

## TDG70B

MOTEURS  
**Baudouin**

|          |     |      |
|----------|-----|------|
| STAND BY | kVA | 70   |
|          | kW  | 56   |
| PRIME    | kVA | 63   |
|          | kW  | 50,4 |



WATER COOLED

50HZ

50HZ



EASY



3 PHASE



DIESEL



REMOTE



### STAND BY RATING (ESP)

It is the way that generators operate under variable load at certain time intervals. It can work as a backup power. It is not suitable to work under extreme load.

### PRIME RATING (PRP)

Applicable for supplying power to varying electrical load for unlimited hours. 10% overload capability is available for a period of 1 hour within 12-hour period of operation.

### CONTINUOUS OPERATION

It is the continuous working under constant load. Unlimited hours use of all (100%) of the defined power. It cannot be overloaded above the defined power. For use where there is no mains power.

### DESCRIPTION

TESCOM TDJ Series Diesel generator set is a fully integrated power generation system, providing optimum performance, reliability, and versatility for stationary standby, prime power and continuous duty applications.

### FEATURES

Baudouin heavy-duty engine - Rugged 4-cycle industrial diesel delivers reliable power, low emissions and fast response to load changes.

Alternator - Low reactance 2/3 pitch windings; low waveform distortion with non-linear loads, fault clearing short-circuits capability, and class H insulation.

Cooling system - The standard integrated kit model radiator system designed and tested for nominal ambient temperatures, simplifies facility design requirements for heat rejected.

Control system - TESCOM TCM01 electronic control is standard equipment and provides total genset system integration, including auto remote start/stop, alarm and status message display.

Canopy Types - Optionally it is possible to make it protective and soundproof against adverse climatic conditions.

Warranty and service - Backed by a comprehensive warranty and worldwide aftersales support, 10 years of spare parts supplying.

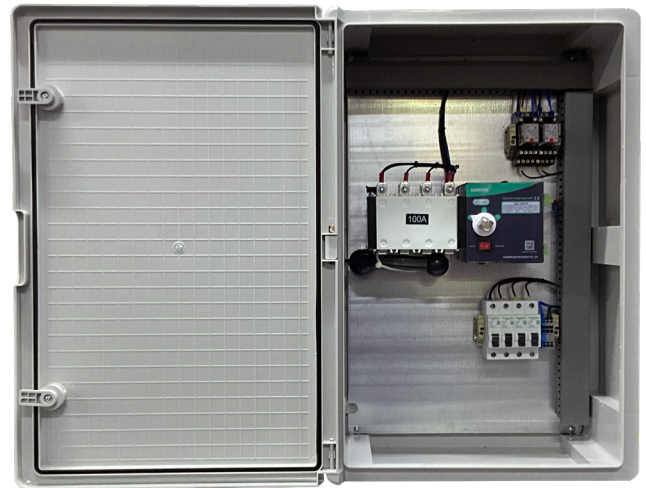
## CONTROL PANEL FEATURES

- The cable group we use in our generators is fireproof cable class. Cable sheaths form the defense line of cables against various chemicals and flame.
- The use of Halogen-free materials in the outer sheath of the cables prevents the spread of toxic gases during a fire. At the same time, fireproof cable sheaths have low smoke density and flame retardant properties. This feature of fireproof cable sheaths prevents the spread of fire and minimizes possible damages.
- Schneider Electric breaker group is used in generator control panels. As a standard, all our products have a 4-pole MCCB (Molded Case Circuit Breaker)



## ATS (AUTOMATIC TRANSFER SWITCH) GENERAL FEATURES

- The SQ5 Dual Power Automatic Transfer Switch Series is a kind of automatic transfer switch that combines the switch and the logic controller, enabling the mechanical and electrical to become an inseparable whole.
- Superior electromagnetic compatibility, high resistance to interference.
- It has zero-time transfer technology with high reliability.
- It cuts the dual circuit power simultaneously.
- In addition to PLC remote control, it has a multi-circuit input / output interface that can automate the system.



