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TPD2000H10.5 TECHNICAL DATA

DIESEL GENERATING SET

TONTEK POWER LIMITED

GREEN POWER SUPPLIER



ISO9001:2008
TONTEK POWER LIMITED



50HZ

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Specifications may change without Notice

TPD2000H10.5



**2000KVA/1600KW
POWERED BY CUMMINS**

Diesel Generating Set

MODEL		TPD2000H10.5	
Power Pf. 0.8	Standby power	kVA	2250
		kW	1800
	Prime power	kVA	2000
		kW	1600

Standby power: Continuous running at variable load for duration for an emergency. No overload is permitted on these ratings. In accordance with ISO 3046.

Prime power: Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hours period. In accordance with ISO 8528, ISO 3046

Features:

- Excitation system: self-excited (AREP and PMG are optional)
- ATS (automatic transfer switch) receptacle (optional)
- Lockable battery isolator switch
- Stainless galvanized zinc plates with strong corrosion resistance
- Vibration isolators between the engine/alternator and base frame
- Integrated wiring design
- Base fuel tank for at least 8 hours running
- Equipped with an industrial muffler
- Engine oil pump
- 50°C radiator
- Top lifting and steel base frame with forklift holes
- Drainage for fuel tank
- Complete protection functions and safety labels
- IP54 (soundproof sets), IP56 (control system)
- Water jacket preheater, oil heater and double air cleaner, etc. are available.

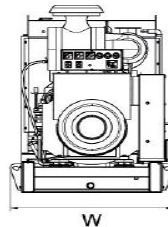
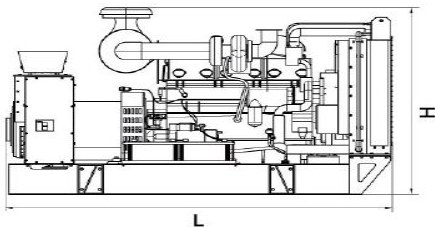
Ratings and Performance Data

Cummins Engine Model	QSK60-G4
Alternator Model	FDH6304D-6
Frequency	50Hz
Rated speed	1000 RPM
Phase	3
Rated voltage	400/10500 V
Fuel consumption at 100% load	345.45L/h
Noise dB(A) @7m (silent type)	75

Remark: Also available in the following voltages 415/240V-380/220V-220/127V-200/115V;

Dimensions and Weights

Generating Set Type	Length (L) mm	Width (W) mm	Height (H) mm	Weight kg
Open Type	7200	2380	2910	19950



Open type

Diesel Engine Data

CUMMINS BRAND

Model	QSK60-G4
Prime Power	1600kW/2000kVA
Standby Power	1800kW/2250kVA
Total Displacement	60.2 Liter
Number of Cylinder and Arrangement	16 – V type
Engine Speed	1000 rpm
Cycle	Four stroke
Bore and Stroke	159 x 190mm
Compression Ratio	14.5: 1
Aspiration	Turbo ,Water /Air Cooling
Steady Speed Droop (%)	≤1%
Fuel Consumption at 100% load	394 g/kW.h
Governor	Electronic
Cooling System	Forced Water Cooling Cycle
Coolant Capacity	454Liter
Total Lubrication System Capacity	280 Liter

AC Alternator Data

FARADAY BRAND

Alternator model	FDH6304D-6
Exciter type	Brushless , self-exciting
Frequency	50HZ
Rated Speed	1000 rpm
Design	Brushless single bearing, revolving field
Prime Power	1600 kW
Standby Power	1760 kW
Phase	3
Rated Voltage	400/10500 V
Power Factor	0.8
Protection Grade	IP23
Insulation Grade	H
Voltage adjust range	± 5.0%
Voltage regulation NL-FL	≤1.0%

SPECIALLY ADAPTED FOR APPLICATIONS

The alternator is designed to be suitable for typical generator applications, such as: stand-by, prime power, cogeneration, marine, rental, telecommunications, etc.

