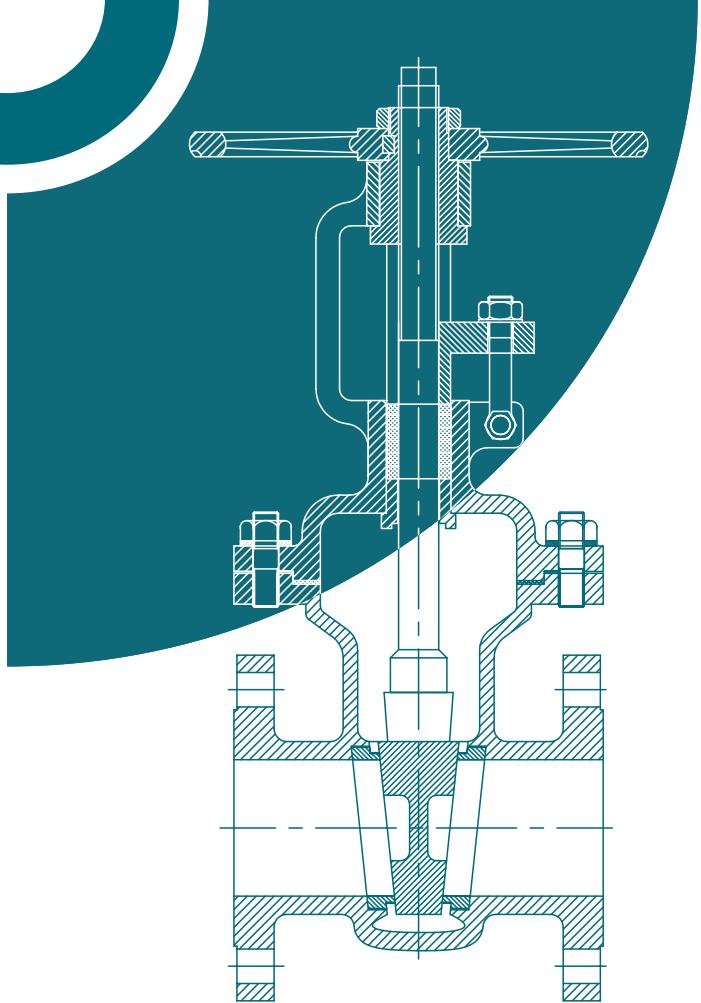




SWASTIK

Ensuring SAFETY With Precision

Quality With Confidence



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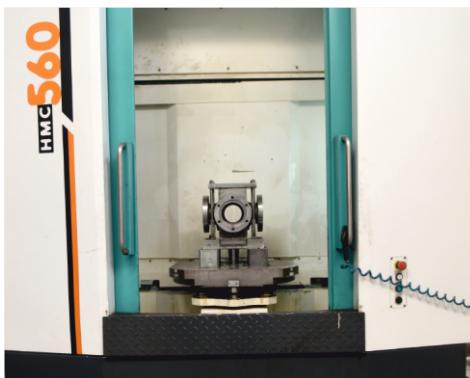
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Manufacturing is more than just putting parts together. It's coming up with ideas, testing principles and perfecting the engineering.



SWASTIK

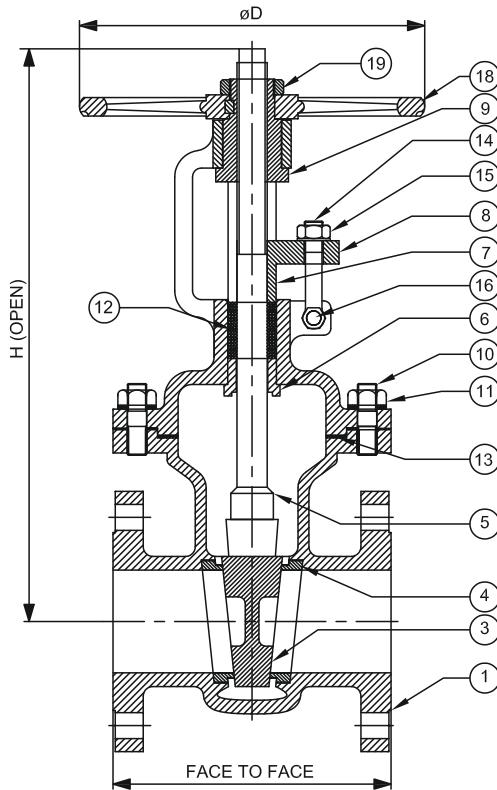
GATE VALVES GLOBE VALVES NON RETURN VALVES



DESIGN STD :-

- Gate valve design : API 600
- Pressure/Temperature rating : ASME B16.34
- End-end Dimension : ASME B16.10
- Flange dimensions : ASME B16.5
- Testing : API 598
- Butt weld ends : ASME 16.25
- Stainless Steel / Graphite Gaskets
- Non-rotating rising stem

GATE VALVE CLASS 150/300/600



Materials

| Part no. | Part Name | WCB | WC6 | CF8 | CF8M |
|----------|----------------|------------------------------|--------------------------|-----------------|-----------------|
| 1 | Body | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 2 | Bonnet | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 3 | Wedge | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 4 | Seat ring | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 5 | Stem | See trim material table | | | |
| 6 | Backseat | See trim material table | | | |
| 7 | Gland bush | 13Cr | 13Cr | AISI 304 | AISI 316 |
| 8 | Gland plate | A 105 | A 105 | A 351 CF8 | A 351 CF8M |
| 9 | Yoke sleeve | A 439 Gr. D2C / EN8 | | | |
| 10 | Bonnet stud | A 193 B7 | A 193 B16 | A 193 B8 | A 193 B8 |
| 11 | Bonnet nut | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 12 | Gland packing | Graphite moulded ring / Rope | | | |
| 13 | Gasket | Graphite+Stainless steel 304 | PTFE+Stainless steel 304 | | |
| 14 | Eye bolts | A 307 Gr. B | A 193 B16 | A 193 B8 | A 193 B8 |
| 15 | Eye bolt nuts | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 16 | Eye bolt pins | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 17 | Retaining ring | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 18 | Handwheel | SG Iron | SG Iron | SG Iron | SG Iron |
| 19 | Handwheel nut | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 20 | Name plate | Stainless steel | | | |

Dimensions (Class 150)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| Face to Face | 127 | 165 | 178 | 191 | 203 | 229 | 254 | 267 | 292 | 330 | 356 | 381 | 406 |
| H (open) | 262 | 345 | 385 | 462 | 525 | 662 | 770 | 855 | 1060 | 1140 | 1255 | 1405 | 1590 |
| øD | 125 | 176 | 176 | 251 | 251 | 304 | 354 | 354 | 400 | 450 | G-B | G-B | G-B |

Dimensions (Class 300)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
|--------------|----|----|-----|-----|-----|-----|-----|------|------|------|------|------|
| Face to Face | -- | -- | 216 | 241 | 282 | 305 | 403 | 419 | 457 | 502 | 762 | 838 |
| H | -- | -- | 435 | 512 | 575 | 712 | 905 | 1110 | 1165 | 1320 | 1500 | 1720 |
| øD | -- | -- | 176 | 251 | 251 | 304 | 400 | 450 | G-B | G-B | G-B | G-B |

Dimensions (Class 600)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
|--------------|----|----|-----|----|-----|-----|-----|-----|------|------|------|------|
| Face to Face | -- | -- | 292 | -- | 356 | 432 | 559 | 660 | 787 | 838 | 889 | 991 |
| H | -- | -- | 360 | -- | 445 | 535 | 785 | 955 | 1205 | 1295 | 1465 | 1665 |
| øD | -- | -- | 251 | -- | 304 | 400 | G-B | G-B | G-B | G-B | G-B | G-B |

Trim Materials

| Part no. | Part name | Trim 1 | Trim 2 | Trim 5 | Trim 8 | Trim 10 |
|----------|----------------|-------------|-----------|-------------------|---------------|-----------|
| | | 13Cr / 13Cr | 304 / 304 | Stellite/Stellite | Stellite/13Cr | 316 / 316 |
| 3 | Wedge Face | 13Cr | AISI 304 | Stellite | 13Cr | AISI 316 |
| 4 | Seat Ring Face | 13Cr | AISI 304 | Stellite | Stellite | AISI 316 |
| 5 | Stem | 13Cr | AISI 304 | 13Cr | 13Cr | AISI 316 |
| 6 | Backseat | 13Cr | AISI 304 | 13Cr | 13Cr | AISI 316 |

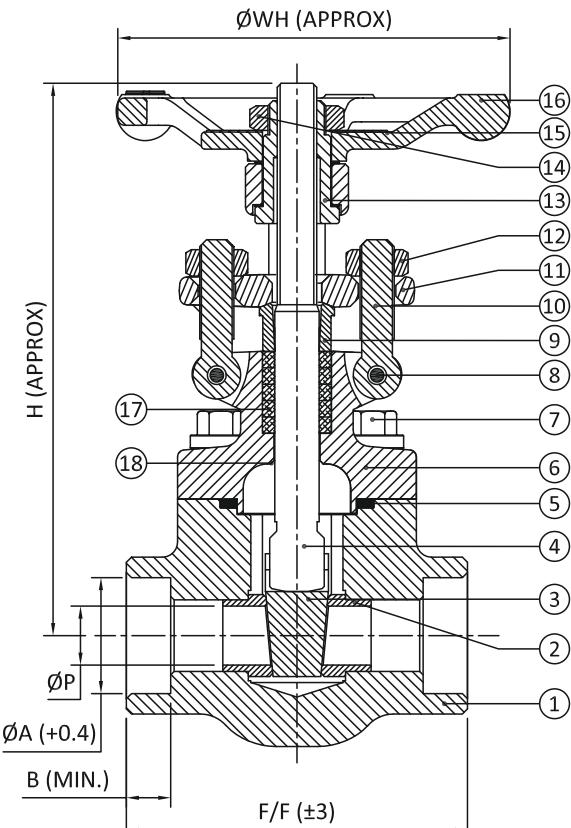
WHY "SWASTIK" GATE VALVE?

- Outside screw and yoke
- Bolted bonnet
- Graphite packing
- Stainless steel / graphite gaskets
- Solid wedge
- Low operating torques
- Round body construction throughout the range
- Extended trim life

DESIGN STD :-

- Gate valve design : API 602 / ISO 15761
- Face-to-face : Swastik STD. (Screwed/socket-weld/butt-weld)
- End connection : ASME B 16.10 (flanged)
- End connection : ASME B 1.20.1(NPT), BS 21/ISO 7 (screwed-taper)
- End connection : BS 2779/ISO 228, BS 21/ISO 7 (screwed-parallel)
- End connection : ASME B 16.5 RF 125-250 Ra (Flanged)
- Valve testing : API 598
- Pressure & Temp. rating : ASME B 16.34

GATE VALVE CLASS 800



Materials

| Part no. | Part Name | Material |
|----------|---------------|-------------------------------|
| 1 | Body | ASTM A 105 |
| 2 | Seat ring | ASTM A 276 Type SS-410 |
| 3 | Wedge | ASTM A 217 Gr. CA-15 |
| 4 | Stem | ASTM A 182 Gr. F6a |
| 5 | Gasket | S.S 304 Spiral wound+graphite |
| 6 | Bonnet | ASTM A 105 |
| 7 | Hex bolt | ASTM A 193 Gr. B7 |
| 8 | Eye bolt pin | ASTM A 276 Type SS-410 |
| 9 | Gland bush | ASTM A 276 Type SS-410 |
| 10 | Eye bolt | ASTM A 193 Gr. B7 |
| 11 | Gland flange | ASTM A 105 |
| 12 | Eye bolt nut | ASTM A 194 Gr. 2H |
| 13 | Yoke sleeve | ASTM A 582 Gr. SS-416 |
| 14 | Stem nut | ASTM A 194 Gr. 2H |
| 15 | Name plate | Stainless steel |
| 16 | Hand wheel | MI / SG iron |
| 17 | Gland packing | Flexible graphite ring |
| 18 | Back sheet | Integral |

