# DATA SHEET

## T 8086 EN

## Series 240, 250 and SMS · Valves with perforated plug

DIN and ANSI versions

**Application**

Optimized trim for critical conditions in applications

| | |
|---|---|
| **Nominal size** | **DN 25 to 500 · NPS 1 to 20** |
| **Pressure rating** | **PN 16 to 400 · Class 150 to 2500** |
| **Medium temperature** | **–273 to +550 °C · –459 to +1022 °F** |

The perforated plug is mainly used for valves in steam applications, particularly for operation in the wet steam region. Additional fields of application include the control of two-phase medium flow, liquid media which vaporize on the outlet side (flashing valves) or emergency relief valves (blow-off valves) involving gas relief in which flow velocities lower than 0.3 Mach cannot be kept.

**Special features**

- Use in Series 240, 250 and SMS Valves with body material 1.0619/A216 WCC or higher grade steels
- Combined with seats of Series 240, 250 and SMS Valves
- Permissible actuator forces correspond to those of standard valve trims
- Avoid using media containing solids

**Versions**

Valves with leakage class IV

- **Type 3241** · Globe valve up to DN 300 and PN 40 (NPS 12, Class 300) · Trim and characteristic according to Table 1 · See Data Sheets ▶ T 8015/▶ T 8012
- **Type 3248** · Cryogenic valve with globe or angle-pattern body up to DN 150 and PN 100 (NPS 6, Class 600) · See Table 1 and Table 2 · See Data Sheets ▶ T 8093/▶ T 8093-1
- **Type 3251** (Fig. 1) · Globe valve up to DN 500 and PN 400 (NPS 20, Class 2500) · See Table 3 · See Data Sheets ▶ T 8051/▶ T 8052
- Type 251GR · Globe valve up to DN 200 and PN 160 (NPS 8, Class 900) · See Table 4 · See Data Sheets ▶ T 8003-GR/▶ T 8004-GR
- **Type 3254** · Globe valve up to DN 500 and PN 400 (NPS 20, Class 2500) · See Table 5 · See Data Sheets ▶ T 8060/▶ T 8061
- **Type 3256** (Fig. 2) · Angle valve up to DN 300 and PN 400 (NPS 12, Class 2500) · See Table 3 to Table 6 · See Data Sheets ▶ T 8065/▶ T 8066

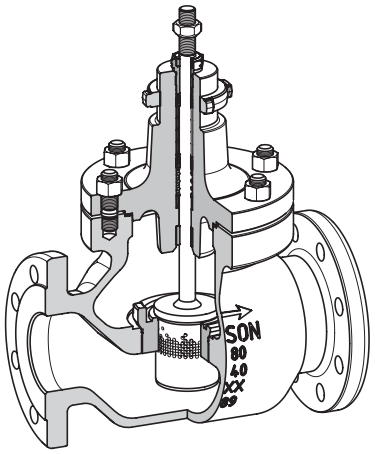

**Fig. 1:** *Type 3251 Globe Valve with perforated plug*

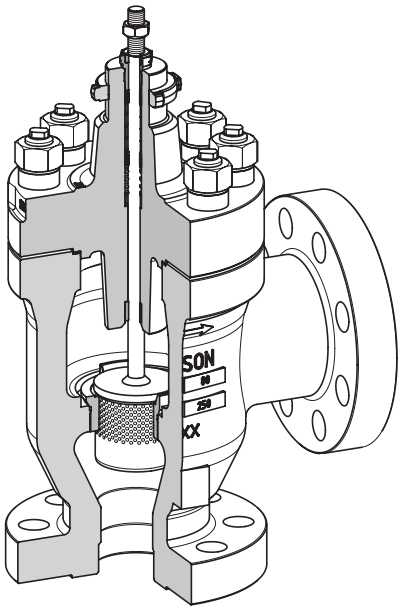

**Fig. 2:** *Type 3256 Angle Valve with perforated plug*

SAMSON AKTIENGESELLSCHAFT · Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507 · samson@samsongroup.com · www.samsongroup.com

Edition November 2024

## Options

- **Higher leakage classes** on request
- **Perforated plug for Type 3246** on request

## Principle of operation

The medium flows through the perforated plug, splitting up the jet stream into numerous smaller jets to ensure low-noise energy transfer to the surrounding medium.

