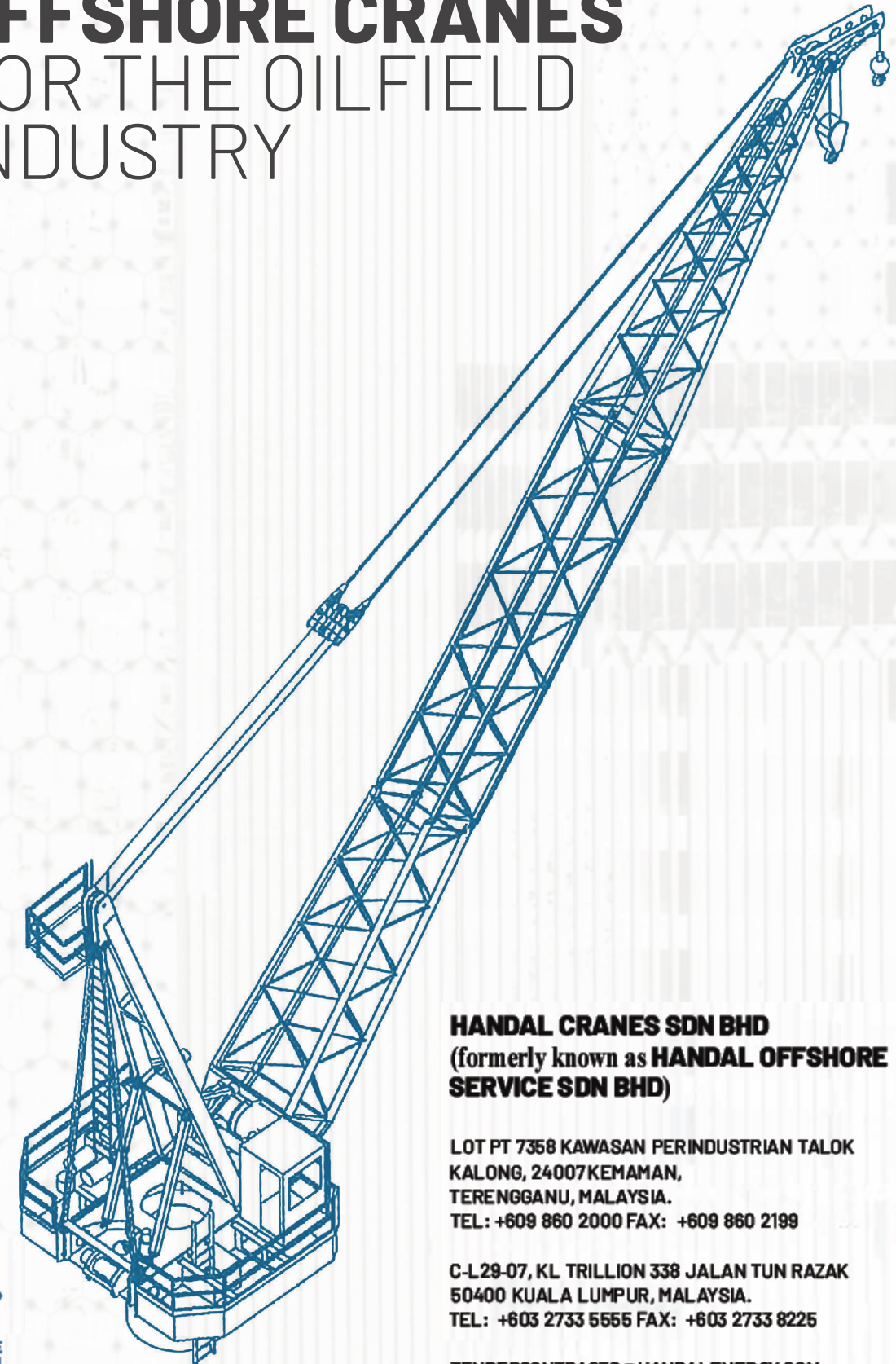


HANDAL

R550

OFFSHORE CRANES
FOR THE OILFIELD
INDUSTRY



HANDAL CRANES SDN BHD
(formerly known as **HANDAL OFFSHORE**
SERVICE SDN BHD)

