

Vertical curve AL



- The vertical curve is used for the transition from a horizontal conveyor section to an ascending section and vice versa

Product description

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.

- Size: all
- Deflection angles and radii (other deflection angles and radii on request)
- Suitable chain types: all
- Version with open section profiles
- Requires the use of the “Advanced” or “Premium” slide rails
- For vertical sections $\leq 5^\circ$, the adjustable AL profile connectors can be used for sizes 65-120

Technical data

Material

Profile: Aluminum; anodized

Profile connector: Steel; zinc-plated

Cross connector: Diecast aluminum

Support profile from size 160: Non-rusting steel 1.4301

Combination matrix

		Straight			Curves			Drives		
		Section profile AL open	Section profile AL closed	Assembly module	Curve wheel	Roller curve*	Horizontal sliding curve	Vertical curve	Head drive	Curve wheel drive
Straight	Section profile AL open	J								
	Section profile AL closed	J	J							
	Assembly module	J	J	N						
Curves	Curve wheel	J	J	L ²⁾	L ²⁾					
	Roller curve*	J	N	J	N	L ¹⁾				
	Horizontal sliding curve	J	J	J	J	N	L ¹⁾			
	Vertical curve	J	J	J	J	L ¹⁾	L ¹⁾	L ¹⁾		

		Straight			Curves				Drives	
		Section profile AL open	Section profile AL closed	Assembly module	Curve wheel	Roller curve*	Horizontal sliding curve	Vertical curve	Head drive	Curve wheel drive
Drives	Head drive	J	J	L ⁽²⁾	L ⁽²⁾	L ^(1, 4)	L ⁽¹⁾	L ^(1, 4)	N	
	Curve wheel drive	J	J	L ⁽²⁾	L ⁽²⁾	N	L ⁽¹⁾	L ⁽¹⁾	N	N
	Connection drive	J	J	L ⁽²⁾	L ⁽²⁾	N	L ⁽¹⁾	L ⁽¹⁾	N	N
	Center drive (STS)**	L ⁽⁵⁾	L ⁽⁵⁾	L ^(2, 5)	L ^(2, 5)	N	L ^(1, 5)	L ^(1, 5)	N	N
Return Unit	Basic unit	J	J	L ⁽²⁾	L ⁽²⁾	L ^(1, 4)	L ⁽¹⁾	L ^(1, 4)	L ⁽²⁾	N
	90° (STS)**	L ⁽⁵⁾	L ⁽⁵⁾	L ^(2, 5)	L ^(2, 5)	N	L ^(1, 5)	L ^(1, 5)	N	N
	Transmission kit	N	N	N	N	N	N	N	J	N

J

possible without restrictions

* Support profile must project 76+2 mm into the roller curve.

L

possible with restrictions

** AL-STC adapter included in the scope of delivery.

N

not possible

Drives	Return Unit			
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Connection drive

Center drive (STS)**

Basic unit

90° (STS)**

Transmission kit

Drives		Return Unit		
Connection drive	Center drive (STS)**	Basic unit	90° (STS)**	Transmission kit
N				
N	N			
N	L ^{2, 3)}	L ^{2, 3)}		
L ^{2, 5)}	N	N	L ²⁾	
J	N	J	N	N

* Support profile must project 76+2 mm into the roller curve.

** AL-STs adapter included in the scope of delivery.

- 1) Profile connector not required
- 2) Use of a profile piece ($L_{\min} = 120 \text{ mm}$)
- 3) Assembly module required
- 4) For sizes 160-320: shorten the support rail on the dotted line
- 5) Use of the AL-STs adapter

