U216A ⌀ 100 - 4,000 mm

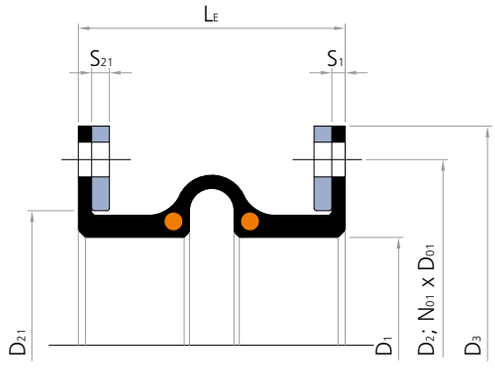
> Type U216A

Type key > page 22

U2 1 6 A

- A → Tie rod variant
- 6 → Support ring variant
- 1 → Number of arches
- U2 → Type

Cross section U216A



Universal expansion joint with one arch

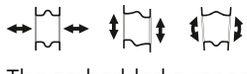
Design: Thick-walled, single arch rubber bellows with full faced rubber flanges, designed to compensate all-directional movements, have a cycle life in the tens of millions, constructed with a high-grade leak-proof tube, multiple layers of high-strength cord, a seamless cover, with support rings at the arch foot and split backing flanges. In compliance with PED 2014/68/EU, FSA Technical Handbook and ASTM F1123 - 87.

Diameters: ⌀ 100 to 4,000 mm, custom diameters possible

Length: Standard L_E = 250 to 350 mm (> page 84)
Custom length on request

Pressure: Up to 25 bar depending on diameter and length
Vacuum-proof

Movement: For axial, lateral and angular movements

 (> page 84)

Spring rate: The embedded support rings and reinforcements generate large spring rates

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

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

Bellows elastomers and reinforcements

Elastomer	Fabric	Marking	°C	Application
EPDM	Polyamid		-40 | +100	Cooling water, hot water, seawater, acids, dilute chlorine compounds
EPDM	Aramid		-40 | +100	Cooling water, hot water, seawater, acids, dilute chlorine compounds
EPDMht	Aramid		-40 | +120	Cooling water, hot water, seawater, acids, dilute chlorine compounds
EPDMwras	Polyamid		-40 | +100	Drinking water, foodstuffs
EPDMwras	Aramid		-40 | +100	Drinking water, foodstuffs
EPDMbeige	Polyamid		-40 | +100	Foodstuffs
EPDMbeige	Aramid		-40 | +100	Foodstuffs
IIR	Polyamid		-20 | +100	Hot water, acids, bases, gases
IIR	Aramid		-20 | +100	Hot water, acids, bases, gases
CSM	Polyamid		-20 | +100	Strong acids, bases, chemicals
CSM	Aramid		-20 | +100	Strong acids, bases, chemicals
NBR	Polyamid		-30 | +100	Oils, petrol, solvents, compressed air
NBR	Aramid		-30 | +100	Oils, petrol, solvents, compressed air
NBRbeige	Polyamid		-30 | +100	Oil, fatty foods
NBRbeige	Aramid		-30 | +100	Oil, fatty foods
CR	Polyamid		-20 | +90	Cooling water, slightly oily water, seawater
CR	Aramid		-20 | +90	Cooling water, slightly oily water, seawater
FPM	Aramid		-20 | +180	Corrosive chemicals, petroleum distillates
FPMbeige	Aramid		-20 | +180	Oil, fatty foods
NR	Polyamid		-20 | +70	Abrasive materials
Silicon	Aramid Glass		-60 | +200	Air, saltwater atmosphere, foodstuffs, medical technology

Backing flanges

Design: Multi-part, round backing flanges with clearance holes

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

Materials: Carbon steel, stainless steel or aluminium

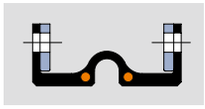
Coating: Primed, hot-dip galvanised, special paint

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)

Filled arch:  (> page 42)



