

SMITH
CRANE & CONSTRUCTION

HITACHI KH180-3

50 Tonne Crawler Crane

Load Chart



Hitachi KH180-3 50T Crawler Crane

Main Boom

 3.54 m  15.9 t **MB** 360° DIN 75 %

Radius / Portée / Ausladung / Radius Main Boom – Flèche principale – Hauptausleger – Hoofdgiek

	13 m	16 m	19 m	22 m	25 m	28 m	31 m	34 m	37 m	40 m	43 m	46 m	49 m	52 m
m	t	t	t	t	t	t	t	t	t	t	t	t	t	t
3.7	50	-	-	-	-	-	-	-	-	-	-	-	-	-
4	45.8	44.2	-	-	-	-	-	-	-	-	-	-	-	-
4.5	38.6	38.55	36.8	-	-	-	-	-	-	-	-	-	-	-
5	32.1	32	31.9	30.2	-	-	-	-	-	-	-	-	-	-
5.5	27.6	27.5	27.4	27.3	26.4	-	-	-	-	-	-	-	-	-
6	24.6	24.5	24.4	24.2	24.1	-	-	-	-	-	-	-	-	-
7	19.5	19.4	19.3	19.2	19.1	19	18.9	-	-	-	-	-	-	-
8	16.2	13.1	16	15.9	15.7	15.5	15.4	15.3	15.3	-	-	-	-	-
9	13.8	13.7	13.6	13.5	13.4	13.3	13.2	13.1	13	12.9	12.8	-	-	-
10	12.1	12	11.9	11.8	11.7	11.6	11.5	11.4	11.3	11.2	11.1	11	10.75	-
12	9.5	9.4	9.3	9.3	9.15	9.05	8.9	8.8	8.8	8.75	8.7	8.55	8.4	8.2
14	-	7.8	7.7	7.6	7.5	7.4	7.3	7.2	7.2	7.1	7	6.9	6.8	6.7
16	-	-	6.5	6.4	6.3	6.2	6.1	6	6	5.9	5.8	5.7	5.6	5.5
18	-	-	-	5.5	5.4	5.3	5.2	5.1	5.1	5	4.9	4.8	4.7	4.6
20	-	-	-	4.7	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4	3.9
22	-	-	-	-	4.1	4	3.9	3.8	3.8	3.7	3.6	3.5	3.4	3.3
24	-	-	-	-	-	3.5	3.4	3.3	3.3	3.2	3.1	3	2.9	2.8
26	-	-	-	-	-	-	3	2.9	2.85	2.75	2.7	2.5	2.4	2.35
28	-	-	-	-	-	-	-	2.6	2.5	2.4	2.35	2.2	2.1	2
30	-	-	-	-	-	-	-	2.3	2.25	2.15	2.05	1.9	1.8	1.7
32	-	-	-	-	-	-	-	-	1.9	1.85	1.75	1.6	1.5	1.4
34	-	-	-	-	-	-	-	-	-	1.6	1.5	1.3	1.2	1.1

Lifting capacities at luffing fly jib
Capacités à la fléchette fixe

Tragfähigkeiten am starrer Hilfsausleger
Capaciteiten aan de starre hulpgiek

 3.54 m  15.9 t **FJ** 360° DIN 75 %

Radius / Portée / Ausladung / Radius Main Boom + Jib – Flèche + Fléchette – Hauptausleger + Hilfsausleger – Hoofdgiek + Hulpgiek

	43 m + 6.1 m	43 m + 9.15 m	43 m + 12.2 m	43 m + 15.25 m
m	t	t	t	t
14	5	-	-	-
16	5	4.8	-	-
18	4.9	4.6	3.65	-
20	4.2	4.2	3.65	3.05
22	3.6	3.6	3.6	3.05
24	3.1	3.1	3.1	3.1
26	2.7	2.7	2.7	2.7
28	2.35	2.35	2.35	2.35
30	2.05	2.05	2.05	2.05
32	1.75	1.75	1.75	1.75
34	1.5	1.5	1.5	1.5



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Capacity with Luffing Jib Attachment