Dimensions (Class 800)

| Size (NB) | 15 | 20 | 25 | 40 | 50 |
|--------------|------|------|------|------|------|
| Face to Face | 73 | 80 | 100 | 120 | 130 |
| H (open) | 151 | 157 | 186 | 237 | 268 |
| H (close) | 135 | 137 | 162 | 201 | 223 |
| ØWH | 86 | 86 | 116 | 150 | 150 |
| ØP | 9.5 | 12.7 | 17.5 | 28.6 | 36.5 |
| ØA | 21.8 | 27.2 | 33.9 | 48.8 | 61.2 |
| B | 9.5 | 12.5 | 12.5 | 12.5 | 16.0 |

Test Requirement

| Test | Medium | Class 800 | Time |
|-----------|--------|--------------------|------|
| | | Kg/cm ² | Sec. |
| Shell | Water | 211 | 15 |
| Back seat | Water | 153 | 15 |
| Seat | Water | 153 | 15 |
| Seat | Air | 7 | 15 |

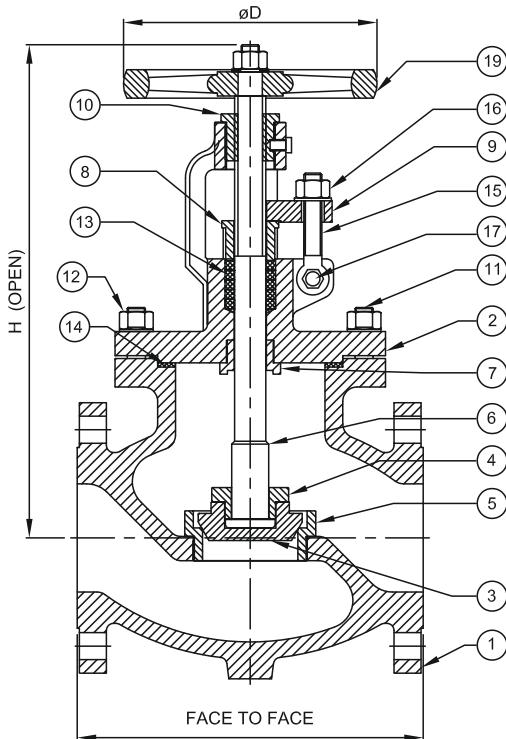
WHY "SWASTIK" GATE VALVE?

- Bolted bonnet
- Outside screw and yoke
- Rising stem
- Integral backseat
- Standard port
- Graphite packing
- Stainless steel/graphite gaskets

DESIGN STD :-

- Globe valve design : BS 1873
- Pressure/temperature rating : ASME B16.34
- End-end Dimension : ASME B16.10
- Flange dimensions : ASME B16.5
- Testing : API 598
- Butt weld ends : ASME 16.25
- Graphite packing
- Stainless Steel/Graphite Gaskets

GLOBE VALVE CLASS 150/300/600



Materials

| Part no. | Part Name | WCB | WC6 | CF8 | CF8M |
|----------|----------------|------------------------------|--------------------------|-----------------|-----------------|
| 1 | Body | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 2 | Bonnet | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 3 | Plug | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 4 | Plug nut | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 5 | Seat ring | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 6 | Stem | See trim material table | | | |
| 7 | Backseat | See trim material table | | | |
| 8 | Gland bush | 13Cr | 13Cr | AISI 304 | AISI 316 |
| 9 | Gland plate | A 105 | A 105 | A 351 CF8 | A 351 CF8M |
| 10 | Yoke bush | A 439 Gr. D2C / EN8 | | | |
| 11 | Bonnet stud | A 193 B7 | A 193 B16 | A 193 B8 | A 193 B8 |
| 12 | Bonnet nut | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 13 | Gland packing | Graphite moulded ring / Rope | | | |
| 14 | Gasket | Graphite+Stainless steel 304 | PTFE+Stainless steel 304 | | |
| 15 | Eye bolts | A 307 Gr. B | A 193 B16 | A 193 B8 | A 193 B8 |
| 16 | Eye bolt nuts | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 17 | Eye bolt pins | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 18 | Retaining ring | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 19 | Handwheel | SG Iron | SG Iron | SG Iron | SG Iron |
| 20 | Handwheel nut | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 21 | Name plate | Stainless steel | | | |

Dimensions (Class 150)

| | | | | | | | | | | | | | |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
| Face to Face | 127 | 165 | 203 | 216 | 241 | 292 | 356 | 406 | 495 | 622 | 698 | 787 | 914 |
| H (open) | 227 | 298 | 322 | 355 | 370 | 440 | 482 | 500 | 608 | 696 | 850 | 985 | 1085 |
| ØD | 125 | 176 | 176 | 251 | 251 | 304 | 354 | 354 | 400 | 450 | G-B | G-B | G-B |

Dimensions (Class 300)

| | | | | | | | | | | | |
|--------------|----|----|-----|----|-----|-----|-----|-----|-----|-----|--|
| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | |
| Face to Face | -- | -- | 267 | -- | 318 | 356 | 445 | 559 | 622 | 711 | |
| H | -- | -- | 348 | -- | 420 | 445 | 570 | 715 | 770 | 830 | |
| ØD | -- | -- | 176 | -- | 251 | 354 | 450 | 500 | G-B | G-B | |

Dimensions (Class 600)

| | | | | | | | | | | | |
|--------------|----|----|-----|----|-----|-----|-----|-----|-----|------|--|
| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | |
| Face to Face | -- | -- | 292 | -- | 356 | 432 | 559 | 660 | 787 | 838 | |
| H | -- | -- | 372 | -- | 458 | 540 | 610 | 730 | 890 | 1005 | |
| ØD | -- | -- | 251 | -- | 354 | 500 | G-B | G-B | G-B | G-B | |

Trim Materials

| Part no. | Part name | Trim 1 | Trim 2 | Trim 5 | Trim 8 | Trim 10 |
|----------|----------------|-------------|-----------|-------------------|---------------|-----------|
| | | 13Cr / 13Cr | 304 / 304 | Stellite/Stellite | Stellite/13Cr | 316 / 316 |
| 3 | Plug Face | 13Cr | AISI 304 | Stellite | 13Cr | AISI 316 |
| 5 | Seat Ring Face | 13Cr | AISI 304 | Stellite | Stellite | AISI 316 |
| 6 | Stem | 13Cr | AISI 304 | 13Cr | 13Cr | AISI 316 |
| 7 | Backseat | 13Cr | AISI 304 | 13Cr | 13Cr | AISI 316 |

WHY "SWASTIK" GLOBE VALVE?

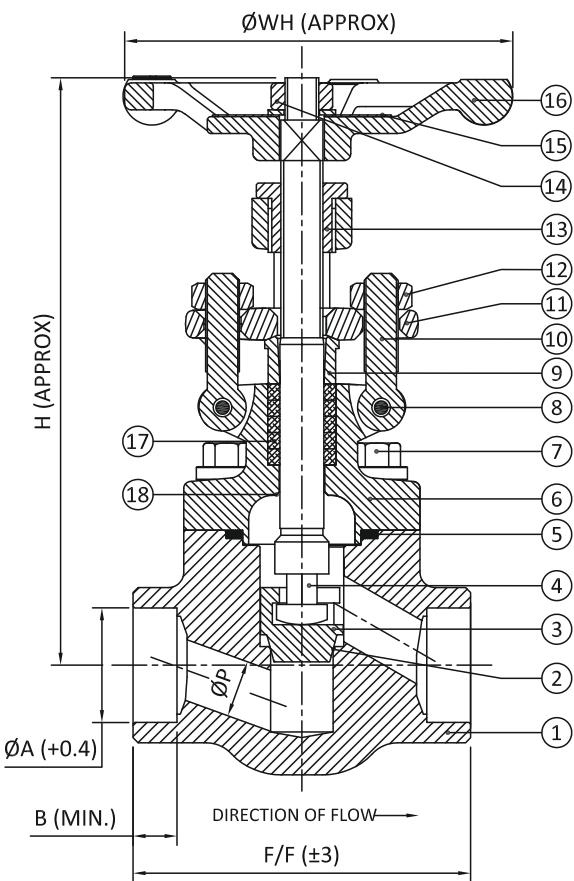
- Bolted bonnet
- Outside screw and yoke
- Graphite packings
- Stainless steel / graphite gaskets
- Low operating torques
- Minimum pressure drop
- Provision for onstream gland replacement
- Single piece casted handwheel
- Onsite renewable trims for 150#

DESIGN STD :-

- Globe valve design : ISO 15761
- Face-to-face : Swastik STD. (screwed/socket-weld/butt-weld)
- End connection : ASME B 16.10 (flanged)
- End connection : ASME B 1.20.1(NPT), BS 21/ISO 7 (screwed-taper)
- End connection : BS 2779/ISO 228, BS 21/ISO 7 (screwed-parallel)
- End connection : ASME B 16.5 RF 125-250 Ra (Flanged)
- Pressure and Temp. rating : ASME B 16.34

- Valve testing : API 598

GLOBE VALVE CLASS 800



Materials

| Part no. | Part Name | Material |
|----------|---------------|-------------------------------|
| 1 | Body | ASTM A 105 |
| 2 | Seat ring | 13% Cr. Integral |
| 3 | Plug | ASTM A 217 Gr. CA-15 |
| 4 | Stem | ASTM A 182 Gr. F6a |
| 5 | Gasket | S.S 304 Spiral wound+graphite |
| 6 | Bonnet | ASTM A 105 |
| 7 | Hex bolt | ASTM A 193 Gr. B7 |
| 8 | Eye bolt pin | ASTM A 276 Type SS-410 |
| 9 | Gland bush | ASTM A 276 Type SS-410 |
| 10 | Eye bolt | ASTM A 193 Gr. B7 |
| 11 | Gland flange | ASTM A 105 |
| 12 | Eye bolt nut | ASTM A 194 Gr. 2H |
| 13 | Yoke sleeve | ASTM A 582 Gr. SS-416 |
| 14 | Stem nut | ASTM A 194 Gr. 2H |
| 15 | Name plate | Stainless steel |
| 16 | Hand wheel | MI / SG iron |
| 17 | Gland packing | Flexible graphite ring |
| 18 | Back sheet | Integral |

Dimensions (Class 800)

| Size (NB) | 15 | 20 | 25 | 40 | 50 |
|--------------|------|------|------|------|------|
| Face to Face | 73 | 80 | 100 | 145 | 160 |
| H (open) | 159 | 162 | 191 | 228 | 265 |
| H (close) | 143 | 146 | 171 | 199 | 236 |
| ØWH | 86 | 86 | 116 | 150 | 150 |
| ØP | 9.5 | 12.7 | 17.5 | 28.6 | 36.5 |
| ØA | 21.8 | 27.2 | 33.9 | 48.8 | 61.2 |
| B | 9.5 | 12.5 | 12.5 | 12.5 | 16.0 |

Test Requirement

| Test | Medium | Class 800 | Time |
|-----------|--------------------|-----------|------|
| | Kg/cm ² | Sec. | |
| Shell | Water | 211 | 15 |
| Back seat | Water | 153 | 15 |
| Seat | Water | 153 | 15 |
| Seat | Air | 7 | 15 |

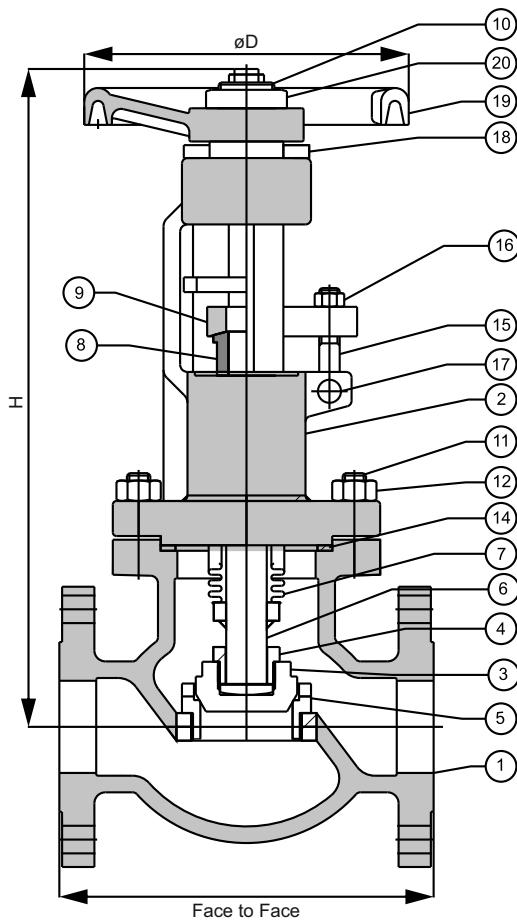
WHY "SWASTIK" GLOBE VALVE?

