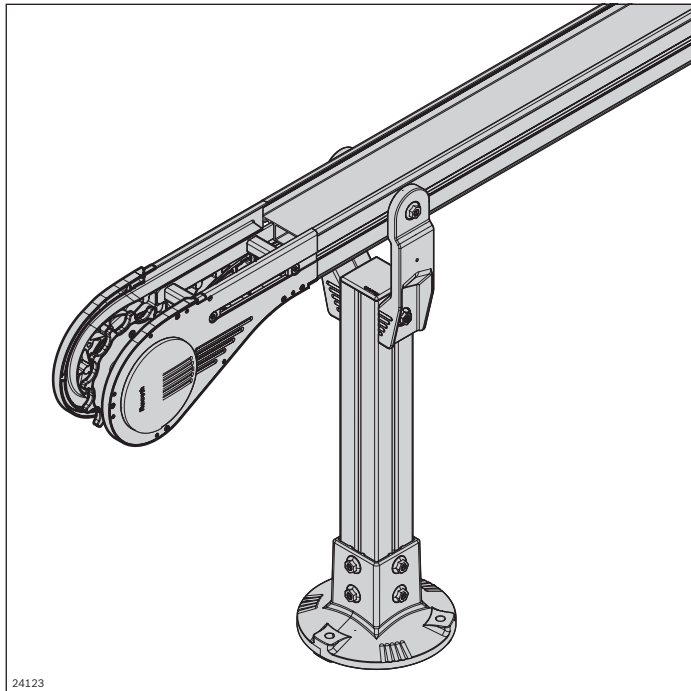
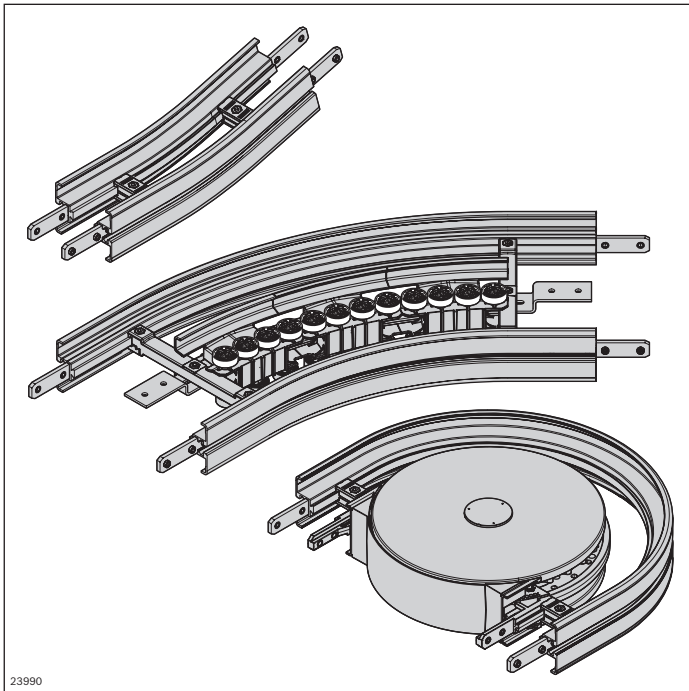


# Aluminum system (AL) VarioFlow *plus*







- ▶ Economical conveyor layout for a wide range of applications in the automotive and electronics industries, machine linking, or in the areas of food & packaging and health & care
- ▶ Mounting of sliding rails without rivets or the need to machine the track bearing surfaces
- ▶ Minimal sliding rail interruptions
- ▶ FDA-compliant, low-friction materials for components subject to constant friction
- ▶ Standardized components that can be used universally
- ▶ Continuous product range in the sizes 65, 90, 120, 160, 240, 320

