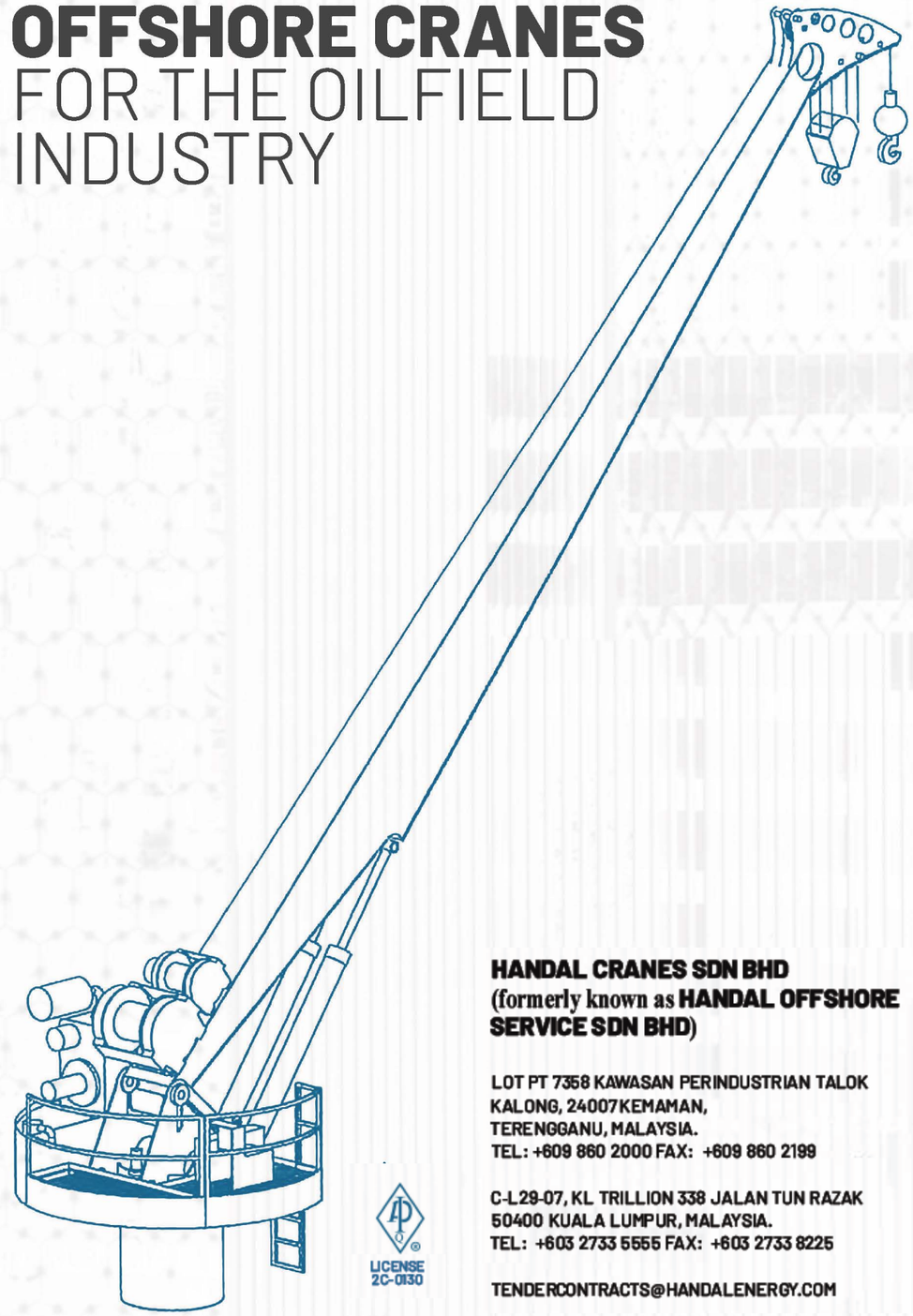
HANDAL

K30

OFFSHORE CRANES
FOR THE OILFIELD
INDUSTRY



LICENSE
2C-0130

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

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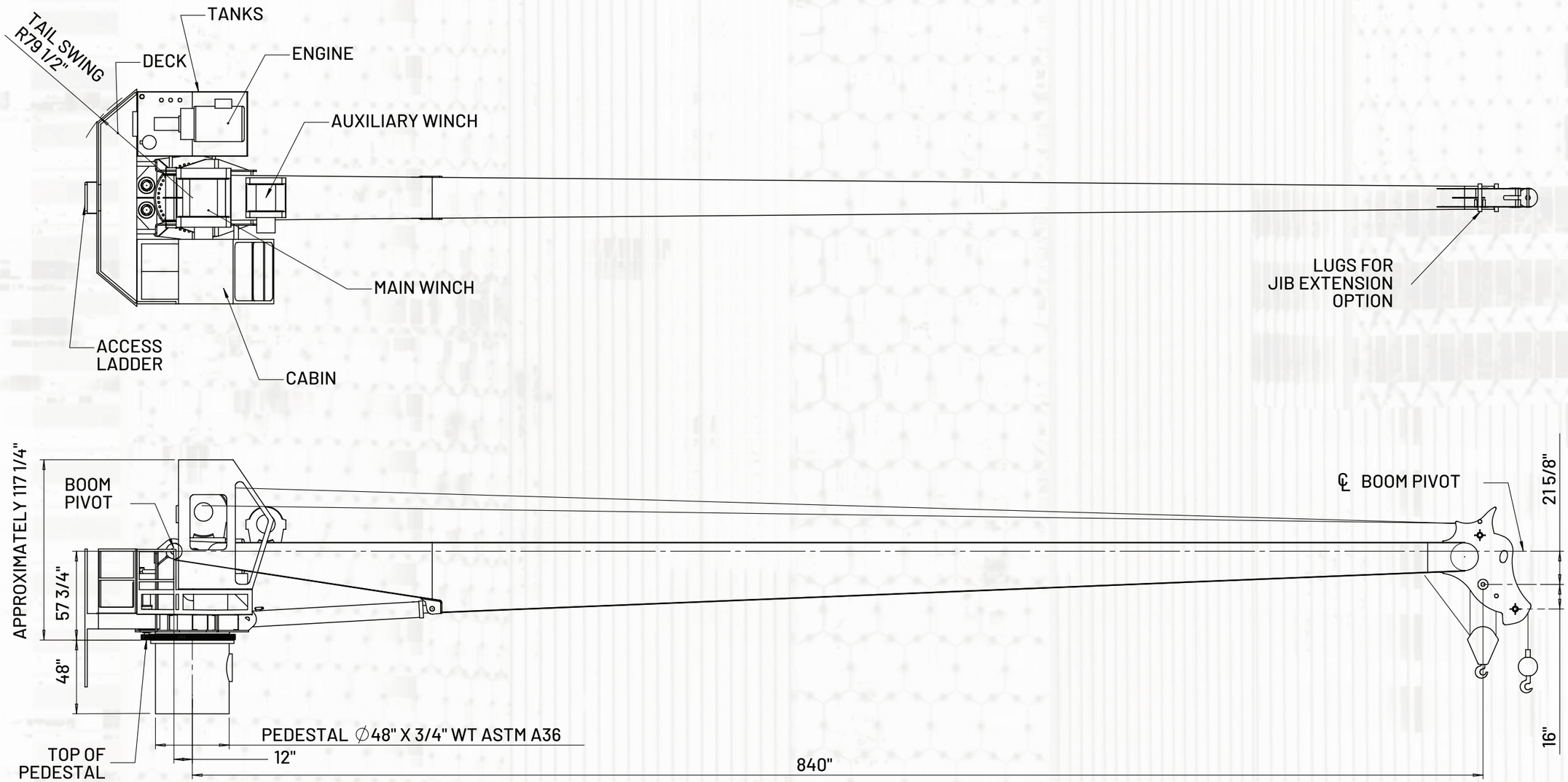
TAIL SWING
R79 1/2"
TANKS
DECK
ENGINE
AUXILIARY WINCH
MAIN WINCH
ACCESS
LADDER
CABIN
LUGS FOR
JIB EXTENSION
OPTION
APPROXIMATELY 117 1/4"
BOOM
PIVOT
57 3/4"
48"
TOP OF
PEDESTAL
PEDESTAL ∅48" X 3/4" WT ASTM A36
12"
840"
℄ BOOM PIVOT
21 5/8"
16"

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TECHNICAL SPECIFICATIONS

CRANE - TYPE

Pedestal mounted, precision slewing ring, ram luffing, box boom.

APPLICATION

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

NOMINAL REACH CAPACITY

30K lb. at 30 ft radius.

LOAD HOOK - MAXIMUM CAPACITY	45 short tons.
MAXIMUM ROPE SIZE	3/4"
SHEAVE DIAMETER	15"
MAXIMUM LINE FALLS	8
WINCH MOUNTING	On boom – eliminates two blocking by luffing down; frees deck space.

AUXILIARY HOOK - MAX. CAPACITY	5 short tons.
MAXIMUM ROPE SIZE	3/4"
SHEAVE DIAMETER	15"
MAXIMUM LINE FALLS	1
WINCH MOUNTING	On boom – eliminates two blocking by luffing down; frees deck space.

SWING – FINAL DRIVE	External spur gear with low backlash and high precision.
DRIVE TRANSMISSION	360 continuous rotation. High torque hydraulic motor, fully enclosed planetary gear reduction, fail-safe multidisk wet static brake. 4:1 safety factor exceeds API 2C.
CAPACITY	54,900 ft-lb X 1 after accounting for friction in drive. Multiple drives recommended for floating applications.
SPEED @ FLOW	1 RPM @ 9.8 GPM X 1 swing circuit flow after accounting for motor slip.
MOTOR PRESSURE CONTROL	2750 PSI Limit pressure. Automatic hydraulic dynamic braking with auto set static brake or free swing with manual set static brake.
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 1/8" 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	48" OD, ¾" Wall thickness, ASTM A36 material - minimum.
LIQUID CAPACITY	100 gallons fuel, 200 gallons hydraulic oil. For illustrated close radius 130 HP configuration with on-board diesel power & "open" control station.

