

**TOP-QUALITY
PNEUMATIC ACTUATOR**



SUNSI
in
i-torK





energy ahead...

INTRODUCTION

PDS Series Pneumatic Actuators are designed using Scotch-Yoke technology from PDS 45 to the largest of PDS 200. Scotch-Yoke technology is well known to all users as the most suitable actuator mechanism for valve and damper operation as it produces higher torque at both end positions.

Specification of PDS actuators follow international standards for faster and easier mounting of accessories like Solenoid valves, Limit switches, Positioners etc.

Ranges available from 10Nm to 4000Nm through double acting, and 5Nm to 1900Nm through spring return.

Maximum operating temperature is $-20^{\circ}\text{C} \sim 80^{\circ}\text{C}$ as standard (For higher and lower temperature applications please consult manufacturer before placing order).

Mounting dimensions follow ISO5211, DIN3337, NAMUR, VDI/VDE3845 standards,

The drive shafts come in various sizes with double square shaped female bore for accomodating valve shaft.

Spring package is pre-compressed for increased safety.

Extremely long service life and reliable performance.

SUSIN I-TORK also provides ITS series limit switch boxes (weather proof, explosion proof), solenoid valves, positioners for modulating services and other pneumatic components.

Side hand-wheel and de-clutchable gear box for manual operation are also options in the SUSIN I-TORK product range.

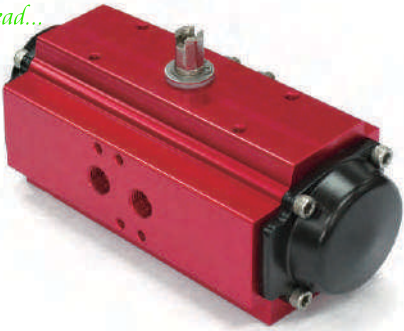






FEATURES AND ADVANTAGE

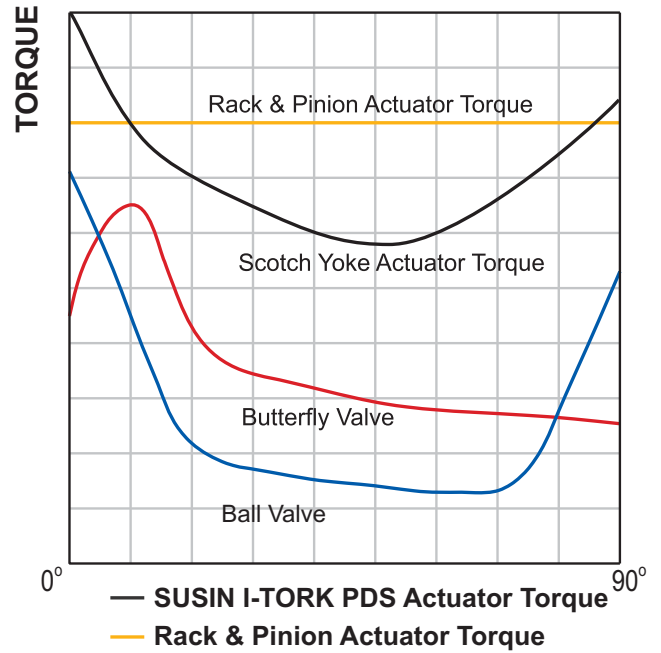
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Advantage (Scotch Yoke)

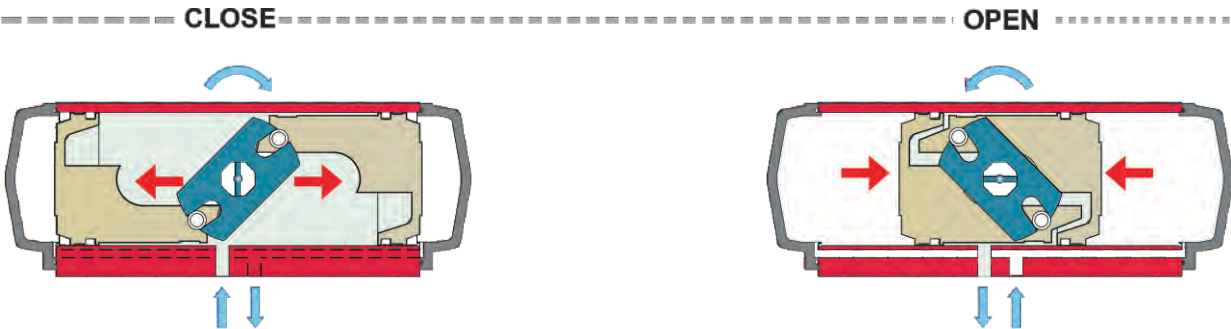
The SUSIN I-TORK actuators provide increased torque at the open and close position, this closely matches the required torque for practical valve operation.

- Increased torque at the open and close position.
- Compact design and size
- Extremely long cyclic life
- Adjustable center stopper for both open & close position

