

CV Series

Gas Combination Controls



DESCRIPTION

The CV100 is a single solenoid shut-off valve with an integrated pressure regulator. It is used for applications with high capacity pilot lines.

The CV200 is a dual solenoid shut-off valve with an integrated pressure regulator. It is used in direct spark or hot surface ignition applications.

The CV300 is also a dual solenoid shut-off valve with an integrated pressure regulator, but an optional pressure regulated pilot gas outlet is available.

Applications for the CV Series include gas boilers, power burners, spa heaters, wall furnaces, gas fires, patio heaters, agricultural heaters, and commercial cooking appliances.

TECHNICAL DATA

FUELS

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

CE: Suitable for use with gases of EN 437 gas family 1, 2 and 3

CERTIFICATIONS

CSA: CV100, CV200, CV300: File # 1165258

CE: CV200, CV300: Gas Appliances Directive 90/396/EEC, DIN EN 126

UL: CV100, CV200: UL Recognized, File # MH172773

CLASSIFICATIONS

CE: Class C, Group 2 according to DIN EN 13611

Class B according to DIN EN 88-1 (Pressure Regulator)

Class B according to DIN EN 161 (Automatic Shut-off Valve)

CSA: Class 3302 81 (Automatic Shut-off Valve)

MOUNTING (multi-positional)

Optional standard mounting bracket or side mounting bracket

CAPACITY

CSA: CV100, CV200: 1.0" WC Pressure Drop at 42,000 BTU/hr NAT

CV300: 1.0" WC Pressure Drop at 73,000 BTU/hr NAT

CE: CV200: 0.25 kPa (2.5 mbar) Pressure Drop at 1.0 m³/h air

CV300: 0.25 kPa (2.5 mbar) Pressure Drop at 1.7 m³/h air

AMBIENT TEMPERATURE RANGE

CSA: CV100, CV200: -40 to 175 °F

CV300: 32 to 175 °F (optional -40 to 175 °F)

CE: CV200, CV300: -15 to 80 °C

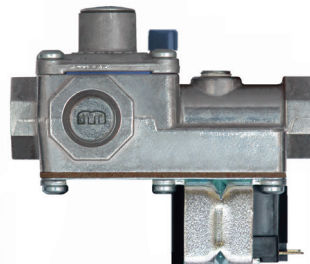
CONVERTIBLE REGULATOR

CSA: CV100, CV200: 3.5" WC NG to 10.0" WC LP or 10.5" W.C. LP

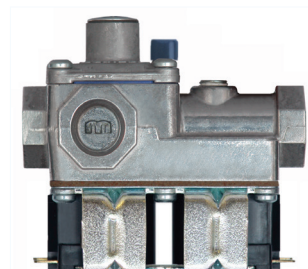
CV300: 5.0" WC NG to 10.0" WC LP

CE: CV200: 0.9 to 2.5 kPa (9.0 to 25.0 mbar)

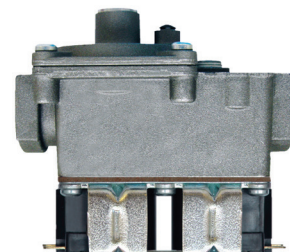
CV300: 1.25 to 2.5 kPa (12.5 to 25.0 mbar)



CV100



CV200



CV300

ELECTRONIC IGNITION SYSTEM

CV100: Regulated pilots

CV200: Direct burner

CV300: Intermittent pilot or direct burner

RANGE OF REGULATION

CSA: CV100, CV200: 2,500 to 45,000 BTU/hr

CV300: 10,000 to 80,000 BTU/hr (w/pilot 500 to 80,000 BTU/hr)

CE: Class B according to EN 88-1 (See chart, page 2)

MAX. INLET PRESSURE

CSA: ½ psi (3.5 kPa)

CE: 6.0 kPa (60 mbar)

MIN. PRESSURE DIFFERENTIAL

CSA: 0.46" WC (0.11 kPa)

CE: 0.25kPa (2.5 mbar)

INLET CONNECTION

CSA: According to ANSI/ASME B1.20.1

CV100, CV200: ¼" NPT, ¼" NPT (side inlet), ⅜" NPT, ⅜" NPT (side inlet), ⅜" Inv. Flare (side inlet)

CV300: ⅜" NPT, ½" NPT

CE: According to ISO 7-1/EN10226-1

CV200: Rp ¼, Rp ¼ (side inlet), Rp ⅜, Rp ⅜ (side inlet)