- Bolted bonnet
- Graphite packing
- Stainless steel/graphite gaskets
- Outside screw and yoke
- Rotating rising stem
- Integral backseat
- Standard port
- Rotating rising stem

DESIGN STD :-

- Globe valve design : ISO 15761
- Face-to-face : Swastik STD. (screwed/socket-weld/butt-weld)
- End connection : ASME B 16.10 (flanged)
- ASME B 1.20.1(NPT), BS 21/ISO 7 (screwed-taper)
- BS 2779/ISO 228, BS 21/ISO 7 (screwed-parallel)
- ASME B 16.5 RF 125-250 Ra (flanged)
- ASME B 16.34
- Valve testing : API 598

BELLOW SEALED GLOBE VALVE CLASS 150/300



Materials

| Part no. | Part Name | WCB | WC6 | CF8 | CF8M |
|----------|---------------|------------------------------|--------------|-----------------|-----------------|
| 1 | Body | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 2 | Bonnet | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 3 | Plug | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 4 | Plug nut | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 5 | Seat ring | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 6 | Stem | See trim material table | | | |
| 7 | Bellow | Stainless steel | | | |
| 8 | Gland bush | 13Cr | 13Cr | AISI 304 | AISI 316 |
| 9 | Gland plate | A 105 | A 105 | A 351 CF8 | A 351 CF8M |
| 10 | Yoke sleeve | A 439 Gr. D2C / EN8 | | | |
| 11 | Bonnet stud | A 193 B7 | A 193 B16 | A 193 B8 | A 193 B8 |
| 12 | Bonnet nut | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 13 | Gasket | Graphite+Stainless steel 304 | | | |
| 14 | Eye bolts | A 307 Gr. B | A 193 B16 | A 193 B8 | A 193 B8 |
| 15 | Eye bolt nuts | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 16 | Eye bolt pins | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 17 | Retainer ring | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 18 | Handwheel | SG Iron | SG Iron | SG Iron | SG Iron |
| 19 | Lock Nut | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 20 | Name plate | Stainless steel | | | |

Dimensions (Class 150)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Face to Face | 127 | 165 | 203 | 216 | 241 | 292 | 356 | 406 | 495 | 622 | 698 | 787 | 914 |
| H (open) | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| øD | 125 | 176 | 176 | 251 | 251 | 304 | 354 | 354 | 400 | 450 | G-B | G-B | G-B |

Dimensions (Class 300)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | | | |
|--------------|----|----|-----|----|-----|-----|-----|-----|-----|-----|--|--|--|
| Face to Face | -- | -- | 267 | -- | 318 | 356 | 445 | 559 | 622 | 711 | | | |
| H | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| øD | -- | -- | 176 | -- | 251 | 354 | 450 | 500 | G-B | G-B | | | |

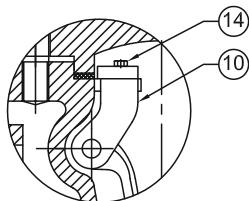
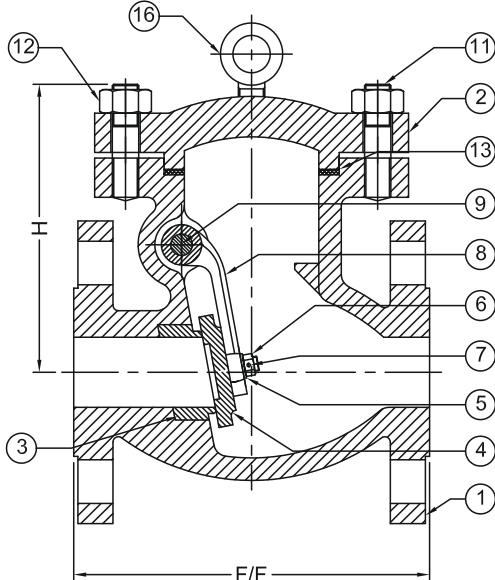
Trim Materials

| Part no. | Part name | Trim 1 | Trim 2 | Trim 5 | Trim 8 | Trim 10 |
|----------|----------------|-------------|-----------|-------------------|---------------|-----------|
| | | 13Cr / 13Cr | 304 / 304 | Stellite/Stellite | Stellite/13Cr | 316 / 316 |
| 3 | Plug Face | 13Cr | AISI 304 | Stellite | 13Cr | AISI 316 |
| 5 | Seat Ring Face | 13Cr | AISI 304 | Stellite | Stellite | AISI 316 |
| 6 | Stem | 13Cr | AISI 304 | 13Cr | 13Cr | AISI 316 |
| 7 | Backseat | 13Cr | AISI 304 | 13Cr | 13Cr | AISI 316 |

DESIGN STD :-

- Check valve design : BS 1868
- Pressure/temperature rating : ASME B16.34
- End-end Dimension : ASME B16.10
- Flange dimensions per ASME B16.5
- Testing per API 598
- Butt weld ends per ASME 16.25

SWING CHECK VALVE CLASS 150/300/600



Internally Mounted Hinge

Materials

| Part no. | Part Name | WCB | WC6 | CF8 | CF8M |
|----------|---------------|------------------------------|--------------------------|-----------------|-------------|
| 1 | Body | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 2 | Cover | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 3 | Seat Ring | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 4 | Disc | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 5 | Disc Washer | 13Cr | 13Cr | AISI 304 | AISI 316 |
| 6 | Disc Nut | Stainless Steel | | | |
| 7 | Disc Nut Pin | Stainless Steel | | | |
| 8 | Hinge | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 9 | Hinge Pin | See trim material table | | | |
| 10 | Hinge Bracket | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 11 | Cover stud | A 193 B7 | A 193 B16 | A 193 B8 | A 193 B8 |
| 12 | Cover nut | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 13 | Gasket | Graphite+Stainless steel 304 | PTFE+Stainless steel 304 | | |
| 14 | Hex Bolt | Carbon steel | | Stainless steel | |
| 15 | Lock Washer | Carbon steel | | Stainless steel | |
| 16 | Eyebolt | Carbon steel | | Stainless steel | |
| 17 | Plug | Carbon steel | | Stainless steel | |
| 18 | Name plate | Stainless steel | | | |

Dimensions (Class 150)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Face to Face | 127 | 165 | 203 | 216 | 241 | 292 | -- | 356 | 495 | 622 | 699 | 787 | 864 |
| H | 105 | 140 | 156 | 180 | 188 | 116 | -- | 234 | 276 | 308 | 358 | 435 | 482 |

Dimensions (Class 300)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
|--------------|----|----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| Face to Face | -- | -- | 267 | -- | 318 | 356 | 445 | 533 | 622 | 711 | 838 | 864 |
| H | -- | -- | 165 | -- | 208 | 236 | 285 | 320 | 366 | 450 | 480 | 520 |

Dimensions (Class 600)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
|--------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Face to Face | -- | -- | 292 | 330 | 356 | 432 | 559 | 660 | 787 | 838 | 889 | 991 |
| H | -- | -- | 165 | 200 | 208 | 255 | 305 | 390 | 415 | 428 | 460 | 585 |

Trim Materials

| Part no. | Part name | Trim 1 | Trim 2 | Trim 5 | Trim 8 | Trim 10 |
|----------|-----------|-------------|-----------|-------------------|---------------|-----------|
| | | 13Cr / 13Cr | 304 / 304 | Stellite/Stellite | Stellite/13Cr | 316 / 316 |
| 4 | Disc Face | 13Cr | AISI 304 | Stellite | 13Cr | AISI 316 |
| 3 | Seat Face | 13Cr | AISI 304 | Stellite | Stellite | AISI 316 |
| 9 | Hinge Pin | 13Cr | AISI 304 | 13Cr | 13Cr | AISI 316 |

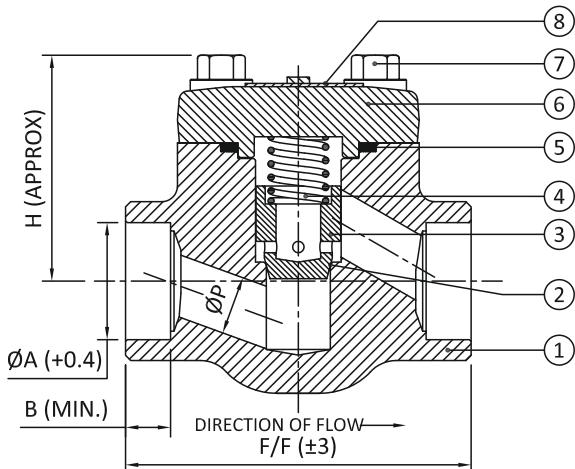
WHY "SWASTIK" CHECK VALVE?

- Bolted cover
- Internally mounted hinge
- Stainless steel / graphite packings
- Minimum pressure drop

DESIGN STD :-

- Check valve design : ISO 15761
- Face-to-face : Swastik STD. (screwed/socket-weld/butt-weld)
- End connection : ASME B 16.10 (Flanged)
- End connection : ASME B 1.20.1(NPT), BS 21/ISO 7 (screwed-taper)
- End connection : BS 2779/ISO 228, BS 21/ISO 7 (screwed-parallel)
- End connection : ASME B 16.5 RF 125-250 Ra (Flanged)
- Valve testing : API 598

CHECK VALVE CLASS 800



Materials

| Part no. | Part Name | Material |
|----------|-------------|---------------------------------|
| 1 | Body | ASTM A 105 |
| 2 | Seat ring | 13% Cr Integral |
| 3 | Plug | ASTM A 276 Type SS-410 |
| 4 | Spring | ASTM A 313 Type SS-410 |
| 5 | Gasket | S.S 304 Spiral wounded+graphite |
| 6 | Check plate | ASTM A 105 |
| 7 | Hex bolt | ASTM A 193 Gr. B7 |
| 8 | Name plate | Stainless steel |

Dimensions (Class 150)

| Size (NB) | 15 | 20 | 25 | 40 | 50 |
|--------------|------|------|------|------|------|
| Face to Face | 73 | 80 | 100 | 145 | 160 |
| ØP | 9.5 | 12.7 | 17.5 | 28.6 | 36.5 |
| ØA | 21.8 | 27.2 | 33.9 | 48.8 | 61.2 |
| B | 9.5 | 12.5 | 12.5 | 12.5 | 16.0 |

WHY "SWASTIK" CHECK VALVE?

