

### MG POWER DIESEL GENERATOR Cummins® powered Genset Model: MGC 20



\*Drawing above for illustration purposes only

#### I . GENERAL DATA

|                     |        |                |      |
|---------------------|--------|----------------|------|
| Prime Power         | kW/kVA | 20             | 25   |
| Standby Power       | kW/kVA | 22             | 28   |
| Frequency           | Hz/rpm | 50             | 1500 |
| Voltage             | V      | 400            | 230  |
| Current             | A      | 36             |      |
| Connection          | /      | 3P 4W/Y        |      |
| Rated Power Factor  | /      | 0.8            |      |
| Open Type (L×W×H)   | mm     | 1800×850×1330  |      |
| Open Type(Weight)   | kg     | 730            |      |
| Silent Type (L×W×H) | mm     | 2300×1100×1290 |      |
| Silent Type(Weight) | kg     | 1050           |      |



■ Available for voltages 400/230V, 480/277V, 380/220V, 440/254V, 416/240V, 220/127V, 208/120V

■ All datas based on ISO 3046, altitude 100m (328ft), barometric pressure 100kPa (29.53inHg), air temperature 25°C (77°F), relative humidity 30%.

■ Please contact with YANAN engineer for correct generator capacity selection when the load application can't meet with the standard reference.

■ YANAN diesel generators comply with standards: ISO8528, ISO14000, ISO3046, GB755, BS5000, VDE0530, IEC34-1

### II. STANDARD CONFIGURATION

|                          |  |
|--------------------------|--|
| Engine                   | Cummins, including air filters, fuel filters, oil filter, starting motor and charging alternator etc.                |
| Alternator               | YANAN brushless AC alternator  |
| Radiator                 | 50°C, fan protective shroud  |
| Base Frame               | ≤550KW: base mounted fuel tank, anti-vibration pads, battery holder  |
|                          | >550KW: channel steel base frame, anti-vibration pads, battery holder  |
| Circuit Breaker          | ≤63A: Micro Circuit Breaker (MCB) >63A ≤1250A : Molded case circuit breaker(MCCB) , >1250A: Air circuit breaker(ACB) |
| Control System           | DEEP SEA 6120  |
| Start Battery            | Dry charged battery, available for 6 times starts under standard condition; connection cables.                       |
| Installation Accessories | Bellow, Elbow and flange, Exhaust silencer, etc.   |
| Documents                | Electric drawing, operation & maintenance manual, certification etc.   |

### III. OPTIONAL CONFIGURATION

|                            |  |
|----------------------------|--|
| Engine Accessories         | ◇ Heavy-duty air filter ◇ Coolant heater ◇ Lub oil heater ◇ Fuel and Water Separator               |
| Alternator And Accessories | ◇ Stamford ◇ Leroy Somer ◇ Marathon ◇ Anti condensation heater ◇ PMG                               |
|                            | ◇ High voltage _____ kV  |
| Cooling System             | ◇ 50°C radiator ◇ Heat exchanger + water cooling tower + External water circulation pumping system |
|                            | ◇ Remote horizontal water tank system  |
| Control System             | ◇ AMF ◇ Parallel ◇ Practical type in low temperature environment ◇ Control Screen Heater           |
|                            | ◇ Other (Comap、DEIF)   |
| Circuit Breaker            | ◇ 3/4 poles ◇ Fixed/handcart type ◇ Electric mechanism   |
| Automatic Transfer Swtich  | ◇ ATS cabinet  |
| Start Battery              | ◇ Nickel-cadmium battery ◇ Maintenance-free battery ◇ Power charger and selector                   |
|                            | ◇ Charging current meter   |
| External Fuel Tank         | ◇ 500L ◇ 1000L ◇ 1500L ◇ 2000L ◇ 2500L ◇ 3000L ◇ 4000L ◇ 5000L                                     |
| Others                     | _____  |

### IV. ENGINE DATA

|                  |                     |                   |         |     |
|------------------|---------------------|-------------------|---------|-----|
| Engine Model     | 4B3.9-G2            | Engine Power      | 27      | kW  |
| Aspiration       | Naturally Aspirated | Displacement      | 3.9     | L   |
| Type             | In-line             | Bore×Stroke       | 102×120 | mm  |
| No. of Cylinders | 4                   | Compression Ratio | 18.0: 1 |     |
| Governor Type    | Electronic Governor | Rated Speed       | 1500    | RPM |

