ACTUATION · PNEUMATIC

# APSA Pneumatic Actuator — Single Acting Spring Return

Rack and pinion quarter-turn single acting spring return air actuator with NAMUR pneumatic and accessory interfaces and ISO 5211 bottom mount. Cylinder Ø52–Ø400, 5–9,523 Nm air stroke.

NAMUR | ISO 5211 | SPRING RETURN | 2.5–8 BAR

## FEATURES

- Single acting spring return pneumatic actuator
- Rack and pinion quarter turn design
- End of stroke adjustment
- Air supply connection to NAMUR standard for solenoid valves and speed controllers
- ISO 5211 bottom mount for direct installation onto valves, declutchable gearboxes or mounting kits
- Position indicator with NAMUR interface for limit switch boxes and positioners
- Two independent externally mounted travel stops, ±5° adjustment at open or closed
- Operating direction is reversible · 5 to 12 spring configurations (up to 16 on APRT8000SR)
- Fasteners: 316 stainless steel

## TECHNICAL SPECIFICATION

| | |
|---|---|
| Body | **Extruded aluminium alloy** |
| End caps | **Cast aluminium, epoxy coated** |
| Cylinder size | **52 mm – 400 mm** |
| Control pressure | **2.5 – 8 bar** |
| Control medium | **Dry or lubricated air, non-corrosive gases**<br>**Max particle diameter 30 µm** |
| Ambient temperature | **Standard −20 °C to +80 °C**<br>**Low temp option −40 °C to +80 °C**<br>**High temp option −20 °C to +150 °C** |
| Coatings | **Hard anodise, epoxy, PTFE or nickel plated** |
| Mounting pad | **ISO 5211** |
| Application | **Indoor or outdoor use** |

## OPTIONS

### LIMIT SWITCHES

Mechanical switches · proximity sensors · explosion proof

### NAMUR SOLENOIDS

12 V DC, 24 V DC · 24 V AC, 110 V AC, 240 V AC

### ACCESSORIES

Viton seals for −20 °C to 150 °C · filter regulators · positioners · extensions · repair seal kits

## DIMENSIONAL SPECIFICATIONS

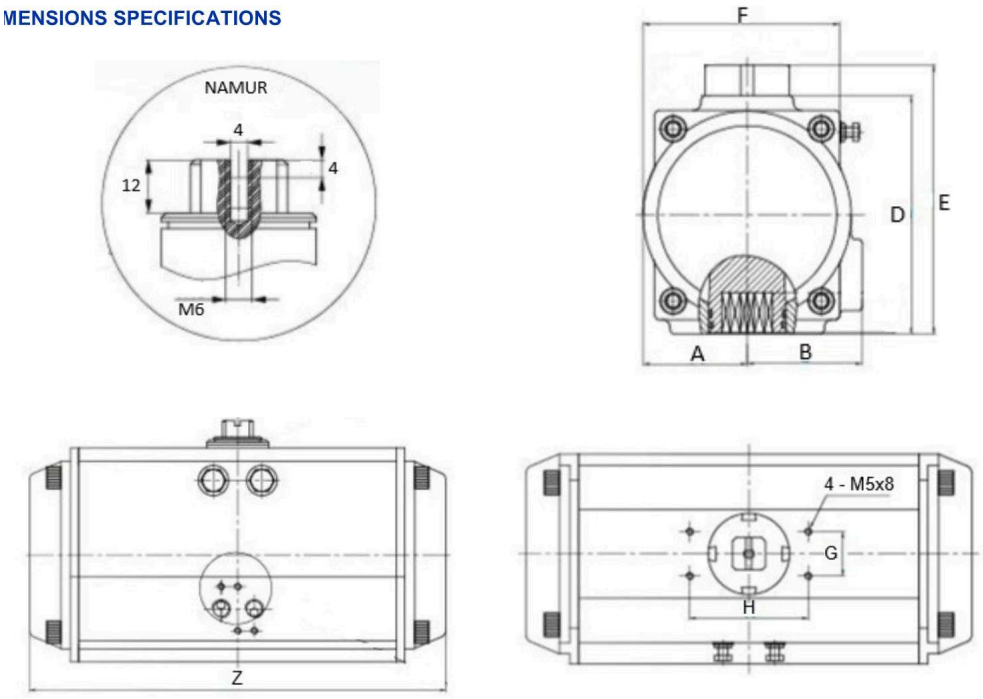



Fig. 1 — NAMUR accessory pad, end view (A, B, D, E, F), plan views (G, H, Z) and mounting threads.

