

Steps in proposing a rail fastening system



www.gantrail.com

The table below sets out the steps to be taken in choosing a crane rail fastening system and its details.

Step	Input data	Consideration	Output
1	<i>Rail selection</i>	If the rail section is given but no wheel load is specified assume the wheel load to be 0.5 tonnes per mm of head width.	Vertical wheel load
2	<i>Vertical Wheel Load</i>	If no rail section is given and only the wheel load, seek advice of Gantrail Technical Dept., a rail manufacturers catalogue or choose on basis of 2.5mm head width per tonne of wheel load for heavy duty cranes and 1.7mm head width for medium and light duty cranes.	Rail Head Width. Suggest rail sections to customer
3	<i>Horizontal Wheel Load</i>	If this is not given, it can be calculated from some national standards, FEM (the European crane makers trade association) rules, BS2573 Part 2 or assumed as 15%. It may be appropriate to inform the customer of the assumption.	Horizontal Wheel Load
4	<i>Industry/Support Steel/Concrete</i>	Outputs required are: should pad be used? Clip type? Clip spacing? e.g. Steel Industry - use type 9 clips. (Mounting on concrete go to item 8 below. This is mainly a matter of experience).	Type of Mounting and Clips
5	<i>Girder/Support Width</i>	Rail bottom flange width plus clip width must not exceed girder width. Customer must supply this or accept our suggestions.	Confirm Girder Width
6	<i>Our range of Clips</i>	Clips must fit rail. See the Gantrail Clip Selection Guide or seek advice of Gantry Railing. Clips must be able to economically take crane horizontal wheel load. Clips must fit on girder. (For narrow girders consider 9116/08, 9216/08 or 7120/10).	Clip reference
7	<i>Clip reference, wheel loads, rail</i>	Clip spacing cannot be calculated but only checked by calculation in some cases. Hence we use experience. The guide is: <i>Very heavy duty cranes</i> 500mm <i>Normal spacing</i> 600 to 650mm <i>Light duty cranes</i> 800	Clip spacing
8	<i>Concrete Mounting</i>	Wheel loads above 35 tonnes, heavy duty applications and steel works use continuous soleplate. See other Gantrail information.	Full details of system

Steps in proposing a rail fastening system

9	<i>Discontinuous Mounting</i>	Discontinuous mounting is suitable for lighter applications and most cases with vertical wheel loads of less than 15 tonnes. It is heavily dependant on the industry and application. Between 15 and 35 tonnes, rely on experience or consult Gantrail Technical Dept. It is necessary to calculate the rail stress and sometimes deflection. For high bay warehouse cranes, deflection must always be checked.	Full details of system
10	<i>Order Clips, Pad and Gantrail Materials</i>	Precisely define the materials that are needed. Please also supply any supporting information that may be necessary for Gantry Railing to check the application and process the order. Indicate what rail section is to be used. A completed questionnaire is always helpful.	Gantry Railing supply the required materials

A world of crane rail expertise.

Gantry Railing Ltd

Sudmeadow Road, Hempsted, Gloucester GL2 5HG
www.gantrail.com

Tel: +44 (0) 1452 300688
Fax: +44 (0) 1452 300198

International: +44 (0) 1452 300688
E-mail: info@gantrail.com

