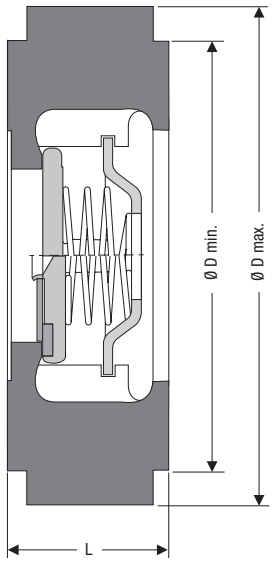
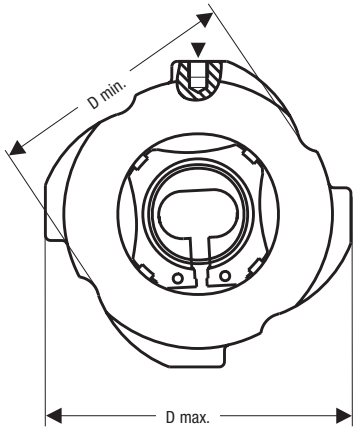
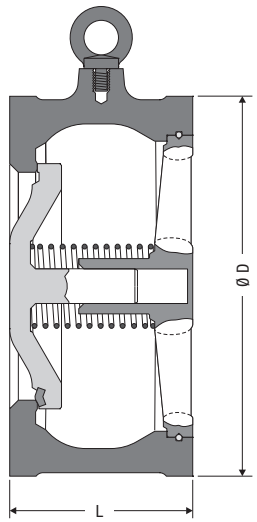



*RK 86 / RK 86 A*
*DN 15 – 100 mm*




*RK 86 / RK 86 A*
*DN 15 – 100 mm*




*RK 86 / RK 86 A*
*DN 125 – 200 mm*

## RK 86 and RK 86 A – Our Robust All-Rounder

### Application

| Type | PN | |
|---|---|---|
| **RK 86**<br>**RK 86 A** | 40/class 300<br>40/class 300 | For liquids, gases, vapours. Application as gravity circulations check, vacuum breaker, breather, foot valve, pressure-maintaining valve, check valve.<br>RK 86 A especially suited for low temperatures, aggressive fluids, boiler feedwater lines, and other industrial applications. |

### Body Material

| Type | | Nominal sizes DN | EN reference | ASTM equivalent [1] |
|---|---|---|---|---|
| **RK 86** | **Body** | 15 – 100 mm | Chromium steel, 1.4317 | A 743-CA6-NM |
| | **Valve disk** | | 1.4571 | AISI 316 Ti |
| | **Body** | 125 – 200 mm | GP240GH (1.0619) | A 216 WCB |
| | **Plug** | | 1.4107 | A217-CA15 |
| **RK 86A** | **Body** | 15 – 200 mm | 1.4408 | A 351 CF 8M |
| | **Valve disk/plug** | | 1.4571 | AISI 316 Ti |

**[1] ASTM material similar to EN material.**
**Observe different physical and chemical properties!**

### Dimensions

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Nominal sizes** | [mm] | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 |
| | [Inch] | 1/2 | 3/4 | 1 | 1 1/4 | 1 1/2 | 2 | 2 1/2 | 3 | 4 | 5 | 6 | 8 |
| **Overall dimensions [mm]** | L | 16 | 19 | 22 | 28 | 31,5 | 40 | 46 | 50 | 60 | 90 | 106 | 140 |
| | ∅ $D_{min}$ | 44 | 53 | 64 | 73 | 83 | 96 | 110 | 128 | 151 | – | – | – |
| | ∅ $D_{max}$ | 67 | 76 | 82 | 93 | 104 | 118 | 136 | 158 | 186 | – | – | – |
| **∅ D** | PN 10/16 | – | – | – | – | – | – | – | – | – | 194 | 220 | 275 |
| | PN 25 | – | – | – | – | – | – | – | – | – | 194 | 226 | 286 |
| | PN 40 | – | – | – | – | – | – | – | – | – | 194 | 226 | 293 |
| | Class 125/150 | – | – | – | – | – | – | – | – | – | 194 | 220 | 275 |
| | Class 300 | – | – | – | – | – | – | – | – | – | 216 | 251 | 308 |
| **Weight** | [kg] | 0.27 | 0.38 | 0.52 | 0.8 | 1.12 | 1.78 | 2.43 | 3.37 | 5.34 | 11 | 14 | 25 |

### Pressure/Temperature Ratings with metal-to-metal seat

| Typ | PN | DN | PMA / TMA / [bar] / [°C] | | |
|---|---|---|---|---|---|
| **RK 86** | 40/class 300 | 15 – 100 | 51 / -10 | 43.9 / 200 | 36.9 / 350 |
| | 40/class 300 | 125 – 200 | 51 / -10 | 43.9 / 200 | 34.5 / 400 |
| **RK 86 A** | 40/class 300 | 15 – 200 | 49.6 / -200 | 35.8 / 200 | 24 / 550 |

### Designs

| Type | Seat | | | | Springs | | | Earthing connection |
|---|---|---|---|---|---|---|---|---|
| | metal-to-metal | EPDM (–40 up to 150 °C)[1] | FPM (–25 up to 200 °C)[1] | PTFE [2] | without spring | special spring | Nimonic spring [3] | |
| **RK 86** | X | 0 | 0 | 0 | 0 | 0 | 0 | X |
| **RK 86A** | X | 0 | 0 | 0 | 0 | 0 | 0 | X |

**[1] Observe pressure/temp. ratings of the equipment**
**[2] DN 15-100 –190 °C up to 250 °C; DN 125-200 –60 up to 200 °C**
**[3] Required for temperatures above 300 °C**

X : standard
0 : optional

## Pressure Drop Charts

The curves given in the chart are valid for water at 20 °C. To read the pressure drop for other fluids the equivalent water volume flowrate must be calculated and used in the graph.

The values indicated in the chart are applicable to spring-loaded valves with horizontal flow. With vertical flow insignificant deviations occur only within the range of partial opening.

$$\dot{V}_W = \dot{V} \cdot \sqrt{\frac{\rho}{1000}}$$

$\dot{V}_W$ = Equivalent water volume flow in [l/s] or [m³/h]

$\rho$ = Density of fluid (operating condition) in [kg/m³]

$\dot{V}$ = Volume of fluid (operating condition) in [l/s] or [m³/h]

## Opening Pressures

Differential pressures at zero volume flow.

### RK 86, RK 86 A

| DN | Opening pressures [mbar] | | | |
|---|---|---|---|---|
| | Direction of flow | | | |
| | without spring | with spring | | |
| | ↑ | ↑ | → | ↓ |
| 15 | 2.5 | 10 | 7.5 | 5 |
| 20 | 2.5 | 10 | 7.5 | 5 |
| 25 | 2.5 | 10 | 7.5 | 5 |
| 32 | 3.5 | 12 | 8.5 | 5 |
| 40 | 4.0 | 13 | 9 | 5 |
| 50 | 4.5 | 14 | 9.5 | 5 |
| 65 | 5.0 | 15 | 10 | 5 |
| 80 | 5.5 | 16 | 10.5 | 5 |
| 100 | 6.5 | 18 | 11.5 | 5 |
| 125 | 12.5 | 35 | 22.5 | 10 |
| 150 | 14.0 | 38 | 24.0 | 10 |
| 200 | 13.5 | 37 | 23.5 | 10 |

### RK 86, 86 A