



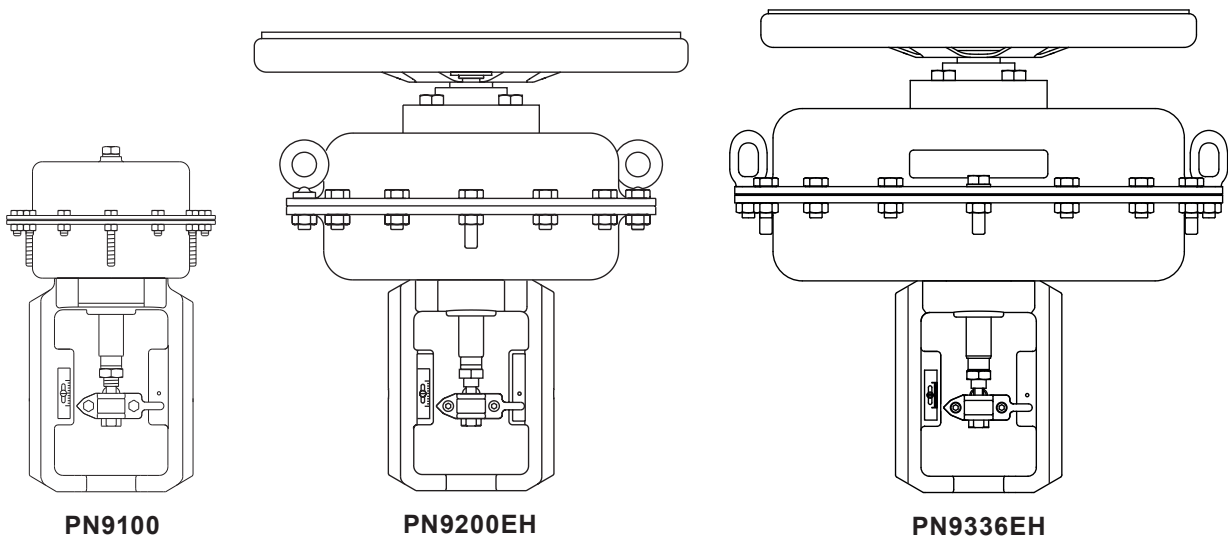
# PN9000 Series Pneumatic Actuators for use with Spira-trol™ Control Valves

## Description

The PN9000 series actuators are a compact range of linear actuators that are available in 3 diaphragm sizes for matching the requirements of valves at various differential pressures.

Each actuator is fitted with a mechanical travel indicator and incorporates a fully-rolling diaphragm, which provides good linearity over the operating stroke.

|                        |  |                                  |  |
|------------------------|--|----------------------------------|--|
| <b>Available types</b> | <b>PN</b> = Standard                   | <b>Suffix E</b> = Spring-extend  | <b>Important note:</b> Throughout this document, reference has been made to the PN actuator. |
|                        | <b>PNP</b> = Electroless nickel plated | <b>Suffix R</b> = Spring-retract |  |
| <b>Optional extra</b>  | <b>Manual handwheel</b>                | <b>Suffix H</b>                  |  |
|                        | <b>Stainless steel bolting</b>         | <b>Suffix S</b>                  |  |
| <b>Fast speed</b>      |  | <b>Suffix F</b>                  |  |



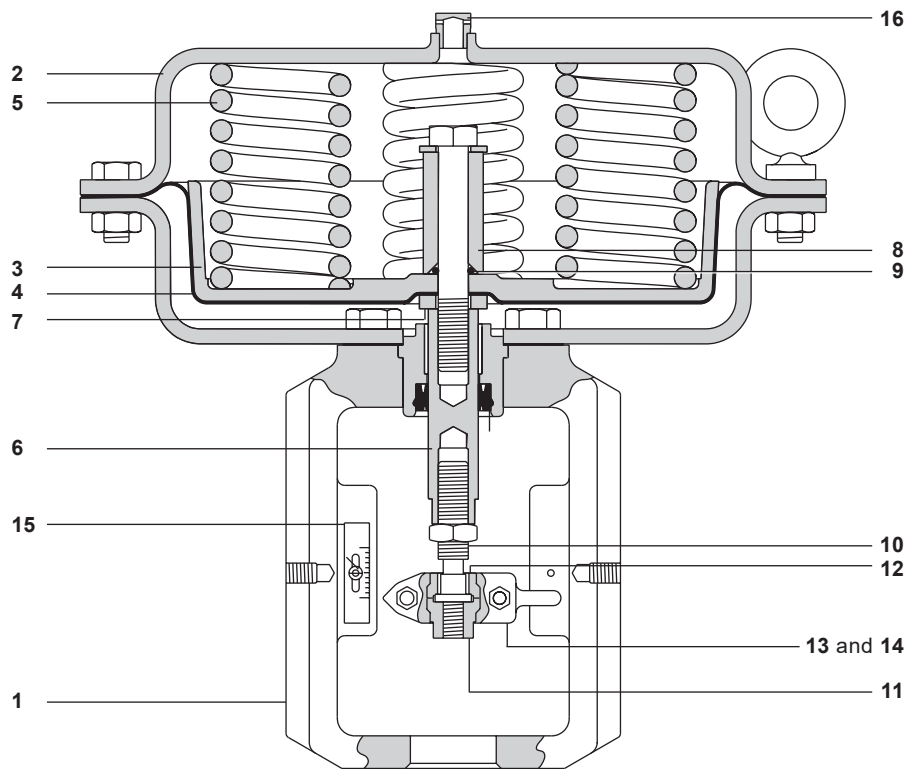
## Actuator force available in relation to motive air pressure

| Actuator | Area of diaphragm (cm <sup>2</sup> ) | Spring rating (bar) |     | Spring force<br>E = Closed / R = Opened (N) | Actuator force available in relation to motive air pressure (N) |      |       |       |       |       |
|----------|--------------------------------------|---------------------|-----|---|---|------|-------|-------|-------|-------|
|          |                                      |                     |     |   | 1   | 2    | 3     | 4     | 5     | 6     |
| PN91_0_  | 96                                   | 0.2                 | 1.0 | 192   |   | 968  | 1920  | 2880  | 3840  | 4800  |
| PN91_0_  | 96                                   | 0.4                 | 1.2 | 384   |   | 768  | 1728  | 2688  | 3648  | 3840  |
| PN91_6_  | 96                                   | 1.0                 | 2.0 | 960   |   |      | 960   | 1920  | 2880  | 3840  |
| PN91_3_  | 96                                   | 2.0                 | 4.0 | 1920  |   |      |       |       | 960   | 1920  |
| PN92_0_  | 340                                  | 0.2                 | 1.0 | 680   |   | 3400 | 6800  | 10200 | 13600 | 17000 |
| PN92_0_  | 340                                  | 0.4                 | 1.2 | 1360  |   | 2720 | 6120  | 9520  | 12920 | 16320 |
| PN92_6_  | 340                                  | 1.0                 | 2.0 | 3400  |   |      | 3400  | 6800  | 10200 | 13600 |
| PN92_3_  | 340                                  | 2.0                 | 4.0 | 6800  |   |      |       |       | 3400  | 6800  |
| PN93_0_  | 670                                  | 0.2                 | 1.0 | 1340  |   | 6700 | 13400 | 20100 |       |       |
| PN93_0_  | 670                                  | 0.4                 | 1.2 | 2680  |   | 5360 | 12060 | 18760 |       |       |
| PN93_6_  | 670                                  | 1.0                 | 2.0 | 6700  |   |      | 6700  | 13400 |       |       |
| PN93_7_  | 670                                  | 2.5                 | 3.5 | 16750                                       |   |      |       | 3350  |       |       |

### Technical data

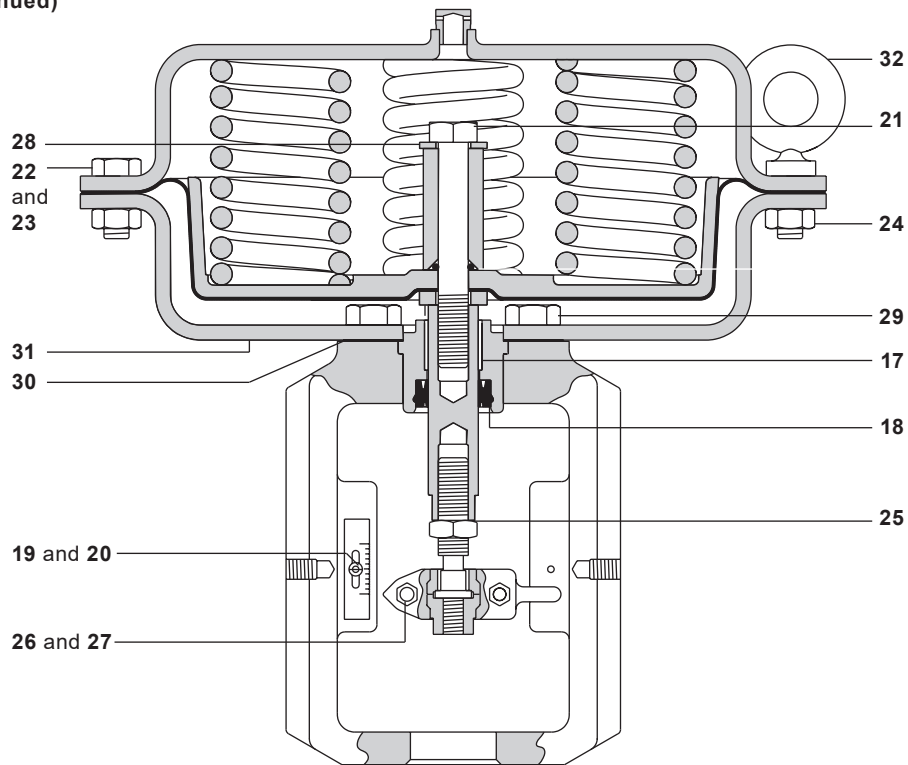
|                                  |                   |                    |
|----------------------------------|-------------------|--------------------|
| Temperature range                |                   | - 20 °C to +110 °C |
| Maximum operating inlet pressure | PN9100            | 6 bar g            |
|                                  | PN9200            | 6 bar g            |
|                                  | PN9300E           | 4 bar g            |
|                                  | PN9300R           | 2.7 bar g          |
| Air supply connection            |                   | ¼" NPT             |
| Actuator travel                  | PN9100            | 20 mm              |
|                                  | PN922_ and PN932_ | 20 mm              |
|                                  | PN923_ and PN933_ | 30 mm              |

## Materials

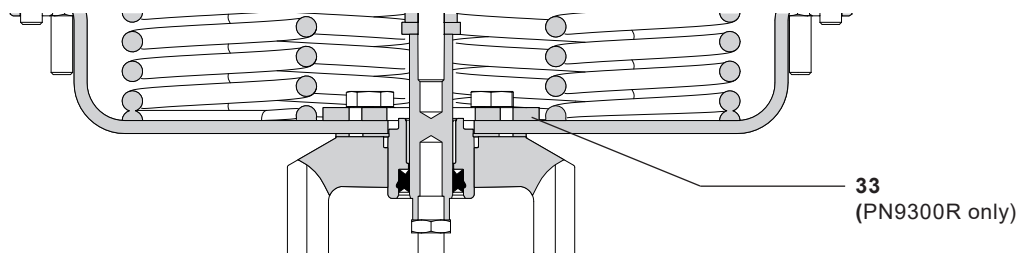


| No. | Part                    | Material              |                                    |
|-----|-------------------------|-----------------------|------------------------------------|
| 1   | Yoke                    | SG iron               |                                    |
| 2   | Upper diaphragm housing | Carbon steel (plated) |                                    |
| 3   | Diaphragm plate         | Aluminium             |                                    |
| 4   | Diaphragm               | Reinforced NBR        |                                    |
| 5   | Spring                  | Spring steel          |                                    |
| 6   | Spindle                 | Stainless steel       |                                    |
| 7   | Washer                  | Carbon steel (plated) |                                    |
| 8   | Spacer                  | Carbon steel (plated) |                                    |
| 9   | 'O' ring                | Viton                 |                                    |
| 10  | Connector               | Stainless steel       | BS 970 431 S29                     |
| 11  | Adaptor                 | Stainless steel       | BS 970 431 S29                     |
|     |                         | PN9000                | Carbon steel                       |
| 12  | Collar                  | PNP9000               | Stainless steel 1.4057 or AISI 420 |
|     |                         | PN9000S               | Stainless steel 316L               |
| 13  | Clamp front             | Stainless steel       | BS 3100 Pt 2 304 C15               |
| 14  | Clamp rear              | Stainless steel       | BS 3100 Pt 2 304 C15               |
| 15  | Scale                   | Stainless steel       | BS 1449 304 S16                    |
| 16  | Vent plug               | Brass                 |                                    |

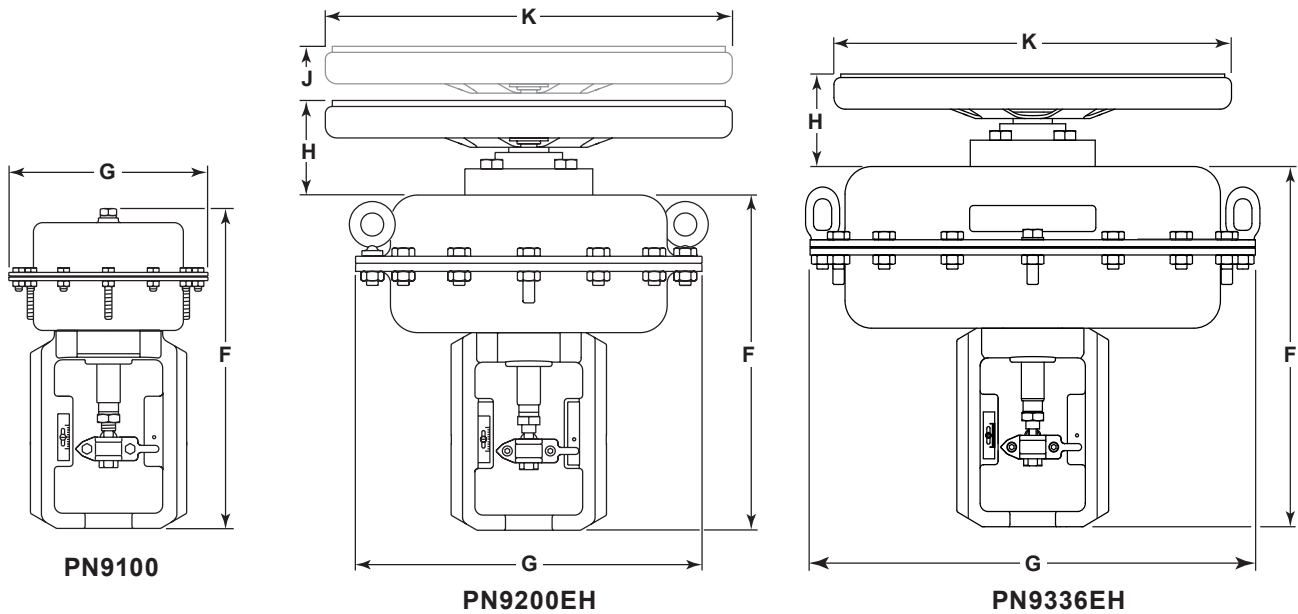
**Materials (continued)**



| No. | Part                    |              | Material              |                                |
|-----|-------------------------|--------------|-----------------------|--------------------------------|
| 17  | Bearing                 |              | PTFE/steel composite  |                                |
| 18  | Seal                    |              | Polyurethane          |                                |
| 19  | Pan head screw          | PN9000       | Carbon steel (plated) |                                |
| 20  | Nyloc nut               | PNP9000      | Stainless steel       | A2 - 70                        |
|     |                         | PN9000S      | Stainless steel       | A2 - 70                        |
| 21  | Bolt                    |              | Carbon steel (plated) | Gr. 8.8                        |
| 22  | Hex. head screw (short) | PN9000       | Carbon steel (plated) | Gr. 8.8                        |
| 23  | Hex. head screw (long)  | PNP9000      | Stainless steel       | A2 - 70                        |
| 24  | Nut                     | PN9000S      | Stainless steel       | A2 - 70                        |
|     |                         | PN9000       | Carbon steel (plated) |                                |
| 25  | Lock-nut                | PNP9000      | Stainless steel       | A2 - 70                        |
|     |                         | PN9000S      | Stainless steel       | A2 - 70                        |
|     |                         | PN9000       | Carbon steel (plated) | Gr. 8.8                        |
| 26  | Socket head screw       | PNP9000      | Stainless steel       | A2 - 70                        |
| 27  | Nut                     | PN9000S      | Stainless steel       | A2 - 70                        |
| 28  | Washer                  |              | Carbon steel (plated) |                                |
| 29  | Hex. head screw         |              | Carbon steel (plated) | Gr. 8.8 (Gr. 10.9 for PN9300R) |
| 30  | Gasket                  |              | Reinforced Graphite   |                                |
| 31  | Lower diaphragm housing |              | Carbon steel (plated) |                                |
|     |                         | PN9000       | Cast steel            |                                |
| 32  | Lifting eye             | PNP9000      | Cast steel            |                                |
|     |                         | PN9000S      | Stainless steel 316L  |                                |
| 33  | Thrust plate            | PN9300R only | Carbon steel          |                                |



## Dimensions/weights (approximate) in mm and kg



| Actuator range       | F   | G   | H   | J<br>(Handwheel<br>lifted) | K   | Weight   |                |
|----------------------|-----|-----|-----|----------------------------|-----|----------|----------------|
|                      |     |     |     |                            |     | Actuator | With handwheel |
| PN9100E and variants | 275 | 170 | 55  | 75                         | 225 | 6        | + 5.86         |
| PN9100R and variants | 275 | 170 | 120 | 140                        | 225 | 6        | + 2.50         |
| PN9200E and variants | 300 | 300 | 65  | 85                         | 350 | 17       | + 7.20         |
| PN9200R and variants | 300 | 300 | 132 | 152                        | 350 | 17       | + 3.77         |
| PN9230E and variants | 335 | 300 | 65  | 95                         | 350 | 17       | + 3.77         |
| PN9230R and variants | 335 | 300 | 122 | 152                        | 350 | 17       | + 3.77         |
| PN9320E and variants | 325 | 390 | 65  | 85                         | 350 | 27       | + 7.20         |
| PN9320R and variants | 325 | 390 | 132 | 152                        | 350 | 27       | + 3.77         |
| PN9330E and variants | 335 | 390 | 65  | 95                         | 350 | 27       | + 7.20         |
| PN9330R and variants | 335 | 390 | 122 | 152                        | 350 | 27       | + 3.70         |
| PN9336E and variants | 335 | 390 | 65  | 95                         | 350 | 27       | + 7.20         |
| PN9336R and variants | 335 | 390 | 122 | 152                        | 350 | 27       | + 3.77         |
| PN9337E and variants | 335 | 390 | 410 | 410                        | 350 | 27       | + 21.00        |

### How to use the sizing data on pages 6 to 25:

The following tables supply guidance as to the sizing of the PN9000 when it is used on a Spira-trol™ control valve.

