Pipeline Compensating Joint Series

Overview

Lapped compensating joint

The device of lapped connecting pipe consists of a body, a seal ring and a compression member, which is used for absorbing the axial displacement and cannot withstand the pressure thrust.

Lapped limit compensating joint

It consists of lapped compensating joint and limit expansion pipe, to prevent the leakage or damage of the compensating joint due to excessive displacement. It is a device of lapped joint of pipeline which is used to absorb axial displacement and withstand pressure thrust within the allowable displacement range.

Lapped force transmission compensating joint

It is composed of flange lapped compensating joint, short pipe flange, force transmission screw and other components. It transmits the pressure thrust of the connected parts and compensates the installation error of the pipeline. It does not absorb the axial displacement and it is a device of lapped joint used for pumps, valves and other accessories.

Large-deflection lapped compensating joint

A device of lapped joint of pipeline with the angular displacement of 6° - 7°, which consists of short-pipe flange, body, gland, check ring, limited block, sealing pair, compression member, and is used to absorb the axial displacement and deflection.

Spherical compensating joint

The pipe connecting device consists of ball shell, ball, sealing pair and compression member and is used to absorb the flexible displacement of the pipeline.

Distance between centers of balls

The distance between the longitudinal center lines of two balls when arranging a pair of spherical compensating joints.

Flexible amount

The deflection angle value of the compensating joint under the condition of maintaining sealing from the center line of one end to the offset center line of another end

Off-center amount

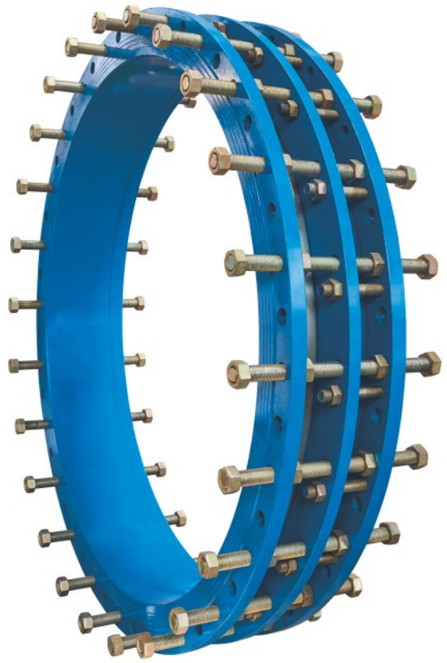
The radial displacement measured of the compensating joint under the condition of maintaining sealing from the center line of one end to the offset center line of another end

Pressure balance compensating joint

It is a device of lapped joint of pipeline, which consists of body, seal ring, pressure balancing device, expansion pipe and compression member, and is used to balance the internal pressure thrust while absorbing the axial displacement.

Regulating variable

The allowable regulating distance between the compensating joint and the connected pump, valve and other equipment during the installation and disassembly of the equipment.



Executive standard

Product standard: GB/T12465-2007 pipeline compensating joint
Flange connection: GB/T 17241.6-2008 integral cast iron flange
Pressure test: GB/T12465-2007 pipeline compensating joint
Model preparation: GB/T12465-2007 pipeline compensating joint

Pipeline Compensating Joint Series

Lvdu Valve

Model preparation

The product mark is composed of type code, pressure code and material code.

B2F - 16 Q

- Q: Valve body material code (Q: Nodular cast iron; C: carbon steel)
- 16: Pressure code (16: Rated working pressure: 1.6 MPa)
- B2F: Type code

Type and model of the compensating joint (see Table 1)

Type	Type		Model
A	Lapped compensating joint of nut	No locking ring	ALI
	Lapped compensating joint of nut	With locking ring	ALII
	Gland lapped compensating joint		AY
	Flange lapped compensating joint		AF
B	Single-flange lapped limit compensating joint		BF
	Double-flange lapped limit compensating joint		B2F
	Lapped limit compensating joint of gland		BY
C	Single-flange lapped force transmission compensating joint		CF
	Double-flange lapped force transmission compensating joint		C2F
	Disassemble double-flange lapped force transmission compensating joint		CC2F
D	Large-deflection lapped compensating joint		D
E	Spherical compensating joint		E
F	Gland type pressure balance compensating joint		FY
	Gland box type pressure balance compensating joint		FT

Performance specification table

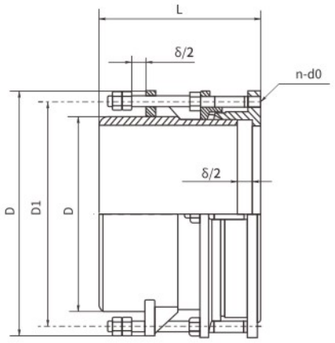
Nominal pressure		PN6	PN10	PN16	
Test pressure	Shell strength	0.9	1.5	2.4	MPa
	Liquid high -pressure sealing	0.66	1.1	1.76	
Medium temperature		-10-80°C			
Applicable medium		Clean water, etc.			

