

Purpose:

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

Scope:

- (a) RH Advantage Hoists - 5, 7.5 and 10 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.

Beam Sizing and Calculation method:

The bridge beams are designed and selected base on the calculation method outlined in Harrington's internal use only document EDOC002, "Single Girder Bridge Beam Chart". EDOC002 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

RH Advantage - Single Girder Beam Chart – US Tons – A36 or A572 Steel						
Cap – Lift	5 Ton – 23 Ft Lift	5 Ton – 33 Ft Lift	7 ½ Ton – 23 Ft Lift	7 ½ Ton – 33 Ft Lift	10 Ton – 23 Ft Lift	10 Ton – 33 Ft Lift
Span Ft. \ Hoist	RH05U23D4G2W-A RH05U23D4G4W-A	RH05U33D4G2W-A RH05U33D4G4W-A	RH08U23D3G2W-A RH08U23D3G4W-A	RH08U33D3G2W-A RH08U33D3G4W-A	RH10U23D4L2W-A RH10U23D4L4W-A	RH10U33D4L2W-A RH10U33D4L4W-A
10	W16x57	W18x65	W21x83	W24x94	W18x106	—
15	W18x65	W18x65	W24x94	W21x111	W18x119	—
20	W18x71	W18x71	W24x94	W24x94 C15x33.9	W18x119	W27x129
25	W18x71	W21x83	W30x116	W24x94 C15x33.9	W27x129	W27x129
30	W21x83	W21x83	W33x130	W33x130 MC18x42.7	W27x129	W30x148
35	W21x83	W24x94	W30x116 MC18x42.7	(See Note 3)	W30x148	W30x148
40	W24x94	W24x94	W30x116 MC18x45.8	(See Note 3)	W30x148	W24x162
45	W24x94	W24x117	W33x130 MC18x51.9	(See Note 3)	W24x162	W33x169
50	W27x102	W24x117	(See Note 3)	(See Note 3)	W33x169	W33x169
55	W30x116	W33x130	(See Note 3)	(See Note 3)	W33x169	W36x194
60	W33x130	W33x130	(See Note 3)	(See Note 3)	W33x169 MC18x42.7	W36x194

- Notes: (1) For cranes using Harrington RH Advantage Hoists and Harrington end trucks only.
 (2) For indoor cranes only – no wind load considered.
 (3) For long span 7 ½ Ton application, a box girder or fabricated beam is required. Beam by others.
 (4) 1 US Ton = 2000 lb (907 kg)