



Model Designations

Models having a suffix letter or a combination of suffix letters listed below indicates the design modifications described.

- A** Limited spring adjustment (RV47A & CV47A**, short stack*).
- C** Convertible regulators***; preset to deliver outlet pressures for either natural or LP gases.
(RV20, RV47, RV48, CV47)
- D** Integral ball check limiting device; permits higher maximum individual load.
(see Capacities and Pressure Drop, page 6)
- E** Excessive pressure rated.
- F** Factory-set; fixed/non-adjustable regulator.
- I** Left side integral manual valve; outlet faces main inlet (CV47).
- L** Integral vent limiting orifice as the breather hole - with dust cap.
- M** B.S.P. - PL parallel thread - conforms to ISO 7-1, where pressure tight joints are made on the threads.
- N** Internal by-pass orifice to prevent lockup. Main burner only (RV20, RV47, RV48, CV47).
- R** Right side+ integral manual valve; outlet faces main outlet (CV47).
- SR** Side pressure tap; right side+ 1/8" NPT (RV20, RV47, RV48, CV47I).
- S** Side pressure tap; left side+ 1/8" NPT (RV20, RV47, RV48, CV47R).
- T** Higher ambient temperature range.
- V** Threaded vent connector, 5/16-24 for 1/8" tubing connection (RV20) - with dust cap.

* Short stack models have an adjustment range of less than 2" w.c. (0.5 kPa); these models are advantageous where installation must be made in a limited space.

** CV47 is best described as a RV47 with an extra regulated outlet. This outlet contains an integral manual valve located on the valve body's side.

*** Convertible regulators are designed to deliver either of two fixed outlet pressures for natural or LP gases.
 RV20C: NAT GAS: 4.0" w.c. (1.0 kPa); LP: 10" w.c. (2.5 kPa)
 RV47C, RV48C, CV47C: NAT GAS: 4.0", 5.0" or 6.0" w.c. (1.0, 1.3, or 1.5 kPa); LP: 10" or 11" w.c. (2.5 or 2.8 kPa)

+ Left and right is determined when viewing regulator from outlet side with stack up.

NOTE: The RV48 model may be used with either a 12A04 ball check device, or a 12A06 fixed orifice vent limiting device. See page 62 for vent accessory options.

RV SERIES

Straight-Thru-Flow Design

Maxitrol's original straight-thru-flow (STF) design regulators are non-lockup type regulators for high capacities at low inlet pressures. The difference between STF design and other type regulators is the conical valve. The cone principal permits gas to flow straight through the regulator without changing directions. Frictional flow resistance is reduced, resulting in greater capacity. An improved flow pattern provides accurate, sensitive regulation at extremely low pressure differentials. Typical applications include residential, commercial, and industrial gas-fired appliances and equipment used on low or medium pressure gas supplies.



RV81

Specifications

- Pipe Sizes**.....1/2" to 3" threaded connections with NPT or ISO7-1 threads. 4" 150lb. flange (RV131 only).
- Housing Material**RV52, RV53, RV61, RV81, RV91, RV111: aluminum; RV131: cast iron.
- Mounting**RV52, RV53, RV61 are suitable for multi-positional mounting. If ball check vent limiting device is installed, mount in an upright position only. RV81, RV91, RV111, RV131, upright position only.
NOTE: All Maxitrol gas pressure regulators should be installed and operated in accordance with Maxitrol Safety Warning Instructions (see GPR_MI_EN.ES or GPR_CSA_MI_EN.FR).
- Certifications**RV52, RV53, RV61, RV81, RV91, RV111: ANSI Z21.18/CSA6.3 Gas Appliance Pressure Regulators.
- Gas Types**Suitable for natural, manufactured, mixed gases, liquefied petroleum gases, and LP gas-air mixtures.
- Maximum Inlet Pressure**CSA Certified: RV52, RV53, RV61, RV81, RV91, RV111: 1/2 psi (3.4 kPa)
 Maxitrol Tested*: RV52, RV53: 1/2 psi (3.4 kPa)
 RV61, RV81, RV91, RV111: 1 psi (6.9 kPa)
 RV131: 2 psi (13.8 kPa)
- *Do not use if inlet pressure is more than 10 times desired outlet pressure.
- Emergency Exposure Limits**.....RV52, RV53: 3 psi (21 kPa)
 RV61, RV81, RV91, RV111: 5 psi (34 kPa)
 RV131: 15 psi (103 kPa)
- Gas Containment Limits**.....RV52, RV53: 15 psi (103 kPa)
 RV61, RV81, RV91, RV111, RV131: 25 psi (172 kPa)
NOTE: Internal damage may occur when exposed to these pressures.
- Ambient Temperature Ranges**...RV52, RV53, RV61, RV81, RV91, RV111: -40° to 205°F (-40° to 96°C)
 RV131: -40° to 125°F (-40° to 52°C)
- Minimum Regulation**.....RV52, RV53: 20 CFH; RV61: 25 CFH; RV81, RV91: 50 CFH; RV111, RV131: 250 CFH.
 Expressed in CFH @ 0.64 sp gr gas.



