



baelz 340

DESCRIPTION

The baelz 340 is a 2-way control valve in a 3-way housing for industrial applications. Several plug variants allow utilization for different control tasks.

TECHNICAL SPECIFICATIONS

Connection type: Flange EN 1092-2; EN 1092-1 Shapes D / E / F on request.

Plug type: parabolic plug, special plug, cage plug

Control characteristic: equal percentage, linear

Working media: liquids, gases, water, steam, thermal oil, etc.

| Leakage class (EN 1349) |
|--|
| metal-to-metal seal: 0.004% Kvs (better than class IV) |
| with Teflon plug: 0.001% Kvs (better than class VI) |

| Stroke (mm) | | Spindle diameter (mm) |
|-----------------|----|-----------------------|
| DN 15 - DN 25 | 12 | 10 (12*) |
| DN 32 - DN 125 | 22 | 10 (16**) |
| DN 150 | 44 | 22 |
| DN 200 - DN 300 | 66 | |

* for baelz 340-ES

** for baelz 340-B-EMF DN 100, DN 125

| Options | | Designation*** |
|---------------------------|---|---------------------|
| Plug | Parabolic plug (standard) | baelz 340-B |
| | Balanced | baelz 340-B-EMF |
| | Cage plug | baelz 340-B-LK |
| | Reduced Kvs | baelz 340-B-SKr |
| | With Teflon soft seal plug (max. 200°C) | baelz 340-B-TK |
| Stem seal | V-rings in PFTE standard | baelz 340-B |
| | Cooling tube | baelz 340-BK |
| | Cooling tube + bellows seal | baelz 340-BK-SS |
| Additional options | V-shaped seal heating (for media at temperatures of - 10 to - 40°C) Pmax. 20 W; 12-24 V / 110-230 V AC/DC | baelz 85950... |
| | Construction without silicone | baelz 340-B...-Silf |

*** Designation: 347-B up to DN 125 and for spindle Ø up to 16 mm; 347-BB from DN 150 and for spindle Ø 22 mm

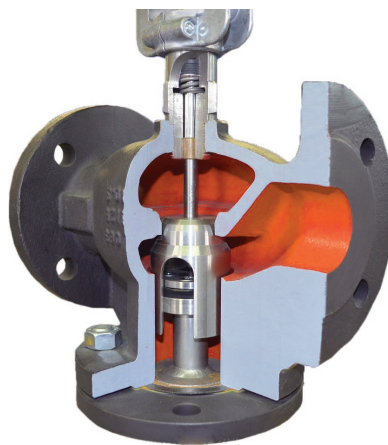
| Housing material | T max. (°C) / P max. (bar) | | | | Stainless steel 1.4313 PN 40 |
|--------------------------------|---|------------------------------------|------------------------------------|---------------------------------|------------------------------------|
| | Spheroid ductile iron GJS-400-18-LT - 5.3103 | | Cast steel GP240GH - 1.0619 | | |
| Nominal pressure | PN 16 | PN 25 | PN 25 | PN 40 | |
| baelz 340-B | 240/12.3 ... 50/16 | 240/19.3 ... 50/25 | - | - | |
| baelz 340-B-EMF | | | 240/19.3 ... 50/25 | 240/30.9 ... 50/40 | |
| baelz 340-BK | 350/10.2 ... 50/16 | 350/16 ... 50/25 | 350/16 ... 50/25 | 350/25.7 ... 50/40 | |
| baelz 340-BK-SS | | | - | 350/25 ... 50/25 | |
| baelz 340-BK-EMF | 315/10.7...260/ 11.8 ... 50/16 | 315/16.8 ...260/ 18.6 ... 50/25 | 315/16.8 ...260/ 18.6 ... 50/25 | 315/27...260/ 29.8 ... 50/40 | |
| baelz 340-ES (DN 25 and DN 50) | - | | | | 240/30.9 ... 50/40 |

