



PN9000 Série

Actuadores Pneumáticos

para utilização com as válvulas de controlo Spira-trol™

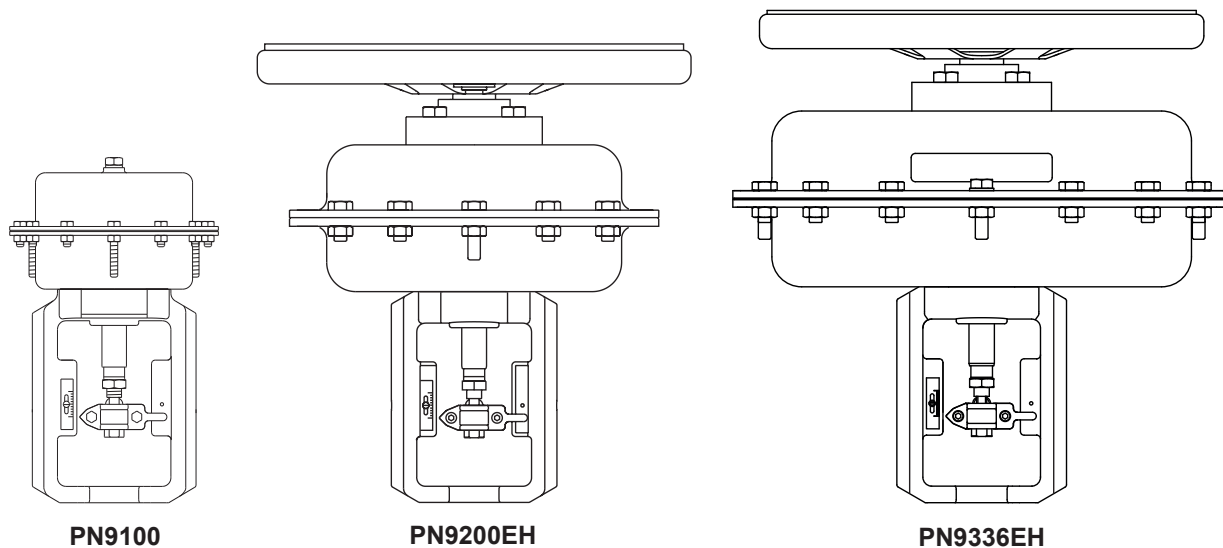
Descrição

Os actuadores de série PN9000 são uma linha compacta de actuadores lineares disponíveis com 3 medidas de diafragma de forma a adequar-se a válvulas a várias pressões diferenciais.

Cada actuador tem um indicador de curso e um diafragma integralmente rolante, que proporciona uma boa linearidade em todo o curso de operação.

| | | |
|--------------------------|----------------------------------|----------------------------------|
| Tipos disponíveis | PN = Standard | Sufixo E = Mola estendida |
| | | Sufixo R = Mola retraída |
| Extra opcional | Manipulo | Sufixo H |
| | Parafusos anti-corrosivos | Sufixo S |
| Velocidade Rápida | | Sufixo F |

Nota importante: As referências feitas ao longo deste documento dizem respeito aos actuadores PN.



Força disponível no actuador em relação à pressão de ar motriz

| Actuador | Área do diafragma (cm ²) | Gama das molas (bar) | | Força das molas E = Fechado / R = Aberto (N) | Força do actuador em relação à pressão do ar motriz (N) | | | | | |
|----------|--------------------------------------|----------------------|-----|---|---|------|-------|-------|-------|-------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 |
| PN91_0_ | 100 | 0,2 | 1,0 | 200 | | 1000 | 2000 | 3000 | 4000 | 5000 |
| PN91_0_ | 100 | 0,4 | 1,2 | 400 | | 800 | 1800 | 2800 | 3800 | 4800 |
| PN91_6_ | 100 | 1,0 | 2,0 | 1000 | | | 1000 | 2000 | 3000 | 4000 |
| PN91_3_ | 100 | 2,0 | 4,0 | 2000 | | | | | 1000 | 2000 |
| PN92_0_ | 340 | 0,2 | 1,0 | 680 | | 3400 | 6800 | 10200 | | |
| PN92_0_ | 340 | 0,4 | 1,2 | 1360 | | 2720 | 6120 | 9520 | | |
| 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 | | | |
| PN93_0_ | 670 | 0,4 | 1,2 | 2680 | | 5360 | 12060 | | | |
| PN93_6_ | 670 | 1,0 | 2,0 | 6700 | | | 6700 | 13400 | | |
| PN93_7_ | 670 | 2,5 | 3,5 | 16750 | | | | 3350 | | |

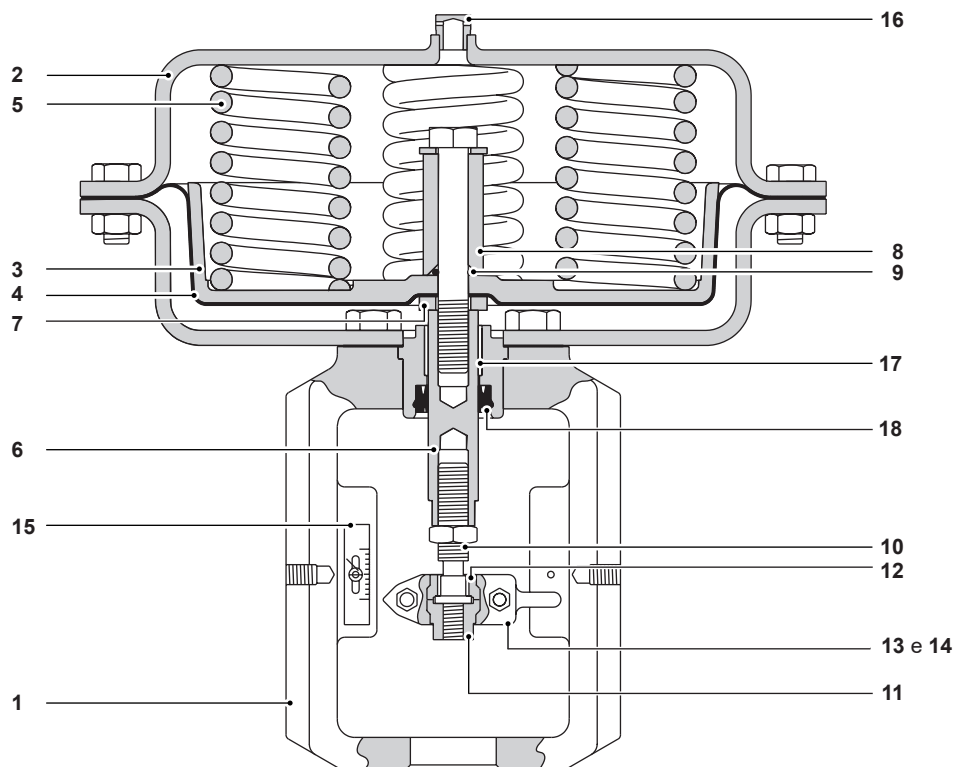
Dados técnicos

| | | |
|---------------------------------------|-------------------------------------|------------------|
| Gama de temperatura | Diafragma NBR reforçado | 20 °C a +110 °C |
| | EPDM (versão T) | -20 °C a +130 °C |
| Pressão máxima de operação na entrada | PN9100 | 6 bar g |
| | PN9220E | 3 bar g |
| | PN9226E/PN9230E | 4 bar g |
| | PN9223E/PN9236E/PN9233E and PN9200R | 6 bar g |
| | PN9320E | 2 bar g |
| | PN9330E | 3 bar g |
| | PN9336E-PN9337E | 4 bar g |
| | PN9300R | 2,7 bar g |
| Ligação de ar de Alimentação | | ¼" NPT |
| Curso do actuador | PN9100 | 20 mm |
| | PN922_ e PN932_ | 20 mm |
| | PN923_ e PN933_ | 30 mm |
| Diafragma NBR reforçado | | |

Conformidade

O actuador série PN9000, quando acoplado à válvula de controlo Spira-trol™ (conforme definido nas folhas de Informação Técnica TI-S24-71 e TI-S24-72), cumpre os requisitos da Directiva de Máquinas 2006/42EC. Consulte as Instruções de Instalação e Manutenção para a série PN9000 (IM-P357-29) e a válvula Spira-trol™ (IM-S24-42) para obter informações sobre potenciais perigos e segurança relacionados com a instalação, comissionamento, manutenção e eliminação do conjunto do produto e das suas peças componentes.

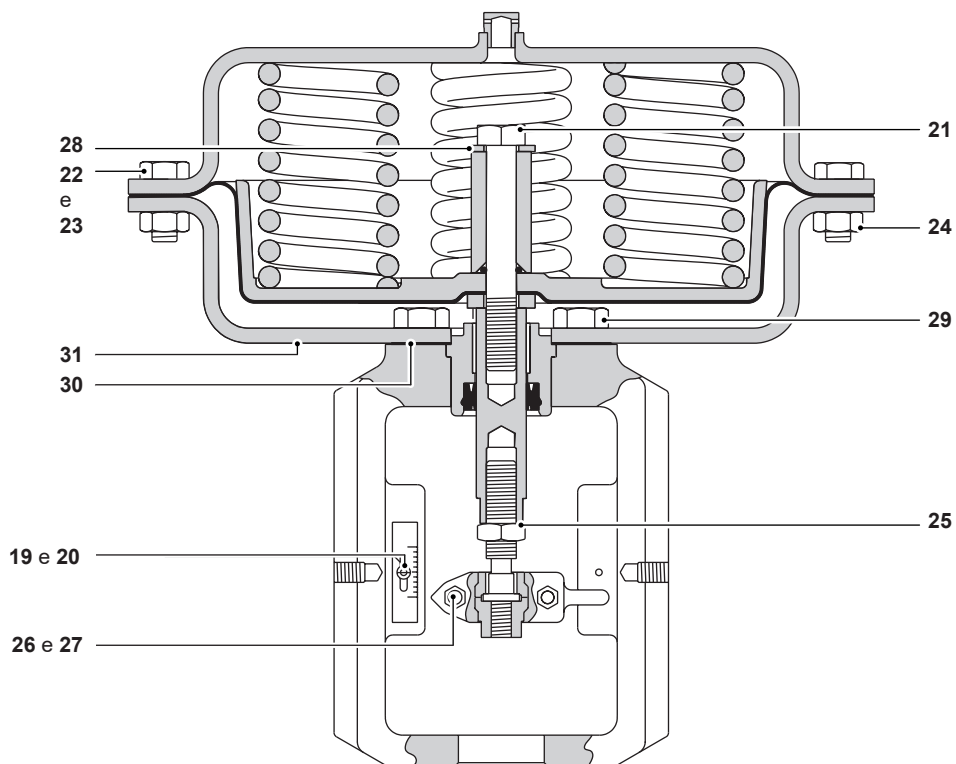
Materiais



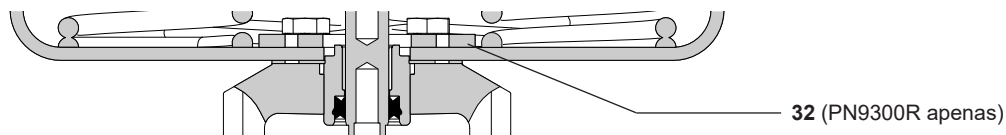
| No. | Peça | Material | |
|-----|--|---|----------------------|
| 1 | Forquilha | Ferro nodular | |
| 2 | Caixa superior do diafragma | Aço carbono (zincado) | |
| 3 | Prato do diafragma | Alumínio | |
| 4 | Membrana (EPDM opcional para a versão T) | NBR reforçado | |
| 5 | Mola | Aço de mola | |
| 6 | Haste | Aço inoxidável | |
| 7 | Anilha | Aço carbono (zincado) | |
| 8 | Espaçador | Aço carbono (zincado) | |
| 9 | 'O' ring | Viton | |
| 10 | Conector | Aço inoxidável | BS 970 431 S29 |
| 11 | Adaptador | Aço inoxidável | BS 970 431 S29 |
| 12 | Colar | Aço inoxidável | 1,4057 |
| 13 | Grampo frontal | Aço inoxidável | BS 3100 Pt 2 304 C15 |
| 14 | Grampo traseiro | Aço inoxidável | BS 3100 Pt 2 304 C15 |
| 15 | Escala | Aço inoxidável | BS 1449 304 S16 |
| 16 | Bujão de alívio | Latão | |
| 17 | Chumaceira | Compósito PTFE/aço (FKM para a versão T) | |
| 18 | Vedante | Poliuretano | |

