



Seria: AT U

Parametry techniczne:

- **medium:** suche lub naoliwione powietrze, punkt rosy musi wynosić -20°C lub przynajmniej 10°C poniżej temperatury otoczenia
- **ciśnienie robocze:** 2,5÷8 bar
- **temperatura pracy:**
 - wersja standardowa -40°C ÷ +80°C
 - wersja superniskotemperaturowa -60°C ÷ +80°C – AT-...- **LLT2**
 - wersja wysokotemperaturowa -15°C ÷ +150°C – AT-...- **HT**
- **skoki (kąt obrotu):**
 - wykonanie standardowe 90°
 - wykonanie Y 120°
 - wykonanie X 180°
- siłowniki są smarowane fabrycznie do pracy w warunkach standardowych

Opis siłownika:

- pełna zgodność z normami ISO 5211, DIN 3337 i VDI/VDE 3845 NAMUR
- korpus wykonany z przetłaczanego aluminium z zewnętrznym i wewnętrznym zabezpieczeniem antykorozyjnym* o honowanej powierzchni wewnętrznej
- dwie zewnętrzne śruby regulacyjne pozwalające na precyzyjne ustawienie pozycji zamknięcia i otwarcia w zakresie ±15°
- konstrukcja wałka zębatego i dwóch tłoków z zębami zapewnia zwartą budowę, symetryczną pozycję montażową, dużą żywotność i prędkość działania oraz zmianę kierunku obrotów wałka poprzez odwrócenie tłoków w korpusie
- jedna, kompaktowa konstrukcja dla napędów jednostronnego i dwustronnego działania
- modułowy kartridż ze sprężynami powrotnymi
- wielofunkcyjny wskaźnik położenia z gniazdem NAMUR wizualnie wskazuje aktualną pozycję, umożliwia montaż takich akcesoriów jak czujniki położenia lub pozycjonery

*** Zabezpieczenia antykorozyjne:**

- A = korpus alodur, pokrywy z powłoką poliesterową
- B = korpus pokryty PTFE
- D = korpus i pokrywy pokryte PTFE
- E = jak D + wałek ze stali nierdzewnej

Certyfikaty: PED 97/23/EC
ATEX 94/9/EC
SIL 3 IEC 61508
GOST-R

| Siłowniki obrotowe dwustronnego działania, serii AT... UD | | | | | | |
|---|---------------------|-----------------|------------------|--------|---------|-------------------|
| ø tłoka [mm] | przyłącze montażowe | kwadrat | moment obr. [Nm] | | | kody zamówieniowe |
| | | | 4 bar | 5 bar | 6 bar | |
| 45 | F03/F04 | 9/11 | 9,6 | 12,0 | 14,4 | AT 045 UD |
| 50 | F03/F04 | 11 | 13,3 | 16,6 | 19,9 | AT 051 UD |
| 63 | F05 | 14 | 23,5 | 29,3 | 35,2 | AT 101 UD |
| 75 | F05 – F07 | 17 | 46,5 | 58,2 | 69,8 | AT 201 UD |
| 88 | F05 – F07 | 17 | 73,2 | 91,5 | 110,0 | AT 251 UD |
| 100 | F07 – F10 | 22 | 106,0 | 133,0 | 160,0 | AT 301 UD |
| 115 | F07 – F10 | 22 | 172,0 | 215,0 | 258,0 | AT 351 UD |
| 125 | F07 – F10 | 27 | 222,0 | 277,0 | 332,0 | AT 401 UD |
| 145 | F10 – F12 | 27 | 348,0 | 435,0 | 522,0 | AT 451 UD |
| 160 | F10 – F12 | 27 | 454,0 | 567,0 | 681,0 | AT 501 UD |
| 180 | F14 | 36 | 613,0 | 766,0 | 919,0 | AT 551 UD |
| 200 | F14 | 46 | 851,0 | 1064,0 | 1276,0 | AT 601 UD |
| 240 | F16 | 46 | 1430,0 | 1787,0 | 2144,0 | AT 651 UD |
| 265 | F16 | 46 | 2075,0 | 2594,0 | 3112,0 | AT 701 UD |
| 360 | F16 | 55 | 2872,0 | 3590,0 | 4308,0 | AT 751 UD |
| 330 | F25 | 55 | 3604,0 | 4504,0 | 5405,0 | AT 801 UD |
| 420 | F30 | 55 ¹ | 6671,0 | 8339,0 | 10007,0 | AT 1004 UD |

