WILLBRANDT **Rubber Expansion Joint Type 48**

DN 50 - DN 250

Type 48 is a high-corrugated rubber expansion joint. Its high corrugation means that it has very low inherent resistance. It reduces up to 90 % incoming energy. It continues to be characterised by its considerably movement absorption in all directions.

Type 48 is primarily used in industrial applications to absorb expansion and vibration.

Bellow design	High-corrugated rubber bellow with reinforcement and shaped sealing bead, self-sealing (no additional seals required). Suitable for swiveling flanges.
Flange version	Both sides with swiveling flange made of galvanized steel, with clearance holes, drilled according to DIN PN 10 (standard). Other materials and dimensions are possible.

Accessories	- Guide sleeves - Potential equalisation - Flame-resistant protective covers - Dust and splash protection covers - Segment tie rods
Vacuum resistance	Can be used up to -200 mbar without additional measures, full vacuum possible with vacuum supporting spiral/ring.
Approvals	There are no approvals available.

Specifications

Bellow		Bellow design			Permissible operating data							
Colour code	Colour marking	Core (inner)	Reinforcement	Cover (outer)	°C	bar	°C	bar	°C	bar	Short-term °C	Surface resistance Ro Ohm x cm
red		EPDM	Sp. Cord	EPDM	50	16	70	10	100	6	110	7 x 10^4

Bursting pressure DN 50 - 250 > 48 bar

Important information

For aggressive media, please see the resistance table (can be requested separately).
The bellows should not be painted or insulated. Please refer to the installation instructions.
++++ We will be happy to send you further information on the individual types and designs. ++++

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Application

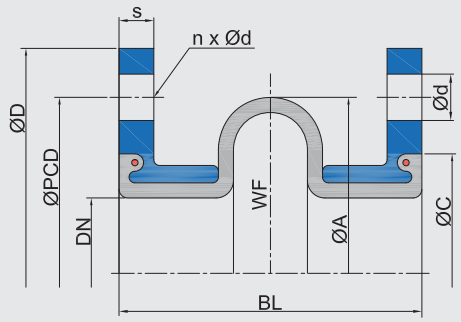
Type 48 red
For hot water, sea water, cooling water with chemical additives for treating water, saline solutions, weak acids and weak alkali solutions. Very good resistance to steam, excellent resistance to swelling and chemicals (diluted acids, alkalis, acetone and alcohol). Not suitable for oil products or cooling water with additives containing oil.

Note!
Detailed material descriptions on pages 5 - 7.

Design A - without tie rods

Can be used for movement absorption in any direction (for combined movements, see the movement diagram in the technical appendix), noise and vibration insulation.

The expansion joint's reaction force must be absorbed via suitable piping.



Dimensions

DN	Length	Bellow		Flange PN 10*2						Movement absorption				Weight
	BL	ØA	WF*1	ØD	ØPCD	Ød	n	s	ØC	axial +	axial -	lateral ±	angular ±	
	mm	mm	mm²	mm	mm	mm		mm	mm	mm	mm	mm	∠°	kg
50	**150**	133	11900	165	125	18	4	16	96	25	25	20	30	5.4
65	**150**	147	14700	185	145	18	8	16	116	25	25	20	30	6.7
80	**150**	167	19400	200	160	18	8	18	133	25	25	20	30	7.5
100	**155**	197	27500	220	180	18	8	18	153	40	30	25	30	8.9
150	**155**	248	44500	285	240	23	8	20	203	45	35	25	20	15.9
200	**160**	292	62400	340	295	23	8	20	261	45	35	25	20	20.7
250	**160**	340	85500	395	350	23	12	20	310	45	35	25	20	27.8

*1 WF = effective area
*2 Other standards/dimensions possible.

Permissible degree of utilisation for movement areas:
- up to 50 °C: Utilisation ~ 100 %
- up to 70 °C: Utilisation ~ 75 %
- up to 90 °C: Utilisation ~ 60 %

Important information

Please note the appropriate fixed point constructions and plain bearings in your piping system!
For more information please refer to our installation instructions.
For information on the tie rods, please see the technical appendix (p. 89 - 92)!
++++ We will be happy to send you further information on the individual types and designs. ++++