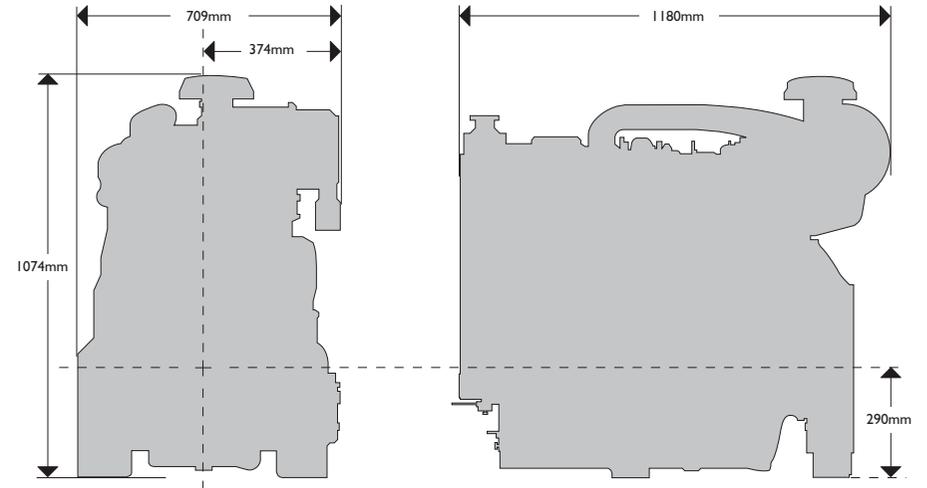


INDUSTRIAL POWER UNIT



GENERAL TECHNICAL DATA

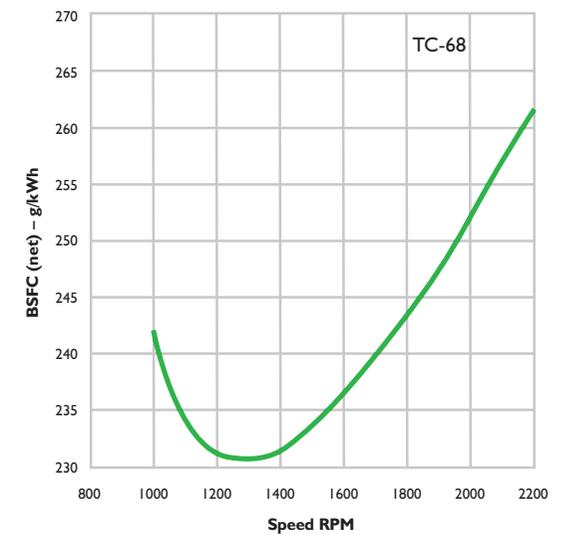
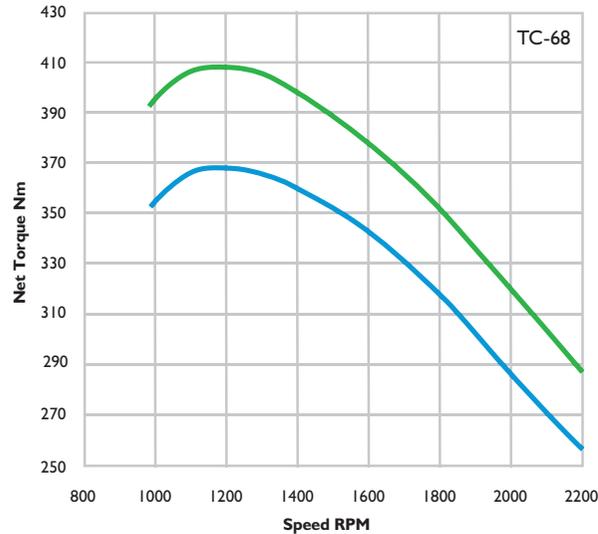
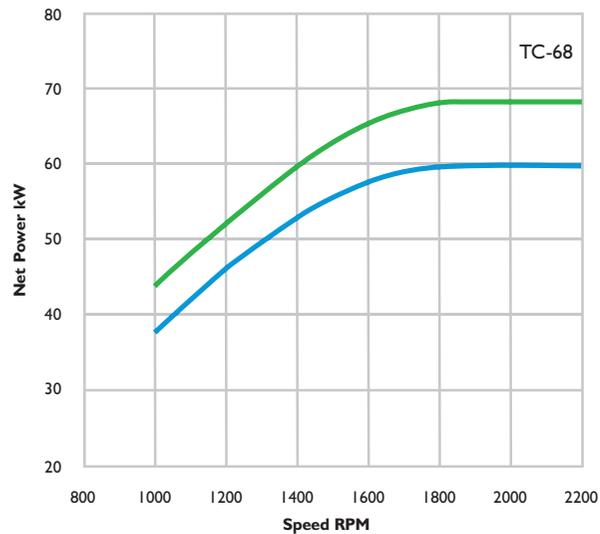
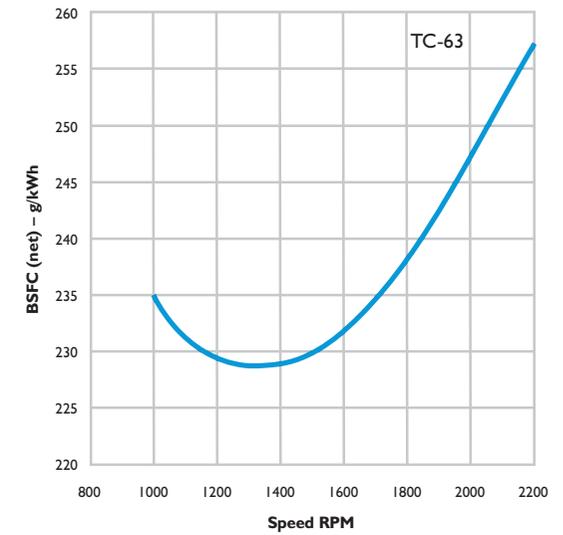
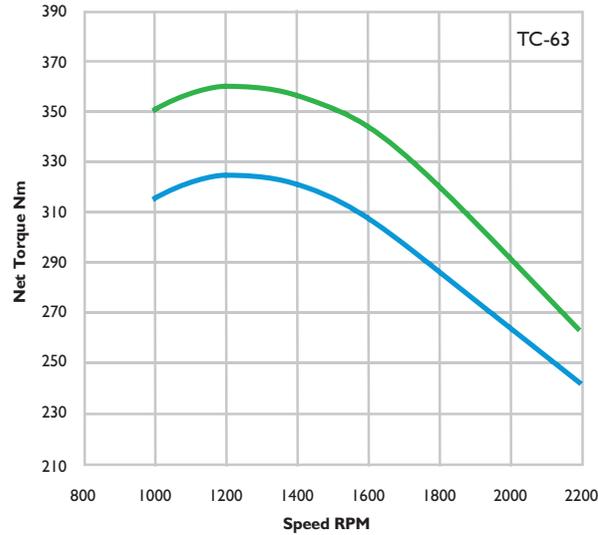
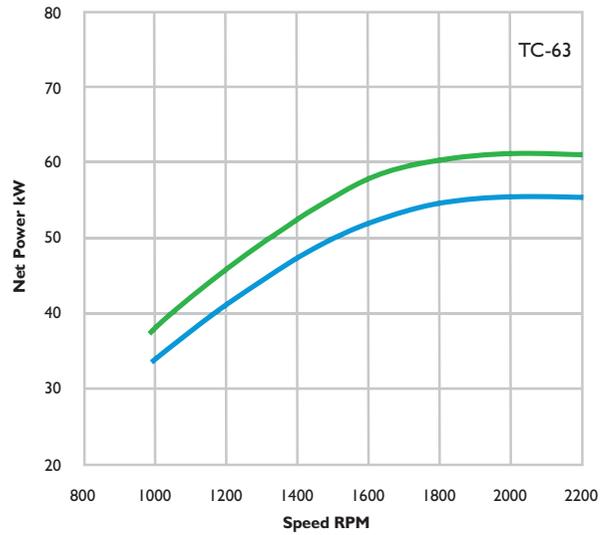
Technical Code	444 IPU T3 TC	
Thermodynamic cycle	Diesel 4 stroke	
Air intake	TC	
Arrangement	in-line 4 cyl. IPU	
Bore	mm	103
Stroke	mm	132
Swept volume	cm <sup>3</sup>	4399
Mean piston speed at rated speed	m/s	9.68
Valves per cylinder	4	
Cooling	Liquid	
Direction of rotation (viewed from crank nose)	Clockwise	
Compression ratio	17.2	
Rotational mass moment of inertia excluding flywheel	kgm <sup>2</sup>	0.2255
Standard flywheel inertia	kgm <sup>2</sup>	0.4061
Dry weight	kg	586

Technical Code		444 IPU T3 TC-63	444 IPU T3 TC-68
Maximum rating <sup>(1)</sup> (net intermittent)	kW	60.8	66.4
Rated speed	rpm	2200	2200
Maximum torque (net intermittent)	Nm	359	362
Maximum torque speed	rpm	1200	1200
Maximum no load governed speed	rpm	2420	2420
Nominal idling speed	rpm	900	900
BMEP at maximum torque	bar	10.3	11.7
Emission certification		EPA Tier3, EU St3	EPA Tier3, EU St3
Best point specific fuel consumption (net)	g/kWh	228	230
Specific fuel consumption @ (net) rated power	g/kWh	257	266
Specific fuel consumption @ (net) peak torque	g/kWh	228	230
Minimum starting temperature without auxiliaries	°C	-20	-20

