



**IDJ90D**

**IDEA DIESEL GENERATING SET  
TECHNICAL SPECIFICATIONS**



| <b>ELECTRICAL</b> |                |                  |                 |
|-------------------|----------------|------------------|-----------------|
| <b>FREQUENCY</b>  | <b>VOLTAGE</b> | <b>PRIME</b>     | <b>STAND-BY</b> |
| 50 Hz             | 400/230 V      | 81 kVA / 64,8 kW | 90 kVA / 72 kW  |
| Rated Speed       | 1500 RPM       |                  |                 |
| Phase             | 3              |                  |                 |
| Power Factor      | 0,8            |                  |                 |

**Prime** : This rating is for the supply of continuous electrical power at variable load. There is no limitation on the annual hours in operation and 10% overload power can be supplied for 1 hour in 12.

**Stand-by** : This rating is for the supply of continuous electrical power at variable load , in the event of utility power failure.No overload is permitted.

| <b>WEIGHT AND DIMENSIONS</b> |    |             |               |
|------------------------------|----|-------------|---------------|
|                              |    | <b>OPEN</b> | <b>CANOPY</b> |
| Length                       | mm | 1950        | 2700          |
| Width                        | mm | 1000        | 1000          |
| Height                       | mm | 1350        | 1700          |
| Weight                       | kg | 1070        | 1320          |

## IDJ90D

| ENGINE                           |      |              |
|----------------------------------|------|--------------|
|                                  |      | 50 Hz        |
| Output Rating                    | kW   | 75           |
| Manufacturer and Model           |      | DHI R4110ZD  |
| Fuel                             |      | Diesel       |
| Injection                        |      | Direct       |
| Aspiration                       |      | Turbocharged |
| Cylinders                        |      | 4            |
| Bore and Stroke                  | mm   | 110 x 135    |
| Displacement                     | lt   | 5,13         |
| Cooling                          |      | Water        |
| Engine Oil Specification         |      | SAE 15W40    |
| Compression Ratio                |      | 16:1         |
| Engine Oil Capacity(Sump Only)   | lt   | 13           |
| Coolant Capacity (incl.radiator) | lt   | 22           |
| Governor                         |      | Mechanical   |
| Air Filter                       |      | Dry element  |
| Fuel Consumption                 |      | 50 Hz        |
| 100 % Load                       | lt/h | 17,3         |
| 75 % Load                        | lt/h | 12,9         |
| 50 % Load                        | lt/h | 8,6          |

| EXHAUST SYSTEM                      |                     |      |
|-------------------------------------|---------------------|------|
| Maximum Temperature                 | °C                  | ≤600 |
| Exhaust Gas Flow                    | m <sup>3</sup> /min | 8,66 |
| Maximum Allowed Back Pressure       | kPA                 | 6,5  |
| Exhaust Flange Size (Internal Dia.) | mm                  | 60   |

| AIR SYSTEM             |                     |     |
|------------------------|---------------------|-----|
| Intake Air Flow        | m <sup>3</sup> /min | 8,2 |
| Total Cooling Air Flow | m <sup>3</sup> /min | 70  |

| STARTING SYSTEM   |    |      |
|-------------------|----|------|
| Starter Motor     | kW | 6    |
| Battery Capacity  | Ah | 2x60 |
| Auxiliary Voltage | V  | 24   |

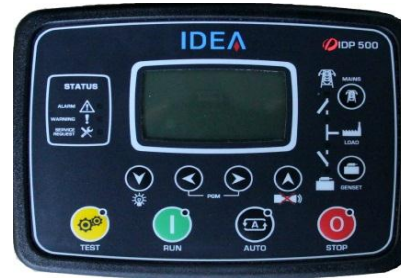
| FUEL SYSTEM          |    |       |
|----------------------|----|-------|
| Diesel Specification |    | EN590 |
| Fuel Tank Capacity   | lt | 145   |

| ALTERNATOR                      |  |                                     |
|---------------------------------|--|-------------------------------------|
| Poles                           |  | 4 pole                              |
| Winding Connections             |  | Star                                |
| Insulation                      |  | Class H                             |
| Enclosure                       |  | IP23                                |
| Exciter System                  |  | Self regulating Brushless           |
| Voltage Regulator               |  | AVR                                 |
| Steady State Voltage Regulation |  | ± 1 %                               |
| Bearing                         |  | Single bearing sealed               |
| Coupling                        |  | Flexible disc                       |
| Cooling                         |  | Direct drive centrifugal blower fan |

## CONTROL PANEL - IDP500

The IDP500 is next generation genset control unit combining multi-functionality and wide communication possibilities together with a reliable and low cost design.

