

Highlights	02
Dimensions & Weights	03
Configuration	05
Capacities	06
Specifications	10



Max. Lifting Capacity 40T at 3 Mtrs
Max. Crane Boom Length 40 Mtrs
Boom and Jib Combination 31 Mtrs + 15.25 Mtrs /
34 Mtrs + 12.2 Mtrs.

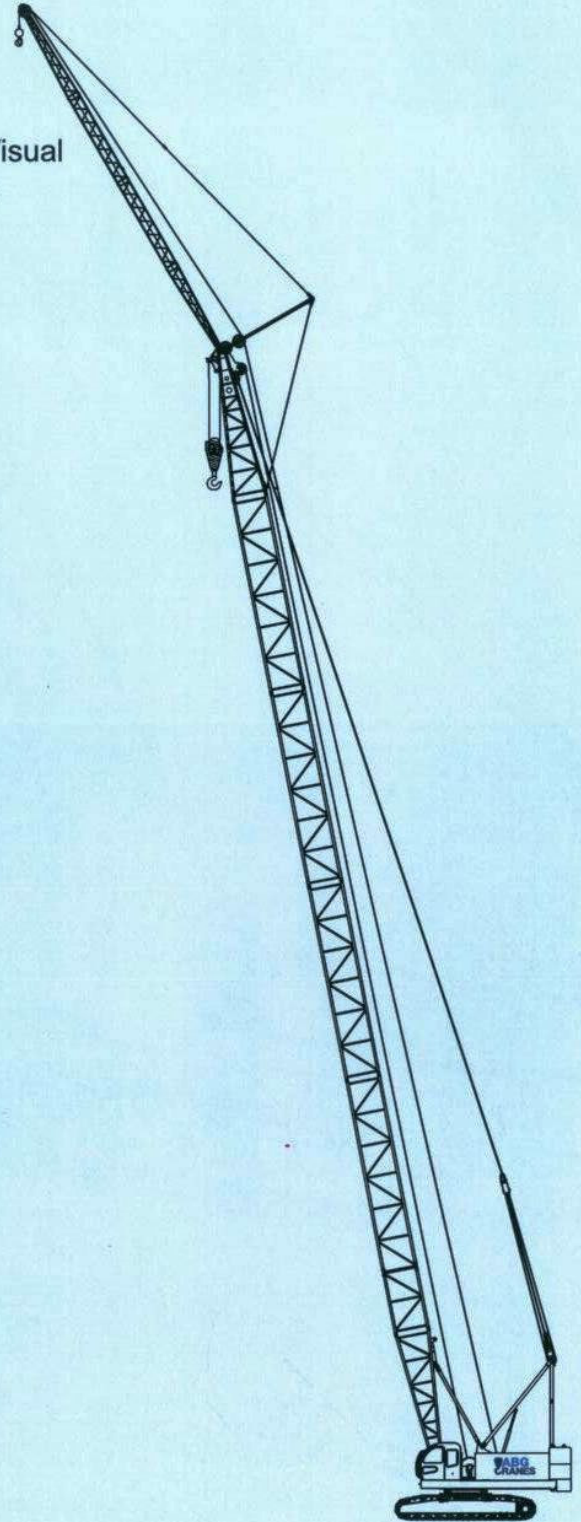
1040

HYDRAULIC CRAWLER CRANE

ABG
CRANES

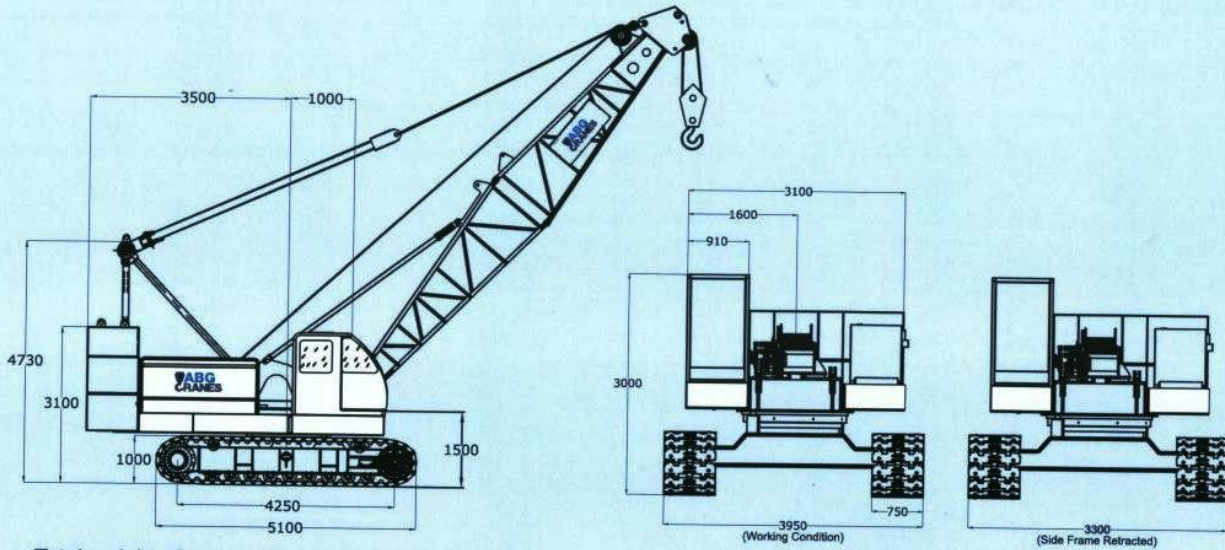
HIGHLIGHTS

- 40 T hydraulic crane designed & built in India.
- Optimised transport weights < 15 Tonnes.
- Max. single linepull 8 Tonne.
- Rated single line pull 5 Tonne.
- Safe - Load Indicator with Audio-Visual Alarm and Motion Cut Equipment.



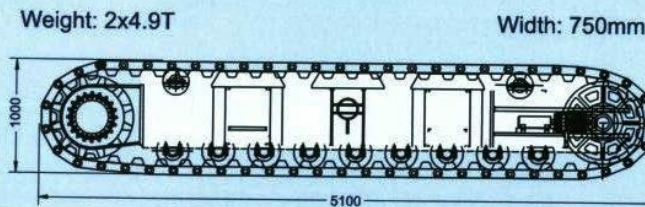
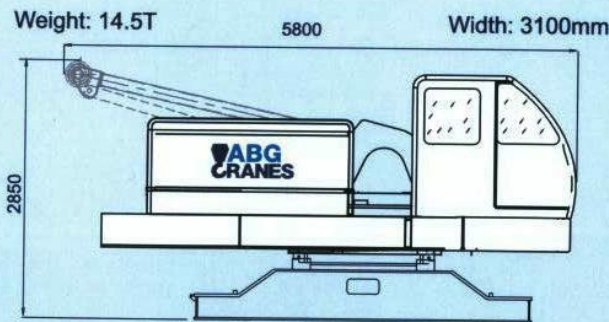
Dimensions & Weights

Dimensions - mm, Weights - Tonne



Total weight of crane with Lower structure + Super structure + Basic boom + Hook Block = 43T

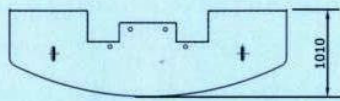
