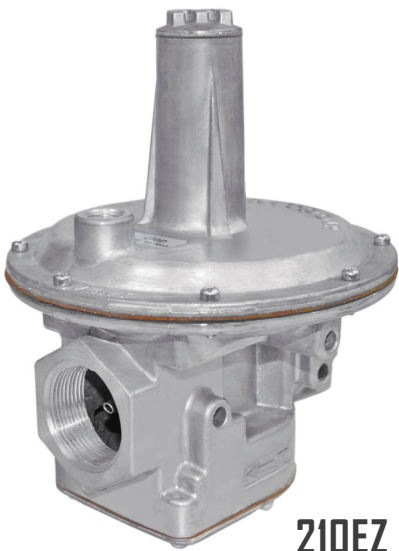


# 210Z SERIES

## Zero Governor Design

The 210Z series are adaptable for air-gas mixing applications. Because of the balanced valve construction, Z models offer superior performance at an economical price compared with other types of atmospheric regulators.

Maxitrol's 210Z zero governor model regulators are used for flow control of burners, nozzle mixers, mixing tees and proportional premixers.



210EZ

### Specifications

|                                                                                                                                                                                    |                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pipe Sizes.....                                                                                                                                                                    | 210Z Models: 1" to 3" threaded connections with NPT or ISO 7-1 threads.<br>4" 125 lb. flange (210JZ only).                                                                                       |
| Housing Material .....                                                                                                                                                             | 210DZ, 210EZ, 210GZ, 210JZ: aluminum.                                                                                                                                                            |
| Mounting.....                                                                                                                                                                      | 210DZ, 210EZ, 210GZ, 210JZ mount in an upright position only.                                                                                                                                    |
| <b>NOTE:</b> 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.....                                                                                                                                                                | 210DZ, 210EZ, 210GZ: ANSI Z21.18/CSA 6.3 Gas Appliance Pressure Regulators.                                                                                                                      |
| Fuel Gases.....                                                                                                                                                                    | Suitable for natural, manufactured, mixed gases, liquefied petroleum gases, and LP gas-air mixtures.                                                                                             |
| Rated Inlet Pressure.....                                                                                                                                                          | CSA Certified: 210DZ, 210EZ, 210GZ: 5 psi (34.5 kPa)                                                                                                                                             |
| Maxitrol Tested.....                                                                                                                                                               | 210JZ: 5 psi (34.5 kPa)                                                                                                                                                                          |
| Emergency Exposure Limits .....                                                                                                                                                    | 210DZ, 210EZ, 210GZ, 210JZ: 25 psi (172 kPa)                                                                                                                                                     |
| Ambient Temperature Ranges.....                                                                                                                                                    | 210DZ, 210EZ, 210GZ, 210JZ: -40 to 200°F (-40 to 93°C)                                                                                                                                           |
| Sensing Taps.....                                                                                                                                                                  | 210Z has convenient tap locations available for downstream sensing, cross connections, and differential control. Four locations can be tapped and plugged for measuring pressure.                |
| Remote Sensing.....                                                                                                                                                                | 210DZ, 210EZ, 210GZ models may be ordered with remote sensing. The internal sensing tube is omitted and external sensing taps are provided. Add suffix letter "R" to model number when ordering. |
| Low-Fire By-Pass.....                                                                                                                                                              | With the main valve closed, an adjustable by-pass provides a minimum firing rate. Add suffix "L" (left side) , "R" (right side), or "B" (both sides) when ordering.                              |
| Model Designations .....                                                                                                                                                           | (F) Factory-set; fixed non-adjustable regulator. Welch plug replaces seal cap.<br>(M) B.S.P. - PL parallel thread - conforms to ISO 7-1, where pressure tight joints are made on the threads.    |

