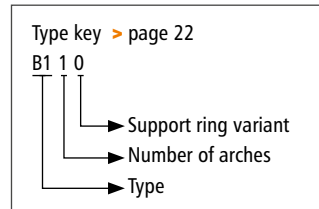


## 176 Universal expansion joints for clamped fixing

**B110** ∅ 50 - 5,000 mm  
 ——— ∅ 6,000 x 3,000 mm



- > **Type B110**  
without vacuum ring
- > **Type B111**  
with internal vacuum ring
- > **Type B112**  
with embedded vacuum ring

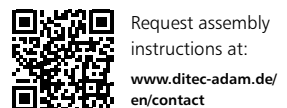


## Universal expansion joint with one arch




















- Design:** Streamlined, single wide arch slip-on sleeve type rubber bellows, 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 fixing clamps. Optional with vacuum ring. In compliance with PED 2014/68/EU, FSA Technical Handbook and ASTM F1123 - 87. Available in split-wrap or custom offset arrangements.
- Diameters:** ∅ 50 to 5,000 mm, custom diameters possible
- Length:** = Installation gap + 2 x fixing width  
 $L_0 = 125 \text{ to } 250 \text{ mm}$  (standard installation gaps) (> page 179–181)  
 Custom length on request
- Fixing width:** At least 40 mm  
 Depends on pressure, diameter and clamp type
- Pressure:** Up to 6 bar depending on diameter and length  
 Vacuum stability on request, with vacuum ring up to 0.05 bar absolute
- Movement:** For axial, lateral and angular movements  
 For axial extension or vacuum, the expansion joint can slip of the pipeline (groove as needed at the pipeline end)



**Application:**  
 Power plants, plant construction, food processing, wastewater treatment plants, industrial facilities, e. g. to disconnect pipelines, on oscillating conveyor systems, on sieving machines



## 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




PTFE-lining: Firmly embedded against chemical attacks on the interior at the rubber bellows, available starting at  $\varnothing$  300 mm. Take the restriction of the listed movement into account (> page 179–181)

## Clamps

<b>Design:</b>	Depending on pressure and diameters, endless clamp belt, screw thread belt, small clamps or hinge bolt clamps. At higher pressures, 2 parallel clamps per side	
<b>Width:</b>	Endless clamp belt:	$\frac{3}{4}$ "
	Screw thread belt:	$\frac{1}{2}$ "
	Small clamp:	depending on $\varnothing$ : 9–12 mm
	Hinge bolt clamp:	depending on $\varnothing$ : 18–30 mm
<b>Materials:</b>	Endless clamp belt with screw lugs (tongs):	1.7300
	Screw thread belt with threaded screw lugs:	1.4310
	Small clamp, belt and housing:	1.4016 (Screw steel galvanised)
	Hinge bolt clamp, belt and housing:	1.4016 (Screw steel galvanised)

## 178 Universal expansion joints for clamped fixing

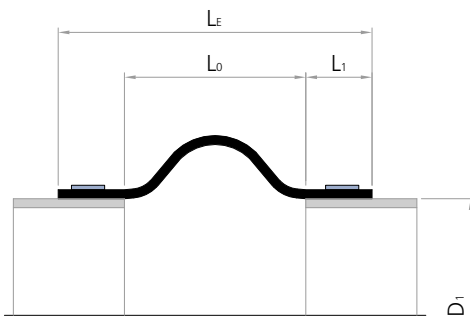
### Support rings

TYPE	Support rings	Vacuum ring	Pressure	Movement
B110		None	Depending on the diameter up to 6 bar, vacuum stability on request	> page 179
B111		Medium contact, inside the arch	Depending on the diameter up to 6 bar, for vacuum up to 0.05 bar absolute	> page 180
B112		No medium contact, embedded in the arches	Depending on the diameter up to 6 bar, for vacuum up to 0.05 bar absolute	> page 181

#### Materials

Stainless steel	Carbon steel, rubberised	Carbon steel, embedded
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Cross section B110



