

# KIRLOSKAR DIESEL ENGINES

## Engine Model : 4R1040

No. of	Bore x Stroke	Displacement (cc)	Gross Power Output Rating as per ISO3046 at 1500 RPM bhp (kW)		Suitable Power Rating for Generator at 0.8 pf	
Cyls.	(mm)		Prime	Standby	Prime	Standby
4	105 x 120	4160	56 bhp (41.2 kW)	61.6 bhp (45.3 kW)	40 kVA	44 kVA

# Features –

- Designed for heavy duty applications
- Extremely reliable
- All service points like dipstick, lube oil filling, lube oil filter, fuel pump, injectors are on one side which is the cooler side. This adds to operator comfort.
- Lower operating cost
- Easy maintenance higher uptime
- Superior design standards that minimize power deration even at high ambient temperatures.
- Winner of the frost & Sullivan Voice of Customer Award in the "Best Bang for Buck" category in the Indian Generating sets Market.

#### Ratings Definition:

**Standby Ratings**: These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO 8528-3)

**Prime Rating**: These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercial purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

**Continuous Rating**: These ratings are applicable for supplying power continuously to a constant load upto the full output rating for unlimited hours. No sustained overload capability is available for this rating.



# Engine Technical Data :

Physical Data			
Engine Make	Kirloskar		
Engine Model	4R1040		
Number of cylinders	4		
Configuration	Inline		
Туре	Four stroke		
Bore x Stroke (mm)	105 x 120		
Displacement (cc)	4160		
Cooling	Water cooled		
Aspiration	Naturally Aspirated		
Compression Ratio	18 : 1		
Starting Arrangement	12V Electric		

Fuel System				
Type of fuel filter	Two stage spin on type			
Governor Type	Mechanical			
Class of Governing	ISO 3046 Class A1 & ISO 8528-5, Class G2			
Fuel pump type	Inline			
Fuel pump make	MICO - BOSCH			
Recommended Fuel	Class A2, High speed diesel			
Specific fuel consumption gm/bhp-hr (gm/kW-hr)	160 (217)			
Fuel consumption at 100% load +5% tolerance (lit/hr)	10.73			
Fuel consumption at 75% load +5% tolerance (lit/hr)	8.05			
Fuel consumption readings are based on diesel fuel with a specific gravity of 0.85 and confirming to BS 2869, Class A2)				

Air System			
Air Filter Type	Dry type replaceable element		
Air Volume required for Ventilation (m <sup>3</sup> /hr)	5554		
Combustion air flow (m <sup>3</sup> /hr)	187		
Total Air Flow required for ventilation (m <sup>3</sup> /hr)	6061		
Total Fresh air required (m³/hr)	5555		

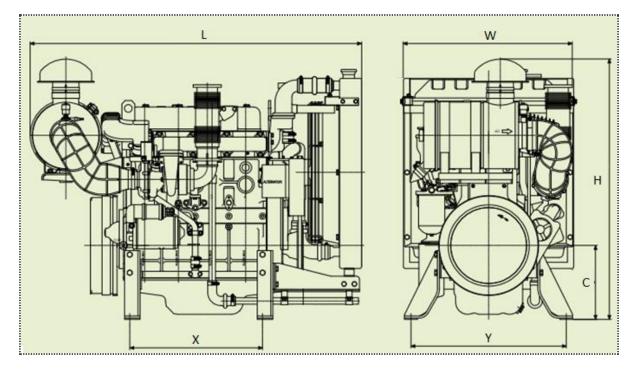
Cooling System				
Cooling system capacity (lit)	18			
Water pump type	Centrifugal			
Radiator fan load (hp)	4			

Lubrication System			
Type of lube oil filter	Full flow spin on type		
Oil to be used	Multi grade 15W40		
Oil pump type	Through G-rotor gear pump		
Lub oil sump capacity (lit)	11		
Lube oil consumption	0.3% of fuel consumption		

Electrical System				
Starting Arrangement	12V Electric			
Starter	12V Electric			
Starter Battery Rating	100 Amp-hr			
Battery charging alternator	Engine mounted 12V battery charger			
Battery charger amps	35			



# **Engine Dimensional Details :**



Dimensions in mm					
L	W	Н	С	Х	Y
1219	790	1114	285	513.5	600

Weight Details			Coupling	
Engine weight without radiator	540 / 420	Flywheel	Suitable for SAE 11.5" disc	
Gross / Net (kg)	Housing	Housing	SAE3	
Radiator and accessories weight Gross / Net (kg)75 / 60		Coupling disc	Not supplied	

# lirloskar

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