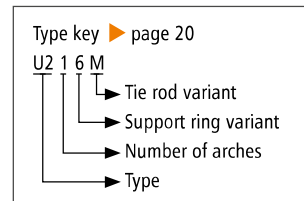


U216x (B/E/C/M/R/K/L)

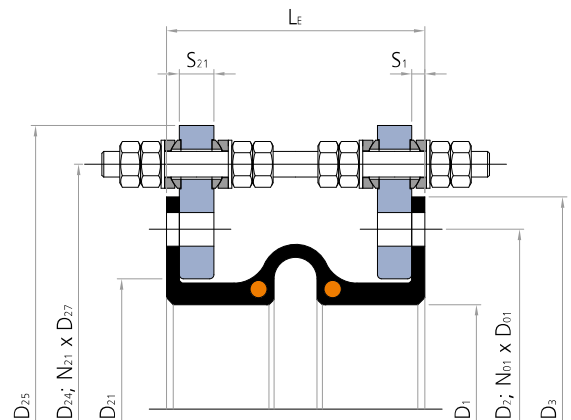
NB 100 – NB 4000



► Type U216x (B/E/C/M/R/K/L)



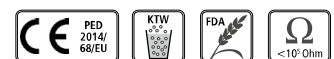
Planning help U216M



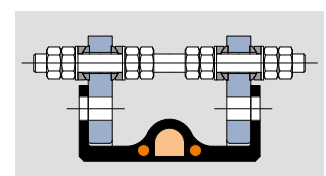
Lateral expansion joint with one arch

- Design:** Thick-walled, single-arch rubber bellows with full faced rubber flanges, split backing flanges with tie rods and embedded support rings at the arch foot
- Nominal diameters:** NB 100 to NB 4000, intermediate sizes possible
- Installation length:** Standard $L_E = 250$ to 350 mm (► page 181)
Other installation lengths on request
- Pressure:** Depending on the nominal diameter up to 25 bar
Vacuum-proof. Design in accordance with Pressure Equipment Directive PED 2014/68/EU
- Movement:** For lateral movements (► page 181)
Installation gap tolerances possible in the context of axial compression and extension
- Stiffness rate:** The embedded support rings and reinforcements generate large stiffness rates
- Arch:** Optionally filled with foam rubber, to avoid turbulence and accumulation of solid matter (► page 181)
Observe the restriction on specified movement (► page 181)






















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



Assembly instruction download
www.ditec-adam.de/en/downloads.html



Rubber bellows

Rubber	Fabric	Marking	Max.	Application
EPDM	Nylon		100 °C	Cooling water, hot water, seawater, acids, dilute chlorine compounds
EPDM	Kevlar		100 °C	Cooling water, hot water, seawater, acids, dilute chlorine compounds
EPDMht	Kevlar		120 °C	Cooling water, hot water, seawater, acids, dilute chlorine compounds
EPDMtw	Nylon		100 °C	Drinking water
EPDMtw	Kevlar		100 °C	Drinking water
EPDMaf	Nylon		100 °C	Abrasive materials, water-sand extraction
EPDMaf	Kevlar		100 °C	Abrasive materials, water-sand extraction
EPDMbeige	Nylon		100 °C	Foodstuffs
EPDMbeige	Kevlar		100 °C	Foodstuffs
IIR	Nylon		100 °C	Hot water, acids, bases, gases
IIR	Kevlar		100 °C	Hot water, acids, bases, gases
CSM	Nylon		100 °C	Strong acids, bases, chemicals
CSM	Kevlar		100 °C	Strong acids, bases, chemicals
NBR	Nylon		100 °C	Oils, petrol, solvents, compressed air
NBR	Kevlar		100 °C	Oils, petrol, solvents, compressed air
NBRbeige	Nylon		100 °C	Oil, fatty foods
NBRbeige	Kevlar		100 °C	Oil, fatty foods
CR	Nylon		90 °C	Cooling water, slightly oily water, seawater
CR	Kevlar		90 °C	Cooling water, slightly oily water, seawater
FPM	Kevlar		180 °C	Corrosive chemicals, petroleum distillates
FPMbeige	Kevlar		180 °C	Oil, fatty foods
NR	Nylon		70 °C	Abrasive materials
Silicon	Kevlar or glass		200 °C	Air, saltwater atmosphere, foodstuffs, medical technology