LUFFING – TYPE	Hydraulic ram luffing.
RAM	Dual rams, double acting.
BORE	8"
ROD	Hard chrome plated rod.
SPEED @ FLOW	1½ minutes min. to max. angle @ 25 GPM. Limit flow 50 GPM.
PRESSURE	Max working pressure 2400 PSI. Limit pressure 3000 PSI
MIN BOOM ANGLE	0 degrees to positive stop.
MAX BOOM ANGLE	83 degrees to positive stop.
AUX. HOLDING MECHANISM	Hydraulic lock valve directly mounted to cylinder.
CONTROL	Power controlled lowering – automatic hydraulic dynamic braking with lock valve requiring power to lower load; no free fall or friction brake lowering.
BOOM CONSTRUCTION	Mild steel, HSLA or constructional alloy depending upon boom length. Longitudinal Internal stiffeners @ bottom flange to preclude local buckling and ensure proper strength factors. Internal vertical web stiffeners to resist web buckling. Tapered construction provides for maximum strength / minimum weight. Fully seal welded.
ROPE REEVING	Nylon sheaves with sealed anti friction bearings. Retainers prevent rope from leaving sheave groove. Rope guides with polymer rub strips provided as needed on boom. Fleet angle limited to 1½ 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.
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.
QUALITY	Official API 2C Monogram. API Q1& ISO 9001 quality standards. Material fully traced. Welding to AWS D1.1. Thorough NDE and testing.

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RADIUS (Ft)		MAXIMUM SWLH - ONBOARD LIFT BOTTOM SUPPORTED CRANE BASE API SPEC 2C 7TH					
		30 FT BOOM	40 FT BOOM	50 FT BOOM	60 FT BOOM	70 FT BOOM	80 FT BOOM
Minimum		89,100	90,300	91,000	91,000	84,000	63,900
5		88,600	89,900	-	-	-	-
10		83,900	81,900	83,400	85,400	82,600	-
15		68,000	62,600	62,400	59,700	57,600	56,200
20		50,600	49,800	49,000	46,600	44,500	43,300
25		40,400	40,000	39,700	38,600	36,600	35,400
30		30,200	33,100	32,800	32,000	31,100	29,900
35		-	28,100	27,900	27,000	26,200	25,900
40			21,200	24,100	23,200	22,400	22,100
45			-	21,100	20,300	19,500	19,100
50				15,900	17,900	17,100	16,800
55				-	16,000	15,100	14,800
60					11,800	13,500	13,200
65					-	12,200	11,900
70						8,700	10,700
75						-	9,600
80							6,600
Max		26,300	18,900	14,400	10,700	7,900	6,000
Foundation reactions	Max thrust (Lb)	194,412	197,905	200,181	203,047	193,840	160,006
	@ moment (Lb-Ft)	784,488	795,436	1,224,315	1,443,062	1,554,904	1,402,351
	Max moment (Lb-Ft)	2,086,149	2,080,620	2,077,323	2,056,348	2,034,450	2,025,972
	@ thrust (Lb)	106,169	93,115	83,855	94,900	95,554	86,226
Ref:		K30_30_BOT_legacy_on	K30_40_BOT_legacy_on	K30_50_BOT_legacy_on	K30_60_BOT_legacy_on	K30_70_BOT_legacy_on	K30_80_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

Component	Weight (lb)	Volume ft x ft x ft
Pedestal	460 + 380 x L	L x 4.6 x 4.6
Turret	5,200	6.8 x 4.8 x 5.0
Ram (2)	2,600	2.0 x 8.3 x 1.1
Boom – 30 ft	5,300	2.6 x 6.0 x 33.1
– 40 ft	6,100	2.6 x 6.0 x 43.1
– 50 ft	7,200	2.6 x 6.0 x 53.1
– 60 ft	9,300	2.6 x 6.0 x 63.1
– 70 ft	12,400	2.6 x 6.0 x 73.1
– 80 ft	13,500	2.6 x 6.0 x 83.1
Hoists/ropes/hook	5,900	5.0 x 5.0 x 6.0
Control station / deck	1,600	7.0 x 9.5 x 4.2
AFT deck	700	12.5 x 3.2 x 5.9
Engine deck	3,100	5.2 x 9.3 x 7.6
Ladder – access	100	8.0 x 2.0 x 0.8
Fuel + oil	2,300	150 gal + 350 gal
Accessories	varies	varies

L = Length in feet. Weight includes machinery.
For illustrated configuration m001109.
K30_wt_dim_revA

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

Foundation reactions based on dead load plus live load x 1.5 x c_b.

Ratings shown are per API Spec 2C.7th 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 weight of the hook block to determine the lifting capacity.