

L&T 300

HYDRAULIC EXCAVATOR



Larsen & Toubro Limited, India's leading multi-dimensional engineering conglomerate, has an unmatched track record in construction and mining equipment sector. L&T offers a wide range of machines which incorporate contemporary technology as well as advanced features based on feedback generated from extensive field trials. Every machine is engineered to deliver a high level of performance.

L&T 300 Hydraulic Excavator, formerly known as 300CK, is the leader in its class of machines. Sturdy, rugged and highly-reliable, these machines are manufactured by L&T Construction Equipment Limited (LTCEL) at Doddaballapur, near Bengaluru. LTCEL is ISO 9001 accredited for design, development, manufacturing, sales and servicing, and ISO 14001 certified for Environmental Management System, and OHSAS 18001 certified for Occupational Health & Safety Management Systems.

Manufactured by:

L&T Construction Equipment Limited

CIN No.: U29119MH1997PLC109700

Engine

Make	: Cummins India Limited
Model III	: NT 855-C335, Big Cam
Type	: Direct Injection, 4 Stroke Water cooled, Diesel Engine
Aspiration	: Turbo-charged
No. of Cylinders	: 6
Bore	: 140 mm
Stroke	: 152 mm
Piston Displacement	: 14 L
Flywheel Horsepower	: 320 hp @ 1900 rpm (SAE J1349)
Max. Torque	: 1352 Nm @ 1400 rpm

Hydraulic System

Variodyn® Hydraulic system provides optimum conversion of engine power into hydraulic power at the bucket. The heavy lift mode provides increased lifting capabilities and digging force at the flick of a switch. The hydraulic circuit provides series parallel flow to the attachment and smooth simultaneous operations.

Maximum Operating Pressure in
normal lift mode - 320 bar
heavy lift mode - 400 bar

Hydraulic Pump

A radial piston, fixed displacement pump is simple, compact and contain a few moving parts which contribute significantly to its high efficiency and reliability.

Maximum flow of the pump : 741 lpm @ 1900 rpm

Hydraulic Cylinders

Cylinder	Qty. per Machine	Bore Dia	Rod Dia	Stroke (mm)
Boom	2	165	110	1400
B/A Stick	1	195	130	1500
B/A Bucket	1	155	110	1400
B/D Stick	1	210	140	1400
B/D Bucket	1	225	150	800
B/D Open	2	115	75	400

Bore/ rod diameter in MM

Operating Weight

	L&T 300 B/A	L&T 300 B/D
Operating Weight (kg)	58,500	61,450
Track(mm)	600	600
Boom (m)	6.8	3.9
Arm (m)	3.25	2.75
Bucket (L)	3200	4000



Floating Boom

The front end automatically adapts to contours of the terrain, simplifying digging and preventing the bucket from jolting against the ground.

Outstanding Features

Six flow hydraulic pump

- Fewer hoses, pipes and joints
- Increased capacity of coolers
- Improved layout for easy accessibility

Motor for Electric Version

Make: Marathon Electric Totally enclosed (IP55) Tube Ventilated Squirrel Cage Induction Motor developing 300 HP (225 kW) @ 1500 rpm synchronous speed having Class F insulation. Suitable for 3300 volts, 3 phase 50 cycles electric supply.

Upper Structure

Frame

All welded heavy-duty steel structure with heavy gauge steel plate ensures durability. Aesthetically designed, open-type cowling provides easy service accessibility.

Swing Mechanism

High torque, low speed hydraulic motor engages with ring gear ensuring high efficiency. Single row cross roller bearings support induction hardened external ring gear. Swing can be locked from operator cabin.

Cabin

The cab interior is spacious. An ergonomically designed operator seat and easy access to all control levers ensure maximum operator comfort and better concentration on the job.

Adjustable seat and control levers - The seat slides forward and backward together with the work equipment control levers to ensure the best operating position at all times. Literature compartment with lock facility, electric horn, wiper and fan are also provided.



Undercarriage

All welded reinforced steel structure, track adjuster with shock absorbing spring. Track rollers, carrier rollers and idlers lubricated for life. Triple grouser track shoes

Shoe width (mm)	500	600
No. of track shoes	48	48
No. of track rollers	7	7
No. of carrier rollers	2	2
Ground bearing pressure (kg/cm ²)	1.2	1.0

Travel

An independent axial piston high torque hydraulic motor through planetary reduction gearbox drives each track

Maximum drawbar pull	414 kN
Travel speeds	1.3/2.6 kmph
Maximum Gradeability	58% continuous

Travel parking brake is spring set, hydraulically released multiple disc type (for electronic version and available as option in diesel version).