| | | Kvs value (m³/h) | | | | | | | | | | | | | |
|------------------------------|------|------------------|-----|-----|------|------|----|----|-----|-----|-----|-----|-----|-----|------|
| DN | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| Standard plug (B/BB) | | 5.6 | | | | | | | | | | | | | |
| Balanced plug (EMF) | | 3 | 6.3 | 9 | 16 | 25 | 36 | 63 | 105 | 130 | 200 | 360 | 580 | 960 | 1340 |
| | | 2 | | | | | | | | | | | | | |
| Balancing cage plug (EMF-LK) | | - | - | - | - | 20 | 32 | 50 | 80 | 100 | 130 | 250 | 320 | - | - |
| Reduced Kvs (Skr) | | 2 | 2.5 | 5 | 8 | 12.5 | 20 | 32 | 50 | 80 | 130 | - | - | - | - |
| | | 1 | 1.6 | 3.2 | 4 | 6.3 | 10 | 16 | 25 | 40 | 63 | - | - | - | - |
| | | 2.5 | 4 | 6.3 | 12.5 | 20 | 32 | 50 | 80 | 100 | 130 | 250 | 320 | 580 | - |
| Cage plug (LK) | (LK) | 3.2 | 5 | 10 | 16 | 25 | 40 | 63 | 80 | 100 | 200 | - | - | - | - |
| | | 1.6 | 2.5 | 4 | 6.3 | 10 | 16 | 25 | 40 | 63 | - | 130 | - | - | - |

| | | Weight of the baelz 340 valves | | | | | | | | | | | | | |
|--|------------|--------------------------------|-----|-----|------|------|------|------|------|------|------|--------|-----|-----|-----|
| | | 340-B | | | | | | | | | | 340-BB | | | |
| DN | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| Standard | PN16 | | | | | | | | | | | | 200 | 240 | 425 |
| | PN25 | 6.2 | 7.1 | 7.8 | 11.5 | 13.9 | 18.5 | 27.8 | 32.9 | 44.5 | 65.6 | 101 | | | |
| | PN40 | | | | | | | | | | | | 270 | 310 | |
| Cooling tube (K) | PN16 | 7.2 | 8.1 | 8.8 | 12.5 | 14.9 | 19.5 | 28.8 | 33.9 | 45.5 | 66.6 | 107 | 250 | 300 | 470 |
| | PN25 | | | | | | | | | | | | | | |
| | PN40 | 7.7 | 8.6 | 9.3 | 13.5 | 16.4 | 21.5 | 31.8 | 37.9 | 50.5 | 73.6 | 117 | 270 | 345 | 540 |
| Cooling tube and bellows (K-SS) | PN16 | 7.5 | 8.4 | 9.1 | 12.8 | 15.2 | 19.8 | 29.1 | 34.2 | 45.8 | 66.9 | 107.7 | 250 | 300 | 470 |
| | PN40 | 8 | 8.9 | 9.6 | 13.8 | 16.7 | 21.8 | 32.1 | 38.2 | 50.8 | 73.9 | 118 | 270 | - | - |
| Made of stainless steel ES PN40 | PN40 | - | - | 7.8 | - | - | 18.5 | - | - | - | - | - | - | - | - |
| Balanced plug (EMF) | PN16 | | | | | | | | | | | | | 240 | 425 |
| | PN25 | - | - | - | - | 14.4 | 19 | 28.4 | 32.9 | 46.3 | 71 | 101 | 200 | | |
| | PN25 steel | | | | | | | | | | | | | 277 | 440 |
| | PN40 | - | - | - | - | 15.9 | 21 | 31.4 | 36.9 | 51.3 | 78 | 111 | 252 | 310 | 518 |
| Cooling tube and balanced plug (K-EMF) | PN16 | | | | | | | | | | | | | 300 | 470 |
| | PN25 | - | - | - | - | 15.4 | 20 | 29.4 | 33.9 | 47.3 | 72 | 107 | 250 | | |
| | PN25 steel | | | | | | | | | | | | | 320 | 450 |
| | PN40 | - | - | - | - | 16.9 | 22 | 32.4 | 37.9 | 52.3 | 79 | 122 | 302 | 370 | 558 |