Weight of Crane (Without Bridle, Main Boom & Hook block) = 41T



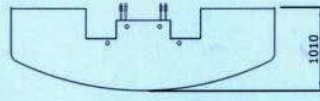
Total weight including counterweight, Basic Boom & 40 T Hook Block	43 T
Superstructure (with three winch drums, A- frame & all wire ropes, carbody)	14.5 T
Crawler assembly with shoes	2 X4.9 T
Counter weight	16.39 T
Ground pressure based on 43 T (machine weight)	0.675 Kg/Sq.cm
Gradeability unladen	40 %

Dimensions & Weights

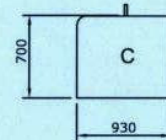
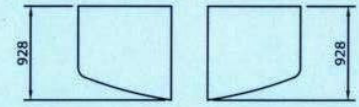
Model: 1040, Dimensions - mm, Weights - Tonne



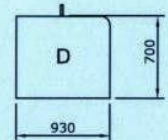
Bottom Counter Weight = 6.133 T



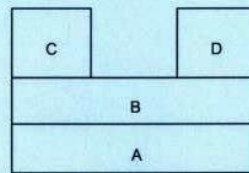
Top Counter Weight = 6.146 T



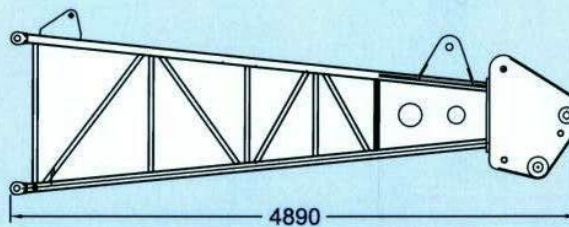
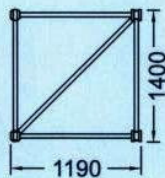
LH = 2.06 T



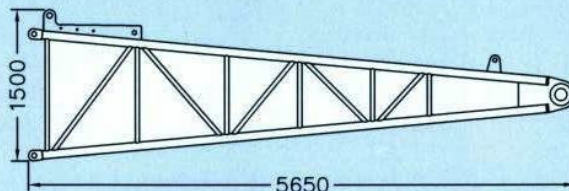
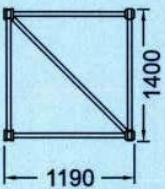
RH = 2.06 T