タワー高さ (m)	19.22	22	25, 28			28	31, 34					37, 40				37
ジブ長さ (m)	16	19	16	19	22	25	16	19	22	25	28	16	19	22	25	28
作業 半径 (m)																
8.5	11.40															
9.0	11.40	9.5mX 11.25t	11.40				10.40					8.60				
10.0	10.3mX 11.40t	10.90	9.5mX 11.40t	10.50	11.0mX 9.40t		10.00	9.35	11.0mX 8.40t			8.40	7.80	11.0mX 7.10t		
12.0	9.40	11.1mX 10.30t	10.7mX 10.90t	11.6mX 9.75t	9.00	8.20	11.95mX 9.45t	8.70	8.10	7.55	13.0mX 6.15t	8.05	7.45	6.90	6.45	13.0mX 6.15t
14.0	7.75	7.70	7.75	7.70	12.5mX 8.80t	7.30	7.75	13.1mX 8.35t	14.2mX 7.55t	7.05	5.75	7.75	15.2mX 6.95t	6.50	6.10	5.75
16.0	6.60	6.55	6.60	6.55	6.50	15.5mX 6.70t	6.60	6.55	6.50	15.5mX 6.70t	5.15	6.60	6.55	16.7mX 6.15t	5.75	5.15
18.0	16.6mX 6.30t	5.65	16.6mX 6.30t	5.65	5.60	5.55	18.6mX 6.30t	5.65	5.60	5.55	4.65	16.6mX 6.30t	5.65	5.60	18.2mX 5.50t	4.65
20.0		19.3mX 5.20t		19.3mX 5.20t	4.95	4.90		19.3mX 5.20t	4.95	4.90	4.15		19.3mX 5.20t	4.95	4.90	4.15
22.0					4.40	4.35			4.40	4.35	3.75			4.40	4.35	3.75
24.0					22.1mX 4.38t	3.90			22.1mX 4.38t	3.90	3.35			22.1mX 4.38t	3.90	3.35
26.0						24.8mX 3.70t				24.8mX 3.70t	3.00				24.8mX 3.70t	3.00
27.5											2.70					2.70

Notes:

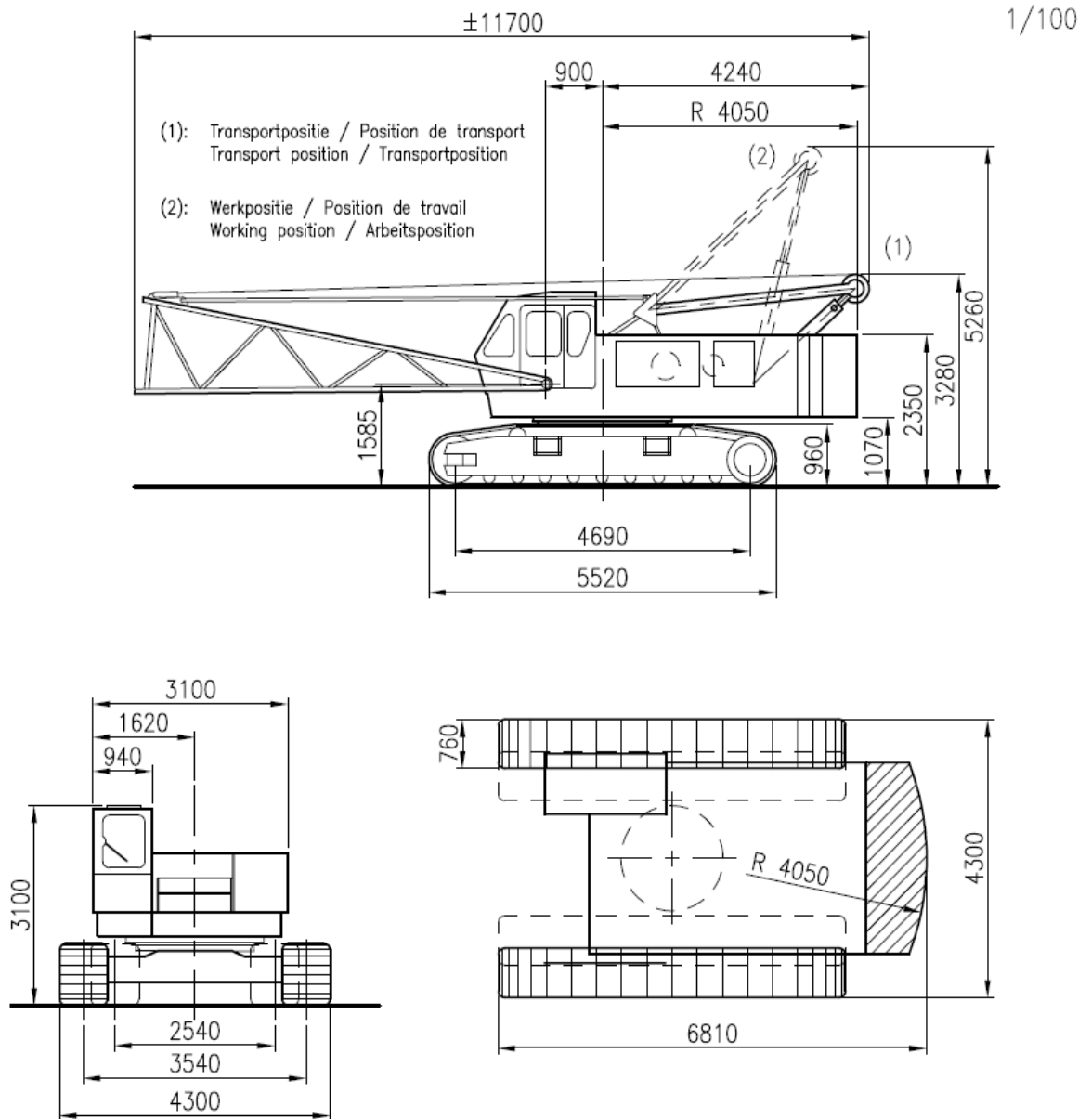
1. All Capacities above are 78% of either stability of tipping
2. All capacities above are in metric tonnes
3. Minimum Hook weight required is 15T single sheave @ 0.4T tare weight

