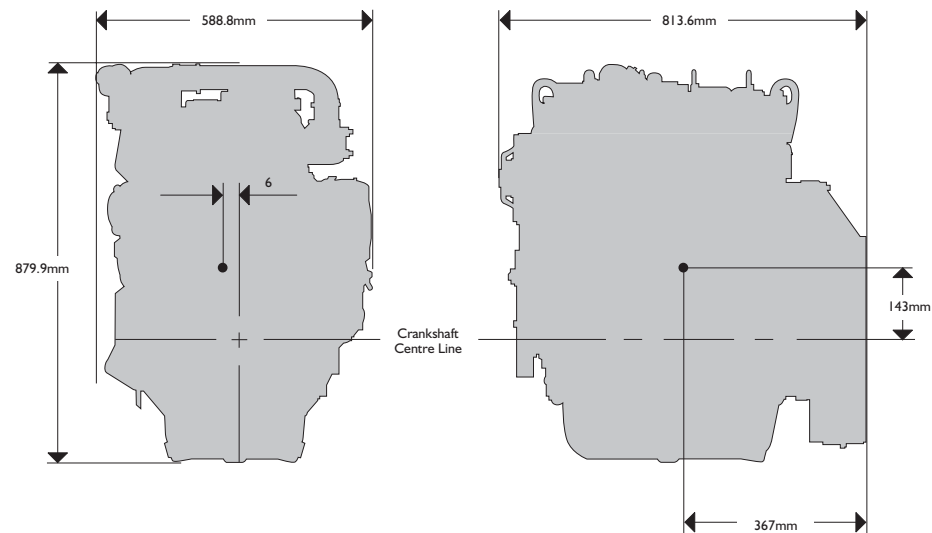
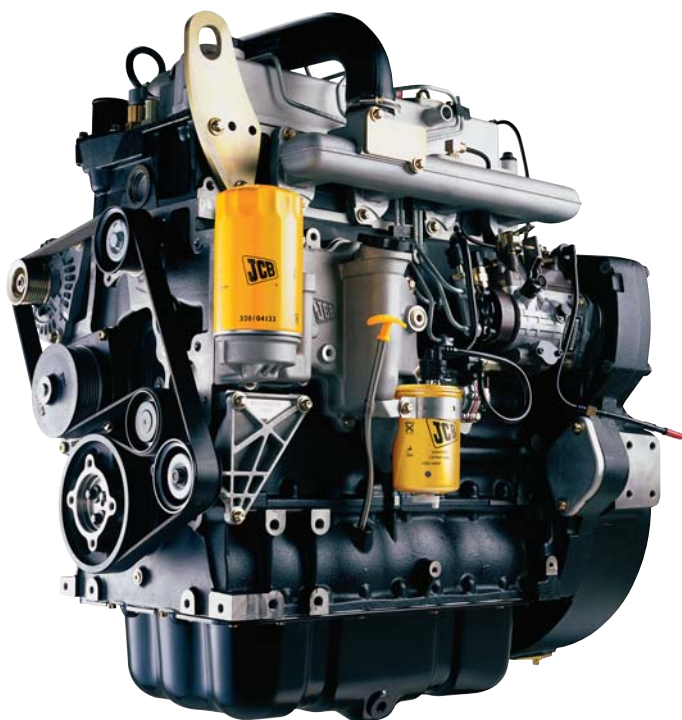




## JCB 444 TURBOCHARGED 68.6kW (92hp) & 74.2kW (100hp)



### MOBILE MACHINERY



### GENERAL TECHNICAL DATA

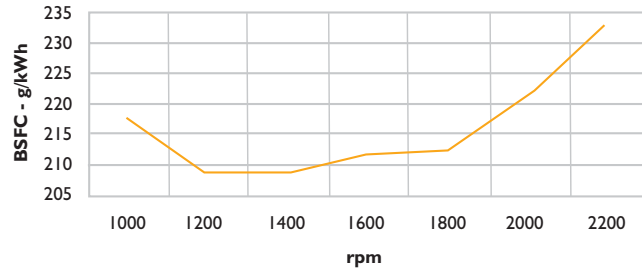
Technical Code	JCB444 TC – 68.6kW	JCB444 TC – 74.2kW
Thermodynamic Cycle	Diesel 4 stroke	Diesel 4 stroke
Air intake	TC	TC
Arrangement	4.4L	4.4L
Nominal Bore	mm 103	mm 103
Stroke	mm 132	mm 132
Total displacement	cm <sup>3</sup> 4399	cm <sup>3</sup> 4399
Valves per cylinder	4	4
Cooling	Liquid	Liquid
Direction of rotation (viewed from crank nose)	Clockwise	Clockwise
Compression ratio	18.3:1	18.3:1
Rotational mass moment of inertia excluding flywheel.	kgm <sup>2</sup> 0.2255	kgm <sup>2</sup> 0.2255
Standard flywheel inertia	kgm <sup>2</sup> 0.4061	kgm <sup>2</sup> 0.4061

