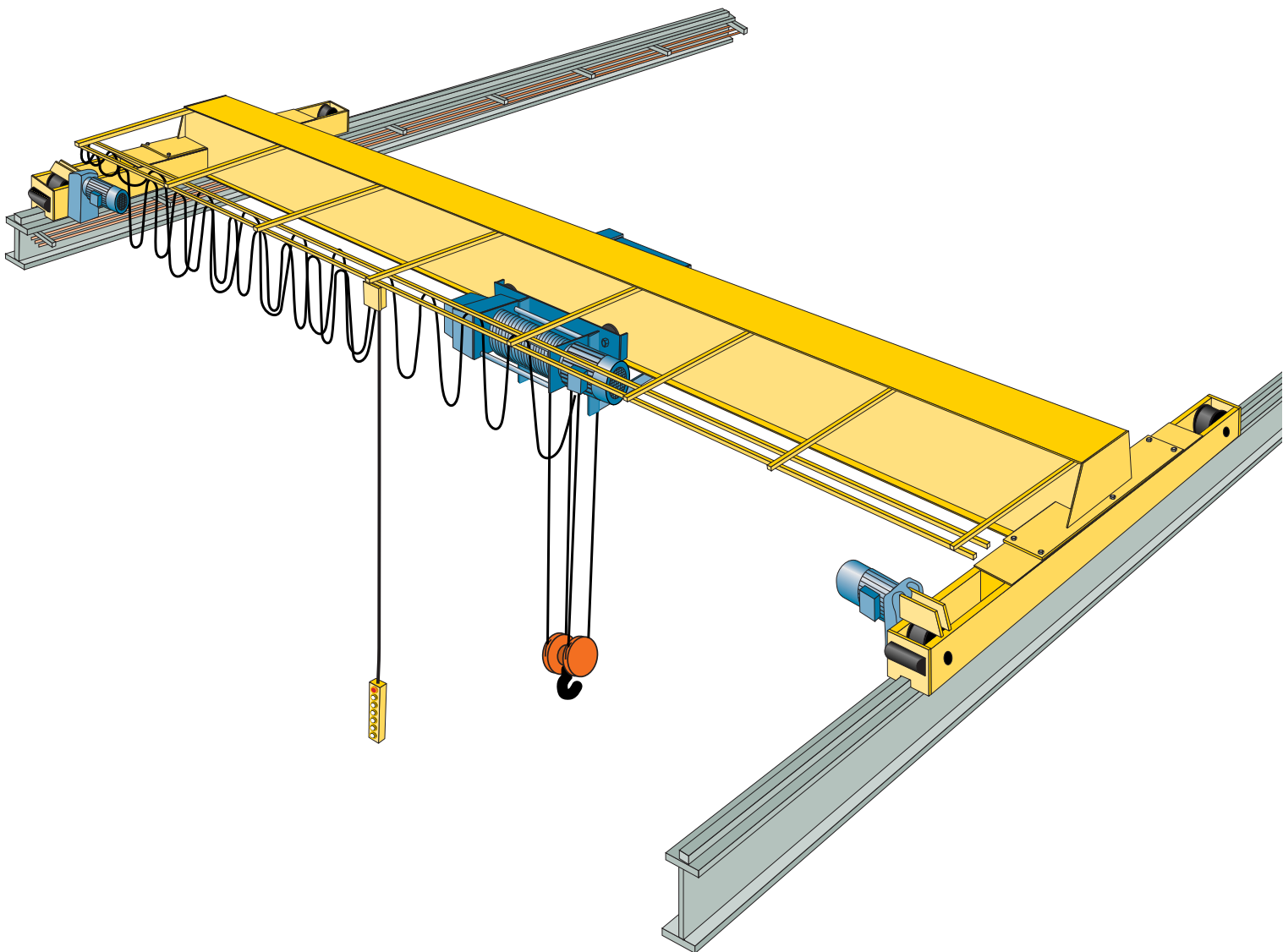


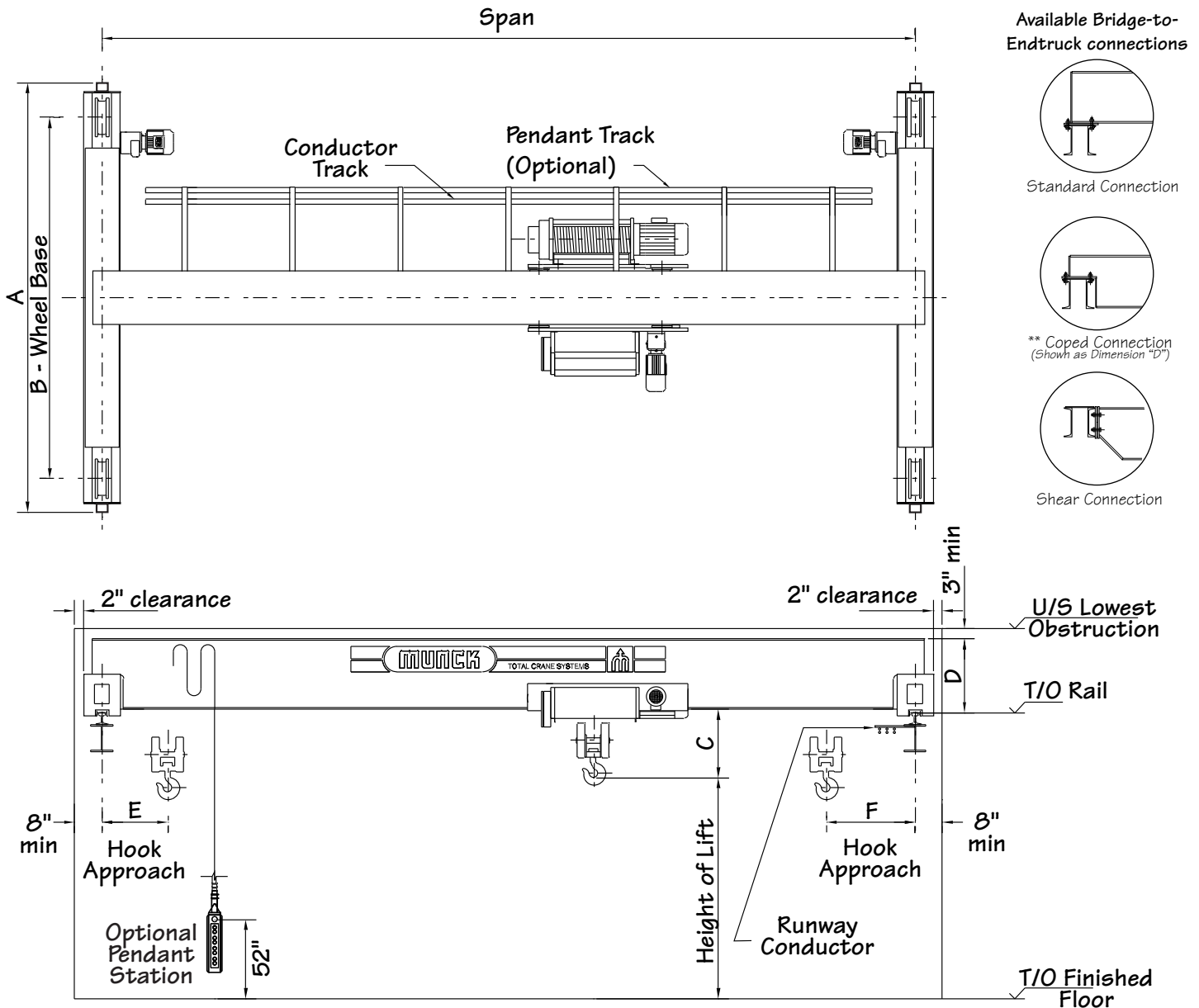
# Top Running, Single Girder Overhead Cranes

## Engineering & Design Data



## Crane Reference Diagram

All data may be referenced to the following crane diagram. Travel speeds are nominal and may vary  $\pm 10\%$ . Other travel speeds are available on request. Dimensions E & F are given at high hook and are measured from the centerline of the runway rail to the centerline of the hoist hook and do not take into consideration the downshop conductor system.