## Capacities and Pressure Drop

Capacities expressed in CFH (m<sup>3</sup>/h) @ 0.64 sp gr gas

| Model | Pipe Size             | Pressure Drop - inches w.c. (kPa) unless noted |                |                |                |                |                |                |                   |                    |                 |                    |
|-------|-----------------------|------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|--------------------|-----------------|--------------------|
|       |                       | 0.1<br>(0.025)                                 | 0.3<br>(0.075) | 0.5<br>(0.125) | 1.0<br>(0.25)  | 3.0<br>(0.75)  | 5.0<br>(1.25)  | 7.0<br>(1.74)  | 0.5 psi<br>(3.45) | 0.75 psi<br>(5.17) | 1 psi<br>(6.89) | 1.5 psi<br>(10.34) |
| 210DZ | 1" x 1"               | --                                             | --             | --             | 900<br>(25.2)  | 1600<br>(44.8) | 2000<br>(56.0) | 2400<br>(67.2) | 3300<br>(92.4)    | 4100<br>(115)      | 4750<br>(133)   | 5800<br>(162)      |
|       | 1 1/4"<br>x<br>1 1/4" | --                                             | --             | --             | 1100<br>(30.8) | 1900<br>(53.2) | 2500<br>(70.0) | 2900<br>(81.2) | 4100<br>(115)     | 5000<br>(140)      | 5850<br>(164)   | 7150<br>(200)      |
|       | 1 1/2"<br>x<br>1 1/2" | --                                             | --             | --             | 1200<br>(33.6) | 2100<br>(58.8) | 2700<br>(75.6) | 3200<br>(89.6) | 4500<br>(126)     | 5500<br>(154)      | 6350<br>(176)   | 7750<br>(217)      |
| 210EZ | 1 1/2"<br>x<br>1 1/2" | --                                             | 1050<br>(29.4) | 1350<br>(37.8) | 1915<br>(53.6) | 3315<br>(92.8) | 4280<br>(120)  | 5065<br>(142)  | 7125<br>(199)     | 8725<br>(244)      | 10075<br>(282)  | 12340<br>(345)     |
|       | 2" x 2"               | --                                             | 1210<br>(33.9) | 1560<br>(43.7) | 2210<br>(61.9) | 3825<br>(107)  | 4940<br>(139)  | 5845<br>(164)  | 8225<br>(230)     | 10070<br>(282)     | 11630<br>(326)  | 14245<br>(399)     |
| 210GZ | 2 1/2"<br>x<br>2 1/2" | 1410<br>(39.5)                                 | 2450<br>(68.6) | 3160<br>(88.5) | 4470<br>(125)  | 7740<br>(217)  | 9995<br>(280)  | 11825<br>(331) | 16635<br>(466)    | 20370<br>(570)     | 23525<br>(659)  | 28810<br>(807)     |
|       | 3" x 3"               | 1555<br>(43.5)                                 | 2695<br>(75.5) | 3475<br>(97.3) | 4920<br>(138)  | 8520<br>(239)  | 11000<br>(308) | 13020<br>(365) | 18310<br>(513)    | 22425<br>(628)     | 25890<br>(725)  | 31710<br>(888)     |
| 210JZ | 4" x 4"               | 2700<br>(75.6)                                 | 4700<br>(132)  | 6000<br>(168)  | 8600<br>(241)  | 15000<br>(420) | 19000<br>(532) | 23000<br>(644) | 32000<br>(896)    | 40000<br>(1120)    | 45500<br>(1274) | 55700<br>(1560)    |

**NOTE:** CSA maximum capacities vary with spring range and pipe size. Please contact Maxitrol directly for CSA maximums. See pages 72-73 for Regulator Sizing Requirements and Examples.

| Model | Pressure Drop - inches w.c. (kPa) unless noted |
|-------|------------------------------------------------|
|       | By-Pass (L Suffix Only)                        |
| 210DZ | 10 - 90<br>(0.28 - 2.5)                        |
| 210EZ | 10 - 90<br>(0.28 - 2.5)                        |

By-pass flow maximum calculated at a pressure drop. (Delta P) = 3.5" w.c.

# 210Z SERIES

Zero Governor Design

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

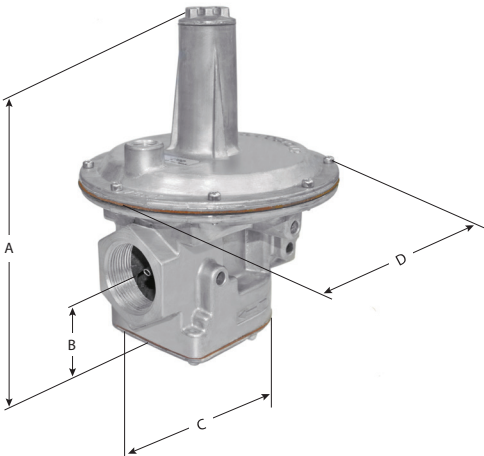
| Model | Outlet Pressure Range          |
|-------|--------------------------------|
| 210DZ | -1.0 to 1.5<br>(-0.25 to 0.37) |
| 210EZ | -1.0 to 1.5<br>(-0.25 to 0.37) |
| 210GZ | -1.0 to 1.5<br>(-0.25 to 0.37) |
| 210JZ | -1.0 to 1.5<br>(-0.25 to 0.37) |

NOTE: See pages 70-71 for complete Spring Selection Chart.

