

PNEUMATIC ACTUATOR EC



This series of linear pneumatic actuators is designed to automate knife gate valves. Available in 6 sizes and different stroke lengths.

TECHNICAL DATA

| | |
|------------------------------|---|
| Design: | Double-acting pneumatic linear cylinder |
| Diameter of cylinder barrel: | Ø 100 mm Ø 125 mm Ø 160 mm Ø 200 mm Ø 250 mm Ø 320 mm |
| Stroke: | 90 mm up to 1030 mm |
| Supply pressure: | max. 10 bar |
| Temperature range: | Standard: -20 to +80 °C High and low temperature design on request |
| Power range: (at 6 bar): | 4524 N - 46322 N |
| Namur Interface: | NAMUR, VDI / VDE 3845 |
| Air supply: | clean and dry compressed air acc. to ISO 8573-1: 2010 min. class 3 Other supply media on request |
| Valve interface: | based on ISO 5211 |
| Surface: | Body anodized Cover: powder-coated |
| Approval: | Fulfills the requirements of DIN EN 15714-3 |

FEATURES:

- Body groove for integration of limit switches acc. to ISO 15552 for contact-free position indication with magnetic pistons (optional)
- Both Namur interface for direct mounting of solenoid valves and air ducts integrated in the body reduce mounting and piping efforts to a minimum
- Robust stainless steel pull rod design
- Optimal sliding properties by precise guided piston and exact bearing of piston rod
- Low maintenance by lifetime lubrication
- Low weight by aluminium lightweight construction
- Body: In- and exterior made of anodized aluminium for optimal abrasion and sliding properties
- Cover and extruded body made of aluminium form a compact and stable cylinder for multifunctional application

