

Neles™ 3-way globe valves Series GW

Neles™ series GW, 3-way top and bottom seat guided globe valves are high performance control valves with the all inherent benefits of linear control valves. The primary application is temperature control. GW design combines the benefits of strong guiding with an unbalanced trim design. The actuator selection is done the same way as single seated valves.

The flow either comes into one side port and is diverted to the other side port and bottom port or it comes into the side and bottom ports and is mixed internally and passed to other side port. GW standard seat leakage is ANSI B16.104 Class II and optionally Class III.

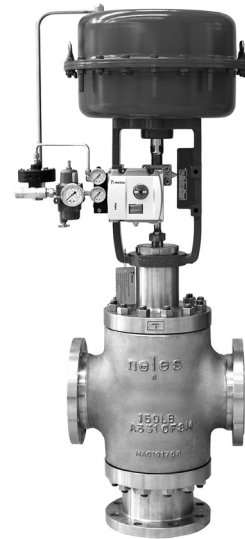
Standard units are equipped with spring diaphragm or cylinder actuators and Neles intelligent valve controllers for extended operational life and performance monitoring on-line.

Construction

- Heavy duty guiding with top and bottom seat for stable control
- Both diverting and mixing type available depending on the application
- Wide material selection for different applications
- All trim components removable from the bottom side after removed bottom flange
- Many end connection styles available for different applications
- Extension bonnet design for wide temperature range

Accurate control & performance

- Neles digital valve controller for auto-calibration and accurate control
- Accurate and sensitive diaphragm and cylinder actuators
- Stable flow control with high rangeability
- Streamline flow passage to secure capacity



Benefits of GW series applications

- Commonly used in temperature control applications
- Top & bottom seated guiding reduces the vibration of the plug, which could cause valve failure
- Prolonged trim and valve life time
- Stable control of valve and process
- ND9000 digital valve controller with online diagnostics enables performance follow up and predictive maintenance
- Efficient asset management with any FDT frame application and excellent networking capabilities
- Rugged one piece body and bottom flange structure to minimize the leak paths
- Strictly tested to ensure specified performance with quality assurance systems in accordance to ISO 9001
- Certified ISO 15848 fugitive emissions
- Certified CE/PED & ATEX, TSG & EAC (GOST-R)

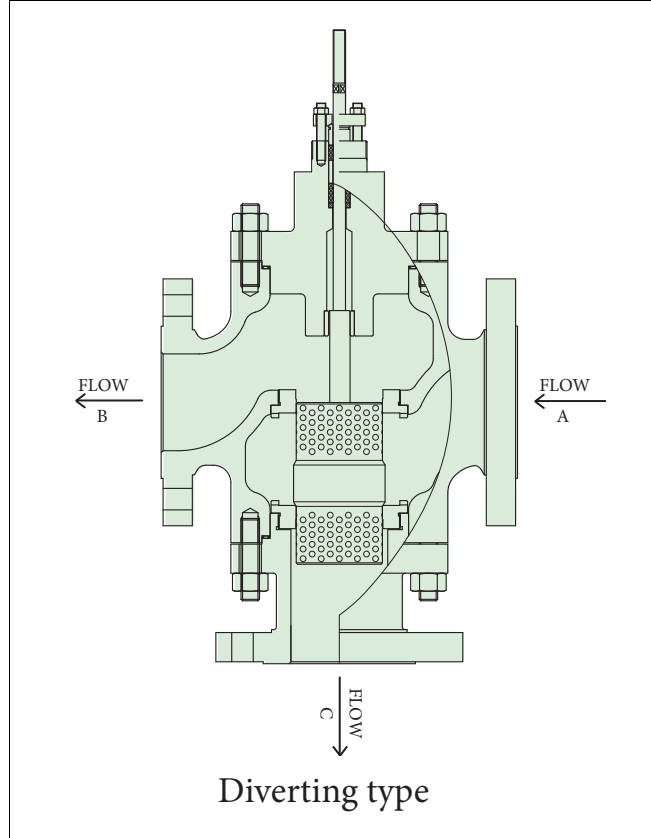
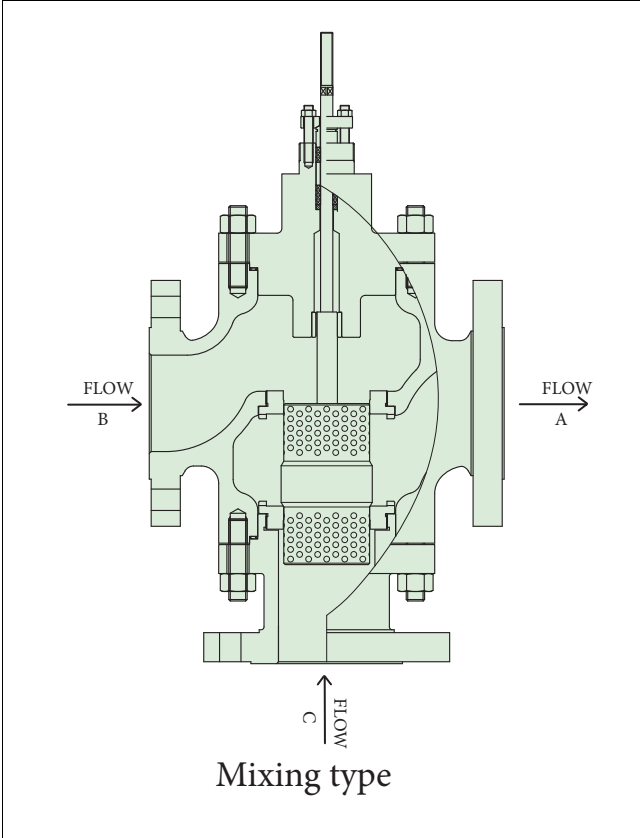
Accessories

A variety of accessories are available including Neles positioners and limit switches, solenoid valves, transducers, relays, boosters and volume tanks and build-in volume chambers etc.

