

P&H 9150-TC

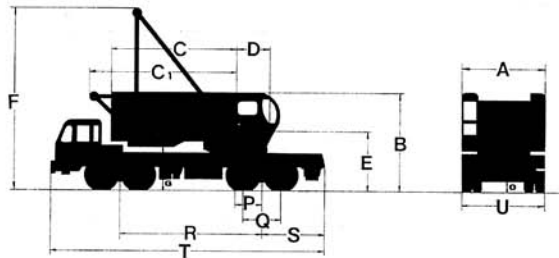
150-TON TRUCK CRANE

88.39 m Boom

82.30 m Boom + 18.29 m Jib

(Preliminary Specifications)

GENERAL DIMENSIONS



	Meters	Ft. & Ins.
A—Width of cab	3.40	(11-1 $\frac{1}{2}$)
B—Height to top of cab	4.02	(13-2 $\frac{1}{2}$)
C—Radius of rear end (counterweight)	5.14	(16-11 $\frac{1}{2}$)
C ₁ —Radius of rear end (gantry folded)	5.90	(19-4 $\frac{1}{2}$)
D—Center of rotation to boom foot pin	1.365	(4-5 $\frac{1}{2}$)
E—Height from ground to boom foot pin	2.44	(8-0)
F—Clearance height over gantry (raised)	7.30	(23-11 $\frac{1}{2}$)
G—Counterweight ground clearance	1.80	(5-10 $\frac{1}{2}$)
O—Ground clearance (rear axle housing)	0.28	(0-11)
P—Center of rotation to rear bogie	1.07	(3-6 $\frac{1}{2}$)
Q—Distance between rear axle	1.52	(4-11 $\frac{1}{2}$)
R—Wheelbase	5.84	(19-1 $\frac{1}{2}$)
S—Center of rear bogie to rear of carrier	2.65	(8-8 $\frac{1}{2}$)
T—Overall length of carrier with outriggers	11.30	(37- $\frac{3}{4}$)
U—Overall width of carrier (outside of tires)	3.37	(11- $\frac{1}{2}$)



SPECIFICATIONS

UPPER MACHINERY



POWER PLANT:

Diesel: Mitsubishi 8DC60C, 8 cyl. 230 hp @ 2,000 rpm

TORQUE CONVERTER: Niigata CBSO-100, 3 stage—with tail shaft governor.

FUEL TANK 416 lt (109.9 gal.)



BOOM HOIST ASSEMBLY: Independent planetary gear type with external ratchet and automatic brake provides for raising or lowering boom under power and locking boom. Single internal expanding band type clutch, external

contracting "full wrap" design brake with grooved double drums mounted on anti-friction bearings.

Line Speed (based on torque converter out-put shaft at 1,200 rpm)

Hoisting (1st layer) 21 m/min (68.9 fpm)

Lowering (1st layer) 14 m/min (45.9 fpm)



MAIN DRUM ASSEMBLY: Drums in tandem, mounted on anti-friction bearings. Cast grooves. Clutches—band type, internal expanding, separate clutch for each machine function.

Brakes—(Front and rear drums)—band type external contracting—full wrap—with hydraulic set brake and with additional spring set hydraulically operated fail safe brake and external ratchet for locking drum.

(Front and rear planetary drums)—band type full wrap—external contracting.

Drum Cable Dia. 28 mm (1 1/8")

Line Speed (based on torque converter out-put shaft at 1,200 rpm)

Hoisting (1st layer) 52 m/min (170.6 fpm)

Lowering (1st layer) 30 m/min (98.4 fpm)



SWING UNITS: Swing motion through two electro-magnetic "Magnetoque" units.

TYPE OF FASTENING TO LOWER: Six adjustable hook rollers—one double front, two double rear.

SWING ROLLERS 40 rollers, live roller circle.

SWING GEAR:

Internal cut teeth 1,880 mm (74") pitch dia.

SWING BRAKE: External band type, spring set, hydraulic release.

ROTATING SPEEDS 2.8 rpm



CONTROLS Full flow power hydraulic.