U216A

> with one arch

Installation length (L_E) at design pressure

	up to 10 bar L_E = 250 mm					up to 10 bar L_E = 300 mm					up to 10 bar L_E = 350 mm				
	higher pressures on request														
	Movement				A	Movement				A	Movement				A
∅															
mm	mm	mm	±mm	±°	cm²	mm	mm	±mm	±°	cm²	mm	mm	±mm	±°	cm²
100	35	15	27	16.7	346	41	21	35	22.8	460	47	24	40	25.6	573
125	35	15	25	13.5	434	41	21	34	18.6	560	47	24	39	21	683
150	35	15	25	11.3	531	41	21	33	15.6	670	47	24	37	17.7	804
175	35	15	24	9.7	661	41	21	32	13.5	814	47	24	36	15.3	962
200	35	15	23	8.5	755	41	21	31	11.9	919	47	24	35	13.5	1,075
250	35	15	22	6.8	1,018	41	21	30	9.5	1,207	47	24	34	10.9	1,385
300	35	15	22	5.7	1,333	41	21	29	8.0	1,548	47	24	33	9.1	1,750
350	35	15	21	4.9	1,698	41	21	28	6.8	1,940	47	24	32	7.8	2,165
400	35	15	21	4.3	2,059	41	21	27	6.0	2,324	47	24	31	6.8	2,570
450	35	15	20	3.8	2,489	41	21	27	5.3	2,781	47	24	31	6.1	3,048
500	35	15	20	3.4	2,951	41	21	26	4.8	3,267	47	24	30	5.5	3,557
550	35	15	19	3.1	3,421	41	21	26	4.4	3,761	47	24	29	5	4,072
600	35	15	19	2.9	3,993	41	21	25	4.0	4,359	47	24	29	4.6	4,693
650	35	15	19	2.6	4,536	41	21	25	3.7	4,927	47	24	29	4.2	5,281
700	35	15	19	2.5	5,204	41	21	25	3.4	5,621	47	24	28	3.9	5,999
750	35	15	18	2.3	5,809	41	21	24	3.2	6,249	47	24	28	3.7	6,648
800	35	15	18	2.1	6,576	41	21	24	3.0	7,044	47	24	28	3.4	7,466
850	35	15	18	2.0	7,238	41	21	24	2.8	7,729	47	24	27	3.2	8,171
900	35	15	18	1.9	8,091	41	21	24	2.7	8,610	47	24	27	3.1	9,076
950	35	15	18	1.8	8,825	41	21	23	2.5	9,366	47	24	27	2.9	9,852
1000	35	15	17	1.7	9,764	41	21	23	2.4	10,333	47	24	26	2.7	10,843
1050	35	15	17	1.6	10,568	41	21	23	2.3	11,159	47	24	26	2.6	11,690
1100	35	15	17	1.6	11,613	41	21	23	2.2	12,233	47	24	26	2.5	12,788
1150	35	15	17	1.5	12,469	41	21	23	2.1	13,110	47	24	26	2.4	13,685
1200	35	15	17	1.4	13,581	41	21	22	2.0	14,250	47	24	26	2.3	14,849
1250	35	15	17	1.4	14,527	41	21	22	1.9	15,218	47	24	25	2.2	15,837
1300	35	15	17	1.3	15,725	41	21	22	1.9	16,445	47	24	25	2.1	17,087
1350	35	15	17	1.3	16,742	41	21	22	1.8	17,483	47	24	25	2	18,146
1400	35	15	16	1.2	18,027	41	21	22	1.7	18,796	47	24	25	2	19,483
1450	35	15	16	1.2	19,113	41	21	22	1.7	19,906	47	24	25	1.9	20,612
1500	35	15	16	1.1	20,485	41	21	22	1.6	21,305	47	24	25	1.8	22,035
1600	35	15	16	1.1	23,100	41	21	21	1.5	23,970	47	24	24	1.7	24,745
1650	35	15	16	1.0	24,328	41	21	21	1.5	25,221	47	24	24	1.7	26,016
1700	35	15	16	1.0	25,873	41	21	21	1.4	26,793	47	24	24	1.6	27,612
1800	35	15	16	1.0	28,832	41	21	21	1.3	29,804	47	24	24	1.5	30,666
1900	35	15	16	0.9	31,889	41	21	21	1.3	32,910	47	24	24	1.4	33,816
1950	35	15	15	0.9	33,329	41	21	21	1.2	34,373	47	24	23	1.4	35,299
2000	35	15	15	0.9	35,133	41	21	20	1.2	36,204	47	24	23	1.4	37,154
2100	35	15	15	0.8	38,533	41	21	20	1.1	39,655	47	24	23	1.3	40,649
2200	35	15	15	0.8	42,091	41	21	20	1.1	43,263	47	24	23	1.2	44,301
2250	35	15	15	0.8	43,744	41	21	20	1.1	44,938	47	24	23	1.2	45,996
2300	35	15	15	0.7	45,806	41	21	20	1.0	47,028	47	24	23	1.2	48,111
2400	35	15	15	0.7	49,678	41	21	20	1.0	50,950	47	24	23	1.1	52,077
2500	35	15	15	0.7	53,707	41	21	20	1.0	55,030	47	24	22	1.1	56,200
2550	35	15	15	0.7	55,572	41	21	20	0.9	56,917	47	24	22	1.1	58,107
2600	35	15	15	0.7	57,893	41	21	19	0.9	59,266	47	24	22	1.1	60,481
2700	35	15	15	0.6	62,237	41	21	19	0.9	63,660	47	24	22	1	64,918
2800	35	15	14	0.6	66,737	41	21	19	0.9	68,210	47	24	22	1	69,513
2850	35	15	14	0.6	68,813	41	21	19	0.8	70,309	47	24	22	1	71,631
2900	35	15	14	0.6	71,394	41	21	19	0.8	72,918	47	24	22	0.9	74,264
3000	35	15	14	0.6	76,209	41	21	19	0.8	77,783	47	24	22	0.9	79,173
3100	35	15	14	0.6	81,181	41	21	19	0.8	82,805	47	24	22	0.9	84,239
3150	35	15	14	0.5	83,469	41	21	19	0.8	85,116	47	24	21	0.9	86,570
3200	35	15	14	0.5	86,309	41	21	19	0.8	87,984	47	24	21	0.9	89,462
3300	35	15	14	0.5	91,595	41	21	19	0.7	93,320	47	24	21	0.8	94,842
3400	35	15	14	0.5	97,038	41	21	19	0.7	98,813	47	24	21	0.8	100,379
3450	35	15	14	0.5	99,538	41	21	19	0.7	101,336	47	24	21	0.8	102,922
3600	35	15	14	0.5	108,395	41	21	18	0.7	110,270	47	24	21	0.8	111,924
3800	35	15	14	0.5	120,380	41	21	18	0.6	122,356	47	24	21	0.7	124,098
4000	35	15	14	0.4	132,993	41	21	18	0.6	135,070	47	24	21	0.7	136,900

Recommended sizes
Further possible sizes

Reduction of movement for expansion joints with filled arch:
axial compression: -50 %; axial extension: -75 %; lateral displacement: -50 %; angular movement: -75 %.
In the event of axial extension and simultaneous lateral displacement the above movements are reduced (> page 29).

Customised products available

The movement capability of the expansion joints given in the tables is determined for flange dimensions according to DIN PN10. In case of deviating flange dimensions, please contact us.

Rubber bellow ∅ 1,600 mm of type U216A for a drinking water line