- Bolted Check plate
- Standard port
- Graphite packing
- Stainless steel/graphite gaskets
- Pressure and Temp. rating : ASME B 16.34

Test Requirement

| Test | Medium | Class 800 | Time |
|-------|--------------------|-----------|------|
| | Kg/cm ² | Sec. | |
| Shell | Water | 211 | 15 |
| Seat | Water | 153 | 15 |

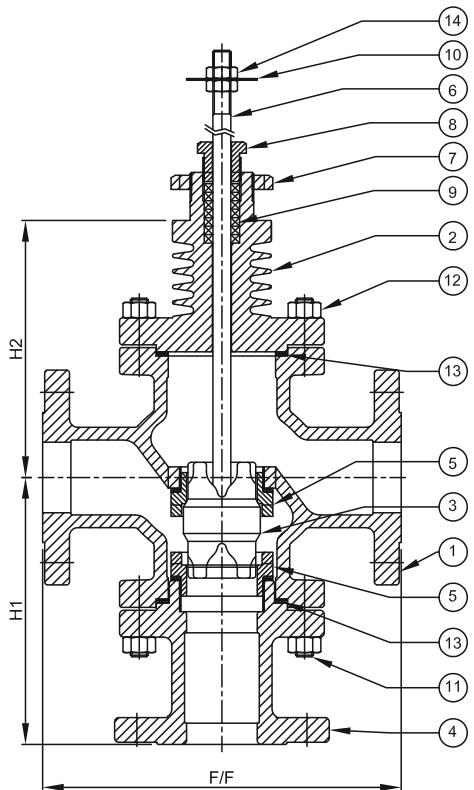


CONTROL VALVE



CONTROL VALVE CLASS 150

3 WAY TYPE



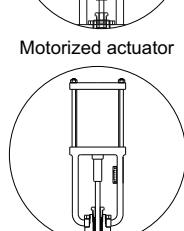
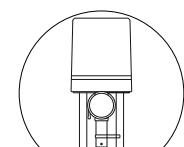
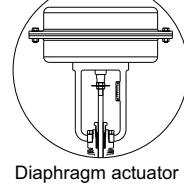
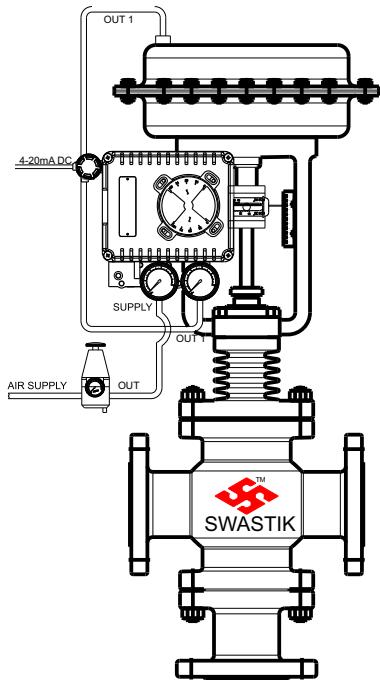
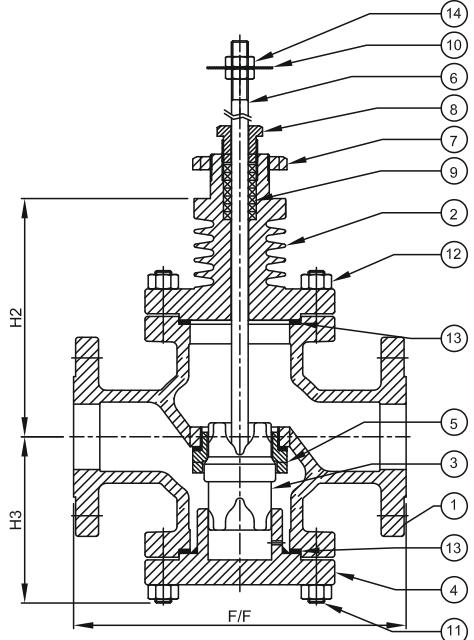
Materials

| Part no. | Part Name | WCB | WC6 | CF8 | CF8M |
|----------|---------------|---|---------------|-----------------|-----------------|
| 1 | Body | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 2 | Bonnet | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 3 | Plug | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 4 | Tail piece | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 5 | Seat ring | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 6 | Stem | A 479 Type410 | A 479 Type410 | A 479 Type304 | A 479 Type316 |
| 7 | Lock nut | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 8 | Gland nut | A 479 Type410 | A 479 Type410 | A 479 Type304 | A 479 Type316 |
| 9 | Gland packing | Graphite | Graphite | V Cut PTFE | V Cut PTFE |
| 10 | Indic. Washer | Carbon steel | | Stainless steel | |
| 11 | Body stud | A 193 B7 | A 193 B16 | A 193 B8 | A 193 B8 |
| 12 | Body nut | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 13 | Gasket | S.S Spiral wound with PTFE / Graphite fillers | | | |
| 14 | Stem lock nut | Carbon steel | | Stainless steel | |
| 15 | Name plate | Stainless steel | | | |

Dimensions (Class 150)

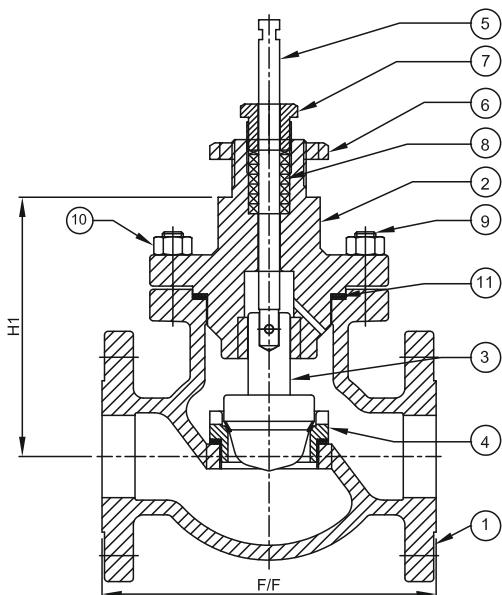
| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Face to Face | 184 | 222 | 254 | 276 | 298 | 352 | 356 | 406 | 495 | 622 | 698 | |
| H1 | 133 | 178 | 189 | 207 | 219 | 285 | 280 | 288 | 347 | -- | -- | |
| H2 | 133 | 173 | 182 | 205 | 215 | 344 | 353 | 367 | 384 | -- | -- | |
| H3 | 95 | 115 | 130 | 140 | 150 | 185 | -- | -- | -- | -- | -- | |

2 WAY TYPE



CONTROL VALVE CLASS 150/300

2 WAY GLOBE TYPE



Materials

| Part no. | Part Name | WCB | WC6 | CF8 | CF8M |
|----------|---------------|---|---------------|-----------------|-----------------|
| 1 | Body | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 2 | Std. bonnet | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 3 | Plug | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 4 | Seat ring | A 217 CA15 | A 217 CA15 | A 351 CF8 | A 351 CF8M |
| 5 | Stem | A 479 Type410 | A 479 Type410 | A 479 Type304 | A 479 Type316 |
| 6 | Lock nut | Carbon steel | Carbon steel | Stainless steel | Stainless steel |
| 7 | Gland nut | A 479 Type410 | A 479 Type410 | A 479 Type304 | A 479 Type316 |
| 8 | Gland packing | Graphite | Graphite | V Cut PTFE | V Cut PTFE |
| 9 | Body stud | A 193 B7 | A 193 B16 | A 193 B8 | A 193 B8 |
| 10 | Body nut | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 11 | Gasket | S.S Spiral wound with PTFE / Graphite fillers | | | |
| 12 | Name plate | Stainless steel | | | |

Dimensions (Class 150)

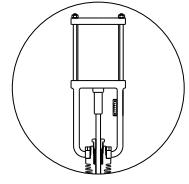
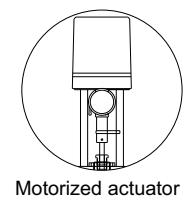
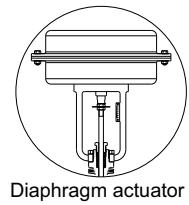
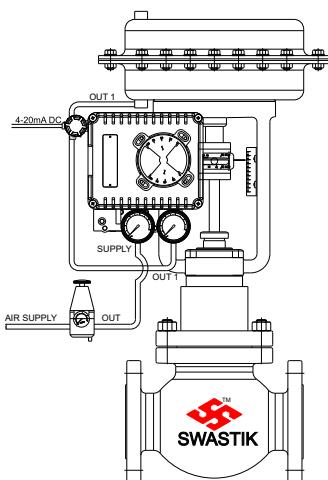
| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Face to Face | 127 | 165 | 203 | 216 | 241 | 292 | 356 | 406 | 495 | 622 | 698 | |
| H1 | 110 | 145 | 160 | 175 | 200 | 235 | 240 | 250 | 310 | 350 | 475 | |

Dimensions (Class 300)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | |
|--------------|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|--|
| Face to Face | 197 | 235 | 267 | -- | 318 | 368 | 473 | 568 | 708 | 775 | |
| H1 | 125 | 145 | 160 | -- | 200 | 235 | 285 | 345 | 375 | 515 | |

LET US KNOW IN ALL ENQUIRIES

- Valve type
- ANSI Pressure class
- Size
- Design pressure
- Design temperature
- Differential pressure-shut off
- Flow medium
- Material of construction
- Trim material
- Type of end connection
- Pipe schedule



CONTROL VALVE CLASS 150/300



Test Requirement

| Test | Medium | Class 150 | | Class 300 | | Class 600 | |
|-----------|--------|-----------|-----|-----------|-----|-----------|-----|
| | | psi | bar | psi | bar | psi | bar |
| Shell | Water | 450 | 32 | 1125 | 78 | 2225 | 153 |
| Back seat | Water | 315 | 23 | 815 | 56 | 1630 | 112 |
| Seat | Water | 315 | 23 | 815 | 56 | 1630 | 112 |
| Seat | Air | 60-100 | 4-7 | 60-100 | 4-7 | 60-100 | 4-7 |

Trim Materials

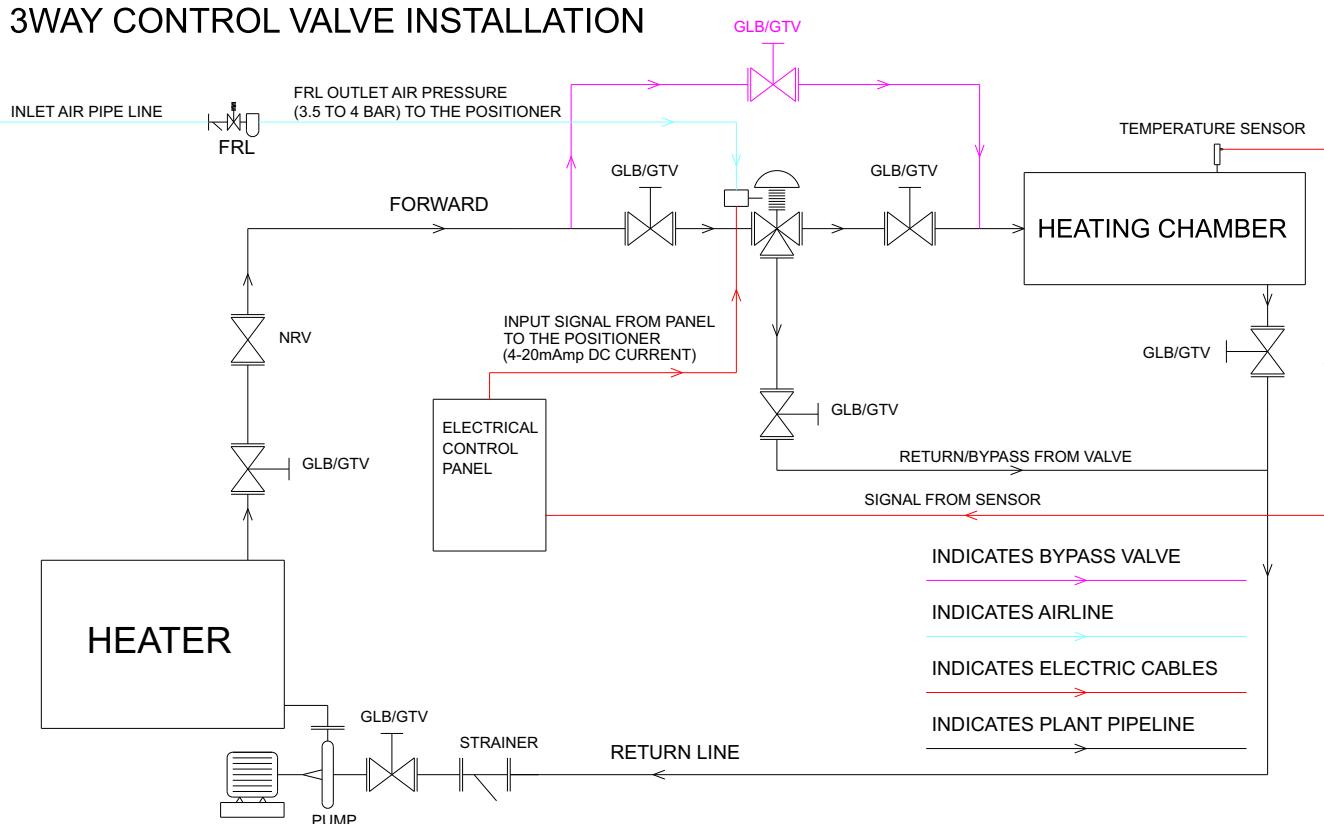
| Part no. | Part name | Trim 1 | Trim 2 | Trim 5 | Trim 8 | Trim 10 |
|----------|----------------|-------------|-----------|-------------------|---------------|-----------|
| | | 13Cr / 13Cr | 304 / 304 | Stellit./Stellite | Stellite/13Cr | 316 / 316 |
| 3 | Plug Face | 13Cr | AISI 304 | Stellite | 13Cr | AISI 316 |
| 5 | Seat Ring Face | 13Cr | AISI 304 | Stellite | Stellite | AISI 316 |
| 6 | Stem | 13Cr | AISI 304 | 13Cr | 13Cr | AISI 316 |
| 7 | Guide | 13Cr | AISI 304 | 13Cr | 13Cr | AISI 316 |