#### Two conditions are illustrated in tabular form:

**Class IV shut-off** - Providing shut-off of the valve to the requirements of BS 5793-4 (IEC 60534-4) class IV.

**Class VI shut-off** - Providing shut-off of the valve to the requirements of BS 5793-4 (IEC 60534-4) class VI.

#### To select a suitable actuator:

- Identify the column containing the valve and gland material selected.
- Identify the maximum operating pressure condition, including any transient pressures likely to occur, within the selected column.
- Read back to the left hand side of the table to identify the suitable actuator for the application.

For conditions outside of those illustrated please contact Spirax Sarco.

**Maximum differential pressures for Class IV shut-off - Metal Seated (T&S) Spira-trol -  
DN15-25 (1/2" - 1") - Flow under - PN9000E**

| Actuator         |          | Standard cage (S)       |       |       |       |  |   |                     |   |  |      |       |       |            |      |  |   |  |   |           |   |      |       |       |      |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
|------------------|----------|-------------------------|-------|-------|-------|--|---|---------------------|---|--|------|-------|-------|------------|------|--|---|--|---|-----------|---|------|-------|-------|------|-----------|---|--|---|--|---|-----------|-----|--|---|--|---|--|---|--|---|--|--|--|--|--|--|--|--|--|--|
|                  |          | DN15-25 (1/2"-1")       |       |       |       |  |   |                     |   |  |      |       |       |            |      |  |   |  |   |           |   |      |       |       |      |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
|                  |          | 0.01-0.07 (0.012-0.081) |       |       |       |  |   | 0.1-0.2 (0.12-0.23) |   |  |      |       |       | 0.5 (0.58) |      |  |   |  |   | 1.0 (1.2) |   |      |       |       |      | 1.6 (1.8) |   |  |   |  |   | 2.5 (2.9) |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| Spring range bar | Kvs (Cv) |                         | N-P   |       | H     |  | B |                     | C |  | D    |       | N-P   |            | H    |  | B |  | C |           | D |      | N-P   |       | H    |           | B |  | C |  | D |           | N-P |  | H |  | B |  | C |  | D |  |  |  |  |  |  |  |  |  |  |
| PN9120E          | 0.2-1.0  | 6.0                     | 103.4 |       |       |  |   |                     |   |  |      |       |       |            |      |  |   |  |   |           |   |      |       |       |      |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9120E          | 0.4-1.2  | 6.0                     | 103.4 | 16.0  | 103.4 |  |   |                     |   |  | 16.0 | 96.6  |       |            |      |  |   |  |   |           |   | 16.0 | 26.5  |       |      |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9125E          | 0.4-2.0  | 6.0                     | 103.4 | 16.0  | 103.4 |  |   |                     |   |  | 16.0 | 96.6  |       |            |      |  |   |  |   |           |   | 16.0 | 26.5  |       |      |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9126E          | 1.0-2.0  | 6.0                     | 103.4 | 103.4 |       |  |   |                     |   |  | 16.0 | 103.4 | 103.4 |            |      |  |   |  |   |           |   | 16.0 | 103.4 | 81.4  |      |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9123E          | 2.0-4.0  | 6.0                     | 103.4 | 103.4 | 25.0  |  |   |                     |   |  | 16.0 | 103.4 | 103.4 | 25.0       |      |  |   |  |   |           |   | 16.0 | 103.4 | 103.4 | 25.0 |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9220E          | 0.2-1.0  | 6.0                     | 103.4 | 103.4 |       |  |   |                     |   |  | 16.0 | 103.4 | 94.6  |            |      |  |   |  |   |           |   | 16.0 | 85.4  | 25.7  |      |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9220E          | 0.4-1.2  | 6.0                     | 103.4 | 103.4 |       |  |   |                     |   |  | 16.0 | 103.4 | 103.4 |            |      |  |   |  |   |           |   | 16.0 | 103.4 | 103.4 |      |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9226E          | 1.0-2.0  | 6.0                     | 103.4 | 103.4 | 25.0  |  |   |                     |   |  | 16.0 | 103.4 | 103.4 | 25.0       | 25.0 |  |   |  |   |           |   | 16.0 | 103.4 | 103.4 | 25.0 | 25.0      |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9223E          | 2.0-4.0  | 6.0                     | 103.4 | 103.4 | 25.0  |  |   |                     |   |  | 16.0 | 103.4 | 103.4 | 25.0       | 25.0 |  |   |  |   |           |   | 16.0 | 103.4 | 103.4 | 25.0 | 25.0      |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9320E          | 0.2-1.0  | 4.0                     | 103.4 | 103.4 |       |  |   |                     |   |  | 16.0 | 103.4 | 103.4 |            |      |  |   |  |   |           |   | 16.0 | 103.4 | 103.4 |      |           |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |
| PN9320E          | 0.4-1.2  | 4.0                     | 103.4 | 103.4 | 25.0  |  |   |                     |   |  | 16.0 | 103.4 | 103.4 | 25.0       | 25.0 |  |   |  |   |           |   | 16.0 | 103.4 | 103.4 | 25.0 | 25.0      |   |  |   |  |   |           |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |

| Actuator         |          | Standard cage (S) |       |       |      |  |   |                   |   |  |      |       |       |           |      |      |      |      |      |         |   |      |       |       |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------|----------|-------------------|-------|-------|------|--|---|-------------------|---|--|------|-------|-------|-----------|------|------|------|------|------|---------|---|------|-------|-------|------|-----------|---|--|---|--|---|-------------------------------|-----|--|---|--|---|--|---|--|---|--|--|--|--|--|--|--|--|--|--|--|--|
|                  |          | DN15-25 (1/2"-1") |       |       |      |  |   |                   |   |  |      |       |       |           |      |      |      |      |      |         |   |      |       |       |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
|                  |          | 4.0 (4.6)         |       |       |      |  |   | 4.9-6.3 (5.7-7.3) |   |  |      |       |       | 7.2 (8.3) |      |      |      |      |      | 10 (12) |   |      |       |       |      | 11 (12.7) |   |  |   |  |   | 2.5-4.6,3-10 (2.9-4.6-7.3-12) |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| Spring range bar | Kvs (Cv) |                   | N-P   |       | H    |  | B |                   | C |  | D    |       | N-P   |           | H    |      | B    |      | C    |         | D |      | N-P   |       | H    |           | B |  | C |  | D |                               | N-P |  | H |  | B |  | C |  | D |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9120E          | 0.2-1.0  | 6.0               |       |       |      |  |   |                   |   |  |      |       |       |           |      |      |      |      |      |         |   |      |       |       |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9120E          | 0.4-1.2  | 6.0               | 5.1   |       |      |  |   |                   |   |  |      |       |       |           |      |      |      |      |      |         |   |      |       |       |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9125E          | 0.4-2.0  | 6.0               | 5.1   |       |      |  |   |                   |   |  |      |       |       |           |      |      |      |      |      |         |   |      |       |       |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9126E          | 1.0-2.0  | 6.0               | 56.0  | 29.5  |      |  |   |                   |   |  | 16.0 | 20.5  | 8.7   |           |      |      |      |      |      |         |   | 11.2 | 11.4  | 3.7   |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9123E          | 2.0-4.0  | 6.0               | 103.4 | 103.4 | 8.3  |  |   |                   |   |  | 16.0 | 58.2  | 46.4  |           |      |      |      |      |      |         |   | 16.0 | 36.2  | 28.5  |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9220E          | 0.2-1.0  | 6.0               | 31.3  | 4.8   |      |  |   |                   |   |  | 16.0 | 13.8  |       |           |      |      |      |      |      |         |   | 2.3  | 4.2   |       |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9220E          | 0.4-1.2  | 6.0               | 91.4  | 64.9  |      |  |   |                   |   |  | 16.0 | 36.2  | 24.4  |           |      |      |      |      |      |         |   | 16.0 | 21.7  | 14.0  |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9226E          | 1.0-2.0  | 6.0               | 103.4 | 103.4 | 25.0 |  |   |                   |   |  | 16.0 | 103.4 | 103.4 | 25.0      | 25.0 |      |      |      |      |         |   | 16.0 | 74.4  | 66.7  | 25.0 | 25.0      |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9223E          | 2.0-4.0  | 6.0               | 103.4 | 103.4 | 25.0 |  |   |                   |   |  | 16.0 | 103.4 | 103.4 | 25.0      | 25.0 |      |      |      |      |         |   | 16.0 | 103.4 | 103.4 | 25.0 | 25.0      |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9320E          | 0.2-1.0  | 4.0               | 89.6  | 63.1  |      |  |   |                   |   |  | 16.0 | 35.4  | 23.6  |           |      |      |      |      |      |         |   | 16.0 | 21.2  | 13.5  |      |           |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9320E          | 0.4-1.2  | 4.0               | 103.4 | 103.4 | 25.0 |  |   |                   |   |  | 16.0 | 88.1  | 76.3  | 25.0      | 17.3 | 16.0 | 70.1 | 60.6 | 22.4 | 12.8    |   | 16.0 | 55.8  | 48.1  | 17.1 | 9.3       |   |  |   |  |   |                               |     |  |   |  |   |  |   |  |   |  |  |  |  |  |  |  |  |  |  |  |  |

**Maximum differential pressures for Class IV shut-off - Metal Seated (T&S) Spira-trol -  
DN15-25 (1/2"-1") - Flow Under - PN9000R**

| Actuator  | Spring range bar | Standard cage (S)       |                          |       |      |      |       |       |                     |      |       |       |      |      |       |            |      |      |       |       |      |      |           |       |      |      |       |       |      |           |       |       |      |      |  |  |           |  |  |  |  |
|-----------|------------------|-------------------------|--------------------------|-------|------|------|-------|-------|---------------------|------|-------|-------|------|------|-------|------------|------|------|-------|-------|------|------|-----------|-------|------|------|-------|-------|------|-----------|-------|-------|------|------|--|--|-----------|--|--|--|--|
|           |                  | DN15-25 (1/2"-1")       |                          |       |      |      |       |       |                     |      |       |       |      |      |       |            |      |      |       |       |      |      |           |       |      |      |       |       |      |           |       |       |      |      |  |  |           |  |  |  |  |
|           |                  | 0.01-0.07 (0.012-0.081) |                          |       |      |      |       |       | 0.1-0.2 (0.12-0.23) |      |       |       |      |      |       | 0.5 (0.58) |      |      |       |       |      |      | 1.0 (1.2) |       |      |      |       |       |      | 1.6 (1.8) |       |       |      |      |  |  | 2.5 (2.9) |  |  |  |  |
| Cage Type | Valve size       | Kvs (Cv)                | Maximum pressure (bar g) | N-P   | H    | B    | C     | D     | N-P                 | H    | B     | C     | D    | N-P  | H     | B          | C    | D    | N-P   | H     | B    | C    | D         | N-P   | H    | B    | C     | D     | N-P  | H         | B     | C     | D    |      |  |  |           |  |  |  |  |
| PN9120R   | 0.2-1.0          | 6.0                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9120R   | 0.4-1.2          | 6.0                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9125R   | 0.4-2.0          | 6.0                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9126R   | 1.0-2.0          | 6.0                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9123R   | 2.0-4.0          | 6.0                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9220R   | 0.2-1.0          | 6.0                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9220R   | 0.4-1.2          | 6.0                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9226R   | 1.0-2.0          | 6.0                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9223R   | 2.0-4.0          | 6.0                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9320R   | 0.2-1.0          | 2.7                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |
| PN9320R   | 0.4-1.2          | 2.7                     | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0                | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |           |  |  |  |  |

| Actuator  | Spring range bar | Standard cage (S) |                          |       |      |      |       |       |                   |      |       |       |      |      |       |           |      |      |       |       |      |      |         |       |      |      |       |       |      |           |       |       |      |      |  |  |                               |  |  |  |  |
|-----------|------------------|-------------------|--------------------------|-------|------|------|-------|-------|-------------------|------|-------|-------|------|------|-------|-----------|------|------|-------|-------|------|------|---------|-------|------|------|-------|-------|------|-----------|-------|-------|------|------|--|--|-------------------------------|--|--|--|--|
|           |                  | DN15-25 (1/2"-1") |                          |       |      |      |       |       |                   |      |       |       |      |      |       |           |      |      |       |       |      |      |         |       |      |      |       |       |      |           |       |       |      |      |  |  |                               |  |  |  |  |
|           |                  | 4.0 (4.6)         |                          |       |      |      |       |       | 4.9-6.3 (5.7-7.3) |      |       |       |      |      |       | 7.2 (8.3) |      |      |       |       |      |      | 10 (12) |       |      |      |       |       |      | 11 (12.7) |       |       |      |      |  |  | 2.5-4.6-3-10 (2.9-4.6-7.3-12) |  |  |  |  |
| Cage Type | Valve size       | Kvs (Cv)          | Maximum pressure (bar g) | N-P   | H    | B    | C     | D     | N-P               | H    | B     | C     | D    | N-P  | H     | B         | C    | D    | N-P   | H     | B    | C    | D       | N-P   | H    | B    | C     | D     | N-P  | H         | B     | C     | D    |      |  |  |                               |  |  |  |  |
| PN9120R   | 0.2-1.0          | 6.0               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9120R   | 0.4-1.2          | 6.0               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9125R   | 0.4-2.0          | 6.0               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9126R   | 1.0-2.0          | 6.0               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9123R   | 2.0-4.0          | 6.0               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9220R   | 0.2-1.0          | 6.0               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9220R   | 0.4-1.2          | 6.0               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9226R   | 1.0-2.0          | 6.0               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9223R   | 2.0-4.0          | 6.0               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9320R   | 0.2-1.0          | 2.7               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |
| PN9320R   | 0.4-1.2          | 2.7               | 103.4                    | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0              | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0 |  |  |                               |  |  |  |  |

**Maximum differential pressures for Class IV shut-off - Metal Seated (T&S) Spira-trol - DN32-50 (1 1/4"-2") - Flow under - PN9000E**

| Actuator  | Spring range bar | Standard cage (S)   |                          |       |      |           |       |      |      |         |       |      |      |                     |       |       |      |      |      |       |       |      |      |      |      |         |      |      |      |   |  |  |  |   |  |
|-----------|------------------|---------------------|--------------------------|-------|------|-----------|-------|------|------|---------|-------|------|------|---------------------|-------|-------|------|------|------|-------|-------|------|------|------|------|---------|------|------|------|---|--|--|--|---|--|
|           |                  | DN32-50 (1 1/4"-2") |                          |       |      |           |       |      |      |         |       |      |      | 17.5 - 18 (20.2-21) |       |       |      |      |      |       |       |      |      |      |      | 25 (29) |      |      |      |   |  |  |  |   |  |
|           |                  | 4.0 (4.6)           |                          |       |      | 6.3 (7.3) |       |      |      | 10 (12) |       |      |      | 16 (18)             |       |       |      | N-P  |      |       |       | H    |      |      |      | B       |      |      |      | C |  |  |  | D |  |
| Cage Type | Valve size       | Kvs (Cv)            | Maximum pressure (bar g) | N-P   | H    | B         | C     | D    | N-P  | H       | B     | C    | D    | N-P                 | H     | B     | C    | D    | N-P  | H     | B     | C    | D    | N-P  | H    | B       | C    | D    |      |   |  |  |  |   |  |
| PN9120E   | 0.4-1.2          | 6.0                 | 7.9                      |       |      |           |       |      |      |         |       |      |      |                     |       |       |      |      |      |       |       |      |      |      |      |         |      |      |      |   |  |  |  |   |  |
| PN9125E   | 0.4-2.0          | 6.0                 | 7.9                      |       |      |           |       |      |      |         |       |      |      |                     |       |       |      |      |      |       |       |      |      |      |      |         |      |      |      |   |  |  |  |   |  |
| PN9126E   | 1.0-2.0          | 6.0                 | 57.2                     | 31.5  | 16.0 | 30.3      | 15.4  | 16.0 | 17.4 | 7.8     |       |      |      |                     |       |       |      |      |      |       |       |      |      |      |      |         |      |      |      |   |  |  |  |   |  |
| PN9123E   | 2.0-4.0          | 6.0                 | 103.4                    | 103.4 | 11.0 | 16.0      | 78.0  | 63.1 | 3.4  | 16.0    | 47.9  | 38.4 | 0.2  | 16.0                | 38.8  | 30.9  |      |      |      |       |       |      |      |      |      |         |      |      |      |   |  |  |  |   |  |
| PN9220E   | 0.2-1.0          | 6.0                 | 33.2                     | 7.6   | 16.0 | 16.3      | 1.4   | 9.9  | 8.5  |         |       |      |      | 4.3                 | 6.2   |       |      |      |      |       |       |      |      |      |      |         |      |      |      |   |  |  |  |   |  |
| PN9220E   | 0.4-1.2          | 6.0                 | 91.4                     | 65.7  | 16.0 | 50.2      | 35.2  | 16.0 | 30.1 | 20.6    |       |      |      | 16.0                | 24.1  | 16.2  |      |      |      |       |       |      |      |      |      |         |      |      |      |   |  |  |  |   |  |
| PN9226E   | 1.0-2.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 103.4     | 103.4 | 25.0 | 16.0 | 95.0    | 85.5  | 25.0 | 25.0 | 16.0                | 77.7  | 69.8  | 25.0 | 25.0 | 16.0 | 59.2  | 53.1  | 25.0 | 22.6 | 16.0 | 30.5 | 27.2    | 13.9 | 10.6 | 16.0 |   |  |  |  |   |  |
| PN9223E   | 2.0-4.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 103.4     | 103.4 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 25.0 | 16.0 | 67.9 | 64.6    | 25.0 | 25.0 | 16.0 |   |  |  |  |   |  |
| PN9320E   | 0.2-1.0          | 4.0                 | 89.7                     | 64.0  | 16.0 | 49.2      | 34.3  | 16.0 | 29.5 | 19.9    |       |      |      | 16.0                | 23.5  | 15.6  |      |      |      |       |       |      |      |      |      |         |      |      |      |   |  |  |  |   |  |
| PN9320E   | 0.4-1.2          | 4.0                 | 103.4                    | 103.4 | 25.0 | 103.4     | 100.9 | 25.0 | 25.0 | 72.1    | 62.6  | 24.4 | 14.8 | 16.0                | 58.8  | 50.9  | 19.3 | 11.4 | 16.0 | 44.6  | 38.4  | 14.0 | 7.9  | 16.0 | 22.5 | 19.2    | 6.0  | 2.7  | 16.0 |   |  |  |  |   |  |