Flanges

Design: Single-part or multi-part backing flanges with clearance holes and holder for tie rods (control unit type B, E, C, M)

Single-part or multi-part round backing flanges with clearance holes and control unit plates (control unit type R, K, L)

Flange norms: DIN, EN, ANSI, AWWA, BS, JIS, special measurements (▶ page 256)

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

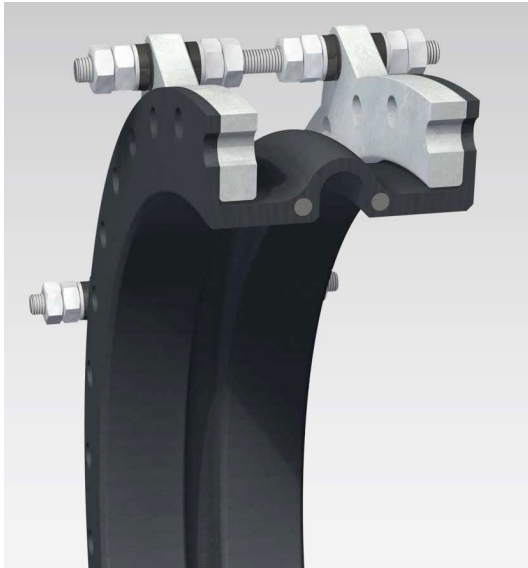
Coating: Primed, hot-dip galvanised, special paint

Optional accessories

Protective hood: UV protection cover, ground protective cover, fire protection cover, splash protective cover (▶ page 44)

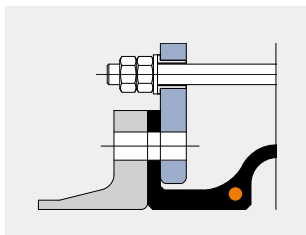
Flow liners: Cylindrical flow liner, conical flow liner, telescoping flow liner (▶ page 43)

Tie rods

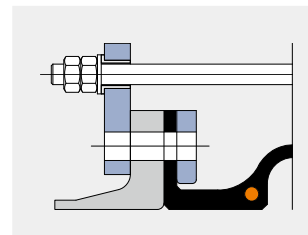


Example: Type U216M

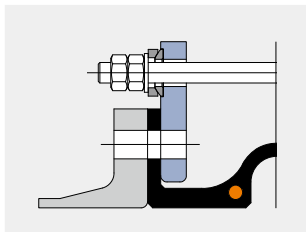
- Design:** Dimensioning according to design pressure (test pressure) based on the Pressure Equipment Directive
- Materials:** Carbon steel in strength class 8.8 or stainless steel
- Coating:** Spherical bearings and ball disks PTFE-coated
Tie rods galvanised, hot-dip galvanised or PTFE-coated



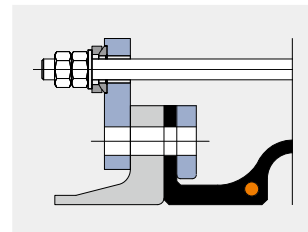
Type U216B
Tie rods mounted outside in rubber bushing to accommodate reaction forces in the event of pressure (up to NB 300)



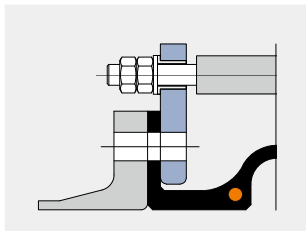
Type U216R
Control unit plate: Tie rods mounted outside in rubber bushing to accommodate reaction forces in the event of pressure (up to NB 300)