Capacities and Pressure Drop

Capacities expressed in CFH (m³/h) @ 0.64 sp gr gas

Model	Pipe Size	CSA MAX	Pressure Drop - inches w.c. (kPa)												
			0.1 (0.02)	0.2 (0.04)	0.3 (0.07)	0.4 (0.10)	0.5 (0.12)	0.6 (0.15)	0.7 (0.17)	0.8 (0.20)	0.9 (0.22)	1.0 (0.25)	2.0 (0.5)	3.0 (0.75)	4.0 (1.0)
RV52	1/2" x 1/2" 3/4" x 3/4"	450 (12.7)	151 (4.2)	214 (6.1)	262 (7.4)	302 (8.5)	338 (9.5)	370 (10.5)	400 (11.3)	427 (12.1)	453 (12.8)	478 (13.5)	676 (19.1)	828 (23.4)	956 (27.1)
RV53	3/4" x 3/4" 1" x 1"	690 (19.5)	217 (6.1)	306 (8.6)	375 (10.6)	433 (12.2)	484 (13.7)	530 (15)	573 (16.2)	612 (17.3)	650 (18.4)	684 (19.3)	968 (27.4)	1185 (33.5)	1369 (38.7)
RV61	1" x 1" 1 1/4" x 1 1/4"	900 (24.5)	379 (10.7)	536 (15.1)	675 (19.1)	759 (21.5)	848 (24.0)	929 (26.3)	1004 (28.4)	1073 (30.4)	1138 (32.2)	1200 (34.0)	1742 (49.3)	2134 (60.4)	2464 (69.8)
RV81	1 1/4" x 1 1/4" 1 1/2" x 1 1/2"	2500 (70.8)	780 (22.1)	1102 (31.2)	1350 (38.2)	1559 (44.1)	1743 (49.5)	1909 (54.0)	2062 (58.4)	2204 (62.4)	2339 (66.2)	2465 (69.8)	3485 (98.7)	4269 (120)	4929 (139)
RV91	2" x 2" 2 1/2" x 2 1/2"	3275 (92.7)	1212 (34.3)	1714 (48.5)	2100 (59.4)	2424 (68.6)	2711 (76.7)	2969 (84.1)	3208 (90.8)	3429 (97.1)	3637 (103)	3834 (108)	5422 (153)	6640 (188)	7668 (217)
RV111	2 1/2" x 2 1/2" 3" x 3"	7500 (212)	2742 (78.0)	3878 (110)	4750 (134)	5485 (155)	6132 (175)	6718 (190)	7256 (205)	7757 (219)	8227 (233)	8572 (243)	12134 (343)	14862 (420)	17161 (486)
RV131	4" x 4"	---	4734 (134)	6695 (190)	8200 (232)	9468 (268)	10586 (300)	11596 (328)	12525 (354)	13390 (380)	14202 (402)	14971 (424)	21172 (600)	25930 (734)	29942 (848)

NOTE: See pages 58-59 for Regulator Sizing Requirements and Examples.

Spring Selection Chart: inches w.c. (kPa)