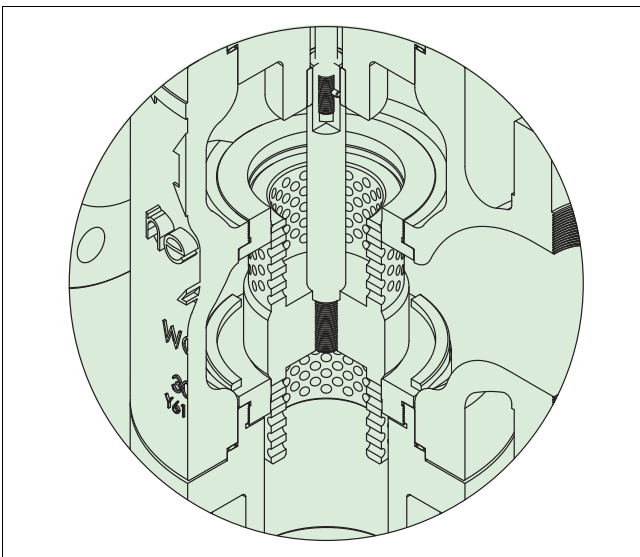
Safety and quality

- Rugged one piece body and bottom flange structure to minimize the leak paths

Different flow directions

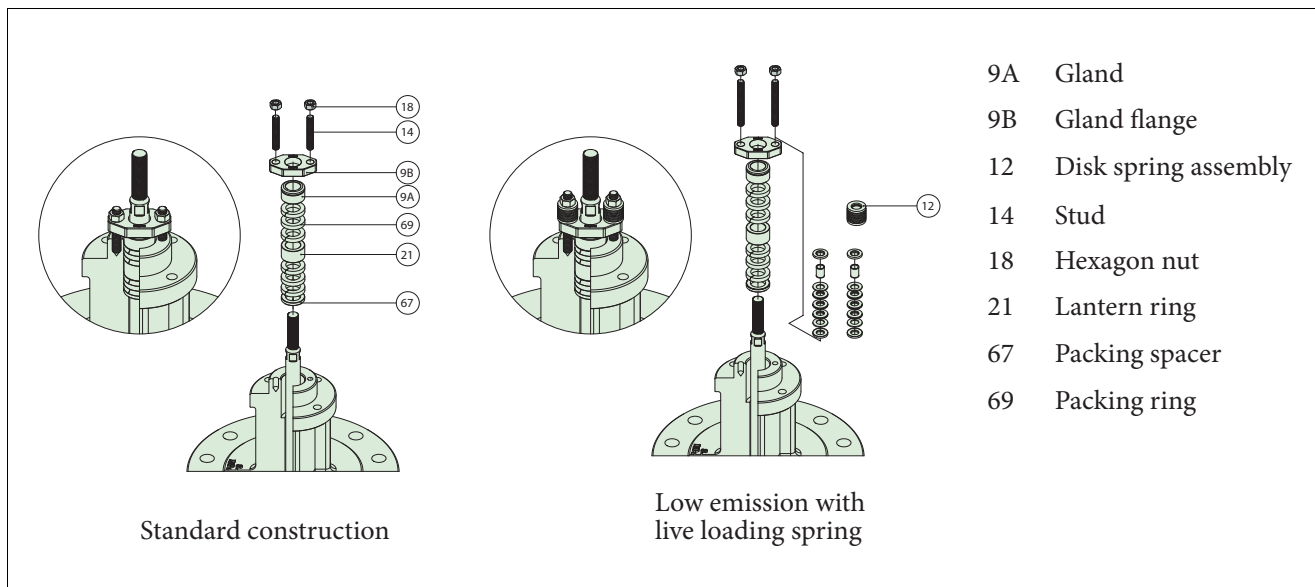


Standard trim design

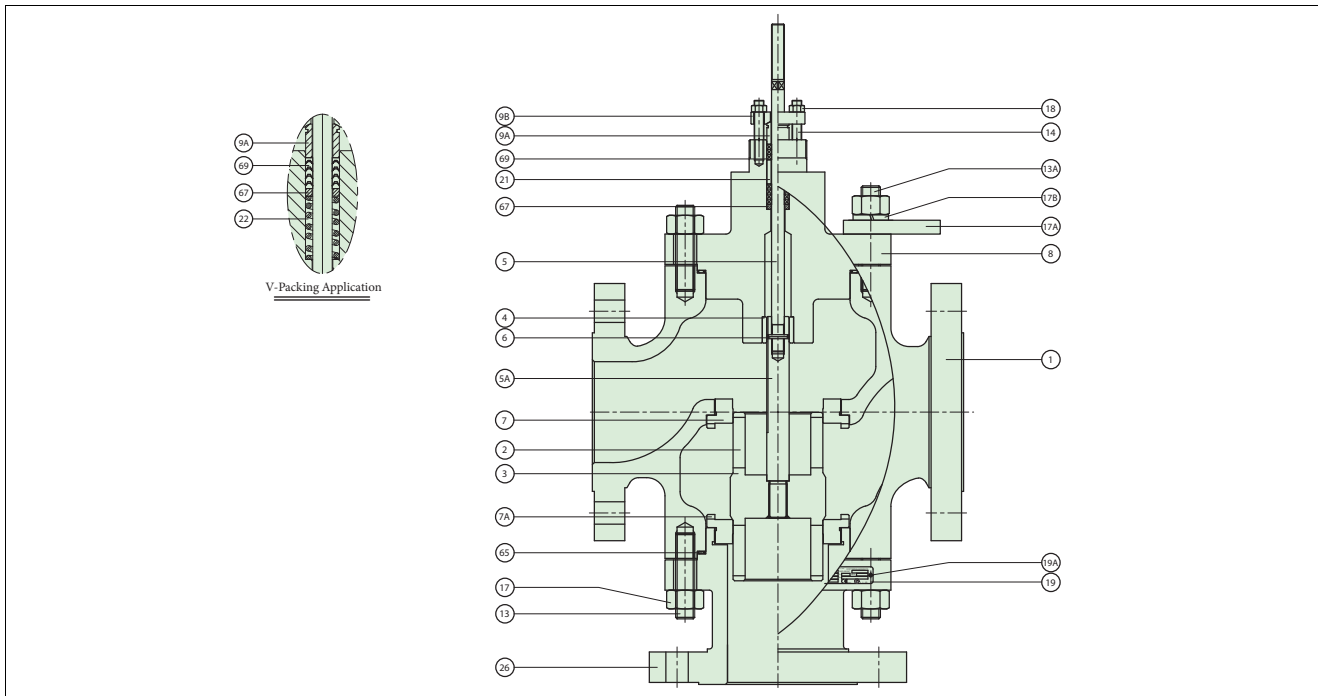


Series GW, standard cylindrical plug offers a smooth flow profile and heavy duty guiding. The arrangement of opened small and/or large drilled holes defines the flow path and the flow characteristics of the valve (standard is linear). The trim design combines benefits of stronger guiding with top and bottom seat rings and the solid cylindrical plug provides strong support to ensure valve alignment.

Packing constructions



GW, Components and materials



Body materials: Carbon steel

| Part no. | Description | Material |
|----------|----------------------|--------------------------------|
| 1 | BODY | ASTM A216 GR WCB |
| 2 | PLUG SET | 410 SS / 630 SS |
| 3* | PLUG | 410 STAINLESS STEEL |
| 4 | GUIDE BUSHING | 440C STAINLESS STEEL |
| 5 / 5A* | STEM | 630 STAINLESS STEEL + HCr |
| 6* | PLUG PIN | 316 STAINLESS STEEL |
| 7 | SEAT RING | 410 STAINLESS STEEL |
| 7A | SEAT RING | 410 STAINLESS STEEL |
| 8 | BONNET | ASTM A216 GR WCB |
| 9A | GLAND | 304 STAINLESS STEEL |
| 9B | GLAND FLANGE | A351 GR CF8 |
| 13 | STUD | A193 Gr.B7M |
| 13A | STUD | A193 Gr.B7M |
| 14 | STUD | A193 Gr.8M |
| 17 | HEXAGON NUT | A194 Gr.2HM |
| 17A | LIFTING PLATE | JIS G3101-SS400 |
| 17B | SPRING WASHER | AISI 304 |
| 18 | HEXAGON NUT | A194 GR 8 |
| 19 | IDENTIFICATION PLATE | 304 STAINLESS STEEL |
| 19A | RIVET | 304 STAINLESS STEEL |
| 21 | LANTERN RING | 304 STAINLESS STEEL |
| 22 | PACKING SPRING | 304 STAINLESS STEEL |
| 26 | BOTTOM FLANGE | ASTM A216 GR WCB |
| 65 | BODY GASKET | S/W GASKET, 316L SS + GRAPHITE |
| 67 | PACKING SPACER | 304 STAINLESS STEEL |
| 69 | PACKING RING | PTFE + CARBON FIBER |

Note.

1. Plug/Seat hard facing (Cobalt based alloy) is available
2. Materials description
316 SS : ASTM A276 TP316 or JIS 316 St. Steel
410 SS : ASTM A276 TP410 or JIS 410 St. Steel
440C SS : ASTM A276 TP440C or JIS 440C St. Steel
