

August 2019

# Type MR105 Direct-Operated Pressure Reducing Regulators



P1205

TYPE MR105 DIRECT-OPERATED REGULATOR WITH  
LOW-PRESSURE ACTUATOR



P1204

TYPE MR105 DIRECT-OPERATED REGULATOR WITH  
HIGH-PRESSURE ACTUATOR

**Figure 1.** Type MR105 Direct-Operated Pressure Reducing Regulators

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## Features

- Travel Indicator
- Large Flow
- Stability
- Fast Response
- Steel and Stainless Steel Constructions  
Meet API 614 Requirements
- Available Constructions to Meet  
NACE MR0175-2003 and NACE MR0103  
Requirements for Sour Gas Service Capability
- Multiple Trim Materials Available
- ANSI/FCI 70-3-2004 Class VI Shutoff
- Multiple End Connection Options
- $P_1 = P_2$  on High-Pressure Actuator
- Suitable for High-Temperature Applications  
up to 250°F / 121°C
- Easy Access to Trim Parts
- Drain Valve
- Bleed valve (for High-Pressure Actuator only)
- Arctic Temperature Constructions

# Type MR105

## Specifications

The Specifications section on this page provides the ratings and other specifications for the Type MR105. The following information is stamped on the nameplate fastened on the regulator at the factory: type; body size; maximum inlet, outlet and differential pressure; maximum pressure above setpoint; maximum casing pressure; maximum temperature; spring range; cage type; and trim and diaphragm material.

### Body Sizes and End Connection Styles

See Table 1

### Shutoff Classification per ANSI/FCI 70-3-2004

Class VI (Soft Seat)

### Maximum Inlet, Outlet and Emergency Casing Pressure<sup>(1)</sup>

See Table 3

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

5 to 300 psig / 0.34 to 20.7 bar; see Table 2

### Maximum Setpoint<sup>(1)</sup>

**Low-Pressure Actuator:** 43 psig / 3.0 bar

**High-Pressure Actuator:**

*Nitrile (NBR) and Ethylene Propylene (EPDM)*

*Diaphragm:* 300 psig / 20.7 bar

*Fluorocarbon (FKM) Diaphragm:*

150 psig / 10.3 bar

### Construction Materials

See Table 6

### Maximum Differential Pressures<sup>(1)</sup>

See Table 4

### Flow and Sizing Coefficients

See Table 5

### Temperature Capabilities<sup>(1)(4)</sup>

**Nitrile (NBR):** -20 to 180°F / -29 to 82°C

**Fluorocarbon (FKM):** 20 to 250°F / -7 to 121°C<sup>(2)</sup>

**EPDM<sup>(3)</sup>:** -20 to 225°F /

-29 to 107°C

### Pressure Registration

External

### Downstream Control Line Connection Size

1/2 NPT

### Maximum Pressure Over Setpoint to Avoid Internal Parts Damage<sup>(1)</sup>

**Low-Pressure Actuator:** 20 psig / 1.4 bar

**High-Pressure Actuator:** 120 psig / 8.3 bar

### Spring Case Vent

Type Y602-12

### Pressure-Loaded Spring Case Vent Connection<sup>(5)</sup>

1/2 NPT

### Approximate Weights

#### For Type MR105 with Low-Pressure Actuator

*NPS 1 / DN 25:* 86 lbs / 39 kg

*NPS 2 / DN 50:* 116 lbs / 53 kg

*NPS 3 / DN 80:* 165 lbs / 75 kg

*NPS 4 / DN 100:* 174 lbs / 79 kg

#### For Type MR105 with High-Pressure Actuator

*NPS 1 / DN 25:* 76 lbs / 34 kg

*NPS 2 / DN 50:* 105 lbs / 48 kg

*NPS 3 / DN 80:* 155 lbs / 70 kg

*NPS 4 / DN 100:* 164 lbs / 74 kg

### Options

- Visual Travel Indicator
- Drain Valve
- Pressure-Loaded Actuator<sup>(5)</sup>
- NACE Construction
- Bleed Valve (for High-Pressure Actuator Only)
- EPDM Elastomer Trim Parts

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

2. Fluorocarbon (FKM) is limited to 200°F / 93°C in hot water.

3. EPDM is limited to 20 to 250°F / -7 to 121°C when used with Low Pressure Actuator.

4. Special low temperature constructions for process temperatures between -76 to 104°F / -60 to 40°C are available by request. The low temperature construction passed Emerson laboratory testing for lockup and external leakage down to -76°F / -60°C.

5. Consult the local Sales Office for this option.

## Introduction

The Type MR105 regulators are direct-operated, pressure reducing, high-capacity, multi-purpose regulators.

They are designed to handle pressures up to 400 psig / 27.6 bar and temperatures up to 250°F / 121°C.

This product provides a simple, fast, reliable and economical way to control and reduce pressure in multi-purpose applications suitable for different flow media such as liquid, air and gas. Applications include lube oil

systems and any application where speed of response is critical, minimum differential pressure is a concern or fluid is not free of impurities. Type MR105 regulator with a low-pressure actuator can be set up to 43 psig / 3.0 bar and the high-pressure actuator version can be set up to 300 psig / 20.7 bar.

The units are available in 4 sizes, NPS 1 through 4 / DN 25 through 100 and are available in several end connection configurations to meet demands on application requirements.

**Table 1. Body Sizes and End Connection Styles**

| BODY MATERIAL                          | END CONNECTION STYLE                                   |                                             |
|----------------------------------------|--------------------------------------------------------|---------------------------------------------|
|                                        | Body Size                                              |                                             |
|                                        | NPS 1 and 2 / DN 25 and 50                             | NPS 3 and 4 / DN 80 and 100                 |
| Cast Iron                              | NPT, CL125 FF, CL250 RF                                | CL125 FF, CL250 RF                          |
| WCC steel <sup>(1)(2)</sup>            | NPT, CL150 RF, CL300 RF, CL600 RF<br>or PN 16/25/40 RF | CL150 RF, CL300 RF, CL600 RF<br>or PN 16 RF |
| CF8M Stainless steel <sup>(1)(2)</sup> | NPT, CL150 RF, CL300 RF, CL600 RF<br>or PN 16/25/40 RF | CL150 RF, CL300 RF, CL600 RF<br>or PN 16 RF |
| CF3M Stainless steel <sup>(1)(2)</sup> | NPT, CL150 RF, CL300 RF, CL600 RF<br>or PN 16/25/40 RF | CL150 RF, CL300 RF, CL600 RF<br>or PN 16 RF |

1. Optional NACE construction available.  
2. Constructions meet API 614 requirements.

**Table 2. Outlet Pressure Ranges**

| BODY SIZE, NPS 1 AND 2 / DN 25 AND 50                                                                                                                                                  |                           |                            |                    |                   |                      |      |                    |     |                                                               |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------|--------------------|-------------------|----------------------|------|--------------------|-----|---------------------------------------------------------------|-----|
| Actuator Type                                                                                                                                                                          | Spring Range              |                            | Spring Part Number | Spring Color Code | Spring Wire Diameter |      | Spring Free Length |     | Maximum Pressure Over Setpoint to Avoid Internal Parts Damage |     |
|                                                                                                                                                                                        | psig                      | bar                        |                    |                   | In.                  | mm   | In.                | mm  | psig                                                          | bar |
| Low Pressure                                                                                                                                                                           | 5 to 12                   | 0.34 to 0.83               | GE42909X012        | White             | 0.437                | 11.1 | 9.70               | 246 | 20                                                            | 1.4 |
|                                                                                                                                                                                        | 10 to 24                  | 0.69 to 1.6                | GE42910X012        | Silver            | 0.500                | 12.7 |                    |     |                                                               |     |
|                                                                                                                                                                                        | 14 to 32                  | 0.96 to 2.2                | GE42911X012        | Orange            | 0.562                | 14.3 |                    |     |                                                               |     |
|                                                                                                                                                                                        | 18 to 43                  | 1.2 to 3.0                 | GE43002X012        | Red               | 0.625                | 15.9 |                    |     |                                                               |     |
| High Pressure                                                                                                                                                                          | 25 to 60 <sup>(1)</sup>   | 1.7 to 4.1 <sup>(1)</sup>  | GE42907X012        | Green             | 0.375                | 9.52 |                    |     | 120                                                           | 8.3 |
|                                                                                                                                                                                        | 43 to 100                 | 3.0 to 6.9                 | GE42909X012        | White             | 0.437                | 11.1 |                    |     |                                                               |     |
|                                                                                                                                                                                        | 75 to 175 <sup>(2)</sup>  | 5.2 to 12.1 <sup>(2)</sup> | GE42910X012        | Silver            | 0.500                | 12.7 |                    |     |                                                               |     |
|                                                                                                                                                                                        | 110 to 300 <sup>(2)</sup> | 7.6 to 20.7 <sup>(2)</sup> | GE42911X012        | Orange            | 0.562                | 14.3 |                    |     |                                                               |     |
| BODY SIZE, NPS 3 AND 4 / DN 80 AND 100                                                                                                                                                 |                           |                            |                    |                   |                      |      |                    |     |                                                               |     |
| Actuator Type                                                                                                                                                                          | Spring Range              |                            | Spring Part Number | Spring Color Code | Spring Wire Diameter |      | Spring Free Length |     | Maximum Pressure Over Setpoint to Avoid Internal Parts Damage |     |
|                                                                                                                                                                                        | psig                      | bar                        |                    |                   | In.                  | mm   | In.                | mm  | psig                                                          | bar |
| Low Pressure                                                                                                                                                                           | 5 to 8                    | 0.34 to 0.55               | GE42909X012        | White             | 0.437                | 11.1 | 9.70               | 246 | 20                                                            | 1.4 |
|                                                                                                                                                                                        | 8 to 20                   | 0.55 to 1.4                | GE42910X012        | Silver            | 0.500                | 12.7 |                    |     |                                                               |     |
|                                                                                                                                                                                        | 12 to 30                  | 0.83 to 2.1                | GE42911X012        | Orange            | 0.562                | 14.3 |                    |     |                                                               |     |
|                                                                                                                                                                                        | 18 to 39                  | 1.2 to 2.7                 | GE43002X012        | Red               | 0.625                | 15.9 |                    |     |                                                               |     |
| High Pressure                                                                                                                                                                          | 39 to 72                  | 2.7 to 5.0                 | GE42909X012        | White             | 0.437                | 11.1 |                    |     | 120                                                           | 8.3 |
|                                                                                                                                                                                        | 71 to 175 <sup>(2)</sup>  | 4.9 to 12.1 <sup>(2)</sup> | GE42910X012        | Silver            | 0.500                | 12.7 |                    |     |                                                               |     |
|                                                                                                                                                                                        | 110 to 250 <sup>(2)</sup> | 7.6 to 17.2 <sup>(2)</sup> | GE42911X012        | Orange            | 0.562                | 14.3 |                    |     |                                                               |     |
| 1. NPS 2 / DN 50 body size spring range is limited to 45 psig / 3.1 bar.<br>2. Maximum setpoint is limited to 150 psig / 10.3 bar for constructions with Fluorocarbon (FKM) diaphragm. |                           |                            |                    |                   |                      |      |                    |     |                                                               |     |

Available in linear and quick opening trim cages for gas and liquid applications, respectively. The cage-guided metal plug provides superior control and stability.

The Type MR105 with steel or stainless steel body construction has been designed to meet API 614 as required by lube oil manufacturers.

## Features

**Travel Indicator**—Travel indicator option provides visual indication of the valve movement from the closed to open position.

**Large Flow**—Able to pass large flow rates with minimal offset from setpoint.

**Stability**—The Type MR105 regulator's cage-guided metal plug design provides superior control stability of delivery pressure.

**Fast Response**—Direct-operated allows for fast response to meet the most demanding pressure and flow requirements.

**Steel and Stainless Steel Constructions Meet API 614 Requirements**—Steel and Stainless steel body constructions comply with the recommendations of API Standard 614.

**Available Constructions to Meet NACE MR0175-2003 and NACE MR0103 Requirements for Sour Gas Service Capability**—Optional materials are available for applications handling sour gases. These constructions comply with the recommendations of NACE International Standards MR0175 and MR0103.

**Multiple Trim Materials Available**—416, 316 and 316L Stainless steel options are available to meet wider application requirements including demands on lube oil and cooling water applications.

## Type MR105

**Table 3. Maximum Inlet, Outlet and Emergency Casing Pressures<sup>(1)</sup>**

| BODY MATERIAL        | END CONNECTION | MAXIMUM INLET PRESSURE |      | MAXIMUM OUTLET PRESSURE |     |                                       |      | MAXIMUM EMERGENCY CASING |     |                                       |      |
|----------------------|----------------|------------------------|------|-------------------------|-----|---------------------------------------|------|--------------------------|-----|---------------------------------------|------|
|                      |                | psig                   | bar  | Low-Pressure Actuator   |     | High-Pressure Actuator <sup>(2)</sup> |      | Low-Pressure Actuator    |     | High-Pressure Actuator <sup>(2)</sup> |      |
|                      |                |                        |      | psig                    | bar | psig                                  | bar  | psig                     | bar | psig                                  | bar  |
| Cast Iron            | NPT            | 340                    | 23.4 | 70                      | 4.8 | 340                                   | 23.4 | 70                       | 4.8 | 340                                   | 23.4 |
|                      | CL125 FF       | 175                    | 12.1 |                         |     | 175                                   | 12.1 |                          |     | 175                                   | 12.1 |
|                      | CL250 RF       | 400                    | 27.6 |                         |     | 400                                   | 27.6 |                          |     | 400                                   | 27.6 |
| WCC steel            | NPT            | 400                    | 27.6 | 70                      | 4.8 | 400                                   | 27.6 | 70                       | 4.8 | 400                                   | 27.6 |
|                      | CL150 RF       | 245                    | 16.9 |                         |     | 245                                   | 16.9 |                          |     | 245                                   | 16.9 |
|                      | CL300 RF       | 400                    | 27.6 |                         |     | 400                                   | 27.6 |                          |     | 400                                   | 27.6 |
|                      | CL600 RF       |                        |      |                         |     | 400                                   | 27.6 |                          |     | 400                                   | 27.6 |
|                      | PN 16 RF       | 245                    | 16.9 |                         |     | 245                                   | 16.9 |                          |     | 245                                   | 16.9 |
| PN 16/25/40 RF       | 400            | 27.6                   | 400  | 27.6                    | 400 | 27.6                                  |      |                          |     |                                       |      |
| CF8M Stainless steel | NPT            | 400                    | 27.6 | 70                      | 4.8 | 400                                   | 27.6 | 70                       | 4.8 | 400                                   | 27.6 |
|                      | CL150 RF       | 225                    | 15.5 |                         |     | 225                                   | 15.5 |                          |     | 225                                   | 15.5 |
|                      | CL300 RF       | 400                    | 27.6 |                         |     | 400                                   | 27.6 |                          |     | 400                                   | 27.6 |
|                      | CL600 RF       |                        |      |                         |     | 400                                   | 27.6 |                          |     | 400                                   | 27.6 |
|                      | PN 16 RF       | 225                    | 15.5 |                         |     | 225                                   | 15.5 |                          |     | 225                                   | 15.5 |
| PN 16/25/40 RF       | 400            | 27.6                   | 400  | 27.6                    | 400 | 27.6                                  |      |                          |     |                                       |      |
| CF3M Stainless steel | NPT            | 400                    | 27.6 | 70                      | 4.8 | 400                                   | 27.6 | 70                       | 4.8 | 400                                   | 27.6 |
|                      | CL150 RF       | 185                    | 12.7 |                         |     | 185                                   | 12.7 |                          |     | 185                                   | 12.7 |
|                      | CL300 RF       | 400                    | 27.6 |                         |     | 400                                   | 27.6 |                          |     | 400                                   | 27.6 |
|                      | CL600 RF       |                        |      |                         |     | 400                                   | 27.6 |                          |     | 400                                   | 27.6 |
|                      | PN 16 RF       | 185                    | 12.7 |                         |     | 185                                   | 12.7 |                          |     | 185                                   | 12.7 |
| PN 16/25/40 RF       | 400            | 27.6                   | 400  | 27.6                    | 400 | 27.6                                  |      |                          |     |                                       |      |

1. Based on a maximum temperature of 250°F / 121°C.

2. Maximum outlet and emergency casing pressures for constructions with Fluorocarbon (FKM) diaphragm are limited to 230 psig / 15.8 bar or the body rating limit, whichever is lower.

**Arctic Temperature Constructions**—For process temperatures as low as -76°F / -60°C.

**ANSI/FCI 70-3-2004 Class VI Shutoff**—Soft-seat valve plug disks for tight shutoff.

**Multiple End Connection Options**—Type MR105 is available in several end connection configurations to meet demands on application requirements.

**$P_1 = P_2$  on High-Pressure Actuator**—Inlet pressure rating equals outlet pressure rating on high-pressure actuator constructions up to 400 psig / 27.6 bar.

**Easy Drain**—Feature allows you to drain the system without expensive spool pieces saving you time and space.

**Easy Bleed**—Feature allows you to purge the air trapped underneath the diaphragm when the high-pressure regulator is installed in the upright position, which improves speed of response.

## Principle of Operation

Refer to Figure 2. The Type MR105 is a direct-operated pressure reducing regulator. Downstream pressure is registered externally through a 1/2 NPT control line tapped in the low-pressure actuator bonnet or in the high-pressure actuator lower casing. When downstream demand decreases, the pressure under the actuator diaphragm increases. This pressure overcomes the regulator setting (which is set by the regulator control spring). Through the action of

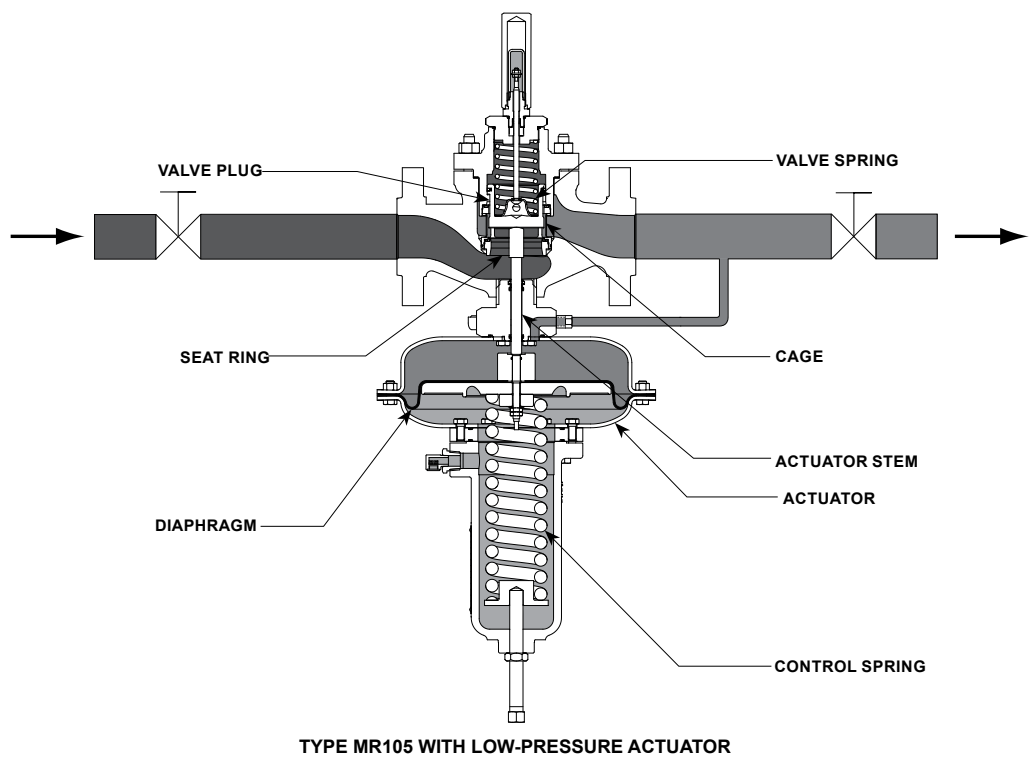
the actuator stem and valve spring, the valve plug moves closer to the seat ring and reduces flow. When demand downstream increases, pressure under the actuator diaphragm decreases. Spring force pushes the actuator stem downward, the valve plug moves away from the seat ring and the flow increases downstream as the regulator opens in response to the decreased pressure underneath the diaphragm. The downward motion of the plug allows gas to flow through the cage into the downstream system.

Increased downstream pressure permits the regulator to close. The combination of valve spring force and valve plug unbalance provides positive valve plug shutoff against the port and upper seals.

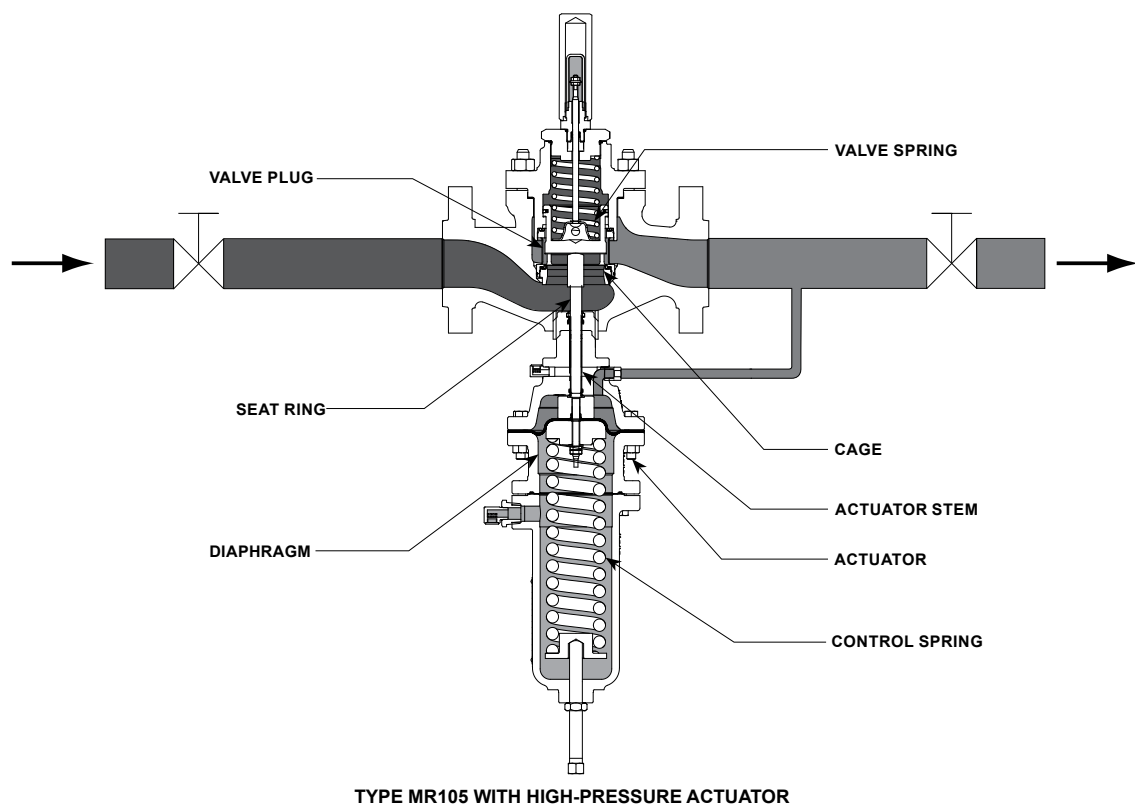
## Overpressure Protection

Type MR105 regulator with the low-pressure actuator has outlet pressure ratings lower than the inlet pressure ratings. Complete downstream overpressure protection is needed if the actual inlet pressure exceeds the outlet pressure rating.

Overpressuring any portion of a regulator or associated equipment may cause personal injury, leakage or property damage due to bursting of pressure-containing parts or explosion of accumulated gas. Provide appropriate pressure-relieving or pressure-limiting devices to ensure that the limits in the Specifications section are not exceeded. Regulator operation within ratings does



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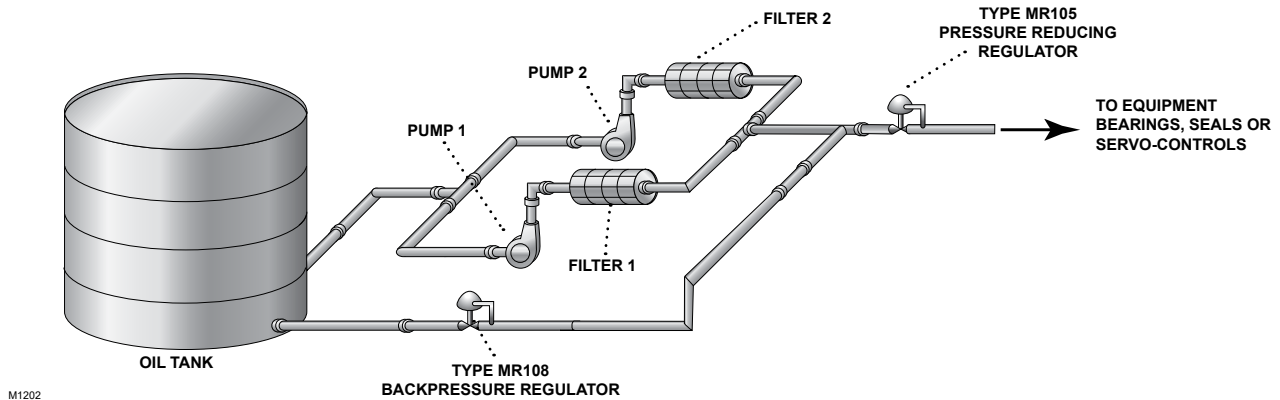


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- INLET PRESSURE
- OUTLET PRESSURE
- ATMOSPHERIC PRESSURE

Figure 2. Type MR105 Operational Schematic

# Type MR105



**Figure 3.** Lube Oil Skid Diagram

not prevent 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 in the Specifications and the Capacity Information section to determine the required relief valve capacity.

## Installation

Vertical installation with the actuator installed directly above or below the main valve is recommended but for optimal performance the actuator should be installed below the main valve. The use of a bleed valve is recommended for liquid installations that require the high pressure actuator to be mounted above the main valve. The unit will operate in horizontal installations with the actuator on the side, however, this could result in premature wear of parts. Make sure that flow will be in the same direction as that indicated by the body arrow. Orientation of the two vents should always be down. Vents may be rotated after regulator installation so that the vent screens are down.