Example: Type B112



# B110

> without vacuum ring



Installation gap															
Ø mm	L <sub>0</sub> = 125 mm					L <sub>0</sub> = 150 mm					L <sub>0</sub> = 175 mm				
	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>
	mm	mm	±mm	±°		mm	mm	±mm	±°		mm	mm	±mm	±°	
50	31	10	20	21.8	96	40	20	30	38.7	155	44	20	32	38.7	159
65	31	10	20	17.1	125	40	20	29	31.6	191	44	20	32	31.6	196
80	31	10	20	14.0	152	40	20	29	26.6	224	44	20	31	26.6	229
100	31	10	19	11.3	212	40	20	28	21.8	297	44	20	30	21.8	303
125	31	10	19	9.1	283	40	20	28	17.7	379	44	20	30	17.7	386
150	31	10	18	7.6	374	40	20	27	14.9	484	44	20	29	14.9	492
175	31	10	18	6.5	466	40	20	27	12.9	588	44	20	29	12.9	597
200	31	10	18	5.7	569	40	20	26	11.3	703	44	20	29	11.3	712
250	31	10	18	4.6	819	40	20	26	9.1	979	44	20	28	9.1	990
300	31	10	17	3.8	1,098	40	20	26	7.6	1,281	44	20	27	7.6	1,294
350	31	10	17	3.3	1,292	40	20	25	6.5	1,490	44	20	27	6.5	1,504
400	31	10	17	2.9	1,636	40	20	25	5.7	1,858	44	20	27	5.7	1,873
450	31	10	17	2.5	2,020	40	20	25	5.1	2,267	44	20	26	5.1	2,283
500	31	10	17	2.3	2,445	40	20	24	4.6	2,715	44	20	26	4.6	2,734
550	31	10	16	2.1	2,911	40	20	24	4.2	3,205	44	20	26	4.2	3,225
600	31	10	16	1.9	3,417	40	20	24	3.8	3,735	44	20	26	3.8	3,757
650	31	10	16	1.8	3,964	40	20	24	3.5	4,305	44	20	26	3.5	4,329
700	31	10	16	1.6	4,551	40	20	24	3.3	4,917	44	20	25	3.3	4,941
750	31	10	16	1.5	5,178	40	20	23	3.1	5,568	44	20	25	3.1	5,595
800	31	10	16	1.4	5,847	40	20	23	2.9	6,260	44	20	25	2.9	6,288
850	31	10	16	1.3	6,555	40	20	23	2.7	6,993	44	20	25	2.7	7,023
900	31	10	16	1.3	7,305	40	20	23	2.5	7,766	44	20	25	2.5	7,798
1000	31	10	16	1.1	8,925	40	20	23	2.3	9,434	44	20	25	2.3	9,469
1100	31	10	15	1.0	10,496	40	20	23	2.1	11,047	44	20	24	2.1	11,085
1200	31	10	15	1.0	12,370	40	20	22	1.9	12,969	44	20	24	1.9	13,009
1300	31	10	15	0.9	14,420	40	20	22	1.8	15,066	44	20	24	1.8	15,109
1400	31	10	15	0.8	16,627	40	20	22	1.6	17,320	44	20	24	1.6	17,366
1500	31	10	15	0.8	18,991	40	20	22	1.5	19,731	44	20	24	1.5	19,781