630 SS : ASTM A564 630 (H1100) or JIS 630 (H1100) St. Steel
3. Above standard materials to be applicable depending on specific service conditions, other optional materials to consult Valmet.
4. Optional materials to meet to requirements of NACE MR 01-75 are available
5. The materials are subject to change as equivalent depending on detail design
6. The part no. 3*, 5 / 5A*, 6* are delivered as a set with no. 2
7. The identification plate is attached to the body when only the bare stem valve is required. And the identification plate is attached to the actuator yoke when the completed valve and actuator is delivered.

Body materials: Stainless steel

| Material | Spare part |
|--------------------------------|------------|
| ASTM A351 GR CF8M | |
| 316 STAINLESS STEEL | Cat 3 |
| 316 STAINLESS STEEL | |
| 316 SS + COBALT BASED ALLOY | |
| 316 STAINLESS STEEL + HCr | |
| 316 STAINLESS STEEL | |
| 316 STAINLESS STEEL | Cat 3 |
| 316 STAINLESS STEEL | Cat 3 |
| ASTM A351 GR CF8M | |
| 304 STAINLESS STEEL | |
| A351 CF8 | |
| A193 Gr. B8M | |
| A193 Gr. B8M | |
| A193 Gr. B8M | |
| A194 Gr. 8M | |
| JIS G3101-SS400 | |
| AISI 304 | |
| A194 Gr. 8M | |
| 304 STAINLESS STEEL | |
| 304 STAINLESS STEEL | |
| 304 STAINLESS STEEL | |
| 304 STAINLESS STEEL | |
| ASTM A351 GR CF8M | |
| S/W GASKET, 316L SS + GRAPHITE | Cat 1 |
| 304 STAINLESS STEEL | |
| PTFE + CARBON FIBER | Cat 1 |

Note.

1. Plug/Seat hard facing (Cobalt based alloy) is available
2. Materials description
316 SS : ASTM A276 TP316 or JIS 316 St. Steel
3. Above standard materials to be applicable depending on specific service conditions, other optional materials to consult Valmet.
4. Optional materials to meet to requirements of NACE MR 01-75 are available
5. The materials are subject to change as equivalent depending on detail design
6. The part no. 3*, 5 / 5A*, 6* are delivered as a set with no. 2
7. The identification plate is attached to the body when only the bare stem valve is required. And the identification plate is attached to the actuator yoke when the completed valve and actuator is delivered.