| Model | Cylinder Ø | A | B | D | E | F | G | H | Z | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| APRT020SR | 52 | 30 | 41.5 | 72 | 92 | 65 | 30 | 80 | 149 | 1.48 |
| APRT035SR | 63 | 36 | 47 | 88 | 108 | 72 | 30 | 80 | 168 | 2.12 |
| APRT050SR | 75 | 42 | 53 | 99.5 | 119.5 | 81 | 30 | 80 | 184 | 2.83 |
| APRT075SR | 83 | 46 | 57 | 109 | 129 | 92 | 30 | 80 | 210 | 3.69 |
| APRT110SR | 92 | 50 | 58.5 | 116.5 | 136.5 | 98 | 30 | 80 | 262 | 5.35 |
| APRT160SR | 105 | 57.5 | 64 | 133 | 153 | 109.5 | 30 | 80 | 268 | 6.72 |
| APRT255SR | 125 | 67.5 | 74.5 | 155 | 175 | 127.5 | 30 | 80 | 301 | 10.32 |
| APRT435SR | 140 | 75 | 77 | 172 | 192 | 137.5 | 30 | 80 | 394 | 15.84 |
| APRT665SR | 160 | 87 | 87 | 197 | 217 | 158 | 30 | 80 | 458 | 23.73 |
| APRT1000SR | 190 | 103 | 103 | 230 | 260 | 189 | 30 | 130 | 528 | 41.93 |
| APRT1200SR | 210 | 113 | 113 | 255 | 285 | 210 | 30 | 130 | 536 | 55.94 |
| APRT1800SR | 240 | 130 | 130 | 289 | 319 | 245 | 30 | 130 | 606 | 67.03 |
| APRT2700SR | 270 | 147 | 147 | 328 | 358 | 273 | 30 | 130 | 726 | 98.29 |
| APRT3800SR | 300 | 203 | 203 | 348 | 378 | 290 | 30 | 130 | 760 | 133.94 |
| APRT5700SR | 350 | 230 | 230 | 408 | 438 | 336 | 30 | 130 | 888 | 209.1 |
| APRT8000SR | 400 | 258 | 258 | 480 | 510 | 360 | 30 | 130 | 930 | 225.46 |

All dimensions in millimetres unless stated.

## MOUNTING & SHAFT INTERFACE

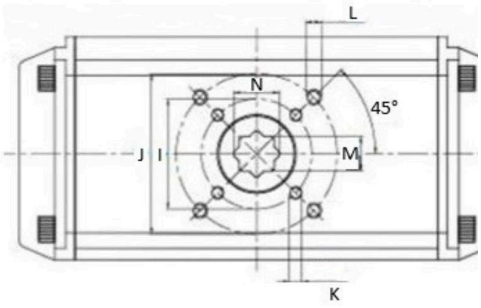



Fig. 2 — Bottom mount flange (I, J, K, L, M, N).

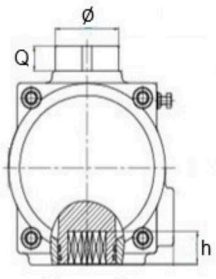



Fig. 3 — Drive interface.

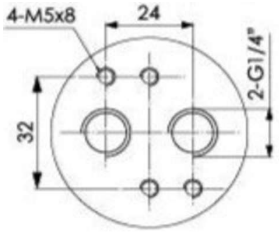



Fig. 4 — NAMUR G1/4", 4 – M5×8.

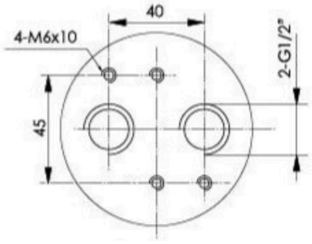



Fig. 5 — NAMUR G1/2", 4 – M6×10.

### ISO 5211 FLANGE SPECIFICATIONS

| Flange | OD | PCD | Bolt qty | Bolt size | Thread depth |
|---|---|---|---|---|---|
| F03 | 46 | 36 | 4 | M5 | 8 |
| F04 | 54 | 42 | 4 | M5 | 8 |
| F05 | 65 | 50 | 4 | M6 | 10 |
| F07 | 90 | 70 | 4 | M8 | 13 |
| F10 | 125 | 102 | 4 | M10 | 16 |
| F12 | 150 | 125 | 4 | M12 | 20 |
| F14 | 175 | 140 | 4 | M16 | 25 |
| F16 | 210 | 165 | 4 | M20 | 25 |
| F25 | 300 | 254 | 8 | M16 | 25 |

