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ACE ACX 400

Hydraulic Crawler Crane

40 tonnes Capacity.
High performance rough terrain and rugged crawler crane.

ACE INDIA'S NO. 1 CRANE BRAND

- Robust and sturdy design
- Best in class lifting duties
- Hydraulically extendable tracks
- Easy transportation
- Best in class boom configuration(s)

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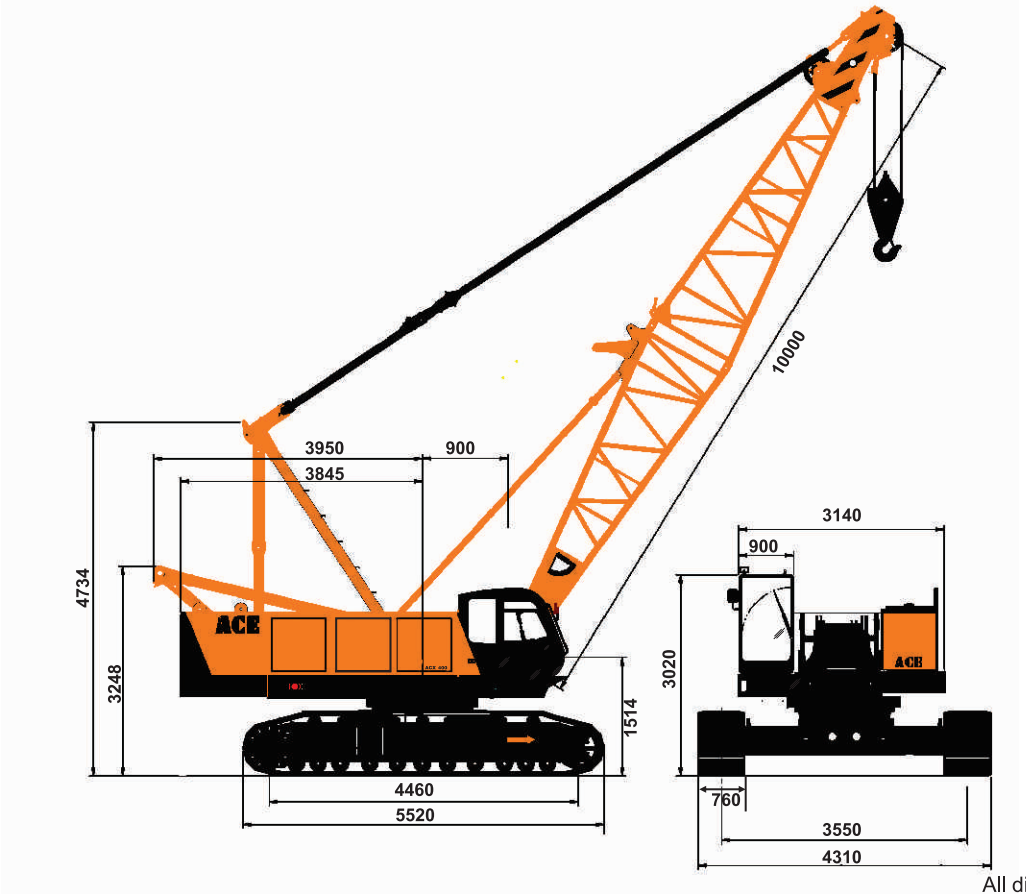
General Dimensions



All dimensions in mm ±5%

Specifications

ACX 400

Description			Unit(s)	ACX 400
Capacity			Ton(s)	40
Boom Length			mtrs	10 - 40
Jib Length			mtrs	6.1 - 15.25 (Optional)
Boom + Jib Combination			mtrs	24 + 15.25
Boom luffing range (Working)			degree	30 - 80
Working Speed(s) (Unladen)	Main / Auxiliary Winch (hoisting)	High Speed	mtrs/min	62
		Low Speed	mtrs/min	31
	Main / Auxiliary Winch (lowering)	High Speed	mtrs/min	62
		Low Speed	mtrs/min	31
	Free Release (Hook Block - Optional)		mtrs/min	84
	Main Boom (Raising)		mtrs/min	60
	Main Boom (Lowering)		mtrs/min	60
	Slew		rpm	3.7
	Travel Speed		km/hr	1.6
Gradeability			%	40
Engine			kw/rpm	127 / 2200
Ground Pressure			Mpa	0.054
Total Operating Weight	With 40 Mtrs. Boom + Fly Jib (Including counter weights)		Ton(s)	40
Counter Weights			Ton(s)	14

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Hydraulic System

Hydraulic system consists of pumps, control valves, motors, counter balance valves, pilot valves, hydraulic reservoir & oil cooler. Hydraulic system is total power variable load feedback.