GW, Applications guide

Temperature range & seat leakage class with different bonnet & seat applications

| Valve size DN / Inch | ASME rating | Seat type | Temp. range (°C) | Seat leakage class (ANSI B 16.104) | |
|--------------------------|----------------|---------------|------------------|---------------------------------------|------------|
| | | | | Standard | Optional |
| 25 ... 250 / 1 ... 10 | 150 ... 600 | Metal seat | -29 ... +425 | II | III or IV* |

* For achieving class IV requirement kindly contact factory.

Temperature range with different body and stud/nut materials

| Body / Bonnet application | Stud / Nut application | Temp. range (°C) | sign |
|--|--|------------------|------|
| Carbon steel (WCB, A105) | ASTM A193-B7M STUD / ASTM A194-2HM NUT | -29 ... +425 | G |
| Stainless steel (CF3, CF8, CF3M, CF8M) | ASTM A193-B8M / ASTM A194 -8M NUT | -196 ... +425 | D |
| Cr.Mo. Steel (WC6, F11, WC9, F22, C12A, F91) | ASTM A193-B16 STUD ASTM A194-4 NUT | -29 ... +425 | H |

Packing applications

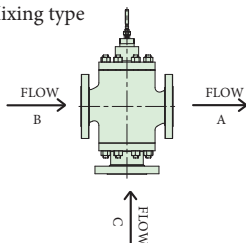
| Packing material | Temp. range (°C) | Sign |
|--|------------------|------|
| PTFE Carbon Fiber (Braided TEF + Graphite) | -29...+260 | G |
| PTFE V-Ring | -29...+232 | T |
| Graphite (with Mold + Braided) | -29...+400 | F* |
| Hi-Graphite (with Mold + Braided) | -29...+425 | H |

*Graphite packing with low emission, live loaded construction can be applicable up to +425 °C

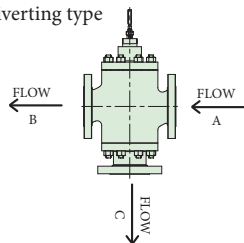
Flow direction

| Flow function | Flow positions |
|---------------|-------------------|
| Mixing | From B and C to A |
| Diverting | From A to B and C |

Mixing type



Diverting type



Trim materials

| GW, trim | | | Temp. range (°C) | Sign |
|--------------------------|--------------|--------------------------|---------------------|-------------|
| Plug | Stem | Seat | | |
| 410 SS | 630 SS + HCr | 410 SS | -29 ... +425 | P1XBCSI1R1 |
| 316 SS | 316SS + HCr | 316 SS | -29 ... +425 | T6XTCSI1T6X |
| 316 SS + Cobalt based | 316SS + HCr | 316 SS + Cobalt based | -29 ... +425 | T6ATCSI1T6A |
| 420 J2 | 630 SS + HCr | 420 J2 | -10 ... +425 | * |
| 316 SS | 316SS + HCr | 316 SS + PTFE | -29 ... +232 | * |
| 630 SS | 630 SS + HCr | 410 SS | -29 ... +425 | * |
| XM-19 | XM-19 | XM-19 | -29 ... +425 | * |
| Inconel 625, 718, 750 | | | -29 ... +425 | * |

* Please contact Valmet.

* Other materials are applicable.

Gasket applications

| Body / Bonnet material | Gasket material | Temp. range (°C) | Sign |
|--|---|---------------------|------|
| Carbon steel (WCB, A105) | S/W (Spiral wound) 316L + Graphite | -29...+425 | S |
| Stainless steel (CF3, CF8, CF3M, CF8M) | S/W (Spiral wound) 316L + Graphite | -29...+425 | S |
| | S/W (Spiral wound) 316L + PTFE | -29...+232 | L |
| Cr.Mo. Steel (WC6, F11, WC9, F22, C12A, F91) | S/W (Spiral wound)316L + Hi-Graphite | -29...+425 | H* |

* Please contact Valmet.

GW, ratings & end connections

| Valve size DN / Inch | GW, ASME ratings | | | |
|-------------------------|-------------------|-----|----|----|
| | Class 150 ... 600 | | | |
| | RF | RTJ | SW | BW |
| 25 / 1 | O | O | O | O |
| 40 / 1-1/2 | O | O | O | O |
| 50 / 2 | O | O | O | O |
| 80 / 3 | O | O | | O |
| 100 / 4 | O | O | | O |
| 150 / 6 | O | O | | O |
| 200 / 8 | O | O | | O |
| 250 / 10 | O | O | | O |

* Note

1. RF: Raised Face Flange RTJ: Ring Joint SW: Socket Weld BW: Butt Weld

Rated Cv and trim table (Globe, 3-way mixing & diverting, top and bottom seat guided)

| 20. Sign | Trim type | 21. Sign | Trim characteristic | 22. Sign | Description | Rated Cv | | | | | | | |
|-------------|-----------------------|-------------|------------------------|-------------|---------------------|-------------------------------|-------------|---------|---------|----------|----------|----------|----------|
| | | | | | | Body size and stroke | | | | | | | |
| | | | | | | 1" Str. | 1-1/2" Str. | 2" Str. | 3" Str. | 4" Str. | 6" Str. | 8" Str. | 10" Str. |
| A | Cylindrical plug type | L | Linear | FC | Full capacity | 10 (20) | 22 (20) | 36 (30) | 76 (40) | 126 (50) | 274 (60) | 490 (70) | 760 (70) |
| | | | | 1A | 1-step reduction | 6 (20) | 14 (20) | 22 (30) | 46 (40) | 76 (50) | 168 (60) | 300 (70) | 460 (70) |
| | | | | 2A | 2-step reduction | 4 (20) | 10 (20) | 14 (30) | 28 (40) | 46 (50) | 100 (60) | 180 (70) | 280 (70) |
| | | | | 3A | 3-step reduction | 2 (20) | 6 (20) | 10 (30) | 16 (40) | 30 (50) | 64 (60) | 120 (70) | 170 (70) |
| Y | Special | Y | Special | YY | Special | Contact Valmet for Cv details | | | | | | | |

* Rated Cv is applied differently depending on the trim type & trim characteristic.