### MOUNTING FLANGE, SHAFT AND AIR SUPPLY BY MODEL

| | ISO 5211 flange | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model | I | J | M | N | Ø Q | h | Ø | Air supply |
| APRT020SR | F03 | F05 | 11 | 15.5 | 20 | 14 | 40 | NAMUR 1/4" |
| APRT035SR | F05 | F07 | 14 | 19.7 | 20 | 18 | 40 | NAMUR 1/4" |
| APRT050SR | F05 | F07 | 14 | 19.7 | 20 | 18 | 40 | NAMUR 1/4" |
| APRT075SR | F05 | F07 | 17 | 24 | 20 | 21 | 40 | NAMUR 1/4" |
| APRT110SR | F05 | F07 | 17 | 24 | 20 | 31 | 40 | NAMUR 1/4" |
| APRT160SR | F07 | F10 | 22 | 31 | 20 | 26 | 40 | NAMUR 1/4" |
| APRT255SR | F07 | F10 | 22 | 29.5 | 20 | 37 | 55 | NAMUR 1/4" |
| APRT435SR | F10 | F12 | 27 | 36.7 | 20 | 37 | 55 | NAMUR 1/4" |
| APRT665SR | F10 | F12 | 27 | 36.7 | 20 | 37 | 55 | NAMUR 1/4" |
| APRT1000SR | — | F14 | 36 | 49.5 | 30 | 47 | 80 | NAMUR 1/4" |
| APRT1200SR | — | F14 | 36 | 49.5 | 30 | 47 | 80 | NAMUR 1/4" |
| APRT1800SR | — | F16 | 46 | 63.6 | 30 | 53 | 80 | NAMUR 1/4" |
| APRT2700SR | — | F16 | 46 | 63.6 | 30 | 66 | 80 | NAMUR 1/4" |
| APRT3800SR | F16 | Ø215 | Ø50.6 | 59.2 | 30 | 72 | 80 | NAMUR 1/2" |
| APRT5700SR | F16 | F25 | * 55 | 63.6 | 30 | 72 | 80 | NAMUR 1/2" |
| APRT8000SR | F16 | F25 | * 55 | 77.7 | 30 | 72 | 80 | NAMUR 1/2" |

* denotes output shaft can be custom configured.

