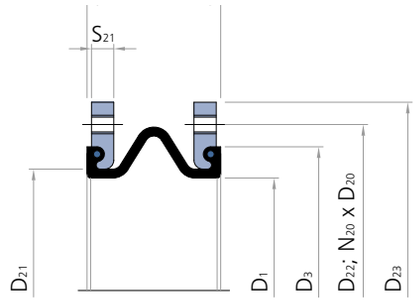
D210A ⌀ 32 - 500 mm

> **Type D210A**
without vacuum ring

> **Type D211A**
with internal vacuum ring

Type key > page 22
D2 1 0 A
- Tie rod variant
- Support ring variant
- Number of arches
- Type

Cross section D210A



Universal expansion joint with one arch

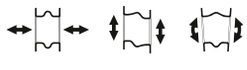
Design: Streamlined, single arch rubber bellows with self-sealing rubber bulges, designed to compensate all directional movements, have a cycle life in the tens of millions, constructed with a high-grade leak-proof tube, multiple layers of high-strength cord, a seamless cover, and swivel backing flanges with threaded holes. Optional with vacuum ring. In compliance with PED 2014/68/EU, FSA Technical Handbook and ASTM F1123 - 87.

Diameters: ⌀ 32 to 500 mm

Length: L_E = 100 or 110 mm (> page 162–163)

Pressure: Up to 25 bar depending on diameter
Vacuum stability on request, with vacuum ring up to 0.05 bar absolute

Movement: For large axial, lateral and angular movements



(> page 162–163)

Application:
Cooling water systems, desalination plants, drinking water supply, plant construction, e. g. in pipelines, on pumps, as dismantling joints, on condensers and vessels

PED 2014/68/EU · KTW WRAS · FDA · <10⁵ Ohm · EX · TÜV DIN 4809 (Standard sizes) · Shipbuilding certification (Standard sizes)

Request assembly instructions at:
www.ditec-adam.de/en/contact

Bellows elastomers and reinforcements

Elastomer	Fabric	Marking	°C	Application
EPDM / EPDM	PEEK		-40 | +130	Heating systems acc. 4809, warm- and hot water
IIR / EPDM	Polyamid		-40 | +100	Drinking water, seawater, acids, dilute chlorine compounds
NBR / CR	Polyamid		-20 | +90	Oil, gases, lubricants, natural gas
NBRweiß / CR	Polyamid		-20 | +90	Oily and fatty food (in complinance with KTW and FDA)
CSM / CSM	Polyamid		-20 | +100	Chemicals, corrosive chemical waste, air compressors with oil content
IIR / EPDM	Polyamid		-40 | +90	Cold-and warm water, sea water, cooling water, weak acids, alcohol

Backing flanges

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

Flange norms: DIN, EN, ANSI, AWWA, BS, JIS, special measurements (> page 298)

Materials: Carbon steel, stainless steel

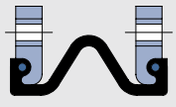
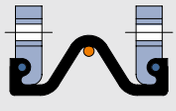
Coating: Galvanised, yellow neutralised

Accessories

Protective covers: Ground protective shield
Protective shield or cover
Fire protective cover (> page 58)

Flow liners: Cylindrical flow liner
Conical flow liner
Telescoping flow liner (> page 57)

Support rings

TYPE	Support rings	Vacuum ring	Pressure	Movement
D210A		None	Depending on the diameter up to 25 bar, vacuum stability on request	> page 162
D211A		Vacuum spiral / ring, medium contact, inside the arch	Depending on the diameter up to 25 bar, for vacuum up to 0.05 bar absolute	> page 163