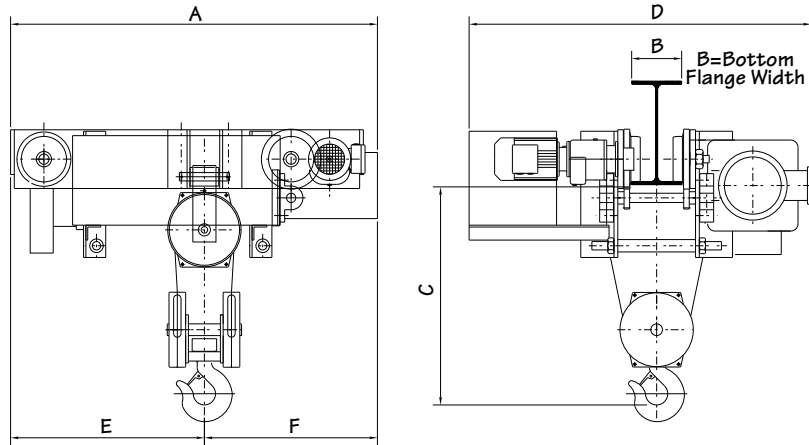


Munck Cranes Inc. assumes no responsibility for, but not limited to, any events or damages which occur as a result of the use of any data contained in this brochure. It should be noted that these figures are supplied to give a general understanding of the specifications relating to any particular capacity of top running, single girder, overhead crane and should not be taken as a basis for construction of any kind. All calculations for actual work to be performed should be done so only by a recognized professional in the industry and only after the unique situations and circumstances to the particular job or job site are considered.

HOIST DATA							CRANE DATA						
Crane Capacity (Tonnes)	Hoist Model	Available Lift Height (ft.)	Trolley Hoist Weight (lbs.)	E	F	Hoist Speed (ft./min.)	SPAN (ft.)	A	B	D ** (in.)	C (in.)	Crane Weight Excluding Hoist (lbs.)	Maximum Static Wheel Load (lbs.)
1	3101-1223 3101-2223 3101-3223 3101-4223 3101-5223	46 66 82 111 139	740 765 785 835 850	2'-8" 3'-3" 3'-9" 4'-7" 5'-5"	2'-3" 2'-3" 2'-3" 2'-3" 2'-3"	Single Speed: 31  Two Speed: 31 & 4.8	-20	7'-8"	6'-6"	13	29	1635	1850
							21-25	7'-8"	6'-6"	12	29	2000	1980
							26-30	7'-8"	6'-6"	14	29	2475	2115
							31-35	7'-8"	6'-6"	14	29	2875	2245
							36-40	7'-8"	6'-6"	16	29	3475	2405
							41-45	7'-8"	6'-6"	16	29	4160	2605
							46-50	7'-8"	6'-6"	19	29	4760	2765
							51-55	10'-8"	9'-6"	21	29	5540	2970
							56-60	10'-8"	9'-6"	21	29	7350	3425
							61-65	10'-8"	9'-6"	34	36	8505	3720
							66-70	10'-8"	9'-6"	38	36	9960	4085
							71-75	10'-8"	9'-6"	38	36	10665	4265
							76-80	13'-2"	12'-0"	41	40	13400	4955
							81-85	13'-2"	12'-0"	43	40	14580	5250
86-90	13'-2"	12'-0"	45	40	15815	5565							
91-95	13'-2"	12'-0"	48	40	17005	5865							
96-100	16'-2"	15'-0"	51	40	19300	6440							
2	3111-1223 3111-2223 3111-3223 3111-4223 3111-5223	46 66 82 111 139	765 820 870 965 1030	2'-8" 3'-3" 3'-9" 4'-7" 5'-5"	2'-4" 2'-4" 2'-4" 2'-4" 2'-4"	Single Speed: 31  Two Speed: 31 & 4.8	-20	7'-8"	6'-6"	12	29	1775	2860
							21-25	7'-8"	6'-6"	12	29	2300	3055
							26-30	7'-8"	6'-6"	14	29	2735	3205
							31-35	7'-8"	6'-6"	14	29	3570	3445
							36-40	7'-8"	6'-6"	19	29	4035	3585
							41-45	7'-8"	6'-6"	19	29	4880	3830
