

B300

NB 50 – NB 1600

► Type B300



Type key ► page 20

B3 0 0

Support ring variant

Number of arches

Type

Conical universal expansion joint

Design:	Conical-concentric rubber bellows with a sleeve for clamped fixing
Nominal diameters:	Standard NB 80 to NB 1600, intermediate sizes or other nominal diameter combinations possible
Installation length:	= Installation gap + 2 x fixing width Standard installation gap $L_0 = 75$ to 2,100 mm (► page 162) Other installation gaps on request
Fixing width:	Depends on pressure, nominal diameter and clamp design, at least 40 mm
Pressure:	Depending on the nominal diameter and installation length up to 1 bar
Movement:	For slight axial compression and lateral movements (► page 162) For axial extension or vacuums, the expansion joint can be drawn from the pipeline (groove as needed at the pipeline end)

Application:

Power plants, plant construction, food processing, wastewater treatment plants, industrial facilities, e. g. to disconnect pipelines, on oscillating conveyor systems, on sieving machines

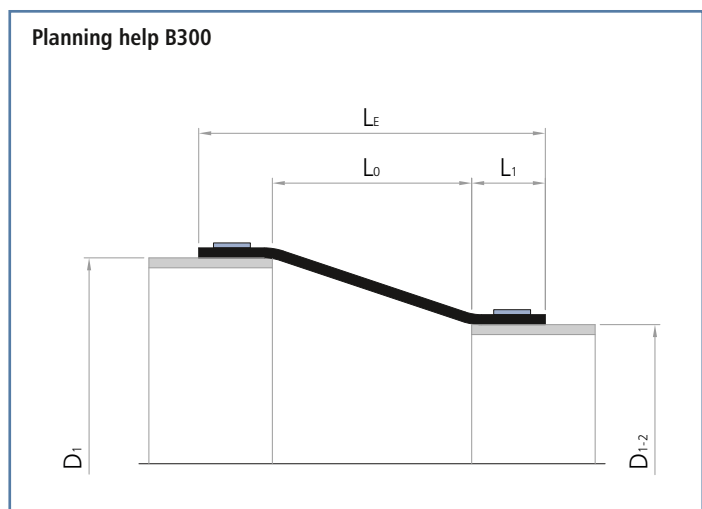


Rubber bellows

Rubber grades:			Carrier:
up to 100 °C:	EPDM	Cooling water, hot water, seawater, acids, dilute chlorine compounds	Nylon fabric Polyester fabric Kevlar fabric Glass fibre fabric Steel mesh
	EPDM, drinking water approved	Drinking water	
	EPDM, white, food grade	Foodstuffs	
	EPDM, abrasion-resistant	Abrasive materials, Water-sand extraction	
	EPDM, insulating	Electrical systems construction	
	IIR	Hot water, acids, bases, gases	
	CSM	Strong acids, bases, chemicals	
	NBR	Oils, petrol, solvents, compressed air	
	NBR, bright, food grade	Oil, fatty foods	
up to 80 °C:	CR	Cooling water, slightly oily water, seawater	
up to 70 °C:	NR	Abrasive materials	
up to 150 °C:	HNBR	Oils, petrol, solvents, compressed air	
up to 180 °C:	FPM	Corrosive chemicals, petroleum distillates	
up to 200 °C:	Silicon (Q)	Air, saltwater atmosphere	
	Silicon (Q), white, food grade	Foodstuffs, medical technology	
PTFE lining:	Permanently embedded against chemical attacks on the interior at the rubber bellows, take the restriction of the listed movement into account (▶ page 162)		

Fastening clamps

Design:	Depending on pressure and nominal diameters, endless clamp belt, screw thread belt, small clamps or hinge bolt clamps. At higher pressures, 2 adjacent clamps per fastening side	
Width:	Endless clamp belt:	3/4"
	Screw thread belt:	1/2"
	Small clamp:	depending on Ø: 9–12 mm
	Hinge bolt clamp:	depending on Ø: 18–30 mm
Materials:	Endless clamp belt with screw lugs (tongs):	1.7300
	Screw thread belt with threaded screw lugs:	1.4310
	Small clamp, belt and housing:	1.4016 (Screw steel galvanised)
	Hinge bolt clamp, belt and housing:	1.4016 (Screw steel galvanised)