| Actuator  | Spring range bar | Standard cage (S)   |                          |      |      |               |      |      |      |         |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
|-----------|------------------|---------------------|--------------------------|------|------|---------------|------|------|------|---------|------|------|------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|--|
|           |                  | DN32-50 (1 1/4"-2") |                          |      |      |               |      |      |      |         |      |      |      | Low noise cage P1-P2-P3-A1-A2 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
|           |                  | 31-36 (36-42)       |                          |      |      | 46-50 (53-58) |      |      |      | All Kvs |      |      |      | N-P                           |      |      |      | H    |      |      |      | B    |      |      |      | C    |      |      |      | D |  |
| Cage Type | Valve size       | Kvs (Cv)            | Maximum pressure (bar g) | N-P  | H    | B             | C    | D    | N-P  | H       | B    | C    | D    | N-P                           | H    | B    | C    | D    | N-P  | H    | B    | C    | D    | N-P  | H    | B    | C    | D    |      |   |  |
| PN9120E   | 0.4-1.2          | 6.0                 |                          |      |      |               |      |      |      |         |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
| PN9125E   | 0.4-2.0          | 6.0                 |                          |      |      |               |      |      |      |         |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
| PN9126E   | 1.0-2.0          | 6.0                 | 2.3                      | 1.0  | 1.2  | 1.0           |      |      |      |         |      |      |      | 1.0                           |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
| PN9123E   | 2.0-4.0          | 6.0                 | 10.8                     | 8.1  | 9.6  | 7.0           | 5.1  | 6.2  | 7.0  | 5.1     |      |      |      | 6.2                           | 7.0  | 5.1  |      |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
| PN9220E   | 0.2-1.0          | 6.0                 |                          |      |      |               |      |      |      |         |      |      |      |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
| PN9220E   | 0.4-1.2          | 6.0                 | 5.8                      | 3.2  | 4.7  | 3.5           | 1.6  | 2.7  | 3.5  | 1.6     |      |      |      | 2.7                           | 3.5  | 1.6  |      |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
| PN9226E   | 1.0-2.0          | 6.0                 | 23.8                     | 21.2 | 10.6 | 8.0           | 16.0 | 16.3 | 14.4 | 6.9     | 5.0  | 15.5 | 16.3 | 14.4                          | 6.9  | 5.0  | 15.5 |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
| PN9223E   | 2.0-4.0          | 6.0                 | 53.8                     | 51.2 | 25.0 | 25.0          | 16.0 | 37.7 | 35.8 | 25.0    | 25.0 | 16.0 | 37.7 | 35.8                          | 25.0 | 25.0 | 16.0 | 37.7 | 35.8 | 25.0 | 25.0 | 16.0 | 37.7 | 35.8 | 25.0 | 25.0 | 16.0 | 16.0 | 16.0 |   |  |
| PN9320E   | 0.2-1.0          | 4.0                 | 5.7                      | 3.0  | 4.5  | 3.4           | 1.5  | 2.5  | 3.4  | 1.5     |      |      |      | 2.5                           | 3.4  | 1.5  |      |      |      |      |      |      |      |      |      |      |      |      |      |   |  |
| PN9320E   | 0.4-1.2          | 4.0                 | 17.5                     | 14.8 | 4.3  | 1.6           | 0.5  | 11.0 | 11.8 | 9.9     | 2.3  | 0.5  | 11.0 | 11.8                          | 9.9  | 2.3  | 0.5  | 11.0 |      |      |      |      |      |      |      |      |      |      |      |   |  |



Maximum differential pressures for Class IV shut-off - Metal Seated (T&S) Spira-trol -  
DN32-50 (1 1/4"-2") - Flow under - PN9000R

| Actuator  | Spring range bar | Standard cage (S)   |                          |       |      |           |       |       |      |         |       |       |      |         |       |       |      |                     |       |       |      |         |       |       |      |       |       |       |      |       |       |       |      |      |
|-----------|------------------|---------------------|--------------------------|-------|------|-----------|-------|-------|------|---------|-------|-------|------|---------|-------|-------|------|---------------------|-------|-------|------|---------|-------|-------|------|-------|-------|-------|------|-------|-------|-------|------|------|
|           |                  | DN32-50 (1 1/4"-2") |                          |       |      |           |       |       |      |         |       |       |      |         |       |       |      |                     |       |       |      |         |       |       |      |       |       |       |      |       |       |       |      |      |
|           |                  | 4.0 (4.6)           |                          |       |      | 6.3 (7.3) |       |       |      | 10 (12) |       |       |      | 16 (18) |       |       |      | 17.5 - 18 (20.2-21) |       |       |      | 25 (29) |       |       |      |       |       |       |      |       |       |       |      |      |
| Cage Type | Valve size       | Kvs (Cv)            | Maximum pressure (bar g) | N-P   | H    | B         | C     | D     | N-P  | H       | B     | C     | D    | N-P     | H     | B     | C    | D                   | N-P   | H     | B    | C       | D     | N-P   | H    | B     | C     | D     |      |       |       |       |      |      |
| PN9120R   | 0.2-1.0          | 6.0                 | 103.4                    | 25.0  | 16.0 | 103.4     | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4               | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 |      |
| PN9120R   | 0.4-1.2          | 6.0                 | 103.4                    | 25.0  | 16.0 | 103.4     | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4               | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 |      |
| PN9125R   | 0.4-2.0          | 6.0                 | 103.4                    | 25.0  | 16.0 | 103.4     | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4               | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 |      |
| PN9126R   | 1.0-2.0          | 6.0                 | 103.4                    | 25.0  | 16.0 | 103.4     | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4               | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 |      |
| PN9123R   | 2.0-4.0          | 6.0                 | 103.4                    | 11.0  | 16.0 | 78.0      | 63.1  | 3.4   | 16.0 | 78.0    | 63.1  | 3.4   | 16.0 | 78.0    | 63.1  | 3.4   | 16.0 | 78.0                | 63.1  | 3.4   | 16.0 | 78.0    | 63.1  | 3.4   | 16.0 | 78.0  | 63.1  | 3.4   | 16.0 | 78.0  | 63.1  | 3.4   | 16.0 |      |
| PN9220R   | 0.2-1.0          | 6.0                 | 103.4                    | 25.0  | 16.0 | 103.4     | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4               | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 |      |
| PN9220R   | 0.4-1.2          | 6.0                 | 103.4                    | 25.0  | 16.0 | 103.4     | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4               | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 |      |
| PN9226R   | 1.0-2.0          | 6.0                 | 103.4                    | 25.0  | 16.0 | 103.4     | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4               | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 |      |
| PN9223R   | 2.0-4.0          | 6.0                 | 103.4                    | 25.0  | 16.0 | 103.4     | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4               | 103.4 | 25.0  | 16.0 | 103.4   | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4 | 25.0  | 16.0 |      |
| PN9320R   | 0.2-1.0          | 2.7                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0  | 103.4 | 103.4 | 25.0 | 16.0  | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9320R   | 0.4-1.2          | 2.7                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0  | 103.4 | 103.4 | 25.0 | 16.0  | 103.4 | 103.4 | 25.0 | 16.0 |

| Actuator  | Spring range bar | Standard cage (S)   |                          |       |      |               |       |      |      |         |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |
|-----------|------------------|---------------------|--------------------------|-------|------|---------------|-------|------|------|---------|-------|------|------|------|-------|------|------|------|-------|------|------|------|-------|------|------|------|-------|------|------|------|-------|------|------|------|-------|------|------|------|
|           |                  | DN32-50 (1 1/4"-2") |                          |       |      |               |       |      |      |         |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |
|           |                  | 31-36 (36-42)       |                          |       |      | 46-50 (53-58) |       |      |      | All Kvs |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |       |      |      |      |
| Cage Type | Valve size       | Kvs (Cv)            | Maximum pressure (bar g) | N-P   | H    | B             | C     | D    | N-P  | H       | B     | C    | D    | N-P  | H     | B    | C    | D    | N-P   | H    | B    | C    | D     | N-P  | H    | B    | C     | D    | N-P  | H    | B     | C    | D    |      |       |      |      |      |
| PN9120R   | 0.2-1.0          | 6.0                 | 36.2                     | 33.5  | 23.0 | 20.3          | 16.0  | 25.1 | 23.2 | 15.7    | 13.8  | 16.0 | 25.1 | 23.2 | 15.7  | 13.8 | 16.0 | 25.1 | 23.2  | 15.7 | 13.8 | 16.0 | 25.1  | 23.2 | 15.7 | 13.8 | 16.0  | 25.1 | 23.2 | 15.7 | 13.8  | 16.0 | 25.1 | 23.2 | 15.7  | 13.8 | 16.0 |      |
| PN9120R   | 0.4-1.2          | 6.0                 | 34.5                     | 31.8  | 21.3 | 18.6          | 16.0  | 23.9 | 22.0 | 14.5    | 12.6  | 16.0 | 23.9 | 22.0 | 14.5  | 12.6 | 16.0 | 23.9 | 22.0  | 14.5 | 12.6 | 16.0 | 23.9  | 22.0 | 14.5 | 12.6 | 16.0  | 23.9 | 22.0 | 14.5 | 12.6  | 16.0 | 23.9 | 22.0 | 14.5  | 12.6 | 16.0 |      |
| PN9125R   | 0.4-2.0          | 6.0                 | 27.7                     | 25.1  | 14.5 | 11.8          | 16.0  | 19.1 | 17.2 | 9.6     | 7.8   | 16.0 | 19.1 | 17.2 | 9.6   | 7.8  | 16.0 | 19.1 | 17.2  | 9.6  | 7.8  | 16.0 | 19.1  | 17.2 | 9.6  | 7.8  | 16.0  | 19.1 | 17.2 | 9.6  | 7.8   | 16.0 | 19.1 | 17.2 | 9.6   | 7.8  | 16.0 |      |
| PN9126R   | 1.0-2.0          | 6.0                 | 27.7                     | 25.1  | 14.5 | 11.8          | 16.0  | 19.1 | 17.2 | 9.6     | 7.8   | 16.0 | 19.1 | 17.2 | 9.6   | 7.8  | 16.0 | 19.1 | 17.2  | 9.6  | 7.8  | 16.0 | 19.1  | 17.2 | 9.6  | 7.8  | 16.0  | 19.1 | 17.2 | 9.6  | 7.8   | 16.0 | 19.1 | 17.2 | 9.6   | 7.8  | 16.0 |      |
| PN9123R   | 2.0-4.0          | 6.0                 | 10.8                     | 8.1   | 9.6  | 7.0           | 5.1   | 6.2  | 7.0  | 5.1     | 6.2   | 7.0  | 5.1  | 6.2  | 7.0   | 5.1  | 6.2  | 7.0  | 5.1   | 6.2  | 7.0  | 5.1  | 6.2   | 7.0  | 5.1  | 6.2  | 7.0   | 5.1  | 6.2  | 7.0  | 5.1   | 6.2  | 7.0  | 5.1  | 6.2   | 7.0  |      |      |
| PN9220R   | 0.2-1.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 101.8 | 99.9 | 25.0 | 16.0    | 101.8 | 99.9 | 25.0 | 16.0 | 101.8 | 99.9 | 25.0 | 16.0 | 101.8 | 99.9 | 25.0 | 16.0 | 101.8 | 99.9 | 25.0 | 16.0 | 101.8 | 99.9 | 25.0 | 16.0 | 101.8 | 99.9 | 25.0 | 16.0 | 101.8 | 99.9 | 25.0 | 16.0 |
| PN9220R   | 0.4-1.2          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 97.5  | 95.7 | 25.0 | 16.0    | 97.5  | 95.7 | 25.0 | 16.0 | 97.5  | 95.7 | 25.0 | 16.0 | 97.5  | 95.7 | 25.0 | 16.0 | 97.5  | 95.7 | 25.0 | 16.0 | 97.5  | 95.7 | 25.0 | 16.0 | 97.5  | 95.7 | 25.0 | 16.0 | 97.5  | 95.7 | 25.0 | 16.0 |
| PN9226R   | 1.0-2.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 80.4  | 78.6 | 25.0 | 16.0    | 80.4  | 78.6 | 25.0 | 16.0 | 80.4  | 78.6 | 25.0 | 16.0 | 80.4  | 78.6 | 25.0 | 16.0 | 80.4  | 78.6 | 25.0 | 16.0 | 80.4  | 78.6 | 25.0 | 16.0 | 80.4  | 78.6 | 25.0 | 16.0 | 80.4  | 78.6 | 25.0 | 16.0 |
| PN9223R   | 2.0-4.0          | 6.0                 | 53.8                     | 51.2  | 25.0 | 16.0          | 37.7  | 35.8 | 25.0 | 16.0    | 37.7  | 35.8 | 25.0 | 16.0 | 37.7  | 35.8 | 25.0 | 16.0 | 37.7  | 35.8 | 25.0 | 16.0 | 37.7  | 35.8 | 25.0 | 16.0 | 37.7  | 35.8 | 25.0 | 16.0 | 37.7  | 35.8 | 25.0 | 16.0 | 37.7  | 35.8 | 25.0 | 16.0 |
| PN9320R   | 0.2-1.0          | 2.7                 | 94.3                     | 91.6  | 25.0 | 16.0          | 66.5  | 64.7 | 25.0 | 16.0    | 66.5  | 64.7 | 25.0 | 16.0 | 66.5  | 64.7 | 25.0 | 16.0 | 66.5  | 64.7 | 25.0 | 16.0 | 66.5  | 64.7 | 25.0 | 16.0 | 66.5  | 64.7 | 25.0 | 16.0 | 66.5  | 64.7 | 25.0 | 16.0 | 66.5  | 64.7 | 25.0 | 16.0 |
| PN9320R   | 0.4-1.2          | 2.7                 | 82.5                     | 79.8  | 25.0 | 16.0          | 58.1  | 56.2 | 25.0 | 16.0    | 58.1  | 56.2 | 25.0 | 16.0 | 58.1  | 56.2 | 25.0 | 16.0 | 58.1  | 56.2 | 25.0 | 16.0 | 58.1  | 56.2 | 25.0 | 16.0 | 58.1  | 56.2 | 25.0 | 16.0 | 58.1  | 56.2 | 25.0 | 16.0 | 58.1  | 56.2 | 25.0 | 16.0 |