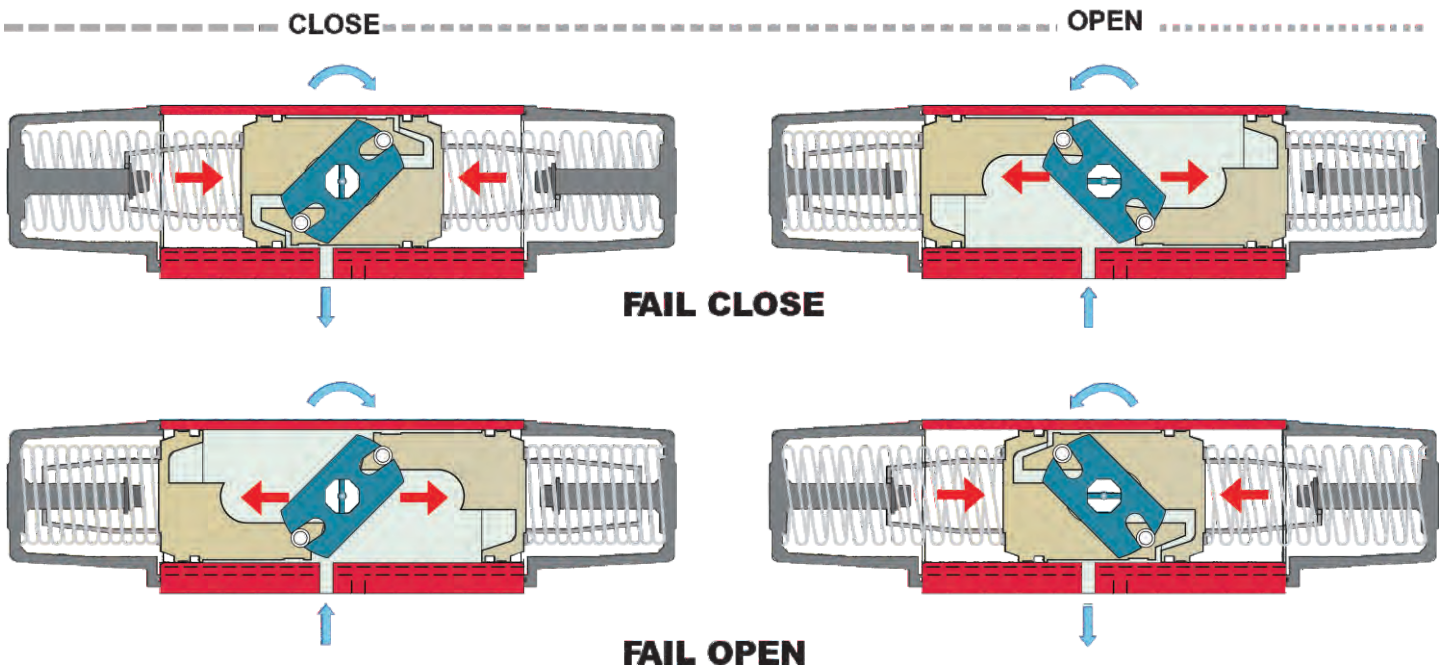


MECHANICAL MOVEMENT & POSITION INSIDE

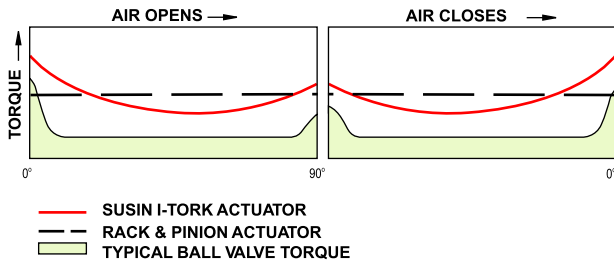
DOUBLE ACTING



SPRING RETURN



DOUBLE ACTING OUTPUT TORQUE (Nm)



| MODEL | Angle | 2.8 bar 40 psi | 3.5 bar 50 psi | 4.2 bar 61 psi | 5.5 bar 80 psi | 6 bar 87 psi | 7 bar 100 psi | 8 bar 116 psi | Air Consumption (L, at 5.5 bar) | | Operating Time (Sec., at 5.5bar) |
|-------|-------|-------------------|-------------------|-------------------|-------------------|-----------------|------------------|------------------|------------------------------------|-------|-------------------------------------|
| | | | | | | | | | OPEN | CLOSE | |
| PD45 | 0° | 12 | 16 | 20 | 26 | 28 | 34 | 38 | 0.12 | 0.12 | < 0.3 |
| | 45° | 5 | 7 | 9 | 11 | 12 | 14 | 16 | | | |
| | 90° | 8 | 12 | 15 | 18 | 20 | 23 | 27 | | | |
| PD50 | 0° | 27 | 34 | 41 | 54 | 59 | 69 | 79 | 0.16 | 0.16 | < 0.3 |
| | 45° | 12 | 15 | 17 | 23 | 25 | 29 | 33 | | | |
| | 90° | 19 | 24 | 29 | 38 | 42 | 48 | 55 | | | |
| PD55 | 0° | 27 | 45 | 56 | 73 | 80 | 94 | 107 | 0.34 | 0.34 | < 0.4 |
| | 45° | 15 | 18 | 23 | 30 | 33 | 37 | 44 | | | |
| | 90° | 25 | 32 | 39 | 51 | 57 | 65 | 75 | | | |
| PD70 | 0° | 76 | 95 | 114 | 149 | 163 | 190 | 217 | 0.46 | 0.46 | < 0.6 |
| | 45° | 32 | 40 | 48 | 62 | 68 | 79 | 90 | | | |
| | 90° | 53 | 66 | 78 | 104 | 114 | 133 | 152 | | | |
| PD75 | 0° | 112 | 141 | 170 | 223 | 243 | 284 | 324 | 0.99 | 0.96 | < 0.9 |
| | 45° | 47 | 58 | 70 | 93 | 101 | 117 | 134 | | | |
| | 90° | 78 | 98 | 119 | 155 | 170 | 198 | 226 | | | |
| PD85 | 0° | 141 | 176 | 212 | 277 | 302 | 353 | 403 | 0.8 | 0.8 | < 1.0 |
| | 45° | 59 | 74 | 89 | 116 | 127 | 148 | 169 | | | |
| | 90° | 99 | 123 | 148 | 194 | 212 | 247 | 282 | | | |
| PD100 | 0° | 229 | 286 | 343 | 449 | 490 | 571 | 653 | 1.32 | 1.28 | < 2.0 |
| | 45° | 96 | 120 | 144 | 188 | 205 | 239 | 273 | | | |
| | 90° | 160 | 200 | 240 | 314 | 343 | 400 | 457 | | | |
| PD125 | 0° | 438 | 547 | 657 | 860 | 938 | 1,095 | 1,250 | 2.49 | 2.42 | < 3.0 |
| | 45° | 182 | 228 | 273 | 358 | 390 | 456 | 521 | | | |
| | 90° | 306 | 383 | 460 | 602 | 657 | 766 | 876 | | | |
| PD160 | 0° | 850 | 1,062 | 1,274 | 1,668 | 1,820 | 2,124 | 2,427 | 4.52 | 4.61 | < 5.0 |
| | 45° | 355 | 444 | 533 | 698 | 761 | 888 | 1,015 | | | |
| | 90° | 595 | 744 | 892 | 1,168 | 1,275 | 1,487 | 1,700 | | | |
| PD200 | 0° | 1,622 | 2,028 | 2,433 | 3,187 | 3,476 | 4,056 | 4,635 | 9.07 | 9.21 | < 6.0 |
| | 45° | 679 | 848 | 1,018 | 1,333 | 1,454 | 1,697 | 1,939 | | | |
| | 90° | 1,136 | 1,420 | 1,704 | 2,231 | 2,434 | 2,840 | 3,245 | | | |

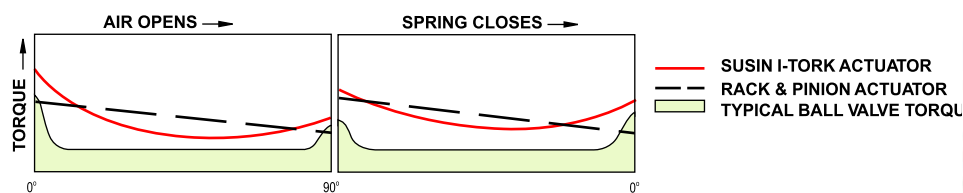
*Please be sure to include appropriate torque safety factors and variable service conditions when sizing.



