OverheadCraneKit.com
(800) 509-6131

Customer Quotation

Attn: Customer

Date	Quotation Number
4/1/2008	E2499

Name / Address	Ship To
OverheadCraneKit.com Customer	Customer Location

Invoice Terms	Delivery	Quote Valid Until	Quoted By
TBD	4-6 Weeks	4/30/2008	TRS

Qty	Item	Description	Each	Total
1.00	New Equipment	R&M 5 Ton Top Running Single Girder Crane Kit x 25'-0" Span- see attached specifications Bridge beam is not included in the pricing. Suggested bridge beam size: W14" x 61#/ft Taxes and freight charges are not included.	11,500.00	11,500.00T

Taxes and freight charges are not included

Subtotal	$11,500.00
Sales Tax (0.0%)	$0.00
Total	$11,500.00

OverheadCraneKit.com provides Quality Products, Competitive Pricing, Knowledgeable Support Staff, and Quick Deliveries. Call us at (800) 509-6131

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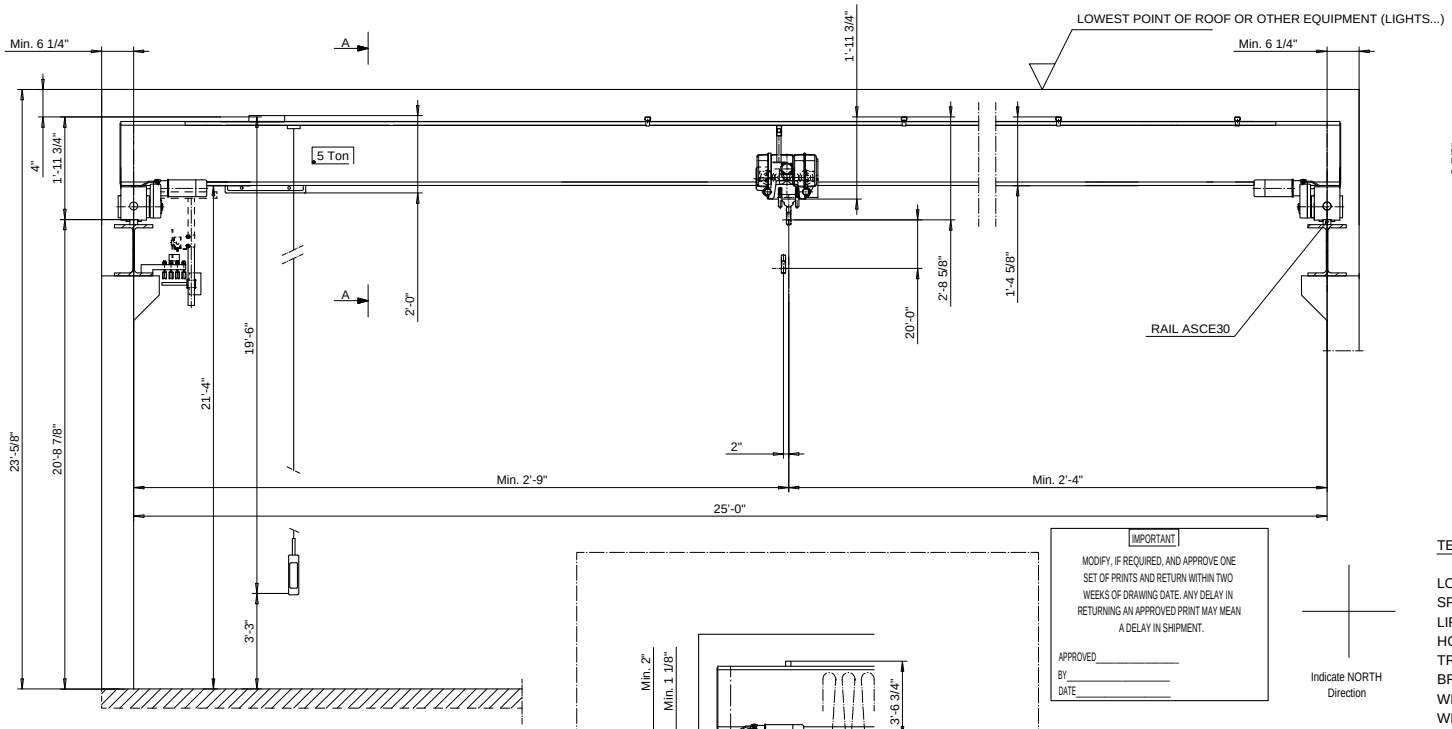
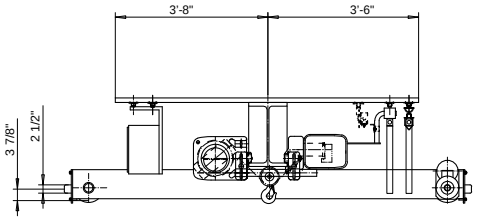
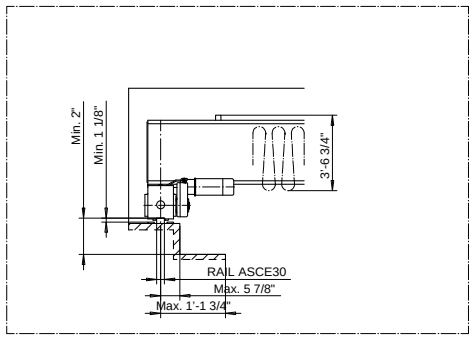