**Maximum differential pressures for Class IV shut-off - Metal Seated (T&S) Spira-trol -  
DN65-100 (2 1/2" -4") - Flow under - PN9000E**

| Actuator | Spring range bar | Standard cage (S)    |       |            |      |          |      |                      |       |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
|----------|------------------|----------------------|-------|------------|------|----------|------|----------------------|-------|------|------|------|------|----------------------|------|------|------|------|------|----------------------|------|------|------|------|------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|
|          |                  | 16 (18)              |       |            |      |          |      | 25 (29)              |       |      |      |      |      | 36 (42)              |      |      |      |      |      | 63-90 (73-104)       |      |      |      |      |      | 100-115-117 (116-133-135) |      |      |      |      |      |      |      |      |      |      |      |
|          |                  | DN65-100 (2 1/2"-4") |       |            |      |          |      | DN65-100 (2 1/2"-4") |       |      |      |      |      | DN65-100 (2 1/2"-4") |      |      |      |      |      | DN65-100 (2 1/2"-4") |      |      |      |      |      | DN65-100 (2 1/2"-4")      |      |      |      |      |      |      |      |      |      |      |      |
|          |                  | Cage Type            |       | Valve size |      | Kvs (Cv) |      | N-P                  |       | H    |      | B    |      | C                    |      | D    |      | P    |      | H                    |      | B    |      | C    |      | D                         |      | P    |      | H    |      | B    |      | C    |      | D    |      |
|          |                  |                      |       |            |      |          |      |                      |       |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
|          |                  |                      |       |            |      |          |      |                      |       |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9230E  | 0.2-1.0          | 6.0                  | 2.8   |            |      |          |      |                      |       |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9230E  | 0.4-1.2          | 6.0                  | 16.6  | 6.3        | 5.4  | 0.9      |      |                      |       |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9236E  | 1.0-2.0          | 6.0                  | 58.2  | 47.8       | 15.4 | 5.0      | 5.0  | 0.4                  | 0.4   | 0.4  | 0.4  | 0.4  | 0.4  | 0.4                  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4                  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4                       | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  |      |
| PN9233E  | 2.0-4.0          | 6.0                  | 103.4 | 103.4      | 25.0 | 25.0     | 16.0 | 53.4                 | 48.9  | 25.0 | 25.0 | 16.0 | 16.0 | 16.0                 | 16.0 | 37.4 | 34.2 | 24.2 | 21.0 | 16.0                 | 12.8 | 11.0 | 11.0 | 11.0 | 12.4 | 11.2                      | 7.6  | 6.5  | 6.5  | 6.5  | 6.5  | 6.5  | 6.5  | 6.5  | 6.5  | 6.5  |      |
| PN9330E  | 0.2-1.0          | 4.0                  | 16.2  | 5.9        |      |          |      | 5.2                  | 0.7   |      |      |      |      |                      |      | 3.0  |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9330E  | 0.4-1.2          | 4.0                  | 43.5  | 33.2       | 0.8  |          |      | 17.0                 | 12.5  |      |      |      |      |                      |      | 11.5 | 8.3  |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9336E  | 1.0-2.0          | 4.0                  | 103.4 | 103.4      | 25.0 | 25.0     | 16.0 | 52.5                 | 48.0  | 25.0 | 25.0 | 16.0 | 16.0 | 16.0                 | 16.0 | 36.7 | 33.5 | 23.5 | 20.3 | 16.0                 | 12.4 | 10.6 | 10.6 | 10.6 | 12.2 | 11.0                      | 7.4  | 6.3  | 6.3  | 6.3  | 6.3  | 6.3  | 6.3  | 6.3  | 6.3  | 6.3  |      |
| PN9337E  | 2.5-3.5          | 4.0                  | 103.4 | 103.4      | 25.0 | 25.0     | 16.0 | 103.4                | 103.4 | 25.0 | 25.0 | 16.0 | 16.0 | 16.0                 | 16.0 | 99.9 | 96.7 | 25.0 | 25.0 | 16.0                 | 55.4 | 25.0 | 25.0 | 16.0 | 34.9 | 33.8                      | 25.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |

| Actuator | Spring range bar | Standard cage (S)    |      |            |      |          |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
|----------|------------------|----------------------|------|------------|------|----------|------|----------------------|------|------|------|------|------|----------------------|------|------|------|------|------|----------------------|------|------|------|------|------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|
|          |                  | 16 (18)              |      |            |      |          |      | 25 (29)              |      |      |      |      |      | 36 (42)              |      |      |      |      |      | 63-90 (73-104)       |      |      |      |      |      | 100-115-117 (116-133-135) |      |      |      |      |      |      |      |      |      |      |      |
|          |                  | DN65-100 (2 1/2"-4") |      |            |      |          |      | DN65-100 (2 1/2"-4") |      |      |      |      |      | DN65-100 (2 1/2"-4") |      |      |      |      |      | DN65-100 (2 1/2"-4") |      |      |      |      |      | DN65-100 (2 1/2"-4")      |      |      |      |      |      |      |      |      |      |      |      |
|          |                  | Cage Type            |      | Valve size |      | Kvs (Cv) |      | N-P                  |      | H    |      | B    |      | C                    |      | D    |      | P    |      | H                    |      | B    |      | C    |      | D                         |      | P    |      | H    |      | B    |      | C    |      | D    |      |
|          |                  |                      |      |            |      |          |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
|          |                  |                      |      |            |      |          |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9230E  | 0.2-1.0          | 6.0                  |      |            |      |          |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9230E  | 0.4-1.2          | 6.0                  |      |            |      |          |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9236E  | 1.0-2.0          | 6.0                  | 2.5  | 1.8        |      |          |      | 4.7                  | 3.5  |      |      |      |      |                      |      | 2.5  | 1.8  |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9233E  | 2.0-4.0          | 6.0                  | 7.3  | 6.6        | 4.3  | 3.6      | 3.6  | 12.4                 | 11.2 | 7.6  | 6.5  | 6.5  | 6.5  | 6.5                  | 7.3  | 6.6  | 4.3  | 3.6  | 3.6  | 3.6                  | 3.6  | 3.6  | 3.6  | 3.6  | 3.6  | 3.6                       | 3.6  | 3.6  | 3.6  | 3.6  | 3.6  | 3.6  | 3.6  | 3.6  | 3.6  | 3.6  | 3.6  |
| PN9330E  | 0.2-1.0          | 4.0                  |      |            |      |          |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9330E  | 0.4-1.2          | 4.0                  | 1.5  | 0.7        |      |          |      | 3.1                  | 1.9  |      |      |      |      |                      | 1.5  | 0.7  |      |      |      |                      |      |      |      |      |      |                           |      |      |      |      |      |      |      |      |      |      |      |
| PN9336E  | 1.0-2.0          | 4.0                  | 7.1  | 6.4        | 4.2  | 3.5      | 3.5  | 12.2                 | 11.0 | 7.4  | 6.3  | 6.3  | 6.3  | 6.3                  | 7.1  | 6.4  | 4.2  | 3.5  | 3.5  | 3.5                  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5                       | 3.5  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5  | 3.5  |
| PN9337E  | 2.5-3.5          | 4.0                  | 21.3 | 20.6       | 18.4 | 17.6     | 16.0 | 34.9                 | 33.8 | 25.0 | 25.0 | 16.0 | 16.0 | 16.0                 | 21.3 | 20.6 | 18.4 | 17.6 | 16.0 | 16.0                 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0                      | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 |

**Maximum differential pressures for Class IV shut-off - Metal Seated (T&S) Spira-trol - DN65-100 (2 1/2" -4") - Flow under PN9000R**

| Actuator | Spring range bar | Standard cage (S)     |       |      |      |      |       |         |      |      |      |       |      |         |      |      |      |      |      |                |      |      |      |      |      |                           |   |   |   |   |   |   |
|----------|------------------|-----------------------|-------|------|------|------|-------|---------|------|------|------|-------|------|---------|------|------|------|------|------|----------------|------|------|------|------|------|---------------------------|---|---|---|---|---|---|
|          |                  | DN65-100 (2 1/2" -4") |       |      |      |      |       |         |      |      |      |       |      |         |      |      |      |      |      |                |      |      |      |      |      |                           |   |   |   |   |   |   |
|          |                  | 16 (18)               |       |      |      |      |       | 25 (29) |      |      |      |       |      | 36 (42) |      |      |      |      |      | 63-90 (73-104) |      |      |      |      |      | 100-115-117 (116-133-135) |   |   |   |   |   |   |
|          |                  | P                     | H     | B    | C    | D    | N-P   | H       | B    | C    | D    | D     | C    | B       | H    | P    | H    | B    | C    | D              | D    | C    | B    | H    | P    | H                         | B | C | D | D | C | B |
| PN9230R  | 0.2-1.0          | 103.4                 | 103.4 | 25.0 | 25.0 | 16.0 | 103.4 | 103.4   | 25.0 | 25.0 | 16.0 | 101.5 | 98.3 | 25.0    | 25.0 | 16.0 | 56.3 | 54.5 | 25.0 | 25.0           | 16.0 | 35.5 | 34.3 | 25.0 | 25.0 | 16.0                      |   |   |   |   |   |   |
| PN9230R  | 0.4-1.2          | 103.4                 | 103.4 | 25.0 | 25.0 | 16.0 | 103.4 | 103.4   | 25.0 | 25.0 | 16.0 | 97.2  | 94.0 | 25.0    | 25.0 | 16.0 | 53.9 | 52.1 | 25.0 | 25.0           | 16.0 | 33.9 | 32.8 | 25.0 | 25.0 | 16.0                      |   |   |   |   |   |   |
| PN9236R  | 1.0-2.0          | 103.4                 | 103.4 | 25.0 | 25.0 | 16.0 | 103.4 | 103.4   | 25.0 | 25.0 | 16.0 | 80.1  | 76.9 | 25.0    | 25.0 | 16.0 | 44.2 | 42.4 | 25.0 | 25.0           | 16.0 | 27.8 | 26.6 | 23.0 | 21.9 | 16.0                      |   |   |   |   |   |   |
| PN9233R  | 2.0-4.0          | 103.4                 | 103.4 | 25.0 | 25.0 | 16.0 | 53.4  | 48.9    | 25.0 | 25.0 | 16.0 | 37.4  | 34.2 | 24.2    | 21.0 | 16.0 | 20.2 | 18.4 | 12.8 | 11.0           | 11.0 | 12.4 | 11.2 | 7.6  | 6.5  | 6.5                       |   |   |   |   |   |   |
| PN9330R  | 0.2-1.0          | 103.4                 | 103.4 | 25.0 | 25.0 | 16.0 | 93.8  | 89.3    | 25.0 | 25.0 | 16.0 | 66.2  | 63.0 | 25.0    | 25.0 | 16.0 | 36.4 | 34.6 | 25.0 | 25.0           | 16.0 | 22.8 | 21.6 | 18.0 | 16.9 | 16.0                      |   |   |   |   |   |   |
| PN9330R  | 0.4-1.2          | 103.4                 | 103.4 | 25.0 | 25.0 | 16.0 | 82.0  | 77.5    | 25.0 | 25.0 | 16.0 | 57.8  | 54.6 | 25.0    | 25.0 | 16.0 | 31.7 | 29.9 | 24.3 | 22.4           | 16.0 | 19.7 | 18.6 | 15.0 | 13.8 | 13.8                      |   |   |   |   |   |   |
| PN9336R  | 1.0-2.0          | 84.5                  | 74.1  | 25.0 | 25.0 | 16.0 | 34.8  | 30.3    | 16.3 | 11.8 | 11.8 | 24.1  | 20.9 | 10.9    | 7.7  | 7.7  | 12.7 | 10.9 | 5.3  | 3.5            | 3.5  | 7.6  | 6.5  | 2.9  | 1.7  | 1.7                       |   |   |   |   |   |   |

| Actuator | Spring range bar | Standard cage (S)     |      |      |      |      |      |         |      |      |      |      |      | Low noise cage (P1-A1-P2-A2-P3) |      |      |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |
|----------|------------------|-----------------------|------|------|------|------|------|---------|------|------|------|------|------|---------------------------------|------|------|---|---|---|---------|---|---|---|---|---|---|---|---|---|---|---|---|
|          |                  | DN65-100 (2 1/2" -4") |      |      |      |      |      |         |      |      |      |      |      | DN100                           |      |      |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |
|          |                  | 160-180 (185-208)     |      |      |      |      |      | All Kvs |      |      |      |      |      | All Kvs                         |      |      |   |   |   | All Kvs |   |   |   |   |   |   |   |   |   |   |   |   |
|          |                  | P                     | H    | B    | C    | D    | D    | H       | B    | C    | D    | D    | C    | B                               | H    | P    | H | B | C | D       | D | C | B | H | P | H | B | C | D | D | C | B |
| PN9230R  | 0.2-1.0          | 21.7                  | 20.9 | 18.7 | 18.0 | 16.0 | 35.5 | 34.3    | 25.0 | 25.0 | 16.0 | 21.7 | 20.9 | 18.7                            | 18.0 | 16.0 |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |
| PN9230R  | 0.4-1.2          | 20.7                  | 20.0 | 17.7 | 17.0 | 16.0 | 33.9 | 32.8    | 25.0 | 25.0 | 16.0 | 20.7 | 20.0 | 17.7                            | 17.0 | 16.0 |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |
| PN9236R  | 1.0-2.0          | 16.9                  | 16.2 | 13.9 | 13.2 | 13.2 | 27.8 | 26.6    | 23.0 | 21.9 | 16.0 | 16.9 | 16.2 | 13.9                            | 13.2 | 13.2 |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |
| PN9233R  | 2.0-4.0          | 7.3                   | 6.6  | 4.3  | 3.6  | 3.6  | 12.4 | 11.2    | 7.6  | 6.5  | 6.5  | 7.3  | 6.6  | 4.3                             | 3.6  | 3.6  |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |
| PN9330R  | 0.2-1.0          | 13.8                  | 13.0 | 10.8 | 10.1 | 10.1 | 22.8 | 21.6    | 18.0 | 16.9 | 16.0 | 13.8 | 13.0 | 10.8                            | 10.1 | 10.1 |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |
| PN9330R  | 0.4-1.2          | 11.9                  | 11.1 | 8.9  | 8.2  | 8.2  | 19.7 | 18.6    | 15.0 | 13.8 | 13.8 | 11.9 | 11.1 | 8.9                             | 8.2  | 8.2  |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |
| PN9336R  | 1.0-2.0          | 4.3                   | 3.6  | 1.3  | 0.6  | 0.6  | 7.6  | 6.5     | 2.9  | 1.7  | 1.7  | 4.3  | 3.6  | 1.3                             | 0.6  | 0.6  |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |

**Maximum differential pressures for Class VI shut-off - Soft Seated (P&C) Spira-trol - DN15-25 (1/2"-1") - Flow under - PN9000E**

| Actuator | Spring range bar | Standard cage (S)       |    |    |     |                     |    |    |    |            |    |    |    |           |    |    |    |           |    |    |    |           |    |    |    |    |
|----------|------------------|-------------------------|----|----|-----|---------------------|----|----|----|------------|----|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|----|
|          |                  | DN15-25 (1/2"-1")       |    |    |     |                     |    |    |    |            |    |    |    |           |    |    |    |           |    |    |    |           |    |    |    |    |
|          |                  | 0.01-0.07 (0.012-0.087) |    |    |     | 0.1-0.2 (0.12-0.23) |    |    |    | 0.5 (0.58) |    |    |    | 1.0 (1.2) |    |    |    | 1.6 (1.8) |    |    |    | 2.5 (2.9) |    |    |    |    |
| N-P      | H                | B                       | C  | D  | N-P | H                   | B  | C  | D  | N-P        | H  | B  | D  | N-P       | H  | B  | D  | N-P       | H  | B  | D  | N-P       | H  | B  | D  |    |
| PN9126E  | 1.0-2.0          | 19                      | 19 | 19 | 16  | 19                  | 19 | 19 | 16 | 19         | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19 |
| PN9123E  | 1.0-2.0          | 19                      | 19 | 19 | 16  | 19                  | 19 | 19 | 16 | 19         | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19 |
| PN9220E  | 0.2-1.0          | 19                      | 19 | 19 | 16  | 19                  | 19 | 19 | 16 | 19         | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19 |
| PN9220E  | 0.4-1.2          | 19                      | 19 | 19 | 16  | 19                  | 19 | 19 | 16 | 19         | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19 |
| PN9320E  | 0.2-1.0          | 19                      | 19 | 19 | 16  | 19                  | 19 | 19 | 16 | 19         | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19        | 19 | 19 | 16 | 19 |

| Actuator | Spring range bar | Standard cage (S) |      |     |    |                   |    |     |    |           |     |     |    |         |    |     |    |           |    |     |    |    |    |     |    | Low noise cage (P1-A1)        |    |    |    |
|----------|------------------|-------------------|------|-----|----|-------------------|----|-----|----|-----------|-----|-----|----|---------|----|-----|----|-----------|----|-----|----|----|----|-----|----|-------------------------------|----|----|----|
|          |                  | DN15-25 (1/2"-1") |      |     |    |                   |    |     |    |           |     |     |    |         |    |     |    |           |    |     |    |    |    |     |    | 2,5-4-6,3-10 (2,9-4,6-7,3-12) |    |    |    |
|          |                  | 4.0 (4.6)         |      |     |    | 4.9-6.3 (5.7-7.3) |    |     |    | 7.2 (8.3) |     |     |    | 10 (12) |    |     |    | 11 (12.7) |    |     |    |    |    |     |    |                               |    |    |    |
| N-P      | H                | B                 | D    | N-P | H  | B                 | D  | N-P | H  | B         | D   | N-P | H  | B       | D  | N-P | H  | B         | D  | N-P | H  | B  | D  | N-P | H  | B                             | D  |    |    |
| PN9126E  | 1.0-2.0          | 19                | 19   | 19  | 16 | 19                | 19 | 19  | 16 | 19        | 19  | 19  | 16 | 19      | 19 | 19  | 16 | 19        | 19 | 19  | 16 | 19 | 19 | 19  | 16 | 19                            | 19 | 19 | 16 |
| PN9123E  | 1.0-2.0          | 19                | 19   | 19  | 16 | 19                | 19 | 19  | 16 | 19        | 19  | 19  | 16 | 19      | 19 | 19  | 16 | 19        | 19 | 19  | 16 | 19 | 19 | 19  | 16 | 19                            | 19 | 19 | 16 |
| PN9220E  | 0.2-1.0          | 19                | 18.1 | 19  | 16 | 19                | 19 | 19  | 16 | 18.3      | 6.6 | 16  | 19 | 19      | 19 | 19  | 16 | 19        | 19 | 19  | 16 | 19 | 19 | 19  | 16 | 19                            | 19 | 19 | 16 |
| PN9220E  | 0.4-1.2          | 19                | 19   | 19  | 16 | 19                | 19 | 19  | 16 | 19        | 19  | 19  | 16 | 19      | 19 | 19  | 16 | 19        | 19 | 19  | 16 | 19 | 19 | 19  | 16 | 19                            | 19 | 19 | 16 |
| PN9320E  | 0.2-1.0          | 19                | 19   | 19  | 16 | 19                | 19 | 19  | 16 | 19        | 19  | 19  | 16 | 19      | 19 | 19  | 16 | 19        | 19 | 19  | 16 | 19 | 19 | 19  | 16 | 19                            | 19 | 19 | 16 |

