

Name: Lightweight overhead monorail track

Technical parameters

Rail profile	Equal flange tees T70 (to PN-EN 10055:1999)
Maximum length of rail sections	2.0 m
Maximum slope of tracks:	
For manual haulage of loads	± 4°
For haulage of a cable bundle	± 27°
Deflection angle of rails at joints, in the vertical plane	max ±7°
Deflection angle of rails at joints, in the horizontal plane	max ±0,5°
Minimum radius of track bends, in the horizontal plane	R = 4 m
Height dimension of the bottom link for joints	≤ 40 mm
Working load limit for rail joints down the direction of suspension	5 kN
working load limit for rail joints down the direction of tracks	10 kN
Maximum haulage speed of transportation units	1 m/s
Length of straight rail sections, type I or II	typically 2m (0.5 m, 1.0 m, 1.5 m upon individual orders)
Length of intermediate rails	typically 2m (0.5 m or 1.0 m upon individual orders)
Length of interfacing rails	1.0 m

Purpose

The lightweight overhead monorail track is designed for transportation of suspended loads with manual haulage of load items or by means of suspended trolleys of the R-150 or R-250 types with immediate braking. These trolleys can be used as single units or combined in transportation sets, where pairs of trolleys are coupled by means of a connecting rod.

The lightweight overhead track can be also used to convey bundles of electric cables and conductors as well as hydraulic hoses suspended from trolleys of the 1-604 type.

The track is a set of rails arranged and mutually interconnected according to the layout required by a user with consideration of needs and local conditions. The track is suspended on roof hangers and stabilized by means of side tendons.

All rails of the monorail track, including straight and curved sections, are made of steel equal flange tees T70 (to PN-EN 10055:1999). The track is suspended from roof support frames of a roadway by means of chain hangers. The same chain hangers can be also used to suspend a track from anchor bolts driven into the roadway roof.

The set of components designed to assemble lightweight overhead track include:

- straight rails, type I – designed for construction of straight sections of an overhead track,
- straight rails, type II – designed for construction of straight sections of an overhead track,
- curved rails – designed for constructions of bent sections of an overhead track,
- right /left hand side intermediate rails – designed to make connections between straight and curved rails,
- interfacing rails – to make connections between straight rails and rails of overhead tracks from other manufacturers.

Auxiliary equipment for overhead tracks:

- hangers to suspend the track from roadway support frames and to stabilize the track.
- suspension chains with long chain links 13 x 82 x 50 designed to PN -75/M-84543,
- shackles with the maximum working load limit (WLL) ≥ 1.0 to suspend rails, tendons for stabilization of an overhead track.

Additional information

Declaration, concerning the meeting of the technical requirements, by the product.

