

BUTTERFLY VALVE

WAFER TYPE MANUAL BUTTERFLY VALVES

- Wide Size range (DN50...DN900)
- Operated by Lever/Gear Box
- 90 deg opening/closing operation
- Cast Iron Body with powder coating.
- S.S. Disc.
- Wafer type Connection



GENERAL

The BS-HWC4 Manual Butterfly Valves is designed for Chilled & Hot Water to be operated by Hand lever or Gear Box

Technical Specification

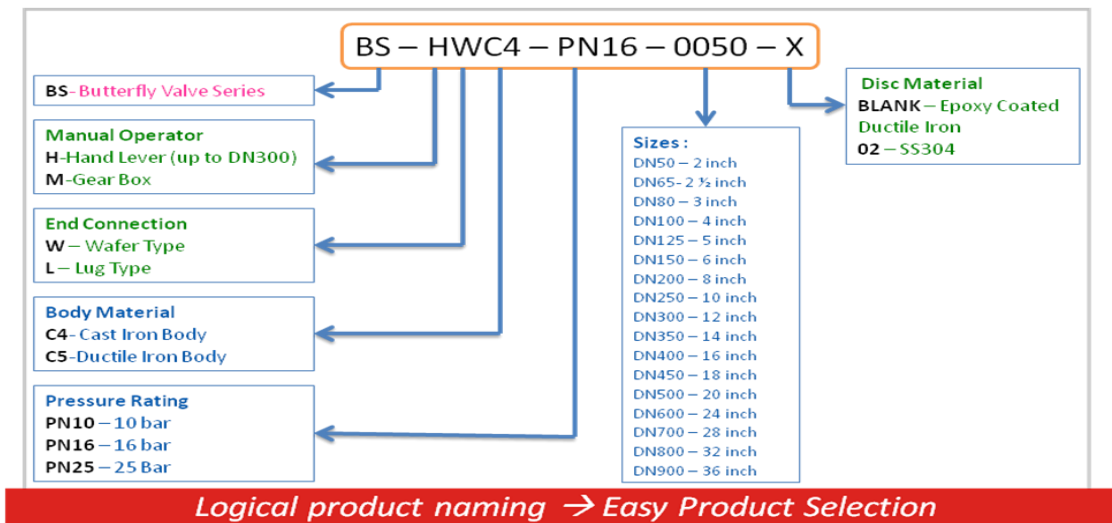
| | |
|---------------------|---|
| Sizes | DN50-DN900 |
| Nominal pressure | PN16 |
| Medium Temperature | -10°C ~ +110°C Maximum |
| Body Material | IS:210, FG 200 C.I - up to DN250 DUCTILE IRON D.I - DN30 |
| Stem Material | ASTM A276,GR SS 410 |
| Disc Material | S.S. Disc |
| Lever | CRCA SHEET |
| Leakage Rate | No visible leakage |
| Medium Type | Water |
| Flange standard | IS 1538 |
| Shell Test pressure | 24 bar |
| Seal Test pressure | 17bar |

DIMENSIONS (mm)

| Size | Model Number | Max. Kvs | Manual Operator | Operator | Total Weight |
|-------|-------------------|----------|-----------------|----------|--------------|
| DN50 | BS-MWC4-PN16-0050 | 115 | Gear Box | 4.5 | 6.8 |
| DN65 | BS-MWC4-PN16-0065 | 196 | Gear Box | 4.5 | 7.3 |
| DN80 | BS-MWC4-PN16-0080 | 302 | Gear Box | 4.5 | 7.8 |
| DN100 | BS-MWC4-PN16-0100 | 600 | Gear Box | 4.5 | 9.4 |
| DN125 | BS-MWC4-PN16-0125 | 1,022 | Gear Box | 4.5 | 10.9 |
| DN150 | BS-MWC4-PN16-0150 | 1,579 | Gear Box | 4.5 | 12.2 |
| DN200 | BS-MWC4-PN16-0200 | 3,136 | Gear Box | 13 | 25.9 |
| DN250 | BS-MWC4-PN16-0250 | 5,340 | Gear Box | 13 | 32.2 |
| DN300 | BS-MWC4-PN16-0300 | 8,250 | Gear Box | 15 | 47.5 |
| DN350 | BS-MWC4-PN16-0350 | 11,917 | Gear Box | 15 | 56.3 |
| DN400 | BS-MWC4-PN16-0400 | 16,388 | Gear Box | 57 | 118 |
| DN450 | BS-MWC4-PN16-0450 | 21,705 | Gear Box | 57 | 136 |
| DN500 | BS-MWC4-PN16-0500 | 27,908 | Gear Box | 57 | 185 |
| DN600 | BS-MWC4-PN16-0600 | 43,116 | Gear Box | 72 | 260 |
| DN700 | BS-MWC4-PN16-0700 | 58,696 | Gear Box | 85 | 361 |
| DN800 | BS-MWC4-PN16-0800 | 68,250 | Gear Box | 85 | 445 |
| DN900 | BS-MWC4-PN16-0900 | 83,375 | Gear Box | 124 | 830.8 |

