MAXITROL®

325 Series Appliance Pressure Regulators

3255AD

For 2 psi, 5 psi, and 10 psi piping systems.

TABLE OF CONTENTS

Description 1
Specifications 1, 2
Pressure Drop 2
Capacities 3
Dimensions 3
Spring Selection Chart 4
Sizing Instructions 4

DESCRIPTION

325 Series pounds to inches regulators are for use on residential, commercial, and industrial applications.

The 325 Series features a high leverage valve linkage assembly to deliver positive dead-end lock-up. The regulators are capable of precise regulating control from full flow down to pilot flow.

B Models: Imblue Technology™ increases corrosion resistance and provides extra protection against the elements for regulators used in outdoor applications.

NOTE: (B) in model number designates Imblue Technology™.

NOTICE

These regulators provide no downstream over-pressure protection in the event of failure. At supply pressures in excess of 2 psi, they should not be used unless downstream appliance controls are rated for supply pressure or protected by some other means. For Technical Support contact a Maxitrol Technical Support Representative. See Maxitrol Safety Warning Instructions, GPR_MI_EN.ES

SPECIFICATIONS

Gases

Suitable for natural, manufactured, mixed gases, liquefied petroleum gases, and LP gas-air mixtures.

Approvals

325-3(B), 325-5(B).....CSA: ANSI Z21.18/CSA 6.3

Maximum Inlet Pressure

Model	CSA Certified	Maxitrol Tested
325-3(B) 325-5(B)	2 psi (13.8 kPa), 5 psi (34.5 kPa)	10 psi (69 kPa)
325-7A(B)	Not Certified	
Model	**With 12A09, 12A39, or 12A49 Installed Maximum Inlet Pressure**	
325-3(B) 325-5(B) 325-7A(B)	NAT: 5 psi (34.5 kPa) LP: 2 psi (13.8 kPa)	

Outlet Pressure Range (CSA Certified)

Model	Inlet Pressure	Spring Ranges
325-3(B) 325-5(B)	2 psi (13.8 kPa)	5-9" w.c. 7-11" w.c.
325-3(B) 325-5(B)	5 psi (34.5 kPa)	6-10" w.c. 7-11" w.c.
325-3(B)	5 psi (34.5 kPa)	15-30" w.c.



Figure 1: 325 Series Appliance Regulators

Emergency Exposure Limits

All models (Inlet Side Only)..... 65 psi (450 kPa)

Maximum Individual Load

Largest single appliance served by the regulator.

325-3(B) .....100,000 Btu/hr
325-5(B) ..... 325,000 Btu/hr
325-7A(B) ..... 1,250,000 Btu/hr

Capacity

Total load of multiple appliances combined.

325-3(B) (3/8", 1/2") .....150,000 Btu/hr
325-5(B) (1/2", 3/4", 1") ..... 325,000 Btu/hr
325-7A(B) (1 1/4", 1 1/2") ..... 1,250,000 Btu/hr

NOTE: Capacity table is used to determine the maximum multiple appliance load.The largest single appliance served by the regulator should not exceed the maximum individual load specified above.

Ambient Temperature Limits

All Models ..... -40ºF to 205ºF (-40ºC to 96ºC)

Vent Pipe Connections

325-3(B) .....1/8" NPT
325-5(B) ..... 3/8" NPT
325-7A(B) .....1/2" NPT

Mounting Position

The 325 Series is suitable for multi-poise mounting, but when used with a vent limiting device, the regulator must be mounted in a horizontal upright position (see Figure 2). Install the regulator properly with gas flowing as indicated by the arrow on the casting. (See Maxitrol Safety Warning Instructions, GPR_MI_EN.ES)

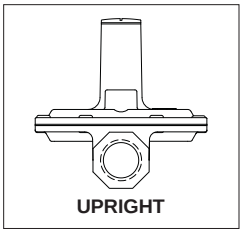


Figure 2: 325 Regulator in Upright Postion

© 2013 Maxitrol Company, All Rights Reserved.



