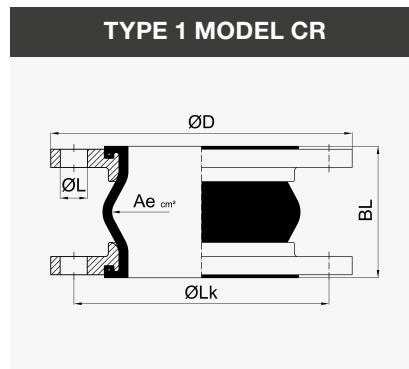


RUBBER EXPANSION JOINTS

Type 1 MODEL CR



Areas of application in industry and trade:

- › Absorbing axial movements and (heat/cold) expansions
- › Vibration-reducing connection of machines and units
- › Reducing noise transfer
- › Compensation of installation inaccuracies
- › Reduction of forces and moments in connections
- › Mechanical engineering, plant engineering, pipeline construction
- › Water supply and building technology
- › Wastewater technology
- › Steel, printing, paper and chemical industry

Version

The HKS rubber expansion joint of **type 1 model CR** consists of a rubber bellows and two rotating flanges.

Design of rubber bellows:

Inner layer: Chloroprene CR, seamless, abrasion-resistant
 Pressure support: PA textile cord
 Outer layer: Chloroprene CR
 Identification: White „CR“ print, DN..., PN..., date of manufacture

Flange design:

Rotating steel flanges made of material S235JR, galvanised, DIN PN 10, with integrated rubber bead (self-sealing), additional seals are not required.

Properties and areas of application:

The HKS rubber expansion joint **type 1 model CR** is suitable for cold and warm water, swimming pool water, seawater, wastewater (lightly acidic or alkaline), also with low oil content, cooling water with corrosion protection agents containing oil, lubricant, grease, air and compressed air. Electrically dissipative.

Additional equipment:

- › PTFE linings
- › Vacuum support rings
- › Tensioning/tension rod length limiters
- › Hinged tensioners
- › Inner sleeves
- › Flame protection covers
- › Soil protection covers

Special versions:

- › Flanges: Other materials, flange standards and dimensions according to DIN, ASA, JIS, etc. are possible.
- › Rubber bellows: On request, other expansion joints are available with Nominal diameters, pressure stages and lengths which exceed the standard listed in the tables. DN 32 bellows are used for DN 25 rubber expansion joints.

Temperature-dependent pressure and movement ranges

| Max. operating temperature | Max. movement range | Temperature-dependent operating pressure for bellows | |
|----------------------------|---------------------|--|--------|
| | | PN 10 | PN 16 |
| 50 °C | 100 % | 10 bar | 16 bar |
| 70 °C | 80 % | 8 bar | 12 bar |
| 100 °C | 60 % | 6 bar | 10 bar |