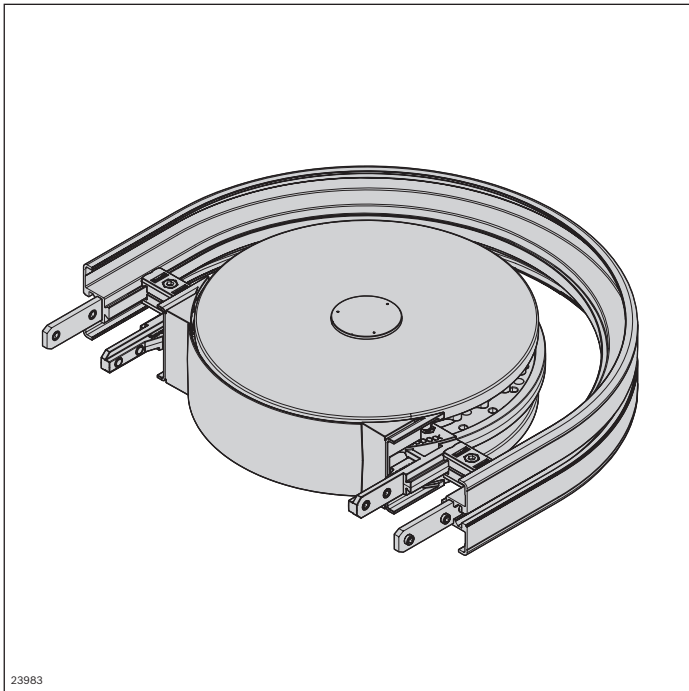
## Curves AL



- ▶ Longer service life and reduced downtimes thanks to low-friction curve technology
- ▶ Reduced friction on curve wheels and patented roller curves to minimize wear, meaning longer sections
- ▶ Components subject to constant friction feature FDA-compliant materials
- ▶ Easy to clean thanks to ample draining surfaces
- ▶ Capable of accumulation
- ▶ Ball bearings sealed on both sides of non-rusting steel (1.4301) with FDA-compliant special grease in curve wheels and patented roller curves
- ▶ Curve wheel can be upgraded to a curve wheel drive or alpine conveyor

	<b>Curve wheel AL</b> <b>Protective cover for the curve wheel AL</b>	<b>68</b>
	<b>Roller curve horizontal AL</b>	<b>70</b>
	<b>Sliding curve horizontal AL</b>	<b>72</b>
	<b>Vertical curve AL</b>	<b>74</b>

## Curve wheel AL



The curve wheel provides a horizontal direction change for the chain. It enables low-friction direction changes with very small radii.

For attachment options, see the matrix on page 313

- Size: 65, 90, 120
- Deflection angles see table on page 69, other deflection angles on request
- Suitable chain types: All
- For circuit systems without chain return in bottom run (using a curve wheel or connection drive), the appropriate cover must be used for personal safety reasons

For the selection of sliding rails, see the "Technical data" chapter on page 300.

**Notice:** High-pressure cleaning of the ball bearings is not permitted.

See also Curve wheel AL ESD, page 194.

- Ball bearing made of non-rusting steel (1.4301), with seal on both sides and FDA-compliant grease filling
- Surfaces in contact with chain made of FDA-compliant material

Scope of delivery:

- Including fastening material for mounting to the section profile AL

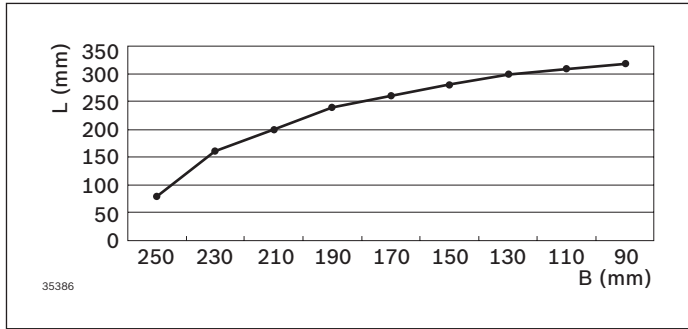
Material:

- Housing: Diecast aluminum
- Chain wheel: PA; white
- Ball bearing: Non-rusting steel 1.4301/FDA