Materiais continua na página seguinte

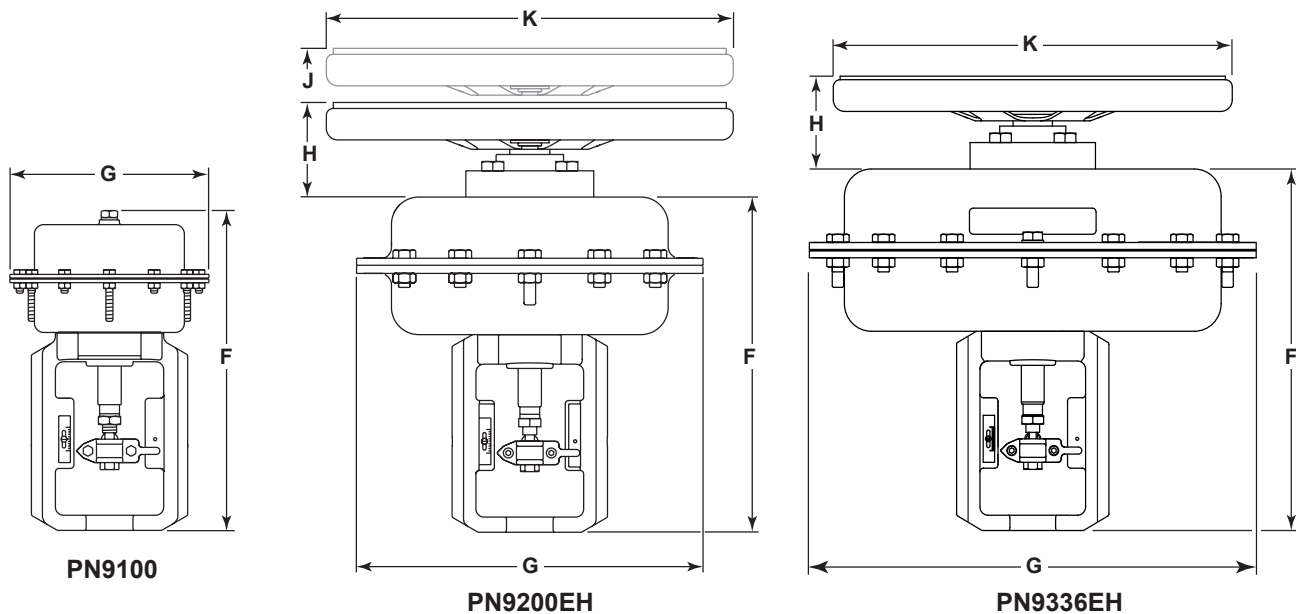
Materiais
(continuação)



| No. | Peça | | Material | |
|-----|------------------------------|----------------|-------------------------------------|---------------------------------|
| 19 | Parafuso da escala | PN9000 | Aço carbono (zincado) | |
| 20 | Porca de bloqueio | PN9000S | Aço inoxidável | A2 - 70 |
| 21 | Parafusos | | Aço carbono (zincado) | Gr. 8,8 |
| 22 | Parafuso hexagonal (curto) | PN9000 | Aço carbono (zincado) | Gr. 8,8 |
| 23 | Parafuso hexagonal (longo) | | | |
| 24 | Porca | PN9000S | Aço-carbono (revestido a Zn. e Al.) | Gr. 8,8 |
| 25 | Porca de bloqueio | | Aço inoxidável | A2 - 70 |
| 26 | Parafuso hexagonal | PN9000 | Aço carbono (zincado) | Gr. 8,8 |
| 27 | Porca | PN9000S | Aço inoxidável | A2 - 70 |
| 28 | Anilha | | Aço carbono (zincado) | |
| 29 | Parafuso de cabeça sextavada | | Aço carbono (zincado) | Gr. 8.8 (Gr. 10.9 para PN9300R) |
| 30 | Junta | | Grafite reforçada | |
| 31 | Caixa inferior do diafragma | | Aço carbono (zincado) | |
| 32 | Placa impulso | PN9300R apenas | Aço carbono | |



Dimensões/pesos (aproximado) em mm e kg



| Gama de actuadores | F | G | H | J (Volante levantado) | K | Peso | |
|---------------------|-----|-----|-----|--------------------------|-----|----------|-------------|
| | | | | | | Actuador | Com volante |
| PN9100E e variantes | 275 | 170 | 55 | 75 | 225 | 6 | + 5,86 |
| PN9100R e variantes | 275 | 170 | 120 | 140 | 225 | 6 | + 2,50 |
| PN9200E e variantes | 300 | 300 | 65 | 85 | 350 | 17 | + 7,20 |
| PN9200R e variantes | 300 | 300 | 132 | 152 | 350 | 17 | + 3,77 |
| PN9230E e variantes | 335 | 300 | 65 | 95 | 350 | 17 | + 3,77 |
| PN9230R e variantes | 335 | 300 | 122 | 152 | 350 | 17 | + 3,77 |
| PN9320E e variantes | 325 | 390 | 65 | 85 | 350 | 27 | + 7,20 |
| PN9320R e variantes | 325 | 390 | 132 | 152 | 350 | 27 | + 3,77 |
| PN9330E e variantes | 335 | 390 | 65 | 95 | 350 | 27 | + 7,20 |
| PN9330R e variantes | 335 | 390 | 122 | 152 | 350 | 27 | + 3,70 |
| PN9336E e variantes | 335 | 390 | 65 | 95 | 350 | 27 | + 7,20 |
| PN9336R e variantes | 335 | 390 | 122 | 152 | 350 | 27 | + 3,77 |
| PN9337E e variantes | 335 | 390 | 410 | 410 | 350 | 27 | |

Como usar os dados para dimensionamento nas páginas 6 a 25

As tabelas seguintes fornecem orientação quanto ao dimensionamento do PN9000 quando este é utilizado numa válvula de controlo Spira-trol™.

Na tabela são indicadas duas condições:

Classe de vedação IV - Tem uma vedação conforme o requerido na BS 5793-4 (IEC 60534-4) classe IV.

Classe de vedação VI - Tem uma vedação conforme o requerido na BS 5793-4 (IEC 60534-4) classe VI.

Para seleccionar o actuador adequado:

- Identificar a coluna que contém a válvula e o material do empanque seleccionado.
- Identificar a condição de pressão máxima de funcionamento, incluindo quaisquer pressões transitórias susceptíveis de ocorrer, na coluna seleccionada.
- Volte a ler o lado esquerdo da tabela para identificar o actuador adequado para a aplicação.

Para condições fora dos valores indicados, consulte a Spira Sarco.

**- Pressões diferenciais máximas (bar) para o fecho de classe IV
- Com sede em metal (T & S)
- Spira-trol
- DN15 - 25 (1/2" - 1")
- Fluxo sob**

| Actuador | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---------------------|-------------------|-------------------------|------|---------------------|-------|------------|-------|-----------|-------|-----------|-------|-----------|-------|-------|------|-----|---|---|-----|---|---|--|--|--|
| | Gama das molas bar | DN15-25 (1/2"-1") | | | | | | | | | | | | | | | | | | | | | | | |
| | | Tipo de gaiola | 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 (1,6) | | 2,5 (2,9) | | | | | | | | | | | | |
| Tamanho válvula | Kvs (Cv) | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| PN9120E | 0,2-1,0 | 103,4 | | | 50,2 | | | | | | | | | | | | | | | | | | | | |
| PN9120E | 0,4-1,2 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 96,6 | 67,6 | 26,5 | 17,6 | 0,6 | | | | | | | | | | | | | |
| PN9126E | 1,0-2,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 103,4 | 103,4 | 81,4 | 25,0 | 85,5 | 47,3 | 25,0 | | | | | | | | | |
| PN9123E | 2,0-4,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 103,4 | 25,0 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | | | | | | | | | |
| PN9220E | 0,2-1,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 94,6 | 85,4 | 25,0 | 25,0 | 25,0 | 49,8 | 11,7 | 25,0 | | | | | | | | | |
| PN9220E | 0,4-1,2 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 103,4 | 103,4 | 103,4 | 25,0 | 103,4 | 98,2 | 25,0 | | | | | | | | | |
| PN9226E | 1,0-2,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 103,4 | 25,0 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | | | | | | | | | |
| PN9223E | 2,0-4,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 103,4 | 25,0 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | | | | | | | | | |
| PN9320E | 0,2-1,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 103,4 | 25,0 | 103,4 | 25,0 | 103,4 | 95,7 | 25,0 | | | | | | | | | |
| PN9320E | 0,4-1,2 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 103,4 | 25,0 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | | | | | | | | | |

| Actuador | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|---------------------|-------------------|-----------|------|-------------------|-------|-----------|-------|---------|------|-----------|-------|-------------------------------|-------|-------|------|-------|-------|------|-------|-------|------|--|--|--|
| | Gama das molas bar | DN15-25 (1/2"-1") | | | | | | | | | | | | | | | | | | | | | | | |
| | | Tipo de gaiola | 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) | | | | | | | | | | | | |
| Tamanho válvula | Kvs (Cv) | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| PN9120E | 0,2-1,0 | | | | | | | | | | | | | | | | | | | | | | | | |
| PN9120E | 0,4-1,2 | 5,1 | | | | | | | | | | | | | | | | | | | | | | | |
| PN9126E | 1,0-2,0 | 56,0 | 29,5 | 25,0 | 27,8 | 12,9 | 21,3 | 20,5 | 8,7 | 15,4 | 11,2 | 5,8 | 11,4 | 11,4 | 3,7 | 8,0 | 11,4 | 3,7 | 8,0 | 11,4 | 3,7 | 8,0 | | | |
| PN9123E | 2,0-4,0 | 103,4 | 103,4 | 25,0 | 75,5 | 60,6 | 25,0 | 58,2 | 46,4 | 25,0 | 45,9 | 36,4 | 25,0 | 36,2 | 28,5 | 25,0 | 36,2 | 28,5 | 25,0 | 36,2 | 28,5 | 25,0 | | | |
| PN9220E | 0,2-1,0 | 31,3 | 4,8 | 19,8 | 13,8 | | 7,4 | 9,5 | | 4,4 | 6,5 | | 4,2 | 4,2 | | 0,8 | 4,2 | | 4,2 | 4,2 | | 0,8 | | | |
| PN9220E | 0,4-1,2 | 91,4 | 64,9 | 25,0 | 47,7 | 32,7 | 25,0 | 36,2 | 24,4 | 25,0 | 28,1 | 18,6 | 24,0 | 21,7 | 14,0 | 18,4 | 24,0 | 21,7 | 14,0 | 21,7 | 14,0 | 18,4 | | | |
| PN9226E | 1,0-2,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 93,0 | 83,5 | 25,0 | 74,4 | 66,7 | 25,0 | 74,4 | 66,7 | 25,0 | 74,4 | 66,7 | 25,0 | | | |
| PN9223E | 2,0-4,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | | | |
| PN9320E | 0,2-1,0 | 89,6 | 63,1 | 25,0 | 46,7 | 31,8 | 25,0 | 35,4 | 23,6 | 25,0 | 27,5 | 17,9 | 23,3 | 21,2 | 13,5 | 17,9 | 23,3 | 21,2 | 13,5 | 21,2 | 13,5 | 17,9 | | | |
| PN9320E | 0,4-1,2 | 103,4 | 103,4 | 25,0 | 103,4 | 98,4 | 25,0 | 88,1 | 76,3 | 25,0 | 70,1 | 60,6 | 25,0 | 55,8 | 48,1 | 25,0 | 55,8 | 48,1 | 25,0 | 55,8 | 48,1 | 25,0 | | | |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
 - Com sede em metal (T & S)
 - Spira-trol
 - DN15 - 25 (1/2" - 1")
 - Fluxo sob

| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------|------------------------|-------------------------|-------|-------|---------------------|-------|-------|------------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|------|-------|-------|------|-------|-------|
| | | DN15-25 (1/2"-1") | | | | | | | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 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 | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | | | | |
| PN9120R | 0.2-1.0 | Tamanho válvula | Pressão Máxima (bar g) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Kvs (Cv) | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9120R | 0.4-1.2 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9126R | 1.0-2.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9123R | 2.0-4.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9220R | 0.2-1.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9220R | 0.4-1.2 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9226R | 1.0-2.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9223R | 2.0-4.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9320R | 0.2-1.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 2,7 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9320R | 0.4-1.2 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 2,7 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |

| | | Gaiola de baixo ruído - P1 | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------|----------------------------|------------------------|-------|-------|-------------------|-------|-------|-----------|-------|-------|---------|-------|-------|-----------|-------|-------|-------------------------------|-------|-------|------|-------|-------|------|-------|-------|
| | | DN15-25 (1/2"-1") | | | | | | | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 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 | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | | | | |
| PN9120R | 0.2-1.0 | Tamanho válvula | Pressão Máxima (bar g) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Kvs (Cv) | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9120R | 0.4-1.2 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9126R | 1.0-2.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9123R | 2.0-4.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9220R | 0.2-1.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9220R | 0.4-1.2 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9226R | 1.0-2.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9223R | 2.0-4.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9320R | 0.2-1.0 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 2,7 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |
| PN9320R | 0.4-1.2 | Pressão Máxima (bar g) | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 2,7 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
- Com sede em metal (T & S)
- Spira-trol
- DN32 - 50 (1¼" - 2")
- Fluxo sob

| Actuador | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---------|---------------------|-------|------------------|------|-------|-----------|------|------|---------|-------|------|---------|-------|-------|---------------------|-------|------|------|------|------|------|---|---|---|
| | | Tipo de gaiola | | DN32-50 (1¼"-2") | | | | | | | | | | | | 25 (29) | | | | | | | | | |
| | | Tamanho válvula | | 4,0 (4,6) | | | 6,3 (7,3) | | | 10 (12) | | | 16 (18) | | | 17,5 - 18 (20.2-21) | | | N-P | | | H | | | D |
| Gama das molas bar | | Kvs (Cv) | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | |
| PN9120E | 0,4-1,2 | 6,0 | 7,9 | | | | | | | | | | | | | | | | | | | | | | |
| PN9126E | 1,0-2,0 | 6,0 | 57,2 | 31,5 | 25,0 | 30,3 | 15,4 | 23,8 | 13,2 | 17,4 | 7,8 | 13,2 | 13,2 | 10,1 | 5,6 | 13,5 | 9,5 | 3,4 | 6,9 | 3,6 | 0,3 | 2,2 | | | |
| PN9123E | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 25,0 | 78,0 | 63,1 | 25,0 | 25,0 | 47,9 | 38,4 | 25,0 | 25,0 | 30,9 | 38,8 | 29,1 | 23,0 | 25,0 | 25,0 | 14,2 | 10,9 | 12,7 | | | |
| PN9220E | 0,2-1,0 | 6,0 | 33,2 | 7,6 | 22,1 | 16,3 | 1,4 | 9,9 | 4,3 | 8,5 | | | | 2,7 | 6,2 | 3,8 | | | 1,2 | 0,5 | | | | | |
| PN9220E | 0,4-1,2 | 6,0 | 91,4 | 65,7 | 25,0 | 50,2 | 35,2 | 25,0 | 25,0 | 30,1 | 20,6 | 25,0 | 25,0 | 16,2 | 24,1 | 17,7 | 11,6 | 15,0 | 15,0 | 8,0 | 4,7 | 6,6 | | | |
| PN9226E | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 25,0 | 95,0 | 85,5 | 25,0 | 25,0 | 69,8 | 77,7 | 59,2 | 53,1 | 25,0 | 25,0 | 30,5 | 27,2 | 25,0 | | | |
| PN9223E | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 25,0 | 103,4 | 103,4 | 25,0 | 25,0 | 103,4 | 103,4 | 103,4 | 103,4 | 25,0 | 25,0 | 67,9 | 64,6 | 25,0 | | | |
| PN9320E | 0,2-1,0 | 4,0 | 89,7 | 64,0 | 25,0 | 49,2 | 34,3 | 25,0 | 25,0 | 29,5 | 19,9 | 25,0 | 25,0 | 15,6 | 23,5 | 17,3 | 11,1 | 14,6 | 14,6 | 7,8 | 4,5 | 6,3 | | | |
| 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 | 25,0 | 25,0 | 50,9 | 58,8 | 44,6 | 38,4 | 25,0 | 25,0 | 22,5 | 19,2 | 21,7 | | | |

| Actuador | | Gaiola de baixo ruído (P1) | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---------|----------------------------|------|------------------|------|------|---------------|------|------|--------------|------|------|------|------|------|--------------|------|------|------|------|------|------|------|------|------|
| | | Tipo de gaiola | | DN32-50 (1¼"-2") | | | | | | | | | | | | Todos os Kvs | | | | | | | | | |
| | | Tamanho válvula | | 31-36 (36-42) | | | 46-50 (53-58) | | | Todos os Kvs | | | N-P | | | H | | | D | | | | | | |
| Gama das molas bar | | Kvs (Cv) | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | |
| PN9126E | 1,0-2,0 | 6,0 | 2,3 | | | 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 | 6,2 | 7,0 | 5,1 | 6,2 | 6,2 | 7,0 | 5,1 | 6,2 | 6,2 | 6,2 | 6,2 | 6,2 | 6,2 | 6,2 | 6,2 | 6,2 | 6,2 |
| PN9220E | 0,4-1,2 | 6,0 | 5,8 | 3,2 | 4,7 | 3,5 | 1,6 | 2,7 | 2,7 | 3,5 | 1,6 | 2,7 | 2,7 | 3,5 | 1,6 | 2,7 | 2,7 | 2,7 | 2,7 | 2,7 | 2,7 | 2,7 | 2,7 | 2,7 | 2,7 |
| PN9226E | 1,0-2,0 | 6,0 | 23,8 | 21,2 | 22,7 | 16,3 | 14,4 | 15,5 | 15,5 | 16,3 | 14,4 | 15,5 | 15,5 | 16,3 | 14,4 | 15,5 | 15,5 | 15,5 | 15,5 | 15,5 | 15,5 | 15,5 | 15,5 | 15,5 | 15,5 |
| PN9223E | 2,0-4,0 | 6,0 | 53,8 | 51,2 | 25,0 | 37,7 | 35,8 | 16,0 | 16,0 | 37,7 | 35,8 | 16,0 | 16,0 | 37,7 | 35,8 | 16,0 | 16,0 | 16,0 | 16,0 | 37,7 | 35,8 | 25,0 | | | |
| PN9320E | 0,2-1,0 | 4,0 | 5,7 | 3,0 | 4,5 | 3,4 | 1,5 | 2,5 | 2,5 | 3,4 | 1,5 | 2,5 | 2,5 | 3,4 | 1,5 | 2,5 | 2,5 | 2,5 | 2,5 | 3,4 | 1,5 | 2,5 | | | |
| PN9320E | 0,4-1,2 | 4,0 | 17,5 | 14,8 | 16,3 | 11,8 | 9,9 | 11,0 | 11,0 | 11,8 | 9,9 | 11,0 | 11,0 | 11,8 | 9,9 | 11,0 | 11,0 | 11,0 | 11,0 | 11,8 | 9,9 | 11,0 | | | |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
 - Com sede em metal (T & S)
 - Spira-trol
 - DN32 - 50 (1 1/4" - 2")
 - Fluxo sob

| Actuador | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---------|---------------------|-------|-----------|------|------------------------|-------|---------|-------|---------|------|---------------------|-------|---------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| | | DN32-50 (1 1/4"-2") | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Tipo de gaiola | | 4,0 (4,6) | | 6,3 (7,3) | | 10 (12) | | 16 (18) | | 17,5 - 18 (20,2-21) | | 25 (29) | | | | | | | | | | | | |
| Gama das molas bar | | Tamanho válvula | | Kvs (Cv) | | Pressão Máxima (bar g) | | N-P | | H | | D | | N-P | | H | | D | | N-P | | H | | D | | |
| PN9120R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9120R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9126R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9123R | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9220R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9220R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9226R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9223R | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9320R | 0,2-1,0 | 2,7 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9320R | 0,4-1,2 | 2,7 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |

| Actuador | | Gaiola de baixo ruído (P1) | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---------|----------------------------|-------|---------------|------|------------------------|------|--------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|
| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Tipo de gaiola | | 31-36 (36-42) | | 46-50 (53-58) | | Todos os Kvs | | | | | | | | | | | | | | | | | | |
| Gama das molas bar | | Tamanho válvula | | Kvs (Cv) | | Pressão Máxima (bar g) | | N-P | | H | | D | | N-P | | H | | D | | N-P | | H | | D | | |
| PN9120R | 0,2-1,0 | 6,0 | 36,2 | 33,5 | 25,0 | 25,1 | 23,2 | 24,3 | 25,1 | 23,2 | 24,3 | 25,1 | 23,2 | 24,3 | 25,1 | 23,2 | 24,3 | 25,1 | 23,2 | 24,3 | 25,1 | 23,2 | 24,3 | 25,1 | 23,2 | 24,3 |
| PN9120R | 0,4-1,2 | 6,0 | 34,5 | 31,8 | 25,0 | 23,9 | 22,0 | 23,1 | 23,9 | 22,0 | 23,1 | 23,9 | 22,0 | 23,1 | 23,9 | 22,0 | 23,1 | 23,9 | 22,0 | 23,1 | 23,9 | 22,0 | 23,1 | 23,9 | 22,0 | 23,1 |
| PN9126R | 1,0-2,0 | 6,0 | 27,7 | 25,1 | 25,0 | 19,1 | 17,2 | 18,3 | 19,1 | 17,2 | 18,3 | 19,1 | 17,2 | 18,3 | 19,1 | 17,2 | 18,3 | 19,1 | 17,2 | 18,3 | 19,1 | 17,2 | 18,3 | 19,1 | 17,2 | 18,3 |
| 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 |
| PN9220R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 101,8 | 99,9 | 25,0 | 101,8 | 99,9 | 25,0 | 101,8 | 99,9 | 25,0 | 101,8 | 99,9 | 25,0 | 101,8 | 99,9 | 25,0 | 101,8 | 99,9 | 25,0 | 101,8 | 99,9 | 25,0 |
| PN9220R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 97,5 | 95,7 | 25,0 | 97,5 | 95,7 | 25,0 | 97,5 | 95,7 | 25,0 | 97,5 | 95,7 | 25,0 | 97,5 | 95,7 | 25,0 | 97,5 | 95,7 | 25,0 | 97,5 | 95,7 | 25,0 |
| PN9226R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 80,4 | 78,6 | 25,0 | 80,4 | 78,6 | 25,0 | 80,4 | 78,6 | 25,0 | 80,4 | 78,6 | 25,0 | 80,4 | 78,6 | 25,0 | 80,4 | 78,6 | 25,0 | 80,4 | 78,6 | 25,0 |
| PN9223R | 2,0-4,0 | 6,0 | 53,8 | 51,2 | 25,0 | 37,7 | 35,8 | 25,0 | 37,7 | 35,8 | 25,0 | 37,7 | 35,8 | 25,0 | 37,7 | 35,8 | 25,0 | 37,7 | 35,8 | 25,0 | 37,7 | 35,8 | 25,0 | 37,7 | 35,8 | 25,0 |
| PN9320R | 0,2-1,0 | 2,7 | 94,3 | 91,6 | 25,0 | 66,5 | 64,7 | 25,0 | 66,5 | 64,7 | 25,0 | 66,5 | 64,7 | 25,0 | 66,5 | 64,7 | 25,0 | 66,5 | 64,7 | 25,0 | 66,5 | 64,7 | 25,0 | 66,5 | 64,7 | 25,0 |
| PN9320R | 0,4-1,2 | 2,7 | 82,5 | 79,8 | 25,0 | 58,1 | 56,2 | 25,0 | 58,1 | 56,2 | 25,0 | 58,1 | 56,2 | 25,0 | 58,1 | 56,2 | 25,0 | 58,1 | 56,2 | 25,0 | 58,1 | 56,2 | 25,0 | 58,1 | 56,2 | 25,0 |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
 - Com sede em metal (T & S)
 - Spira-trol
 - DN65 - 100 (2½" - 4")
 - Fluxo sob