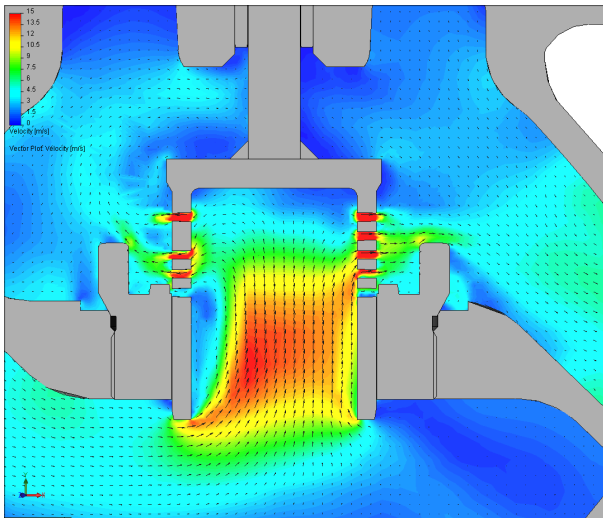

**Fig. 3:** *Type 3251 Globe Valve, flow-to-open*

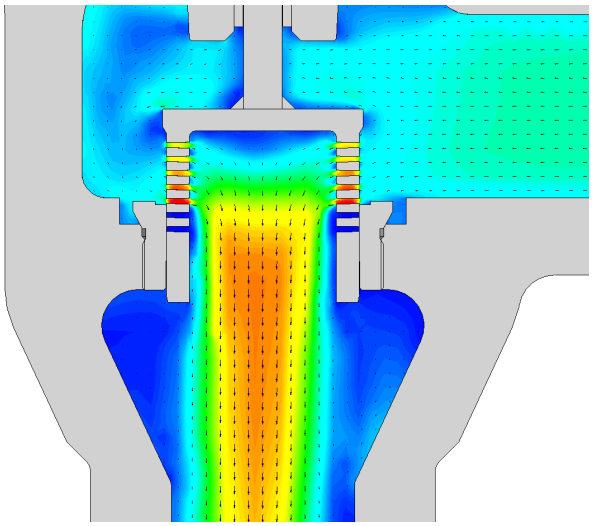

**Fig. 4:** *Type 3256 Angle Valve, flow-to-close*

## Technical data

| **Perforated plug** | | **DIN** | **ANSI** |
|---|---|---|---|
| Nominal size (depending on valve type) | | DN 25 to 500 | NPS 1 to 20 |
| Pressure rating (depending on valve type) | | PN 16 to 400 | Class 125 to 2500 |
| Medium temperature range (depending on the valve bonnet) | **Type 3241** (▶ T 8015/▶ T 8012) | –196 to +450 °C | –325 to +842 °F |
| | **Type 3248** (▶ T 8093/▶ T 8093-1) | –273 to +220 °C | –459 to +428 °F |
| | **Type 3251/3254** (▶ T 8051/▶ T 8052, ▶ T 8060/▶ T 8061) | –196 to +550 °C | –325 to +1022 °F |
| | **Type 251GR** (▶ T 8003-GR/▶ T 8004-GR) | –50 to +600 °C | –58 to 1112 °F |
| | **Type 3256** (▶ T 8065/ ▶ T 8066) | –196 to +550 °C | –325 to +1022 °F |
| Max. permissible differential pressure | | Same as standard V-port plug, see ▶ T 8000-4 | |
| Direction of flow [1] | Type 3241/3248 | Standard FTO | |
| | Type 3251/3254 | Standard FTO | |
| | Type 251GR | Standard FTO | |
| | Type 3256 | Standard FTC | |
| Leakage class with metal seal | | Class IV according to IEC 60534-4 and DIN EN 1349 | Class IV according to ANSI/FCI 70-2 |
| Characteristic | | Equal percentage · Linear | |
| Rangeability | | 50:1 | |
| Pressure balancing | | See Table 1 to Table 5 | |
| Valve bonnet | | Standard · Insulating section · Bellows seal | |
| **Materials** | | | |
| Seat and plug | | Selection depending on application | |

[1] FTO: Flow-to-open (flow under the plug) · FTC: Flow-to-close (flow over the plug)

**Table 1:** *Type 3241 Globe Valve and Type 3248 Cryogenic Valve · Direction of flow FTO*

**Table 1.1:** *$K_{VS}$ and $C_V$ coefficients for Type 3241 and Type 3248 (up to DN 150/NPS 6) · Equal percentage characteristic*

| **Series 240 · Equal percentage characteristic with direction of flow FTO** | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4 | 6.3 | 10 | 16 | 25 | 36 | 40 | 54 | 63 | 80 | 100 | 120 | 160 | 160 | 250 | 360 | 420 | 630 | 1000 |
| $C_V$ | | 5 | 7.5 | 12 | 20 | 30 | 42 | 47 | 62 | 75 | 95 | 120 | 140 | 190 | 190 | 290 | 420 | 485 | 735 | 1150 |
| $K_V$-1 | | 3.6 | 5.7 | 9 | 14.5 | 22 | 32 | 36 | 47 | 57 | 72 | 90 | 100 | 144 | 144 | 225 | 320 | 375 | 560 | 900 |
| $C_V$-1 | | 4.2 | 7 | 10.5 | 17 | 26 | 37 | 42 | 55 | 67 | 85 | 105 | 120 | 170 | 170 | 265 | 375 | 435 | 650 | 1040 |
| $K_V$-2 | | – | – | 8 | 13 | 20 | 29 | – | 43 | 50 | 63 | 80 | 95 | 125 | 125 | 200 | 290 | 340 | 500 | 800 |
| $C_V$-2 | | | | 9.5 | 15 | 23 | 34 | | 50 | 60 | 75 | 95 | 110 | 145 | 145 | 235 | 335 | 390 | 580 | 950 |
| $K_V$-3 | | – | 4.8 | 7.5 | 12 | 20 | – | – | 40 | 47 | 60 | 75 | – | – | 120 | 190 | 270 | 315 | 480 | – |
| $C_V$-3 | | | 5.6 | 9 | 14 | 23 | | | 47 | 55 | 70 | 90 | | | 140 | 220 | 315 | 365 | 560 | |
| Seat Ø | mm | 24 | | 31 | 38 | 48 | 63 | 80 | 63 | 80 | | 100 | 110 | 130 | 125 | 150 | 200 | | 250 | 300 |
| Travel | mm | 15 | | | | | | | 30 | | | | | | 60 | | | | 120 | |
| | in | 0.59 | | | | | | | 1.18 | | | | | | 2.36 | | | | 4.72 | |
| Nominal size DN | NPS | Versions without flow divider · Areas highlighted in gray indicate versions of Type 3241 also available with pressure balancing | | | | | | | | | | | | | | | | | | |
| 25 | 1 | • | • | | | | | | | | | | | | | | | | | |
| 32 | – | • | • | • | | | | | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | | | | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | | | | | | | | | | | | | | |
| 65 | 2½ | | • | • | • | • | • | | | | | | | | | | | | | |
| 80 | 3 | | • | • | • | • | • | • | | | | | | | | | | | | |
| 100 | 4 | | | | | | | | • | • | • | • | | | | | | | | |
| 125 | – | | | | | | | | • | • | • | • | • | | | | | | | |
| 150 | 6 | | | | | | | | • | • | • | • | | • | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | | | • | • | • | • | | |
| 250 | 10 | | | | | | | | • | • | • | • | | | • | • | • | • | • | |
| 300 | 12 | | | | | | | | | | | • | | | • | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 1 · Areas highlighted in gray indicate versions of Type 3241 also available with pressure balancing | | | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | | | |
| 32 | – | • | • | • | | | | | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | | | | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | | | | | | | | | | | | | | |
| 65 | 2½ | | • | • | • | • | • | | | | | | | | | | | | | |
| 80 | 3 | | • | • | • | • | • | • | | | | | | | | | | | | |
| 100 | 4 | | | | | | | | • | • | • | • | | | | | | | | |
| 125 | – | | | | | | | | • | • | • | • | • | | | | | | | |
| 150 | 6 | | | | | | | | • | • | • | • | | • | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | | | • | • | • | • | | |
| 250 | 10 | | | | | | | | • | • | • | • | | | • | • | • | • | • | |
| 300 | 12 | | | | | | | | | | | • | | | • | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 2 · Areas highlighted in gray indicate versions of Type 3241 also available with pressure balancing | | | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | | | |
| 32 | – | | | • | | | | | | | | | | | | | | | | |
| 40 | 1½ | | | • | • | | | | | | | | | | | | | | | |
| 50 | 2 | | | • | • | | | | | | | | | | | | | | | |
| 65 | 2½ | | | • | • | • | • | | | | | | | | | | | | | |
| 80 | 3 | | | • | • | • | • | | | | | | | | | | | | | |
| 100 | 4 | | | | | | | | • | • | • | • | | | | | | | | |
| 125 | – | | | | | | | | • | • | • | • | • | | | | | | | |
| 150 | 6 | | | | | | | | • | • | • | • | | • | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | | | • | • | • | • | | |
| 250 | 10 | | | | | | | | • | • | • | • | | | • | • | • | • | • | |
| 300 | 12 | | | | | | | | | | | • | | | • | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 3 · Areas highlighted in gray indicate versions of Type 3241 also available with pressure balancing | | | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | | | |
| 32 | – | | • | | | | | | | | | | | | | | | | | |
| 40 | 1½ | | • | | | | | | | | | | | | | | | | | |
| 50 | 2 | | • | | | | | | | | | | | | | | | | | |
| 65 | 2½ | | • | • | • | • | | | | | | | | | | | | | | |
| 80 | 3 | | • | • | • | • | | | | | | | | | | | | | | |
| 100 | 4 | | | | | | | | • | | | | | | | | | | | |
| 125 | – | | | | | | | | • | • | • | | | | | | | | | |
| 150 | 6 | | | | | | | | • | • | • | • | | | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | | | • | • | | | | |
| 250 | 10 | | | | | | | | • | • | • | • | | | • | • | • | • | | |
| 300 | 12 | | | | | | | | | | | • | | | • | • | • | • | • | |