- No interfering contours above chain plate height
- Can be used horizontally and vertically (for wedge conveyors)

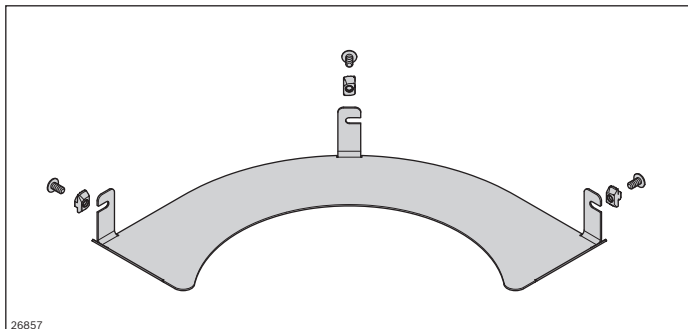
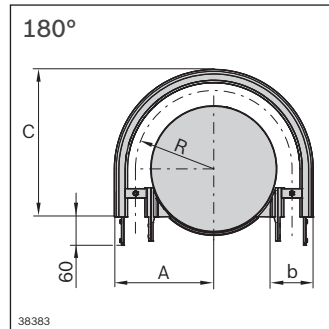
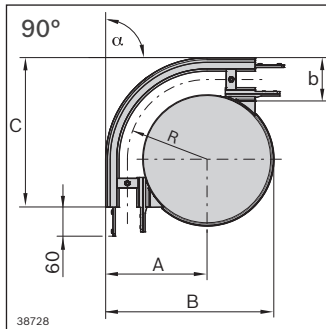
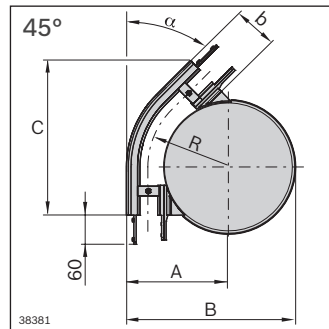
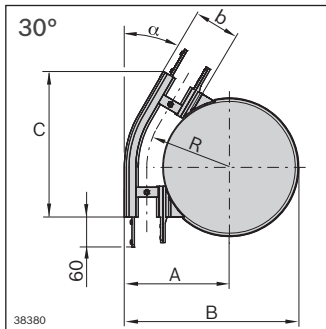
Condition on delivery:

- Assembled



L = product length in conveying direction

B = product width

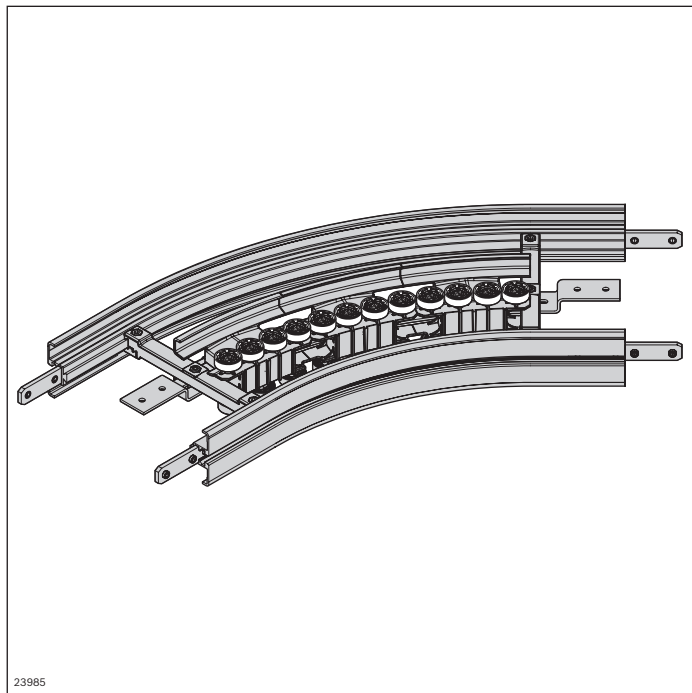


Curve wheel AL	$\alpha$ (°)	No.
VFplus 65	30	<b>3 842 547 048</b>
	45	<b>3 842 547 049</b>
	90	<b>3 842 547 050</b>
	180	<b>3 842 547 051</b>
VFplus 90	30	<b>3 842 547 052</b>
	45	<b>3 842 547 053</b>
	90	<b>3 842 547 054</b>
	180	<b>3 842 547 055</b>
VFplus 120	30	<b>3 842 547 056</b>
	45	<b>3 842 547 057</b>
	90	<b>3 842 547 058</b>
	180	<b>3 842 547 059</b>

b (mm)	$\alpha$ (°)	R (mm)	A (mm)	B (mm)	C (mm)
65	30	153.0	185.5	324.5	279.4
	45	153.0	185.5	324.5	301.9
	90	153.0	185.5	324.5	285.5
	180	153.0	185.5	–	287.5
90	30	165.5	210.5	349.5	291.9
	45	165.5	210.5	349.5	319.6
	90	165.5	210.5	349.5	310.5
	180	165.5	210.5	–	312.5
120	30	180.5	240.5	379.5	306.9
	45	180.5	240.5	379.5	340.8
	90	180.5	240.5	379.5	340.5
	180	180.5	240.5	–	342.5

Protective cover AL	$\alpha$ (°)	No.
VFplus 65	30	<b>3 842 551 545</b>
	45	<b>3 842 551 546</b>
	90	<b>3 842 551 547</b>
	180	<b>3 842 551 548</b>
VFplus 90	30	<b>3 842 551 549</b>
	45	<b>3 842 551 550</b>
	90	<b>3 842 551 551</b>
	180	<b>3 842 551 552</b>

## Roller curve horizontal AL



- Patented roller elements for low-friction, quieter changes in chain direction
- Ball bearing made of non-rusting steel (1.4301), with seal on both sides and FDA-compliant grease filling

### Required accessories:

- Sliding rail: Length calculation, see p. 302

### Scope of delivery:

- Including fastening material for mounting to the section profile AL

### Material:

- Profile: Aluminum; anodized
- Roller carrier: PA66
- Ball bearing: Non-rusting steel 1.4301/FDA
- Connector: Steel; zinc-plated
- Rollers: PA

The low-friction roller curve provides a horizontal change in direction for the chain. Roller elements with ball bearings enable longer conveyor sections.

The service life of the chain is increased and system costs reduced.

For attachment options and length determination of the support profile, see matrix on page 313

- Size: 160, 240, 320
- Deflection angles, see table on p. 71
- Other deflection angles on request
- Suitable chain types: All
- Version with open section profiles