Installation gap															
Ø mm	L <sub>0</sub> = 200 mm					L <sub>0</sub> = 225 mm					L <sub>0</sub> = 250 mm				
	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>
	mm	mm	±mm	±°		mm	mm	±mm	±°		mm	mm	±mm	±°	
50	53	31	42	51.1	233	60	32	46	52.0	255	69	43	56	59.8	347
65	53	31	41	43.6	278	60	32	45	44.6	302	69	43	55	52.9	402
80	53	31	40	37.8	317	60	32	44	38.7	343	69	43	54	47.1	448
100	53	31	39	31.8	402	60	32	44	32.6	431	69	43	53	40.7	549
125	53	31	39	26.4	498	60	32	43	27.1	530	69	43	51	34.5	659
150	53	31	38	22.5	617	60	32	42	23.1	653	69	43	51	29.8	796
175	53	31	37	19.5	734	60	32	41	20.1	773	69	43	50	26.2	928
200	53	31	37	17.2	861	60	32	41	17.7	903	69	43	49	23.3	1,070
250	53	31	36	13.9	1,164	60	32	40	14.4	1,213	69	43	48	19.0	1,405
300	53	31	36	11.7	1,492	60	32	39	12.0	1,548	69	43	48	16.0	1,764
350	53	31	35	10.0	1,717	60	32	39	10.4	1,777	69	43	47	13.8	2,008
400	53	31	35	8.8	2,111	60	32	38	9.1	2,176	69	43	46	12.1	2,431
450	53	31	34	7.8	2,545	60	32	38	8.1	2,617	69	43	46	10.8	2,896
500	53	31	34	7.1	3,019	60	32	38	7.3	3,097	69	43	45	9.8	3,400
550	53	31	34	6.4	3,534	60	32	37	6.6	3,619	69	43	45	8.9	3,946
600	53	31	33	5.9	4,090	60	32	37	6.1	4,181	69	43	45	8.2	4,532
650	53	31	33	5.4	4,686	60	32	37	5.6	4,783	69	43	44	7.5	5,158
700	53	31	33	5.1	5,322	60	32	36	5.2	5,426	69	43	44	7.0	5,825
750	53	31	33	4.7	5,999	60	32	36	4.9	6,110	69	43	44	6.5	6,533
800	53	31	33	4.4	6,717	60	32	36	4.6	6,834	69	43	43	6.1	7,281
850	53	31	32	4.2	7,475	60	32	36	4.3	7,598	69	43	43	5.8	8,069
900	53	31	32	3.9	8,274	60	32	36	4.1	8,404	69	43	43	5.5	8,898
1000	53	31	32	3.5	9,993	60	32	35	3.7	10,136	69	43	43	4.9	10,678
1100	53	31	32	3.2	11,652	60	32	35	3.3	11,805	69	43	42	4.5	12,390
1200	53	31	31	3.0	13,623	60	32	35	3.1	13,789	69	43	42	4.1	14,420
1300	53	31	31	2.7	15,770	60	32	34	2.8	15,948	69	43	42	3.8	16,627
1400	53	31	31	2.5	18,074	60	32	34	2.6	18,265	69	43	41	3.5	18,991
1500	53	31	31	2.4	20,536	60	32	34	2.4	20,739	69	43	41	3.3	21,512

  Recommended sizes  
  Further possible sizes

Reduction of movement for expansion joints with PTFE lining:  
 axial compression: -33 %; axial extension: -66 %; lateral displacement: -50 %; angular movement: -66 %.  
 In the event of axial extension and simultaneous lateral displacement the above movements are reduced (> page 29).  
 For larger movements see type B120 or B123.

