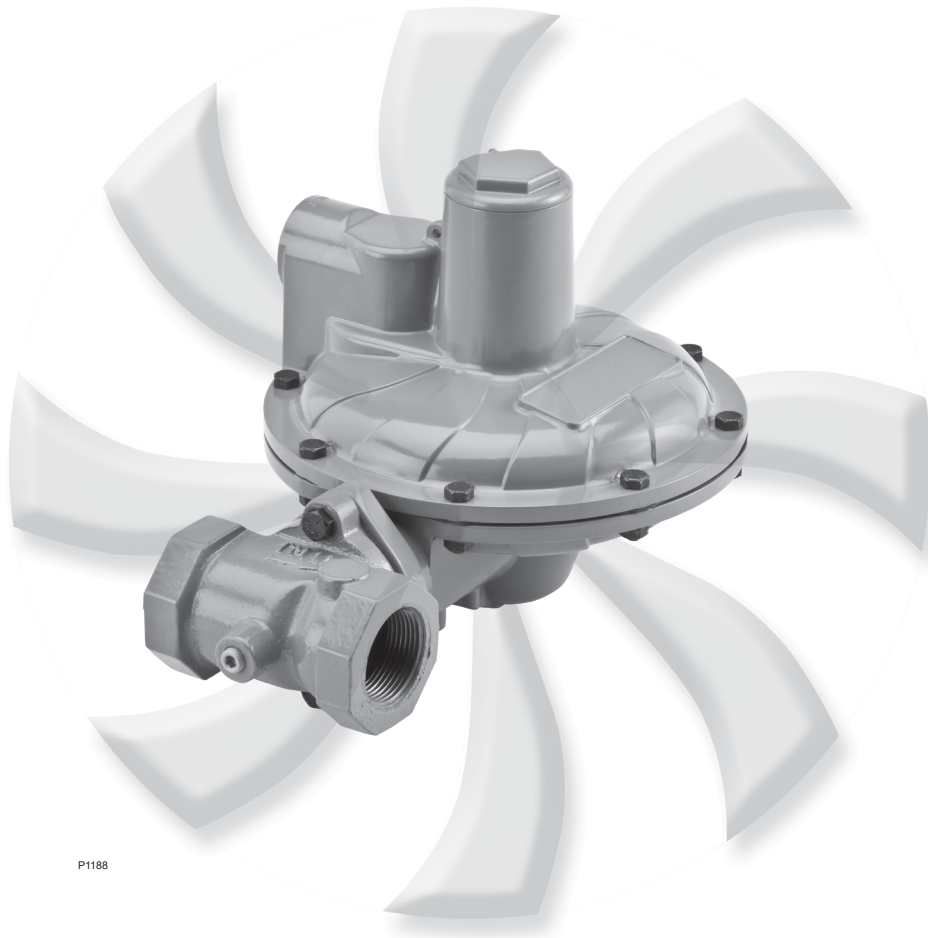


# CS200 Series Commercial / Industrial Pressure Reducing Regulators



**Figure 1.** Typical CS200 Series Pressure Reducing Regulator

## Features and Benefits

- Wide Range of Body Sizes and End Connections
- Easy to Install and Maintain
- Only Standard Tools Required for Pressure Adjustment and Orifice Removal
- Fixed Factor Accuracy (PFM Approved)
- Application Flexibility including Internal Relief, Non-Relieving and Secondary Seat™ Protection
- Secondary Seat Protection provides a secondary seating and disk surface in the event that damage to the primary disk or orifice seat or debris in the flow path inhibit lockup

# CS200 Series

## Specifications

The Specifications section lists the specifications for the CS200 Series Regulators. The following information is stamped on the nameplate of CS200 Series: Type Number, Maximum Outlet Pressure and Spring Range.

### Available Configurations

**Type CS200IN:** Basic construction with Internal pressure registration and Non-Relieving diaphragm assembly.

**Type CS200IR:** Basic construction with Internal pressure registration and Relieving diaphragm assembly.

**Type CS205IN:** Type CS200IN with Secondary Seat™ Protection.

**Type CS205IR:** Type CS200IR with Secondary Seat Protection.

**Type CS206IR:** Type CS200IR with Secondary Seat Protection with bleed to indicate Secondary Seat is functioning. See also Table 1.

### Body Sizes, Material, End Connections and Pressure Rating<sup>(1)</sup>

See Table 2

### Inlet Pressure Ratings<sup>(1)</sup>

See Table 3

### Maximum Outlet Pressure<sup>(1)</sup>

**Casing:** 25 psig / 1.7 bar

**To Avoid Internal Parts Damage:**

5 psig / 0.34 bar differential above outlet pressure setting

**Operating:** 2 psig / 140 mbar

### Outlet Pressure Ranges

3.5 in. w.c. to 2 psig / 9 to 140 mbar

### Internal Relief Performance

**Approximate Internal Relief Start-to-Discharge:**  
See Table 5

**Secondary Seat Approximate Lockup Values:**  
See Table 6

**Relief Performance:**  
See Figures 7 to 10 and Tables 8, 11, 16, and 21

### Flow Capacities

See Tables 7, 9 to 10, 12 to 15, 17 to 20 and 22 to 33

### Flow and IEC Sizing Coefficients

See Table 3

### Orifice Sizes

See Table 3

### Temperature Capabilities<sup>(1)(2)</sup>

-20 to 150°F / -29 to 66°C

### Spring Case Vent Connection

1 NPT

### Body Positions and Spring Case Vent Locations

See Figure 9

### Inlet Pressure Tap

1/4 NPT restricted to 0.054 in. / 1.4 mm

### Construction Materials

**Body:** Gray cast iron

**Body O-ring:** Nitrile (NBR)

**Closing Cap:** Aluminum

**Adjusting Screw:** Aluminum

**Diaphragm Case, Spring Case and**

**Valve Stem:** Aluminum

**Diaphragm Head:** Steel

**Orifice:** Aluminum

**Orifice with Secondary Seat Protection:**

Brass and Nitrile (NBR)

**Pusher Post:** Aluminum

**Diaphragm and Disk:** Nitrile (NBR)

**Control Spring:** Stainless steel or Music wire

**Relief Valve Spring:** Stainless steel

**Relief Valve Spring Retainer:** Aluminum

**Vent Screen:** Stainless steel

**Vent Screen Retaining Ring:** Zinc-plated steel

**Lever Pin:** Stainless steel

**Spring Seat:** Zinc-plated steel

**Lever, Other Metal Parts:** Steel

### Approximate Weight

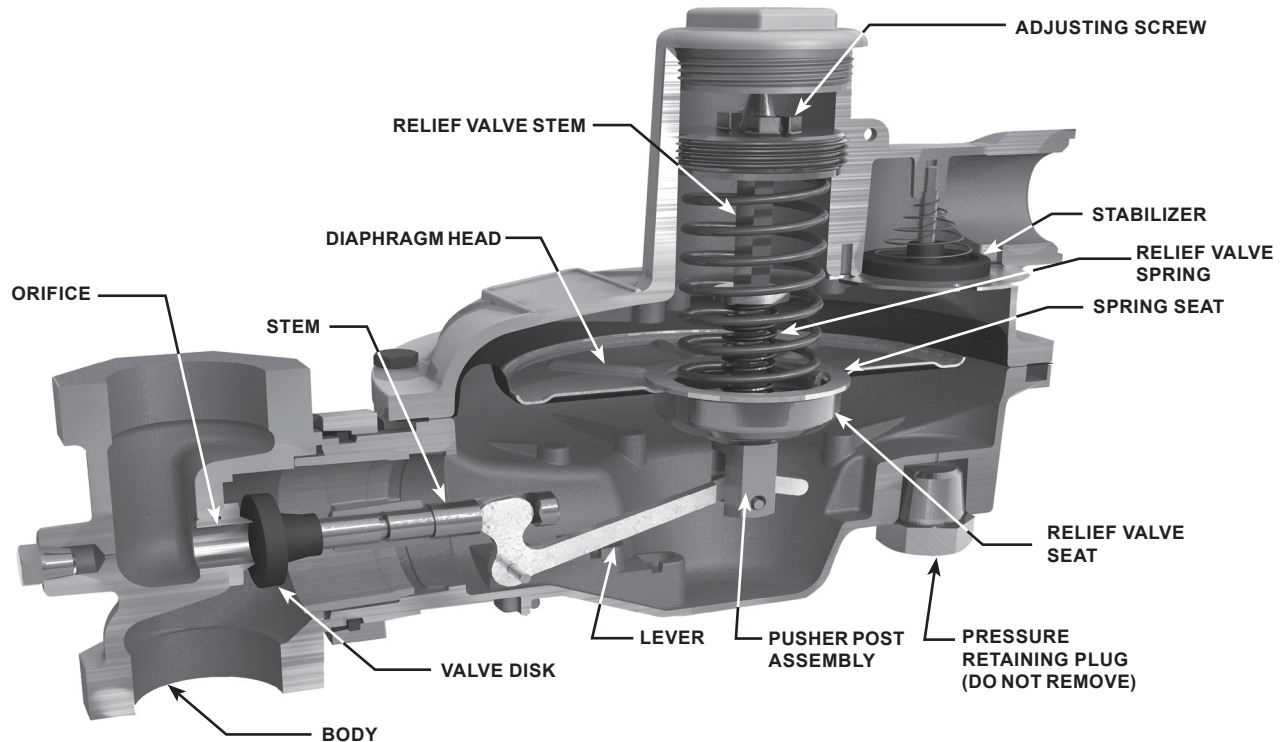
8 lbs / 4 kg

### Designed, Tested and Evaluated consistent with:

ASME B16, ASME Section VIII DIV I, ASTM B117 (Corrosion Resistance)

1. The pressure/temperature limits in this Bulletin or any applicable standard limitation should not be exceeded.

2. Product has passed Emerson Process Management Regulator Technologies, Inc. (Emerson), testing for lockup, relief start-to-discharge and reseal down to -40°.



**Figure 2.** Typical CS200 Series Pressure Reducing Regulator Cut-Away View

## Introduction

The CS200 Series direct-operated, spring-loaded regulators have been engineered to fit a multitude of pressure-reducing applications including commercial and industrial installations. This flexibility is provided by the numerous body sizes, outlet pressure settings and orifice sizes. Ease of maintenance and installation is also a strength of the CS200 Series, which offers a full 360-degree of rotation of the actuator via the union ring connection between the body and casing. The combination of 360° rotatable union ring along with a rotatable upper casing provide simplified vent position, especially in tight spaces or awkward installations.

The CS200 Series also offers Overpressure Protection in the form of Internal Relief and Secondary Seat Protection.

## Overpressure Protection Options Available:

- **Internal Relief** – Relieves gas across the main diaphragm assembly to minimize downstream pressure buildup.
- **Secondary Seat™ Protection** – provides lockup via a secondary seating and disk surface in the event that damage to the primary disk or orifice seating surface, or debris in the flow path, inhibit primary lockup. Secondary Seat Protection does not provide additional overpressure protection in the event the secondary seat or disk is damaged by debris or contamination in the pipeline or from conditions that would cause the regulator to go wide open. See page 6 for additional information.

# CS200 Series

**Table 1. Available Configuration**

| TYPE NUMBER |   |   |   |   | OPTION |                                                                                     |
|-------------|---|---|---|---|--------|-------------------------------------------------------------------------------------|
| C           | S | 2 | 0 |   |        |                                                                                     |
|             |   |   |   |   |        | <b>OVERPRESSURE PROTECTION MODULE</b>                                               |
|             |   |   | 0 |   |        | Without Overpressure Protection Module                                              |
|             |   |   | 5 |   |        | With Secondary Seat™ Protection                                                     |
|             |   |   | 6 |   |        | With Secondary Seat Protection with bleed to indicate Secondary Seat is functioning |
|             |   |   |   |   |        | <b>PRESSURE REGISTRATION</b>                                                        |
|             |   |   |   | I |        | Internal Registration                                                               |
|             |   |   |   |   |        | <b>RELIEF</b>                                                                       |
|             |   |   |   |   | N      | Non-Relief                                                                          |
|             |   |   |   |   | R      | Internal Relief                                                                     |

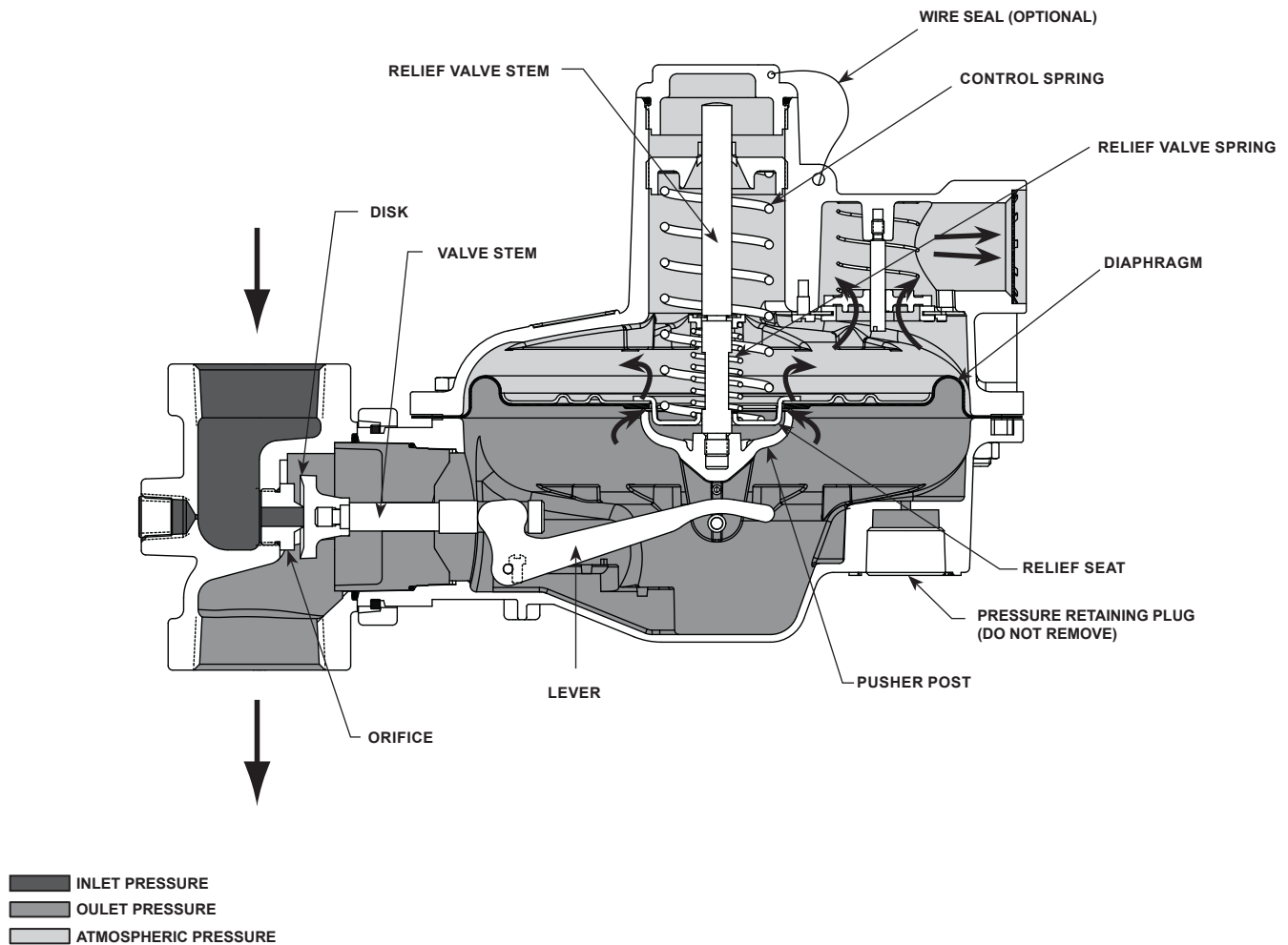
**Table 2. Body Sizes, Material, End Connection and Pressure Rating**

| SERIES | BODY SIZE, NPS                                           | END CONNECTION | BODY MATERIAL  | PRESSURE RATING |      |
|--------|----------------------------------------------------------|----------------|----------------|-----------------|------|
|        |                                                          |                |                | psig            | bar  |
| CS200  | 3/4<br>3/4 x 1<br>3/4 x 1-1/4<br>1<br>1 x 1-1/4<br>1-1/4 | NPT            | Gray Cast Iron | 175             | 12.1 |

**Table 3. Inlet Pressure Ratings and Flow and Sizing Coefficient**

| TYPE            | ORIFICE SIZE |     | MAXIMUM OPERATING INLET PRESSURE TO OBTAIN OPTIMUM PERFORMANCE <sup>(1)(2)</sup> |     | MAXIMUM EMERGENCY INLET PRESSURE <sup>(2)</sup> |      | FLOW COEFFICIENT (WIDE-OPEN) |                | C <sub>1</sub> | IEC SIZING COEFFICIENT |                |                |
|-----------------|--------------|-----|----------------------------------------------------------------------------------|-----|-------------------------------------------------|------|------------------------------|----------------|----------------|------------------------|----------------|----------------|
|                 | In.          | mm  | psig                                                                             | bar | psig                                            | bar  | C <sub>g</sub>               | C <sub>v</sub> |                | X <sub>T</sub>         | F <sub>D</sub> | F <sub>L</sub> |
| CS200           | 1/8          | 3.2 | 125                                                                              | 8.6 | 175                                             | 12.1 | 12                           | 0.4            | 30             | 0.53                   | 0.87           | 0.89           |
|                 | 3/16         | 4.8 | 125                                                                              | 8.6 |                                                 |      | 24                           | 0.8            | 30             | 0.58                   | 0.82           |                |
|                 | 1/4          | 6.4 | 125                                                                              | 8.6 |                                                 |      | 44                           | 1.52           | 29             | 0.53                   | 0.85           |                |
|                 | 3/8          | 9.5 | 60                                                                               | 4.1 |                                                 |      | 102                          | 3.3            | 31             | 0.6                    | 0.83           |                |
|                 | 1/2          | 13  | 40                                                                               | 2.8 |                                                 |      | 172                          | 4.4            | 39             | 0.97                   | 0.72           |                |
| CS205 and CS206 | 1/8          | 3.2 | 125                                                                              | 8.6 |                                                 |      | 17                           | 0.6            | 28             | 0.5                    | 0.82           |                |
|                 | 3/16         | 4.8 | 125                                                                              | 8.6 |                                                 |      | 37                           | 1.4            | 27             | 0.49                   | 0.8            |                |
|                 | 1/4          | 6.4 | 125                                                                              | 8.6 |                                                 |      | 65                           | 2.2            | 30             | 0.5                    | 0.8            |                |
|                 | 5/16         | 7.9 | 100                                                                              | 6.9 |                                                 |      | 88                           | 2.7            | 33             | 0.65                   | 0.79           |                |

1. Inlet pressures based on lock-up performance. For maximum inlet pressure values with optimum regulating performance refer to the applicable Flow Capacity table.  
2. To comply with ANSI B109.4 relief requirements, the maximum inlet pressure may need to be reduced. Reference the Relief Performance Tables 8, 11, 16 and 21.



**Figure 3.** Type CS200IR Pressure Reducing Regulator with Internal Relief

## Principle of Operation

### Type CS200 Base Regulator Operation

Refer to Figure 3. When downstream demand decreases, the pressure under the diaphragm increases. This pressure overcomes the regulator setting (which is set by the control spring). Through the action of the pusher post assembly, lever, and valve

stem, the valve disk moves closer to the orifice and reduces gas flow. If demand downstream increases, pressure under the diaphragm decreases. Spring force pushes the pusher post assembly downward and the valve disk moves away from the orifice.

# CS200 Series

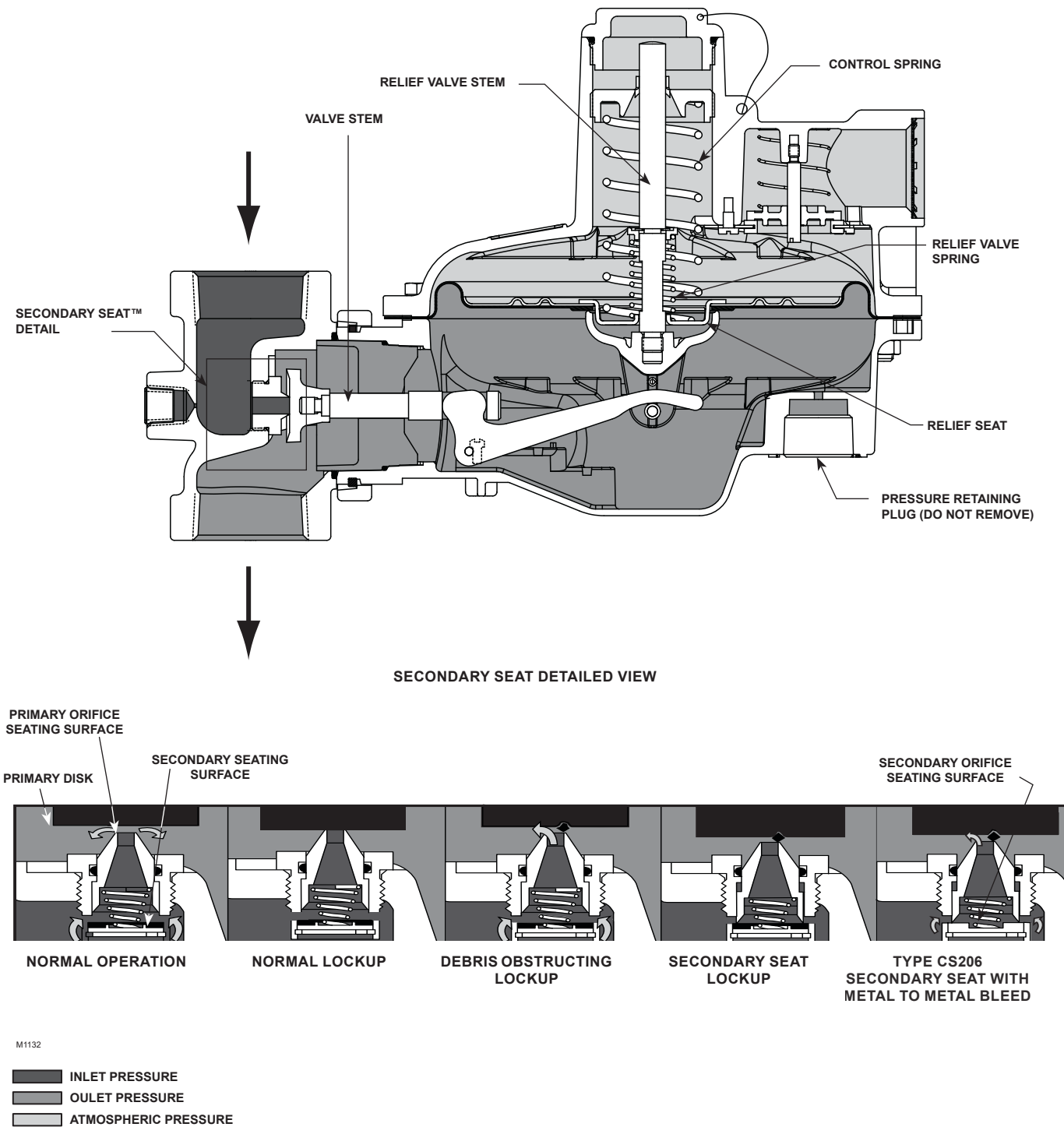


Figure 4. CS200 Series with Secondary Seat Protection

## CS200 Series with Internal Relief

Refer to Figure 3. The option for internal relief is offered on the Types CS200 and CS205 and is standard on the Type CS206. Internal relief is used to help minimize overpressure. Any outlet pressure above the start-to-discharge point of the non-adjustable relief spring moves the diaphragm off of the relief seat, allowing excess pressure to discharge through the vent. For approximate start-to-discharge values, see Table 5. If emergency conditions should exist that prevent normal operation of the regulator or internal relief valve, the relief valve stem acts as a secondary travel stop contacting the underside of the closing cap and stopping the upward travel of the relief seat. Since the diaphragm continues to rise as downstream pressure builds, the diaphragm lifts off of the relief seat to provide relief operation. See Figures 5 through 8 for Relief Capacity data.

## Type CS205 with Secondary Seat™ Protection

Refer to Figure 4. The Type CS205 provides Secondary Seat Protection. As downstream demand decreases and downstream pressure rises to the regulator pressure lock-up value, the regulator will lock up. If, however, damage has occurred to the primary disk, to the primary orifice's seating surface, or debris has become lodged between the primary disk and primary orifice, the outlet pressure will continue to rise. This additional pressure causes the primary disk to apply additional force to the orifice seating surface, which causes the secondary seating surface to move toward the secondary disk or sealing surface. If downstream demand decreases to zero, then the secondary seating surface will contact the sealing surface to provide lockup. Refer to Table 6 for approximate lock-up values provided by the Secondary Seat.

## Type CS206 Secondary Seat Protection with Bleed

The Type CS206 provides small bleed to the downstream system as an indication that the Secondary Seat is providing lockup. In the event that the primary orifice and disk can not provide lockup, the secondary seating surface will move into contact with a metal disk. This metal to metal interface will allow a small

amount of gas to bleed downstream thereby increasing outlet pressure until the Internal relief valve begins to discharge gas to the atmosphere. The odor of this discharged gas provides an indication that the regulator is relying on the Secondary Seat for overpressure protection. See Table 6 for the Downstream Pressure Buildup of the Internal relief acting in conjunction with the Type CS206 Secondary Seat Assembly.

## Types CS205 and CS206 Secondary Seat Protection Limitations

Secondary Seat Protection does not provide additional overpressure protection in the event the secondary seating surface or disk is damaged by debris or contamination in the pipeline or from conditions that would cause the regulator to go wide open. When selecting Secondary Seat Protection option, it is recommended that:

- Other additional overpressure protection methods be added in the downstream system as discussed in the section on Overpressure Protection; and
- An annual downstream lock-up pressure test be done to determine if the Secondary Seat Protection option is operating and functional

## Installation

The CS200 Series regulators may be installed in any position. However, the spring case vent should be pointed downward. If gas escaping through the CS200 Series internal relief valve could constitute a hazard, the spring case vent must be piped to a location where escaping gas will not be hazardous. If the vented gas will be piped to another location, use obstruction-free tubing or piping at least equal in size to the vent and the end of the vent pipe must be protected from anything that might restrict or clog it. Dimensions are shown in Figure 10.

## Overpressure Protection

The CS200 Series regulators have outlet pressure ratings lower than the inlet pressure ratings. Additional downstream overpressure protection is needed and sized for wide-open capacity discharge if the actual inlet pressure exceeds the outlet pressure rating.

