

WILLBRANDT Guide Sleeves

Guide sleeve

Rubber expansion joints are elastic pipe elements with integral corrugation. This corrugation means that at high flow rates, turbulences may occur in the expansion joint. This may cause increased loss of pressure and damage the bellow. For media containing solids it is advisable to use a guide sleeve to protect the bellow. For normal liquids, a guide sleeve should be used at a flow rate of 4 m/s and for gases of 20 m/s. We generally recommend using a guide sleeve when transporting solid parts.

The guide sleeves are manufactured in various forms. If the expansion joint only absorbs axial movement, a fitted, angled pipe can be selected. If the expansion joint needs to absorb lateral movement, the guide sleeve must be offset at the opening; it is advisable to use a conical guided sleeve if there is high lateral movement.

For expansion joints with sealing bead and rotatable flanges, the guide sleeves are manufactured as a slide-in sleeves with a collar. For expansion joints with solid flanges, the guide sleeves are provided with a solid flange.



PTFE guide sleeve

This material is used if high chemical resistance to aggressive media is required.

Important note

The standard material for guide sleeves is 1.4541 or 1.4571 stainless steel. Guide sleeves can also be made from 1.4539 stainless steel for seawater or hardox for abrasive materials. Other materials are available upon request. Guided sleeves must be fitted with additional seals.

In order to prevent vacuums forming or dust settling between the guide sleeve and the bellow, guide sleeves are manufactured with corresponding relief holes.

- Cylindrical version for axial movement only
- Cylindrical version with conical neck (inlet) for axial and lateral movement
- Telescopic guided sleeve for axial and lateral movement and complete bellow protection
- Conical version for large inlet opening and for axial and lateral movement

We recommend guided sleeves for:

	<u>Liquids</u>	<u>Gases</u>
• Type 49	up from 4 m/s	up from 20 m/s
• Types 39, 50, 51, 53, 55	up from 5 m/s	up from 30 m/s
• Type 40	up from 5 m/s	up from 30 m/s

Please note that the standard guide sleeve is designed for axial movement. The max. lateral movement absorption is +/- 5 mm. If higher lateral movement is required, please note that the sleeve is reduced by double the value of the lateral movement in the external diameter of the pipe in order to prevent contact between the bellow and the guide sleeve at maximum load.

WILLBRANDT Potential equalisation

Rubber expansion joints have different electrically conductive resistances. It can be seen in the data sheets, there are expansion joints that are electrically conductive and some are electrically conductive dissipative, while CSM, FPM and PTFE expansion joints (white) are insulating.

In order to create conductivity for insulating or dissipating expansion joints, we recommend flange-to-flange potential equalisation. This guarantees that the corresponding levels can be tolerated in the piping system and that the system is earthed.

