

Purpose:

To provide crane bridge beam sizes for Harrington's RHN Hoists used in conjunction with Harrington end trucks.

Scope:

- (a) RHN Hoists – 2, 3, 5, 7 ½ and 10 METRIC or US Ton Capacities.
- (b) Spans: 10 ft to 60 ft in 5 ft increments.
- (c) For indoor use only – WLO (Operating Wind Load) is zero.
- (d) Bridge beams for Harrington's cranes are single web girders using Standard Shape beams (S Beams), W Shape beams (W Beams), or Combination Sections (S Beam or W Beam with a Channel cap). S Beams, W Beams, and Channels as defined in 4.0 (a), and material limited to the ASTM A36 or A572 Steel.

Beam Sizing and Calculation method:

The bridge beams are designed and selected based on the calculation method outlined in Harrington's internal use only document EDOC0002, "Single Girder Bridge Beam Chart". EDOC0002 methodology is based on:

- (a) ASTM A6/A6M, Standard Specification for General Requirements for Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use.
- (b) CMAA Specification #74, Revised 2010, Specifications for Top Running & Under Running Single Girder Electric Traveling Cranes Utilizing Under Running Trolley Hoist.
- (c) AISE Technical Report No. 6 September 1991, Specification For Electric Traveling Cranes For Steel Mill Service

RHN – Single Girder Beam Chart –METRIC or US Tons – A36 or A572 Steel										
Cap – Lift	2 Ton 20 Ft Lift	2 Ton 33 Ft Lift	3 Ton 20 Ft Lift	3 Ton 33 Ft Lift	5 Ton 20 Ft Lift	5 Ton 33 Ft Lift	7 ½ Ton 20 Ft Lift	7 ½ Ton 33 Ft Lift	10 Ton 20 Ft Lift	10 Ton 33 Ft Lift
Hoist Span Ft	RHN02U20A	RHN02U33A	RHN03U20A	RHN03U33A	RHN05U20B	RHN05U33B	RHN08U20C	RHN08U33C	RHN10U20C	RHN10U33C
10	W8x28	W8x35	W10x39	W10x45	W16x57	W16x57	W21x93	W16x89	W18x119	-
15	W10x30	W10x39	W10x45	W12x50	W18x60	W18x60	W21x93	W21x93	W18x119	W18x119
20	W10x39	W10x39	W12x50	W14x53	W18x65	W18x65	W24x103	W24x103	W27x129	W27x129
25	W12x35	W12x45	W14x53	W14x53	W18x71	W18x71	W24x103	W24x103	W27x129	W27x129
30	W14x43	W14x48	W14x53	W16x57	W18x86	W18x86	W27x129	W27x129	W30x148	W30x148
35	W14x48	W14x48	W16x57	W16x57	W21x83	W21x83	W27x129	W27x129	W30x148	W30x148
40	W16x57	W16x57	W16x67	W18x65	W24x94	W24x94	W27x129	W27x129	W33x169	W30x148
45	W18x60	W18x60	W18x76	W18x76	W24x94	W24x94	W27x129	W27x129	W33x169	W33x169
50	W18x76	W18x76	W24x84	W24x84	W27x102	W27x102	W30x148	W30x148	W33x169	W33x169
55	W18x86	W18x86	W27x94	W27x94	W30x124	W30x124	W30x148	W30x148	W33x169 MC18x42.7	W33x169 MC18x42.7
60	W24x94	W24x94	W27x114	W27x114	W33x141	W33x141	W30x148 MC18x42.7	W33x169	W33x169 MC18x42.7	W33x169 MC18x42.7

- Notes: (1) For cranes using Harrington RHN Hoists and Harrington end trucks only.
 (2) For indoor cranes only – no wind load considered.
 (3) 1 METRIC Ton = 2205 lb (1000 kg)