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TECHNICAL INFORMATION

SPRING RETURN OUTPUT TORQUE (Nm)

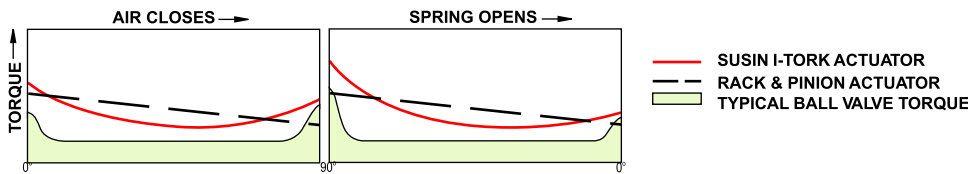


Spring Close

| MODEL | Function | Angle | 4.2 bar 60 psi | 5.5 bar 80 psi | 6 bar 87 psi | 7 bar 100 psi | Air Consumption (L, at 5.5 bar) | Operating Time (Sec., at 5.5bar) |
|-------|--------------|-------|-------------------|-------------------|-----------------|------------------|------------------------------------|-------------------------------------|
| PS45 | Air open | 0° | 12.0 | 17.1 | 18.5 | 20.5 | 0.12 | < 0.3 |
| | | 55° | 4.0 | 5.1 | 5.8 | 6.4 | | |
| | | 90° | 5.1 | 5.9 | 6.7 | 7.6 | | |
| | Spring close | 90° | 9.1 | 12.3 | 13.1 | 15.1 | | |
| | | 35° | 4.3 | 5.5 | 6.5 | 7.3 | | |
| | | 0° | 7.4 | 8.7 | 9.8 | 11.9 | | |
| PS50 | Air open | 0° | 25.6 | 34.6 | 37.6 | 42.5 | 0.16 | < 0.3 |
| | | 55° | 8.3 | 11.1 | 12.0 | 13.4 | | |
| | | 90° | 10.0 | 13.1 | 14.2 | 15.4 | | |
| | Spring close | 90° | 18.6 | 25.0 | 27.3 | 32.2 | | |
| | | 35° | 9.0 | 12.0 | 13.1 | 15.5 | | |
| | | 0° | 15.2 | 19.9 | 21.7 | 25.6 | | |
| PS55 | Air open | 0° | 33.1 | 45.1 | 48.4 | 55.2 | 0.34 | < 0.4 |
| | | 55° | 11.0 | 13.7 | 14.9 | 16.9 | | |
| | | 90° | 31.7 | 18.0 | 19.8 | 21.9 | | |
| | Spring close | 90° | 23.7 | 32.1 | 35.4 | 41.1 | | |
| | | 35° | 11.9 | 16.2 | 17.6 | 20.8 | | |
| | | 0° | 20.8 | 27.2 | 30.4 | 36.2 | | |
| PS70 | Air open | 0° | 68.3 | 92.3 | 98.9 | 112.3 | 0.46 | < 0.6 |
| | | 55° | 21.9 | 29.0 | 31.6 | 35.4 | | |
| | | 90° | 29.0 | 38.0 | 41.7 | 46.2 | | |
| | Spring close | 90° | 49.5 | 66.7 | 72.1 | 84.6 | | |
| | | 35° | 25.7 | 34.3 | 37.4 | 43.8 | | |
| | | 0° | 43.8 | 57.2 | 63.6 | 74.6 | | |
| PS75 | Air open | 0° | 106.4 | 141.7 | 154.2 | 178.1 | 0.96 | < 0.9 |
| | | 55° | 31.5 | 41.8 | 45.1 | 53.2 | | |
| | | 90° | 39.7 | 52.2 | 56.8 | 66.5 | | |
| | Spring close | 90° | 77.0 | 103.2 | 112.4 | 127.8 | | |
| | | 35° | 37.8 | 51.2 | 55.8 | 64.2 | | |
| | | 0° | 59.7 | 80.9 | 88.1 | 100.8 | | |
| PS85 | Air open | 0° | 131.9 | 176.2 | 187.9 | 216.7 | 0.79 | < 1.0 |
| | | 55° | 40.1 | 53.4 | 57.9 | 66.9 | | |
| | | 90° | 50.4 | 67.0 | 72.5 | 83.9 | | |
| | Spring close | 90° | 95.7 | 127.8 | 139.3 | 159.5 | | |
| | | 35° | 48.4 | 64.5 | 70.4 | 80.6 | | |
| | | 0° | 76.7 | 101.9 | 114.6 | 131.0 | | |
| PS100 | Air open | 0° | 214.6 | 286.8 | 311.2 | 359.6 | 1.28 | < 2.0 |
| | | 55° | 64.7 | 86.1 | 93.4 | 108.4 | | |
| | | 90° | 80.5 | 106.7 | 115.7 | 134.9 | | |
| | Spring close | 90° | 156.0 | 208.7 | 227.2 | 259.2 | | |
| | | 35° | 78.6 | 104.9 | 114.3 | 130.3 | | |
| | | 0° | 123.2 | 163.5 | 178.5 | 203.3 | | |
| PS125 | Air open | 0° | 412.5 | 552.4 | 601.3 | 689.3 | 2.42 | < 3.0 |
| | | 55° | 115.9 | 164.9 | 189.4 | 217.2 | | |
| | | 90° | 132.3 | 202.8 | 247.1 | 283.4 | | |
| | Spring close | 90° | 320.7 | 401.1 | 409.7 | 471.5 | | |
| | | 35° | 158.4 | 200.9 | 208.4 | 240.0 | | |
| | | 0° | 234.2 | 309.8 | 336.4 | 388.5 | | |
| PS160 | Air open | 0° | 802.5 | 1,075.6 | 1,189.6 | 1,373.0 | 4.61 | < 5.0 |
| | | 55° | 239.6 | 319.5 | 341.8 | 395.8 | | |
| | | 90° | 294.8 | 390.9 | 401.8 | 467.1 | | |
| | Spring close | 90° | 584.0 | 780.8 | 872.5 | 997.6 | | |
| | | 35° | 292.7 | 390.2 | 429.9 | 491.3 | | |
| | | 0° | 452.6 | 579.9 | 630.3 | 718.8 | | |
| PS200 | Air open | 0° | 1,561.3 | 2,079.9 | 2,272.7 | 2,603.4 | 9.21 | < 6.0 |
| | | 55° | 452.2 | 607.9 | 660.3 | 747.3 | | |
| | | 90° | 536.6 | 729.5 | 786.7 | 877.1 | | |
| | Spring close | 90° | 1,141.7 | 1,508.2 | 1,646.9 | 1,920.1 | | |
| | | 35° | 564.3 | 747.4 | 813.6 | 946.8 | | |
| | | 0° | 835.6 | 1,115.9 | 1,202.8 | 1,391.4 | | |

