# MODEL EB

ORBINOX
VALVULAS-VALVES

## BI-DIRECTIONAL KNIFE GATE VALVE

The **EB** model knife gate is a bi-directional valve designed for general industrial service applications. The design of the body and seat assures non-clogging shutoff on suspended solids in industries such as:

- Wastewater treatment plants
- Chemical plants
- Food and Beverage
- etc.

**Sizes:** DN 50 to DN 1200 (larger diameters on request)

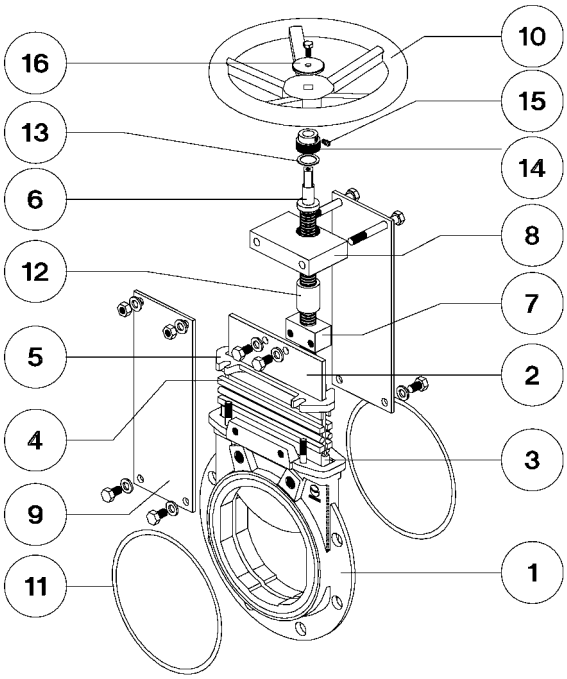
**Working pressure:**

| | |
|---|---|
| DN 50 to DN 250: | 10 (kg/cm2) |
| DN 300 to DN 400: | 6 (kg/cm2) |
| DN 450: | 5 (kg/cm2) |
| DN 500 to DN 600: | 4 (kg/cm2) |
| DN 700 to DN 1200: | 2 (kg/cm2) |

**Standard flange connection:** DIN PN 10

Face to face dimensions acc. to K1 DIN 3202 up to DN 300.

All valves are tested prior to shipping in accordance with the standard developed by the Quality Control department at ORBINOX.




## STÁNDARD PARTS LIST

| | |
|---|---|
| 1- Body | Cast Iron GG25 |
| 2- Gate | AISI 304 |
| 3- Seat | EPDM |
| 4- Packing | AH |
| 5- Gland Follower | Aluminum (DN 50 to DN 600)<br>S.G. Iron (DN 700 to DN 1200) |
| 6- Stem | AISI 303 |
| 7- Stem Nut | Bronze |
| 8- Yoke | Carbon Steel |
| 9- Support Plates | Carbon Steel - Epoxy Coated |
| 10- Handwheel | Cast Iron |
| 11- O-ring | EPDM |
| 12- Stroke limit socket | Carbon steel |
| 13- Thrust washer | Brass |
| 14- Yoke nut | Brass |
| 15- Grease nipple | Acc. to DIN 3402 |
| 16- Locking washer | Carbon steel |



ORBINOX reserves the right to change specifications without notice.

ORBINOX, S.A. Pol. Ind. s/n-20270 ANOETA Spain Apdo. 80 - 20400 TOLOSA Spain
Tel: 943 - 69 80 30* Fax: 943 - 65 30 66 e-mail:orbinox@orbinox.com