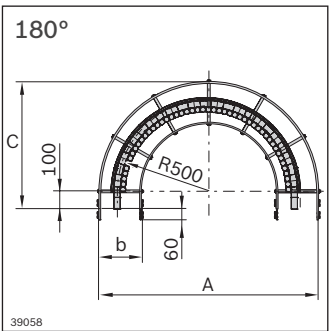
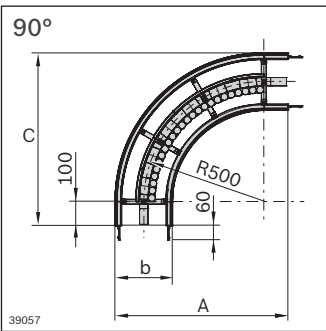
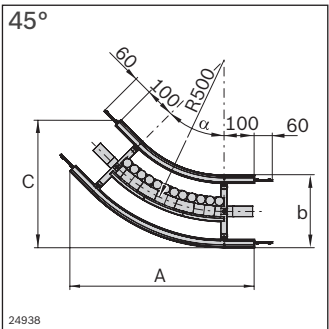
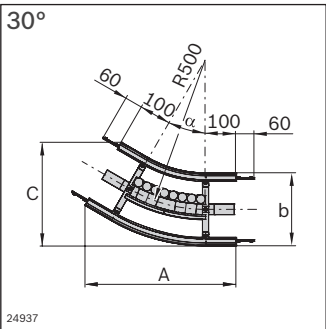
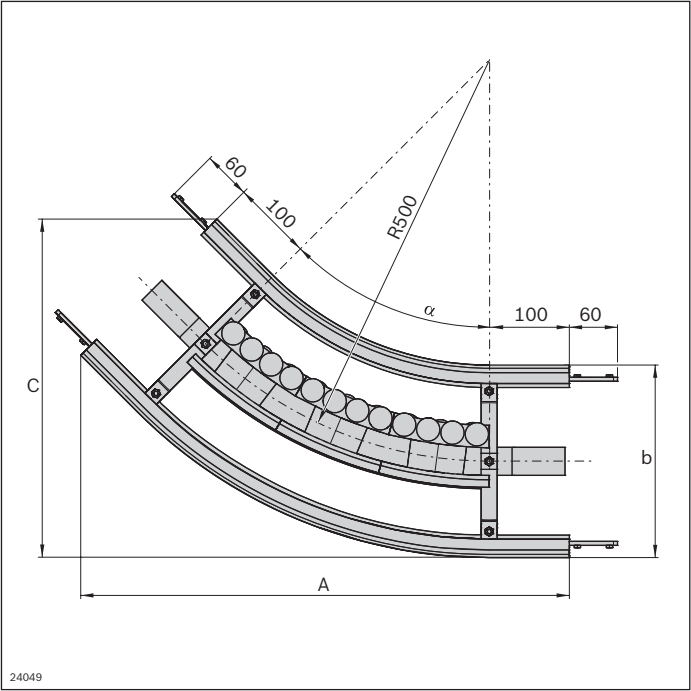
For the selection of sliding rails, see the "Technical data" chapter on page 300.

**Notice:** High-pressure cleaning of the ball bearings is not permitted.

- Surfaces in contact with chain made of FDA-compliant materials

### Condition on delivery:

- Assembled



Roller curve AL	$\alpha$ (°)	No.
VFplus 160	30	<b>3 842 547 060</b>
	45	<b>3 842 547 061</b>
	90	<b>3 842 547 062</b>
	180	<b>3 842 547 063</b>
VFplus 240	30	<b>3 842 547 064</b>
	45	<b>3 842 547 065</b>
	90	<b>3 842 547 066</b>
	180	<b>3 842 547 067</b>
VFplus 320	30	<b>3 842 547 068</b>
	45	<b>3 842 547 069</b>
	90	<b>3 842 547 070</b>
	180	<b>3 842 547 071</b>

b (mm)	$\alpha$ (°)	A (mm)	C (mm)
160	30	476.6	266.3
	45	580.8	353.7
	90	680.0	680.0
	180	1160.0	680.0
240	30	496.6	340.9
	45	609.1	422.0
	90	720.0	720.0
	180	1240.0	720.0
320	30	516.6	415.6
	45	637.4	490.3
	90	760.0	760.0
	180	1320.0	760.0

## Sliding curve horizontal AL



The sliding curve provides a horizontal change in direction for the chain, for when there is not enough space for a curve wheel or the speeds or product dimensions do not permit conveying over a curve wheel. The sliding curve is used to reduce noise at high speeds or when transporting long products in wedge conveyors. The chain tensile force is increased through the ensuing friction.

For attachment options, see the matrix on page 313

- Size: 65, 90, 120
- Deflection angles and radii see table on p. 73, other deflection angles and radii on request
- Suitable chain types: All
- Version with open section profiles
- Requires the use of the sliding rails "Advanced" or "Premium"
- Use in abrasive environments is not permissible

For the selection of sliding rails, see the "Technical data" chapter on page 300.