Customised products available



**B111**

> with internal vacuum ring

Installation gap															
∅ mm	L <sub>0</sub> = 125 mm					L <sub>0</sub> = 150 mm					L <sub>0</sub> = 175 mm				
	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>
	mm	mm	±mm	±°		mm	mm	±mm	±°		mm	mm	±mm	±°	
50	31	3	20	21.8	96	40	7	30	38.7	155	44	7	32	38.7	159
65	31	3	20	17.1	125	40	7	29	31.6	191	44	7	32	31.6	196
80	31	3	20	14.0	152	40	7	29	26.6	224	44	7	31	26.6	229
100	31	3	19	11.3	212	40	7	28	21.8	297	44	7	30	21.8	303
125	31	3	19	9.1	283	40	7	28	17.7	379	44	7	30	17.7	386
150	31	3	18	7.6	374	40	7	27	14.9	484	44	7	29	14.9	492
175	31	3	18	6.5	466	40	7	27	12.9	588	44	7	29	12.9	597
200	31	3	18	5.7	569	40	7	26	11.3	703	44	7	29	11.3	712
250	31	3	18	4.6	819	40	7	26	9.1	979	44	7	28	9.1	990
300	31	3	17	3.8	1,098	40	7	26	7.6	1,281	44	7	27	7.6	1,294
350	31	3	17	3.3	1,292	40	7	25	6.5	1,490	44	7	27	6.5	1,504
400	31	3	17	2.9	1,636	40	7	25	5.7	1,858	44	7	27	5.7	1,873
450	31	3	17	2.5	2,020	40	7	25	5.1	2,267	44	7	26	5.1	2,283
500	31	3	17	2.3	2,445	40	7	24	4.6	2,715	44	7	26	4.6	2,734
550	31	3	16	2.1	2,911	40	7	24	4.2	3,205	44	7	26	4.2	3,225
600	31	3	16	1.9	3,417	40	7	24	3.8	3,735	44	7	26	3.8	3,757
650	31	3	16	1.8	3,964	40	7	24	3.5	4,305	44	7	26	3.5	4,329
700	31	3	16	1.6	4,551	40	7	24	3.3	4,917	44	7	25	3.3	4,941
750	31	3	16	1.5	5,178	40	7	23	3.1	5,568	44	7	25	3.1	5,595
800	31	3	16	1.4	5,847	40	7	23	2.9	6,260	44	7	25	2.9	6,288
850	31	3	16	1.3	6,555	40	7	23	2.7	6,993	44	7	25	2.7	7,023
900	31	3	16	1.3	7,305	40	7	23	2.5	7,766	44	7	25	2.5	7,798
1000	31	3	16	1.1	8,925	40	7	23	2.3	9,434	44	7	25	2.3	9,469
1100	31	3	15	1.0	10,496	40	7	23	2.1	11,047	44	7	24	2.1	11,085
1200	31	3	15	1.0	12,370	40	7	22	1.9	12,969	44	7	24	1.9	13,009
1300	31	3	15	0.9	14,420	40	7	22	1.8	15,066	44	7	24	1.8	15,109
1400	31	3	15	0.8	16,627	40	7	22	1.6	17,320	44	7	24	1.6	17,366
1500	31	3	15	0.8	18,991	40	7	22	1.5	19,731	44	7	24	1.5	19,781

Installation gap															
∅ mm	L <sub>0</sub> = 200 mm					L <sub>0</sub> = 225 mm					L <sub>0</sub> = 250 mm				
	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>
	mm	mm	±mm	±°		mm	mm	±mm	±°		mm	mm	±mm	±°	
50	53	10	42	51	233	60	11	46	52	255	69	14	56	60	347
65	53	10	41	43.6	278	60	11	45	44.6	302	69	14	55	52.9	402
80	53	10	40	37.8	317	60	11	44	38.7	343	69	14	54	47.1	448
100	53	10	39	31.8	402	60	11	44	32.6	431	69	14	53	40.7	549
125	53	10	39	26.4	498	60	11	43	27.1	530	69	14	51	34.5	659
150	53	10	38	22.5	617	60	11	42	23.1	653	69	14	51	29.8	796
175	53	10	37	19.5	734	60	11	41	20.1	773	69	14	50	26.2	928
200	53	10	37	17.2	861	60	11	41	17.7	903	69	14	49	23.3	1,070
250	53	10	36	13.9	1,164	60	11	40	14.4	1,213	69	14	48	19	1,405
300	53	10	36	11.7	1,492	60	11	39	12	1,548	69	14	48	16	1,764
350	53	10	35	10	1,717	60	11	39	10.4	1,777	69	14	47	13.8	2,008
400	53	10	35	8.8	2,111	60	11	38	9.1	2,176	69	14	46	12.1	2,431
450	53	10	34	7.8	2,545	60	11	38	8.1	2,617	69	14	46	10.8	2,896
500	53	10	34	7.1	3,019	60	11	38	7.3	3,097	69	14	45	9.8	3,400
550	53	10	34	6.4	3,534	60	11	37	6.6	3,619	69	14	45	8.9	3,946
600	53	10	33	5.9	4,090	60	11	37	6.1	4,181	69	14	45	8.2	4,532
650	53	10	33	5.4	4,686	60	11	37	5.6	4,783	69	14	44	7.5	5,158
700	53	10	33	5.1	5,322	60	11	36	5.2	5,426	69	14	44	7	5,825
750	53	10	33	4.7	5,999	60	11	36	4.9	6,110	69	14	44	6.5	6,533
800	53	10	33	4.4	6,717	60	11	36	4.6	6,834	69	14	43	6.1	7,281
850	53	10	32	4.2	7,475	60	11	36	4.3	7,598	69	14	43	5.8	8,069
900	53	10	32	3.9	8,274	60	11	36	4.1	8,404	69	14	43	5.5	8,898
1000	53	10	32	3.5	9,993	60	11	35	3.7	10,136	69	14	43	4.9	10,678
1100	53	10	32	3.2	11,652	60	11	35	3.3	11,805	69	14	42	4.5	12,390
1200	53	10	31	3	13,623	60	11	35	3.1	13,789	69	14	42	4.1	14,420
1300	53	10	31	2.7	15,770	60	11	34	2.8	15,948	69	14	42	3.8	16,627
1400	53	10	31	2.5	18,074	60	11	34	2.6	18,265	69	14	41	3.5	18,991
1500	53	10	31	2.4	20,536	60	11	34	2.4	20,739	69	14	41	3.3	21,512

