

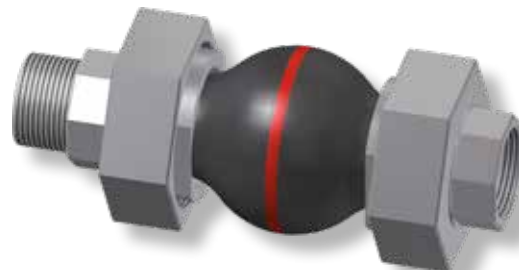
WILLBRANDT Rubber Expansion Joint Type 46

■ mainly in stock

DN 20 (3/4") to DN 50 (2")

Type 46 is a low corrugated rubber expansion joint. Its low corrugated shape minimises flow resistance. It is also characterised by its large axial movement absorption and the wide variety of rubber qualities, so that a suitable rubber compound is available for every application (see material descriptions on the following page).

Type 46 is used in building services engineering, water management, solar and wind energy systems and in engine construction, where it is used specifically for movement and vibration absorption as well as noise damping.



Bellow design	Low corrugated rubber bellow with reinforcement and shaped sealing bead with core ring, self-sealing (no additional seals required). Suitable for 3-piece screw connection.	Approvals/Conformity	CE, shipbuilding approvals, TÜV tested in accordance with DIN 4809 (Detailed overview on page 5.)
Screw connection	Galvanized steel with female or male threads according to DIN EN 10226. Other standards and materials are possible.	Accessories	- Flame-resistant protective covers - Dust and splash protection covers - Earth cover / sun protection cover Further information on page 99 - 105.
Vacuum resistance	- DN 20 to DN 50 vacuum-proof, - Type 46 blue-red PN 10: DN 20 to 40 up to -300 mbar, DN 50 only with vacuum supporting spiral for vacuum application can be used		

Specifications

Bellow		Bellow design			Permissible operating data									Surface resistance Ro	
Colour code	Colour marking	Core (inner)	Reinforcement	Cover (outer)	°C		bar		°C		bar		Short term °C	Core	Cover
					°C	bar	°C	bar	°C	bar					
blue-red		IIR	Polyamide	EPDM	-40	10	50	16	70	12	100	10	120	dissipative	dissipative
blue-red PN 10*		IIR	Polyamide	EPDM	-40	10	50	10	70	8	90	6	120	dissipative	dissipative
red EPDM		EPDM	Polyamide	EPDM	-30	10	50	16	70	12	90	10	100	k.A.	k.A.
red Sp		EPDM	PEEK	EPDM	-40	10	70	16	100	10	130	8	150	dissipative	dissipative
black CR	-	CR	Polyamide	CR	-25	10	50	16	70	12	90	10	100	insulating	insulating
yellow		NBR	Polyamide	CR	-20	10	50	16	70	12	90	10	100	conductive	conductive
yellow LT		NBR-LT	Polyamide	CR	-40	10	50	10	70	12	90	10	100	dissipative	conductive
yellow St		NBR	Steel cord	CR	-20	10	60	16	70	12	90	10	100	conductive	insulating
yellow HNBR		HNBR	Steel cord	CR	-35	10	60	16	70	12	100	10	120	dissipative	insulating
green		CSM	Polyamide	CSM	-20	10	50	16	70	12	100	10	110	insulating	insulating

* Bursting pressure max. 30 bar

Important information

For aggressive media, please have the material resistance checked by our engineers. Please note the appropriate fixed point constructions and plain bearings in your piping system. For more information please refer to our planning and installation instructions. The bellows must be installed free of torsion and must not be painted or insulated at media temperatures >50 °C.

WILLBRANDT Rubber Expansion Joint Type 46

Application

Type 46 blue-red

For hot water, sea water, cooling water with glycol or other chemical additives for treating water, weak acids and weak alkalis and salt solutions, technical alcohols, esters and ketones. Electrically dissipative surface. Not suitable for oil products or cooling water with additives containing oil.

Type blue-red PN 10

Like type 46 blue-red, but max. 10 bar operating pressure.

Type red EPDM

Like type 46 blue-red, but not suitable for shipbuilding or offshore applications. Temperature range: max. 90 °C at 10 bar.

Type 46 red Sp

For heating installations according to DIN 4809. For many years of operation under constant loading with hot water and heating water at 100 °C/110 °C at 10 bar/6 bar operating pressure. Electrically dissipative surface. Not suitable for media with additives containing oil.

Type 46 black CR

For cold and hot water, swimming pool water, salt water, wastewater, cooling water with coolant (e.g. glycol up to 60 °C) and anti-corrosive products containing oil, oil mixtures and compressed air containing oil. Electrically insulating surface.

Type 46 yellow

For oils, lubricants, fuels, gases, city and natural gas (not liquefied) and DIN EN fuels with an aromatic content up to 50 %. Electrically conductive surface.

Type 46 yellow LT

Like type 46 yellow. Also for liquid gas. Electrically dissipative inner surface, electrically insulating outer surface.

Type 46 yellow St

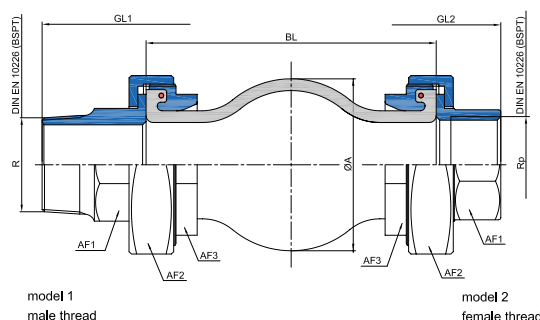
Like type 46 yellow with additional flame-resistance for up to 30 minutes at 800 °C. Electrically conductive inner surface, electrically insulating outer surface.

Type 46 yellow HNBR

Like type 46 yellow St, but for temperatures up to +100 °C. Electrically dissipative inner surface, electrically insulating outer surface.

Type 46 green

For chemicals, aggressive chemical wastewater and compressor air containing oil. Electrically insulating surface.



Dimensions polyamide reinforcement

DN	Length BL	Bellow		R / RP	Total length		Wrench size			Movement absorption ^{*2}				Weight	
		ØA	WF ^{*1}		GL1	GL2	AF1	AF2	AF3	axial + mm	axial - mm	lateral ± mm	angular ± ∠°	Design 1 kg	Design 2 kg
20	130	81	1700	3/4	214	190	36	80	54	15	30	10	30	2.3	2.5
25	130	81	1700	1	214	182	40	80	54	15	30	10	30	2.4	2.4
32	130	81	1700	1 1/4	240	190	48	80	54	15	30	10	30	2.6	2.1
40	130	86	1800	1 1/2	250	198	53	90	74	15	30	10	30	2.9	2.6
50	130	96	3200	2	260	198	66	110	90	15	30	10	30	4.4	3.9

^{*1} WF = effective area

^{*2} Utilisation rate of movement absorption decreases at higher temperatures (see technical appendix).

Note: Reduced expansion for steel cord reinforcement (type 46 yellow ST and yellow HNBR). Weights slightly increased.