| Actuador | Gama das molas bar | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | |
|----------|------------------------|---------------------|---------|-------------------|------|-------|---------|------|---|---|---------|---|---|---|----------------------|---|---|---|-------------------|------------|-------------------|---|--|
| | | Tipo de gaiola | | DN65-100 (2½"-4") | | | | | | | | | | | | | | | | DN100 (4") | | | |
| | | Tamanho válvula | 16 (18) | | | | 25 (29) | | | | 36 (42) | | | | 63-73-90 (73-85-104) | | | | 100-117 (116-135) | | 160-180 (185-208) | | |
| Kvs (Cv) | Máximo pressão (bar g) | P | H | D | N-P | H | D | P | H | D | P | H | D | P | H | D | P | H | D | P | H | D | |
| PN9230E | 0,2-1,0 | 6,0 | 2,8 | 1,2 | | | | | | | | | | | | | | | | | | | |
| PN9230E | 0,4-1,2 | 6,0 | 16,6 | 6,3 | 15,0 | 5,4 | 0,9 | 4,7 | | | | | | | | | | | | | | | |
| PN9236E | 1,0-2,0 | 6,0 | 58,2 | 47,8 | 25,0 | 23,4 | 18,9 | 22,7 | | | | | | | | | | | | | | | |
| PN9233E | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 16,0 | 53,4 | 48,9 | 25,0 | | | | | | | | | | | | | | | |
| PN9330E | 0,2-1,0 | 4,0 | 16,2 | 5,9 | 14,6 | 5,2 | 0,7 | 4,5 | | | | | | | | | | | | | | | |
| PN9330E | 0,4-1,2 | 4,0 | 43,5 | 33,2 | 25,0 | 17,0 | 12,5 | 16,3 | | | | | | | | | | | | | | | |
| PN9336E | 1,0-2,0 | 4,0 | 103,4 | 103,4 | 25,0 | 52,5 | 48,0 | 25,0 | | | | | | | | | | | | | | | |
| PN9337E | 2,5-3,5 | 4,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | | | | | | | | | | | | | | | |

| Actuador | Mola gama bar | Gaiola de baixo ruído (P1) | | | | | | | | | | | | |
|----------|------------------------|----------------------------|--------------|-------------------|------|--------------|------|------|--------------|------------|---|---|---|--|
| | | Tipo de gaiola | | DN65-100 (2½"-4") | | | | | | DN100 (4") | | | | |
| | | Tamanho válvula | Todos os Kvs | | | Todos os Kvs | | | Todos os Kvs | | | | | |
| Kvs (Cv) | Pressão Máxima (bar g) | P | H | D | P | H | D | P | H | D | P | H | D | |
| PN9230E | 0,2-1,0 | 6,0 | | | | | | | | | | | | |
| PN9230E | 0,4-1,2 | 6,0 | | | | | | | | | | | | |
| PN9236E | 1,0-2,0 | 6,0 | 4,7 | 3,5 | 4,5 | 2,5 | 1,8 | 2,4 | | | | | | |
| PN9233E | 2,0-4,0 | 6,0 | 12,4 | 11,2 | 12,2 | 7,3 | 6,6 | 7,2 | | | | | | |
| PN9330E | 0,2-1,0 | 4,0 | | | | | | | | | | | | |
| PN9330E | 0,4-1,2 | 4,0 | 3,1 | 1,9 | 2,9 | 1,5 | 0,7 | 1,4 | | | | | | |
| PN9336E | 1,0-2,0 | 4,0 | 12,2 | 11,0 | 12,0 | 7,1 | 6,4 | 7 | | | | | | |
| PN9337E | 2,5-3,5 | 4,0 | 34,9 | 33,8 | 25,0 | 21,3 | 20,6 | 21,2 | | | | | | |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
- Com sede em metal (T & S)
- Spira-trol
- DN65 - 100 (2½" - 4")
- Fluxo sob

| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | |
|----------|--------------------|---------------------|---------|-------|------|---------|-------|------|---------|------|------|----------------------|------|------|-------------------|------|------|-------------------|------|---|
| | | DN65-100 (2½"-4") | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 16 (18) | | | 25 (29) | | | 36 (42) | | | 63-73-90 (73-85-104) | | | 100-117 (116-135) | | | 160-180 (185-208) | | |
| | | | P | H | D | N-P | H | D | P | H | D | P | H | D | P | H | D | P | H | D |
| PN9230R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 101,5 | 98,3 | 25,0 | 56,3 | 54,5 | 25,0 | 34,3 | 25,0 | 21,7 | 20,9 | 21,6 | |
| PN9230R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 97,2 | 94,0 | 25,0 | 53,9 | 52,1 | 25,0 | 32,8 | 25,0 | 20,7 | 20,0 | 20,6 | |
| PN9236R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 80,1 | 76,9 | 25,0 | 44,2 | 42,4 | 25,0 | 26,6 | 25,0 | 16,9 | 16,2 | 16,8 | |
| PN9233R | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 25,0 | 53,4 | 48,9 | 25,0 | 37,4 | 34,2 | 25,0 | 20,2 | 18,4 | 19,9 | 11,2 | 12,2 | 7,3 | 6,6 | 7,2 | |
| PN9330R | 0,2-1,0 | 2,7 | 103,4 | 103,4 | 25,0 | 93,8 | 89,3 | 25,0 | 66,2 | 63,0 | 25,0 | 36,4 | 34,6 | 25,0 | 21,6 | 22,6 | 13,8 | 13,0 | 13,6 | |
| PN9330R | 0,4-1,2 | 2,7 | 103,4 | 103,4 | 25,0 | 82,0 | 77,5 | 25,0 | 57,8 | 54,6 | 25,0 | 31,7 | 29,8 | 25,0 | 18,6 | 19,6 | 11,9 | 11,1 | 11,7 | |
| PN9336R | 1,0-2,0 | 2,7 | 84,5 | 74,1 | 25,0 | 34,8 | 30,3 | 25,0 | 24,1 | 20,9 | 23,6 | 12,7 | 10,9 | 12,4 | 7,6 | 7,4 | 4,3 | 3,6 | 4,2 | |

| | | Gaiola de baixo ruído (P1) | | | | | | | | | | | | | | | | | | |
|----------|--------------------|----------------------------|------------------|------|------|--------------|------|------|--------------|------|------|------|------|------|------|------|------|------|------|------|
| Actuador | Gama das molas bar | Tipo de gaiola | DN65-80 (2½"-3") | | | DN100 | | | Todos os Kvs | | | | | | | | | | | |
| | | | Todos os Kvs | | | Todos os Kvs | | | Todos os Kvs | | | | | | | | | | | |
| | | | P | H | D | P | H | D | P | H | D | P | H | D | | | | | | |
| PN9230R | 0,2-1,0 | 6,0 | 35,5 | 34,3 | 25,0 | 21,7 | 20,9 | 21,6 | 27,8 | 26,6 | 25,0 | 16,9 | 16,2 | 16,8 | 12,4 | 11,2 | 12,2 | 7,3 | 6,6 | 7,2 |
| PN9230R | 0,4-1,2 | 6,0 | 33,9 | 32,8 | 25,0 | 20,7 | 20,0 | 20,6 | 22,8 | 21,6 | 22,6 | 13,8 | 13,0 | 13,6 | 19,7 | 18,6 | 19,6 | 11,9 | 11,1 | 11,7 |
| PN9236R | 1,0-2,0 | 6,0 | 27,8 | 26,6 | 25,0 | 16,9 | 16,2 | 16,8 | 19,7 | 18,6 | 19,6 | 11,9 | 11,1 | 11,7 | 7,6 | 6,5 | 7,4 | 4,3 | 3,6 | 4,2 |
| PN9233R | 2,0-4,0 | 6,0 | 12,4 | 11,2 | 12,2 | 7,3 | 6,6 | 7,2 | 22,8 | 21,6 | 22,6 | 13,8 | 13,0 | 13,6 | 19,7 | 18,6 | 19,6 | 11,9 | 11,1 | 11,7 |
| PN9330R | 0,2-1,0 | 2,7 | 22,8 | 21,6 | 22,6 | 13,8 | 13,0 | 13,6 | 19,7 | 18,6 | 19,6 | 11,9 | 11,1 | 11,7 | 7,6 | 6,5 | 7,4 | 4,3 | 3,6 | 4,2 |
| PN9330R | 0,4-1,2 | 2,7 | 19,7 | 18,6 | 19,6 | 11,9 | 11,1 | 11,7 | 22,8 | 21,6 | 22,6 | 13,8 | 13,0 | 13,6 | 19,7 | 18,6 | 19,6 | 11,9 | 11,1 | 11,7 |
| PN9336R | 1,0-2,0 | 2,7 | 7,6 | 6,5 | 7,4 | 4,3 | 3,6 | 4,2 | 22,8 | 21,6 | 22,6 | 13,8 | 13,0 | 13,6 | 19,7 | 18,6 | 19,6 | 11,9 | 11,1 | 11,7 |

- Pressões diferenciais máximas (bar) para o fecho de classe VI
- Com sede resiliente (P e Steam-Tight)
- Spira-trol
- DN15 - 25 (1/2" - 1")
- Fluxo sob

| | | Gaiola standard (S) | | | | | | | | | | | |
|----------|--------------------|-------------------------|------|---------------------|------|------------|------|-----------|------|-----------|------|-----------|------|
| | | DN15-25 (1/2"-1") | | | | | | | | | | | |
| Actuador | Gama das molas bar | 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 | D | N-P | H | D | N-P | H | D | N-P | H | D |
| PN9126E | 1,0-2,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 |
| PN9123E | 1,0-2,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 |
| PN9220E | 0,2-1,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 |
| PN9220E | 0,4-1,2 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 |
| PN9320E | 0,2-1,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 |

| | | Gaiola standard (S) | | | | | | | | | | | |
|----------|--------------------|---------------------|------|-------------------|------|-----------|------|---------|------|-----------|------|-------------------------------|------|
| | | DN15-25 (1/2"-1") | | | | | | | | | | | |
| Actuador | Gama das molas bar | 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 | D | N-P | H | D | N-P | H | D | N-P | H | D |
| PN9126E | 1,0-2,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 |
| PN9123E | 1,0-2,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 |
| PN9220E | 0,2-1,0 | 19,0 | 18,1 | 19,0 | 8,9 | 17,4 | 18,3 | 14,5 | 4,9 | 10,3 | 8,0 | 11,4 | 8,0 |
| PN9220E | 0,4-1,2 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 |
| PN9320E | 0,2-1,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 |