# MODEL EB

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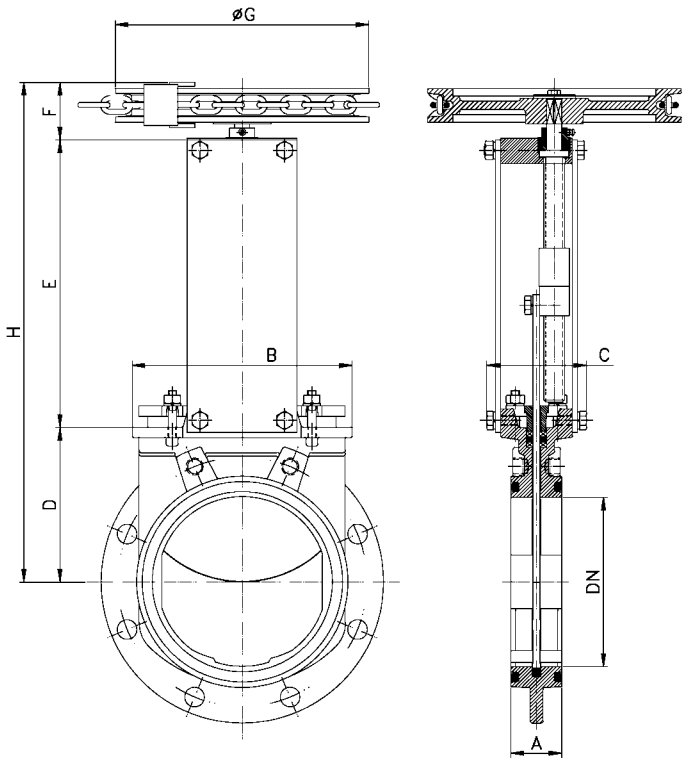
## CHAINWHEEL

- Recommended for elevated installations.
- Consists of:
  - Chainwheel:Epoxy coated Cast Iron
  - Stem
  - Stem nut
  - Grease nipple
- Available in DN 50 to DN 600
- Options:
  - Locking Device
  - Extensions




| DN | A | B | C | D | E | F | ØG | H |
|---|---|---|---|---|---|---|---|---|
| 50 | 43 | 118 | 100 | 105 | 158 | 60 | 225 | 323 |
| 65 | 46 | 133 | 100 | 115 | 175 | 60 | 225 | 350 |
| 80 | 46 | 148 | 100 | 124 | 193 | 60 | 225 | 377 |
| 100 | 52 | 167 | 104 | 140 | 217 | 60 | 225 | 417 |
| 125 | 56 | 174 | 104 | 150 | 243 | 60 | 225 | 453 |
| 150 | 56 | 200 | 104 | 170 | 266 | 60 | 225 | 496 |
| 200 | 60 | 260 | 118 | 183 | 340 | 68 | 300 | 591 |
| 250 | 68 | 310 | 118 | 228 | 395 | 68 | 300 | 691 |
| 300 | 78 | 369 | 118 | 268 | 445 | 68 | 300 | 781 |
| 350 | 80 | 423 | 193 | 315 | 553 | 75 | 454 | 943 |
| 400 | 80 | 480 | 193 | 350 | 603 | 75 | 454 | 1028 |
| 450 | 90 | 530 | 197 | 505 | 653 | 75 | 454 | 1233 |
| 500 | 90 | 595 | 197 | 450 | 713 | 75 | 454 | 1238 |
| 600 | 100 | 700 | 197 | 510 | 813 | 75 | 454 | 1398 |

