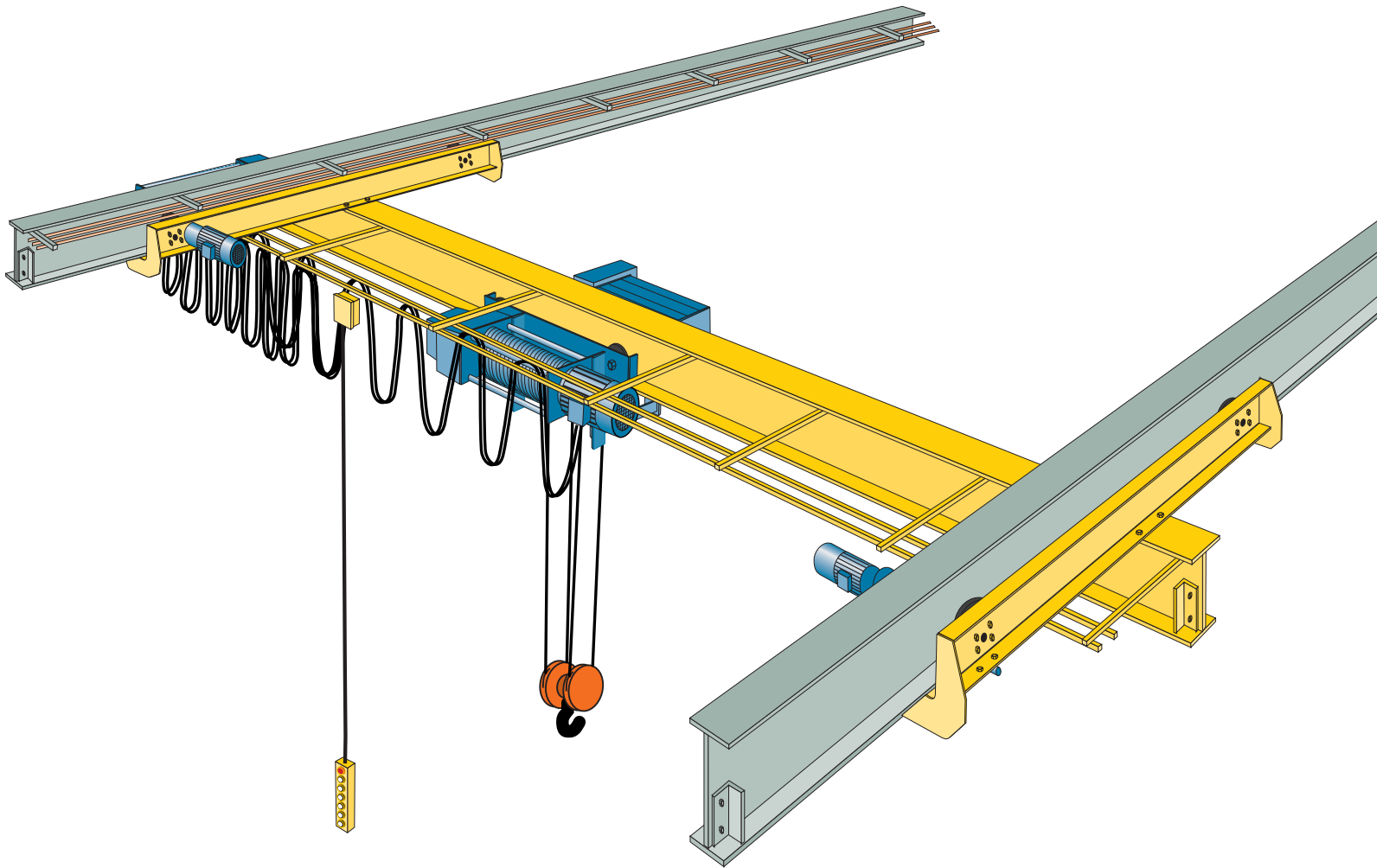


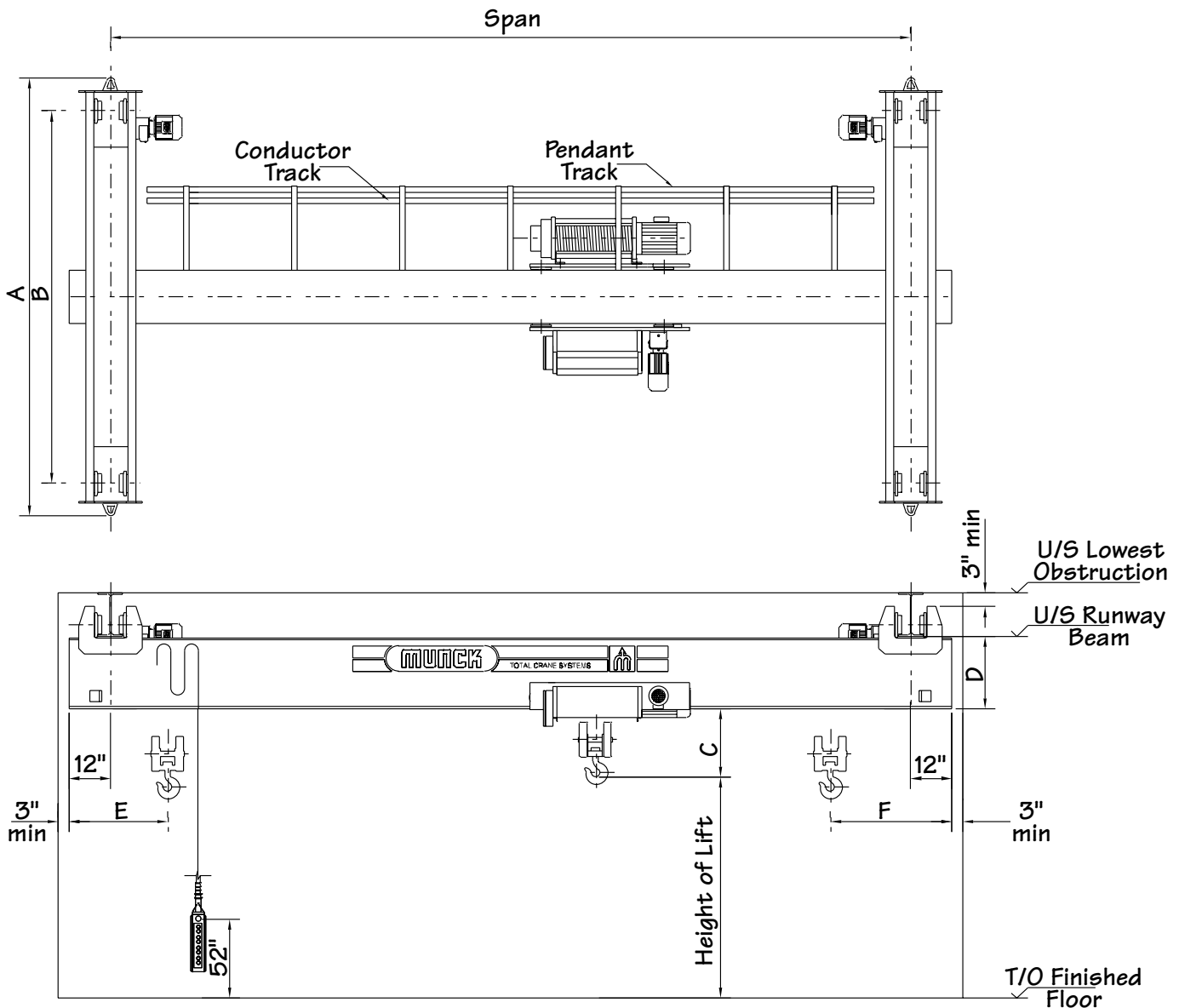
# Under Running, Single Girder Overhead Cranes

## 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 end of the bridge girder to the centerline of the hoist hook and do not take into consideration the downshop conductor system.