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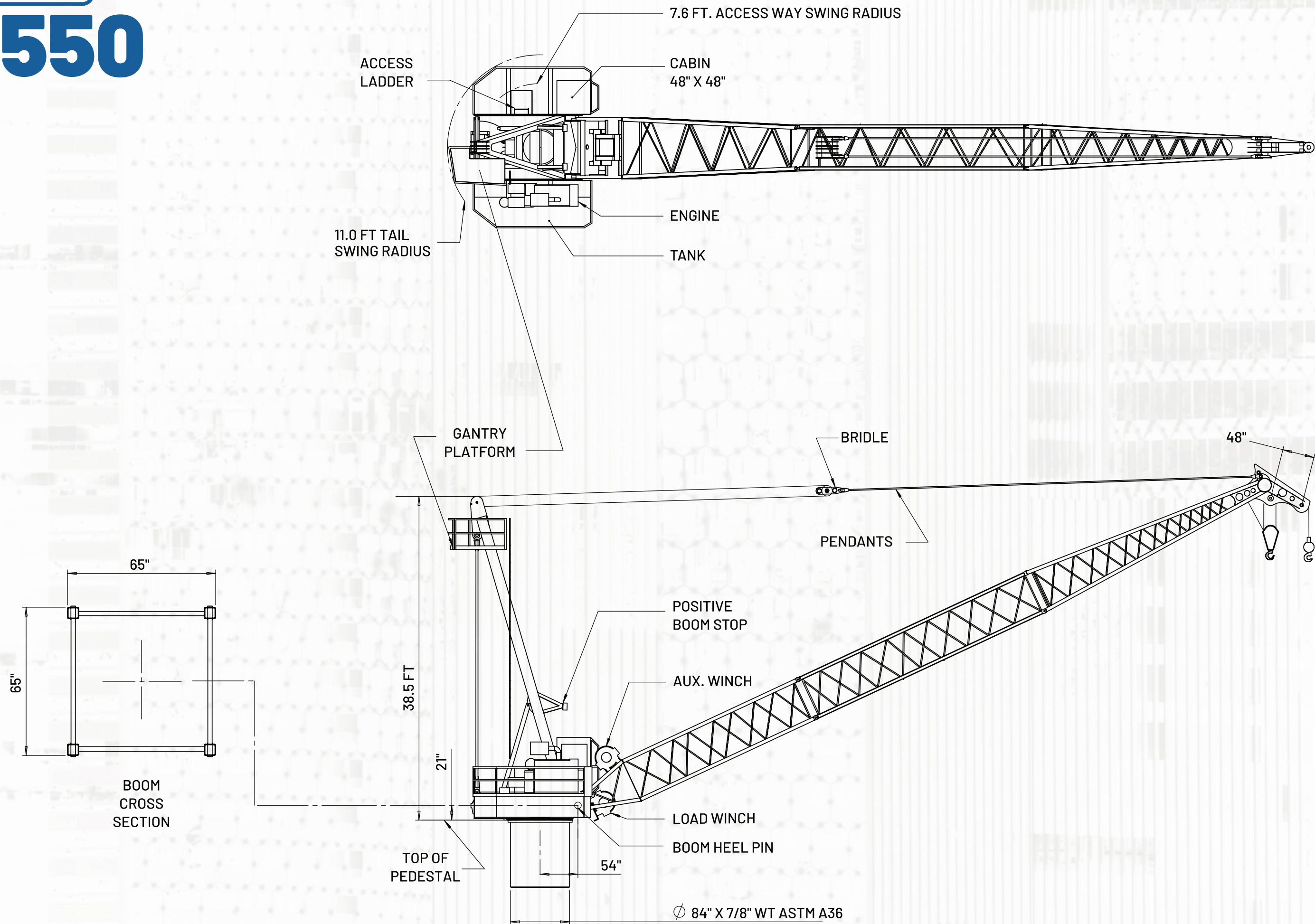
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LICENSE
2C-0130

HANDAL R550



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TECHNICAL SPECIFICATIONS

HANDAL R550

R550

CRANE - TYPE

Pedestal mounted, precision slewing ring, rope luffing, lattice boom, pin-on gantry.

APPLICATION

Designed for offshore applications. Constructed & rated to API 2C specifications.

NOMINAL REACH CAPACITY

55K lb. at 55 ft radius.