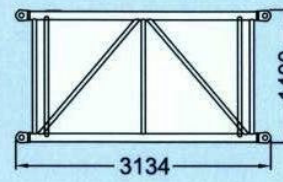
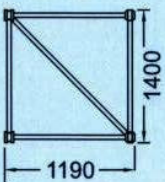
Total Counter Weight = 16.39 T



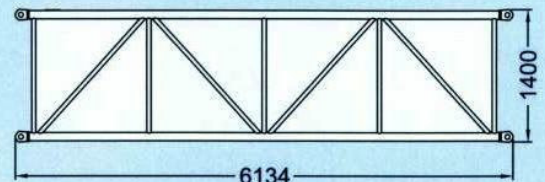
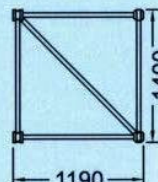
BOOM UPPER : Weight: 1.14 T



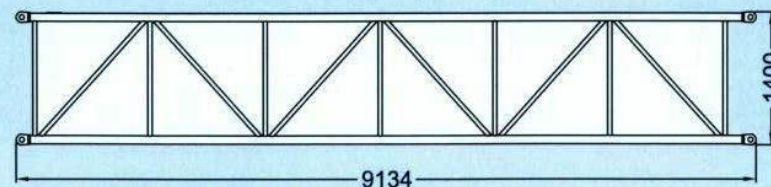
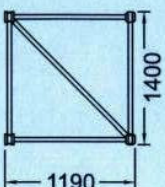
BOOM LOWER : Weight: 0.7 T



3M BOOM INSERT : Weight: 0.24 T



6M BOOM INSERT : Weight: 0.44 T



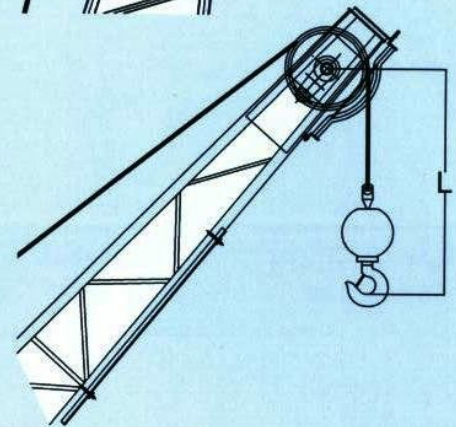
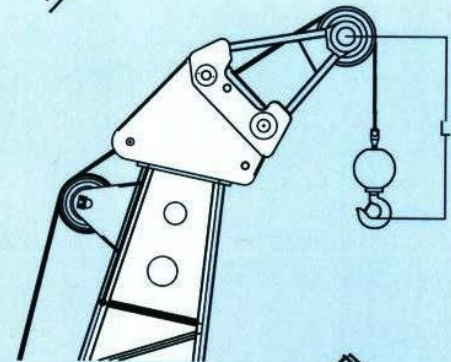
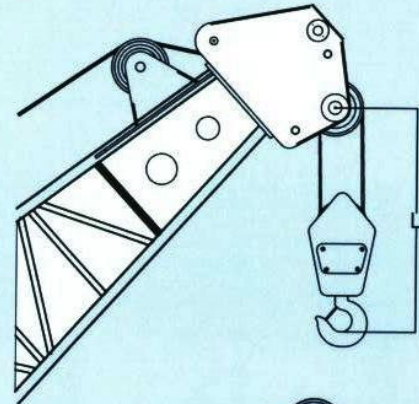
9M BOOM INSERT : Weight: 0.63 T

Dimensions & Weights

Model-1040, M-Meter, T-Tonne

Hook Block (Shank type hook)

Type	Rated lifting capacity	No. of sheave	Part Line	Weight	L
40 T	40 T	4	8	0.4 T	3 M
15 T	15 T	1	3	0.3 T	2.5 M
5 T	5 T	Single line hook	1	0.18 T	2 M



Configuration

Crane Boom Arrangements

Boom Length	Boom Arrangements
10M	
13M	
16M	
19M	
22M	
25M	
28M	
31M	
34M	
37M	
40M	

Note

Symbols	Boom Length	Remarks
	5.5M	Boom Lower
	4.5M	Boom Upper
	3M	Boom Insert
	6M	Boom Insert
	9M	Boom Insert

Fixed Jib Arrangements

Crane Boom Length	Jib Length	Jib Arrangement
25M - 34M	6.1M	
25M - 34M	9.15M	
25M - 34M	12.20M	
25M - 31M	15.25M	