A control line must be installed to allow outlet pressure to register on the actuator's diaphragm. The size of the control line is indicated in the Specifications section, and should be installed four to eight pipe diameter downstream of the regulator and in an area of pipe that is free of turbulence.

An instruction manual is provided with every regulator shipped. Refer to this for detailed installation, operation, adjustment and maintenance instructions. Included is a complete listing of individual parts and recommended spare parts.

## Applications

### Note

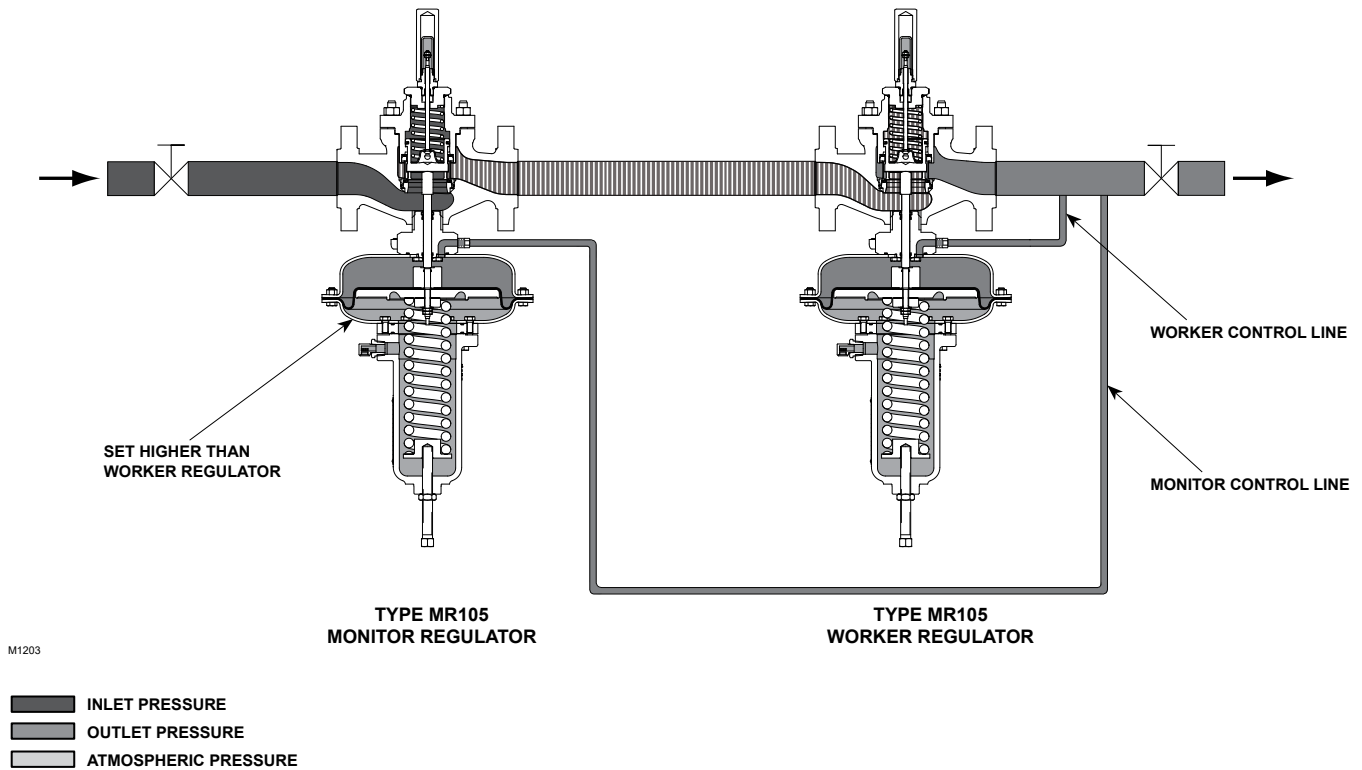
**A linear cage is recommended for applications where low flow stability is a concern but it will limit the overall capacity of the regulator.**

## Lube Oil Skids (Figure 3)

Lube oil skids maintain oil flow to bearings, seals and servo-controls on critical turbomachinery assets such as air and gas compressors, steam turbines, power recovery turbines and power generating equipment. These skids are essential in keeping lube oil clean at all times and ensure maximum service life for the equipment. Because it is critical to maintain a constant flow and pressure of oil to the equipment, it is normally equipped with two pumps – the main pump and the auxiliary pump, which will take over in case of main pump failure – and filters.

In normal condition, the skids operate in the following manner:

- Lube oil is stored in the tank at atmospheric pressure.
- It is then fed to the main pump (Pump 1) which pressurizes the lube oil.
- Oil then goes through a filter.
- After filtration, oil flow is split such that a fraction is sent to a backpressure regulator to limit the supply pressure to the pressure reducing regulator. 20% of the pump rate flows through the backpressure regulator, sending back oil to the oil tank.
- The pressure reducing regulator decreases the pressure to a safe and allowable range. Flow through this regulator is 80% of pump rate.



**Figure 4.** Type MR105 Monitor Regulator Operational Schematic

- Oil flows to large rotating equipment lubricating bearings, e.g. turbines and compressors.

The loss of pressure or flow to the bearings or these turbomachinery assets may shut down the equipment or even the whole plant. Failure of the main pump or filter results in the following upset operation:

- Auxiliary pump (Pump 2) and filter system is brought into operation while main pump is in operation.
- Auxiliary pump ramp up rate is one second.
- Auxiliary pump produces a pressure spike that is beyond the limitations of the pressure reducing regulator.
- The backpressure regulator relieves the excess pressure back to the oil tank. Flow rate is 120% of total pump rate.

Main pump can now be shut down to allow repair of the system. High capacity direct-operated regulators are recommended for this type of application where speed of response is critical. The Type MR105 can provide fast response to the pressure spikes as described above while maintaining a constant delivery pressure of oil to the bearing.

## Wide-Open Monitoring System

Refer to Figure 4. Monitoring system provides overpressure protection by containment and therefore does not vent to the atmosphere. It involves a specific arrangement of two regulators in series which are configured such that if one regulator fails wide open, the other regulator assumes control to maintain the downstream pressure at a set limit. During an overpressure situation, monitoring systems keep the customer on line. Testing is also relatively easy. To perform a periodic test on a monitoring regulator, increase the outlet set pressure of the worker regulator and watch the outlet pressure gauge to determine if the monitor regulator takes over at the appropriate outlet pressure.

In such systems, both regulators are sensing downstream pressure. During normal operation of a wide-open monitor configuration, one regulator (worker) is set at the desired downstream pressure. The other regulator (monitor) is set at a higher pressure and remains wide open. The lock-up pressure will be the worker regulator lock-up pressure. If the worker regulator fails open, the monitor regulator controls the downstream pressure at its setpoint and the lock-up pressure will be the monitor lock-up pressure.

# Type MR105

**Table 4. Maximum Differential Pressures**

| ACTUATOR TYPE | BODY SIZE |     | MAXIMUM DIFFERENTIAL PRESSURE                     |                                                    |                                     |       |
|---------------|-----------|-----|---------------------------------------------------|----------------------------------------------------|-------------------------------------|-------|
|               |           |     | Gas Service (Linear Cage)                         |                                                    | Liquid Service (Quick Opening Cage) |       |
|               | NPS       | DN  | psid                                              | bar d                                              | psid                                | bar d |
| Low Pressure  | 1         | 25  | 400 or maximum inlet pressure, whichever is lower | 27.6 or maximum inlet pressure, whichever is lower | 200                                 | 13.6  |
|               | 2         | 50  |                                                   |                                                    | 200                                 | 13.6  |
|               | 3         | 80  |                                                   |                                                    | 225                                 | 15.5  |
|               | 4         | 100 |                                                   |                                                    | 225                                 | 15.5  |
| High Pressure | 1         | 25  | 400 or maximum inlet pressure, whichever is lower | 27.6 or maximum inlet pressure, whichever is lower | 250                                 | 17.2  |
|               | 2         | 50  |                                                   |                                                    | 200                                 | 13.6  |
|               | 3         | 80  |                                                   |                                                    | 225                                 | 15.5  |
|               | 4         | 100 |                                                   |                                                    | 250                                 | 17.2  |

**Table 5. Wide-Open Flow and IEC Sizing Coefficients**

| LINEAR CAGE                     |     |                            |                |                        |                |                |                |                |
|---------------------------------|-----|----------------------------|----------------|------------------------|----------------|----------------|----------------|----------------|
| Body Size                       |     | Wide-Open Flow Coefficient |                | IEC Sizing Coefficient |                |                |                |                |
|                                 |     | Line Size Equals Body Size |                | C <sub>1</sub>         | K <sub>m</sub> | F <sub>L</sub> | X <sub>T</sub> | F <sub>d</sub> |
| NPS                             | DN  | C <sub>g</sub>             | C <sub>v</sub> |                        |                |                |                |                |
| 1                               | 25  | 463                        | 13.7           | 34.0                   | 0.81           | 0.90           | 0.73           | 0.36           |
| 2                               | 50  | 761                        | 22.5           | 33.8                   | 0.75           | 0.87           | 0.72           | 0.24           |
| 3                               | 80  | 997                        | 30.5           | 32.7                   | 0.78           | 0.88           | 0.68           | 0.22           |
| 4                               | 100 | 934                        | 27.5           | 34.0                   | 0.77           | 0.88           | 0.75           | 0.18           |
| QUICK OPENING CAGE              |     |                            |                |                        |                |                |                |                |
| Body Size                       |     | Wide-Open Flow Coefficient |                | IEC Sizing Coefficient |                |                |                |                |
|                                 |     | Line Size Equals Body Size |                | C <sub>1</sub>         | K <sub>m</sub> | F <sub>L</sub> | X <sub>T</sub> | F <sub>d</sub> |
| NPS                             | DN  | C <sub>g</sub>             | C <sub>v</sub> |                        |                |                |                |                |
| 1                               | 25  | 597                        | 17.5           | 34.1                   | 0.81           | 0.90           | 0.73           | 0.43           |
| 2                               | 50  | 1740                       | 48.2           | 36.1                   | 0.81           | 0.90           | 0.82           | 0.34           |
| 3                               | 80  | 3540                       | 103.1          | 34.4                   | 0.76           | 0.87           | 0.75           | 0.32           |
| 4                               | 100 | 4300                       | 135.9          | 31.6                   | 0.72           | 0.85           | 0.65           | 0.30           |
| REDUCED PORT QUICK OPENING CAGE |     |                            |                |                        |                |                |                |                |
| Body Size                       |     | Wide-Open Flow Coefficient |                | IEC Sizing Coefficient |                |                |                |                |
|                                 |     | Line Size Equals Body Size |                | C <sub>1</sub>         | K <sub>m</sub> | F <sub>L</sub> | X <sub>T</sub> | F <sub>d</sub> |
| NPS                             | DN  | C <sub>g</sub>             | C <sub>v</sub> |                        |                |                |                |                |
| 2                               | 50  | 1570                       | 43.8           | 35.9                   | 0.81           | 0.90           | 0.72           | 0.36           |

## Universal NACE Compliance

Optional materials are available for applications handling sour gases. These constructions comply with the recommendations of NACE International Sour Service Standards.

The manufacturing processes and materials used by Emerson Process Management Regulator Technologies, Inc. assure that all products specified for sour gas service comply with the chemical, physical and metallurgical requirements of NACE MR0175 and/or NACE MR0103. Customers have the responsibility to specify correct materials. Environmental limitations may apply and shall be determined by the user.

## Capacity Information

### Air Capacities

To determine wide-open flow capacity for relief valve sizing, use one of the following equations:

### For Critical Pressure Drops

Use this equation for critical pressure drops (absolute outlet pressure equal to one-half or less than one-half the absolute inlet pressure).

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

where,

- Q = gas flow rate, SCFH
- C<sub>g</sub> = gas sizing coefficient
- P<sub>1</sub> = absolute inlet pressure, psia

### For Non-Critical Pressure Drops

Use this equation for pressure drops lower than critical (absolute outlet pressure greater than one-half of absolute inlet pressure).

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

**Table 6. Construction Materials**

| PART NAME                        | STANDARD                                                        | OPTIONAL                                                                       |
|----------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------|
| Body                             | WCC steel <sup>(1)</sup>                                        | Cast Iron, CF8M, CF3M Stainless steel                                          |
| Body Flange                      | WCC steel <sup>(1)</sup>                                        | CF8M, CF3M Stainless steel                                                     |
| Actuator Casings - Low Pressure  | AISI 1010 steel <sup>(1)</sup>                                  | 316/316L Stainless steel                                                       |
| Actuator Casings - High Pressure | WCC steel <sup>(1)</sup>                                        | CF3M/CF8M Stainless steel                                                      |
| Internal Stiffener Plate         | AISI 1010 steel <sup>(1)</sup>                                  | 316/316L Stainless steel                                                       |
| Spring Case                      | WCC steel                                                       | CF3M/CF8M Stainless steel                                                      |
| Spring Case Spacer               | Zinc-Plated steel                                               | Stainless steel                                                                |
| Cage                             | CF3M/CF8M (Quick Opening), CF8M (Linear) Stainless Steel        |                                                                                |
| Valve Plug and Seat Ring         | 416 Stainless steel                                             | 316, 316L, S20910 (Nitronic 50) Stainless steel (NPS 1 / DN 25 body size only) |
| Closing Spring                   | Inconel® X750                                                   |                                                                                |
| Stem                             | S17400 H1075 Stainless steel                                    | S20910 (Nitronic 50) Stainless steel                                           |
| Lower Diaphragm Support          | S17400 H1075 Stainless steel                                    |                                                                                |
| Diaphragm and Seals              | Nitrile (NBR)                                                   | Fluorocarbon (FKM), EPDM                                                       |
| Upper Diaphragm Plate            | Cast Iron                                                       |                                                                                |
| Control/Set Spring               | Steel Alloy <sup>(1)</sup>                                      |                                                                                |
| Spring Seats                     | Zinc-Plated steel                                               |                                                                                |
| Bolting                          | SA194 Grade B7/NCF (Body to Bonnet), SAE Grade 5/NCF (Actuator) | Stainless steel                                                                |
| Adjusting Screw                  | Zinc-Plated steel                                               | Stainless steel                                                                |

1. Powder coated.

where,

- Q = gas flow rate, SCFH
- G = specific gravity of the gas
- T = absolute temperature of gas at inlet, °Rankine
- C<sub>g</sub> = gas sizing coefficient
- P<sub>1</sub> = absolute inlet pressure, psia
- C<sub>1</sub> = flow coefficient
- ΔP = pressure drop across the regulator, psi

Then, if capacity is desired in normal cubic meters per hour at 0°C and 1.01325 bar, multiply SCFH by 0.0268.

## Liquid Capacities

To determine regulating capacities or to determine wide-open capacities for relief sizing at any inlet pressure, use the following equation.

$$Q = C_v \sqrt{\frac{\Delta P}{G}}$$

where,

- Q = liquid flow rate, GPM
- ΔP = pressure drop across the regulator, psi
- C<sub>v</sub> = regulating or wide-open flow coefficient
- G = specific gravity of the liquid

## Maximum Allowable Pressure Drop for Liquid

Pressure drops in excess of allowable will result in choked flow and possible cavitation damage.

Choked flow is the formation of vapor bubbles in the liquid flowstream causing a condition at the vena contracta which tends to limit flow through the regulator. The vena contracta is the minimum cross-sectional area of the flow stream occurring just downstream of the actual physical restriction.

Cavitation and flashing are physical changes in the process fluid. The change is from the liquid state to the vapor state and results from the increase in fluid velocity at or just downstream of the greatest flow restriction, normally the regulator orifice.

To determine the maximum allowable pressure drop for water:

$$\Delta P_{(allow)} = K_m (P_1)$$

where,

- ΔP = Valve differential in psi
- K<sub>m</sub> = Valve recovery coefficient from Table 5
- P<sub>1</sub> = Valve inlet pressure in psia

# Type MR105

**Table 7. Typical Air  $C_v$  Coefficient with Linear Cage - Setpoint Made at 10% Flow (for Type MR105 with Low-Pressure Actuator)**

| SPRING RANGE,<br>PART NUMBER<br>AND COLOR                       | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | $C_v$ AT % DROOP   |      |      |                    |      |      |
|-----------------------------------------------------------------|-----------------|------|-------------------|------|--------------------|------|------|--------------------|------|------|
|                                                                 | psig            | bar  | psig              | bar  | NPS 1 / DN 25 Body |      |      | NPS 2 / DN 50 Body |      |      |
|                                                                 |                 |      |                   |      | 10%                | 20%  | 40%  | 10%                | 20%  | 40%  |
| 5 to 12 psig /<br>0.34 to 0.83 bar<br><br>GE42909X012<br>White  | 5               | 0.34 | 25                | 1.7  | 2.58               | 3.69 | 7.51 | 2.97               | 4.52 | 9.08 |
|                                                                 |                 |      | 75                | 5.2  | 2.55               | 4.02 | 8.50 | 3.52               | 4.50 | 9.04 |
|                                                                 |                 |      | 150               | 10.3 | 2.78               | 3.98 | 8.95 | 3.24               | 4.97 | 10.3 |
|                                                                 |                 |      | 250               | 17.2 | 2.05               | 3.24 | 8.50 | 3.14               | 4.81 | 10.5 |
|                                                                 | 10              | 0.69 | 25                | 1.7  | 2.56               | 6.04 | 13.6 | 4.66               | 9.56 | 20.3 |
|                                                                 |                 |      | 75                | 5.2  | 3.96               | 7.72 | 13.7 | 4.63               | 8.68 | 21.9 |
|                                                                 |                 |      | 150               | 10.3 | 3.64               | 6.80 | 13.7 | 3.89               | 8.39 | 21.8 |
|                                                                 |                 |      | 250               | 17.2 | 3.84               | 8.45 | 13.7 | 4.34               | 8.26 | 20.4 |
| 10 to 24 psig /<br>0.69 to 1.6 bar<br><br>GE42910X012<br>Silver | 10              | 0.69 | 25                | 1.7  | 2.57               | 4.88 | 10.9 | 3.75               | 6.47 | 13.1 |
|                                                                 |                 |      | 75                | 5.2  | 2.82               | 5.05 | 11.3 | 3.38               | 6.06 | 12.8 |
|                                                                 |                 |      | 150               | 10.3 | 2.80               | 5.01 | 11.6 | 3.56               | 6.15 | 14.3 |
|                                                                 |                 |      | 250               | 17.2 | 3.25               | 5.12 | 12.7 | 3.46               | 6.48 | 14.3 |
|                                                                 | 15              | 1.0  | 25                | 1.7  | 3.67               | 7.36 | 13.7 | 4.64               | 9.99 | 21.6 |
|                                                                 |                 |      | 75                | 5.2  | 3.81               | 7.38 | 13.7 | 5.03               | 9.36 | 22.1 |
|                                                                 |                 |      | 150               | 10.3 | 3.91               | 7.77 | 13.7 | 5.13               | 9.84 | 22.1 |
|                                                                 |                 |      | 250               | 17.2 | 3.84               | 7.85 | 13.7 | 4.53               | 9.84 | 21.5 |
|                                                                 | 20              | 1.4  | 50                | 3.4  | 4.68               | 10.4 | 13.7 | 5.98               | 12.3 | 22.5 |
|                                                                 |                 |      | 75                | 5.2  | 4.48               | 9.64 | 13.7 | 5.71               | 11.9 | 22.5 |
|                                                                 |                 |      | 150               | 10.3 | 4.76               | 11.0 | 13.7 | 4.83               | 10.5 | 22.5 |
|                                                                 |                 |      | 250               | 17.2 | 4.89               | 10.1 | 13.7 | 5.92               | 13.6 | 22.5 |
| 14 to 32 psig /<br>0.96 to 2.2 bar<br><br>GE42911X012<br>Orange | 15              | 1.0  | 25                | 1.7  | 2.95               | 5.58 | 12.1 | 4.27               | 7.34 | 16.5 |
|                                                                 |                 |      | 75                | 5.2  | 2.81               | 5.54 | 12.1 | 3.67               | 6.49 | 15.4 |
|                                                                 |                 |      | 150               | 10.3 | 2.86               | 5.18 | 11.7 | 4.05               | 7.50 | 16.4 |
|                                                                 |                 |      | 250               | 17.2 | 3.01               | 5.77 | 13.3 | 3.87               | 7.08 | 18.3 |
|                                                                 | 20              | 1.4  | 25                | 1.7  | 3.87               | 7.67 | 13.2 | 4.77               | 10.4 | 19.8 |
|                                                                 |                 |      | 75                | 5.2  | 3.42               | 6.69 | 13.7 | 4.51               | 8.77 | 21.9 |
|                                                                 |                 |      | 150               | 10.3 | 3.52               | 6.99 | 13.7 | 5.15               | 9.67 | 22.0 |
|                                                                 |                 |      | 250               | 17.2 | 3.73               | 7.26 | 13.7 | 4.34               | 8.94 | 21.8 |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 4.68               | 9.18 | 13.7 | 5.12               | 11.1 | 22.3 |
|                                                                 |                 |      | 75                | 5.2  | 3.73               | 8.46 | 13.7 | 4.83               | 11.9 | 22.3 |
|                                                                 |                 |      | 150               | 10.3 | 4.05               | 8.79 | 13.7 | 5.2                | 11.4 | 22.5 |
|                                                                 |                 |      | 250               | 17.2 | 4.06               | 9.73 | 13.7 | 4.78               | 10.9 | 22.5 |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 5.18               | 11.1 | 13.7 | 5.77               | 13.8 | 22.3 |
|                                                                 |                 |      | 75                | 5.2  | 4.99               | 11.2 | 13.7 | 6.33               | 14.1 | 22.5 |
|                                                                 |                 |      | 150               | 10.3 | 4.78               | 11.1 | 13.7 | 6.23               | 14.5 | 22.4 |
|                                                                 |                 |      | 250               | 17.2 | 5.53               | 12.7 | 13.7 | 5.29               | 13.6 | 22.5 |
| 18 to 43 psig /<br>1.2 to 3.0 bar<br><br>GE43002X012<br>Red     | 20              | 1.4  | 50                | 3.4  | 2.69               | 5.46 | 11.2 | 3.74               | 7.43 | 15.5 |
|                                                                 |                 |      | 75                | 5.2  | 2.59               | 5.13 | 11.1 | 4.66               | 6.60 | 15.3 |
|                                                                 |                 |      | 150               | 10.3 | 3.03               | 5.36 | 11.9 | 4.19               | 7.44 | 16.2 |
|                                                                 |                 |      | 250               | 17.2 | 2.83               | 5.03 | 12.0 | 4.06               | 7.00 | 16.8 |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 3.18               | 6.49 | 13.0 | 4.97               | 8.82 | 20.4 |
|                                                                 |                 |      | 75                | 5.2  | 3.67               | 6.90 | 13.7 | 4.11               | 8.98 | 20.6 |
|                                                                 |                 |      | 150               | 10.3 | 3.22               | 6.73 | 13.7 | 4.80               | 8.97 | 21.0 |
|                                                                 |                 |      | 250               | 17.2 | 3.46               | 6.66 | 13.7 | 4.59               | 8.76 | 20.3 |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 4.41               | 8.24 | 13.7 | 4.77               | 10.9 | 21.5 |
|                                                                 |                 |      | 75                | 5.2  | 4.18               | 8.24 | 13.7 | 5.82               | 10.2 | 22.1 |
|                                                                 |                 |      | 150               | 10.3 | 3.96               | 8.30 | 13.7 | 5.89               | 10.9 | 22.0 |
|                                                                 |                 |      | 250               | 17.2 | 3.79               | 7.89 | 13.7 | 5.04               | 10.7 | 22.1 |
|                                                                 | 35              | 2.4  | 50                | 3.4  | 4.70               | 9.42 | 13.7 | 5.93               | 12.5 | 21.9 |
|                                                                 |                 |      | 75                | 5.2  | 4.64               | 9.11 | 13.7 | 6.19               | 13.1 | 22.3 |
|                                                                 |                 |      | 150               | 10.3 | 4.44               | 9.42 | 13.7 | 6.28               | 12.9 | 22.4 |
|                                                                 |                 |      | 250               | 17.2 | 4.41               | 9.14 | 13.7 | 5.69               | 12.5 | 22.5 |
|                                                                 | 40              | 2.8  | 50                | 3.4  | 5.34               | 11.1 | 13.7 | 6.31               | 15.2 | 21.7 |
|                                                                 |                 |      | 75                | 5.2  | 4.55               | 10.5 | 13.7 | 7.17               | 14.8 | 22.1 |
|                                                                 |                 |      | 150               | 10.3 | 4.52               | 11.0 | 13.7 | 5.53               | 12.1 | 22.5 |
|                                                                 |                 |      | 250               | 17.2 | 5.11               | 11.0 | 13.7 | 6.29               | 14.9 | 22.5 |