SWING - FINAL DRIVE External spur gear with low backlash and high precision. 360 continuous rotation.
DRIVE TRANSMISSION High torque hydraulic motor, fully enclosed planetary gear reduction, fail-safe multidisk wet static brake. 4:1 safety factor exceeds API 2C.
CAPACITY 173,400 ft-lb X 1 after accounting for friction in drive. Multiple drives recommended for floating applications.
SPEED @ FLOW 1 RPM @ 27 GPM X 1 swing circuit flow after accounting for motor slip.
MOTOR PRESSURE 3000 PSI Limit pressure.

SWING CIRCLE ASSEMBLY Sealed high precision anti-friction, 4 point contact single row ball bearing. High API 2C swing circle strength factor standard. Bearing balls mounted in-line with pedestal wall to minimize flange & raceway prying and maximize joint strength.
BOLTING Heavy duty bolting to sustain clamping under the highest crane loads - for maximum strength and life. Precision pre loading with no special tools required. 1 3/8" SAE J429 strength grade 8, impact toughness per API 2C, anti corrosion coating.

PEDESTAL Precision machined flange. Flange meets DNV thickness requirements and API lamination quality requirements. Joined with full penetration butt welds.
BARREL 84" OD, 3/8" Wall thickness, ASTM A36 material

BOOM CONSTRUCTION Medium strength square tubing chords. Mild steel tubular lacing. Construction provides for maximum strength / economy and ease of repair
LIQUID CAPACITY 200 gallons fuel, 550 gallons hydraulic oil.

MARINE DUTY Seal welding to suit harsh offshore environment, 3 coat marine paint system. Drive components and brakes are sealed and running in oil. Centralized anti-pollution spill containment provided below decking & machinery.

LUFFING - TYPE Rope luffing. Bridle & pendant lines ease change of boom length and minimize amount of replacement running rope.
ROPE 3/4" Dyform 6 rope for higher strength and crush resistance.
SHEAVE DIAMETER 15"
LINE FALLS 10
SPEED @ FLOW 2 minutes min. to radius @ 108.2 GPM. Limit flow 170 GPM.
MOTOR PRESSURE Max working pressure 2280 PSI. Limit pressure 2900PSI
ROPE FLEET ANGLE 1.5 degrees.
MIN BOOM ANGLE 0 degrees working, minus 10 degrees for maintenance.
MAX BOOM ANGLE 81 degrees working limit, 83 degrees to positive stop.
PENDANT - ROPE TYPE 6 x 19 XIP for economy
ROPE SIZE 1 5/8"
LINE FALLS 2

LUFFING WINCH Approved for personnel lifting. Self contained. Integral brake test hardware.
AUX. HOLDING MECHANISM Ratchet & pawl; remains engaged in up luffing, auto releases on boom lowering.
WINCH TRANSMISSION High speed hydraulic motor. Fully enclosed planetary gear reduction, fail-safe multidisk wet static brake. Brake remains engaged during raising mode.
WINCH CONTROL Power controlled lowering - automatic hydraulic dynamic braking with brake valve requiring power to lower load; no free fall or friction brake lowering.
DRUM 12. 3/4" diameter. 29 wraps remain on drum.

ROPE REEVING Nylon sheaves with sealed anti friction bearings. Retainers prevent rope from leaving sheave groove. Idler sheaves limit fleet angle to 1.5 degrees for optimum spooling. Minimum 18:1 pitch ratio. No reverse bending of ropes for maximum life heavy hook weight to prevent rope fouling at winch and at sheave.
QUALITY Official API 2C Monogram. API Q1& ISO 9001 quality standards. Material fully traced. Welding to AWS D1.1. Thorough NDE and testing.

