



# EXPANSION JOINTS: BALANCE SERIES

BALANCE VIII: DN80-1200



## INTRODUCTION

Pipeline systems are exposed to temperature variations, settling in foundations, forces and deformations causing movement and/or stress in the system. To ensure flawless operation of the system it is necessary to insert flexible parts to absorb the movements preventing structural damage.

To provide excellent vibration isolation and flexibility to the pipeline system Loggers delivers top of the line stainless steel expansion joints, the Balance® series. With the Balance® series Loggers offers a complete program of expansion joints for various applications including one or more approvals by certification authorities like ABS, Bureau Veritas, and German Lloyds. For each situation we can offer you solutions (without affecting the pipeline system) with Loggers qualified expansion joints that:

- Compensate movement
- Compensate expansion
- Absorb stress in the system
- Reduce noise transmissions
- Reduce vibration
- Compensate ground and foundation settling
- Compensate inaccurate assembly
- Serve as dismantling joints on fittings

Our complete portfolio consists of standard expansion joints as well as our special customized expansion joints. Balance® series expansion joints are used worldwide for various applications like exhaust gas lines, low and high pressure pipe systems.

## BALANCE VIII: DN80-1200

The Balance® VIII is a relatively short stainless steel expansion joint with rotatable flanges. It is used for compensating movements and misalignments in exhaust systems in situations with limited installation space. Due to the double ply bellows and rotatable flanges this compensator is still able to compensate relatively large movements. The Balance® VIII is supplied at pre-stressed length in order to reduce the reaction forces to the foundation in operating conditions (high temperature). The maximum operating temperature of the Balance® VIII is +550 °C, the maximum working pressure 2,5 bar (120 °C).

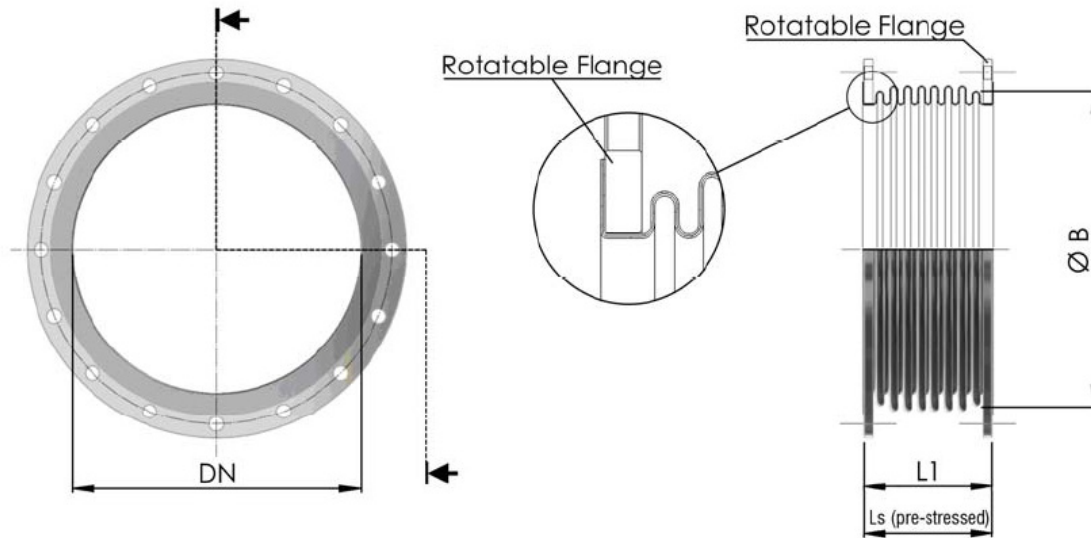
## APPROVALS

Approved by Bureau Veritas and Germanischer Lloyd.