Model	CSA Certified Springs			Other Springs Available								
	3 to 6 (0.75 to 1.5) Plated	4 to 8 (1 to 2) Orange	5 to 12 (1.25 to 3) Blue	1 to 3.5 (0.25 to 0.9) Brown	2 to 5 (0.5 to 1.25) Plated	3 to 8 (0.75 to 2) Pink	4 to 12 (1 to 3) Violet	---	---	10 to 22 (2.5 to 5.5) Red	---	---
RV52	3 to 6 (0.75 to 1.5) Plated	4 to 8 (1 to 2) Orange	5 to 12 (1.25 to 3) Blue	1 to 3.5 (0.25 to 0.9) Brown	2 to 5 (0.5 to 1.25) Plated	3 to 8 (0.75 to 2) Pink	4 to 12 (1 to 3) Violet	---	---	---	---	---
RV53	3 to 6 (0.75 to 1.5) Plated	4 to 8 (1 to 2) Orange	5 to 12 (1.25 to 3) Blue	1 to 3.5 (0.25 to 0.9) Brown	2 to 5 (0.5 to 1.25) Plated	3 to 8 (0.75 to 2) Pink	4 to 12 (1 to 3) Violet	---	---	---	---	---
RV61	3 to 6 (0.75 to 1.5) Plated	4 to 8 (1 to 2) Orange	5 to 12 (1.25 to 3) Blue	1 to 3.5 (0.25 to 0.9) Brown	2 to 5* (0.5 to 1.25) Plated	3 to 8 (0.75 to 2) Pink	---	---	10 to 22 (2.5 to 5.5) Red	---	---	---
RV81	3 to 6 (0.75 to 1.5) Plated	4 to 8 (1 to 2) Orange	5 to 12 (1.25 to 3) Blue	1 to 3.5 (0.25 to 0.9) Brown	2 to 5 (0.5 to 1.25) Plated	3 to 8 (0.75 to 2) Pink	4 to 12 (1 to 3) Violet	5 to 15 (1.25 to 3.7) Green	10 to 22 (2.5 to 5.5) Red	---	---	---
RV91	3 to 6 (0.75 to 1.5) Plated	4 to 8 (1 to 2) Orange	5 to 12 (1.25 to 3) Blue	1 to 3.5 (0.25 to 0.9) Brown	2 to 5 (0.5 to 1.25) Plated	3 to 8 (0.75 to 2) Pink	4 to 12 (1 to 3) Violet	5 to 15 (1.25 to 3.7) Green	10 to 22 (2.5 to 5.5) Red	---	---	---
RV111	3 to 6 (0.75 to 1.5) Plated	4 to 8 (1 to 2) Orange	5 to 12 (1.25 to 3) Blue	1 to 3.5 (0.25 to 0.9) Brown	2 to 5 (0.5 to 1.25) Plated	3 to 8 (0.75 to 2) Pink	4 to 12 (1 to 3) Violet	5 to 15 (1.25 to 3.7) Green	10 to 22 (2.5 to 5.5) Red	---	---	---
RV131	3 to 6 (0.75 to 1.5) Plated	---	5 to 12 (1.25 to 3) Blue	---	2 to 5 (0.5 to 1.25) Plated	3 to 8 (0.75 to 2) Pink	4 to 12 (1 to 3) Violet	---	10 to 22 (2.5 to 5.5) Red	15 to 30 (3.7 to 7.5) Yellow	20 to 42 (5 to 10.5) Black	---

NOTE: The area within the heavy line indicates CSA certified springs. See pages 56-57 for complete Spring Selection Chart.

* The 2 to 5 inches w.c. (0.5 to 1.25 kPa) spring is also CSA certified for the RV61

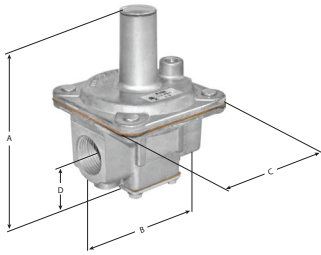
RV SERIES

Straight-Thru-Flow Design

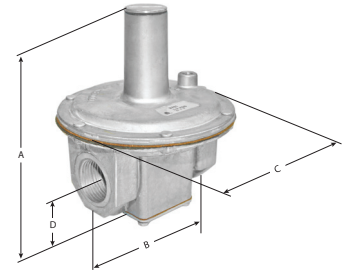
Dimensions

Model	Pipe Size	Vent Connection	Swing Radius	Dimensions			
				A	B	C	D
RV52	1/2", 3/4"	1/8" NPT	3.6" (91 mm)	4.9" (124 mm)	3.2" (81 mm)	3.3" (83 mm)	1.3" (32 mm)
RV53	3/4", 1"	1/8" NPT	3.9" (99 mm)	5.2" (132 mm)	3.8" (95 mm)	3.9" (99 mm)	1.3" (33 mm)
RV61	1", 1 1/4"	1/8" NPT	4.8" (122 mm)	6.4" (164 mm)	4.4" (111 mm)	5.4" (138 mm)	1.6" (41 mm)
RV91	1 1/4", 1 1/2"	3/8" NPT	6.4" (162 mm)	8.4" (213 mm)	6" (153 mm)	7" (178 mm)	2" (51 mm)
	2"	1/2" NPT	8.5" (216 mm)	10.8" (275 mm)	6.5" (165 mm)	9.1" (232 mm)	2.3" (60 mm)
	2 1/2"	1/4" NPT	8.3" (212 mm)	10.5" (267 mm)	7.1" (181 mm)	9.1" (232 mm)	2.4" (62 mm)
RV111	2 1/2", 3"	3/4" NPT	11.5" (284 mm)	15.1" (373 mm)	9" (229 mm)	13.4" (324 mm)	3.5" (89 mm)
RV131	4"	3/4" NPT	18.2" (462 mm)	23.3" (592 mm)	13.9" (353 mm)	18" (457 mm)	5.1" (130 mm)

