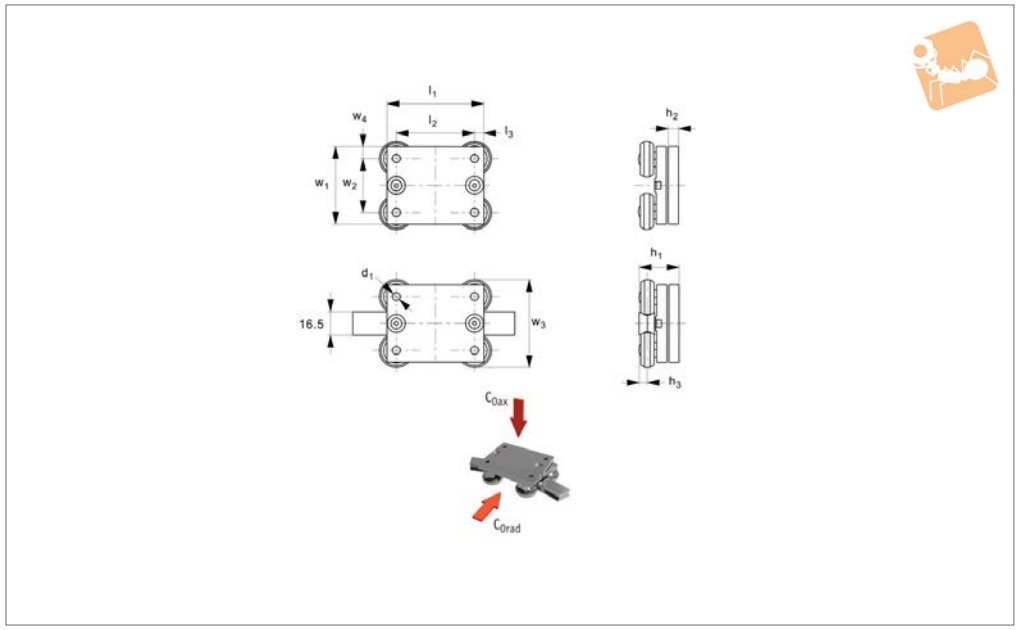


L1978.CR16

Material
Slider body: Fe360. Roller 100Cr6. Roller pins: Lubricated for life.
Finish: electrolytic zinc plated.

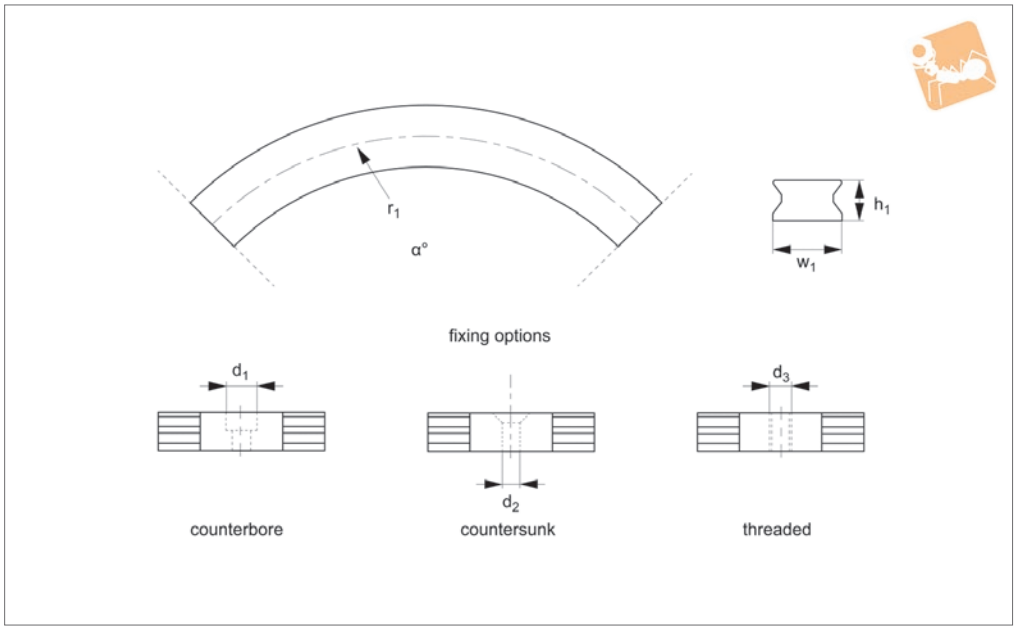
Technical Notes
Where moment loads are present use two or more sliders. Constant (L1978.CRX16) and variable (L1978.VRX16) radii rails can be produced.
Temperature range -30°C to +100°C.

Tips
All stainless steel available. Other coatings and finishes are also available.

Order No.	w_1	h_1	d_1	h_2	h_3	l_1	l_2	l_3	w_2	w_3	w_4	Load $C_{0\ rad}$ N max.	Load $C_{0\ ax}$ N max.	Weight kg
L1978.CR16-070	50	32.3	M5	10	5.7	70	50	10	30	60	10	570	400	0.45

Constant Radius Rails
size 16

L1978.CRX16



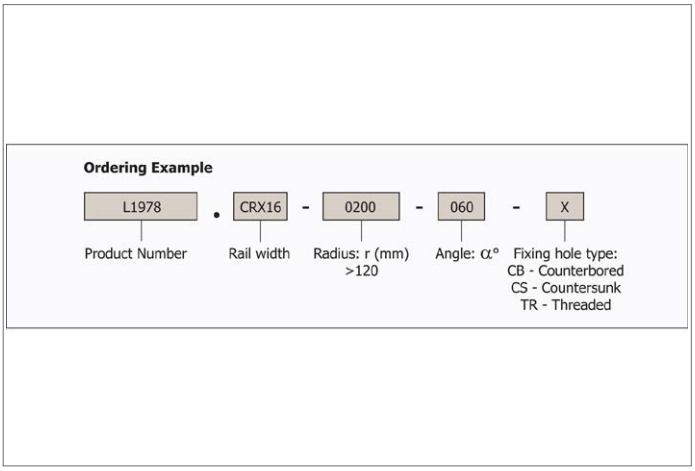
Material
Steel rail (C43), electrolytic zinc plated.
All stainless steel on request.

Technical Notes
Standard radii are shown below but any radius (from r_1 >120 mm) can be produced.
Advise angle required and fixing option type.
Temperature range -30°C to +80°C.
Rail weight 1,2 Kg/m.

Tips
Combine with curviline sliders L1978.CX16-070.
Recommended hole pitch on rail is 80mm.
Rail tolerance ± 0,5mm, angle tolerance ± 1°.
Recommended rail hole is counterbored (easy to install).

