

D100A

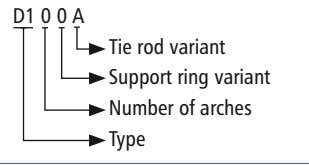
NB 40 – NB 1200



► Type D100A

Type key ► page 20

D1 0 0 A


 Tie rod variant

Support ring variant

Number of arches

Type

Universal expansion joint without arch

Design:	Hydrodynamic, cylindrical rubber bellows with self-sealing rubber bulges and swivel backing flanges Optionally with embedded pressure or vacuum support rings
Nominal diameters:	NB 40 to NB 1200, intermediate sizes possible
Installation length:	Standard $L_e = 150$ to 400 mm (► page 110) Other installation lengths on request
Pressure:	Depending on the nominal diameter and installation length up to 10 bar Vacuum stability on request
Movement:	For small axial and lateral movements (► page 110)

Application:

Plant construction, sand/gravel extraction industry, dredgers, food processing e. g. as suction/pressure hoses, in conveyor lines, on pumps and vessels



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:	For severe chemical attacks. Take the restriction of the listed movement into account (▶ page 110)		

Flanges

Design: Single-part, swivel, round backing flanges with clearance holes and groove to accommodate the rubber bulges

Flange norms: DIN, ANSI, AWWA, BS, JIS, special measurements (▶ page 280)

Materials:

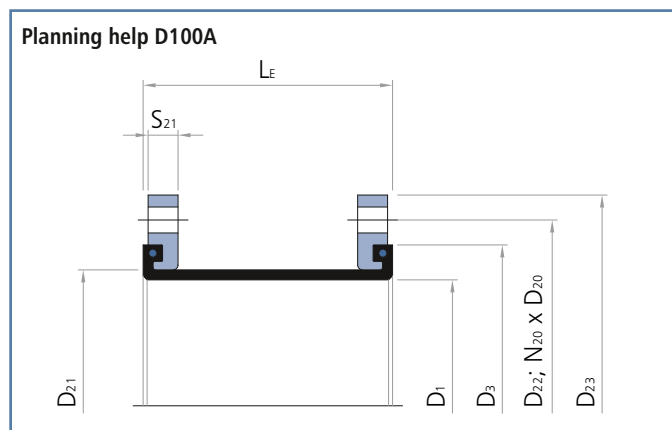
- Carbon steel: 1.0038 (S235JRG2)
1.0570 (S355J2G3)
- Stainless steel: 1.4301 (X5CrNi18-10)
1.4571 (X6CrNiMoTi17-12-2)
- Aluminium: AlMg3
- Other materials on request

Coating: Primed, hot-dip galvanised, special paint

Optional accessories

Protective hood: UV protection cover
Ground protective cover
Fire protection cover
(▶ page 50)

Flow liners: Cylindrical flow liner
Conical flow liner
Telescoping flow liner
(▶ page 49)



**D100A**

▶ without arch



Installation length (L_E) at design pressure															
NB	up to 10 bar $L_E = 150$ mm					up to 10 bar $L_E = 200$ mm					up to 10 bar $L_E = 250$ mm				
	Movement				A cm ²	Movement				A cm ²	Movement				A cm ²
	mm	mm	±mm	±°		mm	mm	±mm	±°		mm	mm	±mm	±°	
40	8	5	12	0	10	10	6	16	0	10	13	8	20	0	10
50	8	5	11	0	16	10	6	15	0	16	13	8	19	0	16
65	8	5	11	0	28	10	6	14	0	28	13	8	18	0	28
80	8	5	10	0	43	10	6	14	0	43	13	8	17	0	43
100	8	5	10	0	69	10	6	13	0	69	13	8	17	0	69
125	8	5	10	0	115	10	6	13	0	115	13	8	16	0	115
150	8	5	9	0	170	10	6	12	0	170	13	8	15	0	170
200	8	5	9	0	278	10	6	12	0	278	13	8	14	0	278
250	8	5	8	0	449	10	6	11	0	449	13	8	14	0	449
300	8	5	8	0	656	10	6	11	0	656	13	8	13	0	656
350	8	5	8	0	855	10	6	10	0	855	13	8	13	0	855
400	8	5	8	0	1,195	10	6	10	0	1,195	13	8	13	0	1,195
450	8	5	7	0	1,514	10	6	10	0	1,514	13	8	12	0	1,514
500	8	5	7	0	1,886	10	6	10	0	1,886	13	8	12	0	1,886
600	8	5	7	0	2,706	10	6	9	0	2,706	13	8	12	0	2,706
700	8	5	7	0	3,750	10	6	9	0	3,750	13	8	11	0	3,750
800	8	5	7	0	4,914	10	6	9	0	4,914	13	8	11	0	4,914
900	8	5	6	0	6,193	10	6	9	0	6,193	13	8	11	0	6,193
1000	8	5	6	0	7,667	10	6	8	0	7,667	13	8	10	0	7,667
1100	8	5	6	0	9,297	10	6	8	0	9,297	13	8	10	0	9,297
1200	8	5	6	0	11,085	10	6	8	0	11,085	13	8	10	0	11,085

Installation length (L_E) at design pressure															
NB	up to 10 bar $L_E = 300$ mm					up to 10 bar $L_E = 350$ mm					up to 10 bar $L_E = 400$ mm				
	Movement				A cm ²	Movement				A cm ²	Movement				A cm ²
	mm	mm	±mm	±°		mm	mm	±mm	±°		mm	mm	±mm	±°	
40	15	9	24	0	10	18	11	28	0	10	20	12	32	0	10
50	15	9	23	0	16	18	11	27	0	16	20	12	30	0	16
65	15	9	22	0	28	18	11	25	0	28	20	12	29	0	28
80	15	9	21	0	43	18	11	24	0	43	20	12	28	0	43
100	15	9	20	0	69	18	11	23	0	69	20	12	27	0	69
125	15	9	19	0	115	18	11	22	0	115	20	12	25	0	115
150	15	9	18	0	170	18	11	21	0	170	20	12	24	0	170
200	15	9	17	0	278	18	11	20	0	278	20	12	23	0	278
250	15	9	17	0	449	18	11	19	0	449	20	12	22	0	449
300	15	9	16	0	656	18	11	19	0	656	20	12	21	0	656
350	15	9	15	0	855	18	11	18	0	855	20	12	21	0	855
400	15	9	15	0	1,195	18	11	18	0	1,195	20	12	20	0	1,195
450	15	9	15	0	1,514	18	11	17	0	1,514	20	12	20	0	1,514
500	15	9	14	0	1,886	18	11	17	0	1,886	20	12	19	0	1,886
600	15	9	14	0	2,706	18	11	16	0	2,706	20	12	19	0	2,706
700	15	9	13	0	3,750	18	11	16	0	3,750	20	12	18	0	3,750
800	15	9	13	0	4,914	18	11	15	0	4,914	20	12	18	0	4,914
900	15	9	13	0	6,193	18	11	15	0	6,193	20	12	17	0	6,193
1000	15	9	13	0	7,667	18	11	15	0	7,667	20	12	17	0	7,667
1100	15	9	12	0	9,297	18	11	14	0	9,297	20	12	16	0	9,297
1200	15	9	12	0	11,085	18	11	14	0	11,085	20	12	16	0	11,085

Reduction of movement for expansion joints with PTFE lining:
 axial compression: -33 %; axial extension: -66 %; lateral displacement: -25 %.
 For larger movements see type D110A.

Individual fabrication possible



Universal expansion joint, type D100A
on the suction side of quenching water pumps in a waste incineration plant
NB 150, 16 bar