# CS200 Series

**Table 4. Outlet Pressure Ranges**

| TYPE  | OUTLET PRESSURE RANGE |           | PART NUMBER | SPRING COLOR | SPRING WIRE DIAMETER |      | SPRING FREE LENGTH |     |
|-------|-----------------------|-----------|-------------|--------------|----------------------|------|--------------------|-----|
|       | In. w.c.              | mbar      |             |              | In.                  | mm   | In.                | mm  |
| CS200 | 3.5 to 5              | 9 to 12   | GE30198X012 | Red          | 0.102                | 2.59 | 3.95               | 100 |
|       | 4.5 to 6.5            | 11 to 16  | GE30195X012 | Purple       | 0.090                | 2.28 | 4.32               | 110 |
|       | 6 to 8                | 15 to 20  | GE30188X012 | Gold         | 0.111                | 2.82 | 4.48               | 114 |
|       | 7.5 to 11             | 19 to 27  | GE30189X012 | Blue         | 0.112                | 2.84 | 4.40               | 112 |
|       | 10 to 14              | 25 to 35  | GE30224X012 | Unpainted    | 0.102                | 2.59 | 4.78               | 121 |
|       | 12 to 19              | 30 to 47  | GE30196X012 | Green        | 0.112                | 2.84 | 4.70               | 119 |
|       | 18 to 1 psig          | 45 to 69  | GE30225X012 | Orange       | 0.120                | 3.04 | 4.94               | 125 |
|       | 1 to 2 psig           | 69 to 140 | GE30190X012 | Black        | 0.145                | 3.68 | 4.66               | 118 |

**Table 5. Types CS200 and CS205 Approximate Internal Relief Valve Start-to-Discharge Pressure Above Setpoint**

| SETPOINT    |      | SPRING COLOR | SPRING PART NUMBER | START-TO-DISCHARGE PRESSURE RANGE ABOVE SETPOINT |           |                   |           |
|-------------|------|--------------|--------------------|--------------------------------------------------|-----------|-------------------|-----------|
|             |      |              |                    | TYPE CS200                                       |           | TYPE CS205        |           |
| psig        | mbar |              |                    | psi                                              | mbar      | psi               | mbar      |
| 7 in. w.c.  | 17   | Gold         | GE30188X012        | 6 to 12 in. w.c.                                 | 15 to 30  | 11 to 16 in. w.c. | 27 to 40  |
| 11 in. w.c. | 27   | Blue         | GE30189X012        | 7 to 13 in. w.c.                                 | 17 to 32  | 11 to 16 in. w.c. | 27 to 40  |
| 14 in. w.c. | 35   | Unpainted    | GE30224X012        | 8 to 14 in. w.c.                                 | 20 to 35  | 13 to 19 in. w.c. | 32 to 47  |
| 1           | 69   | Orange       | GE30225X012        | 0.3 to 1.5                                       | 21 to 103 | 1 to 1.8          | 69 to 124 |
| 2           | 140  | Black        | GE30190X012        | 0.3 to 1.5                                       | 21 to 103 | 1 to 1.8          | 69 to 124 |

**Table 6. Secondary Seat™ Outlet Pressures**

| CONTROL SPRING |                    | SPRING RANGE |           | SETPOINT |      | TYPE CS205                                              |      | TYPE CS206                                 |      |
|----------------|--------------------|--------------|-----------|----------|------|---------------------------------------------------------|------|--------------------------------------------|------|
|                |                    |              |           |          |      | Secondary Seat Shutoff above Setpoint <sup>(1)(2)</sup> |      | Downstream Pressure Buildup <sup>(2)</sup> |      |
| Color          | Spring Part Number | In. w.c.     | mbar      | In. w.c. | mbar | In. w.c.                                                | mbar | In. w.c.                                   | mbar |
| Gold           | GE30188X012        | 6 to 8       | 15 to 20  | 7        | 17   | 5                                                       | 12   | 25.1                                       | 62   |
| Blue           | GE30189X012        | 7.5 to 11    | 19 to 27  | 11       | 27   | 5.5                                                     | 14   | 29.6                                       | 74   |
| Unpainted      | GE30224X012        | 10 to 14     | 25 to 35  | 14       | 35   | 5.8                                                     | 14   | 1.26 psig                                  | 87   |
| Orange         | GE30225X012        | 18 to 1 psig | 45 to 69  | 1 psig   | 69   | 7.8                                                     | 19   | 1.90 psig                                  | 131  |
| Black          | GE30190X012        | 1 to 2 psig  | 69 to 140 | 2 psig   | 140  | 13                                                      | 32   | 3.42 psig                                  | 236  |

1. Shutoff with primary orifice/seating surface disabled.  
2. Shutoff and buildup per ANSI B109.4 at 125 psig / 8.6 bar inlet pressure.

## Internal Relief

The internal relief provided by the Type CS200IR limits the total outlet pressure to values shown in Relief Tables 8, 11, 16 and 21. This internal relief may be adequate, however, if an additional pressure relief is required to maintain downstream pressure at the desired maximum level, an additional relieving or pressure limiting device should be installed to protect downstream equipment.

Overpressuring any portion of a regulator or associated equipment may cause leakage, parts damage, or personal injury due to bursting of pressure-containing parts or explosion of accumulated gas. Regulator operation within ratings does not preclude the possibility of damage from external sources or from debris in the pipeline. A regulator should be inspected for damage periodically and after any overpressure condition.

Refer to the relief sizing coefficients, Table 3, and the Capacity Information section to determine the required relief valve capacity.

## Internal Relief Per ANSI B109.4

The ANSI B109.4 standard applies to outlet setpoints at or below 14 in. w.c. / 35 mbar. At these conditions the maximum outlet pressure allowed during relief is 2 psig / 140 mbar. If the Type CS200IR installation requires conformance with the ANSI B109.4, then the maximum inlet pressure allowed per orifice is limited to the value that maintains an outlet below 2 psig / 140 mbar during relief. Reference applicable relief capacity curves, Figures 5 through 8, to determine maximum allowable inlet per orifice.

Flows are in SCFH (60°F and 14.7 psia) and Nm<sup>3</sup>/h (0°C and 1.01325 bar) of 0.6 specific gravity natural gas. To determine equivalent capacities for air, propane, butane or nitrogen, multiply the capacity number in the tables by the following appropriate conversion factor: 0.775 for air, 0.628 for propane, 0.548 for butane or 0.789 for nitrogen. For gases of other specific gravities, multiply the given capacity by 0.775 and divide by the square root of the appropriate specific gravity.

The published capacities were obtained using inlet and outlet piping the same size as the regulator body size.

## Relief Sizing

### For Critical Flow:

To determine wide-open flow capacities for relief sizing of 0.6 specific gravity natural gas at 60°F at critical pressure drops (absolute outlet pressure equal to approximately one-half or less than one-half of the absolute inlet pressure), use the following formula:

$$Q = P_{1abs}(C_g)(1.29)$$

### For Subcritical Flow:

If pressure drops are lower than critical (absolute outlet pressure greater than approximately one-half the absolute inlet pressure), use the following formula and convert according to the factors in the preceding paragraph if necessary:

$$Q = \sqrt{\frac{520}{GT}} C_g P_1 \sin \left( \frac{3417}{C_1} \sqrt{\frac{\Delta P}{P_1}} \right) \text{ DEG}$$

where:

- $C_1 = C_g/C_v$  (See Table 2)
- $C_g$  = Gas sizing coefficient (See Table 3)
- $G$  = Gas specific gravity (air = 1.0)
- $P_1$  = Regulator inlet pressure, psia
- $\Delta P$  = Pressure drop across regulator, psi
- $Q$  = Gas flow rate, SCFH
- $T$  = Absolute temperature of gas at inlet, °Rankine

## Capacity Information

Tables 7, 9 to 10, 12 to 15, 17 to 20 and 22 to 32 give the CS200 Series natural gas regulating capacities at selected inlet pressures, outlet pressure settings and body outlet sizes.

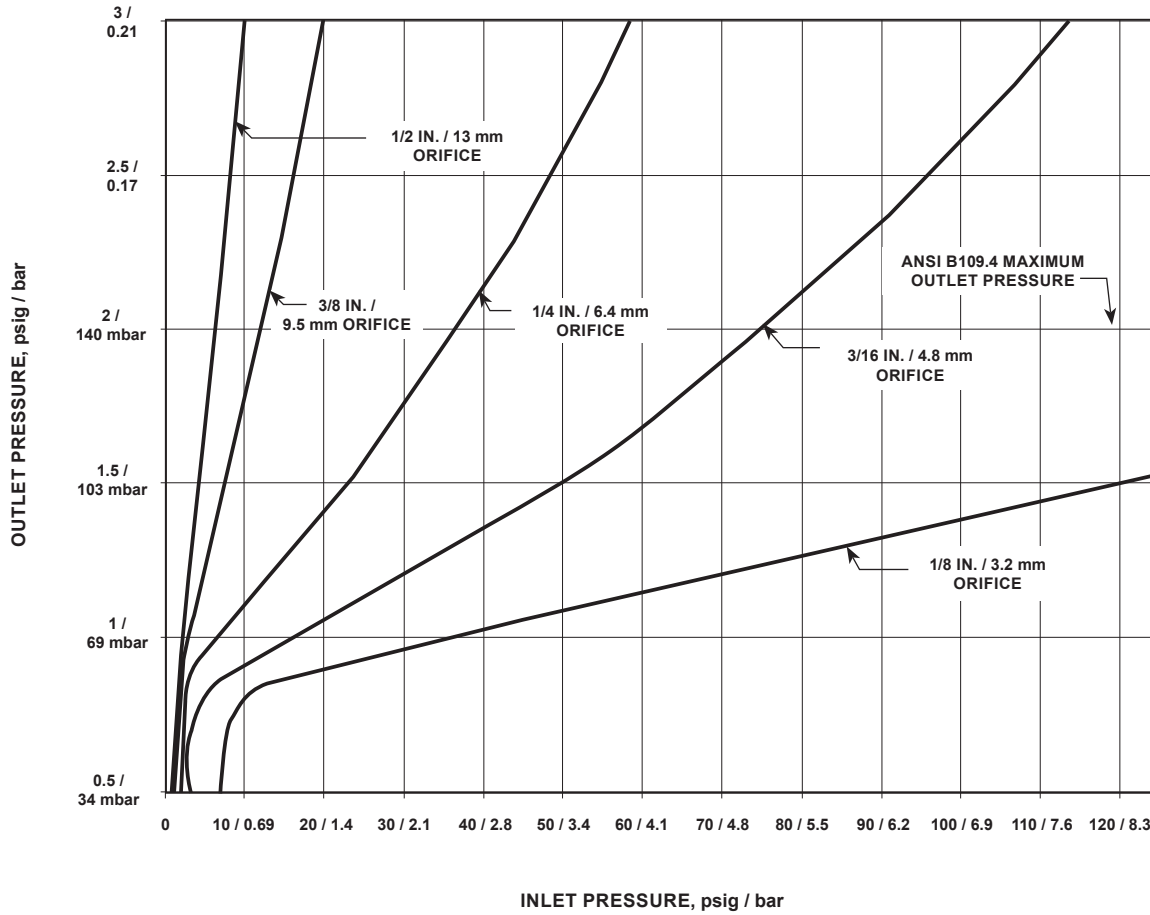
# CS200 Series

**Table 7. CS200IN and CS200IR Series Flow Capacities for 7 in. w.c. / 17 mbar Setpoint**

| SETPOINT   | ACCURACY    |            | SET RANGE       | SPRING PART NUMBER / COLOR |
|------------|-------------|------------|-----------------|----------------------------|
|            | Droop       | Boost      |                 |                            |
| 7 in. w.c. | -1 in. w.c. | 2 in. w.c. | 6 to 8 in. w.c. | GE30188X012 / Gold         |
| 17 mbar    | -2 mbar     | 5 mbar     | 15 to 20 mbar   |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |           |       |          |       |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |
|                                                                |          | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |
| 0.5                                                            | 34 mbar  | 60                     | 1.6   | 120        | 3.2   | 170       | 4.6   | 225       | 6.0   | 300      | 8.1   |
| 1                                                              | 69 mbar  | 100                    | 2.7   | 175        | 4.7   | 300       | 8.1   | 350       | 9.4   | 425      | 11.4  |
| 2                                                              | 140 mbar | 130                    | 3.5   | 250        | 6.7   | 325       | 8.7   | 525       | 14.1  | 625      | 16.8  |
| 3                                                              | 0.21     | 160                    | 4.3   | 325        | 8.7   | 400       | 10.7  | 600       | 16.1  | 825      | 22.1  |
| 5                                                              | 0.34     | 220                    | 5.9   | 425        | 11.4  | 675       | 18.1  | 925       | 24.8  | 1050     | 28.2  |
| 10                                                             | 0.69     | 300                    | 8.1   | 700        | 18.8  | 1025      | 27.5  | 1400      | 37.6  | 1400     | 37.6  |
| 15                                                             | 1.0      | 375                    | 10.1  | 900        | 24.2  | 1400      | 37.6  | 1675      | 45.0  | 1550     | 41.6  |
| 20                                                             | 1.4      | 475                    | 12.8  | 1050       | 28.2  | 1625      | 43.6  | 1825      | 49.0  | 1725     | 46.3  |
| 30                                                             | 2.1      | 600                    | 16.1  | 1375       | 36.9  | 1975      | 53.0  | 2000      | 53.7  |          |       |
| 40                                                             | 2.8      | 750                    | 20.1  | 1700       | 45.6  | 2075      | 55.7  | 2000      | 53.7  |          |       |
| 50                                                             | 3.4      | 900                    | 24.2  | 2025       | 54.4  | 2150      | 57.7  | 2000      | 53.7  |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 2200      | 59.1  |           |       |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2350       | 63.1  | 2250      | 60.4  |           |       |          |       |
| 100                                                            | 6.9      | 1650                   | 44.3  | 2350       | 63.1  |           |       |           |       |          |       |
| 125                                                            | 8.6      | 2000                   | 53.7  |            |       |           |       |           |       |          |       |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |
| 0.5                                                            | 34 mbar  | 60                     | 1.6   | 120        | 3.2   | 170       | 4.6   | 240       | 6.4   | 300      | 8.1   |
| 1                                                              | 69 mbar  | 100                    | 2.7   | 175        | 4.7   | 300       | 8.1   | 400       | 10.7  | 425      | 11.4  |
| 2                                                              | 140 mbar | 130                    | 3.5   | 250        | 6.7   | 400       | 10.7  | 575       | 15.4  | 775      | 20.8  |
| 3                                                              | 0.21     | 160                    | 4.3   | 325        | 8.7   | 475       | 12.8  | 750       | 20.1  | 1025     | 27.5  |
| 5                                                              | 0.34     | 220                    | 5.9   | 425        | 11.4  | 700       | 18.8  | 1100      | 29.5  | 1375     | 36.9  |
| 10                                                             | 0.69     | 300                    | 8.1   | 700        | 18.8  | 1150      | 30.9  | 1775      | 47.7  | 2075     | 55.7  |
| 15                                                             | 1.0      | 375                    | 10.1  | 900        | 24.2  | 1600      | 43.0  | 2300      | 61.7  | 2525     | 67.8  |
| 20                                                             | 1.4      | 475                    | 12.8  | 1050       | 28.2  | 1950      | 52.3  | 2650      | 71.1  | 2675     | 71.8  |
| 30                                                             | 2.1      | 600                    | 16.1  | 1375       | 36.9  | 2550      | 68.5  | 3325      | 89.3  | 3250     | 87.2  |
| 40                                                             | 2.8      | 750                    | 20.1  | 1375       | 36.9  | 3100      | 83.2  | 3775      | 101   | 3400     | 91.3  |
| 50                                                             | 3.4      | 900                    | 24.2  | 1375       | 36.9  | 1350      | 36.2  | 3775      | 101   |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 1375       | 36.9  | 1250      | 33.6  | 3775      | 101   |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 1375       | 36.9  | 1250      | 33.6  |           |       |          |       |
| 100                                                            | 6.9      | 1350                   | 36.2  | 1375       | 36.9  | 1250      | 33.6  |           |       |          |       |
| 125                                                            | 8.6      | 1350                   | 36.2  | 1250       | 33.6  | 1250      | 33.6  |           |       |          |       |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |
| 0.5                                                            | 34 mbar  | 60                     | 1.6   | 100        | 2.6   | 160       | 4.2   | 240       | 6.4   | 300      | 8.1   |
| 1                                                              | 69 mbar  | 100                    | 2.7   | 170        | 4.5   | 250       | 6.7   | 400       | 10.7  | 425      | 11.4  |
| 2                                                              | 140 mbar | 130                    | 3.5   | 250        | 6.7   | 400       | 10.7  | 575       | 15.4  | 775      | 20.8  |
| 3                                                              | 0.21     | 160                    | 4.3   | 270        | 7.2   | 475       | 12.8  | 775       | 20.8  | 1050     | 28.2  |
| 5                                                              | 0.34     | 220                    | 5.9   | 425        | 11.4  | 700       | 18.8  | 1175      | 31.5  | 1475     | 39.6  |
| 10                                                             | 0.69     | 300                    | 8.1   | 700        | 18.8  | 1150      | 30.9  | 2150      | 57.7  | 2450     | 65.8  |
| 15                                                             | 1.0      | 375                    | 10.1  | 870        | 23.4  | 1600      | 43.0  | 3000      | 80.5  | 3300     | 88.6  |
| 20                                                             | 1.4      | 500                    | 13.4  | 1050       | 28.2  | 1900      | 51.0  | 3200      | 85.9  | 2750     | 73.8  |
| 30                                                             | 2.1      | 625                    | 16.8  | 1320       | 35.4  | 2550      | 68.5  | 2200      | 59.1  | 2000     | 53.7  |
| 40                                                             | 2.8      | 775                    | 20.8  | 1725       | 46.3  | 2800      | 75.2  | 1825      | 49.0  | 1700     | 45.6  |
| 50                                                             | 3.4      | 950                    | 25.5  | 2025       | 54.4  | 2350      | 63.1  | 1600      | 42.9  |          |       |
| 60                                                             | 4.1      | 1075                   | 28.9  | 2375       | 63.8  | 1900      | 51.0  | 1600      | 42.9  |          |       |
| 80                                                             | 5.5      | 1375                   | 36.9  | 2875       | 77.2  | 1900      | 51.0  |           |       |          |       |
| 100                                                            | 6.9      | 1700                   | 45.6  | 3150       | 84.6  | 1900      | 51.0  |           |       |          |       |
| 125                                                            | 8.6      | 1700                   | 53.0  | 3175       | 85.2  | 1900      | 51.0  |           |       |          |       |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.  
Gray areas indicate limited capacities due to boost effects.



**Figure 5.** NPS 1 Body Type CS200IR Typical Relief Performance (Linkage Disconnect) at 7 in. w.c. / 17 mbar Set Pressure

**Table 8.** Type CS200IR Internal Relief Performance Table for 7 in. w.c. / 17 mbar Setpoint

| ORIFICE SIZE |     | REGULATOR SET PRESSURE |      | MAXIMUM INLET PRESSURE TO KEEP OUTLET PRESSURE AT OR BELOW <sup>(1)(2)</sup> |      |                   |      |
|--------------|-----|------------------------|------|------------------------------------------------------------------------------|------|-------------------|------|
|              |     |                        |      | 1 psig / 69 mbar                                                             |      | 2 psig / 140 mbar |      |
| In.          | mm  | In. w.c.               | mbar | psig                                                                         | bar  | psig              | bar  |
| 1/8          | 3.2 | 7                      | 17   | 36                                                                           | 2.5  | >125              | >8.6 |
| 3/16         | 4.8 |                        |      | 15                                                                           | 1.0  | 74                | 5.1  |
| 1/4          | 6.4 |                        |      | 6                                                                            | 0.41 | 36                | 2.5  |
| 3/8          | 9.5 |                        |      | 3                                                                            | 0.21 | 12                | 0.83 |

1. Relief value obtained by disconnecting the lever.  
2. 2 psig / 140 mbar is the maximum outlet pressure allowed per ANSI B109.4.

# CS200 Series

**Table 9. CS200IN and CS200IR Series Flow Capacities for 11 in. w.c. / 27 mbar Setpoint**

| SETPOINT    | ACCURACY    |            | SET RANGE          | SPRING PART NUMBER / COLOR |
|-------------|-------------|------------|--------------------|----------------------------|
|             | Droop       | Boost      |                    |                            |
| 11 in. w.c. | -2 in. w.c. | 2 in. w.c. | 7.5 to 11 in. w.c. | GE30189X012 / Blue         |
| 27 mbar     | -5 mbar     | 5 mbar     | 19 to 27 mbar      |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS                                                                                                                                               |          |                        |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|--|--|--|--|--|--|--|--|--|--|--|--|
| Inlet Pressure                                                                                                                                                                                               |          | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                              |          | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                              |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |  |  |  |  |  |  |  |  |  |  |  |  |
| psig                                                                                                                                                                                                         | bar      | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 1                                                                                                                                                                                                            | 69 mbar  | 85                     | 2.3   | 185        | 5.0   | 300       | 8.1   | 425       | 11.4  | 575      | 15.4  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2                                                                                                                                                                                                            | 140 mbar | 130                    | 3.5   | 285        | 7.7   | 425       | 11.4  | 600       | 16.1  | 825      | 22.1  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3                                                                                                                                                                                                            | 0.21     | 170                    | 4.6   | 350        | 9.4   | 525       | 14.1  | 775       | 20.8  | 1050     | 28.2  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5                                                                                                                                                                                                            | 0.34     | 225                    | 6.0   | 480        | 12.9  | 775       | 20.8  | 1150      | 30.9  | 1300     | 34.9  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10                                                                                                                                                                                                           | 0.69     | 325                    | 8.7   | 700        | 18.8  | 1200      | 32.2  | 1550      | 41.6  | 1625     | 43.6  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15                                                                                                                                                                                                           | 1.0      | 400                    | 10.7  | 900        | 24.2  | 1500      | 40.3  | 1850      | 49.7  | 1775     | 47.7  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20                                                                                                                                                                                                           | 1.4      | 480                    | 12.9  | 1075       | 28.9  | 1750      | 47.0  | 2025      | 54.4  | 2200     | 59.1  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30                                                                                                                                                                                                           | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2125      | 57.0  | 2200      | 59.1  | 2200     | 59.1  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40                                                                                                                                                                                                           | 2.8      | 775                    | 20.8  | 1700       | 45.6  | 2300      | 61.7  | 2200      | 59.1  | 2200     | 59.1  |  |  |  |  |  |  |  |  |  |  |  |  |
| 50                                                                                                                                                                                                           | 3.4      | 925                    | 24.8  | 2025       | 54.4  | 2375      | 63.8  | 2200      | 59.1  |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 60                                                                                                                                                                                                           | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 2450      | 65.8  | 2200      | 59.1  |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 80                                                                                                                                                                                                           | 5.5      | 1350                   | 36.2  | 2500       | 67.1  | 2500      | 67.1  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 100                                                                                                                                                                                                          | 6.9      | 1650                   | 44.3  | 2500       | 67.1  | 2500      | 67.1  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 125                                                                                                                                                                                                          | 8.6      | 1950                   | 52.3  | 2500       | 67.1  | 2500      | 67.1  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| psig                                                                                                                                                                                                         | bar      | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 1                                                                                                                                                                                                            | 69 mbar  | 85                     | 2.3   | 185        | 5.0   | 300       | 8.1   | 500       | 13.4  | 650      | 17.4  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2                                                                                                                                                                                                            | 140 mbar | 130                    | 3.5   | 285        | 7.7   | 425       | 11.4  | 725       | 19.5  | 975      | 26.2  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3                                                                                                                                                                                                            | 0.21     | 170                    | 4.6   | 350        | 9.4   | 525       | 14.1  | 925       | 24.8  | 1250     | 33.6  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5                                                                                                                                                                                                            | 0.34     | 225                    | 6.0   | 480        | 12.9  | 775       | 20.8  | 1325      | 35.6  | 1750     | 47.0  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10                                                                                                                                                                                                           | 0.69     | 325                    | 8.7   | 700        | 18.8  | 1250      | 33.6  | 1950      | 52.3  | 2400     | 64.4  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15                                                                                                                                                                                                           | 1.0      | 400                    | 10.7  | 900        | 24.2  | 1625      | 43.6  | 2500      | 67.1  | 2850     | 76.5  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20                                                                                                                                                                                                           | 1.4      | 480                    | 12.9  | 1075       | 28.9  | 1950      | 52.3  | 2925      | 78.5  | 2900     | 77.9  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30                                                                                                                                                                                                           | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2550      | 68.5  | 3550      | 95.3  |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 40                                                                                                                                                                                                           | 2.8      | 775                    | 20.8  | 1725       | 46.3  | 3125      | 83.9  | 3900      | 105   |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 50                                                                                                                                                                                                           | 3.4      | 925                    | 24.8  | 2050       | 55.0  | 1475      | 39.6  | 3900      | 105   |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 60                                                                                                                                                                                                           | 4.1      | 1050                   | 28.2  | 1350       | 36.2  | 1475      | 39.6  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 80                                                                                                                                                                                                           | 5.5      | 1350                   | 36.2  | 1350       | 36.2  | 1475      | 39.6  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 100                                                                                                                                                                                                          | 6.9      | 1475                   | 39.6  | 1350       | 36.2  |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 125                                                                                                                                                                                                          | 8.6      | 1600                   | 43.0  |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| psig                                                                                                                                                                                                         | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 1                                                                                                                                                                                                            | 69 mbar  | 85                     | 2.3   | 170        | 4.6   | 300       | 8.1   | 500       | 13.4  | 650      | 17.4  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2                                                                                                                                                                                                            | 140 mbar | 130                    | 3.5   | 270        | 7.2   | 425       | 11.4  | 725       | 19.5  | 1100     | 29.5  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3                                                                                                                                                                                                            | 0.21     | 170                    | 4.6   | 350        | 9.4   | 525       | 14.1  | 1000      | 26.8  | 1475     | 39.6  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5                                                                                                                                                                                                            | 0.34     | 225                    | 6.0   | 480        | 12.9  | 775       | 20.8  | 1375      | 36.9  | 2000     | 53.7  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10                                                                                                                                                                                                           | 0.69     | 325                    | 8.7   | 700        | 18.8  | 1250      | 33.6  | 2225      | 59.7  | 2450     | 65.8  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15                                                                                                                                                                                                           | 1.0      | 400                    | 10.7  | 900        | 24.2  | 1625      | 43.6  | 2850      | 76.5  | 2875     | 77.2  |  |  |  |  |  |  |  |  |  |  |  |  |
| 20                                                                                                                                                                                                           | 1.4      | 480                    | 12.9  | 1075       | 28.9  | 1950      | 52.3  | 3400      | 91.3  | 3525     | 94.5  |  |  |  |  |  |  |  |  |  |  |  |  |
| 30                                                                                                                                                                                                           | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2500      | 67.1  | 3400      | 91.3  | 1800     | 48.3  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40                                                                                                                                                                                                           | 2.8      | 775                    | 20.8  | 1725       | 46.3  | 2500      | 67.1  | 2400      | 64.4  | 1800     | 48.3  |  |  |  |  |  |  |  |  |  |  |  |  |
| 50                                                                                                                                                                                                           | 3.4      | 925                    | 24.8  | 2050       | 55.0  | 2500      | 67.1  | 1700      | 45.6  |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 60                                                                                                                                                                                                           | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 2500      | 67.1  | 1700      | 45.6  |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 80                                                                                                                                                                                                           | 5.5      | 1350                   | 36.2  | 2975       | 79.9  | 2000      | 53.6  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 100                                                                                                                                                                                                          | 6.9      | 1650                   | 44.3  | 1700       | 45.6  | 1900      | 51.0  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| 125                                                                                                                                                                                                          | 8.6      | 2000                   | 53.7  | 1700       | 45.6  | 1900      | 51.0  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                              |          |                        |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |
| <div><div></div> Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.</div> <div><div></div> Gray areas indicate limited capacities due to boost effects.</div> |          |                        |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |  |