- continued -

**Table 7. Typical Air  $C_v$  Coefficient with Linear Cage - Setpoint Made at 10% Flow (for Type MR105 with Low-Pressure Actuator) (continued)**

| SPRING RANGE,<br>PART NUMBER<br>AND COLOR                       | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | $C_v$ AT % DROOP   |      |      |                     |      |      |
|-----------------------------------------------------------------|-----------------|------|-------------------|------|--------------------|------|------|---------------------|------|------|
|                                                                 | psig            | bar  | psig              | bar  | NPS 3 / DN 80 Body |      |      | NPS 4 / DN 100 Body |      |      |
|                                                                 |                 |      |                   |      | 10%                | 20%  | 40%  | 10%                 | 20%  | 40%  |
| 5 to 8 psig /<br>0.34 to 0.55 bar<br><br>GE42909X012<br>White   | 5               | 0.34 | 25                | 1.7  | 4.96               | 6.90 | 12.2 | 4.72                | 6.55 | 10.0 |
|                                                                 |                 |      | 75                | 5.2  | 4.63               | 6.63 | 12.2 | 4.47                | 6.02 | 10.6 |
|                                                                 |                 |      | 150               | 10.3 | 4.43               | 6.60 | 11.3 | 4.24                | 6.06 | 10.8 |
|                                                                 |                 |      | 250               | 17.2 | 3.97               | 5.81 | 11.1 | 4.39                | 5.97 | 10.6 |
|                                                                 | 8               | 0.55 | 25                | 1.7  | 6.47               | 10.5 | 21.7 | 5.58                | 8.64 | 17.5 |
|                                                                 |                 |      | 75                | 5.2  | 5.72               | 9.35 | 20.2 | 5.23                | 8.25 | 16.8 |
|                                                                 |                 |      | 150               | 10.3 | 5.22               | 8.82 | 19.1 | 5.32                | 9.08 | 17.1 |
|                                                                 |                 |      | 250               | 17.2 | 5.50               | 9.05 | 20.1 | 4.55                | 7.95 | 17.2 |
| 8 to 20 psig /<br>0.55 to 1.4 bar<br><br>GE42910X012<br>Silver  | 10              | 0.69 | 25                | 1.7  | 5.54               | 9.22 | 17.6 | 4.08                | 7.67 | 15.0 |
|                                                                 |                 |      | 75                | 5.2  | 5.79               | 8.79 | 17.3 | 4.75                | 7.29 | 15.1 |
|                                                                 |                 |      | 150               | 10.3 | 5.28               | 8.07 | 16.9 | 4.58                | 6.95 | 13.8 |
|                                                                 |                 |      | 250               | 17.2 | 5.18               | 8.34 | 17.4 | 4.13                | 6.69 | 13.9 |
|                                                                 | 15              | 1.0  | 25                | 1.7  | 7.06               | 13.2 | 29.1 | 5.78                | 11.0 | 23.9 |
|                                                                 |                 |      | 75                | 5.2  | 7.06               | 12.9 | 29.1 | 6.06                | 10.6 | 23.3 |
|                                                                 |                 |      | 150               | 10.3 | 6.33               | 11.9 | 28.0 | 5.45                | 9.91 | 23.0 |
|                                                                 |                 |      | 250               | 17.2 | 6.68               | 12.3 | 27.7 | 5.28                | 9.73 | 23.0 |
|                                                                 | 20              | 1.4  | 50                | 3.4  | 6.51               | 13.7 | 30.5 | 7.20                | 13.7 | 25.3 |
|                                                                 |                 |      | 75                | 5.2  | 8.53               | 16.8 | 30.5 | 7.75                | 13.9 | 24.8 |
|                                                                 |                 |      | 150               | 10.3 | 8.19               | 16.7 | 30.5 | 6.71                | 13.1 | 27.1 |
|                                                                 |                 |      | 250               | 17.2 | 8.41               | 16.8 | 30.5 | 8.00                | 13.2 | 27.4 |
| 12 to 30 psig /<br>0.83 to 2.1 bar<br><br>GE42911X012<br>Orange | 15              | 1.0  | 25                | 1.7  | 5.84               | 9.95 | 20.4 | 4.79                | 7.80 | 17.0 |
|                                                                 |                 |      | 75                | 5.2  | 5.71               | 9.19 | 19.9 | 5.00                | 8.10 | 16.3 |
|                                                                 |                 |      | 150               | 10.3 | 5.39               | 9.13 | 19.5 | 5.10                | 8.29 | 17.1 |
|                                                                 |                 |      | 250               | 17.2 | 5.51               | 9.10 | 19.9 | 5.05                | 8.28 | 17.2 |
|                                                                 | 20              | 1.4  | 25                | 1.7  | 7.94               | 14.2 | 28.1 | 5.15                | 9.96 | 22.6 |
|                                                                 |                 |      | 75                | 5.2  | 6.68               | 12.0 | 27.7 | 6.54                | 11.2 | 24.5 |
|                                                                 |                 |      | 150               | 10.3 | 6.36               | 11.4 | 27.6 | 6.20                | 10.8 | 24.4 |
|                                                                 |                 |      | 250               | 17.2 | 5.72               | 10.9 | 26.9 | 5.37                | 9.58 | 22.7 |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 9.28               | 15.8 | 30.5 | 6.78                | 12.8 | 25.3 |
|                                                                 |                 |      | 75                | 5.2  | 7.34               | 14.6 | 30.5 | 6.60                | 13.3 | 25.2 |
|                                                                 |                 |      | 150               | 10.3 | 5.83               | 12.4 | 30.5 | 6.76                | 13.0 | 25.3 |
|                                                                 |                 |      | 250               | 17.2 | 8.30               | 15.9 | 30.5 | 6.30                | 12.3 | 25.5 |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 9.98               | 17.3 | 30.5 | 7.54                | 16.3 | 25.1 |
|                                                                 |                 |      | 75                | 5.2  | 10.3               | 19.6 | 30.5 | 8.23                | 16.7 | 25.2 |
|                                                                 |                 |      | 150               | 10.3 | 8.45               | 16.8 | 30.5 | 7.94                | 16.1 | 25.2 |
|                                                                 |                 |      | 250               | 17.2 | 8.39               | 18.2 | 30.5 | 7.87                | 16.0 | 25.4 |
| 18 to 39 psig /<br>1.2 to 2.7 bar<br><br>GE43002X012<br>Red     | 20              | 1.4  | 50                | 3.4  | 5.86               | 9.73 | 20.3 | 4.63                | 7.98 | 16.7 |
|                                                                 |                 |      | 75                | 5.2  | 5.77               | 9.40 | 20.6 | 4.94                | 8.54 | 16.8 |
|                                                                 |                 |      | 150               | 10.3 | 5.46               | 9.05 | 19.9 | 5.00                | 8.25 | 17.1 |
|                                                                 |                 |      | 250               | 17.2 | 5.89               | 9.60 | 20.4 | 5.30                | 8.59 | 18.0 |
|                                                                 | 25              | 1.6  | 50                | 3.4  | 7.28               | 12.7 | 26.5 | 6.02                | 10.3 | 22.8 |
|                                                                 |                 |      | 75                | 5.2  | 6.87               | 12.1 | 27.1 | 6.06                | 10.4 | 22.4 |
|                                                                 |                 |      | 150               | 10.3 | 5.26               | 9.59 | 23.1 | 6.02                | 10.3 | 23.3 |
|                                                                 |                 |      | 250               | 17.2 | 6.59               | 11.6 | 26.7 | 5.67                | 10.2 | 23.5 |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 6.57               | 13.0 | 30.5 | 6.42                | 11.9 | 25.8 |
|                                                                 |                 |      | 75                | 5.2  | 8.02               | 14.6 | 30.2 | 6.64                | 12.1 | 26.1 |
|                                                                 |                 |      | 150               | 10.3 | 7.09               | 13.6 | 29.7 | 6.49                | 12.2 | 25.5 |
|                                                                 |                 |      | 250               | 17.2 | 7.25               | 13.5 | 30.5 | 6.87                | 12.5 | 26.8 |
|                                                                 | 35              | 2.4  | 50                | 3.4  | 10.6               | 17.5 | 30.5 | 7.45                | 14.2 | 26.3 |
|                                                                 |                 |      | 75                | 5.2  | 7.36               | 14.8 | 30.5 | 7.97                | 15.2 | 26.3 |
|                                                                 |                 |      | 150               | 10.3 | 7.05               | 14.5 | 30.5 | 7.27                | 14.3 | 26.6 |
|                                                                 |                 |      | 250               | 17.2 | 7.89               | 16.0 | 30.5 | 7.25                | 15.0 | 26.7 |

# Type MR105

**Table 8. Typical Air  $C_v$  Coefficient with Linear Cage - Setpoint Made at 10% Flow (for Type MR105 with High-Pressure Actuator)**

| SPRING RANGE,<br>PART NUMBER<br>AND COLOR                         | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | $C_v$ AT % DROOP   |      |      |                    |      |      |
|-------------------------------------------------------------------|-----------------|------|-------------------|------|--------------------|------|------|--------------------|------|------|
|                                                                   | psig            | bar  | psig              | bar  | NPS 1 / DN 25 Body |      |      | NPS 2 / DN 50 Body |      |      |
|                                                                   |                 |      |                   |      | 10%                | 20%  | 40%  | 10%                | 20%  | 40%  |
| 25 to 60 psig /<br>1.7 to 4.1 bar<br><br>GE42907X012<br>Green     | 25              | 1.7  | 50                | 3.4  | 2.01               | 2.74 | 5.26 |                    |      |      |
|                                                                   |                 |      | 75                | 5.2  | 2.10               | 3.13 | 5.83 |                    |      |      |
|                                                                   |                 |      | 150               | 10.3 | 2.17               | 3.24 | 6.30 |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 2.00               | 2.99 | 7.61 |                    |      |      |
|                                                                   | 30              | 2.1  | 50                | 3.4  | 2.17               | 3.47 | 6.61 |                    |      |      |
|                                                                   |                 |      | 75                | 5.2  | 2.73               | 3.64 | 7.13 |                    |      |      |
|                                                                   |                 |      | 150               | 10.3 | 2.33               | 3.66 | 8.14 |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 2.28               | 3.72 | 10.1 |                    |      |      |
|                                                                   | 40              | 2.8  | 50                | 3.4  | 2.48               | 4.14 | 8.86 |                    |      |      |
|                                                                   |                 |      | 75                | 5.2  | 2.82               | 4.64 | 9.73 |                    |      |      |
|                                                                   |                 |      | 150               | 10.3 | 2.50               | 4.34 | 10.6 |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 2.72               | 4.89 | 13.6 |                    |      |      |
|                                                                   | 50              | 3.4  | 75                | 5.2  | 2.77               | 5.11 | 11.6 |                    |      |      |
|                                                                   |                 |      | 150               | 10.3 | 3.01               | 5.55 | 13.6 |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 3.07               | 6.03 | 13.7 |                    |      |      |
|                                                                   | 60              | 4.1  | 75                | 5.2  | 3.10               | 5.69 | 13.7 |                    |      |      |
|                                                                   |                 |      | 150               | 10.3 | 3.62               | 6.83 | 13.7 |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 3.50               | 7.21 | 13.7 |                    |      |      |
| 25 to 45 psig /<br>1.7 to 3.1 bar<br><br>GE42907X012<br>Green     | 25              | 1.7  | 50                | 3.4  |                    |      |      | 3.17               | 4.27 | 6.43 |
|                                                                   |                 |      | 75                | 5.2  |                    |      |      | 2.74               | 3.77 | 6.24 |
|                                                                   |                 |      | 150               | 10.3 |                    |      |      | 3.18               | 4.01 | 6.81 |
|                                                                   |                 |      | 250               | 17.2 |                    |      |      | 2.95               | 3.89 | 6.64 |
|                                                                   | 30              | 2.1  | 50                | 3.4  |                    |      |      | 2.96               | 4.15 | 7.35 |
|                                                                   |                 |      | 75                | 5.2  |                    |      |      | 3.37               | 4.44 | 8.00 |
|                                                                   |                 |      | 150               | 10.3 |                    |      |      | 3.30               | 4.62 | 8.10 |
|                                                                   |                 |      | 250               | 17.2 |                    |      |      | 3.09               | 4.35 | 7.74 |
|                                                                   | 40              | 2.8  | 50                | 3.4  |                    |      |      | 3.41               | 5.39 | 9.80 |
|                                                                   |                 |      | 75                | 5.2  |                    |      |      | 3.86               | 5.66 | 10.8 |
|                                                                   |                 |      | 150               | 10.3 |                    |      |      | 3.44               | 5.31 | 10.5 |
|                                                                   |                 |      | 250               | 17.2 |                    |      |      | 3.60               | 5.46 | 10.4 |
|                                                                   | 45              | 3.1  | 75                | 5.2  |                    |      |      | 3.71               | 5.86 | 11.6 |
|                                                                   |                 |      | 150               | 10.3 |                    |      |      | 3.67               | 5.63 | 11.3 |
|                                                                   |                 |      | 250               | 17.2 |                    |      |      | 3.92               | 6.01 | 12.4 |
| 43 to 100 psig /<br>3.0 to 6.9 bar<br><br>GE42909X012<br>White    | 50              | 3.4  | 75                | 5.2  | 2.48               | 4.05 | 8.07 | 3.46               | 5.05 | 9.51 |
|                                                                   |                 |      | 150               | 10.3 | 2.61               | 4.12 | 9.19 | 3.35               | 4.99 | 9.34 |
|                                                                   |                 |      | 250               | 17.2 | 2.49               | 4.07 | 10.8 | 3.30               | 5.12 | 9.71 |
|                                                                   | 60              | 4.1  | 75                | 5.2  | 2.71               | 4.63 | 10.1 | 3.75               | 5.94 | 11.6 |
|                                                                   |                 |      | 150               | 10.3 | 2.77               | 4.85 | 10.9 | 3.71               | 5.75 | 11.3 |
|                                                                   |                 |      | 250               | 17.2 | 2.75               | 5.01 | 13.3 | 3.69               | 5.81 | 11.7 |
|                                                                   | 75              | 5.2  | 100               | 6.9  | 2.71               | 5.21 | 12.2 | 4.21               | 6.84 | 14.9 |
|                                                                   |                 |      | 150               | 10.3 | 3.33               | 6.23 | 13.7 | 4.24               | 7.29 | 15.4 |
|                                                                   |                 |      | 250               | 17.2 | 3.15               | 5.93 | 13.7 | 3.89               | 6.84 | 14.8 |
|                                                                   | 100             | 6.9  | 150               | 10.3 | 3.64               | 7.53 | 13.7 | 4.16               | 8.26 | 20.0 |
|                                                                   |                 |      | 250               | 17.2 | 3.57               | 7.50 | 13.7 | 4.37               | 8.73 | 21.0 |
| 75 to 175 psig /<br>5.2 to 12.1 bar<br><br>GE42910X012<br>Silver  | 75              | 5.2  | 100               | 6.9  | 2.60               | 4.35 | 9.01 | 3.50               | 5.02 | 9.72 |
|                                                                   |                 |      | 250               | 17.2 | 2.59               | 4.17 | 9.72 | 3.76               | 5.63 | 10.1 |
|                                                                   | 100             | 6.9  | 150               | 10.3 | 2.71               | 5.14 | 11.5 | 3.62               | 6.13 | 13.2 |
|                                                                   |                 |      | 250               | 17.2 | 3.00               | 5.46 | 12.7 | 4.17               | 6.72 | 14.2 |
|                                                                   | 125             | 8.6  | 200               | 13.8 | 3.34               | 6.50 | 13.7 | 4.13               | 7.88 | 17.7 |
|                                                                   |                 |      | 300               | 20.7 | 3.50               | 6.63 | 13.7 | 4.45               | 8.13 | 18.5 |
|                                                                   | 150             | 10.3 | 200               | 13.8 | 3.94               | 7.93 | 13.7 | 4.90               | 9.21 | 21.8 |
|                                                                   |                 |      | 300               | 20.7 | 3.90               | 8.06 | 13.7 | 4.98               | 9.43 | 21.8 |
|                                                                   | 175             | 12.1 | 200               | 13.8 | 4.06               | 8.86 | 13.7 | 5.34               | 11.0 | 22.1 |
|                                                                   |                 |      | 300               | 20.7 | 4.55               | 9.82 | 13.7 | 5.70               | 11.3 | 22.5 |
| 110 to 300 psig /<br>7.6 to 20.7 bar<br><br>GE42911X012<br>Orange | 125             | 8.6  | 150               | 10.3 | 2.38               | 4.55 | 9.87 | 3.52               | 5.89 | 12.3 |
|                                                                   |                 |      | 250               | 17.2 | 2.94               | 5.07 | 11.2 | 3.86               | 6.56 | 12.9 |
|                                                                   | 150             | 10.3 | 200               | 13.8 | 2.97               | 5.58 | 12.7 | 4.10               | 7.14 | 15.3 |
|                                                                   |                 |      | 300               | 20.7 | 3.08               | 5.85 | 13.6 | 4.37               | 7.33 | 16.3 |
|                                                                   | 200             | 13.8 | 250               | 17.2 | 3.82               | 7.75 | 13.7 | 4.94               | 9.20 | 21.3 |
|                                                                   |                 |      | 300               | 20.7 | 4.23               | 8.35 | 13.7 | 5.62               | 10.5 | 22.1 |
|                                                                   | 250             | 17.2 | 300               | 20.7 | 3.90               | 9.76 | 13.7 | 5.66               | 11.4 | 22.5 |
|                                                                   |                 |      | 350               | 24.1 | 5.06               | 10.2 | 13.7 | 6.75               | 13.7 | 22.5 |
|                                                                   | 300             | 20.7 | 350               | 24.1 | 5.11               | 11.5 | 13.7 | 6.56               | 14.2 | 22.5 |
|                                                                   |                 |      |                   |      |                    |      |      |                    |      |      |

Spring range is not available for the body size.

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**Table 8. Typical Air  $C_v$  Coefficient with Linear Cage - Setpoint Made at 10% Flow (for Type MR105 with High-Pressure Actuator) (continued)**

| SPRINGRANGE,<br>PART NUMBER<br>AND COLOR                         | SET<br>PRESSURE                                                   |      | INLET<br>PRESSURE |      | C <sub>v</sub> AT % DROOP |      |      |                     |      |      |
|------------------------------------------------------------------|-------------------------------------------------------------------|------|-------------------|------|---------------------------|------|------|---------------------|------|------|
|                                                                  | psig                                                              | bar  | psig              | bar  | NPS 3 / DN 80 Body        |      |      | NPS 4 / DN 100 Body |      |      |
|                                                                  |                                                                   |      |                   |      | 10%                       | 20%  | 40%  | 10%                 | 20%  | 40%  |
| 39 to 72 psig /<br>2.7 to 5.0 bar<br><br>GE42909X012<br>White    | 40                                                                | 2.8  | 75                | 5.2  | 3.57                      | 4.93 | 7.96 | 3.48                | 4.79 | 7.68 |
|                                                                  |                                                                   |      | 150               | 10.3 | 4.00                      | 5.45 | 8.86 | 3.82                | 5.20 | 8.44 |
|                                                                  |                                                                   |      | 250               | 17.2 | 3.87                      | 5.22 | 8.48 | 3.68                | 4.97 | 8.08 |
|                                                                  | 50                                                                | 3.4  | 75                | 5.2  | 4.00                      | 5.46 | 9.98 | 3.93                | 5.34 | 9.68 |
|                                                                  |                                                                   |      | 150               | 10.3 | 3.91                      | 5.49 | 10.0 | 3.75                | 5.25 | 9.57 |
|                                                                  |                                                                   |      | 250               | 17.2 | 3.89                      | 5.50 | 9.74 | 3.70                | 5.24 | 9.28 |
|                                                                  | 60                                                                | 4.1  | 75                | 5.2  | 4.35                      | 6.74 | 12.4 | 4.30                | 6.63 | 12.1 |
|                                                                  |                                                                   |      | 150               | 10.3 | 3.96                      | 6.06 | 11.8 | 3.82                | 5.82 | 11.3 |
|                                                                  |                                                                   |      | 250               | 17.2 | 4.54                      | 6.52 | 12.3 | 4.32                | 6.21 | 11.7 |
|                                                                  | 70                                                                | 4.8  | 100               | 6.9  | 4.24                      | 6.85 | 14.0 | 4.17                | 6.71 | 13.6 |
|                                                                  |                                                                   |      | 150               | 10.3 | 4.52                      | 7.11 | 14.0 | 4.38                | 6.86 | 13.4 |
|                                                                  |                                                                   |      | 250               | 17.2 | 4.51                      | 6.90 | 14.0 | 4.30                | 6.57 | 13.4 |
| 71 to 175 psig /<br>4.9 to 12.1 bar<br><br>GE42910X012<br>Silver | 75                                                                | 5.2  | 100               | 6.9  | 4.22                      | 6.23 | 11.4 | 4.16                | 6.11 | 11.0 |
|                                                                  |                                                                   |      | 150               | 10.3 | 4.53                      | 6.56 | 11.8 | 4.39                | 6.35 | 11.4 |
|                                                                  |                                                                   |      | 250               | 17.2 | 4.30                      | 6.21 | 11.0 | 4.11                | 5.92 | 10.5 |
|                                                                  | 100                                                               | 6.9  | 150               | 10.3 | 3.56                      | 6.26 | 13.4 | 3.49                | 6.11 | 13.0 |
|                                                                  |                                                                   |      | 250               | 17.2 | 4.76                      | 7.42 | 14.5 | 4.58                | 7.11 | 13.8 |
|                                                                  | 125                                                               | 8.6  | 200               | 13.8 | 5.49                      | 9.09 | 19.5 | 5.37                | 8.84 | 18.8 |
|                                                                  |                                                                   |      | 300               | 20.7 | 5.36                      | 8.78 | 18.7 | 5.16                | 8.42 | 17.8 |
|                                                                  | 150                                                               | 10.3 | 200               | 13.8 | 5.80                      | 10.3 | 23.4 | 5.71                | 10.1 | 22.7 |
|                                                                  |                                                                   |      | 300               | 20.7 | 5.91                      | 10.3 | 22.7 | 5.72                | 9.97 | 21.7 |
|                                                                  | 175                                                               | 12.1 | 200               | 13.8 | 4.86                      | 9.89 | 26.3 | 4.82                | 9.74 | 25.6 |
|                                                                  |                                                                   |      | 300               | 20.7 | 6.86                      | 12.4 | 28.4 | 6.68                | 12.0 | 27.3 |
|                                                                  | 110 to 250 psig /<br>7.6 to 17.2 bar<br><br>GE42911X012<br>Orange | 125  | 8.6               | 150  | 10.3                      | 4.40 | 7.06 | 14.3                | 4.35 | 6.95 |
| 250                                                              |                                                                   |      |                   | 17.2 | 4.56                      | 6.81 | 13.5 | 4.41                | 6.57 | 12.9 |
| 150                                                              |                                                                   | 10.3 | 200               | 13.8 | 5.08                      | 8.27 | 17.4 | 5.00                | 8.10 | 16.9 |
|                                                                  |                                                                   |      | 300               | 20.7 | 4.16                      | 7.07 | 15.2 | 4.03                | 6.82 | 14.6 |
| 200                                                              |                                                                   | 13.8 | 250               | 17.2 | 6.42                      | 11.1 | 24.4 | 6.33                | 10.9 | 23.7 |
|                                                                  |                                                                   |      | 300               | 20.7 | 6.83                      | 11.5 | 25.1 | 6.69                | 11.2 | 24.3 |
| 250                                                              |                                                                   | 17.2 | 300               | 20.7 | 7.58                      | 13.5 | 29.6 | 7.49                | 13.3 | 27.5 |
|                                                                  |                                                                   |      | 350               | 24.1 | 8.40                      | 15.1 | 29.5 | 8.24                | 14.7 | 27.5 |

