



Components for static sensitive environments

Conveyor systems XS, XL, XM, XH

FlexLink carbon loaded componets

The FlexLink carbon loaded components are to be used in applications where there is a demand for conveyor equipment to improve productivity in static sensitive environments, but where some particle wear generation will not affect product quality.

The following carbon loaded components are available:

- Plain chain (XS, XL, XM and XH)
- Slide rail
- Guide rail cover

Carbonloaded material characteristics

- Carbonloaded chains: high conductivity.
- Some particle generation may occur.
- Maximum chain tension is lower compared to FlexLink standard chains. See table on page 2. See also the *FlexLink Systems chain guide*.

FlexLink ISD components

The FlexLink ISD components are to be used in applications where there is a demand for improved cleanliness and productivity/quality when manufacturing static sensitive parts. The ISD materials do not build up static electricity and do discharge charged products transported on the conveyor. The clean and static dissipative features are inherent in the material and will not disappear over time.

The following ISD components are available:

- Plain chain (XS, XL, XM and XH)
- Roller top chain (XM)
- Guide rail cover

Features of ISD material

- Dissipative.
- Inherent characteristics do not lose effectiveness over time.
- No fast discharges. This reduces the risk of sensitive electronic products being damaged.
- Prevents attraction of dust or debris.
- Does not shed charged particles.
- Good outgassing characteristics.

Note

Maximum chain tension is lower compared to FlexLink standard chains, see table on page 2. See also the *FlexLink Systems chain guide*.

Technical specifications – chain products

Conductive

Material is acetal resin + carbon
Surface resistivity is less than 10^5 ohm/sq.

ISD

Material is acetal resin + ISD.
Surface resistivity is 10^{10} – 10^{11} ohm/sq.
Volume resistivity is 10^9 – 10^{10} ohmcm.

Product	Tensile strength (N)	Permissible working tension (N)
XSTP 5 E		200
XLTP 5 E		200
XMTP 5 E		500
XHTP 5 E		500
3925932 (XS)	2000	425
3925934 (XL)	2000	425
3925937 (XM)	2000	400
3925940 (XH)	2700	550
3926392 (XM)	2000	400

Technical specifications – slide rails

XLCR 25 E

Material is ultra-high molecular weight polyethylene + carbon. Surface resistivity is less than 10^5 ohm/sq.

XLCR 3 TA

Material is acid resistant stainless steel.
Surface resistivity is less than 10^5 ohm/sq.

Technical specifications – guide rail covers

XLRT 6x23 E, XLRT 3x23 E

Material is ultra-high molecular weight polyethylene + carbon. Surface resistivity is less than 10^{12} ohm/sq.

Combinations of chain and slide rail

Chain material	Slide rail	Clean	Low static	No outgassing	Coefficient of friction	Comments
Standard	XLCR 25 U	+	–	+	0,15	Clean, may attract particles due to static build-up.
Conductive	XLCR 25 E	–	+	N/A	N/A	Some particle generation. Quickly dissipative, fast discharges.
Conductive	XLCR 3 TA	–	+	N/A	N/A	Conductive, fast discharges.
ISD	XLCR 25 U	+	+/-	+	0,2	Clean, no particle attraction. Slowly dissipative.
ISD	XLCR 25 E	+/-	+	N/A	0,3	Clean, very low statics. Dissipative.
ISD	XLCR 3 TA	+	+	+	0,3	Very clean and dissipative.

3926346

Material is polyamide + ISD.
Surface resistivity is less than 10^{12} ohm/sq.

The dimensions of these components are the same as for the standard versions. See the FlexLink main catalogue for dimension drawings.

Combining products

The properties obtained when combining standard, ISD and conductive chains with slide rail in various materials are shown in the table below.

Static hot spots

Certain spots in a conveyor are especially critical with regard to static build-up and contamination. This includes:

- the entrances of wheel bends.
- drive and idler wheels.

A smoothly running conveyor is a necessity to get a clean conveyor. This requires careful installation of the slide rail, to avoid bumps.

Important

Low static levels and minimum particle generation is achieved by

- using low conveyor speeds.
- keeping low loads on the conveyor chain.
- minimizing accumulation
- using a roller chain for accumulation, for reduced friction.

To design a static-free or low-contamination conveyor requires certain precautions to be taken. Contact your FlexLink Systems sales unit for additional engineering and design assistance.

Conveyor chain

	Plain chain Acetal resin+carbon	
XLTP 5 E	Plain chain XL, conductive	See XLTP 5 in main catalogue
XMTP 5 E	Plain chain XM, conductive	See XMTP 5 in main catalogue
XHTP 5 E	Plain chain XH, conductive	See XHTP 5 in main catalogue
	Plain chain POM + ISD, natural colour	
3925934	Plain chain XL	See XLTP 5 in main catalogue
3925937	Plain chain XM	See XMTP 5 in main catalogue
3925940	Plain chain XH	See XHTP 5 in main catalogue
3926392	Roller top chain XM, POM + ISD, natural colour	See XMTR 5 in main catalogue

Slide rail

XLCR 25 E	Slide rail Length 25 m UHMW-PE + carbon	See XLCR 25 in main catalogue
XLCR 3 TA	Slide rail Length 3 m Stainless steel, acid resistant	See TB 97-04-28

Guide rail cover

	Guide rail cover for 15 mm guide rail	
XLRT 3x23 E	Length 3 m UHMW-PE + carbon	See XLRT 3x23 in main catalogue
XLRT 6x23 E	Length 6 m UHMW-PE + carbon	See XLRT 6x23 in main catalogue
3926346	Polyamide + ISD, length 3 m	See XLRT 3x23 in main catalogue