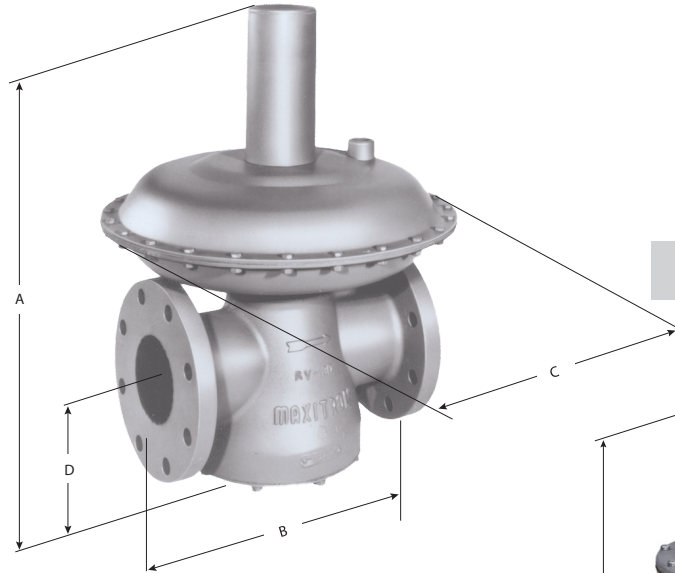
NOTE: Dimensions are maximums and to be used only as an aid in designing clearance for the valve. Actual production dimensions may vary somewhat from those shown.