¹ podwójny kwadrat

| Siłowniki obrotowe jednostronnego działania, serii AT... US | | | | | | |
|---|------------------|--------------------|------------------|--------------------|------------------|-------------------|
| moment obrotowy [Nm] *** | | | | | | kody zamówieniowe |
| 4 bar i 8 sprężyn | | 5 bar i 10 sprężyn | | 6 bar i 12 sprężyn | | |
| sprężyn 0° * | powietrza 90° ** | sprężyn 0° * | powietrza 90° ** | sprężyn 0° * | powietrza 90° ** | |
| 5,4 | 5,5 | 6,7 | 6,9 | 8,1 | 8,2 | AT 051 US – ... |
| 8,9 | 10,0 | 11,1 | 12,4 | 13,3 | 14,9 | AT 101 US – ... |
| 17,7 | 18,8 | 22,1 | 23,6 | 26,5 | 28,3 | AT 201 US – ... |
| 29,3 | 27,0 | 36,7 | 33,8 | 44,0 | 40,5 | AT 251 US – ... |
| 40,5 | 43,3 | 50,7 | 54,2 | 60,8 | 65,0 | AT 301 US – ... |
| 65,6 | 67,1 | 82,0 | 83,9 | 98,4 | 101,0 | AT 351 US – ... |
| 84,0 | 89,7 | 105,0 | 112,0 | 126,0 | 135,0 | AT 401 US – ... |
| 132,0 | 142,0 | 165,0 | 177,0 | 198,0 | 213,0 | AT 451 US – ... |
| 180,0 | 188,0 | 224,0 | 235,0 | 269,0 | 282,0 | AT 501 US – ... |
| 253,0 | 234,0 | 316,0 | 292,0 | 379,0 | 351,0 | AT 551 US – ... |
| 340,0 | 347,0 | 425,0 | 434,0 | 510,0 | 520,0 | AT 601 US – ... |
| 577,0 | 596,0 | 721,0 | 745,0 | 865,0 | 894,0 | AT 651 US – ... |
| 873,0 | 897,0 | 1091,0 | 992,0 | 1309,0 | 1190,0 | AT 701 US – ... |
| 1170,0 | 1125,0 | 1462,0 | 1407,0 | 1754,0 | 1688,0 | AT 751 US |
| 1472,0 | 1623,0 | 1839,0 | 2028,0 | 2207,0 | 2434,0 | AT 801 US – ... |
| 3959,0 | 2711,0 | 4949,0 | 3389,0 | 5938,0 | 4067,0 | AT 1004 US – ... |

Przyłącza montażowe oraz kwadraty dla AT... – S są identyczne jak dla odpowiedniego siłownika dwustronnego działania AT... – D

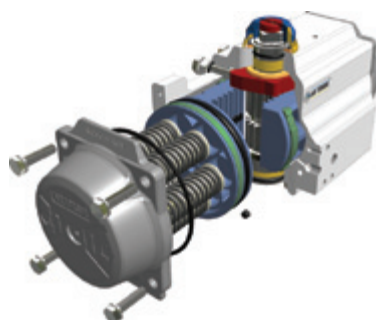
* moment sprężyn podany przy kącie otwarcia siłownika 0° (na końcu skoku)

** moment od sprężonego powietrza przy kącie otwarcia siłownika 90° (na początku skoku)

*** momenty dla innych ciśnień i liczby sprężyn patrz w katalogu siłowników AT

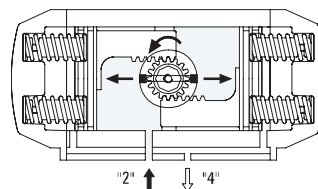
↑
podać liczbę sprężyn: 5÷12
Każda sprężyna doбираna jest na ciśnienie 0,5 bar.