*More Models please refers to the labeling method in figure.

The labeling system for manual butterfly valves is as follows:

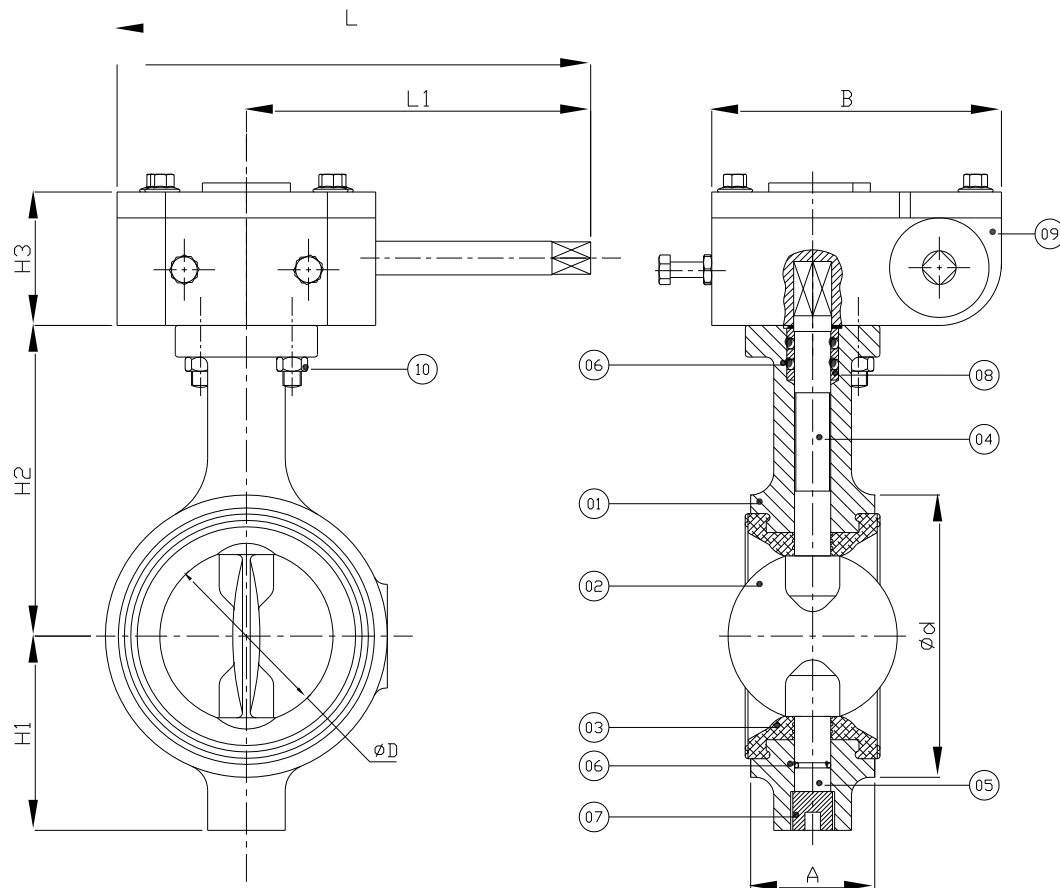


e.g. BS-HWC4-PN16-0050: Butterfly Valve Series, Hand lever Operator, End connection Wafer Type, Cast Iron Body, Nominal Pressure 16 bar, Size DN50-2 inch., Epoxy Coated Ductile Iron Disc.

e.g. BS-MWC5-PN25-0100-02: Butterfly Valve Series, Gear Box Operator, End connection Wafer Type, Cast Iron Body, Nominal Pressure 25 bar, Size DN80-4 inch., SS304 Disc.