Hitachi KH180-3 50T Crawler Crane

Crane Specs

HITACHI KH 180-3

50 TON

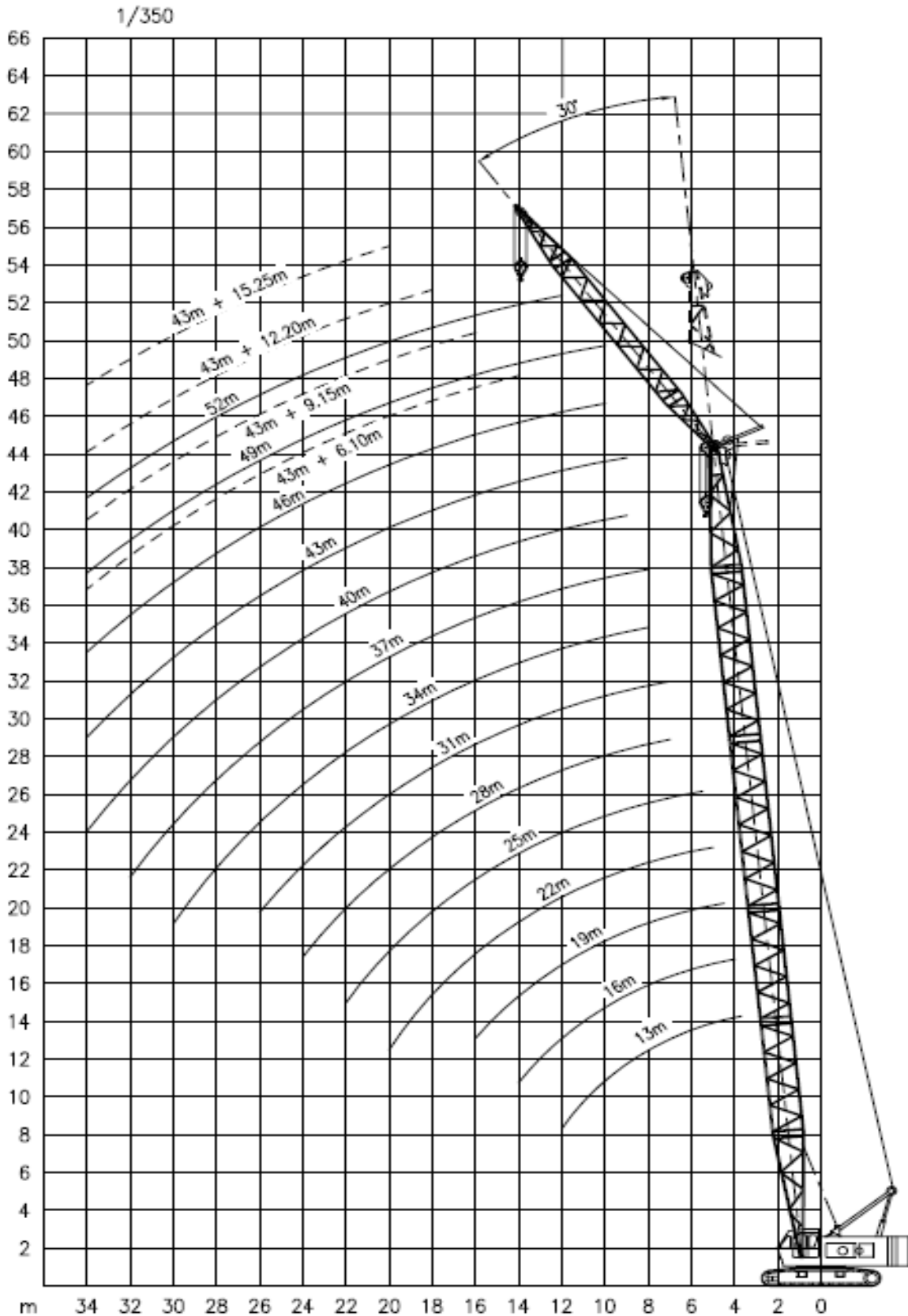


Totaal gewicht / Poids total / Total weight / Gesamtgewicht : 45,3 t

(☐ 15,9 t)