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# MODEL EB

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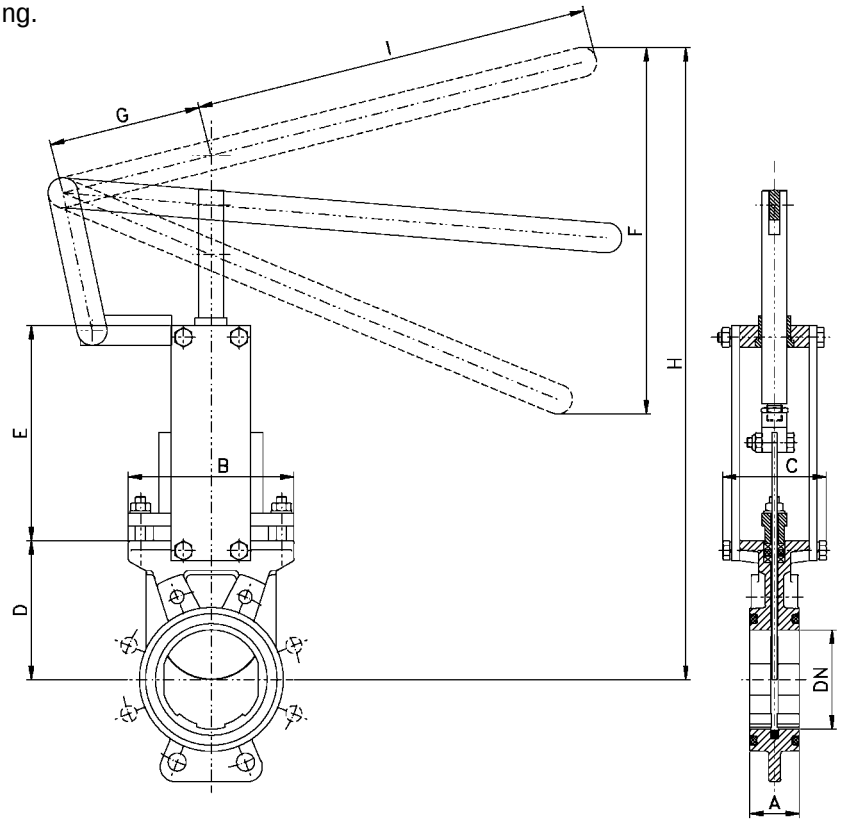
## LEVER

- Recommended for quick opening and closing.
- Consists of:
  - Lever
  - Stem
  - Yoke sleeve
  - Lever lock
- Available in DN 50 to DN 150




| DN | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 50 | 43 | 118 | 100 | 105 | 158 | 212 | 150 | 415 | 315 |
| 65 | 46 | 133 | 100 | 115 | 175 | 212 | 150 | 445 | 315 |
| 80 | 46 | 148 | 100 | 124 | 193 | 256 | 150 | 520 | 315 |
| 100 | 52 | 167 | 104 | 140 | 217 | 368 | 150 | 638 | 415 |
| 125 | 56 | 174 | 104 | 150 | 243 | 454 | 150 | 710 | 415 |
| 150 | 56 | 200 | 104 | 170 | 266 | 500 | 150 | 856 | 415 |

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# MODEL EB

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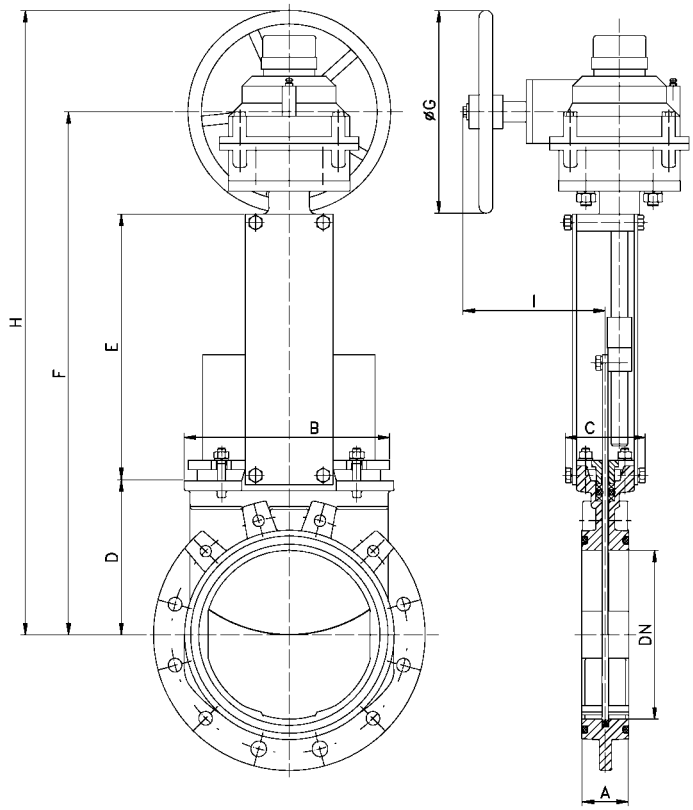
## GEAR, non-rising stem

