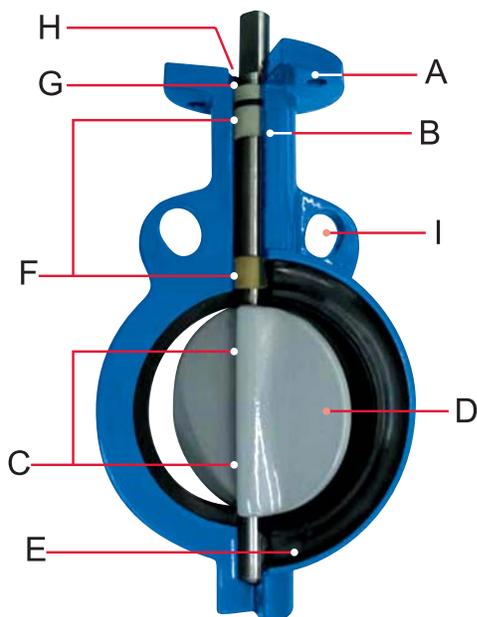




- NENUTEC is pleased to introduce butterfly valves a high quality line of butterfly valves to meet the requirements of today's market. Combining years of field application experience, research and development, NENUTEC has designed many unique features in the NVBF Series not previously available. The results are longer service life, greater reliability, ease of parts replacement and interchangeability of components.

Specifications

| | |
|----------------------------|---|
| | BODY: Cast Iron, Ductile Iron, Cast Steel, Aluminum |
| Materials Selection | DISC: Coated Ductile Iron, Nylon Coated Ductile Iron, 316 Stainless Steel, Nickel Plate |
| | Stem: Coated Carbon Steel, 316 Stainless Steel, 416 Stainless Steel |
| | SEAT: NBR, EPDM |
| Velocity Limits | For on-off services Fluids : 9m/s (30 ft/sec) Gases: 54m/s (175 ft/sec) |
| | Pressure Ratings For bi-directional bubble-tight shut off, disc in closed position: 50mm - 300mm 16 Bar 350 - 600mm 10 Bar |
| | Temperature Range of Seats EPDM: -40°C to 120°C NBR: -20°C to 100°C |



Actuator Mounting flange(A)

Designed to ISO5211 for direct mounting of NENUTEC handles, gear operators and actuators both electric and pneumatic.

Body(B)

One piece body style with polyester coating for excellent corrosion resistance. Extended neck length is easily for piping insulation.

Disc and Stem Connection(C)

Features a high strength double-D split stem design produces the close tolerance. It eliminates stem components being exposed to the line media, such as disc screws and taper pins, which commonly result in vibration failures, corrosion, and leak paths.

Disc(D)

Precision machined and hand polished disc to provide a minimum torque and longer seat life.

Seat(E)

Unique tongue and groove seat design to body retention. Providing complete isolation of flowing media from the body and making field replacement fast and simple. The seat features a molded O-ring which eliminates the use of flange gaskets. The seat is designed to seal with slip-on or weld-neck flanges.

Stem Bushing(F)

The heavy duty, non corrosive bushings support the stem and absorb side thrusts. The stem bushings are designed to lower valve seating torque and longer valve life.

Stem Seal(G)

Stem seal is designed to self-adjusting, to prevent the external substances the stem bore and the line media from coming in contact with the stem and body.

Stem retaining Rings Assembly(H)

The stem is retained by means of two stem retaining rings, retaining rings and washer. The stem retaining rings assembly prevents unintentional removal of the stem.

Flange Locating Holes(I)

Provide quick and proper alignment during installation.

Disc and Seat Seal

The spherically machined and hand polished disc is designed to bubble-tight shut off, minimum torque, and longer seat life.

Cv Values-Valve Sizing Coefficient

| Valve Size | | Disc Position (degrees) | | | | | | | | |
|------------|-----|-------------------------|-------|-------|------|------|------|------|-----|-----|
| ins | mm | 90° | 80° | 70° | 60° | 50° | 40° | 30° | 20° | 10° |
| 2 | 50 | 145 | 115 | 85 | 62 | 43 | 27 | 16 | 7 | 1 |
| 2½ | 65 | 285 | 225 | 165 | 108 | 68 | 43 | 24 | 11 | 2 |
| 3 | 80 | 466 | 368 | 270 | 156 | 97 | 62 | 35 | 15 | 2 |
| 4 | 100 | 849 | 708 | 501 | 277 | 173 | 110 | 63 | 27 | 3 |
| 5 | 125 | 1362 | 1135 | 767 | 424 | 265 | 168 | 97 | 43 | 5 |
| 6 | 150 | 1869 | 1557 | 1035 | 573 | 358 | 227 | 130 | 57 | 6 |
| 8 | 200 | 3349 | 2870 | 1881 | 1092 | 687 | 425 | 243 | 103 | 12 |
| 10 | 250 | 5484 | 4570 | 2977 | 1727 | 1087 | 674 | 386 | 164 | 19 |
| 12 | 300 | 8158 | 6798 | 4437 | 2589 | 1610 | 1015 | 561 | 237 | 27 |
| 14 | 350 | 10433 | 8785 | 5880 | 3350 | 2128 | 1307 | 748 | 296 | 34 |
| 16 | 400 | 13826 | 11643 | 7788 | 4438 | 2819 | 1732 | 991 | 393 | 45 |
| 18 | 450 | 17386 | 14641 | 10166 | 5793 | 3679 | 2259 | 1294 | 512 | 59 |
| 20 | 500 | 22562 | 19000 | 12660 | 7215 | 4581 | 2814 | 1611 | 638 | 73 |