**Table 10. CS200IN and CS200IR Series Flow Capacities for 14 in. w.c. / 35 mbar Setpoint**

|             |             | ACCURACY   |                   |                            |  |  |  |  |  |  |  |
|-------------|-------------|------------|-------------------|----------------------------|--|--|--|--|--|--|--|
| SETPOINT    | Droop       | Boost      | SET RANGE         | SPRING PART NUMBER / COLOR |  |  |  |  |  |  |  |
| 14 in. w.c. | -2 in. w.c. | 2 in. w.c. | 10 to 14 in. w.c. | GE30224X012 / Unpainted    |  |  |  |  |  |  |  |
| 35 mbar     | -5 mbar     | 5 mbar     | 25 to 35 mbar     |                            |  |  |  |  |  |  |  |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|--|--|--|--|--|--|--|--|--|--|--|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |          | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |  |  |  |  |  |  |  |  |  |  |  |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 1                                                              | 69 mbar  | 85                     | 2.3   | 185        | 5.0   | 300       | 8.1   | 425       | 11.4  | 575      | 15.4  |  |  |  |  |  |  |  |  |  |  |  |
| 2                                                              | 140 mbar | 130                    | 3.5   | 285        | 7.7   | 425       | 11.4  | 600       | 16.1  | 825      | 22.1  |  |  |  |  |  |  |  |  |  |  |  |
| 3                                                              | 0.21     | 170                    | 4.6   | 350        | 9.4   | 525       | 14.1  | 775       | 20.8  | 1050     | 28.2  |  |  |  |  |  |  |  |  |  |  |  |
| 5                                                              | 0.34     | 225                    | 6.0   | 480        | 12.9  | 775       | 20.8  | 1150      | 30.9  | 1300     | 34.9  |  |  |  |  |  |  |  |  |  |  |  |
| 10                                                             | 0.69     | 325                    | 8.7   | 700        | 18.8  | 1200      | 32.2  | 1550      | 41.6  | 1625     | 43.6  |  |  |  |  |  |  |  |  |  |  |  |
| 15                                                             | 1.0      | 400                    | 10.7  | 900        | 24.2  | 1500      | 40.3  | 1850      | 49.7  | 1775     | 47.7  |  |  |  |  |  |  |  |  |  |  |  |
| 20                                                             | 1.4      | 480                    | 12.9  | 1075       | 28.9  | 1750      | 47.0  | 2025      | 54.4  | 2200     | 59.1  |  |  |  |  |  |  |  |  |  |  |  |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2125      | 57.0  | 2200      | 59.1  |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 40                                                             | 2.8      | 775                    | 20.8  | 1700       | 45.6  | 2300      | 61.7  | 2200      | 59.1  |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 50                                                             | 3.4      | 925                    | 24.8  | 2025       | 54.4  | 2375      | 63.8  | 2200      | 59.1  |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 2450      | 65.8  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2500       | 67.1  | 2500      | 67.1  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 100                                                            | 6.9      | 1650                   | 44.3  | 2500       | 67.1  |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 125                                                            | 8.6      | 1950                   | 52.3  |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |          |                        |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 1                                                              | 69 mbar  | 85                     | 2.3   | 185        | 5.0   | 300       | 8.1   | 500       | 13.4  | 650      | 17.4  |  |  |  |  |  |  |  |  |  |  |  |
| 2                                                              | 140 mbar | 130                    | 3.5   | 285        | 7.7   | 425       | 11.4  | 725       | 19.5  | 975      | 26.2  |  |  |  |  |  |  |  |  |  |  |  |
| 3                                                              | 0.21     | 170                    | 4.6   | 350        | 9.4   | 525       | 14.1  | 925       | 24.8  | 1250     | 33.6  |  |  |  |  |  |  |  |  |  |  |  |
| 5                                                              | 0.34     | 225                    | 6.0   | 480        | 12.9  | 775       | 20.8  | 1325      | 35.6  | 1750     | 47.0  |  |  |  |  |  |  |  |  |  |  |  |
| 10                                                             | 0.69     | 325                    | 8.7   | 700        | 18.8  | 1250      | 33.6  | 1950      | 52.3  | 2400     | 64.4  |  |  |  |  |  |  |  |  |  |  |  |
| 15                                                             | 1.0      | 400                    | 10.7  | 900        | 24.2  | 1625      | 43.6  | 2500      | 67.1  | 2850     | 76.5  |  |  |  |  |  |  |  |  |  |  |  |
| 20                                                             | 1.4      | 480                    | 12.9  | 1075       | 28.9  | 1950      | 52.3  | 2925      | 78.5  | 2900     | 77.9  |  |  |  |  |  |  |  |  |  |  |  |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2550      | 68.5  | 3550      | 95.3  | 3400     | 91.3  |  |  |  |  |  |  |  |  |  |  |  |
| 40                                                             | 2.8      | 775                    | 20.8  | 1725       | 46.3  | 3125      | 83.9  | 3900      | 105   |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 50                                                             | 3.4      | 925                    | 24.8  | 2050       | 55.0  | 1475      | 39.6  | 3900      | 105   |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 60                                                             | 4.1      | 1050                   | 28.2  | 1350       | 36.2  | 1475      | 39.6  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 80                                                             | 5.5      | 1350                   | 36.2  | 1350       | 36.2  | 1475      | 39.6  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 100                                                            | 6.9      | 1475                   | 39.6  | 1350       | 36.2  |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 125                                                            | 8.6      | 1600                   | 43.0  |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |          |                        |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 1                                                              | 69 mbar  | 85                     | 2.3   | 185        | 5.0   | 280       | 7.5   | 500       | 13.4  | 650      | 17.4  |  |  |  |  |  |  |  |  |  |  |  |
| 2                                                              | 140 mbar | 130                    | 3.5   | 245        | 6.6   | 425       | 11.4  | 725       | 19.5  | 1100     | 29.5  |  |  |  |  |  |  |  |  |  |  |  |
| 3                                                              | 0.21     | 170                    | 4.6   | 350        | 9.4   | 525       | 14.1  | 1000      | 26.8  | 1475     | 39.6  |  |  |  |  |  |  |  |  |  |  |  |
| 5                                                              | 0.34     | 225                    | 6.0   | 480        | 12.9  | 775       | 20.8  | 1375      | 36.9  | 2000     | 53.7  |  |  |  |  |  |  |  |  |  |  |  |
| 10                                                             | 0.69     | 325                    | 8.7   | 700        | 18.8  | 1250      | 33.6  | 2225      | 59.7  | 2450     | 65.8  |  |  |  |  |  |  |  |  |  |  |  |
| 15                                                             | 1.0      | 400                    | 10.7  | 900        | 24.2  | 1625      | 43.6  | 2850      | 76.5  | 2875     | 77.2  |  |  |  |  |  |  |  |  |  |  |  |
| 20                                                             | 1.4      | 480                    | 12.9  | 1075       | 28.9  | 1950      | 52.3  | 3400      | 91.1  | 3525     | 94.6  |  |  |  |  |  |  |  |  |  |  |  |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2300      | 61.7  | 3400      | 91.1  | 1850     | 49.7  |  |  |  |  |  |  |  |  |  |  |  |
| 40                                                             | 2.8      | 775                    | 20.8  | 1725       | 46.3  | 2300      | 61.7  | 2300      | 61.7  | 1850     | 49.7  |  |  |  |  |  |  |  |  |  |  |  |
| 50                                                             | 3.4      | 925                    | 24.8  | 2050       | 55.0  | 2300      | 61.7  | 2150      | 57.7  |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 2300      | 61.7  | 2150      | 57.7  |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2975       | 79.9  | 2000      | 53.6  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 100                                                            | 6.9      | 1650                   | 44.3  | 2975       | 79.9  | 1900      | 51.0  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
| 125                                                            | 8.6      | 2000                   | 53.7  | 2975       | 79.9  | 1900      | 51.0  |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |          |                        |       |            |       |           |       |           |       |          |       |  |  |  |  |  |  |  |  |  |  |  |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

Gray areas indicate limited capacities due to boost effects.

# CS200 Series

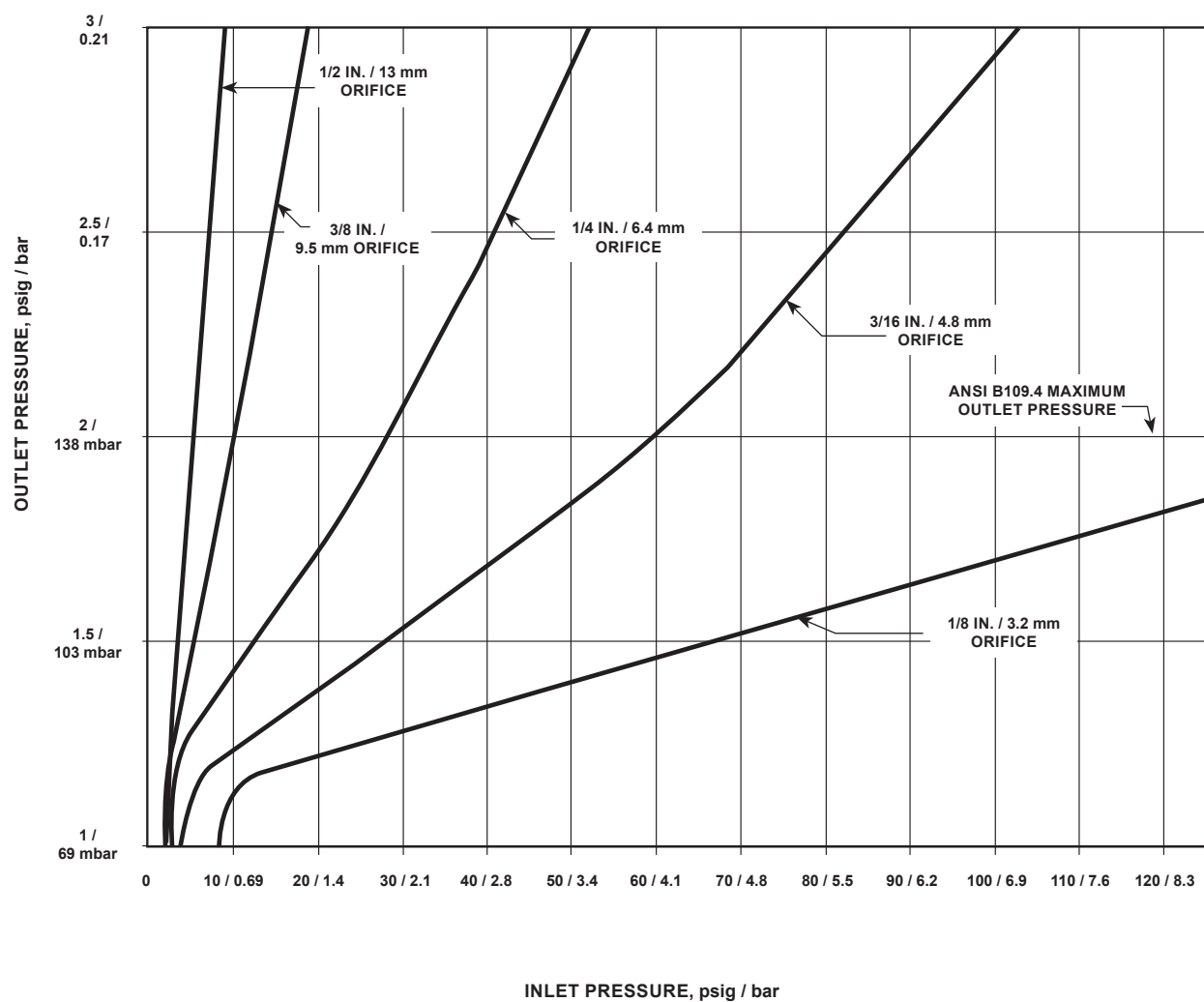


Figure 6. NPS 1 Body Type CS200IR Typical Relief Performance (Linkage Disconnect) at 14 in. w.c. / 35 mbar Set Pressure

Table 11. Type CS200IR Internal Relief Performance Table for 14 in. w.c. / 35 mbar Setpoint

| ORIFICE SIZE |     | REGULATOR SET PRESSURE |      | MAXIMUM INLET PRESSURE TO KEEP OUTLET PRESSURE AT OR BELOW <sup>(1)(2)</sup> |      |                     |      |
|--------------|-----|------------------------|------|------------------------------------------------------------------------------|------|---------------------|------|
|              |     |                        |      | 2 psig / 140 mbar                                                            |      | 2.5 psig / 0.17 bar |      |
| In.          | mm  | In. w.c.               | mbar | psig                                                                         | bar  | psig                | bar  |
| 1/8          | 3.2 | 14                     | 35   | >125                                                                         | >8.6 | >125                | >8.6 |
| 3/16         | 4.8 |                        |      | 59                                                                           | 4.1  | 82                  | 5.7  |
| 1/4          | 6.4 |                        |      | 28                                                                           | 1.9  | 40                  | 2.8  |
| 3/8          | 9.5 |                        |      | 10                                                                           | 0.69 | 14                  | 0.97 |

1. Relief value obtained by disconnecting the lever.  
2. 2 psig / 140 mbar is the maximum outlet pressure allowed per ANSI B109.4.

**Table 12. CS200IN and CS200IR Series Flow Capacities for 1 psig / 69 mbar Setpoint at 1% Accuracy**

|          | ACCURACY   |          |                       |                            |
|----------|------------|----------|-----------------------|----------------------------|
| SETPOINT | +/- 1% ABS |          | SET RANGE             | SPRING PART NUMBER / COLOR |
| 1 psig   | -0.16 psi  | 0.16 psi | 18 in. w.c. to 1 psig | GE30225X012 / Orange       |
| 69 mbar  | -11 mbar   | 11 mbar  | 45 to 69 mbar         |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |           |       |          |       |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |
|                                                                |          | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |
| 2                                                              | 140 mbar | 115                    | 3.1   | 240        | 6.4   | 375       | 10.1  | 625       | 16.8  | 875      | 23.5  |
| 3                                                              | 0.21     | 150                    | 4.0   | 325        | 8.7   | 500       | 13.4  | 800       | 21.5  | 1175     | 31.5  |
| 5                                                              | 0.34     | 225                    | 6.0   | 450        | 12.1  | 725       | 19.5  | 1200      | 32.2  | 1475     | 39.6  |
| 10                                                             | 0.69     | 325                    | 8.7   | 725        | 19.5  | 1150      | 30.9  | 1750      | 47.0  | 1950     | 52.3  |
| 15                                                             | 1.0      | 400                    | 10.7  | 850        | 22.8  | 1500      | 40.3  | 2100      | 56.4  | 2225     | 59.7  |
| 20                                                             | 1.4      | 475                    | 12.8  | 1025       | 27.5  | 1725      | 46.3  | 2300      | 61.7  | 2350     | 63.1  |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2175      | 58.4  | 2675      | 71.8  | 2700     | 72.5  |
| 40                                                             | 2.8      | 750                    | 20.1  | 1700       | 45.6  | 2550      | 68.5  | 2675      | 71.8  | 2700     | 72.5  |
| 50                                                             | 3.4      | 900                    | 24.2  | 2000       | 53.7  | 2650      | 71.1  | 2675      | 71.8  |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 2750      | 73.8  | 2675      | 71.8  |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2850       | 76.5  | 2850      | 76.5  |           |       |          |       |
| 100                                                            | 6.9      | 1600                   | 43.0  | 2850       | 76.5  | 2850      | 76.5  |           |       |          |       |
| 125                                                            | 8.6      | 1975                   | 53.0  | 2850       | 76.5  |           |       |           |       |          |       |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |
| 2                                                              | 140 mbar | 115                    | 3.1   | 240        | 6.4   | 400       | 10.7  | 675       | 18.1  | 950      | 25.5  |
| 3                                                              | 0.21     | 150                    | 4.0   | 325        | 8.7   | 550       | 14.8  | 975       | 26.2  | 1325     | 35.6  |
| 5                                                              | 0.34     | 225                    | 6.0   | 450        | 12.1  | 775       | 20.8  | 1400      | 37.6  | 1850     | 49.7  |
| 10                                                             | 0.69     | 325                    | 8.7   | 725        | 19.5  | 1200      | 32.2  | 2100      | 56.4  | 2600     | 69.8  |
| 15                                                             | 1.0      | 400                    | 10.7  | 850        | 22.8  | 1600      | 43.0  | 2750      | 73.8  | 3100     | 83.2  |
| 20                                                             | 1.4      | 475                    | 12.8  | 1025       | 27.5  | 1900      | 51.0  | 3200      | 85.9  | 3450     | 92.6  |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2425      | 65.1  | 3750      | 101   | 4000     | 107   |
| 40                                                             | 2.8      | 750                    | 20.1  | 1700       | 45.6  | 3150      | 84.6  | 4375      | 117   | 4000     | 107   |
| 50                                                             | 3.4      | 900                    | 24.2  | 2000       | 53.7  | 3700      | 99.3  | 4550      | 122   |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 4150      | 111   | 4550      | 122   |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2975       | 79.9  | 4150      | 111   |           |       |          |       |
| 100                                                            | 6.9      | 1600                   | 43.0  | 3650       | 98.0  | 4150      | 111   |           |       |          |       |
| 125                                                            | 8.6      | 1975                   | 53.0  | 4400       | 118   | 4150      | 111   |           |       |          |       |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |
| 2                                                              | 140 mbar | 115                    | 3.1   | 240        | 6.4   | 425       | 11.4  | 750       | 20.1  | 1000     | 26.8  |
| 3                                                              | 0.21     | 150                    | 4.0   | 325        | 8.7   | 575       | 15.4  | 1050      | 28.2  | 1450     | 38.9  |
| 5                                                              | 0.34     | 225                    | 6.0   | 450        | 12.1  | 825       | 22.1  | 1500      | 40.2  | 2100     | 56.4  |
| 10                                                             | 0.69     | 325                    | 8.7   | 725        | 19.5  | 1300      | 34.9  | 2475      | 66.4  | 3250     | 87.2  |
| 15                                                             | 1.0      | 400                    | 10.7  | 850        | 22.8  | 1600      | 42.9  | 3325      | 89.3  | 4100     | 110   |
| 20                                                             | 1.4      | 475                    | 12.8  | 1025       | 27.5  | 1925      | 51.7  | 4095      | 110   | 4900     | 131   |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2500      | 67.1  | 4400      | 118   | 4900     | 131   |
| 40                                                             | 2.8      | 750                    | 20.1  | 1700       | 45.6  | 3025      | 81.2  | 4400      | 118   | 4900     | 131   |
| 50                                                             | 3.4      | 900                    | 24.2  | 2000       | 53.7  | 3175      | 85.2  | 4400      | 118   |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 4275      | 115   | 4400      | 118   |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2975       | 79.9  | 4600      | 123   |           |       |          |       |
| 100                                                            | 6.9      | 1600                   | 43.0  | 3650       | 98.0  | 4600      | 123   |           |       |          |       |
| 125                                                            | 8.6      | 1975                   | 53.0  | 4400       | 118   | 4600      | 123   |           |       |          |       |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

# CS200 Series

**Table 13. CS200IN and CS200IR Series Flow Capacities for 1 psig / 69 mbar bar Setpoint at 2% Accuracy**

|          | ACCURACY   |          |                       |                            |
|----------|------------|----------|-----------------------|----------------------------|
| SETPOINT | +/- 2% ABS |          | SET RANGE             | SPRING PART NUMBER / COLOR |
| 1 psig   | -0.31 psi  | 0.31 psi | 18 in. w.c. to 1 psig | GE30225X012 / Orange       |
| 69 mbar  | -21 mbar   | 21 mbar  | 45 to 69 mbar         |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS                                                |          |                        |       |            |       |           |       |           |       |          |       |
|---------------------------------------------------------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|
| Inlet Pressure                                                                                                |          | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |
|                                                                                                               |          | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |
|                                                                                                               |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |
| psig                                                                                                          | bar      | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |
| 2                                                                                                             | 140 mbar | 115                    | 3.1   | 275        | 7.4   | 450       | 12.1  | 875       | 23.5  | 1300     | 34.9  |
| 3                                                                                                             | 0.21     | 150                    | 4.0   | 350        | 9.4   | 600       | 16.1  | 1150      | 30.9  | 1675     | 45.0  |
| 5                                                                                                             | 0.34     | 225                    | 6.0   | 500        | 13.4  | 850       | 22.8  | 1625      | 43.6  | 2150     | 57.7  |
| 10                                                                                                            | 0.69     | 325                    | 8.7   | 775        | 20.8  | 1300      | 34.9  | 2425      | 65.1  | 2550     | 68.5  |
| 15                                                                                                            | 1.0      | 400                    | 10.7  | 925        | 24.8  | 1650      | 44.3  | 2775      | 74.5  | 2875     | 77.2  |
| 20                                                                                                            | 1.4      | 475                    | 12.8  | 1050       | 28.2  | 1925      | 51.7  | 3000      | 80.5  | 2975     | 79.9  |
| 30                                                                                                            | 2.1      | 625                    | 16.8  | 1425       | 38.3  | 2500      | 67.1  | 3325      | 89.3  | 3400     | 91.3  |
| 40                                                                                                            | 2.8      | 750                    | 20.1  | 1725       | 46.3  | 3025      | 81.2  | 3500      | 94.0  | 3500     | 94.0  |
| 50                                                                                                            | 3.4      | 900                    | 24.2  | 2050       | 55.0  | 3425      | 91.9  | 3500      | 94.0  |          |       |
| 60                                                                                                            | 4.1      | 1050                   | 28.2  | 2375       | 63.8  | 3500      | 94.0  | 3500      | 94.0  |          |       |
| 80                                                                                                            | 5.5      | 1350                   | 36.2  | 3000       | 80.5  | 3500      | 94.0  |           |       |          |       |
| 100                                                                                                           | 6.9      | 1600                   | 43.0  | 3600       | 96.6  | 3500      | 94.0  |           |       |          |       |
| 125                                                                                                           | 8.6      | 1975                   | 53.0  | 3700       | 99.3  |           |       |           |       |          |       |
| psig                                                                                                          | bar      | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |
| 2                                                                                                             | 140 mbar | 115                    | 3.1   | 275        | 7.4   | 450       | 12.1  | 950       | 25.5  | 1450     | 38.9  |
| 3                                                                                                             | 0.21     | 150                    | 4.0   | 350        | 9.4   | 600       | 16.1  | 1275      | 34.2  | 1850     | 49.7  |
| 5                                                                                                             | 0.34     | 225                    | 6.0   | 500        | 13.4  | 850       | 22.8  | 1775      | 47.7  | 2525     | 67.8  |
| 10                                                                                                            | 0.69     | 325                    | 8.7   | 775        | 20.8  | 1300      | 34.9  | 2700      | 72.5  | 3400     | 91.3  |
| 15                                                                                                            | 1.0      | 400                    | 10.7  | 925        | 24.8  | 1650      | 44.3  | 3425      | 91.9  | 4025     | 108   |
| 20                                                                                                            | 1.4      | 475                    | 12.8  | 1050       | 28.2  | 1925      | 51.7  | 4000      | 107   | 4450     | 120   |
| 30                                                                                                            | 2.1      | 625                    | 16.8  | 1425       | 38.3  | 2500      | 67.1  | 4800      | 129   | 4875     | 131   |
| 40                                                                                                            | 2.8      | 750                    | 20.1  | 1725       | 46.3  | 3100      | 83.2  | 5450      | 146   | 5425     | 146   |
| 50                                                                                                            | 3.4      | 900                    | 24.2  | 2050       | 55.0  | 3675      | 98.7  | 5950      | 160   |          |       |
| 60                                                                                                            | 4.1      | 1050                   | 28.2  | 2375       | 63.8  | 4275      | 115   | 6000      | 161   |          |       |
| 80                                                                                                            | 5.5      | 1350                   | 36.2  | 3000       | 80.5  | 5425      | 146   |           |       |          |       |
| 100                                                                                                           | 6.9      | 1600                   | 43.0  | 3600       | 96.6  | 5825      | 156   |           |       |          |       |
| 125                                                                                                           | 8.6      | 1975                   | 53.0  | 4400       | 118   | 5825      | 156   |           |       |          |       |
| psig                                                                                                          | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |
| 2                                                                                                             | 140 mbar | 115                    | 3.1   | 275        | 7.4   | 450       | 12.1  | 1000      | 26.8  | 1450     | 38.9  |
| 3                                                                                                             | 0.21     | 150                    | 4.0   | 350        | 9.4   | 600       | 16.1  | 1325      | 35.6  | 1950     | 52.3  |
| 5                                                                                                             | 0.34     | 225                    | 6.0   | 500        | 13.4  | 850       | 22.8  | 1875      | 50.3  | 2800     | 75.2  |
| 10                                                                                                            | 0.69     | 325                    | 8.7   | 775        | 20.8  | 1300      | 34.9  | 2825      | 75.8  | 4250     | 114   |
| 15                                                                                                            | 1.0      | 400                    | 10.7  | 925        | 24.8  | 1650      | 44.3  | 3600      | 96.6  | 5250     | 141   |
| 20                                                                                                            | 1.4      | 475                    | 12.8  | 1050       | 28.2  | 1925      | 51.7  | 4200      | 113   | 6200     | 166   |
| 30                                                                                                            | 2.1      | 625                    | 16.8  | 1425       | 38.3  | 2500      | 67.1  | 5625      | 151   | 7400     | 199   |
| 40                                                                                                            | 2.8      | 750                    | 20.1  | 1725       | 46.3  | 3100      | 83.2  | 6825      | 183   | 7600     | 204   |
| 50                                                                                                            | 3.4      | 900                    | 24.2  | 2050       | 55.0  | 3675      | 98.7  | 7000      | 188   |          |       |
| 60                                                                                                            | 4.1      | 1050                   | 28.2  | 2375       | 63.8  | 4275      | 115   | 7000      | 188   |          |       |
| 80                                                                                                            | 5.5      | 1350                   | 36.2  | 3000       | 80.5  | 5425      | 146   |           |       |          |       |
| 100                                                                                                           | 6.9      | 1600                   | 43.0  | 3600       | 96.6  | 5825      | 156   |           |       |          |       |
| 125                                                                                                           | 8.6      | 1975                   | 53.0  | 4400       | 118   | 5825      | 156   |           |       |          |       |
| <div></div> Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded. |          |                        |       |            |       |           |       |           |       |          |       |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