| ATS MODEL  | GENERATOR POWER RANGE |
|--|-----------------------|
| 100 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH  | 0-70 kVA              |
| 160 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH  | 82-124 kVA            |
| 250 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH  | 125-165 kVA           |
| 400 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH  | 220-275 kVA           |
| 630 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH  | 300-440 kVA           |
| 800 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH  | 500-550 kVA           |
| 1000 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH | 660-715 kVA           |
| 1250 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH | 750-825 kVA           |
| 1600 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH | 900-1100 kVA          |
| 2000 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH | 1250kVA               |
| 2500 A SUNTREE BRAND TRANSFER PANEL WITH TRANSFER SWITCH | 1400-1600 kVA         |



## MOTOR FEATURES

|                                     |                         |
|-------------------------------------|-------------------------|
| Frequency                           | 50Hz                    |
| Output rating                       | 66kW                    |
| Manufacturer and model              | Baudouin 4M10G70/5      |
| Fuel                                | Diesel                  |
| Injection                           | Direct                  |
| Aspiration                          | Naturally aspirated     |
| Cylinders                           | 4                       |
| Bore and Stroke                     | 105 x 118mm             |
| Displacement                        | 4,087lt                 |
| Cooling                             | Water                   |
| Engine oil specification            | SAE 15W40               |
| Compression ratio                   | 17,5:1                  |
| Engine oil capacity (sump only)     | 13lt                    |
| Coolant capacity (incl.radiator)    | 17,9lt                  |
| Governor                            | Electronic              |
| Air filter                          | Dry element             |
| <b>FUEL CONSUMPTION</b>             |                         |
| 100% load                           | 16,67lt/h               |
| 75% load                            | 11,1lt/h                |
| 50% load                            | 7,7lt/h                 |
| <b>EXHAUST SYSTEM</b>               |                         |
| Maximum temperature                 | < 700°C                 |
| Exhaust gas flow                    | 14,2m <sup>3</sup> /min |
| Maximum exhaust back pressure       | 50mBar                  |
| Exhaust flange size (internal dia.) | 70mm                    |
| <b>AIR SYSTEM</b>                   |                         |
| Intake air flow                     | 4,17m <sup>3</sup> /min |
| Air intake temperature rise         | < 5°C                   |
| <b>STARTING SYSTEM</b>              |                         |
| Starter motor                       | 3,8kW                   |
| Battery capacity                    | 80Ah                    |
| Auxiliary voltage                   | 12V                     |



## ALTERNATOR FEATURES

|                                 |                                     |
|---------------------------------|-------------------------------------|
| Brand                           | TESCOM                              |
| Poles                           | 4 Poles                             |
| Frequency                       | 50/60Hz                             |
| Winding connections             | Star                                |
| Insulation                      | Class H                             |
| Enclosure                       | IP23                                |
| Power factor                    | 0,8                                 |
| Altitude                        | 1000m                               |
| Exciter system                  | Self excitation                     |
| Voltage regulator               | AVR                                 |
| Steady state voltage regulation | ± 1%                                |
| Direction of rotation           | Clockwise                           |
| Cooling                         | Direct drive centrifugal blower fan |

## CONTROL SYSTEM

The new TESCOM TCM01 genset controllers are a cost effective modular genset controller ready for internet monitoring through plug-in modules. Its main advantages are multifunctionality, support for multiple topologies, harmonic analysis and detailed power measurements. Different brand controller can be offered upon request.

## DESCRIPTION

Software features are complete with easy firmware upgrade through USB port. The Windows based PC software allows monitoring and programming through USB, RS-485, RS-232, Ethernet and GPRS. The Rainbow Scada web service allows monitoring and control of an unlimited number of gensets from a single central location.