- Recommended for valves larger than DN 350 and working pressures greater than 3.5 bars.
- Consists of:
  - Stem
  - Yoke
  - Bevel Gear Actuator with Handwheel (Standard Ratio 4:1)
- Available: DN 200 to DN 1200
- Options:
  - Locking device
  - Extensions
  - Chainwheel
  - Rising stem




| DN | A | B | C | D | E | F | ØG | H | I |
|---|---|---|---|---|---|---|---|---|---|
| 200 | 60 | 260 | 118 | 183 | 340 | 660 | 300 | 810 | 200 |
| 250 | 68 | 310 | 118 | 228 | 395 | 760 | 300 | 910 | 200 |
| 300 | 78 | 369 | 118 | 268 | 445 | 850 | 300 | 1000 | 200 |
| 350 | 80 | 423 | 193 | 315 | 553 | 1040 | 450 | 1265 | 220 |
| 400 | 80 | 480 | 193 | 350 | 603 | 1125 | 450 | 1350 | 220 |
| 450 | 90 | 530 | 197 | 505 | 653 | 1330 | 450 | 1555 | 220 |
| 500 | 90 | 595 | 197 | 450 | 713 | 1335 | 450 | 1560 | 220 |
| 600 | 100 | 700 | 197 | 510 | 813 | 1495 | 450 | 1720 | 220 |
| 700 | 110 | 890 | 398 | 610 | 979 | 1765 | 450 | 1990 | 220 |
| 800 | 110 | 1012 | 320 | 700 | 1076 | 1950 | 650 | 2275 | 250 |
| 900 | 110 | 1112 | 320 | 785 | 1115 | 2075 | 650 | 2400 | 250 |
| 1000 | 110 | 1240 | 320 | 1120 | 1220 | 2515 | 650 | 2840 | 250 |
| 1200 | 150 | 1470 | 450 | 1340 | 1455 | 3005 | 800 | 3405 | 250 |

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# MODEL EB

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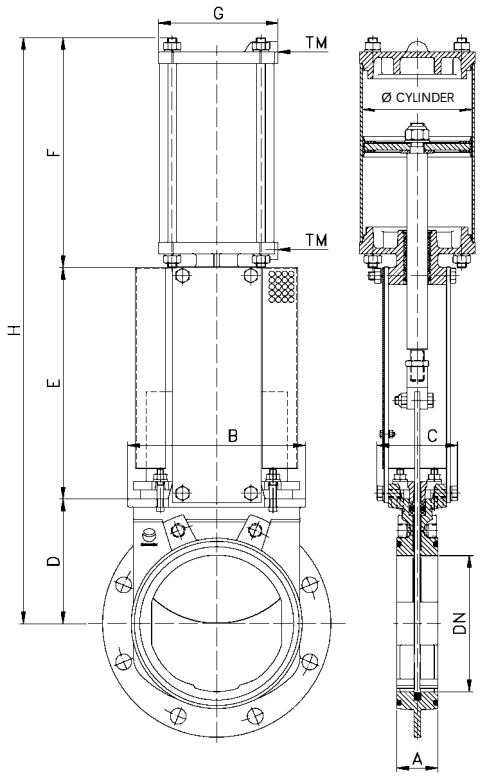
## PNEUMATIC CYLINDER

- The standard pneumatic actuator (double acting on-off cylinder) consists of:
  - Aluminium jacket and covers
  - Stainless (AISI 304) piston rod
  - Nitrile coated steel piston

- Available in DN 50 to DN 800
- Supply Pressure: minimum 3.5 kg/cm² - maximum 7 kg/cm²
- For valves installed in a horizontal position, we recommend U-type support plates and/or actuator support.