A - A



IMPORTANT

MODIFY, IF REQUIRED, AND APPROVE ONE SET OF PRINTS AND RETURN WITHIN TWO WEEKS OF DRAWING DATE. ANY DELAY IN RETURNING AN APPROVED PRINT MAY MEAN A DELAY IN SHIPMENT.

APPROVED_____

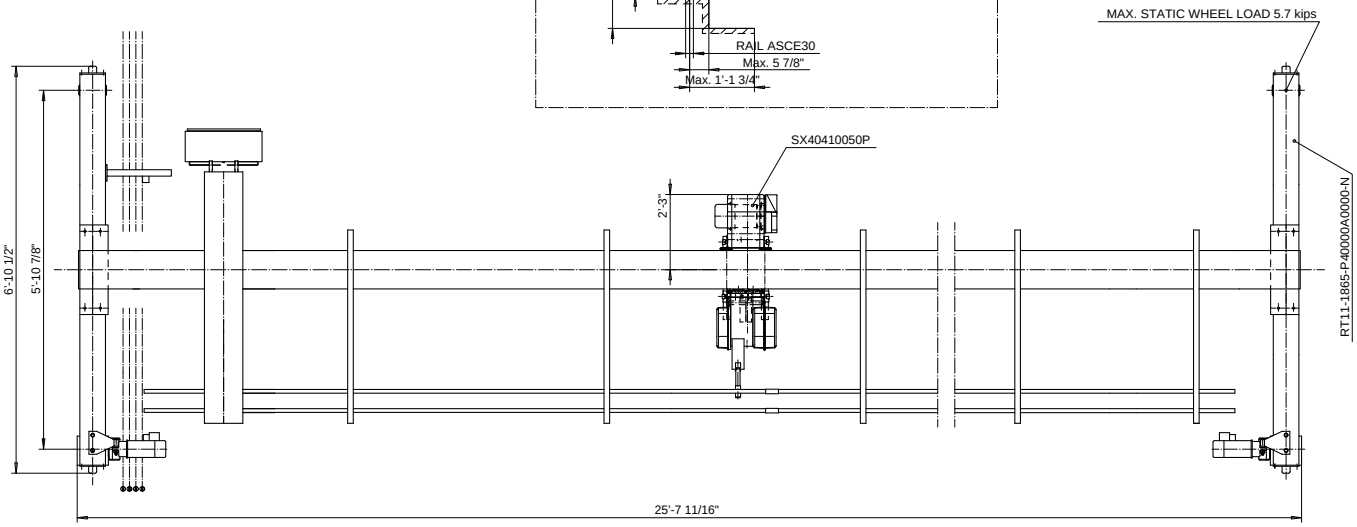
BY_____

DATE_____

Indicate NORTH Direction

TECHNICAL DATA

LOAD.....	5 Ton
SPAN.....	25'-0"
LIFTING HEIGHT.....	20'-0"
HOISTING SPEED.....	20/3.3 ft/min 2-SPEED
TROLLEY SPEED.....	65 ft/min STEPLESS
BRIDGE SPEED.....	100 ft/min STEPLESS
WEIGHT OF TROLLEY.....	820 lbs
WEIGHT OF BRIDGE.....	2400 lbs
POWER SUPPLY.....	460 V / 115 V / 60 Hz
CRANE GROUP.....	CMAA C



