D300A-konz D300A-exz

NB 25 – NB 1200

Type key ▶ page 20

D3 0 0 A

- Tie rod variant
- Support ring variant
- Number of arches
- Type

Conical universal expansion joint

Design: Conical-concentric or conical-eccentric rubber bellows with self-sealing rubber bulges and swivel backing flanges

Nominal diameters: NB 25 to NB 1200, intermediate sizes or other nominal diameter combinations possible

Installation length: Standard L_E = 250 to 2,100 mm (▶ page 132–133) Other installation lengths on request

Pressure: Depending on the nominal diameter and installation length up to 10 bar

Movement: For small axial and lateral movements (▶ page 132–133)

Application:
Plant construction, desulphurisation plants, sand/gravel extraction industry, dredgers, food processing e. g. in gypsum suspension conveyance lines, on pumps, vessels, as vacuum/pressure hoses

KTW FDA Ω <10⁵ Ohm EX

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, available starting at NB 300. Take the restriction of the listed movement into account (▶ page 132–133)		

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

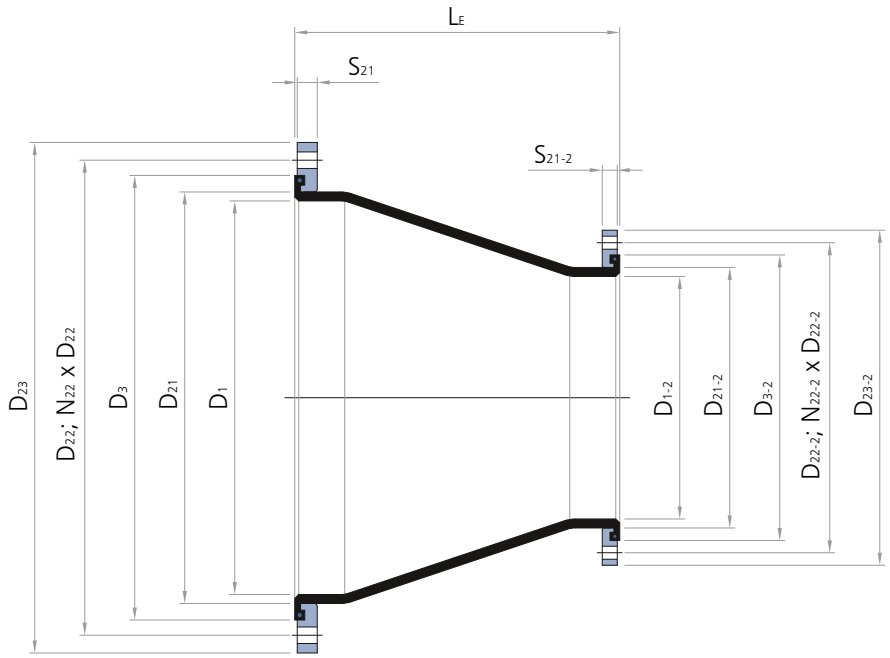
Optional accessories

Tie rods:
Type D300**E**: Tie rods mounted outside in spherical bearings and ball disks to accommodate the reaction forces in the event of pressure
Type D300**M**: Tie rods mounted outside and inside in spherical bearings and ball disks to accommodate the reaction forces in the event of pressure and vacuum

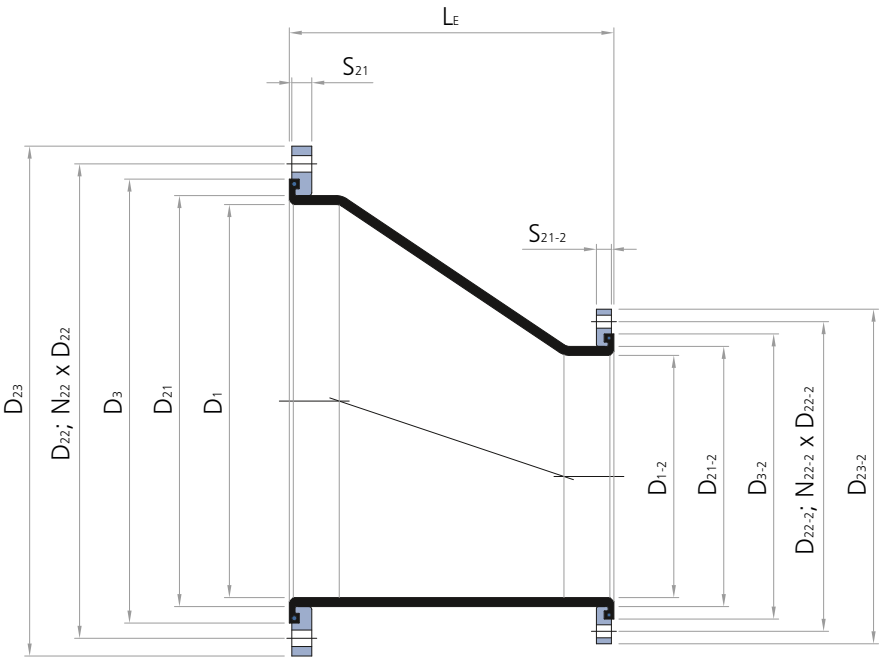
Protective hoods: UV protection cover, ground protective cover, fire protection cover (▶ page 50)

Flow liners: Cylindrical flow liner, conical flow liner, telescoping flow liner (▶ page 49)

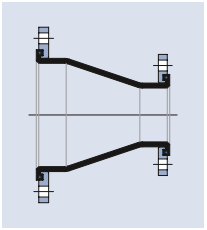
Planning help D300A-konz



Planning help D300A-exz



Universal expansion joint, type U110A
on the supply pumps in a paper mill
DN80 – DN350, 10 bar