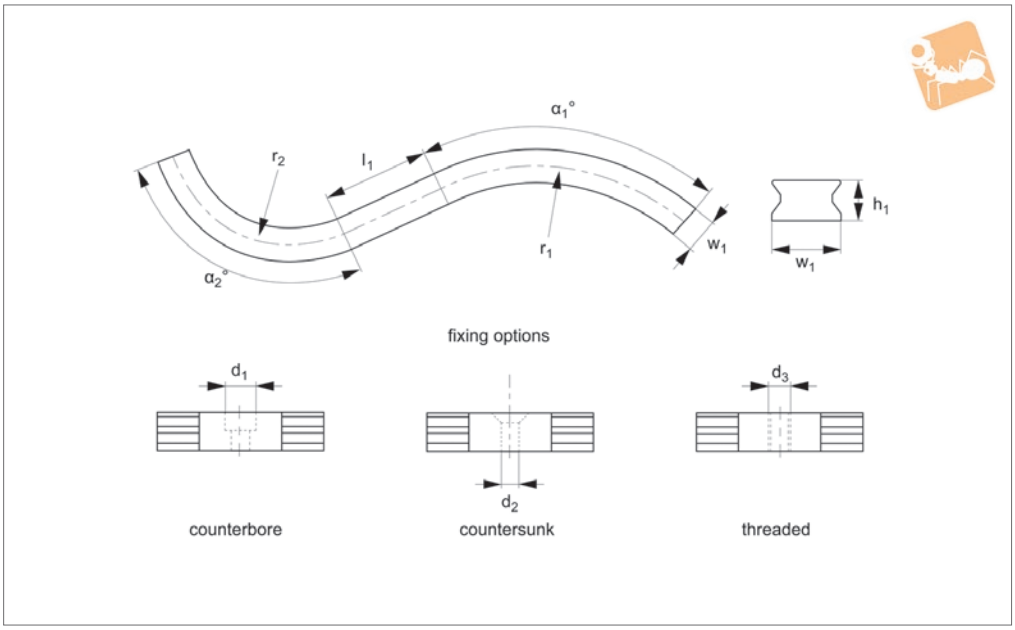
Important Notes
Not to be used in high-cycle applications.

Order No.	w_1	h_1	r_1	α	d_1 for	d_2 for	d_3 for
L1978.CRX16-0150-xx	16.5	10	150	tba	M5	M5	M6
L1978.CRX16-0200-xx	16.5	10	200	tba	M5	M5	M6
L1978.CRX16-0250-xx	16.5	10	250	tba	M5	M5	M6
L1978.CRX16-0300-xx	16.5	10	300	tba	M5	M5	M6
L1978.CRX16-0400-xx	16.5	10	400	tba	M5	M5	M6
L1978.CRX16-0500-xx	16.5	10	500	tba	M5	M5	M6
L1978.CRX16-0600-xx	16.5	10	600	tba	M5	M5	M6
L1978.CRX16-0700-xx	16.5	10	700	tba	M5	M5	M6
L1978.CRX16-0800-xx	16.5	10	800	tba	M5	M5	M6
L1978.CRX16-0900-xx	16.5	10	900	tba	M5	M5	M6
L1978.CRX16-1000-xx	16.5	10	1000	tba	M5	M5	M6


Ordering Example
L1978
CRX16
0200
060
X
Product Number
Rail width
Radius: r (mm) >120
Angle: α°
Fixing hole type:
CB - Counterbored
CS - Countersunk
TR - Threaded

Variable Radius Rails
size 16

L1978.VRX16



Material
Steel rail (C43), electrolytic zinc plated.
All stainless steel on request.

Technical Notes
Advise angle required and fixing option type.
Temperature range -30°C to +80°C.

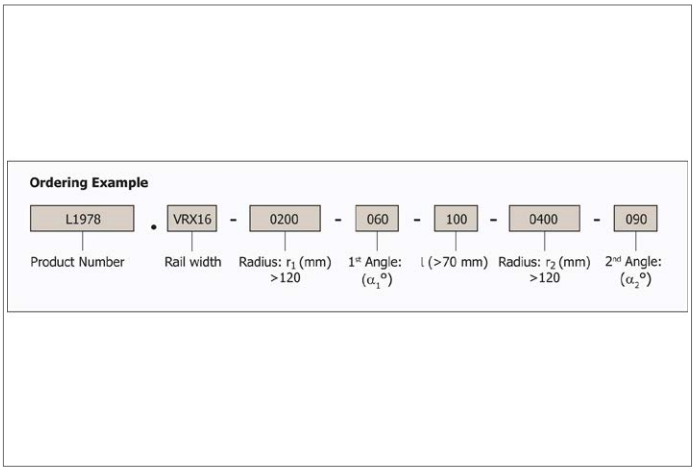
Rail weight 1,2 Kg/m.

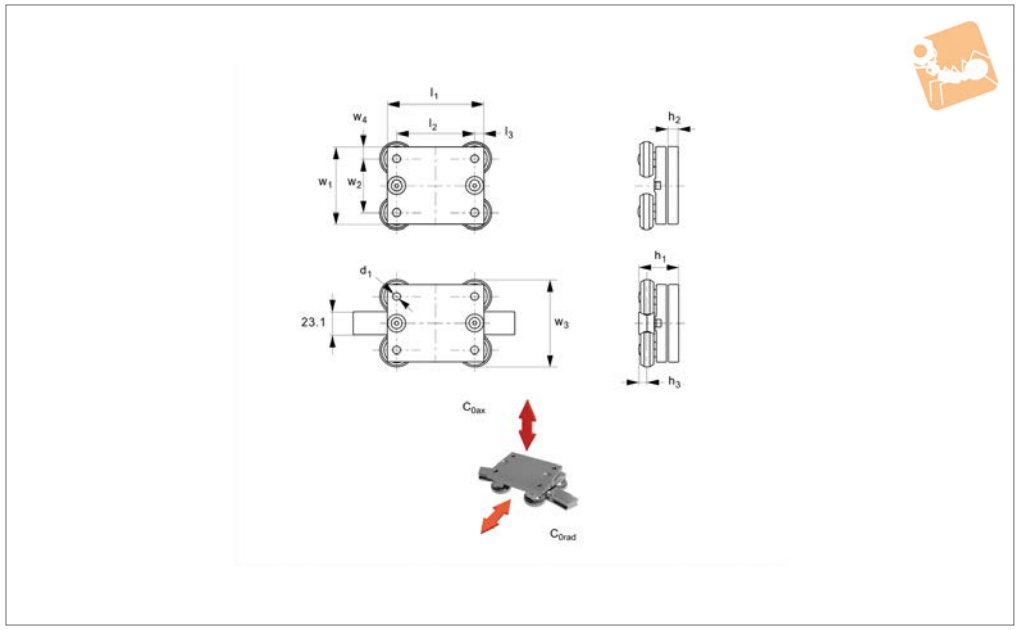
Tips
Combine with curviline sliders L1978.CX16-070.
Recommended hole pitch on rail is 80mm.
Rail tolerance ± 0,5mm, angle tolerance ± 1°.