### Required accessories:

- Sliding rail: Length calculation, see p. 302

### Scope of delivery:

- Including fastening material for mounting to the section profile AL

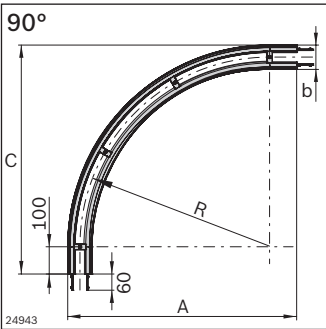
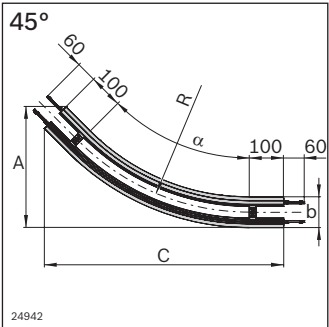
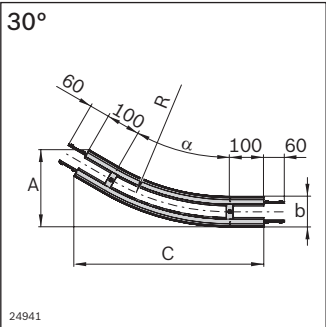
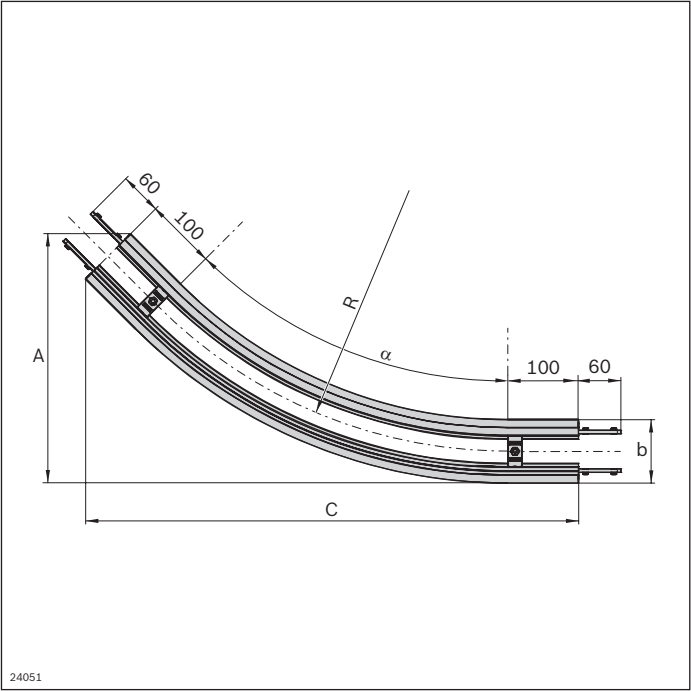
### Condition on delivery:

- Assembled

### Material:

- Profile: Aluminum; anodized
- Profile connector: Steel; zinc-plated
- Cross connector: Diecast aluminum