Part Description & Outside Dimension (mm)

a. Valve Size DN50...200 with Gear Box Operator (PN16)



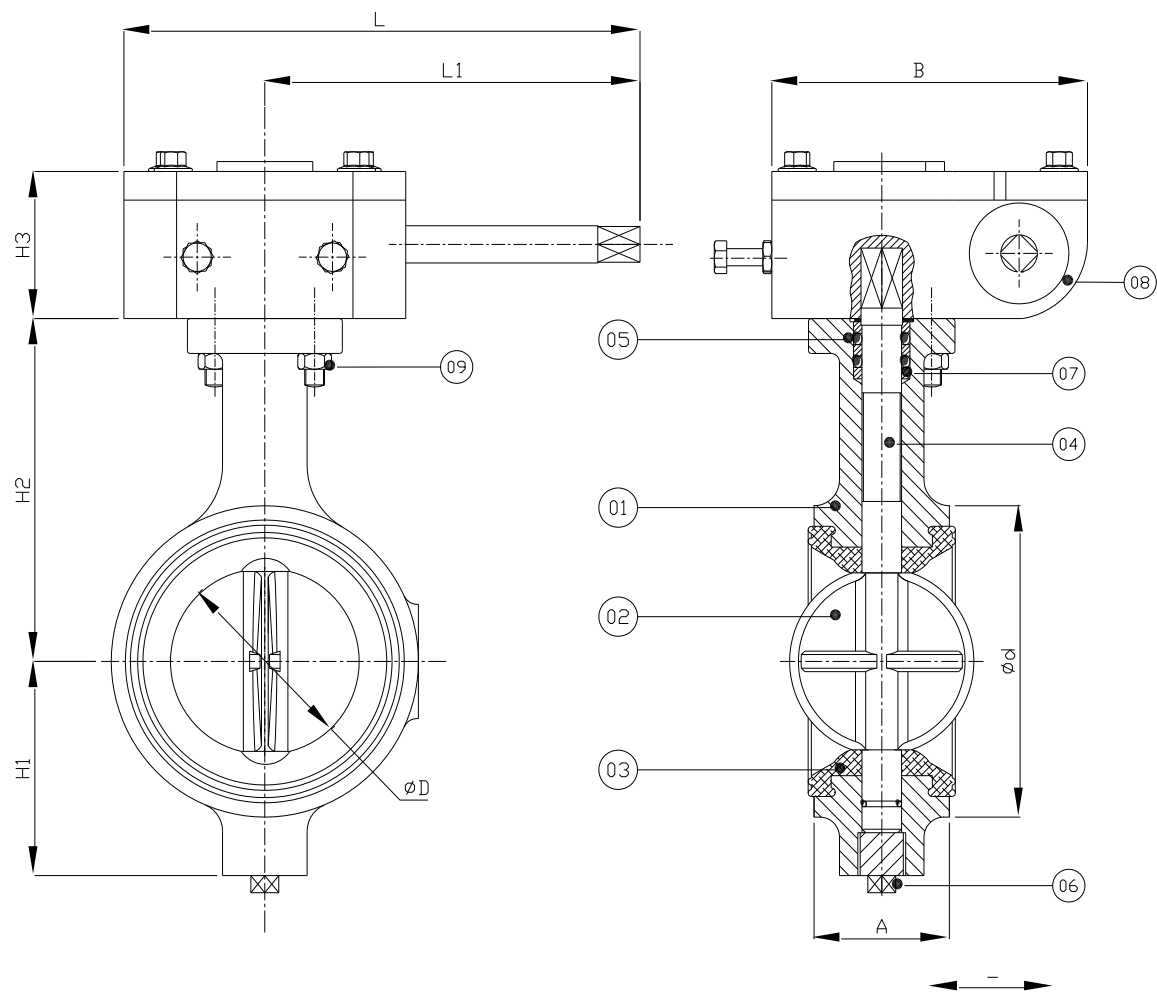
Part Descriptions

| PT No. | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|----------|-----------------------|------|-------|-------------------------|-------------------------|--------|----------------------------|------|-----------|----------|
| Parts | Body | Disc | Liner | Upper Stem | Lower Stem | O-Ring | Plug | Bush | Gear Box | Fastener |
| Material | IS:210 Gr FG200 | S.S. | EPDM | ASTM A 276, Gr SS410 | ASTM A 276, Gr SS410 | EPDM | M. S (Chrome Plated) | PTFE | Cast Iron | S. S |