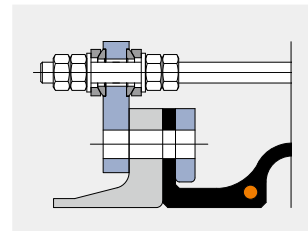
Type U216E
Tie rods mounted outside in spherical bearings and ball disks to accommodate the reaction forces in the event of pressure



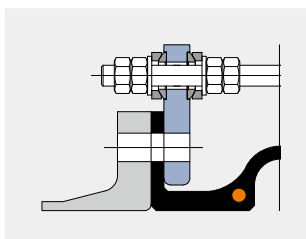
Type U216K
Control unit plate: Tie rods mounted outside in spherical bearings and ball disks to accommodate the reaction forces in the event of pressure



Type U216C
Tie rods mounted outside in rubber bushing and inside in the thrust limiter to accommodate stresses in the event of pressure and vacuum (up to NB 300)



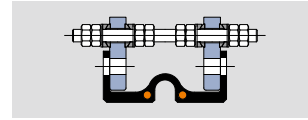
Type U216L
Control unit plate: Tie rods mounted outside and inside in spherical bearings and ball disks to accommodate the reaction forces in the event of pressure and vacuum



Type U216M
Tie rods mounted outside and inside in spherical bearings and ball disks to accommodate the reaction forces in the event of pressure and vacuum

U216x (B/E/C/M/R/K/L)

