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# Pinch valve pneumatically actuated
# Series PI03, PI04



| | |
|---|---|
| Design type | Pinch valve, pneumatically actuated |
| Connection | RP1/2"...RP2" according to ISO 7/1<br>on request: NPT thread, Adhesive socket PVC, Weld ends according to DIN or ISO, Tri-Clamp in inches |
| Materials | Housing Stainless steel 1.4408 (non-media-contacting)<br>Connection parts Stainless steel 1.4435 or rather Adhesive socket PVC<br>Hose NBR, FKM, EPDM, Silicone or SBR |
| Application range | dirty, granular, abrasive, viscous, pasty and aggressive media, that do not attack the materials used |
| Viscosity of the medium | max. 0,001m²/s (1000cSt, 132°E) |
| Medium temperature | Hose NBR -20...+80°C (higher temperatures on request)<br>Hose FKM -10...+130°C<br>Hose EPDM -30...+95°C (higher temperatures on request)<br>Hose Silicone -40...+160°C<br>Hose SBR -30...+80°C (for abrasive media (e.g. sand, cement, etc.)) |
| Ambient temperature | -15...+60°C |
| Operating pressure | see table and Selection charts |
| Control medium | Compressed air and neutral gases (Liquids on request) |
| Control pressure | Function Spring return closed: see table<br>Function spring opens: see Selection chart |
| Approval | FDA-Approval for hose NBR and EPDM |
| Accessories | Limit switch, Manual emergency override, Stroke limitation, Pilot valve |



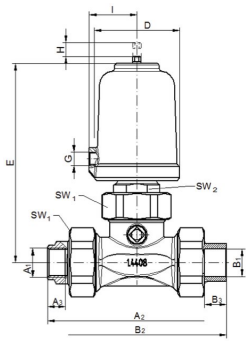
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## Type code

| Pinch valve | | PI | 03 | -12 | -N | Z | S | -51 | -S |
|---|---|---|---|---|---|---|---|---|---|
| **Function** | NC | | 03 | | | | | | |
| | NO | | 04 | | | | | | |
| **Female thread** | RP1/2" | | | 12 | | | | | |
| | RP3/4" | | | 34 | | | | | |
| | RP1" | | | 10 | | | | | |
| | RP11/4" | | | 114 | | | | | |
| | RP11/2" | | | 112 | | | | | |
| | RP2" | | | 20 | | | | | |
| **NPT-Thread** | NPT1/2" | | | 12N | | | | | |
| | NPT3/4" | | | 34N | | | | | |
| | NPT1" | | | 10N | | | | | |
| | NPT11/4" | | | 114N | | | | | |
| | NPT2" | | | 20N | | | | | |
| **Adhesive socket** | DN15 | | | 15 | | | | | |
| | DN20 | | | 20 | | | | | |
| | DN25 | | | 25 | | | | | |
| | DN32 | | | 32 | | | | | |
| | DN40 | | | 40 | | | | | |
| | DN50 | | | 50 | | | | | |
| **Weld ends to DIN** | DN15 | | | D15 | | | | | |
| | DN20 | | | D20 | | | | | |
| | DN25 | | | D25 | | | | | |
| | DN32 | | | D32 | | | | | |
| | DN40 | | | D40 | | | | | |
| | DN50 | | | D50 | | | | | |
| **Weld ends to ISO** | DN15 | | | I15 | | | | | |
| | DN20 | | | I20 | | | | | |
| | DN25 | | | I25 | | | | | |
| | DN32 | | | I32 | | | | | |
| | DN40 | | | I40 | | | | | |
| | DN50 | | | I50 | | | | | |
| **Hose insert** | EPDM food-grade | | | | E | | | | |
| | NBR food-grade | | | | N | | | | |
| | FKM | | | | V | | | | |
| | Silicone | | | | I | | | | |
| | SBR | | | | S | | | | |
| **Connection material** | PVC | | | | | V | | | |
| | Stainless steel 1.4435 | | | | | Z | | | |
| **Body material** | Stainless steel 1.4408 | | | | | | S | | |
| **Actuator** | Piston Ø50mm 1Spring | | | | | | | 51 | |
| | Piston Ø50mm 2Springs | | | | | | | 52 | |
| | Piston Ø50mm 3Springs | | | | | | | 53 | |
| | Piston Ø80mm 1Spring | | | | | | | 81 | |
| | Piston Ø80mm 2Springs | | | | | | | 82 | |
| | Piston Ø80mm 3Springs | | | | | | | 83 | |
| | Piston Ø125mm 1Spring | | | | | | | 1251 | |
| | Piston Ø125mm 2Springs | | | | | | | 1252 | |
| | Piston Ø125mm 3Springs | | | | | | | 1253 | |
| **Special versions** | silicone-free | | | | | | | | S |
| | Special version 01(Description in the text) | | | | | | | | 01 |