**B300**

▶ concentric



Potential combination			Movement		
NB D ₁	NB D ₁₋₂	Gap ≥ mm			
			mm	mm	±mm
100	80	60	1	0	2
	80	135	2	0	4
125	100	75	1	0	2
	80	210	3	0	6
150	100	150	2	0	4
	125	75	1	0	2
	80	360	6	0	10
200	100	300	5	0	8
	125	225	4	0	6
	150	150	2	0	4
250	80	510	8	0	13
	100	450	7	0	11
	125	375	6	0	9
	150	300	5	0	8
	200	150	3	0	4
300	80	660	11	0	16
	100	600	10	0	14
	125	525	9	0	13
	150	450	8	0	11
	200	300	5	0	7
	250	150	3	0	4
350	80	810	14	0	19
	100	750	13	0	17
	125	675	12	0	16
	150	600	10	0	14
	200	450	8	0	10
	250	300	5	0	7
	300	150	3	0	3
400	100	900	16	0	20
	125	825	15	0	18
	150	750	13	0	17
	200	600	11	0	13
	250	450	8	0	10
	300	300	6	0	7
500	150	1050	19	0	22
	200	900	17	0	19
	250	750	14	0	16
	300	600	12	0	13
	350	450	9	0	10
	400	300	6	0	6
600	200	1200	23	0	24
	250	1050	21	0	21
	300	900	18	0	18
	350	750	15	0	15
	400	600	12	0	12
	450	450	9	0	9
700	250	1350	27	0	26
	300	1200	25	0	23
	350	1050	22	0	20
	400	900	19	0	17
	450	750	16	0	15
	500	600	13	0	12
800	300	1500	32	0	28
	350	1350	29	0	25
	400	1200	26	0	23
	450	1050	23	0	20
	500	900	20	0	17
	600	600	13	0	11
700	300	7	0	6	

Potential combination			Movement		
NB D ₁	NB D ₁₋₂	Gap ≥ mm			
			mm	mm	±mm
900	350	1650	36	0	30
	400	1500	33	0	27
	450	1350	30	0	25
	500	1200	27	0	22
	600	900	21	0	16
	700	600	14	0	11
1000	800	300	7	0	5
	400	1800	40	0	32
	450	1650	37	0	29
	500	1500	34	0	27
	600	1200	28	0	21
	700	900	21	0	16
1100	800	600	14	0	11
	900	300	7	0	5
	450	1950	45	0	34
	500	1800	42	0	31
	600	1500	36	0	26
	700	1200	29	0	21
1200	800	900	22	0	16
	900	600	15	0	10
	1000	300	8	0	5
	500	2100	50	0	36
	600	1800	43	0	31
	700	1500	37	0	25
1300	800	1200	30	0	20
	900	900	23	0	15
	1000	600	15	0	10
	1100	300	8	0	5
	600	2100	52	0	35
	700	1800	45	0	30
1400	800	1500	38	0	25
	900	1200	31	0	20
	1000	900	23	0	15
	1100	600	16	0	10
	1200	300	8	0	5
	700	2100	53	0	34
1500	800	1800	46	0	29
	900	1500	39	0	25
	1000	1200	32	0	20
	1100	900	24	0	15
	1200	600	16	0	10
	1300	300	8	0	5
1600	800	2100	55	0	34
	900	1800	47	0	29
	1000	1500	40	0	24
	1100	1200	32	0	19
	1200	900	25	0	14
	1300	600	17	0	10
1700	1400	300	8	0	5
	900	2100	56	0	33
	1000	1800	49	0	28
	1100	1500	41	0	24
	1200	1200	33	0	19
	1300	900	25	0	14
1800	1400	600	17	0	9
	1500	300	9	0	5

The specified movements may vary depending on the design pressure.
Reduction of movement for expansion joints with PTFE lining: -50 %.

Individual fabrication possible



Universal expansion joint, type B310
as a drum connection
NB 900 / NB 650, 0.1 bar