► with one arch



Installation length (L _E) at design pressure															
NB	up to 10 bar L _E = 250 mm					up to 10 bar L _E = 300 mm					up to 10 bar L _E = 350 mm				
	Movement				A cm ²	Movement				A cm ²	Movement				A cm ²
	mm	mm	±mm	±°		mm	mm	±mm	±°		mm	mm	±mm	±°	
100	35	15	27	0	346	41	21	35	0	460	47	24	40	0	573
125	35	15	25	0	434	41	21	34	0	560	47	24	39	0	683
150	35	15	25	0	531	41	21	33	0	670	47	24	37	0	804
175	35	15	24	0	661	41	21	32	0	814	47	24	36	0	962
200	35	15	23	0	755	41	21	31	0	919	47	24	35	0	1,075
250	35	15	22	0	1,018	41	21	30	0	1,207	47	24	34	0	1,385
300	35	15	22	0	1,333	41	21	29	0	1,548	47	24	33	0	1,750
350	35	15	21	0	1,698	41	21	28	0	1,940	47	24	32	0	2,165
400	35	15	21	0	2,059	41	21	27	0	2,324	47	24	31	0	2,570
450	35	15	20	0	2,489	41	21	27	0	2,781	47	24	31	0	3,048
500	35	15	20	0	2,951	41	21	26	0	3,267	47	24	30	0	3,557
550	35	15	19	0	3,421	41	21	26	0	3,761	47	24	29	0	4,072
600	35	15	19	0	3,993	41	21	25	0	4,359	47	24	29	0	4,693
650	35	15	19	0	4,536	41	21	25	0	4,927	47	24	29	0	5,281
700	35	15	19	0	5,204	41	21	25	0	5,621	47	24	28	0	5,999
750	35	15	18	0	5,809	41	21	24	0	6,249	47	24	28	0	6,648
800	35	15	18	0	6,576	41	21	24	0	7,044	47	24	28	0	7,466
850	35	15	18	0	7,238	41	21	24	0	7,729	47	24	27	0	8,171
900	35	15	18	0	8,091	41	21	24	0	8,610	47	24	27	0	9,076
950	35	15	18	0	8,825	41	21	23	0	9,366	47	24	27	0	9,852
1000	35	15	17	0	9,764	41	21	23	0	10,333	47	24	26	0	10,843
1050	35	15	17	0	10,568	41	21	23	0	11,159	47	24	26	0	11,690
1100	35	15	17	0	11,613	41	21	23	0	12,233	47	24	26	0	12,788
1150	35	15	17	0	12,469	41	21	23	0	13,110	47	24	26	0	13,685
1200	35	15	17	0	13,581	41	21	22	0	14,250	47	24	26	0	14,849
1250	35	15	17	0	14,527	41	21	22	0	15,218	47	24	25	0	15,837
1300	35	15	17	0	15,725	41	21	22	0	16,445	47	24	25	0	17,087
1350	35	15	17	0	16,742	41	21	22	0	17,483	47	24	25	0	18,146
1400	35	15	16	0	18,027	41	21	22	0	18,796	47	24	25	0	19,483
1450	35	15	16	0	19,113	41	21	22	0	19,906	47	24	25	0	20,612
1500	35	15	16	0	20,485	41	21	22	0	21,305	47	24	25	0	22,035
1600	35	15	16	0	23,100	41	21	21	0	23,970	47	24	24	0	24,745
1650	35	15	16	0	24,328	41	21	21	0	25,221	47	24	24	0	26,016
1700	35	15	16	0	25,873	41	21	21	0	26,793	47	24	24	0	27,612
1800	35	15	16	0	28,832	41	21	21	0	29,804	47	24	24	0	30,666
1900	35	15	16	0	31,889	41	21	21	0	32,910	47	24	24	0	33,816
1950	35	15	15	0	33,329	41	21	21	0	34,373	47	24	23	0	35,299
2000	35	15	15	0	35,133	41	21	20	0	36,204	47	24	23	0	37,154
2100	35	15	15	0	38,533	41	21	20	0	39,655	47	24	23	0	40,649
2200	35	15	15	0	42,091	41	21	20	0	43,263	47	24	23	0	44,301
2250	35	15	15	0	43,744	41	21	20	0	44,938	47	24	23	0	45,996
2300	35	15	15	0	45,806	41	21	20	0	47,028	47	24	23	0	48,111
2400	35	15	15	0	49,678	41	21	20	0	50,950	47	24	23	0	52,077
2500	35	15	15	0	53,707	41	21	20	0	55,030	47	24	22	0	56,200
2550	35	15	15	0	55,572	41	21	20	0	56,917	47	24	22	0	58,107
2600	35	15	15	0	57,893	41	21	19	0	59,266	47	24	22	0	60,481
2700	35	15	15	0	62,237	41	21	19	0	63,660	47	24	22	0	64,918
2800	35	15	14	0	66,737	41	21	19	0	68,210	47	24	22	0	69,513
2850	35	15	14	0	68,813	41	21	19	0	70,309	47	24	22	0	71,631
2900	35	15	14	0	71,394	41	21	19	0	72,918	47	24	22	0	74,264
3000	35	15	14	0	76,209	41	21	19	0	77,783	47	24	22	0	79,173
3100	35	15	14	0	81,181	41	21	19	0	82,805	47	24	22	0	84,239
3150	35	15	14	0	83,469	41	21	19	0	85,116	47	24	21	0	86,570
3200	35	15	14	0	86,309	41	21	19	0	87,984	47	24	21	0	89,462
3300	35	15	14	0	91,595	41	21	19	0	93,320	47	24	21	0	94,842
3400	35	15	14	0	97,038	41	21	19	0	98,813	47	24	21	0	100,379
3450	35	15	14	0	99,538	41	21	19	0	101,336	47	24	21	0	102,922
3600	35	15	14	0	108,395	41	21	18	0	110,270	47	24	21	0	111,924
3800	35	15	14	0	120,380	41	21	18	0	122,356	47	24	21	0	124,098
4000	35	15	14	0	132,993	41	21	18	0	135,070	47	24	21	0	136,900

LATERAL
rubber flange

U216x

Recommended sizes
Additional possible sizes

Reduction of movement for expansion joints with filled arch:
axial compression: -50 %; axial extension: -75 %; lateral displacement: -50 %.
In the event of lateral displacement and simultaneous axial extension the above movements are reduced (► page 22).

Individual fabrication possible