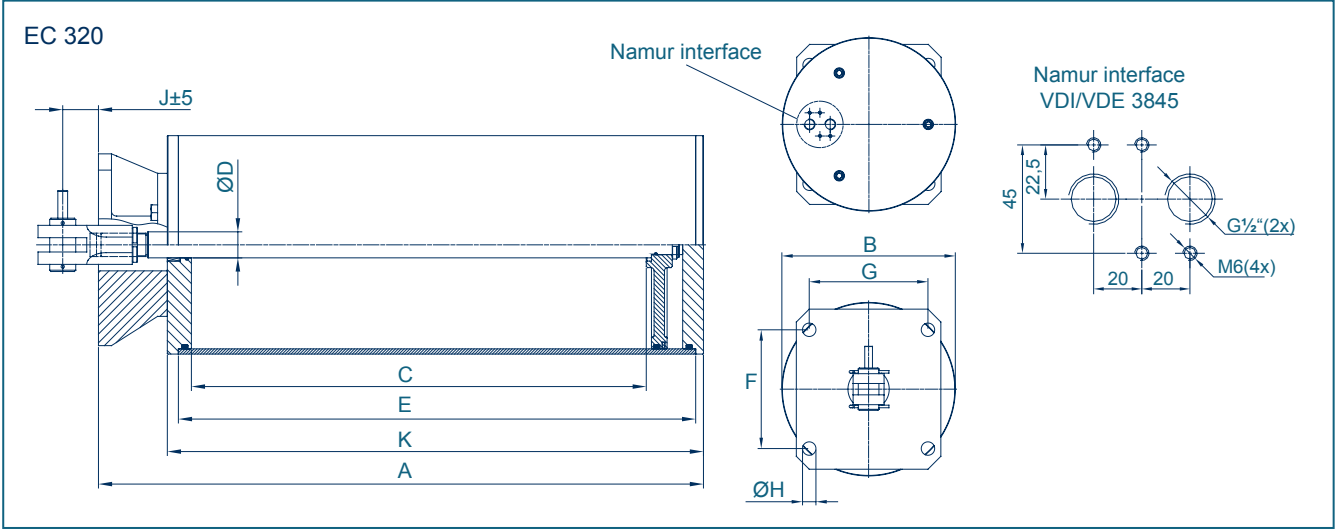
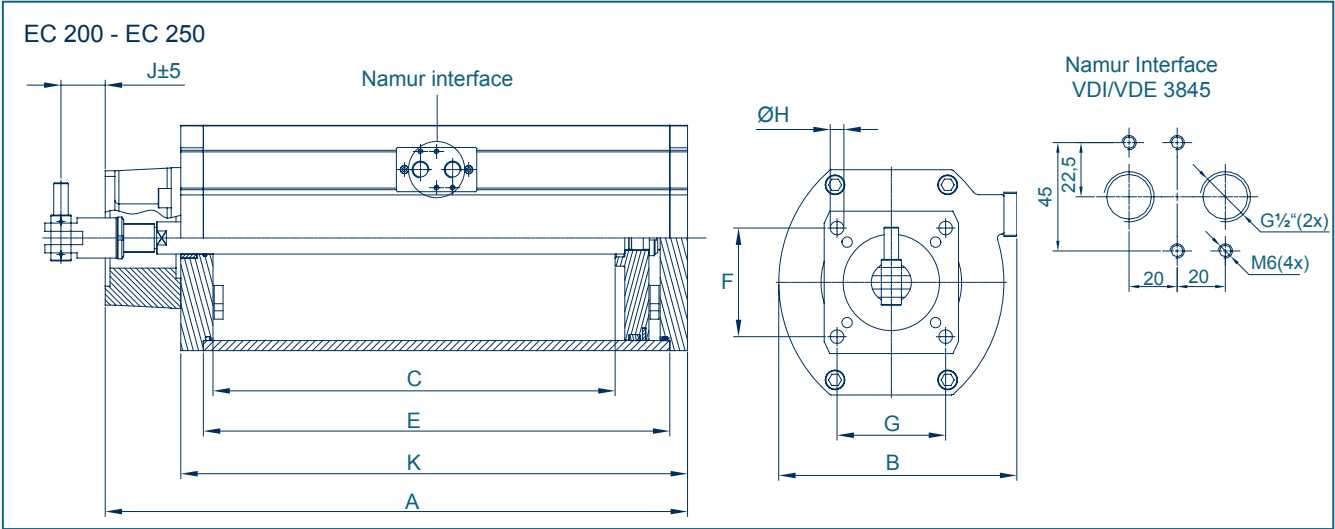
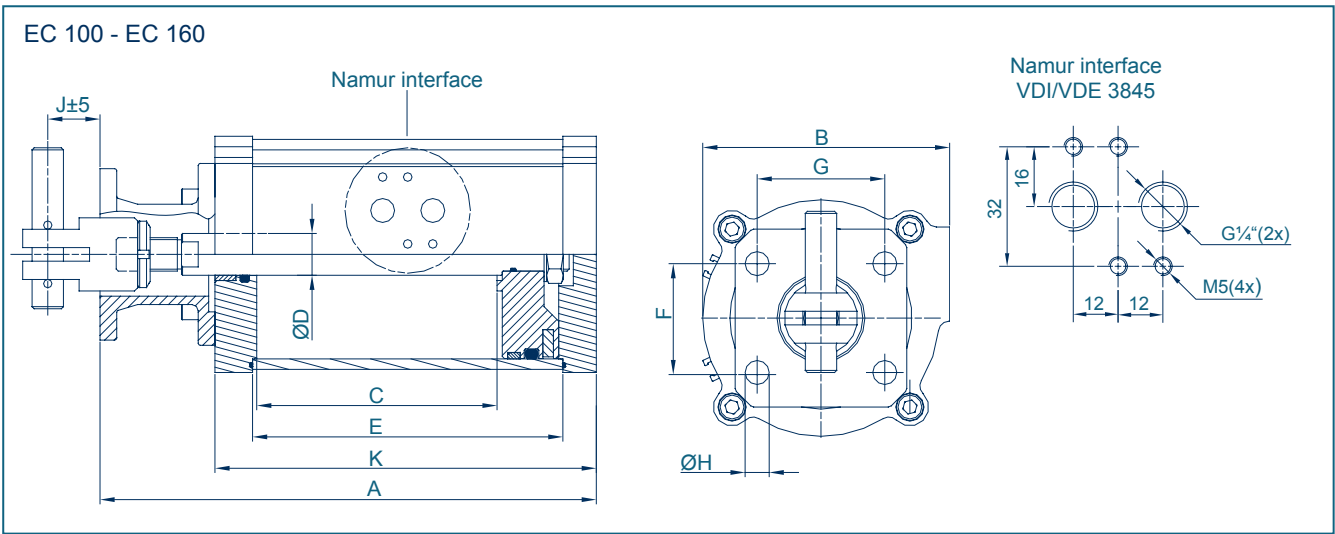
OPTIONS:

