

PURPOSE

To provide recommended Single Girder Bridge beam sizes for Harrington's RY Hoists used in conjunction with Harrington end trucks. See Table 1.

SCOPE

- (a) RY Hoists –3, 5, 7.5 and 10 METRIC or US Ton Capacities. See Notes on Page 2 for Lift.
- (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 ASTM A6, made of ASTM A36 or A572 Grade Steel.

BEAM SIZING AND CALCULATION METHOD:

These bridge beams are designed and selected based on the calculation methods outlined in Harrington's internal-use 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 2015, 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

Table 1 RY – Recommended Single Girder Bridge Beams				
Capacity	3 Ton 25/33 Ft Lift	5 Ton 25/33 Ft Lift	7.5 Ton 30/40 Ft Lift	10 Ton 30/40 Ft Lift
Hoist	RYU030A	RYU050B	RYU075C	RYU100C
Span Ft				
10	W10X68	W12X87	W14X82	W21X93
15	W12X87	W12X87	W16X89	W24X103
20	W12X87	W14X82	W21X93	W24X131
25	W14X82	W14X82	W18X106	W24X146
30	W14X82	W16X89	W24X103	W24X146
35	W16X89	W18X97	W24X131	W24X146
40	W18X86	W21X93	W24X131	W24X162
45	W21X93	W24X103	W24X146	W24X162
50	W21X93	W24X103	W24X146	W27X178
55	W24X103	W24X131	W27X161	W30X148 MC18X42.7
60	W24X131	W24X131	W27X161	W33X169 MC18X42.7

- Notes:
- (1) For both standard RY lift lengths 25/33 (3/5t) and 30/40 (7.5/10t).
 - (2) For cranes using Harrington RY Hoists and Harrington End Trucks only.
 - (3) For indoor cranes only – no wind load considered.
 - (4) 1 METRIC Ton = 2205 lb (1000 kg)

END