- Options:
  - Hard anodised jacket and covers
  - Over / Under sized cylinder
  - Stainless jacket and covers
  - Manual override
  - Fail safe system
  - Travel stops
- Instrumentation (on request):
  - Positioners
  - Solenoid valves
  - Flow regulators
  - Air preparation units




| DN | A | B | C | D | E | F | G | H | Weight (kg.) | Standard Cyl | Connect. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 43 | 118 | 100 | 105 | 158 | 160 | 95 | 423 | 11 | C80/52 | 1/4" G |
| 65 | 46 | 133 | 100 | 115 | 175 | 176 | 95 | 466 | 11,5 | C80/67 | 1/4" G |
| 80 | 46 | 148 | 100 | 124 | 193 | 191 | 95 | 508 | 12,5 | C80/82 | 1/4" G |
| 100 | 52 | 167 | 104 | 140 | 217 | 212 | 115 | 569 | 16 | C100/102 | 1/4" G |
| 125 | 56 | 174 | 104 | 150 | 243 | 252 | 140 | 645 | 22 | C125/127 | 1/4" G |
| 150 | 56 | 200 | 104 | 170 | 266 | 276 | 140 | 712 | 28 | C125/152 | 1/4" G |
| 200 | 60 | 260 | 118 | 183 | 340 | 337 | 175 | 860 | 47 | C160/202 | 1/4" G |
| 250 | 68 | 310 | 118 | 228 | 395 | 395 | 220 | 1018 | 69 | C200/252 | 3/8" G |
| 300 | 78 | 369 | 118 | 268 | 445 | 445 | 220 | 1158 | 84 | C200/302 | 3/8" G |
| 350 | 80 | 423 | 193 | 315 | 553 | 519 | 277 | 1387 | 130 | C250/353 | 3/8" G |
| 400 | 80 | 480 | 193 | 350 | 603 | 569 | 277 | 1522 | 181 | C250/403 | 3/8" G |
| 450 | 90 | 530 | 197 | 505 | 653 | 647 | 382 | 1805 | 235 | C300/453 | 1/2" G |
| 500 | 90 | 595 | 197 | 450 | 713 | 697 | 382 | 1860 | 302 | C300/503 | 1/2" G |
| 600 | 100 | 700 | 197 | 510 | 813 | 797 | 382 | 2120 | 315 | C300/603 | 1/2" G |
| 700 | 110 | 890 | 398 | 610 | 979 | 943 | 444 | 2532 | 480 | C350/703 | 3/4" G |
| 800 | 110 | 1012 | 320 | 700 | 1076 | 1043 | 444 | 2819 | 585 | C350/803 | 3/4" G |

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# MODEL EB

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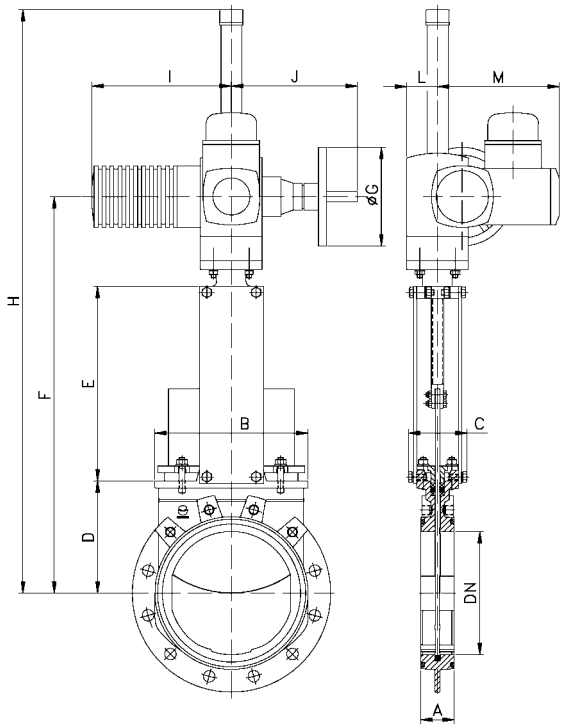
## ELECTRIC ACTUATOR (rising stem)

- Consists of:
  - Electric motor
  - Rising stem
  - Motor support yoke flange
    ( Acc. to ISO 5210 / DIN 3338 )

- The standard electric motor is equiped with:
  - Manual emergency operation
  - Limit switches (open / closed)
  - Torque switches

- Available in DN 50 to DN 1200

- Wide range of types and marks available to meet customer's needs.