# Type MR105

**Table 9. Typical Water  $C_v$  Coefficient with Quick Opening Cage - Setpoint Made at 10% Flow (for Type MR105 with Low-Pressure Actuator)**

| SPRING RANGE,<br>PART NUMBER<br>AND COLOR                       | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | C <sub>v</sub> AT % DROOP |      |      |                              |      |      |                    |      |      |
|-----------------------------------------------------------------|-----------------|------|-------------------|------|---------------------------|------|------|------------------------------|------|------|--------------------|------|------|
|                                                                 |                 |      |                   |      | NPS 1 / DN 25 Body        |      |      | NPS 2 / DN 50 - Reduced Port |      |      | NPS 2 / DN 50 Body |      |      |
|                                                                 | psig            | bar  | psig              | bar  | 10%                       | 20%  | 40%  | 10%                          | 20%  | 40%  | 10%                | 20%  | 40%  |
| 5 to 12 psig /<br>0.34 to 0.83 bar<br><br>GE42909X012<br>White  | 5               | 0.34 | 25                | 1.7  | 5.30                      | 10.9 | 17.5 | 8.17                         | 14.3 | 24.6 | 11.9               | 22.7 | 39.5 |
|                                                                 |                 |      | 75                | 5.2  | 5.00                      | 10.5 | 17.5 | 8.81                         | 14.3 | 21.5 | 11.0               | 21.2 | 33.2 |
|                                                                 |                 |      | 150               | 10.3 | 4.51                      | 9.86 | 16.8 | 8.59                         | 12.4 | 17.4 | 11.5               | 19.0 | 31.8 |
|                                                                 | 10              | 0.69 | 25                | 1.7  | 8.75                      | 17.1 | 17.5 | 12.5                         | 23.2 | 42.9 | 18.3               | 37.5 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 9.11                      | 17.5 | 17.5 | 12.2                         | 20.6 | 35.5 | 17.8               | 31.4 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 9.45                      | 16.9 | 17.5 | 11.9                         | 17.1 | 29.8 | 16.9               | 26.8 | 44.2 |
| 10 to 24 psig /<br>0.69 to 1.6 bar<br><br>GE42910X012<br>Silver | 10              | 0.69 | 25                | 1.7  | 7.25                      | 14.6 | 17.5 | 10.0                         | 18.8 | 33.1 | 15.3               | 30.0 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 6.52                      | 14.0 | 17.5 | 10.3                         | 17.4 | 28.6 | 14.6               | 25.8 | 41.5 |
|                                                                 |                 |      | 150               | 10.3 | 6.68                      | 14.5 | 17.5 | 9.71                         | 14.9 | 24.1 | 14.7               | 24.0 | 36.3 |
|                                                                 | 15              | 1.0  | 25                | 1.7  | 10.9                      | 17.5 | 17.5 | 13.6                         | 28.5 | 43.8 | 20.9               | 44.0 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 8.29                      | 16.0 | 17.5 | 14.2                         | 26.7 | 42.6 | 18.1               | 33.9 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 8.33                      | 16.8 | 17.5 | 12.2                         | 20.1 | 33.9 | 17.3               | 30.8 | 48.2 |
|                                                                 | 20              | 1.4  | 50                | 3.4  | 9.90                      | 17.5 | 17.5 | 14.8                         | 30.2 | 43.8 | 23.3               | 44.4 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 10.7                      | 17.5 | 17.5 | 15.9                         | 29.1 | 43.8 | 22.3               | 42.6 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 11.4                      | 17.5 | 17.5 | 13.7                         | 25.7 | 43.2 | 19.5               | 37.8 | 48.2 |
| 14 to 32 psig /<br>0.96 to 2.2 bar<br><br>GE42911X012<br>Orange | 15              | 1.0  | 25                | 1.7  | 7.08                      | 15.2 | 17.5 | 10.6                         | 20.2 | 36.7 | 15.6               | 33.5 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 7.65                      | 15.0 | 17.5 | 11.2                         | 19.2 | 33.1 | 15.7               | 28.8 | 47.8 |
|                                                                 |                 |      | 150               | 10.3 | 7.11                      | 14.7 | 17.5 | 10.7                         | 16.8 | 28.1 | 14.8               | 26.9 | 46.5 |
|                                                                 | 20              | 1.4  | 25                | 1.7  | 9.07                      | 17.5 | 17.5 | 14.0                         | 31.2 | 43.8 | 20.0               | 47.0 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 9.93                      | 17.3 | 17.5 | 14.3                         | 27.1 | 43.3 | 19.9               | 40.1 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 9.40                      | 17.1 | 17.5 | 12.3                         | 21.0 | 36.3 | 19.3               | 38.4 | 48.2 |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 9.53                      | 17.5 | 17.5 | 16.6                         | 33.2 | 43.8 | 24.2               | 47.2 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 12.4                      | 17.5 | 17.5 | 16.3                         | 32.4 | 43.8 | 22.1               | 42.1 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 9.92                      | 17.5 | 17.5 | 14.0                         | 25.6 | 43.8 | 20.3               | 39.9 | 48.2 |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 11.7                      | 17.5 | 17.5 | 16.7                         | 34.7 | 43.8 | 25.0               | 48.2 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 11.8                      | 17.5 | 17.5 | 17.6                         | 33.9 | 43.8 | 23.7               | 47.1 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 11.8                      | 17.5 | 17.5 | 15.5                         | 29.3 | 43.8 | 22.0               | 40.8 | 48.2 |
| 18 to 43 psig /<br>1.2 to 3.0 bar<br><br>GE43002X012<br>Red     | 20              | 1.4  | 50                | 3.4  | 6.89                      | 14.4 | 17.5 | 10.8                         | 20.3 | 35.2 | 15.9               | 29.8 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 7.55                      | 14.9 | 17.5 | 11.3                         | 19.6 | 34.1 | 15.9               | 29.4 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 6.88                      | 14.4 | 17.5 | 11.0                         | 18.2 | 29.5 | 15.7               | 28.2 | 44.9 |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 8.77                      | 16.4 | 17.5 | 12.8                         | 26.0 | 43.8 | 19.1               | 39.6 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 8.28                      | 16.8 | 17.5 | 13.5                         | 24.4 | 41.6 | 19.0               | 35.8 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 8.86                      | 16.8 | 17.5 | 12.0                         | 19.5 | 33.3 | 18.2               | 32.4 | 48.2 |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 9.80                      | 17.5 | 17.5 | 14.4                         | 30.0 | 43.8 | 22.7               | 46.8 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 9.53                      | 17.5 | 17.5 | 15.0                         | 27.7 | 43.8 | 20.5               | 39.2 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 10.5                      | 17.5 | 17.5 | 12.8                         | 22.6 | 39.5 | 19.4               | 38.3 | 48.2 |
|                                                                 | 35              | 2.4  | 50                | 3.4  | 10.2                      | 17.5 | 17.5 | 17.0                         | 34.6 | 43.8 | 25.1               | 48.2 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 10.3                      | 17.5 | 17.5 | 16.8                         | 31.6 | 43.8 | 23.7               | 45.6 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 11.5                      | 17.5 | 17.5 | 14.1                         | 26.3 | 43.8 | 21.8               | 40.6 | 48.2 |
|                                                                 | 40              | 2.8  | 50                | 3.4  | 10.7                      | 17.5 | 17.5 | 17.4                         | 38.6 | 43.8 | 25.1               | 48.2 | 48.2 |
|                                                                 |                 |      | 75                | 5.2  | 11.2                      | 17.5 | 17.5 | 18.9                         | 35.3 | 43.8 | 25.3               | 48.2 | 48.2 |
|                                                                 |                 |      | 150               | 10.3 | 12.2                      | 17.5 | 17.5 | 15.5                         | 29.9 | 43.8 | 24.3               | 44.3 | 48.2 |

- continued -

**Table 9. Typical Water  $C_v$  Coefficient with Quick Opening Cage - Setpoint Made at 10% Flow (for Type MR105 with Low-Pressure Actuator) (continued)**

| SPRINGRANGE,<br>PART NUMBER<br>AND COLOR                        | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | C <sub>v</sub> AT % DROOP |      |      |                     |      |       |
|-----------------------------------------------------------------|-----------------|------|-------------------|------|---------------------------|------|------|---------------------|------|-------|
|                                                                 | psig            | bar  | psig              | bar  | NPS 3 / DN 80 Body        |      |      | NPS 4 / DN 100 Body |      |       |
|                                                                 |                 |      |                   |      | 10%                       | 20%  | 40%  | 10%                 | 20%  | 40%   |
| 5 to 8 psig /<br>0.34 to 0.55 bar<br><br>GE42909X012<br>White   | 5               | 0.34 | 25                | 1.7  | 19.2                      | 32.7 | 55.3 | 24.3                | 44.4 | 75.2  |
|                                                                 |                 |      | 75                | 5.2  | 17.4                      | 27.8 | 43.0 | 23.8                | 38.0 | 61.1  |
|                                                                 |                 |      | 150               | 10.3 | 17.3                      | 22.6 | 37.2 | 24.2                | 34.8 | 49.5  |
|                                                                 | 8               | 0.55 | 25                | 1.7  | 23.5                      | 46.1 | 80.5 | 28.7                | 65.4 | 113   |
|                                                                 |                 |      | 75                | 5.2  | 21.6                      | 36.8 | 61.9 | 29.7                | 52.1 | 86.9  |
|                                                                 |                 |      | 150               | 10.3 | 19.9                      | 29.3 | 50.3 | 27.2                | 44.8 | 71.0  |
| 8 to 20 psig /<br>0.55 to 1.4 bar<br><br>GE42910X012<br>Silver  | 10              | 0.69 | 25                | 1.7  | 22.5                      | 43.2 | 75.3 | 29.8                | 57.5 | 100   |
|                                                                 |                 |      | 75                | 5.2  | 20.9                      | 35.6 | 62.6 | 28.9                | 50.6 | 84.4  |
|                                                                 |                 |      | 150               | 10.3 | 20.4                      | 31.6 | 51.9 | 27.8                | 43.5 | 71.7  |
|                                                                 | 15              | 1.0  | 25                | 1.7  | 29.8                      | 62.4 | 103  | 36.9                | 82.1 | 136   |
|                                                                 |                 |      | 75                | 5.2  | 27.7                      | 51.3 | 85.0 | 33.7                | 71.0 | 124   |
|                                                                 |                 |      | 150               | 10.3 | 23.2                      | 40.9 | 72.2 | 35.0                | 58.9 | 99.9  |
|                                                                 | 20              | 1.4  | 50                | 3.4  | 32.9                      | 68.7 | 103  | 40.8                | 92.5 | 136   |
|                                                                 |                 |      | 75                | 5.2  | 30.6                      | 64.7 | 103  | 40.3                | 86.8 | 136   |
|                                                                 |                 |      | 150               | 10.3 | 28.3                      | 51.6 | 91.2 | 38.4                | 70.1 | 127   |
| 12 to 30 psig /<br>0.83 to 2.1 bar<br><br>GE42911X012<br>Orange | 15              | 1.0  | 25                | 1.7  | 25.4                      | 50.4 | 91.1 | 30.7                | 64.5 | 119   |
|                                                                 |                 |      | 75                | 5.2  | 23.6                      | 42.2 | 72.7 | 28.4                | 55.2 | 94.8  |
|                                                                 |                 |      | 150               | 10.3 | 21.5                      | 36.0 | 62.1 | 29.5                | 51.0 | 83.1  |
|                                                                 | 20              | 1.4  | 25                | 1.7  | 30.6                      | 70.3 | 103  | 38.6                | 91.0 | 136   |
|                                                                 |                 |      | 75                | 5.2  | 28.0                      | 54.6 | 94.0 | 34.6                | 68.1 | 124   |
|                                                                 |                 |      | 150               | 10.3 | 23.8                      | 43.6 | 77.6 | 35.4                | 62.4 | 103   |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 32.6                      | 67.4 | 103  | 42.9                | 90.1 | 136   |
|                                                                 |                 |      | 75                | 5.2  | 32.6                      | 66.0 | 103  | 39.9                | 82.8 | 136   |
|                                                                 |                 |      | 150               | 10.3 | 28.9                      | 54.9 | 92.3 | 39.4                | 73.7 | 126   |
|                                                                 |                 |      | 250               | 17.2 | 27.1                      | 46.8 | 79.3 | 36.0                | 61.3 | 106.9 |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 38.2                      | 81.7 | 103  | 47.1                | 107  | 136   |
|                                                                 |                 |      | 75                | 5.2  | 38.4                      | 76.8 | 103  | 46.5                | 98.2 | 136   |
|                                                                 |                 |      | 150               | 10.3 | 32.5                      | 64.1 | 103  | 43.8                | 86.0 | 136   |
|                                                                 |                 |      | 250               | 17.2 | 29.6                      | 52.6 | 84.3 | 40.8                | 73.2 | 124.2 |
| 18 to 39 psig /<br>1.2 to 2.7 bar<br><br>GE43002X012<br>Red     | 20              | 1.4  | 50                | 3.4  | 24.6                      | 46.3 | 80.3 | 30.6                | 57.4 | 105   |
|                                                                 |                 |      | 75                | 5.2  | 24.1                      | 43.8 | 77.1 | 29.7                | 57.0 | 99.8  |
|                                                                 |                 |      | 150               | 10.3 | 21.8                      | 38.1 | 65.0 | 29.0                | 50.2 | 87.2  |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 28.4                      | 56.4 | 103  | 36.4                | 70.1 | 127   |
|                                                                 |                 |      | 75                | 5.2  | 29.5                      | 54.2 | 94.0 | 32.9                | 68.2 | 121   |
|                                                                 |                 |      | 150               | 10.3 | 24.0                      | 45.4 | 78.8 | 33.2                | 61.1 | 104   |
|                                                                 |                 |      | 250               | 17.2 | 23.9                      | 39.9 | 66.1 | 31.9                | 53.8 | 91.0  |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 31.7                      | 65.8 | 103  | 38.8                | 83.4 | 136   |
|                                                                 |                 |      | 75                | 5.2  | 32.5                      | 64.2 | 103  | 37.2                | 79.0 | 136   |
|                                                                 |                 |      | 150               | 10.3 | 27.5                      | 54.9 | 92.8 | 36.0                | 71.0 | 121   |
|                                                                 |                 |      | 250               | 17.2 | 25.6                      | 45.4 | 79.0 | 34.7                | 60.9 | 106.3 |
|                                                                 | 35              | 2.4  | 50                | 3.4  | 36.0                      | 77.2 | 103  | 42.8                | 99.4 | 136   |
|                                                                 |                 |      | 75                | 5.2  | 37.0                      | 74.6 | 103  | 41.1                | 88.9 | 136   |
|                                                                 |                 |      | 150               | 10.3 | 31.1                      | 61.8 | 103  | 38.7                | 80.4 | 136   |
|                                                                 |                 |      | 250               | 17.2 | 28.7                      | 52.4 | 88.5 | 39.5                | 71.3 | 122   |

# Type MR105

**Table 10. Typical Water  $C_v$  Coefficient with Quick Opening Cage - Setpoint Made at 10% Flow (for Type MR105 with High-Pressure Actuator)**

| SPRINGRANGE,<br>PART NUMBER<br>AND COLOR                          | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | $C_v$ AT % DROOP   |      |      |                              |      |      |                    |      |      |
|-------------------------------------------------------------------|-----------------|------|-------------------|------|--------------------|------|------|------------------------------|------|------|--------------------|------|------|
|                                                                   | psig            | bar  | psig              | bar  | NPS 1 / DN 25 Body |      |      | NPS 2 / DN 50 - Reduced Port |      |      | NPS 2 / DN 50 Body |      |      |
|                                                                   |                 |      |                   |      | 10%                | 20%  | 40%  | 10%                          | 20%  | 40%  | 10%                | 20%  | 40%  |
| 25 to 60 psig /<br>1.7 to 4.1 bar<br><br>GE42907X012<br>Green     | 25              | 1.7  | 50                | 3.4  | 4.39               | 8.73 | 15.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 75                | 5.2  | 4.83               | 9.38 | 16.4 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 150               | 10.3 | 4.87               | 11.7 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 4.10               | 17.5 | 17.5 |                              |      |      |                    |      |      |
|                                                                   | 30              | 2.1  | 50                | 3.4  | 4.80               | 10.0 | 17.3 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 75                | 5.2  | 5.34               | 10.8 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 150               | 10.3 | 5.59               | 14.0 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 5.33               | 17.5 | 17.5 |                              |      |      |                    |      |      |
|                                                                   | 40              | 2.8  | 50                | 3.4  | 5.88               | 13.2 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 75                | 5.2  | 7.05               | 13.7 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 150               | 10.3 | 7.68               | 16.8 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 9.43               | 17.5 | 17.5 |                              |      |      |                    |      |      |
|                                                                   | 50              | 3.4  | 75                | 5.2  | 7.30               | 15.3 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 150               | 10.3 | 9.17               | 17.5 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 15.9               | 17.5 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 75                | 5.2  | 8.07               | 17.1 | 17.5 |                              |      |      |                    |      |      |
|                                                                   | 60              | 4.1  | 150               | 10.3 | 10.9               | 17.5 | 17.5 |                              |      |      |                    |      |      |
|                                                                   |                 |      | 250               | 17.2 | 15.8               | 17.5 | 17.5 |                              |      |      |                    |      |      |
| 25 to 45 psig /<br>1.7 to 3.1 bar<br><br>GE42907X012<br>Green     | 25              | 1.7  | 50                | 3.4  |                    |      |      | 7.25                         | 12.1 | 19.6 | 9.73               | 16.2 | 28.9 |
|                                                                   |                 |      | 75                | 5.2  |                    |      |      | 8.14                         | 12.8 | 19.5 | 11.2               | 17.8 | 27.9 |
|                                                                   |                 |      | 150               | 10.3 |                    |      |      | 7.35                         | 11.3 | 17.3 | 10.3               | 16.0 | 24.8 |
|                                                                   | 30              | 2.1  | 50                | 3.4  |                    |      |      | 7.30                         | 13.3 | 23.4 | 10.2               | 18.9 | 33.7 |
|                                                                   |                 |      | 75                | 5.2  |                    |      |      | 8.66                         | 14.1 | 22.9 | 12.3               | 20.4 | 32.6 |
|                                                                   |                 |      | 150               | 10.3 |                    |      |      | 7.48                         | 12.4 | 20.5 | 11.0               | 18.3 | 29.5 |
|                                                                   | 40              | 2.8  | 50                | 3.4  |                    |      |      | 8.82                         | 17.7 | 31.9 | 13.4               | 27.6 | 48.2 |
|                                                                   |                 |      | 75                | 5.2  |                    |      |      | 10.9                         | 18.4 | 30.8 | 15.4               | 26.8 | 45.4 |
|                                                                   |                 |      | 150               | 10.3 |                    |      |      | 8.71                         | 15.2 | 26.0 | 13.9               | 23.0 | 39.8 |
|                                                                   | 45              | 3.1  | 75                | 5.2  |                    |      |      | 8.68                         | 16.9 | 31.2 | 13.1               | 25.4 | 46.6 |
|                                                                   |                 |      | 150               | 10.3 |                    |      |      | 9.27                         | 16.1 | 29.4 | 12.6               | 24.8 | 43.0 |
|                                                                   |                 |      |                   |      |                    |      |      |                              |      |      |                    |      |      |
| 43 to 100 psig /<br>3.0 to 6.9 bar<br><br>GE42909X012<br>White    | 50              | 3.4  | 75                | 5.2  | 6.02               | 12.4 | 17.5 | 8.40                         | 15.9 | 28.6 | 11.9               | 23.6 | 43.0 |
|                                                                   |                 |      | 150               | 10.3 | 6.73               | 13.8 | 17.5 | 8.78                         | 15.2 | 26.3 | 13.1               | 23.4 | 41.5 |
|                                                                   |                 |      | 250               | 17.2 | 8.03               | 17.5 | 17.5 | 8.45                         | 13.9 | 23.2 | 11.9               | 20.4 | 37.4 |
|                                                                   | 60              | 4.1  | 75                | 5.2  | 6.76               | 14.4 | 17.5 | 9.60                         | 19.0 | 35.0 | 13.5               | 28.0 | 48.2 |
|                                                                   |                 |      | 150               | 10.3 | 7.76               | 15.6 | 17.5 | 9.80                         | 17.1 | 30.7 | 15.3               | 27.9 | 48.2 |
|                                                                   |                 |      | 250               | 17.2 | 8.36               | 17.5 | 17.5 | 8.93                         | 15.6 | 26.6 | 13.9               | 25.7 | 46.8 |
|                                                                   | 75              | 5.2  | 100               | 6.9  | 7.89               | 16.2 | 17.5 | 9.82                         | 20.9 | 39.5 | 15.3               | 32.5 | 48.2 |
|                                                                   |                 |      | 250               | 17.2 | 12.4               | 17.5 | 17.5 | 10.2                         | 18.1 | 32.6 | 15.5               | 29.7 | 48.2 |
|                                                                   | 100             | 6.9  | 150               | 10.3 | 10.1               | 17.5 | 17.5 | 11.9                         | 24.7 | 43.8 | 17.0               | 38.7 | 48.2 |
|                                                                   |                 |      | 250               | 17.2 | 13.0               | 17.5 | 17.5 | 13.0                         | 23.5 | 43.1 | 19.1               | 40.0 | 48.2 |
|                                                                   |                 |      | 100               | 6.9  | 5.79               | 12.5 | 17.5 | 8.07                         | 15.8 | 29.6 | 11.9               | 24.5 | 45.1 |
|                                                                   |                 |      | 250               | 17.2 | 6.22               | 13.9 | 17.5 | 9.18                         | 15.6 | 26.2 | 12.4               | 22.1 | 41.6 |
| 75 to 175 psig /<br>5.2 to 12.1 bar<br><br>GE42910X012<br>Silver  | 100             | 6.9  | 150               | 10.3 | 7.23               | 15.2 | 17.5 | 9.30                         | 18.7 | 35.9 | 14.7               | 29.8 | 48.2 |
|                                                                   |                 |      | 250               | 17.2 | 8.54               | 16.7 | 17.5 | 11.1                         | 19.5 | 34.0 | 15.7               | 28.1 | 48.2 |
|                                                                   |                 |      | 200               | 13.8 | 8.66               | 17.4 | 17.5 | 11.1                         | 22.4 | 40.8 | 16.6               | 33.9 | 48.2 |
|                                                                   | 125             | 8.6  | 300               | 20.7 | 10.9               | 17.5 | 17.5 | 12.1                         | 22.0 | 39.6 | 16.7               | 35.5 | 48.2 |
|                                                                   |                 |      | 200               | 13.8 | 9.92               | 17.5 | 17.5 | 12.8                         | 26.5 | 43.8 | 19.0               | 40.5 | 48.2 |
|                                                                   | 150             | 10.3 | 300               | 20.7 | 11.9               | 17.5 | 17.5 | 14.4                         | 26.1 | 43.8 | 21.7               | 43.3 | 48.2 |
|                                                                   |                 |      | 200               | 13.8 | 10.6               | 17.5 | 17.5 | 14.4                         | 33.5 | 43.8 | 21.0               | 48.2 | 48.2 |
|                                                                   | 175             | 12.1 | 300               | 20.7 | 12.4               | 17.5 | 17.5 | 15.7                         | 29.8 | 43.8 | 24.5               | 48.2 | 48.2 |
|                                                                   |                 |      | 150               | 10.3 | 6.53               | 14.7 | 17.5 | 9.47                         | 19.7 | 37.2 | 13.6               | 29.7 | 48.2 |
|                                                                   | 125             | 8.6  | 250               | 17.2 | 7.68               | 15.0 | 17.5 | 11.1                         | 19.3 | 33.2 | 16.2               | 30.0 | 48.2 |
|                                                                   |                 |      | 200               | 13.8 | 7.44               | 15.7 | 17.5 | 10.3                         | 21.4 | 41.1 | 15.1               | 33.4 | 48.2 |
|                                                                   | 150             | 10.3 | 300               | 20.7 | 9.65               | 17.5 | 17.5 | 12.1                         | 21.5 | 38.5 | 17.6               | 35.1 | 48.2 |
| 110 to 300 psig /<br>7.6 to 20.7 bar<br><br>GE42911X012<br>Orange | 200             | 13.8 | 250               | 17.2 | 9.44               | 17.5 | 17.5 | 12.5                         | 27.4 | 43.8 | 19.0               | 42.3 | 48.2 |
|                                                                   |                 |      | 300               | 20.7 | 11.7               | 17.5 | 17.5 | 15.8                         | 29.4 | 43.8 | 23.6               | 46.5 | 48.2 |
|                                                                   | 250             | 17.2 | 300               | 20.7 | 11.2               | 17.5 | 17.5 | 14.3                         | 32.3 | 43.8 | 22.7               | 48.2 | 48.2 |
|                                                                   |                 |      | 350               | 24.1 | 14.1               | 17.5 | 17.5 | 18.3                         | 35.5 | 43.8 | 28.4               | 48.2 | 48.2 |
|                                                                   | 300             | 20.7 | 350               | 24.1 | 13.0               | 17.5 | 17.5 | 16.9                         | 38.6 | 43.8 | 25.5               | 48.2 | 48.2 |
|                                                                   |                 |      | 110               | 7.6  | 6.53               | 14.7 | 17.5 | 9.47                         | 19.7 | 37.2 | 13.6               | 29.7 | 48.2 |
|                                                                   | 125             | 8.6  | 250               | 17.2 | 7.68               | 15.0 | 17.5 | 11.1                         | 19.3 | 33.2 | 16.2               | 30.0 | 48.2 |
|                                                                   |                 |      | 200               | 13.8 | 7.44               | 15.7 | 17.5 | 10.3                         | 21.4 | 41.1 | 15.1               | 33.4 | 48.2 |
|                                                                   | 150             | 10.3 | 300               | 20.7 | 9.65               | 17.5 | 17.5 | 12.1                         | 21.5 | 38.5 | 17.6               | 35.1 | 48.2 |
|                                                                   |                 |      | 250               | 17.2 | 9.44               | 17.5 | 17.5 | 12.5                         | 27.4 | 43.8 | 19.0               | 42.3 | 48.2 |
|                                                                   | 200             | 13.8 | 300               | 20.7 | 11.7               | 17.5 | 17.5 | 15.8                         | 29.4 | 43.8 | 23.6               | 46.5 | 48.2 |
|                                                                   |                 |      | 350               | 24.1 | 14.1               | 17.5 | 17.5 | 18.3                         | 35.5 | 43.8 | 28.4               | 48.2 | 48.2 |

□ - Spring range is not available for the body size.