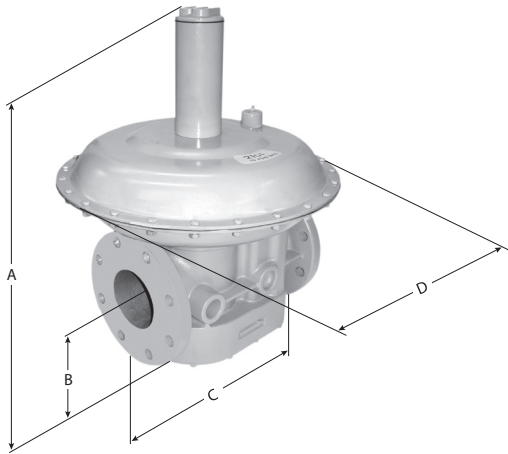
## Dimensions

| Model | Pipe Size          | Vent Connection | Swing Radius      | Dimensions        |                  |                   |                   |
|-------|--------------------|-----------------|-------------------|-------------------|------------------|-------------------|-------------------|
|       |                    |                 |                   | A                 | B                | C                 | D                 |
| 210DZ | 1", 1 1/4", 1 1/2" | 3/8" NPT        | 5.4"<br>(138 mm)  | 9"<br>(229 mm)    | 2.4"<br>(60 mm)  | 6"<br>(152 mm)    | 7"<br>(178 mm)    |
| 210EZ | 1 1/2", 2"         | 1/2" NPT        | 8.3"<br>(211 mm)  | 11.3"<br>(286 mm) | 2.9"<br>(75 mm)  | 8"<br>(203 mm)    | 9.1"<br>(232 mm)  |
| 210GZ | 2 1/2", 3"         | 3/4" NPT        | 11.9"<br>(302 mm) | 16.5"<br>(419 mm) | 4.6"<br>(116 mm) | 11.8"<br>(300 mm) | 13.5"<br>(343 mm) |
| 210JZ | 4"                 | 3/4" NPT        | 18.4"<br>(467 mm) | 24.3"<br>(616 mm) | 5.4"<br>(138 mm) | 13.8"<br>(349 mm) | 18"<br>(457 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.



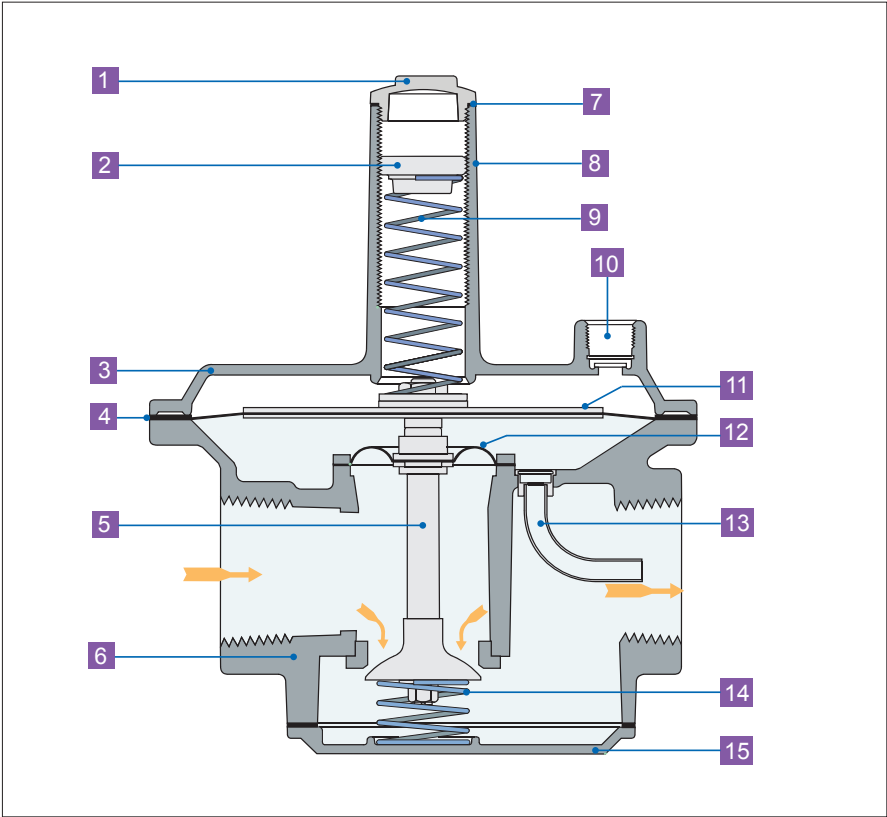
210DZ, 210EZ, 210GZ



210JZ

Zero Governor Design

210DZ, 210EZ, 210GZ, 210JZ



**NOTE:** Diagrams are graphical representations only and may differ from actual product.

- 1 Welch Plug or Seal Cap
- 2 Adjusting Screw
- 3 Top Housing
- 4 Regulating Diaphragm
- 5 Stem & Valve
- 6 Bottom Housing
- 7 Seal Cap Gasket
- 8 Stack
- 9 Spring
- 10 Vent Connection
- 11 Diaphragm Plates
- 12 Balancing Diaphragm
- 13 Sensing Tube
- 14 Counter Spring
- 15 Bottom Plate