DRAWING NOT IN SCALE

TSC/RHK	4/1/2008
R&M MATERIALS HANDLING INC.	5 Ton QXS Crane
	Website_Crane_Kit

CRANE DATA

1 General

Crane type	QXSk5-TON x 25ft Hol:20.01ft	
Span	25'-0"	
Crane load (SWL)	10 000 lbs	
Number of hoists	1 ps	
Hoisting height	20'-0" (max 29'-6 5/16")	
Hoist type	SX40410050P35FCL0F	
Trolley rail gauge	N/A	
Crane use	Indoor	
Crane group	CMAA C	
Hoist group	ASME H4	
Hoist traversing group	CMAA C	
Bridge traveling group	CMAA C	
Hoisting speed	20/3.3 ft/min	2-speed
Trolley traversing speed	65 ft/min	stepless
Bridge traveling speed	100 ft/min	stepless
Dynamic coefficient for live load	1.15	
Dynamic coefficient for dead load	1.1	
Sideways pull factor	1.05	
Crane acceleration	0.82 ft/s²	
Weight of crane (with hoists)	3 230 lbs	
Weight of crane bridge (without hoists)	2 400 lbs	
Weight of one hoist and trolley	820 lbs	
Weight of one end carriage	210 lbs	
Weight of one crane traveling machinery	20 lbs	
Weight of bridge panel	60 lbs	
Weight of one main girder	1 560 lbs	
Weight of crane service platform	N/A	
Main girder type	Profile - W14x61-MatA992	

2 Electrical

Main voltage	460 V /60 Hz
Control voltage	115 V
Nominal power of crane	8.8 hp
Main fuse size at bridge panel	15 A
Maximum current of crane*)	52.8 A
Nominal current of crane*)	14.1 A
Power factor at starting current	0.78
Power factor at nominal current	0.93

Note! The maximum current of crane includes the starting current of hoisting motor(s) and nominal current of trolley and bridge traveling motors. The nominal current of crane includes the nominal current of hoisting, trolley and bridge motors. Maximum or nominal currents of crane do not include the currents of additional accessories, such as lamps, magnets etc.

END CARRIAGE AND TRAVELING MACHINERY DATA

1 General

Crane type	QXSk5-TON x 25ft Hol:20.01ft
Span	25'-0"
Crane load (SWL)	10 000 lbs

2 End carriage

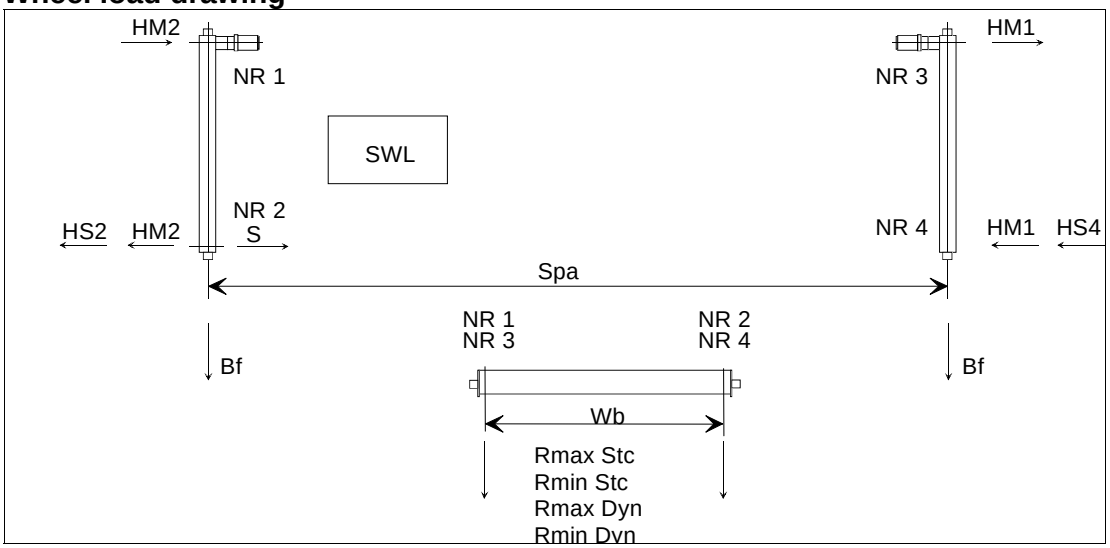
End carriage type	RT11-1865-P40000A0000-N
Bridge traveling group	CMAA C
Maximum static wheel load	5.7 kips
Maximum dynamic wheel load	6.5 kips
Maximum wheel load along rail	0.3 kips
CMAA Equivalent durability wheel load - Pe	4 882 lbs
CMAA Guide for max. durability wheel load - P	6 133 lbs > Pe
Wheel Hardness	280 BHN
Runway rail type	ASCE30
Wheel diameter	4 5/16"
Minimum allowed wheel diameter	4 5/16"
Wheel groove	2 9/16"
Calculated bearing life time	12 520 h > 5 000 h
Joint type	P-TOP-P_-STD-S
Buffer type	D1801
Buffer length	2 1/8"
Buffer diameter	2 1/2"
Buffer centre from top of crane rail	3 7/8"