		JCB444 TC – 68.6kW	JCB444 TC – 74.2kW
Maximum rating* gross intermittent	kW	68.6	74.2
At speed	rpm	2200	2200
Maximum torque	Nm	400	425
At speed	rpm	1250	1300
Maximum no load governed speed	rpm	2390	2390
Nominal idling speed	rpm	800	800
Mean Piston speed at rated speed	m/s	9.68	9.68
BMEP at maximum torque	bar	11.43	12.14
Emission Certification		EPA TII, EU St2	EPA TII, EU St2
Best point specific fuel consumption	g/kWh	209	209
Minimum full load specific fuel consumption	g/kWh	209	209
Noise at maximum rating	dBA 1m	89	89
Minimum starting temperature without auxiliaries	°C	-12	-12
Dry weight	kg	477	477

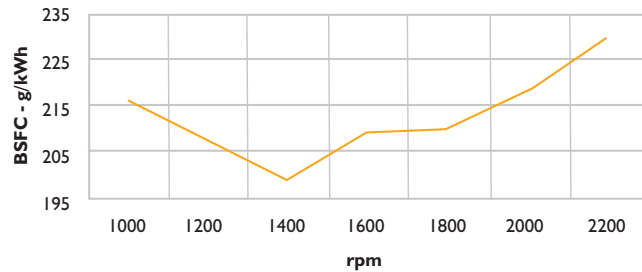


FUEL CONSUMPTION

68.6kW Fuel Consumption



74.2kW Fuel Consumption

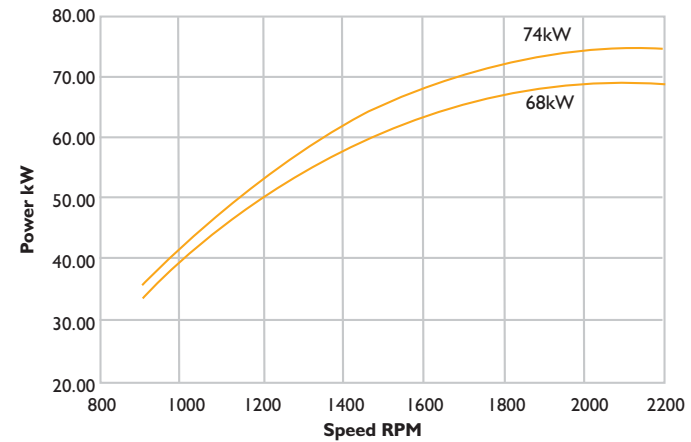
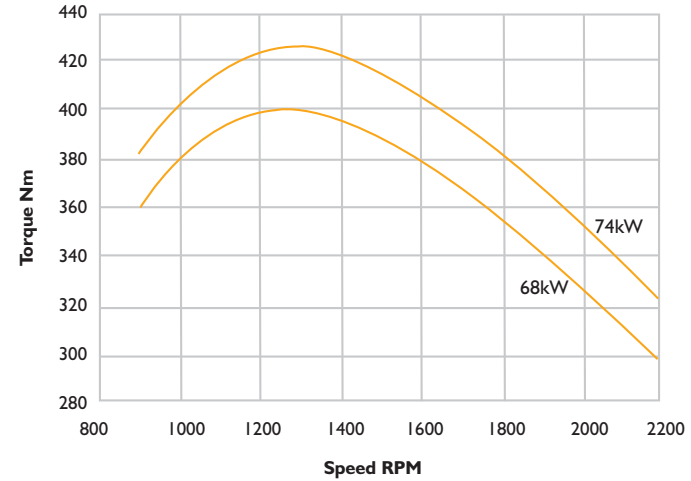


Fuel consumption with fuel at 40°C pump inlet, at full load.

FUEL SYSTEM

	JCB444 TC – 68.6kW	JCB444 TC – 74.2kW
Injection system	Rotary Mechanical	Rotary Mechanical
Fuel maximum intake restriction	mbar 100	100
Fuel maximum intake temperature	C 50	50
Engine Pre Filter	Micron 30	30
Engine Main Filter	Micron 5	5

POWER AND TORQUE CURVES



Fuel stop power (gross intermittent) shown.  
Performance measured according to ISO 14396 after 50 hours running without fan.