The unit complies and mostly exceeds world's tightest safety, EMC, vibration and environmental standards for the industrial category. Software features are complete with easy firmware upgrade process through USB port. The Windows based PC software allows monitoring and programming through USB, serial and GPRS.



| CONTROL PANEL FEATURES                                  |  |
|---|--|
| <b>Alarm and Shutdown functions</b>                     |  |
| High Coolant Temperature                                | Alarm & Shutdown                               |
| Low Oil Pressure  | Alarm & Shutdown                               |
| Battery High / Low Voltage                              | Alarm  |
| Battery Charger Alternator Failure                      | Alarm  |
| Overspeed / Underspeed                                  | Alarm & Shutdown                               |
| Failure to Start  | Alarm & Shutdown                               |
| Low Coolant Level                                       | Alarm & Shutdown                               |
| Stop Fault  | Alarm & Shutdown                               |
| Low Fuel Level  | Alarm  |
| Service Required  | Alarm  |
| Generator High / Low Voltage                            | Alarm & Shutdown                               |
| Generator High / Low Frequency                          | Alarm & Shutdown                               |
| Symmetry between Phases                                 | Alarm & Shutdown                               |
| Over Current  | Alarm & Shutdown                               |
| Rectifier Fail  | Alarm  |
| ECU failure   | Alarm  |
| <b>Measure and Monitor functions</b>                    |  |
| Total Run Hour  | Coolant Temperature                            |
| kW meter - Generator                                    | Oil Pressure                                   |
| Service Indicator                                       | Fuel Level                                     |
| Phase to Phase Voltage - Mains                          | Battery Voltage                                |
| Phase to Neutral Voltage - Mains                        | Engine RPM                                     |
| Phase to Phase Voltage - Generator                      | Battery Charge Alternator Voltage              |
| Phase to Neutral Voltage - Gen.                         | Frequency - Generator & Mains                  |
| Phase current - Generator                               | Power Factor - Generator                       |
| <b>Other functions</b>                                  |  |
| Events History  | Programmable Timer                             |
| External Start Capability                               | Multi Lingual                                  |
| Start Restriction Program                               | Lamp test                                      |
| Mains Failure Start                                     | Remote Monitoring                              |
| Test Run Start (On load & off Load)                     | Manual Override                                |
| Allows SMS controls                                     | Remote Programming                             |
| Fuel consumption counter                                | Magnetic Pick Up Input                         |
| Waveform display of voltage & current                   | Total Harmonic Distortion view                 |
| Programmable as an ATS controller                       | Manual "speed fine adjust" on selected ECUs    |
| Standardized USB port for programming and communication | J1939-CANBUS for electrocally governed engines |

| GENERATOR FEATURES               | STANDARD |           | OPTIONAL      |
|----------------------------------|----------|-----------|---------------|
|                                  | MANUAL   | AUTOMATIC |               |
| <b>ENGINE</b>                    |          |           |               |
| Engine                           |          | ●         | X             |
| Cooling Pack                     |          | ●         | X             |
| Tropical Radiator                |          | X         | ●             |
| Heavy Duty Air Filter            |          | X         | ●             |
| Electronic Governor              |          | X         | ●             |
| High Coolant Temperature Sender  |          | ●         | X             |
| Low Oil Pressure Sender          |          | ●         | X             |
| Low Coolant Level Sender         |          | ●         | X             |
| Radiator Guards                  |          | ●         | X             |
| Hot Component Guards             |          | ●         | X             |
| Manual Oil Drain Pump            |          | X         | ●             |
| Fuel Prefilter                   |          | X         | ●             |
| Water Jacket Heater              | X        | ●         | ● (Manual)    |
| Industrial Silencer - Open Set   |          | ●         | X             |
| Residential Silencer - Open Set  |          | X         | ●             |
| Residential Silencer - Canopy    |          | ●         | X             |
| Cold start aid                   |          | X         | ●             |
| Remote Radiator                  |          | X         | ●             |
| Trailer                          |          | X         | ●             |
| <b>ELECTRICS</b>                 |          |           |               |
| Alternator                       |          | ●         | X             |
| Circuit Breaker - 3 poles        |          | X         | ●             |
| Circuit Breaker - 4 poles        |          | X         | ●             |
| Battery Isolator                 |          | X         | ●             |
| Earth Fault Protection           |          | X         | ●             |
| Anti condensation Heater         |          | X         | ●             |
| Optional Voltages                |          | X         | ●             |
| Class F insulation               |          | X         | ●             |
| External Stop Button - Canopy    |          | ●         | X             |
| GSM SMS message sending on fault |          | X         | ●             |
| Battery Charger                  | X        | ●         | ● (Manual)    |
| ATS Panel - 3 Poles              | X        | ●         | X             |
| ATS Panel - 4 Poles              | X        | X         | ● (Automatic) |
| Synchronisation Panel            | X        | X         | ● (Automatic) |

● - Available X - Not Available

## REFERENCE STANDARDS

IDEA Generating Sets are CE certified and conform to the following standards ;

- Power according to ISO 3046 and ISO 8528
- EN 12100 , EN 13857 , EN 60204
- 2006/42/CE Machinery Safety
- 2006/95/EC Low Voltage
- 2004/108/CE EMC
- Ambient reference conditions 1000 mbar, 25 °C, 30 % relative humidity ISO8528

All the information in this leaflet is intended for general purposes only. IDEA reserves the right to change the specifications without notice.

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