Materials of main parts

Body	Carbon structural steel
Seal ring	Butyronitrile rubber
Gland	Nodular cast iron
Limit screw	High-quality carbon structural steel, stainless steel
Limit expansion pipe	High quality carbon structural steel

Single-flange Lapped Limit Expansion Joint

BF



Main boundary dimension and connection dimension (mm)

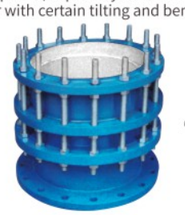
DN	Connection dimension of flange												Outer diameter of pipe	Installation dimension	Expansion amount δ
	0.6MPa				1.0MPa				1.6MPa						
	Outer diameter of flange D	Diameter of central circle of bolt hole D1	Bolt hole		Outer diameter of flange D	Diameter of central circle of bolt hole D1	Bolt hole		Outer diameter of flange D	Diameter of central circle of bolt hole D1	Bolt hole		DW	L	
			n	do			n	do			n	do			
100	210	170	4	19	220	180	8	19	220	180	8	19	108	340	50
													114		
125	240	200	8	19	250	210	8	19	250	210	8	19	133		
													140		
150	265	225	8	19	285	240	8	23	285	240	8	23	159		
													168		
200	320	280	8	19	340	295	8	23	340	295	12	23	219		
250	375	335	12	19	395	350	12	23	405	355	12	28	273		
300	440	395	12	23	445	400	12	23	460	410	12	28	325	350	65
350	490	445	12	23	505	460	16	23	520	470	16	28	377		
400	540	495	16	23	565	515	16	28	580	525	16	31	420		
450	595	550	16	23	615	565	20	28	640	585	20	31	486		
500	645	600	20	23	670	620	20	28	715	650	20	34	530		
600	755	705	20	26	780	725	20	31	840	770	20	37	630		
700	860	810	24	26	895	840	24	31	910	840	24	37	720		
800	975	920	24	31	1015	950	24	34	1025	950	24	40	820	590	130
900	1075	1020	24	31	1115	1050	28	34	1125	1050	28	40	920		
1000	1175	1120	28	31	1230	1160	28	37	1255	1170	28	43	1020		
1200	1405	1340	32	34	1455	1380	32	40	1485	1390	32	49	1220		
1400	1630	1560	36	37	1675	1590	36	43	1685	1590	36	49	1420		
1600	1830	1760	40	37	1915	1820	40	49	1930	1820	40	56	1620		
1800	2045	1970	44	40	2115	2020	44	49	2130	2020	44	56	1820		
2000	2265	2180	48	43	2325	2230	48	49	2345	2230	48	62	2020		
2200	2475	2390	52	43	2550	2440	52	56	2555	2440	52	62	2220		
2400	2685	2600	56	43	2760	2650	56	56	2765	2650	56	62	2420		
2600	2905	2810	60	49	2960	2850	60	56	2965	2850	60	62	2620	600	150
2800	3115	3020	64	49	3180	3070	64	56					2820		
3000	3315	3220	68	49	3405	3290	68	62					3020		

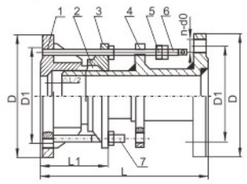
Single-flange Lapped Limit Expansion Joint

B2F

Product characteristics

Double-flange limit expansion joint is composed of main parts such as body, seal ring, gland and short expansion pipe. Limit device is added on the basis of the original performance of the lapped expansion joint, and double nuts are used to lock in the position with maximum expansion or contraction quantity. The pipeline can be expanded and contracted freely in the allowable expansion or contraction quantity, and the limit function will work once beyond its maximum expansion or contraction quantity, to ensure the safe operation of pipeline, especially suitable for the connection in the pipeline with vibration or with certain tilting and bending.





Main materials

No.	Name	Quantity	Material
1	Body	1	QT400-15, Q235A, ZG230-450,20
2	Seal ring	1	NBR
3	Gland	1	QT400-15, Q235A, ZG230-450,20
4	Limit short pipe flange	1	Q235A, 20,16Mn
5	Nut	4n	Q235A, 35, 1Cr18Ni9Ti
6	Long stud	n	Q235A, 20, 1Cr18Ni9Ti
7	Stud	n	Q235A, 20, 1Cr18Ni9Ti

Main boundary dimension and connection dimension (mm)