Outside Dimension (mm)

| SIZE | A | H1 | H2 | H3 | L | L1 | B | ØD | Ød |
|-------|----|-----|-----|----|-----|-----|-----|-------|-----|
| DN50 | 43 | 67 | 110 | 60 | 182 | 115 | 112 | 50.5 | 94 |
| DN65 | 46 | 75 | 118 | 60 | 182 | 115 | 112 | 65 | 110 |
| DN80 | 46 | 82 | 130 | 60 | 182 | 115 | 112 | 80 | 127 |
| DN100 | 52 | 100 | 145 | 60 | 182 | 115 | 112 | 100 | 150 |
| DN125 | 56 | 114 | 156 | 60 | 182 | 115 | 112 | 123 | 175 |
| DN150 | 56 | 135 | 176 | 60 | 182 | 115 | 112 | 148.5 | 205 |
| DN200 | 60 | 161 | 220 | 60 | 182 | 115 | 112 | 197 | 265 |

b. Valve Size DN250...300 with Gear Box Operator (PN16)



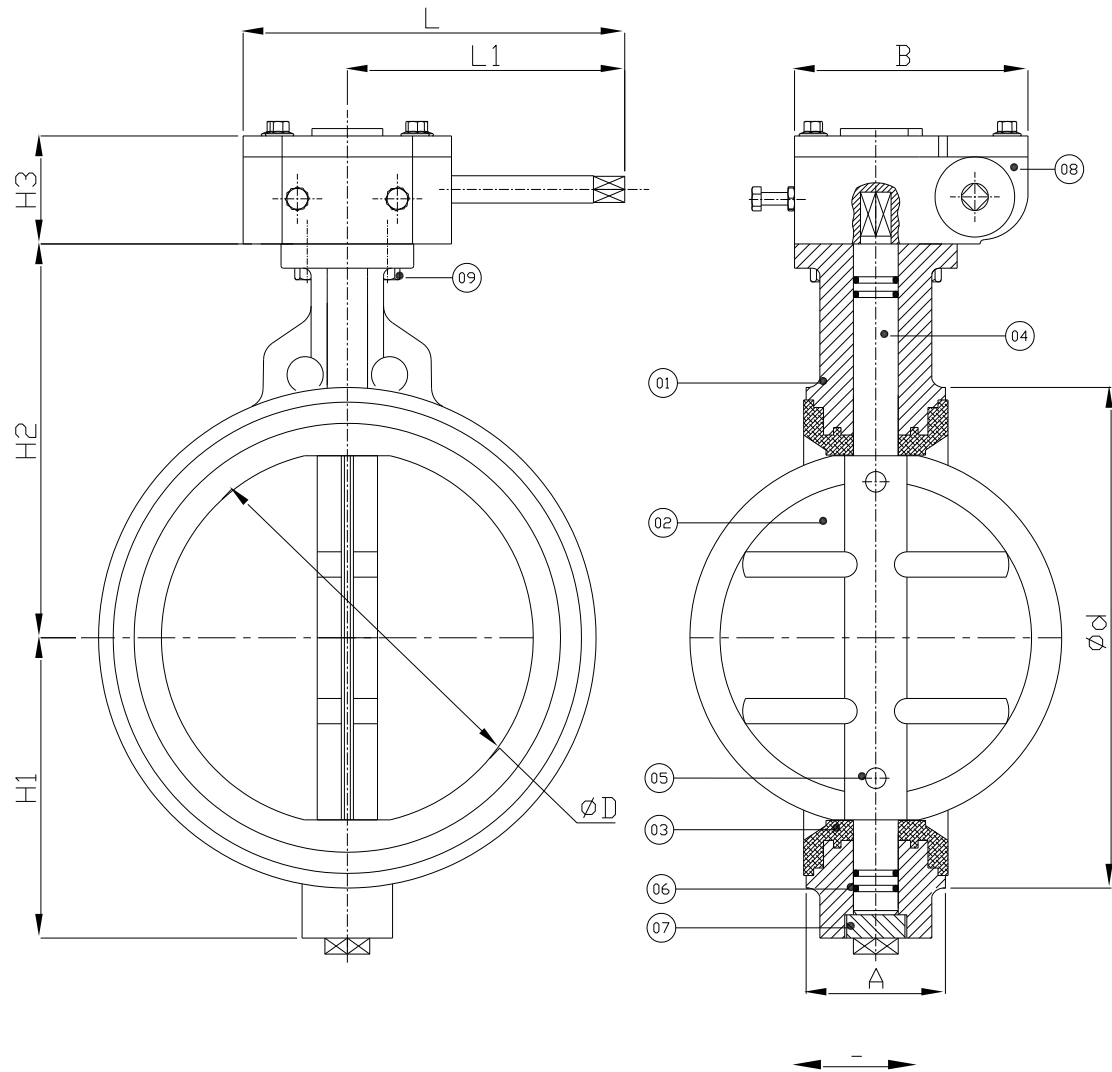
Part Descriptions

| PT No. | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|----------|-----------------------|------|-------|-------------------------|-------------------------|--------|----------------------------|------|-----------|----------|
| Parts | Body | Disc | Liner | Upper Stem | Lower Stem | O-Ring | Plug | Bush | Gear Box | Fastener |
| Material | IS:210 Gr FG200 | S.S. | EPDM | ASTM A 276, Gr SS410 | ASTM A 276, Gr SS410 | EPDM | M. S (Chrome Plated) | PTFE | Cast Iron | S. S |

Outside Dimension (mm)

| SIZE | A | H1 | H2 | H3 | L | L1 | B | ØD | Ød |
|-------|----|-----|-----|----|-----|-----|-----|-------|------------|
| DN250 | 68 | 220 | 280 | 60 | 180 | 130 | 110 | 250.5 | 325 |
| DN300 | 78 | 230 | 305 | 60 | 180 | 130 | 110 | 299.5 | 376 |

c. Valve Size DN350...600 with Gear Box Operator (PN16)



