

4DWY- 60

DWY Series

POWER RATING

Engine Speed	Type of Operation	Engine Gross Power	
		kW	PS
1500 rpm	Prime Power	48	65
	Standby Power	53	72
1800 rpm	Prime Power	53	72
	Standby Power	58	79



- 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

- Engine Type In-Line type, 4 strokes, water-cooled Natural Aspirated
- Combustion type Direct injection
- Cylinder Type
- No. of Cylinders 4
- Bore x stroke 108 x 135 mm
- Displacement 4.9 liter
- Compression ratio 17 : 1
- Firing order 1 – 3 – 4 – 2
- Injection timing 16 °BTDC
- Dry weight Approx. 350 kg
- Dimension(LxWxH) 890 x 630 x 810 mm
- Rotation Anti-clockwise (Face to the flywheel)
- Fly wheel housing SAE NO. 3
- Fly wheel SAE NO.11.5
- Ring Gear Tooth 130 EA

Mechanism

- Type Overhead valve
- Number of valve Intake 1, exhaust 1 per Cylinder
- Valve lashes at cold Intake. 0.35~0.40 mm Exhaust 0.304 mm

Fuel Consumption Data

Speed Rating	(Liter/ Hour)			
	1500 rpm		1800 rpm	
	Prime	Standby	Prime	Standby
100% Load	48 kW	53 kW	53 kW	58 kW
75% Load	12.8	14.2	14.6	17.0
50% Load	10.4	12.4	12.8	13.8
25% Load	7.4	9.1	9.4	10.2
	4.58	5.8	6.0	6.5

Fuel System

- Injection pump Direct Injection type
- Governor Mechanical type
- Feed pump Mechanical type
- Injection nozzle Multi-hole type
- Opening pressure 250 kg/cm² (3556 psi)
- Fuel filter Full Flow, Cartridge Type
- Used fuel Diesel fuel oil

Lubrication System

- Lub. Oil Grade CF-4 oil
- Lub. Oil Pan Capacity 14 liter
- Max. allowable Oil Temp 105 degree C.
- Oil pressure Min. 294 kPa Max. 490 kPa
- Oil Consumption Rate ≤ 1.2 g/kWh

Cooling System

- Cooling method Fresh water forced type
- Water Pump Centrifugal, Belt driven t
- Water capacity 6 liter (engine only)
- Max. Water Temp 99 degree C.
- Thermostat Open 71°C / Full 82°C
- Cooling Fan Blade 7EA - Ø 510 mm

Engineering Data

		1500 rpm		1800 rpm	
		Prime	S/B	Prime	S/B
○ Media Flow					
Combustion Air	m3/min	2.7	2.9	3.2	3.3
Exhaust Gas	m3/min	6.7	7.6	7.7	9.0
Cooling Fan	m3/min				

○ Heat Rejection

to Exhaust	kW	39	43	43	47
to Coolant	kW	25	27	27	30
to Intercooler	kW	-	-	-	-
to radiation	kW	4	4	4	5

Electric System

- Charging generator 14 V x 65 A (910 W)
- Voltage regulator Build-in type
- Starting motor 12 V x 3.7 kW
- Battery Voltage 12 V
- Battery Capacity 120 AH

Conversion Table

in. = mm x 0.0394	lb/ft = N.m x 0.737
PS = kW x 1.3596	U.S. gal = lit. x 0.264
psi = kg/cm ² x 14.2233	kW = 0.2388 kcal/sec
in ³ = lit. x 61.02	lb/PS.h = g/kW.h x 0.00162
HP= PS x 0.98635	Cfm = m3/min x 35.336
lb = kg x 2.20462	

Engine Layout & Dimension