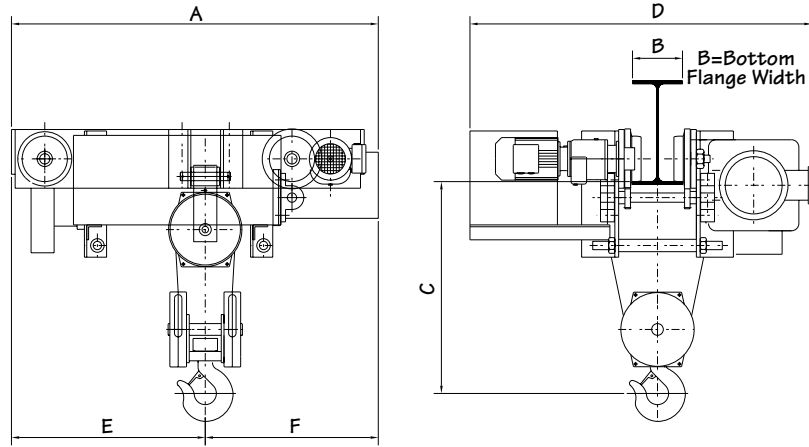


Munck Cranes Inc. assumes no responsibility for, but not limited to, any events or damages which occur as a result of the use of any data contained in this brochure. It should be noted that these figures are supplied to give a general understanding of the specifications relating to any particular capacity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

Crane Capacity (Tonnes)	Hoist Model	HOIST DATA				CRANE DATA							
		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	42 60 74 100 126	740 765 785 835 850	1'-10" 2'-5" 2'-11" 3'-9" 4'-7"	1'-11" 1'-11" 1'-11" 1'-11" 1'-11"	Single Speed: 32  Two Speed: 32 & 10	-20	5'-11"	4'-6"	12	29	1095	1800
							21-25	5'-11"	4'-6"	12	29	1330	1860
							26-30	6'-5"	5'-0"	12	29	1780	1970
							31-35	8'-1"	6'-8"	14	29	2275	2095
							36-40	8'-1"	6'-8"	16	29	2520	2155
							41-45	10'-7"	9'-2"	18	29	3025	2285
							46-50	10'-7"	9'-2"	18	29	3740	2460
							51-55	10'-7"	9'-2"	20	29	4345	2615
							56-60	10'-7"	9'-2"	20	29	5535	2910
							61-65	11'-11"	10'-6"	34	37	6835	3235
							66-70	11'-11"	10'-6"	35	37	7975	3520
							71-75	12'-7"	11'-2"	39	37	9270	3845
							76-80	15'-7"	14'-2"	41	41	10968	4270
							81-85	15'-7"	14'-2"	43	41	12205	4580
							86-90	17'-9"	16'-4"	46	41	13812	4980
91-95	17'-9"	16'-4"	48	41	15315	5355							
96-100	17'-9"	16'-4"	51	41	16715	5705							
2	3111-1223 3111-2223 3111-3223 3111-4223 3111-5223	42 60 73 100 126	765 820 870 965 1030	1'-10" 2'-5" 2'-11" 3'-9" 4'-7"	2'-0" 2'-0" 2'-0" 2'-0" 2'-0"	Single Speed: 32  Two Speed: 32 & 10	-20	5'-11"	4'-6"	12	29	1240	3025
							21-25	5'-11"	4'-6"	12	29	1710	3145
							26-30	6'-5"	5'-0"	14	29	2105	3245
							31-35	8'-1"	6'-8"	14	29	2975	3460
							36-40	8'-1"	6'-8"	18	29	2975	3460
							41-45	10'-7"	9'-2"	18	29	4030	3725
							46-50	10'-7"	9'-2"	20	29	4875	3935
							51-55	10'-7"	9'-2"	23	29	5615	4120
							56-60	10'-7"	9'-2"	23	29	6470	4335
							61-65	11'-11"	10'-6"	34	37	7540	4600
							66-70	11'-11"	10'-6"	36	37	8780	4910
							71-75	12'-7"	11'-2"	39	37	10180	5260
							76-80	15'-7"	14'-2"	41	41	11995	5715
							81-85	15'-7"	14'-2"	43	41	13345	6055
							86-90	17'-11"	16'-4"	46	41	15565	6610