Maximum differential pressures for Class VI shut-off - Soft Seated (P&C) Spira-trol - DN32-50 (1 1/4"-2") - Flow under - PN9000E

| Actuator | Spring range bar | Standard cage (S)   |      |      |      |           |      |      |      |         |      |      |      |         |      |      |      |                     |      |      |      |         |     |      |   |  |  |  |  |  |
|----------|------------------|---------------------|------|------|------|-----------|------|------|------|---------|------|------|------|---------|------|------|------|---------------------|------|------|------|---------|-----|------|---|--|--|--|--|--|
|          |                  | DN32-50 (1 1/4"-2") |      |      |      |           |      |      |      |         |      |      |      |         |      |      |      |                     |      |      |      |         |     |      |   |  |  |  |  |  |
|          |                  | 4.0 (4.6)           |      |      |      | 6.3 (7.3) |      |      |      | 10 (12) |      |      |      | 16 (18) |      |      |      | 17.5 - 18 (20.2-21) |      |      |      | 25 (29) |     |      |   |  |  |  |  |  |
|          |                  | N-P                 | H    | B    | D    | N-P       | H    | B    | D    | N-P     | H    | B    | D    | N-P     | H    | B    | D    | N-P                 | H    | B    | D    | N-P     | H   | B    | D |  |  |  |  |  |
| PN9126E  | 1.0-2.0          | 6.0                 | 19.0 | 19.0 | 16.0 | 19.0      | 19.0 | 13.8 | 19.0 | 19.0    | 16.0 | 19.0 | 11.1 | 16.0    | 19.0 | 19.0 | 15.6 | 14.3                | 8.2  | 11.7 | 7.1  | 3.8     |     |      |   |  |  |  |  |  |
| PN9123E  | 2.0-4.0          | 6.0                 | 19.0 | 19.0 | 16.0 | 19.0      | 19.0 | 6.2  | 16.0 | 19.0    | 4.8  | 16.0 | 19.0 | 4.8     | 16.0 | 19.0 | 3.3  | 16.0                | 19.0 | 19.0 | 19.0 | 14.4    | 1.2 | 16.0 |   |  |  |  |  |  |
| PN9220E  | 0.2-1.0          | 6.0                 | 19.0 | 17.4 | 16.0 | 19.0      | 8.9  | 16.0 | 14.5 | 4.9     | 10.3 | 11.6 | 3.7  | 8.2     | 8.6  | 2.5  |      | 6.0                 | 4.0  | 0.7  |      |         |     |      |   |  |  |  |  |  |
| PN9220E  | 0.4-1.2          | 6.0                 | 19.0 | 19.0 | 16.0 | 19.0      | 19.0 | 16.0 | 19.0 | 19.0    | 16.0 | 19.0 | 19.0 | 16.0    | 19.0 | 19.0 |      | 16.0                | 19.0 | 16.4 | 16.0 | 11.5    | 8.2 | 10.1 |   |  |  |  |  |  |
| PN9226E  | 1.0-2.0          | 6.0                 |      |      |      |           |      |      |      |         |      |      |      |         |      |      |      |                     |      |      |      |         |     |      |   |  |  |  |  |  |
| PN9320E  | 0.2-1.0          | 4.0                 | 19.0 | 19.0 | 16.0 | 19.0      | 19.0 | 19.0 | 19.0 | 19.0    | 16.0 | 19.0 | 19.0 | 16.0    | 19.0 | 19.0 |      | 16.0                | 19.0 | 15.9 | 16.0 | 11.3    | 8.0 |      |   |  |  |  |  |  |
| PN9320E  | 0.4-1.2          | 4.0                 |      |      |      |           |      |      |      |         |      |      |      |         |      |      |      |                     |      |      |      |         |     |      |   |  |  |  |  |  |

| Actuator | Spring range bar | Standard cage (S)   |      |      |      |      |      |      |      |               |     |      |      |      |     |     |   |         |      |      |     |     |      |   |     |   |   |   |   | Low noise cage<br>P1-P2-P3-A1-A2 |  |  |  |  |
|----------|------------------|---------------------|------|------|------|------|------|------|------|---------------|-----|------|------|------|-----|-----|---|---------|------|------|-----|-----|------|---|-----|---|---|---|---|----------------------------------|--|--|--|--|
|          |                  | DN32-50 (1 1/4"-2") |      |      |      |      |      |      |      |               |     |      |      |      |     |     |   |         |      |      |     |     |      |   |     |   |   |   |   |                                  |  |  |  |  |
|          |                  | 31-36 (36-42)       |      |      |      |      |      |      |      | 46-50 (53-58) |     |      |      |      |     |     |   | All Kvs |      |      |     |     |      |   |     |   |   |   |   |                                  |  |  |  |  |
|          |                  | N-P                 | H    | B    | C    | D    | N-P  | H    | B    | N-P           | H   | B    | C    | D    | N-P | H   | B | C       | D    | N-P  | H   | B   | C    | D | N-P | H | B | C | D |                                  |  |  |  |  |
| PN9126E  | 1.0-2.0          | 6.0                 | 5.5  | 2.8  |      | 4.3  | 3.6  | 1.7  |      | 2.8           | 3.6 | 1.7  |      | 2.8  |     |     |   |         |      |      |     |     |      |   |     |   |   |   |   |                                  |  |  |  |  |
| PN9123E  | 2.0-4.0          | 6.0                 | 13.9 | 11.3 | 0.7  | 12.8 | 9.7  | 7.8  | 0.2  | 8.8           | 9.7 | 7.8  | 0.2  | 8.8  |     |     |   |         |      |      |     |     |      |   |     |   |   |   |   |                                  |  |  |  |  |
| PN9220E  | 0.2-1.0          | 6.0                 | 3.0  | 0.4  |      | 1.9  | 1.9  |      |      | 1.1           | 1.9 |      |      | 1.1  |     |     |   |         |      |      |     |     |      |   |     |   |   |   |   |                                  |  |  |  |  |
| PN9220E  | 0.4-1.2          | 6.0                 | 9.0  | 6.4  |      | 7.9  | 6.1  | 4.3  |      | 5.3           | 6.1 | 4.3  |      | 5.3  |     |     |   |         |      |      |     |     |      |   |     |   |   |   |   |                                  |  |  |  |  |
| PN9226E  | 1.0-2.0          | 6.0                 | 19.0 | 19.0 | 13.8 | 11.1 | 16.0 | 19.0 | 17.1 | 9.5           | 7.7 | 16.0 | 19.0 | 17.1 | 9.5 | 7.7 |   | 16.0    | 19.0 | 17.1 | 9.5 | 7.7 | 16.0 |   |     |   |   |   |   |                                  |  |  |  |  |
| PN9320E  | 0.2-1.0          | 4.0                 | 8.8  | 6.2  |      | 7.7  | 6.0  | 4.1  |      | 5.2           | 6.0 | 4.1  |      | 5.2  |     |     |   |         |      |      |     |     |      |   |     |   |   |   |   |                                  |  |  |  |  |
| PN9320E  | 0.4-1.2          | 4.0                 | 8.8  | 6.2  |      | 7.7  | 6.0  | 4.1  |      | 5.2           | 6.0 | 4.1  |      | 5.2  |     |     |   |         |      |      |     |     |      |   |     |   |   |   |   |                                  |  |  |  |  |

**Maximum differential pressures for Class VI shut-off - Soft Seated (P&C) Spira-trol - DN65-100 (2 1/2" -4") - Flow under - PN9000E**

| Actuator | Spring range bar | Standard cage (S) |                          |      |      |                          |     |         |                          |   |     |                          |   |         |                          |   |     |                          |   |                |                          |   |     |                          |   |                           |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |
|----------|------------------|-------------------|--------------------------|------|------|--------------------------|-----|---------|--------------------------|---|-----|--------------------------|---|---------|--------------------------|---|-----|--------------------------|---|----------------|--------------------------|---|-----|--------------------------|---|---------------------------|--------------------------|---|-----|--------------------------|---|-----|--------------------------|---|-----|--------------------------|---|-----|--|---|
|          |                  | 16 (18)           |                          |      |      |                          |     | 25 (29) |                          |   |     |                          |   | 36 (42) |                          |   |     |                          |   | 63-90 (73-104) |                          |   |     |                          |   | 100-115-117 (116-133-135) |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |
|          |                  | N-P               |                          | H    | N-P  |                          | H   | N-P     |                          | B | N-P |                          | C | N-P     |                          | D | N-P |                          | H | N-P            |                          | B | N-P |                          | C | N-P                       |                          | D | N-P |                          | H | N-P |                          | B | N-P |                          | C | N-P |  | D |
|          |                  | Kvs               | Maximum pressure (bar.g) |      | Kvs  | Maximum pressure (bar.g) |     | Kvs     | Maximum pressure (bar.g) |   | Kvs | Maximum pressure (bar.g) |   | Kvs     | Maximum pressure (bar.g) |   | Kvs | Maximum pressure (bar.g) |   | Kvs            | Maximum pressure (bar.g) |   | Kvs | Maximum pressure (bar.g) |   | Kvs                       | Maximum pressure (bar.g) |   | Kvs | Maximum pressure (bar.g) |   | Kvs | Maximum pressure (bar.g) |   | Kvs | Maximum pressure (bar.g) |   |     |  |   |
| PN9230E  | 0.2-1.0          | 6.0               | 7.6                      | 2.6  |      | 1.6                      |     |         |                          |   |     |                          |   |         |                          |   |     |                          |   |                |                          |   |     |                          |   |                           |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |
| PN9230E  | 0.4-1.2          | 6.0               | 19.0                     | 11.1 | 8.6  | 4.1                      |     |         |                          |   |     |                          |   |         |                          |   |     |                          |   |                |                          |   |     |                          |   |                           |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |
| PN9236E  | 1.0-2.0          | 6.0               |                          | 19.0 | 19.0 | 8.0                      | 3.5 | 3.5     |                          |   |     |                          |   |         |                          |   |     |                          |   |                |                          |   |     |                          |   |                           |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |
| PN9233E  | 2.0-4.0          | 6.0               |                          |      |      |                          |     |         |                          |   |     |                          |   |         |                          |   |     |                          |   |                |                          |   |     |                          |   |                           |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |
| PN9330E  | 0.2-1.0          | 4.0               | 19.0                     | 10.7 | 8.4  | 3.9                      |     |         |                          |   |     |                          |   |         |                          |   |     |                          |   |                |                          |   |     |                          |   |                           |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |
| PN9330E  | 0.4-1.2          | 4.0               |                          |      | 19.0 | 15.7                     | 1.7 |         |                          |   |     |                          |   |         |                          |   |     |                          |   |                |                          |   |     |                          |   |                           |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |
| PN9336E  | 1.0-2.0          | 4.0               |                          |      |      |                          |     |         |                          |   |     |                          |   |         |                          |   |     |                          |   |                |                          |   |     |                          |   |                           |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |
| PN9337E  | 2.5-3.5          | 4.0               |                          |      |      |                          |     |         |                          |   |     |                          |   |         |                          |   |     |                          |   |                |                          |   |     |                          |   |                           |                          |   |     |                          |   |     |                          |   |     |                          |   |     |  |   |

| Actuator | Spring range bar | Standard cage (S) |                          |      |      |                          |      |                      |                          |     |     |                          |     |         |                          |     |     |                          |     |       |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |     |
|----------|------------------|-------------------|--------------------------|------|------|--------------------------|------|----------------------|--------------------------|-----|-----|--------------------------|-----|---------|--------------------------|-----|-----|--------------------------|-----|-------|--------------------------|-----|-----|--------------------------|-----|-----|--------------------------|-----|-----|--------------------------|-----|-----|--------------------------|-----|-----|--------------------------|-----|-----|-----|
|          |                  | 160-180 (185-208) |                          |      |      |                          |      | DN65-100 (2 1/2"-4") |                          |     |     |                          |     | DN65-80 |                          |     |     |                          |     | DN100 |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |     |
|          |                  | N-P               |                          | H    | N-P  |                          | B    | N-P                  |                          | C   | N-P |                          | D   | N-P     |                          | H   | N-P |                          | B   | N-P   |                          | C   | N-P |                          | D   | N-P |                          | H   | N-P |                          | B   | N-P |                          | C   | N-P |                          | D   |     |     |
|          |                  | Kvs               | Maximum pressure (bar.g) |      | Kvs  | Maximum pressure (bar.g) |      | Kvs                  | Maximum pressure (bar.g) |     | Kvs | Maximum pressure (bar.g) |     | Kvs     | Maximum pressure (bar.g) |     | Kvs | Maximum pressure (bar.g) |     | Kvs   | Maximum pressure (bar.g) |     | Kvs | Maximum pressure (bar.g) |     | Kvs | Maximum pressure (bar.g) |     | Kvs | Maximum pressure (bar.g) |     | Kvs | Maximum pressure (bar.g) |     | Kvs | Maximum pressure (bar.g) |     |     |     |
| PN9230E  | 0.2-1.0          | 6.0               |                          |      |      |                          |      |                      |                          |     |     |                          |     |         |                          |     |     |                          |     |       |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |     |
| PN9230E  | 0.4-1.2          | 6.0               | 0.9                      | 0.1  |      |                          |      |                      |                          |     |     |                          |     |         |                          |     |     |                          |     |       |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |     |
| PN9236E  | 1.0-2.0          | 6.0               | 3.7                      | 3.0  | 0.8  | 0.1                      | 0.1  | 0.1                  | 0.1                      | 0.1 | 0.1 | 0.1                      | 0.1 | 0.1     | 0.1                      | 0.1 | 0.1 | 0.1                      | 0.1 | 0.1   | 0.1                      | 0.1 | 0.1 | 0.1                      | 0.1 | 0.1 | 0.1                      | 0.1 | 0.1 | 0.1                      | 0.1 | 0.1 | 0.1                      | 0.1 | 0.1 | 0.1                      | 0.1 | 0.1 | 0.1 |
| PN9126E  | 1.0-2.0          | 6.0               | 8.5                      | 7.8  | 5.6  | 4.9                      | 4.9  | 4.9                  | 4.9                      | 4.9 | 4.9 | 4.9                      | 4.9 | 4.9     | 4.9                      | 4.9 | 4.9 | 4.9                      | 4.9 | 4.9   | 4.9                      | 4.9 | 4.9 | 4.9                      | 4.9 | 4.9 | 4.9                      | 4.9 | 4.9 | 4.9                      | 4.9 | 4.9 | 4.9                      | 4.9 | 4.9 | 4.9                      | 4.9 | 4.9 | 4.9 |
| PN9123E  | 1.0-2.0          | 6.0               | 0.8                      | 0.1  |      |                          |      |                      |                          |     |     |                          |     |         |                          |     |     |                          |     |       |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |     |
| PN9220E  | 0.2-1.0          | 6.0               | 2.7                      | 2.0  |      |                          |      |                      |                          |     |     |                          |     |         |                          |     |     |                          |     |       |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |     |
| PN9220E  | 0.4-1.2          | 6.0               | 8.4                      | 7.7  | 5.4  | 4.7                      | 4.7  | 4.7                  | 4.7                      | 4.7 | 4.7 | 4.7                      | 4.7 | 4.7     | 4.7                      | 4.7 | 4.7 | 4.7                      | 4.7 | 4.7   | 4.7                      | 4.7 | 4.7 | 4.7                      | 4.7 | 4.7 | 4.7                      | 4.7 | 4.7 | 4.7                      | 4.7 | 4.7 | 4.7                      | 4.7 | 4.7 | 4.7                      | 4.7 | 4.7 |     |
| PN9320E  | 0.2-1.0          | 4.0               | 19.0                     | 19.0 | 19.0 | 18.9                     | 16.0 |                      |                          |     |     |                          |     |         |                          |     |     |                          |     |       |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |                          |     |     |     |



**Maximum differential pressures for Class VI shut-off - Soft Seated (G&K) Spira-trol -  
DN15-25 (½"-1") - Flow under - PN9000R**

| Actuator | Spring range bar         | Standard cage (S)       |         |     |                     |     |     |            |     |     |           |     |     |           |     |     |           |     |     |     |     |     |     |     |     |     |
|----------|--------------------------|-------------------------|---------|-----|---------------------|-----|-----|------------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|          |                          | DN15-25 (½"-1")         |         |     |                     |     |     |            |     |     |           |     |     |           |     |     |           |     |     |     |     |     |     |     |     |     |
|          |                          | 0.01-0.07 (0.012-0.081) |         |     | 0.1-0.2 (0.12-0.23) |     |     | 0.5 (0.58) |     |     | 1.0 (1.2) |     |     | 1.6 (1.8) |     |     | 2.5 (2.9) |     |     |     |     |     |     |     |     |     |
| Kvs (Cv) | Maximum pressure (bar g) | N-P                     | H       | B   | C                   | D   | N-P | H          | B   | C   | D         | N-P | H   | B         | C   | D   | N-P       | H   | B   | C   | D   | N-P | H   | B   | C   | D   |
|          |                          | PN9120R                 | 0.2-1.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9120R  | 0.4-1.2                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9125R  | 0.4-2.0                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9126R  | 1.0-2.0                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9123R  | 2.0-4.0                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9220R  | 0.2-1.0                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9220R  | 0.4-1.2                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9226R  | 1.0-2.0                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9223R  | 2.0-4.0                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9320R  | 0.2-1.0                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9320R  | 0.4-1.2                  | 7.0                     | 7.0     | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0        | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |

| Actuator | Spring range bar         | Standard cage (S) |         |     |                   |     |     |           |     |     |         |     |     | Low noise cage (P1) |     |     |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|----------|--------------------------|-------------------|---------|-----|-------------------|-----|-----|-----------|-----|-----|---------|-----|-----|---------------------|-----|-----|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|          |                          | DN15-25 (½"-1")   |         |     |                   |     |     |           |     |     |         |     |     | DN15-25 (½"-1")     |     |     |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|          |                          | 4.0 (4.6)         |         |     | 4.9-6.3 (5.7-7.3) |     |     | 7.2 (8.3) |     |     | 10 (12) |     |     | 11 (12.7)           |     |     | 2,5-4-6,3-10 (2,9-4-6-7-3-12) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Kvs (Cv) | Maximum pressure (bar g) | N-P               | H       | B   | C                 | D   | N-P | H         | B   | C   | D       | N-P | H   | B                   | C   | D   | N-P                           | H   | B   | C   | D   | N-P | H   | B   | C   | D   | N-P | H   | B   | C   | D   |
|          |                          | PN9120R           | 0.2-1.0 | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9120R  | 0.4-1.2                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9125R  | 0.4-2.0                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9126R  | 1.0-2.0                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9123R  | 2.0-4.0                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9220R  | 0.2-1.0                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9220R  | 0.4-1.2                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9226R  | 1.0-2.0                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9223R  | 2.0-4.0                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9320R  | 0.2-1.0                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9320R  | 0.4-1.2                  | 7.0               | 7.0     | 7.0 | 7.0               | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0                           | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |





**Maximum differential pressures for Class VI shut-off - Soft Seated (G&K) Spira-trol -  
DN32-50 (1 1/4"-2") - Flow under - PN9000R**

| Actuator | Spring range bar | Standard cage (S) |     |     |     |     |     |           |     |     |     |     |     |         |     |     |     |     |     |         |     |     |     |     |     |                     |     |     |     |     |     |         |     |     |     |     |     |     |
|----------|------------------|-------------------|-----|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|---------------------|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|
|          |                  | 4.0 (4.6)         |     |     |     |     |     | 6.3 (7.3) |     |     |     |     |     | 10 (12) |     |     |     |     |     | 16 (18) |     |     |     |     |     | 17.5 - 18 (20.2-21) |     |     |     |     |     | 25 (29) |     |     |     |     |     |     |
|          |                  | N-P               | H   | B   | C   | D   | N-P | H         | B   | C   | D   | N-P | H   | B       | C   | D   | N-P | H   | B   | C       | D   | N-P | H   | B   | C   | D                   | N-P | H   | B   | C   | D   | N-P     | H   | B   | C   | D   |     |     |
| PN9120R  | 0.2-1.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9120R  | 0.4-1.2          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9125R  | 0.4-2.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9126R  | 1.0-2.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9123R  | 2.0-4.0          | 7.0               | 7.0 | 7.0 | 0.1 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9220R  | 0.2-1.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9220R  | 0.4-1.2          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9226R  | 1.0-2.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9223R  | 2.0-4.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9320R  | 0.2-1.0          | 2.7               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9320R  | 0.4-1.2          | 2.7               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |

| Actuator | Spring range bar | Standard cage (S) |     |     |     |     |     |     |     |     |     |     |     |                     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Low noise cage (P1) |     |     |     |     |     |         |  |  |  |  |  |
|----------|------------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------|-----|-----|-----|-----|-----|---------|--|--|--|--|--|
|          |                  | 31-36 (36-42)     |     |     |     |     |     |     |     |     |     |     |     | DN32-50 (1 1/4"-2") |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 46-50 (53-58)       |     |     |     |     |     | All Kvs |  |  |  |  |  |
|          |                  | N-P               | H   | B   | C   | D   | N-P | H   | B   | C   | D   | N-P | H   | B                   | C   | D   | N-P | H   | B   | C   | D   | N-P | H   | B   | C   | D   | N-P | H   | B   | C   | D   | N-P                 | H   | B   | C   | D   |     |         |  |  |  |  |  |
| PN9120R  | 0.2-1.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9120R  | 0.4-1.2          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9125R  | 0.4-2.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9126R  | 1.0-2.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9123R  | 2.0-4.0          | 7.0               | 7.0 | 2.3 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9220R  | 0.2-1.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9220R  | 0.4-1.2          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9226R  | 1.0-2.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9223R  | 2.0-4.0          | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9320R  | 0.2-1.0          | 2.7               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |
| PN9320R  | 0.4-1.2          | 2.7               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     |  |  |  |  |  |



**Maximum differential pressures for Class VI shut-off - Soft Seated (G&K) Spira-trol -  
DN65-100 (2 1/2" -4") - Flow under PN9000R**

| Actuator         |          | Standard cage (S)        |     |     |     |     |     |         |     |     |     |     |     |         |     |     |     |     |                   |     |     |     |     |                           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------------|----------|--------------------------|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|-------------------|-----|-----|-----|-----|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                  |          | DN65-100 (2 1/2"-4")     |     |     |     |     |     |         |     |     |     |     |     |         |     |     |     |     | 160-180 (185-208) |     |     |     |     |                           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|                  |          | 16 (18)                  |     |     |     |     |     | 25 (29) |     |     |     |     |     | 36 (42) |     |     |     |     | 63-90 (73-104)    |     |     |     |     | 100-115-117 (116-133-135) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Spring range bar | Kvs (Cv) | Maximum pressure (bar g) | N-P | H   | B   | C   | D   | N-P     | H   | B   | C   | D   | N-P | H       | B   | C   | D   | N-P | H                 | B   | C   | D   | N-P | H                         | B   | C   | D   | N-P | H   | B   | C   | D   | N-P | H   | B   | C   | D   |     |     |     |
| PN9230R          | 0.2-1.0  | 6.0                      | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |     |
| PN9230R          | 0.4-1.2  | 6.0                      | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9236R          | 1.0-2.0  | 6.0                      | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9233R          | 2.0-4.0  | 6.0                      | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |
| PN9330R          | 0.2-1.0  | 2.7                      | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9330R          | 0.4-1.2  | 2.7                      | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |     |
| PN9336R          | 1.0-2.0  | 2.7                      | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0               | 7.0 | 7.0 | 7.0 | 7.0 | 7.0                       | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |

| Actuator         |          | Low Noise Cage (P1-A1-P2-A2-P3) |     |     |     |     |     |     |     |     |         |     |     |     |     |     |     |  |
|------------------|----------|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|---------|-----|-----|-----|-----|-----|-----|--|
|                  |          | DN100                           |     |     |     |     |     |     |     |     |         |     |     |     |     |     |     |  |
|                  |          | DN65-80                         |     |     |     |     |     |     |     |     | All Kvs |     |     |     |     |     |     |  |
| Spring range bar | Kvs (Cv) | Maximum pressure (bar g)        | N-P | H   | B   | C   | D   | N-P | H   | B   | C       | D   | N-P | H   | B   | C   | D   |  |
| PN9230R          | 0.2-1.0  | 6.0                             | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |  |
| PN9230R          | 0.4-1.2  | 6.0                             | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |  |
| PN9236R          | 1.0-2.0  | 6.0                             | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |  |
| PN9233R          | 2.0-4.0  | 6.0                             | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |  |
| PN9330R          | 0.2-1.0  | 2.7                             | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |  |
| PN9330R          | 0.4-1.2  | 2.7                             | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |  |
| PN9336R          | 1.0-2.0  | 2.7                             | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0     | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 |  |

**Maximum differential pressures for Class IV shut-off - Hard Facing (W) Spira-trol -  
DN15-25 (1/2"-1") - Flow under - PN9000E**

| Actuator  | Spring range bar | Standard cage (S)        |       |      |       |       |      |       |                     |      |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
|-----------|------------------|--------------------------|-------|------|-------|-------|------|-------|---------------------|------|------|---|-----|---|---|------------|---|-----|---|---|---|---|-----------|---|---|---|---|-----|---|-----------|---|---|--|--|--|--|-----------|--|--|--|--|
|           |                  | DN15-25 (1/2"-1")        |       |      |       |       |      |       |                     |      |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
|           |                  | 0.01-0.07 (0.012-0.08*1) |       |      |       |       |      |       | 0.1-0.2 (0.12-0.23) |      |      |   |     |   |   | 0.5 (0.58) |   |     |   |   |   |   | 1.0 (1.2) |   |   |   |   |     |   | 1.6 (1.8) |   |   |  |  |  |  | 2.5 (2.9) |  |  |  |  |
| Cage Type | Valve size       | Kvs (Cv)                 | N-P   | H    | B     | C     | D    | N-P   | H                   | B    | C    | D | N-P | H | B | C          | D | N-P | H | B | C | D | N-P       | H | B | C | D | N-P | H | B         | C | D |  |  |  |  |           |  |  |  |  |
| PN9120E   | 0.2-1.0          | 6.0                      | 92.8  |      |       |       |      |       |                     |      |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9120E   | 0.4-1.2          | 6.0                      | 103.4 | 16.0 | 103.4 |       | 16.0 | 64.6  |                     |      |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9125E   | 0.4-2.0          | 6.0                      | 103.4 | 16.0 | 103.4 |       | 16.0 | 64.6  |                     |      |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9126E   | 1.0-2.0          | 6.0                      | 103.4 | 16.0 | 103.4 | 103.4 | 16.0 | 103.4 | 103.4               |      |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9123E   | 2.0-4.0          | 6.0                      | 103.4 | 16.0 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4               | 25.0 |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9220E   | 0.2-1.0          | 6.0                      | 103.4 | 16.0 | 103.4 | 103.4 | 16.0 | 103.4 | 62.6                |      |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9220E   | 0.4-1.2          | 6.0                      | 103.4 | 16.0 | 103.4 | 103.4 | 16.0 | 103.4 | 103.4               |      |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9226E   | 1.0-2.0          | 6.0                      | 103.4 | 16.0 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4               | 25.0 | 25.0 |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9223E   | 2.0-4.0          | 6.0                      | 103.4 | 16.0 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4               | 25.0 | 25.0 |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9320E   | 0.2-1.0          | 4.0                      | 103.4 | 16.0 | 103.4 | 103.4 | 16.0 | 103.4 | 103.4               |      |      |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |
| PN9320E   | 0.4-1.2          | 4.0                      | 103.4 | 16.0 | 103.4 | 25.0  | 16.0 | 103.4 | 103.4               | 25.0 | 25.0 |   |     |   |   |            |   |     |   |   |   |   |           |   |   |   |   |     |   |           |   |   |  |  |  |  |           |  |  |  |  |

| Actuator  | Spring range bar | Standard cage (S) |       |       |      |      |       |      |                   |       |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
|-----------|------------------|-------------------|-------|-------|------|------|-------|------|-------------------|-------|------|------|------|-------|-------|-----------|------|------|-------|-------|------|------|---------|-------|-------|------|------|------|-------|-----------|------|------|------|-------|-------|------|-------------------------------|------|--|--|--|
|           |                  | DN15-25 (1/2"-1") |       |       |      |      |       |      |                   |       |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
|           |                  | 4.0 (4.6)         |       |       |      |      |       |      | 4.9-6.3 (5.7-7.3) |       |      |      |      |       |       | 7.2 (8.3) |      |      |       |       |      |      | 10 (12) |       |       |      |      |      |       | 11 (12.7) |      |      |      |       |       |      | 2.5-4.6,3-10 (2.9-4.6-7.3-12) |      |  |  |  |
| Cage Type | Valve size       | Kvs (Cv)          | N-P   | H     | B    | C    | D     | N-P  | H                 | B     | C    | D    | N-P  | H     | B     | C         | D    | N-P  | H     | B     | C    | D    | N-P     | H     | B     | C    | D    | N-P  | H     | B         | C    | D    | N-P  | H     | B     | C    | D                             |      |  |  |  |
| PN9120E   | 0.2-1.0          | 6.0               |       |       |      |      |       |      |                   |       |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
| PN9120E   | 0.4-1.2          | 6.0               |       |       |      |      |       |      |                   |       |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
| PN9125E   | 0.4-2.0          | 6.0               |       |       |      |      |       |      |                   |       |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
| PN9126E   | 1.0-2.0          | 6.0               | 42.7  | 16.2  | 16.0 | 17.8 | 2.9   | 11.3 | 11.6              |       |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
| PN9123E   | 2.0-4.0          | 6.0               | 103.4 | 101.1 | 16.0 | 65.5 | 50.6  | 16.0 | 49.3              | 37.5  |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
| PN9220E   | 0.2-1.0          | 6.0               | 17.9  |       | 6.5  | 3.8  |       |      | 0.6               |       |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
| PN9220E   | 0.4-1.2          | 6.0               | 78.1  | 51.5  | 16.0 | 37.7 | 22.7  | 16.0 | 27.3              | 15.5  |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
| PN9226E   | 1.0-2.0          | 6.0               | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 25.0 | 103.4             | 95.7  | 25.0 | 25.0 | 16.0 | 85.0  | 75.5  | 25.0      | 25.0 | 16.0 | 67.2  | 59.5  | 20.7 | 16.0 | 67.2    | 59.5  | 20.7  | 16.0 | 67.2 | 59.5 | 20.7  | 16.0      | 67.2 | 59.5 | 20.7 | 16.0  | 67.2  | 59.5 | 20.7                          | 16.0 |  |  |  |
| PN9223E   | 2.0-4.0          | 6.0               | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 25.0 | 103.4             | 103.4 | 25.0 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0      | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 25.0 | 16.0 | 103.4 | 103.4     | 25.0 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 25.0                          | 16.0 |  |  |  |
| PN9320E   | 0.2-1.0          | 4.0               | 76.3  | 49.8  | 16.0 | 36.7 | 21.8  | 16.0 | 26.5              | 14.7  |      |      |      |       |       |           |      |      |       |       |      |      |         |       |       |      |      |      |       |           |      |      |      |       |       |      |                               |      |  |  |  |
| PN9320E   | 0.4-1.2          | 4.0               | 103.4 | 103.4 | 25.0 | 16.0 | 103.3 | 88.4 | 79.2              | 67.4  | 20.2 | 8.4  | 16.0 | 62.1  | 52.6  | 14.4      | 4.8  | 16.0 | 48.6  | 40.9  | 9.9  | 2.1  | 16.0    | 48.6  | 40.9  | 9.9  | 2.1  | 16.0 | 48.6  | 40.9      | 9.9  | 2.1  | 16.0 | 48.6  | 40.9  | 9.9  | 2.1                           |      |  |  |  |

**Maximum differential pressures for Class IV shut-off - Hard Facing (W) Spira-trol -  
DN15-25 (1/2"-1") - Flow under - PN9000R**

| Actuator         |                  | Standard cage (S) |                         |          |                          |       |       |           |                     |       |       |       |      |           |            |       |       |      |      |           |           |       |      |      |       |       |           |      |      |       |       |       |           |      |   |   |   |  |
|------------------|------------------|-------------------|-------------------------|----------|--------------------------|-------|-------|-----------|---------------------|-------|-------|-------|------|-----------|------------|-------|-------|------|------|-----------|-----------|-------|------|------|-------|-------|-----------|------|------|-------|-------|-------|-----------|------|---|---|---|--|
|                  |                  | DN15-25 (1/2"-1") |                         |          |                          |       |       |           |                     |       |       |       |      |           |            |       |       |      |      |           |           |       |      |      |       |       |           |      |      |       |       |       |           |      |   |   |   |  |
|                  |                  | 0.5 (0.58)        |                         |          |                          |       |       | 1.0 (1.2) |                     |       |       |       |      | 1.6 (1.8) |            |       |       |      |      | 2.5 (2.9) |           |       |      |      |       |       |           |      |      |       |       |       |           |      |   |   |   |  |
| Spring range bar | Cage Type        | Valve size        | 0.01-0.07 (0.012-0.081) |          |                          |       |       |           | 0.1-0.2 (0.12-0.23) |       |       |       |      |           | 0.5 (0.58) |       |       |      |      |           | 1.0 (1.2) |       |      |      |       |       | 1.6 (1.8) |      |      |       |       |       | 2.5 (2.9) |      |   |   |   |  |
|                  |                  |                   | N-P                     | H        | B                        | C     | D     | N-P       | H                   | B     | C     | D     | N-P  | H         | B          | C     | D     | N-P  | H    | B         | C         | D     | N-P  | H    | B     | C     | D         | N-P  | H    | B     | C     | D     | N-P       | H    | B | C | D |  |
| Actuator         | Spring range bar | Cage Type         | Valve size              | Kvs (Cv) | Maximum pressure (bar g) | N-P   | H     | B         | C                   | D     | N-P   | H     | B    | C         | D          | N-P   | H     | B    | C    | D         | N-P       | H     | B    | C    | D     | N-P   | H         | B    | C    | D     | N-P   | H     | B         | C    | D |   |   |  |
| PN9120R          | 0.2-1.0          |                   |                         | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9120R          | 0.4-1.2          |                   |                         | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9125R          | 0.4-2.0          |                   |                         | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9126R          | 1.0-2.0          |                   |                         | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9123R          | 2.0-4.0          |                   |                         | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9220R          | 0.2-1.0          |                   |                         | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9220R          | 0.4-1.2          |                   |                         | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9226R          | 1.0-2.0          |                   |                         | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9223R          | 2.0-4.0          |                   |                         | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9320R          | 0.2-1.0          |                   |                         | 2.7      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |
| PN9320R          | 0.4-1.2          |                   |                         | 2.7      | 103.4                    | 103.4 | 103.4 | 25.0      | 16.0                | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4      | 103.4 | 103.4 | 25.0 | 16.0 | 103.4     | 103.4     | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0      | 16.0 |   |   |   |  |

| Actuator         |                  | Standard cage (S) |            |          |                          |       |       |         |                   |       |       |       |      |           |           |       |       |      |      |                               |         |       |      |      |       |       |           |      |      |       |       |       |                               |      |   |   |   |  |
|------------------|------------------|-------------------|------------|----------|--------------------------|-------|-------|---------|-------------------|-------|-------|-------|------|-----------|-----------|-------|-------|------|------|-------------------------------|---------|-------|------|------|-------|-------|-----------|------|------|-------|-------|-------|-------------------------------|------|---|---|---|--|
|                  |                  | DN15-25 (1/2"-1") |            |          |                          |       |       |         |                   |       |       |       |      |           |           |       |       |      |      |                               |         |       |      |      |       |       |           |      |      |       |       |       |                               |      |   |   |   |  |
|                  |                  | 7.2 (8.3)         |            |          |                          |       |       | 10 (12) |                   |       |       |       |      | 11 (12.7) |           |       |       |      |      | 2.5-4-6-3-10 (2.9-4-6-7.3-12) |         |       |      |      |       |       |           |      |      |       |       |       |                               |      |   |   |   |  |
| Spring range bar | Cage Type        | Valve size        | 4.0 (4.6)  |          |                          |       |       |         | 4.9-6.3 (5.7-7.3) |       |       |       |      |           | 7.2 (8.3) |       |       |      |      |                               | 10 (12) |       |      |      |       |       | 11 (12.7) |      |      |       |       |       | 2.5-4-6-3-10 (2.9-4-6-7.3-12) |      |   |   |   |  |
|                  |                  |                   | N-P        | H        | B                        | C     | D     | N-P     | H                 | B     | C     | D     | N-P  | H         | B         | C     | D     | N-P  | H    | B                             | C       | D     | N-P  | H    | B     | C     | D         | N-P  | H    | B     | C     | D     | N-P                           | H    | B | C | D |  |
| Actuator         | Spring range bar | Cage Type         | Valve size | Kvs (Cv) | Maximum pressure (bar g) | N-P   | H     | B       | C                 | D     | N-P   | H     | B    | C         | D         | N-P   | H     | B    | C    | D                             | N-P     | H     | B    | C    | D     | N-P   | H         | B    | C    | D     | N-P   | H     | B                             | C    | D |   |   |  |
| PN9120R          | 0.2-1.0          |                   |            | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |
| PN9120R          | 0.4-1.2          |                   |            | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |
| PN9125R          | 0.4-2.0          |                   |            | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |
| PN9126R          | 1.0-2.0          |                   |            | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |
| PN9123R          | 2.0-4.0          |                   |            | 6.0      | 103.4                    | 101.1 | 101.1 | 25.0    | 16.0              | 65.5  | 50.6  | 50.6  | 25.0 | 16.0      | 49.3      | 37.5  | 37.5  | 25.0 | 16.0 | 37.9                          | 28.4    | 28.4  | 25.0 | 16.0 | 29.0  | 21.3  | 21.3      | 25.0 | 16.0 | 29.0  | 21.3  | 21.3  | 25.0                          | 16.0 |   |   |   |  |
| PN9220R          | 0.2-1.0          |                   |            | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |
| PN9220R          | 0.4-1.2          |                   |            | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |
| PN9226R          | 1.0-2.0          |                   |            | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |
| PN9223R          | 2.0-4.0          |                   |            | 6.0      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |
| PN9320R          | 0.2-1.0          |                   |            | 2.7      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |
| PN9320R          | 0.4-1.2          |                   |            | 2.7      | 103.4                    | 103.4 | 103.4 | 25.0    | 16.0              | 103.4 | 103.4 | 103.4 | 25.0 | 16.0      | 103.4     | 103.4 | 103.4 | 25.0 | 16.0 | 103.4                         | 103.4   | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 103.4     | 25.0 | 16.0 | 103.4 | 103.4 | 103.4 | 25.0                          | 16.0 |   |   |   |  |