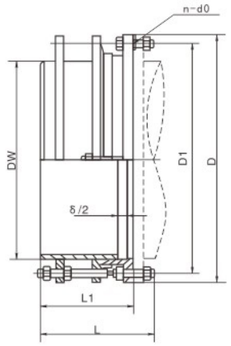
Inside nominal diameter DN	Outer diameter of pipe Dw	Boundary dimension		Expansion amount △L	Connection dimension of flange					
		L	L1		0.6MPa			1.0MPa		
					D	D1	n-d0	D	D1	n-d0
65	76	260	105	40	160	130	4-Φ14	185	145	4-Φ18
80	89				190	150	4-Φ18	200	160	
100	108				210	170		220	180	8-Φ18
	114									
125	133	260	105	40	240	200	8-Φ18	250	210	8-Φ18
	140									
150	159	260	105	40	265	225	8-Φ18	285	240	8-Φ22
	168									
200	219	260	105	40	320	285	8-Φ18	340	295	8-Φ22
250	273	260	105	40	370	335	12-Φ18	395	350	12-Φ22
300	325	300	130	50	440	395	12-Φ22	445	400	12-Φ22
350	377				490	445		505	460	16-Φ22
400	426				540	495	16-Φ22	565	515	16-Φ26
450	480				595	550		615	565	20-Φ26
500	530				645	600	20-Φ22	670	620	
600	630				755	705	20-Φ26	780	725	20-Φ30
700	720				860	810	24-Φ26	895	840	24-Φ30
800	820	530	220	100	975	920	24-Φ30	1015	950	24-Φ33
900	920				1075	1020		1115	1050	28-Φ33
1000	1020				1175	1120	28-Φ30	1230	1160	28-Φ36
1200	1220				1405	1340	32-Φ33	1455	1380	32-Φ40
1400	1420				1630	1560	36-Φ36	1675	1590	36-Φ42
1500	1520				1730	1660		-	-	-
1600	1620				1830	1760	40-Φ36	1915	1820	40-Φ48
1800	1820				2045	1970	44-Φ40	2115	2020	44-Φ48
2000	2020				2265	2180	48-Φ42	2325	2230	48-Φ48
2200	2220				2475	2390	52-Φ42	2550	2440	52-Φ56
2400	2420				2685	2600	56-Φ42	2760	2650	56-Φ56

Single-flange Force Transmission Joint

CF

Product characteristics

The lapped force transmission joint is composed of a flange lapped expansion joint, short pipe flange and force transmission screw. The short pipe has a certain amount of expansion displacement. During installation and maintenance, it shall be adjusted according to site installation dimension. In normal operation, axial thrust can be transmitted to the whole pipeline. This can improve work efficiency and protect pump, valve and other equipment.

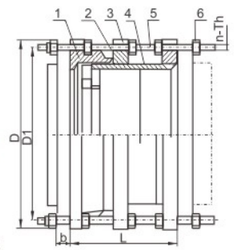


Main boundary dimension and connection dimension (mm)

DN	Connection dimension of flange												Outer diameter of pipe	Total length L	Installation dimension L1		Expansion amount δ
	0.6MPa				1.0MPa				1.6MPa								
	Outer diameter of flange D	Diameter of central circle of bolt hole D1	Bolt hole		Outer diameter of flange D	Diameter of central circle of bolt hole D1	Bolt hole		Outer diameter of flange D	Diameter of central circle of bolt hole D1	Bolt hole						
			n	do			n	do			n	do	DW		max	min	
100	210	170	4	19	220	180	8	19	220	180	8	19	114				
125	240	200	8	19	250	210	8	19	250	210	8	19	140				
150	265	225	8	19	285	240	8	23	285	240	8	23	168	460	420	380	40
200	320	280	8	19	340	295	8	23	340	295	12	23	219				
250	375	335	12	19	395	350	12	23	405	355	12	28	273				
300	440	395	12	23	445	400	12	23	460	410	12	28	325				
350	490	445	12	23	505	460	16	23	520	470	16	28	377				
400	540	495	16	23	565	515	16	28	580	525	16	31	426	485	445	395	50
450	595	550	16	23	615	565	20	28	640	585	20	31	480				
500	645	600	20	23	670	620	20	28	715	650	20	34	530				
600	755	705	20	26	780	725	20	31	840	770	20	37	630	500	465	415	
700	860	810	24	26	895	840	24	31	910	840	24	37	720				
800	975	920	24	31	1015	950	24	34	1025	950	24	40	820	680	630	570	60
900	1075	1020	24	31	1115	1050	28	34	1125	1050	28	40	920				
1000	1175	1120	28	31	1230	1160	28	37	1255	1170	28	43	1020				
1200	1405	1340	32	34	1455	1380	32	40	1485	1390	32	49	1220	720	650	590	
1400	1630	1560	36	37	1675	1590	36	43	1685	1590	36	49	1420				
1600	1830	1760	40	37	1915	1820	40	49	1930	1820	40	56	1620	730	660	600	
1800	2045	1970	44	40	2115	2020	44	49	2130	2020	44	56	1820				
2000	2265	2180	48	43	2325	2230	48	49	2345	2230	48	62	2020	780	680	620	
2200	2475	2390	52	43	2550	2440	52	56	2555	2440	52	62	2220				
2400	2685	2600	56	43	2760	2650	56	56	2765	2650	56	62	2420				
2600	2905	2810	60	49	2960	2850	60	56	2965	2850	60	62	2620	915	790	710	80
2800	3115	3020	64	49	3180	3070	64	56					2820				
3000	3315	3220	68	49	3405	3290	68	62					3020				