- continued -

**Table 10.** Typical Water  $C_v$  Coefficient with Quick Opening Cage - Setpoint Made at 10% Flow (for Type MR105 with High-Pressure Actuator) (continued)

| SPRINGRANGE,<br>PART NUMBER<br>AND COLOR                         | SET<br>PRESSURE                                                   |      | INLET<br>PRESSURE |      | C <sub>v</sub> AT % DROOP |      |       |                     |      |       |
|------------------------------------------------------------------|-------------------------------------------------------------------|------|-------------------|------|---------------------------|------|-------|---------------------|------|-------|
|                                                                  | psig                                                              | bar  | psig              | bar  | NPS 3 / DN 80 Body        |      |       | NPS 4 / DN 100 Body |      |       |
|                                                                  |                                                                   |      |                   |      | 10%                       | 20%  | 40%   | 10%                 | 20%  | 40%   |
| 39 to 72 psig /<br>2.7 to 5.0 bar<br><br>GE42909X012<br>White    | 40                                                                | 2.8  | 75                | 5.2  | 16.2                      | 26.6 | 42.4  | 19.5                | 33.1 | 53.1  |
|                                                                  |                                                                   |      | 150               | 10.3 | 16.6                      | 24.6 | 36.0  | 21.7                | 33.4 | 47.9  |
|                                                                  |                                                                   |      | 250               | 17.2 | 15.3                      | 20.9 | 29.6  | 20.7                | 28.3 | 38.0  |
|                                                                  | 50                                                                | 3.4  | 75                | 5.2  | 17.3                      | 31.2 | 51.5  | 23.4                | 42.5 | 70.0  |
|                                                                  |                                                                   |      | 150               | 10.3 | 18.6                      | 28.5 | 43.2  | 24.4                | 39.2 | 56.8  |
|                                                                  |                                                                   |      | 250               | 17.2 | 16.0                      | 23.4 | 34.8  | 21.9                | 31.6 | 44.7  |
|                                                                  | 60                                                                | 4.1  | 75                | 5.2  | 18.8                      | 37.1 | 64.0  | 26.0                | 50.1 | 87.3  |
|                                                                  |                                                                   |      | 150               | 10.3 | 20.5                      | 32.8 | 50.6  | 26.6                | 43.5 | 65.4  |
|                                                                  |                                                                   |      | 250               | 17.2 | 16.9                      | 26.4 | 39.6  | 22.7                | 34.6 | 51.0  |
|                                                                  | 70                                                                | 4.8  | 100               | 6.9  | 20.2                      | 39.2 | 67.4  | 26.5                | 51.4 | 87.9  |
|                                                                  |                                                                   |      | 150               | 10.3 | 22.7                      | 37.6 | 59.4  | 30.2                | 50.8 | 78.0  |
|                                                                  |                                                                   |      | 250               | 17.2 | 18.4                      | 29.5 | 45.3  | 24.3                | 39.2 | 58.4  |
| 71 to 175 psig /<br>4.9 to 12.1 bar<br><br>GE42910X012<br>Silver | 75                                                                | 5.2  | 100               | 6.9  | 18.8                      | 34.8 | 60.0  | 24.4                | 46.0 | 77.1  |
|                                                                  |                                                                   |      | 150               | 10.3 | 21.8                      | 35.2 | 55.3  | 29.1                | 47.9 | 71.8  |
|                                                                  |                                                                   |      | 250               | 17.2 | 17.5                      | 28.1 | 42.8  | 23.8                | 38.2 | 55.8  |
|                                                                  | 100                                                               | 6.9  | 150               | 10.3 | 20.8                      | 37.8 | 67.4  | 26.6                | 51.1 | 86.2  |
|                                                                  |                                                                   |      | 250               | 17.2 | 21.1                      | 35.0 | 55.5  | 28.2                | 46.7 | 71.3  |
|                                                                  | 125                                                               | 8.6  | 200               | 13.8 | 22.2                      | 41.5 | 73.1  | 28.3                | 55.0 | 92.2  |
|                                                                  |                                                                   |      | 300               | 20.7 | 22.9                      | 38.2 | 65.5  | 30.4                | 50.8 | 81.0  |
|                                                                  | 150                                                               | 10.3 | 200               | 13.8 | 25.2                      | 51.3 | 92.5  | 32.7                | 68.6 | 118   |
|                                                                  |                                                                   |      | 300               | 20.7 | 26.3                      | 45.7 | 76.4  | 35.5                | 62.7 | 93.6  |
|                                                                  | 175                                                               | 12.1 | 200               | 13.8 | 29.6                      | 64.4 | 103   | 37.4                | 83.3 | 136   |
|                                                                  |                                                                   |      | 300               | 20.7 | 30.1                      | 55.2 | 90.1  | 40.0                | 71.8 | 114.5 |
|                                                                  | 110 to 250 psig /<br>7.6 to 17.2 bar<br><br>GE42911X012<br>Orange | 125  | 8.6               | 150  | 10.3                      | 21.1 | 41.8  | 74.0                | 26.3 | 55.1  |
| 250                                                              |                                                                   |      |                   | 17.2 | 22.5                      | 37.8 | 60.1  | 30.4                | 49.7 | 80.5  |
| 150                                                              |                                                                   | 10.3 | 200               | 13.8 | 23.4                      | 44.7 | 78.4  | 28.5                | 56.6 | 98.4  |
|                                                                  |                                                                   |      | 300               | 20.7 | 24.4                      | 41.4 | 65.1  | 31.4                | 53.3 | 89.4  |
| 200                                                              |                                                                   | 13.8 | 250               | 17.2 | 26.7                      | 54.8 | 95.2  | 32.4                | 69.4 | 123   |
|                                                                  |                                                                   |      | 300               | 20.7 | 32.3                      | 57.9 | 94.7  | 39.1                | 73.5 | 119   |
| 250                                                              |                                                                   | 17.2 | 300               | 20.7 | 28.9                      | 64.2 | 103.1 | 36.0                | 81.6 | 136   |
|                                                                  |                                                                   |      | 350               | 24.1 | 36.9                      | 67.9 | 103.1 | 47.9                | 92.5 | 135.9 |

# Type MR105

**Table 11. Typical Air Capacities with Linear Cage - Setpoint Made at 10% Flow (for Type MR105 with Low-Pressure Actuator)**

| SPRINGRANGE,<br>PART NUMBER<br>AND COLOR                        | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | CAPACITIES IN SCFH / Nm³/h OF AIR |       |           |       |           |       |                    |       |           |       |           |       |
|-----------------------------------------------------------------|-----------------|------|-------------------|------|-----------------------------------|-------|-----------|-------|-----------|-------|--------------------|-------|-----------|-------|-----------|-------|
|                                                                 |                 |      |                   |      | NPS 1 / DN 25 Body                |       |           |       |           |       | NPS 2 / DN 50 Body |       |           |       |           |       |
|                                                                 |                 |      |                   |      | 10% Droop                         |       | 20% Droop |       | 40% Droop |       | 10% Droop          |       | 20% Droop |       | 40% Droop |       |
|                                                                 | psig            | bar  | psig              | bar  | SCFH                              | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h | SCFH               | Nm³/h | SCFH      | Nm³/h | SCFH      | Nm³/h |
| 5 to 12 psig /<br>0.34 to 0.83 bar<br><br>GE42909X012<br>White  | 5               | 0.34 | 25                | 1.7  | 3300                              | 89    | 4800      | 130   | 9800      | 260   | 3800               | 100   | 5800      | 160   | 11,800    | 320   |
|                                                                 |                 |      | 75                | 5.2  | 7700                              | 210   | 12,200    | 330   | 25,800    | 690   | 10,600             | 280   | 13,600    | 360   | 27,300    | 730   |
|                                                                 |                 |      | 150               | 10.3 | 15,500                            | 420   | 22,200    | 600   | 50,000    | 1300  | 18,000             | 480   | 27,600    | 740   | 57,100    | 1500  |
|                                                                 |                 |      | 250               | 17.2 | 18,400                            | 490   | 29,100    | 780   | 76,400    | 2000  | 28,000             | 750   | 43,000    | 1200  | 93,800    | 2500  |
|                                                                 | 10              | 0.69 | 25                | 1.7  | 3100                              | 84    | 7500      | 200   | 17,300    | 460   | 5700               | 150   | 11,800    | 320   | 25,700    | 690   |
|                                                                 |                 |      | 75                | 5.2  | 12,000                            | 320   | 23,400    | 630   | 41,600    | 1100  | 14,000             | 370   | 26,200    | 700   | 66,100    | 1800  |
|                                                                 |                 |      | 150               | 10.3 | 20,300                            | 540   | 38,000    | 1000  | 79,700    | 2100  | 21,600             | 580   | 46,600    | 1200  | 121,000   | 3200  |
|                                                                 |                 |      | 250               | 17.2 | 34,500                            | 930   | 76,000    | 2000  | 128,000   | 3400  | 38,800             | 1000  | 73,700    | 2000  | 182,000   | 4900  |
| 10 to 24 psig /<br>0.69 to 1.6 bar<br><br>GE42910X012<br>Silver | 10              | 0.69 | 25                | 1.7  | 3100                              | 84    | 6100      | 160   | 13,900    | 370   | 4600               | 120   | 8000      | 210   | 16,600    | 450   |
|                                                                 |                 |      | 75                | 5.2  | 8600                              | 230   | 15,300    | 410   | 34,200    | 920   | 10,200             | 270   | 18,300    | 490   | 38,500    | 1000  |
|                                                                 |                 |      | 150               | 10.3 | 15,600                            | 420   | 28,000    | 750   | 64,700    | 1700  | 19,700             | 530   | 34,200    | 920   | 79,300    | 2100  |
|                                                                 |                 |      | 250               | 17.2 | 29,200                            | 780   | 46,000    | 1200  | 114,000   | 3100  | 30,900             | 830   | 57,800    | 1500  | 127,000   | 3400  |
|                                                                 | 15              | 1.0  | 25                | 1.7  | 4000                              | 110   | 8400      | 230   | 16,700    | 450   | 5100               | 140   | 11,400    | 310   | 26,200    | 700   |
|                                                                 |                 |      | 75                | 5.2  | 11,600                            | 310   | 22,400    | 600   | 43,200    | 1200  | 15,200             | 410   | 28,200    | 760   | 66,600    | 1800  |
|                                                                 |                 |      | 150               | 10.3 | 21,900                            | 590   | 43,400    | 1200  | 79,100    | 2100  | 28,500             | 760   | 54,600    | 1500  | 123,000   | 3300  |
|                                                                 |                 |      | 250               | 17.2 | 34,500                            | 920   | 70,500    | 1900  | 128,000   | 3400  | 40,400             | 1100  | 87,800    | 2400  | 192,000   | 5200  |
|                                                                 | 20              | 1.4  | 50                | 3.4  | 9800                              | 260   | 21,900    | 590   | 30,600    | 820   | 12,500             | 330   | 26,000    | 700   | 48,200    | 1300  |
|                                                                 |                 |      | 75                | 5.2  | 13,500                            | 360   | 29,200    | 780   | 42,500    | 1100  | 17,100             | 460   | 35,900    | 960   | 68,000    | 1800  |
|                                                                 |                 |      | 150               | 10.3 | 26,600                            | 710   | 61,200    | 1600  | 79,400    | 2100  | 26,800             | 720   | 58,000    | 1600  | 125,000   | 3300  |
|                                                                 |                 |      | 250               | 17.2 | 44,000                            | 1200  | 90,800    | 2400  | 127,000   | 3400  | 52,800             | 1400  | 121,000   | 3200  | 202,000   | 5400  |
| 14 to 32 psig /<br>0.96 to 2.2 bar<br><br>GE42911X012<br>Orange | 15              | 1.0  | 25                | 1.7  | 3300                              | 87    | 6400      | 170   | 14,700    | 390   | 4700               | 130   | 8400      | 230   | 20,100    | 540   |
|                                                                 |                 |      | 75                | 5.2  | 8500                              | 230   | 16,800    | 450   | 36,800    | 990   | 11,100             | 300   | 19,600    | 520   | 46,400    | 1200  |
|                                                                 |                 |      | 150               | 10.3 | 16,000                            | 430   | 28,900    | 780   | 65,100    | 1700  | 22,500             | 600   | 41,600    | 1100  | 90,900    | 2400  |
|                                                                 |                 |      | 250               | 17.2 | 27,000                            | 720   | 51,800    | 1400  | 120,000   | 3200  | 34,500             | 920   | 63,200    | 1700  | 164,000   | 4400  |
|                                                                 | 20              | 1.4  | 25                | 1.7  | 3500                              | 94    | 7700      | 210   | 15,100    | 400   | 4300               | 120   | 10,400    | 280   | 22,700    | 610   |
|                                                                 |                 |      | 75                | 5.2  | 10,300                            | 280   | 20,200    | 540   | 42,000    | 1100  | 13,500             | 360   | 26,400    | 710   | 66,000    | 1800  |
|                                                                 |                 |      | 150               | 10.3 | 19,700                            | 530   | 39,000    | 1000  | 77,900    | 2100  | 28,600             | 770   | 53,700    | 1400  | 122,000   | 3300  |
|                                                                 |                 |      | 250               | 17.2 | 33,500                            | 900   | 65,300    | 1700  | 127,000   | 3400  | 38,700             | 1000  | 79,800    | 2100  | 194,000   | 5200  |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 9500                              | 250   | 18,900    | 510   | 29,900    | 800   | 10,300             | 280   | 22,900    | 610   | 47,200    | 1300  |
|                                                                 |                 |      | 75                | 5.2  | 11,200                            | 300   | 25,500    | 680   | 43,000    | 1200  | 14,400             | 390   | 35,500    | 950   | 67,100    | 1800  |
|                                                                 |                 |      | 150               | 10.3 | 22,600                            | 610   | 49,100    | 1300  | 79,100    | 2100  | 28,900             | 770   | 63,400    | 1700  | 125,000   | 3400  |
|                                                                 |                 |      | 250               | 17.2 | 36,400                            | 980   | 87,500    | 2300  | 129,000   | 3400  | 42,700             | 1100  | 97,300    | 2600  | 202,000   | 5400  |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 10,000                            | 270   | 22,000    | 590   | 29,700    | 800   | 11,100             | 300   | 27,300    | 730   | 46,400    | 1200  |
|                                                                 |                 |      | 75                | 5.2  | 14,700                            | 390   | 33,200    | 890   | 42,300    | 1100  | 18,600             | 500   | 41,900    | 1100  | 67,800    | 1800  |
|                                                                 |                 |      | 150               | 10.3 | 26,700                            | 720   | 62,100    | 1700  | 78,900    | 2100  | 34,600             | 930   | 80,700    | 2200  | 125,000   | 3300  |
|                                                                 |                 |      | 250               | 17.2 | 49,700                            | 1300  | 114,000   | 3100  | 128,000   | 3400  | 47,200             | 1300  | 121,000   | 3300  | 202,000   | 5400  |
| 18 to 43 psig /<br>1.2 to 3.0 bar<br><br>GE43002X012<br>Red     | 20              | 1.4  | 50                | 3.4  | 5600                              | 150   | 11,600    | 310   | 24,100    | 640   | 7800               | 210   | 15,700    | 420   | 33,200    | 890   |
|                                                                 |                 |      | 75                | 5.2  | 7800                              | 210   | 15,500    | 420   | 33,600    | 900   | 14,000             | 370   | 19,900    | 530   | 46,300    | 1200  |
|                                                                 |                 |      | 150               | 10.3 | 16,900                            | 450   | 30,000    | 800   | 66,400    | 1800  | 23,200             | 620   | 41,300    | 1100  | 90,100    | 2400  |
|                                                                 |                 |      | 250               | 17.2 | 25,400                            | 680   | 45,200    | 1200  | 108,000   | 2900  | 36,300             | 970   | 62,500    | 1700  | 150,000   | 4000  |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 6400                              | 170   | 13,400    | 360   | 27,700    | 740   | 10,000             | 270   | 18,100    | 490   | 43,200    | 1200  |
|                                                                 |                 |      | 75                | 5.2  | 11,000                            | 290   | 20,700    | 560   | 41,600    | 1100  | 12,200             | 330   | 26,900    | 720   | 61,900    | 1700  |
|                                                                 |                 |      | 150               | 10.3 | 18,000                            | 480   | 37,600    | 1000  | 76,600    | 2100  | 26,600             | 710   | 49,800    | 1300  | 117,000   | 3100  |
|                                                                 |                 |      | 250               | 17.2 | 31,100                            | 830   | 59,800    | 1600  | 125,000   | 3300  | 41,000             | 1100  | 78,200    | 2100  | 181,000   | 4900  |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 8500                              | 230   | 16,400    | 440   | 29,800    | 800   | 9100               | 240   | 21,600    | 580   | 44,900    | 1200  |
|                                                                 |                 |      | 75                | 5.2  | 12,300                            | 330   | 24,500    | 660   | 42,600    | 1100  | 17,100             | 460   | 30,100    | 810   | 66,400    | 1800  |
|                                                                 |                 |      | 150               | 10.3 | 22,100                            | 590   | 46,400    | 1200  | 79,200    | 2100  | 32,700             | 880   | 60,600    | 1600  | 122,000   | 3300  |
|                                                                 |                 |      | 250               | 17.2 | 34,000                            | 910   | 70,900    | 1900  | 125,000   | 3300  | 45,000             | 1200  | 95,300    | 2600  | 198,000   | 5300  |
|                                                                 | 35              | 2.4  | 50                | 3.4  | 8400                              | 230   | 17,900    | 480   | 28,600    | 770   | 10,600             | 280   | 23,600    | 630   | 44,700    | 1200  |
|                                                                 |                 |      | 75                | 5.2  | 13,400                            | 360   | 26,800    | 720   | 42,800    | 1100  | 17,800             | 480   | 38,300    | 1000  | 66,600    | 1800  |
|                                                                 |                 |      | 150               | 10.3 | 24,800                            | 660   | 52,600    | 1400  | 78,700    | 2100  | 34,900             | 930   | 71,800    | 1900  | 124,000   | 3300  |
|                                                                 |                 |      | 250               | 17.2 | 39,700                            | 1100  | 82,200    | 2200  | 124,000   | 3300  | 50,800             | 1400  | 112,000   | 3000  | 202,000   | 5400  |
|                                                                 | 40              | 2.8  | 50                | 3.4  | 8600                              | 230   | 19,600    | 530   | 27,600    | 740   | 10,200             | 270   | 26,900    | 720   | 43,100    | 1200  |
|                                                                 |                 |      | 75                | 5.2  | 12,800                            | 340   | 30,300    | 810   | 42,500    | 1100  | 20,200             | 540   | 42,500    | 1100  | 65,500    | 1800  |
|                                                                 |                 |      | 150               | 10.3 | 25,200                            | 680   | 61,600    | 1700  | 79,700    | 2100  | 30,700             | 820   | 67,400    | 1800  | 125,000   | 3300  |
|                                                                 |                 |      | 250               | 17.2 | 46,000                            | 1200  | 99,300    | 2700  | 127,000   | 3400  | 56,200             | 1500  | 133,000   | 3600  | 204,000   | 5500  |

- continued -

**Table 11. Typical Air Capacities with Linear Cage - Setpoint Made at 10% Flow (for Type MR105 with Low-Pressure Actuator) (continued)**

| SPRINGRANGE,<br>PART NUMBER<br>AND COLOR                        | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF AIR |                    |           |                    |           |                    |                     |                    |           |                    |           |                    |
|-----------------------------------------------------------------|-----------------|------|-------------------|------|------------------------------------------------|--------------------|-----------|--------------------|-----------|--------------------|---------------------|--------------------|-----------|--------------------|-----------|--------------------|
|                                                                 |                 |      |                   |      | NPS 3 / DN 80 Body                             |                    |           |                    |           |                    | NPS 4 / DN 100 Body |                    |           |                    |           |                    |
|                                                                 | psig            | bar  | psig              | bar  | 10% Droop                                      |                    | 20% Droop |                    | 40% Droop |                    | 10% Droop           |                    | 20% Droop |                    | 40% Droop |                    |
|                                                                 |                 |      |                   |      | SCFH                                           | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH                | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h |
| 5 to 8 psig /<br>0.34 to 0.55 bar<br><br>GE42909X012<br>White   | 5               | 0.34 | 25                | 1.7  | 6300                                           | 170                | 8700      | 230                | 15,600    | 420                | 6200                | 160                | 8600      | 230                | 13,300    | 360                |
|                                                                 |                 |      | 75                | 5.2  | 13,600                                         | 360                | 19,400    | 520                | 35,900    | 960                | 13,800              | 370                | 18,500    | 500                | 32,800    | 880                |
|                                                                 |                 |      | 150               | 10.3 | 23,900                                         | 640                | 35,600    | 950                | 61,100    | 1600               | 24,000              | 640                | 34,300    | 920                | 61,000    | 1600               |
|                                                                 |                 |      | 250               | 17.2 | 34,400                                         | 920                | 50,400    | 1300               | 95,900    | 2600               | 40,000              | 1100               | 54,400    | 1500               | 97,000    | 2600               |
|                                                                 | 8               | 0.55 | 25                | 1.7  | 8000                                           | 210                | 13,000    | 350                | 27,300    | 730                | 7000                | 190                | 11,000    | 300                | 22,800    | 610                |
|                                                                 |                 |      | 75                | 5.2  | 16,800                                         | 450                | 27,400    | 730                | 59,200    | 1600               | 16,100              | 430                | 25,400    | 680                | 51,700    | 1400               |
|                                                                 |                 |      | 150               | 10.3 | 28,200                                         | 750                | 47,600    | 1300               | 103,000   | 2800               | 30,100              | 810                | 51,400    | 1400               | 97,100    | 2600               |
|                                                                 |                 |      | 250               | 17.2 | 47,700                                         | 1300               | 78,500    | 2100               | 174,000   | 4700               | 41,500              | 1100               | 72,400    | 1900               | 156,000   | 4200               |
| 8 to 20 psig /<br>0.55 to 1.4 bar<br><br>GE42910X012<br>Silver  | 10              | 0.69 | 25                | 1.7  | 6600                                           | 180                | 11,200    | 300                | 22,000    | 590                | 5000                | 130                | 9600      | 260                | 19,300    | 520                |
|                                                                 |                 |      | 75                | 5.2  | 17,000                                         | 450                | 25,800    | 690                | 50,800    | 1400               | 14,600              | 390                | 22,500    | 600                | 46,600    | 1200               |
|                                                                 |                 |      | 150               | 10.3 | 28,500                                         | 760                | 43,500    | 1200               | 91,000    | 2400               | 25,900              | 690                | 39,300    | 1100               | 78,100    | 2100               |
|                                                                 |                 |      | 250               | 17.2 | 44,900                                         | 1200               | 72,300    | 1900               | 151,000   | 4000               | 37,700              | 1000               | 61,000    | 1600               | 127,000   | 3400               |
|                                                                 | 15              | 1.0  | 25                | 1.7  | 7700                                           | 210                | 15,000    | 400                | 34,800    | 930                | 6400                | 170                | 12,700    | 340                | 29,400    | 790                |
|                                                                 |                 |      | 75                | 5.2  | 20,700                                         | 560                | 37,800    | 1000               | 85,400    | 2300               | 18,600              | 500                | 32,500    | 870                | 71,700    | 1900               |
|                                                                 |                 |      | 150               | 10.3 | 34,100                                         | 910                | 64,300    | 1700               | 151,000   | 4000               | 30,900              | 830                | 56,100    | 1500               | 130,000   | 3500               |
|                                                                 |                 |      | 250               | 17.2 | 57,900                                         | 1600               | 106,000   | 2900               | 240,000   | 6400               | 48,100              | 1300               | 88,700    | 2400               | 210,000   | 5600               |
|                                                                 | 20              | 1.4  | 50                | 3.4  | 13,300                                         | 360                | 28,300    | 760                | 64,000    | 1700               | 15,200              | 410                | 29,200    | 780                | 55,100    | 1500               |
|                                                                 |                 |      | 75                | 5.2  | 25,000                                         | 670                | 49,300    | 1300               | 91,000    | 2400               | 23,600              | 630                | 42,700    | 1100               | 76,100    | 2000               |
|                                                                 |                 |      | 150               | 10.3 | 44,200                                         | 1200               | 90,300    | 2400               | 168,000   | 4500               | 38,000              | 1000               | 74,000    | 2000               | 154,000   | 4100               |
|                                                                 |                 |      | 250               | 17.2 | 72,900                                         | 2000               | 145,000   | 3900               | 271,000   | 7300               | 72,800              | 2000               | 121,000   | 3200               | 250,000   | 6700               |
| 12 to 30 psig /<br>0.83 to 2.1 bar<br><br>GE42911X012<br>Orange | 15              | 1.0  | 25                | 1.7  | 6400                                           | 170                | 11,300    | 300                | 24,500    | 660                | 5300                | 140                | 9000      | 240                | 20,900    | 560                |
|                                                                 |                 |      | 75                | 5.2  | 16,700                                         | 450                | 27,000    | 720                | 58,400    | 1600               | 15,400              | 410                | 24,900    | 670                | 50,200    | 1300               |
|                                                                 |                 |      | 150               | 10.3 | 29,100                                         | 780                | 49,200    | 1300               | 105,000   | 2800               | 28,900              | 770                | 47,000    | 1300               | 97,000    | 2600               |
|                                                                 |                 |      | 250               | 17.2 | 47,800                                         | 1300               | 78,900    | 2100               | 173,000   | 4600               | 46,000              | 1200               | 75,400    | 2000               | 157,000   | 4200               |
|                                                                 | 20              | 1.4  | 25                | 1.7  | 7200                                           | 190                | 14,100    | 380                | 31,700    | 850                | 4700                | 130                | 10,100    | 270                | 26,100    | 700                |
|                                                                 |                 |      | 75                | 5.2  | 19,600                                         | 520                | 35,300    | 940                | 81,300    | 2200               | 20,000              | 530                | 34,200    | 920                | 75,400    | 2000               |
|                                                                 |                 |      | 150               | 10.3 | 34,300                                         | 920                | 61,600    | 1700               | 149,000   | 4000               | 35,100              | 940                | 61,400    | 1600               | 138,000   | 3700               |
|                                                                 |                 |      | 250               | 17.2 | 49,600                                         | 1300               | 94,200    | 2500               | 234,000   | 6300               | 48,900              | 1300               | 87,200    | 2300               | 207,000   | 5600               |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 18,400                                         | 490                | 32,000    | 860                | 63,900    | 1700               | 13,800              | 370                | 26,600    | 710                | 54,300    | 1500               |
|                                                                 |                 |      | 75                | 5.2  | 21,400                                         | 570                | 42,600    | 1100               | 90,200    | 2400               | 19,900              | 530                | 40,500    | 1100               | 77,300    | 2100               |
|                                                                 |                 |      | 150               | 10.3 | 31,500                                         | 840                | 66,900    | 1800               | 166,000   | 4400               | 38,300              | 1000               | 73,600    | 2000               | 143,000   | 3800               |
|                                                                 |                 |      | 250               | 17.2 | 71,900                                         | 1900               | 138,000   | 3700               | 267,000   | 7200               | 57,400              | 1500               | 112,000   | 3000               | 232,000   | 6200               |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 18,900                                         | 510                | 33,800    | 910                | 64,600    | 1700               | 14,600              | 390                | 32,600    | 870                | 52,900    | 1400               |
|                                                                 |                 |      | 75                | 5.2  | 29,700                                         | 800                | 56,800    | 1500               | 89,800    | 2400               | 24,500              | 660                | 50,300    | 1300               | 76,800    | 2100               |
|                                                                 |                 |      | 150               | 10.3 | 45,600                                         | 1200               | 90,500    | 2400               | 167,000   | 4500               | 44,900              | 1200               | 91,200    | 2400               | 143,000   | 3800               |
|                                                                 |                 |      | 250               | 17.2 | 72,700                                         | 1900               | 158,000   | 4200               | 269,000   | 7200               | 71,700              | 1900               | 145,000   | 3900               | 231,000   | 6200               |
| 18 to 39 psig /<br>1.2 to 2.7 bar<br><br>GE43002X012<br>Red     | 20              | 1.4  | 50                | 3.4  | 12,000                                         | 320                | 20,100    | 540                | 42,600    | 1100               | 9800                | 260                | 17,000    | 460                | 36,300    | 970                |
|                                                                 |                 |      | 75                | 5.2  | 16,900                                         | 450                | 27,600    | 740                | 60,300    | 1600               | 15,100              | 400                | 26,100    | 700                | 51,600    | 1400               |
|                                                                 |                 |      | 150               | 10.3 | 29,500                                         | 790                | 48,800    | 1300               | 107,000   | 2900               | 28,300              | 760                | 46,700    | 1300               | 96,600    | 2600               |
|                                                                 |                 |      | 250               | 17.2 | 51,100                                         | 1400               | 83,200    | 2200               | 177,000   | 4700               | 48,300              | 1300               | 78,200    | 2100               | 164,000   | 4400               |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 14,400                                         | 390                | 25,700    | 690                | 55,100    | 1500               | 12,200              | 330                | 21,400    | 570                | 48,900    | 1300               |
|                                                                 |                 |      | 75                | 5.2  | 20,000                                         | 540                | 35,400    | 950                | 79,300    | 2100               | 18,300              | 490                | 31,600    | 850                | 68,800    | 1800               |
|                                                                 |                 |      | 150               | 10.3 | 28,400                                         | 760                | 51,700    | 1400               | 125,000   | 3300               | 34,100              | 910                | 58,300    | 1600               | 132,000   | 3500               |
|                                                                 |                 |      | 250               | 17.2 | 57,100                                         | 1500               | 100,000   | 2700               | 232,000   | 6200               | 51,600              | 1400               | 93,000    | 2500               | 214,000   | 5700               |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 12,400                                         | 330                | 25,500    | 680                | 62,800    | 1700               | 12,400              | 330                | 23,900    | 640                | 54,400    | 1500               |
|                                                                 |                 |      | 75                | 5.2  | 23,100                                         | 620                | 42,300    | 1100               | 88,300    | 2400               | 19,700              | 530                | 36,500    | 980                | 79,500    | 2100               |
|                                                                 |                 |      | 150               | 10.3 | 38,200                                         | 1000               | 73,500    | 2000               | 160,000   | 4300               | 36,700              | 980                | 68,900    | 1800               | 145,000   | 3900               |
|                                                                 |                 |      | 250               | 17.2 | 62,900                                         | 1700               | 117,000   | 3100               | 265,000   | 7100               | 62,600              | 1700               | 114,000   | 3100               | 244,000   | 6500               |
|                                                                 | 35              | 2.4  | 50                | 3.4  | 18,700                                         | 500                | 32,700    | 880                | 63,000    | 1700               | 13,400              | 360                | 27,100    | 730                | 54,300    | 1500               |
|                                                                 |                 |      | 75                | 5.2  | 20,800                                         | 560                | 42,500    | 1100               | 90,300    | 2400               | 23,200              | 620                | 45,000    | 1200               | 79,900    | 2100               |
|                                                                 |                 |      | 150               | 10.3 | 38,000                                         | 1000               | 78,400    | 2100               | 167,000   | 4500               | 41,100              | 1100               | 81,000    | 2200               | 151,000   | 4000               |
|                                                                 |                 |      | 250               | 17.2 | 68,400                                         | 1800               | 139,000   | 3700               | 270,000   | 7200               | 66,000              | 1800               | 137,000   | 3700               | 244,000   | 6500               |

