

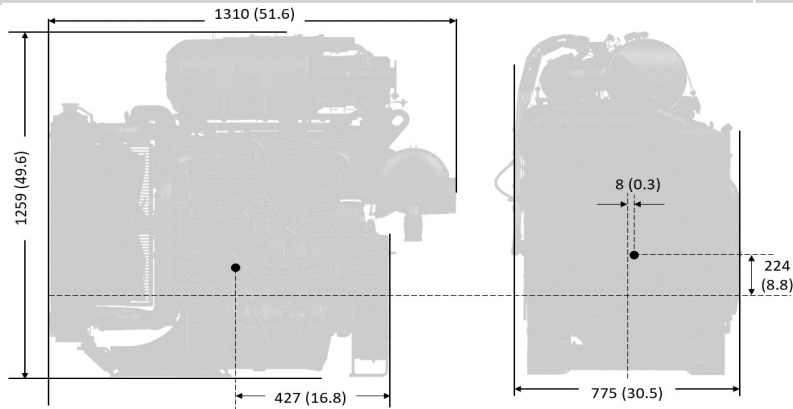


POWER SYSTEMS

JCB 448 DIESELMAX STAGE V 97 kW (130 hp) IPU Engine

FUEL SYSTEM		
Injection System		Common Rail
Brake Specific Fuel Consumption (BSFC) @ Full Load Rated Speed (FLRS)	g / kW / hr	207
BSFC @ Peak Torque	g / kW / hr	212
Max. Fuel Inlet Temperature Measured Before Engine Mounted Fuel Filter.	°C (°F)	80 (176)
Max. Fuel System Back Pressure Measured at Engine Spill Line Outlet From Engine	kPa (PSI)	30 (4.35)
Max. Fuel Inlet Depression Measured at Inlet to Fuel Lift Pump	kPa (PSI)	17 (2.5)
Nominal Fuel Inlet Flow to Pump @ FLRS	litre/h (gal/h)	100 (22)
Heat Rejection to Returned Fuel	kW (hp)	1.25 (1.68)
Nominal Fuel Return Flow to Tank @ FLRS	litre/h (gal/h)	70 (15.4)
Engine Fuel Pre Filter	micron	5
Engine Fuel Main Filter	micron	4

MODEL DATA		
Certification Model		448 STAGE V
Gross Rated Power	kW (hp)	97 (130)
Emissions Level		Stage V
Rated Speed	rpm	2200
Peak Torque	Nm (lbf-ft)	550 (406)
Peak Torque Speed	rpm	1500
Nominal Displacement	litres	4.8
Idle Speed (With engine at normal operating temperature)	rpm	850
Max. No Load Governed Speed	rpm	2450
Dimensions (L x W x H) (Engine Only)	mm (in)	978 (38.5) x 775 (30.5) x 1240 (48.8)
Bore	mm (in)	106 (4.17)
Stroke	mm (in)	135 (5.31)



Dimensions subject to change.

ENGINE LUBRICATION		
Engine Oil Pressure @ FLRS	kPa (PSI)	600 (87)
Max. Continuous Oil Temperature	°C (°f)	130 (266)
Max. Intermittent Oil Temperature	°C (°f)	135 (275)
Oil Capacity	litres (gals)	14 (3.7)
Oil SAE Classification (as supplied from factory)	SAE	10W30 or 5W40
Min. Required Oil Grade	API	API CJ4/CK-4 ACEA E6/E9

POWER & TORQUE														
Speed (r/min)	850	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
Power (kW)	34.3	48.4	57.4	66.0	73.1	79.6	86.4	91.0	94.4	95.6	95.5	95.5	95.4	97.2
Power (hp)	46	65	77	88	98	107	116	122	127	128	128	128	128	130
Torque (Nm)	385	462	498	525	537	543	550	543	530	507	480	456	434	422