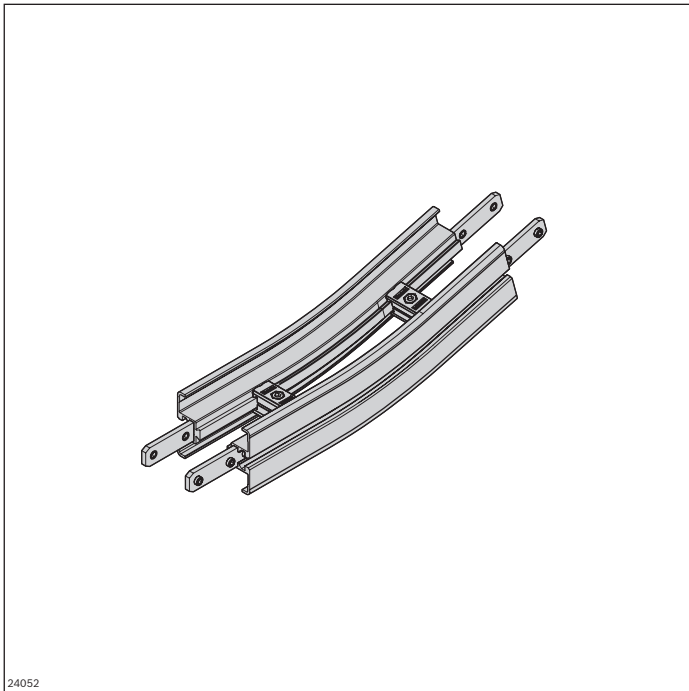




Sliding curve horizontal AL	$\alpha$ (°)	R (mm)	No.
VFplus 65	30	700	<b>3 842 547 072</b>
	45	700	<b>3 842 547 073</b>
	90	700	<b>3 842 547 074</b>
VFplus 90	45	500	<b>3 842 547 075</b>
	90	500	<b>3 842 547 076</b>
	30	700	<b>3 842 547 077</b>
	45	700	<b>3 842 547 078</b>
	90	700	<b>3 842 547 079</b>
	30	700	<b>3 842 547 080</b>
VFplus 120	45	700	<b>3 842 547 081</b>
	90	700	<b>3 842 547 082</b>

b (mm)	$\alpha$ (°)	R (mm)	A (mm)	C (mm)
65	30	700	204.4	552.9
	45	700	331.2	688.7
	90	700	832.5	832.5
90	45	500	294.0	556.1
	90	500	645.0	645.0
	30	700	227.8	559.1
	45	700	352.6	697.5
	90	700	845.0	845.0
	30	700	255.7	566.6
120	45	700	378.2	708.1
	90	700	860.0	860.0

## Vertical curve AL



The vertical curve is used for the transition from a horizontal conveyor section to an ascending section and vice versa. The chain tensile force is increased through the ensuing friction.

A vertical curve of 5° is recommended for the infeed and outfeed on the wedge conveyor, especially with small products.

For attachment options, see the matrix on page 313

- Size: All track widths
- Deflection angles and radii see table on page 75, other deflection angles and radii on request
- Suitable chain types: All
- Version with open section profiles
- Requires the use of the sliding rails "Advanced" or "Premium"
- For vertical sections  $\leq 5^\circ$ , the adjustable profile connectors AL can be used for sizes 65-120

For the selection of sliding rails, see the "Technical data" chapter on page 300.