Subject to technical modifications

| Nominal diameter | | Length | Bellows | | Permitted movement absorption nominal ⁵⁾ | | | | Permitted negative pressure (vacuum stability) | | | Flange | | | | | Weight |
|------------------|--------|--------|------------------|--------------------|---|--------------|----------|---------|--|------------------------|--------------------------|------------------|----------------------------------|-----------------------|--------------|---------------|--------|
| | | | Nominal pressure | Effective diameter | Axial ⁴⁾ | | Lateral | Angular | With out VSD | With VSD ²⁾ | With VSD+S ³⁾ | Outside diameter | Borehole pattern acc. to EN 1092 | Pitch circle diameter | No. of holes | Hole diameter | |
| | | | | | Δx_c | Δx_e | | | | | | | | | | | |
| DN | BL | PN | Ae | Δx_c | Δx_e | Δy | De-grees | mbar | mbar | mbar | D | PN | Lk | n | L | G | |
| mm | in | mm | bar | cm ² | mm | mm | mm | | | | mm | - | mm | - | mm | kg | |
| 25 ¹⁾ | 1" | 130 | 16 | 15 | -30 | +20 | ±30 | ±30 | | | | 115 | 40 | 85 | 4 | 14 | 1.9 |
| 32 | 1 1/4" | 130 | 16 | 15 | -30 | +20 | ±30 | ±30 | max. -1000 | | | 140 | 40 | 100 | 4 | 18 | 3.4 |
| 40 | 1 1/2" | 130 | 16 | 20 | -30 | +20 | ±30 | ±30 | | | | 150 | 40 | 110 | 4 | 18 | 4.0 |
| 50 | 2" | 130 | 16 | 30 | -30 | +20 | ±30 | ±30 | | | | 165 | 16 | 125 | 4 | 18 | 4.6 |
| 65 | 2 1/2" | 130 | 16 | 50 | -30 | +20 | ±30 | ±30 | -700 | | | 185 | 16 | 145 | 4 | 18 | 5.3 |
| 80 | 3" | 130 | 16 | 85 | -30 | +20 | ±30 | ±30 | -600 | max. -1000 | | 200 | 16 | 160 | 8 | 18 | 6.9 |
| 100 | 4" | 130 | 16 | 125 | -30 | +20 | ±30 | ±20 | -400 | | | 220 | 16 | 180 | 8 | 18 | 8.0 |
| 125 | 5" | 130 | 16 | 185 | -30 | +20 | ±30 | ±20 | -300 | | | 250 | 16 | 210 | 8 | 18 | 9.9 |
| 150 | 6" | 130 | 16 | 250 | -30 | +20 | ±30 | ±20 | -300 | | | 285 | 16 | 240 | 8 | 22 | 12.3 |
| 200 | 8" | 130 | 16 | 400 | -25 | +30 | ±30 | ±10 | -300 | | | 340 | 10 | 295 | 8 | 22 | 16.5 |
| 250 | 10" | 130 | 16 | 600 | -10 | +30 | ±15 | ±5 | -200 | | | 395 | 10 | 350 | 12 | 22 | 21.6 |
| 300 | 12" | 130 | 16 | 800 | -10 | +30 | ±15 | ±5 | -100 | | | 445 | 10 | 400 | 12 | 22 | 29.3 |
| 350 | 14" | 200 | 16 | 1000 | -40 | +35 | ±30 | ±8 | - | | | 505 | 10 | 460 | 16 | 22 | 43.0 |
| 400 | 16" | 200 | 16 | 1375 | -40 | +35 | ±30 | ±8 | - | | | 565 | 10 | 515 | 16 | 26 | 46.0 |
| 450 | 18" | 200 | 10 | 1780 | -40 | +35 | ±30 | ±8 | - | -700 | | 615 | 10 | 565 | 20 | 26 | 50.0 |
| 450 | 18" | 250 | 10 | 1780 | -40 | +35 | ±35 | ±10 | - | -700 | | 615 | 10 | 565 | 20 | 26 | 53.0 |
| 500 | 20" | 200 | 10 | 2185 | -40 | +35 | ±30 | ±8 | - | -700 | | 670 | 10 | 620 | 20 | 26 | 57.0 |
| 600 | 24" | 200 | 10 | 3080 | -40 | +35 | ±30 | ±8 | - | -700 | | 780 | 10 | 725 | 20 | 30 | 70.0 |
| 700 | 28" | 260 | 10 | 4800 | -40 | +30 | ±30 | ±5 | - | - | | 895 | 10 | 840 | 24 | 30 | 117.0 |
| 800 | 32" | 250 | 10 | 5440 | -40 | +35 | ±35 | ±5 | - | - | -700 | 1015 | 10 | 950 | 24 | 33 | 129.5 |
| 900 | 36" | 300 | 10 | 7100 | -40 | +40 | ±40 | ±5 | - | - | -700 | 1115 | 10 | 1050 | 28 | 33 | 184.0 |
| 1000 | 40" | 300 | 10 | 8700 | -40 | +40 | ±40 | ±5 | - | - | -700 | 1230 | 10 | 1160 | 28 | 36 | 245.0 |

1) DN 32 bellows are used for DN 25 rubber expansion joints.

2) VSD ... vacuum support ring made of material 1.4571

3) VSD+S ... vacuum support ring with lock (screw fitting) made of 1.4571

4) Axial movement absorption Δx_c ... compression and Δx_e ... extension

5) $\Delta x_c/\Delta x_e$, Δy and $\Delta \alpha$ have to be reduced proportionately for simultaneous movement absorption. The sum of all parts must not exceed 100 %.