Actual chain and sliding rail lengths of the components

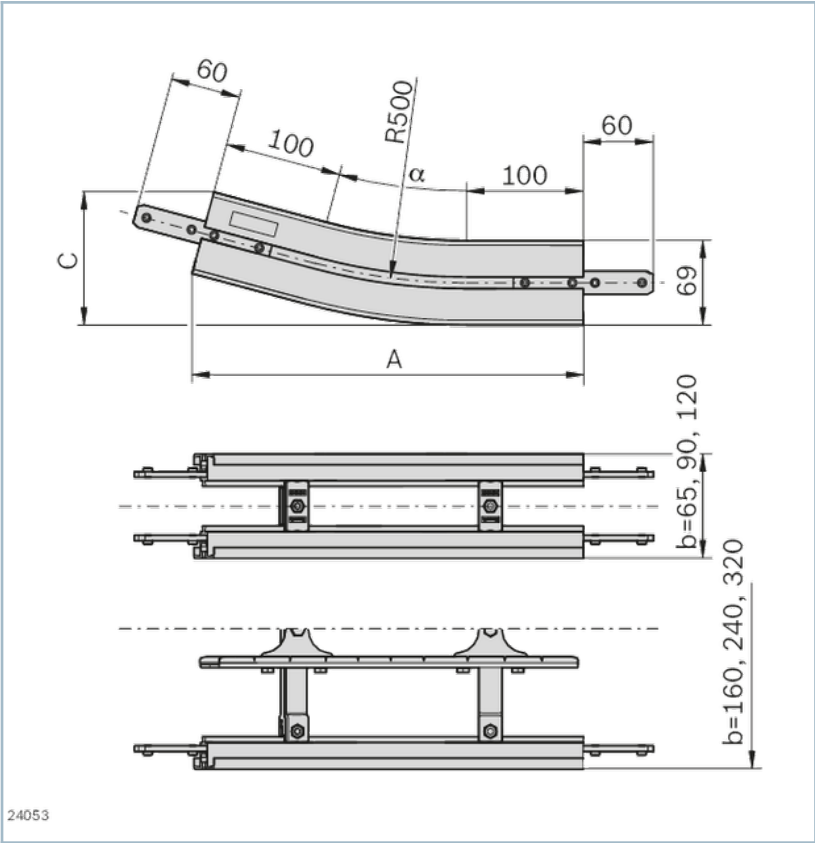
		Actual chain length	Effective sliding rail length
		m	m
Vertical curve AL VFplus 65 5°	3842547083	2x 0,24	4x 0,24
Vertical curve AL VFplus 65 7.5°	3842547084	2x 0,26	4x 0,26
Vertical curve AL VFplus 65 15°	3842547085	2x 0,33	4x 0,33
Vertical curve AL VFplus 65 30°	3842547086	2x 0,46	4x 0,46
Vertical curve AL VFplus 65 45°	3842547087	2x 0,59	4x 0,59
Vertical curve AL VFplus 65 90°	3842559126		
Vertical curve AL VFplus 90 5°	3842547088	2x 0,24	4x 0,24

		Actual chain length	Effective sliding rail length
		m	m
Vertical curve AL VFplus 90 7.5°	3842547089	2x 0,26	4x 0,26
Vertical curve AL VFplus 90 15°	3842547090	2x 0,33	4x 0,33
Vertical curve AL VFplus 90 30°	3842547091	2x 0,46	4x 0,46
Vertical curve AL VFplus 90 45°	3842547092	2x 0,59	4x 0,59
Vertical curve AL VFplus 90 90°	3842559127		
Vertical curve AL VFplus 120 5°	3842547093	2x 0,24	4x 0,24
Vertical curve AL VFplus 120 7.5°	3842547094	2x 0,26	4x 0,26
Vertical curve AL VFplus 120 15°	3842547095	2x 0,33	4x 0,33
Vertical curve AL VFplus 120 30°	3842547096	2x 0,46	4x 0,46
Vertical curve AL VFplus 120 45°	3842547097	2x 0,59	4x 0,59
Vertical curve AL VFplus 120 90°	3842559128		
Vertical curve AL VFplus 160 5°	3842547098	2x 0,24	8x 0,24 ¹⁾
Vertical curve AL VFplus 160 7.5°	3842547099	2x 0,26	8x 0,26 ¹⁾
Vertical curve AL VFplus 160 15°	3842547100	2x 0,33	8x 0,33 ¹⁾
Vertical curve AL VFplus 160 30°	3842547101	2x 0,46	8x 0,46 ¹⁾
Vertical curve AL VFplus 160 45°	3842547102	2x 0,59	8x 0,59 ¹⁾
Vertical curve AL VFplus 240 5°	3842547103	2x 0,24	8x 0,24 ¹⁾
Vertical curve AL VFplus 240 7.5°	3842547104	2x 0,26	8x 0,26 ¹⁾
Vertical curve AL VFplus 240 15°	3842547105	2x 0,33	8x 0,33 ¹⁾
Vertical curve AL VFplus 240 30°	3842547106	2x 0,46	8x 0,46 ¹⁾
Vertical curve AL VFplus 320 5°	3842547107	2x 0,24	8x 0,24 ¹⁾
Vertical curve AL VFplus 320 7.5°	3842547108	2x 0,26	8x 0,26 ¹⁾
Vertical curve AL VFplus 320 15°	3842547109	2x 0,33	8x 0,33 ¹⁾
Vertical curve AL VFplus 320 30°	3842547110	2x 0,46	8x 0,46 ¹⁾

