

## Bellows

### Guideway protection solutions with very little compression

KABELSCHLEPP bellows are used on all kinds of machine to provide protection for guideways and spindles, in those cases where no hot chips are present and accessibility is not a requirement.

Bellows can be individually produced from a range of different materials, depending on your specific requirements.



### Properties

- Simple installation
- High travel speed
- Minimal compression
- High quality

### Delivery options

- For travel speeds of up to 1.5 m/s
- Customized production
- Available in a wide range of shapes
- Available in many different materials

### Installation variants

- Horizontal, lying
- Horizontal, hanging
- Vertical



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Selection

BASIC LINE

BASIC LINE PLUS

VARIO LINE

TUBE SERIES

3D LINE

STEEL LINE

Order

Cables for Motion  
TOTALTRAX Complete Systems

Conveyor Systems

Guideway  
Protection Systems

## Bellows

Guideway protection solutions with very little compression

### Designs

#### U-bellows design

- Variable dimensions
- Customized in the guide
- Economically priced



■ U-bellows design

#### Box bellows design

- Covering for movable machine elements
- High form stability



■ Box bellows design

#### U-bellows design with lamellas

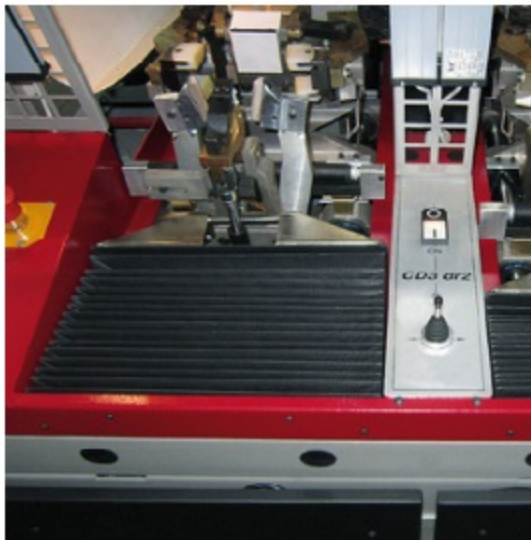
- Reliable protection against heavy chip generation
- Rust-resistant and acid-resistant telescopic plates
- Can be made coolant-proof upon request
- Rigid or movable design of the telescopic plates is possible



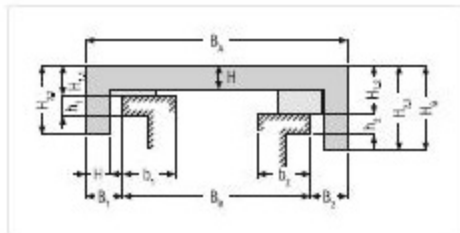
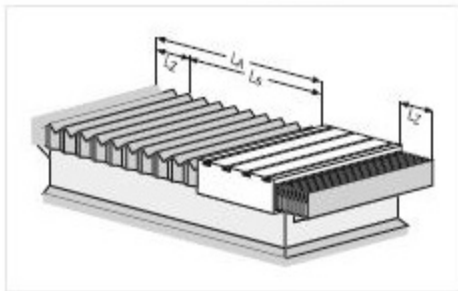
■ U-bellows design with lamellas

Additional shapes and designs are available on request.

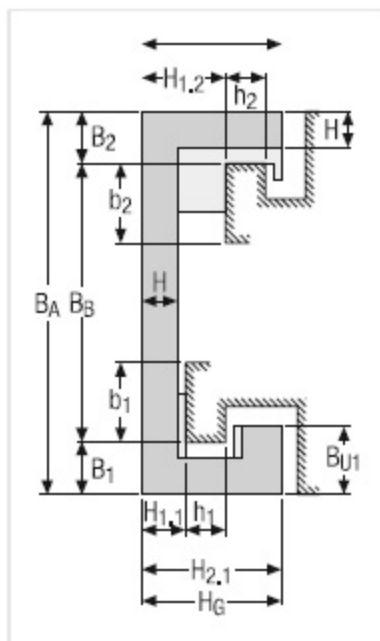
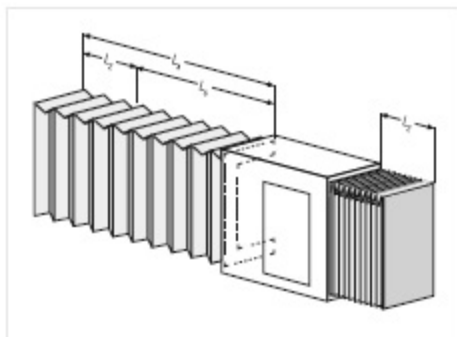
# Examples



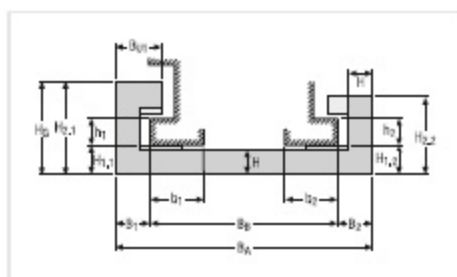
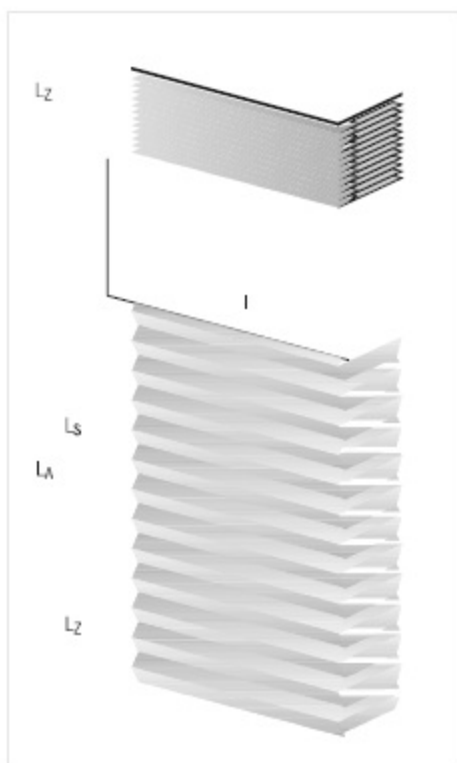
Bellow horizontal, lying



## Bellow horizontal, hanging



## Bellow vertical



Explanation of terms

## Explanation of terms

$B_A$  = Width of bellows

$B_B$  = Width of guideway

$B_1$  = Lateral width to left guide

$B_2$  = Lateral width to the right guide

$B_{U1}$  = Lateral width of the left lower handle

$B_{U2}$  = Lateral width of the right lower handle

$b_1$  = Left guide width

$b_2$  = Right guide width

$H$  = Height of the fold

$H_{1,1}$  = Height above left guide

$H_{1,2}$  = Height above right guide

$H_{2,1}$  = Height of left bellows

$H_{2,2}$  = Height of right bellows

$H_G$  = Total bellows height

$h_1$  = Height of left guide

$h_2$  = Height of right guide

$\alpha$  = Inclination

$L_A$  = Bellows expansion =  $LS + LZ$

$L_S$  = Bellows travel length

$L_{SK}$  = Machine travel length

$L_Z$  = Bellows compression

$n$  = Quantity of folds

$s$  = Material thickness of bellows

$S_F$  = Thickness of end flange

$S_S$  = Thickness of PVC support plate

$v$  = Travel speed of bellows

$Z$  = Extension on the side of the bellows