**Note:**
*Specifications do not apply to Type 3248*

**Table 1.2:** *$K_{VS}$ and $C_V$ coefficients for Type 3241 and Type 3248 (up to DN 150/NPS 6) · Linear characteristic*

| **Series 240 · Linear characteristic with direction of flow FTO** | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4 | 6.3 | 10 | 16 | 25 | 36 | 47 | 60 | 63 | 100 | 130 | 160 | 210 | 250 | 320 | 500 | 900 | 1300 |
| $C_V$ | | 5 | 7.5 | 12 | 20 | 30 | 42 | 55 | 70 | 75 | 120 | 150 | 190 | 245 | 290 | 375 | 580 | 1040 | 1500 |
| $K_V$-1 | | 3.6 | 5.7 | 9 | 14.5 | 22 | 32 | 43 | 54 | 57 | 90 | 115 | 144 | 190 | 225 | 280 | 450 | 800 | 1150 |
| $C_V$-1 | | 4.2 | 7 | 10.5 | 17 | 26 | 37 | 50 | 62 | 67 | 105 | 135 | 170 | 220 | 265 | 325 | 520 | 950 | 1350 |
| $K_V$-2 | | – | – | 8 | 13 | 20 | 29 | 38 | – | 50 | 80 | 105 | 125 | 170 | 200 | 255 | 400 | 720 | 1040 |
| $C_V$-2 | | | | 9.5 | 15 | 23 | 34 | 45 | | 60 | 95 | 120 | 145 | 200 | 235 | 295 | 465 | 835 | 1200 |
| $K_V$-3 | | – | 4.8 | 7.5 | 12 | 20 | 27 | – | – | 47 | 75 | 80 | – | – | 190 | 230 | 375 | 675 | – |
| $C_V$-3 | | | 5.6 | 9 | 14 | 23 | 31 | | | 55 | 90 | 100 | | | 220 | 270 | 435 | 780 | |
| Seat Ø | mm | 24 | | 31 | | 38 | 48 | 63 | 80 | 63 | 80 | 100 | 110 | 130 | 125 | 150 | 200 | 250 | 300 |
| Travel | mm | 15 | | | | | | | | 30 | | | | | 60 | | | 120 | |
| | in | 0.59 | | | | | | | | 1.18 | | | | | 2.36 | | | 4.72 | |
| Nominal size DN | NPS | Versions without flow divider · Areas highlighted in gray indicate versions of Type 3241 also available with pressure balancing | | | | | | | | | | | | | | | | | |
| 25 | 1 | • | • | | | | | | | | | | | | | | | | |
| 32 | – | • | • | • | • | | | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | • | | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • | | | | | | | | | | | | |
| 65 | 2½ | | • | • | • | • | • | • | | | | | | | | | | | |
| 80 | 3 | | • | • | • | • | • | • | • | | | | | | | | | | |
| 100 | 4 | | | | | | | | | • | • | • | | | | | | | |
| 125 | – | | | | | | | | | • | • | • | • | | | | | | |
| 150 | 6 | | | | | | | | | • | • | • | | • | | | | | |
| 200 | 8 | | | | | | | | | • | • | • | | | • | • | • | | |
| 250 | 10 | | | | | | | | | • | • | • | | | • | • | • | • | |
| 300 | 12 | | | | | | | | | | | • | | | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 1 · Areas highlighted in gray indicate versions of Type 3241 also available with pressure balancing | | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | | |
| 32 | – | • | • | • | • | | | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | • | | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • | | | | | | | | | | | | |
| 65 | 2½ | | • | • | • | • | • | • | | | | | | | | | | | |
| 80 | 3 | | • | • | • | • | • | • | • | | | | | | | | | | |
| 100 | 4 | | | | | | | | | • | • | • | | | | | | | |
| 125 | – | | | | | | | | | • | • | • | • | | | | | | |
| 150 | 6 | | | | | | | | | • | • | • | | • | | | | | |
| 200 | 8 | | | | | | | | | • | • | • | | | • | • | • | | |
| 250 | 10 | | | | | | | | | • | • | • | | | • | • | • | • | |
| 300 | 12 | | | | | | | | | | | • | | | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 2 · Areas highlighted in gray indicate versions of Type 3241 also available with pressure balancing | | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | | |
| 32 | – | | | • | • | | | | | | | | | | | | | | |
| 40 | 1½ | | | • | • | • | | | | | | | | | | | | | |
| 50 | 2 | | | • | • | • | • | | | | | | | | | | | | |
| 65 | 2½ | | | • | • | • | • | • | | | | | | | | | | | |
| 80 | 3 | | | • | • | • | • | • | | | | | | | | | | | |
| 100 | 4 | | | | | | | | | • | • | • | | | | | | | |
| 125 | – | | | | | | | | | • | • | • | • | | | | | | |
| 150 | 6 | | | | | | | | | • | • | • | | • | | | | | |
| 200 | 8 | | | | | | | | | • | • | • | | | • | • | • | | |
| 250 | 10 | | | | | | | | | • | • | • | | | • | • | • | • | |
| 300 | 12 | | | | | | | | | | | • | | | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 3 · Areas highlighted in gray indicate versions of Type 3241 also available with pressure balancing | | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | | |
| 32 | – | | • | | | | | | | | | | | | | | | | |
| 40 | 1½ | | • | | | | | | | | | | | | | | | | |
| 50 | 2 | | • | | | | | | | | | | | | | | | | |
| 65 | 2½ | | • | • | • | • | • | | | | | | | | | | | | |
| 80 | 3 | | • | • | • | • | • | | | | | | | | | | | | |
| 100 | 4 | | | | | | | | | • | | | | | | | | | |
| 125 | – | | | | | | | | | • | • | | | | | | | | |
| 150 | 6 | | | | | | | | | • | • | • | | | | | | | |
| 200 | 8 | | | | | | | | | • | • | • | | | • | • | | | |
| 250 | 10 | | | | | | | | | • | • | • | | | • | • | • | | |
| 300 | 12 | | | | | | | | | | | • | | | • | • | • | • | |