Figure 3: Vent Accessories

vLimiter® Vent Limiting Device for Indoor Applications:

325-3(B) 12A09
325-5(B) 12A39
325-7A(B) 12A49

NOTICE

Maxitrol vent limiting devices eliminate the need to run vent piping to the outside. Vent limiting devices are designed for use indoors and in spaces where limiting the amount of gas escapement due to diaphragm failure is critical. **Vent limiting devices should not be used outdoors if they are exposed to the environment.** Vent protectors are available for all outdoor applications to ensure proper vent protection.

vProtector® Vent Protectors for Outdoor Applications:

325-3(B) 13A15
325-5(B) 13A15-5
325-7A(B).....13A25

PRESSURE DROP - 0.64 sp. gr. gas expressed in CFH (m³/h) (for system pressure drop calculations)

Model	Pressure Drop				
	7.0" w.c. (1.7 kPa)	1/2 psi (3.4 kPa)	3/4 psi (5 kPa)	1 psi (7 kPa)	2 psi (13.8 kPa)
325-3(B)	145 (4.0)	204 (5.8)	250 (7.0)	289 (8.2)	—
325-5(B)	400 (11.3)	550 (15.6)	670 (19.0)	770 (21.8)	—
325-7A(B)	815 (23.1)	1149 (32.5)	1405 (39.8)	1624 (46.0)	2305 (65.3)

NOTE: All Maxitrol gas appliance regulators must be installed and operated in accordance with Maxitrol's Safety Warning Instructions.

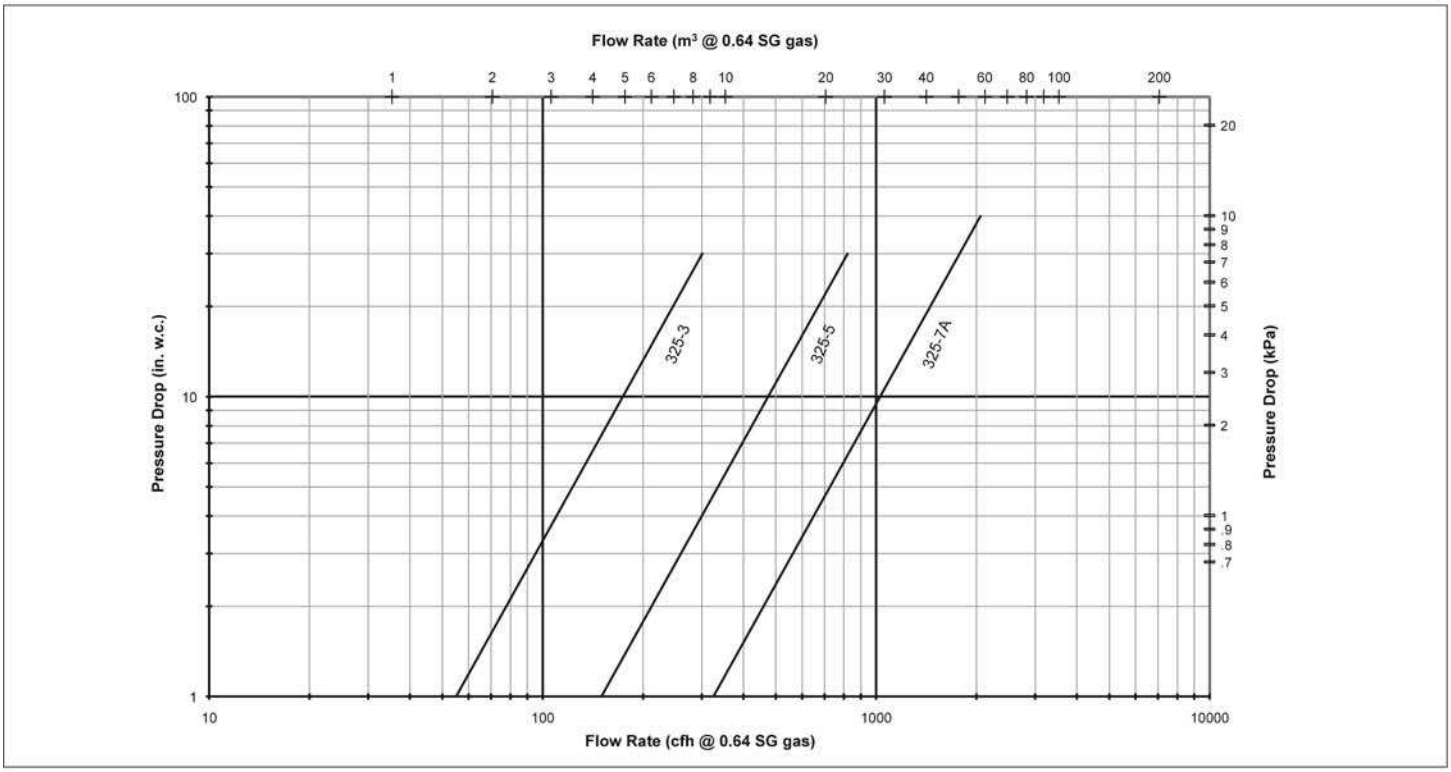


Figure 4: Pressure Drop Chart

© 2013 Maxitrol Company, All Rights Reserved.