COMPLIANT WITH INTERNATIONAL STANDARDS

The alternator conforms to the main international standards and regulations:

IEC 60034, NEMA MG 1.22, ISO 8528, CSA/UL request, marine regulations, etc.

It can be integrated into a CE marked generator-set.

The alternator is designed, manufactured and marketed in an ISO 9001 environment and ISO 14001.

TOP OF THE RANGE ELECTRICAL PERFORMANCE

- Class H insulation.
- Standard 12-wire re-connectable winding, 2/3 pitch, type no. 6 (available in two versions: 6-wire and 12-wire).
- Voltage range: 220 V - 240 V and 380 V - 415 V (440 V) - 50 Hz / 208 V - 240 V and 380 V - 480 V - 60 Hz.
- Other voltages are possible with optional adapted windings:
 - 50 Hz: 440 V (no. 7), 500 V (no. 9), 600 V (no. 23), 690 V (no. 52)
 - 60 Hz: 380 V and 416 V (no. 8), 600 V (no. 9).
- THD Total harmonic distortion < 2% (full load).
- R 791 interference suppression conforming to standard EN 55011 group 1 class B standard for European zone (CE marking).

PROTECTION SYSTEM SUITED TO THE ENVIRONMENT

- The alternator is IP 23.
- Standard winding protection for clean environments with relative humidity $\leq 95\%$, including indoor marine environments.
Options: - Filters on air inlet : derating 5%.
- Filters on air inlet and air outlet (IP 44) : derating 10%.
- Winding protections for harsh environments and relative humidity greater than 95%.
- Space heaters.
- Thermal protection for windings and shields.

REINFORCED MECHANICAL STRUCTURE USING FINITE ELEMENT MODELLING

- Standard direction of rotation : clockwise when looking at the drive end view (engine side).
Running unit anti-clockwise: a derate of 5% must be applied.
- Compact and rigid assembly to better withstand generator-set vibrations.
- Steel frame.
- Two bearing and single bearing versions designed to be suitable for engines on the market.
- Half-key balancing.
- Greased for life bearings (regreasable bearings optional)

ACCESSIBLE TERMINAL BOX PROPORTIONED FOR OPTIONAL EQUIPMENT

- Easy access to the voltage regulator and to the connections.
- Possible clusion of accessories for paralleling, protection and measurement.
- 9-way terminal block for voltage reconnection.

Control System

TPC-DSE7310 (Standard)

All our diesel generator set have a control cabinet (the DEEP SEA module DSE7310 as standard) mounted on isolated support.

Main Features

- Manual and automatic mode
- Parameter configuration via RS-232 serial communication
- Remote control automatic start/shutdown
- Optional ECU control
- Optional CAN engines
- Optional speed sensor access
- PLC programming
- Operating temperature: -20°C to 70°C
- IP56 Rating
- Back-lit icon LCD display
- Power Save mode
- CAN and Magnetic Pick-up/Alt. versions available (specify on ordering)
- PC configurable
- 6 Digital inputs
- 4 Outputs (2 configurable on Magnetic Pick up/Alt., 4 configurable



Protecting Functions

- Over frequency / under frequency
- Over voltage / under voltage
- Over current
- Over speed /under speed
- Emergency stop
- Low oil pressure
- High water temperature
- Failure to start/Failure to stop
- Battery charger failure
- Comprehensive shutdown or warning on fault condition

The control module display

- Generator voltage
- Generator frequency
- Battery voltage
- Engine speed
- Load current
- Engine run-time Hours
- Engine oil pressure (Panel Meter)
- Engine coolant temperature (Panel Meter)

Control System

TPC-DSE 7320(Optional)

TPC-DSE 7320 is an advanced control module based on micro-processor, It is an Auto Mains (Utility) Failure Control Module(AMF), have been designed to start and stop generating sets that include electronic And non-electronic engines. Include the additional capability of being able to monitor a mains (utility) supply. when main is not available. It can automatically start the engine and close generating sets breaker automatically, Accurately measure various operational parameters and display all values and alarms information on the LCD. In additional, it can automatically open breaker, and shutdown the engine after the main supply recovers.

