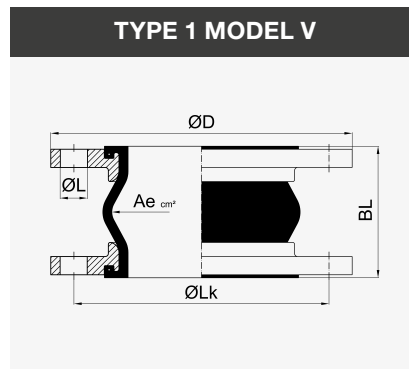


RUBBER EXPANSION JOINTS

Type 1 MODEL V



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
- › Steel, printing, paper and chemical industry

Version

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

Design of rubber bellows:

Inner layer: FPM, seamless, diffusion-proof, electrically insulating
 Pressure support: PA textile cord, special rubber coating
 Outer layer: ECO, electrically conductive
 Identification: White-green-white rings, 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 V with seamless FPM lining is suitable for petrochemical plants, motors, power plants and flue gas desulphurisation plants with a high resistance to hot oils, benzene, xylene, fuels with an aromatics content over 50 %, bio diesel, aromatic/chlorinated hydrocarbons and mineral acids.

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		LGTH	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	Bore-hole pattern acc. to EN 1092	Pitch circle diameter	No. of holes	Hole diameter		
					Δx_c	Δx_e												Δy
mm	in	mm	bar	cm ²	mm	mm	mm	De-grees	mbar	mbar	mbar	mm	-	mm	-	mm	kg	
25 ¹⁾	1"	130	16	15	-30	+20	±30	±30	max. -1000	max. -1000	max. -1000	115	40	85	4	14	1.9	
32	1 1/4"	130	16	15	-30	+20	±30	±30				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	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	-600	340	10	295	8	22

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%.