**Table 14. CS200IN and CS200IR Series Flow Capacities for 1 psig / 69 mbar Setpoint at 10% Accuracy**

|          |          | ACCURACY |                       |  |                            |  |  |  |  |  |  |
|----------|----------|----------|-----------------------|--|----------------------------|--|--|--|--|--|--|
| SETPOINT | +/- 10%  |          | SET RANGE             |  | SPRING PART NUMBER / COLOR |  |  |  |  |  |  |
| 1 psig   | -0.1 psi | 0.1 psi  | 18 in. w.c. to 1 psig |  | GE30225X012 / Orange       |  |  |  |  |  |  |
| 69 mbar  | -7 mbar  | 7 mbar   | 45 to 69 mbar         |  |                            |  |  |  |  |  |  |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |           |       |          |       |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |
|                                                                |          | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |
| 2                                                              | 140 mbar | 115                    | 3.1   | 225        | 6.0   | 300       | 8.1   | 475       | 12.8  | 650      | 17.4  |
| 3                                                              | 0.21     | 150                    | 4.0   | 300        | 8.1   | 425       | 11.4  | 625       | 16.8  | 925      | 24.8  |
| 5                                                              | 0.34     | 225                    | 6.0   | 400        | 10.7  | 600       | 16.1  | 875       | 23.5  | 1250     | 33.6  |
| 10                                                             | 0.69     | 325                    | 8.7   | 700        | 18.8  | 1000      | 26.8  | 1400      | 37.6  | 1675     | 45.0  |
| 15                                                             | 1.0      | 400                    | 10.7  | 825        | 22.1  | 1325      | 35.6  | 1750      | 47.0  | 1900     | 51.0  |
| 20                                                             | 1.4      | 475                    | 12.8  | 975        | 26.2  | 1575      | 42.3  | 1900      | 51.0  | 2125     | 57.0  |
| 30                                                             | 2.1      | 625                    | 16.8  | 1325       | 35.6  | 1950      | 52.3  | 2250      | 60.4  | 2300     | 61.7  |
| 40                                                             | 2.8      | 750                    | 20.1  | 1650       | 44.3  | 2200      | 59.1  | 2250      | 60.4  | 2300     | 61.7  |
| 50                                                             | 3.4      | 900                    | 24.2  | 1900       | 51.0  | 2375      | 63.8  | 2250      | 60.4  |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2300       | 61.7  | 2500      | 67.1  | 2250      | 60.4  |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2600       | 69.8  | 2500      | 67.1  |           |       |          |       |
| 100                                                            | 6.9      | 1600                   | 43.0  | 2600       | 69.8  | 2500      | 67.1  |           |       |          |       |
| 125                                                            | 8.6      | 1975                   | 53.0  | 2600       | 69.8  |           |       |           |       |          |       |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |
| 2                                                              | 140 mbar | 115                    | 3.1   | 225        | 6.0   | 350       | 9.4   | 500       | 13.4  | 650      | 17.4  |
| 3                                                              | 0.21     | 150                    | 4.0   | 325        | 8.7   | 450       | 12.1  | 675       | 18.1  | 900      | 24.2  |
| 5                                                              | 0.34     | 225                    | 6.0   | 450        | 12.1  | 675       | 18.1  | 1050      | 28.2  | 1450     | 38.9  |
| 10                                                             | 0.69     | 325                    | 8.7   | 725        | 19.5  | 1075      | 28.9  | 1675      | 45.0  | 2125     | 57.0  |
| 15                                                             | 1.0      | 400                    | 10.7  | 850        | 22.8  | 1475      | 39.6  | 2200      | 59.1  | 2650     | 71.1  |
| 20                                                             | 1.4      | 475                    | 12.8  | 1025       | 27.5  | 1800      | 48.3  | 2625      | 70.5  | 2850     | 76.5  |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2350      | 63.1  | 3250      | 87.2  | 3500     | 94.0  |
| 40                                                             | 2.8      | 750                    | 20.1  | 1700       | 45.6  | 2950      | 79.2  | 3775      | 101   | 3650     | 98.0  |
| 50                                                             | 3.4      | 900                    | 24.2  | 2000       | 53.7  | 3450      | 92.6  | 4100      | 110   |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 3875      | 104   | 4100      | 110   |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2975       | 79.9  | 3875      | 104   |           |       |          |       |
| 100                                                            | 6.9      | 1600                   | 43.0  | 3650       | 98.0  | 3875      | 104   |           |       |          |       |
| 125                                                            | 8.6      | 1975                   | 53.0  | 4400       | 118   | 3875      | 104   |           |       |          |       |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |
| 2                                                              | 140 mbar | 115                    | 3.1   | 225        | 6.0   | 325       | 8.7   | 525       | 14.1  | 750      | 20.1  |
| 3                                                              | 0.21     | 150                    | 4.0   | 300        | 8.1   | 475       | 12.8  | 750       | 20.1  | 1075     | 28.9  |
| 5                                                              | 0.34     | 225                    | 6.0   | 425        | 11.4  | 675       | 18.1  | 1225      | 32.9  | 1475     | 39.6  |
| 10                                                             | 0.69     | 325                    | 8.7   | 600        | 16.1  | 1125      | 30.2  | 2000      | 53.7  | 2500     | 67.1  |
| 15                                                             | 1.0      | 400                    | 10.7  | 850        | 22.8  | 1500      | 40.3  | 2950      | 79.2  | 3550     | 95.3  |
| 20                                                             | 1.4      | 475                    | 12.8  | 1000       | 26.8  | 1875      | 50.3  | 3800      | 102   | 3900     | 105   |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2500      | 67.1  | 3800      | 102   | 3900     | 105   |
| 40                                                             | 2.8      | 750                    | 20.1  | 1700       | 45.6  | 3025      | 81.2  | 3800      | 102   | 3900     | 105   |
| 50                                                             | 3.4      | 900                    | 24.2  | 2000       | 53.7  | 3175      | 85.2  | 4300      | 115   |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2300       | 61.7  | 3800      | 102   | 4300      | 115   |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2975       | 79.8  | 3800      | 102   |           |       |          |       |
| 100                                                            | 6.9      | 1600                   | 43.0  | 3600       | 96.6  | 3800      | 102   |           |       |          |       |
| 125                                                            | 8.6      | 1975                   | 53.0  | 3800       | 102   | 3800      | 102   |           |       |          |       |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

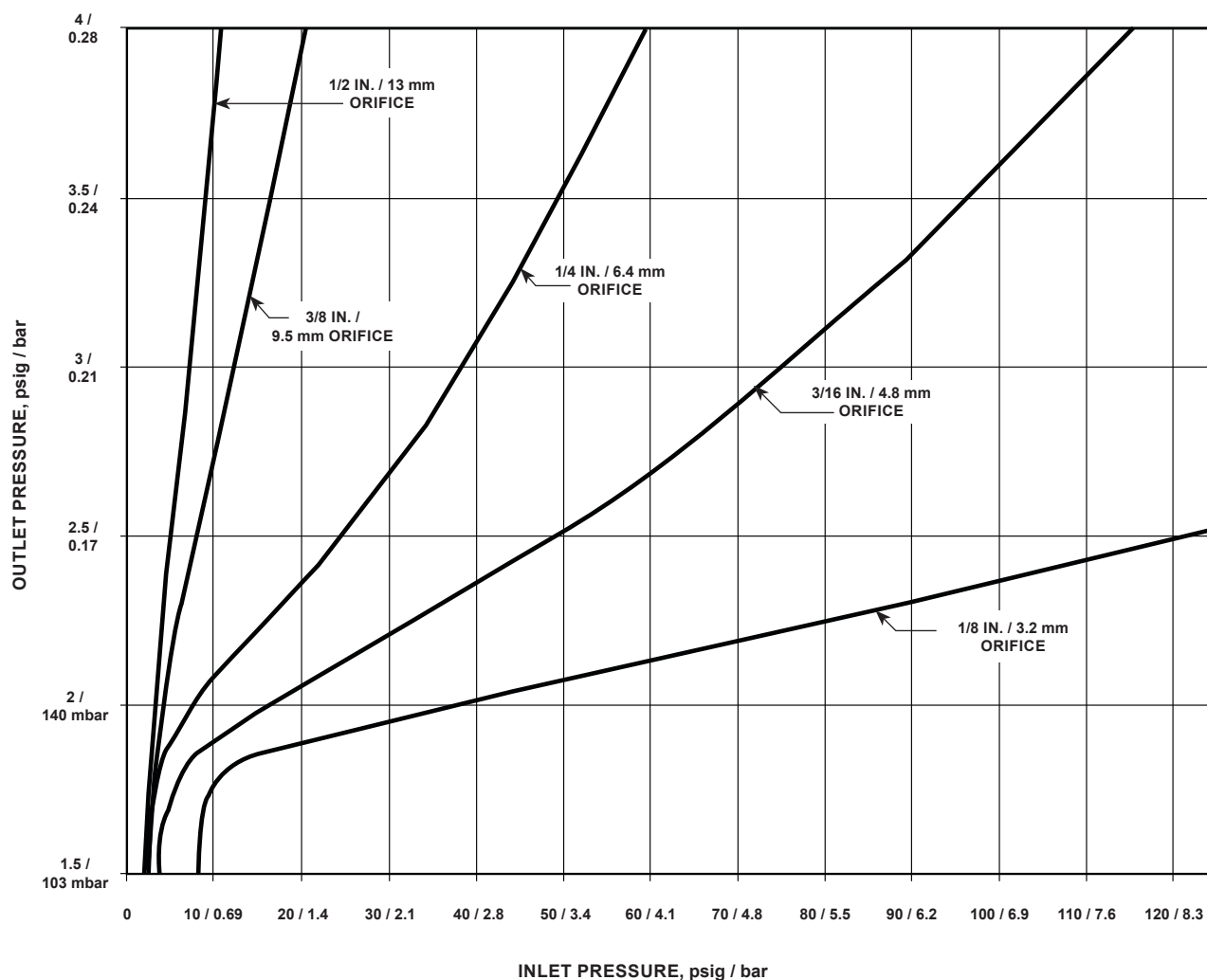
# CS200 Series

**Table 15. CS200IN and CS200IR Series Flow Capacities for 1 psig / 69 mbar Setpoint at 20% Accuracy**

|          | ACCURACY |         |                       |                            |
|----------|----------|---------|-----------------------|----------------------------|
| SETPOINT | +/- 20%  |         | SET RANGE             | SPRING PART NUMBER / COLOR |
| 1 psig   | -0.2 psi | 0.2 psi | 18 in. w.c. to 1 psig | GE30225X012 / Orange       |
| 69 mbar  | -14 mbar | 14 mbar | 45 to 69 mbar         |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |           |       |          |       |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |
|                                                                |          | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |
| 2                                                              | 140 mbar | 115                    | 3.1   | 250        | 6.7   | 400       | 10.7  | 700       | 18.8  | 1025     | 27.5  |
| 3                                                              | 0.21     | 150                    | 4.0   | 325        | 8.7   | 525       | 14.1  | 925       | 24.8  | 1325     | 35.6  |
| 5                                                              | 0.34     | 225                    | 6.0   | 475        | 12.8  | 750       | 20.1  | 1325      | 35.6  | 1675     | 45.0  |
| 10                                                             | 0.69     | 325                    | 8.7   | 750        | 20.1  | 1200      | 32.2  | 1875      | 50.3  | 2100     | 56.4  |
| 15                                                             | 1.0      | 400                    | 10.7  | 875        | 23.5  | 1550      | 41.6  | 2250      | 60.4  | 2450     | 65.8  |
| 20                                                             | 1.4      | 475                    | 12.8  | 1025       | 27.5  | 1775      | 47.7  | 2550      | 68.5  | 2675     | 71.8  |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2250      | 60.4  | 2800      | 75.2  | 2950     | 79.2  |
| 40                                                             | 2.8      | 750                    | 20.1  | 1700       | 45.6  | 2675      | 71.8  | 2800      | 75.2  | 2950     | 79.2  |
| 50                                                             | 3.4      | 900                    | 24.2  | 2025       | 54.4  | 2900      | 77.9  | 2800      | 75.2  |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 3250      | 87.2  | 2800      | 75.2  |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2950       | 79.2  | 3250      | 87.2  |           |       |          |       |
| 100                                                            | 6.9      | 1600                   | 43.0  | 3200       | 85.9  | 3250      | 87.2  |           |       |          |       |
| 125                                                            | 8.6      | 1975                   | 53.0  | 3200       | 85.9  |           |       |           |       |          |       |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |
| 2                                                              | 140 mbar | 115                    | 3.1   | 250        | 6.7   | 425       | 11.4  | 825       | 22.1  | 1050     | 28.2  |
| 3                                                              | 0.21     | 150                    | 4.0   | 325        | 8.7   | 575       | 15.4  | 1100      | 29.5  | 1500     | 40.3  |
| 5                                                              | 0.34     | 225                    | 6.0   | 475        | 12.8  | 800       | 21.5  | 1575      | 42.3  | 2025     | 54.4  |
| 10                                                             | 0.69     | 325                    | 8.7   | 750        | 20.1  | 1225      | 32.9  | 2325      | 62.4  | 2825     | 75.8  |
| 15                                                             | 1.0      | 400                    | 10.7  | 875        | 23.5  | 1625      | 43.6  | 2975      | 79.9  | 3400     | 91.3  |
| 20                                                             | 1.4      | 475                    | 12.8  | 1025       | 27.5  | 1900      | 51.0  | 3400      | 91.3  | 3750     | 101   |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2450      | 65.8  | 3975      | 107   | 4300     | 115   |
| 40                                                             | 2.8      | 750                    | 20.1  | 1700       | 45.6  | 3100      | 83.2  | 4800      | 129   | 4300     | 115   |
| 50                                                             | 3.4      | 900                    | 24.2  | 2025       | 54.4  | 3675      | 98.7  | 4750      | 128   |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 4200      | 113   | 4750      | 128   |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2975       | 79.9  | 5250      | 141   |           |       |          |       |
| 100                                                            | 6.9      | 1600                   | 43.0  | 3600       | 96.6  | 5400      | 145   |           |       |          |       |
| 125                                                            | 8.6      | 1975                   | 53.0  | 4400       | 118   | 4550      | 122   |           |       |          |       |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |
| 2                                                              | 140 mbar | 115                    | 3.1   | 250        | 6.7   | 425       | 11.4  | 850       | 22.8  | 1175     | 31.5  |
| 3                                                              | 0.21     | 150                    | 4.0   | 325        | 8.7   | 575       | 15.4  | 1175      | 31.5  | 1675     | 45.0  |
| 5                                                              | 0.34     | 225                    | 6.0   | 475        | 12.8  | 825       | 22.1  | 1675      | 45.0  | 2375     | 63.8  |
| 10                                                             | 0.69     | 325                    | 8.7   | 750        | 20.1  | 1300      | 34.9  | 2600      | 69.8  | 3600     | 96.6  |
| 15                                                             | 1.0      | 400                    | 10.7  | 875        | 23.5  | 1625      | 43.6  | 3475      | 93.3  | 4650     | 125   |
| 20                                                             | 1.4      | 475                    | 12.8  | 1025       | 27.5  | 1925      | 51.7  | 4125      | 111   | 5650     | 152   |
| 30                                                             | 2.1      | 625                    | 16.8  | 1400       | 37.6  | 2500      | 67.1  | 5575      | 150   | 6975     | 187   |
| 40                                                             | 2.8      | 750                    | 20.1  | 1700       | 45.6  | 3050      | 81.9  | 6675      | 179   | 7525     | 202   |
| 50                                                             | 3.4      | 900                    | 24.2  | 2025       | 54.4  | 3325      | 89.3  | 7600      | 204   |          |       |
| 60                                                             | 4.1      | 1050                   | 28.2  | 2350       | 63.1  | 4275      | 115   | 7600      | 204   |          |       |
| 80                                                             | 5.5      | 1350                   | 36.2  | 2975       | 79.9  | 5425      | 146   |           |       |          |       |
| 100                                                            | 6.9      | 1600                   | 43.0  | 3600       | 96.6  | 5825      | 156   |           |       |          |       |
| 125                                                            | 8.6      | 1975                   | 53.0  | 4400       | 118   | 5825      | 156   |           |       |          |       |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.  
 Gray areas indicate limited capacities due to boost effects.



**Figure 7.** NPS 1 Body Type CS200IR Typical Relief Performance (Linkage Disconnect) at 1 psig / 69 mbar Set Pressure

**Table 16.** Type CS200IR Internal Relief Performance Table for 1 psig / 69 mbar Setpoint

| ORIFICE SIZE |     | REGULATOR SET PRESSURE |      | MAXIMUM INLET PRESSURE TO KEEP OUTLET PRESSURE AT OR BELOW <sup>(1)</sup> |      |                   |      |
|--------------|-----|------------------------|------|---------------------------------------------------------------------------|------|-------------------|------|
|              |     |                        |      | 2.5 psig / 0.17 bar                                                       |      | 3 psig / 0.21 bar |      |
| In.          | mm  | psig                   | mbar | psig                                                                      | bar  | psig              | bar  |
| 1/8          | 3.2 | 1                      | 69   | 121                                                                       | 8.3  | >125              | >8.6 |
| 3/16         | 4.8 |                        |      | 49                                                                        | 3.4  | 74                | 5.1  |
| 1/4          | 6.4 |                        |      | 24                                                                        | 1.7  | 38                | 2.6  |
| 3/8          | 9.5 |                        |      | 8                                                                         | 0.55 | 12                | 0.83 |

1. Relief value obtained by disconnecting the lever.

# CS200 Series

**Table 17. CS200IN and CS200IR Series Flow Capacities for 2 psig / 140 mbar Setpoint at 1% Accuracy**

|          | ACCURACY   |          |                |                            |
|----------|------------|----------|----------------|----------------------------|
| SETPOINT | +/- 1% ABS |          | SET RANGE      | SPRING PART NUMBER / COLOR |
| 2 psig   | -0.17 psi  | 0.17 psi | 1 to 2 psig    | GE30190X012 / Black        |
| 140 mbar | -12 mbar   | 12 mbar  | 69 to 140 mbar |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS                                                |      |                        |       |            |       |           |       |           |       |          |       |
|---------------------------------------------------------------------------------------------------------------|------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|
| Inlet Pressure                                                                                                |      | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |
|                                                                                                               |      | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |
|                                                                                                               |      | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |
| psig                                                                                                          | bar  | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 250        | 6.7   | 250       | 6.7   | 425       | 11.4  | 550      | 14.8  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 350        | 9.4   | 445       | 11.9  | 700       | 18.8  | 1000     | 26.8  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 550        | 14.8  | 720       | 19.3  | 1125      | 30.2  | 1550     | 41.6  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 750        | 20.1  | 1100      | 29.5  | 1575      | 42.3  | 1900     | 51.0  |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 950        | 25.5  | 1375      | 36.9  | 1800      | 48.3  | 2125     | 57.0  |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1300       | 34.9  | 1850      | 49.7  | 2150      | 57.7  | 2475     | 66.4  |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1425       | 38.3  | 2175      | 58.4  | 2450      | 65.8  | 2575     | 69.1  |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 1900       | 51.0  | 2475      | 66.4  | 2575      | 69.1  |          |       |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2100       | 56.4  | 2600      | 69.8  | 2675      | 71.8  |          |       |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 2475       | 66.4  | 2850      | 76.5  |           |       |          |       |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 2725       | 73.2  | 2850      | 76.5  |           |       |          |       |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 2850       | 76.5  |           |       |           |       |          |       |
| psig                                                                                                          | bar  | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 250        | 6.7   | 300       | 8.1   | 475       | 12.8  | 675      | 18.1  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 350        | 9.4   | 445       | 11.9  | 800       | 21.5  | 1000     | 26.8  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 550        | 14.8  | 720       | 19.3  | 1400      | 37.6  | 1850     | 49.7  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 800        | 21.5  | 1120      | 30.1  | 1900      | 51.0  | 2500     | 67.1  |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1000       | 26.8  | 1445      | 38.8  | 2325      | 62.4  | 2800     | 75.2  |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1350       | 36.2  | 2045      | 54.9  | 3000      | 80.5  | 3300     | 88.6  |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1600       | 43.0  | 2750      | 73.8  | 3500      | 94.0  | 4100     | 110   |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 1950       | 52.3  | 3300      | 88.6  | 3900      | 105   |          |       |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2300       | 61.7  | 3825      | 103   | 4100      | 110   |          |       |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 4200      | 113   |           |       |          |       |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3550       | 95.3  | 4200      | 113   |           |       |          |       |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 4200       | 113   | 4200      | 113   |           |       |          |       |
| psig                                                                                                          | bar  | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 250        | 6.7   | 290       | 7.7   | 475       | 12.8  | 675      | 18.1  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 350        | 9.4   | 445       | 11.9  | 825       | 22.1  | 1000     | 26.8  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 550        | 14.8  | 720       | 19.3  | 1500      | 40.3  | 1850     | 49.7  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 800        | 21.5  | 1120      | 30.1  | 2175      | 58.4  | 2800     | 75.2  |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1000       | 26.8  | 1495      | 40.1  | 2675      | 71.8  | 3675     | 98.7  |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1350       | 36.2  | 2220      | 59.6  | 3950      | 106   | 5400     | 145   |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1600       | 43.0  | 3000      | 80.5  | 5400      | 145   | 5400     | 145   |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 1950       | 52.3  | 3475      | 93.3  | 5400      | 145   |          |       |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2300       | 61.7  | 4075      | 109   | 5400      | 145   |          |       |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 4400      | 118   |           |       |          |       |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3550       | 95.3  | 4400      | 118   |           |       |          |       |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 4200       | 113   | 4400      | 118   |           |       |          |       |
| <div></div> Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded. |      |                        |       |            |       |           |       |           |       |          |       |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

**Table 18. CS200IN and CS200IR Series Flow Capacities for 2 psig / 140 mbar Setpoint at 2% Accuracy**

|          | ACCURACY   |          |                |                            |
|----------|------------|----------|----------------|----------------------------|
| SETPOINT | +/- 2% ABS |          | SET RANGE      | SPRING PART NUMBER / COLOR |
| 2 psig   | -0.33 psi  | 0.33 psi | 1 to 2 psig    | GE30190X012 / Black        |
| 140 mbar | -23 mbar   | 23 mbar  | 69 to 140 mbar |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS                                                |      |                        |       |            |       |           |       |           |       |          |       |
|---------------------------------------------------------------------------------------------------------------|------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|
| Inlet Pressure                                                                                                |      | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |
|                                                                                                               |      | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |
|                                                                                                               |      | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |
| psig                                                                                                          | bar  | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 275        | 7.4   | 450       | 12.1  | 700       | 18.8  | 1100     | 29.5  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 425        | 11.4  | 675       | 18.1  | 1050      | 28.2  | 1550     | 41.6  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 675        | 18.1  | 1150      | 30.9  | 1850      | 49.7  | 2225     | 59.7  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 875        | 23.5  | 1450      | 38.9  | 2175      | 58.4  | 2650     | 71.1  |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1050       | 28.2  | 1725      | 46.3  | 2500      | 67.1  | 2825     | 75.8  |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1400       | 37.6  | 2150      | 57.7  | 2975      | 79.9  | 3300     | 88.6  |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1650       | 44.3  | 2800      | 75.2  | 3275      | 87.9  | 3300     | 88.6  |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 2050       | 55.0  | 3000      | 80.5  | 3400      | 91.3  |          |       |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2275       | 61.1  | 3300      | 88.6  | 3400      | 91.3  |          |       |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 3500      | 94.0  |           |       |          |       |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3400       | 91.3  | 3500      | 94.0  |           |       |          |       |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 3400       | 91.3  |           |       |           |       |          |       |
| psig                                                                                                          | bar  | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 275        | 7.4   | 450       | 12.1  | 700       | 18.8  | 1100     | 29.5  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 425        | 11.4  | 675       | 18.1  | 1250      | 33.6  | 1725     | 46.3  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 675        | 18.1  | 1175      | 31.5  | 2075      | 55.7  | 2750     | 73.8  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 875        | 23.5  | 1550      | 41.6  | 2675      | 71.8  | 3425     | 91.9  |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1050       | 28.2  | 1900      | 51.0  | 3250      | 87.2  | 3900     | 105   |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1400       | 37.6  | 2500      | 67.1  | 4025      | 108   | 4475     | 120   |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1650       | 44.3  | 3050      | 81.9  | 4550      | 122   | 5100     | 137   |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 2050       | 55.0  | 3650      | 98.0  | 5000      | 134   |          |       |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2275       | 61.1  | 4250      | 114   | 5200      | 140   |          |       |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 5450      | 146   |           |       |          |       |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3600       | 96.6  | 5700      | 153   |           |       |          |       |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 4450       | 120   | 5700      | 153   |           |       |          |       |
| psig                                                                                                          | bar  | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 275        | 7.4   | 430       | 11.5  | 750       | 20.1  | 1150     | 30.9  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 425        | 11.4  | 675       | 18.1  | 1300      | 34.9  | 1700     | 45.6  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 675        | 18.1  | 1175      | 31.5  | 2225      | 59.7  | 3090     | 83.0  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 875        | 23.5  | 1550      | 41.6  | 2975      | 79.9  | 4090     | 110   |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1050       | 28.2  | 1900      | 51.0  | 3800      | 102   | 5025     | 135   |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1400       | 37.6  | 2500      | 67.1  | 5250      | 141   | 5900     | 158   |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1650       | 44.3  | 3050      | 81.9  | 5800      | 155   | 5900     | 158   |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 2050       | 55.0  | 3650      | 98.0  | 5800      | 155   |          |       |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2275       | 61.1  | 4250      | 114   | 5800      | 155   |          |       |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 4900      | 131   |           |       |          |       |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3600       | 96.6  | 4900      | 131   |           |       |          |       |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 4450       | 120   | 4900      | 131   |           |       |          |       |
| <div></div> Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded. |      |                        |       |            |       |           |       |           |       |          |       |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