#### ■ Fuel System

|                              |  |     |                                |       |     |
|------------------------------|--|-----|--------------------------------|-------|-----|
| Prime Power Fuel Consumption | 6.7  | L/h | Standby Power Fuel Consumption | 7.5   | L/h |
| Fuel #                       | ASTM D975 No.2-D or BS2869 1998 Class A1, A2 |     | Injection System               | BYC A |     |

#### ■ Lubrication System

|                  |                |   |                 |     |    |
|------------------|----------------|---|-----------------|-----|----|
| Lub Oil Capacity | 10.9           | L |                 |     |    |
| Lub #            | API CF-4 15W40 |   | Max.Temperature | 121 | °C |

#### ■ Coolant System

|                                    |         |        |                     |             |    |
|------------------------------------|---------|--------|---------------------|-------------|----|
| Coolant Capacity                   | 19      | L      | Max. Top Tank Temp. | 110         | °C |
| Std. Thermostat (Modulating) Range | 83 - 95 | °C     | Fan Drive Method    | Shaft drive |    |
| Cooling Fan Air Flow               | 210     | m3/min |                     |             |    |

#### ■ Air Intake System

|                     |             |        |                                |     |     |
|---------------------|-------------|--------|--------------------------------|-----|-----|
| Combustion Air Flow | 1.968/1.974 | m3/min | Maximum Air Intake Restriction | 3.7 | kPa |
|---------------------|-------------|--------|--------------------------------|-----|-----|

#### ■ Exhaust System

|                  |           |        |                   |     |     |
|------------------|-----------|--------|-------------------|-----|-----|
| Exhaust Gas Flow | 4.08/4.26 | m3/min | Max.Back Pressure | 10  | kPa |
| Exhaust Gas Temp | ≤410      | °C     | Exhaust Pipe Size | φ76 | mm  |

#### ■ Starting System

|            |                      |         |       |    |
|------------|----------------------|---------|-------|----|
| Start Mode | DC24V Electric start | Battery | 2×120 | Ah |
|------------|----------------------|---------|-------|----|

### V. ALTERNATOR DATA

|                      |          |                    |              |        |
|----------------------|----------|--------------------|--------------|--------|
| Alternator Model     | SLG184F  | Rate Power         | 22/27.5      | kW/kVA |
| PF.                  | 0.8      | Voltage            | 400/230      | V      |
| Phase                | 3        | Frequency          | 50           | Hz     |
| Connection           | 3P 4W/Y  | Bearing            | 1            |        |
| Winding Pitch        | 2/3      | Proteccion Class   | IP23         |        |
| Insulation Class     | H        | Efficiency         | 85.8%        |        |
| Tel. Influence       | TIF: <50 | Voltage Regulation | ±1.0%        |        |
| Harmonic Coefficient | THF: <2% | AVR                | AS440        |        |
| Voltage Adjust Scope | ≥±5%     | Excitation System  | Self Excited |        |

### VI. CONTROL SYSTEM DATA

**MODEL DSE6120**

#### ■ Main feature

Electronic J1939 (CAN) and nonelectronic MPU and alternator sensing engine support for diesel, gas and petrol engines all in one variant.

With a number of flexible inputs, outputs and protections, the modules can be easily adapted to suit a wide range of applications.

#### ■ Key Function

- ▲Utility voltage sensing
- ▲Generator/load power monitoring (kW, kV A, kV Ar, pf)
- ▲Generator overload protection(kW)
- ▲Efficient power save mode
- ▲mains and generator closed via front panel
- ▲4 configurable DC outputs
- ▲4 configurable analog./digital inputs
- ▲6 configurable digital inputs
- ▲Support for 0-10 V & 4-20 mA Oil pressure sensors
- ▲Configurable staged loading outputs
- ▲CAN, MPU and alternator speed sensing in one variant
- ▲3 engine maintenance alarms
- ▲Engine speed protection
- ▲Engine pre-heat
- ▲Multiple date and time scheduler
- ▲Engine idle control for starting & stopping
- ▲Fuel pump control
- ▲Battery voltage monitoring
- ▲Start on low battery voltage
- ▲Configurable remote start input
- ▲Alternative configuration
- ▲Alarm including common alarm, common electric and common shutdown
- ▲LCD and LED alarm indication
- ▲Configurable event log (50)
- ▲Heated display option available



DSE6120 MKIII

☆ For more information, please visit the official website.

### VII. WARRANTY POLICY

1. Guarantee for one year or 1000 hours (accord to whichever reach first) from ex-factory date. Refer to 《YANAN Diesel Generator Warranty Manual》 for more details.
2. Wearing parts( filters), incorrect man-made operation, maintenance failures are excluded from the warranty policy

### VIII. DRAWING (for illustration purposes only)