RADIUS (Ft)	MAXIMUM SWLH - ONBOARD LIFT BOTTOM SUPPORTED CRANE BASE API SPEC 2C 7 TH								
	70 FT BOOM	80 FT BOOM	90 FT BOOM	100 FT BOOM	110 FT BOOM	120 FT BOOM	130 FT BOOM	140 FT BOOM	
Minimum	122,000	122,000	122,000	122,000	122,000	116,500	102,500	88,500	
20	122,000	122,000	-	-	-	-	-	-	
25	122,000	122,000	122,000	122,000	122,000	-	-	-	
30	122,000	122,000	122,000	115,400	107,100	100,300	94,500	-	
35	104,000	103,900	103,800	100,400	93,300	87,400	82,200	77,700	
40	89,400	89,300	89,200	89,000	83,100	77,900	73,300	69,200	
45	78,300	78,200	78,100	78,000	75,200	70,600	66,400	62,600	
50	69,700	69,600	69,500	69,300	68,900	64,800	60,900	57,400	
55	62,700	62,600	62,500	62,400	61,900	59,900	56,400	53,100	
60	57,000	56,900	56,800	56,700	56,000	55,700	52,500	49,600	
65	52,200	52,100	52,000	51,700	51,100	50,800	49,200	46,500	
70	48,200	48,100	47,900	47,500	46,900	46,700	46,200	43,900	
75	-	44,600	44,300	43,900	43,300	43,100	42,600	42,200	
80		41,400	41,100	40,800	40,200	39,900	39,500	39,000	
85		-	38,300	38,000	37,400	37,200	36,700	36,300	
90			35,800	35,500	34,900	34,600	34,200	33,800	
95			-	33,200	32,600	32,400	32,000	31,600	
100				31,200	30,600	30,400	30,000	29,600	
105				-	28,800	28,600	28,200	27,700	
110					27,100	26,900	26,500	26,100	
115					-	25,400	25,000	24,600	
120						24,000	23,600	23,200	
125						-	22,300	21,900	
130							21,100	20,700	
135							-	19,600	
140								18,500	
MAX	40,000	34,500	29,900	25,900	22,100	19,500	17,000	14,600	
Foundation reactions	Max thrust (Lb)	294,600	295,849	298,885	300,138	301,825	294,384	273,932	252,476
	@ moment (Lb-Ft)	6,837,333	6,853,256	6,869,985	5,739,527	5,759,273	5,564,704	5,339,939	5,382,240
	Max mom. (Lb-Ft)	7,285,932	7,300,809	7,302,034	7,297,530	7,273,803	7,258,049	7,217,306	7,179,568
	@ thrust (Lb)	170,217	164,283	181,977	182,653	183,185	183,435	175,538	168,818
Ref:		R550_70 BOT_legacy_on	R550_80 BOT_legacy_on	R550_90 BOT_legacy_on	R550_100 BOT_legacy_on	R550_110 BOT_legacy_on	R550_120 BOT_legacy_on	R550_130 BOT_legacy_on	R550_140 BOT_legacy_on

SWL = SWLH less Weight of hook block. Actual SWL is typically lower due to sea state, wind and hoisting system utilized. SWL ratings and foundation reactions are per API Spec 2C 7th Ed with a bottom supported crane base and zero wind conditions. Method used is general method for onboard case and legacy method for offboard case.

APPROXIMATE SHIPPING DATA		
Components	Weight (lb)	Volume ft x ft x ft
Pedestal	1100 + 890 x L	L x 7.7 x 7.7
Upper	21,400	14.2 x 8.0 x 3.4
Gantry fore	5,700	37.1 x 7.5 x 5.3
Gantry aft	2,250	31.2 x 7.3 x 0.7
Gantry braces	420	11.4 x 0.8 x 1.6
Bridle	400	1.6 x 1.9 x 2.7
Boom heel	12,000	30.9 x 7.4 x 6.0
Boom mid	137 x L	L x 5.5 x 5.5
Boom tip	5,100	34.1 x 5.5 x 7.7
Pendants + hook blocks	3,200	5.0 x 5.0 x 5.0
Gantry platform	700	7.6 x 4.6 x 4.0
Cabin / deck	5,700	15.0 x 6.5 x 9.5
Power unit / deck	9,600	14.2 x 6.0 x 9.5
Aft deck	1,600	17.5 x 2.5 x 6.0
Ladders - access & gantry	600	20.0 x 2.0 x 2.0
Accessories	varies	varies

L = Length in feet. Weight includes machinery. For illustrated configuration m001126a.
R550_wt_dim_revA

L = LENGTH IN FEET.
WEIGHT INCLUDES MACHINERY.
FOR ILLUSTRATED CONFIGURATION.

Ratings shown are maximum per API Spec 2C Ed. @ c_b = 1.33, 0 wind speed, 0° offlead, 0° sidelead & level fixed foundation. Actual ratings are typically lower due to optional hoist system limitations or dynamic conditions. Deduct the hook block weight to determine the lifting capacity. Foundation reactions are based on dead load plus live load x 1.5 x c_b.