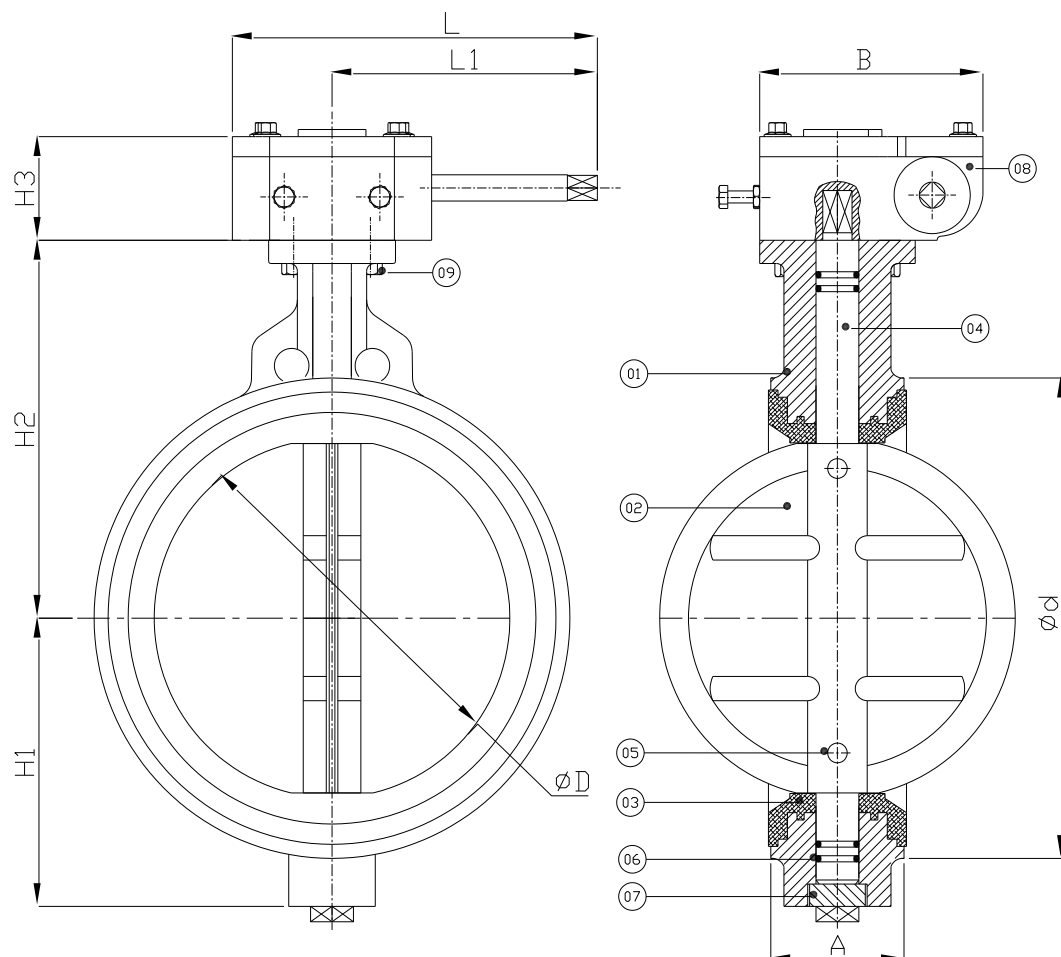
Part Descriptions

| PT No. | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|----------|-----------------------|------|-------|-------------------------|--------|--------|----------------------------|------|-----------|----------|
| Parts | Body | Disc | Liner | Stem | Pin | O-Ring | Plug | Bush | Gear Box | Fastener |
| Material | IS:210 Gr FG200 | S.S. | EPDM | ASTM A 276, Gr SS410 | SS 410 | EPDM | M. S (Chrome Plated) | PTFE | Cast Iron | S. S |

Outside Dimension (mm)

| SIZE | A | H1 | H2 | H3 | L | L1 | B | ØD | Ød | Wheel Diameter |
|-------|-----|-----|-----|----|-----|-----|-----|-----|-----|-------------------|
| DN350 | 92 | 280 | 370 | 72 | 308 | 195 | 155 | 351 | 445 | 360 |
| DN400 | 102 | 315 | 412 | 72 | 308 | 195 | 155 | 403 | 495 | 360 |
| DN450 | 114 | 348 | 425 | 72 | 308 | 195 | 155 | 453 | 550 | 360 |
| DN500 | 127 | 380 | 470 | 72 | 308 | 195 | 155 | 503 | 610 | 360 |
| DN600 | 154 | 445 | 550 | 72 | 308 | 195 | 155 | 603 | 705 | 360 |