91-95	17'-11"	16'-4"	48	41	17095	6990							
96-100	17'-11"	16'-4"	50	41	18510	7345							
3	3101-1423 3101-2423 3101-3423 3101-4423 3101-5423	21 30 37 50 63	750 810 860 955 1015	1'-8" 2'-3" 2'-9" 4'-3" 4'-5"	2'-1" 2'-1" 2'-1" 2'-1" 2'-1"	Single Speed: 16  Two Speed: 16 & 4	-20	6'-5"	5'-0"	12	21	1390	4155
							21-25	6'-5"	5'-0"	14	21	1730	4240
							26-30	6'-5"	5'-0"	14	21	2340	4395
							31-35	8'-1"	6'-8"	18	21	2820	4515
							36-40	8'-1"	6'-8"	18	21	3530	4690
							41-45	10'-7"	9'-2"	20	21	4475	4930
							46-50	10'-7"	9'-2"	23	21	5315	5140
							51-55	10'-7"	9'-2"	29	25	5710	5235
							56-60	10'-7"	9'-2"	31	28	6590	5455
							61-65	11'-11"	10'-6"	34	28	7540	5695
							66-70	11'-11"	10'-6"	36	28	8780	6005
							71-75	12'-7"	11'-2"	39	28	10625	6465
							76-80	15'-9"	14'-2"	41	32	12437	6920
							81-85	15'-9"	14'-2"	43	32	13789	7255
							86-90	17'-11"	16'-4"	46	32	15564	7700
91-95	17'-11"	16'-4"	48	32	17095	8085							
96-100	17'-11"	16'-4"	50	32	18506	8435							
5	3111-1423 3111-2423 3111-3423 3111-4423 3111-5423	21 30 37 50 63	800 860 910 1005 1070	1'-9" 2'-4" 2'-9" 3'-8" 4'-6"	2'-4" 2'-4" 2'-4" 2'-4" 2'-4"	Single Speed: 16  Two Speed: 16 & 4	-20	8'-3"	6'-8"	14	21	1870	6495
							21-25	8'-3"	6'-8"	14	21	2335	6610
							26-30	8'-3"	6'-8"	16	21	3000	6775
							31-35	8'-3"	6'-8"	18	21	3785	6975
							36-40	8'-3"	6'-8"	20	21	4465	7145
							41-45	10'-9"	9'-2"	23	21	5445	7390
							46-50	10'-9"	9'-2"	23	21	6210	7580
							51-55	10'-7"	9'-2"	29	25	7140	7810
							56-60	10'-7"	9'-2"	31	28	8150	8065
							61-65	11'-11"	10'-6"	33	28	9365	8370
							66-70	11'-11"	10'-6"	36	28	10730	8710
							71-75	12'-7"	11'-2"	38	28	12240	9085
							76-80	15'-9"	14'-2"	41	32	13800	9475
							81-85	15'-9"	14'-2"	43	32	15310	9855
							86-90	16'-5"	18'-0"	45	32	17390	10375
91-95	16'-5"	18'-0"	48	32	19270	10845							
96-100	16'-5"	18'-0"	50	32	20825	11235							

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	22 29 40 55 69	1345 1390 1520 1685 1960	2'-0" 2'-6" 3'-2" 4'-2" 5'-1"	3'-3" 3'-3" 3'-3" 3'-3" 3'-3"	-20	8'-3"	6'-8"	20	28	2155	9670	
						Single Speed: 16	21-25	8'-3"	6'-8"	20	28	3000	9880
							26-30	8'-3"	6'-8"	20	28	3600	10030
							31-35	8'-3"	6'-8"	23	28	4475	10250
