# FUJIAN EPOS ELECTRIC MACHINERY CO., LTD





**ENGINE MODEL: 4DX23-90D** 

**EMEAN POWER** 

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## ■ Model: 4DX23-90D

| Basic technical data               |           |                            |  |
|------------------------------------|-----------|----------------------------|--|
| Engine Model                       | 4DX23-90D |                            |  |
| No. of cylinders                   | 4         |                            |  |
| Cylinder arrangement               | In-line   |                            |  |
| Cycle                              |           | 4 stroke                   |  |
| Aspiration                         |           | Turbocharged & Intercooled |  |
| Cooling system                     |           | Water-cooled               |  |
| Bore                               | mm        | 102 mm                     |  |
| Stroke                             | mm        | 118 mm                     |  |
| Compression ratio                  |           | 17:1                       |  |
| Displacement                       | L         | 3.86 L                     |  |
| Dry engine weight                  | kg        | 340 kg                     |  |
| Dimension (L*W*H)                  | mm        | mm 800*680*850             |  |
| The Flywheel shell interface       |           | SAE3-11.5"                 |  |
| Performance Data                   |           |                            |  |
| Governed Engine Speed              | r/min     | 1800                       |  |
| Continuous Power without Fans      | kW        | 65                         |  |
| Standby Power                      | kW        | 72                         |  |
| Adaptive power station (kw)        | kW        | 55                         |  |
| Steady state speed regulation rate | %         | N/M                        |  |
|                                    |           | 0-3 / Electronical         |  |
| Emission Standards                 |           | CN Stage II                |  |
| Noise Level                        | dB        | <u>≤111</u>                |  |
| Average effective pressure         | mPa       | 1.12                       |  |
|                                    |           |                            |  |
| Lubrication system                 |           |                            |  |
| Lubricating oil capacity           | L         | 13                         |  |
| Lubricating oil consumption        | L/h       | ≤0.05                      |  |
| Fuel system                        |           |                            |  |
| Fuel consumption PRP               | kg/h      | 13.70                      |  |
| Fuel consumption Rate              | g/kW·h    |                            |  |
| 25% prime power                    | g/kW·h    | 255                        |  |
| 50% prime power                    | g/kW·h    | 220                        |  |
| 75% prime power                    | g/kW·h    | 210                        |  |
| 100% prime power                   | g/kW·h    | 210                        |  |
|                                    |           |                            |  |

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| Air intoles system              |                         |             |
|---------------------------------|-------------------------|-------------|
| Air intake system               | m³/min                  | 4.7         |
| Air consumption                 |                         |             |
| Maximum allowed intake pressure | kPa                     | 6.3         |
| Fuel calorific value            | 2                       | N/M         |
| Exhaust gas discharge           | m³/min                  | 12.1        |
| Exhaust temperature             | $^{\circ}\! \mathbb{C}$ | 500         |
| (exhaust gas after turbine)     |                         |             |
| Exhaust heat                    | kw                      | 51          |
| Maximum allowed back pressure   | kPa                     | 6.7         |
| Heat balance                    |                         |             |
| Engine heat output              | kw                      | 5.2         |
| Heat removal of coolant         | kw                      | 35.8        |
| Heat dissipation of intercooler | kw                      | 9.2         |
|                                 |                         |             |
| Cooling system                  |                         |             |
| Fan Speed Ratio                 |                         | 1.68        |
| Pump Flow head                  | L/s                     | 3.4         |
| Coolant capacity-engine         | L                       | 8           |
| Fan diameter                    | mm                      | 520         |
| Fan speed                       | R/min                   | 3027        |
| Fan flow                        | m³/s/Pa)                | 2.88/720    |
| Fan power consumption           | kW                      | 7.95        |
| Coolant capacity-Radiator       | L                       | 11          |
| Thermostat on / off temperature | $^{\circ}\! \mathbb{C}$ |             |
| Noted:Pump Flow / Speed head    |                         | 174/3200-10 |
|                                 |                         |             |
| Electrical system               |                         |             |
| Auxiliary voltage (V)           |                         | 24 V        |
| Alternaotr (A)                  |                         | 35          |
| Starter Motor (kw)              |                         | 4.5         |

### **Power Calibration Regulations**

Number of teeth of flywheel ring gear

Start preheater (kw)

1.The diesel engine performance data specified above are based on the atmospheric environment specified in the GB/T6072.1/ISO3046-1 standard.

The atmospheric pressure is 100kPa, the ambient temperature is 25°C, and the air humidity is 30%. Fuel calorific value 42.7mJ/kg

- 2.Prime power refers to the output power that the diesel engine can run for a long time without time limit under this working condition
- 3.Standby power refers to that the diesel engine is allowed to work continuously for 1 hour under the limited power of fuel volume every 6 hours

#### **Power correction**

- 1. The diesel engine can be used without reducing the power when the altitude is 400m and the ambient temperature is less than  $40^{\circ}$ C.
- 2. When the environment deviates from the standard, the operating power of the diesel engine shall be corrected according to the following table

| Altitude < 3000m    | %/m | 4/500         |
|---------------------|-----|---------------|
| Altitude>3000m      | %/m | 6/500         |
| Ambient Temperature | %/℃ | 2/5           |
| Humidity            | %   | No correction |

#### Fuel consumption rate

Unless otherwise specified, the allowable deviation of calibrated fuel consumption rate at rated power is +5%

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