Recommended rail hole is counterbored (easy to install).

Important Notes
Not to be used in high-cycle applications.

Order No.	w_1	h_1	r_1 & r_2	α_1 & α_2 °	d_1 for	d_2 for	d_3 for	l_1
L1978.VRX16-xxx-xx	16.5	10	tba	tba	M5	M5	M6	tba





L1978.CR23

Material
Slider body: Fe360. Roller 100Cr6. Roller pins: Lubricated for life.
Finish: electrolytic zinc plated.

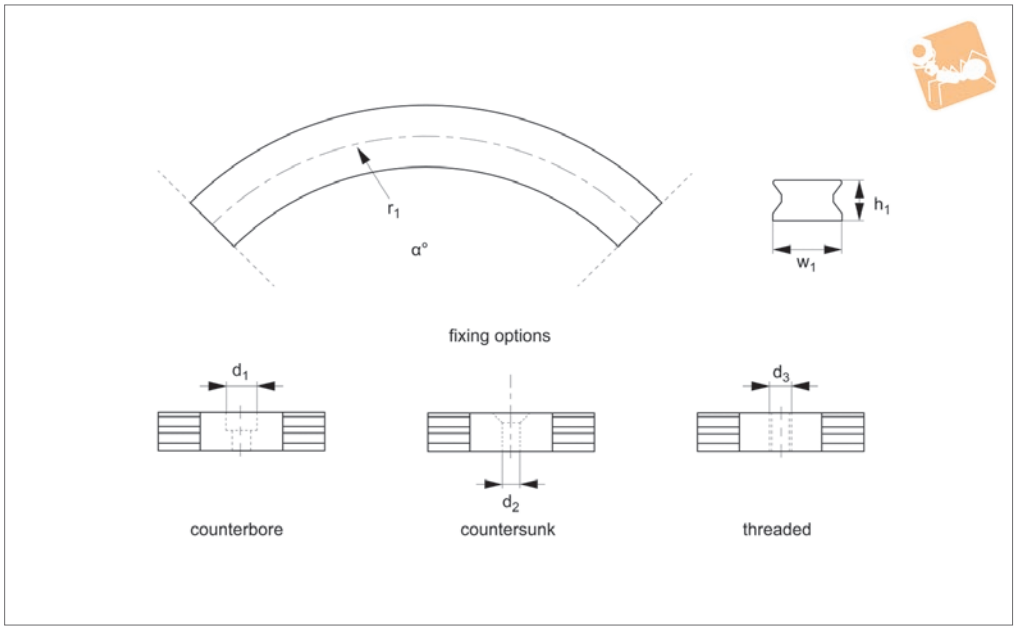
Technical Notes
Where moment loads are present use two or more sliders.
Constant (L1978.CRX23) and variable (L1978.VRX23) radii rails can be produced.
Temperature range -30°C to +100°C.

Tips
All stainless steel available. Other coatings and finishes are also available.

Order No.	w_1	h_1	h_2	h_3	d	l_1	l_2	l_3	w_2	w_3	w_4	Load $C_{0\,rad}$ N max.	Load $C_{0\,ax}$ N max.	Weight kg
L1978.CR23-100	80	36.4	10	7.5	M8	100	80	10	55	89.5	12.5	1615	1130	1.10

Constant Radius Rails
size 23

L1978.CRX23



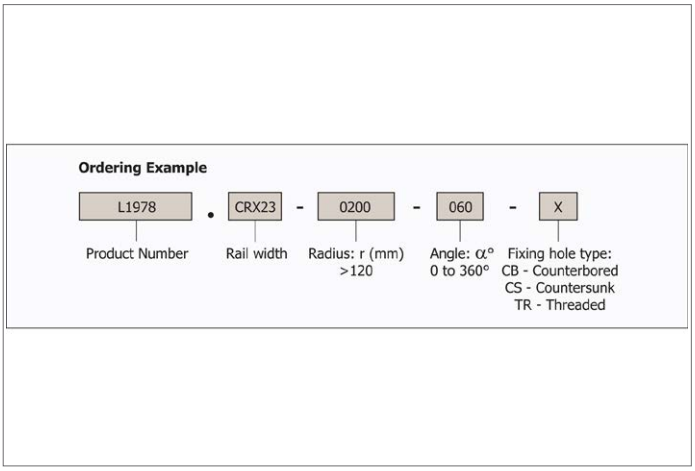
Material
Steel rail (C43), electrolytic zinc plated.
All stainless steel on request.

Technical Notes
Standard radii are shown below but any radius (from r_1 >120 mm) can be produced.
Advise angle required and fixing option type.
Temperature range -30°C to +80°C.
Rail weight 2,2 Kg/m.

Tips
Combine with curviline sliders L1978.CX23-100.
Recommended hole pitch on rail is 80mm.
Rail tolerance ± 0,5mm, angle tolerance ± 1°.
Recommended rail hole is counterbored (easy to install).

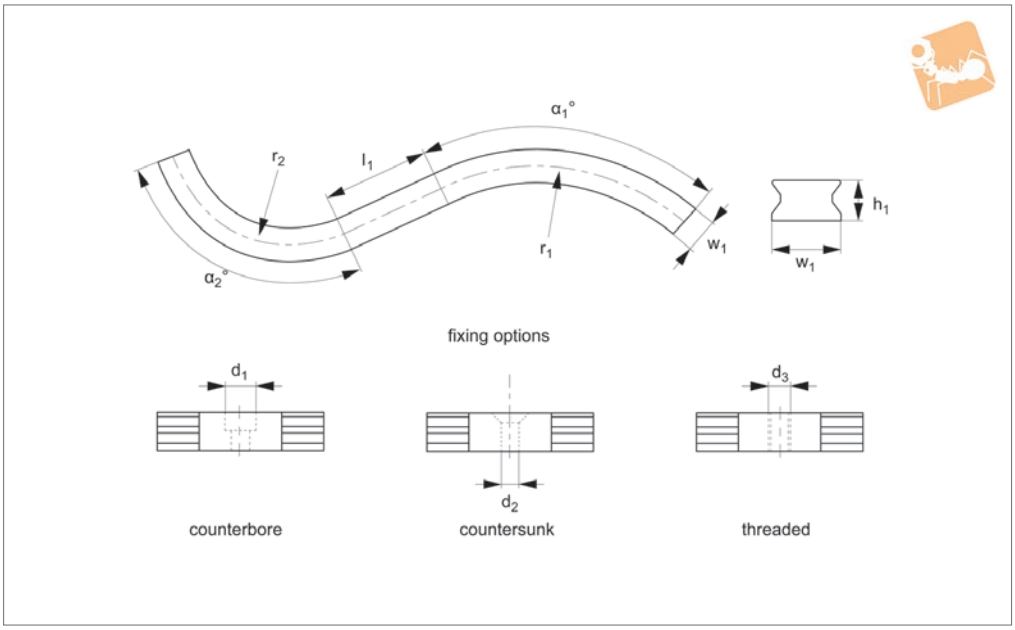
Important Notes
Not to be used in high-cycle applications.