Flow characteristics : Standard trim linear, Equal percentage, On-off
Modified equal percentage available on request

Rangeability : 30:1 Standard (50:1 or higher available on request)

Leakage rates : As per ANSI / FCI 70-2

3WAY CONTROL VALVE INSTALLATION





SPECIAL ASSEMBLIES AND PRESSURE REDUCING VALVES



PRESSURE REDUCING STATION



1. MOISTURE SEPARATOR WITH TRAP ASSEMBLY

2. INLET PRESSURE GAUGE

3. STOP VALVE

4. STRAINER

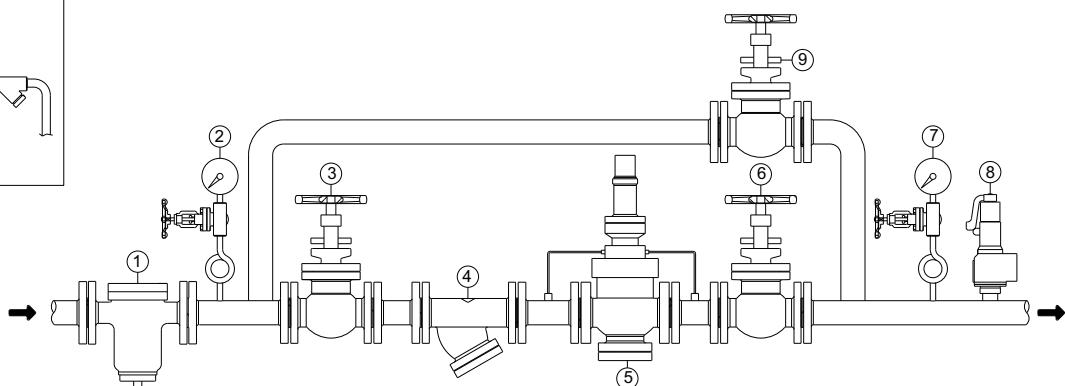
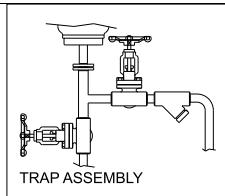
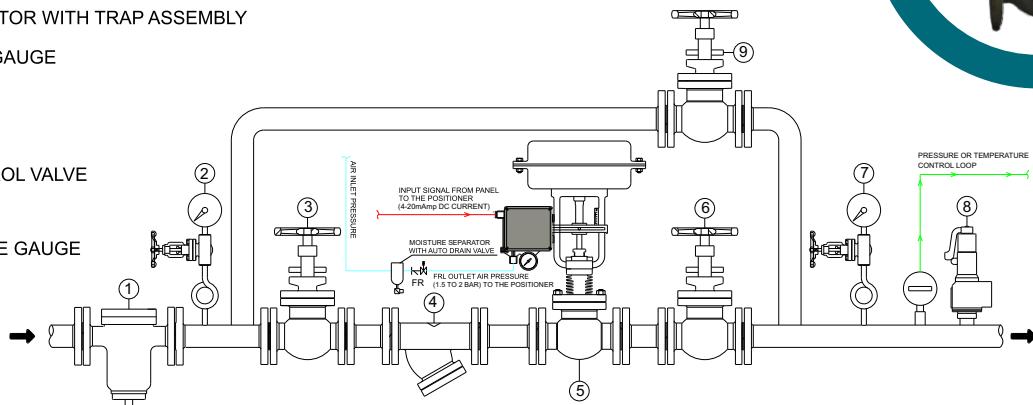
5. PRESSURE CONTROL VALVE

6. STOP VALVE

7. OUTLET PRESSURE GAUGE

8. SAFETY VALVE

9. BYPASS VALVE



PRS SIZE RANGES :

INLET / OUTLET SIZE : 25NB TO 300NB

END CONNECTION :

FLANGED END #150 / #300 AS PER ASME B16.5

HIGHER PRESSURE CLASS ALSO AVAILABLE

REQUIRED PRS SIZING TECHNICAL DETAILS :

INLET PRESSURE : MAX. & MIN. PRESSURE IN KG/CM²(G) / BAR(G) / PSIG

OUTLET PRESSURE : MAX. & MIN. PRESSURE IN KG/CM²(G) / BAR(G) / PSIG

FLOW RATE : MAX. & MIN. FLOW IN KG/HR / LBS/HR / M³/HR

PRS SIZE EXAMPLE : 80 NB X 50 NB X 100 NB
(INLET) (PRV) (OUTLET)

OPTIONAL :

IBR / NON-IBR

PRESSURE CONTROLLER ELE.-PANEL

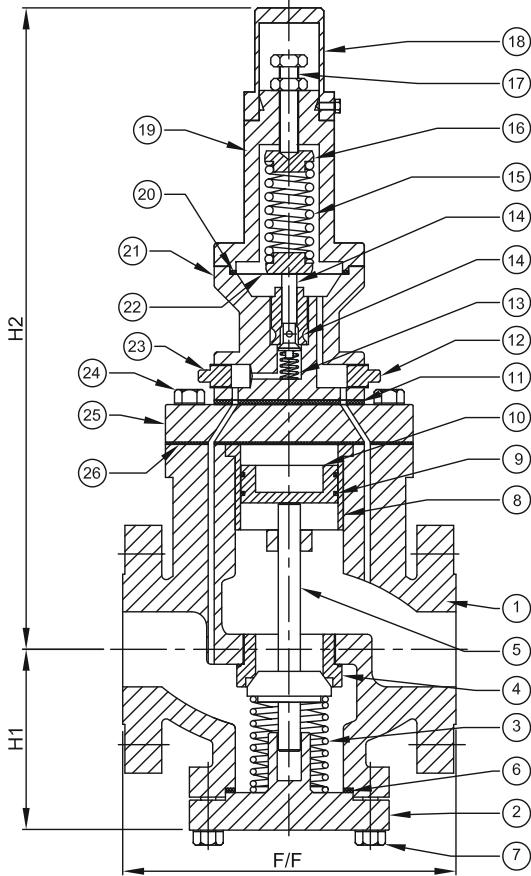
PRESSURE TRANSMITTER



DESIGN STD :-

- Cast steel pilot operated PRV suitable for steam, air and proceed gas
- Size : 25NB to 100NB
- Flanged connection : ANSI 150#
- Available on request : BS 10 Table H
- Maximum working pressure : 10.54 Kg/cm² at 180 °C
- Body cold hydraulic test pressure : 32 Kg/cm²
- Soft sealing for compressed air and industrial gas. Maximum temperature 120 °C

PILOT OPERATED PRESSURE REDUCING VALVE



Materials

| Part no. | Part Name | Material | Standard |
|----------|-------------------|------------------|-----------------------------|
| 1 | Body | Cast steel | ASTM A 216 WCB |
| 2 | Bottom plate | Cast steel | ASTM A 216 WCB |
| 3 | Return spring | Spring steel | IS 4454 Part IV Gr.1 |
| 4 | Seat | SS Type 304 | ASTM A 276 |
| 5 | Main plug | SS Type 304 | ASTM A 276 |
| 6 | Bo. plate gasket | Graphite | |
| 7 | Stud nut | Carbon steel | H.T. IS 1367 Gr. 8.8, Gr. 8 |
| 8 | Sleeve | SS Type 304 | ASTM A 351 CF8 |
| 9 | Piston ring | Hard chrome iron | |
| 10 | Piston | SS Type 304 | ASTM A 276 |
| 11 | To. plate gasket | Graphite | |
| 12 | BP Port plug | Carbon steel | ASTM A 105 |
| 13 | Pil. valve spring | Spring steel | IS 4454 Part IV Gr.1 |
| 14 | Pilot valve | SS Type 304 | ASTM A 276 |
| 15 | Adjusting spring | Spring steel | IS 4454 Part IV Gr.1 |
| 16 | Spring washer | SS Type 304 | ASTM A 276 |
| 17 | Adjusting screw | Carbon steel | H.T. IS 1367 Gr. 8.8, Gr. 8 |
| 18 | Cap | Cast steel | ASTM A 216 WCB |
| 19 | Spring housing | Cast steel | ASTM A 216 WCB |
| 20 | Pilot hou.gasket | Graphite | |
| 21 | Pilot housing | Cast steel | ASTM A 216 WCB |
| 22 | Diaphragm | SS Type 304 | ASTM A 240 |
| 23 | HP Port plug | Carbon steel | ASTM A 105 |
| 24 | Stud nut | Carbon steel | H.T. IS 1367 Gr. 8.8, Gr. 8 |
| 25 | Top plate | Cast steel | ASTM A 216 WCB |
| 26 | Body gasket | Graphite | |

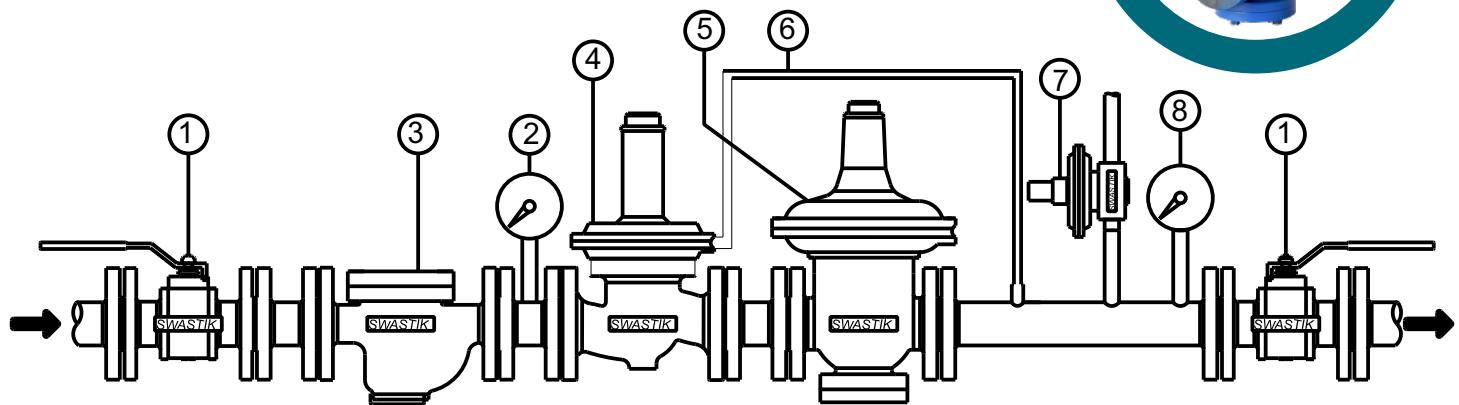
Dimensions Class 150 / Table H

| Valve size (NB) | 25 | 40 | 50 | 80 | 100 |
|-----------------|-----|-----|-----|-----|-----|
| FACE TO FACE | 200 | 208 | 220 | 320 | 363 |
| H1 | 90 | 120 | 140 | 165 | 160 |
| H2 | 365 | 400 | 425 | 445 | 480 |