Recommended sizes  
Further possible sizes

Reduction of movement for expansion joints with PTFE lining:  
axial compression: -33 %; axial extension: -0 %; lateral displacement: -50 %; angular movement: -0 %.  
In the event of axial extension and simultaneous lateral displacement the above movements are reduced (> page 29).  
For larger movements see type B121 or B124.

Customised products available



# B112

> with embedded vacuum ring



Installation gap															
Ø mm	L <sub>0</sub> = 125 mm					L <sub>0</sub> = 150 mm					L <sub>0</sub> = 175 mm				
	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>
	mm	mm	±mm	±°		mm	mm	±mm	±°		mm	mm	±mm	±°	
50	20	2	19	15.6	76	26	6	29	35.8	129	29	6	31	35.8	137
65	20	2	19	12.2	102	26	6	28	29.0	163	29	6	31	29.0	172
80	20	2	18	9.9	126	26	6	27	24.2	193	29	6	30	24.2	203
100	20	2	18	8.0	182	26	6	27	19.8	261	29	6	29	19.8	273
125	20	2	18	6.4	248	26	6	26	16.1	339	29	6	29	16.1	352
150	20	2	17	5.3	334	26	6	26	13.5	439	29	6	28	13.5	454
175	20	2	17	4.6	422	26	6	26	11.6	538	29	6	28	11.6	554
200	20	2	17	4.0	519	26	6	25	10.2	647	29	6	28	10.2	666
250	20	2	16	3.2	760	26	6	25	8.2	913	29	6	27	8.2	935
300	20	2	16	2.7	1,029	26	6	24	6.8	1,206	29	6	27	6.8	1,231
350	20	2	16	2.3	1,217	26	6	24	5.9	1,409	29	6	26	5.9	1,436
400	20	2	16	2.0	1,551	26	6	24	5.1	1,768	29	6	26	5.1	1,798
450	20	2	16	1.8	1,926	26	6	23	4.6	2,166	29	6	26	4.6	2,200
500	20	2	15	1.6	2,341	26	6	23	4.1	2,606	29	6	25	4.1	2,642
550	20	2	15	1.5	2,797	26	6	23	3.7	3,086	29	6	25	3.7	3,125
600	20	2	15	1.3	3,294	26	6	23	3.4	3,606	29	6	25	3.4	3,649
650	20	2	15	1.2	3,831	26	6	23	3.2	4,167	29	6	25	3.2	4,213
700	20	2	15	1.1	4,408	26	6	23	2.9	4,769	29	6	25	2.9	4,818
750	20	2	15	1.1	5,027	26	6	22	2.7	5,411	29	6	24	2.7	5,463
800	20	2	15	1.0	5,685	26	6	22	2.6	6,093	29	6	24	2.6	6,149
850	20	2	15	0.9	6,384	26	6	22	2.4	6,816	29	6	24	2.4	6,875
900	20	2	15	0.9	7,124	26	6	22	2.3	7,580	29	6	24	2.3	7,642
1000	20	2	15	0.8	8,725	26	6	22	2.1	9,229	29	6	24	2.1	9,297
1100	20	2	14	0.7	10,279	26	6	22	1.9	10,825	29	6	24	1.9	10,899
1200	20	2	14	0.7	12,135	26	6	21	1.7	12,728	29	6	23	1.7	12,808
1300	20	2	14	0.6	14,166	26	6	21	1.6	14,806	29	6	23	1.6	14,892
1400	20	2	14	0.6	16,354	26	6	21	1.5	17,041	29	6	23	1.5	17,134
1500	20	2	14	0.5	18,699	26	6	21	1.4	19,433	29	6	23	1.4	19,532