*Please be sure to include appropriate safety factors and various service conditions when sizing.

SPRING RETURN OUTPUT TORQUE (Nm)



Spring Open

| MODEL | Function | Angle | 4.2 bar 60 psi | 5.5 bar 80 psi | 6 bar 87 psi | 7 bar 100 psi | Air Consumption (L, at 5.5 bar) | Operating Time (Sec., at 5.5bar) |
|-------|----------------|-------|-------------------|-------------------|-----------------|------------------|------------------------------------|-------------------------------------|
| PS45 | Air close | 90° | 7.9 | 11.75 | 12.85 | 14.5 | 0.12 | < 0.3 |
| | | 55° | 3.9 | 5.12 | 5.78 | 6.24 | | |
| | | 0° | 6.87 | 8.98 | 9.65 | 10.78 | | |
| | Spring open | 0° | 12.79 | 17.32 | 18.92 | 22.3 | | |
| | | 35° | 3.9 | 5.1 | 5.78 | 6.45 | | |
| | | 90° | 4.95 | 6.34 | 7.15 | 8.55 | | |
| PS50 | Air close | 90° | 17.9 | 24.2 | 26.3 | 29.8 | 0.16 | < 0.3 |
| | | 55° | 8.3 | 11.1 | 12.0 | 13.4 | | |
| | | 0° | 14.3 | 18.7 | 20.3 | 22.0 | | |
| | Spring open | 0° | 26.5 | 35.7 | 39.0 | 46.1 | | |
| | | 35° | 8.3 | 11.0 | 12.0 | 14.1 | | |
| | | 90° | 10.7 | 13.9 | 15.2 | 17.9 | | |
| PS55 | Air close | 90° | 22.78 | 31.2 | 33.46 | 37.8 | 0.34 | < 0.4 |
| | | 55° | 10.65 | 14.6 | 15.2 | 17.65 | | |
| | | 0° | 19.8 | 26.2 | 28.6 | 31.7 | | |
| | Spring open | 0° | 34.55 | 46.57 | 50.2 | 58.9 | | |
| | | 35° | 10.8 | 14.4 | 15.78 | 17.9 | | |
| | | 90° | 14.67 | 19.45 | 21.1 | 25.2 | | |
| PS70 | Air close | 90° | 47.8 | 64.6 | 69.3 | 78.6 | 0.46 | < 0.6 |
| | | 55° | 22.7 | 30.4 | 32.8 | 36.9 | | |
| | | 0° | 41.4 | 54.2 | 59.6 | 66.0 | | |
| | Spring open | 0° | 70.7 | 95.3 | 103.0 | 120.8 | | |
| | | 35° | 22.9 | 30.3 | 33.3 | 39.0 | | |
| | | 90° | 30.7 | 40.1 | 44.6 | 52.2 | | |
| PS75 | Air close | 90° | 73.85 | 98.75 | 107.54 | 124.8 | 0.99 | < 0.9 |
| | | 55° | 33.1 | 43.45 | 48.26 | 56.3 | | |
| | | 0° | 55.95 | 75.45 | 81.34 | 95.13 | | |
| | Spring open | 0° | 110.5 | 147.1 | 161.1 | 183.8 | | |
| | | 35° | 32.9 | 44.15 | 48.12 | 55.23 | | |
| | | 90° | 42.1 | 56.35 | 61.3 | 69.87 | | |
| PS85 | Air close | 90° | 92.4 | 123.4 | 131.6 | 151.7 | 0.8 | < 1.0 |
| | | 55° | 42.3 | 56.4 | 61.2 | 70.6 | | |
| | | 0° | 72.0 | 95.6 | 103.5 | 119.8 | | |
| | Spring open | 0° | 136.6 | 182.5 | 199.0 | 227.8 | | |
| | | 35° | 42.1 | 56.1 | 61.2 | 70.0 | | |
| | | 90° | 53.7 | 71.4 | 80.2 | 91.7 | | |
| PS100 | Air close | 90° | 150.3 | 200.8 | 217.9 | 251.8 | 1.32 | < 2.0 |
| | | 55° | 68.5 | 91.3 | 99.1 | 114.8 | | |
| | | 0° | 114.9 | 152.3 | 165.3 | 192.7 | | |
| | Spring open | 0° | 222.8 | 298.0 | 324.4 | 370.2 | | |
| | | 35° | 68.2 | 90.9 | 99.0 | 112.9 | | |
| | | 90° | 86.2 | 114.5 | 125.0 | 142.4 | | |
| PS125 | Air close | 90° | 288.8 | 386.8 | 421.0 | 482.6 | 2.49 | < 3.0 |
| | | 55° | 125.6 | 175.2 | 191.1 | 219.1 | | |
| | | 0° | 188.9 | 289.7 | 352.9 | 404.8 | | |
| | Spring open | 0° | 458.0 | 572.9 | 585.1 | 673.4 | | |
| | | 35° | 135.1 | 173.5 | 189.4 | 218.3 | | |
| | | 90° | 164.0 | 217.0 | 235.6 | 272.1 | | |
| PS160 | Air close | 90° | 561.9 | 753.1 | 832.9 | 961.4 | 4.52 | < 5.0 |
| | | 55° | 254.5 | 339.9 | 367.7 | 425.3 | | |
| | | 0° | 421.0 | 558.3 | 573.8 | 667.0 | | |
| | Spring open | 0° | 834.1 | 1115.1 | 1246.1 | 1424.8 | | |
| | | 35° | 255.9 | 340.6 | 372.4 | 425.4 | | |
| | | 90° | 316.9 | 418.6 | 441.4 | 503.3 | | |
| PS200 | Air close | 90° | 1093.2 | 1456.4 | 1591.3 | 1822.9 | 9.07 | < 6.0 |
| | | 55° | 485.1 | 650.2 | 707.6 | 804.1 | | |
| | | 0° | 766.4 | 1041.9 | 1123.5 | 1252.7 | | |
| | Spring open | 0° | 1630.5 | 2154.0 | 2352.0 | 2742.2 | | |
| | | 35° | 481.5 | 639.3 | 693.9 | 806.1 | | |
| | | 90° | 585.1 | 781.4 | 842.2 | 974.3 | | |

