# DIY POWER SYSTEM CO., LTD.



## DIY-YT165

**YTO**
LR6B3L-15

**DIY alternator**
DIY274E3

**DeepSea**
DSE6120

## Generating Power Rates

| | | PRP | ESP |
|---|---|---|---|
| **Power Rating** | kVA | 150 | 165 |
| | kW | 120 | 132 |
| **Frequency** | Hz | 50 | |
| **Speed** | RPM | 1500 | |
| **Voltage** | V | 400/230 | |
| **P.F.** | Cos Phi | 0.8 | |

### Prime Power ( PRP )

**Prime power rating is applicable for supplying electric power in lieu of commercially purchased power. Prime power applications usually is the form of UNLIMITED TIME RUNNING PRIME POWER:**
Prime Power is available for an unlimited number of hours per year in a variable load application. Variable load shouled not exceed a 70% average of period of 250 hours. The total operating time at 100% Prime Power shall not exceed 500 hours per year. A 10% overload capablility is available for aperiod of 1 hour within a 12 hour period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year.

### Standby Power ( ESP )

**Standby power rating is appliable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. Under no condition is an engine allowed to operate in parallel with the public utility at the standby Power rating.**
This rating should be applied where reliable utility power is available. A standby rated engine should be sized for a maximum of an 80% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the standby power rating. Standby ratings should never be applied except in true emergency power outages. Negotiated power outages contracted with a utility company are not considered an emergency.

DIY POWER SYSTEM CO.,LTD. reserves the right to modify the characteristics of its product at any time in order to incorporate the latest technological developments.The information contained in this document may therefore be changed without notice.

**CUSTOMIZED POWER SOLUTIONS**

## Engine Specification — Powered by YTO

| General Data | | |
|---|---|---|
| **Engine Model** | | LR6B3L-15 |
| **Number of Cylinders** | | 6L |
| **Cycle** | | 4-stroke |
| **Aspiration** | | Turbocharged with aia-air intercooler |
| **Bore x Stroke** | mm | 108x125 |
| **Displacement** | L | 6.9 |
| **Standby Power Output** | kW | 159 |
| **Prime Power Output** | kW | 145 |
| **Compression Ratio** | | 17:1 |
| **Speed** | RPM | 1500 |
| **Fuel Consumption ( ESP )** | L/H | 40 |
| **Fuel Consumption ( 100% PRP )** | L/H | 35.9 |
| **Fuel Consumption ( 75% PRP )** | L/H | 24.6 |
| **Fuel Consumption ( 50% PRP )** | L/H | 16.8 |
| **Fuel Consumption ( 25% PRP )** | L/H | 9.6 |
| **Lubrication Capacity** | L | 16 |
| **Coolant Capacity** | L | 9.35 |
| **Air temperature** | °C | 25 |
| **Starter motor** | volts | 24 |
| **Battery Capacity** | A | 165 |

| Engine Features | |
|---|---|
| **Starting System** | 12/24 volt negative earth |
| | Battery charging alternator 35 amp on engine |
| | Cranking current 1800 amps at 0°C |
| **Fuel System** | 12/24 volt fail safe actuator |
| | Spin-on paper element fuel filters |
| | Dual flexible fuel lines and connectors |
| | Standard fuel water separator |
| **Filters** | Air cleaner with dry element |
| | Spin-on full flow lube oil filter |
| | Standard air filter |
| | Standard fuel filter |
| **Cooling** | Water-cooled |
| | 40°C ambient temperature radiator |

**Reference Standards:**
BS-5514 and DIN-6271 standards are based on ISO-3046.
**Operation At Elevated Temperatrue And Altitude:**
Up to 5,000 ft.(1500m) and 104°F (40°C) without power deration.

CUSTOMIZED POWER SOLUTIONS

## Alternator Specification Powered by DIY alternator

| General Data | | |
|---|---|---|
| **Alternator Manufacture** | | DIY alternator |
| **Alternator Model** | | DIY274E3 |
| **Standby Power** | kVA | 165 |
| | kW | 132 |
| **Prime Power** | kVA | 150 |
| | kW | 120 |
| **Alternator Voltage Regulation** | | SX460 |
| **Voltage regulation** | | ± 1 % |
| **Winding Leads** | Wires | 12 |
| **Pitch** | | 2/3 |
| **Alternator Insulation** | Class | H |
| **Protection Class** | | IP23 |
| **THD in no-load** | | < 3.5 % |
| **THD in linear load** | | < 5 % |

### Alternator Specification

**- Excitation Systems: short circuit capacity**

- SHUNT system: without short-circuit capacity.
- AREP, PMG: 3 times the nominal current for 10 seconds.

**- Transient features :**

-Transient voltage dip for rated step load at 0.8 power factor is less than 18 %.