Figure

Fig.1. Installation of a lightweight track – option I

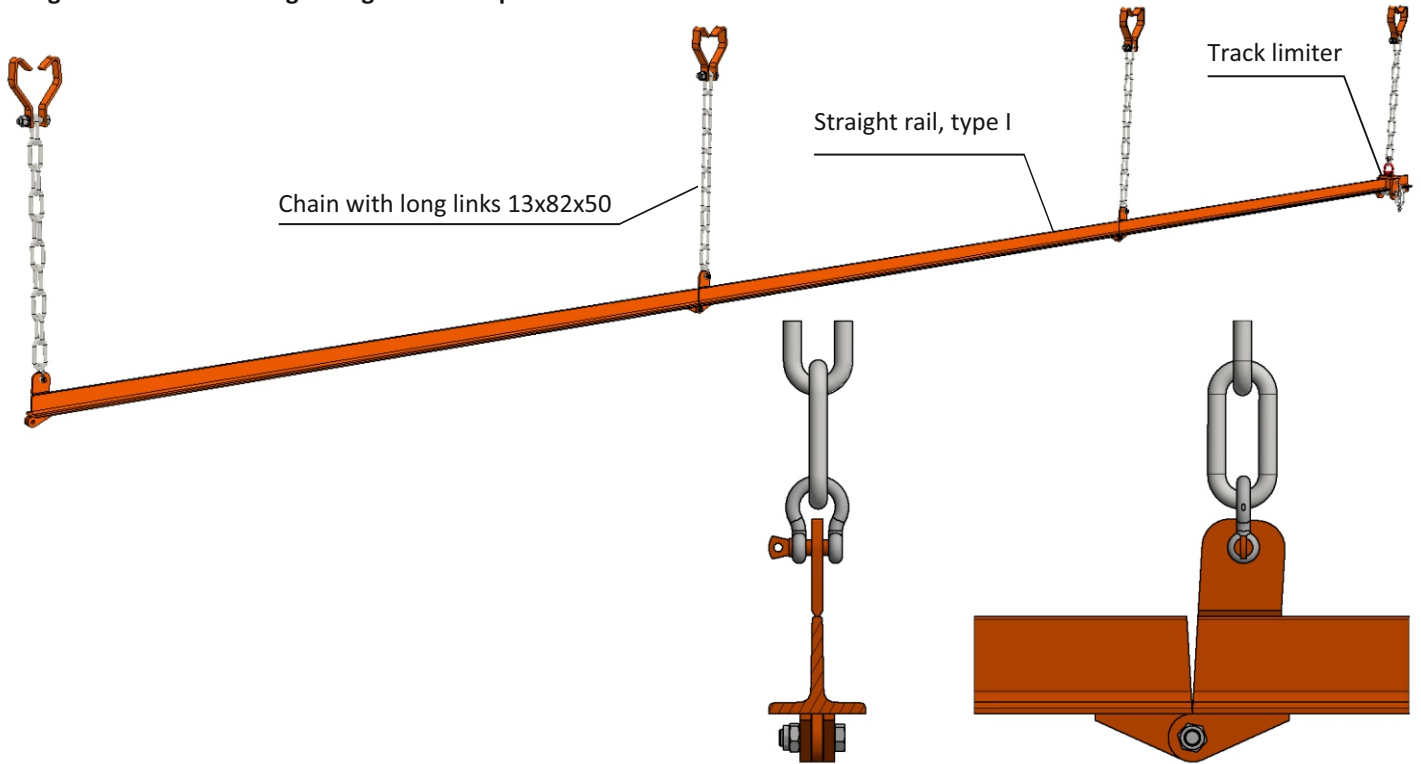


Fig. 2 - Connecting rails - version I

Fig. 3. Installation of a lightweight track – option II

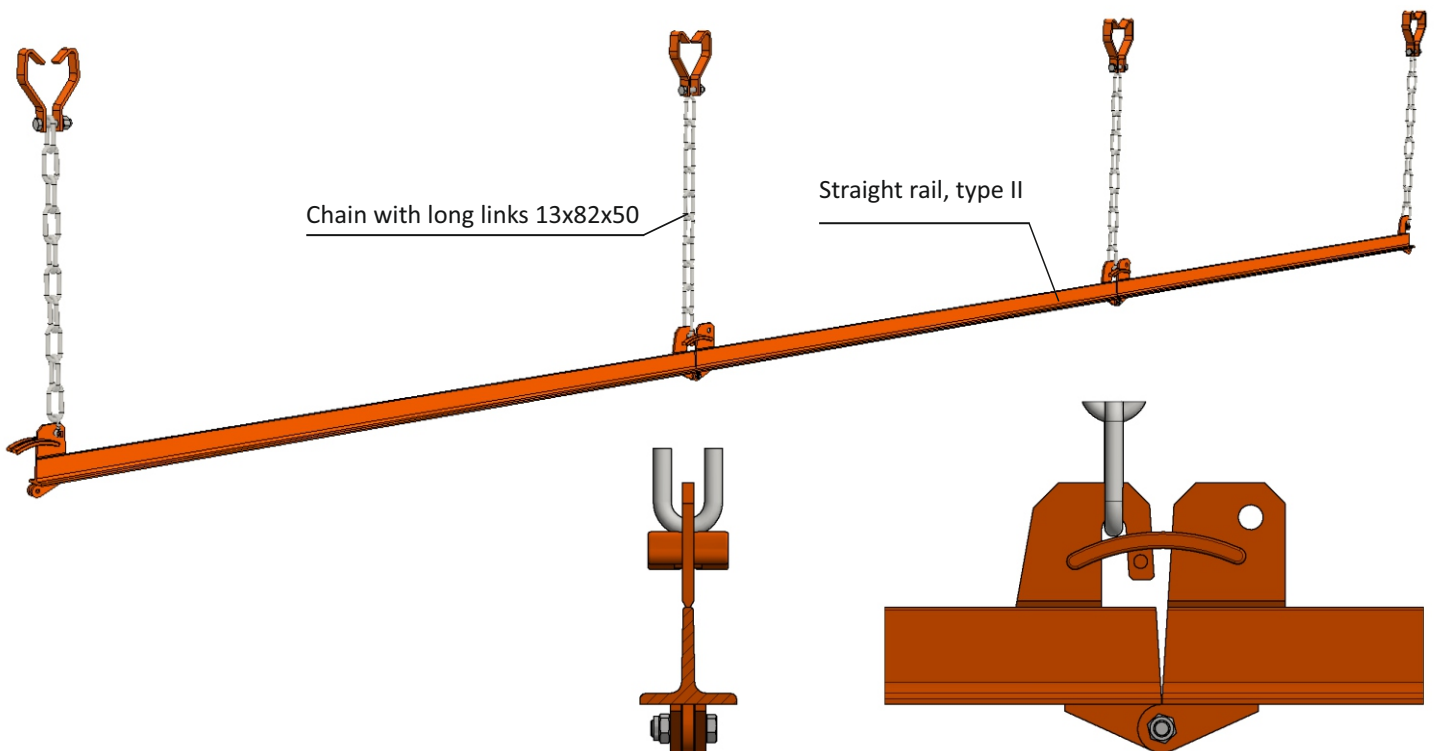


Fig. 4 - Connecting rails - version II