Order No.	w_1	h_1	r_1	α	d_1 for	d_2 for	d_3 for
L1978.CRX23-0150-xx	23	13.5	150	tba	M6	M6	M8
L1978.CRX23-0200-xx	23	13.5	200	tba	M6	M6	M8
L1978.CRX23-0250-xx	23	13.5	250	tba	M6	M6	M8
L1978.CRX23-0300-xx	23	13.5	300	tba	M6	M6	M8
L1978.CRX23-0400-xx	23	13.5	400	tba	M6	M6	M8
L1978.CRX23-0500-xx	23	13.5	500	tba	M6	M6	M8
L1978.CRX23-0600-xx	23	13.5	600	tba	M6	M6	M8
L1978.CRX23-0700-xx	23	13.5	700	tba	M6	M6	M6
L1978.CRX23-0800-xx	23	13.5	800	tba	M6	M6	M8
L1978.CRX23-0900-xx	23	13.5	900	tba	M6	M6	M8
L1978.CRX23-1000-xx	23	13.5	1000	tba	M6	M6	M8


Ordering Example
L1978
CRX23
0200
060
X
Product Number
Rail width
Radius: r (mm) >120
Angle: α° 0 to 360°
Fixing hole type: CB - Counterbored CS - Countersunk TR - Threaded

Variable Radius Rails
size 23

L1978.VRX23



Material
Steel rail (C43), electrolytic zinc plated.
All stainless steel on request.

Technical Notes
Advise angles required and fixing option type.
Temperature range -30°C to +80°C.

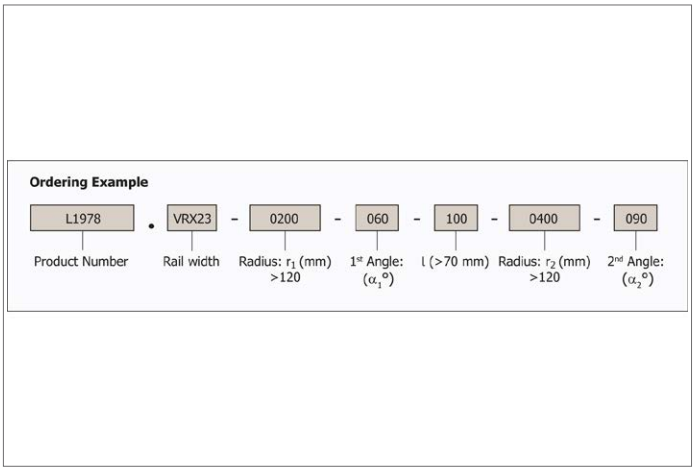
Rail weight 2,2 Kg/m.

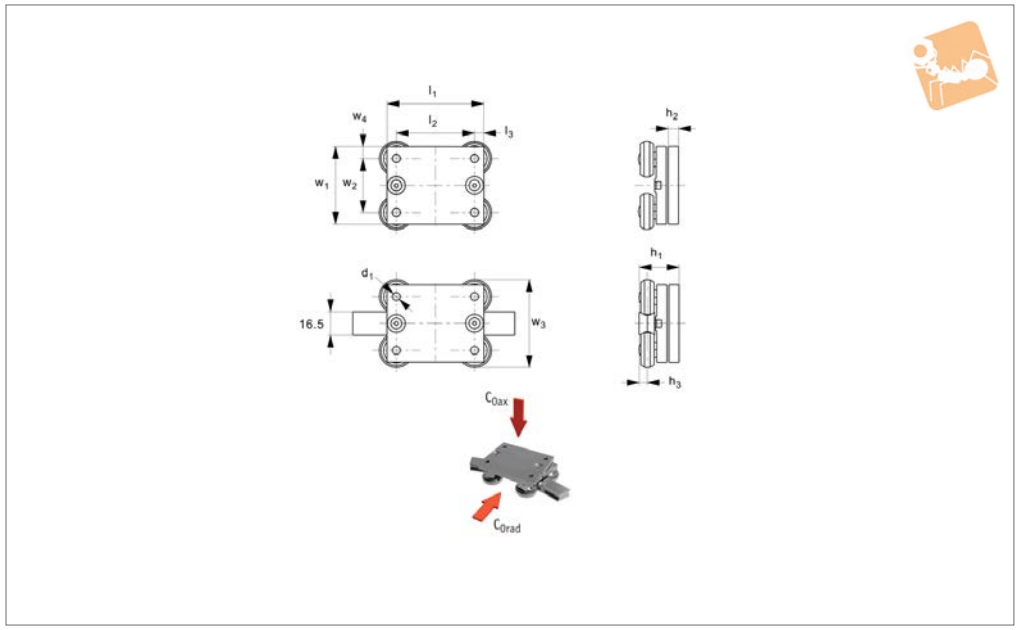
Tips
Combine with curviline carriages L1978.CX23-100.
Recommended hole pitch on rail is 80mm.
Rail tolerance ± 0,5mm, angle tolerance ± 1°.

Recommended rail hole is counterbored (easy to install).

Important Notes
Not to be used in high-cycle applications.

Order No.	w_1	h_1	r_1 & r_2	α_1 & α_2 °	d_1 for	d_2 for	d_3 for	l_1
L1978.VRX23-xxx-xx	23	13.5	tba	tba	M6	M6	M8	tba





L1979.CR16

Material
Slider body: AISI 316L. Roller AISI 440.

Technical Notes
Where moment loads are present, use two or more sliders.
Temperature range -30oC to +100oC.

Tips
All stainless available.