CV300: Rp ⅜, Rp ½

OUTLET CONNECTION

CSA: According to ANSI/ASME B1.20.1

CV100, CV200: ⅜" NPT, ¼" NPT, ⅜" NPT, ¼" Loxit, ⅜" Inv. Flare

CV300: ⅜" NPT, ½" NPT, ½" Inv. Flare

CE: According to ISO 7-1/EN10226-1

CV200: Rp ⅜, Rp ¼, Rp ⅜

CV300: Rp ⅜, Rp ½

COIL

CSA: CV100, CV200: 12 VDC, 24 VAC or 120 VAC

CV300: 12 VDC, 24 VAC, 120 VAC

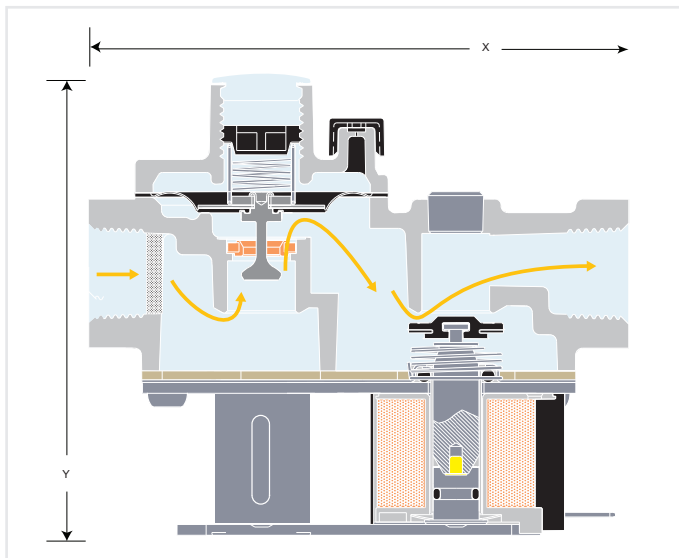
CE: 12 VDC, 24 VAC

INLET AND OUTLET SCREEN

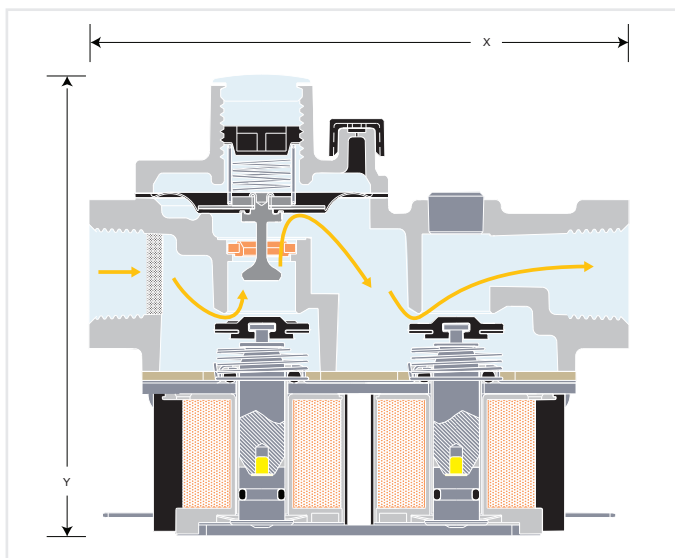
CV100, CV200: Inlet screen and optional outlet screen

CV300: Inlet screen

DIMENSIONS



Cut-away of CV100 single solenoid shut-off valve



Cut-away of CV200/CV300 dual solenoid shut-off valve with integrated pressure regulator

Model	Type	X		Y	
		inch	mm	inch	mm
CV100	Fixed Models	3.75	95	3.14	80
	LP / NAT. Gas Models			3.21	82
	Convertible Models			3.46	88
CV200	Fixed Models	3.75	95	3.14	80
	LP / NAT. Gas Models			3.21	82
	Convertible Models			3.46	88
CV300	Fixed Models	4.06	103	3.48	88
	LP / NAT. Gas Models			3.54	90
	Convertible Models			3.79	96

NOTE: Dimensions are maximums and are to be used only as an aid in designing clearance for the regulator. Actual production dimensions may vary somewhat from those shown. All other dimensions are as cast ± 0.05 inch/1.27 mm. Maxitrol Company reserves the right to change specifications without notice.

SPRING SELECTION

Model	A	B		C	D	Convertible
	CSA certified spring ranges in " WC (in kPa)					
CV100	3.0 - 4.0 (0.75 - 1.0)	4.0 - 5.0 (1.0 - 1.25)	-	-	9.0 - 11.0 (2.25 - 2.75)	3.5" to 10.0" or 10.5"
CV200	3.0 - 4.0 (0.75 - 1.0)	4.0 - 5.0 (1.0 - 1.25)	-	-	9.0 - 11.0 (2.25 - 2.75)	3.5" to 10.0" or 10.5"
CV300	3.0 - 4.0 (0.75 - 1.0)	4.0 - 5.0 (1.0 - 1.25)	-	6.0 - 10.0 (1.5 - 2.5)	9.0 - 11.0 (2.25 - 2.75)	5.0" to 10.0"
CE certified spring ranges in kPa (in mbar)						
CV200	0.75 - 1.0 (7.5 - 10.0)	1.0 - 1.25 (10.0 - 12.5)	1.25 - 1.75 (12.5 - 17.5)	1.75 - 2.25 (17.5 - 22.5)	2.25 - 2.75 (22.5 - 27.5)	-
CV300	0.75 - 1.0 (7.5 - 10.0)	1.0 - 1.25 (10.0 - 12.5)	1.25 - 1.5 (12.5 - 15.0)	1.5 - 2.5 (15.0 - 25.0)	2.4 - 2.75 (24.0 - 27.5)	-

PRESSURE DROP CHART (CE ONLY)