Rysunek rozbitny siłownika jednostronnego działania AT... – S

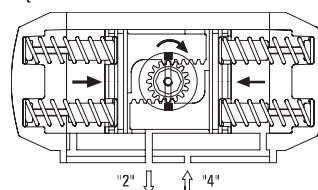


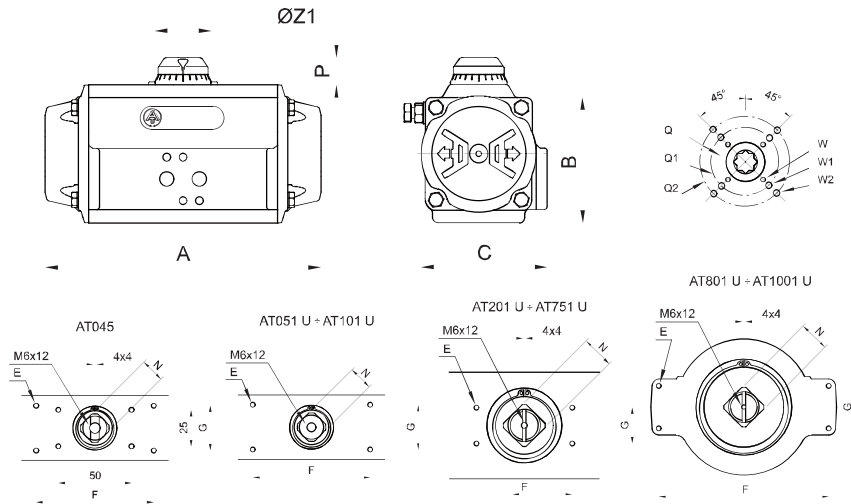
ATEX II 2GDcT4T135°C -10°C ≤ Ta ≤ +60°C

Kąt otwarcia siłownika 90°



Kąt otwarcia siłownika 0°

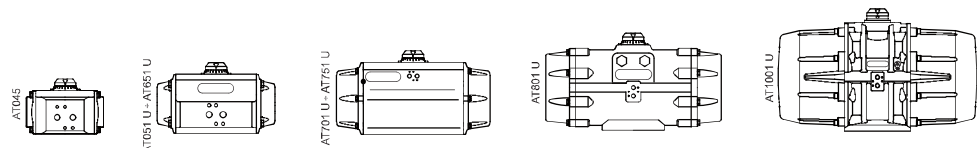




Seria: AT ... U
Wymiary i dane fizyczne

Wymiary metryczne

| Typ silownika | AT045 | | AT051 U | | AT101 U | | AT201 U | | AT251 U | | AT301 U | | AT351 U | | AT401 U | | AT451 U | | AT501 U | | AT551 U | | AT601 U | | AT651 U | | AT701 U | | AT751 U | | AT801 U | | AT1001 U | | | |
|---------------------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|---------|-----------|-----------|---------|---------|---------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|----------|------|------|----|
| | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | | |
| A | 118 | 137 | 153,5 | 203,5 | 241 | 259 | 304 | 333 | 394,5 | 422,5 | 474 | 528 | 605 | 710 | 812 | 876 | 950 | | | | | | | | | | | | | | | | | | | |
| B | 66 | 69 | 85 | 102 | 115 | 127 | 145 | 157 | 177 | 196 | 220,5 | 245 | 298,5 | 330 | 383 | 410 | 518 | | | | | | | | | | | | | | | | | | | |
| C | 62 | 72 | 84,5 | 93 | 103 | 118,5 | 137 | 147 | 166 | 181 | 200 | 218 | 258 | 319 | 371 | 418 | 530 | | | | | | | | | | | | | | | | | | | |
| D | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | | |
| E | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | M5x8 | | |
| F | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | |
| G | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | |
| N | 11 | 11 | 11 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | |
| P | 15 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| R | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |
| S | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |
| T - ISO 228 | 1/8" | 1/8" | 1/8" | 1/8" | 1/8" | 1/8" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | 1/4" | |