# Type MR105

**Table 12. Typical Air Capacities with Linear Cage - Setpoint Made at 10% Flow (for Type MR105 with High-Pressure Actuator)**

| SPRINGRANGE,<br>PART NUMBER<br>AND COLOR                          | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF AIR |                    |           |                    |           |                    |                    |                    |           |                    |           |                    |
|-------------------------------------------------------------------|-----------------|------|-------------------|------|------------------------------------------------|--------------------|-----------|--------------------|-----------|--------------------|--------------------|--------------------|-----------|--------------------|-----------|--------------------|
|                                                                   |                 |      |                   |      | NPS 1 / DN 25 Body                             |                    |           |                    |           |                    | NPS 2 / DN 50 Body |                    |           |                    |           |                    |
|                                                                   | psig            | bar  | psig              | bar  | 10% Droop                                      |                    | 20% Droop |                    | 40% Droop |                    | 10% Droop          |                    | 20% Droop |                    | 40% Droop |                    |
|                                                                   |                 |      |                   |      | SCFH                                           | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH               | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h |
| 25 to 60 psig /<br>1.7 to 4.1 bar<br><br>GE42907X012<br>Green     | 25              | 1.7  | 50                | 3.4  | 4100                                           | 110                | 5600      | 150                | 11,200    | 300                |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 75                | 5.2  | 6300                                           | 170                | 9400      | 250                | 17,700    | 470                |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 150               | 10.3 | 12,100                                         | 330                | 18,100    | 490                | 35,200    | 940                |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 250               | 17.2 | 17,900                                         | 480                | 26,900    | 720                | 68,400    | 1800               |                    |                    |           |                    |           |                    |
|                                                                   | 30              | 2.1  | 50                | 3.4  | 4200                                           | 110                | 6900      | 190                | 13,800    | 370                |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 75                | 5.2  | 8000                                           | 220                | 10,900    | 290                | 21,500    | 580                |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 150               | 10.3 | 13,000                                         | 350                | 20,500    | 550                | 45,500    | 1200               |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 250               | 17.2 | 20,500                                         | 550                | 33,500    | 900                | 91,000    | 2400               |                    |                    |           |                    |           |                    |
|                                                                   | 40              | 2.8  | 50                | 3.4  | 4000                                           | 110                | 7300      | 200                | 17,600    | 470                |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 75                | 5.2  | 8000                                           | 210                | 13,400    | 360                | 29,000    | 780                |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 150               | 10.3 | 14,000                                         | 370                | 24,200    | 650                | 59,000    | 1600               |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 250               | 17.2 | 24,500                                         | 660                | 44,000    | 1200               | 122,000   | 3300               |                    |                    |           |                    |           |                    |
|                                                                   | 50              | 3.4  | 75                | 5.2  | 7300                                           | 190                | 14,000    | 380                | 33,800    | 910                |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 150               | 10.3 | 16,700                                         | 450                | 30,900    | 830                | 76,000    | 2000               |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 250               | 17.2 | 27,600                                         | 740                | 54,200    | 1500               | 129,000   | 3500               |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 75                | 5.2  | 7200                                           | 190                | 14,400    | 390                | 38,900    | 1000               |                    |                    |           |                    |           |                    |
|                                                                   | 60              | 4.1  | 150               | 10.3 | 19,900                                         | 530                | 37,800    | 1000               | 80,400    | 2200               |                    |                    |           |                    |           |                    |
|                                                                   |                 |      | 250               | 17.2 | 31,400                                         | 840                | 64,800    | 1700               | 129,000   | 3500               |                    |                    |           |                    |           |                    |
| 25 to 45 psig /<br>1.7 to 3.1 bar<br><br>GE42907X012<br>Green     | 25              | 1.7  | 50                | 3.4  |                                                |                    |           |                    |           |                    | 6400               | 170                | 8800      | 240                | 13,600    | 370                |
|                                                                   |                 |      | 75                | 5.2  |                                                |                    |           |                    |           |                    | 8100               | 220                | 11,300    | 300                | 18,800    | 500                |
|                                                                   |                 |      | 150               | 10.3 |                                                |                    |           |                    |           |                    | 17,700             | 470                | 22,300    | 600                | 37,800    | 1000               |
|                                                                   |                 |      | 250               | 17.2 |                                                |                    |           |                    |           |                    | 26,300             | 700                | 34,700    | 930                | 59,200    | 1600               |
|                                                                   | 30              | 2.1  | 50                | 3.4  |                                                |                    |           |                    |           |                    | 5700               | 150                | 8200      | 220                | 15,300    | 410                |
|                                                                   |                 |      | 75                | 5.2  |                                                |                    |           |                    |           |                    | 9900               | 260                | 13,200    | 350                | 24,000    | 640                |
|                                                                   |                 |      | 150               | 10.3 |                                                |                    |           |                    |           |                    | 18,300             | 490                | 25,700    | 690                | 45,000    | 1200               |
|                                                                   |                 |      | 250               | 17.2 |                                                |                    |           |                    |           |                    | 27,600             | 740                | 38,800    | 1000               | 69,100    | 1900               |
|                                                                   | 40              | 2.8  | 50                | 3.4  |                                                |                    |           |                    |           |                    | 5500               | 150                | 9500      | 260                | 19,400    | 520                |
|                                                                   |                 |      | 75                | 5.2  |                                                |                    |           |                    |           |                    | 10,800             | 290                | 16,300    | 440                | 31,900    | 860                |
|                                                                   |                 |      | 150               | 10.3 |                                                |                    |           |                    |           |                    | 19,100             | 510                | 29,500    | 790                | 58,400    | 1600               |
|                                                                   |                 |      | 250               | 17.2 |                                                |                    |           |                    |           |                    | 32,100             | 860                | 48,700    | 1300               | 93,200    | 2500               |
|                                                                   | 45              | 3.1  | 75                | 5.2  |                                                |                    |           |                    |           |                    | 10,100             | 270                | 16,500    | 440                | 34,200    | 920                |
|                                                                   |                 |      | 150               | 10.3 |                                                |                    |           |                    |           |                    | 20,300             | 540                | 31,200    | 840                | 62,700    | 1700               |
|                                                                   |                 |      | 250               | 17.2 |                                                |                    |           |                    |           |                    | 35,000             | 940                | 53,600    | 1400               | 110,000   | 3000               |
| 43 to 100 psig /<br>3.0 to 6.9 bar<br><br>GE42909X012<br>White    | 50              | 3.4  | 75                | 5.2  | 6500                                           | 170                | 11,100    | 300                | 23,500    | 630                | 9000               | 240                | 13,800    | 370                | 27,600    | 740                |
|                                                                   |                 |      | 150               | 10.3 | 14,500                                         | 390                | 23,000    | 620                | 51,300    | 1400               | 18,500             | 500                | 27,600    | 740                | 51,800    | 1400               |
|                                                                   |                 |      | 250               | 17.2 | 22,400                                         | 600                | 36,600    | 980                | 97,300    | 2600               | 29,500             | 790                | 45,700    | 1200               | 86,600    | 2300               |
|                                                                   |                 |      | 75                | 5.2  | 6300                                           | 170                | 11,700    | 310                | 28,500    | 760                | 8600               | 230                | 15,000    | 400                | 32,600    | 870                |
|                                                                   | 60              | 4.1  | 150               | 10.3 | 15,200                                         | 410                | 26,800    | 720                | 61,100    | 1600               | 20,300             | 540                | 31,600    | 850                | 62,400    | 1700               |
|                                                                   |                 |      | 250               | 17.2 | 24,700                                         | 660                | 45,000    | 1200               | 120,000   | 3200               | 32,900             | 880                | 51,800    | 1400               | 104,000   | 2800               |
|                                                                   | 75              | 5.2  | 100               | 6.9  | 8600                                           | 230                | 17,700    | 470                | 45,000    | 1200               | 13,300             | 360                | 23,100    | 620                | 54,700    | 1500               |
|                                                                   |                 |      | 150               | 10.3 | 17,800                                         | 480                | 33,900    | 910                | 76,000    | 2000               | 22,600             | 610                | 39,500    | 1100               | 85,100    | 2300               |
|                                                                   |                 |      | 250               | 17.2 | 28,300                                         | 760                | 53,200    | 1400               | 129,000   | 3400               | 34,700             | 930                | 61,100    | 1600               | 132,000   | 3500               |
|                                                                   | 100             | 6.9  | 150               | 10.3 | 18,000                                         | 480                | 38,800    | 1000               | 78,200    | 2100               | 20,500             | 550                | 42,400    | 1100               | 108,000   | 2900               |
|                                                                   |                 |      | 250               | 17.2 | 31,700                                         | 850                | 67,000    | 1800               | 130,000   | 3500               | 38,600             | 1000               | 77,600    | 2100               | 187,000   | 5000               |
| 75 to 175 psig /<br>5.2 to 12.1 bar<br><br>GE42910X012<br>Silver  | 75              | 5.2  | 100               | 6.9  | 8200                                           | 220                | 14,800    | 400                | 33,300    | 890                | 11,000             | 300                | 17,000    | 450                | 35,700    | 960                |
|                                                                   |                 |      | 250               | 17.2 | 23,300                                         | 620                | 37,400    | 1000               | 87,400    | 2300               | 33,500             | 900                | 50,200    | 1300               | 90,400    | 2400               |
|                                                                   | 100             | 6.9  | 150               | 10.3 | 13,400                                         | 360                | 26,500    | 710                | 62,700    | 1700               | 17,800             | 480                | 31,500    | 840                | 71,200    | 1900               |
|                                                                   |                 |      | 250               | 17.2 | 26,600                                         | 710                | 48,700    | 1300               | 114,000   | 3100               | 36,800             | 990                | 59,700    | 1600               | 127,000   | 3400               |
|                                                                   | 125             | 8.6  | 200               | 13.8 | 22,200                                         | 590                | 44,600    | 1200               | 99,700    | 2700               | 27,400             | 730                | 54,000    | 1400               | 126,000   | 3400               |
|                                                                   |                 |      | 300               | 20.7 | 36,900                                         | 990                | 70,400    | 1900               | 154,000   | 4100               | 46,600             | 1200               | 85,800    | 2300               | 196,000   | 5200               |
|                                                                   | 150             | 10.3 | 200               | 13.8 | 23,900                                         | 640                | 51,400    | 1400               | 103,000   | 2700               | 29,600             | 790                | 59,500    | 1600               | 152,000   | 4100               |
|                                                                   |                 |      | 300               | 20.7 | 40,300                                         | 1100               | 84,500    | 2300               | 154,000   | 4100               | 51,200             | 1400               | 98,400    | 2600               | 231,000   | 6200               |
|                                                                   | 175             | 12.1 | 200               | 13.8 | 21,000                                         | 560                | 52,300    | 1400               | 99,100    | 2700               | 27,600             | 740                | 64,600    | 1700               | 150,000   | 4000               |
|                                                                   |                 |      | 300               | 20.7 | 45,600                                         | 1200               | 101,000   | 2700               | 153,000   | 4100               | 56,900             | 1500               | 115,000   | 3100               | 241,000   | 6500               |
| 110 to 300 psig /<br>7.6 to 20.7 bar<br><br>GE42911X012<br>Orange | 125             | 8.6  | 150               | 10.3 | 10,000                                         | 270                | 21,200    | 570                | 51,700    | 1400               | 14,700             | 400                | 27,400    | 730                | 64,500    | 1700               |
|                                                                   |                 |      | 250               | 17.2 | 25,500                                         | 680                | 44,600    | 1200               | 100,000   | 2700               | 33,400             | 890                | 57,500    | 1500               | 114,000   | 3100               |
|                                                                   |                 |      | 200               | 13.8 | 18,000                                         | 480                | 36,200    | 970                | 89,300    | 2400               | 24,800             | 660                | 46,100    | 1200               | 107,000   | 2900               |
|                                                                   |                 |      | 300               | 20.7 | 31,800                                         | 850                | 61,300    | 1600               | 145,000   | 3900               | 44,900             | 1200               | 76,500    | 2000               | 173,000   | 4600               |
|                                                                   | 200             | 13.8 | 250               | 17.2 | 27,300                                         | 730                | 60,200    | 1600               | 126,000   | 3400               | 35,100             | 940                | 71,300    | 1900               | 182,000   | 4900               |
|                                                                   |                 |      | 300               | 20.7 | 40,400                                         | 1100               | 83,200    | 2200               | 151,000   | 4100               | 53,600             | 1400               | 105,000   | 2800               | 230,000   | 6200               |
|                                                                   | 250             | 17.2 | 300               | 20.7 | 31,800                                         | 850                | 88,300    | 2400               | 150,000   | 4000               | 46,100             | 1200               | 103,000   | 2800               | 228,000   | 6100               |
|                                                                   |                 |      | 350               | 24.1 | 54,300                                         | 1500               | 115,000   | 3100               | 176,000   | 4700               | 72,200             | 1900               | 155,000   | 4200               | 275,000   | 7400               |
|                                                                   | 300             | 20.7 | 350               | 24.1 | 46,800                                         | 1300               | 119,000   | 3200               | 171,000   | 4600               | 60,000             | 1600               | 146,000   | 3900               | 264,000   | 7100               |
|                                                                   |                 |      |                   |      |                                                |                    |           |                    |           |                    |                    |                    |           |                    |           |                    |

□ - Spring range is not available for the body size.

- continued -

**Table 12. Typical Air Capacities with Linear Cage - Setpoint Made at 10% Flow (for Type MR105 with High-Pressure Actuator) (continued)**

| SPRINGRANGE,<br>PART NUMBER<br>AND COLOR                          | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | CAPACITIES IN SCFH / Nm <sup>3</sup> /h OF AIR |                    |           |                    |           |                    |                     |                    |           |                    |           |                    |
|-------------------------------------------------------------------|-----------------|------|-------------------|------|------------------------------------------------|--------------------|-----------|--------------------|-----------|--------------------|---------------------|--------------------|-----------|--------------------|-----------|--------------------|
|                                                                   |                 |      |                   |      | NPS 3 / DN 80 Body                             |                    |           |                    |           |                    | NPS 4 / DN 100 Body |                    |           |                    |           |                    |
|                                                                   |                 |      |                   |      | 10% Droop                                      |                    | 20% Droop |                    | 40% Droop |                    | 10% Droop           |                    | 20% Droop |                    | 40% Droop |                    |
|                                                                   | psig            | bar  | psig              | bar  | SCFH                                           | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH                | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h | SCFH      | Nm <sup>3</sup> /h |
| 39 to 72 psig /<br>2.7 to 5.0 bar<br><br>GE42909X012<br>White     | 40              | 2.8  | 75                | 5.2  | 9900                                           | 270                | 13,900    | 370                | 23,100    | 620                | 11,200              | 300                | 14,500    | 390                | 23,200    | 620                |
|                                                                   |                 |      | 150               | 10.3 | 21,600                                         | 580                | 29,400    | 790                | 47,800    | 1300               | 20,200              | 540                | 26,300    | 710                | 43,000    | 1200               |
|                                                                   |                 |      | 250               | 17.2 | 33,500                                         | 900                | 45,300    | 1200               | 73,600    | 2000               | 33,600              | 900                | 44,000    | 1200               | 69,900    | 1900               |
|                                                                   | 50              | 3.4  | 75                | 5.2  | 10,300                                         | 280                | 14,700    | 390                | 28,400    | 760                | 9600                | 260                | 13,700    | 370                | 26,000    | 700                |
|                                                                   |                 |      | 150               | 10.3 | 21,100                                         | 560                | 29,600    | 790                | 54,100    | 1500               | 22,300              | 600                | 31,300    | 840                | 53,100    | 1400               |
|                                                                   |                 |      | 250               | 17.2 | 33,700                                         | 900                | 47,700    | 1300               | 84,500    | 2300               | 35,700              | 960                | 48,400    | 1300               | 83,600    | 2200               |
|                                                                   | 60              | 4.1  | 75                | 5.2  | 9900                                           | 270                | 16,800    | 450                | 34,300    | 920                | 9600                | 260                | 15,400    | 410                | 30,900    | 830                |
|                                                                   |                 |      | 150               | 10.3 | 21,200                                         | 570                | 32,600    | 870                | 63,800    | 1700               | 22,400              | 600                | 33,600    | 900                | 60,900    | 1600               |
|                                                                   |                 |      | 250               | 17.2 | 39,400                                         | 1100               | 56,500    | 1500               | 107,000   | 2900               | 37,900              | 1000               | 53,800    | 1400               | 100,000   | 2700               |
|                                                                   | 70              | 4.8  | 100               | 6.9  | 13,900                                         | 370                | 23,500    | 630                | 51,300    | 1400               | 14,300              | 380                | 22,700    | 610                | 47,500    | 1300               |
|                                                                   |                 |      | 150               | 10.3 | 23,900                                         | 640                | 38,000    | 1000               | 75,600    | 2000               | 24,800              | 660                | 36,500    | 980                | 70,900    | 1900               |
|                                                                   |                 |      | 250               | 17.2 | 39,100                                         | 1000               | 59,800    | 1600               | 122,000   | 3300               | 40,000              | 1100               | 60,700    | 1600               | 119,000   | 3200               |
| 71 to 175 psig /<br>4.9 to 12.1 bar<br><br>GE42910X012<br>Silver  | 75              | 5.2  | 100               | 6.9  | 13,200                                         | 350                | 20,800    | 560                | 41,100    | 1100               | 12,600              | 340                | 18,900    | 510                | 36,600    | 980                |
|                                                                   |                 |      | 150               | 10.3 | 23,700                                         | 640                | 34,800    | 930                | 63,700    | 1700               | 23,000              | 620                | 31,300    | 840                | 58,400    | 1600               |
|                                                                   |                 |      | 250               | 17.2 | 37,300                                         | 1000               | 53,900    | 1400               | 95,400    | 2600               | 37,300              | 1000               | 50,900    | 1400               | 93,000    | 2500               |
|                                                                   | 100             | 6.9  | 150               | 10.3 | 17,300                                         | 460                | 31,700    | 850                | 71,200    | 1900               | 22,500              | 600                | 35,200    | 940                | 71,200    | 1900               |
|                                                                   |                 |      | 250               | 17.2 | 41,000                                         | 1100               | 64,200    | 1700               | 126,000   | 3400               | 40,000              | 1100               | 60,900    | 1600               | 116,000   | 3100               |
|                                                                   | 125             | 8.6  | 200               | 13.8 | 35,900                                         | 960                | 61,200    | 1600               | 136,000   | 3600               | 32,100              | 860                | 54,500    | 1500               | 119,000   | 3200               |
|                                                                   |                 |      | 300               | 20.7 | 54,900                                         | 1500               | 90,300    | 2400               | 192,000   | 5200               | 49,800              | 1300               | 84,700    | 2300               | 179,000   | 4800               |
|                                                                   | 150             | 10.3 | 200               | 13.8 | 34,800                                         | 930                | 65,900    | 1800               | 161,000   | 4300               | 32,200              | 860                | 61,100    | 1600               | 145,000   | 3900               |
|                                                                   |                 |      | 300               | 20.7 | 59,600                                         | 1600               | 105,000   | 2800               | 234,000   | 6300               | 61,100              | 1600               | 102,000   | 2700               | 225,000   | 6000               |
|                                                                   | 175             | 12.1 | 200               | 13.8 | 25,000                                         | 670                | 57,700    | 1500               | 175,000   | 4700               | 29,700              | 800                | 63,400    | 1700               | 165,000   | 4400               |
|                                                                   |                 |      | 300               | 20.7 | 67,400                                         | 1800               | 124,000   | 3300               | 292,000   | 7800               | 60,500              | 1600               | 113,000   | 3000               | 258,000   | 6900               |
|                                                                   |                 |      |                   |      |                                                |                    |           |                    |           |                    |                     |                    |           |                    |           |                    |
| 110 to 250 psig /<br>7.6 to 17.2 bar<br><br>GE42911X012<br>Orange | 125             | 8.6  | 150               | 10.3 | 18,300                                         | 490                | 32,500    | 870                | 73,600    | 2000               | 11,900              | 320                | 15,100    | 400                | 52,300    | 1400               |
|                                                                   |                 |      | 250               | 17.2 | 38,600                                         | 1000               | 58,400    | 1600               | 117,000   | 3100               | 31,600              | 850                | 39,700    | 1100               | 113,000   | 3000               |
|                                                                   | 150             | 10.3 | 200               | 13.8 | 30,400                                         | 820                | 52,800    | 1400               | 119,000   | 3200               | 26,600              | 710                | 43,700    | 1200               | 97,000    | 2600               |
|                                                                   |                 |      | 300               | 20.7 | 42,000                                         | 1100               | 72,100    | 1900               | 157,000   | 4200               | 50,900              | 1400               | 80,100    | 2100               | 164,000   | 4400               |
|                                                                   | 200             | 13.8 | 250               | 17.2 | 45,300                                         | 1200               | 85,000    | 2300               | 205,000   | 5500               | 36,500              | 980                | 69,200    | 1900               | 170,000   | 4600               |
|                                                                   |                 |      | 300               | 20.7 | 64,400                                         | 1700               | 112,000   | 3000               | 257,000   | 6900               | 57,800              | 1500               | 102,000   | 2700               | 227,000   | 6100               |
|                                                                   | 250             | 17.2 | 300               | 20.7 | 61,300                                         | 1600               | 121,000   | 3200               | 293,000   | 7900               | 51,200              | 1400               | 108,000   | 2900               | 264,000   | 7100               |
|                                                                   |                 |      | 350               | 24.1 | 88,900                                         | 2400               | 168,000   | 4500               | 347,000   | 9300               | 80,600              | 2200               | 155,000   | 4200               | 319,000   | 8500               |