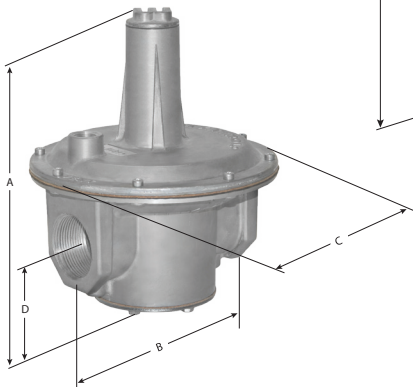
RV52, RV53



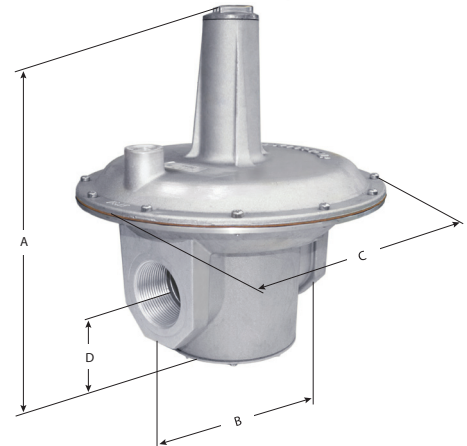
RV61



RV131



RV81, RV91



RV111

SPRING SELECTION CHART

Model #	Part Number	Color Code	Outlet Pressure (In. w.c.)	Approx Inner Diameter	Approx Length
Adjustable Models:					
RV12L	R1210T-13	Brown	1.0 to 3.5	3/8"	9/16"
	R1210T-35*	Plated	2.8 to 5.2		3/4"
	R1210T-48	Orange	4.0 to 8.0		3/4"
	R1210T-610	Red	6.0 to 10		7/8"
	R1210T-812	Blue	8.0 to 12		1"
RV20L	R2010-13	Brown	1.0 to 3.5	7/16"	13/16"
	R2010-35*	Plated	2.8 to 5.2		1 1/16"
	R2010-48	Orange	4.0 to 8.0		15/16"
	R2010-610	Red	6.0 to 10		1"
	R2010-812	Blue	8.0 to 12		1 1/8"
	R2010-912	Plated	9.0 to 12		1 9/16"
RV20LT	R2010T-35*	Plated	2.8 to 5.2	7/16"	1 1/16"
	R2010T-48	Orange	4.0 to 8.0		15/16"
	R2010T-610	Red	6.0 to 10		1"
	R2010T-812	Blue	8.0 to 12		1 1/8"
RV47AD RV47AL	R4710-4	Black	3.8 to 4.3	9/16"	1 3/4"
	R4710-5	Green	4.7 to 5.3		1 13/16"
	R4710-6	Red	5.6 to 6.4		1 13/16"
	R4710-10	Blue	9.7 to 11.3		1 11/16"
RV47D RV47L	R4710-13	Brown	1.0 to 3.5	9/16"	7/8"
	R4710-35*	Plated	2.8 to 5.2		1 1/4"
	R4710-48	Orange	4.0 to 8.0		1 5/16"
	R4710-412	Violet	4.0 to 12		1 1/16"
	R4710-610	Red	6.0 to 10		1 7/16"
	R4710-812	Blue	8.0 to 12		1 1/2"
RV48	R4810-13	Brown	1.0 to 3.5	9/16"	15/16"
	R4810-36*	Plated	3.0 to 6.0		1 3/16"
	R4810-48	Orange	4.0 to 8.0		1 1/8"
	R4810-512	Blue	5.0 to 12		1 3/16"
	R4810-610	Red	6.0 to 10		1 1/2"
RV48T	R4810T-36*	S Steel	3.0 to 6.0	9/16"	1 3/16"
	R4810T-48	Orange	4.0 to 8.0		1 1/8"
	R4810T-512	Blue	5.0 to 12		1 3/16"
	R4810T-610	Red	6.0 to 10		1 1/2"
R400 R400S	R400B10-13	Brown	1.0 to 3.5	3/8"	1 1/4"
	R400B10-25	Plated	2.0 to 5.0		1 9/16"
	R400B10-36*	Plated	3.0 to 6.0		2"
	R400B10-38	Pink	3.0 to 8.0		1 9/16"
	R400B10-412	Violet	4.0 to 12		1 1/2"
	R400B10-512	Blue	5.0 to 12		1 7/8"
	R400B10-1022	Red	10 to 22		1 3/4"
RV52 R500 R500S	R5210-13	Brown	1.0 to 3.5	9/16"	2"
	R5210-25	Plated	2.0 to 5.0		2 9/16"
	R5210-36*	Plated	3.0 to 6.0		2 7/8"
	R5210-38	Pink	3.0 to 8.0		2 9/16"
	R5210-48	Orange	4.0 to 8.0		3 1/8"
	R5210-412	Violet	4.0 to 12		2 1/2"
R5210-512	Blue	5.0 to 12	2 15/16"		
R500 R500S	R5210-1022	Red	10 to 22	9/16"	2 13/16"
RV53 R600 R600S	R5310-13	Brown	1.0 to 3.5	5/8"	2 5/8"
	R5310-25	Plated	2.0 to 5.0		2 15/16"
	R5310-36*	Plated	3.0 to 6.0		3 3/8"
	R5310-38	Pink	3.0 to 8.0		3 1/16"
	R5310-48	Orange	4.0 to 8.0		3 5/8"
	R5310-412	Violet	4.0 to 12		3 1/6"
	R5310-512	Blue	5.0 to 12		3 7/16"

