

## STANDARD SPECIFICATIONS

## 1. ENGINE

- Diesel engine
- 4 strokes-cycle
- Water-cooled
- 12V Electrical system
- Radiator with blowing fan
- Water separator decanting filter (visible level)
- Mechanical governor
- Dry air cleaner
- Hot components and radiator guards
- Mobile components guards

## 2. Electrical system

- Control and power electric panel, with measurements devices and controller (according to necessity and configuration)
- Earth leakage protection adjustable (time & sensibility) standard - Battery charger 3 poles (standard on automatic control panels)
- Pre-heating resistance (standard on automatic control panels) / water jacket heater- Battery charge alternator with ground connection
- Starting battery/ies installed and connected to the engine (supports included)
- Ground connection electrical installation with connection ready for ground pike (not supplied)Optional :
- Battery isolator switch - DSE Battery charger

## 3. Open set version

- Emergency stop button
- Steel made chassis
- Antivibration shock absorber
- Chassis with integrated fuel tank
- Fuel level sensor
- Drain cap fuel tank
- Steel made residential silencer -15db(A) attenuation

## 4. Optional

- Fuel transfer pump
- Steel made residential silencer -35db(A) attenuation.

## 5. CONTROL PANEL

| Make  | Deep Sea   |
|-------|------------|
| Model | DSE4510/20 |

*The DSE4510 is an Auto Start Control Module and The DSE4520 Auto Mains(Utility) Failure control Module are suitable for a wide variety of single gen-set applications*

- Alternator frequency & CAN speed sensing in one variant
- Largest back-lit icon display in its class
- Fully configurable via the fascia or PC using USB
- 3 Phase generator sensing
- 3 Phase mains(utility) sensing(DSE4520 only)
- Generator/load power monitoring(KW,KVA,KVAR,PF)
- Accumulated power monitoring(KW h, KVA h, KVAR h)
- Generator overload protection(KW)
- Generator/load current monitoring and protection
- Fuel and start outputs(configurable when using CAN)
- Configurable staged loading outputs
- Engine speed protection
- Engine pre-heat
- Engine run-time scheduler
- Battery voltage monitoring
- Comprehensive warning, electrical trip or shutdown protection upon fault condition

## Engine Specifications 1.500 r.p.m.

|                                      |                                     |
|--------------------------------------|-------------------------------------|
| Manufacturer                         | YANMAR                              |
| Engine Model                         | 4TNV98                              |
| Engine Type                          | Diesel 4 strokes-cycle              |
| Injection Type                       | Direct                              |
| Aspiration Type                      | Natural                             |
| Cylinders Arrangement                | 4 - L                               |
| Bore and Stroke mm                   | 98 x 110                            |
| Displacement Liters                  | 3.319                               |
| Cooling System                       | coolant                             |
| Lube Oil Specifications              | SAE 3 class 10W30 / API grade CD,CF |
| Compression Ratio                    | 18.5                                |
| Fuel Consumption StandBy L/h         | 8.53                                |
| Fuel Consumption 100% PRP L/h        | 7.60                                |
| Fuel Consumption 75 % PRP L/h        | 5.70                                |
| Fuel Consumption 50 % PRP L/h        | 4.05                                |
| Lube Oil Consumption Full Load g/kwh | 0.27                                |
| Total Oil Capacity L                 | 10.5                                |
| Total Coolant Capacity L             | 9                                   |
| Governor                             | Mechanical                          |
| Air Filter                           | Dry                                 |
| Inner diameter exhaust pipe mm       | 45                                  |
| Intake Air Flow m³/h                 | 134.42                              |
| Cooling Air Flow m³/h                | 0.979                               |
| Alternator fan air flow m³/s         | 0.09                                |
| Fuel Tank volume L                   | 120                                 |
| Starting motor KW                    | 2.3                                 |
| Starting motor CV                    | 3.13                                |
| Recommended Battery Capacity Ah      | 92                                  |
| Auxiliary voltage Vcc                | 12                                  |
| Maximum Exhaust Temperature °C       | 550                                 |
| Exhaust Gas Flow m³/min              | 8.52                                |

## DIMENSIONS AND WEIGHT\*

| Lengthmm | Widthmm | Heightmm | Weight* kg (wet) |
|----------|---------|----------|------------------|
| 1850     | 780     | 1500     | 579              |

\* For skid mounted genset without enclosure wet weight = with lube oil and coolant

| Service               |         | PRP                     | Standby |
|-----------------------|---------|-------------------------|---------|
| Power                 | kVA     | 34                      | 37      |
| Power                 | kW      | 27                      | 30      |
| Rated Speed           | r.p.m.  | 1500                    |         |
| Standard Voltage      | V       | 400                     |         |
| Available Voltages    | V       | 230-230/132 - 400/230 V |         |
| Rated at power factor | Cos Phi | 0.8                     |         |

# 35KVA

POWERED BY:



## ALTERNATOR DATA

| Make                   | Stamford / Marelli   |                |
|------------------------|----------------------|----------------|
| Model                  | PI144G / MJB 160 MB4 |                |
| KVA                    | 30 / 30.9            |                |
| KW                     | 24 / 24.7            |                |
| No. of bearings        | 1                    |                |
| Insulation class       | H                    |                |
| Total Harmonic Content | at no load <3%       | at no load <2% |
|                        | - on load <2%        |                |
| Winding Leads          | 12                   |                |
| Ingress Protection     | IP23                 |                |
| Excitation System      | Self - excited       |                |
| Winding Pitch          | 2/3 / 2/3 (wdg M0)   |                |
| AVR Model              | AS480 / Mark V       |                |
| Overspeed              | 2250 rpm             |                |
| Voltage Regulation     | ± 1.0 %              |                |
| Short Circuit Capacity | -                    |                |

## STANDARD SPECIFICATIONS

### 6. FUEL SYSTEM

*On Generating Sets up to 2000 KVA, the base frame design can be incorporated with an integral fuel tank with a capacity of approx. 8 hours running at Full Load. The tank is supplied complete with fill cap breather fuel feed and return lines to the Engine and drain plug.*

### 7. ALTERNATOR

#### 7.1 INSULATION SYSTEM

- The insulation system is Class H.
- All windings are impregnated in either a triple dipthermosetting liquid, oil and acid resisting polyester varnish or vacuum pressure impregnated with a special polyester resin.