- Spring return version
- End of stroke damping
- Adjustable stroke
- Emergency manual override
- Special surface coating
- Trip function



The body groove to integrate limit switches and the Namur interface

PNEUMATIC ACTUATOR EC



Subject to change without notice

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| Type EC | Stroke length [mm] | Dimensions [mm] | | | | | | | | | | Weight [kg] | *Filling volume / Stroke |
|---------|--------------------|-----------------|-----|------|----|------|-----|-----|----|----|------|-------------|--------------------------|
| | | A | B | C | D | E | F | G | H | J | K | | |
| 100 | 90 | 213 | 118 | 90 | 20 | 124 | 52 | 61 | 11 | 25 | 158 | 4,1 | 0,7 |
| 100 | 115 | 238 | 118 | 115 | 20 | 149 | 52 | 61 | 11 | 25 | 183 | 4,5 | 0,9 |
| 100 | 140 | 263 | 118 | 140 | 20 | 173 | 52 | 61 | 11 | 25 | 208 | 4,6 | 1,1 |
| 100 | 165 | 288 | 118 | 165 | 20 | 199 | 52 | 61 | 11 | 25 | 233 | 4,9 | 1,3 |
| 125 | 115 | 285 | 147 | 115 | 32 | 153 | 52 | 61 | 11 | 25 | 198 | 7,6 | 1,4 |
| 125 | 165 | 335 | 147 | 165 | 32 | 203 | 52 | 61 | 11 | 25 | 248 | 8,0 | 2,0 |
| 160 | 115 | 285 | 188 | 115 | 32 | 153 | 52 | 61 | 11 | 25 | 198 | 10,0 | 2,3 |
| 160 | 140 | 310 | 188 | 140 | 32 | 178 | 52 | 61 | 11 | 25 | 223 | 10,5 | 2,8 |
| 160 | 165 | 335 | 188 | 165 | 32 | 203 | 52 | 61 | 11 | 25 | 248 | 11,0 | 3,3 |
| 160 | 215 | 366 | 188 | 215 | 32 | 253 | 100 | 110 | 13 | 40 | 298 | 13,0 | 4,3 |
| 160 | 270 | 421 | 188 | 270 | 32 | 308 | 100 | 110 | 13 | 40 | 353 | 14,0 | 5,4 |
| 160 | 320 | 471 | 188 | 320 | 32 | 358 | 100 | 110 | 13 | 40 | 403 | 15,0 | 6,4 |
| 200 | 215 | 432 | 245 | 215 | 40 | 290 | 100 | 110 | 13 | 40 | 338 | 30 | 7,4 |
| 200 | 270 | 487 | 245 | 270 | 40 | 345 | 100 | 110 | 13 | 40 | 393 | 32,5 | 9,4 |
| 200 | 320 | 537 | 245 | 320 | 40 | 395 | 100 | 110 | 13 | 40 | 443 | 34,5 | 11,1 |
| 200 | 350 | 567 | 245 | 350 | 40 | 425 | 135 | 135 | 17 | 55 | 473 | 36 | 12,1 |
| 200 | 400 | 637 | 245 | 400 | 40 | 475 | 160 | 160 | 21 | 55 | 523 | 46 | 13,9 |
| 200 | 450 | 667 | 245 | 450 | 40 | 525 | 160 | 160 | 21 | 55 | 573 | 50 | 15,6 |
| 200 | 550 | 787 | 245 | 550 | 40 | 625 | 160 | 160 | 21 | 55 | 673 | 54,5 | 19,1 |
| 250 | 350 | 574 | 296 | 350 | 40 | 430 | 135 | 135 | 17 | 55 | 480 | 48,0 | 17,9 |
| 250 | 400 | 644 | 296 | 400 | 40 | 480 | 135 | 135 | 17 | 55 | 530 | 58,0 | 20,4 |
| 250 | 450 | 694 | 296 | 450 | 40 | 530 | 160 | 160 | 21 | 55 | 580 | 63,5 | 23,0 |
| 250 | 500 | 744 | 296 | 500 | 40 | 580 | 160 | 160 | 21 | 55 | 630 | 71,0 | 25,5 |
| 250 | 575 | 819 | 296 | 575 | 40 | 655 | 230 | 230 | 26 | 55 | 705 | 75,0 | 29,4 |
| 250 | 630 | 874 | 296 | 630 | 40 | 710 | 200 | 200 | 21 | 55 | 760 | 78,5 | 32,2 |
| 250 | 800 | 1044 | 296 | 800 | 40 | 880 | 230 | 230 | 26 | 55 | 930 | 90,0 | 40,9 |
| 320 | 500 | 731 | 336 | 500 | 40 | 596 | 230 | 230 | 26 | 55 | 625 | 67,0 | 39,2 |
| 320 | 575 | 806 | 336 | 575 | 40 | 671 | 230 | 230 | 26 | 55 | 700 | 70,5 | 45,1 |
| 320 | 700 | 931 | 336 | 700 | 40 | 796 | 230 | 230 | 26 | 55 | 825 | 76,0 | 54,9 |
| 320 | 715 | 954 | 336 | 715 | 40 | 811 | 230 | 230 | 26 | 55 | 840 | 78,0 | 56,1 |
| 320 | 800 | 1031 | 336 | 800 | 40 | 896 | 230 | 230 | 26 | 80 | 925 | 84,0 | 62,8 |
| 320 | 915 | 1146 | 336 | 915 | 40 | 1011 | 230 | 230 | 26 | 80 | 1040 | 89,0 | 71,8 |
| 320 | 1030 | 1261 | 336 | 1030 | 40 | 1126 | 230 | 230 | 26 | 80 | 1155 | 95,0 | 80,8 |

