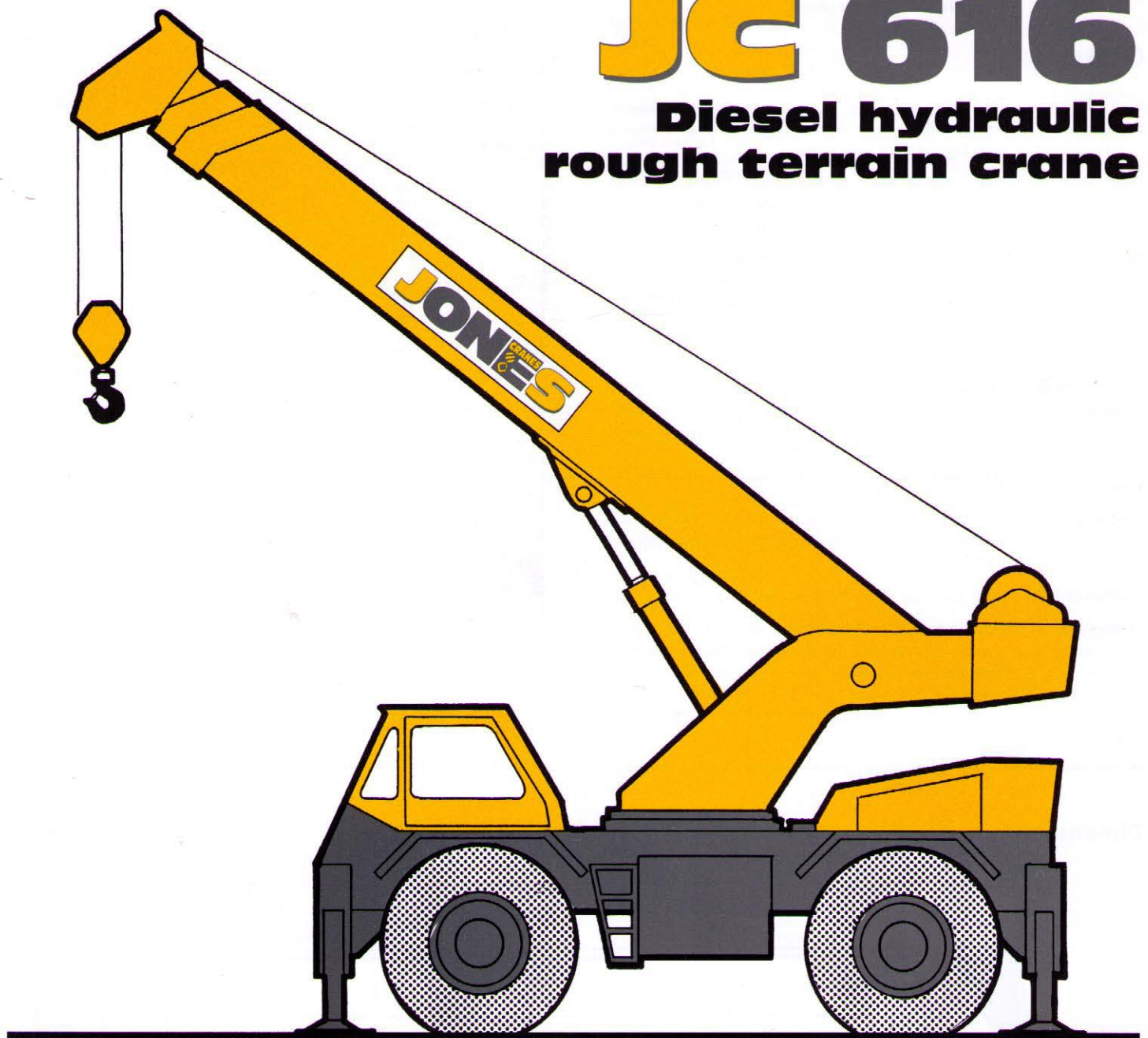




JONES CRANES ES

JC 616

**Diesel hydraulic
rough terrain crane**



- Maximum capacity - 16.000 kg
- Three section boom 7.80 - 18.80 m
- Maximum travel speed - 40 km/h
- Maximum tip height - 27.10 m