- Pressões diferenciais máximas (bar) para o fecho de classe VI
 - Com sede resiliente (P e Steam-Tight)
 - Spira-trol
 - DN32 - 50 (1¼" - 2")
 - Fluxo sob

| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | |
|----------|--------------------|---------------------|-----------|------|------|-----------|------|------|---------|------|------|---------|------|------|---------------------|------|------|---------|--|--|
| | | DN32-50 (1¼"-2") | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 4,0 (4,6) | | | 6,3 (7,3) | | | 10 (12) | | | 16 (18) | | | 17,5 - 18 (20.2-21) | | | 25 (29) | | |
| | | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| PN9126E | 1,0-2,0 | 6,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 13,8 | 19,0 | 19,0 | 19,0 | 11,1 | 15,6 | 11,7 | 7,1 | 3,8 | | | |
| PN9123E | 2,0-4,0 | 6,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 17,7 | 14,4 | 16,3 | | |
| PN9220E | 0,2-1,0 | 6,0 | 19,0 | 17,4 | 19,0 | 19,0 | 8,9 | 19,0 | 14,5 | 4,9 | 10,3 | 11,6 | 3,7 | 8,2 | 6,0 | 4,0 | 0,7 | 2,6 | | |
| PN9220E | 0,4-1,2 | 6,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 16,4 | 11,5 | 8,2 | 10,0 | | |
| PN9226E | 1,0-2,0 | 6,0 | | | | | | | | | | | | | | | | | | |
| PN9320E | 0,2-1,0 | 4,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 19,0 | 15,9 | 11,3 | 8,0 | 9,9 | | |
| PN9320E | 0,4-1,2 | 4,0 | | | | | | | | | | | | | | | | | | |

| | | Gaiola standard (S) | | | | | | | | | | | | Gaiola de baixo ruído (P1-A1-P2-A2) | | | | | | |
|----------|--------------------|---------------------|----------------|------|------|---------------|------|------|--------------|------|------|------|------|-------------------------------------|--|--|--|--|--|--|
| | | DN32-50 (1¼"-2") | | | | | | | | | | | | DN32-50 (1¼"-2") | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 31-36 (36-42)) | | | 46-50 (53-58) | | | Todos os Kvs | | | | | | | | | | | |
| | | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | 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 | 3,6 | 1,7 | 2,8 | | | | | | |
| PN9123E | 2,0-4,0 | 6,0 | 13,9 | 11,3 | 12,8 | 9,7 | 7,8 | 8,8 | 9,7 | 7,8 | 8,8 | 9,7 | 7,8 | 8,8 | | | | | | |
| PN9220E | 0,2-1,0 | 6,0 | 3,0 | 0,4 | 1,9 | 1,9 | | 1,1 | 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 | 6,1 | 4,3 | 5,3 | | | | | | |
| PN9226E | 1,0-2,0 | 6,0 | 19,0 | 19,0 | 19,0 | 19,0 | 17,1 | 18,2 | 19,0 | 17,1 | 18,2 | 19,0 | 17,1 | 18,2 | | | | | | |
| 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 | 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 | 6,0 | 4,1 | 5,2 | | | | | | |

- Pressões diferenciais máximas (bar) para o fecho de classe VI
 - Com sede resiliente (P e Steam-Tight)
 - Spira-trol
 - DN65 - 100 (2½" - 4")
 - Fluxo sob

| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | |
|----------|--------------------|---------------------|------|------|---------|------|------|---------|------|------|----------------------|------|------|-------------------|------|------|-------------------|------|------|
| | | DN65-100 (2½"-4") | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | 16 (18) | | | 25 (29) | | | 36 (42) | | | 63-73-90 (73-85-104) | | | 100-117 (116-135) | | | 160-180 (185-208) | | |
| | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D |
| PN9230E | 0,2-1,0 | 7,6 | 6,3 | 1,9 | 2,6 | 1,9 | 1,1 | 0,5 | 0,3 | | | | | | | | | | |
| PN9230E | 0,4-1,2 | 19,0 | 11,1 | 19,0 | 8,6 | 4,1 | 7,9 | 5,8 | 2,6 | 5,3 | 2,9 | 1,1 | 2,7 | 1,7 | 0,5 | 1,5 | 0,9 | | 0,8 |
| PN9236E | 1,0-2,0 | | | | 19,0 | 19,0 | 19,0 | 18,7 | 15,5 | 18,2 | 10,2 | 8,4 | 9,9 | 6,3 | 5,1 | 6,1 | 3,7 | 3,0 | 3,6 |
| PN9233E | 2,0-4,0 | | | | | | | | | | 19,0 | 19,0 | 19,0 | 14,0 | 12,8 | 5,0 | 8,5 | 7,8 | 8,4 |
| PN9330E | 0,2-1,0 | 19,0 | 10,7 | 19,0 | 8,4 | 3,9 | 7,7 | 5,7 | 2,5 | 5,2 | 2,9 | 1,1 | 2,6 | 1,6 | 0,5 | 1,4 | 0,8 | | 0,7 |
| PN9330E | 0,4-1,2 | | | | 19,0 | 15,7 | 19,0 | 14,1 | 10,0 | 13,6 | 7,6 | 5,8 | 7,3 | 4,7 | 3,5 | 4,5 | 2,7 | 2,0 | 2,6 |
| PN9336E | 1,0-2,0 | | | | | | | | | | 19,0 | 19,0 | 19,0 | 13,8 | 12,6 | 13,6 | 8,4 | 7,7 | 8,3 |
| PN9337E | 2,5-3,5 | | | | | | | | | | | | | | | | 19,0 | 19,0 | 19,0 |

| | | Gaiola de baixo ruído (P1-A1-P2-A2) | | | | | | | | | | | | |
|----------|--------------------|-------------------------------------|------|------|--------------|------|------|--------------|---|---|--------------|---|---|--|
| | | DN100 (4") | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Todos os Kvs | | | Todos os Kvs | | | Todos os Kvs | | | Todos os Kvs | | | |
| | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | |
| PN9230E | 0,2-1,0 | | | | | | | | | | | | | |
| PN9230E | 0,4-1,2 | 1,7 | 0,5 | 1,5 | 0,9 | 0,9 | 0,8 | | | | | | | |
| PN9236E | 1,0-2,0 | 6,3 | 5,1 | 6,1 | 3,7 | 3,0 | 3,6 | | | | | | | |
| PN9233E | 2,0-4,0 | 14,0 | 12,8 | 5,0 | 8,5 | 7,8 | 8,4 | | | | | | | |
| PN9330E | 0,2-1,0 | 1,6 | 0,5 | 1,4 | 0,8 | 0,7 | | | | | | | | |
| PN9330E | 0,4-1,2 | 4,7 | 3,5 | 4,5 | 2,7 | 2,0 | 2,6 | | | | | | | |
| PN9336E | 1,0-2,0 | 13,8 | 12,6 | 13,6 | 8,4 | 7,7 | 8,3 | | | | | | | |
| PN9337E | 2,5-3,5 | | | | 19,0 | 19,0 | 19,0 | | | | | | | |

| Actuador | | Gaiola standard (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) | | | | | | | | | | |
| Gama das molas bar | Tipo de gaiola | Tamanho válvula | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Pressão Máxima (bar g) | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6,0 | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | |
| | | 6,0 | 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 |
| | | 1,0-2,0 | 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 |
| 2,0-4,0 | 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 | | |
| 0,2-1,0 | 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 | | |
| 0,4-1,2 | 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 | | |

| Actuador | | Gaiola de baixo ruído (P1) | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|----------------|----------------------------|-----|-----|-------------------|-----|-----|-----------|-----|-----|---------|-----|-----|-----------|-----|-----|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 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) | | | | | | | | | |
| Gama das molas bar | Tipo de gaiola | Tamanho válvula | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Pressão Máxima (bar g) | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6,0 | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D |
| | | 6,0 | 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 |
| | | 1,0-2,0 | 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 |
| 2,0-4,0 | 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 | |
| 0,2-1,0 | 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 | |
| 0,4-1,2 | 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 | |

- Pressões diferenciais máximas (bar) para o fecho de classe VI
 - Com sede em PTFE (G)
 - Spira-trol
 - DN15 - 25 (1/2" - 1")
 - Fluxo sob

| | | Gaiola standard (S) | | | | | | | | | | | | Gaiola de baixo ruído (P1) | | | | | | |
|----------|--------------------|---------------------|-------------------------|-----|-----|---------------------|-----|-----|------------|-----|-----|-----------|-----|----------------------------|----------------------------------|-----------|----------------------------|-----|-----------|-----|
| | | DN15-25 (1/2"-1") | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | Tamanho válvula | | | | | | | | | | | | 2,5-4-6-3-10 (2,9-4,6-7,3-12) | | | | | |
| | | | 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 | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D |
| PN9120R | 0,2-1,0 | | 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 |
| PN9120R | 0,4-1,2 | | 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 |
| PN9126R | 1,0-2,0 | | 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 |
| | | Gaiola standard (S) | | | | | | | | | | | | | | | Gaiola de baixo ruído (P1) | | | |
| | | DN15-25 (1/2"-1") | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | Tamanho válvula | | | | | | | | | | | | 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 | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D |
| PN9120R | 0,2-1,0 | | 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 |
| PN9120R | 0,4-1,2 | | 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 |
| PN9126R | 1,0-2,0 | | 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 |

- Pressões diferenciais máximas (bar) para o fecho de classe VI
 - Com sede em PTFE (G)
 - Spira-trol
 - DN32 - 50 (1 1/4" - 2")
 - Fluxo sob

| Actuador | Gama das molas bar | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------|---------------------|---------------------|-----------|-----|-----|-----------|-----|-----|---------|-----|-----|---------|-----|-----|---------------------|-----|-----|---------|-----|-----|-----|--|--|--|--|
| | | Tipo de gaiola | DN32-50 (1 1/4"-2") | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Tamanho válvula | 4,0 (4,6) | | | 6,3 (7,3) | | | 10 (12) | | | 16 (18) | | | 17,5 - 18 (20,2-21) | | | 25 (29) | | | | | | | |
| Kvs (Cv) | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | | | |
| PN9120E | 0,2-1,0 | 6,0 | 4,0 | | 3,3 | | | 1,9 | | | | | 1,5 | | | 1,1 | | | 0,4 | | | | | | | |
| PN9120E | 0,4-1,2 | 6,0 | 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 | 2,5 | | 1,1 | 1,1 | | | | |
| PN9126E | 1,0-2,0 | 6,0 | 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 | | | | |
| PN9123E | 2,0-4,0 | 6,0 | 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 | | | | |
| PN9220E | 0,2-1,0 | 6,0 | 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 | | | | |
| PN9220E | 0,4-1,2 | 6,0 | 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 | | | | |
| PN9226E | 1,0-2,0 | 6,0 | 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 | | | | |
| PN9223E | 2,0-4,0 | 6,0 | 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 | | | | |

| Actuador | Gama das molas bar | Gaiola de baixo ruído (P1) | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|------------------------|----------------------------|---------------------|---------------|-----|-----|---------------|-----|-----|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| | | Tipo de gaiola | DN32-50 (1 1/4"-2") | | | | | | | | | | | | | | | | | | | | | | | |
| | | | Tamanho válvula | 31-36 (36-42) | | | 46-50 (53-58) | | | Todos os Kvs | | | | | | | | | | | | | | | | |
| Kvs (Cv) | Pressão Máxima (bar g) | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | | |
| PN9120E | 0,2-1,0 | 6,0 | 0,3 | | | | | | | | | | | | | | | | | | | | | | | |
| PN9120E | 0,4-1,2 | 6,0 | 2,0 | 0,8 | 1,3 | 0,5 | 0,5 | 1,3 | 0,5 | 0,5 | 1,3 | 0,5 | 0,5 | 1,3 | 0,5 | 0,5 | 1,3 | 0,5 | 0,5 | 1,3 | 0,5 | 0,5 | | | | |
| PN9126E | 1,0-2,0 | 6,0 | 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 | | | | |
| PN9123E | 2,0-4,0 | 6,0 | 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 | | | | |
| PN9220E | 0,2-1,0 | 6,0 | 4,0 | 1,9 | 3,4 | 1,3 | 2,4 | 3,2 | 1,3 | 2,4 | 3,2 | 1,3 | 2,4 | 3,2 | 1,3 | 2,4 | 3,2 | 1,3 | 2,4 | 3,2 | 1,3 | 2,4 | | | | |
| PN9220E | 0,4-1,2 | 6,0 | 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 | | | | |
| PN9226E | 1,0-2,0 | 6,0 | 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 | | | | |
| PN9223E | 2,0-4,0 | 6,0 | 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 | | | | |

