

## 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.	Accessories	<ul><li>Guide sleeves</li><li>Potential equalisation</li><li>Flame-resistant protective covers</li><li>Dust and splash protection covers</li><li>Segment tie rods</li></ul>
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.	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**

Bellov	N	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 <sup>4</sup>

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. ++++





## **WILLBRANDT Rubber Expansion Joint Type 48**

### **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.

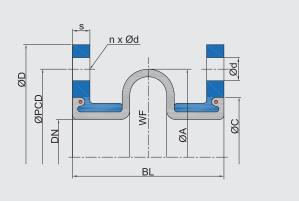
#### Note!

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**

Length	Be	ellow	Flange PN 10*2							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
150	133	11900	165	125	18	4	16	96	25	25	20	30	5.4
150	147	14700	185	145	18	8	16	116	25	25	20	30	6.7
150	167	19400	200	160	18	8	18	133	25	25	20	30	7.5
155	197	27500	220	180	18	8	18	153	40	30	25	30	8.9
155	248	44500	285	240	23	8	20	203	45	35	25	20	15.9
160	292	62400	340	295	23	8	20	261	45	35	25	20	20.7
160	340	85500	395	350	23	12	20	310	45	35	25	20	27.8
	Mm 150 150 155 155 160	BL         ØA           mm         mm           150         133           150         147           150         167           155         197           155         248           160         292	BL         ØA         WF*1           mm         mm²           150         133         11900           150         147         14700           150         167         19400           155         197         27500           155         248         44500           160         292         62400	BL         ØA         WF*1         ØD           mm         mm         mm²         mm           150         133         11900         165           150         147         14700         185           150         167         19400         200           155         197         27500         220           155         248         44500         285           160         292         62400         340	BL         ØA         WF*1         ØD         ØPCD           mm         mm         mm²         mm         mm           150         133         11900         165         125           150         147         14700         185         145           150         167         19400         200         160           155         197         27500         220         180           155         248         44500         285         240           160         292         62400         340         295	BL         ØA         WF*1         ØD         ØPCD         Ød           mm         mm         mm         mm         mm         mm           150         133         11900         165         125         18           150         147         14700         185         145         18           150         167         19400         200         160         18           155         197         27500         220         180         18           155         248         44500         285         240         23           160         292         62400         340         295         23	BL         ØA         WF*1         ØD         ØPCD         Ød         n           mm         mm         mm²         mm         mm         mm         mm           150         133         11900         165         125         18         4           150         147         14700         185         145         18         8           150         167         19400         200         160         18         8           155         197         27500         220         180         18         8           155         248         44500         285         240         23         8           160         292         62400         340         295         23         8	BL         ØA         WF*1         ØD         ØPCD         Ød         n         s           mm         mm         mm         mm         mm         mm         mm         mm           150         133         11900         165         125         18         4         16           150         147         14700         185         145         18         8         16           150         167         19400         200         160         18         8         18           155         197         27500         220         180         18         8         18           155         248         44500         285         240         23         8         20           160         292         62400         340         295         23         8         20	BL         ØA         WF*1         ØD         ØPCD         Ød         n         s         ØC           mm         166         166	BL         ØA         WF*1         ØD         ØPCD         Ød         n         s         ØC         axial + mm           mm	BL mm         ØA mm         WF*1 mm         ØD mm         ØPCD mm         Ød mm         n mm         s mm mm         ØC mm mm         axial + mm         axial + mm           150         133         11900         165         125         18         4         16         96         25         25           150         147         14700         185         145         18         8         16         116         25         25           150         167         19400         200         160         18         8         18         133         25         25           155         197         27500         220         180         18         8         18         153         40         30           155         248         44500         285         240         23         8         20         203         45         35           160         292         62400         340         295         23         8         20         261         45         35	BL mm         ØA mm         WF*1 mm         ØD mm         ØPCD mm         Ød mm         n mm         s mm         ØC mm mm         axial mm mm         lateral ± mm           150         133         11900         165         125         18         4         16         96         25         25         20           150         147         14700         185         145         18         8         16         116         25         25         20           150         167         19400         200         160         18         8         18         133         25         25         20           155         197         27500         220         180         18         8         18         153         40         30         25           155         248         44500         285         240         23         8         20         203         45         35         25           160         292         62400         340         295         23         8         20         261         45         35         25	BL mm         ØA mm         WF*1 mm         ØD mm         ØPCD mm         Ød mm         n mm         s mm mm         ØC mm mm         axial mm

<sup>\*1</sup> WF = effective area

information

Permissible degree of utilisation for movement areas: - up to 50  $^{\circ}\text{C}$ : Utilisation  $\sim$  100 %

- up to 70 °C: Utilisation ~ 75 % - up to 90 °C: Utilisation ~ 60 %

# **Important**

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. ++++



<sup>\*2</sup> Other standards/dimensions possible.