# CS200 Series

**Table 19. CS200IN and CS200IR Series Flow Capacities for 2 psig / 140 mbar Setpoint at 10% Accuracy**

|          | ACCURACY |         |                |                            |
|----------|----------|---------|----------------|----------------------------|
| SETPOINT | +/- 10%  |         | SET RANGE      | SPRING PART NUMBER / COLOR |
| 2 psig   | -0.2 psi | 0.2 psi | 1 to 2 psig    | GE30190X012 / Black        |
| 140 mbar | -14 mbar | 14 mbar | 69 to 140 mbar |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS                                                |      |                        |       |            |       |           |       |           |       |          |       |  |  |
|---------------------------------------------------------------------------------------------------------------|------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|--|--|
| Inlet Pressure                                                                                                |      | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |  |  |
|                                                                                                               |      | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |  |  |
|                                                                                                               |      | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |  |  |
| psig                                                                                                          | bar  | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |  |  |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 250        | 6.7   | 250       | 6.7   | 425       | 11.4  | 550      | 14.8  |  |  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 350        | 9.4   | 445       | 11.9  | 700       | 18.8  | 1000     | 26.8  |  |  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 550        | 14.8  | 720       | 19.3  | 1125      | 30.2  | 1550     | 41.6  |  |  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 750        | 20.1  | 1100      | 29.5  | 1575      | 42.3  | 1900     | 51.0  |  |  |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 950        | 25.5  | 1375      | 36.9  | 1800      | 48.3  | 2125     | 57.0  |  |  |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1300       | 34.9  | 1850      | 49.7  | 2150      | 57.7  | 2475     | 66.4  |  |  |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1425       | 38.3  | 2175      | 58.4  | 2450      | 65.8  | 2575     | 69.1  |  |  |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 1900       | 51.0  | 2475      | 66.4  | 2575      | 69.1  |          |       |  |  |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2100       | 56.4  | 2600      | 69.8  | 2675      | 71.8  |          |       |  |  |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 2475       | 66.4  | 2850      | 76.5  |           |       |          |       |  |  |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 2725       | 73.2  | 2850      | 76.5  |           |       |          |       |  |  |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 2850       | 76.5  |           |       |           |       |          |       |  |  |
|                                                                                                               |      |                        |       |            |       |           |       |           |       |          |       |  |  |
| psig                                                                                                          | bar  | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |  |  |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 250        | 6.7   | 300       | 8.1   | 475       | 12.8  | 675      | 18.1  |  |  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 350        | 9.4   | 445       | 11.9  | 800       | 21.5  | 1000     | 26.8  |  |  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 550        | 14.8  | 720       | 19.3  | 1400      | 37.6  | 1850     | 49.7  |  |  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 800        | 21.5  | 1120      | 30.1  | 1900      | 51.0  | 2500     | 67.1  |  |  |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1000       | 26.8  | 1445      | 38.8  | 2325      | 62.4  | 2800     | 75.2  |  |  |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1350       | 36.2  | 2045      | 54.9  | 3000      | 80.5  | 3300     | 88.6  |  |  |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1600       | 43.0  | 2750      | 73.8  | 3500      | 94.0  | 4100     | 110   |  |  |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 1950       | 52.3  | 3300      | 88.6  | 3900      | 105   |          |       |  |  |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2300       | 61.7  | 3825      | 103   | 4100      | 110   |          |       |  |  |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 4200      | 113   |           |       |          |       |  |  |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3550       | 95.3  | 4200      | 113   |           |       |          |       |  |  |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 4200       | 113   | 4200      | 113   |           |       |          |       |  |  |
|                                                                                                               |      |                        |       |            |       |           |       |           |       |          |       |  |  |
| psig                                                                                                          | bar  | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |  |  |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 250        | 6.7   | 300       | 8.1   | 475       | 12.8  | 675      | 18.1  |  |  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 350        | 9.4   | 445       | 11.9  | 825       | 22.1  | 1000     | 26.8  |  |  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 550        | 14.8  | 720       | 19.3  | 1525      | 40.9  | 1850     | 49.7  |  |  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 640        | 17.1  | 1120      | 30.1  | 2175      | 58.4  | 2800     | 75.2  |  |  |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1000       | 26.8  | 1495      | 40.1  | 2675      | 71.8  | 3675     | 98.7  |  |  |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1100       | 29.5  | 2220      | 59.6  | 3950      | 106   | 5475     | 147   |  |  |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1600       | 43.0  | 3000      | 80.5  | 5700      | 153   | 6600     | 177   |  |  |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 1950       | 52.3  | 3475      | 93.3  | 5900      | 158   |          |       |  |  |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2300       | 61.7  | 4075      | 109   | 5900      | 158   |          |       |  |  |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 5300      | 142   |           |       |          |       |  |  |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3550       | 95.3  | 5300      | 142   |           |       |          |       |  |  |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 4200       | 113   | 5300      | 142   |           |       |          |       |  |  |
|                                                                                                               |      |                        |       |            |       |           |       |           |       |          |       |  |  |
| <div></div> Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded. |      |                        |       |            |       |           |       |           |       |          |       |  |  |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

**Table 20. CS200IN and CS200IR Series Flow Capacities for 2 psig / 140 mbar Setpoint at 20% Accuracy**

|          | ACCURACY |         |                |                            |
|----------|----------|---------|----------------|----------------------------|
| SETPOINT | +/- 20%  |         | SET RANGE      | SPRING PART NUMBER / COLOR |
| 2 psig   | -0.4 psi | 0.4 psi | 1 to 2 psig    | GE30190X012 / Black        |
| 140 mbar | -28 mbar | 28 mbar | 69 to 140 mbar |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS                                                |      |                        |       |            |       |           |       |           |       |          |       |
|---------------------------------------------------------------------------------------------------------------|------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|
| Inlet Pressure                                                                                                |      | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |
|                                                                                                               |      | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |
|                                                                                                               |      | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |
| psig                                                                                                          | bar  | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 275        | 7.4   | 450       | 12.1  | 775       | 20.8  | 1250     | 33.6  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 425        | 11.4  | 675       | 18.1  | 1200      | 32.2  | 1825     | 49.0  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 675        | 18.1  | 1150      | 30.9  | 2025      | 54.4  | 2400     | 64.4  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 875        | 23.5  | 1450      | 38.9  | 2450      | 65.8  | 2825     | 75.8  |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1050       | 28.2  | 1725      | 46.3  | 2725      | 73.2  | 3050     | 81.9  |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1400       | 37.6  | 2150      | 57.7  | 3200      | 85.9  | 3600     | 96.6  |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1650       | 44.3  | 3000      | 80.5  | 3525      | 94.6  | 3600     | 96.6  |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 2050       | 55.0  | 3225      | 86.6  | 3600      | 96.6  |          |       |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2275       | 61.1  | 3600      | 96.6  | 3600      | 96.6  |          |       |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 3600      | 96.6  |           |       |          |       |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3400       | 91.3  | 3600      | 96.6  |           |       |          |       |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 3400       | 91.3  |           |       |           |       |          |       |
| psig                                                                                                          | bar  | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 275        | 7.4   | 450       | 12.1  | 925       | 24.8  | 1300     | 34.9  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 425        | 11.4  | 675       | 18.1  | 1400      | 37.6  | 2025     | 54.4  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 675        | 18.1  | 1175      | 31.5  | 2250      | 60.4  | 3050     | 81.9  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 875        | 23.5  | 1550      | 41.6  | 2950      | 79.2  | 3800     | 102   |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1050       | 28.2  | 1900      | 51.0  | 3525      | 94.6  | 4200     | 113   |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1400       | 37.6  | 2500      | 67.1  | 4375      | 117   | 4800     | 129   |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1650       | 44.3  | 3050      | 81.9  | 4950      | 133   | 5550     | 149   |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 2050       | 55.0  | 3650      | 98.0  | 5500      | 148   |          |       |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2275       | 61.1  | 4250      | 114   | 5775      | 155   |          |       |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 5450      | 146   |           |       |          |       |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3600       | 96.6  | 6000      | 161   |           |       |          |       |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 4450       | 120   | 6000      | 161   |           |       |          |       |
| psig                                                                                                          | bar  | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |
| 3                                                                                                             | 0.21 | 120                    | 3.2   | 275        | 7.4   | 450       | 12.1  | 825       | 22.1  | 1300     | 34.8  |
| 5                                                                                                             | 0.34 | 150                    | 4.0   | 425        | 11.4  | 675       | 18.1  | 1450      | 38.9  | 1900     | 51.0  |
| 10                                                                                                            | 0.69 | 250                    | 6.7   | 675        | 18.1  | 1175      | 31.5  | 2400      | 64.4  | 3400     | 91.1  |
| 15                                                                                                            | 1.0  | 330                    | 8.9   | 875        | 23.5  | 1550      | 41.6  | 3200      | 85.9  | 4400     | 118   |
| 20                                                                                                            | 1.4  | 425                    | 11.4  | 1050       | 28.2  | 1900      | 51.0  | 3850      | 104   | 5450     | 146   |
| 30                                                                                                            | 2.1  | 550                    | 14.8  | 1400       | 37.6  | 2500      | 67.1  | 5250      | 141   | 6000     | 161   |
| 40                                                                                                            | 2.8  | 750                    | 20.1  | 1650       | 44.3  | 3050      | 81.9  | 5800      | 155   | 6000     | 161   |
| 50                                                                                                            | 3.4  | 875                    | 23.5  | 2050       | 55.0  | 3650      | 98.0  | 5800      | 155   |          |       |
| 60                                                                                                            | 4.1  | 1025                   | 27.5  | 2275       | 61.1  | 4250      | 114   | 5800      | 155   |          |       |
| 80                                                                                                            | 5.5  | 1300                   | 34.9  | 3000       | 80.5  | 5450      | 146   |           |       |          |       |
| 100                                                                                                           | 6.9  | 1600                   | 43.0  | 3600       | 96.6  | 5450      | 146   |           |       |          |       |
| 125                                                                                                           | 8.6  | 1975                   | 53.0  | 4450       | 120   | 5450      | 146   |           |       |          |       |
| <div></div> Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded. |      |                        |       |            |       |           |       |           |       |          |       |

Blank areas indicate where maximum operating inlet pressure for a given orifice size is exceeded.

# CS200 Series

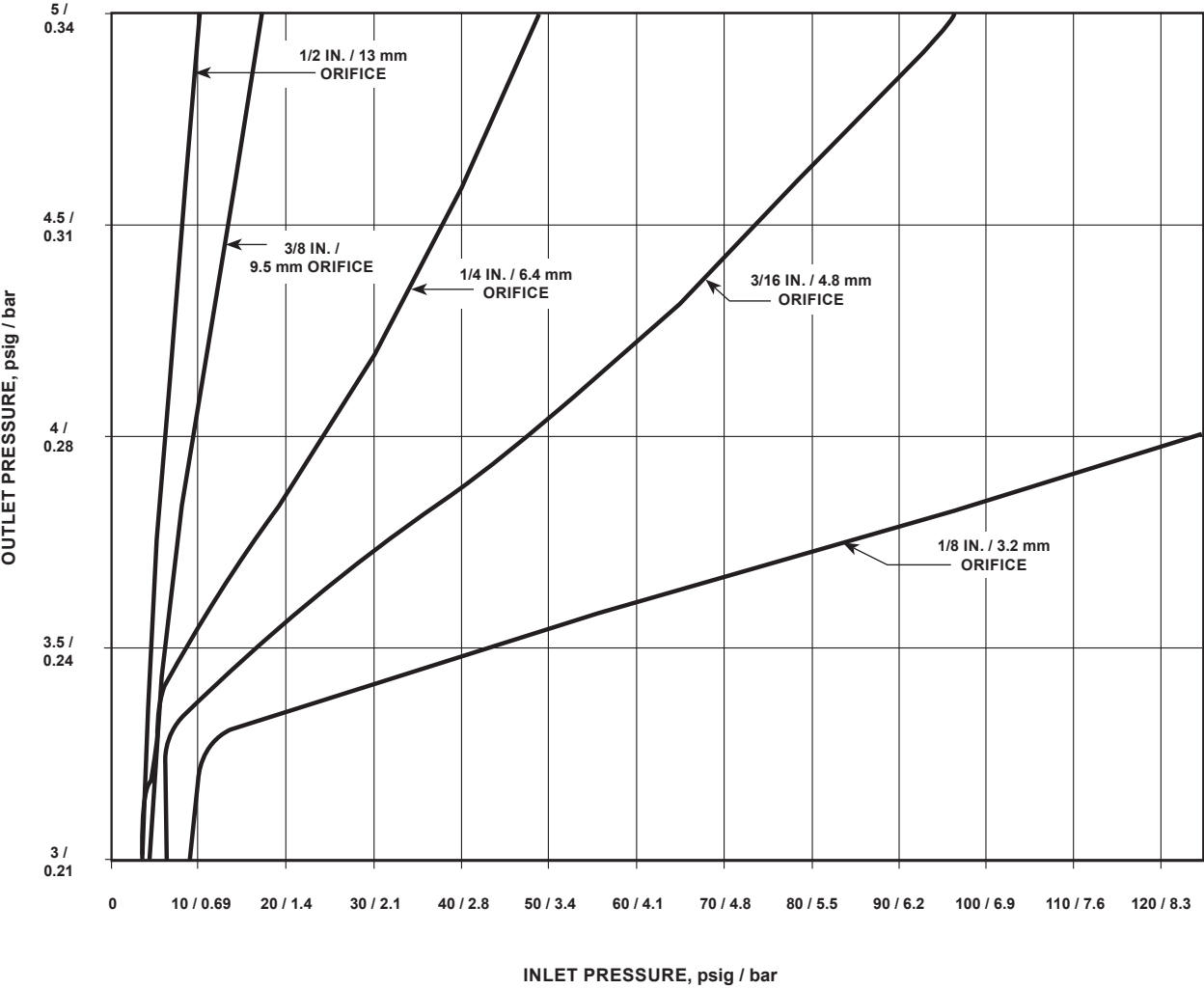


Figure 8. NPS 1 Body Type CS200IR Typical Relief Performance (Linkage Disconnect) at 2 psig / 140 mbar Set Pressure

Table 21. Type CS200IR Internal Relief Performance Table for 2 psig / 140 mbar Setpoint

| ORIFICE SIZE                                         |     | REGULATOR SET PRESSURE |      | MAXIMUM INLET PRESSURE TO KEEP OUTLET PRESSURE AT OR BELOW <sup>(1)</sup> |      |                   |      |
|------------------------------------------------------|-----|------------------------|------|---------------------------------------------------------------------------|------|-------------------|------|
|                                                      |     |                        |      | 4 psig / 0.28 bar                                                         |      | 5 psig / 0.34 bar |      |
| In.                                                  | mm  | psig                   | mbar | psig                                                                      | bar  | psig              | bar  |
| 1/8                                                  | 3.2 | 2                      | 140  | 122                                                                       | 8.4  | >125              | >8.6 |
| 3/16                                                 | 4.8 |                        |      | 47                                                                        | 3.2  | 96                | 6.6  |
| 1/4                                                  | 6.4 |                        |      | 23                                                                        | 1.6  | 49                | 3.4  |
| 3/8                                                  | 9.5 |                        |      | 9                                                                         | 0.62 | 17                | 1.17 |
| 1. Relief value obtained by disconnecting the lever. |     |                        |      |                                                                           |      |                   |      |

**Table 22. CS205 and CS206 Series Flow Capacities for 7 in. w.c. / 17 mbar Setpoint**

| SETPOINT   | ACCURACY    |            | SET RANGE       | SPRING PART NUMBER / COLOR |
|------------|-------------|------------|-----------------|----------------------------|
|            | Droop       | Boost      |                 |                            |
| 7 in. w.c. | -1 in. w.c. | 2 in. w.c. | 6 to 8 in. w.c. | GE30188X012 / Gold         |
| 17 mbar    | -2 mbar     | 5 mbar     | 15 to 20 mbar   |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |            |       |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|------------|-------|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |            |       |
|                                                                |          | 18 / 3.2               |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 5/16 / 7.9 |       |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH       | Nm³/h |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |            |       |
| 0.5                                                            | 34 mbar  |                        |       |            |       | 155       | 4.2   | 205        | 5.5   |
| 1                                                              | 69 mbar  |                        |       |            |       | 160       | 4.3   | 260        | 7.0   |
| 2                                                              | 140 mbar | 110                    | 2.9   | 235        | 6.3   | 325       | 8.7   | 370        | 9.9   |
| 3                                                              | 0.21     | 145                    | 3.9   | 320        | 8.6   | 430       | 11.5  | 475        | 12.7  |
| 5                                                              | 0.34     | 200                    | 5.4   | 450        | 12.1  | 615       | 16.5  | 710        | 19.0  |
| 10                                                             | 0.69     | 290                    | 7.8   | 690        | 18.5  | 985       | 26.4  | 1060       | 28.4  |
| 15                                                             | 1.0      | 400                    | 10.7  | 950        | 25.5  | 1310      | 35.1  | 1380       | 37.0  |
| 20                                                             | 1.4      | 510                    | 13.7  | 1180       | 31.6  | 1560      | 41.8  | 1600       | 42.9  |
| 30                                                             | 2.1      | 685                    | 18.4  | 1570       | 42.1  | 1990      | 53.3  | 1900       | 50.9  |
| 40                                                             | 2.8      | 855                    | 22.9  | 1970       | 52.8  | 2300      | 61.6  | 2160       | 57.9  |
| 50                                                             | 3.4      | 1030                   | 27.6  | 2300       | 61.6  | 2570      | 68.9  | 2380       | 63.8  |
| 60                                                             | 4.1      | 1220                   | 32.7  | 2550       | 68.3  | 2700      | 72.3  | 2560       | 68.6  |
| 80                                                             | 5.5      | 1550                   | 41.5  | 2910       | 78.0  | 2970      | 79.6  | 2640       | 70.7  |
| 90                                                             | 6.2      | 1740                   | 46.6  | 3020       | 80.9  | 2950      | 79.0  | 2750       | 73.7  |
| 100                                                            | 6.9      | 1880                   | 50.4  | 2810       | 75.3  | 2890      | 77.4  | 2670       | 71.5  |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |            |       |
| 0.5                                                            | 34 mbar  |                        |       |            |       | 215       | 5.8   | 200        | 5.4   |
| 1                                                              | 69 mbar  |                        |       |            |       | 295       | 7.9   | 315        | 8.4   |
| 2                                                              | 140 mbar |                        |       |            |       | 190       | 5.1   | 375        | 10.0  |
| 3                                                              | 0.21     |                        |       |            |       | 270       | 7.2   | 475        | 12.7  |
| 5                                                              | 0.34     | 145                    | 3.9   | 390        | 10.4  | 710       | 19.0  | 840        | 22.5  |
| 10                                                             | 0.69     | 265                    | 7.1   | 680        | 18.2  | 1150      | 30.8  | 1370       | 36.7  |
| 15                                                             | 1.0      | 385                    | 10.3  | 935        | 25.0  | 1620      | 43.4  | 1810       | 48.5  |
| 20                                                             | 1.4      | 450                    | 12.1  | 1160       | 31.1  | 2020      | 54.1  | 2210       | 59.2  |
| 30                                                             | 2.1      | 630                    | 16.9  | 1530       | 41.0  | 1410      | 37.8  | 2970       | 79.6  |
| 40                                                             | 2.8      | 805                    | 21.6  | 1910       | 51.2  | 1090      | 29.2  | 1200       | 32.1  |
| 50                                                             | 3.4      | 975                    | 26.1  | 1090       | 29.2  | 990       | 26.5  | 1000       | 26.8  |
| 60                                                             | 4.1      | 1140                   | 30.5  | 860        | 23.0  | 940       | 25.2  | 930        | 24.9  |
| 80                                                             | 5.5      | 905                    | 24.2  | 860        | 23.0  | 925       | 24.8  | 930        | 24.9  |
| 90                                                             | 6.2      | 905                    | 24.2  | 835        | 22.4  | 925       | 24.8  | 930        | 24.9  |
| 100                                                            | 6.9      | 905                    | 24.2  | 835        | 22.4  | 925       | 24.8  | 930        | 24.9  |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |            |       |
| 0.5                                                            | 34 mbar  |                        |       |            |       | 120       | 3.2   | 210        | 5.6   |
| 1                                                              | 69 mbar  |                        |       |            |       | 170       | 4.6   | 290        | 7.8   |
| 2                                                              | 140 mbar |                        |       |            |       | 260       | 7.0   | 380        | 10.2  |
| 3                                                              | 0.21     |                        |       |            |       | 315       | 8.4   | 460        | 12.3  |
| 5                                                              | 0.34     | 130                    | 3.5   | 470        | 12.6  | 655       | 17.5  | 695        | 18.6  |
| 10                                                             | 0.69     | 250                    | 6.7   | 735        | 19.7  | 1180      | 31.6  | 1240       | 33.2  |
| 15                                                             | 1.0      | 315                    | 8.4   | 940        | 25.2  | 1560      | 41.8  | 1680       | 45.0  |
| 20                                                             | 1.4      | 455                    | 12.2  | 1160       | 31.1  | 1950      | 52.2  | 2100       | 56.3  |
| 30                                                             | 2.1      | 630                    | 16.9  | 1560       | 41.8  | 2630      | 70.5  | 2800       | 75.0  |
| 40                                                             | 2.8      | 805                    | 21.6  | 1860       | 49.8  | 1380      | 37.0  | 1340       | 35.9  |
| 50                                                             | 3.4      | 965                    | 25.9  | 1090       | 29.2  | 1260      | 33.8  | 1180       | 31.6  |
| 60                                                             | 4.1      | 1140                   | 30.5  | 1010       | 27.1  | 1110      | 29.7  | 1070       | 28.7  |
| 80                                                             | 5.5      | 965                    | 25.9  | 970        | 26.0  | 1110      | 29.7  | 1070       | 28.7  |
| 90                                                             | 6.2      | 940                    | 25.2  | 940        | 25.2  | 1110      | 29.7  | 1070       | 28.7  |
| 100                                                            | 6.9      | 940                    | 25.2  | 940        | 25.2  | 1110      | 29.7  | 1070       | 28.7  |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.  
Gray areas indicate limited capacities due to boost effects.

# CS200 Series

**Table 23. CS205 and CS206 Series Flow Capacities for 7 in. w.c. / 17 mbar Setpoint**

| SETPOINT    | ACCURACY    |            | SET RANGE          | SPRING PART NUMBER / COLOR |
|-------------|-------------|------------|--------------------|----------------------------|
|             | Droop       | Boost      |                    |                            |
| 11 in. w.c. | -2 in. w.c. | 2 in. w.c. | 7.5 to 11 in. w.c. | GE30189X012 / Blue         |
| 27 mbar     | -5 mbar     | 5 mbar     | 19 to 27 mbar      |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |            |       |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|------------|-------|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |            |       |
|                                                                |          | 18 / 3.2               |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 5/16 / 7.9 |       |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH       | Nm³/h |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |            |       |
| 1                                                              | 69 mbar  |                        |       | 155        | 4.2   | 320       | 8.6   | 315        | 8.4   |
| 2                                                              | 140 mbar |                        |       | 270        | 7.2   | 385       | 10.3  | 480        | 12.9  |
| 3                                                              | 0.21     | 145                    | 3.9   | 360        | 9.6   | 545       | 14.6  | 635        | 17.0  |
| 5                                                              | 0.34     | 200                    | 5.4   | 480        | 12.9  | 720       | 19.3  | 850        | 22.8  |
| 10                                                             | 0.69     | 325                    | 8.7   | 745        | 20.0  | 1100      | 29.5  | 1160       | 31.1  |
| 15                                                             | 1.0      | 415                    | 11.1  | 990        | 26.5  | 1450      | 38.8  | 1490       | 39.9  |
| 20                                                             | 1.4      | 510                    | 13.7  | 1150       | 30.8  | 1710      | 45.8  | 1760       | 47.2  |
| 30                                                             | 2.1      | 685                    | 18.4  | 1530       | 41.0  | 2180      | 58.4  | 2090       | 56.0  |
| 40                                                             | 2.8      | 850                    | 22.8  | 1860       | 49.8  | 2390      | 64.0  | 2390       | 64.0  |
| 50                                                             | 3.4      | 1020                   | 27.3  | 2220       | 59.5  | 2760      | 73.9  | 2640       | 70.7  |
| 60                                                             | 4.1      | 1200                   | 32.1  | 2530       | 67.8  | 3000      | 80.4  | 2790       | 74.7  |
| 80                                                             | 5.5      | 1550                   | 41.5  | 3200       | 85.7  | 3160      | 84.7  | 2940       | 78.8  |
| 100                                                            | 6.9      | 1740                   | 46.6  | 3140       | 84.1  | 3160      | 84.7  | 3030       | 81.2  |
| 125                                                            | 8.6      | 1910                   | 51.2  | 3140       | 84.1  | 3160      | 84.7  | 3030       | 81.2  |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |            |       |
| 1                                                              | 69 mbar  |                        |       |            |       | 265       | 7.1   | 345        | 9.2   |
| 2                                                              | 140 mbar |                        |       |            |       | 445       | 11.9  | 510        | 13.7  |
| 3                                                              | 0.21     | 135                    | 3.6   | 275        | 7.4   | 570       | 15.3  | 675        | 18.1  |
| 5                                                              | 0.34     | 205                    | 5.5   | 425        | 11.4  | 785       | 21.0  | 880        | 23.6  |
| 10                                                             | 0.69     | 325                    | 8.7   | 725        | 19.4  | 1270      | 34.0  | 1420       | 38.0  |
| 15                                                             | 1.0      | 410                    | 11.0  | 795        | 21.3  | 1670      | 44.7  | 1890       | 50.6  |
| 20                                                             | 1.4      | 510                    | 13.7  | 1130       | 30.3  | 1980      | 53.0  | 2300       | 61.6  |
| 30                                                             | 2.1      | 675                    | 18.1  | 1520       | 40.7  | 2660      | 71.3  | 2980       | 79.8  |
| 40                                                             | 2.8      | 860                    | 23.0  | 1930       | 51.7  | 1180      | 31.6  | 1130       | 30.3  |
| 50                                                             | 3.4      | 1010                   | 27.1  | 2280       | 61.1  | 1010      | 27.1  | 1060       | 28.4  |
| 60                                                             | 4.1      | 1190                   | 31.9  | 895        | 24.0  | 915       | 24.5  | 985        | 26.4  |
| 80                                                             | 5.5      | 1180                   | 31.6  | 895        | 24.0  | 915       | 24.5  | 985        | 26.4  |
| 100                                                            | 6.9      | 1070                   | 28.7  | 895        | 24.0  | 915       | 24.5  | 985        | 26.4  |
| 125                                                            | 8.6      | 810                    | 21.7  | 895        | 24.0  | 915       | 24.5  | 985        | 26.4  |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |            |       |
| 1                                                              | 69 mbar  |                        |       | 200        | 5.4   | 260       | 7.0   | 310        | 8.3   |
| 2                                                              | 140 mbar |                        |       | 300        | 8.0   | 430       | 11.5  | 485        | 13.0  |
| 3                                                              | 0.21     | 135                    | 3.6   | 355        | 9.5   | 560       | 15.0  | 630        | 16.9  |
| 5                                                              | 0.34     | 205                    | 5.5   | 515        | 13.8  | 745       | 20.0  | 815        | 21.8  |
| 10                                                             | 0.69     | 295                    | 7.9   | 765        | 20.5  | 1290      | 34.6  | 1360       | 36.4  |
| 15                                                             | 1.0      | 410                    | 11.0  | 950        | 25.5  | 1690      | 45.3  | 1910       | 51.2  |
| 20                                                             | 1.4      | 505                    | 13.5  | 1170       | 31.3  | 1910      | 51.2  | 2270       | 60.8  |
| 30                                                             | 2.1      | 665                    | 17.8  | 1490       | 39.9  | 2610      | 69.9  | 3260       | 87.3  |
| 40                                                             | 2.8      | 860                    | 23.0  | 1900       | 50.9  | 1490      | 39.9  | 1830       | 49.0  |
| 50                                                             | 3.4      | 995                    | 26.7  | 2340       | 62.7  | 1270      | 34.0  | 1490       | 39.9  |
| 60                                                             | 4.1      | 1190                   | 31.9  | 1600       | 42.9  | 1110      | 29.7  | 1310       | 35.1  |
| 80                                                             | 5.5      | 1550                   | 41.5  | 1430       | 38.3  | 1090      | 29.2  | 1310       | 35.1  |
| 100                                                            | 6.9      | 1550                   | 41.5  | 1280       | 34.3  | 1090      | 29.2  | 1310       | 35.1  |
| 125                                                            | 8.6      | 1470                   | 39.4  | 1280       | 34.3  | 1090      | 29.2  | 1310       | 35.1  |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.  
 Gray areas indicate limited capacities due to boost effects.