| Z1 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | |
| Kołnier ISO | F04 | F04 | F05 + F07 | F05 + F07 | F05 + F07 | F05 + F07 | F07 + F10 | F07 + F10 | F07 + F10 | F07 + F10 | F10 + F12 | F10 + F12 | F14 | F14 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | F16 | |
| Q | 42 | 42 | 50 | 50 | 50 | 70 | 70 | 70 | 70 | 70 | 102 | 102 | 140 | 140 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | 165 | |
| Q1 | - | - | 70 | 70 | 70 | 102 | 102 | 102 | 102 | 102 | 125 | 125 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Q2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| W | M5 | M5 | M6 | M6 | M6 | M8 | M8 | M8 | M8 | M8 | M10 | M10 | M16 | M16 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | M20 | | |
| W1 | - | - | M8 | M8 | M8 | M10 | M10 | M10 | M10 | M10 | M12 | M12 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| W2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Opcje kołnierza ISO | F03 | F03 | F03 | F05 | F07 | F05 + F07 | F10 | F10 | F12 | F12 | F10 + F12 | F10 + F12 | F12 | F12 | F14 | F14 | F16 + F25 | F25 | F30 | | | | | | | | | | | | | | | | | |
| | | F03 + F05 | F04 | F07 | | F07 | | | | | | | F10 | F14 | F14 | F16 + F25 | | | | | | | | | | | | | | | | | | | | |
| CH x l min. | Ss | - | 9 x 11 | 9 x 11 | 11 x 12 | 14 x 16 | 17 x 19 | 17 x 19 | 22 x 24 | 22 x 24 | 22 x 24 | 27 x 29 | 27 x 29 | 36 x 39 | 36 x 39 | 46 x 49 | 46 x 49 | 55 x 59 | 55 x 59 | 75 x 80 | | | | | | | | | | | | | | | | |
| | | - | 11 x 12 | 11 x 12 | 14 x 16 | 17 x 19 | 22 x 24 | 22 x 24 | 27 x 29 | 27 x 29 | 27 x 29 | 36 x 39 | 36 x 39 | 46 x 49 | 46 x 49 | 55 x 59 | 55 x 59 | 75 x 80 | | | | | | | | | | | | | | | | | | |
| | - | - | 14 x 16 | 17 x 19 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | | | | | | | | |
| | Ds | 9 x 11 | 11 x 12 | 14 x 16 | 17 x 19 | 17 x 19 | 22 x 24 | 22 x 24 | 27 x 29 | 27 x 29 | 27 x 29 | 36 x 39 | 36 x 39 | 46 x 49 | 46 x 49 | 55 x 59 | 55 x 59 | 75 x 80 | | | | | | | | | | | | | | | | | | |