d. Valve Size DN700...900 with Gear Box Operator (PN16)



Part Descriptions

| PT No. | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 |
|----------|-----------------------|------|-------|-------------------------|--------|--------|----------------------------|------|-----------|----------|
| Parts | Body | Disc | Liner | Stem | Pin | O-Ring | Plug | Bush | Gear Box | Fastener |
| Material | IS:210 Gr FG200 | S.S. | EPDM | ASTM A 276, Gr SS410 | SS 410 | EPDM | M. S (Chrome Plated) | PTFE | Cast Iron | S. S |

Outside Dimension (mm)

| SIZE | A | H1 | H2 | H3 | L | L1 | B | ØD | Ød | Wheel Diameter |
|-------|-----|-----|-----|----|-----|-----|-----|-----|------|-------------------|
| DN700 | 229 | 520 | 625 | 72 | 308 | 195 | 155 | 703 | 805 | 360 |
| DN800 | 221 | 590 | 670 | 72 | 308 | 195 | 155 | 403 | 914 | 360 |
| DN800 | 221 | 655 | 720 | 72 | 308 | 195 | 155 | 901 | 1012 | 360 |

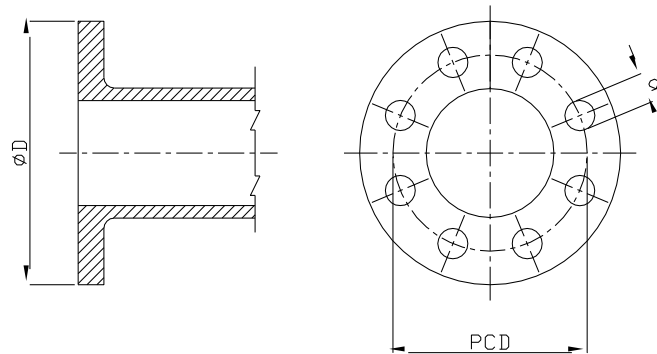
- Piping Connection Flange meets IS:1538
- It can be operated by lever or Gear Box.