COUNTERWEIGHT: Three piece, external mounted cast construction pin connected.

Total weight..... 32,600 kg (71,870 lbs.)

Removable with gantry and boom hoist (optional extra).

SAFETY DEVICES: Crane hook over hoist alarm, Boom over hoist limit, Boom angle indicator, Signal horn, Boom hoist drum lock, Front and rear hoist drum lock, Swing lock, Boom backstop.

CARRIER

MAKE AND MODEL P&H KS-150

TYPE 8x4 Truck crane carrier

WEIGHT: Including turret and hydraulic outriggers, with standard tires approx. 35,500 kg (78,260 lbs.)



HYDRAULIC OUTRIGGERS: Eight (8) double acting hydraulic cylinders provide independent horizontal and vertical movement of each beam, solenoid valve controlled.

OUTRIGGER HOUSINGS

..... Two independent housings.

OUTRIGGER BEAMS: Welded box section of high tensile strength steel.

POWER PLANT:

Diesel: Mitsubishi 10DC60A, 10 cyl.... 375 hp @ 2,500 rpm

CLUTCH Single dry plate

TRANSMISSION:

MAIN: 5 speed forward plus reverse. AUXILIARY: 4 speed.



STEERING: Recirculating ball screw type with hydraulic power booster.

SERVICE BRAKES..... Air on all eight wheels.

PARKING BRAKES: Internal expanding duo-servo shoe type acting on drum at aux. transmission case rear.

SUSPENSION: FRONT: Laminated spring with torque rod. REAR: Equalizer beam with torque rod.

TIRES Twelve, 14:00x24—24 ply

FUEL TANK 300 lt (79.3 gal.)

ELECTRIC SYSTEM 24 volt, negative ground

CAB: Steel, one man type, offset left side engine.

PERFORMANCE:

Maximum travel speed..... 65 km/h (40.4 mph)

Percent grade..... 36%

Minimum turning radius 12 m (39'-4 7/8")

CRANE GENERAL DATA

HEAVY DUTY BOOM: Tubular high tension steel chords, lattice construction, pin connected. Extendible up to 51.82 m (170').

Length—boom base section 7.62 m (25')

—boom tip section 7.62 m (25')

Open throat, 1,905 mm (6'-3") deep x 2,032 mm (6'-8")

wide cross section with seven boom point sheaves offset from centerline, on anti-friction bearings, pitch dia.

..... 616 mm (26 1/4")

LIGHT DUTY BOOM: Tubular high tension steel chords, lattice construction pin connected. Extendible up to 88.39 m (290')

Length—boom base section 7.62 m (25')

—boom tip section 10.67 m (35')

Open throat, 1,905 mm (6'-3") deep x 2,032 mm (6'-8")

wide cross section with three boom point sheaves offset from centerline, on anti-friction bearings, pitch dia.

..... 616 mm (26 1/4")

BOOM INSERT: Insert length

..... 3.05 m (10'), 6.10 m (20'), 9.14 m (30), 12.19 m (40')

12.19 m (40') boom insert will be used for boom length

57.91 m (190') and over.

JIB: Tubular high tension steel chords, lattice construction.

Basic length, pin connected in two section 6.10 m (20')

Jib cross section with one boom point sheave on anti-friction bearings.

Insert length 3.05 m (10'), 6.10 m (20')

Maximum jib length 18.29 m (60')

Jib cannot be extended on heavy duty boom.

HOOK BLOCK: 150 ton, seven sheaves with swivel hook.

65 ton, three sheaves with swivel hook. 25 ton, single sheave

with swivel hook. 13.5 ton, ball hook.

BOOM HOIST REEVING: 16 parts of line—spreader sheaves on anti-friction bearings.

POWER CONTROLLED LOAD LOWERING: Planetary gear type power lowering with external contracting clutch band. Applicable to front and rear drums, standard.

GANTRY: High gantry lowers automatically toward rear into cab roof recess, two positions, full up and full down. Hydraulic gantry assist life cylinders.