Note

Symbols	Jib Length	Remarks
	3.05M	Jib Base
	3.05M	Jib Top
	3.05M	Jib Insert

Capacities - Main Boom

Rated Lifting Capacities on Main Boom

Capacity- Tonne, m-meter

360° working area

Boom length(m) Working radius(m)	10	13	16	19	22	25	28	31	34	37	40	Boom length(m) Working radius(m)
3.0	40.0	---	---	---	---	---	---	---	---	---	---	3.0
3.5	37.3	---	---	---	---	---	---	---	---	---	---	3.5
3.7	35.0	35.0	---	---	---	---	---	---	---	---	---	3.7
4.0	32.6	33.5	---	---	---	---	---	---	---	---	---	4.0
4.5	26.9	26.7	26.6	---	---	---	---	---	---	---	---	4.5
5.0	22.8	22.7	22.5	22.5	---	---	---	---	---	---	---	5.0
6.0	17.5	17.3	17.1	17.1	17.0	---	---	---	---	---	---	6.0
7.0	14.1	13.9	13.7	13.7	13.6	13.5	13.4	13.3	---	---	---	7.0
8.0	11.7	11.6	11.4	11.4	11.3	11.2	11.0	10.9	10.8	---	---	8.0
9.0	10.0	9.9	9.7	9.7	9.5	9.4	9.3	9.2	9.1	9.1	---	9.0
10.0	---	8.6	8.4	8.4	8.2	8.1	8.0	7.9	7.8	7.8	7.8	10.0
12.0	---	6.7	6.5	6.5	6.4	6.3	6.1	6.0	5.9	5.9	5.8	12.0
13.0	---	---	5.3	5.2	5.1	5.0	4.8	4.7	4.6	4.5	4.5	14.0
16.0	---	---	---	4.3	4.2	4.1	3.9	3.8	3.7	3.7	3.7	16.0
18.0	---	---	---	---	3.5	3.4	3.2	3.1	3.0	3.0	3.0	18.0
20.0	---	---	---	---	---	2.9	2.7	2.6	2.5	2.5	2.5	20.0
22.0	---	---	---	---	---	2.4	2.3	2.2	2.1	2.0	2.0	22.0
24.0	---	---	---	---	---	---	2.3	1.8	1.7	1.7	1.6	24.0
26.0	---	---	---	---	---	---	---	1.5	1.4	1.4	1.3	26.0
28.0	---	---	---	---	---	---	---	---	1.2	1.2	1.1	28.0
Reeves	8	7	6	5	4	3	3	3	3	2	2	Reeves