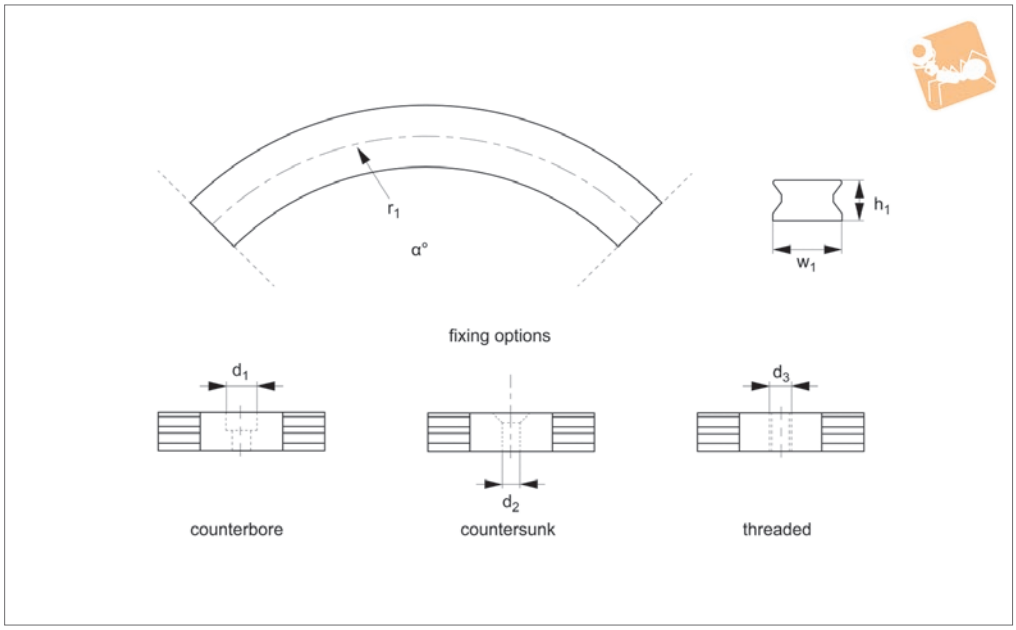
Other coatings and finishes are also available.

Order No.	w_1	h_1	d_1	h_2	h_3	l_1	l_2	l_3	w_2	w_3	w_4	Load $C_{0\ rad}$ N max.	Load $C_{0\ ax}$ N max.	Weight kg
L1979.CR16-070	50	32.3	M5	10	5.7	70	50	10	30	60	10	570	400	0.45

Constant Radius Rails

Stainless steel; size 16

L1979.CRX16



Material
Stainless steel rail AISI 316L.

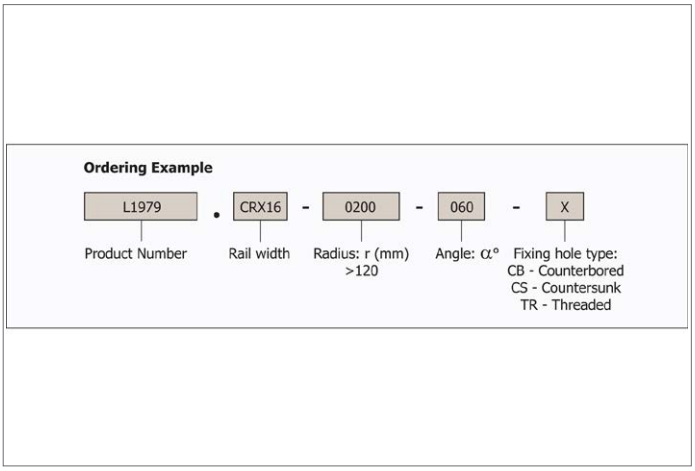
Technical Notes
Standard radii are shown below but any radius (from r1>120mm) can be produced. Advise angle required and fixing option type.

Temperature range -30°C to +80°C.
Rail weight 1.2 Kg/m.

Tips
Combine with curviline sliders (L1979.CR16-070).
Recommended hole pitch on rail is 80mm.
Rail tolerance ±0.5mm, angle tolerance ±1°.
Recommended rail hole is counterbored (easy to install).

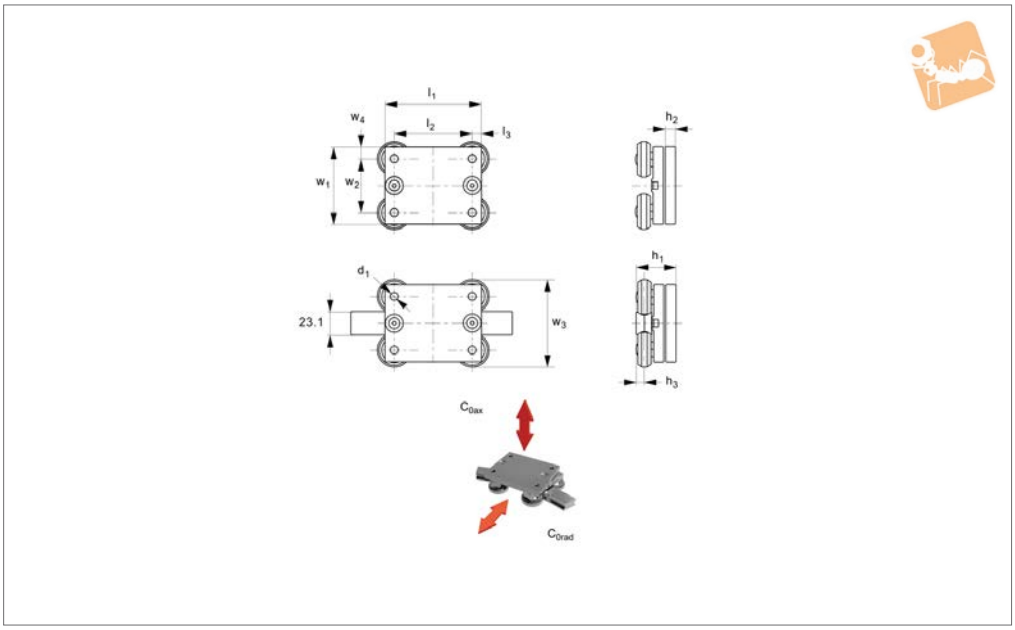
Important Notes
Not to be used in high-cycle applications.

Order No.	w_1	h_1	r_1	α	d_1 for	d_2 for	d_3 for
L1979.CRX16-0150-xx	16.5	10	150	tba	M5	M5	M6
L1979.CRX16-0200-xx	16.5	10	200	tba	M5	M5	M6
L1979.CRX16-0250-xx	16.5	10	250	tba	M5	M5	M6
L1979.CRX16-0300-xx	16.5	10	300	tba	M5	M5	M6
L1979.CRX16-0400-xx	16.5	10	400	tba	M5	M5	M6
L1979.CRX16-0500-xx	16.5	10	500	tba	M5	M5	M6
L1979.CRX16-0600-xx	16.5	10	600	tba	M5	M5	M6
L1979.CRX16-0700-xx	16.5	10	700	tba	M5	M5	M6
L1979.CRX16-0800-xx	16.5	10	800	tba	M5	M5	M6
L1979.CRX16-0900-xx	16.5	10	900	tba	M5	M5	M6
L1979.CRX16-1000-xx	16.5	10	1000	tba	M5	M5	M6


Ordering Example
L1979
CRX16
0200
060
X
Product Number
Rail width
Radius: r (mm) >120
Angle: α°
Fixing hole type:
CB - Counterbored
CS - Countersunk
TR - Threaded

