

LIGHT DUTY SINGLE GIRDER CRANES

Light duty, single girder cranes provide maximum economy for light loads and short spans. Although designed for light duty service, quality components provide many years of dependable trouble-free service. They are available for rated loads to 2 tons and spans to 20 feet. Light duty cranes are always hand propelled. Crane selection is made from the table on Page CR-5.

Nos. 34011, 34016 and 34021 light rail sections are used for girders. Only carriers with 4 inch and 5 inch diameter wheels can operate on these cranes. No. 340136 end stops are provided on each end of the girder.

Light duty cranes may be electrified with Insul-8-Bar's 90

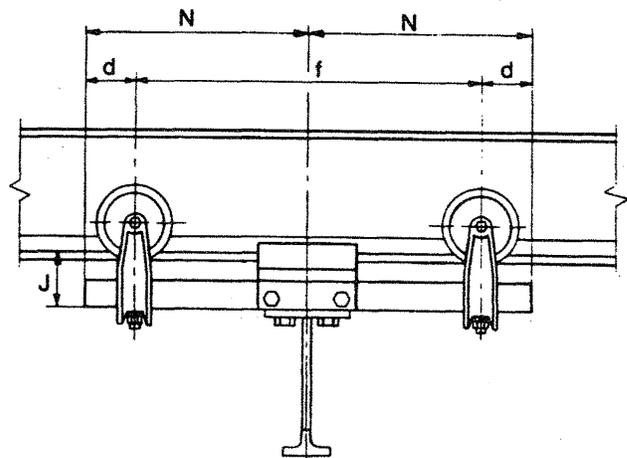
amp conductors. Cranes with Insul-8-Bar electrification include No. 560374 collectors on one end truck. All light duty cranes may be equipped with tagline conductors.

Light duty cranes with No. 34021 girders can be furnished with Type L interlocks for transferring loads through fixed transfer sections or to spur tracks. They are not used for crane to crane transfers. No. 34021 girders are used on transfer cranes cataloged with Nos. 34011 or 34016 girders because the depth of these girders does not permit installation of the interlock. These cranes do not require guide rollers or guide roller guides. When 2 or more light duty transfer cranes operate on the same runway, the cranes must have end trucks that maintain the same elevation of the girder treads.

LIGHT DUTY CRANE END TRUCKS

Three end trucks are used on light duty cranes. The drawing illustrates the No. 170302 end truck. The table indicates the item number, rated load, carrier heads, minimum girder overhang, net weight and principal dimensions for each end truck. Complete specifications on carrier heads and wheel assemblies are listed in the Carrier Section.

The load bars are made from steel tubing. Lugs are provided to limit the drop of the end truck to 1 inch or less in the event of a wheel or axle failure. The No.170302 end truck uses (2) 5/8 inch capscrews for girder attachment; Nos.170301 and 170303 end truck uses (4) 5/8 inch capscrews.

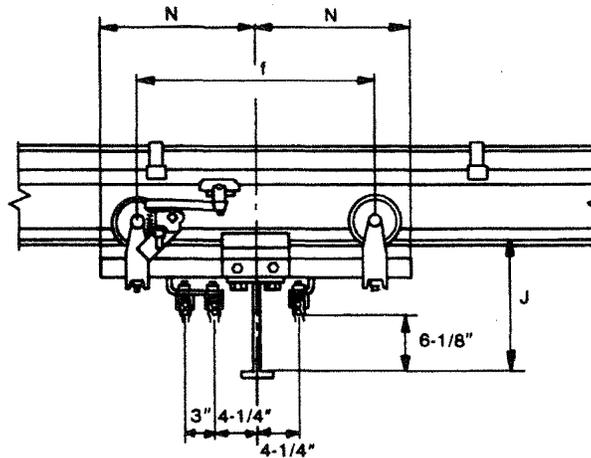
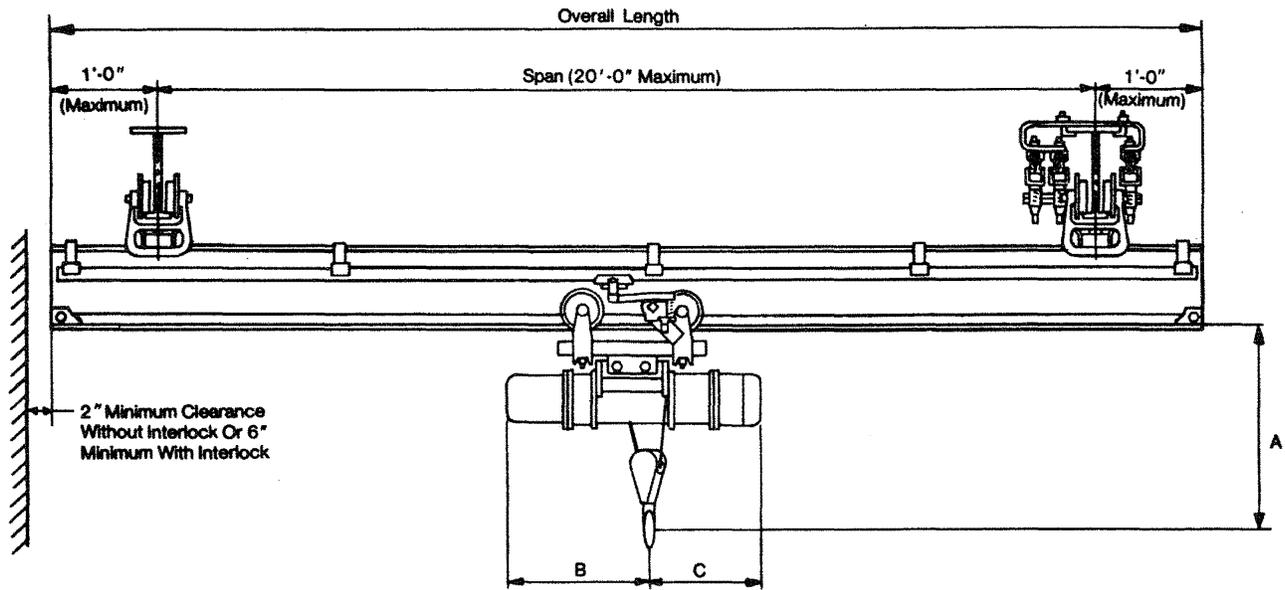