Double-flange Force Transmission Joint

C2F



Main materials

No.	Name	Quantity	Material
1	Body	1	QT400-15, Q235A, ZG230-450,20
2	Seal ring	1	NBR
3	Gland	1	QT400-15, Q235A, ZG230-450,20
4	Short pipe flange	1	Q235A, 20,16Mn
5	Stud	n	Q235A, 35, 1Cr18Ni9Ti
6	Nut	5n	Q235A, 20, 1Cr18Ni9Ti

Product characteristics

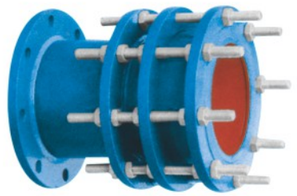
The double-flange force transmission joint is characterized by short and small structure, reasonable design, reliable sealing, convenient loading and unloading, in a certain range, it can compensate for the axial displacement of the pipeline, transfer the axial push-pull force, has the function of adjusting the maximum amount of expansion, and can prevent the pipe from loosening. It can be used replacing expansion joints such as U-pipe and bellows, and is an ideal solution to the problems of pipe installation and expansion.

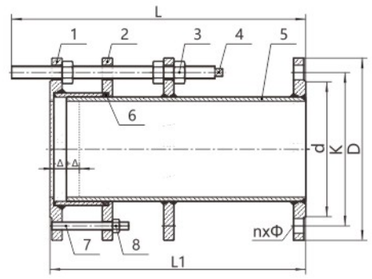
Main boundary dimension and connection dimension (mm)

Inside nominal diameter DN	Outer diameter of pipe Dw	Boundary dimension		Connection dimension of flange							
		L	△L	0.6MPa				1.0MPa			
				D	D1	n-Th	b	D	D1	n-Th	b
65	76			160	130	4-M12		185	145	4-M16	20
80	89			190	150	4-M16	18	200	160		22
100	114			210	170			220	180	8-M16	24
125	140	200	40	240	200	8-M16	20	250	210		26
150	168			265	225			285	240	8-M20	
200	219			320	280		22	340	295		
250	273			375	335	12-M16	24	395	350		28
300	325			440	395	12-M20	24	445	400		28
350	377			490	445		26	505	460	16-M20	30
400	426	220	50	540	495	16-M20	28	566	515	16-M24	32
450	480			595	550			615	565	20-M24	32
500	530			645	600	20-M20	30	670	620	20-M24	34
600	630	240		755	705	20-M24		780	725	20-M27	36
700	720			860	810	24-M24	32	895	840	24-M27	40
800	820			975	920	24-M27	34	1015	950	24-M30	44
900	920	320		1075	1020		36	1115	1050	28-M30	46
1000	1020			1175	1120	28-M27		1230	1160	28-M33	50
1200	1220	370		1405	1340	32-M30	40	1455	1380	32-M36	56
1400	1420		60	1630	1560	36-M33	44	1675	1590	36-M39	62
1600	1620	380		1830	1760	40-M33	48	1915	1820	40-M45	68
1800	1820			2045	1970	44-M36	50	2115	2020	44-M45	70
2000	2020	400		2265	2180	48-M39	54	2325	2230	48-M45	74
2200	2220			2475	2390	52-M39	60	2550	2440	52-M52	80
2400	2420			2685	2600	56-M39	62	2760	2650	56-M52	82

