

# 10-9

## 2-way stainless steel control valve GVF-S Series (SUS 316)



### Summary

GVF-S Series is 2-way Globe valve in stainless steel with flange connection to be assembled with GEA Series. It is for manufacturing industry of paper, dyeing, acid, chemical fiber, fertilizer and austenitic stainless steel valve for food, sauna, off-shore facilities. Electric digital actuator can be mounted to use.

- Nominal stroke : DN 15 ~ DN 50 - 20mm  
DN 65 ~ DN 150 - 40mm  
DN 200, DN 250 - 60mm

### Technical Data

- Operating pressure : JIS 10Kgf/cm<sup>2</sup>
- Applicable fluid and temp. : DIN4747 / DIN3158 at -25°C ~ 150°C  
(Replace Packing above 100°C)
- Linear type
- Leakage : ≤ 0.01% of Kvs value Class IV (ANSI B 16.104)
- End connection : JIS 10K RF Type(JIS B2220)

※ Close-off pressure

| Model     | DN<br>mm | Flow coefficient |       | Stroke<br>mm | Sv | ΔPv | Actuator ΔPmax (kgf/cm <sup>2</sup> ) |             |             |              |             |
|-----------|----------|------------------|-------|--------------|----|-----|---------------------------------------|-------------|-------------|--------------|-------------|
|           |          | Kv               | Cv    |              |    |     | GEA-20A(PD)                           | GEA-35A(PD) | GEA-55A(PD) | GEA-100A(PD) | GEA-250A(P) |
| GVF-S 15  | 15       | 3.1              | 3.6   | 20           | 50 | 10  | 10                                    | -           | -           | -            | -           |
| GVF-S 20  | 20       | 5.6              | 6.5   | 20           | 50 | 10  | 10                                    | -           | -           | -            | -           |
| GVF-S 25  | 25       | 10.6             | 12.4  | 20           | 50 | 10  | 10                                    | -           | -           | -            | -           |
| GVF-S 40  | 40       | 25.4             | 29.6  | 20           | 50 | 10  | 10                                    | -           | -           | -            | -           |
| GVF-S 50  | 50       | 38.8             | 45.3  | 20           | 50 | 10  | 8                                     | -           | -           | -            | -           |
| GVF-S 65  | 65       | 64.2             | 74.9  | 40           | 50 | 5   | -                                     | 8.1         | -           | -            | -           |
| GVF-S 80  | 80       | 90.5             | 105.6 | 40           | 50 | 4   | -                                     | 5.4         | -           | -            | -           |
| GVF-S 100 | 100      | 130.2            | 151.9 | 40           | 50 | 4   | -                                     | 3.4         | -           | -            | -           |
| GVF-S 125 | 125      | 188.0            | 219.4 | 40           | 50 | 4   | -                                     | -           | 3.4         | -            | -           |
| GVF-S 150 | 150      | 283.0            | 330.3 | 40           | 50 | 3.5 | -                                     | -           | 2.4         | -            | -           |
| GVF-S 200 | 200      | 594.0            | 696.0 | 60           | 50 | 3   | -                                     | -           | -           | 2.4          | 6.1         |
| GVF-S 250 | 250      | 906.0            | 1057  | 60           | 50 | 3   | -                                     | -           | -           | -            | 3.9         |

Sv : Rangeability (VDI 2173)

ΔPV100 : Maximum allowable pressure difference of valve faces in full opening position with installation highly loaded

ΔPmax : Maximum allowable pressure difference of actuator not to leak fluid in closing position(close-off pressure)

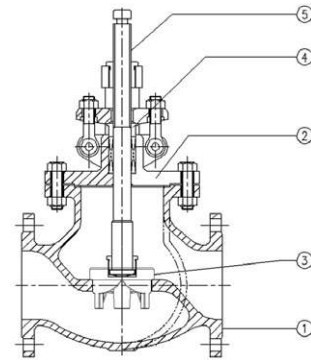
Make sure to indicate valve Model in case of assembling valve of stroke 20mm and GEA035A(PD) or GEA-55P(A) in order-sheet

\*Kv=Cv/1,167

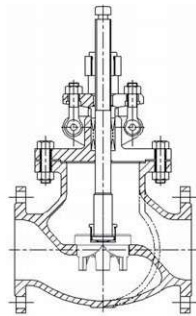
※ Note : Cylinder balancing valve to be applied for over Max. 3bar of valve pressure difference in 50A

### Materials

| No        | 1                      | 2                      | 3              | 4                      | 5              |
|-----------|------------------------|------------------------|----------------|------------------------|----------------|
| Part Name | Body                   | Bonnet                 | Disc           | Gland Packing (GASKET) | Stem           |
| Material  | SCS14 (CF8M)<br>SUS316 | SCS14 (CF8M)<br>SUS316 | SCS14 (SUS316) | PTFE                   | SCS14 (SUS316) |



