



**'Fluid control'** the Complete solution from one source !

## Universal Engineering

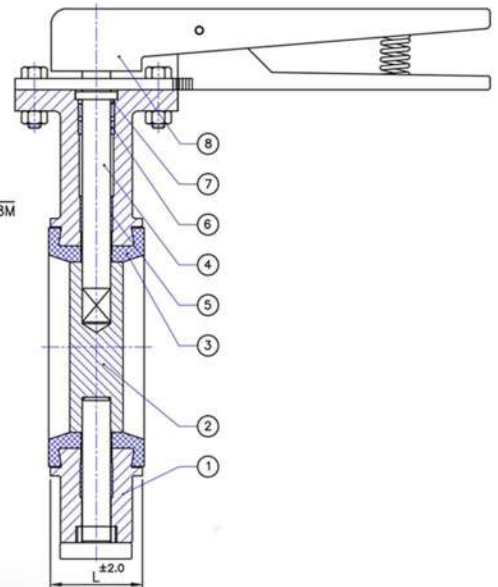
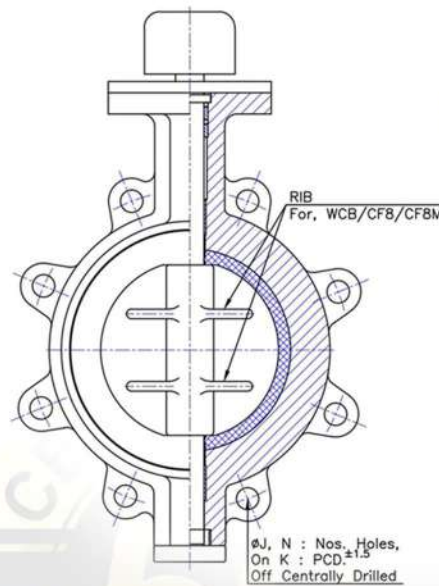
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# FULL LUG TYPE BUTTERFLY VALVE HAND LEVER OPERATED

| BILL OF MATERIAL |    |       |   |        |
|------------------|----|-------|---|--------|
| SIZE             | L  | ØJ    | N | K:PCD. |
| 40               | 33 | 15.9  | 4 | 98.4   |
| 50               | 43 | 19.05 | 4 | 120.7  |
| 65               | 46 | 19.05 | 4 | 139.7  |
| 80               | 46 | 19.05 | 4 | 152.4  |
| 100              | 52 | 19.05 | 8 | 190.5  |
| 125              | 56 | 22.2  | 8 | 215.9  |
| 150              | 56 | 22.2  | 8 | 241.3  |
| 200              | 60 | 22.2  | 8 | 298.5  |



| BILL OF MATERIAL |      |              |                                                                                  |
|------------------|------|--------------|----------------------------------------------------------------------------------|
| P.No             | Qty. | Nomenclature | Material                                                                         |
| 1                | 1    | Body         | C.I. IS 210 Gr. FG220<br>ASTM A536 Gr. 65-45-12 (S.G. IRON)<br>ASTM A216 Gr. WCB |
| 2                | 1    | Disc         | ASTM A351 Gr. CF8M<br>ASTM A351 Gr. CF8<br>ASTM A536 Gr. 65-45-12 (S.G. IRON)    |
| 3                | 1    | Seat         | NBR                                                                              |
| 4                | 2    | Stem         | SS 410                                                                           |
| 5                | 2    | Bearing Bush | Brass                                                                            |
| 6                | 2    | Bush         | PTFE/Poly acetal                                                                 |
| 7                | Req. | 'O' Ring     | Nitrile                                                                          |
| 8                | 1    | Lever        | Carbon steel Fabricated                                                          |

All dimensions are in M.M.

## Technical Specification

Manufacturing Std : API 609/BS 5155  
Face to Face : API 609 (Category A)/  
BS 5155 (Wafer Short/  
Medium)  
End Connection : Wafer Lugged To Suit  
ASME B16.5 150#  
Inspection and  
Testing Std. : BS 5155/BS EN 12266-1/API 598  
Rating: PN 10/16

| TEST PRESSURE |                       |                       |
|---------------|-----------------------|-----------------------|
| TESTING       | Body                  | SEAT                  |
| HYDRAULIC     | 15 Kg/cm <sup>2</sup> | 10 Kg/cm <sup>2</sup> |
|               | 24 Kg/cm <sup>2</sup> | 16 Kg/cm <sup>2</sup> |





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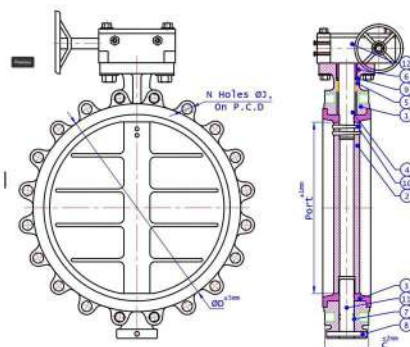
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# FULL LUG TYPE BUTTERFLY VALVE GEAR OPERATED