Disassemble Double-flange Lapped Force Transmission Compensating Joint

CC2F





Main boundary dimension

Unit: mm

DN	L	L1	±Δ	PN6				PN10				PN16			
				D	d	K	n×Φ	D	d	K	n×Φ	D	d	K	n×Φ
50	450	400	20	140	88	110	4×14	165	99	125	4×19	165	99	125	4×19
65	460	400	20	160	108	130	4×14	185	118	145	4×19	185	118	145	4×19
80	460	400	20	190	124	150	4×19	200	132	160	8×19	200	132	160	8×19
100	460	400	20	210	144	170	4×19	220	156	180	8×19	220	156	180	8×19
125	460	400	20	240	174	200	8×19	250	184	210	8×19	250	184	210	8×19
150	460	400	20	165	199	225	8×19	285	211	240	8×23	285	211	240	8×23
200	460	400	20	320	254	280	8×19	340	266	295	8×23	340	266	295	12×23
250	460	400	20	375	309	335	12×19	395	319	350	12×23	406	319	355	12×28
300	485	420	25	440	363	395	12×23	445	370	400	12×23	460	370	410	12×28
350	485	420	25	490	413	445	12×23	505	429	460	16×23	520	429	470	16×28
400	485	420	25	540	463	495	16×23	565	480	515	16×28	580	480	525	16×31
450	485	420	25	595	518	550	16×23	615	530	565	20×28	640	548	585	20×31
500	485	420	25	645	568	600	20×23	670	582	620	20×28	715	609	650	20×34
600	500	440	25	735	667	705	20×26	780	682	725	20×31	840	720	770	20×37
700	500	440	25	860	772	810	24×26	895	794	840	24×31	910	794	840	24×37
800	680	600	30	975	878	920	24×31	1015	901	950	24×34	1025	901	950	24×40
900	680	600	30	1075	978	1020	24×31	1115	1001	1050	28×34	1125	1001	1050	28×40
1000	680	600	30	1175	1078	1120	28×31	1230	1112	1160	28×37	1255	1112	1170	28×43
1200	750	650	30	1405	1295	1340	32×34	1455	1328	1380	32×40	1485	1328	1390	32×49
1400	750	650	30	1630	1510	1560	36×37	1675	1530	1590	36×43	1685	1550	1590	36×49
1600	770	670	30	1830	1710	1760	40×37	1915	1750	1820	40×49	1930	1750	1820	40×56
1800	770	670	30	2045	1918	1970	44×40	2115	1950	2020	44×49	2130	1950	2020	44×56
2000	830	700	30	2265	2125	2180	48×43	2325	2150	2230	48×49	2345	2150	2230	48×62
2200	860	730	30	2475	2335	2390	52×43	2550	2366	2440	52×56	2555	2360	2440	52×62
2400	860	730	30	2685	2545	2600	56×43	2760	2576	2650	56×56	2765	2570	2650	56×62
2600	1000	840	40	2905	2750	2810	60×49	2960	2776	2850	60×56	2965	2770	2850	60×62

Flexible Rubber Joint

XTQ1 RF

Overview

It consists of rubber parts reinforced by fabric or other materials and components such as parallel movable joints or metal flanges, which is used for shock absorption, vibration isolation, noise reduction and displacement compensation of pipeline system.

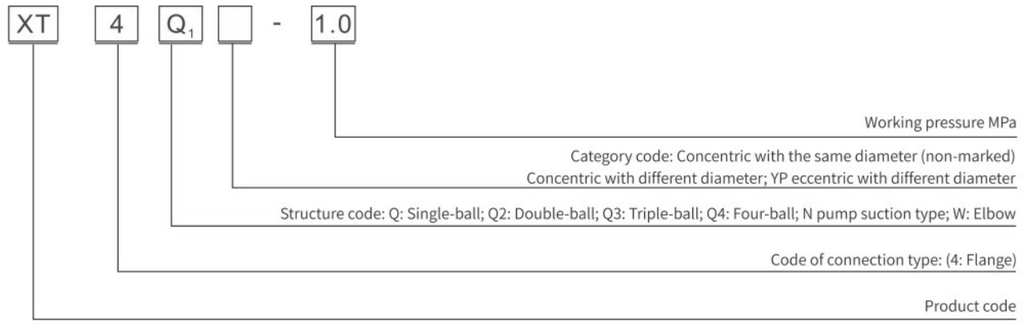
Working principle

It is divided into ordinary joint and special joint according to service performance
Ordinary joint: Be suitable for medium with the transfer temperature of -15°C-80°C, and acid-base solutions with the concentration under 10%.
Special joint: Be suitable for media with special performance requirements, such as: Oil resistance, heat resistance, cold resistance, ozone resistance, wear resistance or chemical corrosion resistance.
Based on the structural type, it is divided into: Single-ball, double-ball, triple-ball, pump suction ball and elbow body. Spherical rubber joint is divided into concentric with the same diameter, concentric with different diameter and eccentric with different diameter. Based on the flange sealing surface form, it is divided into: Raised face flange sealing and full-face flange sealing.
Based on the connection form, it is divided into: Flange connection, thread connection and hose clamp connection.
Based on the working pressure, it is divided into: 0.25MPa, 0.6MPa, 1.0MPa, 1.6MPa, 2.5MPa, 4.0MPa. Based on the vacuum degree, it is divided into: 32kPa, 40 kPa, 53 kPa, 86 kPa and 100 kPa.