- Heavy coat of antitracking varnish additional protection against moisture.

#### 7.2 AUTOMATIC VOLTAGE REGULATOR (AVR)

The fully sealed Automatic Voltage Regulator maintains the Voltage Regulation at  $\pm 1\%$ . Nominal adjustment by means of a trim pot incorporated on the AVR.

**7.3 MOTOR STARTING** an overload capacity equivalent to 300% of the Full Load impedance at zero Power Factor can be sustained for 10 seconds.

### 8. MOUNTING ARRANGEMENT

#### 8.1 BASE FRAME

The complete Generating Set is mounted as a whole on a heavy duty fabricated steel Baseframe.

**8.2 COUPLING** The Engine and Alternator are directly coupled by means of an SAE flange. The Engine flywheel is flexibly coupled to the Alternator rotor.

**8.3 ANTI-VIBRATION MOUNTING PADS** anti-Vibration pads are affixed between the Engine / Alternator feet and the Baseframe thus ensuring complete vibration isolation of the rotating assembly. The Fan & Fan Drive along with the Battery Charging

**8.4 SAFETY GUARDS** The Fan & Fan Drive along with the Battery Charging Alternator are Safety Guard protected for personal protection.

### 9. FACTORY TESTS

- The Generating set is load tested before dispatch
- All protective devices control functions and site load conditions are simulated. The generator and it's systems are checked before dispatch.

**10. EQUIPMENT FINISHING** all mild steel components are fully degreased and painted with powder coated paint to ensure maximum scuff resistance and durability.

### RATINGS DEFINITION

#### Prime Power

These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. 10% overload power is available for 1 hour in 12 hours continuous operation.

#### Standby Power

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings.

### STANDARD REFERENCE CONDITIONS

Output ratings are presented at 25°C air inlet temperature, barometric pressure 100 kPa, relative humidity 30%. This generating set is designed to operate at high ambient temperatures (up to 55°C), humidity (up to 99%) and altitudes. De-rating may apply, please consult your dealer for specific site ratings.

**STAUNCH** Generators are assembled Some of the specifications are not standard on all Genset models. in facilities certified to ISO 9001 All information in this document is substantially correct at time of printing and may be altered subsequently.

Generating Set pictured may include optional accessories.

**11. DOCUMENTATIONS** a set of Operation & Maintenance manual, Circuit wiring diagrams and Commissioning / Fault Finding instruction leaflets accompany the Generator.

**12. QUALITY STANDARDS** The equipment meets the following standards: BS4999, BS5000, BS5514 IEC 60034, VDE0530, NEMA MG 1.22 and ISO 8528.

**13. WARRANTY** All of the Generating Sets are covered under a warranty policy for a period of 12 months. Warranty of the equipment is in line with manufacturers warranty terms & conditions.

(check warranty statement for more details, as it may vary for different countries) In line with continuous product development, we reserve the right to change specifications without notice.

**For further information on all of the standard and optional features accompanying this product please contact your local dealer or visit:**

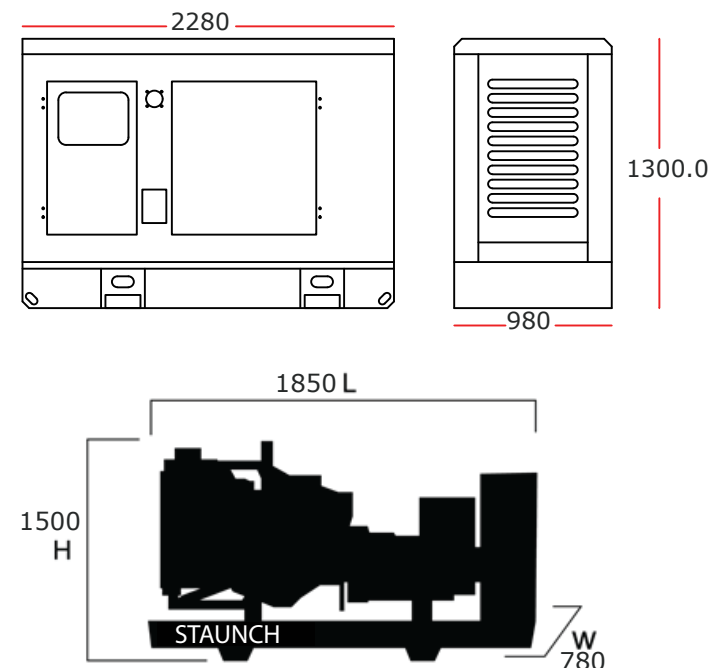
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### AVAILABLE OPTIONS & ACCESSORIES

We offer a range of optional features and accessories to tailor our generating sets to meet your power needs.



### ACCESSORIES

- switches
- Load banks
- Auxiliary fuel tanks
- Manual & automatic
- Genuine spare parts transfer

### OPTIONS

- Water jacket heater
- A variety of generating set
- Additional protection alarms
- Water fuel separator control and synchronizing and shutdowns
- panels
- Battery charger