| DN | A | B | C | D | E | F | ØG | H | I | J | L | M | StemØxpitch | Torque(Nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 43 | 118 | 100 | 105 | 158 | 416 | 140 | 786 | 265 | 234 | 75,5 | 237 | 20 x 4 | 20 |
| 65 | 46 | 133 | 100 | 115 | 175 | 443 | 140 | 813 | 265 | 234 | 75,5 | 237 | 20 x 4 | 25 |
| 80 | 46 | 148 | 100 | 124 | 193 | 470 | 140 | 840 | 265 | 234 | 75,5 | 237 | 20 x 4 | 30 |
| 100 | 52 | 167 | 104 | 140 | 217 | 510 | 140 | 880 | 265 | 234 | 75,5 | 237 | 20 x 4 | 40 |
| 125 | 56 | 174 | 104 | 150 | 243 | 546 | 160 | 916 | 265 | 250 | 75,5 | 237 | 20 x 4 | 50 |
| 150 | 56 | 200 | 104 | 170 | 266 | 589 | 160 | 959 | 265 | 250 | 75,5 | 237 | 20 x 4 | 60 |
| 200 | 60 | 260 | 118 | 183 | 340 | 705 | 200 | 1085 | 282 | 256 | 82,5 | 247 | 25 x 5 | 70 |
| 250 | 68 | 310 | 118 | 228 | 395 | 805 | 200 | 1185 | 282 | 256 | 82,5 | 247 | 25 x 5 | 80 |
| 300 | 78 | 369 | 118 | 268 | 445 | 895 | 200 | 1275 | 282 | 256 | 82,5 | 247 | 25 x 5 | 90 |
| 350 | 80 | 423 | 193 | 315 | 553 | 1087 | 200 | 1742 | 282 | 256 | 128 | 247 | 35 x 6 | 105 |
| 400 | 80 | 480 | 193 | 350 | 603 | 1170 | 200 | 1827 | 282 | 256 | 128 | 247 | 35 x 6 | 120 |
| 450 | 90 | 530 | 197 | 505 | 653 | 1403 | 315 | 2087 | 385 | 325 | 130 | 285 | 35 x 6 | 160 |
| 500 | 90 | 595 | 197 | 450 | 713 | 1408 | 315 | 2092 | 385 | 325 | 130 | 285 | 35 x 6 | 180 |
| 600 | 100 | 700 | 197 | 510 | 813 | 1568 | 315 | 2252 | 385 | 325 | 130 | 285 | 35 x 6 | 210 |
| 700 | 110 | 890 | 398 | 610 | 979 | 1838 | 315 | 2918 | 385 | 325 | 202 | 285 | 40 x 7 | 250 |
| 800 | 110 | 1012 | 320 | 700 | 1076 | 2025 | 400 | 3041 | 385 | 332 | 202 | 285 | 50 x 8 | 400 |
| 900 | 110 | 1112 | 320 | 785 | 1115 | 2129 | 400 | 3165 | 385 | 332 | 202 | 285 | 50 x 8 | 450 |
| 1000 | 110 | 1240 | 320 | 1120 | 1220 | 2564 | 400 | 3605 | 385 | 332 | 202 | 285 | 50 x 8 | 500 |
| 1200 | 150 | 1470 | 450 | 1340 | 1455 | 3079 | 500 | 4390 | 510 | 355 | 284 | 307 | 50 x 8 | 700 |