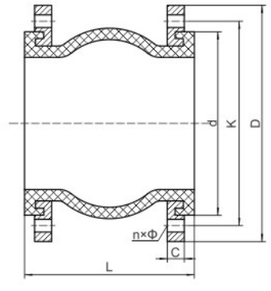
Executive standard

Product standard: GB/T26121-2010 Flexible rubber joint
Pressure test: GB/T26121-2010 Flexible rubber joint
Flange connection: GB/T17241.6-2008 Integral cast iron flange
Model preparation: GB/T26121-2010 Flexible rubber joint
JB/T308-2004Preparation method of valve model

Model preparation



Example:
Double-ball rubber joint connected with raised face flange sealing with the nominal dimension of DN350, and working pressure of 1.0MPa: XTQ2RF1.0-350
Double-ball rubber joint connected with full-face flange sealing with the nominal dimension of DN350 and working pressure of 1.0MPa: XTQ2FF1.0-350



Flexible Rubber Joint

XTQ1 RF

Main performance and parameters

Performance specification table				
Nominal pressure		PN10	PN16	
Test pressure	Shell strength	0.9	1.5	MPa
	Liquid high -pressure sealing	0.66	1.1	
Medium temperature		-10-80°C		
Applicable medium		Clean water, etc.		

Materials of main parts

Materials of main parts	
Flange	High-quality carbon structural steel, stainless steel
Inner and outer rubber layers	Natural rubber, NBR, EPDM, etc
Middle rubber layer	Natural rubber, NBR, EPDM, etc
Enhancement layer	Natural rubber, NBR, EPDM, etc
Wire rope ring	Steel wire

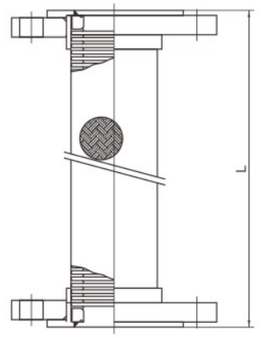
Main boundary dimension

Unit: mm

DN	L	L1	L2	L3	α/(°)	D		K		C		n×Φ	
						PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16
50	105	6	10	10	25	165	165	125	125	19	19	4×19	4×19
65	115	8	15	12	25	185	185	145	145	19	19	4×19	4×19
80	135	8	15	12	25	200	200	160	160	19	19	8×19	8×19
100	150	12	20	16	15	220	220	180	180	19	19	8×19	8×19
125	165	12	20	16	15	250	250	210	210	19	19	8×19	8×19
150	180	12	20	16	15	285	285	240	240	19	19	8×23	8×23
200	190	14	30	25	8	340	340	295	295	20	20	8×23	12×23
250	230	14	30	25	8	395	405	350	355	22	22	12×23	12×28
300	240	14	30	25	8	445	460	400	410	24.5	24.5	12×23	12×28
350	250	14	30	25	8	505	520	460	470	24.5	26.5	16×23	16×28
400	250	14	30	25	8	565	580	515	525	24.5	28	16×28	16×31
450	250	14	30	25	8	615	640	565	585	25.5	30	20×28	20×31
500	250	14	30	25	8	670	715	620	650	26.5	31.5	20×28	20×34
600	260	14	30	25	8	780	840	725	770	30	36	20×31	20×37
700	260	16	35	25	3	895	910	840	840	32.5	39.5	24×31	24×37
800	260	16	35	25	3	1015	1025	950	950	35	43	24×34	24×40
900	260	16	35	25	3	1115	1125	1050	1050	37.5	46.5	28×34	28×40
1000	260	16	35	25	3	1230	1255	1160	1170	40	50	28×37	28×43
1200	300	16	35	25	3	1455	1485	1380	1390	45	57	32×40	32×49
1400	300	25	35	25	< 2	1675	1685	1590	1590	45	60	36×43	36×49
1600	350	25	35	25	< 2	1915	1930	1820	1820	49	65	40×49	40×56
1800	400	25	35	25	< 2	2115	2130	2020	2020	52	70	44×49	44×56
2000	450	25	35	25	< 2	2325	-	2230	-	55	-	48×49	-

Metal Bellows

BW



Main performance and parameters

Working pressure	PN10 / PN16 / PN25 / 150LB / 10K / 16K
Inside nominal diameter	DN50~DN600, 2"~24"
Working temperature	0°C~420°C
Applicable medium	Water/gas/oil, etc
Manufacturing standard	GB / JIS / ANSI / BSEN / ISO / DIN
Pressure test	GB/T 13927-2008

Materials of main parts

Flange	Carbon steel/stainless steel
Bellows	Stainless steel
Mesh grid	Stainless steel
Connecting pipe	Carbon steel/stainless steel

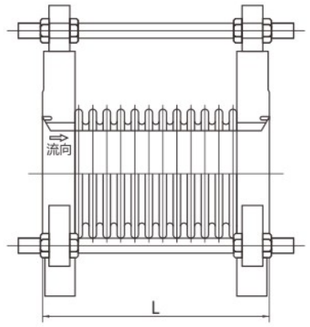
Main boundary dimension

Unit: mm

Inside nominal diameter		Length	Offset	Working pressure (MPa)
(mm)	(in)			
15	1/2	300	34	1.6
20	3/4	300	34	1.6
25	1	300	34	1.6
32	1 1/4	300	33	1.6
40	1 1/2	300	32	1.6
50	2	300	24	1.6
65	2 1/2	300	33	1.6
80	3	300	25	1.6
100	4	300	22	1.6
125	5	300	17	1.6
150	6	300	14	1.6
200	8	300	6	1.6
250	10	300	5.5	1.6
300	12	300	5	1.6

