



Enriching Lives

Engine Data Sheet
Kirloskar Oil Engines Limited
Laxmanrao Kirloskar Road
Khadki, Pune - 411003 (India)

Basic Engine Model:
KFP4R-FM05D1

Reference Number : EDS - FM05D1 - 00

Revision Date : 28.07.2018

Rev. Number : 00

General Engine Data

Engine Manufacturer.....	KOEL
Ignition Type.....	Compression (Diesel)
Number of Cylinders.....	4
Bore and Stroke - in(mm).....	3.78 x 4.4 (96 x 112)
Displacement - in ³ (L).....	197 (3.2)
Compression Ratio.....	17.5 : 1
Valve per cylinder - Intake.....	1
Exhaust.....	1
Combustion System.....	Direct Injection
Engine Type.....	In-Line, 4 Stroke Cycle
Aspiration.....	Naturally Aspirated
Firing Order.....	1-3-4-2
Charge Air Cooling Type.....	Not Applicable
Rotation(Viewed from Flywheel end) - Clockwise..	Not Available
Counter-Clockwise.....	Standard
Engine Crankcase Vent System.....	Open
Installation Drawing.....	T4.2427.00.0.00

Power Rating - Approved

2900	
Engine Nameplate Power - HP(kW).....	43(32)

Cooling system

2900	
Engine Coolant Heat - Btu/sec(kW).....	26.5(28)
Engine Radiated Heat - Btu/sec(kW).....	10.4(11)
Heat Exchanger minimum Flow	
60 ⁰ F (16 ⁰ C) Raw Water - gal/min (LPM)....	6.57(25)
100 ⁰ F (38 ⁰ C) Raw Water - gal/min (LPM)...	7.88(30)
Heat Exchanger Maximum Cooling Water	
Inlet Pressure - lb/in ² (bar)	60 (4.13)
Flow - gal/min (LPM).....	10.5(40)
Thermostat, Start to Open - ⁰ F (⁰ C).....	165.2(74)
Fully Opened - ⁰ F (⁰ C).....	183.2(84)
Engine Coolant capacity - L.....	8.0
Engine Coolant High Temp. Switch - ⁰ F (⁰ C).....	203(95)
Engine Coolant Low Temp. Switch - ⁰ F (⁰ C).....	95(35)
Raw water High Temp. Switch - ⁰ F (⁰ C).....	149(65)

Continued.....

Electric System - DC

System Voltage (Nominal).....	12 V
Battery Capacity for Ambient above 32°F (0°C)	
Voltage (Nominal).....	12 V
Current Capacity - Amp/hr.....	150
Qty. per Battery Bank.....	1
CCA at 0°F (-18°C).....	640
Reserve Capacity - Minutes.....	260
Battery Cable Minimum Size - mm ²	35
Charging Alternator Output - Amp.....	35
Starter Cranking Amps - at 60°F (15°C).....	250 - 350

Exhaust System**2900**

Exhaust Flow - ft ³ /min (m ³ /min).....	298.6(8.5)
Exhaust Temperature - °F (°C).....	959(515)
Max. Allowable Back Pressure - in H ₂ O(kPa).....	16(4)
Exhaust pipe Dia. In (mm) for further exhaust piping(Min.).....	4 (100)

Fuel System**2900**

Fuel Consumption - gal/hr (L/hr).....	2.72(10.3)
Fuel Return - gal/hr (L/hr).....	26.38(137.7)
Total Supply Fuel Flow - gal/hr (L/hr).....	29.1(148)
Fuel Pressure - lb/in ² (kPa).....	36.25(250)
Fuel Supply Line Size(Min.) - in(mm)	0.5(12.7)
Fuel Return Line Size(Min.) - in(mm).....	0.375(9.5)
Max. Allowable Fuel Pump Suction With Clean Filter - in H ₂ O (m H ₂ O).....	31 (0.8)
Max. Allowable Fuel Head Above Fuel Pump Supply or Return - m (ft).....	5 (16.4)
Fuel Filter Size - Micron.....	3 - 5 micron

Heater System

Jacket Water Heater.....	Standard
Wattage (Nominal).....	1500
Voltage - AC, 1P.....	240

Continued.....

Air Intake System**2900**

Air Cleaner Type.....	Dry type, Indoor service only
Air Intake Restriction Maximum Limit	
Dirty Air Cleaner - in H ₂ O (kPa).....	7.1(1.8)
Clean Air Cleaner - in H ₂ O (kPa).....	4(1.0)
Engine Air Flow - ft ³ /min (m ³ /min).....	109.5(3.1)
Air Temperature(At Engine Inlet) - °F (°C).....	113(45) Max. Allowable

Lubrication System

Oil Pressure(Normal) - lb/in ² (kPa).....	36.26 to 79.77 (250 to 550)
Oil Temperature(In Pan) - °F (°C) (max.).....	248 (120)
Oil Pan Capacity, High - L.....	10
Low - L.....	8.0
Total Oil Capacity with filter - L.....	11.5

Performance**2900**

BMEP - lb/in ² (kPa).....	59.2(408)
Piston Speed - ft/min (m/min).....	2132.5(650)
Mechanical Noise - dB(A) at 1m.....	102 approx.
Power Curve.....	Performance curve No. : EPC - FM05D1 - 00

Note : The unit 'gal/hr or gal/min' mentioned in above data sheet is US gallon.