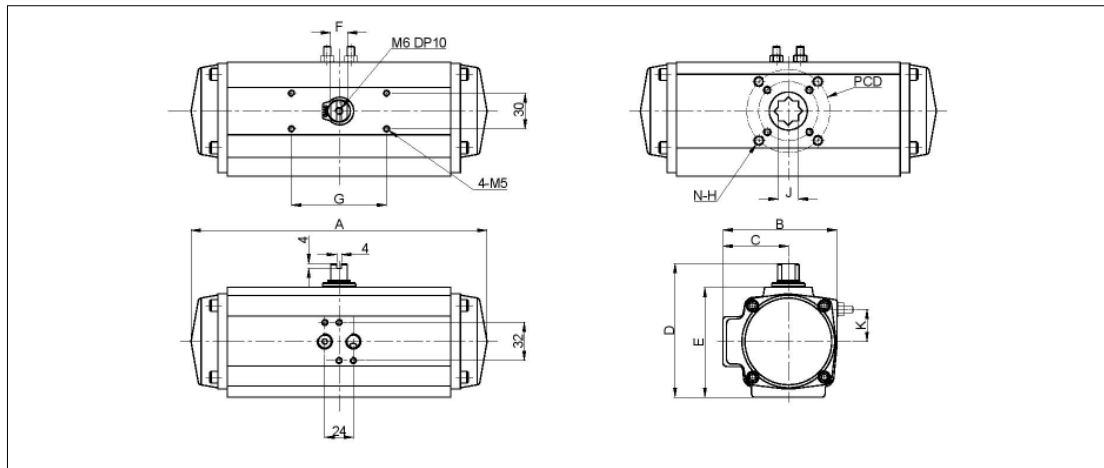
*Please be sure to include appropriate safety factors and various service conditions when sizing.



DIMENSIONS

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DOUBLE ACTING : PD Series

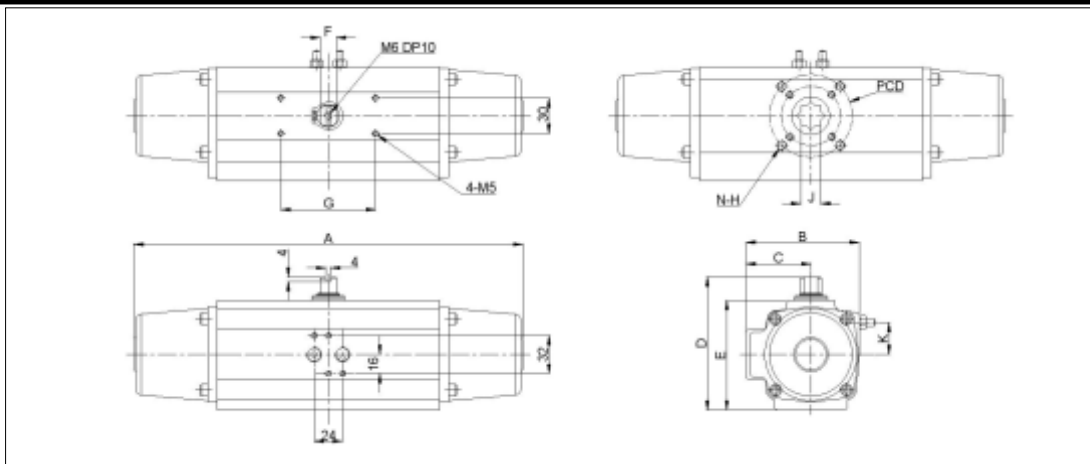


UNIT : mm

| MODEL | A | B | C | D | E | F | G | ISO5211 | PCD | N-H | J | DP | K | |
|--------------|-----|-----|-----|-----|-----|------|--------|-------------|----------|-----------|-------|----|------|-----|
| PD45 | 159 | 73 | 42 | 91 | 71 | 9 | 80 | F03/F05/F07 | 35/50/70 | 4-M5/M6 | 11X11 | 15 | 19.5 | 1.3 |
| PD50 | 186 | 73 | 42 | 91 | 71 | 9 | 80 | F03/F05/F07 | 35/50/70 | 4-M5/M6 | 11X11 | 15 | 19.5 | 1.6 |
| PD55 | 201 | 96 | 55 | 112 | 92 | 14 | 80 | F05/F07 | 50/70 | 4-M6/M8 | 17X17 | 19 | 26 | 2.4 |
| PD70 | 255 | 96 | 55 | 112 | 92 | 14 | 80 | F05/F07 | 50/70 | 4-M6/M8 | 17X17 | 19 | 26 | 3 |
| PD75 | 270 | 130 | 73 | 150 | 130 | 20 | 80 | F07/F10 | 70/102 | 4-M8/M10 | 22X22 | 30 | 39.5 | 6 |
| PD85 | 300 | 110 | 62 | 130 | 110 | 17 | 80 | F05/F07 | 50/70 | 4-M6/M8 | 17X17 | 24 | 33 | 5 |
| PD100 | 350 | 130 | 73 | 150 | 130 | 20 | 80 | F07/F10 | 70/102 | 4-M8/M10 | 22X22 | 30 | 39.5 | 7.5 |
| PD125 | 412 | 159 | 88 | 182 | 162 | 22 | 80 | F10/F12 | 102/125 | 4-M10/M12 | 27X27 | 35 | 47.5 | 11 |
| PD160 | 510 | 195 | 105 | 240 | 210 | 32.8 | 80/130 | F10/F14 | 102/140 | 4-M10/M16 | 36X36 | 50 | 62 | 26 |
| PD200 | 625 | 243 | 130 | 292 | 262 | 40 | 80/130 | F12/F16 | 125/165 | 4-M12/M20 | 46X46 | 50 | 77.5 | 43 |