***Note:***
*Specifications do not apply to Type 3248*

**Table 2:** *Type 3248 Cryogenic Angle Valve · Direction of flow FTC*

**Table 2.1:** *$K_{VS}$ and $C_V$ coefficients for Type 3248 · Equal percentage characteristic*

| **Type 3248 · Equal percentage characteristic with direction of flow FTC** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4 | 6.3 | 10 | 13 | 20 | 32 | 36 | 47 | 54 | 70 | 85 | 105 | 144 |
| $C_V$ | | 5 | 7.5 | 12 | 15 | 23 | 37 | 42 | 55 | 62 | 80 | 100 | 121 | 170 |
| Seat Ø | mm | 24 | | 31 | 38 | 48 | 63 | 80 | 63 | 80 | 80 | 100 | 110 | 130 |
| Travel | mm | 15 | | | | | | | 30 | | | | | |
| | in | 0.59 | | | | | | | 1.18 | | | | | |
| Nominal size | | Version without flow divider | | | | | | | | | | | | |
| DN | NPS | | | | | | | | | | | | | |
| 25 | 1 | • | • | | | | | | | | | | | |
| 32 | – | • | • | • | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | | | | | | | | |
| 65 | 2½ | | • | • | • | • | • | | | | | | | |
| 80 | 3 | | • | • | • | • | • | • | | | | | | |
| 100 | 4 | | | | | | | | • | • | • | • | | |
| 125 | – | | | | | | | | • | • | • | • | • | |
| 150 | 6 | | | | | | | | • | • | • | • | | • |

**Table 2.2:** *$K_{VS}$ and $C_V$ coefficients for Type 3248 · Linear characteristic*

| **Type 3248 · Linear characteristic with direction of flow FTC** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4 | 6.3 | 10 | 13 | 20 | 32 | 40 | 50 | 54 | 85 | 115 | 144 | 190 |
| $C_V$ | | 5 | 7.5 | 12 | 15 | 23 | 37 | 47 | 60 | 62 | 100 | 135 | 170 | 220 |
| Seat Ø | mm | 24 | | 31 | | 38 | 48 | 63 | 80 | 63 | 80 | 100 | 110 | 130 |
| Travel | mm | 15 | | | | | | | | 30 | | | | |
| | in | 0.59 | | | | | | | | 1.18 | | | | |
| Nominal size | | Version without flow divider | | | | | | | | | | | | |
| DN | NPS | | | | | | | | | | | | | |
| 25 | 1 | • | • | | | | | | | | | | | |
| 32 | – | • | • | • | • | | | | | | | | | |
| 40 | 1½ | • | • | • | • | • | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • | | | | | | | |
| 65 | 2½ | | • | • | • | • | • | • | | | | | | |
| 80 | 3 | | • | • | • | • | • | • | • | | | | | |
| 100 | 4 | | | | | | | | | • | • | • | | |
| 125 | – | | | | | | | | | • | • | • | • | |
| 150 | 6 | | | | | | | | | • | • | • | | • |

**Table 3:** *Type 3251 Globe Valve and Type 3256 Angle Valve · Direction of flow FTO*

**Table 3.1:** *$K_{VS}$ and $C_V$ coefficients for Type 3251 and Type 3256 (up to DN 300/NPS 12) · Equal percentage characteristic*

| **Series 250 · Equal percentage characteristic with direction of flow FTO** | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4 | 6.3 | 10 | 16 | 25 | 36 | 54 | 63 | 80 | 100 | 160 | 250 | 360 | 420 | 630 | 1000 | 1350 | 1650 | 2500 |
| $C_V$ | | 5 | 7.5 | 12 | 20 | 30 | 42 | 62 | 75 | 95 | 120 | 190 | 290 | 420 | 485 | 735 | 1150 | 1560 | 1900 | 2900 |
| $K_V$-1 | | 3.6 | 5.7 | 9 | 14.5 | 22 | 32 | 47 | 57 | 72 | 90 | 144 | 225 | 320 | 375 | 560 | 900 | 1200 | 1500 | 2250 |
| $C_V$-1 | | 4.2 | 7 | 10.5 | 17 | 26 | 37 | 55 | 67 | 85 | 105 | 170 | 265 | 375 | 435 | 650 | 1040 | 1400 | 1730 | 2600 |
| $K_V$-2 | | 3.2 | 5 | 8 | 13 | 20 | 29 | 43 | 50 | 63 | 80 | 125 | 200 | 290 | 340 | 500 | 800 | 1080 | 1320 | – |
| $C_V$-2 | | 3.7 | 6 | 9.5 | 15 | 23 | 34 | 50 | 60 | 75 | 95 | 145 | 235 | 335 | 390 | 580 | 950 | 1250 | 1530 | |
| $K_V$-3 | | 3 | 4.8 | 7.5 | 12 | 20 | 27 | 40 | 47 | 60 | 75 | 120 | 190 | 270 | 315 | 480 | 750 | 1000 | 1250 | – |
| $C_V$-3 | | 3.5 | 5.6 | 9 | 14 | 23 | 31 | 47 | 55 | 70 | 90 | 140 | 220 | 315 | 365 | 560 | 880 | 1150 | 1450 | |
| Seat Ø | mm | 24 | | 31 | 38 | 50 | | 63 | 80 | | 100 | 125 | 150 | 200 | | 250 | 300 | 350 | 400 | 500 |
| Travel | mm | 15 | | | | | | 30 | | | | 60 | | | | 120 | | | | |
| | in | 0.59 | | | | | | 1.18 | | | | 2.36 | | | | 4.72 | | | | |
| Nominal size DN | NPS | Versions without flow divider · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | | | | | | | |
| 25 | 1 | • | • | | | | | | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | | | | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • | | | | | | | | | | | | | |
| 80 | 3 | • | • | • | • | • | • | • | • | • | | | | | | | | | | |
| 100 | 4 | | | | • | • | • | • | • | • | • | | | | | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | • | • | | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | • | • | • | | | | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | • | • | • | | | | |
| 300 | 12 | | | | | | | | | | • | • | • | • | • | • | • | | | |
| – | 14 | | | | | | | | | | | | • | • | • | • | • | • | | |
| 400 | 16 | | | | | | | | | | | | • | • | • | • | • | • | • | |
| 500 | 20 | | | | | | | | | | | | | | | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 1 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | | | | | | | |
| 25 | 1 | • | • | | | | | | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | | | | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • | | | | | | | | | | | | | |
| 80 | 3 | • | • | • | • | • | • | • | • | • | | | | | | | | | | |
| 100 | 4 | | | | • | • | • | • | • | • | • | | | | | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | • | • | | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | • | • | • | | | | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | • | • | • | | | | |
| 300 | 12 | | | | | | | | | | • | • | • | • | • | • | • | | | |
| – | 14 | | | | | | | | | | | | • | • | • | • | • | • | | |
| 400 | 16 | | | | | | | | | | | | • | • | • | • | • | • | • | |
| 500 | 20 | | | | | | | | | | | | | | | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 2 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | | | |
| 40 | 1½ | | | | | | | | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • | | | | | | | [1] Pressure balancing only up to PN 160/Class 900 | | | | | | |
| 80 | 3 | • | • | • | • | • | • | • | • | • [1] | | | | | | | | | | |
| 100 | 4 | | | | • | • | • | • | • | • | • [1] | | | | | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | • | • [1] | | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | • | • [1] | • [1] | | | | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | • | • | • [1] | | | | |
| 300 | 12 | | | | | | | | | | • | • | • | • | • | • | • [1] | | | |
| – | 14 | | | | | | | | | | | | • | • | • | • | • | • | | |
| 400 | 16 | | | | | | | | | | | | • | • | • | • | • | • | • [1] | |
| 500 | 20 | | | | | | | | | | | | | | | • | • | • | • | |
| Nominal size DN | NPS | Versions with flow divider ST 3 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | | | |
| 40 | 1½ | | | | | | | | | | | | | | | | | | | |
| 50 | 2 | • | • | | | | | | | | | | | | | | | | | |
| 80 | 3 | • | • | • | • | • | • | | | | | | | | | | | | | |
| 100 | 4 | | | | • | • | • | • | | | | | | | | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | • | | | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | • | | | | | | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | • | • | | | | | |
| 300 | 12 | | | | | | | | | | • | • | • | • | • | • | | | | |
| – | 14 | | | | | | | | | | | | • | • | • | • | • | • | | |
| 400 | 16 | | | | | | | | | | | | • | • | • | • | • | • | | |
| 500 | 20 | | | | | | | | | | | | | | | • | • | • | • | |