							46-50	7'-8"	6'-6"	19	29	5925	4105
							51-55	10'-8"	9'-6"	21	29	6970	4380
							56-60	10'-8"	9'-6"	24	29	7465	4510
							61-65	10'-8"	9'-6"	34	36	9045	4915
							66-70	10'-8"	9'-6"	36	36	10260	5225
							71-75	10'-8"	9'-6"	38	36	11515	5545
							76-80	13'-2"	12'-0"	41	40	15005	6425
							81-85	13'-2"	12'-0"	43	40	16270	6745
86-90	13'-2"	12'-0"	46	40	17585	7075							
91-95	13'-2"	12'-0"	49	40	19145	7470							
96-100	16'-3"	15'-0"	50	40	20700	7865							
3	3101-1423 3101-2423 3101-3423 3101-4423 3101-5423	23 33 41 55 69	750 810 860 955 1015	2'-7" 3'-1" 3'-7" 4'-5" 5'-3"	2'-5" 2'-5" 2'-5" 2'-5" 2'-5"	Single Speed: 15.5  Two Speed: 15.5 & 2.4	-20	7'-8"	6'-6"	12	20	1895	3865
							21-25	7'-8"	6'-6"	14	20	2300	4055
							26-30	7'-8"	6'-6"	14	20	2975	4280
							31-35	7'-8"	6'-6"	19	20	3640	4490
							36-40	7'-8"	6'-6"	19	20	4195	4660
							41-45	7'-8"	6'-6"	21	20	5060	4925
							46-50	7'-8"	6'-6"	23	20	5925	5155
							51-55	10'-8"	9'-6"	29	24	6895	5415
							56-60	10'-8"	9'-6"	32	27	8130	5735
							61-65	10'-8"	9'-6"	34	27	9095	5990
							66-70	10'-8"	9'-6"	38	27	10590	6375
							71-75	10'-8"	9'-6"	39	27	11565	6625
							76-80	13'-2"	12'-0"	41	31	14945	7475
							81-85	13'-2"	12'-0"	44	31	16370	7840
86-90	13'-2"	12'-0"	46	31	17685	8175							
91-95	13'-2"	12'-0"	50	31	19240	8570							
96-100	16'-3"	15'-0"	51	31	20700	8940							
5	3111-1423 3111-2423 3111-3423 3111-4423 3111-5423	23 33 41 55 69	785 840 890 985 1050	2'-7" 3'-1" 3'-7" 4'-5" 5'-3"	2'-6" 2'-6" 2'-6" 2'-6" 2'-6"	Single Speed: 15.5  Two Speed: 15.5 & 2.4	-20	7'-8"	6'-6"	14	20	2015	5840
							21-25	7'-8"	6'-6"	14	20	2800	6175
							26-30	7'-8"	6'-6"	19	20	3210	6370
							31-35	7'-8"	6'-6"	19	20	4025	6640
							36-40	7'-8"	6'-6"	21	20	4755	6875
							41-45	7'-9"	6'-6"	24	20	5960	7230
							46-50	7'-9"	6'-6"	24	20	7050	7535
							51-55	10'-9"	9'-6"	29	24	7840	7760
							56-60	10'-9"	9'-6"	33	27	9320	8150
							61-65	10'-9"	9'-6"	34	27	10160	8360
							66-70	10'-9"	9'-6"	39	27	11440	8710
							71-75	10'-9"	9'-6"	39	27	13050	9125
							76-80	13'-3"	12'-0"	41	31	16135	9910
							81-85	13'-3"	12'-0"	44	31	17450	10250
86-90	13'-3"	12'-0"	46	31	18815	10600							
91-95	13'-3"	12'-0"	48	31	20135	10940							
96-100	16'-3"	15'-0"	51	31	21600	11310							