* Available other flow characteristic.

* (Str.) means the valve stroke.

* FC: Full capacity 1A: 1-Step reduced 2A: 2-Step reduced 3A: 3-Step reduced

GW series Cv vs travel

ANSI Class: 150# ... 600#

Size: 1" ... 10"

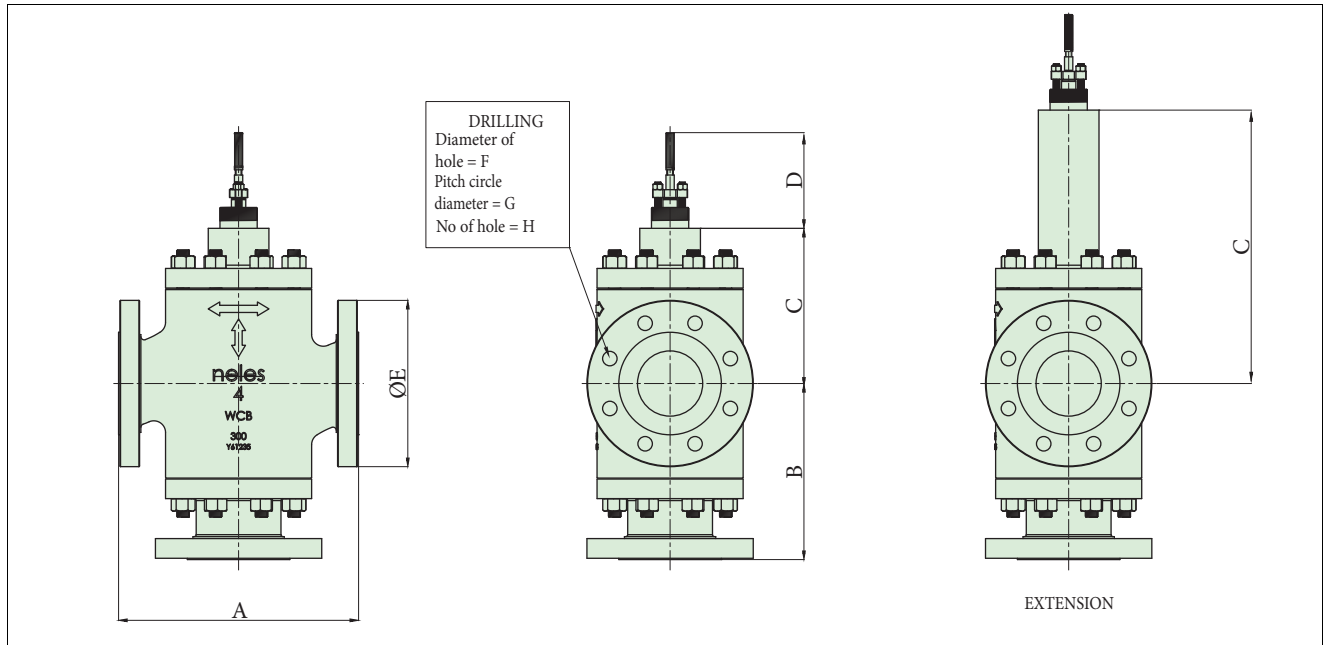
Flow characteristic: linear

| Valve travel [%] | | | | | | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | |
|------------------|-----|------------------|------|-------|--------|----|----------|--------|--------|--------|--------|--------|--------|--------|--------|-----|-----|
| F _L | | | | | | | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Valve size | | Orifice diameter | | | Travel | | Rated Cv | | | | | | | | | | |
| Inch | mm | Sign | Inch | mm | Inch | mm | | | | | | | | | | | |
| 1 | 25 | FC | 1.1 | 27.0 | 0.8 | 20 | 0.98 | 1.96 | 2.94 | 3.92 | 4.90 | 5.88 | 6.86 | 7.84 | 8.82 | 10 | |
| | | 1A | | | | | 0.59 | 1.18 | 1.77 | 2.35 | 2.94 | 3.53 | 4.12 | 4.71 | 5.29 | 6 | |
| | | 2A | | | | | 0.39 | 0.78 | 1.18 | 1.57 | 1.96 | 2.35 | 2.74 | 3.14 | 3.53 | 4 | |
| | | 3A | | | | | 0.20 | 0.39 | 0.59 | 0.78 | 0.98 | 1.18 | 1.37 | 1.57 | 1.76 | 2 | |
| 1-1/2 | 40 | FC | 1.5 | 38.4 | 0.8 | 20 | 2.16 | 4.32 | 6.47 | 8.63 | 10.78 | 12.94 | 15.10 | 17.25 | 19.41 | 22 | |
| | | 1A | | | | | 1.37 | 2.75 | 4.12 | 5.49 | 6.86 | 8.23 | 9.61 | 10.98 | 12.35 | 14 | |
| | | 2A | | | | | 0.98 | 1.96 | 2.94 | 3.92 | 4.90 | 5.88 | 6.86 | 7.84 | 8.82 | 10 | |
| | | 3A | | | | | 0.59 | 1.18 | 1.77 | 2.35 | 2.94 | 3.53 | 4.12 | 4.71 | 5.29 | 6 | |
| 2 | 50 | FC | 2.0 | 50.8 | 1.2 | 30 | 3.54 | 7.06 | 10.59 | 14.12 | 17.65 | 21.18 | 24.70 | 28.23 | 31.76 | 36 | |
| | | 1A | | | | | 2.16 | 4.32 | 6.47 | 8.63 | 10.78 | 12.94 | 15.10 | 17.25 | 19.41 | 22 | |
| | | 2A | | | | | 1.37 | 2.75 | 4.12 | 5.49 | 6.86 | 8.23 | 9.61 | 10.98 | 12.35 | 14 | |
| | | 3A | | | | | 0.98 | 1.96 | 2.94 | 3.92 | 4.90 | 5.88 | 6.86 | 7.84 | 8.82 | 10 | |
| 3 | 80 | FC | 2.6 | 66.7 | 1.6 | 40 | 7.46 | 14.91 | 22.36 | 29.81 | 37.26 | 44.70 | 52.15 | 59.60 | 67.05 | 76 | |
| | | 1A | | | | | 4.52 | 9.03 | 13.53 | 18.04 | 22.55 | 27.06 | 31.57 | 36.07 | 40.58 | 46 | |
