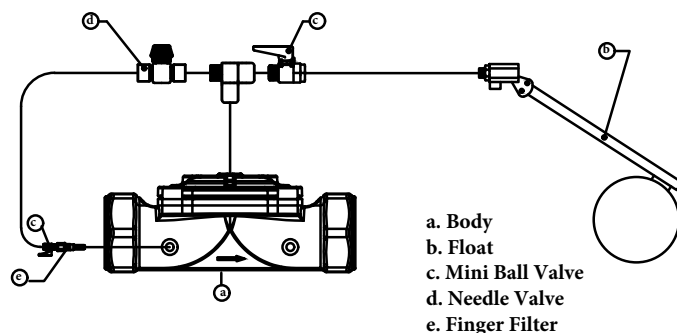




### Technical Drawing



### Product Description

BKV 516 Series Horizontal Float Level Control Valves are hydraulic control valves that maintain the water level within desired ranges in large surface area tanks or low volume reservoirs. The main valve is automatically controlled by a 2-way horizontal float. Mounted at the tank or reservoir inlets, the main valve closes completely and leak-proof without creating a shock when the water level reaches its maximum. When the water level falls below the float, the main valve fully opens, ensuring the tank or reservoir remains continuously full. The valve automatically adjusts the water inlet flow rate to the tank according to the flow within the tank.

### Features

- Reliable hydraulic operation,
- Drip-proof sealing,
- Proportional flow,
- Fully automatic operation,
- Always full tank or reservoir,
- Easy level adjustment,
- Maintenance can be performed without removing it from the pipeline.

### Adjustment

- Mount the float-operated pilot valve, indicated by "a", securely according to the water level in the tank or reservoir.
- Connect one end of the hydraulic pressure signal tube, supplied with the valve, to the ball valve indicated by "b", and the other end to the float-operated pilot valve.
- Open the ball valves indicated by "b".
- Adjust the opening and closing speed of the main valve using the needle valve indicated by "c".

### Production Standards

|                |                              |          |
|----------------|------------------------------|----------|
| DN50           | ⇒                            | DN80     |
| Pressure Range | 1 bar                        | ⇒ 16 bar |
| Connection     | ISO (BSP) - ANSI (NPT)       |          |
| Paint          | Electrostatic Powder Coating |          |
| Temperature    | -10 °C +80 °C                |          |

### Application Areas

- Agricultural irrigation
- Fire extinguishing
- Industrial applications
- Irrigation and drinking water systems

### Working Principle

- Closed position: The valve is closed by applying pressure to the diaphragm through fluid pressure.
- Open position: Internal line pressure moves the diaphragm upwards, allowing flow.
- Modulation position: The diaphragm remains in a fixed position by balancing the internal and external line pressures.



| Diameter | 2" / DN50     | 2 1/2" / DN65 | 3" / DN80     |
|----------|---------------|---------------|---------------|
| Code     | GD16YFV<br>50 | GD16YFV<br>65 | GD16YFV<br>80 |
|          |               |               |               |

## Recommended Work Values



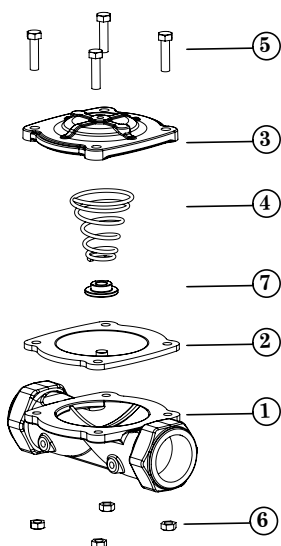
|                         |                                   |                        |
|-------------------------|-----------------------------------|------------------------|
| <b>Working Pressure</b> | <b>Standard</b>                   | 1-16 bar (10-160 psi)  |
| <b>Temperature</b>      | <b>Min. Operating Temperature</b> | -10°C                  |
|                         | <b>Max. Operating Temperature</b> | +80°C                  |
| <b>Connection</b>       | <b>Flanged</b>                    | EN 1092-2 ISO 7005-2   |
|                         | <b>Threaded</b>                   | ISO (BSP) – ANSI (NPT) |
| <b>Paint Coating</b>    | <b>Standard</b>                   | Polyester              |
|                         | <b>Optional</b>                   | Epoksi                 |

## Globe Type Control Valves Size and Weight Table

| <i>DN</i>   |           | <i>L</i>    |           | <i>D</i>    |           | <i>H</i>    |           | <b>Weight</b> |           |
|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|---------------|-----------|
| <i>inch</i> | <i>mm</i> | <i>inch</i> | <i>mm</i> | <i>inch</i> | <i>mm</i> | <i>inch</i> | <i>mm</i> | <i>lbs</i>    | <i>kg</i> |
| 2"          | 50        | 8           | 205       | 6,5         | 165       | 6,5         | 165       | 18            | 8,5       |
| 2 ½"        | 65        | 8           | 205       | 7,3         | 185       | 7,3         | 185       | 22            | 10        |
| 3"          | 80        | 11,4        | 290       | 7,9         | 200       | 7,9         | 200       | 44            | 20        |

NOTE: Weight and valve height (h) do not include accessories.