## JCB 444 TURBOCHARGED 68.6kW (92hp) & 74.2kW (100hp)



### EXHAUST SYSTEM

		JCB444 TC – 68.6kW	JCB444 TC – 74.2kW
Maximum allowable back pressure	mbar	150	150
Maximum exhaust temperature at full rated speed	°C	621	664
Exhaust flow at maximum output	kg/h	433	437

### LUBRICATION SYSTEM

		JCB444 TC – 68.6kW	JCB444 TC – 74.2kW
Lubricating oil pressure	bar	4.6	4.6
Maximum oil temperature at full rated speed: continuous.	°C	125	125
Maximum oil temperature at full rated speed: intermittent.	°C	135	135
Engine angularity limits in continuous operation:			
Maximum front up and front down	deg	35	35
Maximum right hand and left hand	deg	35	35
Total system capacity – including pipes, filters etc	Ltrs	14	14
Minimum recommended oil grade	API	CF4	CF4
Oil filter maintenance service schedule	Hours	500	500
Oil consumption at maximum rating	% of fuel consumption	0.1	0.1

### COOLING SYSTEM

		JCB444 TC – 68.6kW	JCB444 TC – 74.2kW
Coolant capacity – Engine only	Ltrs	7	7
Water pump flow at rated speed	ltr/min	200	200
Heat to reject by heat exchanger at maximum power	kW	48.1 est.	52.0
Thermostat Temperature	°C	90	90
Cooling liquid maximum temperature	°C	110	110
Minimum and Maximum pressure in the cooling circuit	kPa (bar)	1 bar max - min	1 bar max - min
Coolant Specification Approved (JCB High Performance Coolant)		ASTM D6210	ASTM D6210

### ELECTRICAL SYSTEM

		JCB444 TC – 68.6kW	JCB444 TC – 74.2kW
Type (ETR - Energised To Run)		Negative Ground, ETR	Negative Ground, ETR
Standard (Starter & Alternator)	V	12	12
Option.	V	24	24
Minimum Cranking Speed	rpm	100	100
Battery – minimum capacity recommended, not included		145Ah.	145Ah.
Battery – minimum cold cranking capacity recommended, not included		850 CCA	850 CCA

### AIR INDUCTION

		JCB444 TC – 68.6kW	JCB444 TC – 74.2kW
Maximum allowable air intake restriction with clean air filter	mbar	50	50
Maximum allowable restriction with dirty air filter	mbar	85	85
Air requirement for combustion at 100% rated speed	g/s	121	121
Turbocharging pressure at full rated speed	bar	0.664	0.664
Turbocharging air maximum temperature – engine inlet	°C	98	98
Cooled charge air at inlet manifold	°C	NA	NA
Heat rejected to intercooler at maximum power	kW	NA	NA
Intercooler system max pressure drop	mbar	NA	NA



## JCB 444 TURBOCHARGED 68.6kW (92hp) & 74.2kW (100hp)



### STANDARD CONFIGURATION

		JCB444 TC – 68.6kW	JCB444 TC – 74.2kW
Flywheel housing	SAE	3	3
Intake manifold location		Left hand forward.	Left hand forward.
Exhaust manifold/ Turbocharger location		Right hand rearward.	Right hand rearward.
Turbocharger		Wastegate controlled	Wastegate controlled
Fan transmission ratios.		0.85, 1.1, 1.16 or 1.25:1	0.85, 1.1, 1.16 or 1.25:1
Distance between fan - crankshaft centres	mm	262 or 356	262 or 356
Main Fuel Filter & Pre Filter		Included	Included
Fuel pump		Included	Included
Oil filter	qty	1 left side	1 left side
Oil Sump		Pressed dual skin	Pressed dual skin
Oil vapours blow-by circuit		Closed	Closed
Oil heat exchanger		Left side	Left side
Oil filler position		Top and left hand side	Top and left hand side
Starter motor		12v, 4.2kW.	12v, 4.2kW.
Alternator		12v, 95A	12v, 95A
Engine stop		Electrical	Electrical
Power Take off Heavy Duty (OEM Spec)		Standard: 60kW. RHS.	Standard: 60kW. RHS.
Power Take off Light Duty		Standard: 10kW. LHS.	Standard: 10kW. LHS.
Power Take off Crank nose		Standard: 60kW.	Standard: 60kW.
Finish		Lacquered	Lacquered
Owners Manual		Included	Included

### OPTIONAL EQUIPMENT

Pusher & Puller Fans, AVM's, Hydraulic Pumps, 24 Volt Electrics, Water In Fuel Sensor.  
 Grid Heater Matrix for improved cold starting.  
 Flywheel Options: 10", 11", 11.5", W300, Voith and ZF.  
 Long dipstick.