## TORQUE OUTPUT & AIR CONSUMPTION — APRT020SR TO APRT435SR

| Model | Springs | 2.5 bar | | 3 bar | | 4 bar | | 5 bar | | 6 bar | | 7 bar | | 8 bar | | Spring output | | Air vol. (L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 90° st. | 0° end | |
| APRT020SR | 5 | 5.7 | 3.8 | 7.6 | 5.7 | | | | | | | | | | | 6.2 | 4.3 | 0.12 |
| | 6 | 4.9 | 2.5 | 6.9 | 4.5 | 10.9 | 8.5 | | | | | | | | | 7.4 | 5.0 | |
| | 7 | 4.0 | 1.3 | 6.0 | 3.3 | 9.8 | 7.3 | 14.0 | 10.4 | | | | | | | 8.6 | 5.9 | |
| | 8 | | | 5.2 | 2.0 | 9.2 | 6.0 | 13.2 | 9.1 | 17.2 | 14.1 | | | | | 9.9 | 6.7 | |
| | 9 | | | 4.3 | 0.8 | 8.3 | 4.8 | 12.3 | 7.9 | 16.3 | 12.8 | 20.3 | 16.8 | | | 11.1 | 7.6 | |
| | 10 | | | | | 7.4 | 3.6 | 11.5 | 6.7 | 15.5 | 11.6 | 19.5 | 15.6 | | | 12.4 | 8.5 | |
| | 11 | | | | | 6.6 | 2.3 | 10.6 | 5.4 | 14.6 | 10.4 | 18.6 | 14.3 | 22.6 | 18.3 | 13.6 | 9.3 | |
| | 12 | | | | | | | 9.7 | 4.2 | 13.8 | 9.1 | 17.8 | 12.2 | 21.8 | 17.1 | 14.8 | 10.2 | |
| APRT035SR | 5 | 11.4 | 7.7 | 15.0 | 11.4 | 22.3 | 18.7 | | | | | | | | | 10.4 | 6.8 | 0.21 |
| | 6 | 10.1 | 5.7 | 13.6 | 9.3 | 20.9 | 16.6 | 28.3 | 23.9 | | | | | | | 12.5 | 8.2 | |
| | 7 | 8.6 | 3.6 | 12.5 | 7.2 | 19.5 | 14.5 | 26.8 | 21.9 | | | | | | | 14.6 | 9.6 | |
| | 8 | | | 10.9 | 5.1 | 18.2 | 12.4 | 25.5 | 19.8 | 32.8 | 27.0 | 40.1 | 34.3 | | | 16.7 | 10.9 | |
| | 9 | | | | | 16.8 | 10.4 | 24.1 | 17.7 | 31.4 | 24.9 | 38.7 | 32.2 | | | 18.8 | 12.3 | |
| | 10 | | | | | 14 | 8.2 | 22.8 | 15.6 | 30.0 | 22.8 | 37.3 | 30.1 | 44.7 | 37.4 | 20.9 | 13.7 | |
| | 11 | | | | | | | 21.5 | 13.5 | 38.7 | 20.7 | 36.0 | 28.0 | 43.3 | 35.3 | 22.9 | 15.0 | |
| | 12 | | | | | | | 20.0 | 11.4 | 27.3 | 18.6 | 34.6 | 25.9 | 41.9 | 33.3 | 25.0 | 16.4 | |
| APRT050SR | 5 | 14.5 | 10.6 | 19.4 | 15.5 | 29.5 | 25.7 | | | | | | | | | 14.5 | 10.5 | 0.3 |
| | 6 | 12.4 | 7.6 | 17.3 | 12.6 | 27.4 | 22.7 | 37.5 | 32.8 | | | | | | | 17.4 | 12.7 | |
| | 7 | 10.4 | 4.8 | 15.2 | 9.7 | 25.3 | 19.9 | 35.4 | 29.9 | | | | | | | 20.3 | 14.8 | |
| | 8 | | | 13.1 | 6.8 | 23.1 | 16.9 | 33.3 | 27.0 | 43.2 | 37.0 | 53.3 | 47.0 | | | 23.2 | 16.9 | |
| | 9 | | | | | 21.0 | 14.1 | 31.2 | 24.1 | 41.1 | 34.1 | 51.2 | 44.2 | | | 26.1 | 19.0 | |
| | 10 | | | | | 19.0 | 11.1 | 28.8 | 21.2 | 39.0 | 31.2 | 49.1 | 41.2 | 59.1 | 51.2 | 29.0 | 21.1 | |
| | 11 | | | | | | | 27.0 | 18.3 | 37.0 | 28.3 | 47.0 | 38.4 | 57.0 | 48.4 | 31.9 | 23.2 | |
| | 12 | | | | | | | 24.9 | 15.4 | 34.9 | 25.4 | 44.9 | 35.4 | 54.9 | 45.4 | 34.7 | 25.3 | |
| APRT075SR | 5 | 23.3 | 16.1 | 31.1 | 24.0 | 46.8 | 39.7 | | | | | | | | | 23.0 | 15.8 | 0.43 |
| | 6 | 20.1 | 11.5 | 28.0 | 19.3 | 43.7 | 35.1 | 59.4 | 50.7 | | | | | | | 27.6 | 19.0 | |
| | 7 | 17.0 | 6.9 | 24.8 | 14.8 | 40.5 | 30.5 | 56.2 | 46.2 | | | | | | | 32.2 | 22.1 | |
| | 8 | | | 21.7 | 10.1 | 37.4 | 25.8 | 53.1 | 41.5 | 68.8 | 57.2 | 84.5 | 72.9 | | | 36.8 | 25.3 | |
| | 9 | | | | | 34.2 | 21.3 | 49.9 | 37.0 | 65.6 | 52.6 | 81.2 | 68.3 | | | 41.4 | 28.5 | |
| | 10 | | | | | 31.0 | 16.6 | 46.7 | 32.3 | 62.4 | 48.0 | 78.1 | 63.7 | 93.8 | 79.3 | 46.0 | 31.6 | |