| | | 2A | | | | | 2.75 | 5.49 | 8.24 | 10.98 | 13.73 | 16.47 | 19.21 | 21.96 | 24.70 | 28 | |
| | | 3A | | | | | 1.57 | 3.14 | 4.71 | 6.28 | 7.84 | 9.41 | 10.98 | 12.55 | 14.12 | 16 | |
| 4 | 100 | FC | 3.5 | 89.0 | 2.0 | 50 | 12.37 | 24.72 | 37.07 | 49.42 | 61.77 | 74.11 | 86.46 | 98.81 | 111.16 | 126 | |
| | | 1A | | | | | 7.46 | 14.91 | 22.36 | 29.81 | 37.26 | 44.70 | 52.15 | 59.60 | 67.05 | 76 | |
| | | 2A | | | | | 4.52 | 9.03 | 13.53 | 18.04 | 22.55 | 27.06 | 31.57 | 36.07 | 40.58 | 46 | |
| | | 3A | | | | | 2.95 | 5.89 | 8.83 | 11.77 | 14.71 | 17.65 | 20.59 | 23.53 | 26.47 | 30 | |
| 6 | 150 | FC | 5.3 | 134.0 | 2.4 | 60 | 26.91 | 53.76 | 80.61 | 107.46 | 134.31 | 161.17 | 188.02 | 214.87 | 241.72 | 274 | |
| | | 1A | | | | | 16.50 | 32.96 | 49.43 | 65.89 | 82.35 | 98.82 | 115.28 | 131.75 | 148.21 | 168 | |
| | | 2A | | | | | 9.82 | 19.62 | 29.42 | 39.22 | 49.02 | 58.82 | 68.62 | 78.42 | 88.22 | 100 | |
| | | 3A | | | | | 6.28 | 12.56 | 18.83 | 25.10 | 31.37 | 37.64 | 43.92 | 50.19 | 56.46 | 64 | |
| 8 | 200 | FC | 7.0 | 178.0 | 2.8 | 70 | 48.12 | 96.14 | 144.16 | 192.18 | 240.20 | 288.22 | 336.24 | 384.26 | 432.28 | 490 | |
| | | 1A | | | | | 29.46 | 58.86 | 88.26 | 117.66 | 147.06 | 176.46 | 205.86 | 235.26 | 264.66 | 300 | |
| | | 2A | | | | | 17.68 | 35.32 | 52.96 | 70.60 | 88.24 | 105.88 | 123.52 | 141.16 | 158.80 | 180 | |
| | | 3A | | | | | 11.78 | 23.54 | 35.30 | 47.06 | 58.82 | 70.58 | 82.34 | 94.10 | 105.86 | 120 | |
| 10" | 250 | FC | 8.8 | 224.0 | 2.8 | 70 | 74.63 | 149.11 | 223.59 | 298.07 | 372.55 | 447.03 | 521.51 | 595.99 | 670.47 | 760 | |
| | | 1A | | | | | 45.10 | 90.25 | 134.33 | 180.41 | 225.49 | 270.57 | 315.65 | 360.73 | 405.81 | 460 | |
| | | 2A | | | | | 27.46 | 54.94 | 82.38 | 109.82 | 137.26 | 164.70 | 192.14 | 219.58 | 247.02 | 280 | |
| | | 3A | | | | | 16.68 | 33.35 | 50.01 | 66.67 | 83.33 | 99.99 | 116.65 | 133.31 | 149.97 | 170 | |

NOTE

- C_v: Valve flow coefficient
- F_L: Liquid pressure recovery factor
- FC: Full capacity
- 1A: 1-Step reduced
- 2A: 2-Step reduced
- 3A: 3-Step reduced