3 Traveling machinery

Machinery type	GES342PS4BOF06MA200-6460N
Number of traveling machinery	2 ps
Nominal power of motor (High / Low Speed)	0.5 hp
Synchronized speed of motor (High / Low Speed)	3 600 / 0 r/min
Nominal speed of motor (High / Low Speed)	3 430 / 0 r/min
Nominal torque of motor (High Speed)	0.8 lbf-ft
Gear ratio	41.9
Nominal bridge speed (High / Low Speed)	100 ft/min stepless
Practical bridge speed (High Speed)	95 ft/min
Acceleration time	4.2 s (< 4.5 s)
Electrical braking distance	4'-1 11/16"
Mechanical braking distance	1'-7/8"
Thermal loading per motor	0.26 hp
Number of starts per hour	N/A
Torque margin	1.64 (>=1)
Power margin	1.91 (>=1)

CRANE WHEEL LOAD DATA

1 Wheel load drawing



2 Crane information

Crane type	QXSk5-TON x 25ft Hol:20.01	Buffer type	D1801
Span (Spa)	25'-0"	Wheel base (Wb)	5'-10 7/8"
Load (SWL)	10 000 lbs	Crane rail in calculation	ASCE30
Hoist type	SX40410050P	Wheel groove	2 9/16"
Hoist group	ASME H4	Crane group	CMAA C
Hoisting speed	20/3.3 ft/min	Crane speed	100 ft/min
Crane weight	3 230 lbs	Crane travel limit switch	1-step

3 Vertical wheel loads

Wheel	NR1	NR2	NR3	NR4
Rmax Stc	5.7 kips	5.4 kips	-	-
Rmin Stc	-	-	1.1 kips	1 kips
Rmax Dyn	6.5 kips	6.1 kips	-	-
Rmin Dyn	-	-	1.3 kips	1.1 kips

4 Horizontal wheel loads (according to DIN 4132 + 15018 and FEM)

4.1 Inertia forces (from driving mechanisms)	HM1 = 0.1 kips	HM2 = 0.6 kips
4.2 Wheel loads along crane runway		0.3 kips
4.3 Buffer force for dimensioning the crane runway end stop		Bf = 3 kips
4.4 Forces coming from skewing		
4.4.1 Guiding (contact) force (S= HS2 + HS4)		S = 2.1 kips
4.4.2 Friction forces due to oblique travel	HS2 = 1.8 kips	HS4 = 0.3 kips

ELECTRICAL COMPONENT DATA

1 General

Crane type	QXSk5-TON x 25ft Hol:20.01ft
Crane main / control voltage	460 V /60 Hz / Control 115 V
Nominal power of crane	8.8 hp
Maximum / nominal current of crane*)	52.8 A / 14.1 A
Power factor at starting / nominal current	0.78 / 0.93