| | 11 | | | | | | | 43.6 | 27.7 | 59.3 | 43.4 | 75.0 | 59.1 | 90.6 | 74.8 | 50.6 | 34.8 | |
| | 12 | | | | | | | 40.4 | 23.2 | 56.1 | 38.9 | 71.7 | 54.5 | 87.4 | 70.2 | 55.2 | 38.0 | |
| APRT110SR | 5 | 33.1 | 22.0 | 44.2 | 33.2 | 66.8 | 55.9 | | | | | | | | | 34.4 | 23.3 | 0.64 |
| | 6 | 28.4 | 15.2 | 39.6 | 26.4 | 62.2 | 49.0 | 84.8 | 71.6 | | | | | | | 41.2 | 28.0 | |
| | 7 | 23.8 | 8.2 | 34.9 | 19.4 | 57.5 | 42.1 | 80.2 | 64.7 | | | | | | | 48.1 | 32.7 | |
| | 8 | | | 31.3 | 12.6 | 52.9 | 35.2 | 75.5 | 57.9 | 98.1 | 80.5 | 120.7 | 103.0 | | | 55.0 | 37.3 | |
| | 9 | | | | | 48.2 | 28.4 | 70.9 | 51.0 | 93.5 | 73.6 | 116.0 | 96.1 | | | 61.9 | 42.00 | |
| | 10 | | | | | 43.6 | 21.5 | 66.2 | 44.1 | 88.8 | 66.7 | 111.3 | 89.2 | 134.0 | 110.8 | 68.75 | 46.7 | |
| | 11 | | | | | | | 61.5 | 37.2 | 84.1 | 59.9 | 106.6 | 82.4 | 129.2 | 105.0 | 75.6 | 51.4 | |
| | 12 | | | | | | | 56.8 | 30.4 | 79.4 | 53.0 | 101.9 | 75.5 | 124.5 | 98.1 | 82.5 | 56.0 | |
| APRT160SR | 5 | 51.0 | 33.4 | 67.5 | 49.9 | 100.6 | 83.0 | | | | | | | | | 49.2 | 31.6 | 0.95 |
| | 6 | 44.7 | 23.5 | 61.1 | 40.0 | 94.2 | 73.2 | 127.3 | 106.2 | | | | | | | 59.1 | 38.0 | |
| | 7 | 38.4 | 13.7 | 54.9 | 30.3 | 87.9 | 63.4 | 121.0 | 96.4 | | | | | | | 68.9 | 44.3 | |
| | 8 | | | 48.5 | 20.4 | 81.6 | 53.5 | 114.7 | 86.5 | 147.7 | 119.6 | 180.8 | 152.7 | | | 78.7 | 50.6 | |
| | 9 | | | | | 75.3 | 43.7 | 108.4 | 76.8 | 141.5 | 109.8 | 174.5 | 142.9 | | | 88.6 | 56.9 | |
| | 10 | | | | | 68.9 | 33.4 | 102.0 | 66.5 | 135.1 | 99.6 | 168.2 | 132.6 | 201.2 | 165.7 | 98.4 | 63.3 | |
| | 11 | | | | | | | 95.7 | 57.0 | 128.7 | 90.1 | 161.8 | 123.1 | 194.8 | 156.2 | 108.3 | 69.6 | |
| | 12 | | | | | | | 89.4 | 47.5 | 122.5 | 80.6 | 155.5 | 113.6 | 188.6 | 146.7 | 118.1 | 75.9 | |
| APRT255SR | 5 | 73 | 47 | 98 | 72 | 148 | 122 | | | | | | | | | 79 | 52 | 1.6 |
| | 6 | 63 | 31 | 88 | 56 | 138 | 107 | 188 | 157 | | | | | | | 94 | 63 | |
| | 7 | 52 | 15 | 77 | 40 | 127 | 90 | 178 | 141 | | | | | | | 110 | 73 | |
| | 8 | | | 67 | 25 | 117 | 75 | 167 | 125 | 217 | 176 | 268 | 226 | | | 125 | 84 | |
| | 9 | | | | | 107 | 59 | 157 | 109 | 207 | 159 | 257 | 210 | | | 141 | 94 | |
| | 10 | | | | | 96 | 44 | 146 | 94 | 196 | 144 | 247 | 194 | 297 | 245 | 157 | 105 | |
| | 11 | | | | | | | 136 | 78 | 186 | 128 | 236 | 178 | 286 | 228 | 173 | 115 | |
| | 12 | | | | | | | 125 | 63 | 176 | 113 | 226 | 163 | 276 | 213 | 188 | 125 | |
| APRT435SR | 5 | 128 | 85 | 171 | 127 | 256 | 213 | | | | | | | | | 129 | 86 | 2.5 |
| | 6 | 111 | 59 | 154 | 102 | 239 | 187 | 325 | 273 | | | | | | | 155 | 103 | |
| | 7 | 94 | 33 | 137 | 76 | 222 | 162 | 308 | 247 | | | | | | | 181 | 120 | |
| | 8 | | | 120 | 50 | 205 | 136 | 291 | 221 | 376 | 307 | 462 | 392 | | | 206 | 137 | |
| | 9 | | | | | 187 | 110 | 273 | 196 | 358 | 281 | 444 | 367 | | | 232 | 155 | |
| | 10 | | | | | 170 | 84 | 256 | 169 | 341 | 255 | 427 | 340 | 512 | 426 | 258 | 172 | |
| | 11 | | | | | | | 238 | 143 | 324 | 229 | 409 | 314 | 495 | 400 | 284 | 189 | |
| | 12 | | | | | | | 221 | 118 | 307 | 203 | 392 | 289 | 478 | 374 | 310 | 206 | |