1) With support profile

Dimensions

Vertical curve AL

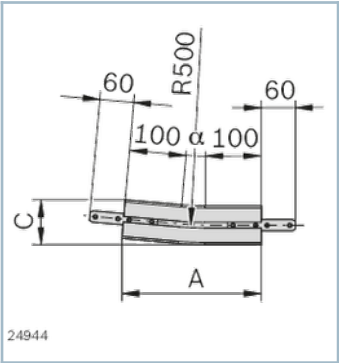


Deflection angles and radii

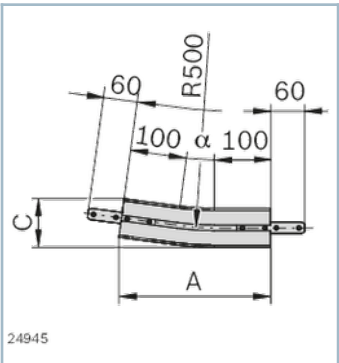
b	α	A	C	R
mm	°	mm	mm	mm
65	5	246.2	79.5	500
	7.5	268.9	86	500
	15	334.9	110.7	500
	30	453.9	181.4	500
	45	548.7	276.1	500
	90	636.3	636.3	500
90	5	246.2	79.5	500
	7.5	268.9	86	500
	15	334.9	110.7	500
	30	453.9	181.4	500
	45	548.7	276.1	500
	90	636.3	636.3	500
120	5	246.2	79.5	500
	7.5	268.9	86	500
	15	334.9	110.7	500
	30	453.9	181.4	500
	45	548.7	276.1	500
	90	636.3	636.3	500
160	5	246.2	79.5	500
	7.5	268.9	86	500
	15	334.9	110.7	500
	30	453.9	181.4	500
	45	548.7	276.1	500

b	α	A	C	R
mm	°	mm	mm	mm
240	5	246.2	79.5	500
	7.5	268.9	86	500
	15	334.9	110.7	500
	30	453.9	181.4	500
320	5	246.2	79.5	500
	7.5	268.9	86	500
	15	334.9	110.7	500
	30	453.9	181.4	500