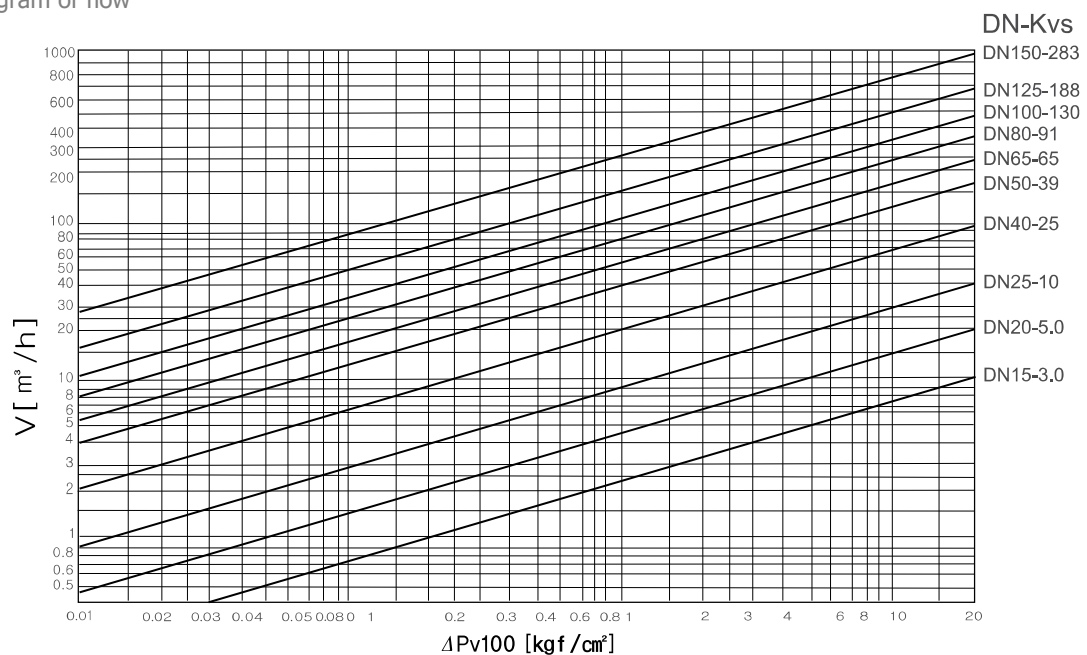
### Mechanical design



- Plug direct-coupled with valve stem
- Seat with SS316 material attached to valve body

### Valve selection

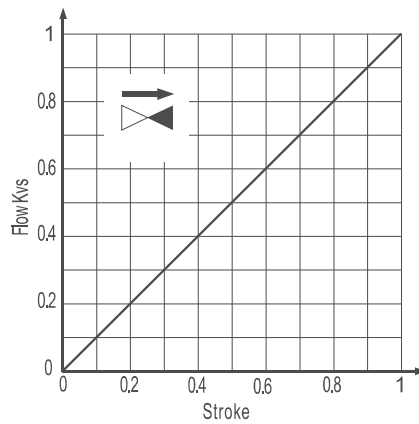
#### ► Diagram of flow



$V$  : flow(m<sup>3</sup>/h)

$\Delta P_{v100}$  : valve pressure drop(kgf/cm<sup>2</sup>)

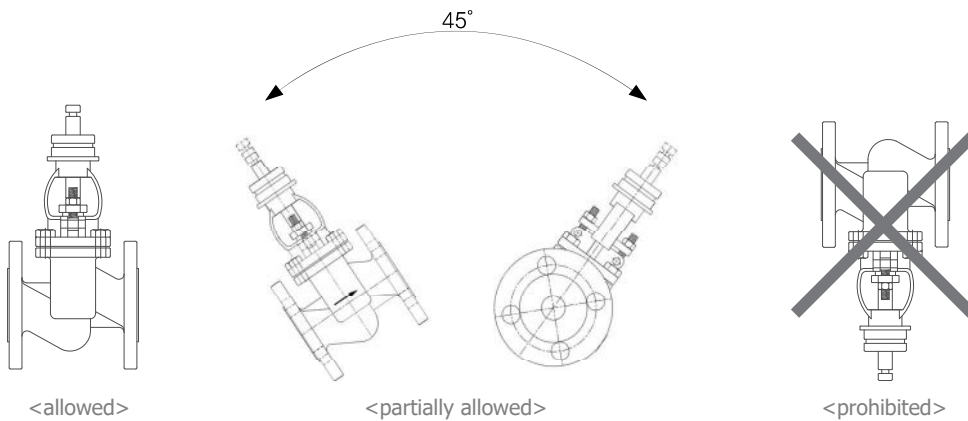
## Valve flows



- Flow control of valve
- Linear
- Proportion of flow control - 50:1 (Rangeability)