HOIST DATA						CRANE DATA							
Crane Capacity (Tonnes)	Hoist Model	Available Lift Height (ft.)	Trolley Hoist Weight (lbs.)	E	F	Hoist Speed (ft./min.)	SPAN (ft.)	A	B	D ** (in.)	C (in.)	Crane Weight Excluding Hoist (lbs.)	Maximum Static Wheel Load (lbs.)
7.5	3121-1423 3121-2423 3121-3423 3121-4423 3121-5423	21 29 40 54 68	1210 1310 1455 1610 1760	2'-10" 3'-4" 4'-0" 5'-0" 5'-11"	3'-2" 3'-2" 3'-2" 3'-2" 3'-2"	Single Speed: 16  Two Speed: 16 & 5	-20	7'-9"	6'-6"	19	28	2680	8430
							21-25	7'-9"	6'-6"	19	28	3325	8865
							26-30	7'-9"	6'-6"	19	28	4130	9250
							31-35	7'-9"	6'-6"	22	28	4880	9570
							36-40	7'-9"	6'-6"	24	28	5860	9910
							41-45	7'-9"	6'-6"	27	28	6950	10260
							46-50	7'-9"	6'-6"	27	28	7900	10560
							51-55	10'-9"	9'-6"	29	38	8890	10835
	56-60	10'-9"	9'-6"	33	38	10220	11230						
	61-65	10'-9"	9'-6"	34	38	11595	11610						
	66-70	10'-9"	9'-6"	39	38	12840	11950						
	71-75	10'-9"	9'-6"	39	43	14705	12445						
	76-80	13'-7"	12'-0"	42	43	16965	13030						
	81-85	13'-7"	12'-0"	44	43	19495	13680						
	86-90	13'-7"	12'-0"	46	43	20955	14065						
	91-95	13'-7"	12'-0"	49	43	22470	14460						
96-100	16'-7"	15'-0"	51	43	25570	15250							
10	3122-1423 3122-2423 3122-3423 3122-4423 3122-5423	21 29 40 54 68	1265 1365 1570 1665 1815	2'-10" 3'-4" 4'-0" 5'-0" 5'-11"	3'-3" 3'-3" 3'-3" 3'-3" 3'-3"	Single Speed: 16  Two Speed: 16 & 5	-20	7'-9"	6'-6"	19	28	3060	10460
							21-25	7'-9"	6'-6"	19	28	3805	11430
							26-30	7'-9"	6'-6"	21	28	4550	11855
							31-35	7'-9"	6'-6"	21	28	5480	12255
							36-40	7'-9"	6'-6"	25	28	6840	12725
							41-45	7'-9"	6'-6"	27	28	7850	13075
							46-50	7'-9"	6'-6"	28	38	8480	13315
							51-55	10'-11"	9'-6"	30	38	10335	13840
	56-60	10'-11"	9'-6"	33	38	11790	14260						
	61-65	10'-11"	9'-6"	33	38	13105	14635						
	66-70	10'-11"	9'-6"	36	38	14970	15140						
	71-75	10'-11"	9'-6"	39	43	17375	15775						
	76-80	13'-7"	12'-0"	41	43	18800	16160						
	81-85	13'-7"	12'-0"	44	43	20245	16550						
	86-90	13'-7"	12'-0"	46	43	22740	17195						
	91-95	13'-7"	12'-0"	49	43	23190	17330						
96-100	16'-7"	15'-0"	50	43	27860	18515							
12.5	3131-1423 3131-2423 3131-3423 3131-4423	26 36 49 69	1850 2035 2170 2510	3'-6" 4'-3" 5'-3" 6'-8"	3'-9" 3'-9" 3'-9" 3'-9"	Single Speed: 16  Two Speed: 16 & 5	-20	7'-11"	6'-6"	19	31	3545	13640
							21-25	7'-11"	6'-6"	19	31	4425	14310
							26-30	7'-11"	6'-6"	22	31	5105	14780
							31-35	7'-11"	6'-6"	24	31	6220	15270
							36-40	7'-11"	6'-6"	27	31	7095	15650
							41-45	7'-11"	6'-6"	27	31	8345	16090
							46-50	7'-11"	6'-6"	28	33	10025	16610
							51-55	11'-1"	9'-6"	30	33	11545	17070
	56-60	11'-1"	9'-6"	34	33	13230	17560						
	61-65	11'-1"	9'-6"	34	36	14730	17990						
	66-70	11'-1"	9'-6"	36	36	16460	18475						
	71-75	11'-1"	9'-6"	39	36	18750	19090						
	76-80	13'-9"	12'-0"	42	36	21000	19690						
	81-85	13'-9"	12'-0"	46	36	23495	20345						
	86-90	13'-9"	12'-0"	49	36	26175	21045						
	91-95	13'-9"	12'-0"	51	41	28225	21585						
96-100	16'-9"	15'-0"	51	41	31585	22450							
15	3131-1423 3131-2423 3131-3423 3131-4423	26 36 49 69	1850 2035 2170 2510	3'-6" 4'-3" 5'-3" 6'-8"	3'-9" 3'-9" 3'-9" 3'-9"	Single Speed: 16  Two Speed: 16 & 5	-20	8'-7"	6'-8"	17	31	3835	16050
							21-25	8'-7"	6'-8"	20	31	4685	16795
							26-30	8'-7"	6'-8"	22	31	5525	17355
							31-35	8'-7"	6'-8"	28	31	6525	18050
							36-40	8'-7"	6'-8"	28	31	7435	18280
							41-45	11'-1"	9'-2"	28	33	8990	18815
							46-50	11'-1"	9'-2"	31	33	10035	19195
							51-55	10'-7"	9'-2"	33	33	12375	19875
	56-60	10'-7"	9'-2"	34	33	14095	20390						
	61-65	11'-11"	10'-6"	40	33	15825	20890						
	66-70	11'-11"	10'-6"	36	36	17665	21405						
	71-75	12'-7"	11'-2"	40	36	19200	21840						
	76-80	16'-1"	14'-2"	43	36	22090	22610						
	81-85	16'-1"	14'-2"	51	36	24550	23470						
	86-90	18'-6"	16'-4"	51	41	26455	23775						
	91-95	18'-6"	16'-4"	51	41	29100	24465						
96-100	18'-6"	16'-4"	51	41	33375	25560							