**Table 24. CS205 and CS206 Series Flow Capacities for 14 in. w.c. / 35 mbar Setpoint**

| SETPOINT    | ACCURACY    |            | SET RANGE         | SPRING PART NUMBER / COLOR |
|-------------|-------------|------------|-------------------|----------------------------|
|             | Droop       | Boost      |                   |                            |
| 14 in. w.c. | -2 in. w.c. | 2 in. w.c. | 10 to 14 in. w.c. | GE30224X012 / Unpainted    |
| 35 mbar     | -5 mbar     | 5 mbar     | 25 to 35 mbar     |                            |

| CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |                    |            |                    |           |                    |            |                    |
|-----------------------------------------------------------------------------|----------|------------------------|--------------------|------------|--------------------|-----------|--------------------|------------|--------------------|
| Inlet Pressure                                                              |          | Orifice Size, In. / mm |                    |            |                    |           |                    |            |                    |
|                                                                             |          | 18 / 3.2               |                    | 3/16 / 4.8 |                    | 1/4 / 6.4 |                    | 5/16 / 7.9 |                    |
|                                                                             |          | SCFH                   | Nm <sup>3</sup> /h | SCFH       | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH       | Nm <sup>3</sup> /h |
| psig                                                                        | bar      | Body Size: NPS 3/4     |                    |            |                    |           |                    |            |                    |
| 1                                                                           | 69 mbar  |                        |                    | 160        | 4.3                | 225       | 6.0                | 280        | 7.5                |
| 2                                                                           | 140 mbar |                        |                    | 260        | 7.0                | 375       | 10.0               | 455        | 12.2               |
| 3                                                                           | 0.21     | 135                    | 3.6                | 355        | 9.5                | 480       | 12.9               | 635        | 17.0               |
| 5                                                                           | 0.34     | 200                    | 5.4                | 460        | 12.3               | 690       | 18.5               | 790        | 21.2               |
| 10                                                                          | 0.69     | 335                    | 9.0                | 735        | 19.7               | 1090      | 29.2               | 1160       | 31.1               |
| 15                                                                          | 1.0      | 435                    | 11.7               | 1020       | 27.3               | 1380      | 37.0               | 1450       | 38.8               |
| 20                                                                          | 1.4      | 500                    | 13.4               | 1160       | 31.1               | 1660      | 44.5               | 1780       | 47.7               |
| 30                                                                          | 2.1      | 675                    | 18.1               | 1540       | 41.3               | 2020      | 54.1               | 2110       | 56.5               |
| 40                                                                          | 2.8      | 825                    | 22.1               | 1920       | 51.4               | 2320      | 62.2               | 2340       | 62.7               |
| 50                                                                          | 3.4      | 1020                   | 27.3               | 2250       | 60.3               | 2560      | 68.6               | 2520       | 67.5               |
| 60                                                                          | 4.1      | 1200                   | 32.1               | 2590       | 69.4               | 2700      | 72.3               | 2780       | 74.5               |
| 80                                                                          | 5.5      | 1560                   | 41.8               | 2940       | 78.8               | 2830      | 75.8               | 3000       | 80.4               |
| 100                                                                         | 6.9      | 1700                   | 45.5               | 3200       | 85.7               | 2830      | 75.8               | 3000       | 80.4               |
| 125                                                                         | 8.6      | 1890                   | 50.6               | 3210       | 86.0               | 2830      | 75.8               | 3000       | 80.4               |
| psig                                                                        | bar      | Body Size: NPS 1       |                    |            |                    |           |                    |            |                    |
| 1                                                                           | 69 mbar  |                        |                    |            |                    | 280       | 7.5                | 360        | 9.6                |
| 2                                                                           | 140 mbar |                        |                    |            |                    | 420       | 11.3               | 465        | 12.5               |
| 3                                                                           | 0.21     |                        |                    | 280        | 7.5                | 545       | 14.6               | 650        | 17.4               |
| 5                                                                           | 0.34     |                        |                    | 420        | 11.3               | 760       | 20.4               | 825        | 22.1               |
| 10                                                                          | 0.69     | 260                    | 7.0                | 700        | 18.8               | 1210      | 32.4               | 1390       | 37.2               |
| 15                                                                          | 1.0      | 365                    | 9.8                | 890        | 23.8               | 1630      | 43.7               | 1840       | 49.3               |
| 20                                                                          | 1.4      | 465                    | 12.5               | 1120       | 30.0               | 2000      | 53.6               | 2160       | 57.9               |
| 30                                                                          | 2.1      | 620                    | 16.6               | 1450       | 38.8               | 2660      | 71.3               | 2910       | 78.0               |
| 40                                                                          | 2.8      | 810                    | 21.7               | 1870       | 50.1               | 1180      | 31.6               | 1440       | 38.6               |
| 50                                                                          | 3.4      | 975                    | 26.1               | 2280       | 61.1               | 995       | 26.7               | 1180       | 31.6               |
| 60                                                                          | 4.1      | 1150                   | 30.8               | 950        | 25.5               | 950       | 25.5               | 1000       | 26.8               |
| 80                                                                          | 5.5      | 990                    | 26.5               | 930        | 24.9               | 950       | 25.5               | 1000       | 26.8               |
| 100                                                                         | 6.9      | 980                    | 26.3               | 845        | 22.6               | 950       | 25.5               | 1000       | 26.8               |
| 125                                                                         | 8.6      | 980                    | 26.3               | 845        | 22.6               | 950       | 25.5               | 1000       | 26.8               |
| psig                                                                        | bar      | Body Size: NPS 1-1/4   |                    |            |                    |           |                    |            |                    |
| 1                                                                           | 69 mbar  |                        |                    | 210        | 5.6                | 315       | 8.4                | 165        | 4.4                |
| 2                                                                           | 140 mbar |                        |                    | 260        | 7.0                | 415       | 11.1               | 440        | 11.8               |
| 3                                                                           | 0.21     |                        |                    | 380        | 10.2               | 555       | 14.9               | 715        | 19.2               |
| 5                                                                           | 0.34     |                        |                    | 520        | 13.9               | 735       | 19.7               | 905        | 24.2               |
| 10                                                                          | 0.69     | 250                    | 6.7                | 720        | 19.3               | 1170      | 31.3               | 1340       | 35.9               |
| 15                                                                          | 1.0      | 325                    | 8.7                | 945        | 25.3               | 1470      | 39.4               | 1800       | 48.2               |
| 20                                                                          | 1.4      | 425                    | 11.4               | 1120       | 30.0               | 1870      | 50.1               | 2250       | 60.3               |
| 30                                                                          | 2.1      | 635                    | 17.0               | 1510       | 40.5               | 2470      | 66.2               | 3070       | 82.2               |
| 40                                                                          | 2.8      | 800                    | 21.4               | 1930       | 51.7               | 3200      | 85.7               | 3860       | 103                |
| 50                                                                          | 3.4      | 940                    | 25.2               | 2260       | 60.5               | 3870      | 103                | 1510       | 40.5               |
| 60                                                                          | 4.1      | 1140                   | 30.5               | 1670       | 44.7               | 1370      | 36.7               | 1420       | 38.0               |
| 80                                                                          | 5.5      | 1110                   | 29.7               | 1330       | 35.6               | 1340      | 35.9               | 1280       | 34.3               |
| 100                                                                         | 6.9      | 1090                   | 29.2               | 1330       | 35.6               | 1300      | 34.8               | 1280       | 34.3               |
| 125                                                                         | 8.6      | 1010                   | 27.1               | 1330       | 35.6               | 1300      | 34.8               | 1280       | 34.3               |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.  
 Gray areas indicate limited capacities due to boost effects.

# CS200 Series

**Table 25. CS205 and CS206 Series Flow Capacities for 1 psig / 69 mbar Setpoint at 1% Accuracy**

|          | ACCURACY   |          |                       |                            |
|----------|------------|----------|-----------------------|----------------------------|
| SETPOINT | +/- 1% ABS |          | SET RANGE             | SPRING PART NUMBER / COLOR |
| 1 psig   | -0.16 psi  | 0.16 psi | 18 in. w.c. to 1 psig | GE30225X012 / Orange       |
| 69 mbar  | -11 mbar   | 11 mbar  | 45 to 69 mbar         |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |            |       |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|------------|-------|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |            |       |
|                                                                |          | 18 / 3.2               |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 5/16 / 7.9 |       |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH       | Nm³/h |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |            |       |
| 2                                                              | 140 mbar |                        |       | 235        | 6.3   | 360       | 9.6   | 515        | 13.8  |
| 3                                                              | 0.21     | 125                    | 3.3   | 330        | 8.8   | 480       | 12.9  | 645        | 17.3  |
| 5                                                              | 0.34     | 160                    | 4.3   | 470        | 12.6  | 705       | 18.9  | 825        | 22.1  |
| 10                                                             | 0.69     | 330                    | 8.8   | 700        | 18.8  | 1070      | 28.7  | 1320       | 35.4  |
| 15                                                             | 1.0      | 375                    | 10.0  | 960        | 25.7  | 1380      | 37.0  | 1880       | 50.4  |
| 20                                                             | 1.4      | 500                    | 13.4  | 1160       | 31.1  | 1700      | 45.5  | 1630       | 43.7  |
| 30                                                             | 2.1      | 585                    | 15.7  | 1590       | 42.6  | 2140      | 57.3  | 2360       | 63.2  |
| 40                                                             | 2.8      | 795                    | 21.3  | 1900       | 50.9  | 2560      | 68.6  | 2620       | 70.2  |
| 50                                                             | 3.4      | 975                    | 26.1  | 2260       | 60.5  | 2840      | 76.1  | 2950       | 79.0  |
| 60                                                             | 4.1      | 1110                   | 29.7  | 2600       | 69.7  | 3030      | 81.2  | 3100       | 83.1  |
| 80                                                             | 5.5      | 1370                   | 36.7  | 3280       | 87.9  | 3370      | 90.3  | 3370       | 90.3  |
| 90                                                             | 6.2      | 1480                   | 39.7  | 3350       | 89.7  | 3520      | 94.3  | 3390       | 90.8  |
| 100                                                            | 6.9      | 1670                   | 44.7  | 3520       | 94.3  | 3520      | 94.3  | 3390       | 90.8  |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |            |       |
| 2                                                              | 140 mbar |                        |       | 165        | 4.4   | 295       | 7.9   | 390        | 10.4  |
| 3                                                              | 0.21     |                        |       | 260        | 7.0   | 430       | 11.5  | 540        | 14.5  |
| 5                                                              | 0.34     | 135                    | 3.6   | 405        | 10.9  | 630       | 16.9  | 785        | 21.0  |
| 10                                                             | 0.69     | 260                    | 7.0   | 680        | 18.2  | 1020      | 27.3  | 1320       | 35.4  |
| 15                                                             | 1.0      | 345                    | 9.2   | 920        | 24.6  | 1400      | 37.5  | 1770       | 47.4  |
| 20                                                             | 1.4      | 435                    | 11.7  | 1100       | 29.5  | 1810      | 48.5  | 2190       | 58.7  |
| 30                                                             | 2.1      | 605                    | 16.2  | 1490       | 39.9  | 2370      | 63.5  | 2860       | 76.6  |
| 40                                                             | 2.8      | 810                    | 21.7  | 1880       | 50.4  | 2990      | 80.1  | 3410       | 91.4  |
| 50                                                             | 3.4      | 955                    | 25.6  | 2260       | 60.5  | 3510      | 94.0  | 3870       | 103   |
| 60                                                             | 4.1      | 1120                   | 30.0  | 2610       | 69.9  | 3930      | 105   | 4280       | 114   |
| 80                                                             | 5.5      | 1490                   | 39.9  | 3360       | 90.0  | 4620      | 123   | 4990       | 133   |
| 90                                                             | 6.2      | 1670                   | 44.7  | 3750       | 100   | 4830      | 129   | 5000       | 134   |
| 100                                                            | 6.9      | 1840                   | 49.3  | 4130       | 110   | 4880      | 130   | 5000       | 134   |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |            |       |
| 2                                                              | 140 mbar |                        |       | 275        | 7.4   | 380       | 10.2  | 460        | 12.3  |
| 3                                                              | 0.21     |                        |       | 335        | 9.0   | 505       | 13.5  | 640        | 17.1  |
| 5                                                              | 0.34     | 135                    | 3.6   | 485        | 13.0  | 730       | 19.6  | 920        | 24.6  |
| 10                                                             | 0.69     | 255                    | 6.8   | 760        | 20.4  | 1150      | 30.8  | 1480       | 39.7  |
| 15                                                             | 1.0      | 350                    | 9.4   | 960        | 25.7  | 1530      | 41.0  | 1940       | 52.0  |
| 20                                                             | 1.4      | 450                    | 12.1  | 1120       | 30.0  | 1860      | 49.8  | 2340       | 62.7  |
| 30                                                             | 2.1      | 600                    | 16.1  | 1410       | 37.8  | 2450      | 65.6  | 3090       | 82.8  |
| 40                                                             | 2.8      | 785                    | 21.0  | 1880       | 50.4  | 3240      | 86.8  | 3880       | 103   |
| 50                                                             | 3.4      | 960                    | 25.7  | 2300       | 61.6  | 3790      | 101   | 4520       | 121   |
| 60                                                             | 4.1      | 1140                   | 30.5  | 2610       | 69.9  | 4490      | 120   | 5150       | 138   |
| 80                                                             | 5.5      | 1490                   | 39.9  | 3400       | 91.1  | 5580      | 149   | 6120       | 164   |
| 90                                                             | 6.2      | 1650                   | 44.2  | 3860       | 103   | 6210      | 166   | 5870       | 157   |
| 100                                                            | 6.9      | 1820                   | 48.8  | 4220       | 113   | 3020      | 80.9  | 5490       | 147   |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.  
 Gray areas indicate limited capacities due to boost effects.

**Table 26. CS205 and CS206 Series Flow Capacities for 1 psig / 69 mbar Setpoint at 2% Accuracy**

|          | ACCURACY   |          |                       |                            |
|----------|------------|----------|-----------------------|----------------------------|
| SETPOINT | +/- 2% ABS |          | SET RANGE             | SPRING PART NUMBER / COLOR |
| 1 psig   | -0.31 psi  | 0.31 psi | 18 in. w.c. to 1 psig | GE30225X012 / Orange       |
| 69 mbar  | -21 mbar   | 21 mbar  | 45 to 69 mbar         |                            |

| CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |                    |            |                    |           |                    |            |                    |
|-----------------------------------------------------------------------------|----------|------------------------|--------------------|------------|--------------------|-----------|--------------------|------------|--------------------|
| Inlet Pressure                                                              |          | Orifice Size, In. / mm |                    |            |                    |           |                    |            |                    |
|                                                                             |          | 18 / 3.2               |                    | 3/16 / 4.8 |                    | 1/4 / 6.4 |                    | 5/16 / 7.9 |                    |
|                                                                             |          | SCFH                   | Nm <sup>3</sup> /h | SCFH       | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH       | Nm <sup>3</sup> /h |
| psig                                                                        | bar      | Body Size: NPS 3/4     |                    |            |                    |           |                    |            |                    |
| 2                                                                           | 140 mbar |                        |                    | 270        | 7.2                | 445       | 11.9               | 625        | 16.7               |
| 3                                                                           | 0.21     | 145                    | 3.9                | 375        | 10.0               | 635       | 17.0               | 725        | 19.4               |
| 5                                                                           | 0.34     | 190                    | 5.1                | 525        | 14.1               | 840       | 22.5               | 1060       | 28.4               |
| 10                                                                          | 0.69     | 355                    | 9.5                | 805        | 21.6               | 1280      | 34.3               | 1580       | 42.3               |
| 15                                                                          | 1.0      | 425                    | 11.4               | 1000       | 26.8               | 1670      | 44.7               | 2380       | 63.8               |
| 20                                                                          | 1.4      | 525                    | 14.1               | 1180       | 31.6               | 1990      | 53.3               | 2060       | 55.2               |
| 30                                                                          | 2.1      | 655                    | 17.5               | 1590       | 42.6               | 2610      | 69.9               | 2910       | 78.0               |
| 40                                                                          | 2.8      | 850                    | 22.8               | 1920       | 51.4               | 3040      | 81.4               | 3300       | 88.4               |
| 50                                                                          | 3.4      | 1030                   | 27.6               | 2270       | 60.8               | 3390      | 90.8               | 3540       | 94.8               |
| 60                                                                          | 4.1      | 1190                   | 31.9               | 2660       | 71.3               | 3600      | 96.4               | 3750       | 100                |
| 80                                                                          | 5.5      | 1480                   | 39.7               | 3460       | 92.7               | 3890      | 104                | 3910       | 104                |
| 90                                                                          | 6.2      | 1620                   | 43.4               | 3690       | 98.9               | 4090      | 109                | 3860       | 103                |
| 100                                                                         | 6.9      | 1800                   | 48.2               | 4010       | 107                | 4150      | 111                | 3860       | 103                |
| psig                                                                        | bar      | Body Size: NPS 1       |                    |            |                    |           |                    |            |                    |
| 2                                                                           | 140 mbar |                        |                    | 200        | 5.4                | 370       | 9.9                | 520        | 13.9               |
| 3                                                                           | 0.21     |                        |                    | 300        | 8.0                | 540       | 14.5               | 690        | 18.5               |
| 5                                                                           | 0.34     | 145                    | 3.9                | 460        | 12.3               | 785       | 21.0               | 1020       | 27.3               |
| 10                                                                          | 0.69     | 270                    | 7.2                | 750        | 20.1               | 1300      | 34.8               | 1630       | 43.7               |
| 15                                                                          | 1.0      | 365                    | 9.8                | 945        | 25.3               | 1680      | 45.0               | 2120       | 56.8               |
| 20                                                                          | 1.4      | 440                    | 11.8               | 1140       | 30.5               | 2030      | 54.4               | 2660       | 71.3               |
| 30                                                                          | 2.1      | 620                    | 16.6               | 1520       | 40.7               | 2700      | 72.3               | 3430       | 91.9               |
| 40                                                                          | 2.8      | 810                    | 21.7               | 1920       | 51.4               | 3240      | 86.8               | 4020       | 107                |
| 50                                                                          | 3.4      | 975                    | 26.1               | 2270       | 60.8               | 3870      | 103                | 4500       | 120                |
| 60                                                                          | 4.1      | 1130                   | 30.3               | 2640       | 70.7               | 4420      | 118                | 4920       | 131                |
| 80                                                                          | 5.5      | 1490                   | 39.9               | 3400       | 91.1               | 5090      | 136                | 5250       | 140                |
| 90                                                                          | 6.2      | 1670                   | 44.7               | 3800       | 101                | 5090      | 136                | 5250       | 140                |
| 100                                                                         | 6.9      | 1840                   | 49.3               | 4170       | 111                | 5090      | 136                | 5250       | 140                |
| psig                                                                        | bar      | Body Size: NPS 1-1/4   |                    |            |                    |           |                    |            |                    |
| 2                                                                           | 140 mbar |                        |                    | 300        | 8.0                | 460       | 12.3               | 615        | 16.5               |
| 3                                                                           | 0.21     |                        |                    | 375        | 10.0               | 595       | 15.9               | 800        | 21.4               |
| 5                                                                           | 0.34     | 145                    | 3.9                | 535        | 14.3               | 860       | 23.0               | 1050       | 28.1               |
| 10                                                                          | 0.69     | 275                    | 7.4                | 800        | 21.4               | 1340      | 35.9               | 1660       | 44.5               |
| 15                                                                          | 1.0      | 365                    | 9.8                | 1010       | 27.1               | 1710      | 45.8               | 2210       | 59.2               |
| 20                                                                          | 1.4      | 450                    | 12.1               | 1170       | 31.3               | 2030      | 54.4               | 2600       | 69.7               |
| 30                                                                          | 2.1      | 620                    | 16.6               | 1520       | 40.7               | 2630      | 70.5               | 3480       | 93.2               |
| 40                                                                          | 2.8      | 790                    | 21.2               | 1900       | 50.9               | 3430      | 91.9               | 4280       | 114                |
| 50                                                                          | 3.4      | 960                    | 25.7               | 2280       | 61.1               | 4080      | 109                | 5060       | 135                |
| 60                                                                          | 4.1      | 1140                   | 30.5               | 2630       | 70.5               | 4540      | 121                | 5780       | 154                |
| 80                                                                          | 5.5      | 1490                   | 39.9               | 3420       | 91.6               | 5920      | 158                | 5950       | 159                |
| 90                                                                          | 6.2      | 1650                   | 44.2               | 3860       | 103                | 5920      | 158                | 5950       | 159                |
| 100                                                                         | 6.9      | 1820                   | 48.8               | 4180       | 112                | 5920      | 158                | 5950       | 159                |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.  
 Gray areas indicate limited capacities due to boost effects.

# CS200 Series

**Table 27. CS205 and CS206 Series Flow Capacities for 1 psig / 69 mbar Setpoint at 10% Accuracy**

|           | ACCURACY |         |                       |                            |
|-----------|----------|---------|-----------------------|----------------------------|
| SETPPOINT | +/- 10%  |         | SET RANGE             | SPRING PART NUMBER / COLOR |
| 1 psig    | -0.1 psi | 0.1 psi | 18 in. w.c. to 1 psig | GE30225X012 / Orange       |
| 69 mbar   | -7 mbar  | 7 mbar  | 45 to 69 mbar         |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |            |       |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|------------|-------|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |            |       |
|                                                                |          | 18 / 3.2               |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 5/16 / 7.9 |       |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH       | Nm³/h |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |            |       |
| 2                                                              | 140 mbar |                        |       | 210        | 5.6   | 285       | 7.6   | 505        | 13.5  |
| 3                                                              | 0.21     | 120                    | 3.2   | 295        | 7.9   | 400       | 10.7  | 495        | 13.3  |
| 5                                                              | 0.34     | 150                    | 4.0   | 410        | 11.0  | 605       | 16.2  | 790        | 21.2  |
| 10                                                             | 0.69     | 310                    | 8.3   | 650        | 17.4  | 915       | 24.5  | 1090       | 29.2  |
| 15                                                             | 1.0      | 350                    | 9.4   | 915        | 24.5  | 1180      | 31.6  | 1710       | 45.8  |
| 20                                                             | 1.4      | 465                    | 12.5  | 1110       | 29.7  | 1480      | 39.7  | 1450       | 38.8  |
| 30                                                             | 2.1      | 540                    | 14.5  | 1520       | 40.7  | 1900      | 50.9  | 2120       | 56.8  |
| 40                                                             | 2.8      | 755                    | 20.2  | 1870       | 50.1  | 2360      | 63.2  | 2320       | 62.2  |
| 50                                                             | 3.4      | 940                    | 25.2  | 2170       | 58.1  | 2620      | 70.2  | 2640       | 70.7  |
| 60                                                             | 4.1      | 1070                   | 28.7  | 2460       | 65.9  | 2720      | 72.9  | 2830       | 75.8  |
| 80                                                             | 5.5      | 1300                   | 34.8  | 2960       | 79.3  | 3110      | 83.3  | 3050       | 81.7  |
| 90                                                             | 6.2      | 1390                   | 37.2  | 2970       | 79.6  | 3250      | 87.1  | 3050       | 81.7  |
| 100                                                            | 6.9      | 1580                   | 42.3  | 3130       | 83.9  | 3330      | 89.2  | 3160       | 84.7  |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |            |       |
| 2                                                              | 140 mbar |                        |       | 155        | 4.2   | 250       | 6.7   | 310        | 8.3   |
| 3                                                              | 0.21     |                        |       | 235        | 6.3   | 340       | 9.1   | 425        | 11.4  |
| 5                                                              | 0.34     | 130                    | 3.5   | 355        | 9.5   | 520       | 13.9  | 610        | 16.3  |
| 10                                                             | 0.69     | 250                    | 6.7   | 615        | 16.5  | 840       | 22.5  | 1060       | 28.4  |
| 15                                                             | 1.0      | 330                    | 8.8   | 885        | 23.7  | 1210      | 32.4  | 1530       | 41.0  |
| 20                                                             | 1.4      | 430                    | 11.5  | 1060       | 28.4  | 1610      | 43.1  | 1940       | 52.0  |
| 30                                                             | 2.1      | 585                    | 15.7  | 1440       | 38.6  | 2170      | 58.1  | 2610       | 69.9  |
| 40                                                             | 2.8      | 810                    | 21.7  | 1820       | 48.8  | 2700      | 72.3  | 3150       | 84.4  |
| 50                                                             | 3.4      | 935                    | 25.0  | 2230       | 59.7  | 3300      | 88.4  | 3640       | 97.5  |
| 60                                                             | 4.1      | 1110                   | 29.7  | 2560       | 68.6  | 3690      | 98.9  | 3990       | 106   |
| 80                                                             | 5.5      | 1490                   | 39.9  | 3320       | 88.9  | 1390      | 37.2  | 1790       | 48.0  |
| 90                                                             | 6.2      | 1640                   | 43.9  | 3690       | 98.9  | 1170      | 31.3  | 1680       | 45.0  |
| 100                                                            | 6.9      | 1790                   | 48.0  | 4070       | 109   | 1090      | 29.2  | 1680       | 45.0  |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |            |       |
| 2                                                              | 140 mbar |                        |       | 195        | 5.2   | 335       | 9.0   | 375        | 10.0  |
| 3                                                              | 0.21     |                        |       | 315        | 8.4   | 450       | 12.1  | 475        | 12.7  |
| 5                                                              | 0.34     | 130                    | 3.5   | 430        | 11.5  | 615       | 16.5  | 780        | 20.9  |
| 10                                                             | 0.69     | 235                    | 6.3   | 710        | 19.0  | 1010      | 27.1  | 1270       | 34.0  |
| 15                                                             | 1.0      | 330                    | 8.8   | 890        | 23.8  | 1390      | 37.2  | 1720       | 46.1  |
| 20                                                             | 1.4      | 430                    | 11.5  | 1070       | 28.7  | 1700      | 45.5  | 2090       | 56.0  |
| 30                                                             | 2.1      | 585                    | 15.7  | 1350       | 36.2  | 2270      | 60.8  | 2890       | 77.4  |
| 40                                                             | 2.8      | 775                    | 20.8  | 1850       | 49.6  | 3100      | 83.1  | 3680       | 98.6  |
| 50                                                             | 3.4      | 960                    | 25.7  | 2280       | 61.1  | 3700      | 99.1  | 4330       | 116   |
| 60                                                             | 4.1      | 1110                   | 29.7  | 2600       | 69.7  | 4420      | 118.4 | 4700       | 125   |
| 80                                                             | 5.5      | 1490                   | 39.9  | 3390       | 90.8  | 2610      | 69.9  | 2160       | 57.9  |
| 90                                                             | 6.2      | 1650                   | 44.2  | 2810       | 75.3  | 2050      | 54.9  | 2010       | 53.8  |
| 100                                                            | 6.9      | 1800                   | 48.2  | 2440       | 65.4  | 1920      | 51.4  | 2010       | 53.8  |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.  
 Gray areas indicate limited capacities due to boost effects.