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# MODEL EB

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VALVULAS-VALVES

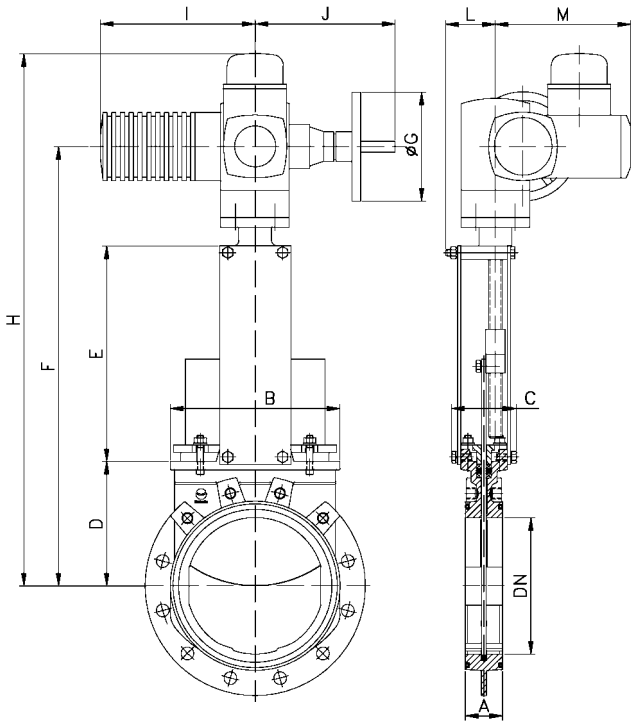
## ELECTRIC ACTUATOR (non-rising stem)

- Consists of:
  - Electric motor
  - Non rising stem
  - Motor support yoke flange
    ( Acc. to ISO 5210 / DIN 3338 )

- The standard electric motor is equiped with:
  - Manual emergency operation
  - Limit switches (open / closed)
  - Torque switches

- Available in DN 50 to DN 1200

- Wide range of types and marks available to meet customer's needs.




| DN | A | B | C | D | E | F | ØG | H | I | J | L | M | StemØxpitch | Torque(Nm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 43 | 118 | 100 | 105 | 158 | 416 | 140 | 586 | 265 | 234 | 75,5 | 237 | 20 x 4 | 20 |
| 65 | 46 | 133 | 100 | 115 | 175 | 443 | 140 | 613 | 265 | 234 | 75,5 | 237 | 20 x 4 | 25 |
| 80 | 46 | 148 | 100 | 124 | 193 | 470 | 140 | 640 | 265 | 234 | 75,5 | 237 | 20 x 4 | 30 |
| 100 | 52 | 167 | 104 | 140 | 217 | 510 | 140 | 680 | 265 | 234 | 75,5 | 237 | 20 x 4 | 40 |
| 125 | 56 | 174 | 104 | 150 | 243 | 546 | 160 | 716 | 265 | 250 | 75,5 | 237 | 20 x 4 | 50 |
| 150 | 56 | 200 | 104 | 170 | 266 | 589 | 160 | 759 | 265 | 250 | 75,5 | 237 | 20 x 4 | 60 |
| 200 | 60 | 260 | 118 | 183 | 340 | 688 | 200 | 858 | 282 | 256 | 82,5 | 247 | 25 x 5 | 70 |
| 250 | 68 | 310 | 118 | 228 | 395 | 788 | 200 | 958 | 282 | 256 | 82,5 | 247 | 25 x 5 | 80 |
| 300 | 78 | 369 | 118 | 268 | 445 | 878 | 200 | 1048 | 282 | 256 | 82,5 | 247 | 25 x 5 | 90 |
| 350 | 80 | 423 | 193 | 315 | 553 | 1068 | 200 | 1238 | 282 | 256 | 128 | 247 | 35 x 6 | 105 |
| 400 | 80 | 480 | 193 | 350 | 603 | 1151 | 200 | 1321 | 282 | 256 | 128 | 247 | 35 x 6 | 120 |
| 450 | 90 | 530 | 197 | 505 | 653 | 1403 | 315 | 1583 | 385 | 325 | 130 | 285 | 35 x 6 | 160 |
| 500 | 90 | 595 | 197 | 450 | 713 | 1408 | 315 | 1588 | 385 | 325 | 130 | 285 | 35 x 6 | 180 |
| 600 | 100 | 700 | 197 | 510 | 813 | 1568 | 315 | 1748 | 385 | 325 | 130 | 285 | 35 x 6 | 210 |
| 700 | 110 | 890 | 398 | 610 | 979 | 1838 | 315 | 2038 | 385 | 325 | 202 | 285 | 40 x 7 | 250 |
| 800 | 110 | 1012 | 320 | 700 | 1076 | 2025 | 400 | 2225 | 385 | 332 | 202 | 285 | 50 x 8 | 400 |
| 900 | 110 | 1112 | 320 | 785 | 1115 | 2129 | 400 | 2329 | 385 | 332 | 202 | 285 | 50 x 8 | 450 |
| 1000 | 110 | 1240 | 320 | 1120 | 1220 | 2564 | 400 | 2764 | 385 | 332 | 202 | 285 | 50 x 8 | 500 |
| 1200 | 150 | 1470 | 450 | 1340 | 1455 | 3079 | 500 | 3329 | 510 | 355 | 284 | 307 | 50 x 8 | 700 |