THE JONES NAME FOR CRANES

**JONES** CRANES**JC****616****specification****Power Unit**

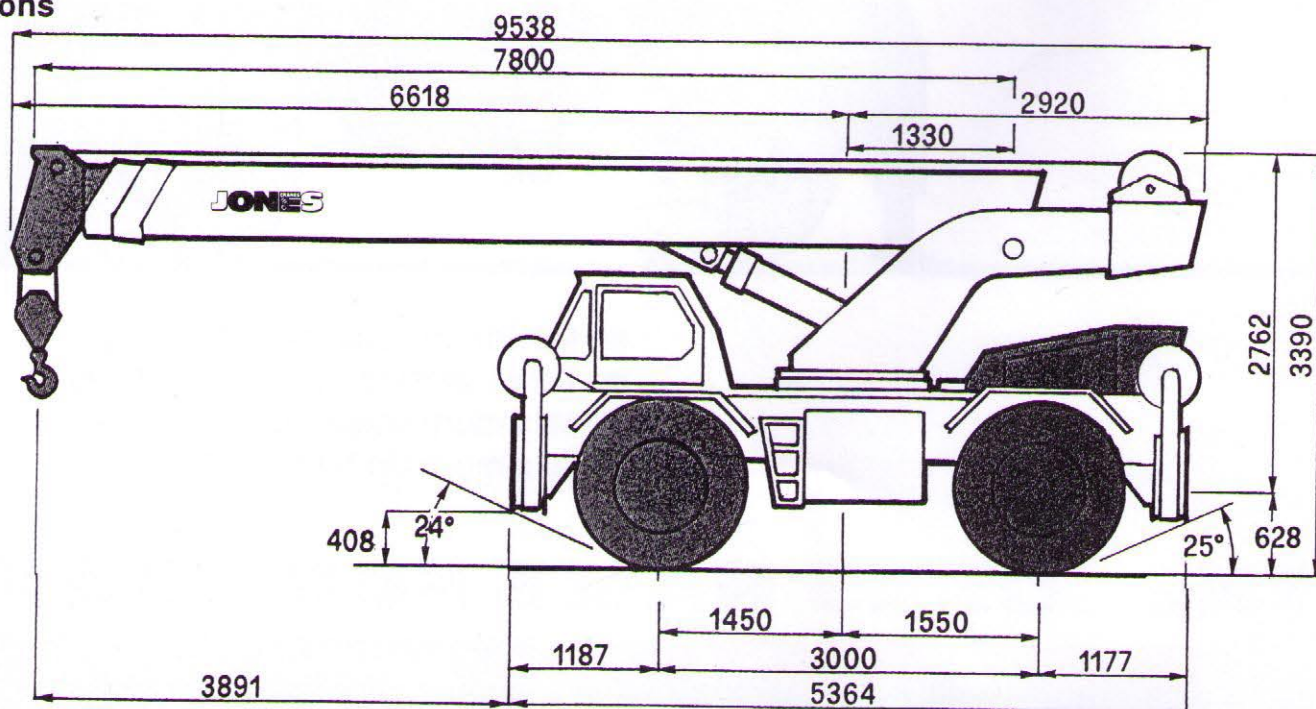
- Engine** Cummins 4 cylinder turbocharged water cooled diesel developing 87 kW (116 bhp) at 2500 rpm.
- Transmission** Torque converter with full power shift giving 6 forward and 6 reverse gears.

Chassis

- Drive** 4 x 4 x 4
- Construction** Purpose designed box type section frame fabricated from high tensile steel plate.
- Front Axle** Rigidly mounted drive/steer axle with central differential and planetary reduction hubs. Full power steering controlled by steering wheel in driver's cab.
- Rear Axle** Oscillating drive/steer axle with central differential and planetary reduction hubs. Hydraulic power steering with rear wheel steer indicator. Steering lock for road travel. Automatically operated rear axle lock out.
- Tyres** 14,00 x 24 earthmover type.
- Brakes** Dual circuit air over hydraulic service brakes to all wheels. Cable operated disc type parking brake to front wheels.
- Fuel Tank** 205 Litres (45 Gallons)
- Hydraulic Pumps** Three gear type hydraulic pump system. One tandem pump and one single pump. Total capacity 333 litres/min.
- Hydraulic Oil** Tank capacity 430 litres (95 Gallons)
- Outriggers** Four independent cantilever type outrigger beams operated by double acting hydraulic rams operated from the driver's cab.