- Pressões diferenciais máximas (bar) para o fecho de classe VI
 - Com sede em PTFE (G)
 - Spira-trol
 - DN32 - 50 (1¼" - 2")
 - Fluxo sob

| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------|---|-----------|-----|-----|-----------|-----|-----|---------|-----|-----|---------|-----|-----|---------------------|-----|-----|---------|-----|-----|-----|-----|-----|-----|
| | | DN32-50 (1¼"-2") | | | | | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 4,0 (4,6) | | | 6,3 (7,3) | | | 10 (12) | | | 16 (18) | | | 17,5 - 18 (20,2-21) | | | 25 (29) | | | | | | |
| | | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | | | | | |
| PN9120R | 0,2-1,0 | Tamanho válvula Kvs (Cv) Máximo pressão (bar g) | 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 | | | |
| PN9120R | 0,4-1,2 | | 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 | | |
| PN9126R | 1,0-2,0 | | 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 | |
| PN9123R | 2,0-4,0 | | 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 |
| PN9220R | 0,2-1,0 | | 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 |
| PN9220R | 0,4-1,2 | | 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 |

| | | Gaiola de baixo ruído (P1) | | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------|---|---------------|-----|-----|---------------|-----|-----|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | DN32-50 (1¼"-2") | | | | | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 31-36 (36-42) | | | 46-50 (53-58) | | | Todos os Kvs | | | | | | | | | | | | | | | |
| | | | N-P | H | D | N-P | H | D | N-P | H | D | | | | | | | | | | | | | |
| PN9120R | 0,2-1,0 | Tamanho válvula Kvs (Cv) Máximo pressão (bar g) | 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 | |
| PN9120R | 0,4-1,2 | | 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 |
| PN9126R | 1,0-2,0 | | 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 |
| PN9123R | 2,0-4,0 | | 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 |
| PN9220R | 0,2-1,0 | | 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 |
| PN9220R | 0,4-1,2 | | 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 |

- Pressões diferenciais máximas (bar) para o fecho de classe VI
- Com sede em PTFE (G)
- Spira-trol
- DN65 - 100 (2½" - 4")
- Fluxo sob

| Actuador | Gama das molas bar | Tipo de gaiola | Gaiola standard (S) | | | | | | | | | | | | | | | | | |
|----------|--------------------|----------------|---------------------|-----|-----|---------|-----|-----|---------|-----|-----|----------------------|-----|-----|-------------------|-----|-----|-------------------|--|--|
| | | | DN65-100 (2½"-4") | | | | | | | | | | | | | | | | | |
| | | | 16 (18) | | | 25 (29) | | | 36 (42) | | | 63-73-90 (73-85-104) | | | 100-117 (116-135) | | | 160-180 (185-208) | | |
| N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| PN9230E | 0,2-1,0 | 6,0 | 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 | | |
| PN9230E | 0,4-1,2 | 6,0 | 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 | | |
| PN9236E | 1,0-2,0 | 6,0 | 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 | | |
| PN9233E | 2,0-4,0 | 6,0 | 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 | | |
| PN9330E | 0,2-1,0 | 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 | | |
| PN9330E | 0,4-1,2 | 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 | | |
| PN9336E | 1,0-2,0 | 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 | | |
| PN9337E | 2,5-3,5 | 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 | | |

| Actuador | Gama das molas bar | Tipo de gaiola | Gaiola de baixo ruído (P1) | | | | | | | | | | | |
|----------|--------------------|----------------|----------------------------|-----|-----|--------------|-----|-----|--------------|-----|-----|--------------|--|--|
| | | | DN65-80 (2½"-3") | | | | | | DN100 (4") | | | | | |
| | | | Todos os Kvs | | | Todos os Kvs | | | Todos os Kvs | | | Todos os Kvs | | |
| N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| PN9230E | 0,2-1,0 | 6,0 | 0,9 | 0,8 | 0,8 | 0,8 | 0,5 | 0,5 | 0,5 | 0,5 | 0,5 | 0,4 | | |
| PN9230E | 0,4-1,2 | 6,0 | 2,5 | 1,3 | 2,3 | 2,3 | 1,5 | 0,8 | 1,4 | 1,4 | 1,4 | 1,4 | | |
| PN9236E | 1,0-2,0 | 6,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | | |
| PN9233E | 2,0-4,0 | 6,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | | |
| PN9330E | 0,2-1,0 | 4,0 | 2,4 | 1,3 | 3,6 | 3,6 | 1,5 | 0,7 | 1,4 | 1,4 | 1,4 | 1,4 | | |
| PN9330E | 0,4-1,2 | 4,0 | 4,0 | 4,3 | 4,0 | 4,0 | 3,4 | 2,6 | 3,2 | 3,2 | 3,2 | 3,2 | | |
| PN9336E | 1,0-2,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | | |
| PN9337E | 2,5-3,5 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | | |

- Pressões diferenciais máximas (bar) para o fecho de classe VI
- Com sede em PTFE (G)
- Spira-trol
- DN65 - 100 (2½" - 4")
- Fluxo sob

| Actuador | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|----------|---------------------|---------|----------|---------|------------------------|-----|---------|-----|-----|----------------------|-----|-----|-------------------|-----|-----|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | DN65-100 (2½"-4") | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16 (18) | | | 25 (29) | | | 36 (42) | | | 63-73-90 (73-85-104) | | | 100-117 (116-135) | | | 160-180 (185-208) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tipo de gaiola | | Tamanho válvula | | Kvs (Cv) | | Pressão Máxima (bar g) | | N-P | | H | | D | | N-P | | H | | D | | N-P | | H | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gama das molas bar | Actuador | 0,2-1,0 | PN9230R | 6,0 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 0,4-1,2 | PN9230R | 6,0 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,0-2,0 | PN9236R | 6,0 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2,0-4,0 | PN9233R | 6,0 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0,2-1,0 | PN9330R | 2,7 | 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 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,0-2,0 | PN9336R | 2,7 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Actuador | | Gaiola de baixo ruído (P1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|----------|----------------------------|---------|-----------------|-----|----------|-----|------------------------|-----|--------------|-----|--------------|-----|-----|-----|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | DN100 (4") | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Tipo de gaiola | | Tamanho válvula | | Kvs (Cv) | | Pressão Máxima (bar g) | | Todos os Kvs | | Todos os Kvs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gama das molas bar | | DN65-80 (2½"-3") | | N-P | | H | | D | | N-P | | H | | D | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gama das molas bar | Actuador | 0,2-1,0 | PN9230R | 6,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | 0,4-1,2 | PN9230R | 6,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,0-2,0 | PN9236R | 6,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2,0-4,0 | PN9233R | 6,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0,2-1,0 | PN9330R | 2,7 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1,0-2,0 | PN9336R | 2,7 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | 4,0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
 - Revestimento duro (W)
 - Spira-trol
 - DN15 - 25 (1/2" - 1")
 - Fluxo sob

| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------|------------------------|-------------------------|-------|------|---------------------|-------|------|------------|-------|------|-----------|-------|------|-----------|-------|------|-----------|-------|------|-------|-------|------|-------|-------|------|
| | | DN15-25 (1/2"-1") | | | | | | | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | Tamanho válvula | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 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 | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D |
| PN9120E | 0.2-1.0 | Kvs (Cv) | 92.8 | | | | | | | | | | | | | | | | | | | | | | | |
| PN9120E | 0.4-1.2 | Pressão Máxima (bar g) | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 64.6 | | | | | | | | | | | | | | | | | |
| PN9126E | 1.0-2.0 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 |
| PN9123E | 2.0-4.0 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 |
| PN9220E | 0.2-1.0 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 62.6 | 25.0 | 103.4 | 103.4 | 25.0 | 65.4 | 5.7 | 25.0 | 33.8 | | | | | | | | |
| PN9220E | 0.4-1.2 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 |
| PN9226E | 1.0-2.0 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 |
| PN9223E | 2.0-4.0 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 |
| PN9320E | 0.2-1.0 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 |
| PN9320E | 0.4-1.2 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 |

| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------|------------------------|-----------------|-------|------|-------------------|-------|------|-----------|-------|------|---------|-------|------|-----------|-------|------|-------------------------------|-------|------|-------|-------|------|-------|-------|------|
| | | DN15-25 (1/2"-1") | | | | | | | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | Tamanho válvula | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 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 | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D |
| PN9126E | 1.0-2.0 | Kvs (Cv) | 42.7 | 16.2 | 25.0 | 17.8 | 2.9 | 11.3 | 11.6 | | | | | | | | | | | | | | | | | |
| PN9123E | 2.0-4.0 | Pressão Máxima (bar g) | 103.4 | 101.1 | 25.0 | 65.5 | 50.6 | 25.0 | 49.3 | 37.5 | 25.0 | 37.9 | 28.4 | 25.0 | 29.0 | 21.3 | 25.0 | 29.0 | 21.3 | 25.0 | 29.0 | 21.3 | 25.0 | 29.0 | 21.3 | 25.0 |
| PN9220E | 0.2-1.0 | | 17.9 | | 6.5 | 3.8 | | | 0.6 | | | | | | | | | | | | | | | | | |
| PN9220E | 0.4-1.2 | | 78.1 | 51.5 | 25.0 | 37.7 | 22.7 | 25.0 | 27.3 | 15.5 | 25.0 | 20.1 | 10.6 | 16.0 | 14.5 | 6.8 | 11.2 | 14.5 | 6.8 | 11.2 | 14.5 | 6.8 | 11.2 | 14.5 | 6.8 | 11.2 |
| PN9226E | 1.0-2.0 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 95.7 | 25.0 | 85.0 | 75.5 | 25.0 | 67.2 | 59.5 | 25.0 | 67.2 | 59.5 | 25.0 | 67.2 | 59.5 | 25.0 | 67.2 | 59.5 | 25.0 |
| PN9223E | 2.0-4.0 | | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 | 103.4 | 103.4 | 25.0 |
| PN9320E | 0.2-1.0 | | 76.3 | 49.8 | 25.0 | 36.7 | 21.8 | 25.0 | 26.5 | 14.7 | 25.0 | 19.5 | 9.9 | 15.3 | 14.0 | 6.3 | 10.7 | 14.0 | 6.3 | 10.7 | 14.0 | 6.3 | 10.7 | 14.0 | 6.3 | 10.7 |
| PN9320E | 0.4-1.2 | | 103.4 | 103.4 | 25.0 | 103.3 | 88.4 | 25.0 | 79.2 | 67.4 | 25.0 | 62.1 | 52.6 | 25.0 | 48.6 | 40.9 | 25.0 | 48.6 | 40.9 | 25.0 | 48.6 | 40.9 | 25.0 | 48.6 | 40.9 | 25.0 |