Compensator

BCQ



Main performance and parameters

Working pressure	PN10 / PN16 / PN25 / 150LB / 10K / 16K
Inside nominal diameter	DN50~DN600, 2"~24"
Working temperature	0°C~420°C
Applicable medium	Water/gas/oil, etc
Manufacturing standard	GB / JIS / ANSI / BSEN / ISO / DIN
Pressure test	GB/T 13927-2008

Materials of main parts

Flange	Carbon steel/stainless steel
Bellows	Stainless steel
Valve rod nut	Carbon steel/stainless steel
Pull rod	Carbon steel/stainless steel
Nut	Carbon steel/stainless steel

Main boundary dimension

单位: mm

Inside nominal diameter		Length	Axial operation displacement
(mm)	(in)		
20	3/4	120	±15
25	1	120	±15
32	1 1/4	120	±15
40	1 1/2	150	±15
50	2	150	±15
65	2 1/2	150	±20
80	3	150	±20
100	4	200	±20
125	5	200	±20
150	6	200	±20
200	8	250	±20
250	10	250	±20
300	12	250	±20
350	14	250	±20
400	16	300	±20
450	18	300	±20
500	20	300	±20
600	24	300	±20

Single Disc Compensator (quick-connect Flange)

Special function:

It can replace the expansion piece, flange plate, short pipe A, short pipe B, pipe clamp, etc.. It can be quickly connected with valves, water meters and pipeline components. It can be used to replace local short pipes and repair damaged pipes. It is very convenient to use for cast iron pipes, nodular cast iron pipes, plastic pipes, glass steel pipes, and steel pipes, which can save large amount of installation costs.

Identification color of products:

Blue	Be used for plastic pipe, glass steel pipes
Silver white	Be used for cast iron pipe
Green	Be used for nodular cast iron pipe
Apple green	Be used steel pipe

Main performance specifications and materials:

Applicable pressure	⩽1.0MPa(10kgf/cm²)
Applicable temperature	⩽80°C
Applicable medium	Water, air and other non-corrosive liquid
Material	Gray cast iron, nodular cast iron , rubber

Manufacturing specification:

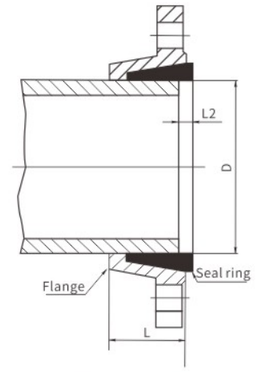
The flange connection dimension is subject to GB/T 17241.6-2008; the outer diameter of applicable straight pipe is subject to GB/T 10002.1-2006, GB/T 13663-2000, GB/T 3420-3422-1982, GB/T 13295-2008 and GB/T 3091-2008.

Advantageous performance:

1. The product has certain regulation and compensation effect on the length change of the pipeline, and can be used for quick connection between pipes and pipe fittings, and also for partial replacement of short pipes. There is no need to build the cement port, or carry out welding or threading for both newly installed pipelines and original pipelines. It only needs to sleeve the compensator on the pipe to make it directly connect with the equipment.
2. The installation is labor-saving and light. It is convenient and quick to use. It can make construction workers free from the heavy physical work such as port building and welding on site, and realize quick connection.
3. The product adopts a rubber-ring for flexible sealing, which can save the flange rubber gasket during installation, is safe and reliable, and can be used when the pipeline cannot be completely stopped.
4. The single-disc compensator can replace other products, reduce the number of pipeline components, reduce the difficulty of engineering construction, and greatly save engineering costs.

Scope of application:

This product is suitable for pipeline construction in many industries, such as water supply and drainage, residential community, sewage, petroleum, construction, power plant and other pipeline systems. It also can be used for plastic pipes, cast iron pipes, nodular cast iron pipes, steel pipes and glass steel pipes.



Structure diagram

Reference data table (partial products)