# Type MR105

**Table 13. Typical Water Capacities with Quick Opening Cage - Setpoint Made at 10% Flow (for Type MR105 with Low-Pressure Actuator)**

| SPRING RANGE,<br>PART NUMBER<br>AND COLOR                       | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | CAPACITIES IN GPM / LPM OF WATER |     |           |     |           |     |                              |     |           |      |           |      |                    |     |           |      |           |      |
|-----------------------------------------------------------------|-----------------|------|-------------------|------|----------------------------------|-----|-----------|-----|-----------|-----|------------------------------|-----|-----------|------|-----------|------|--------------------|-----|-----------|------|-----------|------|
|                                                                 |                 |      |                   |      | NPS 1 / DN 25 Body               |     |           |     |           |     | NPS 2 / DN 50 - Reduced Port |     |           |      |           |      | NPS 2 / DN 50 Body |     |           |      |           |      |
|                                                                 |                 |      |                   |      | 10% Droop                        |     | 20% Droop |     | 40% Droop |     | 10% Droop                    |     | 20% Droop |      | 40% Droop |      | 10% Droop          |     | 20% Droop |      | 40% Droop |      |
|                                                                 | psig            | bar  | psig              | bar  | GPM                              | LPM | GPM       | LPM | GPM       | LPM | GPM                          | LPM | GPM       | LPM  | GPM       | LPM  | GPM                | LPM | GPM       | LPM  | GPM       | LPM  |
| 5 to 12 psig /<br>0.34 to 0.83 bar<br><br>GE42909X012<br>White  | 5               | 0.34 | 25                | 1.7  | 24                               | 91  | 44        | 170 | 72        | 270 | 37                           | 140 | 58        | 220  | 100       | 380  | 54                 | 200 | 92        | 350  | 160       | 610  |
|                                                                 |                 |      | 75                | 5.2  | 42                               | 160 | 79        | 300 | 130       | 500 | 74                           | 280 | 110       | 410  | 160       | 620  | 92                 | 350 | 160       | 610  | 250       | 950  |
|                                                                 |                 |      | 150               | 10.3 | 52                               | 200 | 110       | 400 | 180       | 690 | 99                           | 370 | 140       | 510  | 190       | 720  | 130                | 500 | 210       | 780  | 350       | 1310 |
|                                                                 | 10              | 0.69 | 25                | 1.7  | 35                               | 130 | 61        | 230 | 84        | 320 | 50                           | 190 | 83        | 310  | 160       | 600  | 73                 | 280 | 130       | 510  | 220       | 840  |
|                                                                 |                 |      | 75                | 5.2  | 74                               | 280 | 130       | 490 | 160       | 590 | 99                           | 370 | 150       | 570  | 260       | 990  | 150                | 550 | 230       | 870  | 390       | 1460 |
|                                                                 |                 |      | 150               | 10.3 | 110                              | 410 | 180       | 680 | 210       | 790 | 140                          | 520 | 180       | 690  | 320       | 1210 | 200                | 740 | 290       | 1080 | 470       | 1790 |
| 10 to 24 psig /<br>0.69 to 1.6 bar<br><br>GE42910X012<br>Silver | 10              | 0.69 | 25                | 1.7  | 29                               | 110 | 52        | 200 | 80        | 300 | 40                           | 150 | 67        | 250  | 120       | 460  | 61                 | 230 | 110       | 400  | 180       | 700  |
|                                                                 |                 |      | 75                | 5.2  | 53                               | 200 | 100       | 390 | 150       | 560 | 84                           | 320 | 130       | 480  | 210       | 790  | 120                | 450 | 190       | 710  | 310       | 1150 |
|                                                                 |                 |      | 150               | 10.3 | 77                               | 290 | 160       | 590 | 200       | 770 | 110                          | 420 | 160       | 600  | 260       | 980  | 170                | 640 | 260       | 970  | 390       | 1470 |
|                                                                 | 15              | 1.0  | 25                | 1.7  | 37                               | 140 | 65        | 250 | 89        | 340 | 46                           | 170 | 86        | 330  | 160       | 590  | 71                 | 270 | 130       | 500  | 210       | 790  |
|                                                                 |                 |      | 75                | 5.2  | 65                               | 250 | 110       | 430 | 150       | 550 | 110                          | 420 | 190       | 710  | 300       | 1150 | 140                | 540 | 240       | 900  | 380       | 1430 |
|                                                                 |                 |      | 150               | 10.3 | 96                               | 360 | 180       | 670 | 210       | 780 | 140                          | 530 | 210       | 800  | 360       | 1360 | 200                | 760 | 320       | 1230 | 580       | 2200 |
|                                                                 | 20              | 1.4  | 50                | 3.4  | 56                               | 210 | 95        | 360 | 110       | 430 | 84                           | 320 | 150       | 580  | 260       | 1000 | 130                | 500 | 230       | 850  | 350       | 1310 |
|                                                                 |                 |      | 75                | 5.2  | 81                               | 310 | 130       | 500 | 150       | 560 | 120                          | 450 | 200       | 750  | 330       | 1260 | 170                | 640 | 290       | 1090 | 430       | 1630 |
|                                                                 |                 |      | 150               | 10.3 | 130                              | 500 | 200       | 740 | 210       | 790 | 160                          | 590 | 270       | 1000 | 450       | 1700 | 220                | 850 | 390       | 1480 | 700       | 2660 |
| 14 to 32 psig /<br>0.96 to 2.2 bar<br><br>GE42911X012<br>Orange | 15              | 1.0  | 25                | 1.7  | 24                               | 91  | 46        | 170 | 74        | 280 | 36                           | 140 | 61        | 230  | 120       | 450  | 53                 | 200 | 100       | 380  | 180       | 690  |
|                                                                 |                 |      | 75                | 5.2  | 60                               | 230 | 110       | 400 | 150       | 560 | 88                           | 330 | 140       | 510  | 240       | 890  | 120                | 470 | 200       | 770  | 340       | 1290 |
|                                                                 |                 |      | 150               | 10.3 | 82                               | 310 | 150       | 580 | 200       | 770 | 120                          | 470 | 180       | 670  | 300       | 1120 | 170                | 650 | 280       | 1070 | 490       | 1860 |
|                                                                 | 20              | 1.4  | 25                | 1.7  | 24                               | 91  | 45        | 170 | 64        | 240 | 37                           | 140 | 73        | 280  | 140       | 520  | 53                 | 200 | 110       | 420  | 190       | 710  |
|                                                                 |                 |      | 75                | 5.2  | 75                               | 280 | 120       | 440 | 140       | 530 | 110                          | 410 | 180       | 700  | 300       | 1130 | 150                | 570 | 270       | 1030 | 410       | 1560 |
|                                                                 |                 |      | 150               | 10.3 | 110                              | 410 | 180       | 670 | 210       | 790 | 140                          | 530 | 220       | 820  | 380       | 1430 | 220                | 840 | 400       | 1500 | 610       | 2310 |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 50                               | 190 | 83        | 310 | 110       | 400 | 87                           | 330 | 160       | 590  | 240       | 920  | 130                | 480 | 220       | 840  | 320       | 1200 |
|                                                                 |                 |      | 75                | 5.2  | 90                               | 340 | 120       | 450 | 140       | 530 | 120                          | 450 | 210       | 800  | 320       | 1200 | 160                | 610 | 270       | 1040 | 420       | 1570 |
|                                                                 |                 |      | 150               | 10.3 | 110                              | 420 | 190       | 700 | 210       | 790 | 160                          | 600 | 260       | 980  | 450       | 1700 | 230                | 870 | 410       | 1530 | 620       | 2350 |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 56                               | 210 | 90        | 340 | 110       | 410 | 80                           | 300 | 150       | 560  | 240       | 920  | 120                | 450 | 210       | 810  | 330       | 1260 |
|                                                                 |                 |      | 75                | 5.2  | 82                               | 310 | 130       | 480 | 140       | 530 | 120                          | 460 | 210       | 800  | 330       | 1230 | 160                | 620 | 290       | 1110 | 440       | 1650 |
|                                                                 |                 |      | 150               | 10.3 | 130                              | 500 | 200       | 750 | 210       | 790 | 170                          | 650 | 290       | 1110 | 480       | 1830 | 240                | 920 | 410       | 1540 | 700       | 2660 |
| 18 to 43 psig /<br>1.2 to 3.0 bar<br><br>GE43002X012<br>Red     | 20              | 1.4  | 50                | 3.4  | 39                               | 150 | 73        | 280 | 110       | 420 | 61                           | 230 | 100       | 390  | 180       | 700  | 90                 | 340 | 150       | 570  | 270       | 1010 |
|                                                                 |                 |      | 75                | 5.2  | 57                               | 220 | 100       | 380 | 140       | 540 | 85                           | 320 | 130       | 500  | 240       | 890  | 120                | 450 | 200       | 750  | 330       | 1260 |
|                                                                 |                 |      | 150               | 10.3 | 79                               | 300 | 150       | 560 | 200       | 760 | 130                          | 480 | 190       | 710  | 310       | 1160 | 180                | 680 | 290       | 1100 | 470       | 1770 |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 46                               | 170 | 77        | 290 | 110       | 400 | 67                           | 250 | 120       | 460  | 220       | 830  | 100                | 380 | 190       | 700  | 300       | 1130 |
|                                                                 |                 |      | 75                | 5.2  | 60                               | 230 | 110       | 410 | 150       | 580 | 98                           | 370 | 160       | 600  | 280       | 1050 | 140                | 520 | 230       | 880  | 390       | 1470 |
|                                                                 |                 |      | 150               | 10.3 | 100                              | 380 | 170       | 650 | 210       | 790 | 140                          | 510 | 200       | 750  | 340       | 1290 | 210                | 780 | 330       | 1250 | 550       | 2060 |
|                                                                 | 30              | 2.1  | 50                | 3.4  | 47                               | 180 | 76        | 290 | 100       | 380 | 69                           | 260 | 130       | 490  | 230       | 850  | 110                | 410 | 200       | 760  | 300       | 1150 |
|                                                                 |                 |      | 75                | 5.2  | 66                               | 250 | 110       | 420 | 150       | 580 | 100                          | 390 | 170       | 650  | 290       | 1100 | 140                | 540 | 240       | 920  | 380       | 1450 |
|                                                                 |                 |      | 150               | 10.3 | 120                              | 440 | 180       | 690 | 210       | 790 | 140                          | 540 | 230       | 850  | 400       | 1510 | 220                | 810 | 380       | 1450 | 580       | 2200 |
|                                                                 | 35              | 2.4  | 50                | 3.4  | 44                               | 170 | 74        | 280 | 95        | 360 | 73                           | 280 | 130       | 500  | 230       | 850  | 110                | 410 | 200       | 770  | 290       | 1100 |
|                                                                 |                 |      | 75                | 5.2  | 68                               | 260 | 110       | 420 | 140       | 550 | 110                          | 420 | 190       | 710  | 300       | 1140 | 160                | 590 | 270       | 1020 | 400       | 1500 |
|                                                                 |                 |      | 150               | 10.3 | 130                              | 470 | 190       | 710 | 210       | 790 | 150                          | 580 | 260       | 970  | 450       | 1690 | 240                | 900 | 400       | 1500 | 610       | 2300 |
|                                                                 | 40              | 2.8  | 50                | 3.4  | 40                               | 150 | 71        | 270 | 96        | 360 | 65                           | 250 | 130       | 490  | 220       | 830  | 94                 | 360 | 170       | 660  | 290       | 1110 |
|                                                                 |                 |      | 75                | 5.2  | 70                               | 260 | 110       | 430 | 140       | 510 | 120                          | 450 | 200       | 750  | 310       | 1160 | 160                | 600 | 280       | 1040 | 420       | 1570 |
|                                                                 |                 |      | 150               | 10.3 | 130                              | 490 | 190       | 720 | 210       | 780 | 170                          | 630 | 290       | 1090 | 480       | 1810 | 260                | 980 | 430       | 1610 | 630       | 2370 |

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**Table 13. Typical Water Capacities with Quick Opening Cage - Setpoint Made at 10% Flow (for Type MR105 with Low-Pressure Actuator) (continued)**

| SPRINGRANGE,<br>PART NUMBER<br>AND COLOR                        | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | CAPACITIES IN GPM / LPM OF WATER |      |           |      |           |      |                     |      |           |      |           |      |
|-----------------------------------------------------------------|-----------------|------|-------------------|------|----------------------------------|------|-----------|------|-----------|------|---------------------|------|-----------|------|-----------|------|
|                                                                 |                 |      |                   |      | NPS 3 / DN 80 Body               |      |           |      |           |      | NPS 4 / DN 100 Body |      |           |      |           |      |
|                                                                 |                 |      |                   |      | 10% Droop                        |      | 20% Droop |      | 40% Droop |      | 10% Droop           |      | 20% Droop |      | 40% Droop |      |
|                                                                 | psig            | bar  | psig              | bar  | GPM                              | LPM  | GPM       | LPM  | GPM       | LPM  | GPM                 | LPM  | GPM       | LPM  | GPM       | LPM  |
| 5 to 8 psig /<br>0.34 to 0.55 bar<br><br>GE42909X012<br>White   | 5               | 0.34 | 25                | 1.7  | 87                               | 330  | 130       | 480  | 220       | 830  | 110                 | 420  | 170       | 640  | 290       | 1100 |
|                                                                 |                 |      | 75                | 5.2  | 140                              | 540  | 200       | 770  | 320       | 1190 | 190                 | 720  | 270       | 1030 | 440       | 1650 |
|                                                                 |                 |      | 150               | 10.3 | 190                              | 730  | 240       | 900  | 390       | 1480 | 260                 | 1000 | 360       | 1350 | 510       | 1920 |
|                                                                 | 8               | 0.55 | 25                | 1.7  | 99                               | 370  | 170       | 640  | 300       | 1140 | 120                 | 460  | 230       | 880  | 410       | 1550 |
|                                                                 |                 |      | 75                | 5.2  | 180                              | 670  | 260       | 1000 | 450       | 1680 | 240                 | 900  | 360       | 1380 | 610       | 2310 |
|                                                                 |                 |      | 150               | 10.3 | 220                              | 840  | 300       | 1150 | 520       | 1980 | 300                 | 1120 | 460       | 1720 | 720       | 2740 |
| 8 to 20 psig /<br>0.55 to 1.4 bar<br><br>GE42910X012<br>Silver  | 10              | 0.69 | 25                | 1.7  | 90                               | 340  | 150       | 560  | 270       | 1010 | 120                 | 450  | 190       | 730  | 350       | 1320 |
|                                                                 |                 |      | 75                | 5.2  | 170                              | 640  | 250       | 950  | 450       | 1680 | 230                 | 880  | 350       | 1320 | 590       | 2220 |
|                                                                 |                 |      | 150               | 10.3 | 230                              | 860  | 330       | 1230 | 540       | 2040 | 300                 | 1150 | 440       | 1660 | 730       | 2750 |
|                                                                 | 15              | 1.0  | 25                | 1.7  | 100                              | 380  | 180       | 690  | 340       | 1300 | 130                 | 470  | 230       | 890  | 460       | 1740 |
|                                                                 |                 |      | 75                | 5.2  | 220                              | 820  | 350       | 1320 | 590       | 2220 | 260                 | 1000 | 470       | 1790 | 830       | 3150 |
|                                                                 |                 |      | 150               | 10.3 | 260                              | 980  | 420       | 1570 | 740       | 2790 | 380                 | 1440 | 580       | 2210 | 1000      | 3770 |
|                                                                 | 20              | 1.4  | 50                | 3.4  | 190                              | 700  | 340       | 1280 | 590       | 2210 | 230                 | 870  | 440       | 1680 | 780       | 2960 |
|                                                                 |                 |      | 75                | 5.2  | 230                              | 870  | 420       | 1600 | 710       | 2680 | 300                 | 1150 | 560       | 2100 | 970       | 3660 |
|                                                                 |                 |      | 150               | 10.3 | 320                              | 1190 | 520       | 1950 | 920       | 3470 | 420                 | 1580 | 680       | 2590 | 1250      | 4740 |
| 12 to 30 psig /<br>0.83 to 2.1 bar<br><br>GE42911X012<br>Orange | 15              | 1.0  | 25                | 1.7  | 86                               | 330  | 150       | 560  | 280       | 1070 | 100                 | 390  | 180       | 700  | 360       | 1370 |
|                                                                 |                 |      | 75                | 5.2  | 190                              | 700  | 290       | 1090 | 500       | 1900 | 220                 | 840  | 370       | 1390 | 640       | 2410 |
|                                                                 |                 |      | 150               | 10.3 | 240                              | 910  | 370       | 1390 | 630       | 2400 | 320                 | 1210 | 510       | 1920 | 830       | 3140 |
|                                                                 | 20              | 1.4  | 25                | 1.7  | 81                               | 310  | 160       | 600  | 320       | 1220 | 100                 | 390  | 200       | 760  | 420       | 1570 |
|                                                                 |                 |      | 75                | 5.2  | 210                              | 800  | 360       | 1360 | 630       | 2370 | 260                 | 990  | 440       | 1650 | 810       | 3070 |
|                                                                 |                 |      | 150               | 10.3 | 270                              | 1000 | 440       | 1650 | 780       | 2960 | 390                 | 1460 | 610       | 2310 | 1020      | 3850 |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 170                              | 650  | 310       | 1160 | 560       | 2110 | 230                 | 850  | 400       | 1510 | 750       | 2840 |
|                                                                 |                 |      | 75                | 5.2  | 240                              | 890  | 420       | 1570 | 720       | 2730 | 290                 | 1090 | 510       | 1930 | 920       | 3490 |
|                                                                 |                 |      | 150               | 10.3 | 320                              | 1220 | 540       | 2040 | 920       | 3460 | 430                 | 1620 | 710       | 2680 | 1220      | 4630 |
|                                                                 | 30              | 2.1  | 250               | 17.2 | 380                              | 1450 | 610       | 2320 | 1050      | 3960 | 500                 | 1880 | 790       | 2970 | 1380      | 5210 |
|                                                                 |                 |      | 50                | 3.4  | 180                              | 690  | 340       | 1280 | 580       | 2200 | 230                 | 860  | 430       | 1640 | 720       | 2730 |
|                                                                 |                 |      | 75                | 5.2  | 270                              | 1010 | 460       | 1750 | 750       | 2840 | 320                 | 1220 | 580       | 2180 | 960       | 3630 |
|                                                                 |                 |      | 150               | 10.3 | 360                              | 1360 | 620       | 2340 | 1020      | 3850 | 480                 | 1810 | 810       | 3070 | 1330      | 5050 |
|                                                                 | 35              | 2.4  | 250               | 17.2 | 420                              | 1580 | 680       | 2590 | 1100      | 4170 | 560                 | 2130 | 930       | 3520 | 1590      | 6000 |
| 18 to 39 psig /<br>1.2 to 2.7 bar<br><br>GE43002X012<br>Red     | 20              | 1.4  | 50                | 3.4  | 140                              | 530  | 230       | 860  | 410       | 1540 | 170                 | 650  | 280       | 1040 | 520       | 1970 |
|                                                                 |                 |      | 75                | 5.2  | 180                              | 690  | 290       | 1090 | 510       | 1950 | 220                 | 850  | 370       | 1380 | 650       | 2460 |
|                                                                 |                 |      | 150               | 10.3 | 240                              | 920  | 380       | 1440 | 650       | 2480 | 320                 | 1200 | 490       | 1850 | 860       | 3240 |
|                                                                 | 25              | 1.7  | 50                | 3.4  | 150                              | 560  | 260       | 970  | 490       | 1850 | 190                 | 720  | 310       | 1180 | 590       | 2230 |
|                                                                 |                 |      | 75                | 5.2  | 210                              | 810  | 340       | 1290 | 610       | 2290 | 240                 | 900  | 420       | 1590 | 760       | 2870 |
|                                                                 |                 |      | 150               | 10.3 | 270                              | 1010 | 450       | 1690 | 780       | 2960 | 360                 | 1370 | 590       | 2220 | 1010      | 3800 |
|                                                                 | 30              | 2.1  | 250               | 17.2 | 340                              | 1280 | 520       | 1980 | 870       | 3300 | 440                 | 1670 | 690       | 2610 | 1170      | 4440 |
|                                                                 |                 |      | 50                | 3.4  | 150                              | 580  | 270       | 1030 | 520       | 1960 | 190                 | 700  | 340       | 1280 | 660       | 2510 |
|                                                                 |                 |      | 75                | 5.2  | 230                              | 850  | 390       | 1460 | 680       | 2570 | 260                 | 980  | 460       | 1760 | 860       | 3240 |
|                                                                 |                 |      | 150               | 10.3 | 310                              | 1150 | 530       | 2000 | 910       | 3430 | 390                 | 1480 | 670       | 2530 | 1150      | 4350 |
|                                                                 | 35              | 2.4  | 250               | 17.2 | 360                              | 1370 | 590       | 2230 | 1030      | 3910 | 480                 | 1810 | 770       | 2930 | 1360      | 5140 |
|                                                                 |                 |      | 50                | 3.4  | 160                              | 590  | 290       | 1090 | 550       | 2090 | 180                 | 700  | 360       | 1370 | 690       | 2620 |
|                                                                 |                 |      | 75                | 5.2  | 240                              | 920  | 430       | 1620 | 730       | 2750 | 270                 | 1030 | 500       | 1880 | 920       | 3470 |
|                                                                 |                 |      | 150               | 10.3 | 340                              | 1280 | 590       | 2210 | 1000      | 3770 | 420                 | 1590 | 740       | 2810 | 1280      | 4860 |
|                                                                 | 40              | 2.7  | 250               | 17.2 | 410                              | 1540 | 670       | 2550 | 1150      | 4340 | 550                 | 2070 | 900       | 3390 | 1540      | 5840 |

# Type MR105

**Table 14. Typical Water Capacities with Quick Opening Cage - Setpoint Made at 10% Flow (for Type MR105 with High-Pressure Actuator)**