Curviline Sliders
Stainless steel; size 23

L1979.CR23



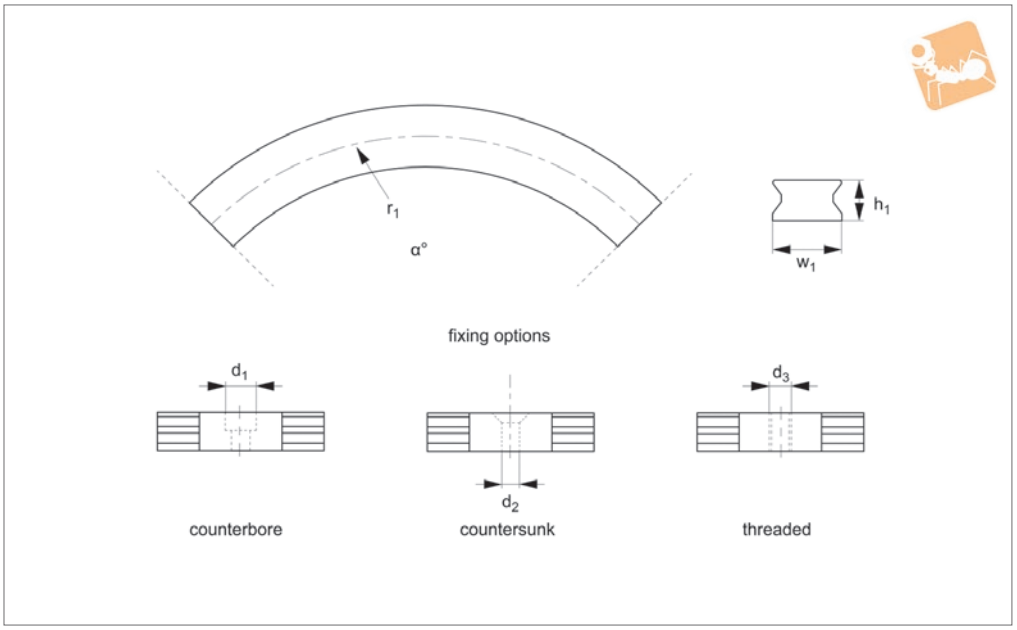
Material
Slider body: AISI 316L. Roller AISI 440.

Technical Notes
Where moment loads are present use two or more sliders.
Temperature range -30°C to +100°C.

Tips
All stainless steel available.

Other coatings and finishes are also available.

Order No.	w_1	h_1	d_1	h_2	h_3	l_1	l_2	l_3	w_2	w_3	w_4	Load $C_{0\ rad}$ N max.	Load $C_{0\ ax}$ N max.	Weight kg
L1979.CR23-100	80	36.4	M8	10	7.5	100	80	10	55	89.5	12.5	1615	1130	1.10



L1979.CRX23

Material
Stainless steel rail AISI 316L.

Technical Notes
Standard radii are shown below, but any radius (from r1> 120mm) can be produced. Advise angle required and fixing option type.

Temperature range -30°C to +80C.
Rail weight 1.2Kg/m.

Tips
Combine with curviline sliders (L1979.CR23-100).
Recommended hole pitch on rail is 80mm.
Rail tolerance ±0.5mm and angle tolerance ±1°.
Recommended rail hole is counterbored (easy to install).

Important Notes
Not to be used in high-cycle applications.

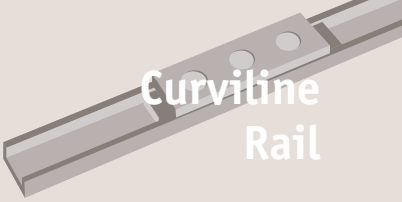
Order No.	w_1	h_1	r_1	α	d_1 for	d_2 for	d_3 for
L1979.CRX23-0150-xx	23	13.5	150	tba	M6	M6	M8
L1979.CRX23-0200-xx	23	13.5	200	tba	M6	M6	M8
L1979.CRX23-0250-xx	23	13.5	250	tba	M6	M6	M8
L1979.CRX23-0300-xx	23	13.5	300	tba	M6	M6	M8
L1979.CRX23-0400-xx	23	13.5	400	tba	M6	M6	M8
L1979.CRX23-0500-xx	23	13.5	500	tba	M6	M6	M8
L1979.CRX23-0600-xx	23	13.5	600	tba	M6	M6	M8
L1979.CRX23-0700-xx	23	13.5	700	tba	M6	M6	M8
L1979.CRX23-0800-xx	23	13.5	800	tba	M6	M6	M8
L1979.CRX23-0900-xx	23	13.5	900	tba	M6	M6	M8
L1979.CRX23-1000-xx	23	13.5	1000	tba	M6	M6	M8

Constant Radius Rail

Stainless steel; size 23

Ordering Example

L1979	.	CRX23	-	0200	-	060	-	X
Product Number		Rail width		Radius: r (mm) >120		Angle: α° 0 to 360°		Fixing hole type: CB - Counterbored CS - Countersunk TR - Threaded



The Curviline rail system offers a cost-effective solution to curvi-linear applications.

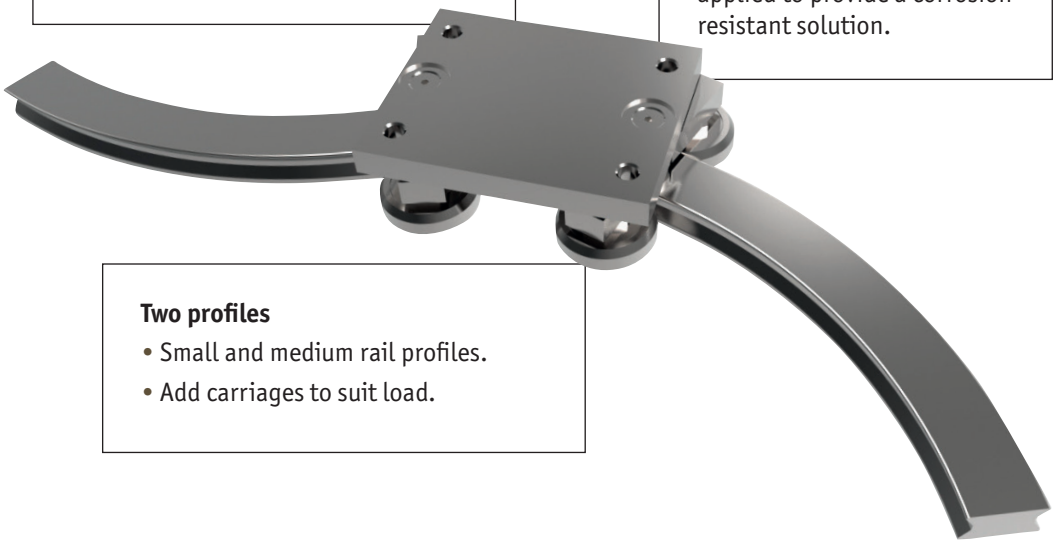
Flexibility when you need it

Constant radius, variable radius are available in standard radii, non-standard radii to your drawings are also possible. Straight and curved sections in a single length can be supplied.