Materials
Stainless steel

D210A

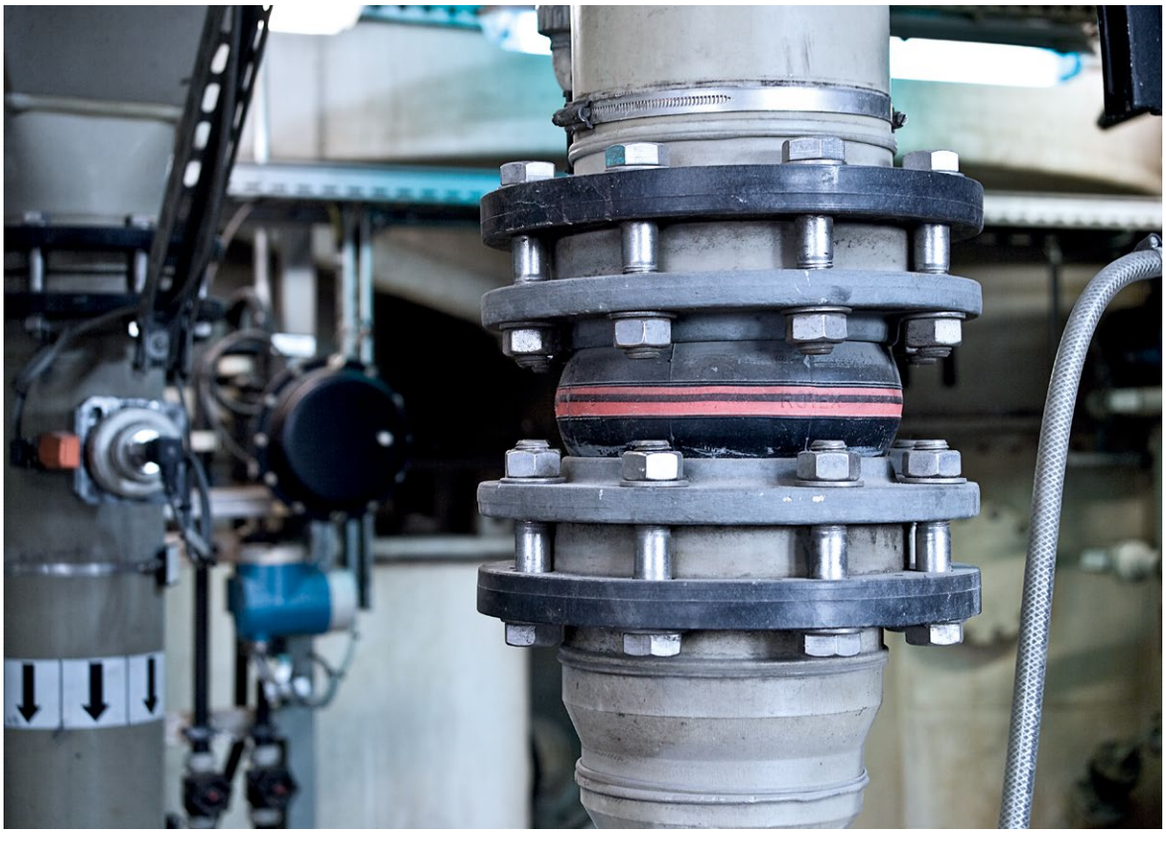
> without vacuum support ring

Installation length (L_E) at design pressure										
	up to 10 bar L_E = 100 mm					up to 10 bar L_E = 110 mm				
	higher pressures on request									
	Movement				A	Movement				A
∅										
mm	mm	mm	±mm	±°	cm²	mm	mm	±mm	±°	cm²
32	30	20	30	7.0	18					
40	30	20	30	7.0	18					
50	30	20	30	7.0	35					
65	30	20	30	7.0	56					
80	30	20	30	7.0	87					
100	30	20	30	7.0	130					
125	30	20	30	7.0	190					
150	30	20	30	7.0	263					
200	30	20	30	7.0	416					
250	30	20	30	7.0	607					
300	30	20	30	7.0	830					
350	30	20	30	7.0	1,100					
400						30	20	30	7.0	1,385
500						30	20	30	7.0	2,091

Standard sizes

In the event of axial extension and simultaneous lateral displacement (due to installation gap tolerance) the above movements are reduced (> page 29).

Angular movement only possible for 10 mm reduced installation length (90 / 100).