*Filling volume / Stroke at 1 atm

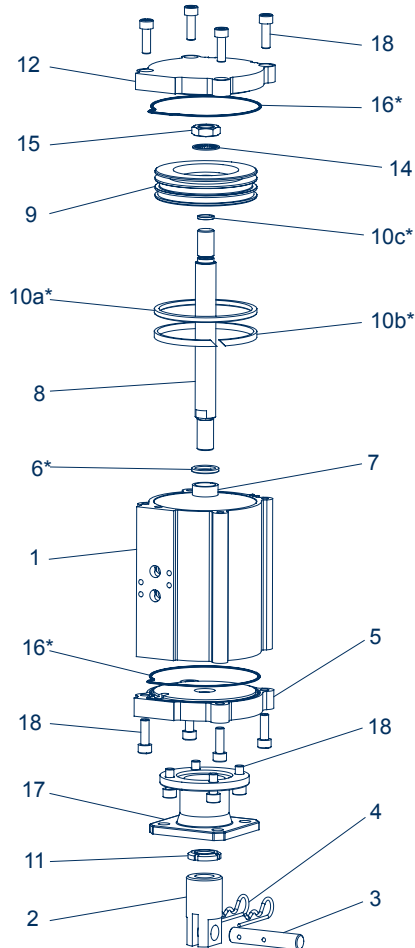
| EC | Force / Stroke in Newton (N) | | | | | | | | | |
|-----|------------------------------|-------|---------|-------|-------|-------|---------|-------|-------|-------|
| | 4 bar | | 4,5 bar | | 5 bar | | 5,5 bar | | 6 bar | |
| | Close | Open | Close | Open | Close | Open | Close | Open | Close | Open |
| 100 | 3142 | 3016 | 3534 | 3393 | 3927 | 3770 | 4320 | 4147 | 4712 | 4524 |
| 125 | 4909 | 4587 | 5522 | 5160 | 6136 | 5734 | 6750 | 6307 | 7363 | 6881 |
| 160 | 8042 | 7721 | 9048 | 8686 | 10053 | 9651 | 11058 | 10616 | 12064 | 11581 |
| 200 | 13854 | 13352 | 15586 | 15021 | 17318 | 16690 | 19050 | 18359 | 20782 | 20028 |
| 250 | 20428 | 19926 | 22982 | 22416 | 25535 | 24907 | 28089 | 27398 | 30642 | 29888 |
| 320 | 31385 | 30882 | 35308 | 34742 | 39231 | 38602 | 43154 | 42463 | 47077 | 46323 |