Maximum differential pressures for Class IV shut-off - Hard Facing (W) Spira-trol -  
DN32-50 (1 1/4"-2") - Flow under - PN9000E

| Actuator | Spring range bar | Standard cage (S)   |       |      |       |           |      |       |       |         |      |      |      |         |       |       |      |                     |      |      |      |      |   |   |     |   |   |   |   |  |  |  |  |
|----------|------------------|---------------------|-------|------|-------|-----------|------|-------|-------|---------|------|------|------|---------|-------|-------|------|---------------------|------|------|------|------|---|---|-----|---|---|---|---|--|--|--|--|
|          |                  | DN32-50 (1 1/4"-2") |       |      |       |           |      |       |       |         |      |      |      | 25 (29) |       |       |      |                     |      |      |      |      |   |   |     |   |   |   |   |  |  |  |  |
|          |                  | 4.0 (4.6)           |       |      |       | 6.3 (7.3) |      |       |       | 10 (12) |      |      |      | 16 (18) |       |       |      | 17.5 - 18 (20.2-21) |      |      |      |      |   |   |     |   |   |   |   |  |  |  |  |
| N-P      | H                | B                   | C     | D    | N-P   | H         | B    | C     | D     | N-P     | H    | B    | C    | D       | N-P   | H     | B    | C                   | D    | N-P  | H    | B    | C | D | N-P | H | B | C | D |  |  |  |  |
| PN9126E  | 1.0-2.0          | 40.8                | 15.1  | 16.0 | 17.8  | 2.9       | 11.3 | 7.4   | 3.2   | 4.4     | 1.0  | 1.5  |      |         |       |       |      |                     |      |      |      |      |   |   |     |   |   |   |   |  |  |  |  |
| PN9123E  | 2.0-4.0          | 103.4               | 97.2  | 16.0 | 65.5  | 50.6      | 16.0 | 37.9  | 28.4  | 16.0    | 29.7 | 21.8 | 16.0 | 21.1    | 15.0  | 16.0  | 8.3  | 5.0                 | 6.8  |      |      |      |   |   |     |   |   |   |   |  |  |  |  |
| PN9220E  | 0.2-1.0          | 16.8                |       | 5.7  | 3.8   |           |      |       |       |         |      |      |      |         |       |       |      |                     |      |      |      |      |   |   |     |   |   |   |   |  |  |  |  |
| PN9220E  | 0.4-1.2          | 75.0                | 49.3  | 16.0 | 37.7  | 22.7      | 16.0 | 20.1  | 10.6  | 16.0    | 15.0 | 7.1  | 11.5 | 9.7     | 3.6   | 7.0   | 2.1  |                     |      |      |      |      |   |   |     |   |   |   |   |  |  |  |  |
| PN9226E  | 1.0-2.0          | 103.4               | 103.4 | 25.0 | 103.4 | 103.4     | 25.0 | 85.0  | 75.5  | 25.0    | 25.0 | 25.0 | 25.0 | 21.3    | 20.7  | 14.6  | 16.0 | 24.6                | 21.3 | 8.1  | 4.8  | 16.0 |   |   |     |   |   |   |   |  |  |  |  |
| PN9223E  | 2.0-4.0          | 103.4               | 103.4 | 25.0 | 103.4 | 103.4     | 25.0 | 103.4 | 103.4 | 25.0    | 25.0 | 25.0 | 25.0 | 25.0    | 103.4 | 103.4 | 25.0 | 62.0                | 58.7 | 25.0 | 16.0 |      |   |   |     |   |   |   |   |  |  |  |  |
| PN9320E  | 0.2-1.0          | 4.0                 | 73.3  | 16.0 | 36.7  | 21.8      | 16.0 | 19.5  | 9.9   | 15.3    | 14.4 | 6.5  | 11.0 | 9.3     | 3.1   | 6.6   | 1.9  |                     |      |      |      |      |   |   |     |   |   |   |   |  |  |  |  |
| PN9320E  | 0.4-1.2          | 103.4               | 103.4 | 25.0 | 103.3 | 88.4      | 25.0 | 62.1  | 52.6  | 14.4    | 4.8  | 10.2 | 2.3  | 16.0    | 36.6  | 30.4  | 6.0  | 13.3                | 0.1  | 15.2 |      |      |   |   |     |   |   |   |   |  |  |  |  |

| Actuator | Spring range bar | Standard cage (S)   |      |      |      |               |      |      |      |      |      |      |      |               |      |      |      |      |      |      |      |   |   |   |     |   |   |   |   | Low noise cage (P1-P2-P3-A1-A2) |   |   |   |   |  |  |  |
|----------|------------------|---------------------|------|------|------|---------------|------|------|------|------|------|------|------|---------------|------|------|------|------|------|------|------|---|---|---|-----|---|---|---|---|---------------------------------|---|---|---|---|--|--|--|
|          |                  | DN32-50 (1 1/4"-2") |      |      |      |               |      |      |      |      |      |      |      | 46-50 (53-58) |      |      |      |      |      |      |      |   |   |   |     |   |   |   |   | All Kvs                         |   |   |   |   |  |  |  |
|          |                  | 31-36 (36-42)       |      |      |      | 46-50 (53-58) |      |      |      |      |      |      |      |               |      |      |      |      |      |      |      |   |   |   |     |   |   |   |   |                                 |   |   |   |   |  |  |  |
| N-P      | H                | B                   | C    | D    | N-P  | H             | B    | C    | D    | N-P  | H    | B    | C    | D             | N-P  | H    | B    | C    | D    | N-P  | H    | B | C | D | N-P | H | B | C | D | N-P                             | H | B | C | D |  |  |  |
| PN9126E  | 1.0-2.0          | 6.0                 |      |      |      |               |      |      |      |      |      |      |      |               |      |      |      |      |      |      |      |   |   |   |     |   |   |   |   |                                 |   |   |   |   |  |  |  |
| PN9123E  | 2.0-4.0          | 6.0                 | 5.5  | 2.9  | 4.4  | 2.6           | 0.7  | 1.7  | 2.6  | 0.7  | 1.7  |      |      |               |      |      |      |      |      |      |      |   |   |   |     |   |   |   |   |                                 |   |   |   |   |  |  |  |
| PN9220E  | 0.2-1.0          | 6.0                 |      |      |      |               |      |      |      |      |      |      |      |               |      |      |      |      |      |      |      |   |   |   |     |   |   |   |   |                                 |   |   |   |   |  |  |  |
| PN9220E  | 0.4-1.2          | 6.0                 | 0.6  |      |      |               |      |      |      |      |      |      |      |               |      |      |      |      |      |      |      |   |   |   |     |   |   |   |   |                                 |   |   |   |   |  |  |  |
| PN9226E  | 1.0-2.0          | 6.0                 | 18.6 | 15.9 | 5.3  | 2.7           | 16.0 | 11.9 | 10.0 | 2.4  | 0.5  | 11.0 | 11.9 | 10.0          | 2.4  | 0.5  | 11.0 |      |      |      |      |   |   |   |     |   |   |   |   |                                 |   |   |   |   |  |  |  |
| PN9223E  | 2.0-4.0          | 6.0                 | 48.6 | 45.9 | 25.0 | 25.0          | 33.2 | 31.4 | 23.8 | 21.9 | 16.0 | 33.2 | 31.4 | 23.8          | 21.9 | 16.0 | 33.2 | 31.4 | 23.8 | 21.9 | 16.0 |   |   |   |     |   |   |   |   |                                 |   |   |   |   |  |  |  |
| PN9320E  | 0.2-1.0          | 4.0                 | 0.4  |      |      |               |      |      |      |      |      |      |      |               |      |      |      |      |      |      |      |   |   |   |     |   |   |   |   |                                 |   |   |   |   |  |  |  |
| PN9320E  | 0.4-1.2          | 4.0                 | 12.2 | 9.6  | 11.1 | 7.3           | 5.4  | 6.5  | 7.3  | 5.4  | 6.5  | 7.3  | 5.4  | 6.5           | 7.3  | 5.4  | 6.5  |      |      |      |      |   |   |   |     |   |   |   |   |                                 |   |   |   |   |  |  |  |

**Maximum differential pressures for Class IV shut-off - Hard Facing (W) Spira-trol -  
DN32-50 (1 1/4"-2") - Flow under PN9000R**

| Actuator  | Spring range bar | Standard cage (S)   |                          |       |      |           |       |       |      |         |       |       |      |         |       |       |      |                     |       |       |      |         |       |       |      |      |       |       |      |      |       |       |      |      |
|-----------|------------------|---------------------|--------------------------|-------|------|-----------|-------|-------|------|---------|-------|-------|------|---------|-------|-------|------|---------------------|-------|-------|------|---------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|
|           |                  | DN32-50 (1 1/4"-2") |                          |       |      |           |       |       |      |         |       |       |      |         |       |       |      |                     |       |       |      |         |       |       |      |      |       |       |      |      |       |       |      |      |
|           |                  | 4.0 (4.6)           |                          |       |      | 6.3 (7.3) |       |       |      | 10 (12) |       |       |      | 16 (18) |       |       |      | 17.5 - 18 (20.2-21) |       |       |      | 25 (29) |       |       |      |      |       |       |      |      |       |       |      |      |
| Cage Type | Valve size       | Kvs (Cv)            | Maximum pressure (bar g) | N-P   | H    | B         | C     | D     | N-P  | H       | B     | C     | D    | N-P     | H     | B     | C    | D                   | N-P   | H     | B    | C       | D     | N-P   | H    | B    | C     | D     |      |      |       |       |      |      |
| PN9120R   | 0.2-1.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9120R   | 0.4-1.2          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9125R   | 0.4-2.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9126R   | 1.0-2.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9123R   | 2.0-4.0          | 6.0                 | 103.4                    | 97.2  | 16.0 | 65.5      | 50.6  | 16.0  | 37.9 | 28.4    | 16.0  | 29.7  | 21.8 | 16.0    | 21.1  | 15.0  | 16.0 | 8.3                 | 5.0   | 16.0  | 8.3  | 5.0     | 16.0  | 8.3   | 5.0  | 16.0 | 8.3   | 5.0   | 16.0 | 8.3  | 5.0   | 16.0  | 8.3  | 5.0  |
| PN9220R   | 0.2-1.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9220R   | 0.4-1.2          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9226R   | 1.0-2.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9223R   | 2.0-4.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9320R   | 0.2-1.0          | 2.7                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9320R   | 0.4-1.2          | 2.7                 | 103.4                    | 103.4 | 25.0 | 16.0      | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |

| Actuator  | Spring range bar | Standard cage (S)   |                          |       |      |               |       |       |      |         |       |       |      |                                 |       |       |      |         |       |       |      |                                 |       |       |      |      |       |       |      |      |       |       |      |      |
|-----------|------------------|---------------------|--------------------------|-------|------|---------------|-------|-------|------|---------|-------|-------|------|---------------------------------|-------|-------|------|---------|-------|-------|------|---------------------------------|-------|-------|------|------|-------|-------|------|------|-------|-------|------|------|
|           |                  | DN32-50 (1 1/4"-2") |                          |       |      |               |       |       |      |         |       |       |      |                                 |       |       |      |         |       |       |      |                                 |       |       |      |      |       |       |      |      |       |       |      |      |
|           |                  | 31-36 (36-42)       |                          |       |      | 46-50 (53-58) |       |       |      | All Kvs |       |       |      | Low noise cage (P1-P2-P3-A1-A2) |       |       |      | All Kvs |       |       |      | Low noise cage (P1-P2-P3-A1-A2) |       |       |      |      |       |       |      |      |       |       |      |      |
| Cage Type | Valve size       | Kvs (Cv)            | Maximum pressure (bar g) | N-P   | H    | B             | C     | D     | N-P  | H       | B     | C     | D    | N-P                             | H     | B     | C    | D       | N-P   | H     | B    | C                               | D     | N-P   | H    | B    | C     | D     | N-P  | H    | B     | C     | D    |      |
| PN9120R   | 0.2-1.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9120R   | 0.4-1.2          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9125R   | 0.4-2.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9126R   | 1.0-2.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9123R   | 2.0-4.0          | 6.0                 | 103.4                    | 97.2  | 16.0 | 65.5          | 50.6  | 16.0  | 37.9 | 28.4    | 16.0  | 29.7  | 21.8 | 16.0                            | 21.1  | 15.0  | 16.0 | 8.3     | 5.0   | 16.0  | 8.3  | 5.0                             | 16.0  | 8.3   | 5.0  | 16.0 | 8.3   | 5.0   | 16.0 | 8.3  | 5.0   | 16.0  | 8.3  | 5.0  |
| PN9220R   | 0.2-1.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9220R   | 0.4-1.2          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9226R   | 1.0-2.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9223R   | 2.0-4.0          | 6.0                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9320R   | 0.2-1.0          | 2.7                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |
| PN9320R   | 0.4-1.2          | 2.7                 | 103.4                    | 103.4 | 25.0 | 16.0          | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0    | 103.4 | 103.4 | 25.0 | 16.0                            | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0 | 16.0 |



Maximum differential pressures for Class IV shut-off - Hard Facing (W) Spira-trol - DN65-100 (2 1/2" -4") - Flow under PN9000E

| Actuator | Spring range bar | Standard cage (S) |       |       |      |      |       |       |         |      |      |      |      |      |      |         |      |      |      |      |      |      |                |      |      |      |      |      |      |                           |      |      |      |      |      |      |                   |  |  |  |  |  |  |
|----------|------------------|-------------------|-------|-------|------|------|-------|-------|---------|------|------|------|------|------|------|---------|------|------|------|------|------|------|----------------|------|------|------|------|------|------|---------------------------|------|------|------|------|------|------|-------------------|--|--|--|--|--|--|
|          |                  | 16 (18)           |       |       |      |      |       |       | 25 (29) |      |      |      |      |      |      | 36 (42) |      |      |      |      |      |      | 63-90 (73-104) |      |      |      |      |      |      | 100-115-117 (116-133-135) |      |      |      |      |      |      | 160-180 (185-208) |  |  |  |  |  |  |
|          |                  | N-P               | H     | B     | C    | D    | N-P   | H     | B       | C    | D    | N-P  | H    | B    | C    | D       | N-P  | H    | B    | C    | D    | N-P  | H              | B    | C    | D    | N-P  | H    | B    | C                         | D    | N-P  | H    | B    | C    | D    |                   |  |  |  |  |  |  |
| PN9230E  | 0.4-1.2          | 8.6               |       |       |      |      | 0.1   |       |         |      |      |      |      |      |      |         |      |      |      |      |      |      |                |      |      |      |      |      |      |                           |      |      |      |      |      |      |                   |  |  |  |  |  |  |
| PN9236E  | 1.0-2.0          | 6.0               | 39.8  | 7.4   |      | 18.1 | 13.6  |       |         |      |      |      |      |      |      |         |      |      |      |      |      |      |                |      |      |      |      |      |      |                           |      |      |      |      |      |      |                   |  |  |  |  |  |  |
| PN9233E  | 2.0-4.0          | 6.0               | 103.4 | 103.4 | 25.0 | 16.0 | 48.1  | 43.6  | 25.0    | 25.0 | 16.0 | 32.9 | 29.7 | 19.7 | 16.5 | 16.0    | 16.9 | 15.0 | 9.4  | 7.6  | 7.6  | 7.6  | 7.6            | 7.6  | 7.6  | 7.6  | 7.6  | 7.6  | 7.6  | 7.6                       | 7.6  | 7.6  | 7.6  | 7.6  | 7.6  | 7.6  | 7.6               |  |  |  |  |  |  |
| PN9330E  | 0.2-1.0          | 4.0               | 8.2   |       |      |      |       |       |         |      |      |      |      |      |      |         |      |      |      |      |      |      |                |      |      |      |      |      |      |                           |      |      |      |      |      |      |                   |  |  |  |  |  |  |
| PN9330E  | 0.4-1.2          | 4.0               | 35.5  | 25.2  |      | 11.8 | 7.3   |       |         |      |      | 7.0  | 3.8  |      |      |         | 2.3  | 0.5  |      |      |      |      |                |      |      |      |      |      |      |                           |      |      |      |      |      |      |                   |  |  |  |  |  |  |
| PN9336E  | 1.0-2.0          | 4.0               | 103.4 | 103.4 | 25.0 | 16.0 | 47.2  | 42.7  | 25.0    | 24.2 | 16.0 | 32.3 | 29.1 | 19.1 | 15.9 | 15.9    | 16.5 | 14.7 | 9.1  | 7.3  | 7.3  | 7.3  | 7.3            | 7.3  | 7.3  | 7.3  | 7.3  | 7.3  | 7.3  | 7.3                       | 7.3  | 7.3  | 7.3  | 7.3  | 7.3  | 7.3  | 7.3               |  |  |  |  |  |  |
| PN9337E  | 2.5-3.5          | 4.0               | 103.4 | 103.4 | 25.0 | 16.0 | 103.4 | 103.4 | 25.0    | 25.0 | 16.0 | 95.5 | 92.3 | 25.0 | 25.0 | 16.0    | 52.0 | 50.2 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0           | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0                      | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 25.0              |  |  |  |  |  |  |

| Actuator | Spring range bar | Low Noise Cage (P1-A1-P2-A2-P3) |      |      |      |      |      |      |         |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------|------------------|---------------------------------|------|------|------|------|------|------|---------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|          |                  | DN65-80                         |      |      |      |      |      |      | DN100   |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                  | All Kvs                         |      |      |      |      |      |      | All Kvs |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9230E  | 0.4-1.2          | 6.0                             |      |      |      |      |      |      |         |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9236E  | 1.0-2.0          | 6.0                             | 0.9  |      |      |      | 0.4  |      |         |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9233E  | 2.0-4.0          | 6.0                             | 8.6  | 5.0  | 3.8  | 3.8  | 5.2  | 4.5  | 2.2     | 1.5  | 1.5  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9330E  | 0.2-1.0          | 4.0                             |      |      |      |      |      |      |         |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9330E  | 0.4-1.2          | 4.0                             | 0.4  |      |      |      |      |      |         |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9336E  | 1.0-2.0          | 4.0                             | 9.5  | 8.3  | 4.7  | 3.6  | 5.0  | 4.3  | 2.1     | 1.3  | 1.3  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PN9337E  | 2.5-3.5          | 4.0                             | 32.2 | 31.1 | 25.0 | 25.0 | 16.0 | 18.5 | 16.2    | 15.5 | 15.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