							36-40	8'-3"	6'-8"	23	28	5520	10510
							41-45	10'-9"	9'-2"	23	28	6755	10820
						Two Speed: 16 & 5	46-50	10'-9"	9'-2"	29	33	7045	10895
							51-55	10'-7"	9'-2"	31	38	8075	11150
							56-60	10'-7"	9'-2"	32	38	9375	11475
							61-65	11'-11"	10'-6"	34	38	10695	11805
							66-70	11'-11"	10'-6"	36	38	12050	12145
							71-75	12'-7"	11'-2"	38	43	14410	12735
							76-80	15'-11"	14'-2"	41	43	16110	13160
							81-85	15'-11"	14'-2"	43	43	17755	13570
							86-90	18'-1"	16'-4"	45	43	20875	14350
							91-95	18'-1"	16'-4"	49	43	23350	14970
96-100	18'-1"	16'-4"	51	43	25365	15475							
10	3122-1423 3122-2423 3122-3423 3122-4423 3122-5423	22 29 40 55 69	1345 1390 1520 1685 1960	2'-0" 2'-6" 3'-2" 4'-2" 5'-1"	3'-5" 3'-5" 3'-5" 3'-5" 3'-5"	-20	8'-5"	6'-8"	23	28	2820	12630	
						Single Speed: 16	21-25	8'-5"	6'-8"	23	28	3755	12865
							26-30	8'-5"	6'-8"	23	28	4575	13070
							31-35	8'-5"	6'-8"	23	28	5610	13330
							36-40	8'-5"	6'-8"	26	33	7210	13730
							41-45	10'-11"	9'-2"	27	38	7405	13780
						Two Speed: 16 & 5	46-50	10'-11"	9'-2"	29	38	8560	14065
							51-55	10'-7"	9'-2"	29	38	9925	14410
							56-60	10'-7"	9'-2"	32	38	11240	14735
							61-65	11'-11"	10'-6"	34	43	12490	15050
							66-70	11'-11"	10'-6"	36	43	13810	15380
							71-75	12'-7"	11'-2"	39	43	16240	15985
							76-80	16'-1"	14'-2"	41	43	17970	16420
							81-85	16'-1"	14'-2"	44	43	19970	16920
							86-90	18'-3"	16'-4"	46	44	23305	17755
							91-95	18'-3"	16'-4"	48	45	25365	18270
96-100	18'-3"	16'-4"	51	46	27415	18780							
12.5	3131-1423 3131-2423 3131-3423 3131-4423	26 36 50 70	1850 2035 2170 2510	2'-6" 3'-3" 4'-3" 5'-8"	4'-0" 4'-0" 4'-0" 4'-0"	-20	8'-7"	6'-8"	17	31	3185	15805	
						Single Speed: 16	21-25	8'-7"	6'-8"	20	31	3920	15985
							26-30	8'-7"	6'-8"	22	31	4720	16185
							31-35	8'-7"	6'-8"	23	31	5755	16445
							36-40	8'-7"	6'-8"	24	31	6870	16725
							41-45	11'-1"	9'-2"	25	31	8210	17060
						Two Speed: 16 & 5	46-50	11'-1"	9'-2"	26	33	9560	17395
							51-55	10'-7"	9'-2"	29	33	11050	17770
							56-60	10'-7"	9'-2"	31	33	12535	18140
							61-65	11'-11"	10'-6"	34	37	14230	18565
							66-70	11'-11"	10'-6"	37	37	16060	19020
							71-75	12'-7"	11'-2"	39	37	19150	19795
							76-80	16'-1"	14'-2"	42	37	21230	20315