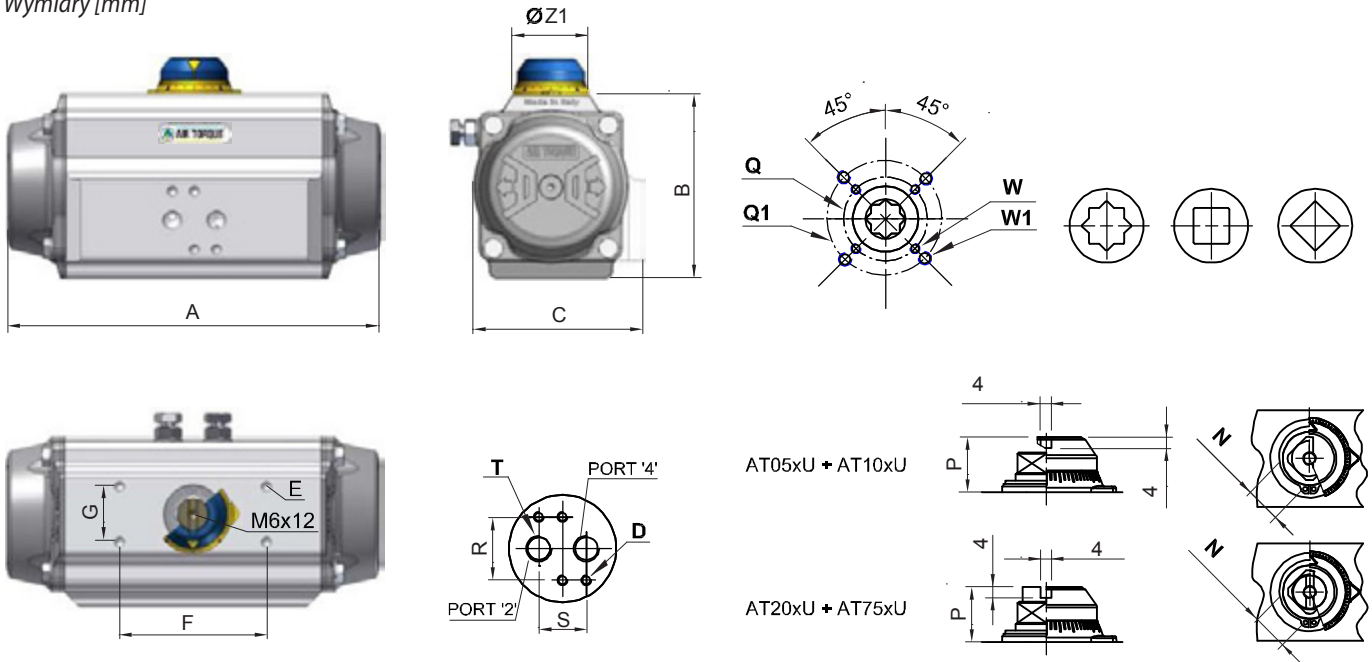
Dane fizyczne

| Typ silownika | AT045 | | AT051 U | | AT101 U | | AT201 U | | AT251 U | | AT301 U | | AT351 U | | AT401 U | | AT451 U | | AT501 U | | AT551 U | | AT601 U | | AT651 U | | AT701 U | | AT751 U | | AT801 U | | AT1001 U | |
|---------------|-------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|-------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|-----|---------|-----|---------|-----|----------|-----|
| | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | D | S | | |
| Czas otw. [s] | 0,15 | 0,2 | 0,2 | 0,25 | 0,25 | 0,3 | 0,3 | 0,35 | 0,4 | 0,5 | 0,5 | 0,6 | 0,7 | 0,8 | 0,9 | 1,1 | 1,2 | 1,4 | 1,5 | 1,7 | 2 | 2,2 | 2,7 | 3,2 | 3,5 | 4 | 4 | 4,5 | 5 | 6 | 6 | 7,5 | 8 | 10 |
| Czas zam. [s] | 0,2 | 0,25 | 0,25 | 0,3 | 0,3 | 0,35 | 0,4 | 0,5 | 0,5 | 0,6 | 0,7 | 0,8 | 0,9 | 1,1 | 1,2 | 1,4 | 1,5 | 1,8 | 1,8 | 2,1 | 2,4 | 2,8 | 3,5 | 4 | 4,1 | 4,6 | 4,5 | 5 | 6 | 7 | 7 | 8,5 | 9 | 11 |
| Obj. otw. [L] | 0,06 | 0,09 | 0,16 | 0,31 | 0,51 | 0,71 | 1,19 | 1,54 | 2,41 | 3,14 | 4,26 | 5,94 | 10 | 14,5 | 20 | 25 | 49 | | | | | | | | | | | | | | | | | |
| Obj. zam. [L] | 0,1 | 0,15 | 0,26 | 0,49 | 0,78 | 1,11 | 1,8 | 2,34 | 3,78 | 4,92 | 6,89 | 9,46 | 15,2 | 21,38 | 33 | 40 | 84 | | | | | | | | | | | | | | | | | |
| Ciążar [kg] | 0,75 | 0,9 | 1,0 | 1,1 | 1,6 | 1,7 | 2,7 | 3,1 | 3,7 | 4,3 | 5,2 | 6,1 | 8,0 | 9,3 | 9,8 | 11,7 | 14,2 | 17,4 | 18,1 | 22,3 | 24,3 | 32,7 | 34,1 | 41,9 | 52,7 | 67,3 | 74 | 93 | 123 | 155 | 127 | 169 | 170 | 238 |

Časy otwarcia i zamknięcia silownika mierzono bez zewneźnego obciężenia.



Wymiary [mm]