baelz 340-B-EMF balancing guide



Sectional view of baelz 340-B-EMF plug



baelz 340-B cage plug

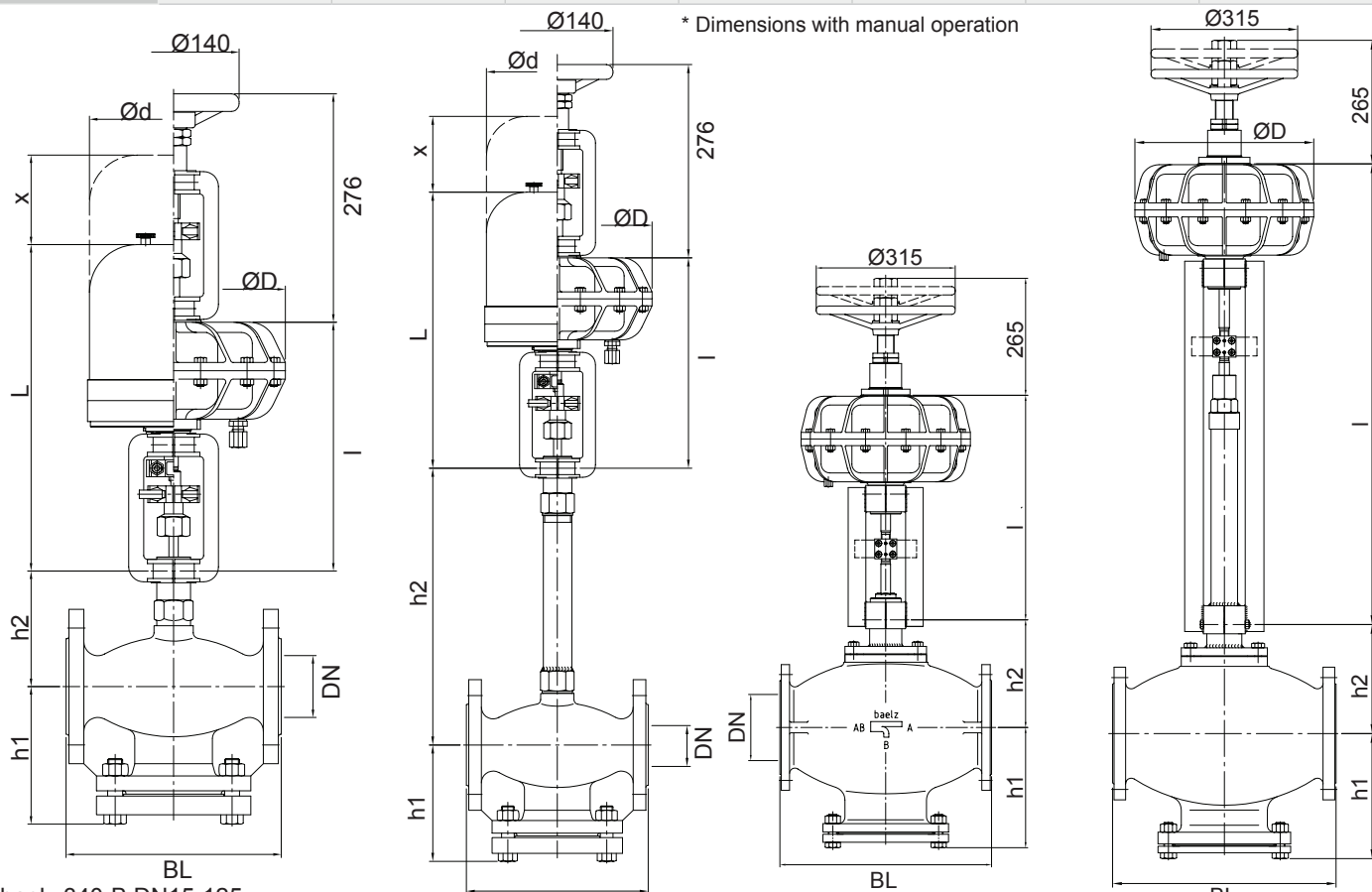
Dimensions of the baelz 340 valves (mm)