Rated Lifting Capacities on Runner

Capacity- Tonne, m-meter

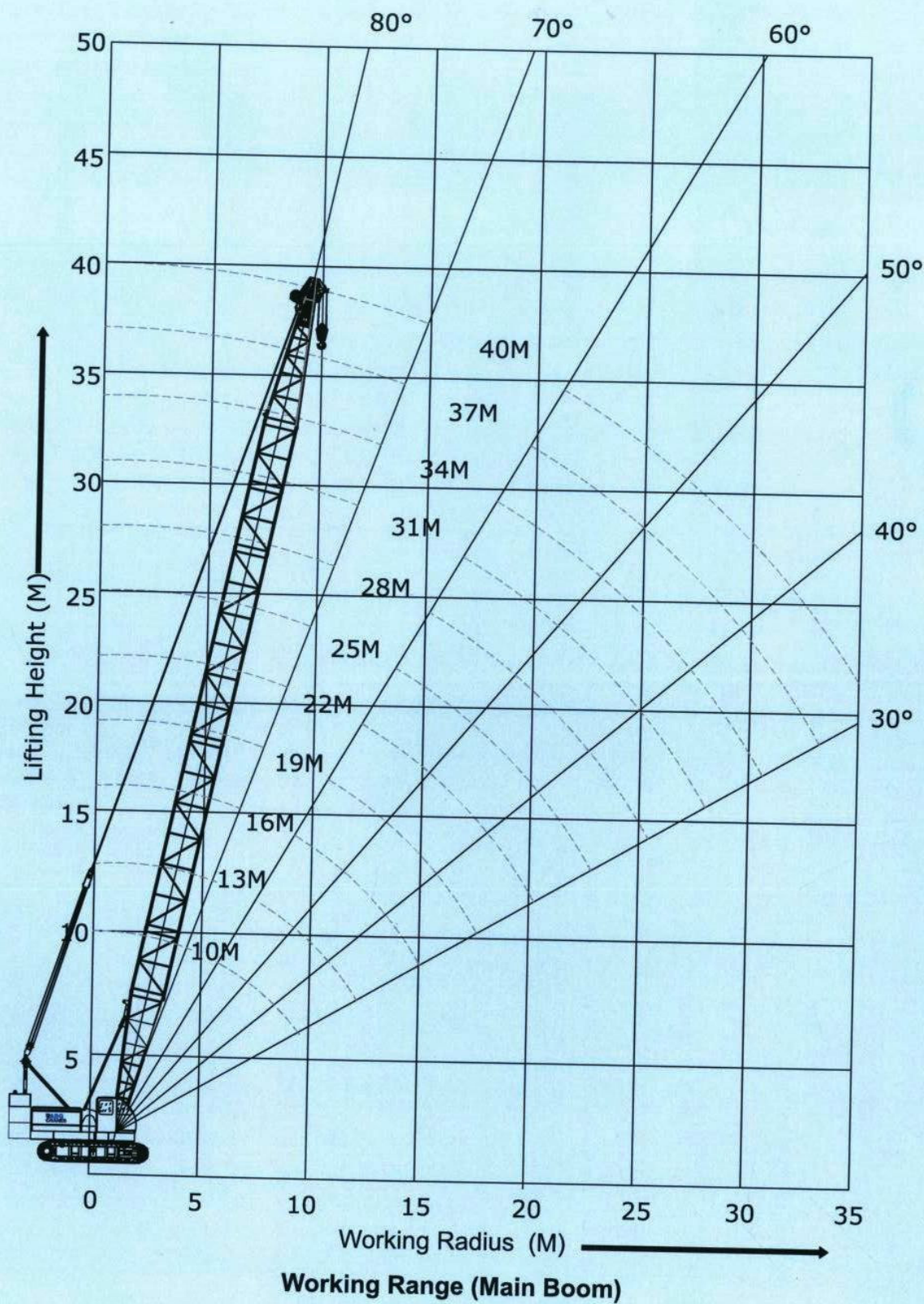
360° working area

Boom length(m) Working radius(m)	10	13	16	19	22	25	28	31	34	37	40	Boom length(m) Working radius(m)
4.5	5.0	5.0	5.0	---	---	---	---	---	---	---	---	4.5
5.0	5.0	5.0	5.0	5.0	---	---	---	---	---	---	---	5.0
6.0	5.0	5.0	5.0	5.0	5.0	---	---	---	---	---	---	6.0
7.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	---	---	---	7.0
8.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	---	---	8.0
9.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	---	9.0
10.0	---	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	10.0
12.0	---	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	12.0
14.0	---	---	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	14.0
16.0	---	---	---	3.8	3.7	3.6	3.8	3.8	3.8	3.5	3.0	16.0
18.0	---	---	---	---	2.9	2.8	2.9	2.9	2.9	2.9	2.4	18.0
20.0	---	---	---	---	---	2.2	2.1	2.0	1.9	1.9	1.8	20.0
22.0	---	---	---	---	---	1.6	1.7	1.6	1.5	1.4	1.3	22.0
24.0	---	---	---	---	---	---	1.3	1.2	1.1	1.0	1.0	24.0
26.0	---	---	---	---	---	---	---	1.0	0.8	0.7	0.6	26.0
28.0	---	---	---	---	---	---	---	---	0.5	0.4	0.3	28.0
Reeves	1	1	1	1	1	1	1	1	1	1	1	Reeves

Main Boom - Working Range

Model 1040
M-METER

CAPACITIES



Capacities – Fixed Jib

Rated Lifting Capacities On Fixed Jib

Capacity- Tonne, m-meter

Jib offset angle of 15° and 30° - 360° working area

Boom length(m) →		25								28								← Boom length(m)	
Jib length(m) →		6.1		9.15		12.2		15.25		6.1		9.15		12.2		15.25		← Jib length(m)	
Jib offset angle		10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	Jib offset angle	
Operating radius(m) ↓																		Operating radius(m) ↓	
9		5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	
10		5	-	5	-	4	-	-	-	5	-	-	-	-	-	-	-	10	
11		5	5	5	-	4	-	-	-	5	5	5	-	-	-	-	-	11	
12		5	5	5	-	4	-	-	-	5	5	5	-	4	-	-	-	12	
13		5	5	5	5	4	-	3.2	-	5	5	5	-	4	-	3.2	-	13	
14		5	5	5	5	4	-	3.2	-	4.85	5	4.9	5	4	-	3.2	-	14	
16		4	4.2	4.15	4.3	4	-	3.2	-	3.95	4.1	4.05	4.25	4	3.75	3.2	-	16	
18		3.7	3.5	3.85	3.65	3.55	3.7	3.15	3.2	3.3	3.4	3.4	3.55	3.45	3.65	3.15	3.2	18	
20		3.1	3	3	3.1	3	3.15	3.05	3.1	2.8	2.9	2.85	3	2.9	3.1	2.95	3.1	20	
22		2.5	2.55	2.55	2.65	2.6	2.75	2.65	2.8	2.4	2.45	2.45	2.55	2.5	2.65	2.55	2.75	22	
24		2.25	2.2	2.2	2.3	2.25	2.4	2.3	2.45	2.05	2.1	2.1	2.2	2.15	2.3	2.2	2.4	24	
26		1.95	1.95	1.95	2	2	2.1	2	2.15	1.8	1.85	1.85	1.9	1.9	2	1.9	2.5	26	
28		1.65	1.7	1.7	1.75	1.75	1.8	1.75	1.6	1.55	1.6	1.6	1.65	1.65	1.75	1.65	1.8	28	
30		-	-	1.5	1.55	1.55	1.6	1.55	1.65	1.3	1.35	1.35	1.45	1.4	1.5	1.45	1.6	30	
32		-	-	-	1.35	1.35	1.4	1.4	1.45	-	-	1.2	1.25	1.2	1.3	1.25	1.4	32	