Hitachi KH180-3 50T Crawler Crane

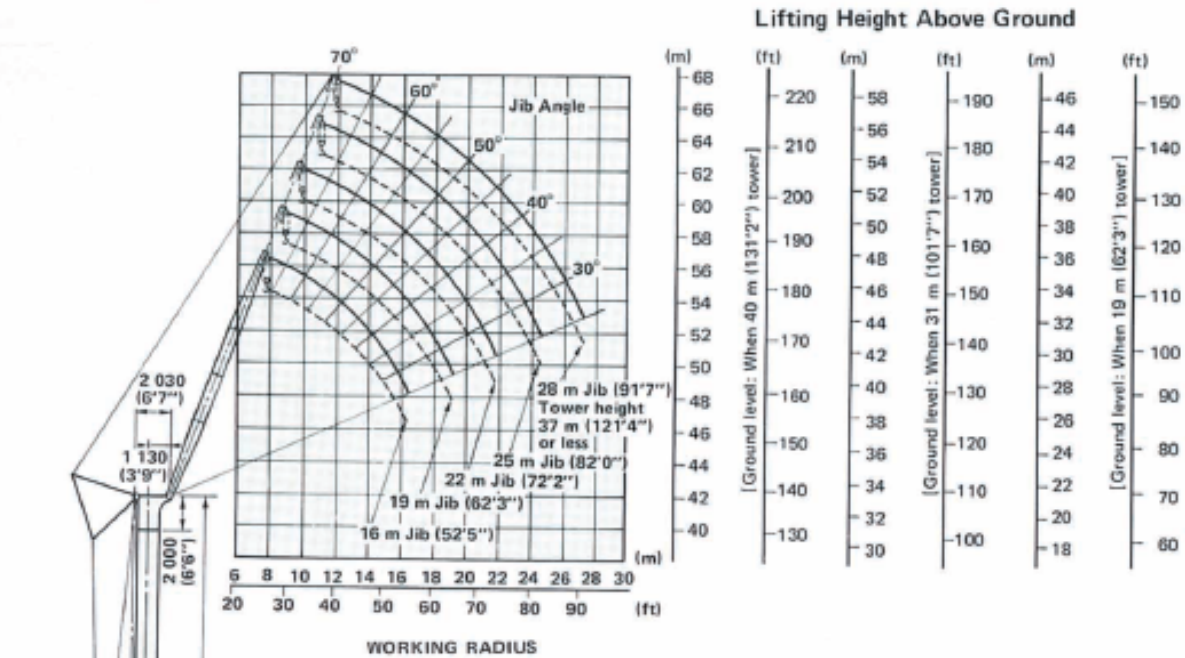
Range Diagram



Hitachi KH180-3 50T Crawler Crane

Luffing Jib Range Diagram

Working Ranges



Specifications

Maximum rated load	11 400 kg at 10.3 m (25 000 lb at 37'4")
Tower boom length	19.0 m (62'3") to 40.0 m (131'2")
Jib length	16.0 m (52'6") to 28.0 m (91'7")
Max. tower boom + Jib boom	65.0 m (213'3") [40.0 m (131'2") + 25.0 m (82'0")]
Tower boom point maximum height above ground	41.6 m (136'5")