Any radius
- From 120mm radius upwards.
- Standard and special radii.
- Angles up to 360°.

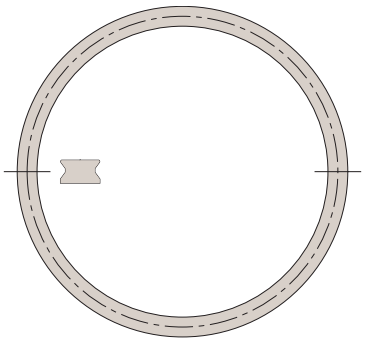
Anti-corrosion

Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.

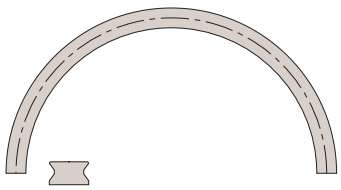


Two profiles
- Small and medium rail profiles.
- Add carriages to suit load.

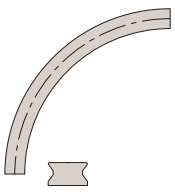
Examples



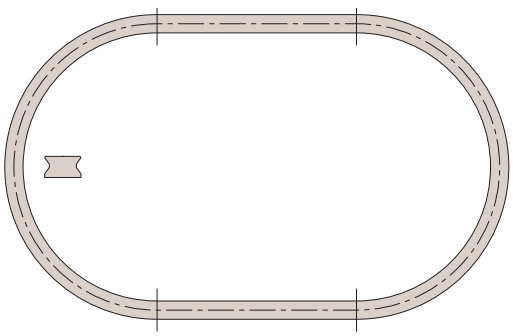
Circle



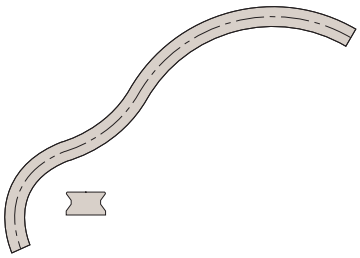
Semi-circle



Arcs



Ovals



Complex rails with varied radii and angles

Curviline Rail from Automotion Components

Curviline Rail

Specifications and applications

Curviline Rail from Automotion Components

Specifications

- Maximum speed 1,5 m/s.
- Maximum acceleration 2 m/s².
- Maximum rail length 3600 mm.
- Two rail sizes 16,5 and 23,5 mm width.
- Minimum radius 120 mm.
- Recommended hole pitch 80 mm.
- Radius tolerance ± 0,5 mm (± 1°).
- Maximum radial load per slider 1615N.
- Temperature range -30°C to +80°C.
- Roller bearing seals 2Z (dust proof), lubricated for life.
- Rollers from 100Cr6, (stainless versions with rubber seals 2RS available on request).
- Sliders are preload adjustable.
- Not suitable for moment loads.
- Special coatings and finishes available on request.

Applications

Sliding doors & windows
Internal sliding doors
gates • roof lights
display cases

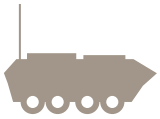
Special purpose & packaging machines
Precision positioning systems
handling units • robotic systems
cutting machines

Safety guarding
Extending protective systems
sliding gates
automatic pick & place

Transport (naval)
Sliding hatches
pull-out storage

Transport (automotive)
Ambulance sliding systems
fire fighting vehicles
sliding panels

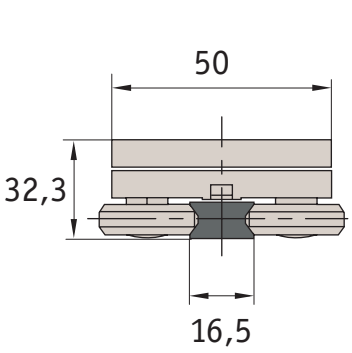
Transport (rail)
Seat adjustment
sliding doors
battery removal units



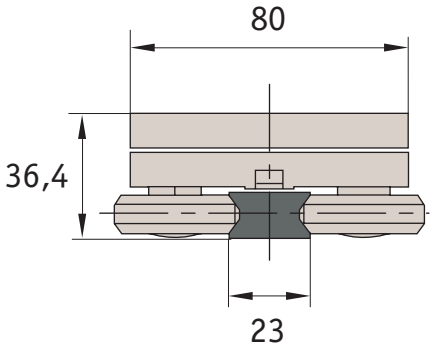
Transport (military)
Sliding seats
protective hatches
stretcher extensions

ov-curviline-specifications-and-applications-lnh-Updated-15-03-2023

Rail sizes



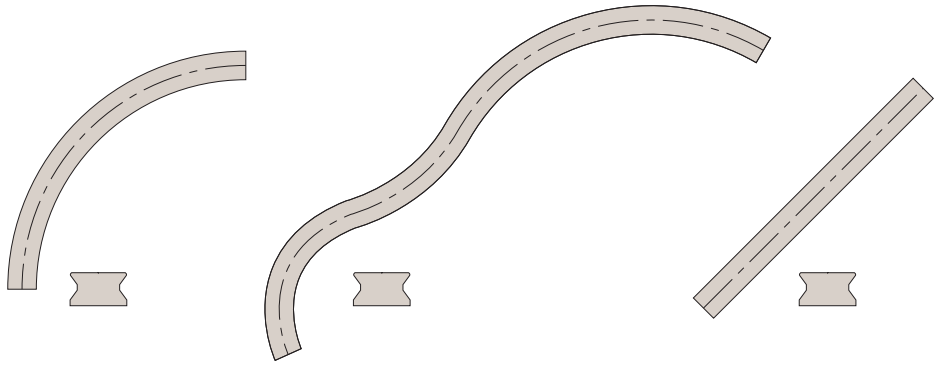
Size 16 (rail and slider)



Size 23 (rail and slider)

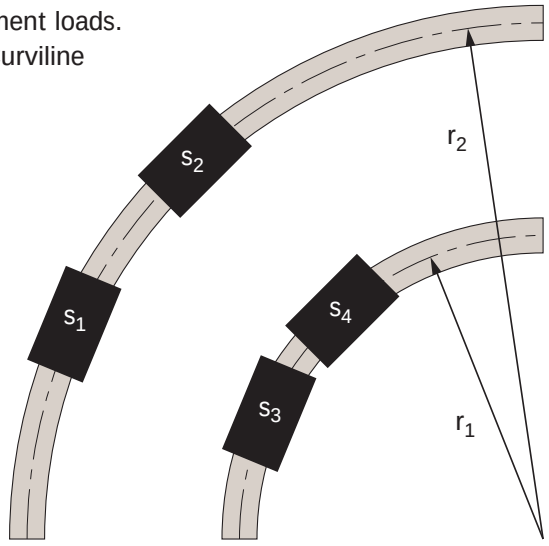
The sliders have eccentric rollers that are adjustable with the thin spanner that is supplied with them. This allows the preload of the system to be set as required – tight or free running.