2 Bridge panel

Bridge panel type	BPP3-1QQ400-76J0
Bridge panel length / weight (preliminary)	2'-0" / 60 lbs
Main fuse size at bridge panel	15 A

3 Hoist speed control

Type	2 - speed
Voltage	460 V
Control method / Location	2 - step / Trolley panel

4 Trolley speed control

Type	CMXC007FXXT00, stepless
Voltage	460 V
Control method / Location	EP / Trolley panel
Adjusted acceleration time	3.4 s
Nominal current margin (max. allowed / required)	1.4
Maximum current margin (max allowed / required)	1.8

5 Bridge speed control

Type	CMXC022FXXTN0, stepless
Voltage	460 V
Control method / Location	EP / Bridge panel
Adjusted acceleration time	4.5 s
Nominal current margin (max. allowed / required)	2.4
Maximum current margin (max allowed / required)	2.9

6 Trolley power supply (festoon)

Type	QQSMS12L4BP376076
Hoist main power cable type	FC0804 FLAT
Distance between cable trolleys	6'-0"
Cable trolley type	KC-023571
Free cable length at bridge panel end	16'-5"
Free cable length at hoist panel end	8'-2"

7 Crane control

Pendant type	PBR082221C00-N058PE30
Pendant cable length	19'-0"
Remote control type	N/A
Radio frequency	N/A
Control method	Pendant - 2 step push-button

Note! The maximum current of crane includes the starting current of hoisting motor(s) and nominal current of trolley and bridge traveling motors. The nominal current of crane includes the nominal current of hoisting, trolley and bridge motors. Maximum or nominal currents of crane don't include currents of additional accessories (e.g. lamps, magnets etc.)

MOTOR DATA

1 General

Crane type	QXSk5-TON x 25ft Hol:20.01ft
Span	25'-0"
Crane load (SWL)	10 000 lbs
Crane voltage	460 V

2 Hoisting motor

Motor code	P3
Motor voltage	460 V
Motor type	MF10X-106
Number of hoists	1 ps
Synchronized speed	3 600 / 600 r/min
Duty group	ASME H4
Nominal power	7.2/1.2 hp
Duty factor	60 % ED
Starting torque (High Speed)	25.1 lbf-ft
Starting current (High Speed)	49 A
Nominal current (High Speed)	10.3 A
Power factor at starting current	0.78
Power factor at nominal current	0.93

3 Trolley traversing motor

Motor type	MF06LA200
Motor voltage	364 V
Number of motors	1 ps
Synchronized speed	3 000 / 0 r/min
Nominal speed	2 690 / 0 r/min
Duty group	CMAA C
Nominal power	0.6 hp
Duty factor	40 % ED
Starting torque (High Speed)	5.2 lbf-ft
Starting current (High Speed)	2 A
Nominal current (High Speed)	1.7 A

4 Bridge traveling motor

Motor type	MF06MA200
Motor voltage	460 V
Number of motors	2 ps
Synchronized speed	3 600 / 0 r/min
Nominal speed	3 430 / 0 r/min
Duty group	CMAA C
Nominal power	0.5 hp
Duty factor	40 % ED
Starting torque (High Speed)	2.1 lbf-ft
Starting current (High Speed)	1.3 A
Nominal current (High Speed)	1.1 A

Note! The supplied motor data plates have typically power and current values labeled for 40%ED (S3). Therefore the data plate values might vary from the above-calculated actual values, which are based on the actual use and duty group of the crane.

MAIN GIRDER DATA

1 Main girder data

Crane type ..... QXSk5-TON x 25ft Hol:20.01ft
Main girder type ..... Profile - W14x61-MatA992
Flange width (B__) ..... 10"
Girder height (H__) ..... 1'-1 7/8"
Girder material: ..... 50 ksi
Trolley rail type ..... N/A
Crane service platform type ..... N/A

2 Main girder (and service platform) weights

Number of main girders ..... 1 ps
Weight of one main girder / length unit ..... 61 lbs/ft
Weight of one main girder ..... 1 560 lbs
Weight of crane service platform ..... N/A

3 Main girder deflection

Vertical deflection (due to load and trolley own weight) 5/16" < 11/32"

4 Main girder drawing