| DN | BL | h1 | | | | | h2 | |
|-----|-----|----------------|------|------|--------------------|---------------------|----|--|
| | | 340-B / 340-ES | | | 340-BK / 340-BK-SS | | | |
| 15 | 130 | 101 | | | 105 | 231 | | |
| 20 | 150 | 103 | | | 105 | 231 | | |
| 25 | 160 | 113 | | | 105 | 231 | | |
| 32 | 180 | 130 | | | 104 | 283 | | |
| 40 | 200 | 135 | | | 114 | 281 | | |
| 50 | 230 | 147 | | | 124 | 277 | | |
| 65 | 290 | 159 | | | 144 | 269 | | |
| 80 | 310 | 166 | | | 154 | 269 | | |
| 100 | 350 | 189 | | | 169 | 262 | | |
| 125 | 400 | 243 | | | 189 | 252 | | |
| | | PN16 | PN25 | PN40 | 340-BB | 340-BBK / 340-BK-SS | | |
| 150 | 480 | 269 | 277 | 277 | 244 | 234 | | |
| 200 | 600 | 272 | 280 | 288 | 268 | 258 | | |
| 250 | 730 | 314 | 322 | 332 | 317 | 307 | | |
| 300 | 850 | 327 | 335 | 345 | 361 | 351 | | |

Dimensions of the actuators

| Designation | L | x | Ød | l | ØD |
|-------------|-----------------------|-------------------------|-----|----------------------|------------------------|
| E 07 | 320 | 145 | 129 | | |
| E 45 | 560 | 150 | 175 | | |
| P 21 | | | | 268 | 242 |
| P 21V6 | | | | 304 | 242 |
| P 22 | | | | 322 | 242 |
| | 340-BB/ 340-BB-EMF | 340-BBK/ 340-BBK-SSF | | 340-BB/ 340-BB-EM | 340-BBK/ 340-BBK-SS |
| E 45 | 577 | 1057 | 150 | 175 | |
| E 66 | 614 | 1094 | 200 | 188 (258*) | |
| P 31 | | | | 509 | 989 |
| P 32 | | | | 525 | 1005 |
| P 41 | | | | 562 | 1042 |
| P 41-V6 | | | | 687 | 1167 |

* Dimensions with manual operation



baelz 340-B DN15-125
baelz 340-ES DN25, DN50
baelz 340-B-EMF DN40-125

baelz 340-BK DN15-125
baelz 340-BK-SS DN15-125

baelz 340-BB DN150-300
baelz 340-BB-EMF DN150-300

baelz 340-BBK DN150-300
baelz 340-BBK-SS DN150-300

Maximum differential pressure ΔP_{max} (bar) at which the actuator closes the valve completely

The differential pressures specified here are limited by the nominal pressure of the housings, if this is lower.

Electric actuators. baelz 340-B/BB, 340-BK/BBK, 340-BK-SS/BBK-SS, 340-B-ES. Plug closes against the flow.

| Actuator baelz 373- | Power (N) | DN (mm) / maximum differential pressure ΔP_{max} (bar) | | | | | | | | | | | | | |
|------------------------|--------------|--|----|----|----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|
| | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| E07- 20- | 2000 | 40 | 40 | 32 | 20 | 12 | 8 | 4.8 | 3 | 2 | 1.2 | | | | |
| E65- 11- | 1100 | 25 | 25 | 21 | 11 | 6.3 | 3.5 | 1.7 | 0.9 | 0.3 | | | | | |
| E65- 20- | 2000 | 40 | 40 | 32 | 20 | 12 | 8 | 4.8 | 3 | 2 | 1.2 | | | | |
| E45- 40- | 4000 | 40 | 40 | 40 | 40 | 25 | 16 | 10 | 6.9 | 4.4 | 2.8 | 1.7 | | | |
| E66- 80- | 8000 | | | | | | | | | | | 3.1 | 1.6 | 0.9 | |
| E66- 150- | 15000 | | | | | | | | | | | 7.1 | 3.8 | 2.3 | 1.5 |
| E88-ALS-25- | 2500 | | | | | | | | | | | 0.5 | | | |
| E88-ALS-75- | 7500 | | | | | | | | | | | 3.1 | 1.6 | 0.9 | |
| E88- 100- | 10000 | | | | | | | 28 | 18 | 11 | 7.4 | 5 | 2.7 | 1.7 | 1.1 |
| E88- 100- | 13000 | | | | | | | 37 | 24 | 15 | 9.8 | 6.7 | 3.7 | 2.3 | 1.5 |
| E88- 100- | 16000 | | | | | | | 40 | 30 | 19 | 12 | 8.4 | 4.6 | 2.9 | 2 |
| E88- 300- | 30000 | | | | | | | | | | | 15.3 | 9 | 5.8 | 3.9 |
| E88- 300- | 35000 | | | | | | | | | | | 18.9 | 10.5 | 6.7 | 4.6 |
| E88- 300- | 40000 | | | | | | | | | | | 21.7 | 12.1 | 7.7 | 5.3 |