Working radius	8.5 m (27'9") to 27.5 m (90'2")
Maximum lifting height above ground	63.0 m (206'7")
Ground pressure	0.68 bar (0.69 kgf/cm ² 9.8 psi)
Operating weight [40.0 m (131'2") tower boom plus 25.0 m (82'0") Jib]	52 400 kg (115 500 lb)

Note: For common specifications which are not listed above, refer to P.4 and P.5.

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Tower + Luffing Jib

Rated Loads

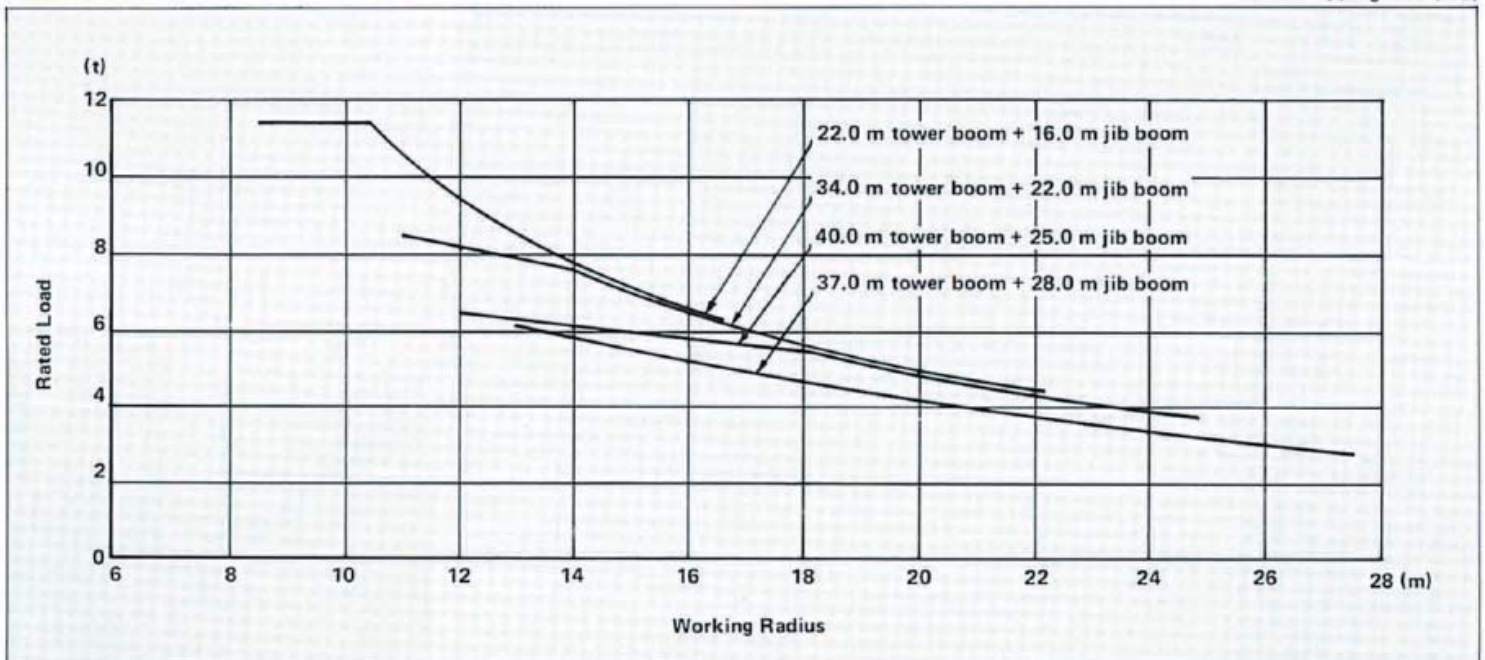
78% of tipping load (JIS)

