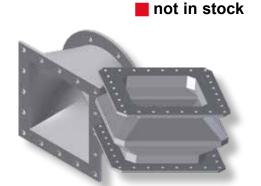


## WILLBRANDT Rubber Expansion Joint Type 63

Type 63 is a free moulded rubber expansion joint that is specially designed and manufactured to your specification and design dimensions. The cross-sections can be round, square, oval or a combination of these. The bellow can be designed with multiple corrugations to absorb a large amount of movement.

A variety of rubber qualities are available for production, so that a suitable rubber compound can be found for almost every application (see material descriptions on the following pages).

Type 63 is used in air, water and chemical plants to absorb movements, vibrations and structural displacements.



Bellow design	Reinforced rubber bellow. Optionally with cylindrical ends for fastening with clamps or tension band or with molded solid rubber flanges, self-sealing (no additional seal necessary), suitable for backing flanges. The bellow can be smooth, single or multi-corrugated or pleated.	Fixing	The type of clamp / tension bands and the type of holes for the backing flange can be freely selected.				
		Approvals/Conformity	Drinking water approval FDA and EG 1935/2004 conform				
Pressure resistance	Max. 10 bar working pressure → As this is a free-form product, the max. permissible pressure is very highly dependent on its shape.	Accessories	<ul> <li>Potential equalisation (vulcanised braid)</li> <li>Guide sleeves</li> <li>Flame-resistant protective covers</li> <li>Dust and splash protection covers</li> <li>Earth cover / sun protection cover</li> </ul>				
Vacuum resistance	Only vacuum-proof with a vacuum supporting ring.		- Tie rods Further information on page 99 - 105.				

#### **Specifications**

Bellow		Bellow design			Permissible operating data										
Colour code	Colour marking	Core (inner)	Reinforce- ment	Cover (outer)	Max. temperature °C	°C	bar	°C	bar	°C	bar	°C	bar	°C	bar
red		EPDM	Polyamide	EPDM	100										
blue		EPDM TW	Polyamide	EPDM	100										
white-red		EPDM beige	Polyamide	EPDM	100										
green		CSM	Polyamide	CSM	100										
yellow		NBR	Polyamide	NBR	100										
white		NBR beige	Polyamide	NBR	100										
grey		CR	Polyamide	CR	90										
red-blue-red		EPDM	Aramid	EPDM	100										
blue-blue-blue		EPDM TW	Aramid	EPDM	100		Expansion joints will designed according to your operating parameters.								
white-blue-red		EPDM beige	Aramid	EPDM	100										
orange-blue-orange		EPDM HT	Aramid	EPDM HT	125										
green-blue-green		CSM	Aramid	CSM	100							I			
yellow-blue-yellow		NBR	Aramid	NBR	100										
white-blue-white		NBR beige	Aramid	NBR	100										
grey-blue-grey		CR	Aramid	CR	90										
lilac-blue-lilac		FPM	Aramid	FPM	180										
-	-	Silicone	Aramid	Silicone	180										
-	-	Silicone	Glass fabric	Silicone	200										

# Important information

For aggressive media, please have the material resistance checked by our engineers. The bellows must not be painted or insulated at media temperatures >50  $^{\circ}$ C. Please also note the planning instructions.



## WILLBRANDT Rubber Expansion Joint Type 63

### **Application**

#### Type 63 red (EPDM)

For water, sea water, cooling water with glycol or other chemical additives for treating water, salt solutions, weak acids and weak alkalis. Unsuitable for aliphatic, aromatic and chlorinated hydrocarbons, oil or oily media.

#### Type 63 blue (EPDM TW)

Like type 63 red, but approved for drinking water.

#### Type 63 white-red (EPDM beige)

Like type 63 red, but with light-coloured rubber in food-grade (FDA and EG 1935/2004 conform). Not approved for drinking water.

#### Type 63 green (CSM)

For chemicals, aggressive, chemical waste water and compressor air containing oil.

#### Type 63 yellow (NBR)

For oils, fats. gases, diesel fuels, kerosene and crude oil. Not suitable for aromatic and chlorinated hydrocarbons, esters and ketones.