## MAJOR FEATURES

- Diesel and gas genset support
- 400Hz operation support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- 128x64 graphical LCD display
- Downloadable languages
- Waveform display of V & I
- Harmonic analysis of V & I
- 16Amp MCB & GCB outputs
- 8 configurable digital inputs
- 6 configurable digital outputs
- 3 configurable analog inputs
- Both CANBUS-J1939 & MPU
- 3 configurable service alarms
- Multiple automatic exerciser
- Weekly operation schedule
- Dual mutual standby with equal aging of gensets
- Manual "speed fine adjust" on selected ECUs
- Automatic fuel pump control
- Disable protections feature
- Excess power protection
- Reverse power protection
- Overload IDMT protection
- Load shedding, dummy load
- Multiple load management
- Current unbalance protection
- Voltage unbalance protection
- Fuel filling & fuel theft alarm
- Battery back-up real time clock
- Idle speed control
- Battery charge run enabled
- Combat mode support
- Multiple nominal conditions
- Contactor & MCB drive
- 4 quadrant genset power counters
- Mains power counters
- Fuel filling counter
- Fuel consumption counter
- Modem diagnostics display
- Configurable through USB, RS-485, Ethernet and GPRS
- Free configuration program
- Allows SMS controls
- Ready for central monitoring
- Mobile genset support
- Automatic GSM geo-location
- Easy USB firmware upgrade
- -40°C operation with optional display heater
- IP65 rating with optional gasket

## COMMUNICATION

- USB Device
- J1939-CANBUS
- Geo-locating through GSM
- Internet Central Monitoring
- SMS message sending
- E-mail sending
- Free PC software: Rainbow Plus
- Modbus RTU (2400-57600baud)
- Modbus TCP/IP

## MEASUREMENTS

- Mains & genset PN/PP voltages
- Mains & genset frequency
- Mains & genset phase currents
- Mains & genset neutral currents
- Mains & genset, phase & total, kW, kVA, kVAr, pf
- Engine speed
- Battery voltage

## PLUG-IN MODULES

- GSM Modem (2G-3G-4G)
- Ethernet 100Mbps
- Wi-Fi (802.11 b/g/n)
- RS-485 (2400-57600baud)
- RS-232 (2400-57600baud)

## FUNCTIONALITIES

- AMF unit
- ATS unit
- Remote start controller
- Manual start controller
- Engine controller

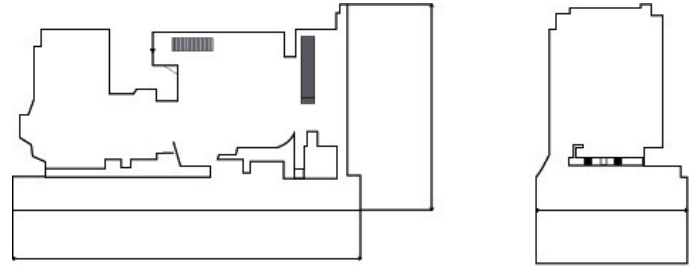
## TOPOLOGIES

- 3 ph 4 w, star & delta
- 3 ph 3 w, 2 CTs
- 2 ph 3 w
- 1 phase 2 wires

## CANOPY STANDARD SPECIFICATIONS

- Compact design connection with non-welded nuts and bolts.
- Integrated canopy, generator set, exhaust system fuel tank.
- Body made from steel components treated with polyester powder coating
- Easy access to all service points
- Exhaust system inside canopy
- Large doors on each side
- Control panel viewing window in a lockable access door
- Emergency stop push button mounted on cabin exterior
- Fuel fill and battery can only be reached via lockable access doors.
- Customer options available to meet your applications needs.
- TESCOM makes its generating sets noise level tests in accordance with directive 2000/14/EC validation of the noise level test has been approved by the notified body Szutest (CE conformity assessment body).

### OPEN TYPE



### WITH CABINET



|              | Length (mm) | Width (mm) | Height (mm) | Tank capacity (L) |
|--------------|-------------|------------|-------------|-------------------|
| OPEN TYPE    | 2463        | 1000       | 1600        | 150               |
| WITH CABINET | 2463        | 1000       | 1750        | 150               |

## CERTIFICATES

- 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