Installation gap															
Ø mm	L <sub>0</sub> = 200 mm					L <sub>0</sub> = 225 mm					L <sub>0</sub> = 250 mm				
	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>	Movement				A cm <sup>2</sup>
	mm	mm	±mm	±°		mm	mm	±mm	±°		mm	mm	±mm	±°	
50	35	9	41	49	207	40	9	45	49	207	46	13	54	57	290
65	35	9	40	41.7	249	40	9	43	41.7	249	46	13	53	50.2	340
80	35	9	39	35.9	286	40	9	43	35.9	286	46	13	52	44.3	383
100	35	9	38	30.1	367	40	9	42	30.1	367	46	13	51	38	476
125	35	9	38	24.9	459	40	9	41	24.9	459	46	13	50	32	580
150	35	9	37	21.1	574	40	9	40	21.1	574	46	13	49	27.5	708
175	35	9	36	18.3	687	40	9	40	18.3	687	46	13	48	24	833
200	35	9	36	16.2	810	40	9	39	16.2	810	46	13	48	21.3	968
250	35	9	35	13.1	1,104	40	9	38	13.1	1,104	46	13	47	17.3	1,288
300	35	9	35	10.9	1,425	40	9	38	10.9	1,425	46	13	46	14.6	1,632
350	35	9	34	9.4	1,645	40	9	37	9.4	1,645	46	13	45	12.6	1,867
400	35	9	34	8.3	2,030	40	9	37	8.3	2,030	46	13	45	11	2,277
450	35	9	33	7.3	2,456	40	9	36	7.3	2,456	46	13	44	9.8	2,727
500	35	9	33	6.6	2,922	40	9	36	6.6	2,922	46	13	44	8.9	3,217
550	35	9	33	6	3,429	40	9	36	6	3,429	46	13	44	8.1	3,748
600	35	9	33	5.5	3,977	40	9	36	5.5	3,977	46	13	43	7.4	4,319
650	35	9	32	5.1	4,565	40	9	35	5.1	4,565	46	13	43	6.8	4,931
700	35	9	32	4.7	5,194	40	9	35	4.7	5,194	46	13	43	6.4	5,584
750	35	9	32	4.4	5,863	40	9	35	4.4	5,863	46	13	42	5.9	6,277
800	35	9	32	4.1	6,573	40	9	35	4.1	6,573	46	13	42	5.6	7,011
850	35	9	32	3.9	7,323	40	9	34	3.9	7,323	46	13	42	5.2	7,785
900	35	9	31	3.7	8,114	40	9	34	3.7	8,114	46	13	42	5	8,600
1000	35	9	31	3.3	9,817	40	9	34	3.3	9,817	46	13	41	4.5	10,351
1100	35	9	31	3	11,461	40	9	34	3	11,461	46	13	41	4.1	12,037
1200	35	9	31	2.8	13,417	40	9	33	2.8	13,417	46	13	41	3.7	14,040
1300	35	9	30	2.6	15,548	40	9	33	2.6	15,548	46	13	40	3.4	16,218
1400	35	9	30	2.4	17,837	40	9	33	2.4	17,837	46	13	40	3.2	18,554
1500	35	9	30	2.2	20,283	40	9	33	2.2	20,283	46	13	40	3	21,047

Recommended sizes  
Further possible sizes

Reduction of movement for expansion joints with PTFE lining:  
axial compression: -0 %; axial extension: -0 %; lateral displacement: -0 %; angular movement: -0 %.  
In the event of axial extension and simultaneous lateral displacement the above movements are reduced (> page 29).  
For larger movements see type B122 or B125.

Customised products available