ORDERING INFORMATION

- Operating medium
- Medium state - Gas
- Molecular weight - Gas - density
- Set pressure
- Discharge temperature
- Discharge Flow rate
- Inlet size and rating
- Pipe / Vessel material
- Valve outlet connection details

GAS SKID LAYOUT



1. BALL VALVE

2. INLET PRESSURE GAUGE

3. FILTER

4. SAFETY SHUT OFF VALVE

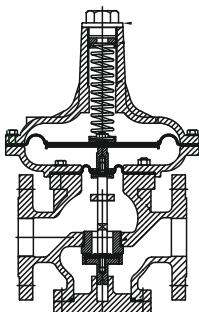
5. GAS REGULATOR

6. IMPULSE LINE TO SSV

7. SAFETY RELIEF VALVE

8. OUTLET PRESSURE GAUGE

GAS REGULATOR



GAS SKID SIZE RANGES :

INLET / OUTLET SIZE : 25NB TO 100NB

END CONNECTION : FLANGED END #150 AS PER ASME B16.5

OPTIONAL :

ROTARY ACTUATED BALL VALVE

PRESSURE SWITCH

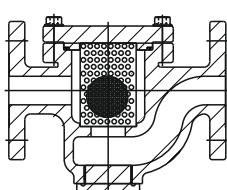
LOW PRESSURE SAFETY RELIEF VALVE (CRV)

NITROGEN BLANKETING SKID

PRESSURE TRANSMITTER

SLAM SHUT OFF VALVE

FILTER



REQUIRED GAS SKID SIZING TECHNICAL DETAILERS

INLET PRESSURE : MAX. & MIN. (UNIT OF PRESSURE : KG/CM²(G) / BAR(G) / PSIG)

OUTLET PRESSURE : MAX. & MIN. (UNIT OF PRESSURE : KG/CM²(G) / BAR(G) / PSIG)

FLOW RATE : MAX. & MIN. (UNIT OF FLOW : KG/HR / LBS/HR / M³/HR)

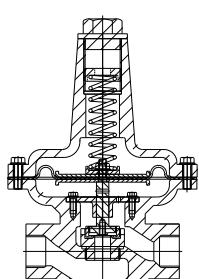
FLUID STATE : GAS / VAPOR

FLUID TEMPERATURE : MAX. & MIN. (UNIT OF TEMPERATURE : °C / °F)

PIPE LINE : SIZE / SCHEDULED

GAS SKID APPLICATION

SAFETY RELIEF VALVE



GAS SKID SIZE EXAMPLE : 80 NB X 50 NB X 100 NB
(INLET) (PRV) (OUTLET)



SWASTIK

BALL VALVES



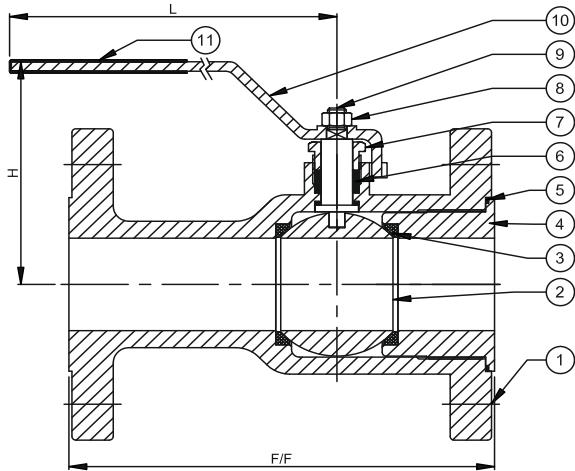
DESIGN STD :-

- Ball valve design : BS 5351
- End-end Dimension : ASME B16.10
- Flange dimensions : ASME B16.5
- Testing : API 598 / BS 5146
- Butt weld ends : ASME 16.25

BALL VALVE CLASS 150



Full bore single piece flanged end design



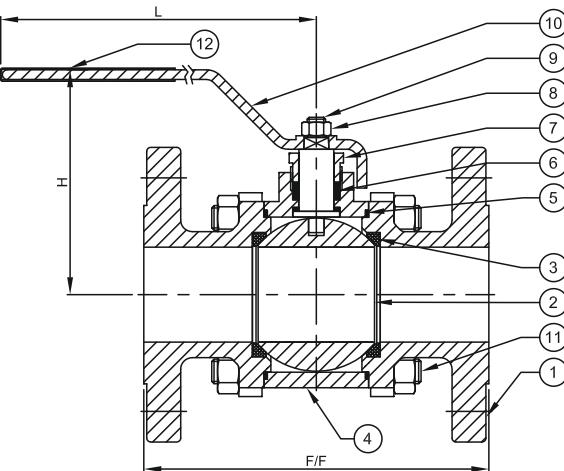
Materials

| Part no. | Part Name | WCB | CF8 | CF8M |
|----------|---------------|---|-----------|------------|
| 1 | Body | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 2 | Ball | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 3 | Seat ring | Virgin PTFE / Glass PTFE / Carbon PTFE | | |
| 4 | End nut | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 5 | Body ring | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 6 | Gland packing | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 7 | Gland nut | AISI 304 | | AISI 316 |
| 8 | Stem nut | Stainless steel | | |
| 9 | Stem | A 351 CF8 | | A 351 CF8M |
| 10 | Handle | A 217 CA15 | | |
| 11 | Sleeve | Plastic | | |
| 12 | Name plate | Stainless steel / Optional | | |

Dimensions (Class 150)

| Size (NB) | 15 | 20 | 25 | 40 | 50 | 65 | 80 | 100 | 150 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Face to Face | 108 | 118 | 127 | 165 | 178 | 190 | 203 | 229 | |
| H | 64 | 68 | 85 | 107 | 115 | 127 | 136 | 162 | |
| L | 140 | 140 | 160 | 206 | 206 | 304 | 304 | 344 | |

Full bore three piece flanged end design



Materials

| Part no. | Part Name | WCB | CF8 | CF8M |
|----------|---------------|---|-----------|------------|
| 1 | Adaptor | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 2 | Ball | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 3 | Seat ring | Virgin PTFE / Glass PTFE / Carbon PTFE | | |
| 4 | Body | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 5 | Body ring | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 6 | Gland packing | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 7 | Gland nut | AISI 304 | | AISI 316 |
| 8 | Stem nut | Stainless steel | | |
| 9 | Stem | A 351 CF8 | | A 351 CF8M |
| 10 | Handle | A 217 CA15 | | |
| 11 | Stud nut | Stainless steel | | |
| 12 | Sleeve | Plastic | | |
| 13 | Name plate | Stainless steel / Optional | | |

Dimensions (Class 150)

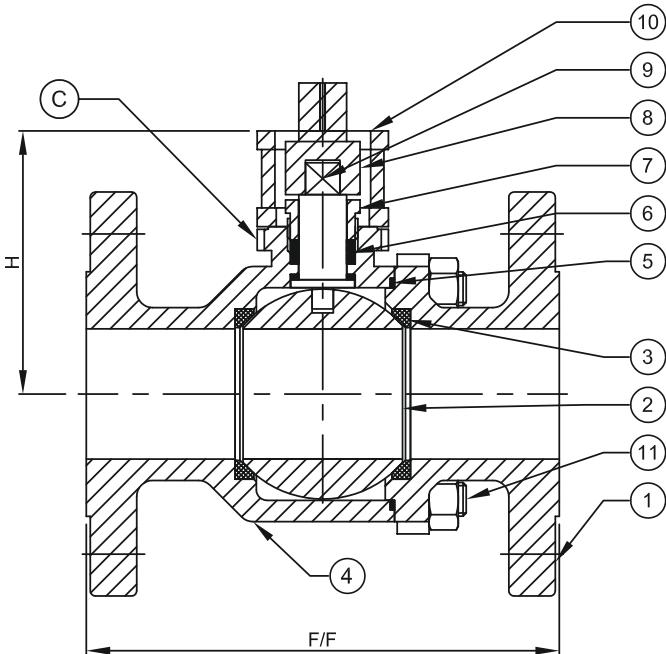
| Size (NB) | 15 | 20 | 25 | 40 | 50 | 65 | 80 | 100 | 150 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Face to Face | 108 | 118 | 127 | 165 | 178 | 190 | 203 | 229 | 267 |
| H | 64 | 68 | 85 | 107 | 115 | 127 | 136 | 162 | 260 |
| L | 140 | 140 | 160 | 206 | 206 | 304 | 304 | 344 | 450 |

DESIGN STD :-

- Ball valve design : BS 5351
- End-end Dimension : ASME B16.10
- Flange dimensions : ASME B16.5
- Testing : API 598 / BS 5146
- Butt weld ends : ASME 16.25

BALL VALVE CLASS 150

Full bore two piece flanged end design



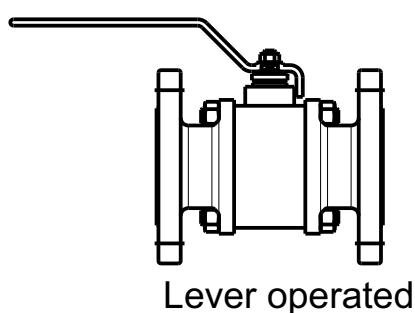
Materials

| Part no. | Part Name | WCB | CF8 | CF8M |
|----------|---------------|---|-----------|------------|
| 1 | Adopter | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 2 | Ball | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 3 | Seat ring | Virgin PTFE / Glass PTFE / Carbon PTFE | | |
| 4 | Body | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 5 | Body ring | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 6 | Gland packing | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 7 | Gland nut | AISI 304 | AISI 316 | |
| 8 | Stem joint | Stainless steel | | |
| 9 | Stem | A 351 CF8 | | A 351 CF8M |
| 10 | Stand | A 217 CA15 | | |
| 11 | Stud nut | Stainless steel | | |
| 12 | Name plate | Stainless steel / Optional | | |

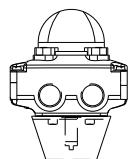
Dimensions (Class 150)

| Size (NB) | 15 | 20 | 25 | 40 | 50 | 65 | 80 | 100 | 150 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Face to Face | 108 | 118 | 127 | 165 | 178 | 190 | 203 | 229 | 267 |
| H | 64 | 68 | 85 | 107 | 115 | 127 | 136 | 162 | 260 |
| L | 140 | 140 | 160 | 206 | 206 | 304 | 304 | 344 | 450 |

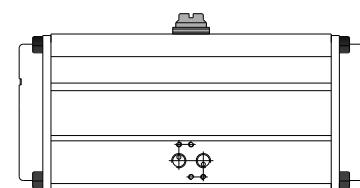
Valve Operation :



Lever operated



Switch box



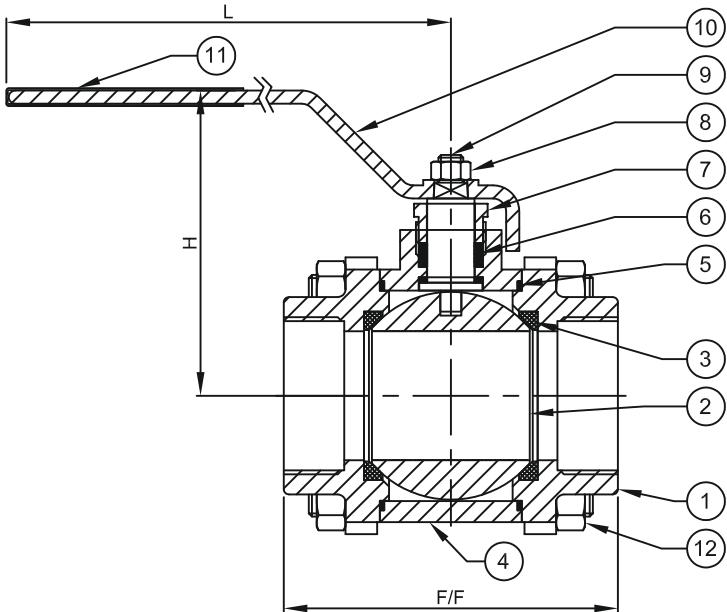
Actuator operated

DESIGN STD :-

- Ball valve design : BS 5351
- End-end Dimension : Manufacturing standard
- End connection : BSP / NPT / Socket weld
- Testing : API 598 / BS 5146