## CHARACTERISTICS

- Stainless steel expansion joint AISI 321
- With rotatable flanges acc. DIN 86044
- Double ply bellows material
- Standard length
- Max. temperature: 550 °C
- Max. pressure: 2,5 bar (120 °C)
- Alternative flange dimensions available
- Stock item
- Supplied at pre-stressed length





Dimensions in millimeters (mm)

### TECHNICAL DATA

Article No.	DN	L1	Ls	Bellows (material: AISI 321)			Movements <sup>1</sup> (mm)		Springrate (N/mm)		Flange (Carbon steel)		
				B (mm)	Plies	Thickness (mm)	Axial +/-	Lateral +/-	Axial +/-	Lateral +/-	D outside	Bolt circle	Holes x d
302 610 080	80	180	200	100	2	0,3	30	15	48	31	200	160	8 x 18
302 610 100	100	150	170	152	2	0,3	33	10	41	67	220	180	8 x 18
302 610 125	125	185	210	182	2	0,3	35	11	67	112	250	210	8 x 18
302 610 150	150	200	225	208	2	0,3	40	12	70	126	285	240	8 x 22
302 610 175	175	205	230	238	2	0,3	40	10	78	183	315	270	8 x 22
302 610 200	200	185	215	258	2	0,4	44	10	71	219	320	280	8 x 18
302 610 250	250	185	215	315	2	0,4	42	8	86	410	375	335	12 x 18
302 610 300	300	180	210	368	2	0,4	45	7	86	607	440	395	12 x 22
302 610 350	350	180	210	409	2	0,4	44	6	94	795	490	445	12 x 22
302 610 400	400	220	265	466	2	0,4	65	10	52	364	540	495	16 x 22
302 610 450	450	180	215	520	2	0,4	50	5	66	920	595	550	16 x 22
302 610 500	500	230	280	571	2	0,4	73	9	66	631	645	600	20 x 22
302 610 550	550	240	290	623	2	0,4	73	8	70	816	703	650	20 x 22
302 610 600	600	230	275	675	2	0,4	68	7	76	1204	754	700	20 x 22
302 610 700	700	230	275	773	2	0,4	63	5	105	2332	856	800	24 x 22
302 610 800	800	230	275	873	2	0,5	66	5	118	3314	958	900	24 x 22
302 610 900	900	230	275	983	2	0,5	66	4	130	4631	1060	1010	28 x 22
302 611 000	1000	230	275	1083	2	0,5	66	4	144	6273	1162	1110	32 x 22
302 611 100	1100	230	275	1183	2	0,6	66	3	156	8301	1266	1210	32 x 22
302 611 200	1200	230	275	1283	2	0,6	66	3	169	10622	1366	1310	36 x 22

<sup>1</sup> Movements (axial/lateral) are not in combination.

## ABOUT LOGGERS

Loggers is **thought leader** and international recognized solution provider in the field of shock, vibration and noise control. With **excellent technical know-how** in combination with proven market knowledge and experience Loggers designs, develops and engineers **innovative solutions** for the most complex and challenging situations for leading clients worldwide for over 90 years.

### Loggers understands all difficulties in the area of vibration, shock and noise control entirely.

We bring up the best and most cost effective solution for every challenge, regardless of its complexity. Loggers defines and engineers all deliverables necessary for solving your problem, ranging from standard to tailor-made solutions. Loggers' state-of-the-art portfolio contains all products and services to provide you with the optimal solution for relatively simple as well as the most complex challenges.

#### Products

- Vibration mounts
- Expansion joints
- Shock mounts

#### Services

- Assessment of current situation (on site)
- Analysis design including construction drawings
- Structural design and stress analysis
- Vibration measurement, calculation and analysis, if needed on site
- Solution definition based on:
  - standard products
  - customized products, or even
  - tailor-made new products, including prototyping
- Complete simulation of solution to ensure its effectiveness
- Testing including certification by independent certification authorities
- On site support during installation

Loggers understands both business and technology and brings both worlds together in satisfying customers' needs in rapidly changing environments. By working closely with clients Loggers enables them to realize their strategic targets through solving specific operational issues in the following market segments:

- Shipbuilding
- Dredging
- Defense
- Machinery
- Offshore
- Transportation



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