# Maximum differential pressures for Class IV shut-off - Hard Facing (W) Spira-trol - DN65-100 (2 1/2" - 4") - Flow under - PN9000R

| Actuator  |            | Standard cage (S)    |                          |       |      |      |      |      |         |       |      |      |      |      |      |                   |      |      |      |      |      |      |                |      |      |      |      |      |      |                           |      |      |      |      |
|-----------|------------|----------------------|--------------------------|-------|------|------|------|------|---------|-------|------|------|------|------|------|-------------------|------|------|------|------|------|------|----------------|------|------|------|------|------|------|---------------------------|------|------|------|------|
|           |            | DN65-100 (2 1/2"-4") |                          |       |      |      |      |      |         |       |      |      |      |      |      | 160-180 (185-208) |      |      |      |      |      |      |                |      |      |      |      |      |      |                           |      |      |      |      |
|           |            | 16 (18)              |                          |       |      |      |      |      | 25 (29) |       |      |      |      |      |      | 36 (42)           |      |      |      |      |      |      | 63-90 (73-104) |      |      |      |      |      |      | 100-115-117 (116-133-135) |      |      |      |      |
| Cage Type | Valve size | Kvs (Cv)             | Maximum pressure (bar g) | N-P   | H    | B    | C    | D    | N-P     | H     | B    | C    | D    | N-P  | H    | B                 | C    | D    | N-P  | H    | B    | C    | D              | N-P  | H    | B    | C    | D    | N-P  | H                         | B    | C    | D    |      |
| PN9230R   | 0.2-1.0    | 6.0                  | 103.4                    | 103.4 | 25.0 | 25.0 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 25.0 | 16.0 | 97.1 | 93.9 | 25.0              | 25.0 | 25.0 | 16.0 | 52.9 | 51.1 | 25.0 | 25.0           | 16.0 | 32.8 | 31.7 | 25.0 | 25.0 | 25.0 | 16.0                      | 19.6 | 18.8 | 16.6 | 15.9 |
| PN9230R   | 0.4-1.2    | 6.0                  | 103.4                    | 103.4 | 25.0 | 25.0 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 25.0 | 16.0 | 92.8 | 89.6 | 25.0              | 25.0 | 25.0 | 16.0 | 50.5 | 48.7 | 25.0 | 25.0           | 16.0 | 31.3 | 30.1 | 25.0 | 25.0 | 25.0 | 16.0                      | 18.6 | 17.9 | 15.6 | 14.9 |
| PN9236R   | 1.0-2.0    | 6.0                  | 103.4                    | 103.4 | 25.0 | 25.0 | 25.0 | 16.0 | 103.4   | 103.4 | 25.0 | 25.0 | 16.0 | 75.7 | 72.5 | 25.0              | 25.0 | 25.0 | 16.0 | 40.9 | 39.1 | 25.0 | 25.0           | 16.0 | 25.1 | 24.0 | 20.4 | 19.2 | 16.0 | 14.8                      | 14.0 | 11.8 | 11.1 |      |
| PN9233R   | 2.0-4.0    | 6.0                  | 103.4                    | 103.4 | 25.0 | 25.0 | 25.0 | 16.0 | 48.1    | 43.6  | 25.0 | 25.0 | 16.0 | 32.9 | 29.7 | 19.7              | 16.5 | 16.0 | 16.0 | 16.9 | 15.0 | 9.4  | 7.6            | 7.6  | 9.7  | 8.6  | 5.0  | 3.8  | 3.8  | 5.2                       | 4.5  | 2.2  | 1.5  |      |
| PN9330R   | 0.2-1.0    | 2.7                  | 103.4                    | 103.4 | 25.0 | 25.0 | 25.0 | 16.0 | 88.6    | 84.1  | 25.0 | 25.0 | 16.0 | 61.8 | 58.6 | 25.0              | 25.0 | 25.0 | 16.0 | 33.1 | 31.3 | 25.0 | 23.9           | 16.0 | 20.1 | 19.0 | 15.4 | 14.2 | 14.2 | 11.6                      | 10.9 | 8.7  | 8.0  |      |
| PN9330R   | 0.4-1.2    | 2.7                  | 103.4                    | 103.4 | 25.0 | 25.0 | 25.0 | 16.0 | 76.8    | 72.3  | 25.0 | 25.0 | 16.0 | 53.4 | 50.2 | 25.0              | 25.0 | 25.0 | 16.0 | 28.3 | 26.5 | 20.9 | 19.1           | 16.0 | 17.1 | 15.9 | 12.3 | 11.2 | 11.2 | 9.8                       | 9.0  | 6.8  | 6.1  |      |
| PN9336R   | 1.0-2.0    | 2.7                  | 76.5                     | 66.1  | 25.0 | 23.3 | 16.0 | 29.5 | 25.0    | 11.0  | 6.5  | 6.5  | 6.5  | 19.7 | 16.5 | 6.5               | 3.2  | 3.2  | 3.2  | 9.4  | 7.6  | 2.0  | 0.2            | 0.2  | 4.9  | 3.8  | 0.2  | 2.2  | 1.5  |                           |      |      |      |      |

| Actuator  |            | Low Noise Cage (P1-A1-P2-A2-P3) |                          |      |      |      |      |      |         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------|------------|---------------------------------|--------------------------|------|------|------|------|------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|           |            | DN65-80                         |                          |      |      |      |      |      | DN100   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|           |            | All Kvs                         |                          |      |      |      |      |      | All Kvs |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Cage Type | Valve size | Kvs (Cv)                        | Maximum pressure (bar g) | N-P  | H    | B    | C    | D    | N-P     | H    | B    | C    | D    | N-P  | H    | B    | C    | D    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| PN9230R   | 0.2-1.0    | 6.0                             | 31.7                     | 31.7 | 25.0 | 25.0 | 25.0 | 16.0 | 19.6    | 18.8 | 16.6 | 15.9 | 15.9 | 32.8 | 31.7 | 25.0 | 25.0 | 25.0 | 16.0 | 19.6 | 18.8 | 16.6 | 15.9 | 15.9 | 31.3 | 30.1 | 25.0 | 25.0 | 25.0 | 16.0 | 18.6 | 17.9 | 15.6 | 14.9 | 14.9 |
| PN9230R   | 0.4-1.2    | 6.0                             | 25.1                     | 24.0 | 20.4 | 19.2 | 16.0 | 14.8 | 14.8    | 14.0 | 11.8 | 11.1 | 11.1 | 25.1 | 24.0 | 20.4 | 19.2 | 16.0 | 14.8 | 14.8 | 14.0 | 11.8 | 11.1 | 11.1 | 9.7  | 8.6  | 5.0  | 3.8  | 3.8  | 5.2  | 4.5  | 2.2  | 1.5  | 1.5  |      |
| PN9236R   | 1.0-2.0    | 6.0                             | 20.1                     | 19.0 | 15.4 | 14.2 | 14.2 | 14.2 | 11.6    | 10.9 | 8.7  | 8.0  | 8.0  | 20.1 | 19.0 | 15.4 | 14.2 | 14.2 | 11.6 | 11.6 | 10.9 | 8.7  | 8.0  | 8.0  | 17.1 | 15.9 | 12.3 | 11.2 | 11.2 | 9.8  | 9.0  | 6.8  | 6.1  | 6.1  |      |
| PN9233R   | 2.0-4.0    | 6.0                             | 4.9                      | 3.8  | 0.2  | 2.2  | 1.5  |      | 2.2     | 1.5  |      |      |      | 4.9  | 3.8  | 0.2  | 2.2  | 1.5  |      | 2.2  | 1.5  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| PN9330R   | 0.2-1.0    | 2.7                             | 20.1                     | 19.0 | 15.4 | 14.2 | 14.2 | 14.2 | 11.6    | 10.9 | 8.7  | 8.0  | 8.0  | 17.1 | 15.9 | 12.3 | 11.2 | 11.2 | 9.8  | 9.0  | 6.8  | 6.1  | 6.1  | 6.1  | 17.1 | 15.9 | 12.3 | 11.2 | 11.2 | 9.8  | 9.0  | 6.8  | 6.1  | 6.1  |      |
| PN9330R   | 0.4-1.2    | 2.7                             | 76.5                     | 66.1 | 25.0 | 23.3 | 16.0 | 29.5 | 25.0    | 11.0 | 6.5  | 6.5  | 6.5  | 19.7 | 16.5 | 6.5  | 3.2  | 3.2  | 3.2  | 9.4  | 7.6  | 2.0  | 0.2  | 0.2  | 4.9  | 3.8  | 0.2  | 2.2  | 1.5  |      |      |      |      |      |      |
| PN9336R   | 1.0-2.0    | 2.7                             | 4.9                      | 3.8  | 0.2  | 2.2  | 1.5  |      | 2.2     | 1.5  |      |      |      | 4.9  | 3.8  | 0.2  | 2.2  | 1.5  |      | 2.2  | 1.5  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

## PN9000 series selection guide:

Before making your PN9000 series selection please reference pages 6 to 25 - Sizing data

### How to use the sizing data:

The tables supply guidance as to the sizing of the PN9000 when it is used on a SPIRA-TROL control valve.

### Two conditions are illustrated in tabular form:

**Class IV shut-off** - Providing shut-off of the valve to the requirements of BS 5793-4 (IEC 60534-4) class IV.

**Class VI shut-off** - Providing shut-off of the valve to the requirements of BS 5793-4 (IEC 60534-4) class VI.

### To select a suitable actuator:

- Identify the column containing the valve and gland material selected.
- Identify the maximum operating pressure condition, including any transient pressures likely to occur, within the selected column.
- Read back to the left hand side of the table to identify the suitable actuator for the application.

For conditions outside of those illustrated please contact Spirax Sarco.

|                                |   |            |
|--------------------------------|---|------------|
| <b>Type</b>                    | <b>PN</b> = Polyester powder coated (standard)<br><b>PNP</b> = Electroless nickle plated  | <b>PNP</b> |
| <b>Series</b>                  | <b>9</b> = 9000 series  | <b>9</b>   |
| <b>Actuator size</b>           | <b>1</b> = 100 cm <sup>2</sup><br><b>2</b> = 340 cm <sup>2</sup><br><b>3</b> = 670 cm <sup>2</sup>  | <b>3</b>   |
| <b>Valve travel</b>            | <b>2</b> = 20 mm<br><b>3</b> = 30 mm  | <b>3</b>   |
| <b>Spring rating</b>           | <b>0</b> = 0.2 to 1.0 bar (option for 0.4 to 1.2 bar)<br><b>3</b> = 2.0 to 4.0 bar<br><b>5</b> = 0.4 to 2.0 bar (PN9100 series only)<br><b>6</b> = 1.0 to 2.0 bar<br><b>7</b> = 2.5 to 3.5 bar (PN933_ series only) | <b>7</b>   |
| <b>Spring action</b>           | <b>E</b> = Spring-extend<br><b>R</b> = Spring-retract   | <b>E</b>   |
| <b>Yoke type (DN15 - DN50)</b> | <b>Blank</b> = Spira-trol™ K and L Series (M34)<br><b>B</b> = Spira-trol™ J Series (M50)  |            |
| <b>Manual override</b>         | <b>H</b> = Handwheel (optional)   |            |
| <b>Stainless steel bolting</b> | <b>S</b> = Stainless steel bolting (optional)   |            |
| <b>Fast Speed</b>              | <b>F</b> = version with the higher capacity of speed (possible only PN92_ and PN93_)  |            |

### How to order / selection example:

1 off Spirax Sarco PNP9337E pneumatic actuator.

## Fast speed version

Fast speed versions are available for PN92xx and PN93xx. The fast speed version is a modified version of the existing PN but it also need to have the right pipe diameter of the air inlet as an example: **DN65 PTSUSS + PN9320 air inlet= 1/8" without**

|          | Time to close | Time to open |
|----------|---------------|--------------|
| Standard | 2.5s          | 5.1s         |
| Fast     | 1.4s          | 2.9s         |

Same with 1/4" air inlet.

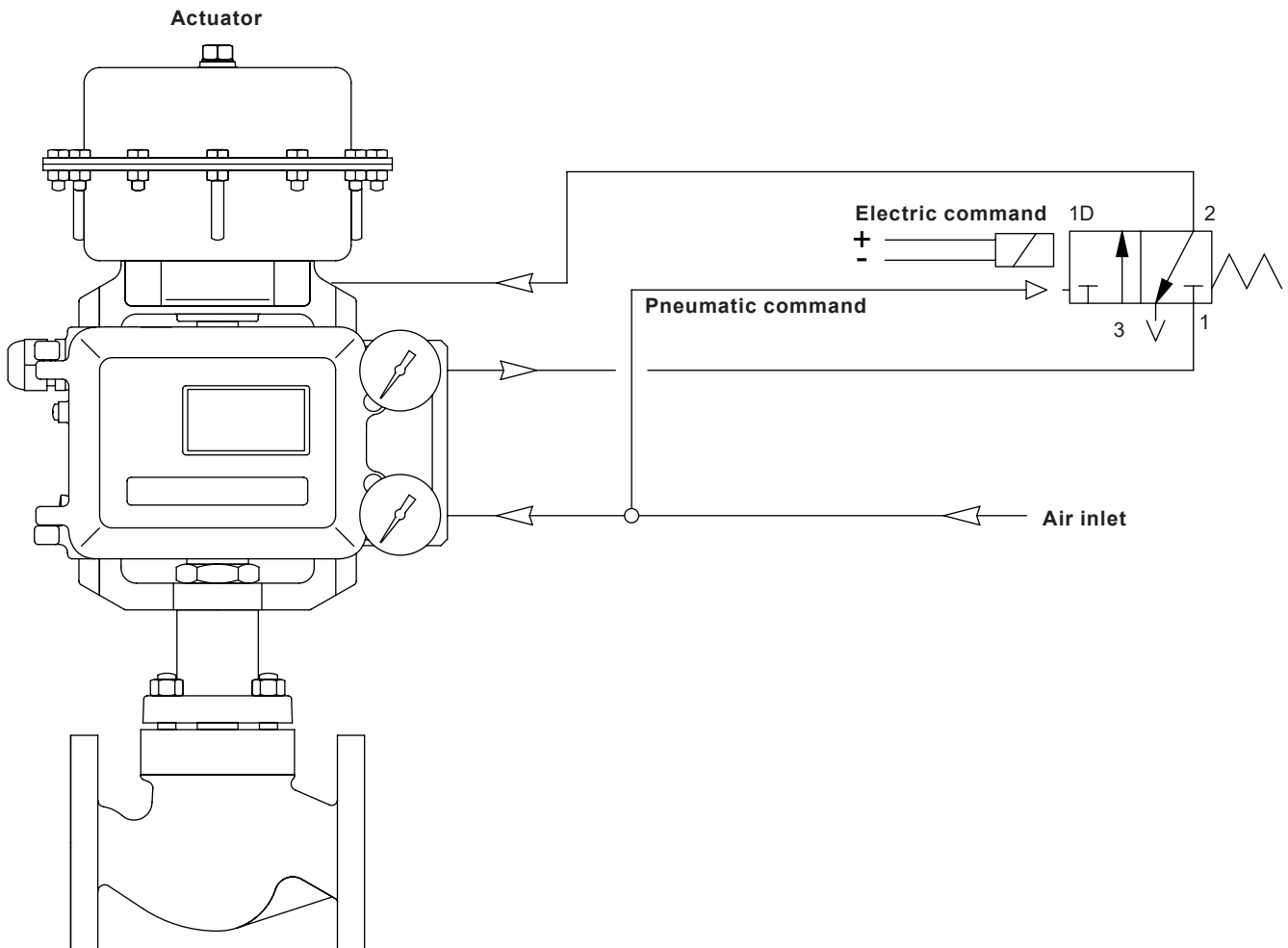
|      |      |      |
|------|------|------|
| Fast | 0.8s | 1.5s |
|------|------|------|

With a positioner, the fastest time to close/open will be limited by itself.

Same with 1/4" air inlet SP500.

|      |      |      |
|------|------|------|
| Fast | 1.4s | 2.9s |
|------|------|------|

For fail safe fast speed function, the below lay at could be used to shortcut the positioner.



## Spare parts

The only spares available are clearly indicated below and are common for both spring-extend and spring-retract versions.

### Available spares

|   |                    |
|---|--------------------|
| Stem seal kit   | 17, 18, 30         |
| Diaphragm kit   | 4, 9               |
| Travel indicator kit                                  | 15, 19, 20         |
| Spring kit  | 5                  |
| Linkage kit (suitable for Mk1 and Spira-trol™ valves) | 10, 13, 14, 26, 27 |

### How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the actuator model.

**Example:** 1 - Stem seal kit for a PN9120 pneumatic actuator.