							81-85	16'-1"	14'-2"	46	37	23875	20975
							86-90	16'-5"	17'-6"	47	39	25995	21505
							91-95	16'-5"	17'-6"	50	39	28840	22215
96-100	16'-5"	17'-6"	52	40	32045	23020							
15	3131-1423 3131-2423 3131-3423 3131-4423	26 36 50 70	1850 2035 2170 2510	2'-6" 3'-3" 4'-3" 5'-8"	4'-1" 4'-1" 4'-1" 4'-1"	-20	8'-7"	6'-8"	23	31	3375	18600	
						Single Speed: 16	21-25	8'-7"	6'-8"	25	31	4180	18800
							26-30	8'-7"	6'-8"	26	31	5065	19025
							31-35	8'-7"	6'-8"	28	31	6130	19290
							36-40	8'-7"	6'-8"	31	31	7270	19575
							41-45	11'-1"	9'-2"	32	33	8630	19915
						Two Speed: 16 & 5	46-50	11'-1"	9'-2"	34	33	9905	20235
							51-55	10'-7"	9'-2"	36	33	11285	20580
							56-60	10'-7"	9'-2"	38	33	12840	20965
							61-65	11'-11"	10'-6"	41	37	14880	21475
							66-70	11'-11"	10'-6"	41	37	16600	21905
							71-75	12'-7"	11'-2"	41	37	19700	22680
							76-80	16'-1"	14'-2"	44	38	21825	23215
							81-85	16'-1"	14'-2"	46	38	24505	23885
							86-90	18'-6"	16'-4"	48	39	27970	24750
							91-95	18'-6"	16'-4"	50	39	31720	25685
96-100	18'-6"	16'-4"	54	39	35925	26740							

## Trolley Hoist Reference Diagram

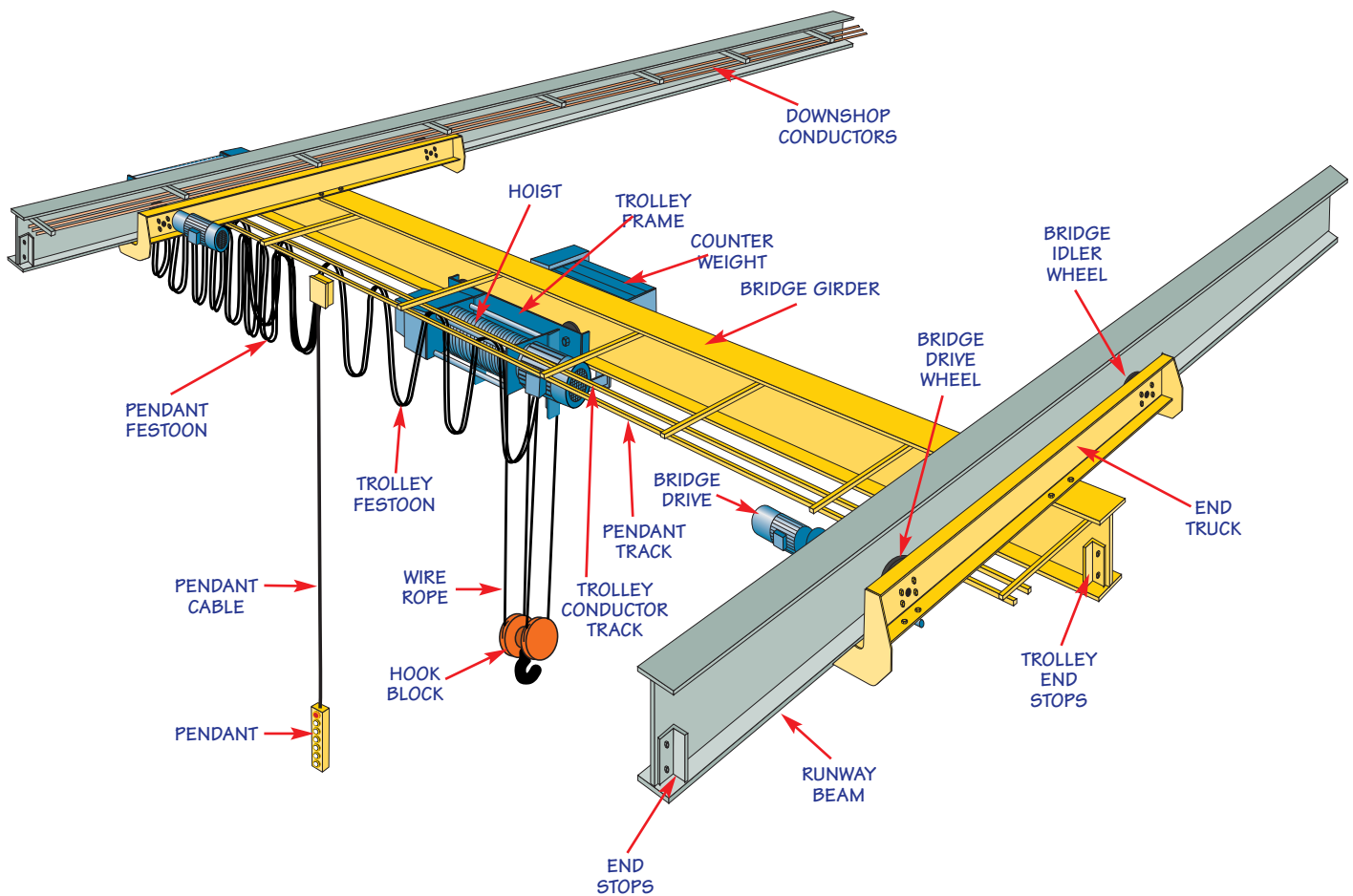


MONORAIL TROLLEY DATA													
Crane Capacity (Tonnes)	Hoist Model	Available Lift Height (ft.)	Trolley Hoist Weight (lbs.)	Hoist Speed (ft./min.)	A	C					D	E	F
						B =< 8"	B =< 12"	B =< 16"	B =< 20"	B =< 24"			
1	3101-1223	42	740		3'-10"							2'-1"	1'-9"
	3101-2223	60	765	32	4'-5"							2'-8"	1'-9"
	3101-3223	74	785	or	4'-11"	2'-4"	2'-4"	2'-8"	3'-0"	3'-3"	4'-3"	3'-2"	1'-9"
	3101-4223	100	835	32 & 10	5'-9"							4'-0"	1'-9"
	3101-5223	126	850		6'-7"							4'-10"	1'-9"
2	3111-1223	42	765		3'-11"							2'-1"	1'-9"
	3111-2223	60	820	32	4'-6"							2'-8"	1'-9"
	3111-3223	73	870	or	4'-11"	2'-4"	2'-4"	2'-8"	3'-0"	3'-3"	4'-3"	3'-2"	1'-9"
	3111-4223	100	965	32 & 10	5'-10"							4'-0"	1'-9"
	3111-5223	1268	1030		6'-8"							4'-10"	1'-9"
3	3101-1423	21	750		3'-10"							2'-0"	1'-11"
	3101-2423	30	810	16	4'-5"							2'-7"	1'-11"
	3101-3423	37	860	or	4'-11"	1'-8"	1'-8"	1'-11"	2'-3"	2'-7"	4'-3"	3'-0"	1'-11"
	3101-4423	50	955	16 & 4	5'-9"							3'-11"	1'-11"
	3101-5423	63	1015		6'-7"							4'-9"	1'-11"
5	3111-1423	21	800		3'-11"							2'-0"	1'-11"