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## Technical Specifications and Dimensions with threaded connection or Adhesive socket




Spring closes

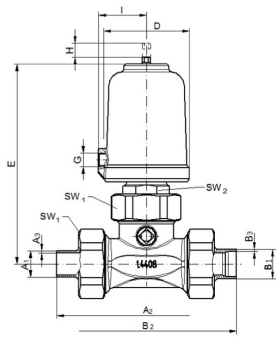
| Nominal size DN [mm] | Actuator | Female thread | | | NPT-Thread | | | Adhesive socket PVC | | | D | E | G | I | SW1 | SW2 | Stroke | Kvs values [m³/h] | Weight [kg] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A1 | A2 | A3 | A1 | A2 | A3 | B1 | B2 | B3 | | | | | | | | | |
| 15 | 50 | RP1/2" | 130 | 13 | NPT1/2" | 132 | 14,5 | 20 | 130 | 16 | 62 | 144 | G1/8" | 35 | 46 | 27 | 16 | 12,5 | 1,7 |
| 15 | 80 | RP1/2" | 130 | 13 | NPT1/2" | 132 | 14,5 | 20 | 130 | 16 | 98 | 183 | G1/4" | 55 | 46 | 27 | 16 | 12,5 | 3,7 |
| 20 | 50 | RP3/4" | 132 | 13 | NPT3/4" | 132 | 15 | 25 | 136 | 19 | 62 | 144 | G1/8" | 35 | 46 | 27 | 16 | 12,5 | 2 |
| 20 | 80 | RP3/4" | 132 | 13 | NPT3/4" | 132 | 6 | 25 | 136 | 19 | 98 | 183 | G1/4" | 55 | 46 | 27 | 16 | 12,5 | 4 |
| 25 | 80 | RP1" | 184 | 18 | NPT1" | 182 | 17,9 | 32 | 190 | 22 | 98 | 215 | G1/4" | 55 | 65 | 30 | 22 | 24 | 5 |
| 32 | 80 | RP11/4" | 190 | 18 | NPT11/4" | 194 | 19 | 40 | 200 | 26 | 98 | 215 | G1/4" | 55 | 65 | 30 | 22 | 24 | 5,3 |
| 40 | 80 | RP11/2" | 246 | 20 | NPT11/2" | 246 | 18,4 | 50 | 256 | 31 | 98 | 260 | G1/4" | 55 | 88 | 30 | 34 | 84 | 7,9 |
| 40 | 125 | RP11/2" | 246 | 20 | NPT11/2" | 246 | 18,4 | 50 | 256 | 31 | 146 | 285 | G1/4" | 80 | 88 | 30 | 34 | 84 | 9,6 |
| 50 | 80 | RP2" | 246 | 22 | NPT2" | 246 | 18,8 | 63 | 272 | 38 | 98 | 260 | G1/4" | 55 | 88 | 30 | 34 | 84 | 8,2 |
| 50 | 125 | RP2" | 246 | 22 | NPT2" | 246 | 18,8 | 63 | 272 | 38 | 146 | 285 | G1/4" | 80 | 88 | 30 | 34 | 84 | 9,9 |



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## Technical Specifications and Dimensions with Weld ends




Spring closes

| Nominal size DN [mm] | Actuator | Weld ends to DIN | | | Weld ends to ISO | | | D | E | G | I | SW1 | SW2 | Stroke | Kvs values [m³/h] | Weight [kg] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A1 | A2 | A3 | B1 | B2 | B3 | | | | | | | | | |
| 15 | 50 | 19 | 130 | 1,5 | 21,3 | 130 | 1,6 | 62 | 144 | G1/8" | 35 | 46 | 27 | 16 | 12,5 | 1,7 |
| 15 | 80 | 19 | 130 | 1,5 | 21,3 | 130 | 1,6 | 98 | 183 | G1/4" | 55 | 46 | 27 | 16 | 12,5 | 3,7 |
| 20 | 50 | 23 | 130 | 1,5 | 26,9 | 130 | 1,6 | 62 | 144 | G1/8" | 35 | 46 | 27 | 16 | 12,5 | 2 |
| 20 | 80 | 23 | 130 | 1,5 | 26,9 | 130 | 1,6 | 98 | 183 | G1/4" | 55 | 46 | 27 | 16 | 12,5 | 4 |
| 25 | 80 | 29 | 184 | 1,5 | 33,7 | 190 | 2 | 98 | 215 | G1/4" | 55 | 65 | 30 | 22 | 24 | 5 |
| 32 | 80 | 32 | 190 | 1,5 | 42,4 | 190 | 2 | 98 | 215 | G1/4" | 55 | 65 | 30 | 22 | 24 | 5,3 |
| 40 | 80 | 41 | 250 | 1,5 | 48,3 | 250 | 2 | 98 | 260 | G1/4" | 55 | 88 | 30 | 34 | 84 | 7,9 |
| 40 | 125 | 41 | 250 | 1,5 | 48,3 | 250 | 2 | 146 | 285 | G1/4" | 80 | 88 | 30 | 34 | 84 | 9,6 |
| 50 | 80 | 53 | 250 | 1,5 | 60,3 | 250 | 2 | 98 | 260 | G1/4" | 55 | 88 | 30 | 34 | 84 | 8,2 |
| 50 | 125 | 53 | 250 | 1,5 | 60,3 | 250 | 2 | 146 | 285 | G1/4" | 80 | 88 | 30 | 34 | 84 | 9,9 |