**Table 3.2:** *$K_{VS}$ and $C_V$ coefficients for Type 3251 and Type 3256 (up to DN 300/NPS 12) · Linear characteristic*

| **Series 250 · Linear characteristic with direction of flow FTO** | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4 | 6.3 | 10 | 16 | 25 | 40 | 63 | 100 | 130 | 250 | 320 | 500 | 900 | 1300 | 1700 | 2100 | 3200 |
| $C_V$ | | 5 | 7.5 | 12 | 20 | 30 | 47 | 75 | 120 | 150 | 290 | 375 | 580 | 1040 | 1500 | 2000 | 2450 | 3700 |
| $K_V$-1 | | 3.6 | 5.7 | 9 | 14.5 | 22 | 36 | 57 | 90 | 115 | 225 | 280 | 450 | 800 | 1150 | 1530 | 1900 | 2900 |
| $C_V$-1 | | 4.2 | 7 | 10.5 | 17 | 26 | 42 | 67 | 105 | 135 | 265 | 325 | 520 | 950 | 1350 | 1800 | 2200 | 3300 |
| $K_V$-2 | | 3.2 | 5 | 8 | 13 | 20 | 32 | 50 | 80 | 105 | 200 | 255 | 400 | 720 | 1030 | 1350 | 1680 | – |
| $C_V$-2 | | 3.7 | 6 | 9.5 | 15 | 23 | 37 | 60 | 95 | 120 | 235 | 295 | 465 | 835 | 1200 | 1560 | 1940 | |
| $K_V$-3 | | 3 | 4.8 | 7.5 | 12 | 20 | 30 | 47 | 75 | 100 | 190 | 230 | 375 | 675 | 950 | 1275 | 1600 | – |
| $C_V$-3 | | 3.5 | 5.6 | 9 | 14 | 23 | 35 | 55 | 90 | 120 | 220 | 270 | 435 | 780 | 1100 | 1475 | 1860 | |
| Seat Ø | mm | 24 | | 31 | | 38 | 50 | 63 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 500 |
| Travel | mm | 15 | | | | | 30 | | | | 60 | | | 120 | | | | |
| | in | 0.59 | | | | | 1.18 | | | | 2.36 | | | 4.72 | | | | |
| Nominal size DN | NPS | Versions without flow divider · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | | | | | |
| 25 | 1 | • [1] | • | | | | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | • [1] | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • [1] | | | | | | | | | | | |
| 80 | 3 | • | • | • | • | • | • | • | • [1] | | | | | | | | | |
| 100 | 4 | | | | | • | • | • | • | • | | | | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | • | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | • | | | | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | • | | | | |
| 300 | 12 | | | | | | | | | • | • | • | • | • | • | | | |
| – | 14 | | | | | | | | | | | • | • | • | • | | | |
| 400 | 16 | | | | | | | | | | | • | • | • | • | • | • | |
| 500 | 20 | | | | | | | | | | | | | • | • | • | • | • |
| [1] Red. $K_{VS}$/ $C_V$ w. Class 900- 2500: | | 4.2 | – | – | – | 22 | 36 | – | 90 | – | | | | | | | | |
| | | 3.6 | – | – | – | 26 | 42 | – | 105 | | | | | | | | | |
| Nominal size DN | NPS | Versions with flow divider ST 1 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | | | | | |
| 25 | 1 | • | • | | | | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | • | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • | | | | | | | | | | | |
| 80 | 3 | • | • | • | • | • | • | • | • | | | | | | | | | |
| 100 | 4 | | | | | • | • | • | • | • | | | | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | • | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | • | | | | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | • | | | | |
| 300 | 12 | | | | | | | | | • | • | • | • | • | • | | | |
| – | 14 | | | | | | | | | | | • | • | • | • | | | |
| 400 | 16 | | | | | | | | | | | • | • | • | • | • | • | |
| 500 | 20 | | | | | | | | | | | | | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 2 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | |
| 40 | 1½ | | | | | | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • | | | | | | | | | | | |
| 80 | 3 | • | • | • | • | • | • | • | • [1] | | | | | | | | | |
| 100 | 4 | | | | | • | • | • | • | • [1] | | | | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | • [1] | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | • [1] | | | | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | • [1] | | | | |
| 300 | 12 | | | | | | | | | • | • | • | • | • | • [1] | | | |
| – | 14 | | | | | | | | | | | • | • | • | • | | | |
| 400 | 16 | | | | | | | | | | | • | • | • | • | • | • [1] | |
| 500 | 20 | | | | | | | | | | | | | • | • | • | • | |
| Nominal size DN | NPS | Versions with flow divider ST 3 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | | | | | |
| 25 | 1 | | | | | | | | | | | | | | | | | |
| 40 | 1½ | | | | | | | | | | | | | | | | | |
| 50 | 2 | • | • | | | | | | | | | | | | | | | |
| 80 | 3 | • | • | • | • | • | • | | | | | | | | | | | |
| 100 | 4 | | | | | • | • | • | | | | | | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | | | | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | | | | | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | | | | | |
| 300 | 12 | | | | | | | | | • | • | • | • | • | | | | |
| – | 14 | | | | | | | | | | | • | • | • | • | | | |
| 400 | 16 | | | | | | | | | | | • | • | • | • | • | | |
| 500 | 20 | | | | | | | | | | | | | • | • | • | • | |