Output torque in Nm. “0° st.” is air-stroke start torque at closed position; “90° end” is air-stroke end torque at open position. Spring output is the spring return torque at 90° start and 0° end.

## TORQUE OUTPUT & AIR CONSUMPTION — APRT665SRK TO APRT8000SRK

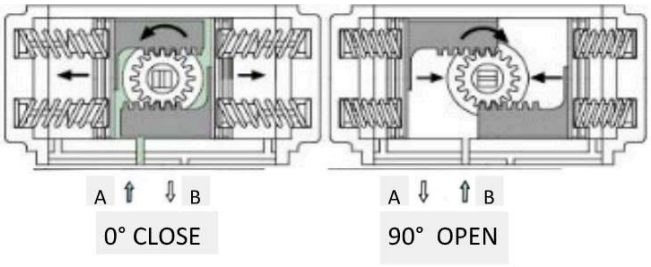
| Model | Springs | 2.5 bar | | 3 bar | | 4 bar | | 5 bar | | 6 bar | | 7 bar | | 8 bar | | Spring output | | Air vol. (L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 0° st. | 90° end | 90° st. | 0° end | |
| APRT665SRK | 5 | 193 | 124 | 259 | 191 | 392 | 324 | | | | | | | | | 208 | 140 | 3.7 |
| | 6 | 165 | 83 | 232 | 149 | 365 | 282 | 498 | 415 | | | | | | | 250 | 168 | |
| | 7 | 137 | 41 | 203 | 107 | 336 | 240 | 469 | 373 | | | | | | | 292 | 196 | |
| | 8 | | | 176 | 66 | 309 | 199 | 442 | 237 | 575 | 465 | 708 | 598 | | | 333 | 223 | |
| | 9 | | | | | 280 | 157 | 413 | 290 | 546 | 423 | 679 | 556 | | | 375 | 251 | |
| | 10 | | | | | 253 | 115 | 386 | 248 | 519 | 381 | 652 | 514 | 785 | 647 | 417 | 279 | |
| | 11 | | | | | | | 358 | 207 | 491 | 340 | 624 | 473 | 757 | 606 | 458 | 307 | |
| | 12 | | | | | | | 330 | 165 | 463 | 298 | 596 | 431 | 729 | 564 | 500 | 335 | |
| APRT1000SRK | 5 | 332 | 222 | 438 | 329 | 651 | 542 | | | | | | | | | 309 | 200 | 5.9 |
| | 6 | 292 | 161 | 398 | 267 | 611 | 480 | 824 | 693 | | | | | | | 371 | 240 | |
| | 7 | 252 | 99 | 358 | 205 | 571 | 418 | 784 | 631 | | | | | | | 433 | 280 | |
| | 8 | | | 318 | 143 | 531 | 356 | 744 | 569 | 957 | 782 | 1169 | 995 | | | 495 | 320 | |
| | 9 | | | | | 491 | 295 | 704 | 507 | 917 | 720 | 1130 | 933 | | | 557 | 360 | |
| | 10 | | | | | 451 | 233 | 664 | 446 | 877 | 658 | 1090 | 871 | 1302 | 1084 | 618 | 400 | |
| | 11 | | | | | | | 624 | 384 | 837 | 597 | 1050 | 809 | 1263 | 1022 | 680 | 440 | |
| | 12 | | | | | | | 584 | 322 | 797 | 535 | 1010 | 748 | 1223 | 960 | 742 | 480 | |
| APRT1200SRK | 5 | 390 | 285 | 523 | 418 | 789 | 684 | | | | | | | | | 380 | 275 | 7.5 |
| | 6 | 335 | 209 | 468 | 342 | 734 | 608 | 1000 | 874 | | | | | | | 456 | 330 | |
| | 7 | 280 | 133 | 413 | 266 | 679 | 532 | 945 | 798 | | | | | | | 532 | 385 | |
| | 8 | | | 358 | 190 | 624 | 456 | 890 | 722 | 1156 | 988 | 1422 | 1254 | | | 608 | 440 | |
| | 9 | | | | | 569 | 380 | 835 | 646 | 1101 | 912 | 1367 | 1178 | | | 684 | 495 | |
| | 10 | | | | | 514 | 304 | 780 | 570 | 1046 | 836 | 1312 | 1102 | 1578 | 1368 | 760 | 550 | |
| | 11 | | | | | | | 725 | 494 | 991 | 760 | 1257 | 1026 | 1523 | 1292 | 836 | 605 | |
| | 12 | | | | | | | 670 | 418 | 936 | 684 | 1202 | 950 | 1468 | 1216 | 912 | 660 | |
| APRT1800SRK | 5 | 552 | 409 | 744 | 600 | 1129 | 985 | | | | | | | | | 554 | 410 | 11 |
| | 6 | 470 | 297 | 662 | 489 | 1047 | 874 | 1432 | 1259 | | | | | | | 665 | 492 | |
| | 7 | 388 | 187 | 580 | 379 | 964 | 764 | 1349 | 1149 | | | | | | | 775 | 575 | |
| | 8 | | | 498 | 268 | 883 | 653 | 1267 | 1037 | 1652 | 1422 | 2037 | 1807 | | | 886 | 656 | |
| | 9 | | | | | 800 | 542 | 1185 | 926 | 1569 | 1311 | 1954 | 1696 | | | 998 | 739 | |
| | 10 | | | | | 718 | 431 | 1103 | 816 | 1488 | 1201 | 1872 | 1586 | 2257 | 1970 | 1108 | 821 | |