MAST GANTRY: 9.75 m (32') length, two legs rectangular box section. Mast foot 355 mm (14") above boom foot to allow close coupling of mast and boom base. Required for all boom.

BOOM BACKSTOP: Telescopic type with spring bumper.

WORKING WEIGHT 100,000 kg (220,460 lbs.)

Including three counterweight, 15.24 m (50') heavy duty boom and seven sheave hook block.

SPECIFICATIONS

UPPER MACHINERY



POWER PLANT:

Diesel: Mitsubishi 8DC60C, 8 cyl. 230 hp @ 2,000 rpm

TORQUE CONVERTER: Niigata CBSO-100, 3 stage—with tail shaft governor.

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BOOM HOIST ASSEMBLY: Independent planetary gear type with external ratchet and automatic brake provides for raising or lowering boom under power and locking boom. Single internal expanding band type clutch, external

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SWING ROLLERS 40 rollers, live roller circle.

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Internal cut teeth 1,880 mm (74") pitch dia.

SWING BRAKE: External band type, spring set, hydraulic release.

ROTATING SPEEDS 2.8 rpm



CONTROLS Full flow power hydraulic.

COUNTERWEIGHT: Three piece, external mounted cast construction pin connected.

Total weight..... 32,600 kg (71,870 lbs.)

Removable with gantry and boom hoist (optional extra).

SAFETY DEVICES: Crane hook over hoist alarm, Boom over hoist limit, Boom angle indicator, Signal horn, Boom hoist drum lock, Front and rear hoist drum lock, Swing lock, Boom backstop.

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Two independent housings.

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CLUTCH Single dry plate

TRANSMISSION:

MAIN: 5 speed forward plus reverse. **AUXILIARY:** 4 speed.



STEERING: Recirculating ball screw type with hydraulic power booster.

SERVICE BRAKES..... Air on all eight wheels.

PARKING BRAKES: Internal expanding duo-servo shoe type acting on drum at aux. transmission case rear.

SUSPENSION: FRONT: Laminated spring with torque rod. REAR: Equalizer beam with torque rod.

TIRES Twelve, 14:00x24—24 ply

FUEL TANK 300 lt (79.3 gal.)

ELECTRIC SYSTEM 24 volt, negative ground

CAB: Steel, one man type, offset left side engine.

PERFORMANCE:

Maximum travel speed..... 65 km/h (40.4 mph)

Percent grade..... 36%

Minimum turning radius 12 m (39'-4 7/8")

CRANE GENERAL DATA

HEAVY DUTY BOOM: Tubular high tension steel chords, lattice construction, pin connected. Extendible up to 51.82 m (170').

Length—boom base section 7.62 m (25')

—boom tip section 7.62 m (25')

Open throat, 1,905 mm (6'-3") deep x 2,032 mm (6'-8")

wide cross section with seven boom point sheaves offset from centerline, on anti-friction bearings, pitch dia.

..... 616 mm (26 1/4")

LIGHT DUTY BOOM: Tubular high tension steel chords, lattice construction pin connected. Extendible up to 88.39 m (290')

Length—boom base section 7.62 m (25')

—boom tip section 10.67 m (35')

Open throat, 1,905 mm (6'-3") deep x 2,032 mm (6'-8")

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Jib cross section with one boom point sheave on anti-friction bearings.

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POWER CONTROLLED LOAD LOWERING: Planetary gear type power lowering with external contracting clutch band. Applicable to front and rear drums, standard.

GANTRY: High gantry lowers automatically toward rear into cab roof recess, two positions, full up and full down. Hydraulic gantry assist life cylinders.

MAST GANTRY: 9.75 m (32') length, two legs rectangular box section. Mast foot 355 mm (14") above boom foot to allow close coupling of mast and boom base. Required for all boom.

BOOM BACKSTOP: Telescopic type with spring bumper.

WORKING WEIGHT 100,000 kg (220,460 lbs.)

Including three counterweight, 15.24 m (50') heavy duty boom and seven sheave hook block.

LIFTING CAPACITIES

MAXIMUM JIB RATINGS IN KG (LBS.)