BALL VALVE

Full bore three piece screw end design



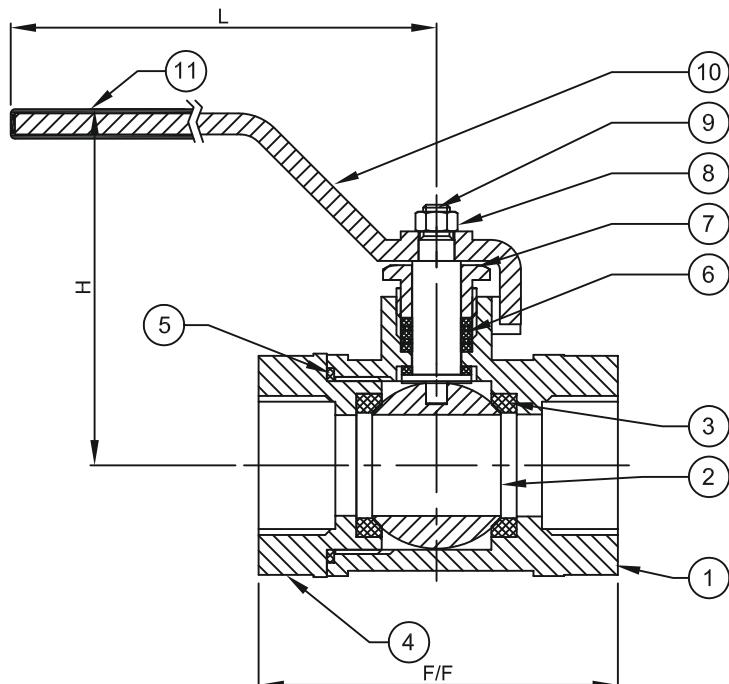
Materials

| Part no. | Part Name | WCB | CF8 | CF8M |
|----------|---------------|---|-----------|------------|
| 1 | Connector | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 2 | Ball | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 3 | Seat ring | Virgin PTFE / Glass PTFE / Carbon PTFE | | |
| 4 | Body | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 5 | Body ring | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 6 | Gland packing | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 7 | Gland nut | AISI 304 | | AISI 316 |
| 8 | Stem nut | Stainless steel | | |
| 9 | Stem | A 351 CF8 | | A 351 CF8M |
| 10 | Handle | A 217 CA15 | | |
| 11 | Sleeve | Plastic | | |
| 12 | Stud nut | Stainless steel | | |
| 13 | Name plate | Stainless steel / Optional | | |

Dimensions

| Size (NB) | 15 | 20 | 25 | 40 | 50 |
|--------------|-----|-----|-----|-----|-----|
| Face to Face | 72 | 80 | 96 | 116 | 127 |
| H | 64 | 68 | 85 | 107 | 115 |
| L | 140 | 140 | 160 | 206 | 206 |

Full bore single piece screw end design



Materials

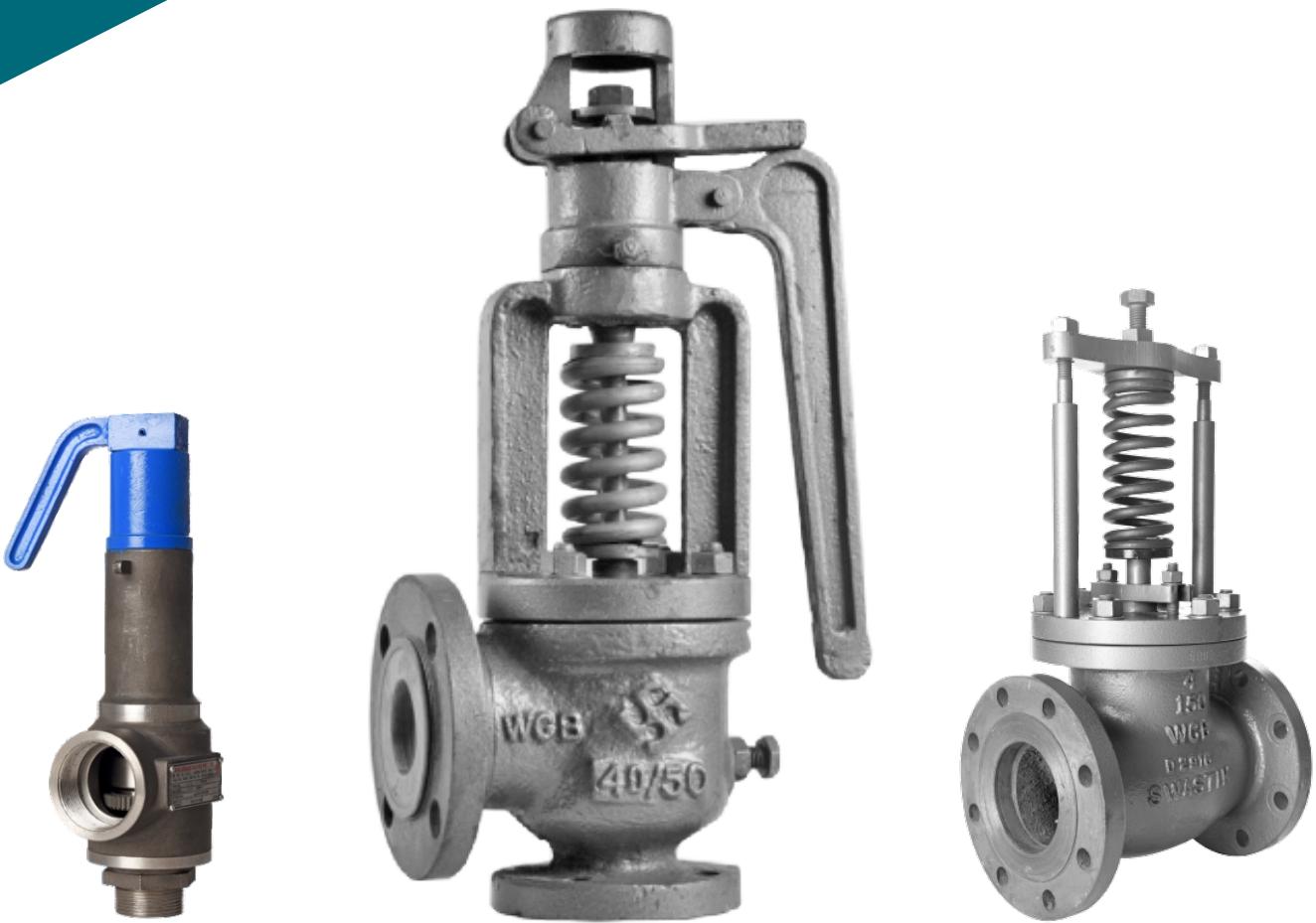
| Part no. | Part Name | WCB | CF8 | CF8M |
|----------|---------------|---|-----------|------------|
| 1 | Body | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 2 | Ball | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 3 | Seat ring | Virgin PTFE / Glass PTFE / Carbon PTFE | | |
| 4 | End nut | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 5 | Body ring | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 6 | Gland packing | Virgin PTFE / Carbon filled PTFE / Graphite | | |
| 7 | Gland nut | AISI 304 | | AISI 316 |
| 8 | Stem nut | Stainless steel | | |
| 9 | Stem | A 351 CF8 | | A 351 CF8M |
| 10 | Handle | A 217 CA15 | | |
| 11 | Sleeve | Plastic | | |
| 12 | Name plate | Stainless steel / Optional | | |

Dimensions

| Size (NB) | 15 | 20 | 25 | 40 | 50 |
|--------------|-----|-----|-----|-----|-----|
| Face to Face | 65 | 76 | 85 | 114 | 125 |
| H | 59 | 70 | 80 | 91 | 107 |
| L | 140 | 140 | 160 | 206 | 206 |



SAFETY RELIEF VALVES



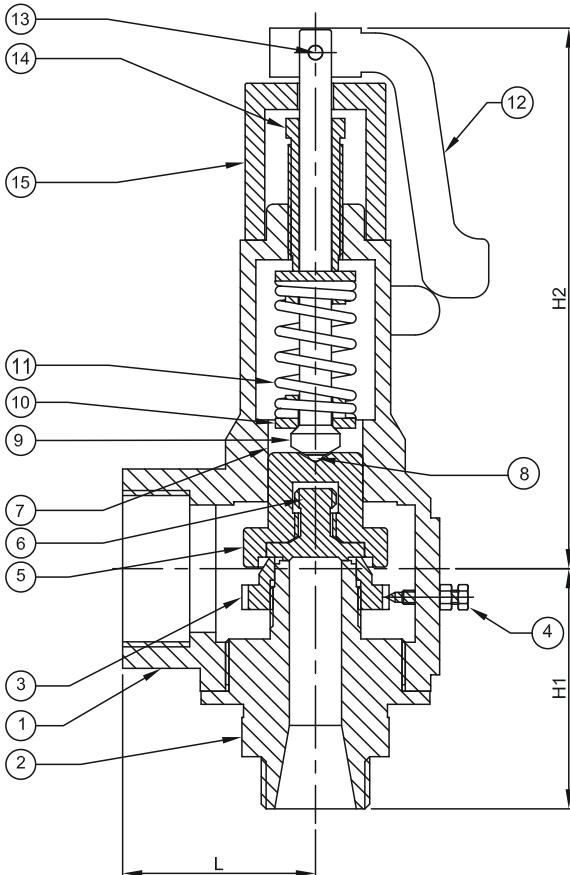
DESIGN STD :-

- End connection
- Set pressure range
- Testing

: screwed BSP / NPT
: 01 to 25 Kg/cm²
: API 527

FEATURES

- Standard metal sealing
- Soft seat as option
- Material like duplex, super duplex, monel, hastelloy and inconel
- Standard open bonnet
- Closed bonnet option

SAFETY VALVE**Materials**

| Part no. | Part Name | WCB | CF8 | CF8M |
|----------|-----------------|-----------------|-----------------|-----------------|
| 1 | Body | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 2 | Nozzle | A 479 Type304 | A 351 CF8 | A 351 CF8M |
| 3 | Nozzle ring | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 4 | Lock nut | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 5 | Disc holder | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 6 | Disc | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 7 | Guide | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 8 | Ball | Stainless steel | Stainless steel | Stainless steel |
| 9 | Stem | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 10 | Spring washer | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 11 | Spring | Spring steel | Stainless steel | Stainless steel |
| 12 | Lever | SG Iron | | |
| 13 | Dowel pin | Carbon steel | | |
| 14 | Adjusting screw | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 15 | Cap | SG Iron | | |
| 16 | Name plate | Stainless steel | | |

Dimensions

| Valve size (NB) | 15x25 | 25x40 | 40x50 |
|-----------------|-------|-------|-------|
| H1 | 66 | 74 | 94 |
| H2 | 108 | 165 | 245 |
| L | 44 | 59 | 73 |