[1] Pressure balancing only up to PN 160/Class 900

**Table 4:** *Type 251GR Globe Valve · Direction of flow FTO*

**Table 4.1:** *$K_{VS}$ and $C_V$ coefficients for Type 251GR · Equal percentage characteristic*

| **Series SMS with screwed-in seat · Equal percentage characteristic with direction of flow FTO** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4.3 | 6.2 | 7.8 | 13 | 21 | 32 | 42 | 74 | 90 | 140 | 210 | 320 | 580 |
| $C_V$ | | 5 | 7.2 | 9 | 15 | 24 | 37 | 49 | 85 | 105 | 162 | 243 | 370 | 670 |
| $K_V$-1 | | 3.9 | 5.6 | 6.9 | 12 | 19 | 29 | 38 | 66 | 82 | 126 | 190 | 290 | 520 |
| $C_V$-1 | | 4.5 | 6.5 | 8 | 14 | 22 | 34 | 44 | 76 | 95 | 146 | 220 | 335 | 600 |
| Seat Ø | mm | 24 | 27 | 27 | 33 | 42 | 55 | 55 | 70 | 85 | 110 | 130 | 170 | 228 |
| Travel | mm | 15 | 15 | 15 | 19 | 19 | 30 | 30 | 38 | 38 | 60 | 60 | 60 | 90 |
| Nom. size NPS | DN | Version without flow divider | | | | | | | | | | | | |
| ½ | 15 | | | | | | | | | | | | | |
| 1 | 25 | • | • | • | | | | | | | | | | |
| 1½ | 40 | • | • | • | • | • | | | | | | | | |
| 2 | 50 | | | • | • | • | • | • | | | | | | |
| 3 | 80 | | | | | • | • | • | • | • | | | | |
| 4 | 100 | | | | | | • | • | • | • | • | | | |
| 6 | 150 | | | | | | | | | • | • | • | • | |
| 8 | 200 | | | | | | | | | | • | • | • | • |
| Nom. size NPS | DN | Version with flow divider **ST 1** | | | | | | | | | | | | |
| ½ | 15 | | | | | | | | | | | | | |
| 1 | 25 | • | • | • | | | | | | | | | | |
| 1½ | 40 | • | • | • | • | • | | | | | | | | |
| 2 | 50 | | | • | • | • | • | • | | | | | | |
| 3 | 80 | | | | | • | • | • | • | • | | | | |
| 4 | 100 | | | | | | • | • | • | • | • | | | |
| 6 | 150 | | | | | | | | | • | • | • | • | |
| 8 | 200 | | | | | | | | | | • | • | • | • |

**Table 4.2:** *$K_{VS}$ and $C_V$ coefficients for Type 251GR · Equal percentage characteristic*

| **Series SMS with clamped-in seat · Equal percentage characteristic with direction of flow FTO** | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4.3 | 6.2 | 6.9 | 7.8 | 13 | 19 | 21 | 32 | 38 | 42 | 74 | 82 | 90 | 126 | 140 | 210 | 290 | 320 | 520 | 580 |
| $C_V$ | | 5 | 7.2 | 8 | 9 | 15 | 22 | 24 | 37 | 44 | 49 | 85 | 95 | 105 | 146 | 162 | 243 | 335 | 370 | 600 | 670 |
| Seat Ø | mm | 24 | 27 | 27 | 27 | 33 | 42 | 42 | 55 | 55 | 55 | 70 | 85 | 85 | 110 | 110 | 130 | 170 | 170 | 228 | 228 |
| Travel | mm | 15 | 15 | 15 | 15 | 19 | 19 | 19 | 30 | 30 | 30 | 38 | 38 | 38 | 60 | 60 | 60 | 60 | 60 | 90 | 90 |
| Nom. size NPS | DN | Version without flow divider | | | | | | | | | | | | | | | | | | | |
| ½ | 15 | | | | | | | | | | | | | | | | | | | | |
| 1 | 25 | • | • | • | | | | | | | | | | | | | | | | | |
| 1½ | 40 | • | • | | • | • | • | | | | | | | | | | | | | | |
| 2 | 50 | | | | • | • | | • | • | • | | | | | | | | | | | |
| 3 | 80 | | | | | | | • | • | | • | • | • | | | | | | | | |
| 4 | 100 | | | | | | | | • | | • | • | | • | • | | | | | | |
| 6 | 150 | | | | | | | | | | | | | • | | • | • | • | | | |
| 8 | 200 | | | | | | | | | | | | | | | • | • | | • | • | |

**Table 4.3:** *$K_{VS}$ and $C_V$ coefficients for Type 251GR · Linear characteristic*

| **Series SMS with screwed-in seat · Linear characteristic with direction of flow FTO** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4.3 | 6.9 | 9.4 | 13 | 19 | 26 | 47 | 74 | 100 | 152 | 273 | 363 | 630 |
| $C_V$ | | 5 | 8 | 11 | 15 | 22 | 30 | 54 | 85 | 116 | 177 | 315 | 420 | 730 |
| $K_V$-1 | | 3.9 | 6.2 | 8.5 | 12 | 17 | 23 | 42 | 66 | 90 | 137 | 245 | 327 | 570 |
| $C_V$-1 | | 4.5 | 7.2 | 10 | 14 | 20 | 27 | 49 | 76 | 105 | 159 | 284 | 378 | 660 |
| Seat Ø | mm | 24 | 27 | 27 | 33 | 33 | 42 | 55 | 70 | 85 | 110 | 130 | 170 | 228 |
| Travel | mm | 15 | 15 | 15 | 19 | 19 | 19 | 30 | 38 | 38 | 60 | 60 | 60 | 90 |
| Nom. size NPS | DN | Version without flow divider | | | | | | | | | | | | |
| ½ | 15 | | | | | | | | | | | | | |
| 1 | 25 | • | • | • | | | | | | | | | | |
| 1½ | 40 | • | • | • | • | • | • | | | | | | | |
| 2 | 50 | | | • | • | • | • | • | | | | | | |
| 3 | 80 | | | | | | • | • | • | • | | | | |
| 4 | 100 | | | | | | | • | • | • | • | | | |
| 6 | 150 | | | | | | | | | • | • | • | • | |
| 8 | 200 | | | | | | | | | | • | • | • | • |
| Nom. size NPS | DN | Version with flow divider **ST 1** | | | | | | | | | | | | |
| ½ | 15 | | | | | | | | | | | | | |
| 1 | 25 | • | • | • | | | | | | | | | | |
| 1½ | 40 | • | • | • | • | • | • | | | | | | | |
| 2 | 50 | | | • | • | • | • | • | | | | | | |
| 3 | 80 | | | | | | • | • | • | • | | | | |
| 4 | 100 | | | | | | | • | • | • | • | | | |
| 6 | 150 | | | | | | | | | • | • | • | • | |
| 8 | 200 | | | | | | | | | | • | • | • | • |