| | 11 | | | | | | | 1021 | 705 | 1406 | 1090 | 1791 | 1474 | 2176 | 1859 | 1219 | 903 | |
| | 12 | | | | | | | 939 | 594 | 1323 | 979 | 1708 | 1363 | 2093 | 1748 | 1330 | 985 | |
| APRT2700SRK | 5 | 903 | 675 | 1195 | 968 | 1779 | 1552 | | | | | | | | | 787 | 560 | 17 |
| | 6 | 790 | 519 | 1083 | 811 | 1667 | 1396 | 2252 | 1981 | | | | | | | 943 | 672 | |
| | 7 | 679 | 361 | 972 | 654 | 1556 | 1238 | 2141 | 1823 | | | | | | | 1101 | 783 | |
| | 8 | | | 860 | 497 | 1444 | 1081 | 2029 | 1666 | 2614 | 2252 | 3199 | 2836 | | | 1258 | 895 | |
| | 9 | | | | | 1332 | 923 | 1917 | 1509 | 2502 | 2094 | 3087 | 2678 | | | 1416 | 1007 | |
| | 10 | | | | | 1220 | 767 | 1805 | 1352 | 2390 | 1937 | 2974 | 2521 | 3560 | 3107 | 1572 | 1119 | |
| | 11 | | | | | | | 1693 | 1194 | 2278 | 1779 | 2862 | 2364 | 3448 | 2949 | 1730 | 1231 | |
| | 12 | | | | | | | 1582 | 1037 | 2167 | 1623 | 2751 | 2207 | 3336 | 2792 | 1887 | 1342 | |
| APRT3800SRK | 5 | 1097 | 729 | | | | | | | | | | | | | 1061 | 730 | 23.8 |
| | 6 | 935 | 494 | 1316 | 875 | | | | | | | | | | | 1273 | 876 | |
| | 7 | 772 | 258 | 1153 | 639 | 1916 | 1402 | | | | | | | | | 1485 | 1022 | |
| | 8 | | | 991 | 403 | 1754 | 1166 | 2517 | 1929 | | | | | | | 1697 | 1168 | |
| | 9 | | | | | 1592 | 930 | 2355 | 1693 | 3118 | 2456 | | | | | 1909 | 1314 | |
| | 10 | | | | | 1430 | 695 | 2193 | 1458 | 2956 | 221 | 3719 | 2984 | 4482 | 3747 | 2122 | 1460 | |
| | 11 | | | | | | | 2030 | 1222 | 2793 | 1985 | 3556 | 2748 | 4319 | 3511 | 2334 | 1606 | |
| | 12 | | | | | | | 1868 | 986 | 2631 | 1749 | 3394 | 2512 | 4157 | 3275 | 2546 | 1752 | |
| APRT5700SRK | 5 | 1553 | 964 | | | | | | | | | | | | | 1702 | 1173 | 35.1 |
| | 6 | 1292 | 586 | 1863 | 1157 | | | | | | | | | | | 2043 | 1408 | |
| | 7 | 1031 | 208 | 1602 | 779 | 2745 | 1922 | | | | | | | | | 2383 | 1642 | |
| | 8 | | | 1341 | 401 | 2484 | 1544 | 3626 | 2686 | | | | | | | 2724 | 1877 | |
| | 9 | | | | | 2224 | 1165 | 3336 | 2307 | 4508 | 3449 | | | | | 3064 | 2112 | |
| | 10 | | | | | 1963 | 787 | 3105 | 1929 | 4247 | 3071 | 5390 | 4214 | 6532 | 5356 | 3405 | 2346 | |
| | 11 | | | | | | | 2844 | 1551 | 3986 | 2693 | 5129 | 3836 | 6271 | 4978 | 3745 | 2581 | |
| | 12 | | | | | | | 2584 | 1172 | 3726 | 2314 | 4869 | 3457 | 6011 | 4599 | 4086 | 2816 | |
| APRT8000SRK | 7 | 2028 | 869 | | | | | | | | | | | | | 2880 | 1837 | 52.6 |
| | 8 | 1736 | 411 | 2550 | 1225 | | | | | | | | | | | 3292 | 2100 | |
| | 9 | | | 2259 | 768 | 3887 | 2396 | | | | | | | | | 3703 | 2362 | |
| | 10 | | | 1967 | 311 | 3595 | 1939 | 5223 | 3567 | | | | | | | 4115 | 2624 | |
| | 11 | | | | | 3303 | 1482 | 4931 | 3110 | 6559 | 4738 | | | | | 4526 | 2887 | |
| | 12 | | | | | 3012 | 1025 | 4640 | 2653 | 6268 | 4281 | 7895 | 5908 | 9523 | 7536 | 4938 | 3149 | |
| | 13 | | | | | | | 4348 | 2195 | 5976 | 3823 | 7603 | 5450 | 9231 | 7078 | 5349 | 3412 | |
| | 14 | | | | | | | 4057 | 1738 | 5685 | 3366 | 7312 | 4993 | 8940 | 6621 | 5761 | 3674 | |
| | 15 | | | | | | | 3765 | 1281 | 5393 | 2909 | 7020 | 4536 | 8648 | 6164 | 6172 | 3937 | |
| | 16 | | | | | | | | | 5101 | 2452 | 6728 | 4079 | 8356 | 5707 | 6584 | 4199 | |