### Required accessories:

- Sliding rail: Length calculation, see p. 302

### Scope of delivery:

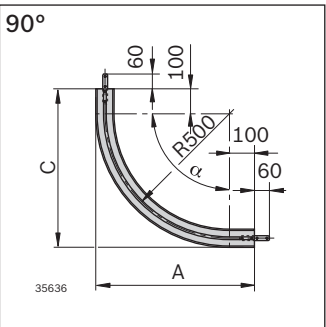
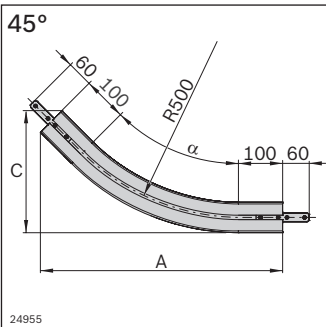
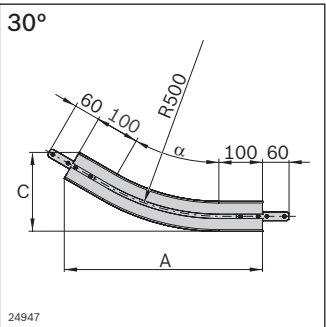
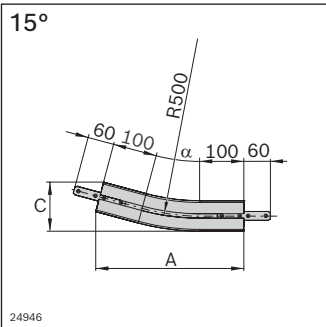
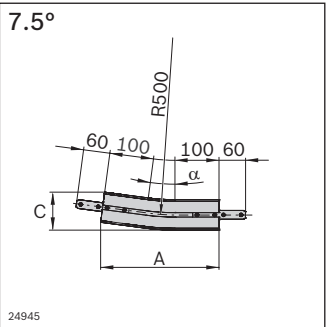
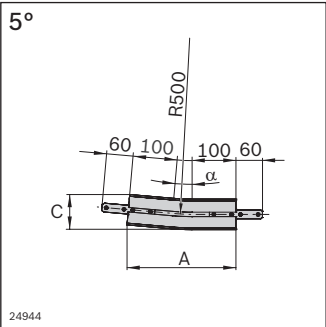
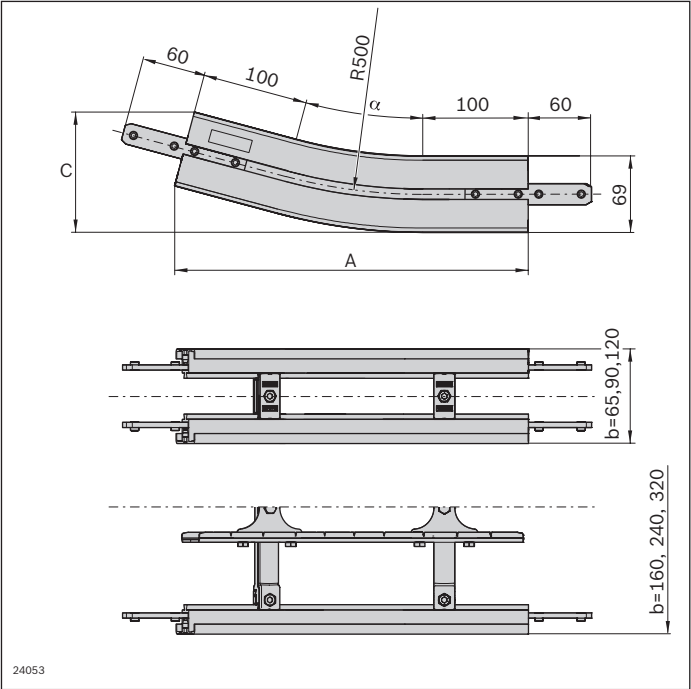
- Including fastening material for mounting to the section profile AL

### Condition on delivery:

- Assembled

### Material:

- Profile: Aluminum; anodized
- Profile connector: Steel; zinc-plated
- Cross connector: Diecast aluminum
- Support profile from size 160: Non-rusting steel 1.4301



Vertical curve AL	$\alpha$ (°)	No.
VFplus 65	5	3 842 547 083
	7.5	3 842 547 084
	15	3 842 547 085
	30	3 842 547 086
	45	3 842 547 087
	90	3 842 559 126
VFplus 90	5	3 842 547 088
	7.5	3 842 547 089
	15	3 842 547 090
	30	3 842 547 091
	45	3 842 547 092
	90	3 842 559 127
VFplus 120	5	3 842 547 093
	7.5	3 842 547 094
	15	3 842 547 095
	30	3 842 547 096
	45	3 842 547 097
	90	3 842 559 128
VFplus 160	5	3 842 547 098
	7.5	3 842 547 099
	15	3 842 547 100
	30	3 842 547 101
	45	3 842 547 102
	90	3 842 559 129
VFplus 240	5	3 842 547 103
	7.5	3 842 547 104
	15	3 842 547 105
	30	3 842 547 106
VFplus 320	5	3 842 547 107
	7.5	3 842 547 108
	15	3 842 547 109
	30	3 842 547 110

b (mm)	$\alpha$ (°)	R (mm)	A (mm)	C (mm)
65-320	5	500	246.2	79.5
	7.5	500	268.9	86
	15	500	334.9	110.7
	30	500	453.9	181.4
65-160	45	500	548.7	276.1
65-120	90	500	636.3	636.3