

Appendixes

A. Installation of plastic slide rail and support rail

About slide rail

The slide rail is attached to the sides of the conveyor beam to reduce chain friction where the chain would otherwise be in direct contact with the beam profile. It is very important that the slide rail is installed properly, so that the chain can run without disruption.

When the conveyor is to be mounted high above ground level, it might be easier to mount the slide rail onto a conveyor section while the conveyor beam is still on the floor. If doing so, leave an extra end, approximately 300 mm longer than the beam, so that it can be cut off and adjusted when the beam is finally installed.

Characteristics

Slide rails are available in several materials, each with different characteristics:

The coefficient of friction is normally closer to the lower value at startup of a new conveyor. It will increase as the contact surfaces are wearing in. Lubricants will reduce the coefficient of friction.

Considerations when selecting slide rail

Each of the slide rails has its own characteristics and is suitable for different types of applications.

Slide rails made of HDPE or PA-PE are suitable for most standard applications. PA-PE has higher wear resistance but should not be used in wet environments.

In environments where high resistance to chemicals is important, PVDF slide rails are recommended.

Hardened steel slide rails in combination with PVDF slide rails in bends can be a good combination where larger particles such as chip occur.

UHMW-PE has the highest wear resistance and can be recommended in applications with accumulation, transport of heavy parts, high speed, abrasive particles or requirements on low dust generation.

Plain bends

The contact pressure between the chain and the slide rail is very high in the inner bend of plain bends. It is important to use the PVDF slide at this location if the speed is high as there will be increased temperatures that may cause melting of other slide rails. This, however, will result in somewhat higher wear on the chain.

PO
X70X
X85X
X180X
X300X
WL
222X
WL
273X
WL
374X
WL
526X
WL
678X
CSX
GRX
FSTX
TR
APX
IDX

A. Installation of plastic slide rail and support rail (continued)

Example of available slide rail types

| Slide rail type | XSCR 25 XLCR 25 XBCR 25 | XBCR 25 P XSCR 25 P XLCR 25 P XWCR 25 P | XBCR 25H XLCR 25 H | XSCR 25 U XLCR 25 U XKCR 25 U XWCR 25 U XBCR 3 UA | XLCR 25 E XBCR 25 E XBCR 25 EB XBCR 3 EA | XLCR 3 TA | XLCR 3 TH XKCR 3 TH XKCR W.. TH |
|----------------------------|--|---|---|--|--|--|---|
| Material | HDPE High density polyethylene | PVDF Polyvinylidene fluoride | PA-PE Polyamide-polyethylene | UHMW-PE Ultra-high molecular weight polyethylene | UHMW-PE Carbon filled ultra-high molecular weight polyethylene | SS Stainless steel | -- Hardened steel |
| Friction coefficient | 0,1–0,25 | 0,15–0,35 | 0,1–0,30 | 0,1–0,25 | 0,15–0,30 | 0,15–0,35 | 0,15–0,35 |
| Application information | –40 to +60 °C Standard applications | –40 to +100 °C High resistance to chemicals (see table in the Product catalogue) Accumulation Transport of heavy parts High speed Abrasive particles | –40 to +80 °C Accumulation Transport of heavy parts High speed Abrasive non-metal particles | –40 to +60 °C High wear resistance Clean environment Low dust and particle generation | –40 to +60 °C Reduces static electricity Relatively low dust and particle generation | Abrasive particles High resistance to chemicals | Abrasive particles such as metal chips from milling and grinding processes |
| Advantages | Good standard Easy to mount | Chemical and heat resistant Low elongation More resistant to chemicals | Good wear and heat resistance | Easy to mount Low wear out Minimum of particles | High conductivity Fast discharge Easy to mount | No elongation High resistance to chemicals and abrasive particles. Heat resistant Low wear out | No elongation Very high resistance to abrasive particles Heat resistant Low wear out |
| Disadvantages | Poor resistance to solvents (petroleum, white spirit) Limited temperature range Wear out at heavy accumulation | Higher friction More difficult to mount | Should not be used in wet applications | Limited temperature range Higher elongation | Some particle generation may occur | Difficult to mount, with only straight lengths High friction Generates particles in dry environments | Special mounting procedure High friction Generates particles in dry environments |
| Colour | Black | Natural white | Grey | White | Black | Natural | Natural |
| Suitable application areas | All industries Medium speed Medium load | Greasy environments Water (washing machines) Chemicals High load Heat resistant | High speed High load | All types of clean production | Environments sensitive to static electricity | High load Heat/cold | Aggressive particles High load Heat/cold |