Control Valve(s) :	Hydraulically pilot operated spool type control valves for luffing, main hoisting, auxiliary hoisting and travelling. Lever operated control valve for slewing operation.
Oil cooler :	Oil to air heat exchanger with hydraulically driven fan.
Hydraulic oil reservoir:	Hydraulic tank is fitted with suction strainer, return line filter, breather cum filler, butter fly valve and drain valve. Tank capacity - 450 ltrs.

Hoisting System

Boom hoist	Boom hoisting is achieved through a reducer powered by hydraulic motor and fitted with counter balance valve. Fail safe brakes are operated hydraulically and external drum locking is also provided.
Main hoist/ Auxiliary hoist	The winch drum is driven through a reducer powered by motor. External drum locking mechanism is also provided. Equipped with switch and pedal for gravity free fall function.

Slewing System

Slewing is achieved through planetary reducer and pinion gear powered by hydraulic motor providing 360° rotation for the complete super structure.

The heavy duty slew ring is internal geared type, and provides unlimited slewing in either direction. Spring applied hydraulic multiple disc brake is mounted on the slew gear box and mechanical swing lock is provided.

Electrical System

The electrical system is 24V DC (negative earth) and is provided with 2 Nos 180 AH - 12 V heavy duty batteries connected in series.

The electrical system comprises of ignition switch, starter, indicator light(s), working light(s), cab light(s), fan, wiper, limit switches, gauges and digital load display.

Engine

Heavy duty, watercooled, diesel engine of adequate horse power fitted with deaireation tank type radiator and dry element type air cleaner. Fuel tank is of 350 ltrs capacity.

Super Structure

The revolving super structure is all welded, precision machined and is of robust construction. The structure is fabricated with high tensile plates and the machined upper structure houses, main hoist, boom hoist and auxiliary hoist. The side platforms of super structure houses, the engine assembly and other hydraulic assemblies. The super structure is mounted on slew bearing and all components are easily accessible for daily maintenance checks and servicing.

Under Carriage

Under Carriage consists of the "H" frame and hydraulically extendable track frames as a single assembly. The hydraulic extension of the track frames is achieved through hydraulic cylinder operated by a control lever. The under carriage with the tracks retracted hydraulically, provides for easy movement and transportation of the complete under carriage as a complete assembly. The "H" frame and the crawler side frames are all welded, precision machined and of box type construction. The slew bearing is mounted on the machined top surface of the under carriage.

The crawler drive is achieved through hydraulic planetary gear box in each track powered by hydraulic motor. Spring applied hydraulically released brakes are provided. The steering is achieved through hydraulic system providing skid steering and counter rotating steering in opposite direction(s). The max. travel speed is 1.6 km/hr.

Main Boom

The length of main boom is 40 mtrs. including top and bottom booms (each 5.5 mtrs.& 4.5 mtrs respectively) and boom inserts (3 mtrs- 02 nos, 6 mtrs - 04 nos). The flyjib of 15.25 mtrs. length can also be provided optionally which consists of a top and bottom section (3.05 mtrs. each) and 3 Nos. inserts (3.05 mtrs. each).

The main boom is fabricated from high tensile (alloy steel) seamless round tubes. The various sections of boom and flyjib are connected together through pins and connectors made from alloy steel and heavy duty pendant ropes.

Hook Block(s)

The crane is supplied with 3 hook blocks of 40 Tons, 15 Tons & 5 Tons capacity each. The 40 tons hook block has 4 pulleys suitable for 8 falls whereas 15 tons hook block has 3 pulleys which is suitable for 6 falls. The 5 tons hook block is used for single line application.