Note : Port Size : 1/4" BSP

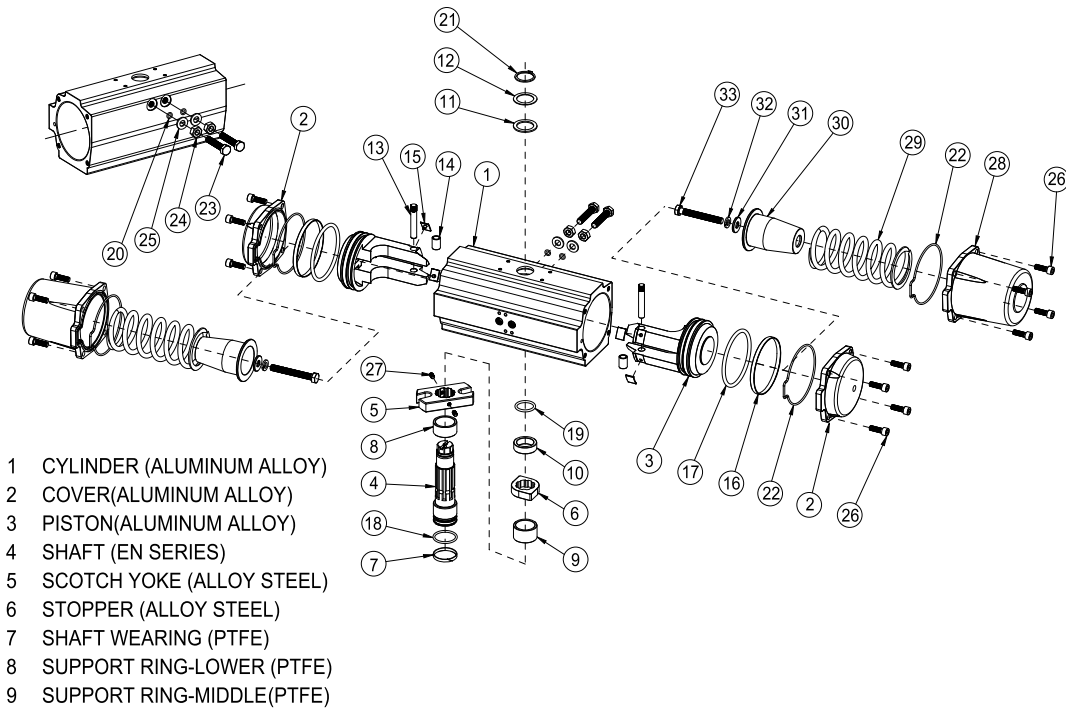
SPRING RETURN : PS Series



UNIT : mm

| MODEL | A | B | C | D | E | F | G | ISO5211 | PCD | N-H | J | DP | K | WEIGHT (Kg) |
|--------------|-----|-----|-----|-----|-----|------|--------|-------------|----------|-----------|-------|----|------|-------------|
| PS45 | 226 | 73 | 42 | 91 | 71 | 9 | 80 | F03/F05/F07 | 35/50/70 | 4-M5/M6 | 11X11 | 15 | 19.5 | 1.5 |
| PS50 | 255 | 73 | 42 | 91 | 71 | 9 | 80 | F03/F05/F07 | 35/50/70 | 4-M5/M6 | 11X11 | 15 | 19.5 | 1.7 |
| PS55 | 281 | 96 | 55 | 112 | 92 | 14 | 80 | F05/F07 | 50/70 | 4-M6/M8 | 17X17 | 19 | 26 | 2.9 |
| PS70 | 330 | 96 | 55 | 112 | 92 | 14 | 80 | F05/F07 | 50/70 | 4-M6/M8 | 17X17 | 19 | 26 | 3.5 |
| PS75 | 422 | 130 | 73 | 150 | 130 | 20 | 80 | F07/F10 | 70/102 | 4-M8/M10 | 22X22 | 30 | 39.5 | 7.5 |
| PS85 | 423 | 110 | 62 | 130 | 110 | 17 | 80 | F05/F07 | 50/70 | 4-M6/M8 | 17X17 | 24 | 33 | 5.5 |
| PS100 | 499 | 130 | 73 | 150 | 130 | 20 | 80 | F07/F10 | 70/102 | 4-M8/M10 | 22X22 | 30 | 39.5 | 10 |
| PS125 | 629 | 159 | 88 | 182 | 162 | 22 | 80 | F10/F12 | 102/125 | 4-M10/M12 | 27X27 | 35 | 47.5 | 18 |
| PS160 | 744 | 195 | 105 | 240 | 210 | 32.8 | 80/130 | F10/F14 | 102/140 | 4-M10/M16 | 36X36 | 50 | 62 | 35.5 |
| PS200 | 869 | 243 | 130 | 292 | 262 | 40 | 80/130 | F12/F16 | 125/165 | 4-M12/M20 | 46X46 | 50 | 77.5 | 73 |

Note : Port Size : 1/4" BSP



- 10 SUPPORT RING-UPPER (PTFE)
- 11 THRUST WASHER (PTFE)
- 12 WASHER (SS)
- 13 ROLLER PIN (EN SERIES)
- 14 ROLLER (EN SERIES)
- 15 PISTON GUIDE PAD (PTFE)
- 16 SUPPORT BAND (PTFE)
- 17 O-RING (NBR)
- 18 O-RING (NBR)
- 19 O-RING (NBR)
- 20 O-RING (NBR)
- 21 SNAP RING (SS)
- 22 O-RING (NBR)
- 23 ADJUST BOLT (EN SERIES)
- 24 ADJUST NUT (SS)
- 25 WASHER (SS)
- 26 ALLEN HEAD CAP SCREW (SS)
- 27 SET SCREW (SS)
- 28 SPRING RETURN COVER (ALUMINUM ALLOY)
- 29 SPRING (SPRING STEEL)
- 30 SPRING RETAINER (ALLOY STEEL)
- 31 PLAIN WASHER (SS)
- 32 SPRING WASHER (SS)
- 33 PRE TENSION BOLT (SS)