Table (2) Hydraulic Characteristics

The below table shows the Kvs at different opening angles:

| DIMENSIONS (mm) | | | | | | | | | |
|-----------------|---------------------------|-------|-------|--------|--------|--------|--------|--------|--------|
| Size | Kvs at Disk Opening Angle | | | | | | | | |
| | 10° | 20° | 30° | 40° | 50° | 60° | 70° | 80° | 90° |
| 50 | 0.1 | 5 | 12 | 24 | 45 | 64 | 90 | 125 | 115 |
| 65 | 0.2 | 8 | 20 | 37 | 65 | 98 | 144 | 204 | 196 |
| 80 | 0.3 | 12 | 22 | 39 | 70 | 116 | 183 | 275 | 302 |
| 100 | 0.5 | 17 | 36 | 78 | 139 | 230 | 364 | 546 | 600 |
| 125 | 0.8 | 29 | 61 | 133 | 237 | 392 | 620 | 930 | 1,022 |
| 150 | 2 | 45 | 95 | 205 | 366 | 605 | 958 | 1,437 | 1,579 |
| 200 | 3 | 89 | 188 | 408 | 727 | 1,202 | 1,903 | 2,854 | 3,136 |
| 250 | 4 | 151 | 320 | 694 | 1,237 | 2,047 | 3,240 | 4,859 | 5,340 |
| 300 | 5 | 324 | 495 | 1,072 | 1,911 | 3,162 | 5,005 | 7,507 | 8,250 |
| 350 | 6 | 338 | 715 | 1,549 | 2,761 | 4,568 | 7,230 | 10,844 | 11,917 |
| 400 | 8 | 464 | 983 | 2,130 | 3,797 | 6,282 | 9,942 | 14,913 | 16,388 |
| 450 | 11 | 615 | 1,302 | 2,822 | 5,028 | 8,320 | 13,168 | 19,752 | 21,705 |
| 500 | 14 | 791 | 1,674 | 3,628 | 6,465 | 10,698 | 16,931 | 25,396 | 27,908 |
| 600 | 22 | 1,222 | 2,587 | 5,605 | 9,989 | 16,528 | 26,175 | 39,236 | 43,116 |
| 700 | 30 | 1,663 | 3,522 | 7,630 | 12,599 | 20,036 | 30,482 | 46,899 | 58,696 |
| 800 | 45 | 2,387 | 4,791 | 8,736 | 13,788 | 20,613 | 31,395 | 48,117 | 68,250 |
| 900 | 60 | 3,021 | 6,063 | 11,055 | 17,449 | 26,086 | 39,731 | 60,895 | 83,375 |

Table (3) Flange Dimensions (As per IS: 1538)



| Outside Dimension (mm) | | | | |
|------------------------|-----------|------|--------------|--------------|
| SIZE | Flange ØD | PCD | Hole Dia (d) | No. Of Holes |
| 50 | 165 | 125 | 19 | 4 |
| 65 | 185 | 145 | 19 | 4 |
| 80 | 200 | 160 | 19 | 4 |
| 100 | 220 | 180 | 19 | 8 |
| 125 | 250 | 210 | 19 | 8 |
| 150 | 285 | 240 | 23 | 8 |
| 200 | 395 | 295 | 23 | 8 |
| 250 | 395 | 350 | 23 | 12 |
| 300 | 445 | 400 | 23 | 12 |
| 350 | 515 | 450 | 23 | 16 |
| 400 | 565 | 515 | 28 | 16 |
| 450 | 615 | 565 | 28 | 20 |
| 500 | 670 | 620 | 28 | 20 |
| 600 | 780 | 725 | 31 | 20 |
| 700 | 895 | 840 | 31 | 24 |
| 800 | 1015 | 950 | 34 | 24 |
| 900 | 1115 | 1050 | 34 | 28 |

For more information,
<https://honeywellbuildings.in>
 Call: 1-800-103-0339
 Email: HBT-Indiabuildings@honeywell.com

Honeywell HBT India Buildings
 Unitech Trade Center, 5th Floor, Sector-43,
 Block C, Sushant Lok Phase - I,
 Gurgaon - 122 002