Valve dimensions



| Dimension (mm) | A | | | B | | | C | | D | E | | | F | | | G | | | H | | | Weight (kg) | | |
|----------------|------|------|------|------|------|------|-----|-----|--------|------|------|------|------|------|------|-------|-------|-------|------|------|------|-------------|------|------|
| | 150# | 300# | 600# | 150# | 300# | 600# | STD | EXT | COMMON | 150# | 300# | 600# | 150# | 300# | 600# | 150# | 300# | 600# | 150# | 300# | 600# | 150# | 300# | 600# |
| 025 | 184 | 197 | 210 | 160 | 160 | 160 | 130 | 250 | 110 | 110 | 125 | 125 | 15.9 | 19.1 | 19.1 | 79.4 | 88.9 | 88.9 | 4 | 4 | 4 | 20 | 21 | 33 |
| 040 | 222 | 235 | 251 | 178 | 178 | 178 | 155 | 295 | 110 | 125 | 155 | 155 | 15.9 | 22.2 | 22.2 | 98.4 | 114.3 | 114.3 | 4 | 4 | 4 | 41 | 43 | 50 |
| 050 | 254 | 267 | 286 | 197 | 197 | 197 | 184 | 295 | 110 | 150 | 165 | 165 | 19.1 | 19.1 | 19.1 | 120.7 | 127 | 127 | 4 | 8 | 8 | 57 | 62 | 73 |
| 080 | 298 | 318 | 337 | 238 | 238 | 238 | 235 | 330 | 115 | 190 | 210 | 210 | 19.1 | 22.2 | 22.2 | 152.4 | 168.3 | 168.3 | 4 | 8 | 8 | 100 | 104 | 113 |
| 100 | 352 | 368 | 394 | 270 | 270 | 270 | 238 | 380 | 140 | 230 | 255 | 275 | 19.1 | 22.2 | 25.4 | 190.5 | 200 | 215.9 | 8 | 8 | 8 | 136 | 141 | 156 |
| 150 | 451 | 473 | 508 | 330 | 330 | 330 | 280 | 430 | 150 | 280 | 320 | 355 | 22.2 | 22.2 | 28.6 | 241.3 | 269.9 | 292.1 | 8 | 12 | 12 | 238 | 249 | 322 |
| 200 | 543 | 568 | 610 | 410 | 410 | 460 | 375 | 490 | 150 | 345 | 380 | 420 | 22.2 | 25.4 | 31.8 | 298.5 | 330.2 | 349.2 | 8 | 12 | 12 | 351 | 375 | 451 |
| 250 | 673 | 708 | 752 | 457 | 457 | 490 | 416 | 600 | 150 | 405 | 445 | 510 | 25.4 | 28.6 | 34.9 | 362 | 387.4 | 431.8 | 12 | 16 | 16 | 779 | 847 | 982 |

| Dimension (inch) | A | | | B | | | C | | D | E | | | F | | | G | | | H | | | Weight (lbs) | | |
|------------------|------|------|------|------|------|------|------|------|--------|------|------|------|------|------|------|------|------|------|------|------|------|--------------|------|------|
| | 150# | 300# | 600# | 150# | 300# | 600# | STD | EXT | COMMON | 150# | 300# | 600# | 150# | 300# | 600# | 150# | 300# | 600# | 150# | 300# | 600# | 150# | 300# | 600# |
| 1" | 7.2 | 7.8 | 8.3 | 6.3 | 6.3 | 6.3 | 5.1 | 9.8 | 4.3 | 4.3 | 4.9 | 4.9 | 0.6 | 0.8 | 0.8 | 3.1 | 3.5 | 3.5 | 4 | 4 | 4 | 44 | 46 | 73 |
| 1-1/2" | 8.7 | 9.3 | 9.9 | 7 | 7 | 7 | 6.1 | 11.6 | 4.3 | 4.9 | 6.1 | 6.1 | 0.6 | 0.9 | 0.9 | 3.9 | 4.5 | 4.5 | 4 | 4 | 4 | 90 | 95 | 110 |
| 2" | 10 | 10.5 | 11.3 | 7.8 | 7.8 | 7.8 | 7.2 | 11.6 | 4.3 | 5.9 | 6.5 | 6.5 | 0.8 | 0.8 | 0.8 | 4.8 | 5 | 5 | 4 | 8 | 8 | 126 | 137 | 161 |
| 3" | 11.7 | 12.5 | 13.3 | 9.4 | 9.4 | 9.4 | 9.3 | 13 | 4.5 | 7.5 | 8.3 | 8.3 | 0.8 | 0.9 | 0.9 | 6 | 6.6 | 6.6 | 4 | 8 | 8 | 221 | 229 | 249 |
| 4" | 13.9 | 14.5 | 15.5 | 10.6 | 10.6 | 10.6 | 9.4 | 15 | 5.5 | 9.1 | 10 | 10.8 | 0.8 | 0.9 | 1 | 7.5 | 7.9 | 8.5 | 8 | 8 | 8 | 300 | 311 | 344 |
| 6" | 17.8 | 18.6 | 20 | 13 | 13 | 13 | 11 | 16.9 | 5.9 | 11 | 12.6 | 14 | 0.9 | 0.9 | 1.1 | 9.5 | 10.6 | 11.5 | 8 | 12 | 12 | 525 | 549 | 710 |
| 8" | 21.4 | 22.4 | 24 | 16.1 | 16.1 | 18.1 | 14.8 | 19.3 | 5.9 | 13.6 | 15 | 16.5 | 0.9 | 1 | 1.3 | 11.8 | 13 | 13.7 | 8 | 12 | 12 | 774 | 827 | 994 |
| 10" | 26.5 | 27.9 | 29.6 | 18 | 18 | 19.3 | 16.4 | 23.6 | 5.9 | 15.9 | 17.5 | 20.1 | 1 | 1.1 | 1.4 | 14.3 | 15.3 | 17 | 12 | 16 | 16 | 1717 | 1867 | 2165 |

NOTE
P.C.D = Pitch Circle Diameter

How to order

Globe 3-way, diverting / Mixing type, series GW

| | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. | 17. | 18. | 19. | 20. | 21. | 22. |
| GW | 02 | C | W | A | J2 | X | P1 | X | BC | S2 | P1 | X | S | G | X | S | G | X | A | L | FC |