**Air volume and action cycle times** **L/min** = Air volume (air consumption opening) × $\left[\frac{\text{Air supply (kPa)} + 101.3}{101.3}\right]$ × Actuator cycle times (per minute)

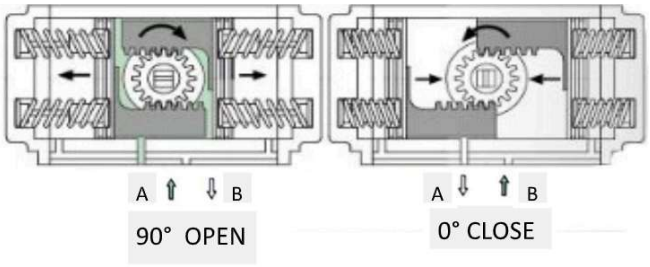
· Blank cells fall outside the recommended operating envelope.

## OPERATING PRINCIPLES

### COUNTER CLOCKWISE




### CLOCKWISE




### COUNTER CLOCKWISE — AIR STROKE

Air to port A forces the pistons outwards, turning the drive shaft counter clockwise while air is exhausted from port B. The springs compress and store the return energy.

### COUNTER CLOCKWISE — SPRING RETURN

On loss of air pressure at port A the stored spring energy drives the pistons inwards; the drive shaft turns clockwise while air exhausts from port A.

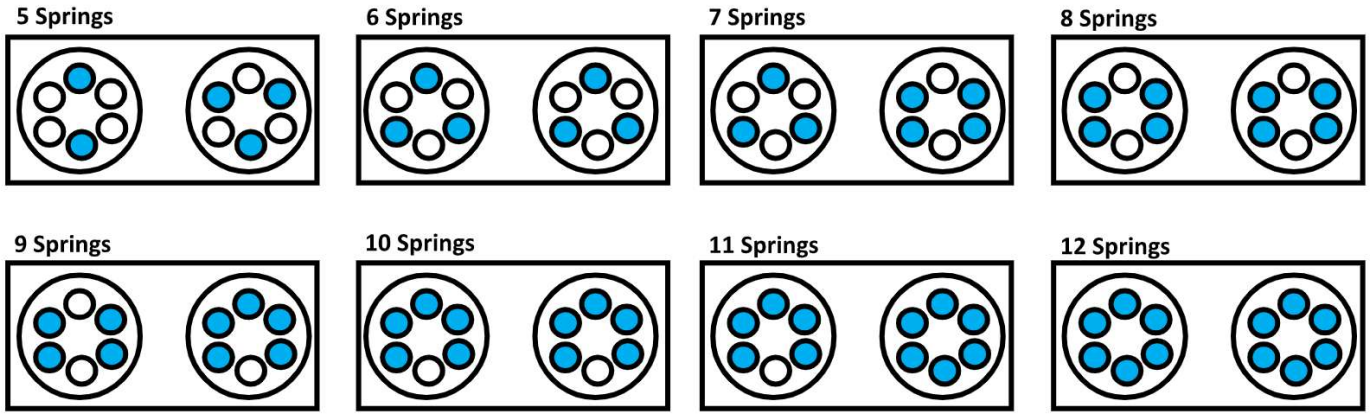
### CLOCKWISE — AIR STROKE

Reversed assembly: air to port A forces the pistons outwards and compresses the springs, turning the drive shaft clockwise while air exhausts from port B.

### CLOCKWISE — SPRING RETURN

On loss of air pressure at port A the springs drive the pistons inwards; the drive shaft turns counter clockwise while air exhausts from port A.

## SPRING CONFIGURATIONS




Spring sets are supplied in 5, 6, 7, 8, 9, 10, 11 and 12 spring configurations (APRT8000SRK also 13 to 16). Selecting a higher spring count raises the guaranteed fail-safe torque and lifts the minimum air supply pressure required to complete the air stroke — refer to the torque tables for the valid pressure range of each configuration.

## STANDARDS & COMPLIANCE

- Air supply interface to NAMUR standard
- Accessory interface to NAMUR (VDI/VDE 3845)
- Bottom mounting flange according to ISO 5211
- Fasteners in 316 stainless steel



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