Rated Lifting Capacities On Fixed Jib

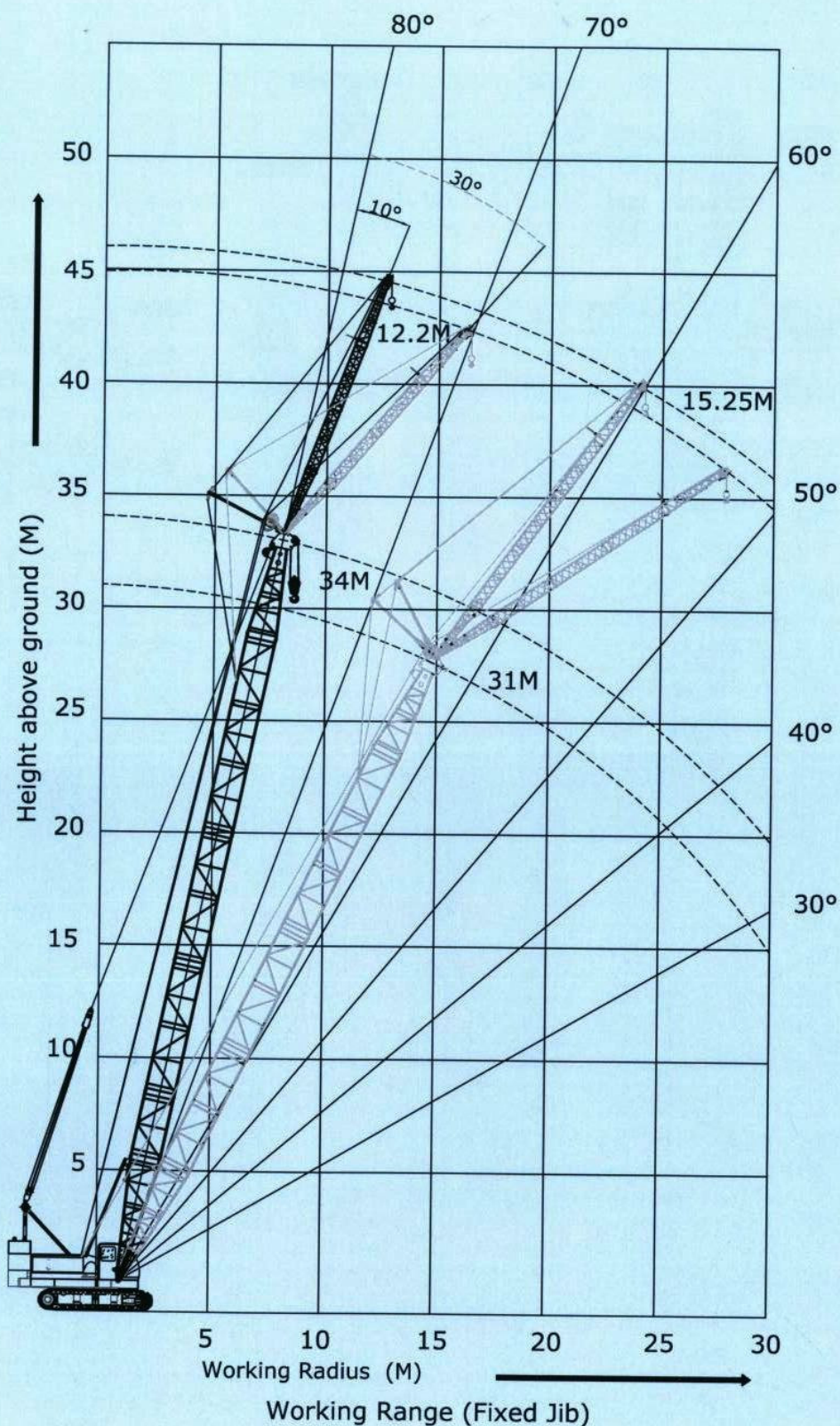
Jib offset angle of 15° and 30° - 360° working area

