D210A

NB 32 – NB 500

- **Type D210A**
  without vacuum support ring
- **Type D211A**
  with internal vacuum support ring

Type key ▶ page 20

D2 1 0 A

- A → Tie rod variant
- 0 → Support ring variant
- 1 → Number of arches
- D2 → Type

Universal expansion joint with one arch

Design: Single-arch rubber bellows with self-sealing rubber bulges and swivel backing flanges with threaded holes
Optionally with vacuum support ring

Nominal diameters: NB 32 to NB 500

Installation length: L_E = 100 or 110 mm (▶ page 126–127)

Pressure: Depending on the nominal diameter up to 25 bar
Vacuum-proof up to 0.8 bar absolute, with vacuum support ring up to 0.05 bar absolute
Design in accordance with Pressure Equipment Directive PED 97/23/EC

Movement: For large axial, lateral and angular movements (▶ page 126–127)

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

CE PED 97/23/EC · KTW · FDA · Ω <10^5 Ohm · EX · TÜV DIN 4809 (Standard sizes) · Shipbuilding certification (Standard sizes)

Rubber bellows

Rubber grades			Carrier
up to 110 °C:	EPDM	Hot water, very high-temperature water dilute chlorine compounds	Nylon fabric Nomex fabric
up to 90 °C:	IIR drinking water approved	Drinking water, hot water, cold water, seawater, wastewater	
	CSM	Strong acids, bases, chemicals	
	NBR	City gas, natural gas, fuels, lubricants	
up to 80 °C:	NBR, bright, food grade	Oil, fatty foods	

Flanges

Design: Single-part, swivel, round backing flanges with threaded 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)
Other materials on request

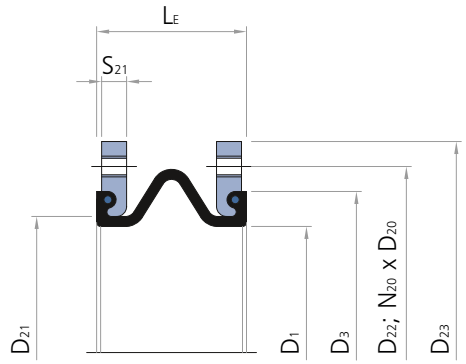
Coating: Galvanised, yellow neutralised

Optional accessories

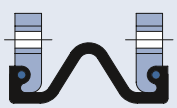
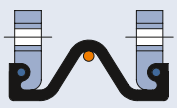
Protective hood: UV protection cover
Ground protective cover
Fire protection cover
(▶ page 50)

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

Planning help D210A



Support rings

TYPE		Vacuum support ring	Pressure	Movement
D210A		Without	Depending on the nominal diameter up to 25 bar, for vacuum up to 0.8 bar absolute	▶ page 126
D211A		Vacuum support ring spiral, medium contact, inside the arch apex	Depending on the nominal diameter up to 25 bar, for vacuum up to 0.05 bar absolute	▶ page 127

Materials		
Stainless steel:	1.4310 (X12CrNi17-7)	Other materials on request

D210A

▶ without vacuum support ring

HENNLICH

Installation length (L_E) at design pressure

NB	up to 10 bar L_E = 100 mm higher pressures on request Movement mm	mm	±mm	±°	A cm²	up to 10 bar L_E = 110 mm Movement mm	mm	±mm	±°	A 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					
175	30	20	30	7.0	334					
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

Recommended sizes

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

Universal expansion joint, type D110A
in a GRP line
NB 100, 16 bar

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									
NB	Movement				A	Movement				A
	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					
150	30	5	20	4.0	263					
175	30	5	20	4.0	334					
200	30	5	20	4.0	416					
250	30	5	20	4.0	607					
300	30	5	20	4.0	830					
350	30	5	20	4.0	1,100					
400						30	5	20	4.0	1,385
500						30	5	20	4.0	2,091

Recommended sizes

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

Universal expansion joint, type D110A
on the pump's suction side
NB 250, 10 bar