Balanced 2-way valves for liquids and steam baelz 340-B-EMF, 340-BB-EMF. Plug closes against the flow.

| Actuator baelz 373- | Power (N) | DN (mm) / maximum differential pressure ΔP_{max} (bar) | | | | | | | | | | | | | |
|------------------------|--------------|--|----|----|----|----|----|----|----|-----|-----|------|------|------|------|
| | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| E07- 20- | 2000 | | | | | 40 | 40 | 40 | 40 | 40 | 40 | | | | |
| E65- 11- | 1100 | | | | | 40 | 40 | 40 | 40 | | | | | | |
| E65- 20- | 2000 | | | | | 40 | 40 | 40 | 40 | 40 | 40 | | | | |
| E45- 40- | 4000 | | | | | 40 | 40 | 40 | 40 | 40 | 40 | 8.2 | | | |
| E66- 80- | 8000 | | | | | | | | | | | 24.8 | 15 | 9.7 | 6.3 |
| E66- 150- | 15000 | | | | | | | | | | | 40 | 40 | 29.1 | 22.1 |
| E63- 440- | 4448 | | | | | | | | | | | 10.3 | | | |
| E63- 660- | 6672 | | | | | | | | | | | 20.9 | | | |
| E88-ALS-25- | 2500 | | | | | | | | | | | 1.1 | | | |
| E88-ALS-75- | 7500 | | | | | | | | | | | 24.8 | 15 | 9.7 | 6.3 |
| E88- 100- | 10000 | | | | | | | | | | | 36.7 | 23.4 | 16.1 | 11.5 |
| E88- 130- | 13000 | | | | | | | | | | | 40 | 33.5 | 23.9 | 17.9 |
| E88- 160- | 16000 | | | | | | | | | | | 40 | 40 | 31.7 | 24.2 |
| E88- 300- | 30000 | | | | | | | | | | | 40 | 40 | 40 | 40 |
| E88- 350- | 35000 | | | | | | | | | | | 40 | 40 | 40 | 40 |
| E88- 400- | 40000 | | | | | | | | | | | 40 | 40 | 40 | 40 |

3-way valves as diverting valves baelz 340-B-EMF, 340-BB-EMF. Plug closes in direction of flow.

| Actuator baelz 373- | Power (N) | DN (mm) / maximum differential pressure ΔP_{max} (bar) | | | | | | | | | | | | | | |
|------------------------|--------------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | |
| E07- 20- | 2000 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | | | | |
| E65- 11- | 1100 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | | | | |
| E65- 20- | 2000 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | | | | |
| E45- 40- | 4000 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | | | | |
| E66- 150- | 15000 | | | | | | | | | | | | 1 | 0.6 | 0.6 | 0.6 |
| E88- 100- | 10000 | | | | | | | | | | | | 1 | 0.6 | 0.6 | 0.6 |
| E88- 300- | 30000 | | | | | | | | | | | | 1 | 0.6 | 0.6 | 0.6 |

Maximum differential pressure ΔP_{max} (bar) at which the actuator closes the valve completely

The differential pressures specified here are limited by the nominal pressure of the housings, if this is lower.