* Standard Spring

Model #	Part Number	Color Code	Outlet Pressure (In. w.c.)	Approx Inner Diameter	Approx Length		
Adjustable Models:							
R600 R600S	R5310-1022	Red	10 to 22	5/8"	3 1/4"		
	R5310-1530	Yellow	15 to 30		3 1/2"		
RV61	R6110-13	Brown	1.0 to 3.5	3/4"	2 5/8"		
	R6110-25	Plated	2.0 to 5.0		3 1/4"		
	R6110-36*	Plated	3.0 to 6.0		3 1/2"		
	R6110-38	Pink	3.0 to 8.0		3 1/8"		
	R6110-48	Orange	4.0 to 8.0		3 9/16"		
	R6110-512	Blue	5.0 to 12		3 9/16"		
	R6110-1022	Red	10 to 22		3 1/2"		
RV81 210D	R8110-13	Brown	1.0 to 3.5	7/8"	3 1/8"		
	R8110-25	Plated	2.0 to 5.0		3 13/16"		
	R8110-36*	Plated	3.0 to 6.0		4 5/16"		
	R8110-38	Pink	3.0 to 8.0		3 7/8"		
	R8110-48	Orange	4.0 to 8.0		4 1/2"		
	R8110-412	Violet	4.0 to 12		3 3/4"		
	R8110-512	Blue	5.0 to 12		4 1/16"		
	R8110-1022	Red	10 to 22		4 3/4"		
210D	R8110-1530	Yellow	15 to 30	7/8"	4 1/2"		
	R8110-2042	Black	20 to 42		4 5/16"		
RV91 210E	R9110-13	Brown	1.0 to 3.5	1 1/8"	4"		
	R9110-25	Plated	2.0 to 5.0		4 15/16"		
	R9110-36*	Plated	3.0 to 6.0		5 3/4"		
	R9110-38	Pink	3.0 to 8.0		5 1/16"		
	R9110-48	Orange	4.0 to 8.0		5 15/16"		
	R9110-412	Violet	4.0 to 12		5 1/16"		
	R9110-512	Blue	5.0 to 12		5 1/2"		
	R9110-515	Green	5.0 to 15		5 1/8"		
	R9110-1022	Red	10 to 22		5 5/8"		
	210E	R9110-1530	Yellow		15 to 30	1 7/8"	5 7/8"
R9110-2042*		Black	20 to 42	5 3/4"			
RV111 210G	R11110-13	Brown	1.0 to 3.5	1 1/2"	6 1/8"		
	R11110-25	Plated	2.0 to 5.0		7 1/6"		
	R11110-36*	Plated	3.0 to 6.0		8 5/16"		
	R11110-38	Pink	3.0 to 8.0		7 3/8"		
	R11110-48	Orange	4.0 to 8.0		8 3/8"		
	R11110-412	Violet	4.0 to 12		7 3/8"		
	R11110-512	Blue	5.0 to 12		8 1/8"		
	R11110-1022	Red	10 to 22		7 1/16"		
210G	R11110-1530	Yellow	15 to 30	1 1/2"	8 7/16"		
	R11110-2042	Black	20 to 42		8 1/4"		
RV131 210J	R13110-25	Plated	2.0 to 5.0	2 1/8"	9 1/6"		
	R13110-36*	Plated	3.0 to 6.0		11 3/4"		
	R13110-38	Pink	3.0 to 8.0		10 1/8"		
	R13110-412	Violet	4.0 to 12		9 7/8"		
	R13110-512	Blue	5.0 to 12		11 5/8"		
	R13110-1022	Red	10 to 22		11 1/2"		
	R13110-1530	Yellow	15 to 30		11 11/16"		
	R13110-2042	Black	20 to 42		11 1/4"		
	220D, E,G,& J	R325C10-1022	Tagged		1 psi-3 psi	5/8"	2 1/8"
		R325C10-1530	Tagged		2 psi-5 psi		2 5/16"

Sizing Examples

RUBBER SEAT POPPETS

For main burner and pilot load applications.

Example: To select an RV type regulator:

- Known: Single 150,000 Btu/h main burner; pipe size 1/2"; inlet pressure 7" w.c.; outlet pressure 4" w.c.
- Solution: The RV48 (1/2") has a maximum capacity of 230,000 Btu/h and a maximum individual load of 160,000 Btu/h. The pressure drop at a flow rate of 150,000 Btu/h is 0.4" w.c., well below the available differential of 3" w.c. The RV48 (without "L" fixed orifice) is the correct regulator to use for the application.

STRAIGHT-THRU-FLOW (S-T-F)

For main burner only applications not requiring a lockup type regulator. When sizing the S-T-F Series, it is recommended that pressure drop not exceed 1/2 of available differential pressure.

Example: To select an RV type regulator:

- Known: Flow rate 2,000,000 Btu/h; pipe size 1 1/4"; inlet pressure 9" w.c.; outlet pressure 5" w.c.
- Solution: The RV81 (1 1/4") has a maximum capacity of 2,500,000 Btu/h. The pressure drop at a flow of 2,000,000 Btu/h is 0.66" w.c. The RV81 (1 1/4") is the correct regulator to use with this application. The pressure drop of the RV61 (1 1/4") at a flow rate of 2,000,000 Btu/h is 2.64" w.c. This is within the available differential but exceeds the recommended 50% maximum.

LEVER ACTING

For main burner and pilot load application requiring positive dead-end lockup (see Definitions page 63).