Crane Superstructure

- Superstructure Frame** Fabricated high tensile steel structure onto which is mounted the telescopic jib, hoist unit, derricking cylinder and counterweight. The superstructure is capable of unlimited slewing in either direction and rotates on a slew bearing that is sealed against the ingress of dust and water.
- Control Valves** Individual valves allowing independent or simultaneous operation of the crane functions operated by control levers in Driver's cab
- Hoist Motion** Three speed hydraulic motor driven double reduction gear unit with 'fail safe' spring applied disc brake and counterbalance valve.
- Derrick Motion** Double acting hydraulic cylinder with lock valve allowing Boom elevation from 0° to + 75°.
- Slew Motion** Hydraulic driven slew pinion through planetary double reduction gearbox. Multidisc type slew brake with hand operated positive slew lock.
- Boom Telescoping** Double acting hydraulic cylinder with lock valve mounted within the jib structure.
- Main Boom** Three section boom of box type construction comprising base section and two fully powered automatically synchronised sections extending from 7,8 m to 18,8 m.
- Hoist Rope** 14 mm diameter x 110 m non spin.
- Hook Block** Three sheave hook block for maximum duty
- Electrical System** 24 Volt Electrical starting and charging circuits. Full road lighting to EEC requirements.

Dimensions



Driver's Cab

Construction	Fully enclosed, all steel construction, two door driver's cab mounted on Crane chassis giving maximum all round vision through safety glass windows.
Fittings	Fully upholstered driver's seat with hydraulic damper, adjustable for height rake and leg length. Cab front screen wiper and rear view mirrors.
Instruments	Full cab instrumentation for engine and transmission oil pressures and temperature, air pressures, fuel and travel speeds, battery charging, road lighting and direction indicators.
Controls	Normal automotive road controls including steering wheel for front axle and control switch for rear axle steer, transmission gear selection and forward/reverse shift, high low speeds and 2/4 wheel drive. Crane controls for all functions are mounted in the driver's cab.

Safety equipment

Standard	Overhoist and overlowering limit switches. Lock valves on all hydraulic cylinders with overload valve on all systems.
Optional	Audible and visual rated capacity indicator.
Paint	High gloss finish Yellow superstructure with grey chassis and operator's cab.

Performance Data.

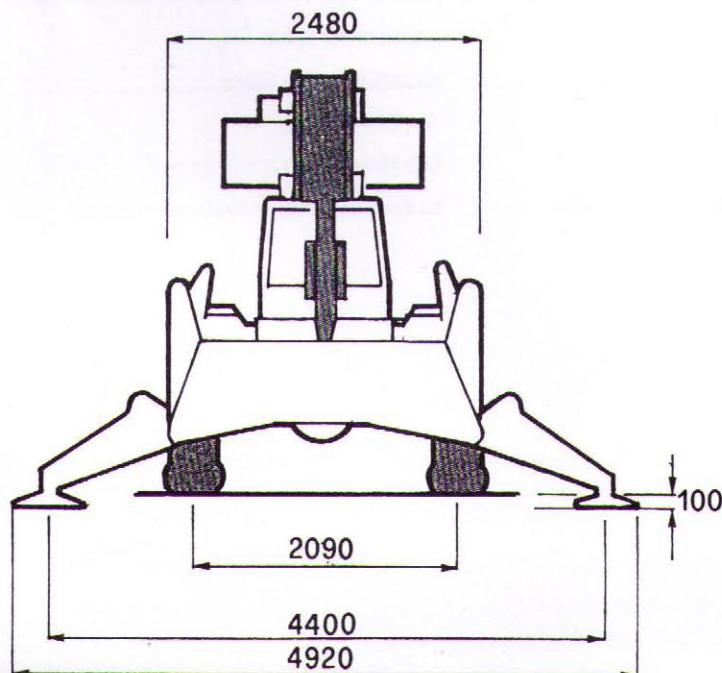
OPERATING

Line Pull	4200 kg. (41 kN)
Line Speed - Fast	0 - 92 m/min. 3 speed
Boom Derrick Up	34 seconds
Boom Derrick Down	31 seconds
Boom extension speed	21 m/min
Slew Speed	Up to 2,5 r.p.m.
Travel Speed	40 km/h max. (24.8 m.p.h.)
Turning Radius - 2 wheel steer	8,506 m between kerbs
- 4 wheel steer	5,656 m between kerbs

GENERAL

Axle Loads	Weight with crane in normal travelling order.
- Front axle	9,500 kg. (20948 lbs.)
- Rear axle	10,100 kg. (22270 lbs.)
- Total weight	19,600 kg. (43218 lbs.)
Maximum gradient - unladen	40%.

