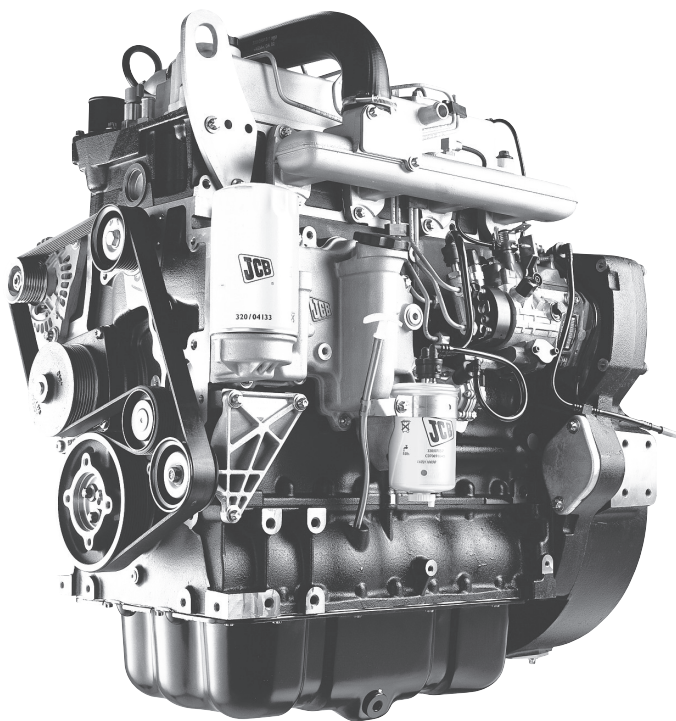
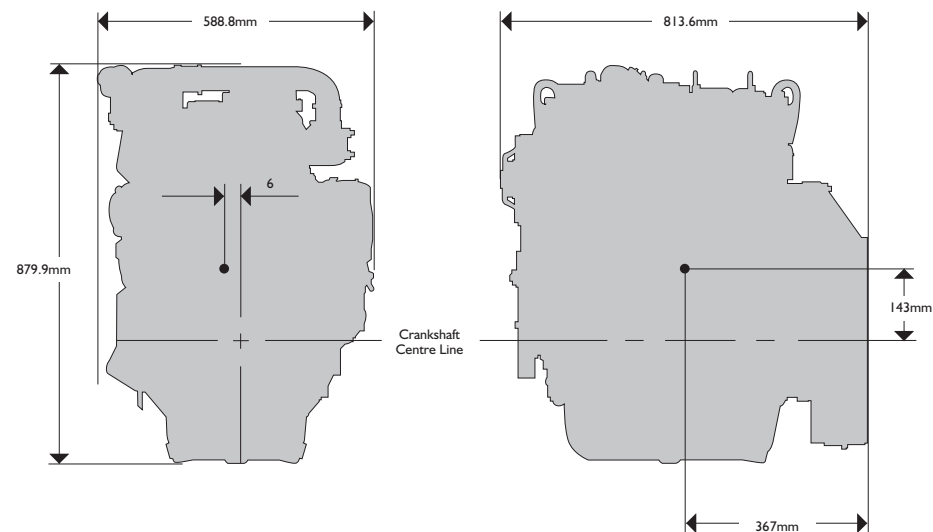




TURBOCHARGED 74.2kW (100hp) | JCB DIESELMAX



MOBILE MACHINERY



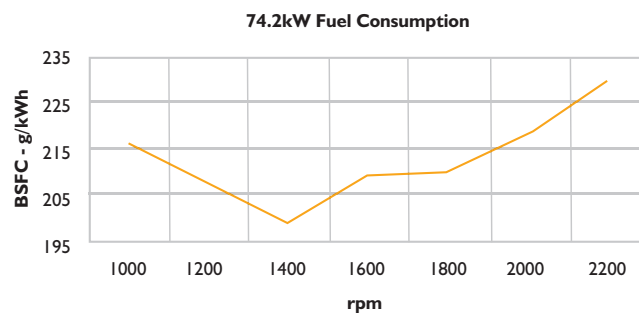
GENERAL TECHNICAL DATA

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

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



FUEL CONSUMPTION

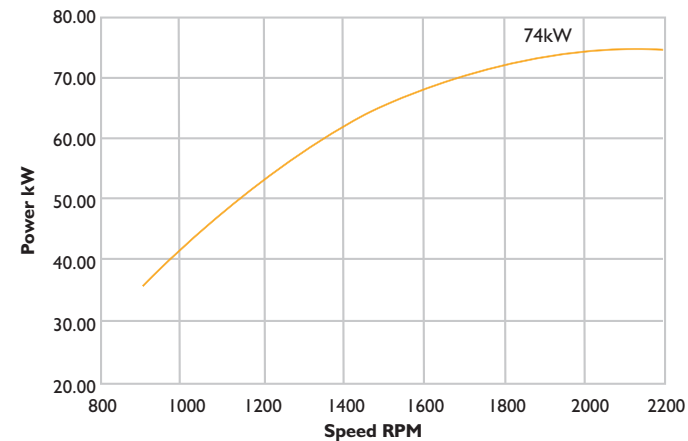
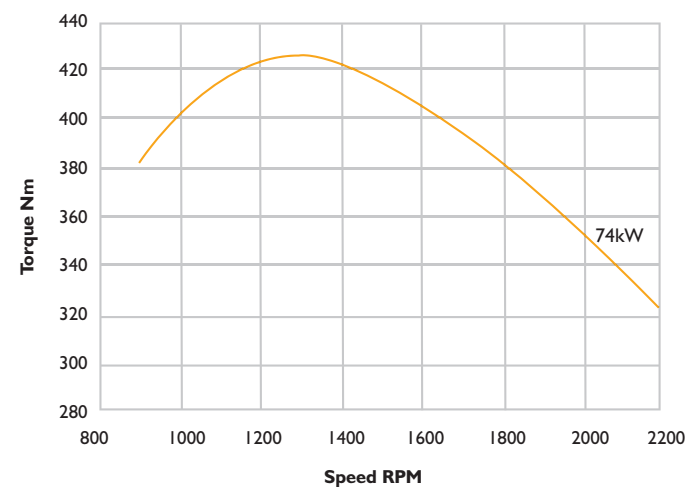


Fuel consumption with fuel at 40°C pump inlet, at full load.

FUEL SYSTEM

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

POWER AND TORQUE CURVES



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



EXHAUST SYSTEM

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

ELECTRICAL SYSTEM

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

LUBRICATION SYSTEM

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

AIR INDUCTION

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

COOLING SYSTEM

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



STANDARD CONFIGURATION

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