Example: To select a 325 Series regulator:

- Known: Single 145,000 Btu/h burner; pipe size 1/2"; inlet pressure 2 psi; outlet pressure 7" w.c.
- Solution: The 325-3's pressure drop at a flow rate of 145,000 Btu/h is 7" w.c., well below the available differential of 1 3/4 psi. The 325-3 (1/2") is the correct regulator to use with this application.

BALANCED VALVE

For main burner and pilot load application requiring a lockup type regulator or zero governor usage (see Definitions page 63).

Example: To select a 210 or R/RS Series regulator:

- Known: Desired flow rate 6,000,000 Btu/h; pipe size 1 1/2"; inlet pressure 1 psi; outlet pressure 9" w.c.
- Solution: The 210E (1 1/2") has a maximum capacity of 10,000,000 Btu/h. The 210D (1 1/2") has a capacity of 6,000,000 Btu/h. Therefore, the 210E (1 1/2") will give you the desired outlet pressure of 9" w.c. and is the correct regulator to use for the application.

ACCESSORIES

Vent Tube Connector

Threaded sleeve - two piece assembly where the nut is tightened inside male connector.

- **11A03:** connects 1/8" female pipe thread to 1/8" O.D. tubing.
- **11A04:** connects 1/8" female pipe thread to 1/4" O.D. tubing.

Threaded sleeve nut - for RV20V.

- **11A08:** 5/16-24 threaded sleeve nut for 1/8" O.D. tubing.

Compression fitting - where nut and sleeve are slipped over tubing and tightened into fitting body.

- **11A05-42:** connects 1/4" female pipe thread to 1/4" O.D. tubing.
- **11A05-61:** connects 1/8" female pipe thread to 1/8" O.D. tubing.
- **11A05-63:** connects 3/8" female pipe thread to 3/8" O.D. tubing.
- **11A05-64:** connects 1/2" female pipe thread to 3/8" O.D. tubing.

Vent Limiting Device: vLimiter®

Optional automatic vent limiting device - ball check permits unobstructed inhalation for fast regulator diaphragm response on opening cycle, but limits gas escape-ment to within ANSI standards should a diaphragm rupture.

NOTE: When using the vent limiting device, regulator must be mounted in a horizontal upright position.

- **12A04:** CSA certified for up to 1/2 psi (14" w.c.) inlet pressure. Use on RV48, RV52, RV53, RV61, R400(S), R500(S), R600(S) regulators. Color - brass. 1/8" NPT.
- **12A09:** CSA certified for 2 psi (LP) and 5 psi (natural) inlet pressure with 325-3 and 325-3L regulators; OPD48, OPD600. Color - green. 1/8" NPT.
- **12A34:** CSA certified for up to 1/2 psi (14" w.c.) inlet pressure with RV81. Color - brass. 3/8" NPT.
- **12A39:** CSA certified for 2 psi (LP) and 5 psi (natural) inlet pressure with 325-5 and 325-5L regulators; OPD210D. Color - brass. 3/8" NPT.
- **12A49:** CSA certified for 2 psi (LP) and 5 psi (natural) inlet pressure with 325-7A, 325-7AL, 325-9, and 325-9L regulators; OPD210E. Color - brass. 1/2" NPT.

Satisfies ANSI Standards for both Natural and LP gas.

NOTE: Vent limiters are not recommended for use in models RV91, RV111, RV131, and 210 Series.

Vent Limiting Orifice

- **12A06:** Orifice hole is on side of body, under head. Fixed orifice equally limits inhalation and escapement. Use on RV48, RV52, RV53, RV61, R400(S), R500(S), R600(S) regulators. Color- brown. 1/8" NPT.

Satisfies ANSI Standards for both Natural and LP gas.





Vent Protector: vProtector®

Designed for outdoor applications. Use on vent opening to protect breather hole from rain, snow, dust, insects and other foreign particles.

NOTE: Vent protector **MUST** be mounted in an upright position.

- **13A15:** for 1/8" NPT vent. For outdoor use in 325-3, 325-3L, RV48, RV52, RV53, RV61, R500(S)(Z), and R600(S)(Z).
- **13A15-5:** for 3/8" NPT vent. For outdoor use in 325-5, 325-5L, RV81, 210D.
- **13A25:** for 1/2" NPT vent. For outdoor use in 325-7A, 325-7AL, 325-9, 325-9L, RV91, 210E.

NOTE: **NOT** a vent limiting device. Consult Maxitrol regarding other configurations.