CAPACITIES - Based on 1" w.c. pressure drop from set point**.

Capacities expressed in CFH (m^3/h) @ 0.64 sp gr gas

Model Number (pipe size)	Outlet Pressure Set Point	CSA Maximum	Operating Inlet Pressure					
			0.5 psi (3.4 kPa)	0.75 psi (5 kPa)	1 psi (7 kPa)	2 psi (13.8 kPa)	5 psi (34.5 kPa)	10 psi (69 kPa)
325-3(B) (3/8", 1/2")	4.0" w.c. (1.0 kPa)	150 (4.2)	160 (4.5)	190 (5.4)	220 (6.2)	220 (6.2)	300 (8.5)	320 (9.1)
	7.0" w.c. (1.7 kPa)	150 (4.2)	120 (3.4)	150 (4.2)	180 (5.1)	220 (6.2)	290 (8.2)	320 (9.1)
	10.0" w.c. (2.5 kPa)	150 (4.2)	100 (2.8)	120 (3.4)	150 (4.2)	220 (6.2)	280 (7.9)	320 (9.1)
325-5(B) (1/2", 3/4", 1")	4.0" w.c. (1.0 kPa)	325 (9.2)	340 (9.6)	390 (11.0)	450 (12.7)	560 (15.9)	680 (19.3)	750 (21.2)
	7.0" w.c. (1.7 kPa)	325 (9.2)	260 (7.4)	360 (10.2)	410 (11.6)	530 (15.0)	680 (19.3)	750 (21.2)
	10.0" w.c. (2.5 kPa)	325 (9.2)	240 (6.8)	320 (9.1)	360 (10.2)	300 (8.5)	650 (18.4)	750 (21.2)
325-7A(B) (1 1/4", 1 1/2")	4.0" w.c. (1.0 kPa)	---	850 (24.0)	1060 (30.0)	1190 (33.7)	1600 (45.3)	2090 (59.2)	2190 (62.0)
	7.0" w.c. (1.7 kPa)	---	780 (22.0)	950 (26.9)	1060 (30.0)	1500 (42.5)	1860 (52.7)	2060 (58.3)
	10.0" w.c. (2.5 kPa)	---	650 (18.4)	860 (24.4)	990 (28.0)	1300 (36.8)	1620 (45.9)	2060 (58.3)

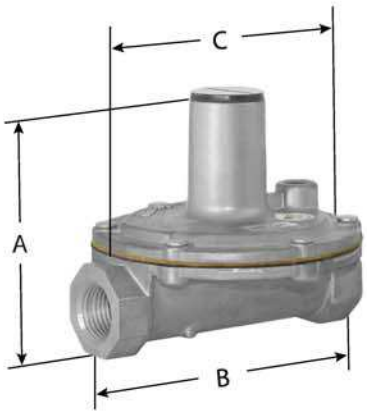
** Set points (in CFH): 325-3(B) = 50, 325-5(B) = 150, 325-7A(B) = 500.
NOTE: Maximum individual load for 325-3(B) is 100 CFH (2.8 m^3/h), 325-5(B) is 325 CFH (9.2 m^3/h), 325-7A(B) is 1250 CFH (35.4 m^3/h)
Approval based on use as an appliance regulator.