Main Features

- AMF and ATS and communication and expansion function
- Designed to work with electronic or non-electronic or gas engine simultaneously. (support many kinds of engines ECU).
- Manual, Automatic, Test and remote control mode selectable.
- Monitoring and measuring operational parameters of the mains supply and genset.
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections and multiple parameters display.
- Includes 12 inputs and eight outputs. 8 inputs are configurable and 4 outputs are configurable.
- Can be programmed using the front panel or by using the PC software.
- Support twelve languages. The language was edited by customer.
- Graded protection: pre-alarm, shutdown and electrical trip, flexible setting.
- The module can be pre-set for four operating modes and protecting parameters.
- Add DSE860 or DSE865 module, internet network monitoring can be realized.
- The firmware can be updated automatically, so customer can have the latest version.



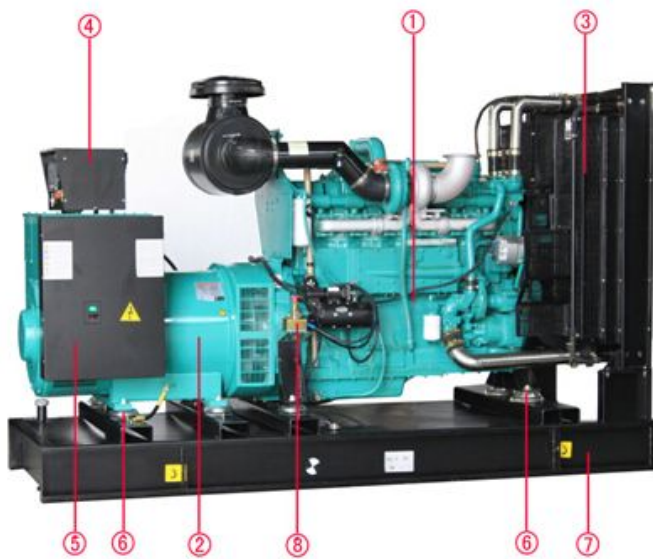
The control module display

- Generator voltage
- Generator frequency
- Battery voltage
- Engine speed
- Load current
- Generator KVA, KW, PF
- Engine run-time Hours
- Engine oil pressure
- Engine coolant temperature
- Real time clock for time and date, overall run time

specifications may change without notice

Standard Configuration

- Assembled by Cummins diesel engine and reputable alternator
- Radiator and fan with safety guard
- Automatic control panel and electricity output switch cabinet
- Built-in shock pad
- Strong and durable hi-strength base frame



- ① Diesel Engine
- ② Alternator
- ③ Water Tank Radiator
- ④ Control Panel
- ⑤ Electricity/output switch cabinet
- ⑥ Hi-strength Base Frame
- ⑦ Solenoid Switch

Standard Supply Scope



Muffler



Maintenance free battery



Bellow



Elbow and flange

Optional Supply Scope

Engine

- Water Jacket Preheater
- Fuel-water separator
- Oil pump
- Oil preheater
- Battery preheater

Alternator

- PMG excitation
- Space heater
- Winding Temperature Measuring

Generator Set

- Tools with the machine
- Coolant (-30°C)

Control System

- AMF function
- ATS control cabinet
- Double-frequency and double voltage
- Single phase
- ABB MCCB

Fuel System

- 12 / 24 hour base tank (single wall)
- Dual wall base fuel tank
- Outside fuel tank
- Automatic fuel feeding
- Fuel level indicate

Canopy

- Hired type
- Economy Oil heater
- Trailer



ATS



Synchronization Panel



Silent Canopy



Trailer



External Daily Fuel Tank



Auto Fuel Pump



Fuel and water separator



Fuel Drain Pump



Lube Oil Heater



Coolant Heater

Contact Us

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TONTEK POWER LIMITED reserves the right to make changes in model, technical specification, color, configuration and accessories without prior notice. Please contact the salesman before ordering.

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