Service refill capacity

Fuel tank	710 L
Engine crank case	27 L
Cooling system	52 L
Hydraulic oil tank	600 L
Hydraulic Oil System	1020 L
Final drive case (each side)	5 L

Attachments

Bottom Dump



Backhoe





BUCKET CAPACITIES

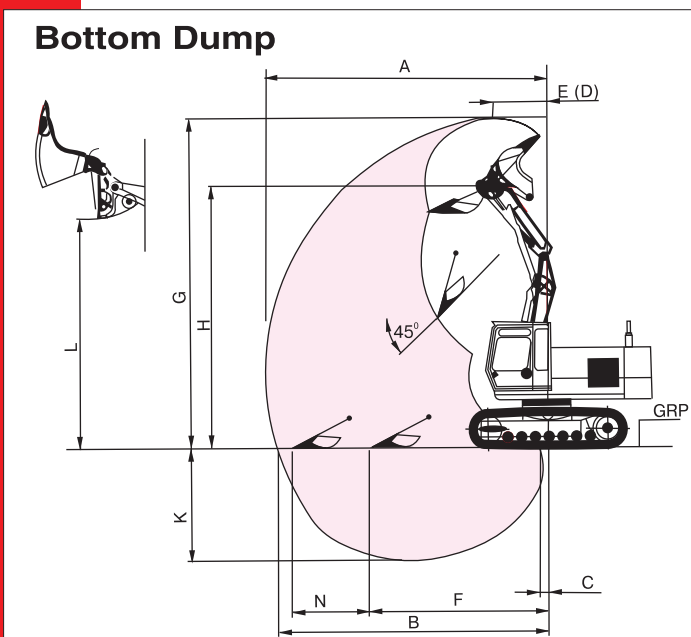
BACKHOE (6.8 M Boom & 3.25 M Stick)

Designation (Litre)	Bucket Capacity HEAPED	Outside width (mm)		Mass kg	No. of teeth	Density T/M ³
		With side cutter	Without side cutter			
3200	As per ISO 7451 (Litre)	2000	1850	2700	6	1.8
	3200					

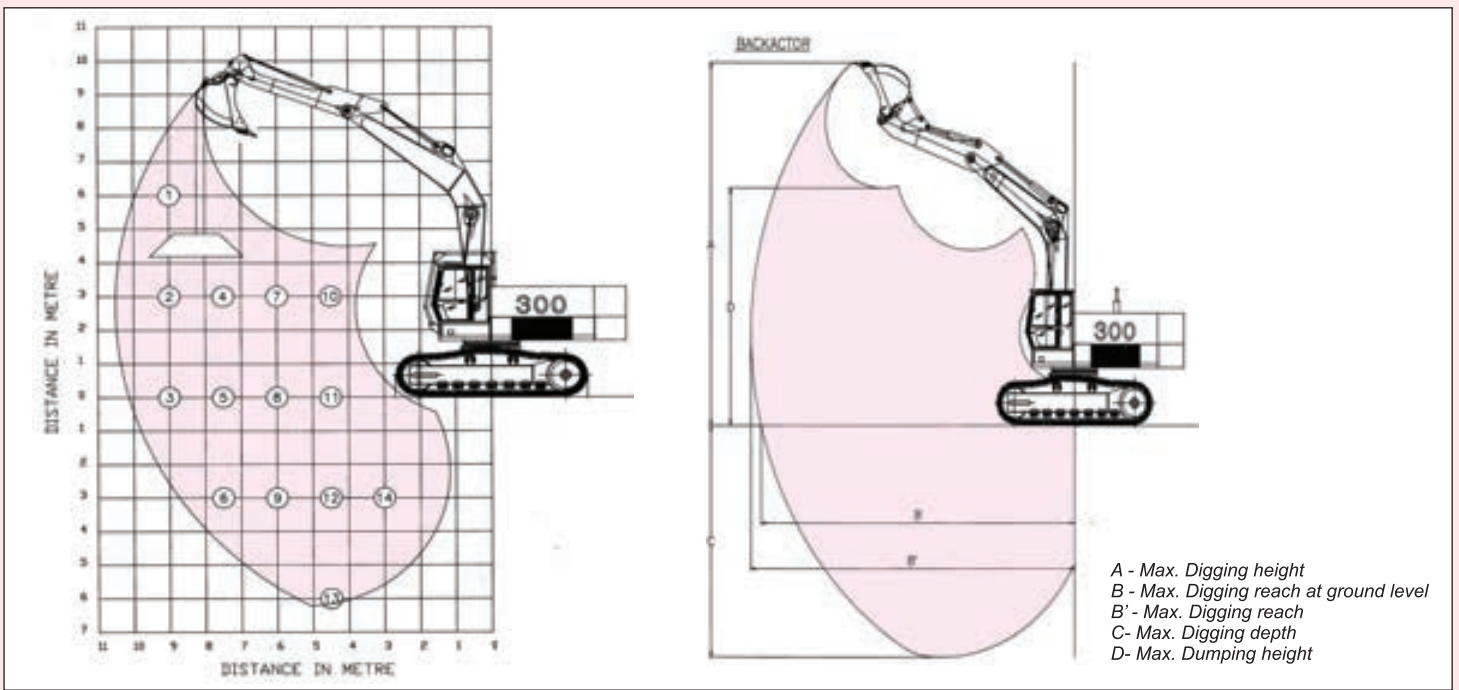
BOTTOM DUMP (3.9 m boom & 2.75 m stick)