Expected Seating / Unseating Torques Nm

| Size | | Full Rated Pressure Valve(Bar) | | | |
|------|-----|--------------------------------|------|------|------|
| inch | mm | 3.5 | 7 | 10 | 16 |
| 2 | 50 | 12 | 12 | 12 | 14 |
| 2½ | 65 | 15 | 16 | 17 | 18 |
| 3 | 80 | 19 | 20 | 21 | 23 |
| 4 | 100 | 28 | 30 | 32 | 35 |
| 5 | 125 | 50 | 55 | 60 | 67 |
| 6 | 150 | 61 | 69 | 76 | 87 |
| 8 | 200 | 108 | 120 | 133 | 152 |
| 10 | 250 | 197 | 222 | 246 | 283 |
| 12 | 300 | 299 | 338 | 377 | 437 |
| 14 | 350 | 485 | 559 | 633 | 780 |
| 16 | 400 | 840 | 1011 | 1182 | 1524 |
| 18 | 450 | 962 | 1205 | 1448 | 1935 |
| 20 | 500 | 1174 | 1470 | 1767 | 2360 |

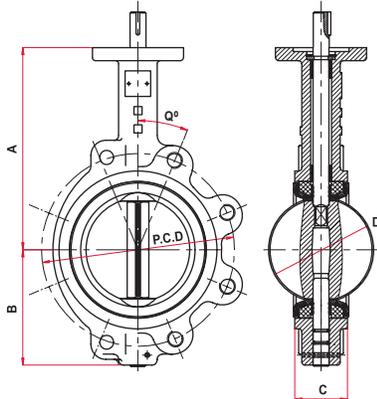
Recommended specifications for NVBF Series shall be:

- Polyester coated, cast iron, wafer or lug bodies.
- With flange location holes that meet ANSI Class125/150, DIN2501, AS2129, BS4504, JISB2210 10K.
- Through-stem direct drive double «D» design requiring no disc screws or pins to connect stem to disc with no possible leak paths in disc/stem connection.
- Stem mechanically retained in body neck and no part of stem of body exposed to line media.
- Tongue-and-groove seat design with primary hub seal and a molded O-ring suitable for weld-neck and slip-on flanges. Seat totally encapsulates the body with no flange gaskets required.
- Spherically machined, hand polished disc edge and hub for minimum torque and maximum sealing capability.
- Equipped with non-corrosive bushing and self-adjusting stem seal.
- Bi-directional and tested to 110% of full rating.
- Bi-directional pressure ratings:
2" to 12" 16 Bar
14" to 24" 10 Bar
- No field adjustment necessary to maintain optimum field performance.

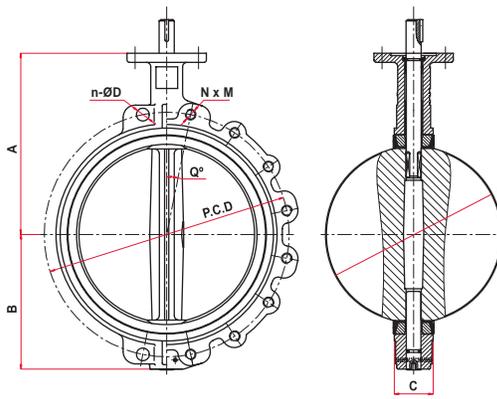
Weights

| ins | kg |
|-----|-------|
| 2 | 2.5 |
| 2 ½ | 3.2 |
| 3 | 3.6 |
| 4 | 4.9 |
| 5 | 57.0 |
| 6 | 7.8 |
| 8 | 13.2 |
| 10 | 19.0 |
| 12 | 32.5 |
| 14 | 42.5 |
| 16 | 52.0 |
| 18 | 87.0 |
| 20 | 98.0 |
| 24 | 133.0 |