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# MODEL EB

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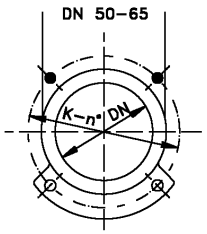
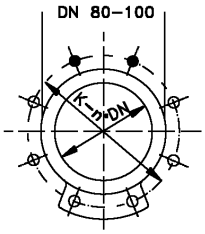
VALVULAS-VALVES

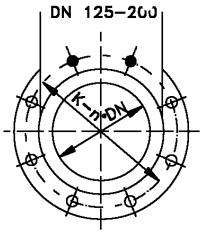
## FLANGE AND BOLTING DETAILS

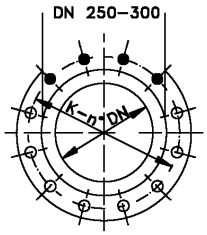
### DIN PN10

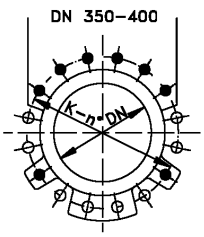
| DN | K | nº | M | T | ⌖ ⊕ |
|---|---|---|---|---|---|
| 50 | 125 | 4 | M-16 | 10 | 2 - 2 |
| 65 | 145 | 4 | M-16 | 10 | 2 - 2 |
| 80 | 160 | 8 | M-16 | 12 | 2 - 6 |
| 100 | 180 | 8 | M-16 | 12 | 2 - 6 |
| 125 | 210 | 8 | M-16 | 12 | 2 - 6 |
| 150 | 240 | 8 | M-20 | 14 | 2 - 6 |
| 200 | 295 | 8 | M-20 | 14 | 2 - 6 |
| 250 | 350 | 12 | M-20 | 18 | 4 - 8 |
| 300 | 400 | 12 | M-20 | 18 | 4 - 8 |
| 350 | 460 | 16 | M-20 | 18 | 8 - 8 |
| 400 | 515 | 16 | M-24 | 18 | 8 - 8 |
| 450 | 565 | 20 | M-24 | 20 | 12 - 8 |
| 500 | 620 | 20 | M-24 | 20 | 12 - 8 |
| 600 | 725 | 20 | M-27 | 20 | 12 - 8 |
| 700 | 840 | 24 | M-27 | 20 | 16 - 8 |
| 800 | 950 | 24 | M-30 | 20 | 16 - 8 |
| 900 | 1050 | 28 | M-30 | 20 | 20 - 8 |
| 1000 | 1160 | 28 | M-33 | 20 | 20 - 8 |
| 1200 | 1380 | 32 | M-36 | 35 | 22 -10 |

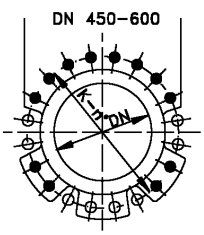


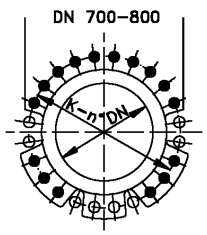



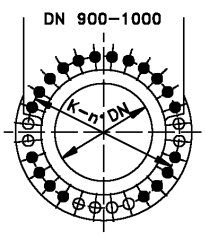



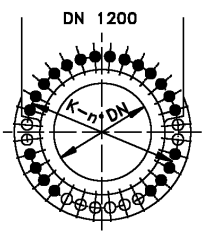



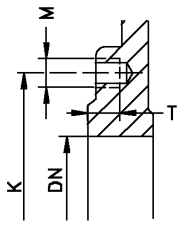




BLIND TAPPED BOLTS

THROUGH BOLTS