| SPRING RANGE, PART NUMBER AND COLOR                            | SET PRESSURE |      | INLET PRESSURE |      | CAPACITIES IN GPM / LPM OF WATER |     |           |     |           |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|----------------------------------------------------------------|--------------|------|----------------|------|----------------------------------|-----|-----------|-----|-----------|-----|------------------------------|-----|-----------|------|-----------|------|--------------------|------|-----------|------|-----------|------|-----|-----|--|--|--|--|
|                                                                |              |      |                |      | NPS 1 / DN 25 Body               |     |           |     |           |     | NPS 2 / DN 50 - Reduced Port |     |           |      |           |      | NPS 2 / DN 50 Body |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      |                |      | 10% Droop                        |     | 20% Droop |     | 40% Droop |     | 10% Droop                    |     | 20% Droop |      | 40% Droop |      | 10% Droop          |      | 20% Droop |      | 40% Droop |      |     |     |  |  |  |  |
|                                                                | psig         | bar  | psig           | bar  | GPM                              | LPM | GPM       | LPM | GPM       | LPM | GPM                          | LPM | GPM       | LPM  | GPM       | LPM  | GPM                | LPM  | GPM       | LPM  | GPM       | LPM  |     |     |  |  |  |  |
| 25 to 60 psig / 1.7 to 4.1 bar<br><br>GE42907X012<br>Green     | 25           | 1.7  | 50             | 3.4  | 23                               | 87  | 41        | 160 | 76        | 290 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 75             | 5.2  | 35                               | 130 | 61        | 230 | 110       | 410 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 | 55                               | 210 | 120       | 450 | 190       | 700 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 60                               | 230 | 250       | 930 | 260       | 970 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                | 30           | 2.1  | 50             | 3.4  | 23                               | 87  | 43        | 160 | 79        | 300 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 75             | 5.2  | 37                               | 140 | 67        | 250 | 110       | 420 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 | 62                               | 230 | 140       | 530 | 190       | 710 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 78                               | 300 | 240       | 920 | 250       | 950 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                | 40           | 2.8  | 50             | 3.4  | 22                               | 83  | 44        | 170 | 79        | 300 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 75             | 5.2  | 44                               | 170 | 77        | 290 | 120       | 440 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 | 82                               | 310 | 160       | 610 | 190       | 720 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 140                              | 520 | 240       | 890 | 240       | 920 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                | 50           | 3.4  | 75             | 5.2  | 40                               | 150 | 75        | 280 | 110       | 420 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 | 94                               | 360 | 160       | 610 | 190       | 700 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 230                              | 860 | 240       | 910 | 250       | 950 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      | 75             | 5.2  | 37                               | 140 | 70        | 260 | 110       | 410 |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
| 60                                                             | 4.1          | 150  | 10.3           | 110  | 400                              | 160 | 610       | 190 | 700       |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              | 250  | 17.2           | 220  | 840                              | 240 | 890       | 250 | 930       |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      |                |      |                                  |     |           |     |           |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
| 25 to 45 psig / 1.7 to 3.1 bar<br><br>GE42907X012<br>Green     | 25           | 1.7  | 50             | 3.4  |                                  |     |           |     |           |     | 38                           | 140 | 57        | 220  | 96        | 360  | 51                 | 190  | 76        | 290  | 140       | 540  |     |     |  |  |  |  |
|                                                                |              |      | 75             | 5.2  |                                  |     |           |     |           |     | 59                           | 220 | 83        | 310  | 130       | 490  | 81                 | 310  | 120       | 440  | 160       | 610  | 250 | 960 |  |  |  |  |
|                                                                |              |      | 150            | 10.3 |                                  |     |           |     |           |     | 83                           | 310 | 120       | 440  | 180       | 670  | 120                | 440  | 160       | 610  | 250       | 960  |     |     |  |  |  |  |
|                                                                | 30           | 2.1  | 50             | 3.4  |                                  |     |           |     |           |     | 35                           | 130 | 57        | 220  | 110       | 400  | 49                 | 190  | 81        | 310  | 150       | 580  |     |     |  |  |  |  |
|                                                                |              |      | 75             | 5.2  |                                  |     |           |     |           |     | 60                           | 230 | 88        | 330  | 150       | 560  | 85                 | 320  | 130       | 480  | 210       | 790  |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 |                                  |     |           |     |           |     | 83                           | 310 | 120       | 470  | 210       | 780  | 120                | 460  | 180       | 690  | 300       | 1130 |     |     |  |  |  |  |
|                                                                | 40           | 2.8  | 50             | 3.4  |                                  |     |           |     |           |     | 33                           | 120 | 59        | 220  | 120       | 460  | 50                 | 190  | 92        | 350  | 180       | 700  |     |     |  |  |  |  |
|                                                                |              |      | 75             | 5.2  |                                  |     |           |     |           |     | 68                           | 260 | 100       | 390  | 180       | 690  | 96                 | 360  | 150       | 570  | 270       | 1010 |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 |                                  |     |           |     |           |     | 93                           | 350 | 150       | 550  | 250       | 960  | 150                | 560  | 220       | 840  | 390       | 1470 |     |     |  |  |  |  |
|                                                                | 45           | 3.1  | 75             | 5.2  |                                  |     |           |     |           |     | 51                           | 190 | 89        | 340  | 180       | 660  | 77                 | 290  | 130       | 510  | 260       | 990  |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 |                                  |     |           |     |           |     | 97                           | 370 | 150       | 570  | 280       | 1070 | 130                | 500  | 230       | 880  | 410       | 1560 |     |     |  |  |  |  |
|                                                                |              |      |                |      |                                  |     |           |     |           |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
| 43 to 100 psig / 3.0 to 6.9 bar<br><br>GE42909X012<br>White    | 50           | 3.4  | 75             | 5.2  | 33                               | 120 | 61        | 230 | 110       | 400 | 46                           | 170 | 78        | 300  | 150       | 580  | 65                 | 250  | 120       | 440  | 230       | 860  |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 | 69                               | 260 | 130       | 480 | 180       | 680 | 90                           | 340 | 140       | 530  | 250       | 940  | 130                | 510  | 220       | 820  | 390       | 1480 |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 120                              | 440 | 230       | 860 | 250       | 940 | 120                          | 460 | 180       | 680  | 300       | 1150 | 170                | 650  | 260       | 1000 | 490       | 1840 |     |     |  |  |  |  |
|                                                                | 60           | 4.1  | 75             | 5.2  | 31                               | 120 | 59        | 220 | 100       | 380 | 44                           | 170 | 78        | 300  | 160       | 620  | 62                 | 230  | 120       | 440  | 240       | 910  |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 | 76                               | 290 | 140       | 520 | 180       | 670 | 96                           | 360 | 150       | 570  | 280       | 1060 | 150                | 570  | 250       | 930  | 460       | 1730 |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 120                              | 440 | 230       | 860 | 240       | 920 | 130                          | 470 | 200       | 740  | 340       | 1290 | 200                | 740  | 320       | 1230 | 600       | 2260 |     |     |  |  |  |  |
|                                                                | 75           | 5.2  | 100            | 6.9  | 45                               | 170 | 83        | 310 | 120       | 470 | 56                           | 210 | 110       | 400  | 220       | 850  | 87                 | 330  | 170       | 630  | 330       | 1260 |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 170                              | 640 | 230       | 860 | 240       | 910 | 140                          | 520 | 220       | 830  | 400       | 1530 | 210                | 790  | 360       | 1370 | 670       | 2550 |     |     |  |  |  |  |
|                                                                |              |      | 150            | 10.3 | 78                               | 300 | 130       | 490 | 160       | 600 | 92                           | 350 | 170       | 650  | 350       | 1310 | 130                | 500  | 270       | 1020 | 490       | 1850 |     |     |  |  |  |  |
|                                                                | 100          | 6.9  | 250            | 17.2 | 160                              | 620 | 210       | 810 | 230       | 890 | 170                          | 620 | 270       | 1010 | 510       | 1910 | 240                | 920  | 460       | 1720 | 690       | 2590 |     |     |  |  |  |  |
|                                                                |              |      |                |      |                                  |     |           |     |           |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      |                |      |                                  |     |           |     |           |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
| 75 to 175 psig / 5.2 to 12.1 bar<br><br>GE42910X012<br>Silver  | 75           | 5.2  | 100            | 6.9  | 33                               | 120 | 64        | 240 | 110       | 430 | 46                           | 170 | 81        | 310  | 170       | 640  | 68                 | 260  | 130       | 470  | 260       | 970  |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 84                               | 320 | 170       | 640 | 240       | 890 | 120                          | 470 | 190       | 720  | 330       | 1230 | 170                | 640  | 270       | 1020 | 520       | 1950 |     |     |  |  |  |  |
|                                                                | 100          | 6.9  | 150            | 10.3 | 56                               | 210 | 110       | 400 | 160       | 600 | 72                           | 270 | 130       | 490  | 270       | 1020 | 110                | 430  | 210       | 780  | 410       | 1540 |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 110                              | 410 | 190       | 720 | 230       | 880 | 140                          | 530 | 220       | 840  | 400       | 1510 | 200                | 750  | 320       | 1210 | 620       | 2340 |     |     |  |  |  |  |
|                                                                | 125          | 8.6  | 200            | 13.8 | 81                               | 310 | 150       | 550 | 190       | 710 | 100                          | 390 | 190       | 710  | 370       | 1390 | 160                | 590  | 290       | 1080 | 550       | 2090 |     |     |  |  |  |  |
|                                                                |              |      | 300            | 20.7 | 150                              | 560 | 230       | 860 | 250       | 950 | 170                          | 630 | 270       | 1030 | 500       | 1910 | 230                | 870  | 440       | 1650 | 700       | 2630 |     |     |  |  |  |  |
|                                                                | 150          | 10.3 | 200            | 13.8 | 80                               | 300 | 140       | 510 | 180       | 680 | 100                          | 390 | 190       | 730  | 400       | 1510 | 150                | 580  | 290       | 1110 | 550       | 2070 |     |     |  |  |  |  |
|                                                                |              |      | 300            | 20.7 | 150                              | 580 | 220       | 830 | 240       | 920 | 190                          | 700 | 300       | 1140 | 580       | 2180 | 280                | 1060 | 500       | 1890 | 700       | 2630 |     |     |  |  |  |  |
|                                                                | 175          | 12.1 | 200            | 13.8 | 69                               | 260 | 120       | 470 | 170       | 620 | 94                           | 360 | 200       | 740  | 420       | 1590 | 140                | 520  | 280       | 1070 | 540       | 2050 |     |     |  |  |  |  |
|                                                                |              |      | 300            | 20.7 | 150                              | 560 | 210       | 780 | 240       | 890 | 190                          | 710 | 320       | 1210 | 600       | 2280 | 290                | 1110 | 520       | 1970 | 700       | 2630 |     |     |  |  |  |  |
|                                                                |              |      |                |      |                                  |     |           |     |           |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
|                                                                |              |      |                |      |                                  |     |           |     |           |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
| 110 to 300 psig / 7.6 to 20.7 bar<br><br>GE42911X012<br>Orange | 125          | 8.6  | 150            | 10.3 | 40                               | 150 | 81        | 310 | 140       | 540 | 58                           | 220 | 110       | 410  | 240       | 890  | 83                 | 310  | 160       | 620  | 360       | 1360 |     |     |  |  |  |  |
|                                                                |              |      | 250            | 17.2 | 90                               | 340 | 160       | 600 | 220       | 830 | 130                          | 490 | 200       | 770  | 370       | 1390 | 190                | 720  | 320       | 1200 | 580       | 2180 |     |     |  |  |  |  |
|                                                                | 150          | 10.3 | 200            | 13.8 | 60                               | 230 | 110       | 430 | 170       | 650 | 83                           | 310 | 160       | 590  | 330       | 1250 | 120                | 460  | 240       | 920  | 490       | 1850 |     |     |  |  |  |  |
|                                                                |              |      | 300            | 20.7 | 120                              | 470 | 200       | 760 | 240       | 920 | 160                          | 590 | 250       | 940  | 470       | 1760 | 230                | 860  | 410       | 1530 | 690       | 2600 |     |     |  |  |  |  |
|                                                                | 200          | 13.8 | 250            | 17.2 | 79                               | 300 | 140       | 540 | 190       | 720 | 110                          | 400 | 210       | 780  | 430       | 1640 | 160                | 600  | 320       | 1200 | 600       | 2270 |     |     |  |  |  |  |
|                                                                |              |      | 300            | 20.7 | 130                              | 480 | 190       | 710 | 230       | 860 | 170                          | 650 | 290       | 1100 | 550       | 2070 | 260                | 980  | 460       | 1730 | 690       | 2620 |     |     |  |  |  |  |
|                                                                | 250          | 17.2 | 300            | 20.7 | 97                               | 370 | 160       | 600 | 210       | 780 | 120                          | 470 | 250       | 950  | 530       | 1990 | 200                | 750  | 400       | 1510 | 650       | 2480 |     |     |  |  |  |  |
|                                                                |              |      | 350            | 24.1 | 160                              | 600 | 200       | 770 | 220       | 830 | 210                          | 780 | 360       | 1350 | 580       | 2200 | 320                | 1200 | 530       | 2020 | 630       | 2380 |     |     |  |  |  |  |
|                                                                |              |      | 350            | 24.1 | 120                              | 440 | 170       | 660 | 190       | 730 | 150                          | 570 | 310       | 1170 | 540       | 2040 | 230                | 860  | 480       | 1830 | 630       | 2390 |     |     |  |  |  |  |
|                                                                |              |      |                |      |                                  |     |           |     |           |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |
| ☐ - Spring range is not available for the body size.           |              |      |                |      |                                  |     |           |     |           |     |                              |     |           |      |           |      |                    |      |           |      |           |      |     |     |  |  |  |  |

**Table 14.** Typical Water Capacities with Quick Opening Cage - Setpoint Made at 10% Flow (for Type MR105 with High-Pressure Actuator) (continued)

| SPRING RANGE,<br>PART NUMBER<br>AND COLOR                         | SET<br>PRESSURE |      | INLET<br>PRESSURE |      | CAPACITIES IN GPM / LPM OF WATER |      |              |      |              |      |                     |      |              |      |              |      |
|-------------------------------------------------------------------|-----------------|------|-------------------|------|----------------------------------|------|--------------|------|--------------|------|---------------------|------|--------------|------|--------------|------|
|                                                                   |                 |      |                   |      | NPS 3 / DN 80 Body               |      |              |      |              |      | NPS 4 / DN 100 Body |      |              |      |              |      |
|                                                                   |                 |      |                   |      | 10%<br>Droop                     |      | 20%<br>Droop |      | 40%<br>Droop |      | 10%<br>Droop        |      | 20%<br>Droop |      | 40%<br>Droop |      |
|                                                                   | psig            | bar  | psig              | bar  | GPM                              | LPM  | GPM          | LPM  | GPM          | LPM  | GPM                 | LPM  | GPM          | LPM  | GPM          | LPM  |
| 39 to 72 psig /<br>2.7 to 5.0 bar<br><br>GE42909X012<br>White     | 40              | 2.8  | 75                | 5.2  | 100                              | 380  | 140          | 550  | 240          | 910  | 120                 | 460  | 180          | 660  | 300          | 1120 |
|                                                                   |                 |      | 150               | 10.3 | 180                              | 670  | 230          | 860  | 340          | 1290 | 230                 | 880  | 300          | 1150 | 440          | 1670 |
|                                                                   |                 |      | 250               | 17.2 | 220                              | 820  | 270          | 1010 | 380          | 1440 | 290                 | 1080 | 350          | 1330 | 480          | 1810 |
|                                                                   | 50              | 3.4  | 75                | 5.2  | 95                               | 360  | 150          | 560  | 260          | 1000 | 130                 | 480  | 200          | 750  | 350          | 1330 |
|                                                                   |                 |      | 150               | 10.3 | 190                              | 720  | 250          | 960  | 390          | 1490 | 250                 | 950  | 340          | 1290 | 510          | 1920 |
|                                                                   |                 |      | 250               | 17.2 | 230                              | 860  | 290          | 1100 | 440          | 1660 | 300                 | 1140 | 380          | 1450 | 550          | 2080 |
|                                                                   | 60              | 4.1  | 75                | 5.2  | 86                               | 330  | 150          | 560  | 290          | 1090 | 120                 | 450  | 190          | 730  | 380          | 1450 |
|                                                                   |                 |      | 150               | 10.3 | 200                              | 760  | 280          | 1060 | 440          | 1680 | 260                 | 990  | 360          | 1370 | 560          | 2120 |
|                                                                   |                 |      | 250               | 17.2 | 240                              | 890  | 320          | 1210 | 490          | 1850 | 310                 | 1180 | 410          | 1560 | 620          | 2330 |
|                                                                   | 70              | 4.8  | 100               | 6.9  | 120                              | 470  | 210          | 780  | 390          | 1470 | 160                 | 610  | 270          | 1000 | 490          | 1870 |
|                                                                   |                 |      | 150               | 10.3 | 210                              | 800  | 310          | 1150 | 500          | 1890 | 280                 | 1070 | 400          | 1520 | 640          | 2430 |
|                                                                   |                 |      | 250               | 17.2 | 250                              | 950  | 350          | 1330 | 550          | 2080 | 330                 | 1260 | 460          | 1720 | 690          | 2620 |
| 71 to 175 psig /<br>4.9 to 12.1 bar<br><br>GE42910X012<br>Silver  | 75              | 5.2  | 100               | 6.9  | 110                              | 400  | 170          | 650  | 330          | 1250 | 140                 | 530  | 220          | 840  | 410          | 1560 |
|                                                                   |                 |      | 150               | 10.3 | 200                              | 750  | 280          | 1050 | 460          | 1730 | 260                 | 1000 | 370          | 1400 | 580          | 2190 |
|                                                                   |                 |      | 250               | 17.2 | 240                              | 900  | 330          | 1250 | 510          | 1940 | 320                 | 1220 | 440          | 1660 | 650          | 2470 |
|                                                                   | 100             | 6.9  | 150               | 10.3 | 160                              | 610  | 250          | 960  | 490          | 1850 | 210                 | 780  | 340          | 1270 | 610          | 2320 |
|                                                                   |                 |      | 250               | 17.2 | 270                              | 1010 | 390          | 1460 | 630          | 2380 | 360                 | 1350 | 500          | 1900 | 790          | 2990 |
|                                                                   | 125             | 8.6  | 200               | 13.8 | 210                              | 790  | 340          | 1280 | 640          | 2400 | 270                 | 1000 | 440          | 1650 | 780          | 2960 |
|                                                                   |                 |      | 300               | 20.7 | 310                              | 1180 | 460          | 1720 | 810          | 3050 | 420                 | 1570 | 590          | 2240 | 970          | 3680 |
|                                                                   | 150             | 10.3 | 200               | 13.8 | 200                              | 770  | 360          | 1360 | 720          | 2720 | 260                 | 1000 | 470          | 1780 | 900          | 3400 |
|                                                                   |                 |      | 300               | 20.7 | 340                              | 1280 | 510          | 1930 | 890          | 3370 | 460                 | 1730 | 680          | 2590 | 1070         | 4040 |
|                                                                   | 175             | 12.1 | 200               | 13.8 | 190                              | 730  | 360          | 1380 | 770          | 2900 | 240                 | 920  | 460          | 1740 | 960          | 3620 |
|                                                                   |                 |      | 300               | 20.7 | 360                              | 1360 | 570          | 2170 | 990          | 3750 | 480                 | 1810 | 730          | 2760 | 1230         | 4660 |
|                                                                   |                 |      |                   |      |                                  |      |              |      |              |      |                     |      |              |      |              |      |
| 110 to 250 psig /<br>7.6 to 17.2 bar<br><br>GE42911X012<br>Orange | 125             | 8.6  | 150               | 10.3 | 130                              | 490  | 220          | 840  | 450          | 1720 | 160                 | 610  | 290          | 1080 | 570          | 2160 |
|                                                                   |                 |      | 250               | 17.2 | 260                              | 1000 | 390          | 1460 | 640          | 2420 | 360                 | 1350 | 500          | 1870 | 840          | 3170 |
|                                                                   | 150             | 10.3 | 200               | 13.8 | 190                              | 720  | 310          | 1180 | 610          | 2310 | 230                 | 870  | 390          | 1460 | 750          | 2830 |
|                                                                   |                 |      | 300               | 20.7 | 310                              | 1180 | 460          | 1750 | 760          | 2870 | 400                 | 1530 | 580          | 2200 | 1020         | 3860 |
|                                                                   |                 |      | 250               | 17.2 | 220                              | 840  | 400          | 1510 | 790          | 2970 | 270                 | 1030 | 490          | 1870 | 990          | 3760 |
|                                                                   | 200             | 13.8 | 300               | 20.7 | 350                              | 1340 | 550          | 2090 | 970          | 3690 | 430                 | 1620 | 680          | 2590 | 1200         | 4540 |
|                                                                   |                 |      | 300               | 20.7 | 250                              | 950  | 480          | 1830 | 960          | 3640 | 310                 | 1180 | 600          | 2270 | 1250         | 4720 |
|                                                                   |                 |      | 350               | 24.1 | 410                              | 1560 | 660          | 2500 | 1170         | 4410 | 540                 | 2020 | 880          | 3320 | 1650         | 6240 |

# Type MR105

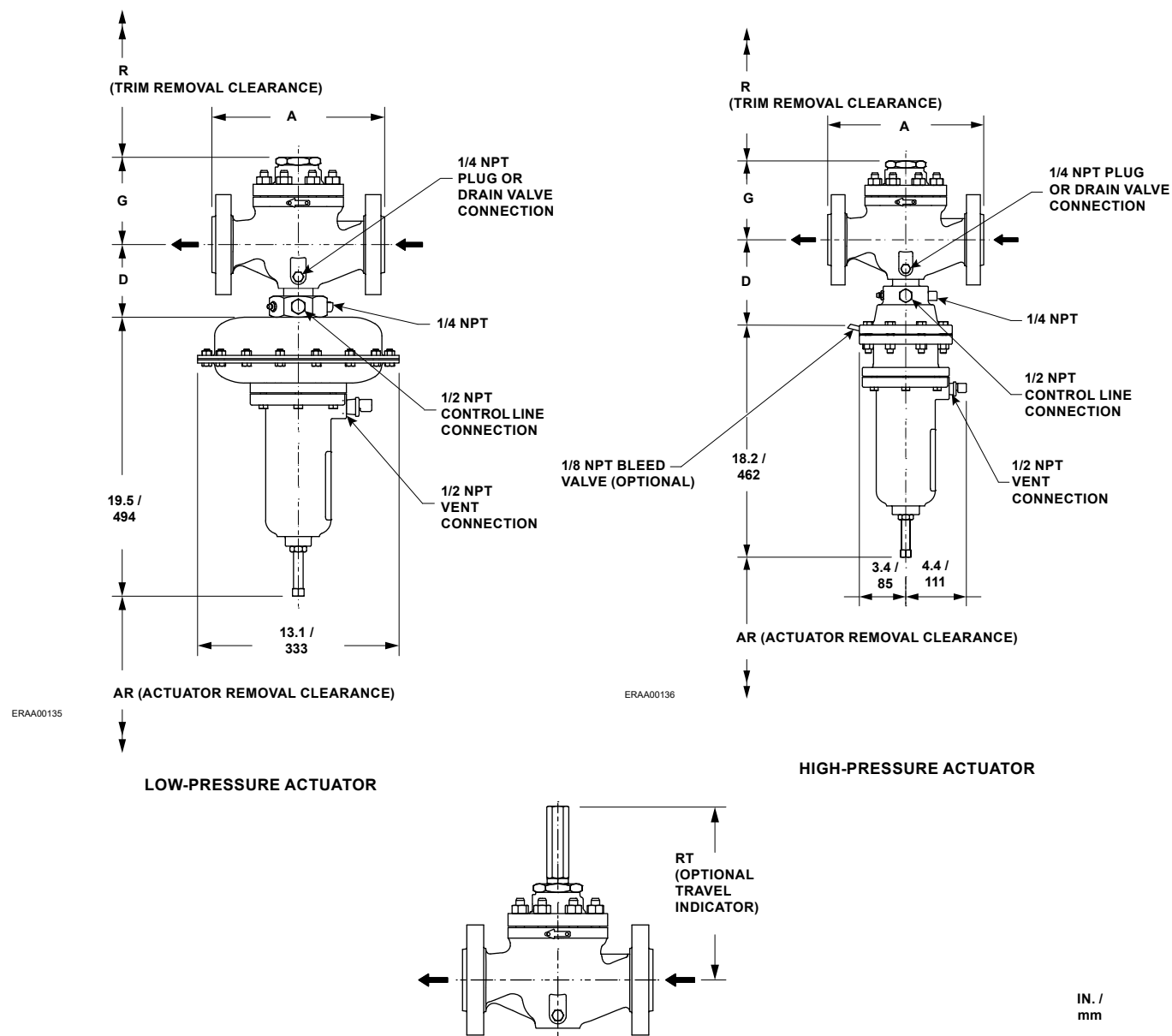


Figure 5. Type MR105 Dimensions

Table 15. Type MR105 Dimensions

| BODY SIZE |     | DIMENSION, in. / mm |                       |                       |                |                   |              |                              |                               |              |              |               |
|-----------|-----|---------------------|-----------------------|-----------------------|----------------|-------------------|--------------|------------------------------|-------------------------------|--------------|--------------|---------------|
|           |     | A                   |                       |                       |                |                   | AR           | D                            |                               | G            | R            | RT            |
|           |     | NPT                 | CL125 FF/<br>CL150 RF | CL250 RF/<br>CL300 RF | CL600 RF       | PN<br>16/25/40 RF |              | Low-<br>Pressure<br>Actuator | High-<br>Pressure<br>Actuator |              |              |               |
| NPS       | DN  |                     |                       |                       |                |                   |              |                              |                               |              |              |               |
| 1         | 25  | 8.25 /<br>210       | 7.25 /<br>184         | 7.75 /<br>197         | 8.25 /<br>210  | 7.62 /<br>194     | 3.2 /<br>82  | 4.1 /<br>105                 | 5.5 /<br>140                  | 5.2 /<br>133 | 3.4 /<br>87  | 9.8 /<br>249  |
| 2         | 50  | 11.25 /<br>286      | 10.0 /<br>254         | 10.50 /<br>267        | 11.25 /<br>286 | 10.25 /<br>260    | 3.7 /<br>94  | 4.8 /<br>122                 | 6.2 /<br>158                  | 5.7 /<br>145 | 4.1 /<br>105 | 10.3 /<br>262 |
| 3         | 80  | ----                | 11.75 /<br>299        | 12.50 /<br>318        | 13.25 /<br>337 | 12.48 /<br>317    | 4.5 /<br>115 | 5.4 /<br>138                 | 6.8 /<br>173                  | 7.0 /<br>178 | 5.2 /<br>133 | 11.6 /<br>295 |
| 4         | 100 | ----                | 13.88 /<br>353        | 14.50 /<br>368        | 15.50 /<br>394 | 13.78 /<br>350    | 5.7 /<br>145 | 6.7 /<br>171                 | 8.1 /<br>206                  | 8.4 /<br>214 | 6.4 /<br>163 | 13.0 /<br>331 |

## Ordering Information

Use the Specifications section on page 2 and carefully review the description to the right of each specification. Use this information to complete the

Ordering Guide below. Specify the desired selection wherever there is a choice to be made. Then send the Ordering Guide to your local Sales Office.

## Ordering Guide

### Body Size (Select One)

- ☐ NPS 1 / DN 25
- ☐ NPS 2 / DN 50
- ☐ NPS 3 / DN 80
- ☐ NPS 4 / DN 100

### Actuator Type (Select One)

- ☐ Low Pressure
- ☐ High Pressure

### Cage Type (Select One)

- ☐ Linear (For Gas Service Only)
- ☐ Quick Open (For Liquid Service Only)

### Body Material and End Connection Style (Select One)

#### Cast Iron

- ☐ NPT (1 or 2 NPT only)
- ☐ CL125 FF
- ☐ CL250 RF

#### WCC Steel

- ☐ NPT (1 or 2 NPT only)
- ☐ CL150 RF
- ☐ CL300 RF
- ☐ CL600 RF
- ☐ PN 16 RF
- ☐ PN 16/25/40 RF (NPS 1 or 2 / DN 25 or 50 only)

#### CF8M Stainless Steel

- ☐ NPT (1 or 2 NPT only)
- ☐ CL150 RF
- ☐ CL300 RF
- ☐ CL600 RF
- ☐ PN 16 RF
- ☐ PN 16/25/40 RF (NPS 1 or 2 / DN 25 or 50 only)

#### CF3M Stainless Steel

- ☐ NPT (1 or 2 NPT only)
- ☐ CL150 RF
- ☐ CL300 RF
- ☐ CL600 RF
- ☐ PN 16 RF
- ☐ PN 16/25/40 RF (NPS 1 or 2 / DN 25 or 50 only)

### Diaphragm, O-rings and Seal Materials (Select One)

- ☐ Nitrile (NBR)
- ☐ Fluorocarbon (FKM)
- ☐ EPDM

### Actuator Type and Outlet Pressure Range (Select One)

#### NPS 1 / DN 25

##### Low-Pressure Actuator

- ☐ 5 to 12 psig / 0.34 to 0.83 bar, White
- ☐ 10 to 24 psig / 0.69 to 1.6 bar, Silver
- ☐ 14 to 32 psig / 0.96 to 2.2 bar, Orange
- ☐ 18 to 43 psig / 1.2 to 3.0 bar, Red

##### High-Pressure Actuator

- ☐ 25 to 60 psig / 1.7 to 4.1 bar, Green
- ☐ 43 to 100 psig / 3.0 to 6.9 bar, White
- ☐ 75 to 175 psig / 5.2 to 12.1 bar, Silver<sup>(1)</sup>
- ☐ 110 to 300 psig / 7.6 to 20.7 bar, Orange<sup>(1)</sup>

#### NPS 2 / DN 50

##### Low-Pressure Actuator

- ☐ 5 to 12 psig / 0.34 to 0.83 bar, White
- ☐ 10 to 24 psig / 0.69 to 1.6 bar, Silver
- ☐ 14 to 32 psig / 0.96 to 2.2 bar, Orange
- ☐ 18 to 43 psig / 1.2 to 3.0 bar, Red

##### High-Pressure Actuator

- ☐ 25 to 45 psig / 1.7 to 3.1 bar, Green
- ☐ 43 to 100 psig / 3.0 to 6.9 bar, White
- ☐ 75 to 175 psig / 5.2 to 12.1 bar, Silver<sup>(1)</sup>
- ☐ 110 to 300 psig / 7.6 to 20.7 bar, Orange<sup>(1)</sup>

#### NPS 3 and 4 / DN 80 and 100

##### Low-Pressure Actuator

- ☐ 5 to 8 psig / 0.34 to 0.55 bar, White
- ☐ 8 to 20 psig / 0.55 to 1.4 bar, Silver
- ☐ 12 to 30 psig / 0.83 to 2.1 bar, Orange
- ☐ 18 to 39 psig / 1.2 to 2.7 bar, Red

##### High-Pressure Actuator

- ☐ 39 to 72 psig / 2.7 to 5.0 bar, White
- ☐ 71 to 175 psig / 4.9 to 12.1 bar, Silver<sup>(1)</sup>
- ☐ 110 to 250 psig / 7.6 to 17.2 bar, Orange<sup>(1)</sup>

### Optional

- ☐ Visual Travel Indicator
- ☐ Drain Valve
- ☐ Pressure-Loaded Actuator<sup>(2)</sup>
- ☐ NACE Construction
- ☐ Bleed Valve (for High-Pressure Actuator Only)

- continued -

1. Maximum setpoint is limited to 150 psig / 10.3 bar for constructions with Fluorocarbon (FKM) diaphragm.

2. Consult the local Sales Office for this option.

## Ordering Guide (continued)

### Main Valve Replacement Parts Kit (Optional)

- ☐ Yes, send one replacement parts kit to match this order.

### Actuator Replacement Parts Kit (Optional)

- ☐ Yes, send one replacement parts kit to match this order.

### Wireless Position Monitor Mounting Kit (Optional)

- ☐ Yes, send one mounting kit for mounting the Topworx™ 4310 or the Fisher™ 4320 wireless position monitor.

#### 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 \_\_\_\_\_

Fluid Type \_\_\_\_\_

Specific Gravity \_\_\_\_\_

Temperature \_\_\_\_\_

Does the Application Require Overpressure Protection?

☐ Yes ☐ No

##### Pressure:

Maximum Inlet Pressure \_\_\_\_\_

Minimum Inlet Pressure \_\_\_\_\_

Differential Pressure \_\_\_\_\_

Set Pressure \_\_\_\_\_

Maximum Flow \_\_\_\_\_

##### Accuracy Requirements:

Less Than or Equal To:

☐ 5% ☐ 10% ☐ 20% ☐ 40%

##### Construction Material Requirements (if known):

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 Fisher.com

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