	3111-2423	30	860	16	4'-6"							2'-7"	1'-11"
	3111-3423	37	910	or	5'-0"	1'-8"	1'-8"	1'-11"	2'-3"	2'-7"	4'-3"	3'-0"	1'-11"
	3111-4423	50	1005	16 & 4	5'-10"							3'-11"	1'-11"
	3111-5423	63	1070		6'-8"							4'-9"	1'-11"
7.5	3121-1423	22	1345		4'-9"							2'-2"	2'-7"
	3121-2423	29	1390	16	5'-3"							2'-8"	2'-7"
	3121-3423	40	1520	or	6'-0"	2'-4"	2'-3"	2'-8"	3'-1"	3'-6"	4'-4"	3'-5"	2'-7"
	3121-4423	55	1685	16 & 5	7'-0"							4'-5"	2'-7"
	3121-5423	69	1960		7'-11"							5'-4"	2'-7"
10	3122-1423	22	1345		4'-10"							2'-2"	2'-8"
	3122-2423	29	1390	16	5'-4"							2'-8"	2'-8"
	3122-3423	40	1520	or	6'-0"	2'-4"	2'-3"	2'-8"	3'-1"	3'-6"	4'-4"	3'-5"	2'-8"
	3122-4423	55	1685	16 & 5	7'-0"							4'-5"	2'-8"
	3122-5423	69	1960		7'-11"							5'-4"	2'-8"
12.5	3131-1423	26	1850	16	5'-9"							2'-8"	3'-1"
	3131-2423	36	2035	or	6'-6"	2'-4"	2'-4"	2'-7"	2'-11"	3'-4"	4'-9"	3'-5"	3'-1"
	3131-3423	50	2170	16 & 5	7'-6"							4'-5"	3'-1"
	3131-4423	70	2510		9'-0"							5'-10"	3'-1"
15	3131-1423	26	1850	16	5'-9"							2'-8"	3'-1"
	3131-2423	36	2035	or	6'-6"	2'-4"	2'-4"	2'-7"	2'-11"	3'-4"	4'-9"	3'-5"	3'-1"
	3131-3423	50	2170	16 & 5	7'-6"							4'-5"	3'-1"
	3131-4423	70	2510		8'-11"							5'-10"	3'-1"
20	3141-1423	25	3335	16	6'-2"							2'-9"	3'-6"
	3141-2423	39	3765	or	7'-0"	3'-2"	3'-1"	2'-11"	2'-10"	3'-2"	5'-6"	3'-7"	3'-6"
	3141-3423	63	4180	16 & 5	8'-6"							5'-1"	3'-6"
	3141-5423	82	4490		9'-8"							6'-3"	3'-6"

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# Under 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 controlled from a push-button station suspended from a track allowing the operator to remain clear of the load during lifting and traveling.
- Other types of controls such as radio, infrared and cab controls are available.
- Contactors, fuses, transformers and other associated equipment are mounted in electrical cabinets to suit the applicable environment.
- All cranes are equipped with an emergency stop button that operates a mainline contactor shutting off the power to the crane.

### 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 Control
- Remote Control
- 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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