**- Pressões diferenciais máximas (bar) para fecho de classe IV
- Face dura (W)
- Spira-trol
- DN15 - 25 (1/2" - 1")
- Fluxo sob**

| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | |
|----------|--------------------|---------------------|-------------------------|-------|------|---------------------|-------|------|------------|-------|------|-----------|-------|------|-----------|-------|------|-----------|-------|------|
| | | DN15-25 (1/2"-1") | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 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 | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D |
| PN9120R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9120R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9126R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9123R | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9220R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9220R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9226R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |

| | | Gaiola standard (S) | | | | | | | | | | | | Gaiola de baixo ruído (P1-A1) | | | | | | | |
|----------|--------------------|---------------------|-----------|-------|------|-------------------|-------|------|-----------|-------|------|---------|-------|-------------------------------|-----------|-------|------|-------|-------|------|------|
| | | DN15-25 (1/2"-1") | | | | | | | | | | | | 2,5-4-6-3-10 (2,9-4,6-7,3-12) | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 4,0 (4,6) | | | 4,9-6,3 (5,7-7,3) | | | 7,2 (8,3) | | | 10 (12) | | | 11 (12,7) | | | | | | |
| | | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | | |
| PN9120R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9120R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9126R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9123R | 2,0-4,0 | 6,0 | 103,4 | 101,1 | 25,0 | 65,5 | 50,6 | 25,0 | 49,3 | 37,5 | 25,0 | 28,4 | 25,0 | 29,0 | 21,3 | 25,0 | 21,3 | 25,0 | 29,0 | 21,3 | 25,0 |
| PN9220R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9220R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9226R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
 - Revestimento duro (W)
 - Spira-trol
 - DN32 - 50 (1 1/4" - 2")
 - Fluxo sob

| | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------|------------------------|-----------|-------|------|-------|-------|------|-----------|-------|------|---------|------|-------|---------|------|------|---------------------|-----|---|---------|--|--|
| | | DN32-50 (1 1/4" - 2") | | | | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 4,0 (4,6) | | | | | | 6,3 (7,3) | | | 10 (12) | | | 16 (18) | | | 17,5 - 18 (20,2-21) | | | 25 (29) | | |
| | | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| PN9126E | 1,0-2,0 | Tamanho válvula | 40,8 | 15,1 | 25,0 | 17,8 | 2,9 | 11,3 | 7,4 | 3,2 | 4,4 | 1,0 | 1,5 | | | | | | | | | | |
| PN9123E | 2,0-4,0 | Kvs (Cv) | 103,4 | 97,2 | 25,0 | 65,5 | 50,6 | 25,0 | 37,9 | 28,4 | 25,0 | 21,8 | 16,0 | 21,1 | 15,0 | 18,4 | 8,3 | 5,0 | 6,8 | | | | |
| PN9220E | 0,2-1,0 | Máximo pressão (bar g) | 16,8 | | 5,7 | 3,8 | | | | | | | | | | | | | | | | | |
| PN9220E | 0,4-1,2 | | 75,0 | 49,3 | 25,0 | 37,7 | 22,7 | 25,0 | 20,1 | 10,6 | 16,0 | 7,1 | 11,5 | 9,7 | 3,6 | 7,0 | 2,1 | 0,7 | | | | | |
| PN9226E | 1,0-2,0 | | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 85,0 | 75,5 | 25,0 | 60,7 | 16,0 | 51,2 | 45,1 | 25,0 | 24,6 | 23,2 | | | | | |
| PN9223E | 2,0-4,0 | | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 16,0 | 103,4 | 103,4 | 25,0 | 62,0 | 25,0 | | | | | |
| PN9320E | 0,2-1,0 | | 73,3 | 47,6 | 25,0 | 36,7 | 21,8 | 25,0 | 19,5 | 9,9 | 15,3 | 6,5 | 11,0 | 9,3 | 3,1 | 6,6 | 1,9 | 0,5 | | | | | |
| PN9320E | 0,4-1,2 | | 103,4 | 103,4 | 25,0 | 103,3 | 88,4 | 25,0 | 62,1 | 52,6 | 25,0 | 41,8 | 16,0 | 36,6 | 30,4 | 25,0 | 16,7 | 15,2 | | | | | |

| | | Gaiola de baixo ruído (P1-P2-P3-A1-A2) | | | | | | | | | | | | | | | | | | | | | |
|----------|--------------------|--|---------------|------|------|------|------|------|---------------|------|------|--------------|------|------|------|------|------|------|------|------|------|------|------|
| | | DN32-50 (1 1/4" - 2") | | | | | | | | | | | | | | | | | | | | | |
| Actuador | Gama das molas bar | Tipo de gaiola | 31-36 (36-42) | | | | | | 46-50 (53-58) | | | Todos os Kvs | | | | | | | | | | | |
| | | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | | | | | | | |
| PN9123E | 2,0-4,0 | Tamanho válvula | 5,5 | 2,9 | 4,4 | 2,6 | 0,7 | 1,7 | 2,6 | 0,7 | 1,7 | 2,6 | 0,7 | 1,7 | | | | | | | | | |
| PN9220E | 0,2-1,0 | Kvs (Cv) | | | | | | | | | | | | | | | | | | | | | |
| PN9220E | 0,4-1,2 | Máximo pressão (bar g) | 0,6 | | | | | | | | | | | | | | | | | | | | |
| PN9226E | 1,0-2,0 | | 18,6 | 15,9 | 17,4 | 11,9 | 10,0 | 11,0 | 11,9 | 10,0 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 | 11,0 |
| PN9223E | 2,0-4,0 | | 48,6 | 45,9 | 25,0 | 33,2 | 31,4 | 25,0 | 33,2 | 31,4 | 25,0 | 33,2 | 31,4 | 25,0 | 33,2 | 31,4 | 25,0 | 33,2 | 31,4 | 25,0 | 33,2 | 31,4 | 25,0 |
| PN9320E | 0,2-1,0 | | 0,4 | | | | | | | | | | | | | | | | | | | | |
| PN9320E | 0,4-1,2 | | 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 | 7,3 | 5,4 | 6,5 | 7,3 | 5,4 | 6,5 |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
 - Revestimento duro (W)
 - Spira-trol
 - DN32 - 50 (1 1/4" - 2")
 - Fluxo sob

| Actuador | Gama das molas bar | Tipo de gaiola | Gaiola standard (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) | | | | | | | | | |
| Pressão Máxima (bar g) | Kvs (Cv) | Tamanho válvula | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | | | | | |
| | | | PN9120R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 |
| PN9120R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9126R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9123R | 2,0-4,0 | 6,0 | 103,4 | 97,2 | 25,0 | 65,5 | 50,6 | 25,0 | 37,9 | 28,4 | 25,0 | 29,7 | 21,8 | 25,0 | 21,1 | 15,0 | 18,4 | 8,3 | 5,0 | 6,8 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 |
| PN9220R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9220R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9226R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9223R | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9320R | 0,2-1,0 | 2,7 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |
| PN9320R | 0,4-1,2 | 2,7 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | 103,4 | 103,4 | 25,0 | |

| Actuador | Gama das molas bar | Tipo de gaiola | Gaiola standard (S) | | | | | | | | | | | | | | | | | | Gaiola de baixo ruído (P1-P2-P3-A1-A2) | | |
|------------------------|--------------------|-----------------|---------------------|---------|------|---------------|------|------|--------------|------|------|--------------|------|------|------|------|------|------|------|------|--|------|------|
| | | | DN32-50 (1 1/4"-2") | | | | | | | | | | | | | | | | | | Todos os Kvs | | |
| | | | 31-36 (36-42) | | | 46-50 (53-58) | | | Todos os Kvs | | | Todos os Kvs | | | | | | | | | | | |
| Pressão Máxima (bar g) | Kvs (Cv) | Tamanho válvula | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| | | | PN9120R | 0,2-1,0 | 6,0 | 30,9 | 28,3 | 25,0 | 20,7 | 18,8 | 19,8 | 20,7 | 18,8 | 19,8 | 20,7 | 18,8 | 19,8 | 20,7 | 18,8 | 19,8 | 20,7 | 18,8 | 19,8 |
| PN9120R | 0,4-1,2 | 6,0 | 29,2 | 26,6 | 25,0 | 19,5 | 17,6 | 18,6 | 19,5 | 17,6 | 18,6 | 19,5 | 17,6 | 18,6 | 19,5 | 17,6 | 18,6 | 19,5 | 17,6 | 18,6 | | | |
| PN9126R | 1,0-2,0 | 6,0 | 22,5 | 19,8 | 21,3 | 14,6 | 12,7 | 13,8 | 14,6 | 12,7 | 13,8 | 14,6 | 12,7 | 13,8 | 14,6 | 12,7 | 13,8 | 14,6 | 12,7 | 13,8 | | | |
| PN9123R | 2,0-4,0 | 6,0 | 5,5 | 2,9 | 4,4 | 2,6 | 0,7 | 1,7 | 2,6 | 0,7 | 1,7 | 2,6 | 0,7 | 1,7 | 2,6 | 0,7 | 1,7 | 2,6 | 0,7 | 1,7 | | | |
| PN9220R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 25,0 | 97,4 | 95,5 | 25,0 | 97,4 | 95,5 | 25,0 | 97,4 | 95,5 | 25,0 | 97,4 | 95,5 | 25,0 | 97,4 | 95,5 | 25,0 | | | |
| PN9220R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 25,0 | 93,1 | 91,2 | 25,0 | 93,1 | 91,2 | 25,0 | 93,1 | 91,2 | 25,0 | 93,1 | 91,2 | 25,0 | 93,1 | 91,2 | 25,0 | | | |
| PN9226R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 25,0 | 76,0 | 74,1 | 25,0 | 76,0 | 74,1 | 25,0 | 76,0 | 74,1 | 25,0 | 76,0 | 74,1 | 25,0 | 76,0 | 74,1 | 25,0 | | | |
| PN9223R | 2,0-4,0 | 6,0 | 48,6 | 45,9 | 25,0 | 33,2 | 31,4 | 25,0 | 33,2 | 31,4 | 25,0 | 33,2 | 31,4 | 25,0 | 33,2 | 31,4 | 25,0 | 33,2 | 31,4 | 25,0 | | | |
| PN9320R | 0,2-1,0 | 2,7 | 89 | 86,4 | 25,0 | 62,1 | 60,2 | 25,0 | 62,1 | 60,2 | 25,0 | 62,1 | 60,2 | 25,0 | 62,1 | 60,2 | 25,0 | 62,1 | 60,2 | 25,0 | | | |
| PN9320R | 0,4-1,2 | 2,7 | 77,2 | 74,6 | 25,0 | 53,7 | 51,8 | 25,0 | 53,7 | 51,8 | 25,0 | 53,7 | 51,8 | 25,0 | 53,7 | 51,8 | 25,0 | 53,7 | 51,8 | 25,0 | | | |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
 - Revestimento duro (W)
 - Spira-trol
 - DN65 - 100 (2½" - 4")
 - Fluxo sob

| Actuador | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|-----------------|---------------------|------------------------|-------------------|---------|------|---------|-------|------|---------|------|------|----------------------|------|------|-------------------|------|------|-------------------|------|------|-----|---|---|-----|--|--|
| | | Tipo de gaiola | | DN65-100 (2½"-4") | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 16 (18) | | | 25 (29) | | | 36 (42) | | | 63-73-90 (73-85-104) | | | 100-117 (116-135) | | | 160-180 (185-208) | | | | | | | | |
| Gama das molas bar | Tamanho válvula | Kvs (Cv) | Pressão Máxima (bar g) | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| | | | | PN9230E | 0,4-1,2 | 6,0 | 8,6 | 7,0 | | | | | | | | | | | | | | | | | | | |
| PN9236E | 1,0-2,0 | 6,0 | 50,2 | 39,8 | 25,0 | 17,4 | 18,1 | 13,6 | 17,4 | 8,3 | 11,0 | 4,5 | 2,0 | 0,9 | 1,8 | 0,4 | | | | | | | | | 0,3 | | |
| PN9233E | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 25,0 | 25,0 | 48,1 | 43,6 | 25,0 | 32,9 | 29,7 | 25,0 | 16,9 | 15,0 | 16,6 | 9,7 | 8,6 | 9,5 | 5,2 | 4,5 | 5,1 | | | | | | |
| PN9330E | 0,2-1,0 | 4,0 | 8,2 | 6,6 | | | | | | | | | | | | | | | | | | | | | | | |
| PN9330E | 0,4-1,2 | 4,0 | 35,5 | 25,2 | 25,0 | 11,1 | 11,8 | 7,3 | 11,1 | 7,0 | 3,8 | 6,5 | 2,3 | 0,5 | 2,0 | 0,4 | | | | | | | | | | | |
| PN9336E | 1,0-2,0 | 4,0 | 103,4 | 103,4 | 25,0 | 25,0 | 47,2 | 42,7 | 25,0 | 32,3 | 29,1 | 15,9 | 16,5 | 14,7 | 16,2 | 9,5 | 8,3 | 9,3 | 5,0 | 4,3 | 4,9 | | | | | | |
| PN9337E | 2,5-3,5 | 4,0 | 103,4 | 103,4 | 25,0 | 25,0 | 103,4 | 103,4 | 25,0 | 95,5 | 92,3 | 25,0 | 52,0 | 50,2 | 25,0 | 32,2 | 31,1 | 25,0 | 19,2 | 18,5 | 19,1 | | | | | | |