Vent Dampener

- **KVOP-3:** Used on 325-5, 325-5L.
- **KVOP-4:** Used on 325-7A, 325-7AL, 325-9L

NOTE: Should not be used with vent limiter.

Vent Screen

Brass, 40 mesh screen flame arrestor for insertion in vent outlet. Prevents ignition of gas-air mixture which might be present in upper diaphragm chamber.

- **13A03-1:** for 1/8" NPT vent.
- **13A03-2:** for 1/4" NPT vent.
- **13A03-3:** for 3/8" NPT vent.
- **13A03-4:** for 1/2" NPT vent.
- **13A03-6:** for 3/4" NPT vent.

Pressure Tap Connector

- **PF10:** Pressure tap connector installed as part of the control. It is a hose fitting incorporating a captured sealing means for testing inlet and outlet pressures. This eliminates the need for a special barb fitting.

Dust Cap

Use on vent opening to prevent blockage of breather hole from dust or other foreign particles. Standard on all "L" models with 1/8" threaded vent.

- **13A09:** for 1/8" NPT vent. Press-in plastic cap.

Tamper Proof Seals

Permanent pressure sensitive backed paper. Attempted removal of these seals will destroy the face stock, leaving adhesive residue on surface beneath. Therefore, tampering can be easily detected. Available for all threaded models. Outlet pressure printed on seal.

- **101310:** for RV12, RV20L, RV47, RV48, RV52, RV53, RV61, R400(S)(Z), RV500(S)(Z), R600(S)(Z), 325-3, and 325-5.
- **101311:** for RV81, RV91, RV111, 210D, 210E, 210G, 325-7A, 325-9.



CHOOSING A VENT ACCESSORY

NOTE: If vent limiting device is not used, regulator vent must be piped in accordance with government and local codes and regulations.

RV12L, RV20L	Integral vent limiting orifice with dust cap standard.
RV20VL	Integral vent limiting orifice with dust cap standard or use 11A08 threaded sleeve nut and run vent line as per code.
RV47	Must order: "L" suffix - Integral vent limiting orifice, includes dust cap; or "D" suffix - integral ball-check limiting device, includes dust cap.
RV48	1/8" NPT vent tap. Optional 12A04 or 12A06 vent limiter. Optional 13A09 dust cap. Optional 10A16-2 or 10A16-3 plastic thread protector.
RV48L	Integral vent limiting orifice.
RV52, RV53, RV61	1/8" NPT vent tap. Optional 12A04 or 12A06 vent limiter or 13A15 vent protector.
RV81	3/8" NPT vent tap. Optional 12A34 vent limiter or 13A15-5 vent protector.
RV91 (2 1/2" pipe size)	1/4" NPT vent tap. Optional 13A15 vent protector. <i>Vent limiter not approved for this model.</i>
RV91 (2" pipe size)	1/2" NPT vent tap. 2" pipe size. Optional 13A25 vent protector. <i>Vent limiter not approved for this model.</i>
RV111, RV131	3/4" NPT vent tap. <i>Vent limiter not approved for these models.</i>
210D	3/8" NPT vent tap. Optional 13A15-5 vent protector. <i>Vent limiter not approved for this model.</i>
210E	1/2" NPT vent tap. Optional 13A25 vent protector. <i>Vent limiter not approved for this model.</i>
210G, 210J	3/4" NPT vent tap. <i>Vent limiter not approved for these models.</i>
220D, 220E, 220G, 220J	Pilot regulator is equipped with 12A06 vent limiting orifice, separate vent line is not required.
325-3, 325-3L	1/8" NPT vent tap. Optional 12A09 vent limiting device or 13A15 vent protector.
325-5, 325-5L	3/8" NPT vent tap. Optional 12A39 vent limiting device or 13A15-5 vent protector.
325-7A, 325-7AL	1/2" NPT vent tap. Optional 12A49 vent limiting device or 13A25 vent protector.
325-9, 325-9L	1/2" NPT vent tap. Optional 12A49 vent limiting device or 13A25 vent protector.
R400(S), R500(S), R600(S)	1/8" NPT vent tap. Optional 12A04 vent limiting device.
OPD47	Integral vent limiting orifice, includes dust cap.
OPD48, OPD600	1/8" NPT vent tap. Optional 12A09 vent limiting device or 13A15 vent protector.
OPD210D	3/8" NPT vent tap. Optional 12A39 vent limiting device or 13A15-5 vent protector.
OPD210E	1/2" NPT vent tap. Optional 12A49 vent limiting device or 13A25 vent protector.

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.