<sup>(1)</sup> as per ISO14396 (adjusted for fan loss)



NET POWER, TORQUE AND FUEL CONSUMPTION CURVES



— A Rating Power — B Rating Power

— A Rating Torque — B Rating Torque

A = Net continuous Power/Torque  
B = Net intermittent Power/Torque



## JCB DIESELMAX 444 TURBOCHARGED TIER3 63KW (84HP) & 68.6KW (92HP)

### AIR INDUCTION

		444 IPU T3 TC-63	444 IPU T3 TC-68
Maximum allowable air intake restriction with clean air filter	mbar	50	50
Maximum allowable restriction with dirty air filter	mbar	80	80
Air requirement for combustion at full load rated speed	g/s	98	109
Turbocharging pressure at full load rated speed	mbar	700	1000
Turbocharger compressor outlet air temperature	°C	94	110
Charge cooler outlet temperature	°C	NA	NA
Heat rejected to charge cooler at maximum power	kW	NA	NA
Charge cooler system max pressure drop	mbar	NA	NA

### EXHAUST SYSTEM

		444 IPU T3 TC-63	444 IPU T3 TC-68
Maximum allowable back pressure	mbar	150	150
Exhaust gas temperature at full rated speed	°C	572	559
Exhaust flow at maximum output	g/s	103	114

### COOLING SYSTEM

		444 IPU T3 TC-63	444 IPU T3 TC-68
Coolant capacity - (inc. cooling pack)	ltrs	18	18
Water pump flow at rated speed	ltr/min	240	240
Heat to reject from coolant at maximum power	kW	48 est	51 est
Thermostat temperature	°C	88	88
Cooling liquid maximum temperature	°C	110	110
Coolant specification approved (JCB HP high performance)		ASTM D6210	ASTM D6210
Headertank pressure cap setting	bar	1	1
Cooling air flow requirement	m³/sec	1.8	1.8
Maximum working ambient temperature	°C	46	46
Fan type (standard)		18" pusher	18" pusher
Fan ratio		1.16:1	1.16:1

### LUBRICATING SYSTEM

		444 IPU T3 TC-63	444 IPU T3 TC-68
Lubricating oil pressure	bar	4.9	4.9
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	CH4	CH4
Oil filter maintenance service interval (<75% duty cycle)	hrs	500	500
Oil consumption at maximum rating	% of fuel consumption	0.03	0.03

### FUEL SYSTEM

		444 IPU T3 TC-63	444 IPU T3 TC-68
Injection system		Rotary Mechanical	Rotary Mechanical
Fuel maximum intake restriction	mbar	150	150
Fuel maximum intake temperature	°C	50	50
Engine pre-filter	Micron	30	30
Engine main filter	Micron	5	5

### ELECTRICAL SYSTEM

		444 IPU T3 TC-63	444 IPU T3 TC-68
Type (ETR - Energised To Run)		Negative Ground ETR	Negative Ground ETR
Standard (starter & alternator)	V	12	12
Minimum cranking speed	rpm	105	105
Battery (not included) - minimum capacity recommended		145Ah.	145Ah.
Battery (not included) - minimum cold cranking capacity		850 CCA	850 CCA

## STANDARD CONFIGURATION

<b>Technical Code</b>	<b>444 IPU T3 TC</b>
Flywheel housing	SAE 3
Flywheel	11.5"
Cooling system	Aluminium Radiator with associated guards, hoses and fan included
Induction system	Air filter (2 stage paper element) with induction hose and depression indicator included
Intake manifold location	Left hand forward
Exhaust manifold / turbocharger location	Right hand rearward
Turbocharger	Wastegate controlled
Fan drive ratio	1.16:1
Distance between fan - crankshaft centres	262mm
Main fuel filter & pre-filter	Included
Fuel pump	Included
Oil filter	1 off, left side
Oil sump	Press steel, low noise transmission structure
Oil vapours blow-by circuit	Open filtered, breather hose included
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	60kW SAE B, RHS
Power Take Off: light-duty	10kW SAE A, LHS
Electric Harness	Option available
Finish	Lacquered

## OPTIONAL EQUIPMENT

Extensive range of configuration options available from JCB Dieselmax sales option manual - contact JCB Power Systems dealer or JCB Power Systems Sales Dept. for availability of specific configuration options.