- 1 CYLINDER (ALUMINUM ALLOY)
- 2 COVER (ALUMINUM ALLOY)
- 3 PISTON (ALUMINUM ALLOY)
- 4 SHAFT (EN SERIES)
- 5 SCOTCH YOKE (ALLOY STEEL)
- 6 STOPPER (ALLOY STEEL)
- 7 SHAFT WEARING (PTFE)
- 8 SUPPORT RING-LOWER (PTFE)
- 9 SUPPORT RING-MIDDLE (PTFE)

PD40 (RACK & PINION)

OUTPUT TORQUE

TORQUE (Nm)

| PD40 | PRESSURE | 2.8 | 3.5 | 4.2 | 5.5 | 6 | 7 | 8 |
|------|----------|-----|-----|-----|-----|----|----|----|
| | TORQUE | 5.6 | 7 | 8.4 | 11 | 12 | 14 | 16 |

Please be sure to include appropriate safety factors and various service conditions when sizing.

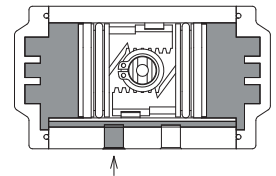
AIR CONSUMPTION (L, at 5.5 bar)

0.04

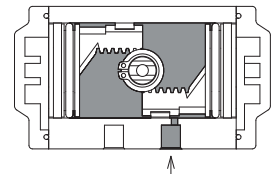
OPERATING TIME (Sec., at 5.5bar)

< 0.3

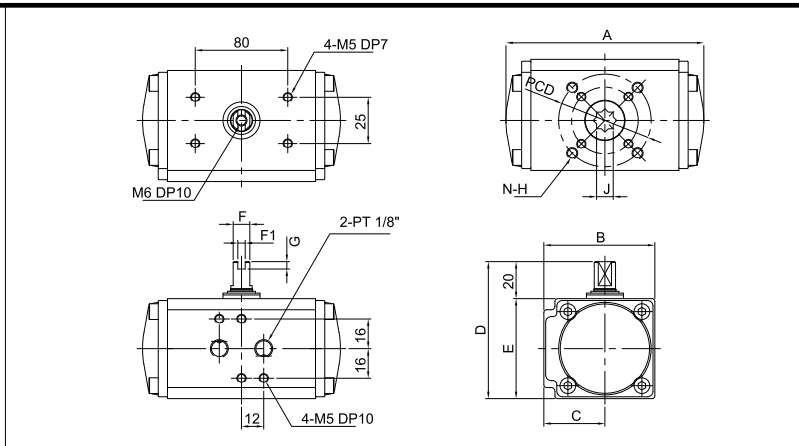
Air
Volume
0.04 Litre



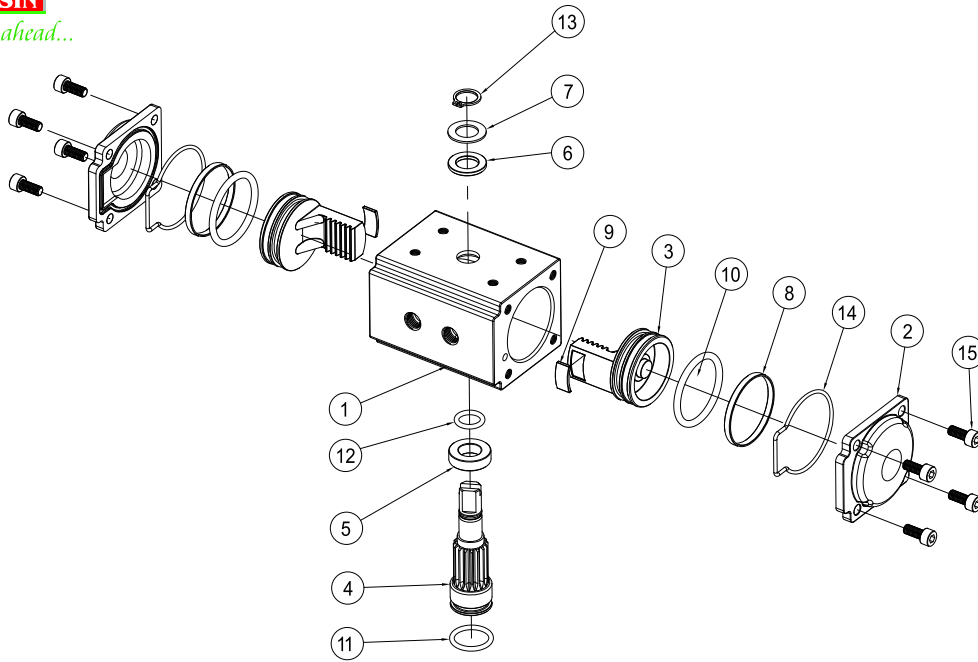
Air
Volume
0.04 Litre



DIMENSIONS



| MODEL | A | B | C | D | E | F | F1 | G | ISO5211 | PCD | N-H | J | DP | WEIGHT |
|-------|-----|----|----|----|----|---|----|---|---------|-------|---------|-----|----|--------|
| PD40 | 107 | 60 | 33 | 74 | 54 | 9 | 4 | 4 | F03/F05 | 35/50 | 4-M5/M6 | 9x9 | 11 | 1.1 |



- 1 CYLINDER (ALUMINUM ALLOY)
- 2 COVER (ALUMINUM ALLOY)
- 3 PISTON (ALUMINUM ALLOY)
- 4 SHAFT (EN8)
- 5 SUPPORT RING-UPPER (PTFE)
- 6 THRUST WASHER (PTFE)
- 7 WASHER (SS)
- 8 SUPPORT BAND (PTFE)
- 9 PISTON GUIDE PAD (PTFE)
- 10 O-RING (NBR)
- 11 O-RING (NBR)
- 12 O-RING (NBR)
- 13 SNAP RING (SS)
- 14 O-RING (NBR)
- 15 SUS WRENCH BOLT (SS)