## Trolley Hoist Reference Diagram

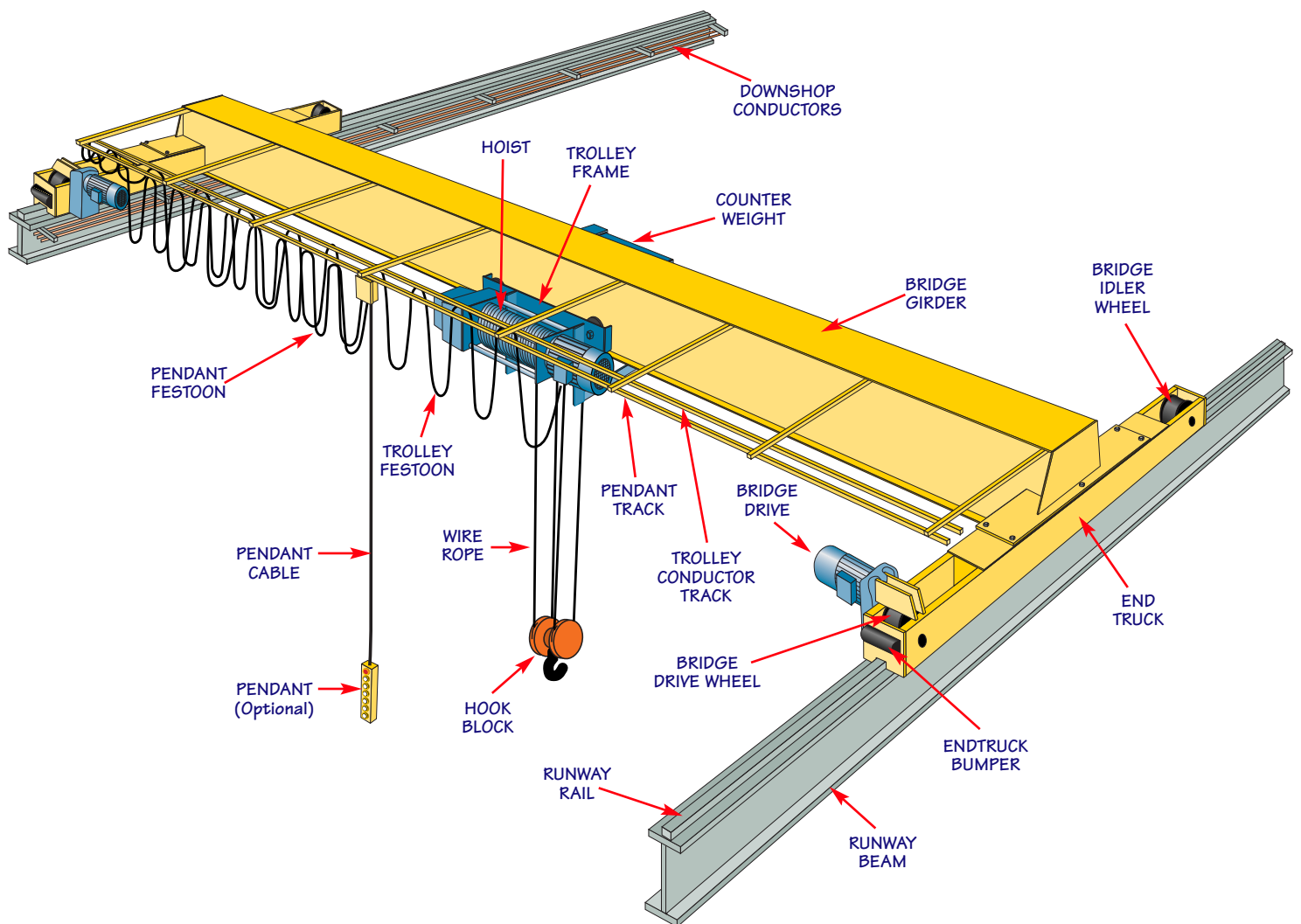


MONORAIL TROLLEY DATA													
Crane Capacity (Tonnes)	Hoist Model	Available Lift Height (ft.)	Trolley Hoist Weight (lbs.)	Hoist Speed (ft./min.)	A	C					D	E	F
						B =< 8"	B =< 12"	B =< 16"	B =< 20"	B =< 24"			
1	3101-1223	46	740		3'-10"							2'-1"	1'-9"
	3101-2223	66	765	31	4'-5"							2'-8"	1'-9"
	3101-3223	82	785	or	4'-11"	2'-5"	2'-5"	2'-9"	3'-0"	3'-4"	4'-3"	3'-2"	1'-9"
	3101-4223	111	835	31 & 4.8	5'-9"							4'-0"	1'-9"
	3101-5223	139	850		6'-7"							4'-10"	1'-9"
2	3111-1223	46	765		3'-11"							2'-1"	1'-9"
	3111-2223	66	820	31	4'-6"							2'-8"	1'-9"
	3111-3223	82	870	or	4'-11"	2'-5"	2'-5"	2'-9"	3'-0"	3'-4"	4'-3"	3'-2"	1'-9"
	3111-4223	111	965	31 & 4.8	5'-10"							4'-0"	1'-9"
	3111-5223	139	1030		6'-8"							4'-10"	1'-9"
3	3101-1423	23	750		3'-10"							2'-0"	1'-11"
	3101-2423	33	810	15.5	4'-5"							2'-7"	1'-11"
	3101-3423	41	860	or	4'-11"	1'-8"	1'-8"	2'-0"	2'-3"	2'-7"	4'-3"	3'-0"	1'-11"
	3101-4423	55	955	15.5 & 2.4	5'-9"							3'-11"	1'-11"
	3101-5423	69	1015		6'-7"							4'-9"	1'-11"
5	3111-1423	23	785		3'-11"							2'-0"	1'-11"
	3111-2423	33	840	15.5	4'-6"							2'-7"	1'-11"
	3111-3423	41	890	or	4'-11"	1'-8"	1'-8"	2'-0"	2'-3"	2'-7"	4'-3"	3'-0"	1'-11"