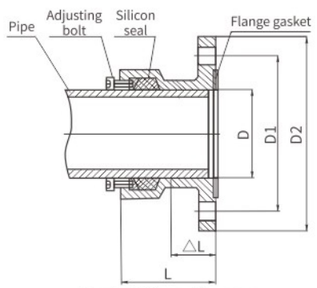
DN (mm)	L Length (mm)	L2Expansion amount L2 (mm)	Be applicable to the outer diameter D of the pipe (mm)				Bolt	Reference weight (kg)
			Plastic pipe	Cast iron pipe	Nodular cast iron pipe	Steel pipe		
40	40	10	40	•	•	48	4-M16X65	1.7
50	52	10	50、63	•	•	57、60、63	4-M16X70	2.5
65	56	10	75	•	•	76	4-M16X80	3
80	56	10	90	93	•	89	8-M16X80	3.5
100	64	10	110	118	118	108、114	8-M16X100	4
125	68	10	125、140	•	•	127、140	8-M16X100	6
150	74	10	160	169	170	159、165	8-M20X100	7.5
200	79	10	200	220	222	219	8-M20X120	11
250	95	15	250	271.6	274	273	12-M20X125	15
300	100	15	315	322.8	326	325	12-M20X125	18
400	100	15	400	425.6	429	426	16-M24X150	30
500	105	15	500	528	532	530	20-M24X160	37
600	105	15	630	630.8	635	630	24-M27X160	44
700	105	15	710	733	738	720	24-M27X160	63
800	105	15	800	836	842	•	24-M30X160	80

Tray Expansion Piece

Product features:

The product has a flange at one end and a bellmouth at the other end. Compared with the traditional expansion piece, the product is light in weight, excellent in performance, novel in structure, simple in installation, and good in sealing effect. The sealing strength can be adjusted as needed.

The product can be quickly connected with plastic pipes, cast iron pipes, nodular cast iron pipes, steel pipes, valves and pipe fittings.



Installation diagram

Advantageous performance:

1. The product is very convenient to use. There is no need to conduct onsite welding or port building for maintenance of newly installed pipelines or original pipelines. It only needs to be connected according to the installation method, which can save labor force.
2. Flexible rubber sealing is adopted between the bellmouth and the pipe, and the sealing strength can be adjusted to make the sealing more safe and reliable.
3. The product has large expansion compensation amount. Its value is shown in the reference data table AL. Especially for the plastic pipe with high thermal expansion coefficient and the pipeline with large stress, this product is the best choice.
4. When the sealing effect is weakened after years of use, the bolts can be tightened again to enhance the sealing effect.

Data of technical parameters:

Model	CPSSQ-10
Applicable pressure	≤1.0MPa(10kgf/cm²)
Applicable temperature	≤80°C
Applicable medium	Water and other non-corrosive media

Name	Material
Expansion piece	Gray cast iron, nodular cast iron
Seal ring	NBR, natural rubber
Adjusting bolt	Stainless steel

Reference data table (partial)

DN(mm)	L Length (mm)	L2Expansion amount L2 (mm)	Be applicable to the outer diameter D of the pipe (mm)				Flange connecting bolt	Adjusting bolt	Reference weight (kg)
			Plastic pipe	Cast iron pipe	Nodular cast iron pipe	Steel pipe			
80	125	70	90	93	——	89	8-M16X70	4-M8	6
100	133	75	110	118	118	108、114	8-M16X70	4-M8	7
150	143	80	160	169	170	159	8-M20X75	4-M8	13
200	143	80	200	220	222	219	8-M20X75	6-M8	18
250	150	90	250	271.6	274	273	12-M20X80	6-M8	25
300	170	100	315	322.8	326	325	12-M20X80	8-M8	34
400	170	110	400	425.6	429	426	16-M22X90	10-M8	50
500	190	120	500	528	532	530	20-M22X100	12-M8	65

Manufacturing specification:

The flange connection dimension is subject to GB/T 17241.6-2008 and GB/T 9113-2010. The outer diameter of applicable straight pipe is subject to GB/T 10002.1-2006, GB/T 13663-2000, GB/T 3420-2008, GB/T 13295-2008 and GB/T 3091-3092-2008. The pressure test is subject to GB/T 13927-2008.

Installation and use methods:

1. Before installation, check whether the adjusting bolts are in a loose state and the rubber seal ring in the bellmouth shall be in a non-extrusion state.
2. Connect one end of the flange of the product to the flange on the pipeline or the flange of the valve pipe fitting, and insert the other end of the pipe into the bellmouth. The insertion length shall be slightly smaller than the total length of the product. Mark the length to be inserted at the insertion end of the pipe to guarantee correct insertion.
3. When inserting pipe, apply soapy water to the pipe first, to reduce friction and facilitate insertion.
4. After the pipe is inserted, tighten the adjusting bolts gradually and circularly, so that the rubber seal ring inside the bellmouth can be tightly combined with the pipe. At the same time, pay attention to observing whether the gap between the pipe and the bellmouth is even, avoid eccentric installation, and ensure safe sealing.
5. If the gap between the pipe and the bellmouth is uneven, it is likely to cause un-tight sealing, resulting in leakage. Therefore, special attention shall be paid to the correct installation and gap adjustment methods, that is: The hexagon socket screw at the side with less gap shall be tightened. If the gap is large, it means that the screw is over-tightened. In short, the hexagon socket screw shall be tightened evenly to keep the gap between the pipe and the bellmouth consistent.
6. If the product is used at the end of the pipe (that is, at the end of the pipeline), the end abutment shall be considered to offset the thrust generated by the medium in the pipe.