| Valve Model  | Valve Size<br>MM INCH | Port<br>±1MM ±2MM | C<br>±1MM ±2MM | N  | φJ    | Tapped     | P.C.D.<br>±0.5MM |
|--------------|-----------------------|-------------------|----------------|----|-------|------------|------------------|
| FLT-ECO-250  | 250 10"               | 241               | 68             | 12 | 25.4  | -          | 362              |
| FLT-ECO-300  | 300 12"               | 286               | 78             | 12 | 25.4  | -          | 431.8            |
| FLT-ECO-350  | 350 14"               | 333               | 78             | 12 | 28.6  | -          | 476.3            |
| FLT-ECO-400  | 400 16"               | 382               | 102            | 16 | 28.6  | -          | 539.8            |
| FLT-ECO-450  | 450 18"               | 433               | 114            | 16 | 31.75 | -          | 577.9            |
| FLT-ECO-500  | 500 20"               | 476               | 127            | 20 | 31.75 | 1" UNC     | 635              |
| FLT-ECO-550  | 550 22"               | 552               | 144            | 20 | 34.9  | 1.1/2" UNC | 692.1            |
| FLT-ECO-600  | 600 24"               | 590               | 154            | 20 | 34.9  | 1.1/2" UNC | 749.3            |
| FLT-ECO-650  | 650 26"               | 635               | 165            | 24 | 35.05 | 1.1/2" UNC | 806.4            |
| FLT-ECO-700  | 700 28"               | 680               | 165            | 28 | 34.9  | 1.1/2" UNC | 863.6            |
| FLT-ECO-750  | 750 34"               | 725               | 190            | 28 | 35.05 | 1.1/2" UNC | 914.4            |
| FLT-ECO-800  | 800 32"               | 785               | 190            | 28 | 41.3  | 1.1/2" UNC | 977.9            |
| FLT-ECO-850  | 850 34"               | 810               | 190            | 32 | 41.3  | 1.1/2" UNC | 1028.7           |
| FLT-ECO-900  | 900 36"               | 885               | 203            | 32 | 41.3  | 1.1/2" UNC | 1085.8           |
| FLT-ECO-1000 | 1000 40"              | 965               | 216            | 36 | 41.3  | 1.1/2" UNC | 1200.2           |
| FLT-ECO-1200 | 1200 48"              | 1170              | 254            | 44 | 41.3  | 1.1/2" UNC | 1422.4           |



### BUTTERFLY VALVE DETAIL

|                 |                                                                                                        |
|-----------------|--------------------------------------------------------------------------------------------------------|
| Pressure Rating | : PN-10/16                                                                                             |
| Seat Leakage    | : Tight shut off                                                                                       |
| Mounting        | : If can be Fitted Between Flanges<br>Mounting Drilled as per ASME<br>B 16.5/ 16.47 Series A Class 150 |
| Valve Type      | : Centric Disc Butterfly Valve with<br>a Single Piece Rubber Lined Body                                |
| Body Type       | : Short wafer (Sandwiched Between<br>Flanges)                                                          |
| Seat Type       | : Bonded with The Body "Lug Type"                                                                      |

| BILL OF MATERIAL |      |                             |                                                                                                                                        |
|------------------|------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Part             | Qty. | Nomenclature                | Material                                                                                                                               |
| 1                | 1    | Body                        | IS 210 Gr. FG 220<br>ASTM A 216 Gr. W.C.B.ASTM B 148<br>Gr. AL-BRONZE (C95800)<br>ASTM A 890 Gr. CD4MCUN-1B                            |
| 2                | 1    | Disc                        | ASTM A 536 Gr. 65-45-12<br>ASTM A 531 Gr.CF 8<br>ASTM A 531 Gr.CF 8M<br>ASTM B 148 Gr. AL-BRONZE (C95800)<br>ASTM A 890 Gr. CD4MCUN-1B |
| 3                | 1    | Seat                        | NBR                                                                                                                                    |
| 4                | 1    | Shaft                       | AISI 410 / MONEL K-500                                                                                                                 |
| 5                | 2    | Bearing Bush                | Metal PTFE coated                                                                                                                      |
| 6                | 1    | Bush                        | PTFE                                                                                                                                   |
| 7                | 2    | 'O' Ring                    | NBR                                                                                                                                    |
| 8                | 1    | Bottom Plate /<br>Dowel Pin | IS 2062 Gr.B                                                                                                                           |
| 9                | 1    | V-Seal                      | NBR                                                                                                                                    |
| 10               | 2    | Taper pin                   | AISI 410 / MONEL K-500                                                                                                                 |
| 11               | 1    | Bottom Pin                  | AISI 410 / MONEL K-500                                                                                                                 |
| 12               | 1    | Gear Handle                 | Standard                                                                                                                               |

### Technical Specification

|                                             |                                                                                           |
|---------------------------------------------|-------------------------------------------------------------------------------------------|
| Design And Manufacturing :                  | API 609 Category A/<br>IS:13095 BS EN 593                                                 |
| Valve Face To Face<br>Dimension             | : Short wafer As Per ISO<br>5752 TAB 5/API 609<br>Category A/ ISO 5752 TAB 1<br>(BS 5155) |
| Flange Standard<br>Conformity               | : ASME B16.5/16.47 Series<br>A Class 150                                                  |
| Inspection & Testing<br>Top Flange Drilling | : API 598 / BS EN 12266-1<br>: ISO 5211                                                   |

| TEST PRESSURE |                       |                       |
|---------------|-----------------------|-----------------------|
| TESTING       | Body                  | SEAT                  |
| HYDRAULIC     | 16 Kg/cm <sup>2</sup> | 10 Kg/cm <sup>2</sup> |
|               | 24 Kg/cm <sup>2</sup> | 16 Kg/cm <sup>2</sup> |