	3111-4423	55	985	15.5 & 2.4	5'-10"							3'-11"	1'-11"
	3111-5423	69	1050		6'-8"							4'-9"	1'-11"
7.5	3121-1423	21	1210		4'-9"							2'-2"	2'-7"
	3121-2423	29	1310	16	5'-3"							2'-8"	2'-7"
	3121-3423	40	1455	or	6'-0"	2'-4"	2'-4"	2'-9"	3'-2"	3'-7"	4'-5"	3'-5"	2'-7"
	3121-4423	54	1610	16 & 5	7'-0"							4'-5"	2'-7"
	3121-5423	68	1760		7'-11"							5'-4"	2'-7"
10	3122-1423	21	1265		4'-10"							2'-2"	2'-8"
	3122-2423	29	1365	16	5'-4"							2'-8"	2'-8"
	3122-3423	40	1510	or	6'-0"	2'-4"	2'-4"	2'-9"	3'-2"	3'-7"	4'-5"	3'-5"	2'-8"
	3122-4423	54	1665	16 & 5	7'-0"							4'-5"	2'-8"
	3122-5423	68	1815		7'-11"							5'-4"	2'-8"
12.5	3131-1423	26	1850	16	6'-0"							2'-11"	3'-1"
	3131-2423	36	2035	or	6'-9"	2'-7"	2'-7"	2'-7"	2'-9"	3'-0"	4'-9"	3'-8"	3'-1"
	3131-3423	49	2170	16 & 5	7'-9"							4'-8"	3'-1"
	3131-4423	69	2510		9'-2"							5'-1"	3'-1"
15	3131-1423	26	1850	16	6'-0"							2'-11"	3'-1"
	3131-2423	36	2035	or	6'-9"	2'-7"	2'-7"	2'-7"	2'-9"	3'-0"	4'-9"	3'-8"	3'-1"
	3131-3423	49	2170	16 & 5	7'-9"							4'-8"	3'-1"
	3131-4423	69	2510		9'-2"							6'-1"	3'-1"
20	3141-1423	26	3435	16	6'-5"							3'-0"	3'-6"
	3141-2423	39	3685	or	7'-3"	2'-3"	2'-3"	2'-5"	2'-9"	3'-1"	5'-7"	3'-10"	3'-6"
	3141-3423	63	4100	16 & 5	8'-9"							5'-3"	3'-6"
	3141-5423	82	4445		9'-11"							6'-6"	3'-6"

