# VIBRATION ABSORBER

# **Expansion Joints**

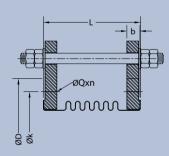


A practical solution to resolve many mechanical vibrationrelated problems.

Made from multi-ply bellows with very thin layers of stainless steel, KLINGER's Vibration Absorbers are particularly suited for operation where low-amplitude, high-frequency vibration is problematic and/or operation temperatures exceed rubber Expansion Joint limits.

These Expansion Joints can be equipped with tie rods to limit the movement and absorb the pressure of the pump pressure surge, preventing thrust forces from being transmitted into the pipe.





## **Advantages**

- » A highly versatile and durable choice for all purposes and media
- » Great pressure and temperature-bearing capacity
- » Available in various types of metallic material grades
- » Rubber bushes can be added to the tie rods to help reduce noise
- » Hard-wearing, weatherproof, with a longer cyclic service life than rubber Expansion Joints

# **Applications**

- » Power stations
- » Pulp and paper plants
- » Heating and ventilating systems
- » Shipbuilding
- » Off-shore installations
- » Chemical/petrochemical plants

### **DESIGN VALUES**

Bellows Material	304, 316, 321
Balance of Material	Carbon Steel, Stainless Steel
Design Pressure	16 barg
Design Temperature	300°C

Nominal Diameter	Length (L)	Effective Area	Spring Rates		EN 1092				
			Axial	Lateral	ØD	Øk	b	n	ØQ
	(mm)	(cm²)	(N/mm)	(N/mm)	(mm)	(mm)	(mm)		(mm)
50	130	37	88	102	165	125	16	4	18
65	130	57	94	149	185	145	16	4	18
80	130	79	85	234	200	160	18	8	18
100	130	131	105	292	220	180	18	8	18
125	130	186	148	745	250	210	20	8	18
150	130	269	217	1.544	285	240	20	8	22
200	130	443	260	2.909	340	295	22	12	22
250	160	664	282	3.130	405	355	24	12	26
300	210	942	313	2.498	460	410	26	12	26
350	210	1143	529	5.138	520	470	28	16	26
400	220	1484	371	2.878	580	525	30	16	30
450	220	1845	530	7.196	640	585	32	20	30
500	270	2262	450	5.331	715	650	34	20	33

Please consult with our technical department for different working conditions and design parameters.

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