End Truck Item Number	Rated Load (Lbs.)	Carrier Head Item No.	Net Weight (Lbs.)	Minimum Girder Overhang		d	f	J	N
				Non-Elect.	Electrified				
170301	5,000	010205	94	4-3/4	8-7/8	3-1/2	2'-0	4-1/2	1'-3-1/2
170302	2,400	010201	43	3-1/2	8-7/8	3-1/2	2'-0	3-7/8	1'-3-1/2
170303	4,000	010203	69	4-3/4	8-7/8	3-1/2	2'-0	4-1/2	1'-3-1/2

CLEARANCE DRAWING FOR LIGHT DUTY CRANES

The drawing illustrates the clearance for a light duty crane with 3 conductor Insul-8-Bar electrification. Clearances for a non-electrified crane are the same as shown for the electrified crane. Dimensions f, J and N are shown in the table on Page

CR-5. To determine dimensions A, B and C, refer to the appropriate clearance drawing in the Carrier Section for the hoist and carrier selected for the crane. See end truck table on Page CR-3 for minimum girder overhangs.



SELECTION OF LIGHT DUTY CRANES

Light duty cranes are listed by rated load and span. Rated loads are based on a carrier design load which is adequate for most applications. The carrier design load includes hoist and carrier weights, rated load and 15% impact allowance. The design load is indicated in the table.

Crane selection is made by:

Step 1 - Determine actual carrier load (weights of hoist and carrier selected for the crane, rated load and impact

allowance, if applicable).

Step 2 - Select crane from table providing actual load is no greater than the design load.

If the actual load exceeds the 2 ton design load, select a standard single girder crane from the table on Page CR-15.

The weights are based on cranes with 3 conductors of Insul-8-Bar. Cranes are listed with an overall length based on a nominal span between runway tracks and 1'-0" maximum girder overhangs.

Rated Load (Tons)	Design Load (Lbs.)	Crane Code Number	Net Weight (Lbs.)	Span (Ft.)	Overall Length (Ft.)	f	J	N
1/2	1360	LW11S202X10	308	8	10	2'-0	11-1/2	1'-3-1/2
		LW11S202X12	350	10	12	2'-0	11-1/2	1'-3-1/2
		LW11S202X14	391	12	14	2'-0	11-1/2	1'-3-1/2
		LW11S202X16	433	14	16	2'-0	11-1/2	1'-3-1/2
		LW11S202X18	464	16	18	2'-0	11-1/2	1'-3-1/2
		LW11S202X20	515	18	20	2'-0	11-1/2	1'-3-1/2
		LW16S202X22	634	20	22	2'-0	1'-0	1'-3-1/2
1	2540	LW11S203X10	369	8	10	2'-0	1'-0-1/8	1'-3-1/2
		LW11S203X12	411	10	12	2'-0	1'-0-1/8	1'-3-1/2
		LW16S203X14	452	12	14	2'-0	1'-0-1/8	1'-3-1/2
		LW11S203X16	494	14	16	2'-0	1'-0-1/8	1'-3-1/2
		LW16S203X18	598	16	18	2'-0	1'-0-5/8	1'-3-1/2
		LW16S203X20	646	18	20	2'-0	1'-0-5/8	1'-3-1/2
		LW16S203X22	695	20	22	2'-0	1'-0-5/8	1'-3-1/2
1-1/2	3660	LW11S203X10	369	8	10	2'-0	1'-0-1/8	1'-3-1/2
		LW11S203X12	411	10	12	2'-0	1'-0-1/8	1'-3-1/2
		LW11S203X14	452	12	14	2'-0	1'-0-1/8	1'-3-1/2
		LW16S203X16	550	14	16	2'-0	1'-0-5/8	1'-3-1/2
		LW16S203X18	598	16	18	2'-0	1'-0-5/8	1'-3-1/2
		LW16S203X20	646	18	20	2'-0	1'-0-5/8	1'-3-1/2
		LW21S203X22	756	20	22	2'-0	1'-2-1/8	1'-3-1/2
2	5110	LW11S201X10	410	8	10	2'-0	1'-0-1/8	1'-3-1/2
		LW11S201X12	452	10	12	2'-0	1'-0-1/8	1'-3-1/2
		LW16S201X14	542	12	14	2'-0	1'-0-5/8	1'-3-1/2
		LW16S201X16	591	14	16	2'-0	1'-0-5/8	1'-3-1/2
		LW16S201X18	639	16	18	2'-0	1'-0-5/8	1'-3-1/2
		LW21S201X20	743	18	20	2'-0	1'-2-1/8	1'-3-1/2
		LW21S201X22	797	20	22	2'-0	1'-2-1/8	1'-3-1/2