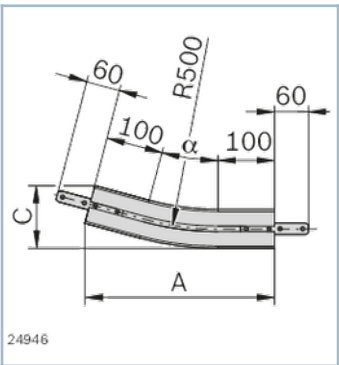
Vertical curve AL 5°



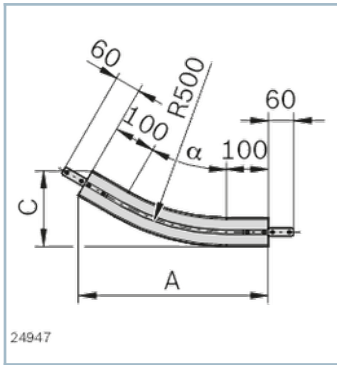
Vertical curve AL 7.5°



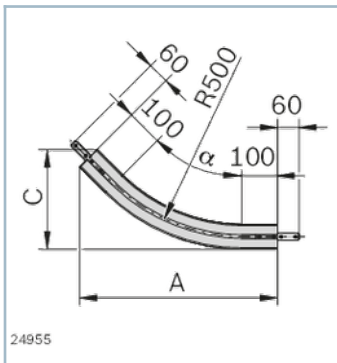
Vertical curve AL 15°



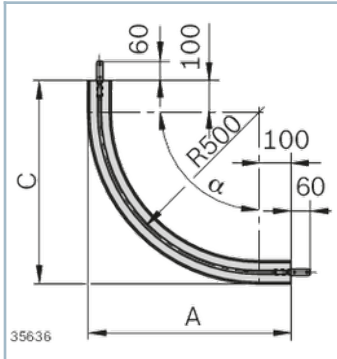
Vertical curve AL 30°



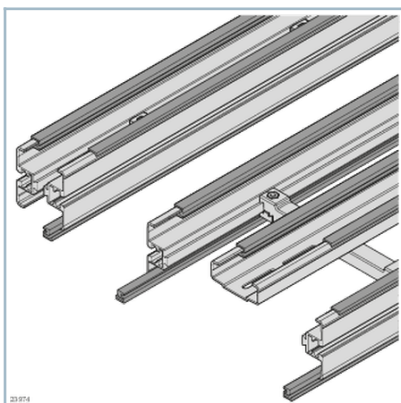
Vertical curve AL 45°



Vertical curve AL 90°



Accessories



Slide rail

- Easy assembly - simply clip onto the section profile
- Secured against axial shifting due to lateral bolting

Delivery notes

Condition of Delivery

Fully assembled

Scope of delivery

Incl. fastening material for mounting to the AL section profile

Ordering codes

	α	R	No.
	°	mm	
Vertical curve AL VFplus 65 5°	5	500	3842547083
Vertical curve AL VFplus 65 7.5°	7.5	500	3842547084
Vertical curve AL VFplus 65 15°	15	500	3842547085
Vertical curve AL VFplus 65 30°	30	500	3842547086
Vertical curve AL VFplus 65 45°	45	500	3842547087
Vertical curve AL VFplus 65 90°	90	500	3842559126
Vertical curve AL VFplus 90 5°	5	500	3842547088
Vertical curve AL VFplus 90 7.5°	7.5	500	3842547089
Vertical curve AL VFplus 90 15°	15	500	3842547090
Vertical curve AL VFplus 90 30°	30	500	3842547091
Vertical curve AL VFplus 90 45°	45	500	3842547092
Vertical curve AL VFplus 90 90°	90	500	3842559127
Vertical curve AL VFplus 120 5°	5	500	3842547093
Vertical curve AL VFplus 120 7.5°	7.5	500	3842547094
Vertical curve AL VFplus 120 15°	15	500	3842547095
Vertical curve AL VFplus 120 30°	30	500	3842547096
Vertical curve AL VFplus 120 45°	45	500	3842547097
Vertical curve AL VFplus 120 90°	90	500	3842559128
Vertical curve AL VFplus 160 5°	5	500	3842547098
Vertical curve AL VFplus 160 7.5°	7.5	500	3842547099
Vertical curve AL VFplus 160 15°	15	500	3842547100
Vertical curve AL VFplus 160 30°	30	500	3842547101
Vertical curve AL VFplus 160 45°	45	500	3842547102
Vertical curve AL VFplus 240 5°	5	500	3842547103
Vertical curve AL VFplus 240 7.5°	7.5	500	3842547104
Vertical curve AL VFplus 240 15°	15	500	3842547105
Vertical curve AL VFplus 240 30°	30	500	3842547106
Vertical curve AL VFplus 320 5°	5	500	3842547107
Vertical curve AL VFplus 320 7.5°	7.5	500	3842547108

	α	R	No.
	°	mm	
Vertical curve AL VFplus 320 15°	15	500	3842547109
Vertical curve AL VFplus 320 30°	30	500	3842547110