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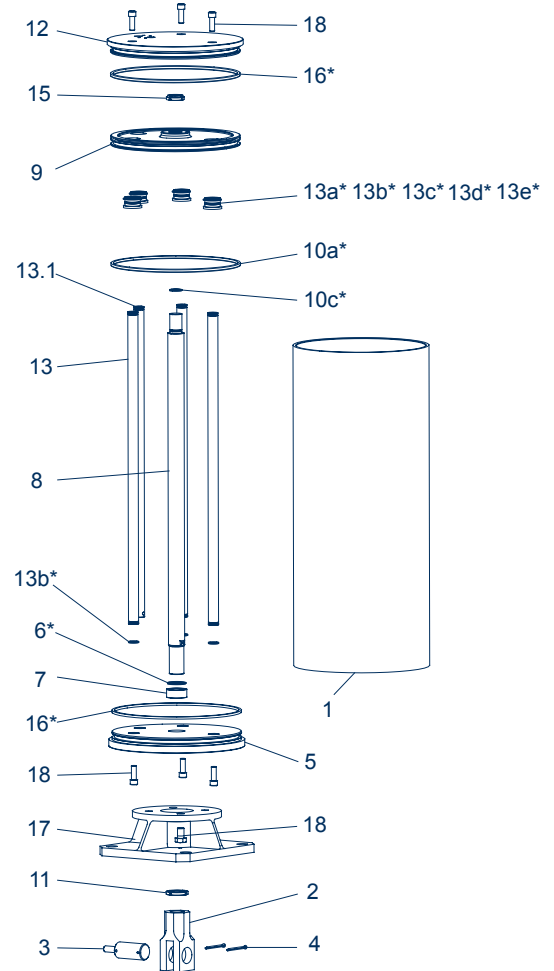
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MATERIAL SPECIFICATION AND PARTS LIST

EC 100 - EC 250



EC 320



| Pt. | Description | Material | Pt. | Description | Material |
|------|------------------------------|-----------------|------|------------------------|-----------------|
| 1 | Cylinder barrel | Aluminium | 12 | Top cover | Aluminium |
| 2 | Gate clevis | Stainless steel | 13 | Guide bar | Stainless steel |
| 3 | Clevis pin | Stainless steel | 13.1 | Air supply bar | Steel |
| 4 | Locking pin | Stainless steel | 13a* | Guide bar bushing | Bronze |
| 5 | Lower cover | Aluminium | 13b* | Guide bar O-ring | NBR |
| 6* | Lower cover internal O-ring | Nitrile | 13c* | Clips | Steel |
| 7 | Lower cover internal bushing | Bronze | 13d* | O-ring bushing outside | NBR |
| 8 | Piston rod | Stainless steel | 13e* | O-ring bushing inside | NBR |
| 9 | Piston | Aluminium | 14 | Piston washer | Stainless steel |
| 10a* | Piston O-Ring | Nitrile | 15 | Self locking nut | Stainless steel |
| 10b* | Piston bearing | POM | 16* | Covers O-Ring | NBR |
| 10c* | Piston rod O-Ring | Nitrile | 17 | Mounting bracket | Stainless steel |
| 11 | Locking nut | Stainless steel | 18 | Hex socket screws | Stainless steel |

* Component of the sealing set

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