Offset Angle Jib to Boom Under Full Load	12.19 m (40') Jib	18.19 m (60') Jib
10°	7,000 (15,430)	4,600 (10,140)
30° Max.	5,900 (13,010)	4,000 (8,820)

Jib crane ratings are based on strength of material. When main boom load rating at operating radius is less than maximum jib ratings, stability governs and the lower value of main boom load rating must be used. Jibs are intended to increase lifting height—not operating radius—therefore, maximum jib operating radius is limited to maximum rated radius of boom length on which jib is mounted.

RATED CRANE LOADS IN KG (LBS.)

WITH OUTRIGGERS FULLY EXTENDED Over Side and Over Rear

Operating Radius in m (Ft.-Ins.)	15.24 m (50') Boom	21.34 m (70') Boom	27.43 m (90') Boom	33.53 m (110') Boom	39.62 m (130') Boom	45.72 m (150') Boom	51.82 m (170') Boom	57.91 m (190') Boom	64.01 m (210') Boom	70.10 m (230') Boom	76.20 m (250') Boom	82.30 m (270') Boom	88.39 m (290') Boom
4.0 (13-1)	150,000 (330,690)												
5.0 (16-5)	120,000 (264,550)												
6.0 (19-8)	100,000 (220,460)	See NOTE (A, B)											
7.0 (23-0)	85,700 (188,940)	84,900 (187,170)	84,000 (185,190)										
8.0 (26-3)	75,000 (165,350)	74,600 (164,460)	74,100 (163,570)										
9.0 (29-6)	65,000 (143,300)	64,900 (143,080)	64,800 (143,360)	65,000 (143,300)									
10.0 (32-10)	56,200 (123,900)	56,100 (123,680)	56,000 (123,460)	56,100 (123,680)	52,500 (115,740)								
12.0 (39-4)	42,500 (93,700)	42,300 (93,260)	42,100 (92,810)	42,200 (93,030)	42,000 (92,590)	41,900 (92,370)	36,500 (80,480)						
14.0 (45-11)	33,900 (74,740)	33,800 (74,520)	33,500 (73,850)	33,600 (74,080)	33,400 (73,630)	33,200 (73,190)	33,000 (72,750)	31,300 (69,000)					
16.0 (52-6)	27,900 (61,510)	27,600 (60,850)	27,700 (61,070)	27,500 (60,630)	27,300 (60,190)	27,100 (59,750)	27,000 (59,520)	27,000 (59,520)	25,200 (55,560)	21,100 (46,520)			
18.0 (59-1)	23,700 (52,250)	23,400 (51,590)	23,500 (51,810)	23,200 (51,150)	23,000 (50,710)	22,800 (50,270)	22,700 (50,040)	22,700 (50,040)	22,300 (49,160)	20,100 (44,310)	16,600 (36,600)	13,800 (30,420)	
20.0 (65-7)	20,500 (45,190)	20,200 (44,530)	20,300 (44,750)	20,000 (44,090)	19,800 (43,650)	19,500 (42,990)	19,400 (42,770)	19,400 (42,770)	19,100 (42,110)	18,900 (41,670)	15,700 (34,610)	13,300 (29,320)	10,600 (23,370)
25.0 (72-2)		14,700 (32,410)	14,800 (32,630)	14,500 (31,970)	14,300 (31,530)	14,000 (30,860)	13,900 (30,640)	13,500 (29,760)	13,500 (29,760)	13,500 (29,760)	13,100 (28,880)	11,800 (26,010)	9,200 (20,280)
30.0 (98-5)			11,500 (25,350)	11,100 (24,470)	10,900 (24,030)	10,600 (23,370)	10,500 (23,150)	10,100 (22,270)	10,100 (22,270)	10,000 (22,050)	9,700 (21,380)	9,400 (20,720)	8,000 (17,640)
35.0 (114-10)		See NOTE (A)			8,900 (19,620)	8,600 (18,960)	8,300 (18,300)	8,100 (17,860)	7,800 (17,200)	7,700 (16,980)	7,300 (16,090)	7,100 (15,650)	6,700 (14,770)
40.0 (131-3)						7,000 (15,430)	6,600 (14,550)	6,500 (14,330)	6,100 (13,450)	6,000 (13,230)	5,500 (12,130)	5,200 (11,460)	4,700 (10,360)
45.0 (147-8)							5,400 (11,900)	5,200 (11,460)	4,700 (10,360)	4,600 (10,140)	4,100 (9,040)	3,700 (8,160)	3,200 (7,050)
50.0 (164-1)								4,100 (9,040)	3,600 (7,940)	3,400 (7,500)	2,900 (6,390)	2,600 (5,730)	2,100 (4,630)
55.0 (180-5)									2,700 (5,950)	2,500 (5,510)	2,000 (4,410)		
													See NOTE (D)