**Table 4.4:** *$K_{VS}$ and $C_V$ coefficients for Type 251GR · Linear characteristic*

| **Series SMS with clamped-in seat · Linear characteristic with direction of flow FTO** | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4.3 | 6.9 | 8.5 | 9.4 | 13 | 19 | 23 | 26 | 42 | 47 | 74 | 90 | 100 | 137 | 152 | 273 | 327 | 363 | 570 | 630 |
| $C_V$ | | 5 | 8 | 10 | 11 | 15 | 22 | 27 | 30 | 49 | 54 | 85 | 105 | 116 | 159 | 177 | 315 | 378 | 420 | 660 | 730 |
| Seat Ø | mm | 24 | 27 | 27 | 27 | 33 | 33 | 42 | 42 | 55 | 55 | 70 | 85 | 85 | 110 | 110 | 130 | 170 | 170 | 228 | 228 |
| Travel | mm | 15 | 15 | 15 | 15 | 19 | 19 | 19 | 19 | 30 | 30 | 38 | 38 | 38 | 60 | 60 | 60 | 60 | 60 | 90 | 90 |
| Nom. size NPS | DN | Version without flow divider | | | | | | | | | | | | | | | | | | | |
| ½ | 15 | | | | | | | | | | | | | | | | | | | | |
| 1 | 25 | • | • | • | | | | | | | | | | | | | | | | | |
| 1½ | 40 | • | • | | • | • | • | • | | | | | | | | | | | | | |
| 2 | 50 | | | | • | • | • | | • | • | | | | | | | | | | | |
| 3 | 80 | | | | | | | | • | | • | • | • | | | | | | | | |
| 4 | 100 | | | | | | | | | | • | • | | • | • | | | | | | |
| 6 | 150 | | | | | | | | | | | | | • | | • | • | • | | | |
| 8 | 200 | | | | | | | | | | | | | | | • | • | | • | • | |

**Table 5:** *Type 3254 Globe Valve · Direction of flow FTO*

**Table 5.1:** *$K_{VS}$ and $C_V$ coefficients for Type 3254 · Equal percentage characteristic*

| **Series 250 · Equal percentage characteristic with direction of flow FTO** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 54 | 63 | 80 | 100 | 160 | 250 | 360 | 420 | 630 | 1000 | 1350 | 1650 | 2500 |
| $C_V$ | | 62 | 75 | 95 | 120 | 190 | 290 | 420 | 485 | 735 | 1150 | 1560 | 1900 | 2900 |
| $K_V$-1 | | 47 | 57 | 72 | 90 | 144 | 225 | 320 | 375 | 560 | 900 | 1200 | 1500 | 2250 |
| $C_V$-1 | | 55 | 67 | 85 | 105 | 170 | 265 | 375 | 435 | 650 | 1040 | 1400 | 1730 | 2600 |
| $K_V$-2 | | 43 | 50 | 63 | 80 | 125 | 200 | 290 | 340 | 500 | 800 | 1080 | 1320 | – |
| $C_V$-2 | | 50 | 60 | 75 | 95 | 145 | 235 | 335 | 390 | 580 | 950 | 1250 | 1530 | |
| $K_V$-3 | | 40 | 47 | 60 | 75 | 120 | 190 | 270 | 315 | 480 | 750 | 1000 | 1250 | – |
| $C_V$-3 | | 47 | 55 | 70 | 90 | 140 | 220 | 315 | 365 | 560 | 880 | 1150 | 1450 | |
| Seat Ø | mm | 63 | 80 | | 100 | 125 | 150 | 200 | | 250 | 300 | 350 | 400 | 500 |
| Travel | mm | 30 | | | | 60 | | | | 120 | | | | |
| | in | 1.18 | | | | 2.36 | | | | 4.72 | | | | |
| Nominal size DN | NPS | Versions without flow divider · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | |
| 80 | 3 | • | • | • | | | | | | | | | | |
| 100 | 4 | • | • | • | • | | | | | | | | | |
| 150 | 6 | • | • | • | • | • | • | | | | | | | |
| 200 | 8 | | • | • | • | • | • | • | • | | | | | |
| 250 | 10 | | • | • | • | • | • | • | • | • | | | | |
| 300 | 12 | | | | • | • | • | • | • | • | • | | | |
| 400 | 16 | | | | | | • | • | • | • | • | • | • | |
| 500 | 20 | | | | | | | | | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 1 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | |
| 80 | 3 | • | • | • | | | | | | | | | | |
| 100 | 4 | • | • | • | • | | | | | | | | | |
| 150 | 6 | • | • | • | • | • | • | | | | | | | |
| 200 | 8 | | • | • | • | • | • | • | • | | | | | |
| 250 | 10 | | • | • | • | • | • | • | • | • | | | | |
| 300 | 12 | | | | • | • | • | • | • | • | • | | | |
| 400 | 16 | | | | | | • | • | • | • | • | • | • | |
| 500 | 20 | | | | | | | | | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 2 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | |
| 80 | 3 | • | • [1] | • [1] | | | | | | | | | | |
| 100 | 4 | • | • | • | • [1] | | | | | [1] Pressure balancing only up to PN 160/Class 900 | | | | |
| 150 | 6 | • | • | • | • | • | • [1] | | | | | | | |
| 200 | 8 | | • | • | • | • | • | • [1] | • [1] | | | | | |
| 250 | 10 | | • | • | • | • | • | • | • | • [1] | | | | |
| 300 | 12 | | | | • | • | • | • | • | • | • [1] | | | |
| 400 | 16 | | | | | | • | • | • | • | • | • | • [1] | |
| 500 | 20 | | | | | | | | | • | • | • | • | |
| Nominal size DN | NPS | Versions with flow divider ST 3 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | | | |
| 80 | 3 | | | | | | | | | | | | | |
| 100 | 4 | • | | | | | | | | | | | | |
| 150 | 6 | • | • | • | • | • | | | | | | | | |
| 200 | 8 | | • | • | • | • | • | | | | | | | |
| 250 | 10 | | • | • | • | • | • | • | • | | | | | |
| 300 | 12 | | | | • | • | • | • | • | • | | | | |
| 400 | 16 | | | | | | • | • | • | • | • | • | | |
| 500 | 20 | | | | | | | | | • | • | • | • | |

