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20DWG-3330

DWG Series for Diesel Generator application

POWER RATING

Engine Speed	Type of Operation	Engine Gross Power		
Engine Speed	Type of Operation	kW	PS	
1500 rpm	Prime Power	2,664	3,623	
	Standby Power	2,930	3,985	
1800 rpm	Prime Power	-	-	
	Standby Power	-	_	

- The engine performance is as per ISO 3046. Type of operation is based on ISO 8528.

- Prime power is available for an unlimited number of hours per year in a variable load application.

- The permissible average power output over 24 hours of operation shall not exceed 80% of the prime power rating.

Engine Specifications

Fuel Consumption Data

						(Liter/Hour)
 Engine Type 	V-type, 4 strokes,	Speed	1500 rpm		1800 rpm	
	water-cooled Turbocharged	Rating	Prime	Standby	Prime	Standby
	air-to-air intercooled		2664 kW	2930 kW	-	-
 Combustion type 	Direct injection	100% Load	605	693		
 Cylinder Type 	Wet liner	75% Load	458	531		
 No. of Cylinders 	20	50% Load	320	372		
 Bore × stroke 	170 ×195 mm	25% Load	192	229		
 Displacement 	88.5 liter					
 Compression ratio 	13.5 : 1					
 Firing order 		Fuel Syste	m			
 Injection timing 	14.5 °BTDC	 Injection put 	Imp	Direc	t Injection ty	/pe

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 Dry weight 	Approx. 7900 kg
 Dimension(LxWxH) 	4110 × 1459 × 1820 mm
 Rotation 	Anti-clockwise
	(Face to the flywheel)

- Fly wheel housing
- Fly wheel
- Ring Gear Tooth

Mechanism

○ Type Number of valve Overhead valve Intake 1, exhaust 1 per Cylinder

SAE NO. 00

SAE NO. 21

218 EA

Valve lashes at cold

Injection pump

- Governor
- Feed pump
- Injection nozzle
- Fuel filter Used fuel

Electronic type Mechanical Type Multi-hole type Full Flow, Cartridge Type Diesel fuel oil

AFI - CF-4 oil

Lubrication System

- Lub. Oil Grade
- Lub. Oil Pan Capacity 300 liter
- Max. allowable Oil Temp 110 degree C. ≤ 300 kPa
 - Oil pressure, Warning
 - Oil pressure, Shut-down Oil Consumption Rate
- ≤ 200 kPa ≤ 1.2 g/kWh



S/B

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Cooling System Engineering Data Cooling method Fresh water forced type 1500 rpm 1800 rpm ○ Water Pump Centrifugal, belt driven ○ Media Flow Prime S/B Prime • Water capacity 200 liter (engine only) Combustion Air m3/min 293.0 322.3 _ • Max. Water Temp 98 degree C. Exhaust Gas m3/min 732.5 805.6. ○ Thermostat Open 71°C / Full 90°C • Cooling fan loss 142 kW @ 2220 kW • Heat Rejection to Exhaust kW 1,705 1,875 _ to Coolant kW 909 1008

Intake & Exhaust System

• Max air restriction Clean 2 kPa / Dirty 5 kPa

• Exhaust back pressure Max 2 kPa

Electric System		Conversion Table	
 Charging generator 	28 V × 55 A	in. = mm × 0.0394	lb/ft = N.m × 0.737
 Voltage regulator 	Build-in type IC regulator	PS = kW × 1.3596	U.S. gal = lit. × 0.264
 Starting motor 	24 V × 13 kW – 2set	psi = kg/cm2 × 14.2233	kW = 0.2388 kcal/sec
 Battery Voltage 	24 V	in ³ = lit. × 61.02	lb/PS.h = g/kW.h × 0.00162
 Battery Capacity 	4 ea x 200 Ah	HP= PS x 0.98635	Cfm = m3/min x 35.336
		lb = kg x 2.20462	

to Intercooler

to radiation

kW

kW

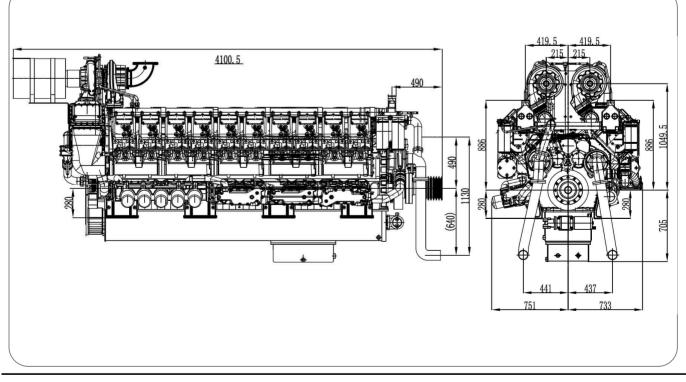
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605

161

Engine Layout & Dimension



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