1. Operating radius is the horizontal distance from centerline of rotation to a vertical line through the centerline of gravity of the load.
2. Ratings shown do not exceed 78% of tipping load. Deduct weight of hook block(s), slings, and all other load handling accessories from main boom rating shown.
3. Ratings shown are based on freely suspended load machine standing on firm, level, uniformly supporting surface and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of-level, operating speeds or any other conditions that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.
4. Mast is required with gantry in full-up positions. Boom inserts must be arranged as shown in the boom make-up chart.
5. When boom is equipped with jib, main hook ratings must be reduced by 900 kg (1,980 lbs.) for 12.19 m (40') jib and 1,400 kg (3,090 lbs.) for 18.29 m (60') jib.
6. Ratings shown are based on a total of three counterweights of 32,600 kg (71,870 lbs.) and a front bumper counterweight of 6,100 kg (13,450 lbs.).

NOTE: The following notes must be complied with when operating in the specified areas of the rating plate, bounded by the heavy lines.

- (A) Ratings shown require a heavy duty tip.
- (B) Ratings shown are based on strength of materials.
- (C) Ratings shown require a light duty tip. Reduce 500 kg (1,100 lbs.) when using heavy duty tip.
- (D) Ratings shown require intermediate suspension.

WARNING: The wind effect on the lifted load can cause sufficient side load to overstress boom or jib structure. When suspended load will not remain in line with boom derated chart 25%. We recommend stopping operation when wind is above 10 m/sec (20 mph) and tying off, or lowering, boom when wind is above 16 m/sec (35 mph).

	Max. Boom Length	Max. Rated Load
Light Duty Boom	88.39 m (290')	65,000 kg (14,330 lbs.)
Heavy Duty Boom	51.82 m (170')	150,000 kg (330,690 lbs.)

MAIN HOIST REEVING

No. of Parts of Line	1	2	3	4	5	6	7
Max. Load—kg (lbs.)	10,500 (23,150)	21,000 (46,300)	31,500 (69,450)	42,000 (92,590)	52,500 (115,740)	65,000 (143,300)	73,500 (162,040)
No. of Parts of Line	8	9	10	11	12	13	14
Max. Load—kg (lbs.)	84,000 (185,190)	94,500 (208,340)	105,000 (231,490)	115,500 (254,630)	126,000 (277,780)	136,500 (300,930)	150,000 (330,690)

MAXIMUM BOOM LENGTH TO LIFT OFF GROUND

Boom Over	With 32,600 kg (71,870 lbs.) counterweight and 6,100 kg (13,450 lbs.) bumper weight, with outriggers.		With 32,600 kg (71,870 lbs.) counterweight and 10,100 kg (22,270 lbs.) bumper weight, with rear aux. floats.	
	Boom Only	Boom & Jib	Boom Only	Boom & Jib
Side	64.01 m (210')	57.91 m + 18.29 m (190' + 60')	Not Approved	
Rear	76.20 m (250')	70.10 m + 18.29 m (230' + 60')	88.39 m (290')	82.30 m + 18.29 m (270' + 60')

P&H 9150-TC

Data published herein is statistical and for information only.
Performance may vary with the conditions encountered.
Kobe Steel, Ltd. reserves the right to make changes
in specifications without advance.

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