ENGINE BREATHING		
Max. Rise Over Ambient at Inlet to Turbocharger	°C (°F)	25 (77)
Max. Induction Depression @ FLRS, Clean Filter	kPa (PSI)	3.8 (0.55)
Min. Induction Depression @ FLRS, Clean Filter	kPa (PSI)	1.0 (0.15)
Max. Induction Depression @ FLRS, Dirty Filter	kPa (PSI)	8.5 (1.23)
Air Requirement For Combustion / CAC Mass Flow @ FLRS, 25°C Ambient	kg/h (Lb/h)	538
Air Requirement For Combustion / CAC Mass Flow @ Peak Torque, 25°C Ambient	kg/h (Lb/h)	439
Engine Compressor Outlet Temperature @ FLRS 25°C Ambient	°C (°F)	136 (277)
Engine Compressor Outlet Temperature @ Peak Torque 25°C Ambient	°C (°F)	142 (288)
Max. Engine Compressor Outlet Temperature @ Limiting Ambient Temperature (LAT)	°C (°F)	220 (428)
Turbocharger Boost Pressure @ FLRS	kPa abs (PSI abs)	225 (32.6)
Max. Turbocharger Boost Pressure	kPa abs (PSI abs)	-
CAC Outlet Temperature @ FLRS, 25°C Ambient	°C (°F)	50-55 (122-131)
CAC Outlet Temperature @ Peak Torque, 25°C Ambient	°C (°F)	50-70 (122-158)
Heat Rejection to CAC @ FLRS 25°C Ambient	kW (hp) thermal	14.4 (19.3)
Heat Rejection to CAC @ Peak Torque 25°C Ambient	kW (hp) thermal	-
CAC System (comp. outlet to intake manifold inlet) Max. Pressure Drop @ FLRS	kPa (PSI)	9.4 (1.36)
CAC System (comp. outlet to intake manifold inlet) Min. Pressure Drop @ FLRS	kPa (PSI)	6.6 (0.96)

EXHAUST & EGR		
Exhaust Mass Flow @ FLRS	kg/h (Lb/h)	568 (1252.2)
Exhaust Mass Flow @ peak torque	kg/h (Lb/h)	457 (1007.5)
Max. Allowable Exhaust Back Pressure @ FLRS	kPa (PSI)	19 (2.76)
Min. Allowable Exhaust Back Pressure @ FLRS	kPa (PSI)	N/A
Turbocharger Turbine Outlet Gas Temperature @ FLRS	°C (°F)	710 (1310)
Max. EGR Actuator Skin Temperature	°C (°F)	N/A

ENGINE COOLING		
Heat to Coolant @ Rated Condition, 25°C Ambient	kW (hp) thermal	60 (80)
Heat to Coolant @ Peak Torque, 25°C Ambient	kW (hp) thermal	48 (64)
Radiator Flow @ Rated Speed (cab heater off)	l/min (gal/h)	210 (2772)
Radiator Flow @ Peak Torque (cab heater off)	l/min (gal/h)	135 (1782)
Max. Coolant System Pressure Drop Between T.Stat Outlet and Coolant Inlet	kPa (PSI)	70 (10.2)
Min. Coolant Fill Rate	l/min (gal/h)	10 (132)
Max. Coolant Temperature	°C (°F)	110 (230)
Max. Managed Coolant Temperature	°C (°F)	115 (239)
Thermostat Opening Temperature	°C (°F)	96 (205)
Coolant Temperature Warning Threshold	°C (°F)	113 (235)
Coolant Capacity Engine Only	litres (gals)	9 (2.38)

MASS / GEOMETRY		
Direction of Rotation (viewed from crank nose)		Clockwise
Approximate Weight (Engine Only, Dry)	kg (lb)	620 (1367)
Max. Bending Moment on Standard Flywheel Housing	Nm (lbf-ft)	1400 (1032)
Mass Moment of Inertia	kgm ² (lbf ²)	-
Centre of Gravity: x (distance from rear face of standard FH2 flywheel housing)	mm (in)	373 (14.7)
Centre of Gravity: y (distance to left of crank centreline, viewed from rear)	mm (in)	4 (0.2)
Centre of Gravity: z (height above centreline of crank)	mm (in)	246 (9.7)

OTHER TEMPERATURE LIMITS		
Max. Engine ECU Case Temperature	°C (°F)	115 (239)
Max. Alternator Air Inlet Temperature	°C (°F)	110 (230)

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