2-way valves: baelz 340-B/BB, 340-BK/BBK, 340-BK/BBK-SS, 340-ES

Pneumatic actuators (OPG) closed without compressed air. Plug closes against the flow.

| Actuator baelz 373- | Power (N) | required feed pressure (bar) | DN (mm) / maximum differential pressure ΔP_{max} (bar) | | | | | | | | | | | | | |
|------------------------|--------------|---------------------------------|--|------|------|------|------|------|-----|-----|-----|-----|-----|------|-----|-----|
| | | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| P11- 1 | 950 | 1.2 | 23.2 | 23.2 | 16.4 | 8.4 | 4.6 | 2.5 | 1.1 | | | | | | | |
| P21- 3 | 1020 | 1.2 | 29 | 29 | 16 | 9.9 | 6.3 | 4.6 | 2.7 | 1.8 | 1 | 0.6 | | | | |
| P21- 6 | 2040 | 3.0 | 40 | 40 | 35 | 21 | 13.5 | 8.9 | 5.2 | 3.4 | 2.2 | 1.4 | | | | |
| P21- 12 | 3390 | 6.0 | 40 | 40 | 40 | 36 | 23 | 14 | 8 | 5 | 3.5 | 2.1 | | | | |
| P21- 18 | 4030 | 6.0 | 40 | 40 | 40 | 40 | 27 | 18 | 10 | 7 | 4.5 | 2.8 | | | | |
| P21- V6 | 7590 | 6.0 | 40 | 40 | 40 | 40 | 40 | 34 | 20 | 13 | 8 | 5 | | | | |
| P22- 3 | 1846 | 3.0 | 40 | 40 | 34.5 | 18.8 | 11 | 6.5 | 3.4 | 2 | 1.1 | 0.5 | | | | |
| P22- 6 | 3692 | 6.0 | 40 | 40 | 40 | 40 | 25.2 | 15.3 | 8.5 | 5.3 | 3.2 | 1.9 | | | | |
| P31- 3 | 2480 | 1.2 | | | | | | | | | | | 1.1 | | | |
| P31- 6 | 4960 | 3.0 | | | | | | | | | | | 2.4 | | | |
| P31- 18 | 10560 | 6.0 | | | | | | | | | | | 5.3 | | | |
| P32- 6 | 4402 | 3.0 | | | | | | | | | | | | 0.8 | | |
| P32- 18 | 8115 | 6.0 | | | | | | | | | | | | 1.8 | | |
| P41- 3 | 3765 | 1.2 | | | | | | | | | | | 2.4 | 1 | 0.6 | 0.4 |
| P41- 6 | 7530 | 3.0 | | | | | | | | | | | 5 | 2 | 1.3 | 0.9 |
| P41- V6 | 31920 | 6.0 | | | | | | | | | | | 21 | 10.5 | 6.5 | 4.5 |

2-way valves: baelz 340-B/BB, 340-BK/BBK, 340-BK/BBK-SS, 340-ES

Pneumatic actuators (OPO) open without compressed air. Plug closes against the flow.

