BS 4360 GR 43A Zinc Plated BS1706	Plated Mild Steel	Mild Steel bonded into Diaphragm	Plated Mild Steel	Plated Mild Steel
Spindle	Carbon Steel	Mild Steel, Zinc Plated	Mild Steel with Protective Coating	Mild Steel with Protective Coating	Mild Steel with Protective Coating
Valve Seat	Nitrile	Nitrile	Nitrile	Nitrile	Nitrile
Spring	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
Spring Adjuster	Acetal Hostaform: C32021	Acetal Copolymer	Nylon 11	Nylon 11	Cast Iron: BS 1452 GR.220
Distance Piece	Acetal Hostaform: C32021	Acetal Copolymer	Nylon 11	ABS	ABS
Impulse Tube	Acetal Hostaform: C32021	Acetal Copolymer	Nylon 11	Nylon 11	Nylon 11
'O' Rings	Nitrile	Nitrile	Nitrile	Nitrile	Nitrile
Breather Valve				Polypropylene	Polypropylene
Vent Cap	Polypropylene	Polypropylene	Polypropylene		

# Dimensions & Weights



SIZE	Type	A	B	C	D	E	F	Wt. Kg's
20mm SC	226 Mk2	103	35	90	108	80	140	0.66
25mm SC	226 Mk2	103	35	90	108	80	140	0.60
32mm SC	226 Mk3	163.5	55	137.5	170	80	210	1.58
40mm SC	226 Mk3	163.5	55	137.5	170	80	210	1.58
50mm SC	226 Mk3	210	61.5	172.5	230	90	270	3.17
50mm FL	226 Mk2	210	58	261	213	110	420	5.0
80mm SC/FL	226 Mk2	318	102	384	381	240	600	16.4
100mm FL	226 Mk2	369	134	620	451	310	970	63.5
150mm FL	226 Mk2	473	194	830	559	435	1270	114.7

All Dimensions in mm



# Other Products in the Series 226 Range

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## Relief Valves:

### Series 226R & 226HR

Size	Model	Max. Inlet Pressure	Relief Pressure Range
3\4" & 1"	226R - Mk3	350 mbarg	10 to 120 mbarg
11/4", 11/2", & 2"	226R - Mk3 226HR - Mk3	350 mbarg 500 mbarg	10 to 120 mbarg 25 to 350 mbarg
DN50	226R - Mk2 226HR - Mk2	350 mbarg 500 mbarg	10 to 120 mbarg 10 to 350 mbarg
3"/DN80	226R - Mk2 226HR - Mk2	200 mbarg 500 mbarg	10 to 70 mbarg 10 to 215 mbarg

## Pilots:

### Series 226K & 226HK

Size	Model	Max. Inlet Pressure	Outlet Pressure Range
3\4" & 1"	226K	550 mbarg	7.5 to 120 mbarg
	226HK	550 mbarg	110 to 350 mbarg
	226MK	350 mbarg	7.5 to 37 mbarg

## Profiling Pilot:

Size	Model	Max. Inlet Pressure	Outlet Pressure Range
3\4" & 1"	226DPP	350 mbarg	17 to 55 mbarg

## Zero Governors

### Series 226Z & 226ZBL

Available in sizes: 1\4" to 3" screwed and 50mm to 150mm Flanged




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*The Bryan Donkin RMG Gas Controls policy is one of continuous improvement and development.  
The company reserves the right to change and introduce improved designs without notice.*