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JONES CRANES

JC 616

Lifting capacities

Lifting capacities in kilogrammes to BS 1757 : 1986 and DIN 15019.2

Working Radius (m)	LIFTING CAPACITIES ON OUTRIGGERS -- Main boom length in metres											
	7.80		10.00		12.00		14.00		16.00		18.80	
	360 ^o	Over front	360 ^o	Over front	360 ^o	Over front	360 ^o	Over front	360 ^o	Over front	360 ^o	Over front
3	16000	16000	14700	14700	14000	14000	13500	13500				
4	13200	13200	13200	13200	13200	13200	12000	12000	11000	11000		
5	10700	10700	10700	10700	10700	10700	10700	10700	9600	9600	8700	8700
6	8400	8700	8400	8700	8400	8700	8400	8700	8400	8700	7700	7700
7			6300	7200	6300	7200	6300	7200	6300	7200	6300	6700
8			5000	6200	5000	6200	5000	6200	5000	6200	5000	5800
9					4000	5100	4000	5100	4000	5100	4000	5100
10					3300	4100	3300	4100	3300	4100	3300	4100
11							2900	3600	2900	3600	2900	3600
12							2400	3100	2400	3100	2400	3100
13									2000	2700	2000	2700
14									1800	2200	1800	2200
15											1600	2000
16											1400	1800
17											1200	1600

FREE ON WHEELS - Capacities - kgs Standard tyres 14.00 x 24				
Radius (m)	Main Boom length (m)			
		Over front Static	360° Static	Over front 3 km/h
3	7.80	11200	8900	9200
4	7.80	7700	6000	6700
5	7.80	6300	4000	5600
6	7.80	4700	2900	4200
7	10.00	3500	2000	3200
8	10.00	2600	1600	2300
9	12.00	2110	1300	1800
10	12.00	1700	1000	1400
11	14.00	1300	700	1000
12	14.00	1000	500	700
13	16.00	900		
14	16.00	600		

FLY JIB 360° Capacities on outriggers - kgs.			
Main Boom angle	6,5 m fly jib		
	0°	15°	30°
74°	2600	1900	1400
70°	2100	1700	1300
60°	1600	1400	1100
50°	1300	1100	900
45°	1000	900	700
4,1 m fly jib			
74°	2600	1900	1400
70°	2100	1700	1300
60°	1600	1400	1100
50°	1300	1100	900
45°	1000	900	700

- Specified capacities relate ONLY to the machine as originally manufactured and equipped and used in accordance with CP.3010 'Safe use of cranes'. Any modification invalidates this information.
- The capacities are in accordance with clause 9.1.3c 'STABILITY' of BS1757:1986 'Power Driven Mobile Cranes' with wind forces to tables 5A and 6A of BS 2573, and also comply with DIN 15019.2.
- Capacities are the gross maximum loads which may be freely suspended from the boom head with the crane standing level on a firm supporting surface.
- When determining the suspended load, the weights of hookblock, slings and any lifting attachment must be added to the weight to be lifted.
- When working with Lattice extension stowed main boom capacities must be reduced by 120 kg. Lattice extension erected in working position 480 kg.
- Free on wheels capacities depend on correct tyre pressure, type and condition.
- Radius is measured with the load suspended
- Capacities shown above the bold line are based on factors other than stability. For this reason stability must not be relied upon to indicate capacity.
- Under normal circumstances it is permissible to attempt to telescope the boom in or out with a load suspended, providing the load/radius is within the capacity shown in the duty chart at all times.
- Capacities over the front apply only within 2,5° either side of the crane centre line.
- Suspended loads may be transported at speeds up to 3 km/h. Loads should be carried over the front of the crane whenever possible. Axle locks must be engaged before lifting free-on-wheels except over the front within 2,5° either side of the crane centre line.
- The boom should not be operated even without a load, at any combination of length or radius where there is no lifting capacity indicated on the chart. To do so may result in loss of machine stability.

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JONES CRANES

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