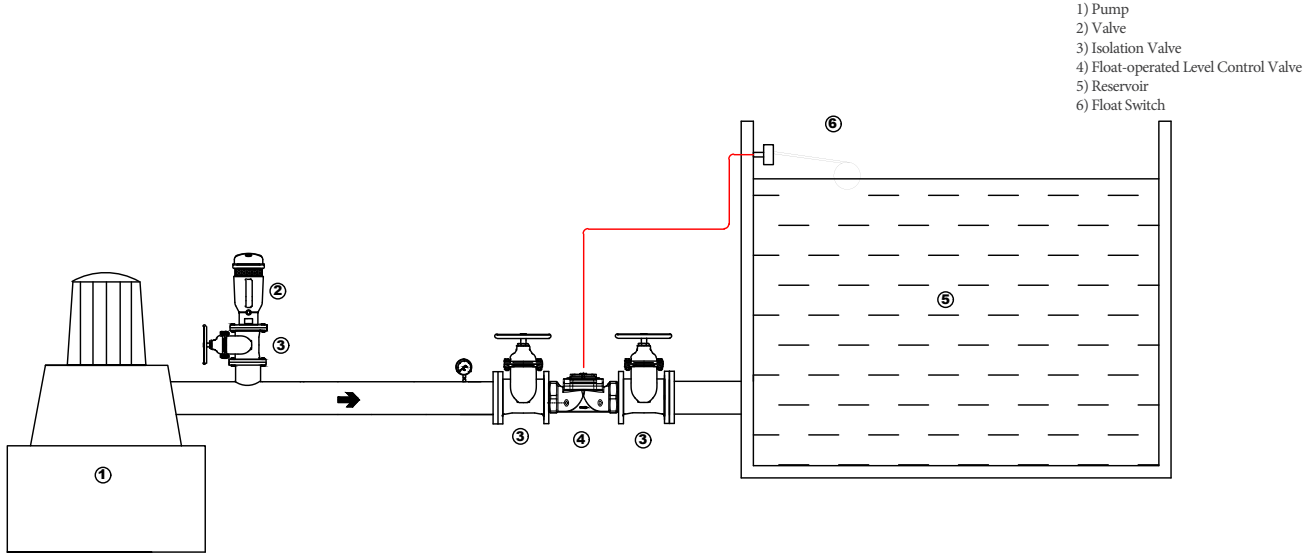
## Main Parts



|          |                                |                                        |
|----------|--------------------------------|----------------------------------------|
| <b>1</b> | <b>Body</b>                    | GG 25 / GGG40 (EN-GJS 400-15)          |
| <b>2</b> | <b>Diaphragm</b>               | Court Fabric Reinforced Natural Rubber |
| <b>3</b> | <b>Lid</b>                     | GG 25 / GGG40 (EN-GJS 400-15)          |
| <b>4</b> | <b>Spring</b>                  | Stainless                              |
| <b>5</b> | <b>Bolt</b>                    | Coated Steel                           |
| <b>6</b> | <b>Nut</b>                     | Coated Steel                           |
| <b>7</b> | <b>Diaphragm Pressure Ring</b> | Polyamid / Polyester                   |

| <b>Maximum Working Pressure</b> |            | <b>Leakage Test Pressure</b> |            | <b>Body Test Pressure</b> |            |
|---------------------------------|------------|------------------------------|------------|---------------------------|------------|
| <b>BAR</b>                      | <b>PSI</b> | <b>BAR</b>                   | <b>PSI</b> | <b>BAR</b>                | <b>PSI</b> |
| <b>10</b>                       | <b>145</b> | <b>11</b>                    | <b>160</b> | <b>15</b>                 | <b>217</b> |
| <b>16</b>                       | <b>232</b> | <b>17,6</b>                  | <b>255</b> | <b>24</b>                 | <b>348</b> |

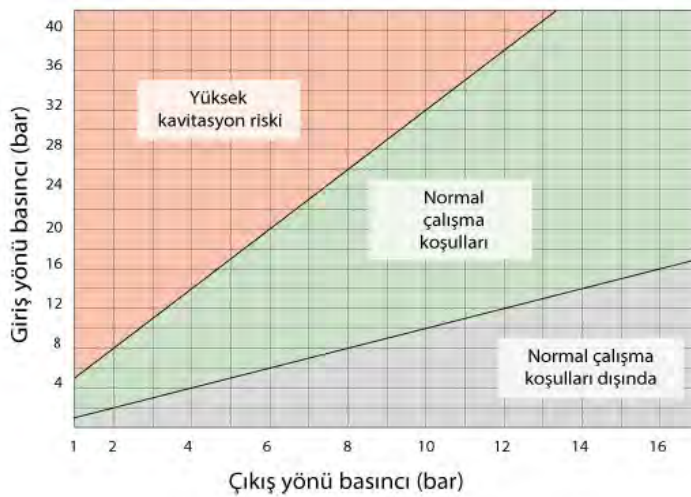
## Example Application



## Akış Performansı

| Diameter | mm                       | 50 | 65  | 80  |
|----------|--------------------------|----|-----|-----|
|          | Inch                     | 2" | 2½" | 3"  |
| kv       | m <sup>3</sup> /h- 1 Bar | 70 | 73  | 167 |
|          |                          | 44 | 46  | 96  |

## Cavitation Graph



## Pressure Loss Graph