Tower length Jib length Working radius	19.0 m, 22.0 m		25.0 m, 28.0 m				31.0 m, 34.0 m					37.0 m, 40.0 m				37.0 m	
	16.0 m	19.0 m	16.0 m	19.0 m	22.0 m	25.0 m	16.0 m	19.0 m	22.0 m	25.0 m	28.0 m	16.0 m	19.0 m	22.0 m	25.0 m	28.0 m	
8.0 m	8.5m x 11.4tonne																
9.0 m	11.4tonne	9.5m x 11.25tonne	11.4tonne				10.40tonne					8.60tonne					
10.0 m	10.3m x 11.4tonne	10.90tonne	9.5m x 11.4tonne	10.5tonne	11.0m x 9.40tonne		10.00tonne	9.35tonne	11.0m x 8.40tonne			8.40tonne	7.80tonne	11.0m x 7.10tonne			
12.0 m	9.40tonne	11.1m x 10.3tonne	10.7m x 10.9tonne	11.6m x 9.75tonne	9.00tonne	8.20tonne	11.95m x 9.45tonne	8.70tonne	8.10tonne	7.55tonne	13.0m x 6.15tonne	8.05tonne	7.45tonne	6.90tonne	6.45tonne	13.0m x 6.15tonne	
14.0 m	7.75tonne	7.70tonne	7.75tonne	7.70tonne	12.5m x 8.80tonne	7.30tonne	7.75tonne	13.1m x 8.35tonne	14.2m x 7.55tonne	7.05tonne	5.75tonne	7.75tonne	15.2m x 6.95tonne	6.50tonne	6.10tonne	5.75tonne	
16.0 m	6.60tonne	6.55tonne	6.60tonne	6.55tonne	6.50tonne	15.5m x 6.70tonne	6.60tonne	6.55tonne	6.50tonne	15.5m x 6.70tonne	5.15tonne	6.60tonne	6.55tonne	16.7m x 6.15tonne	5.75tonne	5.15tonne	
18.0 m	16.6m x 6.30tonne	5.65tonne	16.6m x 6.30tonne	5.65tonne	5.60tonne	5.55tonne	16.6m x 6.30tonne	5.65tonne	5.60tonne	5.55tonne	4.65tonne	16.6m x 6.30tonne	5.65tonne	5.60tonne	18.2m x 5.50tonne	4.65tonne	
20.0 m		19.3m x 5.20tonne		19.3m x 5.20tonne	4.95tonne	4.90tonne		19.3m x 5.20tonne	4.95tonne	4.90tonne	4.15tonne		19.3m x 5.20tonne	4.95tonne	4.90tonne	4.15tonne	
22.0 m					4.40tonne	4.35tonne			4.40tonne	4.35tonne	3.75tonne			4.40tonne	4.35tonne	3.75tonne	
24.0 m					22.1m x 4.38tonne	3.90tonne			22.1m x 4.38tonne	3.90tonne	3.35tonne			22.1m x 4.38tonne	3.90tonne	3.35tonne	
26.0 m						24.8m x 3.70tonne				24.8m x 3.70tonne	3.00tonne				24.8m x 3.70tonne	3.00tonne	
28.0 m											27.5m x 2.70tonne					27.5m x 2.70tonne	

- Notes:
- The rated total loads given in the table above are values taken at the time when the load is to be lifted with the machine placed on a flat, firm ground, not exceeding 78% of tipping loads and with the forward stability of 1.15 or more as specified in the Travelling Crane Construction Standards.
 - The load to be actually lifted will be the value of each rated total load given in the table above minus total weight of all lifting means such as hook.
 - Hook weight: 15-tonne capacity hook (for tower crane) - - - - - 0.4 tonne.