D300A-konz

▶ concentric

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Installation length (L_E) at design pressure

up to 6 bar
higher pressures on request

Potential combination			Movement		
NB D_1	NB D_{1-2}	Installation ≥ mm	mm	mm	±mm
40	25	250	3	3	10
	32	250	3	3	10
50	32	250	3	3	9
	40	250	3	3	9
65	40	250	3	3	9
	50	250	3	3	9
80	50	250	3	3	8
	65	250	3	3	8
100	65	250	3	3	8
	80	250	3	3	8
125	80	250	3	3	7
	100	250	3	3	7
150	100	250	3	3	7
	125	250	3	3	7
200	125	300	4	3	8
	150	300	4	3	8
250	150	300	5	3	8
	200	300	4	3	8
300	200	350	6	4	8
	250	300	4	3	7
350	200	500	9	5	12
	250	400	6	4	9
	300	300	4	3	7
400	200	600	11	6	13
	250	550	9	6	12
	300	400	7	4	9
	350	300	4	3	7
500	200	850	16	9	18
	250	800	15	8	17
	300	650	12	7	14
	350	550	10	6	12
	400	400	7	4	8
	450	300	5	3	6
600	200	1100	22	11	22
	250	1050	21	11	21
	300	900	18	9	18
	350	800	16	8	16
	400	650	13	7	13
	450	550	10	6	11
	500	400	7	4	8
700	250	1300	27	13	25
	300	1150	24	12	22
	350	1050	22	11	20
	400	900	19	9	17
	450	800	16	8	16
	500	650	13	7	13
	600	400	8	4	8
800	300	1400	31	14	26
	350	1300	28	13	24
	400	1150	25	12	22
	450	1050	23	11	20
	500	900	20	9	17
	600	650	14	7	12
	700	400	8	4	8
900	350	1550	35	16	28
	400	1400	32	14	26
	450	1300	30	13	24
	500	1150	26	12	21
	600	900	21	9	16
	700	650	15	7	12
	800	400	8	4	7

Installation length (L_E) at design pressure

up to 6 bar
higher pressures on request

Potential combination			Movement		
NB D_1	NB D_{1-2}	Installation ≥ mm	mm	mm	±mm
1000	400	1650	39	17	29
	450	1550	36	16	28
	500	1400	33	14	25
	600	1150	28	12	20
	700	900	21	9	16
	800	650	15	7	12
	900	400	8	4	7
1100	450	1800	44	18	31
	500	1650	41	17	29
	600	1400	35	14	24
	700	1150	28	12	20
	800	900	22	9	16
	900	650	15	7	11
	1000	400	9	4	7
1200	500	1900	48	19	32
	600	1650	42	17	28
	700	1400	36	14	24
	800	1150	29	12	20
	900	900	23	9	15
	1000	650	16	7	11
	1100	400	9	4	7

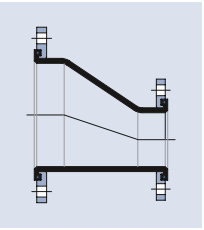
Recommended sizes
Additional possible sizes

The specified movements may vary depending on the design pressure.
Reduction of movements in expansion joints with PTFE lining: -50 % (possible starting at D_{1-2} = 300).

Individual fabrication possible

D300A-exz

▶ eccentric



Installation length (L_E) at design pressure

			up to 6 bar higher pressures on request		
Potential combination			Movement		
NB D_1	NB D_{1-2}	Installation ≥ mm	mm	mm	±mm
250	200	300	4	3	8
300	200	400	6	4	10
	250	350	5	4	8
350	200	550	9	6	13
	250	450	7	5	10
	300	350	5	4	8
400	200	650	11	7	15
	250	600	10	6	13
	300	450	7	5	10
	350	350	5	4	8
500	200	950	17	10	20
	250	900	16	9	19
	300	750	13	8	16
	350	650	11	7	14
	400	500	8	5	11
	450	400	6	4	8
600	200	1200	23	12	24
	250	1150	22	12	23
	300	1000	19	10	20
	350	900	17	9	18
	400	750	14	8	15
	450	650	11	7	13
	500	500	8	5	10
700	250	1400	28	14	27
	300	1250	25	13	24
	350	1150	23	12	22
	400	1000	20	10	19
	450	900	17	9	17
	500	750	14	8	15
	600	500	9	5	10
800	300	1550	32	16	29
	350	1450	30	15	27
	400	1300	27	13	24
	450	1200	24	12	23
	500	1050	21	11	20
	600	800	15	8	15
	700	550	9	6	10
900	350	1700	36	17	31
	400	1550	34	16	28
	450	1450	31	15	26
	500	1300	28	13	24
	600	1050	22	11	19
	700	800	16	8	15
	800	550	10	6	10

Installation length (L_E) at design pressure

			up to 6 bar higher pressures on request		
Potential combination			Movement		
NB D_1	NB D_{1-2}	Installation ≥ mm	mm	mm	±mm
1000	400	1800	40	18	32
	450	1700	38	17	30
	500	1550	35	16	28
	600	1300	29	13	23
	700	1050	23	11	19
	800	800	16	8	14
	900	550	10	6	10
1100	450	2000	46	20	35
	500	1850	43	19	32
	600	1600	37	16	28
	700	1350	30	14	23
	800	1100	24	11	19
	900	850	17	9	15
	1000	600	11	6	10
1200	500	2100	50	21	36
	600	1850	44	19	31
	700	1600	38	16	27
	800	1350	31	14	23
	900	1100	25	11	19
	1000	850	18	9	14
	1100	600	11	6	10

Recommended sizes
Additional possible sizes

The specified movements may vary depending on the design pressure.
Reduction of movements in expansion joints with PTFE lining: -50 % (possible starting at D_{1-2} = 300).

Individual fabrication possible