**Table 28. CS205 and CS206 Series Flow Capacities for 1 psig / 69 mbar Setpoint at 20% Accuracy**

|           | ACCURACY |         |                       |                            |
|-----------|----------|---------|-----------------------|----------------------------|
| SETPPOINT | +/- 20%  |         | SET RANGE             | SPRING PART NUMBER / COLOR |
| 1 psig    | -0.2 psi | 0.2 psi | 18 in. w.c. to 1 psig | GE30225X012 / Orange       |
| 69 mbar   | -14 mbar | 14 mbar | 45 to 69 mbar         |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |          |                        |       |            |       |           |       |            |       |
|----------------------------------------------------------------|----------|------------------------|-------|------------|-------|-----------|-------|------------|-------|
| Inlet Pressure                                                 |          | Orifice Size, In. / mm |       |            |       |           |       |            |       |
|                                                                |          | 18 / 3.2               |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 5/16 / 7.9 |       |
|                                                                |          | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH       | Nm³/h |
| psig                                                           | bar      | Body Size: NPS 3/4     |       |            |       |           |       |            |       |
| 2                                                              | 140 mbar |                        |       | 250        | 6.7   | 410       | 11.0  | 525        | 14.1  |
| 3                                                              | 0.21     | 130                    | 3.5   | 345        | 9.2   | 530       | 14.2  | 660        | 17.7  |
| 5                                                              | 0.34     | 170                    | 4.6   | 495        | 13.3  | 755       | 20.2  | 895        | 24.0  |
| 10                                                             | 0.69     | 340                    | 9.1   | 745        | 20.0  | 1170      | 31.3  | 1470       | 39.4  |
| 15                                                             | 1.0      | 400                    | 10.7  | 980        | 26.3  | 1490      | 39.9  | 2060       | 55.2  |
| 20                                                             | 1.4      | 505                    | 13.5  | 1170       | 31.3  | 1820      | 48.8  | 1770       | 47.4  |
| 30                                                             | 2.1      | 605                    | 16.2  | 1590       | 42.6  | 2300      | 61.6  | 2560       | 68.6  |
| 40                                                             | 2.8      | 810                    | 21.7  | 1920       | 51.4  | 2720      | 72.9  | 2850       | 76.4  |
| 50                                                             | 3.4      | 1000                   | 26.8  | 2270       | 60.8  | 3000      | 80.4  | 3110       | 83.3  |
| 60                                                             | 4.1      | 1150                   | 30.8  | 2650       | 71.0  | 3200      | 85.7  | 3330       | 89.2  |
| 80                                                             | 5.5      | 1430                   | 38.3  | 3460       | 92.7  | 3500      | 93.8  | 3540       | 94.8  |
| 90                                                             | 6.2      | 1520                   | 40.7  | 3560       | 95.4  | 3710      | 99.4  | 3540       | 94.8  |
| 100                                                            | 6.9      | 1710                   | 45.8  | 3690       | 98.9  | 3720      | 99.7  | 3560       | 95.4  |
| psig                                                           | bar      | Body Size: NPS 1       |       |            |       |           |       |            |       |
| 2                                                              | 140 mbar |                        |       | 180        | 4.8   | 325       | 8.7   | 440        | 11.8  |
| 3                                                              | 0.21     |                        |       | 275        | 7.4   | 475       | 12.7  | 595        | 15.9  |
| 5                                                              | 0.34     | 140                    | 3.8   | 430        | 11.5  | 710       | 19.0  | 895        | 24.0  |
| 10                                                             | 0.69     | 265                    | 7.1   | 720        | 19.3  | 1120      | 30.0  | 1460       | 39.1  |
| 15                                                             | 1.0      | 365                    | 9.8   | 930        | 24.9  | 1500      | 40.2  | 1890       | 50.6  |
| 20                                                             | 1.4      | 435                    | 11.7  | 1120       | 30.0  | 1960      | 52.5  | 2380       | 63.8  |
| 30                                                             | 2.1      | 610                    | 16.3  | 1500       | 40.2  | 2530      | 67.8  | 3060       | 82.0  |
| 40                                                             | 2.8      | 810                    | 21.7  | 1900       | 50.9  | 3120      | 83.6  | 3620       | 97.0  |
| 50                                                             | 3.4      | 965                    | 25.9  | 2260       | 60.5  | 3630      | 97.3  | 4100       | 109   |
| 60                                                             | 4.1      | 1130                   | 30.3  | 2620       | 70.2  | 4090      | 109   | 4500       | 120   |
| 80                                                             | 5.5      | 1490                   | 39.9  | 3380       | 90.6  | 4800      | 128   | 5100       | 136   |
| 90                                                             | 6.2      | 1670                   | 44.7  | 3780       | 101   | 5030      | 134   | 5100       | 136   |
| 100                                                            | 6.9      | 1840                   | 49.3  | 4150       | 111   | 5030      | 134   | 5100       | 136   |
| psig                                                           | bar      | Body Size: NPS 1-1/4   |       |            |       |           |       |            |       |
| 2                                                              | 140 mbar |                        |       | 290        | 7.8   | 410       | 11.0  | 530        | 14.2  |
| 3                                                              | 0.21     |                        |       | 350        | 9.4   | 540       | 14.5  | 725        | 19.4  |
| 5                                                              | 0.34     | 140                    | 3.8   | 505        | 13.5  | 785       | 21.0  | 965        | 25.9  |
| 10                                                             | 0.69     | 265                    | 7.1   | 775        | 20.8  | 1220      | 32.7  | 1560       | 41.8  |
| 15                                                             | 1.0      | 360                    | 9.6   | 980        | 26.3  | 1620      | 43.4  | 2060       | 55.2  |
| 20                                                             | 1.4      | 450                    | 12.1  | 1130       | 30.3  | 1930      | 51.7  | 2450       | 65.6  |
| 30                                                             | 2.1      | 620                    | 16.6  | 1460       | 39.1  | 2520      | 67.5  | 3260       | 87.3  |
| 40                                                             | 2.8      | 785                    | 21.0  | 1890       | 50.6  | 3430      | 91.9  | 4050       | 108   |
| 50                                                             | 3.4      | 960                    | 25.7  | 2290       | 61.4  | 3890      | 104   | 4760       | 127   |
| 60                                                             | 4.1      | 1140                   | 30.5  | 2620       | 70.2  | 4520      | 121   | 5410       | 144   |
| 80                                                             | 5.5      | 1490                   | 39.9  | 3410       | 91.4  | 5660      | 151   | 5660       | 151   |
| 90                                                             | 6.2      | 1650                   | 44.2  | 3860       | 103   | 5660      | 151   | 5660       | 151   |
| 100                                                            | 6.9      | 1820                   | 48.8  | 4230       | 113   | 5660      | 151   | 5660       | 151   |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.

# CS200 Series

**Table 29. CS205 and CS206 Series Flow Capacities for 2 psig / 140 mbar Setpoint at 1% Accuracy**

|          | ACCURACY   |          |                |                            |
|----------|------------|----------|----------------|----------------------------|
| SETPOINT | +/- 1% ABS |          | SET RANGE      | SPRING PART NUMBER / COLOR |
| 2 psig   | -0.17 psi  | 0.17 psi | 1 to 2 psig    | GE30190X012 / Black        |
| 140 mbar | -12 mbar   | 12 mbar  | 69 to 140 mbar |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |      |                        |       |            |       |           |       |            |       |
|----------------------------------------------------------------|------|------------------------|-------|------------|-------|-----------|-------|------------|-------|
| Inlet Pressure                                                 |      | Orifice Size, In. / mm |       |            |       |           |       |            |       |
|                                                                |      | 18 / 3.2               |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 5/16 / 7.9 |       |
|                                                                |      | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH       | Nm³/h |
| psig                                                           | bar  | Body Size: NPS 3/4     |       |            |       |           |       |            |       |
| 3                                                              | 0.21 | 110                    | 2.9   | 200        | 5.4   | 350       | 9.4   | 310        | 8.3   |
| 5                                                              | 0.34 | 145                    | 3.9   | 325        | 8.7   | 455       | 12.2  | 570        | 15.3  |
| 10                                                             | 0.69 | 255                    | 6.8   | 540        | 14.5  | 765       | 20.5  | 930        | 24.9  |
| 15                                                             | 1.0  | 350                    | 9.4   | 775        | 20.8  | 1060      | 28.4  | 1230       | 33.0  |
| 20                                                             | 1.4  | 465                    | 12.5  | 980        | 26.3  | 1330      | 35.6  | 1540       | 41.3  |
| 30                                                             | 2.1  | 630                    | 16.9  | 1370       | 36.7  | 1790      | 48.0  | 1920       | 51.4  |
| 40                                                             | 2.8  | 755                    | 20.2  | 1750       | 46.9  | 2180      | 58.4  | 2330       | 62.4  |
| 50                                                             | 3.4  | 905                    | 24.2  | 2110       | 56.5  | 2510      | 67.2  | 2530       | 67.8  |
| 60                                                             | 4.1  | 1030                   | 27.6  | 2360       | 63.2  | 2740      | 73.4  | 2820       | 75.6  |
| 80                                                             | 5.5  | 1290                   | 34.6  | 2880       | 77.2  | 3280      | 87.9  | 3080       | 82.5  |
| 90                                                             | 6.2  | 1480                   | 39.7  | 2960       | 79.3  | 3380      | 90.6  | 3240       | 86.8  |
| 100                                                            | 6.9  | 1510                   | 40.5  | 3170       | 84.9  | 3490      | 93.5  | 3320       | 88.9  |
| psig                                                           | bar  | Body Size: NPS 1       |       |            |       |           |       |            |       |
| 3                                                              | 0.21 |                        |       | 155        | 4.2   | 280       | 7.5   | 275        | 7.4   |
| 5                                                              | 0.34 | 120                    | 3.2   | 280        | 7.5   | 410       | 11.0  | 485        | 13.0  |
| 10                                                             | 0.69 | 225                    | 6.0   | 550        | 14.7  | 695       | 18.6  | 830        | 22.2  |
| 15                                                             | 1.0  | 355                    | 9.5   | 750        | 20.1  | 1030      | 27.6  | 1220       | 32.7  |
| 20                                                             | 1.4  | 420                    | 11.3  | 985        | 26.4  | 1290      | 34.6  | 1590       | 42.6  |
| 30                                                             | 2.1  | 575                    | 15.4  | 1410       | 37.8  | 1900      | 50.9  | 2230       | 59.7  |
| 40                                                             | 2.8  | 755                    | 20.2  | 1780       | 47.7  | 2320      | 62.2  | 2730       | 73.1  |
| 50                                                             | 3.4  | 955                    | 25.6  | 2180       | 58.4  | 2920      | 78.2  | 3240       | 86.8  |
| 60                                                             | 4.1  | 1100                   | 29.5  | 2510       | 67.2  | 3400      | 91.1  | 3680       | 98.6  |
| 80                                                             | 5.5  | 1430                   | 38.3  | 3170       | 84.9  | 4170      | 112   | 4360       | 117   |
| 90                                                             | 6.2  | 1620                   | 43.4  | 3640       | 97.5  | 4430      | 119   | 4590       | 123   |
| 100                                                            | 6.9  | 1710                   | 45.8  | 3890       | 104   | 4550      | 122   | 4930       | 132   |
| psig                                                           | bar  | Body Size: NPS 1-1/4   |       |            |       |           |       |            |       |
| 3                                                              | 0.21 |                        |       | 255        | 6.8   | 315       | 8.4   | 465        | 12.5  |
| 5                                                              | 0.34 |                        |       | 350        | 9.4   | 445       | 11.9  | 610        | 16.3  |
| 10                                                             | 0.69 | 225                    | 6.0   | 535        | 14.3  | 815       | 21.8  | 1040       | 27.9  |
| 15                                                             | 1.0  | 335                    | 9.0   | 775        | 20.8  | 1140      | 30.5  | 1430       | 38.3  |
| 20                                                             | 1.4  | 420                    | 11.3  | 965        | 25.9  | 1440      | 38.6  | 1780       | 47.7  |
| 30                                                             | 2.1  | 605                    | 16.2  | 1320       | 35.4  | 2020      | 54.1  | 2540       | 68.0  |
| 40                                                             | 2.8  | 775                    | 20.8  | 1720       | 46.1  | 2690      | 72.1  | 3240       | 86.8  |
| 50                                                             | 3.4  | 940                    | 25.2  | 2020       | 54.1  | 3360      | 90.0  | 3990       | 107   |
| 60                                                             | 4.1  | 1120                   | 30.0  | 2490       | 66.7  | 3800      | 102   | 4440       | 119   |
| 80                                                             | 5.5  | 1440                   | 38.6  | 3300       | 88.4  | 4940      | 132   | 5670       | 152   |
| 90                                                             | 6.2  | 1680                   | 45.0  | 3630       | 97.3  | 5460      | 146   | 5770       | 155   |
| 100                                                            | 6.9  | 1820                   | 48.8  | 3960       | 106   | 5750      | 154   | 5770       | 155   |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.

**Table 30. CS205 and CS206 Series Flow Capacities for 2 psig / 140 mbar Setpoint at 2% Accuracy**

|           | ACCURACY   |          |                |                            |
|-----------|------------|----------|----------------|----------------------------|
| SETPPOINT | +/- 2% ABS |          | SET RANGE      | SPRING PART NUMBER / COLOR |
| 2 psig    | -0.33 psi  | 0.33 psi | 1 to 2 psig    | GE30190X012 / Black        |
| 140 mbar  | -23 mbar   | 23 mbar  | 69 to 140 mbar |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |      |                        |       |            |       |           |       |            |       |
|----------------------------------------------------------------|------|------------------------|-------|------------|-------|-----------|-------|------------|-------|
| Inlet Pressure                                                 |      | Orifice Size, In. / mm |       |            |       |           |       |            |       |
|                                                                |      | 18 / 3.2               |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 5/16 / 7.9 |       |
|                                                                |      | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH       | Nm³/h |
| psig                                                           | bar  | Body Size: NPS 3/4     |       |            |       |           |       |            |       |
| 3                                                              | 0.21 | 120                    | 3.2   | 255        | 6.8   | 460       | 12.3  | 560        | 15.0  |
| 5                                                              | 0.34 | 165                    | 4.4   | 410        | 11.0  | 640       | 17.1  | 800        | 21.4  |
| 10                                                             | 0.69 | 295                    | 7.9   | 710        | 19.0  | 1060      | 28.4  | 1310       | 35.1  |
| 15                                                             | 1.0  | 400                    | 10.7  | 960        | 25.7  | 1420      | 38.0  | 1660       | 44.5  |
| 20                                                             | 1.4  | 510                    | 13.7  | 1160       | 31.1  | 1710      | 45.8  | 1970       | 52.8  |
| 30                                                             | 2.1  | 675                    | 18.1  | 1540       | 41.3  | 2270      | 60.8  | 2520       | 67.5  |
| 40                                                             | 2.8  | 815                    | 21.8  | 1930       | 51.7  | 2750      | 73.7  | 2910       | 78.0  |
| 50                                                             | 3.4  | 990                    | 26.5  | 2280       | 61.1  | 3100      | 83.1  | 3290       | 88.1  |
| 60                                                             | 4.1  | 1100                   | 29.5  | 2670       | 71.5  | 3420      | 91.6  | 3520       | 94.3  |
| 80                                                             | 5.5  | 1400                   | 37.5  | 3380       | 90.6  | 3910      | 105   | 3840       | 103   |
| 90                                                             | 6.2  | 1590                   | 42.6  | 3690       | 98.9  | 4030      | 108   | 3870       | 104   |
| 100                                                            | 6.9  | 1650                   | 44.2  | 3900       | 104   | 4110      | 110   | 3990       | 107   |
| psig                                                           | bar  | Body Size: NPS 1       |       |            |       |           |       |            |       |
| 3                                                              | 0.21 |                        |       | 195        | 5.2   | 370       | 9.9   | 455        | 12.2  |
| 5                                                              | 0.34 | 125                    | 3.3   | 360        | 9.6   | 560       | 15.0  | 730        | 19.6  |
| 10                                                             | 0.69 | 250                    | 6.7   | 665        | 17.8  | 1000      | 26.8  | 1250       | 33.5  |
| 15                                                             | 1.0  | 360                    | 9.6   | 920        | 24.6  | 1400      | 37.5  | 1630       | 43.7  |
| 20                                                             | 1.4  | 475                    | 12.7  | 1080       | 28.9  | 1740      | 46.6  | 2150       | 57.6  |
| 30                                                             | 2.1  | 610                    | 16.3  | 1490       | 39.9  | 2390      | 64.0  | 2870       | 76.9  |
| 40                                                             | 2.8  | 810                    | 21.7  | 1890       | 50.6  | 3000      | 80.4  | 3470       | 93.0  |
| 50                                                             | 3.4  | 1000                   | 26.8  | 2300       | 61.6  | 3540      | 94.8  | 4010       | 107   |
| 60                                                             | 4.1  | 1150                   | 30.8  | 2610       | 69.9  | 4010      | 107   | 4480       | 120   |
| 80                                                             | 5.5  | 1500                   | 40.2  | 3350       | 89.7  | 4830      | 129   | 5180       | 139   |
| 90                                                             | 6.2  | 1640                   | 43.9  | 3810       | 102   | 5170      | 138   | 5310       | 142   |
| 100                                                            | 6.9  | 1760                   | 47.2  | 4070       | 109   | 5240      | 140   | 5460       | 146   |
| psig                                                           | bar  | Body Size: NPS 1-1/4   |       |            |       |           |       |            |       |
| 3                                                              | 0.21 |                        |       | 335        | 9.0   | 410       | 11.0  | 590        | 15.8  |
| 5                                                              | 0.34 |                        |       | 445        | 11.9  | 615       | 16.5  | 830        | 22.2  |
| 10                                                             | 0.69 | 245                    | 6.6   | 680        | 18.2  | 1110      | 29.7  | 1390       | 37.2  |
| 15                                                             | 1.0  | 345                    | 9.2   | 965        | 25.9  | 1470      | 39.4  | 1810       | 48.5  |
| 20                                                             | 1.4  | 430                    | 11.5  | 1110       | 29.7  | 1850      | 49.6  | 2250       | 60.3  |
| 30                                                             | 2.1  | 605                    | 16.2  | 1500       | 40.2  | 2500      | 67.0  | 3000       | 80.4  |
| 40                                                             | 2.8  | 785                    | 21.0  | 1890       | 50.6  | 3180      | 85.2  | 3710       | 99.4  |
| 50                                                             | 3.4  | 945                    | 25.3  | 2180       | 58.4  | 3770      | 101   | 4640       | 124   |
| 60                                                             | 4.1  | 1120                   | 30.0  | 2590       | 69.4  | 4440      | 119   | 5110       | 137   |
| 80                                                             | 5.5  | 1450                   | 38.8  | 3380       | 90.6  | 5630      | 151   | 6170       | 165   |
| 90                                                             | 6.2  | 1680                   | 45.0  | 3770       | 101   | 6080      | 163   | 6350       | 170   |
| 100                                                            | 6.9  | 1850                   | 49.6  | 4080       | 109   | 6350      | 170   | 6350       | 170   |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.

# CS200 Series

**Table 31. CS205 and CS206 Series Flow Capacities for 2 psig / 140 mbar Setpoint at 10% Accuracy**

|          | ACCURACY |         |                |                            |
|----------|----------|---------|----------------|----------------------------|
| SETPOINT | +/- 10%  |         | SET RANGE      | SPRING PART NUMBER / COLOR |
| 2 psig   | -0.2 psi | 0.2 psi | 1 to 2 psig    | GE30190X012 / Black        |
| 140 mbar | -14 mbar | 14 mbar | 69 to 140 mbar |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS                         |      |                        |       |            |       |           |       |            |       |            |       |  |
|----------------------------------------------------------------------------------------|------|------------------------|-------|------------|-------|-----------|-------|------------|-------|------------|-------|--|
| Inlet Pressure                                                                         |      | Orifice Size, In. / mm |       |            |       |           |       |            |       |            |       |  |
|                                                                                        |      | 18 / 3.2               |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 5/16 / 7.9 |       | 1/2 / 12.7 |       |  |
|                                                                                        |      | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH       | Nm³/h | SCFH       | Nm³/h |  |
| psig                                                                                   | bar  | Body Size: NPS 3/4     |       |            |       |           |       |            |       |            |       |  |
| 3                                                                                      | 0.21 |                        |       | 100        | 2.7   | 180       | 4.8   | 320        | 8.6   | 460        | 12.3  |  |
| 5                                                                                      | 0.34 |                        |       | 210        | 5.6   | 380       | 10.2  | 590        | 15.8  | 830        | 22.2  |  |
| 10                                                                                     | 0.69 | 150                    | 4.0   | 420        | 11.3  | 720       | 19.3  | 1070       | 28.7  | 1530       | 41.0  |  |
| 15                                                                                     | 1.0  | 310                    | 8.3   | 620        | 16.6  | 1050      | 28.1  | 1570       | 42.1  | 1900       | 50.9  |  |
| 20                                                                                     | 1.4  | 400                    | 10.7  | 810        | 21.7  | 1370      | 36.7  | 1800       | 48.2  | 2120       | 56.8  |  |
| 25                                                                                     | 1.7  | 490                    | 13.1  | 950        | 25.5  | 1680      | 45.0  | 2150       | 57.6  | 2475       | 66.3  |  |
| 30                                                                                     | 2.1  | 540                    | 14.5  | 1120       | 30.0  | 1850      | 49.6  | 2150       | 57.6  | 2475       | 66.3  |  |
| 40                                                                                     | 2.8  | 680                    | 18.2  | 1420       | 38.1  | 2170      | 58.2  | 2450       | 65.7  | 2575       | 69.0  |  |
| 50                                                                                     | 3.4  | 820                    | 22.0  | 1790       | 48.0  | 2470      | 66.2  | 2570       | 68.9  |            |       |  |
| 60                                                                                     | 4.1  | 1000                   | 26.8  | 2060       | 55.2  | 2600      | 69.7  | 2670       | 71.6  |            |       |  |
| 80                                                                                     | 5.5  | 1300                   | 34.8  | 2470       | 66.2  | 2850      | 76.4  |            |       |            |       |  |
| 100                                                                                    | 6.9  | 1600                   | 42.9  | 2720       | 72.9  | 2850      | 76.4  |            |       |            |       |  |
| 125                                                                                    | 8.6  | 1970                   | 52.8  | 2850       | 76.4  |           |       |            |       |            |       |  |
| psig                                                                                   | bar  | Body Size: NPS 1       |       |            |       |           |       |            |       |            |       |  |
| 3                                                                                      | 0.21 |                        |       | 110        | 2.9   | 120       | 3.2   | 310        | 8.3   | 470        | 12.6  |  |
| 5                                                                                      | 0.34 |                        |       | 200        | 5.4   | 350       | 9.4   | 610        | 16.3  | 770        | 20.6  |  |
| 10                                                                                     | 0.69 | 140                    | 3.8   | 390        | 10.5  | 720       | 19.3  | 1020       | 27.3  | 1340       | 35.9  |  |
| 15                                                                                     | 1.0  | 210                    | 5.6   | 700        | 18.8  | 1000      | 26.8  | 1380       | 37.0  | 1680       | 45.0  |  |
| 20                                                                                     | 1.4  | 420                    | 11.3  | 910        | 24.4  | 1290      | 34.6  | 1750       | 46.9  | 2010       | 53.9  |  |
| 25                                                                                     | 1.7  | 490                    | 13.1  | 1080       | 28.9  | 1530      | 41.0  | 2000       | 53.6  | 2250       | 60.3  |  |
| 30                                                                                     | 2.1  | 550                    | 14.7  | 1230       | 33.0  | 1750      | 46.9  | 2180       | 58.4  | 2510       | 67.3  |  |
| 40                                                                                     | 2.8  | 700                    | 18.8  | 1490       | 39.9  | 2170      | 58.2  | 2600       | 69.7  | 2900       | 77.7  |  |
| 50                                                                                     | 3.4  | 860                    | 23.0  | 1840       | 49.3  | 2520      | 67.5  | 2750       | 73.7  |            |       |  |
| 60                                                                                     | 4.1  | 1000                   | 26.8  | 2170       | 58.2  | 2850      | 76.4  | 3030       | 81.2  |            |       |  |
| 80                                                                                     | 5.5  | 1300                   | 34.8  | 2590       | 69.4  | 3010      | 80.7  |            |       |            |       |  |
| 100                                                                                    | 6.9  | 1600                   | 42.9  | 2860       | 76.6  | 3160      | 84.7  |            |       |            |       |  |
| 125                                                                                    | 8.6  | 1970                   | 52.8  | 3110       | 83.3  |           |       |            |       |            |       |  |
| psig                                                                                   | bar  | Body Size: NPS 1-1/4   |       |            |       |           |       |            |       |            |       |  |
| 3                                                                                      | 0.21 |                        |       | 110        | 2.9   | 150       | 4.0   | 250        | 6.7   | 400        | 10.7  |  |
| 5                                                                                      | 0.34 |                        |       | 190        | 5.1   | 330       | 8.8   | 580        | 15.5  | 680        | 18.2  |  |
| 10                                                                                     | 0.69 | 190                    | 5.1   | 390        | 10.5  | 680       | 18.2  | 1170       | 31.4  | 1480       | 39.7  |  |
| 15                                                                                     | 1.0  | 300                    | 8.0   | 540        | 14.5  | 940       | 25.2  | 1770       | 47.4  | 2300       | 61.6  |  |
| 20                                                                                     | 1.4  | 340                    | 9.1   | 660        | 17.7  | 1270      | 34.0  | 2290       | 61.4  | 2860       | 76.6  |  |
| 25                                                                                     | 1.7  | 480                    | 12.9  | 860        | 23.0  | 1630      | 43.7  | 2840       | 76.1  | 3610       | 96.7  |  |
| 30                                                                                     | 2.1  | 550                    | 14.7  | 1070       | 28.7  | 1940      | 52.0  | 3220       | 86.3  | 3980       | 107   |  |
| 40                                                                                     | 2.8  | 670                    | 18.0  | 1480       | 39.7  | 2790      | 74.8  | 4140       | 111   | 5230       | 140   |  |
| 50                                                                                     | 3.4  | 810                    | 21.7  | 1730       | 46.4  | 3270      | 87.6  | 5290       | 142   |            |       |  |
| 60                                                                                     | 4.1  | 940                    | 25.2  | 2030       | 54.4  | 4000      | 107   | 5400       | 145   |            |       |  |
| 80                                                                                     | 5.5  | 1300                   | 34.8  | 2740       | 73.4  | 4400      | 118   |            |       |            |       |  |
| 100                                                                                    | 6.9  | 1500                   | 40.2  | 3380       | 90.6  | 4400      | 118   |            |       |            |       |  |
| 125                                                                                    | 8.6  | 1900                   | 50.9  | 4070       | 109   |           |       |            |       |            |       |  |
| Black areas show where indicated droop/boost would be exceeded regardless of capacity. |      |                        |       |            |       |           |       |            |       |            |       |  |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.