Universal expansion joint, type D110A
in a plastic pipe of a paper plant
∅ 150 mm, design pressure 6 bar

D211A

> with internal vacuum ring

Installation length (L_E) at design pressure

	up to 10 bar L_E = 100 mm					up to 10 bar L_E = 110 mm				
	higher pressures on request									
∅	Movement				A	Movement				A
mm	mm	mm	±mm	±°	cm²	mm	mm	±mm	±°	cm²
32	30	5	20	4.0	18					
40	30	5	20	4.0	18					
50	30	5	20	4.0	35					
65	30	5	20	4.0	56					
80	30	5	20	4.0	87					
100	30	5	20	4.0	130					
125	30	5	20	4.0	190					
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200	30	5	20	4.0	416					
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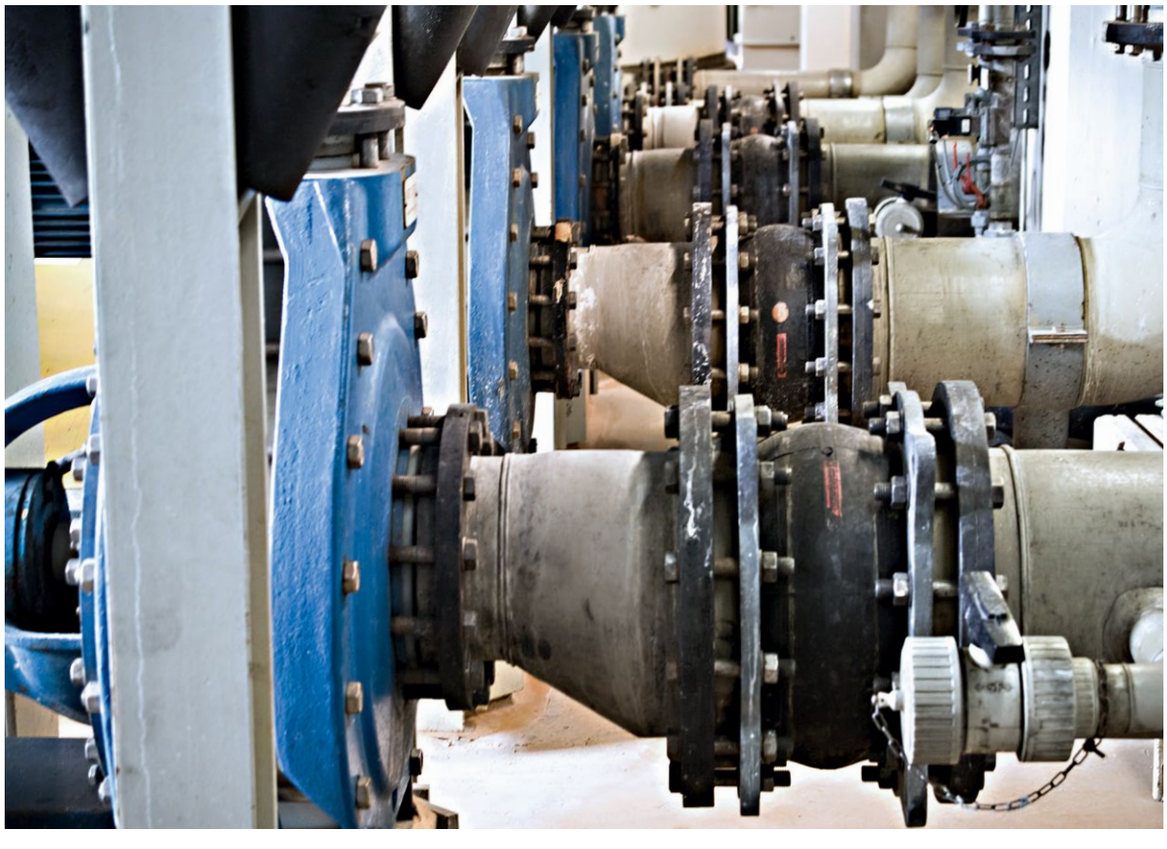

Expansion joints with swivel flanges, type D110A
pumping header installation
∅ 300 mm, operating pressure 10 bar