Rail types



Constant radius | Variable radius rail | Straight sections

Using a pair of rails to reduce moment loads. s_1 - s_4 are Curviline Sliders.

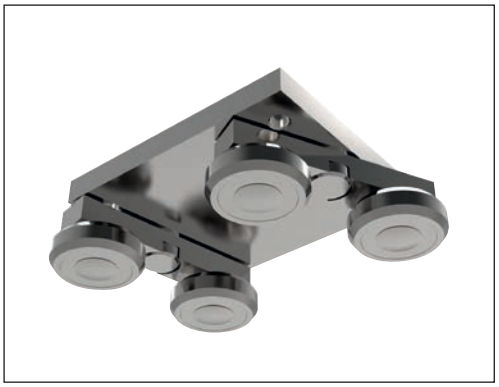


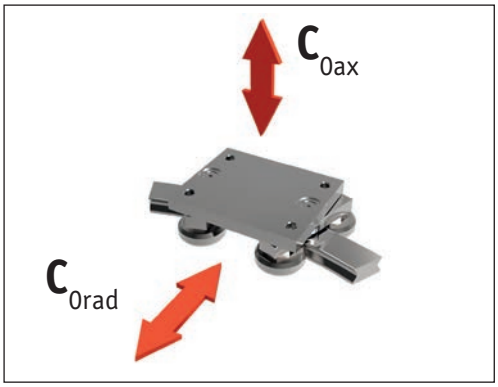
Curviline Rail from Automotion Components

LONG LINEAR RAILS

Curviline Rail from Automotion Components

Load capacities

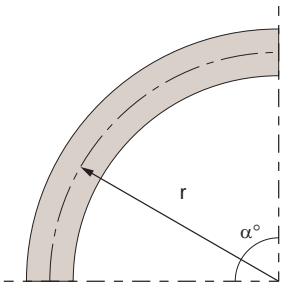




Slider type	C_{0ax} N	C_{0rad} N
L1978.CX16-070	390	560
L1978.CX23-100	1110	1600

Note: Reduce any moment loads by utilising two or more sliders and/or rails.

Constant radius

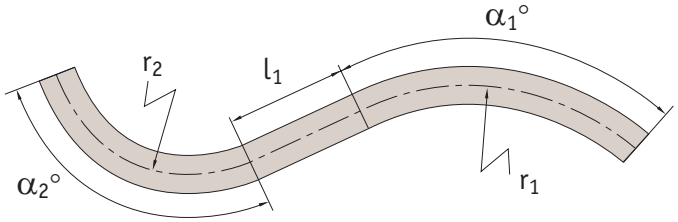


Ordering Example

L1978 . CRX16 – 0200 – 060 – X

- L1978 – Product Number
- CRX16 – Rail width (16 or 23)
- 0200 – Radius: r (mm) 120 upwards
- 060 – Angle: α° (0°-360°)
- X – Fixing hole type: CB - Counterbored, CS - Countersunk, TR - Threaded

Variable radius

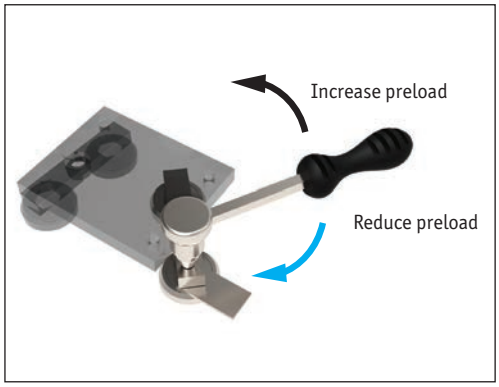


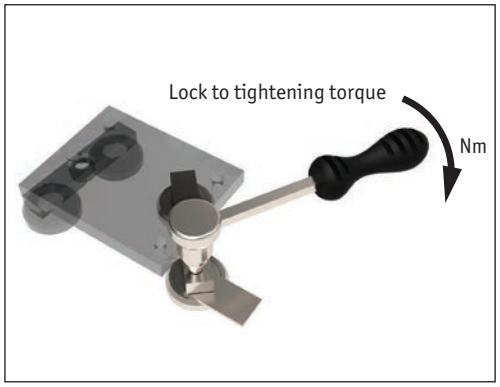
Ordering Example

L1978 . VRX16 – 0400 – 060 – 100 – 0200 – 090

- L1978 – Product Number
- VRX16 – Rail width (16 or 23)
- 0400 – 1st Radius (mm) r_1>120
- 060 – 1st Angle: (α_1°)
- 100 – l_1 (>70 mm)
- 0200 – 2nd Radius (mm) r_2>120
- 090 – 2nd Angle: (α_2°)

Setting the preload





Slider type	Tightening torque Nm
L1978.CX16-070	7
L1978.CX23-100	12

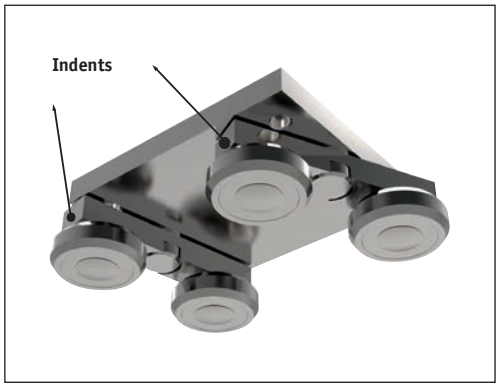
If the Curviline system is delivered as a system, the sliders are already set with no clearance. In this case fixing screws are secured with Loctite® at the factory.

If delivered separately, or if the sliders are to be installed in another track, the eccentric rollers must be re-adjusted.

Important: Loctite® must be applied to the roller fixing screws to prevent loosening.

- Wipe the raceways clean.
- Slightly loosen the fixing screws of the rollers. See below for details on how to identify the eccentric rollers.
- Position the slider(s) at the ends of the rail.
- Insert the flat spanner (provided) onto the hexagonal nut at the top of the roller.
- By turning the spanner clockwise the roller is pressed against the raceway and thus reduces the clearance. Please note that with increasing preload, the friction is also increased and thus the service life is reduced.
- Hold the roller with the spanner in the desired position and carefully tighten the fixing screw. The exact tightening torque will be checked later.
- Move the slider on the rail and check the preload over the entire length of the rail.
  It should move easily and the slider should have no play at any point of the rail.
- Now tighten the fixing screws to the specified tightening torque, whilst securing the roller bearing with the spanner. A special thread in the roller secures the set position.

Identify the eccentric/fixed rollers



The fixed rollers are identified by an indentation on the roller mounts. The eccentric roller mounts have NO indents.