Boom length(m) →		31								34								← Boom length(m)	
Jib length(m) →		6.1		9.15		12.2		15.25		6.1		9.15		12.2		15.25		← Jib length(m)	
Jib offset angle		10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	10°	30°	Jib offset angle	
Operating radius(m) ↓																		Operating radius(m) ↓	
9		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	
10		5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	
11		5	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	11	
12		5	5	5	-	-	-	-	-	5	-	5	-	-	-	-	-	12	
13		5	5	5	5	4	-	-	-	5	5	5	-	-	-	-	-	13	
14		4.7	4.9	4.75	5	4	-	3.2	-	4.7	4.9	4.75	-	-	-	-	-	14	
16		4.35	4.1	4	4.2	4	4	3.2	-	3.8	4	3.9	4.15	3.9	-	-	-	16	
18		3.6	3.4	3.3	3.5	3.4	3.65	3.15	3.2	3.15	3.3	3.2	3.45	3.3	3.6	-	-	18	
20		3	2.8	2.8	2.9	2.85	3.05	2.9	3.15	2.65	2.75	2.7	2.9	2.75	3	-	-	20	
22		2.5	2.4	2.5	2.55	2.45	2.6	2.5	2.7	2.25	2.35	2.3	2.45	2.35	2.55	-	-	22	
24		2.2	2.1	2.1	2.15	2.1	2.25	2.15	2.35	1.9	2	1.95	2.1	2	2.2	-	-	24	
26		1.7	1.8	1.7	1.85	1.8	1.95	1.85	2	1.6	1.7	1.65	1.8	1.7	1.85	-	-	26	
28		1.45	1.5	1.5	1.6	1.55	1.7	1.55	1.75	1.35	1.4	1.4	1.5	1.45	1.6	-	-	28	
30		1.25	1.3	1.3	1.35	1.35	1.45	1.3	1.55	1.1	1.15	1.15	1.25	1.2	1.35	-	-	30	
32		1	1	1.1	1.15	1.15	1.25	1.15	1.3	0.9	0.95	0.95	1.05	1	1.15	-	-	32	

Fixed Jib - Working Range

Model 1040
M-METER

CAPACITIES



POWER PLANT

Model:	Ashok Leyland Diesel Engine 6DTI	Starter:	24V/5KW
Type:	Water cooled, direct fuel injection with turbocharger	Radiator:	Thermostatically controlled corrugated core
Displacement:	5.8 liters	Air Cleaner:	Dry type with service indicator
Rated Power:	135 KW @ 2500rpm	Throttle:	Manual (Hand & Foot) controlled
Maximum Torque:	510 NM @ 1500rpm-1700rpm	Fuel Filter:	Replaceable element paper type
Cooling System	Water re-circulating type	Batteries:	2 Nos. 12V, 180 Ah/20hrs. series connected
		Fuel Tank Capacity:	200 liters

HYDRAULIC SYSTEM

Two variable displacement piston pumps are driven by heavy duty pump drive. The variable displacement pumps are used in the main hook hoist circuit, boom hoist circuit, auxiliary hoist circuit, propel circuit, and swing circuit.

Control: Full-flow hydraulic control system for infinitely variable speed to front and rear drums and boom hoist brakes. Controls respond instantly to the touch, delivering smooth operation.

Cooling: Oil-To-Air Cooler (Fin Type)

BOOM HOISTING SYSTEM

Powered by a hydraulic motor through a planetary reducer.

Fail Safe Brakes : Spring-applied, hydraulically released multiple-disc wet type brake is mounted on the gear box and operated through counter-balance valve provided for additional safety.

Drum Lock: External ratchet locking engaged by spring and released by hydraulic cylinder.

Drum: Single drum grooved for 14 mm dia. wire rope.

Diameter of Wire Ropes: 14mm

Boom Guy Line: 32mm dia.

Boom Hoist Reeving: 12 parts of 14mm dia. high strength wire rope

Boom Back Stops: For safety

LOAD HOIST SYSTEM

Front and rear drums for load hoist powered by a hydraulic motor.

Fail Safe Brakes: Spring-applied, hydraulically released multiple disc brake is mounted on the hoist gear box and operated through Counter - balance valve provided for additional safety.

Drum Lock: External ratchet locking engaged by spring and released by hydraulic cylinder.

Drums: (Front & Rear) Drum (Main Hoist): 320 mm PCD x 450 mm width, grooved for 20 mm wire rope.