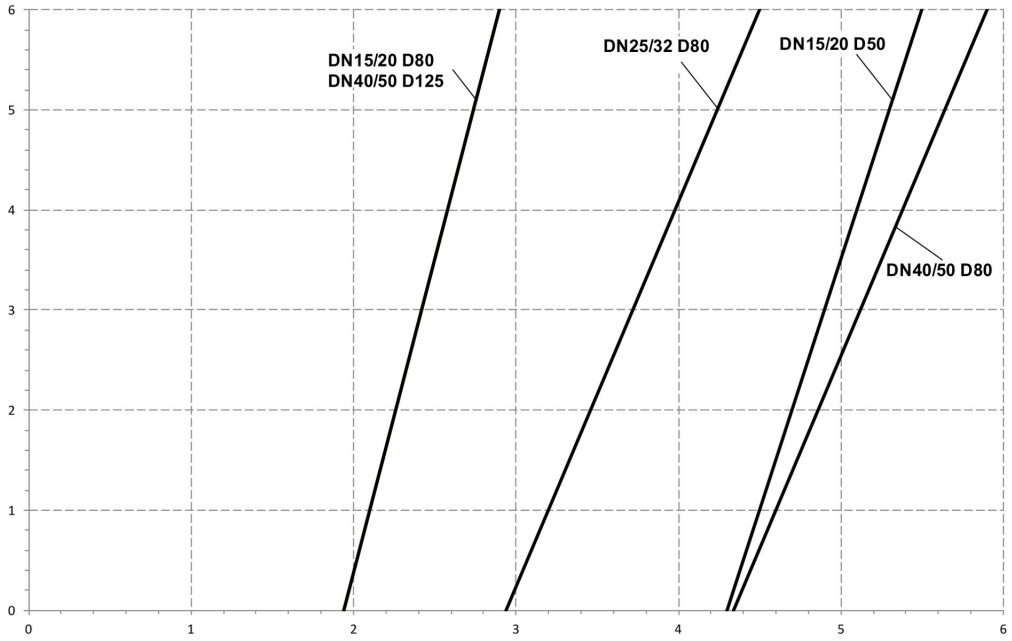

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## Selection table Spring return closed

| Nominal size DN[mm] | Hose material | max. Operating pressure [bar] | Control pressure [bar] | Actuator | Springs |
|---|---|---|---|---|---|
| 15/20 | EPDM | 3 | 4,4-10 | 50 | 2 |
| | NBR | | | | |
| | FKM | | | | |
| | Silicone | 6 | | | |
| | SBR | 4 | | | |
| | EPDM | 6 | 5,6-10 | 50 | 3 |
| | NBR | | | | |
| | FKM | | | | |
| | SBR | | | | |
| | EPDM | 6 | 3,5-10 | 80 | 1 |
| | NBR | | | | |
| | FKM | | | | |
| | Silicone | | | | |
| | SBR | | | | |
| 25/32 | EPDM | 4 | 3,5-10 | 80 | 1 |
| | NBR | 3 | | | |
| | FKM | | | | |
| | Silicone | | | | |
| | SBR | 3 | | | |
| | EPDM | 6 | 4,4-10 | 80 | 2 |
| | NBR | | | | |
| | FKM | | | | |
| | Silicone | | | | |
| | SBR | | | | |
| 40/50 | NBR | 2 | 4,4-10 | 80 | 2 |
| | FKM | | | | |
| | Silicone | 3 | | | |
| | NBR | 3 | 5,6-10 | 80 | 3 |
| | FKM | | | | |
| | Silicone | 5 | | | |
| | EPDM | 2 | 2,2-10 | 125 | 2 |
| | NBR | 4 | | | |
| | FKM | | | | |
| | Silicone | 6 | | | |
| | EPDM | 5 | 3,1-10 | 125 | 3 |
| | NBR | | | | |
| | FKM | | | | |
| | Silicone | 6 | | | |
| | SBR | 3 | | | |


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## Selection charts - Dependence of operating pressure/control pressure - Spring opens




horizontal Axis: pilot pressure in bar
vertical axis: operating pressure in bar

For optimum service life, the pilot pressure should be adjusted to the actual operating pressure according to the diagram..

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