## Mounting notes

- Strainer installation recommended for higher safety rate of valve function



- Match the flow direction with marked direction(➡) on valve body

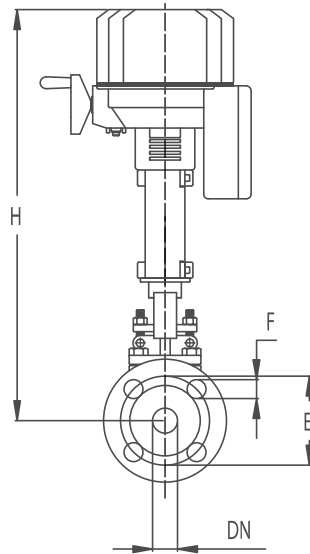
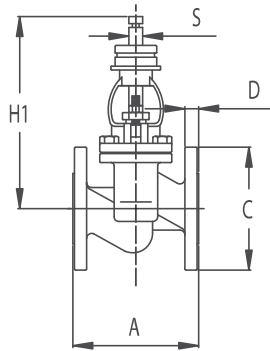
## Guide for inspection

- Inspect the valve in the status of right mounting of actuator
1. Close position with valve shaft upward
  2. Open position with valve shaft downward

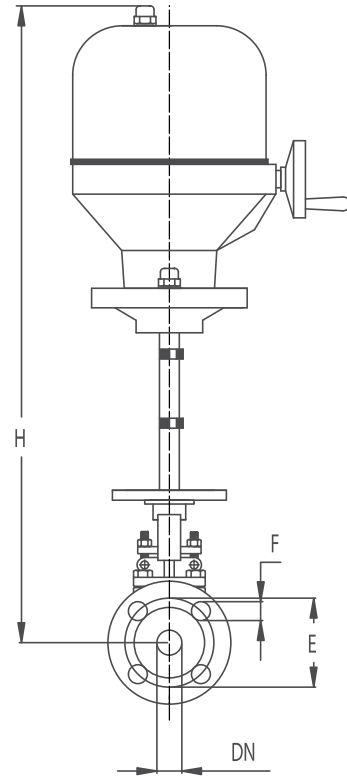
## Tips

- Valve packing replacement without disassembling in case of damage
- Packing box applicable for -25 ~ 130°C(hot and cold water)

# Shape Dimension



GEA-20, 35A(PD)



GEA-55, 100A(PD), 250A(P)

| Model    | DN  | A   | C   | S  | D  | E   | F     | Bolt Size | H1  | H      |        |        |         |         | Weight Valve(kg) |
|----------|-----|-----|-----|----|----|-----|-------|-----------|-----|--------|--------|--------|---------|---------|------------------|
|          |     |     |     |    |    |     |       |           |     | GEA-20 | GEA-35 | GEA-55 | GEA-100 | GEA-250 |                  |
| GVF-S15  | 15  | 108 | 95  | 14 | 12 | 70  | 15×4  | M12       | 168 | 430    | —      | —      | —       | —       | 3.0              |
| GVF-S20  | 20  | 117 | 100 | 14 | 14 | 75  | 15×4  | M12       | 175 | 438    | —      | —      | —       | —       | 3.6              |
| GVF-S25  | 25  | 127 | 125 | 14 | 14 | 90  | 19×4  | M16       | 190 | 450    | —      | —      | —       | —       | 4.8              |
| GVF-S40  | 40  | 161 | 140 | 14 | 16 | 105 | 19×4  | M16       | 200 | 460    | —      | —      | —       | —       | 8.0              |
| GVF-S50  | 50  | 200 | 155 | 14 | 16 | 120 | 19×4  | M16       | 230 | 485    | —      | —      | —       | —       | 10.2             |
| GVF-S65  | 65  | 212 | 175 | 14 | 18 | 140 | 19×4  | M16       | 243 | —      | 540    | —      | —       | —       | 13.5             |
| GVF-S80  | 80  | 241 | 185 | 14 | 18 | 150 | 19×8  | M16       | 286 | —      | 570    | —      | —       | —       | 18.3             |
| GVF-S100 | 100 | 292 | 210 | 14 | 18 | 175 | 19×8  | M16       | 325 | —      | 580    | —      | —       | —       | 25.9             |
| GVF-S125 | 125 | 356 | 250 | 14 | 20 | 210 | 23×8  | M20       | 380 | —      | —      | 880    | —       | —       | 43.5             |
| GVF-S150 | 150 | 406 | 280 | 14 | 22 | 240 | 23×8  | M20       | 445 | —      | —      | 900    | —       | —       | 57.4             |
| GVF-S200 | 200 | 495 | 330 | 20 | 22 | 290 | 23×12 | M20       | 545 | —      | —      | —      | 1020    | —       | 170              |
| GVF-S250 | 250 | 622 | 400 | 20 | 24 | 355 | 25×12 | M22       | 650 | —      | —      | —      | —       | 1050    | 250              |