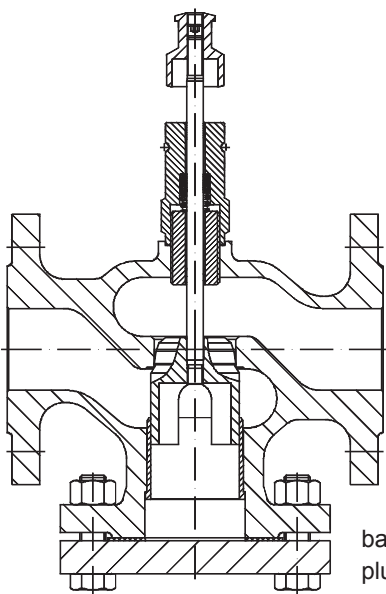
| Actuator baelz 373- | Power (N) | required feed pressure (bar) | DN (mm) / maximum differential pressure ΔP_{max} (bar) | | | | | | | | | | | | | |
|------------------------|--------------|---------------------------------|--|----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
| | | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| P21- 3 | 1020 | 1.2 | 7 | 7 | 4.5 | 2.8 | 1.8 | 1.1 | 0.6 | 0.4 | - | - | | | | |
| | | 3.0 | 40 | 40 | 40 | 40 | 31 | 19 | 12 | 8 | 5 | 3 | | | | |
| | | 6.0 | 40 | 40 | 40 | 40 | 40 | 40 | 30 | 20 | 12 | 8 | | | | |
| P21- 6 | 2040 | 3.0 | 40 | 40 | 35 | 21 | 14 | 8 | 5.3 | 3.5 | 2.2 | 1.4 | | | | |
| | | 6.0 | 40 | 40 | 40 | 40 | 40 | 39 | 24 | 16 | 10 | 6 | | | | |
| P31- 3 | 2480 | 1.2 | | | | | | | | | | | 0.6 | | | |
| | | 3.0 | | | | | | | | | | | 6 | | | |
| | | 6.0 | | | | | | | | | | | 14.8 | | | |
| P31- 6 | 4960 | 3.0 | | | | | | | | | | | 3 | | | |
| | | 6.0 | | | | | | | | | | | 12 | | | |
| P41- 3 | 3765 | 1.2 | | | | | | | | | | | 1.2 | 0.7 | 0.4 | 0.3 |
| | | 3.0 | | | | | | | | | | | 12 | 6.8 | 4.3 | 3 |
| | | 6.0 | | | | | | | | | | | 30 | 17 | 11 | 7.5 |
| P41- 6 | 7530 | 3.0 | | | | | | | | | | | 5 | 3 | 2 | |
| | | 6.0 | | | | | | | | | | | 15 | 10 | 6 | |

Balanced 2-way valves for liquids and steam: baelz 340-B-EMF, 340-BB-EMF

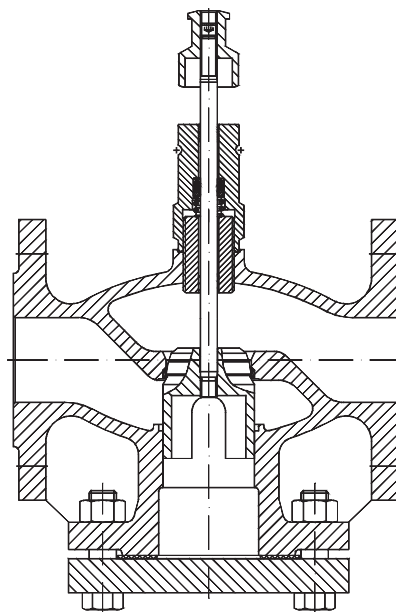
Pneumatic actuators (OPG) closed without compressed air. Plug closes against the flow.

| Actuator baelz 373- | Power (N) | required feed pressure (bar) | DN (mm) / maximum differential pressure ΔP_{max} (bar) | | | | | | | | | | | | | |
|------------------------|--------------|---------------------------------|--|----|----|----|----|----|----|----|-----|-----|------|------|------|-----|
| | | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| P21- 3 | 1020 | 1.2 | | | | | 40 | 40 | 40 | 40 | | | | | | |
| P21- 6 | 2040 | 3.0 | | | | | 40 | 40 | 40 | 40 | 40 | 40 | | | | |
| P22- 3 | 1846 | 3.0 | | | | | 40 | 40 | 40 | 40 | 40 | 40 | | | | |
| P22- 6 | 3692 | 6.0 | | | | | 40 | 40 | 40 | 40 | 40 | 40 | | | | |
| P31- 3 | 2480 | 3.0 | | | | | | | | | | | 1 | | | |
| P31- 6 | 4960 | 3.0 | | | | | | | | | | | 12.8 | | | |
| P31- 18 | 10560 | 6.0 | | | | | | | | | | | 39.4 | | | |
| P32- 6 | 4402 | 3.0 | | | | | | | | | | | | 4.6 | 1.6 | |
| P32- 18 | 8115 | 6.0 | | | | | | | | | | | | 17.1 | 11.2 | 7.5 |
| P41- 3 | 3765 | 1.2 | | | | | | | | | | | 7.1 | 2.5 | | |
| P41- 6 | 7530 | 3.0 | | | | | | | | | | | 24.9 | 15.1 | 9.7 | 6.3 |
| P41- V6 | 31920 | 6.0 | | | | | | | | | | | 40 | 40 | 40 | 40 |