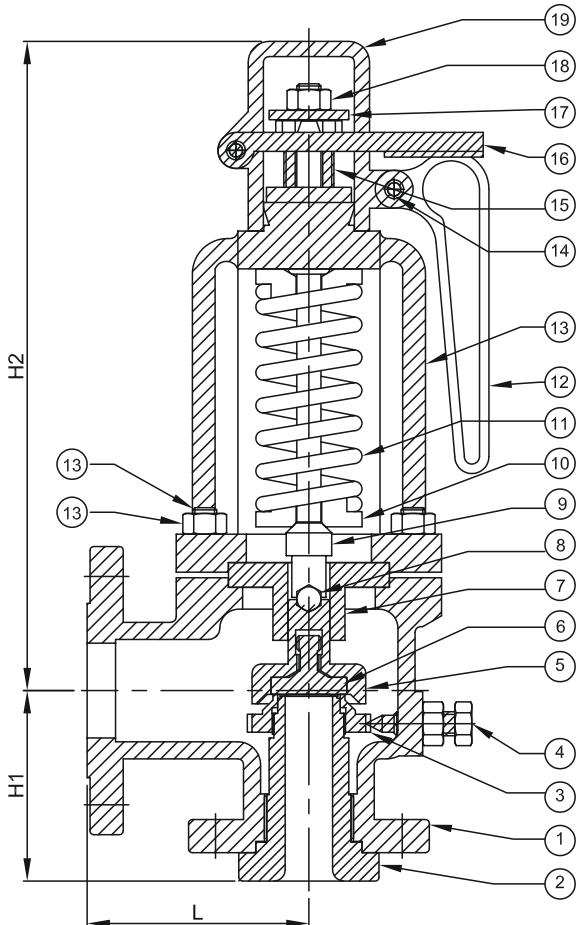
ORDERING INFORMATION

- Operating medium
- Medium state - Liquid / Gas
- Molecular weight - Gas / Liquid - density
- Set pressure
- Discharge temperature
- Discharge Capacity
- Inlet size and rating
- Pipe / Vessel material
- Valve outlet connection details

DESIGN STD :-

- Safety valve design : API 526
- Flange dimensions : ASME B16.5
- Testing : API 527
- Bolted bonnet
- Set pressure : 01 to 80 Kg/cm²

SAFETY VALVE



Materials

| Part no. | Part Name | WCB | CF8 | CF8M |
|----------|-----------------|-----------------|-----------------|-----------------|
| 1 | Body | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 2 | Nozzle | A 479 Type304 | A 351 CF8 | A 351 CF8M |
| 3 | Nozzle ring | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 4 | Lock nut | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 5 | Disc holder | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 6 | Disc | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 7 | Guide | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 8 | Ball | Stainless steel | Stainless steel | Stainless steel |
| 9 | Stem | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 10 | Spring washer | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 11 | Spring | Spring steel | Stainless steel | Stainless steel |
| 12 | Lever | SG Iron | | |
| 13 | Bonnet | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 14 | Lever pin | Stainless steel | | |
| 15 | Adjusting screw | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 16 | Fork | SG Iron | | |
| 17 | Stem washer | Stainless steel | | |
| 18 | Stem nut | Stainless steel | | |
| 19 | Cap | SG Iron | | |
| 20 | Body stud | A 193 B7 | A 193 B8 | A 193 B8 |
| 21 | Body nut | A 194 2H | A 194 Gr. 8 | A 194 Gr. 8 |
| 22 | Name plate | Stainless steel | | |

Dimensions

| Valve size (NB) | 25x50 | 40x50 | 50x80 | 80x100 |
|-----------------|-------|-------|-------|--------|
| H1 | 93 | 100 | 125 | 163 |
| H2 | 316 | 343 | 424 | 445 |
| L | 101 | 117 | 133 | 166 |

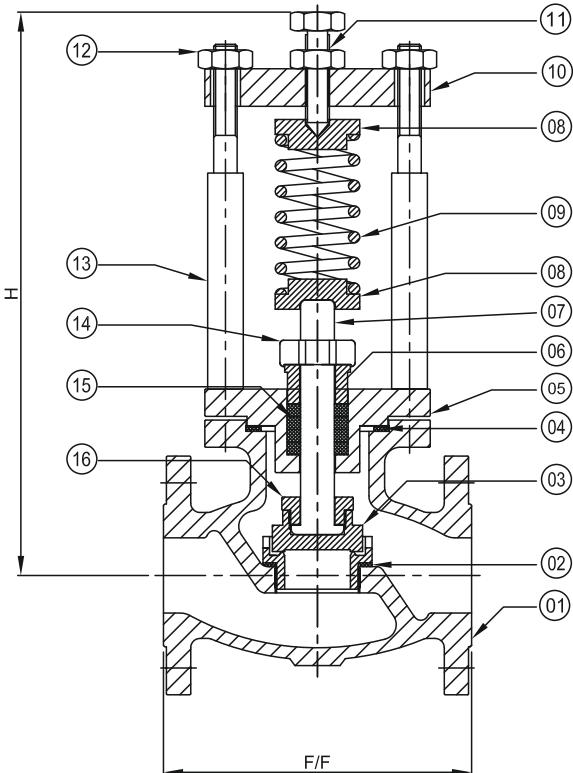
WHY SWASTIK SAFETY VALVE?

- Standard metal sealing
- Soft seat as option
- Material like duplex, super duplex, monel, hastelloy and inconel
- Standard open bonnet
- Closed bonnet option

DESIGN STD :-

- Safety valve design : manufacturer standard
- Flange dimensions : ASME B16.5
- Testing : manufacturer standard
- Bolted cover
- Set pressure : 01 to 05 Kg/cm²

GLOBE TYPE SAFETY VALVE



Materials

| Part no. | Part Name | WCB | CF8 | CF8M |
|----------|---------------|---|-----------------|-----------------|
| 1 | Body | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 2 | Seat | A 351 CF8 | A 351 CF8 | A 351 CF8M |
| 3 | Disc | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 4 | Gasket | S.S Spiral wound with PTFE / Graphite fillers | | |
| 5 | Bonnet | A 216 WCB | A 351 CF8 | A 351 CF8M |
| 6 | Gland bush | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 7 | Stem | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 8 | Spring washer | Carbon steel | Stainless steel | Stainless steel |
| 9 | Spring | Spring steel | Stainless steel | Stainless steel |
| 10 | Top plate | Carbon steel | Stainless steel | Stainless steel |
| 11 | Setting screw | Carbon steel | Stainless steel | Stainless steel |
| 12 | Stud nut | Carbon steel | Stainless steel | Stainless steel |
| 13 | Stud | Carbon steel | Stainless steel | Stainless steel |
| 14 | Gland plate | A 105 | A 351 CF8 | A 351 CF8M |
| 15 | Gland | Graphite | PTFE | PTFE |
| 16 | Disc nut | A 479 Type304 | A 479 Type304 | A 479 Type316 |
| 17 | Name plate | Stainless steel | | |

Dimensions

| Valve size (NB) | 25 | 40 | 50 | 80 | 100 |
|-----------------|-----|-----|-----|-----|-----|
| FACE to FACE | 127 | 165 | 203 | 241 | 292 |
| H | 280 | 307 | 388 | 419 | 468 |

WHY "SWASTIK" GLOBE SAFETY VALVE?

- Soft seat as option
- Material like duplex, super duplex, monel, hastelloy and inconel
- Standard open bonnet
- Closed bonnet option
- Standard metal sealing

ORDERING INFORMATION

- Operating medium
- Medium state - Liquid
- Molecular weight - Liquid - density
- Set pressure
- Discharge temperature
- Discharge Capacity
- Inlet size and rating
- Pipe / Vessel material
- Valve outlet connection details



STRAINERS - FILTERS AND FLUSH BOTTOM VALVES



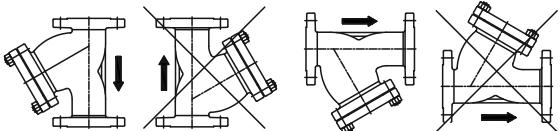
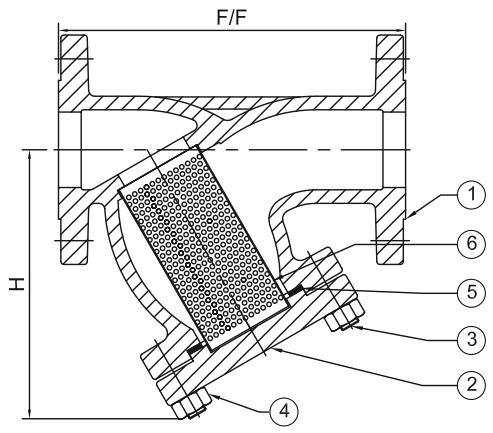
DESIGN STD :-

- Pressure/temperature rating : ASME B16.34
- End-end Dimension : manufacturer standard
- Flange dimensions : ASME B16.5
- Testing : API 598
- Butt weld ends : ASME 16.25
- Bolted cover

OPTIONAL SPECIAL FEATURES

- Screen : Double layers
- Drain : Any combinations of nipples, flanges, valves and plug
- Vent : Optional connection
- DP Gauge : Optional connections

STRAINERS Y TYPE CLASS 150



Installation

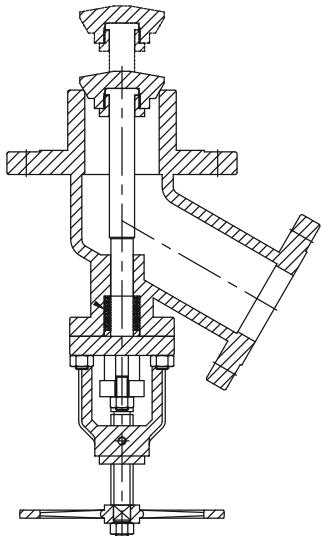
Materials

| Part no. | Part Name | WCB | WC6 | CF8 | CF8M |
|----------|------------|------------------------------|--------------------------|-------------|-------------|
| 1 | Body | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 2 | Cover | A 216 WCB | A 217 WC6 | A 351 CF8 | A 351 CF8M |
| 3 | Cover stud | A 193 B7 | A 193 B16 | A 193 B8 | A 193 B8 |
| 4 | Cover nut | A 194 2H | A 194 Gr. 4 | A 194 Gr. 8 | A 194 Gr. 8 |
| 5 | Gasket | Graphite+Stainless steel 304 | PTFE+Stainless steel 304 | | |
| 6 | Screen | AISI 304 | | | AISI 316 |
| 7 | Name plate | Stainless steel | | | |

Dimensions (Class 150)

| Size (NB) | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Face to Face | 155 | 200 | 235 | 270 | 290 | 350 | 385 | 440 | 600 | 734 | 800 |
| H | 125 | 150 | 170 | 200 | 210 | 287 | 295 | 320 | 420 | 510 | 625 |

Y- TYPE FLUSH BOTTOM VALVE

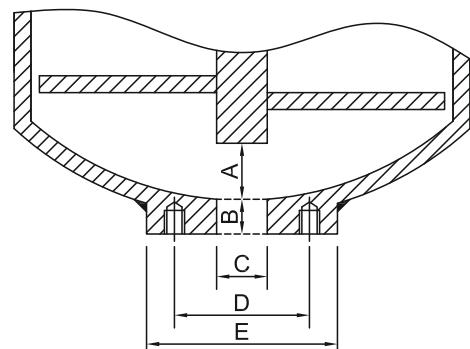


DESIGN

- End connection ASME B 16.5 / DIN2501 / BS 10
- Pressure/temperature rating per ASME B16.34
- Testing per API 598
- Bolted bonnet
- Outside screw and yoke

FEATURES

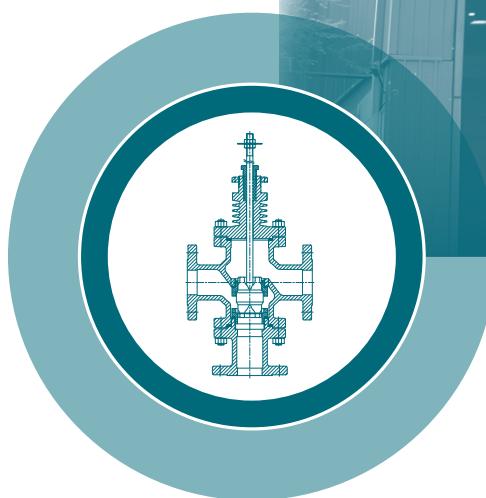
- Standard plug rising to open
- Plug lowering to open option
- Heating Jacket
- Cylinder actuator operated



REQUIRED DIMENSION

- A - Stirrer height
- B - Pad thickness
- C - Pad inside diameter
- D - Pad PCD and No of holes
- E - Pad out side diameter

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