ACCESSORIES

ITS Series Position Monitoring Switch Box

ITS 200 Series (Weather Proof)



| SPECIFICATION | STANDARD OPTION |
|---------------------|--|
| Enclosure | Weather proof IP67, O-ring sealed |
| Outside coating | Epoxy-Polyester inside and outside |
| Ambient temperature | -20°C ~ +80°C |
| Cable entries | 2-NPT 1/2", other standard threads |
| Terminal block | 8 nos of terminal strips |
| Position indicator | Dome type 0°~90° |
| Mounting bracket | Stainless steel acc. to VDI/VDE 3845, NAMUR standard |
| Switches(Sensors) | 2-SPDT mechanical switch(Form C) |

ITS 400 Series (Explosion Proof)

Suitable for valves and actuators in hazardous area applications conforms to EN50014 and 50018, also suitable in Zone 1 and 2

Ex d : IECEx, GOST_R/RTN certified



| SPECIFICATION | STANDARD OPTION |
|---------------------|--|
| Enclosure | Explosion proof Ex d IIC T6, IP67, O-ring sealed |
| Outside coating | Epoxy-Polyester outside against corrosion |
| Ambient temperature | -20°C ~ +80°C |
| Cable entries | 2-M20*1.5, other standard threads |
| Terminal block | 8 nos of terminal strips |
| Position indicator | Dome type 0°~90° |
| Mounting bracket | Stainless steel acc. to VDI/VDE 3845, NAMUR standard |
| Switches(Sensors) | 2-SPDT mechanical switch(Form C) |

ITS 500 Series

Special stainless steel housig (316L or Duplex) for extremely corrosive environmental conditions & for off-shore applications.

Other specifications are shared with the ITS 400 series except for enclosure & coating.

Ex d : IECEx, GOST_R/RTN certified



Electro-Pneumatic Positioner

EPL / EPR (Mechanical Type)



EPL (Linear Type)

EPR (Rotary Type)

FEATURE

- Precise calibration with simple SPAN and ZERO adjustments
- Simple conversion to direct acting or reverse acting
- 1/2 split range available
- Rugged aluminum housing with corrosion-resistant coating
- Stainless steel gauges standard
- Restricted pilot valve orifice kit for small actuators included

*Options available

- Position transmitter (4-20mA output signal)
- Two limit switches (open and close)

SSL / SSR (Electronic Smart Type)

FEATURE

- Auto-calibration for optimum conditions
- Easy operation with four key pads and full text graphical LCD
- Single and double acting actuators
- Pressure regulator built in to eliminate variations in supply air pressure
- Economical energy saving
- Mounting on linear actuators according to IEC 534
- Mounting on rotary actuators according to VDI / VDE 3845

*Options available

- Position transmitter (4-20mA output signal)
- Gauge block with two stainless pressure gauges
- Explosion proof type (Ex d IIB T6, Exia IIC T6)
- HART communication (FSK)



SSL (Linear Type)



SSR (Rotary Type)



IPC

IPC (I/P CONVERTER)

FEATURE

- Pressure regulator built in to eliminate variations in supply air pressure
- Low air consumption due to piezo electric micro-valve
- Explosion proof type (please contact for details)

Solenoid Valve

Our next generation solenoid valves, Specifically engineered to pilot pneumatic process valve actuators, with improved design and added valuable features.

The unique design of the I-Tork solenoid valve redirects the instrument air contained in the pressurized chamber to the actuator's spring chamber during the spring stroke, thus preventing external air from being sucked in.

5/2 function or 3/2 function selectable via 180° turn of the patented rotary sealing plate.

Direct NAMUR standard mounting.



- Weather proof IP65
- NEMA types 1, 2, 3, 3S, 4 and 4X & CE Certified
- ATEX Ex Series
- Ex-Proof Series
- Intrinsically Safe Series
- Standard Series

Electrical

Voltage (+/-10%) : 12VDC & 24 VDC, 24VAC, 120VAC & 240VAC, 50/60Hz
(other voltages are available on request)

Duty Cycle : 100% continuous Service

Construction

Valve Body : Die Cast Aluminum

Sealing Material : NBR and Viton

Inlet Port : 1/4" NPT or G1/4"

Temperature Range : -40°C to 50°C

Pressure : 1.5 to 10 bar

Response : 30 ms (on) 40 ms (off)

Air Flow : Cv>1.1

Media : Lubricated and non lubricated air, Instrument air, Nitrogen

Declutchable Gear Box

Aluminum Housing

| MODEL NO | ITG 050 | ITG 060 | ITG 080 | ITG 090 | ITG 100 | |
|--|-----------------------------------|-------------------------|----------------|----------------|----------------|----|
| Output Torque | 250 Nm | 650 Nm | 1000 Nm | 2335 Nm | 4200 Nm | |
| Top Flange (ISO 5211) | F07 / F10 | F10 / F12 | F12 (F14) | F16 (F14) | F16 | |
| Reduction Ratio | 40 : 1 | 45 : 1 | 48 : 1 | 60 : 1 | 83 : 1 | |
| Mechanical Advantage | 12.62 | 14.27 | 16.31 | 18.25 | 25 | |
| Number of Handwheel Turns | 10 | 11.3 | 12 | 13 | 20.75 | |
| Available Max. (Valve Shaft) | Diameter (∅) | 22 | 32 | 40 | 50 | 95 |
| | Square | 17 | 27 | 36 | 46 | 55 |
| Handwheel Diameter | 300 | 350 | 450 | 550 | 650 | |
| Bottom Flange (ISO 5211) | F07 / F10 | F10 / F12 | F12 (F14) | F16 (F14) | F16 | |
| Weight | 5.5 kg | 7.5 kg | 13.5 kg | 38 kg | 76 kg | |
| Applicable Pneumatic Actuator upto 5.5 bar | PD45/50/55/70/75 PS45/50/55/70 | PD85/100 PS75/85/100 | PD125 PS125 | PD160 PS160 | PD200 PS200 | |



ITG series are rugged, industrial grade manual overrides, manufactured with aluminum housing. All models in this series feature high performance gearings and powder coated finish.

FEATURES

- Cast Aluminum / cast Iron body
- EN8 gears & Internal components
- Declutchable handwheel
- Mounting flanges conforming to ISO5211
- Detachable drive bush
- Mechanical Valve Mounting to release the Air Automatically

CERTIFICATE AND APPROVALS



A joint venture with I-Tork Controls Ltd, Korea



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energy ahead...

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