-Recovery time for a 20 % transient voltage dip is less than 0.5 s.

**- Overload acceptance :**

-Pole alternators can be overloaded according to NEMA

**- Forms :**

-4 Pole alternators can be provided in single or two bearing configurations.

**- Overspeed :**

-The maximum overspeed is 2250 $min^{-1}$

**- Balancing :**

-All the rotors are dynamically balanced according to ISO 1940 & NFC 51-111

-Two bearing rotors are balanced with a half key

### Compliance With Internationally Recognized Standards

**4P alternators are in compliance to the main international standards & regulations**

-IEC 60034, NEMA MG 1.32 - 33, ISO 8528/3, CSA, UL 1446, UL 1004

-Alternators are designed, manufactured and marketed in an ISO 9001 and ISO 14001 environments. It can be integrated into a CE marked generator.

DIY Power

DSE

## DSE6120 Controlled by DeepSea

### AUTO START & AUTO MAINS (UTILITY) FAILURE CONTROL MODULES

### Key Features



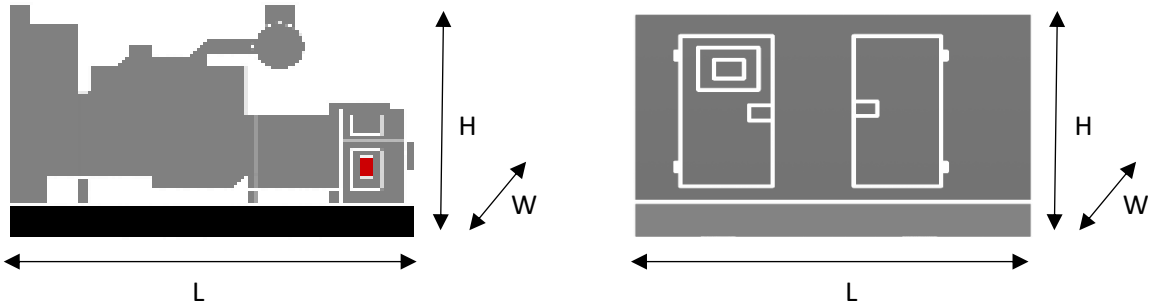

Δ Back-lit text LCD display
Δ Front panel editing
Δ LED and LCD alarm indication
Δ Power Save mode
Δ CAN and Magnetic Pick-up/Alt.versions available (specify on ordering)
Δ PC and front panel configuration
Δ 6 Digital inputs, 3 Analogue inputs
Δ 6 Outputs (4 configurable on Magnetic Pick-up/Alt., 6 configurable on CAN version)
Δ Configurable timers and alarms
Δ Alternative configuration
Δ Event Log (10)
Δ Remote Start input
Δ 3 Phase generator monitoring
Δ Current Monitoring and protection
Δ 3 Phase Mains (Utility) monitoring (DSE6120 only)
Δ Test button (DSE6120 only)
Δ Battery voltage monitoring
Δ Engine pre-heat, Hours counter
Δ Comprehensive shutdown or warning on fault condition
Δ Automatically transfers between mains (utility) and generator power (DSE6120 only)
Δ Hours counter provides accurate information for monitoring and maintenance periods
Δ User-friendly set-up and button layout
Δ Multiple engine parameters are monitored simultaneously
Δ Module can be configured to suit individual applications
Δ Compatible with a wide range of CAN engines
Δ Tier 4 engine support
Δ IP65 rating (with optional gasket) offers increased resistance to water ingress
Δ Licence-free PC software

**CUSTOMIZED POWER SOLUTIONS**

EAC CE ISO 9001 ISO 14001

# DIY-YT165

## Genset information




| Dimension and Weight | | Open | Silent |
|---|---|---|---|
| Length | mm | 2400 | 3250 |
| Width | mm | 930 | 1100 |
| Height | mm | 1500 | 1750 |
| Base fuel tank | L | 250 | 320 |
| Shiping Weight | kg | 1280 | 2117 |

## Canopy Features

**Robust Corrosion Resistant Construction**

Δ Black finish stainless stell lock and hinges
Δ body made from steel components treated with polyester powder coating

**Excellent Access for Maintenance**

Δ radiator fill access plate
Δ lube oil and cooling water drains pipes to exterior of the enclosure
Δ adding cooling water from top of canopy
Δ LED light will be lighting automaticlly when open the door

**Security and Safety**

Δ control panel viewing window in a lockable access door
Δ emergency stop push buttom (red)mounted on enclosure interior
Δ cooling fan and battery charging alternator fully guarded
Δ exhaust silencing system totally enclosed for operator safely
Δ Control panel and cable design in different directions,all the connection wiring in control panel are more neater and firmer.


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