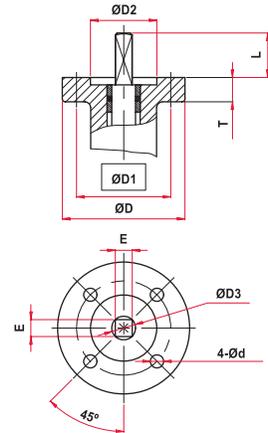
Size: 2"-12"



Size: 14"-24"



Top Flange



| DIM. SIZE | A | B | C | D | ØD | ØD1 | ØD2 | ØD3 | E x E | L | T | 4-Ød | |
|--------------|-----|-----|--------|-------|-----|-----|---|--------------|---------|----|----|----------|---------------|
| | | | | | | | | | | | | Diameter | Space Measure |
| DN50(2") | 161 | 80 | 42.04 | 52.9 | 65 | 50 | 35.25 ^{+0.45} / _{+0.25} | 12.6 ±0.025 | 9 x 9 | 32 | 13 | 7 | Ø0.76 |
| DN65(2.5") | 175 | 89 | 44.68 | 64.5 | 65 | 50 | 35.25 ^{+0.45} / _{+0.25} | 12.6 ±0.025 | 9 x 9 | 32 | 13 | 7 | Ø0.76 |
| DN80(3") | 181 | 95 | 45.21 | 78.8 | 65 | 50 | 35.25 ^{+0.45} / _{+0.25} | 12.6 ±0.025 | 11 x 11 | 32 | 13 | 7 | Ø0.76 |
| DN100(4") | 200 | 114 | 52.07 | 104 | 90 | 70 | 55.25 ^{+0.45} / _{+0.25} | 15.77 ±0.025 | 11 x 11 | 32 | 13 | 10 | Ø0.76 |
| DN125(5") | 213 | 127 | 54.36 | 123.3 | 90 | 70 | 55.25 ^{+0.45} / _{+0.25} | 18.92 ±0.025 | 14 x 14 | 32 | 13 | 10 | Ø0.76 |
| DN150(6") | 226 | 139 | 55.75 | 155.6 | 90 | 70 | 55.25 ^{+0.45} / _{+0.25} | 18.92 ±0.025 | 14 x 14 | 32 | 13 | 10 | Ø0.76 |
| DN200(8") | 260 | 175 | 60.58 | 202.5 | 125 | 102 | 70.25 ^{+0.45} / _{+0.25} | 22.1 ±0.025 | 17 x 17 | 40 | 13 | 12 | Ø0.76 |
| DN250(10") | 292 | 203 | 65.63 | 250.5 | 125 | 102 | 70.25 ^{+0.45} / _{+0.25} | 28.45 ±0.025 | 22 x 22 | 40 | 13 | 12 | Ø0.76 |
| DN300(12") | 337 | 242 | 76.9 | 301.6 | 125 | 102 | 70.25 ^{+0.45} / _{+0.25} | 31.6 ±0.051 | 22 x 22 | 40 | 19 | 12 | Ø0.76 |
| DN350(14") | 368 | 267 | 75 | 333.5 | 125 | 102 | 70.25 ^{+0.45} / _{+0.25} | 31.6 ±0.051 | 22 x 22 | 40 | 19 | 12 | Ø0.76 |
| DN400(16") | 400 | 297 | 85.7 | 389.6 | 197 | 140 | 100.3 ^{+0.5} / _{+0.3} | 37.95 ±0.05 | 27 x 27 | 72 | 20 | 18 | Ø0.76 |
| DN450(18") | 422 | 315 | 104.6 | 440.5 | 197 | 140 | 100.3 ^{+0.5} / _{+0.3} | 42.86 ±0.05 | 27 x 27 | 72 | 20 | 18 | Ø0.76 |
| DN500(20") | 480 | 348 | 130.28 | 491.6 | 197 | 140 | 100.3 ^{+0.5} / _{+0.3} | 45.72 ±0.05 | 36 x 36 | 82 | 22 | 18 | Ø0.76 |
| DN600(24") | 562 | 444 | 151.36 | 592.5 | 276 | 165 | 130.3 ^{+0.5} / _{+0.3} | 53.98 ±0.05 | 36 x 36 | 82 | 22 | 23 | Ø0.76 |

Main Office:

NENUTEC®

NENUTEC ASIA PACIFIC PTE LTD

7030 Ang Mo Kio Ave 5 #08-55

Northstar@AMK

Singapore 569880

Phone : +65 6570 3233

Fax : +65 6570 6783

Email : info@nenutec.com.sg

Website : www.nenutec.com.sg

Headquarter:



TELIMA AG

Schachenstrasse 80

CH-8645 Jona / Switzerland

Tel : +41 55 224 40 60

Fax : +41 55 224 40 69

Email : info@telima.ch

Website : www.nenutec.com