#### Type 63 white (NBR beige)

Like type 63 yellow, but with light-coloured internal rubber in foodgrade (FDA and EG 1935/2004 conform). Not approved for drinking water!

#### Type 63 grey (CR)

For water, wastewater, swimming pool water, salt water, cooling water with anti-corrosive products containing oil, oil mixtures and compressed air containing oil.

#### Type 63 red-blue-red (EPDM/aramid)

Like type 63 red, but with aramid fabric.

#### Type 63 blue-blue (EPDM TW/aramid)

Like type 63 blue, but with aramid fabric.

#### Type 63 white-blue-red (EPDM beige/aramid)

Like type 63 white-red, but with aramid fabric.

#### Type 63 orange-blue-orange (EPDM HT/aramid)

Like type 63 red, but with aramid fabric and for temperatures up to +125  $^{\circ}\text{C}.$ 

#### Type 63 red-blue-red AF (EPDM AF/aramid)

Like type 63 red AF, but with aramid fabric.

#### Type 63 green-blue-green (CSM/aramid)

Like type 63 green, but with aramid fabric.

#### Type 63 yellow-blue-yellow (NBR/aramid)

Like type 63 yellow, but with aramid fabric.

#### Type 63 white-blue-white (NBR beige/aramid)

Like type 63 white-grey, but with aramid fabric.

#### Type 63 grey-blue-grey (CR/aramid)

Like type 63 grey, but with aramid fabric.

#### Type 63 lilac-blue-lilac (FPM)

For flue gas desulphurisation systems and bio-diesel. High chemical resistance to benzene, xylene, toluene, aromatic, chlorinated hydrocarbons, mineral acids and fuels with an aromatic content of more than 50 %. For temperatures of up to +180  $^{\circ}$ C.

#### Type 63 silicone (silicone/glass fibre)

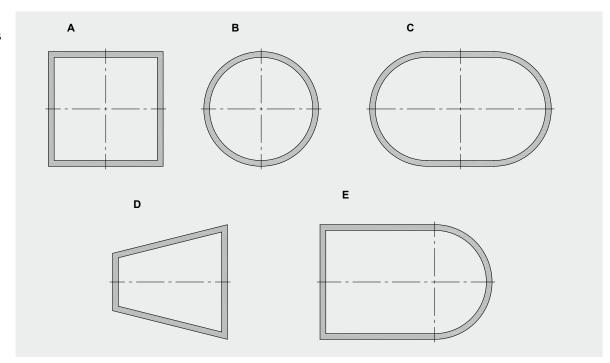
Suitable for hot air, acetic acid, Satisfactory resistance to aliphatic engine and gear oils. Also available in foodstuff quality. Excellent resistance to ageing. UV. ozone and weather. Very good radiation resistance. Not for use with steam above 120 °C. No resistance to fuels



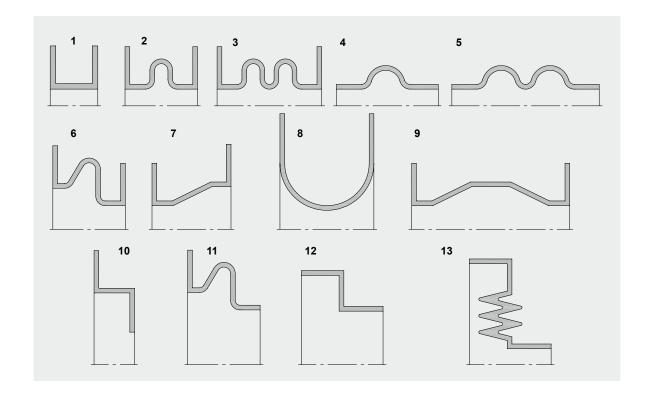


## WILLBRANDT Rubber Expansion Joint Type 63

# **Examples of cross-sections**



# Examples of bellow designs



# Important information

Please note the appropriate fixed point constructions and plain bearings in your pipe system, as well as the tolerances as per the FSA Handbook (see the technical appendix on page 117)! For more information please refer to our planning instructions (page 107 - 117).