Operator Cabin

The operator cabin is fully enclosed and ergonomically designed. The cabin is mounted with rubber pads and is well ventilated and is provided with adjustable seat, wiper, light, fan, instrument cluster, air conditioner (optional), control levers and rear view mirror. Ergonomically placed operator console and instrument cluster ensures ease of operation.

Safety Equipment

The following safety devices / mechanisms are provided :-

- Safe Load Indicator with over load cut off function.
- Counter balance valves.
- Hoisting limiters provided for main hoist, boom hoist and auxiliary hoist.
- Boom angle indicator.
- Boom back stopper.
- Mechanical drum locking system for all hoist drums.
- Mechanical swing lock.
- Audio slew alarm.
- Safety brake on hoists.

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Load Chart (Standard Boom) ACX 400

(Load in Metric Tons)

Radius (Mtrs.)	Boom Length (Mtrs.)										
	10	13	16	19	22	25	28	31	34	37	40
3.5	40.00										
3.6	38.00	38.00									
3.7	36.31	36.20									
4.0	31.86	31.75	4.1mx 30.6t								
4.5	26.38	26.32	26.27	4.6mx 25.84t							
5.0	22.52	22.42	22.36	22.31	5.1mx 21.71t						
6.0	17.31	17.26	17.15	17.10	17.04	16.99	6.5mx 15.2t				
7.0	14.06	13.96	13.84	13.78	13.73	13.68	13.57	13.51			
8.0	11.78	11.67	11.56	11.50	11.45	11.40	11.29	11.23	11.12	11.12	
9.0	10.09	9.98	9.88	9.82	9.77	9.71	9.60	9.55	9.44	9.44	9.33
10.0	9.6mx 9.22t	8.74	8.63	8.57	8.46	8.41	8.30	8.25	8.14	8.14	8.03
12.0		6.89	6.78	6.73	6.62	6.56	6.46	6.40	6.29	6.29	6.18
13.0		12.2mx 6.73t	5.59	5.48	5.42	5.32	5.21	5.15	5.04	5.04	4.94
16.0			14.80m x5.15t	4.61	4.50	4.45	4.32	4.28	4.18	4.12	4.01
18.0				17.4m x4.12t	3.85	3.74	3.63	3.58	3.47	3.42	3.36
20.0					3.31	3.20	3.09	3.04	2.93	2.93	2.82
22.0						2.82	2.71	2.60	2.49	2.49	2.38
24.0						22.6m x2.71t	2.33	2.28	2.17	2.11	2.00
26.0							25.2m x2.71t	2.00	1.90	1.84	1.68
28.0								27.8m x1.79t	1.62	1.57	1.41
30.0									1.41	1.30	1.19
32.0									30.5m x1.30t	1.08	0.97

Notes:-

1. The lifting capacities shown are gross loads and the weight of the hook blocks and lifting tackles/ slings etc. must be considered as part of lifted load.
2. Working radius is the distance from the rotation center to the vertical center line of lifted load.
3. Crane tracks should be extended before lifting the load.
4. Counter Weight - 14Tons
5. Ratings are in metric tons (360^0 Slew) and are for operation in stationary condition on a firm and level surface (upto 1^0 gradient).
6. Before operating the machine, all the instructions in operator manual must be understood and strictly adhered to while operating the crane.
7. Ratings shown are based on freely suspended loads and factors like wind effect, ground conditions, operating speeds and any other conditions which could be detrimental to safe operation of machine are not taken into account .It is the responsibility of the operator to reduce lifted load in above prevailing conditions.
8. When jib is used the load lifting Capacities of main boom will reduce at all points as under :-

   (a). For 9.15 mtrs - 800 kgs

   (b). For 12.20 mtrs - 1000 kgs

   (c). For 15.25 mtrs - 1500 kgs
9. The tipping of crane should not be taken as guidline for lifting of loads as ratings are determined by strength of boom and other structural parts.