Rated Load Curves

78% of tipping load (JIS)



Hitachi KH180-3 50T Crawler Crane

Specifications

Maximum rated load		50 000 kg (110 200 lb) at 3.7 m (12'2") working radius
Boom	Basic boom length	13.0 m (42'8")
	Max. boom length	52.0 m (170'7")
	Jib length	6.10 m (20'0") – 9.15 m (30'0") – 12.20 m (40'0") – 15.25 m (50'0")
	Max. boom length with jib	58.25 m (191'1") [43.0 m (141'0") + 15.25 m (50'0")]
Swing speed		0 – 3.5 min ⁻¹ (0 – 3.5 rpm)
Travel speed		0 – 1.5 km/h (0.93 mph)
Gradeability		22° (40%)
Ground pressure		0.61 bar (0.61 kgf/cm ² , 8.67 psi)
Operating weight	Equipped with basic boom, 50 000 kg (110 200 lb) capacity hook and 15 900 kg (35 100 lb) counterweight	46 900 kg (103 000 lb)
Engine	Model	HINO EM100
	Rated horsepower	110 kW (150 PS) at 2 000 min ⁻¹ (2 000 rpm)

HOOKS

Capacity	Weight	Number of hoist reeving and maximum rated loads									
		9	8	7	6	5	4	3	2	1	
50 000 kg (110 200 lb)	570 kg (1 250 lb)	50 000 kg (110 200 lb)	44 800 kg (98 800 lb)	39 900 kg (87 900 lb)	34 200 kg (75 400 lb)	28 500 kg (62 800 lb)	22 800 kg (50 300 lb)	17 100 kg (37 700 lb)	11 400 kg (25 100 lb)		Standard for main boom
30 000 kg (66 100 lb)	330 kg (730 lb)				30 000 kg (66 100 lb)	28 500 kg (62 800 lb)	22 800 kg (50 300 lb)	17 100 kg (37 700 lb)	11 400 kg (25 100 lb)		Optional for main boom
15 000 kg (33 100 lb)	280 kg (620 lb)							15 000 kg (33 100 lb)	11 400 kg (25 100 lb)		
5 000 kg (11 000 lb)	130 kg (290 lb)									5 000 kg (11 000 lb)	Optional for jib or aux. jib

DRUMS

Dimensions

	Rope dia.	Width	Drum p.c.d.	Max. rope capacity
Main hoist drum	20 mm (0.787")	369 mm (14.53")	420 mm (16.54")	267 m (876')
Aux. hoist drum	20 mm (0.787")	306 mm (12.05")	420 mm (16.54")	220 m (722')

Line speed and line pull

	Max. line speed m/min (ft/min)				Effective line pull	@	Line speed	Max. starting line pull	Max. running line pull
	Hoisting		Lowering						
Main hoist drum	H	70 (230)	H	70 (230)	108 kN (11 000 kgf) (24 300 lbf)	@	34 m/min (112 ft/min)	140 kN (14 300 kgf) (31 600 lbf)	153 kN (15 600 kgf) (34 400 lbf)
	L	35 (115)	L	35 (115)					
Aux. hoist drum	H	70 (230)	H	70 (230)	108 kN (11 000 kgf) (24 300 lbf)	@	34 m/min (112 ft/min)	140 kN (14 300 kgf) (31 600 lbf)	153 kN (15 600 kgf) (34 400 lbf)
	L	35 (115)	L	35 (115)					

H: High speed range L: Low speed range

- Notes: 1) Line speed and line pull are based on first layer of winding at rated engine rpm.
 2) Hoisting line speed varies with load.
 3) Line pull is based on a single line pull in high speed range.
 4) Effective line pull is equivalent to available line pull of mechanical drive winch.

- 5) When starting, hydraulic motor is without rotating, the line pull is "Max. starting line pull" After motor rotating, the line pull becomes "Max. running line pull" shortly.

BOOM HOIST DRUM

Rope diameter	Hoisting line speed	Lowering line speed
16 mm (0.63")	60 m/min (197 ft/min)	60 m/min (197 ft/min)