| Actuador | | Tipo de gaiola | | Gaiola de baixo ruído (P1-A1-P2-A2-P3) | | | | | | | | | | | | | |
|--------------------|----------|------------------------|------|--|------|------------------|------|------|--------------|---|---|--------------|---|---|--------------|---------|-----|
| | | | | Tamanho válvula | | DN65-80 (2½"-3") | | | | | | DN100 (4") | | | | | |
| | | | | | | Todos os Kvs | | | Todos os Kvs | | | Todos os Kvs | | | Todos os Kvs | | |
| Gama das molas bar | Kvs (Cv) | Máximo pressão (bar g) | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| | | | | | | | | | | | | | | | PN9236E | 1,0-2,0 | 6,0 |
| PN9233E | 2,0-4,0 | 6,0 | 9,7 | 8,6 | 9,5 | 5,2 | 4,5 | 5,1 | | | | | | | | | |
| PN9330E | 0,2-1,0 | 4,0 | | | | | | | | | | | | | | | |
| PN9330E | 0,4-1,2 | 4,0 | 0,4 | | 0,2 | | | | | | | | | | | | |
| PN9336E | 1,0-2,0 | 4,0 | 9,5 | 8,3 | 9,3 | 5,0 | 4,3 | 4,9 | | | | | | | | | |
| PN9337E | 2,5-3,5 | 4,0 | 32,2 | 31,1 | 25,0 | 19,2 | 18,5 | 19,1 | | | | | | | | | |

- Pressões diferenciais máximas (bar) para o fecho de classe IV
- Revestimento duro (W)
- Spira-trol
- DN65 - 100 (2½" - 4")
- Fluxo sob

| Actuador | | Gaiola standard (S) | | | | | | | | | | | | | | | | | | | | | | | |
|----------------|---------|---------------------|-----|----------|---------|------------------------|------|---------|-------|------|----------------------|-------|------|-------------------|------|------|-------------------|------|------|------|------|------|------|------|------|
| | | DN65-100 (2½"-4") | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16 (18) | | | 25 (29) | | | 36 (42) | | | 63-73-90 (73-85-104) | | | 100-117 (116-135) | | | 160-180 (185-208) | | | | | | | | |
| Tipo de gaiola | | Tamanho válvula | | Kvs (Cv) | | Pressão Máxima (bar g) | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | | | |
| PN9230R | PN9230R | 0,2-1,0 | 6,0 | 103,4 | 103,4 | 250 | 250 | 103,4 | 103,4 | 250 | 103,4 | 103,4 | 250 | 97,1 | 93,9 | 25,0 | 52,9 | 51,1 | 25,0 | 32,8 | 31,7 | 25,0 | 19,6 | 18,8 | 19,4 |
| PN9230R | PN9230R | 0,4-1,2 | 6,0 | 103,4 | 103,4 | 250 | 250 | 103,4 | 103,4 | 250 | 103,4 | 103,4 | 250 | 92,8 | 89,6 | 25,0 | 50,5 | 48,7 | 25,0 | 31,3 | 30,1 | 25,0 | 18,6 | 17,9 | 18,5 |
| PN9236R | PN9236R | 1,0-2,0 | 6,0 | 103,4 | 103,4 | 250 | 250 | 103,4 | 103,4 | 250 | 103,4 | 103,4 | 250 | 75,7 | 72,5 | 25,0 | 40,9 | 39,1 | 25,0 | 25,1 | 24,0 | 24,9 | 14,8 | 14,0 | 14,7 |
| PN9233R | PN9233R | 2,0-4,0 | 6,0 | 103,4 | 103,4 | 250 | 250 | 103,4 | 103,4 | 250 | 48,1 | 43,6 | 25,0 | 32,9 | 29,7 | 25,0 | 16,9 | 15,0 | 16,6 | 9,7 | 8,6 | 9,5 | 5,2 | 4,5 | 5,1 |
| PN9330R | PN9330R | 0,2-1,0 | 4,0 | 103,4 | 103,4 | 250 | 250 | 88,6 | 84,1 | 250 | 61,8 | 58,6 | 25,0 | 33,1 | 31,3 | 25,0 | 20,1 | 19,0 | 19,9 | 11,6 | 10,9 | 11,5 | 9,8 | 9,0 | 9,6 |
| PN9330R | PN9330R | 0,4-1,2 | 4,0 | 103,4 | 103,4 | 250 | 250 | 76,8 | 72,3 | 250 | 53,4 | 50,2 | 25,0 | 28,3 | 26,5 | 25,0 | 17,1 | 15,9 | 16,9 | 9,8 | 9,0 | 9,6 | 2,1 | 1,5 | 2,1 |
| PN9336R | PN9336R | 1,0-2,0 | 4,0 | 76,5 | 66,1 | 25,0 | 25,0 | 29,5 | 25,0 | 25,0 | 19,7 | 16,5 | 19,2 | 9,4 | 7,6 | 9,1 | 4,9 | 3,8 | 4,8 | 2,1 | 1,5 | 2,1 | | | |

| Actuador | | Gaiola de baixo ruído (P1-A1-P2-A2-P3) | | | | | | | | | | | | | | | | | | | | |
|----------------|---------|--|-----|--------------|------|------------------------|------|--------------|------|--------------|------|--------------|------|------|------|------|------|------|------|------|------|------|
| | | DN100 (4") | | | | | | | | | | | | | | | | | | | | |
| | | Todos os Kvs | | Todos os Kvs | | Todos os Kvs | | Todos os Kvs | | Todos os Kvs | | Todos os Kvs | | | | | | | | | | |
| Tipo de gaiola | | Tamanho válvula | | Kvs (Cv) | | Pressão Máxima (bar g) | | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D | N-P | H | D |
| PN9230R | PN9230R | 0,2-1,0 | 6,0 | 32,8 | 31,7 | 25,0 | 25,0 | 19,6 | 18,8 | 19,4 | 19,6 | 18,8 | 19,4 | 19,6 | 18,8 | 19,4 | 19,6 | 18,8 | 19,4 | 19,6 | 18,8 | 19,4 |
| PN9230R | PN9230R | 0,4-1,2 | 6,0 | 31,3 | 30,1 | 25,0 | 25,0 | 18,6 | 17,9 | 18,5 | 18,6 | 17,9 | 18,5 | 18,6 | 17,9 | 18,5 | 18,6 | 17,9 | 18,5 | 18,6 | 17,9 | 18,5 |
| PN9236R | PN9236R | 1,0-2,0 | 6,0 | 25,1 | 24,0 | 24,9 | 24,9 | 14,8 | 14,0 | 14,7 | 14,8 | 14,0 | 14,7 | 14,8 | 14,0 | 14,7 | 14,8 | 14,0 | 14,7 | 14,8 | 14,0 | 14,7 |
| PN9233R | PN9233R | 2,0-4,0 | 6,0 | 9,7 | 8,6 | 9,5 | 9,5 | 5,2 | 4,5 | 5,1 | 5,2 | 4,5 | 5,1 | 5,2 | 4,5 | 5,1 | 5,2 | 4,5 | 5,1 | 5,2 | 4,5 | 5,1 |
| PN9330R | PN9330R | 0,2-1,0 | 4,0 | 20,1 | 19,0 | 19,9 | 19,9 | 11,6 | 10,9 | 11,5 | 11,6 | 10,9 | 11,5 | 11,6 | 10,9 | 11,5 | 11,6 | 10,9 | 11,5 | 11,6 | 10,9 | 11,5 |
| PN9330R | PN9330R | 0,4-1,2 | 4,0 | 17,1 | 15,9 | 16,9 | 16,9 | 9,8 | 9,0 | 9,6 | 9,8 | 9,0 | 9,6 | 9,8 | 9,0 | 9,6 | 9,8 | 9,0 | 9,6 | 9,8 | 9,0 | 9,6 |
| PN9336R | PN9336R | 1,0-2,0 | 4,0 | 4,9 | 3,8 | 4,8 | 4,8 | 2,1 | 1,5 | 2,1 | 2,1 | 1,5 | 2,1 | 2,1 | 1,5 | 2,1 | 2,1 | 1,5 | 2,1 | 2,1 | 1,5 | 2,1 |

Série PN9000 - Guia de selecção

Antes de efectuar a selecção da série PN9000, consulte as páginas 6 a 26 - Dados de dimensionamento

Como usar os dados para dimensionamento:

As tabelas abaixo dão indicação de como dimensionar os PN9000 quando usados em Válvulas de controlo SPIRA-TROL.

Na tabela são indicadas duas condições:

Classe de vedação IV - Tem uma vedação conforme o requerido na BS 5793-4 (IEC 60534-4) classe IV.

Classe de vedação VI - Tem uma vedação conforme o requerido na BS 5793-4 (IEC 60534-4) classe VI.

Para seleccionar o actuador adequado:

- Identificar a coluna que contém a válvula e o material do empanque seleccionado.
- Identificar a condição de pressão máxima de funcionamento, incluindo quaisquer pressões transitórias susceptíveis de ocorrer, na coluna seleccionada.
- Volte a ler o lado esquerdo da tabela para identificar o actuador adequado para a aplicação.

Para condições fora dos valores indicados, consulte a Spirax Sarco.

| Tipo | PN = Pulverização com pó de Poliéster (standard) | PN |
|------------------------------|--|----|
| Série | 9 = Série 9000 | 9 |
| Tamanho do actuador | 1 = 100 cm ² | 3 |
| | 2 = 340 cm ² | |
| | 3 = 670 cm ² | |
| Curso da válvula | 2 = 20 mm | 3 |
| | 3 = 30 mm | |
| Gama das molas | 0 = 0.2 a 1,0 bar (opcional de 0,4 bar a 1,2 bar) | 7 |
| | 3 = 2.0 a 4,0 bar | |
| | 6 = 1.0 a 2,0 bar | |
| | 7 = 2.5 a 3.5 bar (série PN933_ apenas) | |
| Acção da mola | E = Mola estendida | E |
| | R = Mola retraída | |
| Tipo forquilha (DN15 - DN50) | Em branco = Spira-trol™ Séries K e L (M34) | |
| | B = Spira-trol™ Série J (M50) | |
| Controlo Manual | H = Volante (opcional) | |
| Parafusos anti-corrosivos | S = Parafusos anti-corrosivos (opcional) | |
| Velocidade Rápida | F = Versão com maior rapidez de operação (só possível nos PN92 e PN93) | |
| Diafragma | Em branco = Standard | |
| | T = Diafragma EPDM de alta temperatura | |

Como encomendar / exemplo de selecção:

1 Actuador pneumático Spirax Sarco PN9337E

Sobressalentes

Os únicos sobressalentes disponíveis estão indicados abaixo e são comuns a ambas as versões de mola estendida e mola em retraída

Sobressalentes disponíveis

| | |
|---|--------------------|
| Conjunto de vedação da haste | 17, 18, 30 |
| Conjunto do diafragma | 4, 9 |
| Conjunto de indicador de curso | 15, 19, 20 |
| Conjunto das molas | 5 |
| Conjunto Acoplamento (válvulas Spira-trol™) | 10, 13, 14, 26, 27 |

Como encomendar sobressalentes

Encomende os sobressalentes indicando sempre a descrição da coluna “sobressalentes disponíveis” e o modelo de actuador.

Exemplo: 1 Conjunto de vedação da haste para actuador PN9123E.