Hook Capacity	Hook Weight (Tons)
40 Tons	0.800
15 Tons	0.325
5 Tons	0.200

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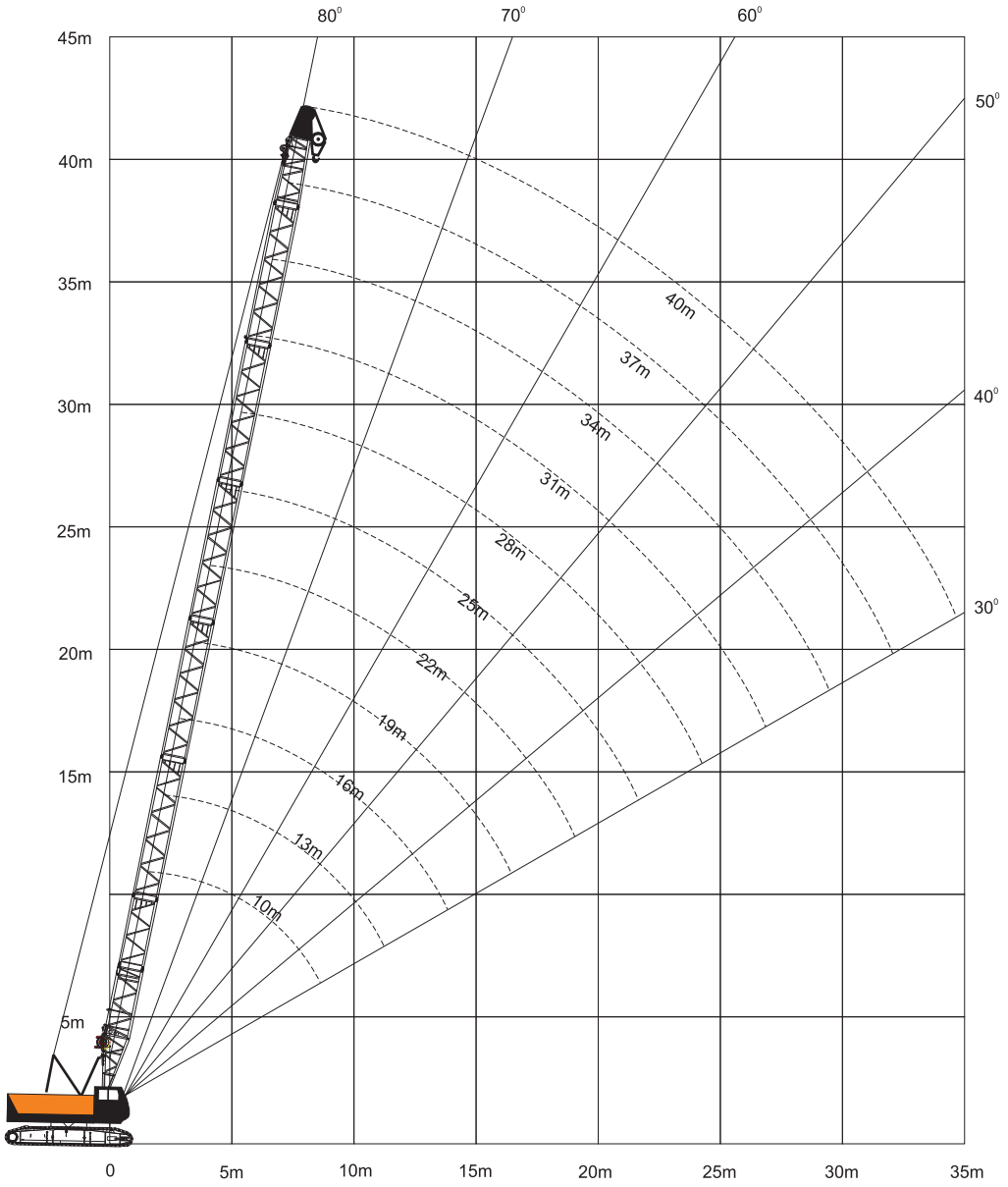
Crawler Crane (Standard Boom)



Boom Combination(s)