**Table 32. CS205 and CS206 Series Flow Capacities for 2 psig / 140 mbar Setpoint at 20% Accuracy**

|          | ACCURACY |         |                |                            |
|----------|----------|---------|----------------|----------------------------|
| SETPOINT | +/- 20%  |         | SET RANGE      | SPRING PART NUMBER / COLOR |
| 2 psig   | -0.4 psi | 0.4 psi | 1 to 2 psig    | GE30190X012 / Black        |
| 140 mbar | -28 mbar | 28 mbar | 69 to 140 mbar |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS |      |                        |       |            |       |           |       |            |       |
|----------------------------------------------------------------|------|------------------------|-------|------------|-------|-----------|-------|------------|-------|
| Inlet Pressure                                                 |      | Orifice Size, In. / mm |       |            |       |           |       |            |       |
|                                                                |      | 18 / 3.2               |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 5/16 / 7.9 |       |
|                                                                |      | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH       | Nm³/h |
| psig                                                           | bar  | Body Size: NPS 3/4     |       |            |       |           |       |            |       |
| 3                                                              | 0.21 | 125                    | 3.3   | 270        | 7.2   | 490       | 13.1  | 600        | 16.1  |
| 5                                                              | 0.34 | 170                    | 4.6   | 430        | 11.5  | 690       | 18.5  | 865        | 23.2  |
| 10                                                             | 0.69 | 305                    | 8.2   | 750        | 20.1  | 1140      | 30.5  | 1400       | 37.5  |
| 15                                                             | 1.0  | 415                    | 11.1  | 985        | 26.4  | 1490      | 39.9  | 1750       | 46.9  |
| 20                                                             | 1.4  | 520                    | 13.9  | 1180       | 31.6  | 1840      | 49.3  | 2100       | 56.3  |
| 30                                                             | 2.1  | 690                    | 18.5  | 1570       | 42.1  | 2400      | 64.3  | 2700       | 72.3  |
| 40                                                             | 2.8  | 840                    | 22.5  | 1930       | 51.7  | 2880      | 77.2  | 3140       | 84.1  |
| 50                                                             | 3.4  | 1000                   | 26.8  | 2290       | 61.4  | 3320      | 88.9  | 3520       | 94.3  |
| 60                                                             | 4.1  | 1140                   | 30.5  | 2670       | 71.5  | 3670      | 98.3  | 3820       | 102   |
| 80                                                             | 5.5  | 1400                   | 37.5  | 3400       | 91.1  | 4110      | 110   | 4120       | 110   |
| 90                                                             | 6.2  | 1620                   | 43.4  | 3770       | 101   | 4250      | 114   | 4130       | 111   |
| 100                                                            | 6.9  | 1680                   | 45.0  | 4100       | 110   | 4350      | 116   | 4240       | 114   |
| psig                                                           | bar  | Body Size: NPS 1       |       |            |       |           |       |            |       |
| 3                                                              | 0.21 |                        |       | 210        | 5.6   | 395       | 10.6  | 510        | 13.7  |
| 5                                                              | 0.34 | 125                    | 3.3   | 375        | 10.0  | 605       | 16.2  | 795        | 21.3  |
| 10                                                             | 0.69 | 255                    | 6.8   | 690        | 18.5  | 1070      | 28.7  | 1370       | 36.7  |
| 15                                                             | 1.0  | 360                    | 9.6   | 935        | 25.0  | 1510      | 40.5  | 1760       | 47.2  |
| 20                                                             | 1.4  | 475                    | 12.7  | 1110       | 29.7  | 1870      | 50.1  | 2310       | 61.9  |
| 30                                                             | 2.1  | 635                    | 17.0  | 1500       | 40.2  | 2510      | 67.2  | 3050       | 81.7  |
| 40                                                             | 2.8  | 810                    | 21.7  | 1920       | 51.4  | 3120      | 83.6  | 3700       | 99.1  |
| 50                                                             | 3.4  | 1000                   | 26.8  | 2300       | 61.6  | 3680      | 98.6  | 4230       | 113   |
| 60                                                             | 4.1  | 1150                   | 30.8  | 2620       | 70.2  | 4180      | 112   | 4700       | 126   |
| 80                                                             | 5.5  | 1500                   | 40.2  | 3370       | 90.3  | 5040      | 135   | 5370       | 144   |
| 90                                                             | 6.2  | 1640                   | 43.9  | 3810       | 102   | 5360      | 144   | 5570       | 149   |
| 100                                                            | 6.9  | 1770                   | 47.4  | 4140       | 111   | 5460      | 146   | 5630       | 151   |
| psig                                                           | bar  | Body Size: NPS 1-1/4   |       |            |       |           |       |            |       |
| 3                                                              | 0.21 |                        |       | 345        | 9.2   | 465       | 12.5  | 620        | 16.6  |
| 5                                                              | 0.34 |                        |       | 485        | 13.0  | 650       | 17.4  | 865        | 23.2  |
| 10                                                             | 0.69 | 250                    | 6.7   | 715        | 19.2  | 1170      | 31.3  | 1470       | 39.4  |
| 15                                                             | 1.0  | 345                    | 9.2   | 995        | 26.7  | 1530      | 41.0  | 2010       | 53.8  |
| 20                                                             | 1.4  | 430                    | 11.5  | 1160       | 31.1  | 1890      | 50.6  | 2350       | 63.0  |
| 30                                                             | 2.1  | 605                    | 16.2  | 1530       | 41.0  | 2720      | 72.9  | 3100       | 83.1  |
| 40                                                             | 2.8  | 785                    | 21.0  | 1910       | 51.2  | 3270      | 87.6  | 3880       | 104   |
| 50                                                             | 3.4  | 945                    | 25.3  | 2220       | 59.5  | 3840      | 103   | 4780       | 128   |
| 60                                                             | 4.1  | 1120                   | 30.0  | 2610       | 69.9  | 4660      | 125   | 5200       | 139   |
| 80                                                             | 5.5  | 1450                   | 38.8  | 3390       | 90.8  | 5760      | 154   | 6550       | 175   |
| 90                                                             | 6.2  | 1680                   | 45.0  | 3790       | 101   | 6250      | 167   | 6550       | 175   |
| 100                                                            | 6.9  | 1850                   | 49.6  | 4090       | 110   | 6550      | 175   | 6550       | 175   |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.

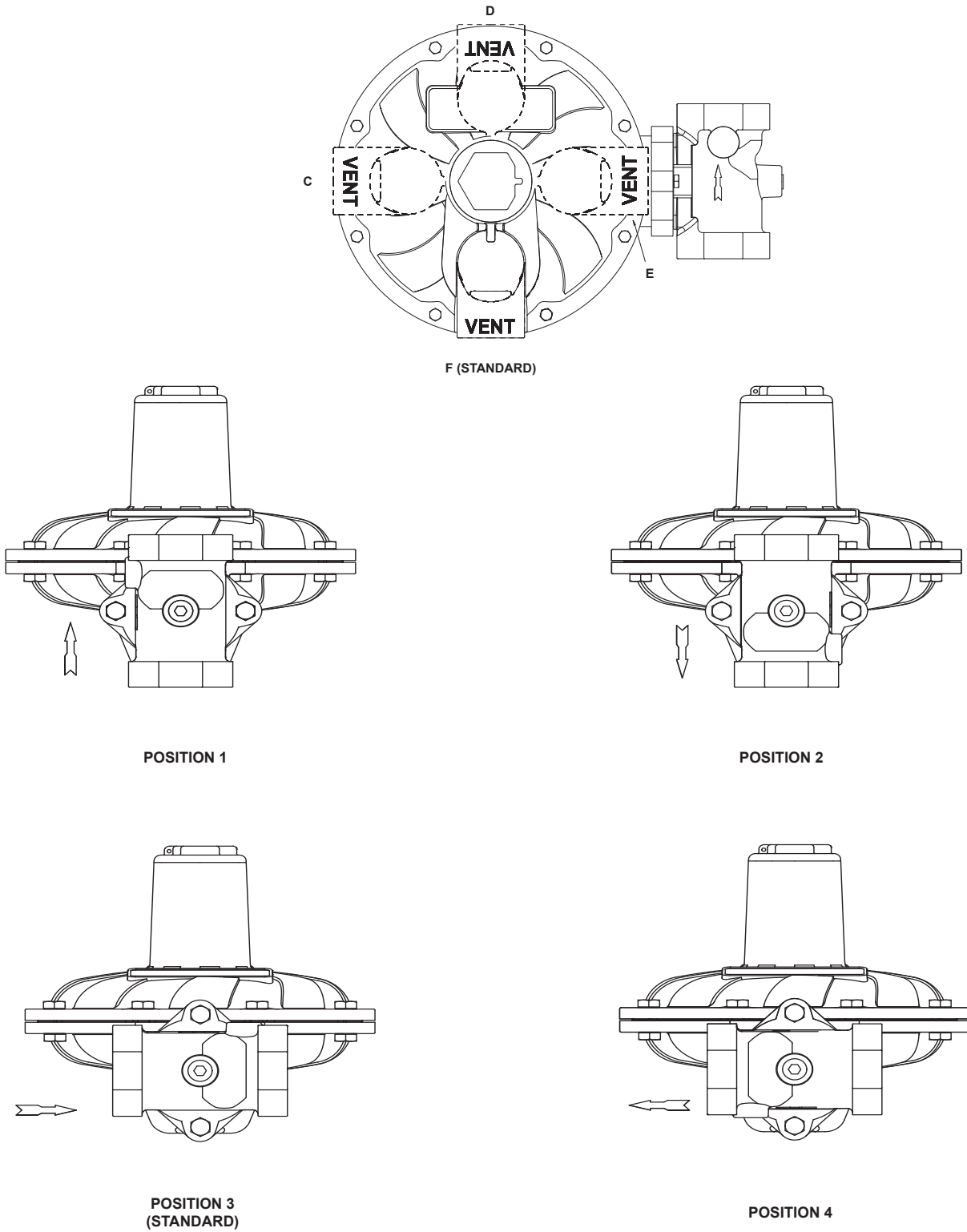
# CS200 Series

**Table 33. CS200 Series Internal Registration Flow Capacities for 2 psig / 140 mbar Setpoint with 1% ABS Pressure Factor Accuracy (PFM Approved)**

|          | ACCURACY   |          |                |                            |
|----------|------------|----------|----------------|----------------------------|
| SETPOINT | +/- 1% ABS |          | SET RANGE      | SPRING PART NUMBER / COLOR |
| 2 psig   | -0.17 psi  | 0.17 psi | 1 to 2 psig    | GE30190X012 / Black        |
| 140 mbar | -12 mbar   | 12 mbar  | 69 to 140 mbar |                            |

| CAPACITIES IN SCFH / Nm³/h OF 0.6 SPECIFIC GRAVITY NATURAL GAS                         |      |                        |       |            |       |           |       |           |       |          |       |      |     |     |     |      |
|----------------------------------------------------------------------------------------|------|------------------------|-------|------------|-------|-----------|-------|-----------|-------|----------|-------|------|-----|-----|-----|------|
| Inlet Pressure                                                                         |      | Orifice Size, In. / mm |       |            |       |           |       |           |       |          |       |      |     |     |     |      |
|                                                                                        |      | 1/8 / 3.2              |       | 3/16 / 4.8 |       | 1/4 / 6.4 |       | 3/8 / 9.5 |       | 1/2 / 13 |       |      |     |     |     |      |
|                                                                                        |      | SCFH                   | Nm³/h | SCFH       | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH     | Nm³/h |      |     |     |     |      |
| psig                                                                                   | bar  | Body Size: NPS 3/4     |       |            |       |           |       |           |       |          |       |      |     |     |     |      |
| 3                                                                                      | 0.21 |                        |       | 100        | 2.7   | 180       | 4.8   | 320       | 8.6   | 460      | 12.3  |      |     |     |     |      |
| 5                                                                                      | 0.34 |                        |       | 210        | 5.6   | 380       | 10.2  | 590       | 15.8  | 830      | 22.2  |      |     |     |     |      |
| 10                                                                                     | 0.69 | 150                    | 4.0   | 420        | 11.3  | 720       | 19.3  | 1070      | 28.7  | 1530     | 41.0  |      |     |     |     |      |
| 15                                                                                     | 1.0  | 310                    | 8.3   | 620        | 16.6  | 1050      | 28.1  | 1570      | 42.1  | 1900     | 50.9  |      |     |     |     |      |
| 20                                                                                     | 1.4  | 400                    | 10.7  | 810        | 21.7  | 1370      | 36.7  | 1800      | 48.2  | 2120     | 56.8  |      |     |     |     |      |
| 25                                                                                     | 1.7  | 490                    | 13.1  | 950        | 25.5  | 1680      | 45.0  | 2150      | 57.6  | 2475     | 66.3  |      |     |     |     |      |
| 30                                                                                     | 2.0  | 540                    | 14.5  | 1120       | 30.0  | 1850      | 49.6  | 2150      | 57.6  | 2475     | 66.3  |      |     |     |     |      |
| 40                                                                                     | 2.7  | 680                    | 18.2  | 1420       | 38.1  | 2170      | 58.2  | 2450      | 65.7  | 2575     | 69.0  |      |     |     |     |      |
| 50                                                                                     | 3.4  | 820                    | 22.0  | 1790       | 48.0  | 2470      | 66.2  | 2570      | 68.9  |          |       |      |     |     |     |      |
| 60                                                                                     | 4.1  | 1000                   | 26.8  | 2060       | 55.2  | 2600      | 69.7  | 2670      | 71.6  |          |       |      |     |     |     |      |
| 80                                                                                     | 5.5  | 1300                   | 34.8  | 2470       | 66.2  | 2850      | 76.4  |           |       |          |       |      |     |     |     |      |
| 100                                                                                    | 6.8  | 1600                   | 42.9  | 2720       | 72.9  | 2850      | 76.4  |           |       |          |       |      |     |     |     |      |
| 125                                                                                    | 8.5  | 1970                   | 52.8  | 2850       | 76.4  |           |       |           |       |          |       |      |     |     |     |      |
| psig                                                                                   | bar  | Body Size: NPS 1       |       |            |       |           |       |           |       |          |       |      |     |     |     |      |
| 3                                                                                      | 0.21 |                        |       | 110        | 2.9   |           |       |           |       |          | 120   | 3.2  | 310 | 8.3 | 470 | 12.6 |
| 5                                                                                      | 0.34 |                        |       |            | 200   | 5.4       | 350   | 9.4       | 610   | 16.3     | 770   | 20.6 |     |     |     |      |
| 10                                                                                     | 0.69 | 140                    | 3.8   | 390        | 10.5  | 720       | 19.3  | 1020      | 27.3  | 1340     | 35.9  |      |     |     |     |      |
| 15                                                                                     | 1.0  | 210                    | 5.6   | 700        | 18.8  | 1000      | 26.8  | 1380      | 37.0  | 1680     | 45.0  |      |     |     |     |      |
| 20                                                                                     | 1.4  | 420                    | 11.3  | 910        | 24.4  | 1290      | 34.6  | 1750      | 46.9  | 2010     | 53.9  |      |     |     |     |      |
| 25                                                                                     | 1.7  | 490                    | 13.1  | 1080       | 28.9  | 1530      | 41.0  | 2000      | 53.6  | 2250     | 60.3  |      |     |     |     |      |
| 30                                                                                     | 2.0  | 550                    | 14.7  | 1230       | 33.0  | 1750      | 46.9  | 2180      | 58.4  | 2510     | 67.3  |      |     |     |     |      |
| 40                                                                                     | 2.7  | 700                    | 18.8  | 1490       | 39.9  | 2170      | 58.2  | 2600      | 69.7  | 2900     | 77.7  |      |     |     |     |      |
| 50                                                                                     | 3.4  | 860                    | 23.0  | 1840       | 49.3  | 2520      | 67.5  | 2750      | 73.7  |          |       |      |     |     |     |      |
| 60                                                                                     | 4.1  | 1000                   | 26.8  | 2170       | 58.2  | 2850      | 76.4  | 3030      | 81.2  |          |       |      |     |     |     |      |
| 80                                                                                     | 5.5  | 1300                   | 34.8  | 2590       | 69.4  | 3010      | 80.7  |           |       |          |       |      |     |     |     |      |
| 100                                                                                    | 6.8  | 1600                   | 42.9  | 2860       | 76.6  | 3160      | 84.7  |           |       |          |       |      |     |     |     |      |
| 125                                                                                    | 8.5  | 1970                   | 52.8  | 3110       | 83.3  |           |       |           |       |          |       |      |     |     |     |      |
| psig                                                                                   | bar  | Body Size: NPS 1-1/4   |       |            |       |           |       |           |       |          |       |      |     |     |     |      |
| 3                                                                                      | 0.21 |                        |       | 110        | 2.9   |           |       |           |       |          | 150   | 4.0  | 250 | 6.7 | 400 | 10.7 |
| 5                                                                                      | 0.34 |                        |       |            | 190   | 5.1       | 330   | 8.8       | 580   | 15.5     | 680   | 18.2 |     |     |     |      |
| 10                                                                                     | 0.69 | 190                    | 5.1   | 390        | 10.5  | 680       | 18.2  | 1170      | 31.4  | 1480     | 39.7  |      |     |     |     |      |
| 15                                                                                     | 1.0  | 300                    | 8.0   | 540        | 14.5  | 940       | 25.2  | 1770      | 47.4  | 2300     | 61.6  |      |     |     |     |      |
| 20                                                                                     | 1.4  | 340                    | 9.1   | 660        | 17.7  | 1270      | 34.0  | 2290      | 61.4  | 2860     | 76.6  |      |     |     |     |      |
| 25                                                                                     | 1.7  | 480                    | 12.9  | 860        | 23.0  | 1630      | 43.7  | 2840      | 76.1  | 3610     | 96.7  |      |     |     |     |      |
| 30                                                                                     | 2.0  | 550                    | 14.7  | 1070       | 28.7  | 1940      | 52.0  | 3220      | 86.3  | 3980     | 107   |      |     |     |     |      |
| 40                                                                                     | 2.7  | 670                    | 18.0  | 1480       | 39.7  | 2790      | 74.8  | 4140      | 111   | 5230     | 140   |      |     |     |     |      |
| 50                                                                                     | 3.4  | 810                    | 21.7  | 1730       | 46.4  | 3270      | 87.6  | 5290      | 142   |          |       |      |     |     |     |      |
| 60                                                                                     | 4.1  | 940                    | 25.2  | 2030       | 54.4  | 4000      | 107   | 5400      | 145   |          |       |      |     |     |     |      |
| 80                                                                                     | 5.5  | 1300                   | 34.8  | 2740       | 73.4  | 4400      | 118   |           |       |          |       |      |     |     |     |      |
| 100                                                                                    | 6.8  | 1500                   | 40.2  | 3380       | 90.6  | 4400      | 118   |           |       |          |       |      |     |     |     |      |
| 125                                                                                    | 8.5  | 1900                   | 50.9  | 4070       | 109   |           |       |           |       |          |       |      |     |     |     |      |
| Black areas show where indicated droop/boost would be exceeded regardless of capacity. |      |                        |       |            |       |           |       |           |       |          |       |      |     |     |     |      |

Black areas show where indicated droop/boost would be exceeded regardless of capacity.



GE26479-A\_S6

**Figure 9.** Spring Case Vent and Body Orientation

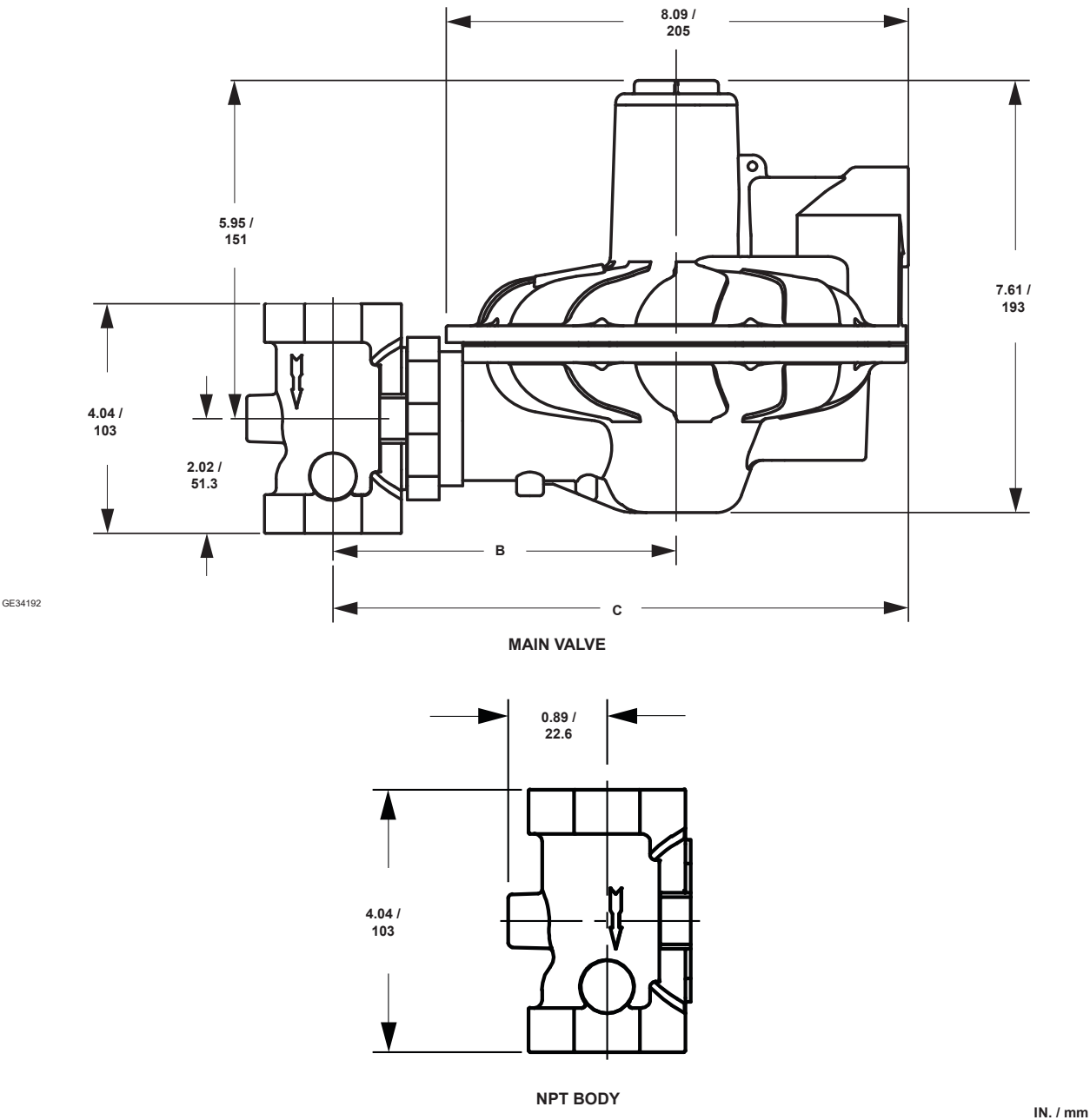


Figure 10. Dimensions

Table 34. Body Size and Dimensions

| BODY SIZE, NPS |        | DIMENSION, IN. / mm |            |
|----------------|--------|---------------------|------------|
| Inlet          | Outlet | B                   | C          |
| 3/4            | 3/4    | 5.84 / 148          | 9.93 / 252 |
| 3/4            | 1      |                     |            |
| 1              | 1      |                     |            |
| 3/4            | 1-1/4  | 6.02 / 153          | 10.1 / 257 |
| 1              |        |                     |            |
| 1-1/4          |        |                     |            |

## Ordering Guide

### Type (Select One)

- ☐ CS200IN\*\*\*
- ☐ CS200IR\*\*\*
- ☐ CS205IN\*\*\*
- ☐ CS205IR\*\*\*
- ☐ CS206IR\*\*\*

### Body Size and End Connection (Select One)

#### Gray Cast Iron

- ☐ 3/4 NPT\*\*\*
- ☐ 3/4 x 1 NPT\*\*\*
- ☐ 3/4 x 1-1/4 NPT\*\*\*
- ☐ 1 NPT\*\*\*
- ☐ 1 x 1-1/4 NPT\*\*\*
- ☐ 1-1/4 NPT\*\*\*

### Outlet Pressure Range (Select One)

- ☐ 3.5 to 5 in. w.c. / 9 to 12 mbar, Red\*\*\*
- ☐ 4.5 to 6.5 in. w.c. / 11 to 16 mbar, Purple\*\*\*
- ☐ 6 to 8 in. w.c. / 5 to 20 mbar, Gold\*\*\*
- ☐ 7.5 to 11 in. w.c. / 19 to 27 mbar, Blue\*\*\*
- ☐ 10 to 14 in. w.c. / 25 to 35 mbar, Unpainted\*\*\*
- ☐ 12 to 19 in. w.c. / 30 to 47 mbar, Green\*\*\*
- ☐ 18 in. w.c. to 1 psig / 45 to 69 mbar, Orange\*\*\*
- ☐ 1 to 2 psig / 69 to 140 mbar, Black\*\*\*

### Type CS200 Orifice Size (Select One)

- ☐ 1/8 in. / 3.2 mm\*\*\*
- ☐ 3/16 in. / 4.8 mm\*\*\*
- ☐ 1/4 in. / 6.4 mm\*\*\*
- ☐ 3/8 in. / 9.5 mm\*\*\*
- ☐ 1/2 in. / 13 mm\*\*\*

### Types CS205 and CS206 Secondary Seat™ Orifice Assembly Size (Select One)

- ☐ 1/8 in. / 3.2 mm\*\*\*
- ☐ 3/16 in. / 4.8 mm\*\*\*
- ☐ 1/4 in. / 6.4 mm\*\*\*
- ☐ 5/16 in. / 7.9 mm\*\*\*

### Body Orientation (Select One)

- ☐ Position 1\*\*\*
- ☐ Position 2\*\*\*
- ☐ Position 3 (standard)\*\*\*
- ☐ Position 4\*\*\*

### Vent Orientation (Select One)

- ☐ Position C\*\*\*
- ☐ Position D\*\*\*
- ☐ Position E\*\*\*
- ☐ Position F (standard)\*\*\*

### Certification

#### (Available only on CS200 Series Constructions)

- ☐ Pressure Factor Measurement (PFM)

## Ordering Guide (continued)

| Regulators Quick Order Guide                                                                                                            |                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| ***                                                                                                                                     | Readily Available for Shipment                                                                       |
| **                                                                                                                                      | Allow Additional Time for Shipment                                                                   |
| *                                                                                                                                       | Special Order, Constructed from Non-Stocked Parts, Consult your local Sales Office for Availability. |
| Availability of the product being ordered is determined by the component with the longest shipping time for the requested construction. |                                                                                                      |

**Specification Worksheet**

**Application:**  
Specific Use \_\_\_\_\_  
Line Size \_\_\_\_\_  
Gas Type and Specific Gravity \_\_\_\_\_  
Gas Temperature \_\_\_\_\_  
Does the Application Require Overpressure Protection?  
☐ Yes ☐ No If yes, which is preferred:  
☐ Relief Valve ☐ Monitor Regulator ☐ Shutoff Device  
Is overpressure protection equipment selection assistance desired? \_\_\_\_\_  
**Pressure:**  
Maximum Inlet Pressure ( $P_{1max}$ ) \_\_\_\_\_  
Minimum Inlet Pressure ( $P_{1min}$ ) \_\_\_\_\_  
Downstream Pressure Setting(s) ( $P_2$ ) \_\_\_\_\_  
Maximum Flow ( $Q_{max}$ ) \_\_\_\_\_  
**Performance Required:**  
Accuracy Requirements? \_\_\_\_\_  
Need for Fast Response? \_\_\_\_\_  
**Other Requirements:** \_\_\_\_\_

-  Webadmin.Regulators@emerson.com
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-  X.com/emr\_automation

### Emerson

**Americas**  
McKinney, Texas 75069 USA  
T +1 800 558 5853  
+1 972 548 3574

**Europe**  
Bologna 40013, Italy  
T +39 051 419 0611

**Asia Pacific**  
Singapore 128461, Singapore  
T +65 6777 8211

**Middle East and Africa**  
Dubai, United Arab Emirates  
T +971 4 811 8100

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