Spring loaded guide rolls

The steel belt is normally tracking on the conveyor by suitable design and levelling of the end drums and the belt support.

External disturbing could influence the tracking which cause transversal movements of the belt.

The reason could be an uneven heating of the belt, displacement of the conveyor frame, built up of dirt on drums and belt supports, etc.

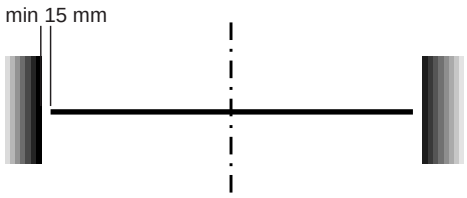
To prevent the belt from too much transversal movement which can cause edge damages, guides can be applied along the upper and lower belt strand. According to general rules, a steel belt should never be forced in position.

Fixed guides of wood, cast iron or brass are used. Ref. fig 1.

Fixed steel rolls are sometimes used. They rotate around its own axis, but are not movable laterally.

Fixed guides should be avoided, if possible, due to the risk for high pressure which damages the belt edge.

Fig. 1



Spring loaded guide rolls are recommended, see drawing overleaf. These are more kind to the belt edges.
When the belt is moving at any direction and run against a the rolls (bogie) the arm with rolls turns out. Because of the pressure from the spring, the belt side movement will be stopped gradually.

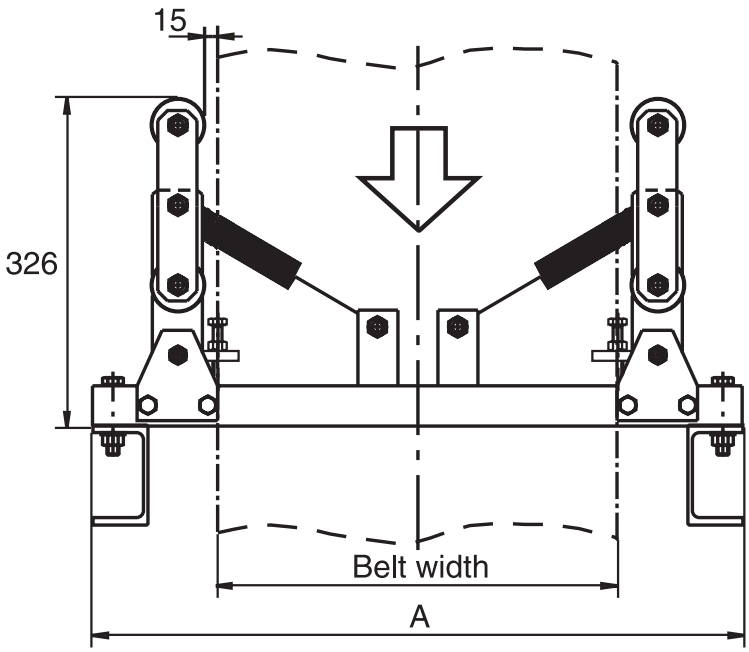
The rolls are manufactured of hardened steel. The diameter should not be less than 50 mm at a belt speed of up to 90 m/min and not less than 150 mm at a belt speed over 90 m/min.

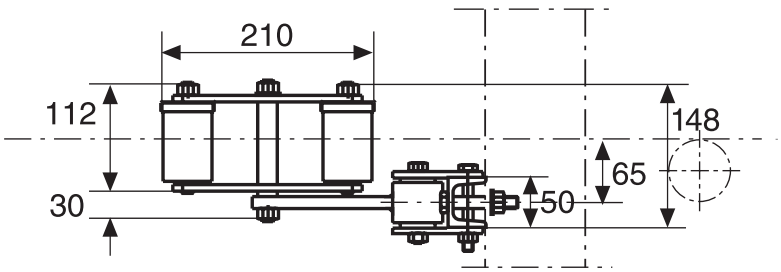
The distance between belt edges and rolls is adjustable, the nominal clearance is 15 mm.

The pretension force of the springs is 100-150 N.

The spring loaded guide rolls are used at both the upper and lower belt part at distances of 15-20 m. The distance from end drums to the first spring loaded guide roll is recommended to be 10 times the belt width.

Spring loaded guide rolls





Belt width	A
400	650
600	850
800	1100
1000	1300
1200	1500
1400	1700
1500	1800

Note.

Spring load guide rolls should be mounted close to belt support.

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