DIMENSIONS

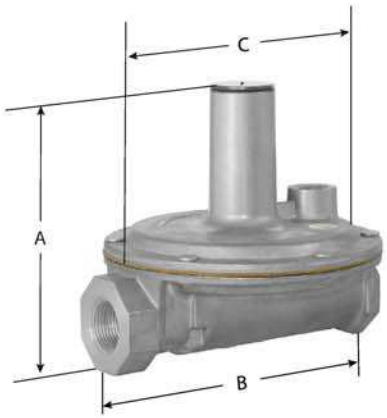
Model Number	Pipe Size*	Swing Radius	Dimensions		
			A	B	C
325-3(B)	3/8", 1/2"	3" (76 mm)	3.5" (89 mm)	4.2" (108 mm)	3.9" (98 mm)
325-5(B)	1/2", 3/4", 1"	4.9" (124 mm)	5.3" (133 mm)	5.9" (149 mm)	5.4" (138 mm)
325-7A(B)	1 1/4", 1 1/2"	6.1" (156 mm)	7.3" (184 mm)	8" (203 mm)	7" (178 mm)

NOTE: Dimensions are to be used only as an aid in designing clearance for the regulator. Actual production dimensions may vary somewhat from those shown.

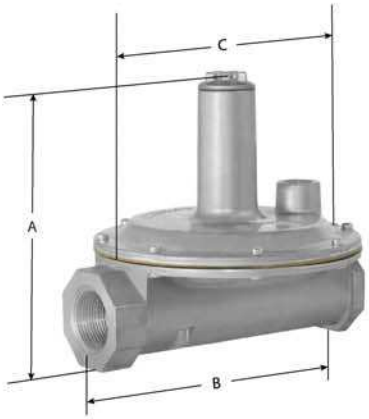
* Standard models NPT threads; 'M' models available with BSP threads.



325-3(B)



325-5(B)



325-7A(B)

© 2013 Maxitrol Company, All Rights Reserved.

SPRING SELECTION CHART - Inches w.c (kPa) unless noted

Model Number	CSA Certified				Standard Spring	Other Springs Available			
	2 psi (13.8 kPa)		5 psi (34.5 kPa)						
325-3(B)	5 to 9 (1.25 to 2.25) Plated	7 to 11 (1.7 to 2.7) White	6 to 10 (1.5 to 2.5) Plated	7 to 11 (1.7 to 2.7) White	4 to 12 (1.0 to 3.0) Violet	2 to 6 (0.5 to 1.5) Plated	10 to 22 (2.5 to 5.5) Red	15 to 30 (3.7 to 1.5) Yellow	1 to 2 psi (6.9 to 13.9) Tagged
325-5(B)	5 to 9 (1.25 to 2.25) Plated	7 to 11 (1.7 to 2.7) White	6 to 10 (1.5 to 2.5) Plated	7 to 11 (1.7 to 2.7) White	4 to 12 (1.0 to 3.0) Violet	2 to 6 (0.5 to 1.5) Plated	10 to 22 (2.5 to 5.5) Red	15 to 30 (3.7 to 1.5) Yellow	1 to 2 psi (6.9 to 13.9) Tagged
325-7A(B)	—	—	—	—	4 to 12 (1.0 to 3.0) Violet	2 to 5 (0.5 to 1.2) Plated	10 to 22 (2.5 to 5.5) Red	15 to 30 (3.7 to 1.5) Yellow	20 to 42 (5.0 to 10.4) Black

SIZING INSTRUCTIONS

When 325 Series regulators are used on 2 psi piping systems, often times the 2 psi systems are sized with a 1 psi pressure drop through the copper or stainless steel tubing. This means there will be 2 psi at the inlet of the regulator under no flow conditions, and 1 psi at the regulator inlet under maximum flow conditions.

TO SELECT AN APPLIANCE REGULATOR OF SUFFICIENT FLOW - ONE MUST KNOW:

1. Available inlet pressure (maximum static/minimum operating).

2. Desired outlet pressure.

3. Required maximum flow rate.

4. Pipe size.

Example: To select a 325 series regulator of sufficient capacity to handle flow...

KNOWN:

A. Desired flow rate 145 CFH.

B. Pipe size 1/2".

C. Operating inlet pressure 2 psi.

D. Outlet pressure 7" w.c.

E. Lockup required.

SOLUTION:

A. Check pressure drop chart, page 2.

B. The 325-3's pressure drop at a flow rate of 145 CFH is 7" w.c. This is well below the available differential of 1.75 psi.

C. The 325-3 (1/2") used with a 5" to 9" spring, set at 7", is the correct regulator to use for this application.

Maxitrol Company
23555 Telegraph Rd., P.O. Box 2230
Southfield, MI 48037-2230 U.S.A.

APR_MS_EN_11.2013

www.maxitrol.com
© 2013 Maxitrol Company,
All Rights Reserved.