Working length: 140m.

Main hoist: 8 parts - 20mm dia.

Max Line Pull: 8T

Rated Line Pull: 5T

SWING SYSTEM

Swing Unit is powered by hydraulic motor. The swing system provides 360 degree rotation.

Swing Parking Brake: Spring-applied, hydraulically released multiple disc brake mounted on the swing gear box.

Swing Circle: Single-row ball bearing with heat treated internal gear.

Swing Lock: Manually controlled two position lock for transport.

UPPER STRUCTURE

High tensile plate machined upper frame. All components are easily accessible for service.

Counter Weight: 16.39 T

CAB AND CONTROL

Completely enclosed full vision cabin with safety glass, wiper and fully adjustable high back seat with head-rest and arm-rest.

Cab Fittings: Convenient compartment for tools & floor mat with glass.

Controls: Joystick for front drum, rear drum, boom drum and swing controls. Travel with hand lever and foot pedals.

LOWER STRUCTURE

Steel welded car body mounted on fabricated beam. Crawler can be hydraulically retracted/extended for crawler side frame assembly / dismantling. Crawler belt tension is maintained by hydraulic jackforce on the track and inserting shims with bearing blocks.

Car Body Weight: 3.5T

Crawler Drive: Independent hydraulic propel drive is built into each crawler side frame. Each drive consists of hydraulic motor, propelling a driving tumbler, through a planetary gear box. Hydraulic motor and gear box are bolted to crawler side frame within the shoe-width.

Crawler Brakes: Spring-applied, hydraulically released propel brake.

Steering Mechanism: A hydraulic propel system provides both skid steering and counter rotating steering in opposite directions.

Specifications

LOWER STRUCTURE

Steel welded car body mounted on fabricated beam. Crawler can be hydraulically retracted/extended for crawler side frame assembly / dismantling. Crawler belt tension is maintained by hydraulic jackforce on the track and inserting shims with bearing blocks.

Car Body Weight: 3.5T

WEIGHT

Including upper and lower machine, the crane weight with basic boom is 43 T

SPEEDS

Mechanism	Speeds	Maximum single line pull	Rated allowable single line pull	Rope size	Length of rope
Main Hoist	50 M/Min	8 T	5 T	20MM	140M
Auxiliary Hoist	50 M/Min	8 T	5 T	20MM	102M
Boom Hoist	55 M/Min	—	—	14MM	130M
Swing	4 RPM	—	—		
Propel(Unladen)	4kmph	—	—		

Note: 1) Speeds at 1st layer of winch drum. 2) Maximum single line pull available on 1st layer of winch drum. Rope reeving effect not considered. 3) Load raising & lowering speeds are same. 4) Speed may vary according to load.

SAFETY DEVICE

- Safe load indicator (with overload protection / cut off function)
- Boom over-hoist prevention device
- LCD multi display
- Ultimate stop function for boom over hoist
- Function lock lever
- Mechanical drum lock pawl (main, aux, and boom hoist)
- Swing parking brake
- Mechanical swing lock pin (two position)
- External lamp for over-load alarm
- Counter balance valves in all functions

NOTES:

1. Ratings according to IS-4573-1982. Rated lifting capacity is not more than 75% of tipping load.
2. Ratings are in metric tons for 360 degree working area.
3. Operating radius is the horizontal distance from center of rotation to vertical line through the center of gravity of hook block.
4. Weight of hook block(s), slings and other load handling accessories is included in rated load. Their total weight must be subtracted from rated load to obtain weight that can be lifted.
5. Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of level operating speeds or any other condition that could be detrimental to the safe operation of this equipment. Operator therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly.
6. Ratings are for operation on a firm and level surface, up to 1% gradient.
7. All radii and boom lengths where no ratings are shown on chart, operation is neither intended nor approved.
8. Boom/jib inserts and guy lines must be arranged as shown in the "Operator's Manual".
9. Boom hoist reeving is 12 part line.
10. Gantry must be in raised position for all conditions.
11. Boom backstops are required for all boom lengths.
12. Instruction in the "Operator's Manual" must be strictly observed when operating the machine.
13. Crane boom ratings with fixed jib: Deduct the weight of hook block, slings and all other load handling accessories from crane boom ratings with fixed jib. When jib is used, load lifting capacity of main boom will be deducted as mentioned.
 - a. For 3.05m jib - 350kgs
 - b. For 6.1m jib - 700kgs
 - c. For 9.15m jib - 850kgs
 - d. For 12.2m jib - 1000kgs
 - e. For 15.25m jib - 1150kgs
14. Ratings shown are determined by the strength of the boom or other structural components. Tipping of crane should not be taken as guidelines for lifting of load.