



Enriching Lives

## Engine Data Sheet

**Kirloskar Oil Engines Limited**  
**Laxmanrao Kirloskar Road**  
**Khadki, Pune - 411003 (India)**

## Basic Engine Model:

**KFP4R-UF05**

Reference Number : EDS - UF05 - 00

Revision Date : 11.01.2018      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. <sup>3</sup> (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
Weight(Dry engine) - lb (kg).....	1080 (490)
Installation Drawing.....	T4.2427.00.0.00

### **Power Rating - Approved**

	<b>2800</b>	<b>3000</b>
Engine Nameplate Power - HP(kW).....	57(42)	55(41)

### **Cooling system**

	<b>2800</b>	<b>3000</b>
Engine Coolant Heat - Btu/sec.(kW).....	38(40)	40(42)
Engine Radiated Heat - Btu/sec.(kW).....	8(8)	8(8)
Heat Exchanger minimum Raw Water Flow		
59°F (15°C) Raw Water - gal/min. (LPM)....	7.4(28)	7.4(28)
100°F (38°C) Raw Water - gal/min. (LPM)...	9.2(35)	9.2(35)
Heat Exchanger Maximum Cooling Raw Water		
Inlet Pressure - lb./in. <sup>2</sup> (bar) .....	60 (4.13)	
Flow - gal/min. (LPM).....	11.9(45)	
Thermostat, Start to Open - °F (°C).....	165.2(74)	
Fully Opened - °F (°C).....	183.2(84)	
Engine Coolant capacity - L.....	8.0	
Engine Coolant High Temperature Switch - °F (°C)..	203(95)	
Engine Coolant Low Temperature Switch - °F (°C)..	95(35)	
Raw water High Temperature Switch - °F (°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 - Min.....	260
Battery Cable Minimum Size - mm <sup>2</sup> .....	35
Charging Alternator Output - Amp.....	35
Starter Cranking Amps - at 60°F (15°C).....	250 - 350

### **Exhaust System**

	<b>2800</b>	<b>3000</b>
Exhaust Flow - ft <sup>3</sup> /min (m <sup>3</sup> /min).....	439.1(12.4)	461.3(13.1)
Exhaust Temperature - °F (°C).....	1225(663)	1238(670)
Max. Allowable Back Pressure - in. of H <sub>2</sub> O(kPa)...	16(4)	16(4)
Exhaust pipe Dia. In. (mm) for further exhaust piping(Min.).....	4 (100)	

### **Fuel System**

	<b>2800</b>	<b>3000</b>
Fuel Consumption - gal./hr. (L/hr.).....	3.64(13.8)	3.75(14.2)
Fuel Return - gal./hr. (L/hr.).....	34.96(132.2)	35.85(135.8)
Total Supply Fuel Flow - gal./hr. (L/hr.).....	38.6(146)	39.6(150)
Fuel Pressure - lb./in. <sup>2</sup> (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 <sub>2</sub> O (m H <sub>2</sub> O).....	31 (0.8)	
Max. Allowable Fuel Head Above Fuel Pump Supply or Return - m (ft.).....	5 (16.4) max. for 2800 to 3000 rpm	
Fuel Filter Size - Micron.....	3 - 5 micron	

### **Heater System**

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

Continued.....

**Induction Air System****2800****3000**

Air Cleaner Type.....	Dry type, Indoor service only	
Air Intake Restriction Maximum Limit		
Dirty Air Cleaner - in. of Water (kPa).....	7.1(1.8) for 2800 to 3000 rpm	
Clean Air Cleaner - in. of Water (kPa)...	4(1.0)	
Engine Air Flow - ft.3/min. (m3/min).....	134.2(3.8)	141.26(4)
Air Temperature(At Engine Inlet) - °F (°C).....	113(45) Max. Allowable	

**Lubrication System**

Oil Pressure(Normal) - lb./in. <sup>2</sup> (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****2800****3000**

BMEP - lb./in. <sup>2</sup> (kPa).....	81.5(562)	73.4(506)
Piston Speed - ft./min (m/min).....	2058(627)	2205(672)
Mechanical Noise - dB(A) at 1m.....	102 approx	
Power Curve.....	Performance curve No. : EPC - UF05 - 00	

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