**Table 5.2:** *$K_{VS}$ and $C_V$ coefficients for Type 3254 · Linear characteristic*

| **Series 250 · Linear characteristic with direction of flow FTO** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 63 | 100 | 130 | 250 | 320 | 500 | 900 | 1300 | 1700 | 2100 | 3200 |
| $C_V$ | | 75 | 120 | 150 | 290 | 375 | 580 | 1040 | 1500 | 2000 | 2450 | 3700 |
| $K_V$-1 | | 57 | 90 | 115 | 225 | 280 | 450 | 800 | 1150 | 1530 | 1900 | 2900 |
| $C_V$-1 | | 67 | 105 | 135 | 265 | 325 | 520 | 950 | 1350 | 1800 | 2200 | 3300 |
| $K_V$-2 | | 50 | 80 | 105 | 200 | 255 | 400 | 720 | 1030 | 1350 | 1680 | – |
| $C_V$-2 | | 60 | 95 | 120 | 235 | 295 | 465 | 835 | 1200 | 1560 | 1940 | |
| $K_V$-3 | | 47 | 75 | 100 | 190 | 230 | 375 | 675 | 950 | 1275 | 1600 | – |
| $C_V$-3 | | 55 | 90 | 120 | 220 | 270 | 435 | 780 | 1100 | 1475 | 1860 | |
| Seat Ø | mm | 63 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 500 |
| Travel | mm | 30 | | | 60 | | | 120 | | | | |
| | in | 1.18 | | | 2.36 | | | 4.72 | | | | |
| Nominal size DN | NPS | Versions without flow divider · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | |
| 80 | 3 | • | • [1] | | | | | | | | | |
| 100 | 4 | • | • | • | | | | | | | | |
| 150 | 6 | • | • | • | • | • | | | | | | |
| 200 | 8 | | • | • | • | • | • | | | | | |
| 250 | 10 | | • | • | • | • | • | • | | | | |
| 300 | 12 | | | • | • | • | • | • | • | | | |
| 400 | 16 | | | | | • | • | • | • | • | • | |
| 500 | 20 | | | | | | | • | • | • | • | • |
| [1] Reduced $K_{VS}/C_V$ coefficients with Class 900 to 2500: $K_{VS}$ = 90; $C_V$ = 105 | | | | | | | | | | | | |
| Nominal size DN | NPS | Versions with flow divider ST 1 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | |
| 80 | 3 | • | • | | | | | | | | | |
| 100 | 4 | • | • | • | | | | | | | | |
| 150 | 6 | • | • | • | • | • | | | | | | |
| 200 | 8 | | • | • | • | • | • | | | | | |
| 250 | 10 | | • | • | • | • | • | • | | | | |
| 300 | 12 | | | • | • | • | • | • | • | | | |
| 400 | 16 | | | | | • | • | • | • | • | • | |
| 500 | 20 | | | | | | | • | • | • | • | • |
| Nominal size DN | NPS | Versions with flow divider ST 2 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | |
| 80 | 3 | • | • [1] | | | | | | | | | |
| 100 | 4 | • | • | • [1] | | | | [1] Pressure balancing only up to PN 160/Class 900 | | | | |
| 150 | 6 | • | • | • | • | • [1] | | | | | | |
| 200 | 8 | | • | • | • | • | • [1] | | | | | |
| 250 | 10 | | • | • | • | • | • | • [1] | | | | |
| 300 | 12 | | | • | • | • | • | • | • [1] | | | |
| 400 | 16 | | | | | • | • | • | • | • | • [1] | |
| 500 | 20 | | | | | | | • | • | • | • | |
| Nominal size DN | NPS | Versions with flow divider ST 3 · Areas highlighted in gray indicate versions also available with pressure balancing | | | | | | | | | | |
| 80 | 3 | | | | | | | | | | | |
| 100 | 4 | • | | | | | | | | | | |
| 150 | 6 | • | • | • | • | | | | | | | |
| 200 | 8 | | • | • | • | • | | | | | | |
| 250 | 10 | | • | • | • | • | • | | | | | |
| 300 | 12 | | | • | • | • | • | • | | | | |
| 400 | 16 | | | | | • | • | • | • | • | | |
| 500 | 20 | | | | | | | • | • | • | • | |

**Table 6:** *Type 3256 Angle Valve · Direction of flow FTC*

**Table 6.1:** *$K_{VS}$ and $C_V$ coefficients for Type 3256 · Equal percentage characteristic*

| **Type 3256 · Equal percentage characteristic with direction of flow FTC** | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4 | 6.3 | 10 | 13 | 20 | 30 | 47 | 54 | 70 | 85 | 144 | 220 | 320 | 400 | 600 | 950 |
| $C_V$ | | 5 | 7.5 | 12 | 15 | 23 | 35 | 55 | 62 | 80 | 100 | 170 | 255 | 375 | 465 | 700 | 1100 |
| Seat Ø | mm | 24 | | 31 | 38 | 50 | | 63 | 80 | | 100 | 125 | 150 | 200 | | 250 | 300 |
| Travel | mm | 15 | | | | | 30 | | | | | 60 | | | | 120 | |
| | in | 0.59 | | | | | 1.18 | | | | | 2.36 | | | | 4.72 | |
| Nominal size | | Version without flow divider · Pressure balancing on request | | | | | | | | | | | | | | | |
| DN | NPS | | | | | | | | | | | | | | | | |
| 25 | 1 | • | • | | | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | | | | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • | | | | | | | | | | |
| 80 | 3 | • | • | • | • | • | • | • | • | • | | | | | | | |
| 100 | 4 | | | | • | • | • | • | • | • | • | | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | • | • | | | | |
| 200 | 8 | | | | | | | | • | • | • | • | • | • | • | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | • | • | • | |
| 300 | 12 | | | | | | | | | | • | • | • | • | • | • | • |

**Table 6.2:** *$K_{VS}$ and $C_V$ coefficients for Type 3256 · Linear characteristic*

| **Type 3256 · Linear characteristic with direction of flow FTC** | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $K_{VS}$ | | 4 | 6.3 | 10 | 13 | 20 | 35 | 54 | 85 | 115 | 220 | 280 | 480 | 860 | 1240 |
| $C_V$ | | 5 | 7.5 | 12 | 15 | 23 | 40 | 62 | 100 | 135 | 255 | 325 | 560 | 1000 | 1440 |
| Seat Ø | mm | 24 | | 31 | | 38 | 50 | 63 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| Travel | mm | 15 | | | | | 30 | | | | 60 | | | 120 | |
| | in | 0.59 | | | | | 1.18 | | | | 2.36 | | | 4.72 | |
| Nominal size | | Version without flow divider · Pressure balancing on request | | | | | | | | | | | | | |
| DN | NPS | | | | | | | | | | | | | | |
| 25 | 1 | • | • | | | | | | | | | | | | |
| 40 | 1½ | • | • | • | • | • [1] | | | | | | | | | |
| 50 | 2 | • | • | • | • | • | • [1] | | | | | | | | |
| 80 | 3 | • | • | • | • | • | • | • | • [1] | | | | | | |
| 100 | 4 | | | | • | • | • | • | • | • | | | | | |
| 150 | 6 | | | | | | | • | • | • | • | • | | | |
| 200 | 8 | | | | | | | | • | • | • | • | • | | |
| 250 | 10 | | | | | | | | • | • | • | • | • | • | |
| 300 | 12 | | | | | | | | | • | • | • | • | • | • |

[1] Reduced $K_{VS}/C_V$ coefficients with Class 900 to 2500 on request

**Ordering text**

The following specifications are required on ordering:

| | |
|---|---|
| Perforated plug for valve | Type … |
| Body material | According to associated data sheet |
| Type of end connections | According to associated data sheet |
| Nominal size | DN .../NPS ... |
| Pressure rating | PN .../Class ... |
| Flow coefficients | $K_{VS}$ .../$C_V$ ... |
| Direction of flow | FTO: Flow-to-open (flow under the plug)<br>FTC: Flow-to-close (flow over the plug) |

For a retrofit, the details below are additionally required

| | |
|---|---|
| Seat diameter | .... mm |
| Travel | .... mm |