Valve constructions

| 1. | Valve series | | |
|----|-----------------------------|--|--|
| GW | Globe 3-way, diverting type | | |

| 2. | Body size | | |
|----|-------------|----|----------------|
| 01 | 1" / DN 25 | 1H | 1-1/2" / DN 40 |
| 02 | 2" / DN 50 | 03 | 3" / DN 80 |
| 04 | 4" / DN 100 | 06 | 6" / DN 150 |
| 08 | 8" / DN 200 | 10 | 10" / DN 250 |
| YY | Special | | |

| 3. | Pressure rating | | |
|----|-----------------|---|----------------|
| C | ASME class 150 | D | ASME class 300 |
| F | ASME class 600 | Y | Special |
| J | EN PN 10 | K | EN PN 16 |
| L | EN PN 25 | M | EN PN 40 |
| N | EN PN 63 | P | EN PN 100 |

| 4. | End connection | | |
|----|-----------------------------|--|--|
| W | Flanged RF, ASME B16.5 | | |
| C | Flanged RF, EN 1092-1 | | |
| V | Socket welding, ASME B16.11 | | |
| Q | Butt welding, ASME B16.25 | | |
| Y | Special | | |

| 5. | Bonnet construction | |
|----|---------------------|----------------------------------|
| | Bonnet type | Actuator connection |
| A | General | Applicable for VD_25/29/37 |
| B | General | Applicable for VD_48/55 |
| C | General | Applicable for VC_30, VB_32 |
| D | General | Applicable for VC_40/50/60/70 |
| E | Extension | Applicable for VD_25/29/37 |
| F | Extension | Applicable for VD_48/55 |
| G | Extension | Applicable for VC_30, VB_32 |
| H | Extension | Applicable for VC_40/50/60/70 |
| P | Cryogenic | Applicable for VD_25/29/37 |
| Q | Cryogenic | Applicable for VD_48/55 |
| R | Cryogenic | Applicable for VC_30, VB_32 |
| S | Cryogenic | Applicable for VC/VB_40/50/60/70 |
| Y | Special | Special |

| 6. | Body material | | |
|----|---------------|----|---------------|
| J2 | A216 gr. WCB | S6 | A351 gr. CF8M |
| S1 | A351 gr. CF3M | YY | Special |

- Bonnet material is same or equivalent with body material.

| 7. | Model code |
|----|------------|
| B | Model B |

Trim constructions

| 8. | Plug material | |
|----|---------------|-----------------------------------|
| | Material | Description |
| P1 | 410 SS | Standard for carbon steel body |
| T6 | 316 SS | Standard for stainless steel body |
| YY | Special | Special materials |

| 9. | Plug application |
|----|--------------------|
| X | Not applicable |
| A | Cobalt based alloy |
| Y | Special |

| 10. | Stem material | |
|-----|---------------|-----------------------------------|
| | Material | Description |
| BC | 630 SS + HCr | Standard for carbon steel body |
| TC | 316 SS + HCr | Standard for stainless steel body |
| VX | XM-19 | |

| 11. | Seat type |
|-----|-------------------|
| S2 | Double metal seat |
| YY | Special |

| 12. | Seat material | |
|-----|---------------|-----------------------------------|
| | Seat | Description |
| P1 | 410 SS | Standard for carbon steel body |
| T6 | 316 SS | Standard for stainless steel body |
| YY | Special | Special materials |

| 13. | Seat application |
|-----|--------------------|
| X | Not applicable |
| A | Cobalt based alloy |
| Y | Special |

Others

| 14. | PACKING / BELLOWS TYPE |
|-----|--------------------------------|
| S | General packing |
| E | Low emission, Live loaded |
| C | Bellows Seal (316L SS, Formed) |

| 15. | PACKING MATERIAL |
|-----|-----------------------------------|
| G | PTFE + Carbon fiber |
| F | Graphite (with mold and braided) |
| T | PTFE V-Ring |
| C | PTFE + Carbon fiber (ATEX) |
| H | Hi-Graphite (with mold + braided) |
| Y | Special |

| 16. | SEAL RING MATERIAL |
|-----|--------------------|
| X | Not applicable |

| 17. | GASKET MATERIAL |
|-----|--|
| S | S/W gasket type, 316L SS + Graphite for standard |
| L | S/W gasket type, 316L SS + PTFE |
| H | S/W gasket type, 316L SS + Hi-Graphite |
| Y | Special |

| 18. | STUD / NUT MATERIAL |
|-----|----------------------------------|
| G | A193 gr. B7M / A194 gr. 2HM |
| D | A193 gr. B8M / A194 gr. 8M |
| K | A320 gr. B8M cl. 2 / A194 gr. 8M |
| H | A193 gr. B16 / A194 gr. 4 |
| Y | Special |

| 19. | OPTIONS |
|-----|--------------------------|
| X | Not applicable |
| M | Globe 3-way, mixing type |
| Y | Special |

* The body, bonnet, trim materials are subject to change as equivalent depending on detail design.

* Please see Neles Globe Typecode instruction for further options.

Trim type & rated Cv

| 20. Sign | Trim type | 21. Sign | Trim characteristic | 22. Sign | Description | Rated Cv | | | | | | | | | | | | | | | |
|-------------|-----------------------|-------------|---------------------|-------------|------------------|-------------------------------------|------|--------|------|----|------|----|------|-----|------|-----|------|-----|------|-----|------|
| | | | | | | Body size and stroke | | | | | | | | | | | | | | | |
| | | | | | | 1" | Str. | 1-1/2" | Str. | 2" | Str. | 3" | Str. | 4" | Str. | 6" | Str. | 8" | Str. | 10" | Str. |
| A | Cylindrical plug type | L | Linear | FC | Full capacity | 10 | (20) | 22 | (20) | 36 | (30) | 76 | (40) | 126 | (50) | 274 | (60) | 490 | (70) | 760 | (70) |
| | | | | 1A | 1-Step reduction | 6 | (20) | 14 | (20) | 22 | (30) | 46 | (40) | 76 | (50) | 168 | (60) | 300 | (70) | 460 | (70) |
| | | | | 2A | 2-Step reduction | 4 | (20) | 10 | (20) | 14 | (30) | 28 | (40) | 46 | (50) | 100 | (60) | 180 | (70) | 280 | (70) |
| | | | | 3A | 3-Step reduction | 2 | (20) | 6 | (20) | 10 | (30) | 16 | (40) | 30 | (50) | 64 | (60) | 120 | (70) | 170 | (70) |
| Y | Special | Y | Special | YY | Special | Contact Valmet for more information | | | | | | | | | | | | | | | |

* Rated Cv is different depending on trim type and characteristic.

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