Designation (litre)	Bucket Capacity	Internal width (mm)	Mass Kg	No.of Teeth	Density T/m ³
	CECE HEAPED (Litre)				
3200	3200	2000	5840	6	2.6
4000	4000	2000	6100	6	2.0

Bottom Dump



SYMBOL	TERM	BOTTOM DUMP (m)
		3.9 m Boom/ 2.75 m Stick
A	Maximum reach	9.0
B	Maximum reach at GRP	8.5
C	Minimum reach at GRP	2.0
D	Reach to bucket pin centre at maximum height	3.7
E	Reach at maximum height	3.7
F	Minimum level floor radius	5.5
G	Maximum height of cutting edge	10.3
H	Maximum bucket hinge pin height	7.7
K	Maximum digging depth	2.7
L	Maximum dumping height for bottom dump	6.9
N	Length of level floor cut	3.0



RATED LIFT CAPACITY IS LIMITED BY HYDRAULIC CAPACITY

	RATED LIFT CAPACITY WITH 3200 L BUCKET (kg)
Boom	6.8 m
Stick	3.25 m
1	7300
2	8900
3	10500
4	10650
5	13250
6	13300
7	13850
8	17900
9	17800
10	20900
11	25600
12	24900
13	16150
14	24500



REACH PARAMETERS (All are in meter)

Boom	Stick	Bucket	A	B	B'	C	D
6.8	3.25	3200 L	11.30	11.65	12	7.4	7.7

Standard / Safety Features

- Upper structure Swing lock
- ACLS - Progressive Type
- Safety Glass ● Horn
- Warning Flashing Indicators (For electrical Version only)
- Fire extinguisher ● Cabin guard ● Cabin cut off switch
- In case of engine failure, front-end can be grounded (foot pump)
- Engine lube oil pressure gauge
- Engine water temperature gauge
- Lube oil temperature gauge ● Fuel level gauge
- Battery Charging indicator
- Air filter clog indicator
- Low engine lube oil pressure indicator
- Hydraulic oil filter clog indicator
- Ammeter ● Hour meter
- Clogging indicator for centralized lubrication system
- Low mark on grease reservoir

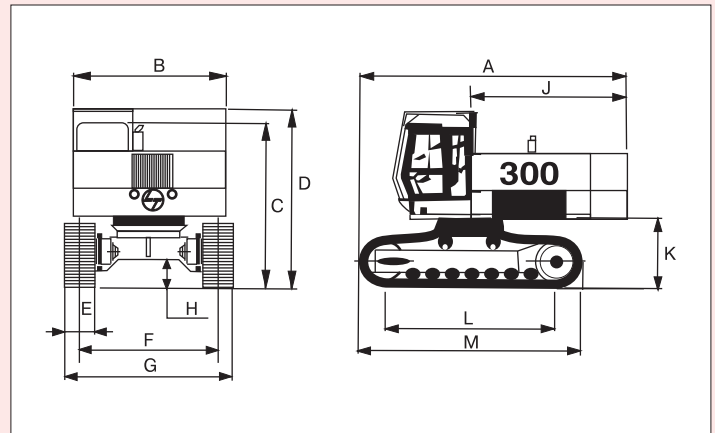
- Motor overload indicator (for electrical version only)
- Phase failure (for electrical version only)
- Seat Belt
- Vent Valve on Hyd. Tank (for quick release of Pressure)

Optional:

- Hose Burst Valve
- Battery cut off switch
- ACLS - Centromatic
- Swing & Track Brake (parking brake)
- Auto Fire detection and suppression system
- Air-conditioned Cabin
- VHMS ● Reverse Alarm
- Rear view camera ● Seat Belt Reminder
- Viscous Mounting pad for cabin
- Wind Shield Washer
- Coolant Level Indicator
- Hose Reel for Manual Greasing

SHIPPING DIMENSIONS (mm)

A	Overall length	6425
B	Width of upper structure	3310
C	Top of cabin to groundline	3850
D	Top of cabin guard to groundline	4200
E	Width of crawler track assembly	600
F	Track gauge, roller centreline to roller centreline	3340
G	Overall width of crawler	3990
H	Ground clearance (per SAE J 1234)	580
J	Swing clearance, rear of upper structure	3820
K	Clearance, upper structure to groundline	1570
L	Nominal distance between centrelines of drive sprockets and idlers	4120
M	Nominal overall length of track assembly	5210



Product improvement is a continuous process. Specifications given in this publication are therefore subject to change without notice. Photograph depicted may be of optional equipment.

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