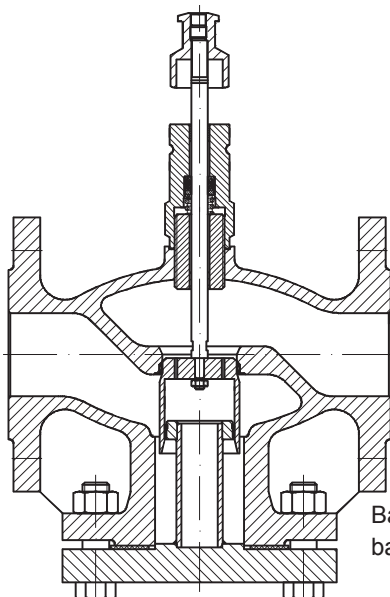
Sectional drawings of the baelz 340 plug



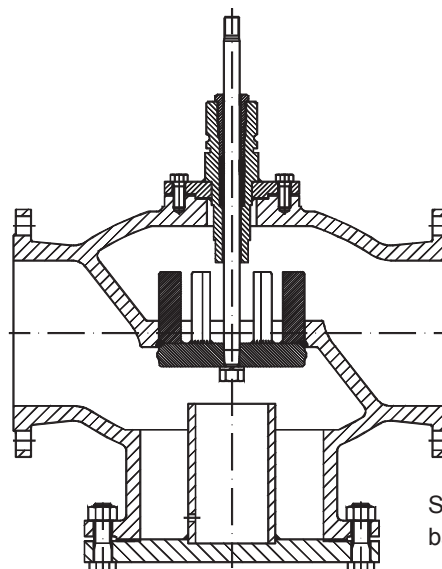
baelz 340-ES parabolic plug with slot guides



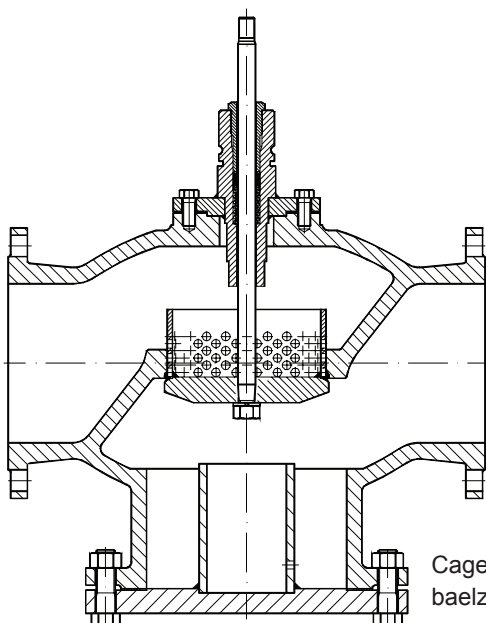
baelz 340-B parabolic plug with slot guides



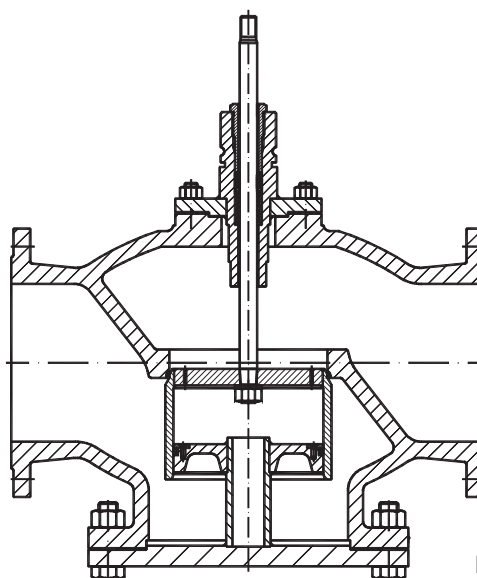
Balanced plug
baelz 340-B-EMF



Slit plug
baelz 340-BB



Cage plug
baelz 340-BB-LK



Balanced plug
baelz 340-BB-EMF