Munck Cranes Inc. assumes no responsibility for, but not limited to, any events or damages which occur as a result of the use of any data contained in this brochure. It should be noted that these figures are supplied to give a general understanding of the specifications relating to any particular capacity of trolley and should not be taken as a basis for construction of any kind. Contact Munck Cranes Inc. to confirm dimensions.

# Top Running, Single Girder Overhead Cranes

## Crane Component Diagram



## Technical Description

- **MUNCK CRANES INC.** is recognized as a quality manufacturer of wire rope hoists and overhead traveling cranes.
- **MUNCK** cranes are in use in a wide range of lifting applications from the lightest duty to severe industrial applications.
- The New Generation of Heavy Industrial Cranes from **MUNCK** is a result of over 80 years of experience and a total devotion to this market.
- Utilizing the latest technology, the **MUNCK** line of Heavy Duty Electric Wire Rope Hoists and Cranes are manufactured to provide a high performance lifting system.
- The **MUNCK** product provides reliable service in more than 60 countries world wide.
- The **MUNCK** crane is a heavy duty, low maintenance crane. Its rugged construction and space saving design provide maximum utilization of available area.

### STEEL CONSTRUCTION

- The bridge girder of every **MUNCK** crane is designed to the current CMAA specifications and can be engineered to meet other local codes and regulations.
- Both rolled structural shapes and welded plate box girder designs are used depending on design requirements.
- Box girders are fabricated from 44W steel.

### END TRUCKS

- The crane end trucks are manufactured from structural sections and are jig assembled to ensure alignment of bearings and axles.
- Dual motor bridge drives are standard. Other drive types are available upon request.
- Bridge to End Truck connections are bolted.
- Bridge wheels are flanged with anti-friction bearings.
- Rail sweeps and rubber bumpers are standard on all end trucks.

### HOISTING MACHINERY

- The hoisting machinery consists of a **MUNCK** heavy duty industrial type standard wire rope hoist unit mounted on a low headroom type trolley.
- Motors are totally enclosed fan cooled, hoist duty with Class "F" insulation.
- Gears are precision machined from alloy steel and induction hardened. All gearing is enclosed in a rugged steel housing and is oil splash lubricated.
- Steel wire rope drums are precision machined.
- Rope drums are available in both single & double grooved configurations.
- Hoists are equipped with rope guides to prevent over lapping of the rope on the drum and to extend rope life.
- Upper and lower hoisting limit switches are standard equipment.
- The trolley is fabricated from structural shapes and plates to suit the application.

### MOTORS

- All motors are specifically designed for hoist and crane duty.
- All motors are totally enclosed fan cooled with Class "F" insulation.

### BRAKES

- All trolley and bridge drive motors have disc brakes as standard equipment.
- All hoists have two braking systems, one control brake and one holding brake.

### CONTROLS

- Each crane is supplied with a radio control as standard equipment.
- Other types of controls such as cab control, infrared, or pendant control station sliding on independent track are available.
- Munck Cranes are supplied with variable speed controls for the trolley and bridge motions. The hoist is supplied with a 2-speed configuration.
- The electrical components are housed in electrical cabinets to suit the applicable environment.

### BRIDGE ELECTRIFICATION

- Bridge electrification is provided via a flat cable festoon system suspended from a track as standard equipment.

### SURFACE TREATMENT

- The hoist is finished in enamel paint.
- The crane steel structure is thoroughly wire brushed and finished with anti-corrosion paint.

### OPTIONAL FEATURES

The following features can be supplied:

- Overload Switch
- Power Circuit Limit Switch
- Rotation Warning Beacon
- Anti-Collision Equipment
- Runway Electrification
- Travel Limits for Bridge & Trolley
- Weighing Equipment
- Variable Speed Hoist Control
- 2 Speed Bridge & Trolley Motions
- Bridge Lights
- Warning Horn or Bell

Other options are available on request.

### RUNWAY SYSTEMS

- Custom designed to suit many applications as part of a "**Total Crane System**" package.

## **Munck Cranes Inc.**

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