**FLY RAIL** 



## **TECHNICAL DATA**

- 1. In case of rigging Fly Rail using chain hoists, make sure pick up points are every 160-180 cm.
- 2. Whenever possible, use shortest available chain lenght (hoist<->hook) to minimize axis movements related to rigging height.
- 3. We don't accept bridle pick up points for mounting trussing.
- 4. To suspend the rail, use a truss of appropriate strength, profile, deflection coefficient with the suspended system as well as deflections under its own weight. All the above characteristics are selected individually in relation to the project requirements and the room capabilities in which the project will be implemented. Due to the complexity of the system and the security requirements in the field of automation, SHOWSTAK remains the decisive entity in terms of the method of installation and operation of the system.
- 5. The construction (truss, rail) should be protected against movements in both axes by using lashings. The lashings and their inspection are determined by SHOWSTAK, although their installation will be the result of agreements between the Customer and SHOWSTAK.
- 6. Fly Rail is fully integrated with Kinesys automation control systems K2 and Vector.
- 7. Regarding electrical characteristics of Kinesys devices, Fly Rail may be powered only by non-RCD power source.
- 8. It is forbidden to suspend the rail without a supporting element (truss), except for the use of a pipe system with adequate strength and a deflection coefficient. Such a solution can be found in the SHOWSTAK offer. The above method allows to reduce the height of the entire system but has its limitations resulting from reduced stiffness and load capacity.
- 9. Depending on the type of construction / object being transferred by the Fly Rail, its impact on the operation of the system should be analyzed. Such properties will be elements of suspending / installing the object for trolleys, their stiffness, strength and susceptibility to transfer the inertia of the object during acceleration and braking of the set (object / load driving trolley). A factor negatively affecting the stability of the load will be the use of soft slings like Steelflex. As a rule, much better results are achieved by the use of clamps (swivel clamp).
- 10. In the case of hanging diode screens for the Fly Rail system, only rigid beam mounting to the system support tube should be used. SHOWSTAK realizes the movement of diode screens using the Fly Rail system, however, in order to create a solid surface after descending into oneself, it is absolutely necessary to use the guidelines for hanging and leveling the system. The diode modules should not be deformed (concentrations at the back of LED panels are sometimes used).
- 11. The total current consumption is determined based on the number of drive cars. The consumption of one stroller is 2.2kW.

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- 12. For the assembly of Fly Rail, personal and goods lifts as a rule are required, such as forklift / basket boom, etc. Their use will depend on the arrangements between the Customer and SHOWSTAK and the specifics of a given project.
- 13. Please consider 2-4 hours after installation for necessary system calibration by the operator and technicians.
- 14. All detailed technical data and calculations are provided by SHOWSTAK taking into account the given project.
- The Fly Rail should only be mounted on the truss models indicated by SHOWSTAK . Among the accepted are Eurotruss HD 34, HD44, ST50.
- Spacing of pick points every 160-180cm.
- Before hanging the rail module, check the spacing of the clamps to match the size of the truss and check truss leveling.
- The rail should be hung with a toothed belt towards the stage, not backstage. The toothed belt is visible from the inside of the rail.
- Due to the specificity of a given project, a certain number of motorized trolleys, slave and cable trolleys should be used.
- Power cables and control lines are transported by cable trolleys. The length of cables and the number of carriages on a given installation depends on the design specification and the expected range of motion and the number of cables belonging to the object suspended under the rail like the screen, etc. should be taken into account.
- Lifting the rail suspended under the truss must be under the supervision of qualified technicians. Before lifting the structure, make sure that the rail together with the trussing are leveled, the truss clamping pins are properly seated and have safety pins, the pressure clamps on the module connections are closed and do not undergo any additional stresses resulting from failure to maintain the construction level.
- After all the trolleys provided in the design have been installed, locks should be installed at both ends of the rail (end stop).
- BEFORE OPERATING ANY TROLLEY ON THE RAIL, MAKE SURE THAT THERE IS NO POSSIBILITY OF COLLISION WITH ANOTHER OBJECT AND WILL CURRENT DOES NOT HAZARD THE MECHANICS AND MOVEMENT OF THE SYSTEM !
- MAKE SURE THAT ANY PIN, BUTTON, SCREW, TOOL DO NOT CAUSE A HAZARD FOR MOTION - ABSOLUTELY CLEAR ALL OF ITS OBJECTS NOT BELONGING TO THE SYSTEM!v

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