HAND RACKED SINGLE GIRDER CRANES

Standard, hand propelled, single girder cranes may be arranged for hand racking by the addition of a squaring shaft drive. Hand racked cranes use 4-wheel extended wheelbase end trucks or 8-wheel end trucks.

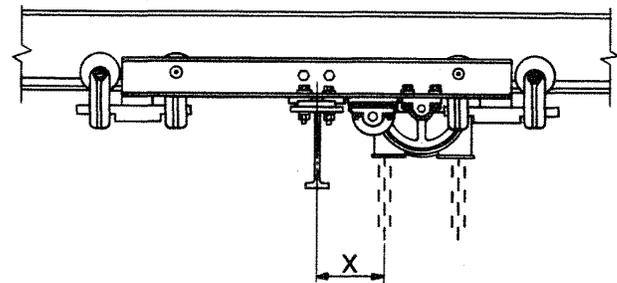
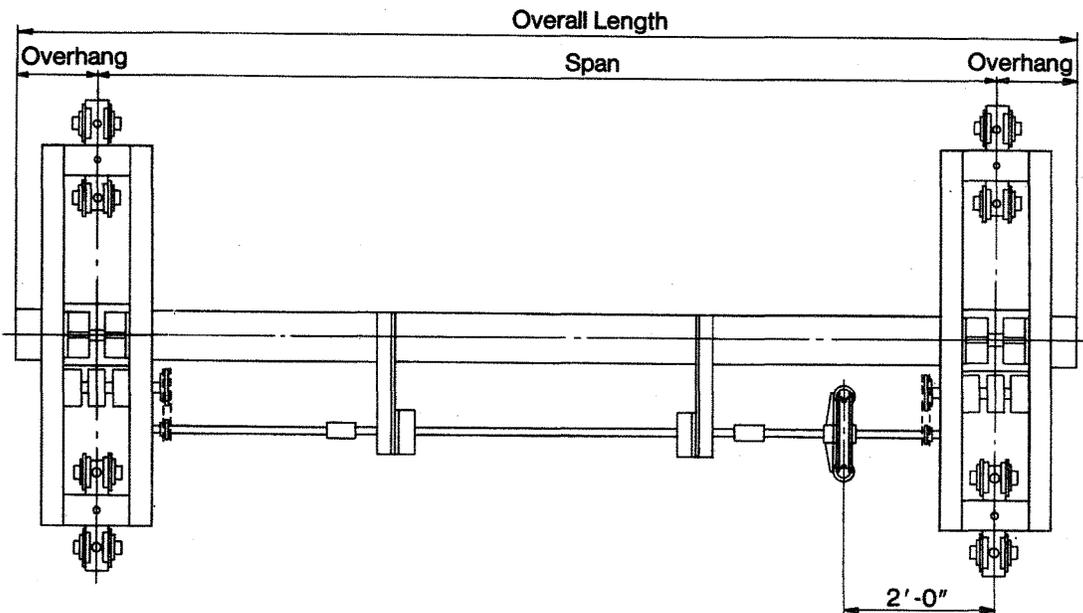
These cranes are limited to spans of 42'-0" maximum and to end trucks with 5 inch or 6-1/2 inch diameter wheels. When electric hoists operate on the crane, they are equipped with conductors and current collectors as described in the Electrification Section. They can be used as transfer cranes by the addition of interlock mechanisms.

The drive consists of rubber wheels mounted in each end truck which bear the bottom of the runway and provide traction to propel the crane. The wheels are connected to a squaring shaft by roller chains. The squaring shaft operates

on self-aligning ball bearing pillow block; the assembly is propelled by a hand chain and chain wheel.

The standard location for the hand chain is 2'-0" from the centerline of the end truck as indicated in the drawing. The hand chain may be located at any point between the end trucks when specified. A second hand chain may also be furnished when specified. The hand chain may be located up to 1'-6" outside of the end truck providing the girder overhang is at least 6 inch beyond the hand chain location.

The arrangement of a hand racked crane is shown in the drawing. Clearances are the same as those shown on preceding pages for a comparable hand propelled crane. Dimension X should be checked for possible interference between the hoist and/or carrier and the hand chain.



End Truck Item Number	Dimension X
170305	
170307	1'-0-3/4"
170309	
170315	
170318	11-1/4"
170320	11-3/4"