10 Mtrs	B	BT								
13 Mtrs	B	3	BT							
16 Mtrs	B	6	BT							
19 Mtrs	B	3	6	BT						
22 Mtrs	B	6	6	BT						
25 Mtrs	B	3	6	6	BT					
28 Mtrs	B	6	6	6	BT					
31 Mtrs	B	3	6	6	6	BT				
34 Mtrs	B	6	6	6	6	BT				
37 Mtrs	B	3	6	6	6	6	BT			
40 Mtrs	B	3	3	6	6	6	6	BT		

Note :

Symbol	Length	Remarks
B	5.5 mt	5.5 mtrs boom foot
BT	4.5 mt	4.5 mtrs boom top
3	3 mt	3 mtrs boom insert
6	6 mt	6 mtrs boom insert

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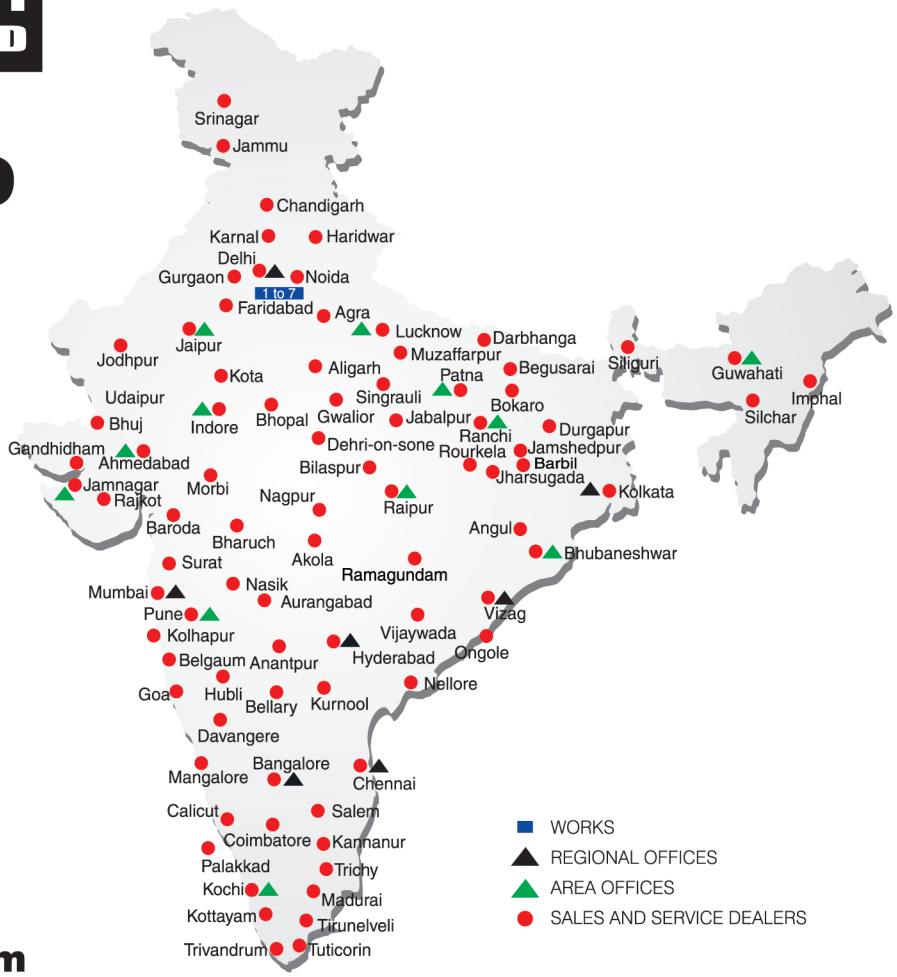
BUILT TO PERFORM

ACE INDIA'S NO.1 CRANE BRAND

RELIABLE AND DEPENDABLE EFFICIENCY

NETWORK



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ACE

Action Construction Equipment Ltd.

Contact:

CVI CERTIFIED MANAGEMENT SYSTEM ISO 9001

ACE reserves the right to alter any specifications without prior notice. Dimensions, weights & capacities mentioned herein are variable by ± 5%. Accessories if shown are not part of the Standard Equipment.

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