| Model | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke | Stroke |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|--------|
| AT052U D | 120° | 153 | 69 | 72 | M5x8 | 80 | 30 | 11 | 20 | 32 | 24 | 1/8" | 42 | 42 | - | M5 | - | F04 | 1,24 |
| AT058U D | 180° | 192 | | | | | | | | | | | | | | | | | 1,57 |
| AT102U D | 120° | 172 | 85 | 84,5 | M5x8 | 80 | 30 | 11 | 20 | 32 | 24 | 1/8" | 42 | 50 | 70 | M6 | M8 | F05 + F07 | 2,03 |
| AT108U D | 180° | 216 | | | | | | | | | | | | | | | | | 2,52 |
| AT202U D | 120° | 229 | | | | | | | | | | | | | | | | | 3,29 |
| AT203U D | 135° | 247 | 102 | 93 | M5x8 | 80 | 30 | 17 | 20 | 32 | 24 | 1/8" | 42 | 50 | 70 | M6 | M8 | F05 + F07 | 3,82 |
| AT208U D | 180° | 291 | | | | | | | | | | | | | | | | | 4,28 |
| AT252U D | 120° | 264 | | | | | | | | | | | | | | | | | 4,55 |
| AT258U D | 180° | 335 | 115 | 106 | M5x8 | 80 | 30 | 17 | 20 | 32 | 24 | 1/8" | 42 | 50 | 70 | M6 | M8 | F05 + F07 | 5,93 |
| AT302U D | 120° | 292 | | | | | | | | | | | | | | | | | 6,31 |
| AT303U D | 135° | 316 | 127 | 118,5 | M5x8 | 80 | 30 | 17 | 20 | 32 | 24 | 1/4" | 42 | 70 | 102 | M8 | M10 | F07 + F10 | 7,05 |
| AT308U D | 180° | 372 | | | | | | | | | | | | | | | | | 7,75 |
| AT352U D | 120° | 345 | | | | | | | | | | | | | | | | | 10,1 |
| AT353U D | 135° | 374 | 145 | 136 | M5x8 | 80 | 30 | 27 | 30 | 32 | 24 | 1/4" | 58 | 70 | 102 | M8 | M10 | F07 + F10 | 11,4 |
| AT358U D | 180° | 443 | | | | | | | | | | | | | | | | | 12,6 |
| AT402U D | 120° | 377 | | | | | | | | | | | | | | | | | 12,1 |
| AT403U D | 135° | 408 | 157 | 146,5 | M5x8 | 80 | 30 | 27 | 30 | 32 | 24 | 1/4" | 58 | 70 | 102 | M8 | M10 | F07 + F10 | 13,6 |
| AT408U D | 180° | 483 | | | | | | | | | | | | | | | | | 15,2 |
| AT502U D | 120° | 478 | | | | | | | | | | | | | | | | | 23,8 |
| AT503U D | 135° | 517 | 196 | 181 | M5x8 | 80 | 30 | 27 | 30 | 32 | 24 | 1/4" | 67,5 | 102 | 125 | M10 | M12 | F10 + F12 | 26,7 |
| AT508U D | 180° | 611 | | | | | | | | | | | | | | | | | 29,1 |
| AT602U D | 120° | 594 | | | | | | | | | | | | | | | | | 43,5 |
| AT603U D | 135° | 641 | 245 | 221,5 | M5x8 | 130 | 30 | 36 | 50 | 32 | 24 | 1/4" | 80 | 140 | - | M16 | - | F14 | 48,2 |
| AT608U D | 180° | 754 | | | | | | | | | | | | | | | | | 52,6 |
| AT652U D | 120° | / | 298,5 | 262 | M6x10 | 130 | 30 | 36 | 50 | 45 | 40 | 3/8" | 115 | 165 | - | M20 | - | F16 | / |
| AT658U D | 180° | 867 | | | | | | | | | | | | | | | | | 106 |
| AT702U D | 120° | / | 330 | 330 | M6x10 | 130 | 30 | 36 | 50 | 45 | 40 | 1/2" | 115 | 165 | - | M20 | - | F16 | / |
| AT708U D | 180° | 1023 | | | | | | | | | | | | | | | | | 127 |
| AT752U D | 120° | / | | | | | | | | | | | | | | | | | / |
| AT758U D | 180° | / | | | | | | | | | | | | | | | | | / |



Siłowniki, wykonane z wysokiej jakości, kutej stali nierdzewnej A182 F316/1.4401. *Jako opcja:* powierzchnia polerowana. *Zastosowanie:* przemysł spożywczy, farmaceutyczny, stoczniowy etc.



Siłownik z mechanicznym ograniczeniem skoku.



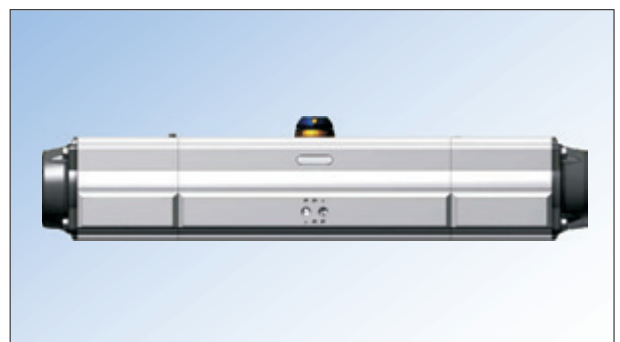
Siłownik szybkiego działania.



Siłowniki z hydrauliczną regulacją prędkości obrotu. Pozwalają precyzyjnie spowolnić prędkość otwarcia lub zamknięcia armatury, np. zapobiega to uderzeniom ciśnienia w rurociąg.



Siłownik 3-położeniowy, umożliwia osiągnięcie pozycji 0° – 45° – 90° lub 0° – 90° – 180° , w zależności od wersji. Pozycja środkowa realizowana jest poprzez blokady tłoków zewnętrznych. Blokady można precyzyjnie regulować zewnętrznymi pokrętkami, osiągając tym samym wymaganą pozycję środkową. *Zastosowanie:* dozowanie, napełnianie.



Siłowniki jednostronnego działania, o kącie obrotu 0° – 180° z pozycją „bezpieczną” 90° . Przy zaniku sprężonego powietrza sprężyny wymuszają zawsze położenie 90° .

