



THSC SERIES SPECIFICATION

Basic Parameters

THSC36PS	
Prime power (kW/kVA)	36/45
Standby power (kW/kVA)	/
Rated voltage (V)	415
Frequency (Hz)	50
Rated speed (rpm)	1500

Generating-set performance

Design standard

Equipment and accessories according with following criteria, but not limited to:

IEC34-1: Performance of fixed and rotary motor

GB755: Rotating Machines Basic technical requirements

GB1105: Internal combustion engine platform testing rule

GB1859: Internal combustion engine noise testing rule

GB2820: Technical conditions of AC generator driving by reciprocating internal combustion engine

GB2423.4: Electric and electronic products of basic environmental testing instruction Db: Alternate damp & heat testing rule

GB2423.16: Electric and electronic products of basic environmental testing instruction J: Mould growth testing rule

GB3907: Basic measuring rule of industry radio inference

GB5320: Vocabulary terms of internal combustion engine

GB12699: Power frequency generating sets for rated power, voltage and rotate speed

ZB J91 005: Internal combustion engine driven generating sets -- Limits and measuring rule tensional vibration of shaft systems rules

Voltage adjusting range	95-105%
Steady State Voltage Regulation	±1%
Transient voltage deviation (100% load sudden reduce)	≤+20%
Transient voltage deviation (load impact)	≤-15%
Voltage stabilization time (100% load sudden reduce)	≤3
Voltage stabilization time (load sudden impact)	≤3
Voltage fluctuation rate	≤±1%
Steady-state frequency regulation	≤±0.5%
Frequency volatility	±0.5%
Transient frequency deviation (100% load sudden reduce)	≤+10%
Transient frequency deviation (load sudden impact)	≤-7%
Frequency Recovery Time (100% load sudden reduce)	≤3
Frequency Recovery Time (load sudden impact)	≤3



HYBRID POWER SYSTEMS P/L ENGINEERED POWER SYSTEMS

**ALTERNATIVE ENERGY SOLUTIONS
SOLAR, WIND, GENERATORS, TRANSFORMERS**

Diesel Engine: CUMMINS Series

•**Low fuel consumption:** From USA Cummins advanced design & skilled manufacturer, it has lower fuel consumption. A cylinder body, cylinder cover adopt integrated design, and prevents the engine occurring water & oil leaks.

•**Powerful engine:** Using turbocharged & turbocharged after-cooling technology for leading products that promote the power performance & improve the economical efficiency. The exhaust gas bypass valve design makes the low speed performance more perfect and more powerful.

•**High reliability:** Using of integrated building block system structure design, less the accessories total quantities, base on ensure design strength & through strict examination testing, less the diesel engine volume & weight, reduce the failure rate & maintenance cost. Nickel alloy flanging piston & major main bearing design, ensure the high reliability request.

•**Lower maintenance cost:** Fewer accessories quantities & lower usage faults make the engine's general maintenance cost lower, which creates more profit for users.

•**Excellent cooled start performance:** With install intake electrical preheating device & a big power engine, it improves the engine cooled start performance quietly. Passed the ultimate low temperature -36°C testing of China North pole village-Mohe River.

•**Pro-environment:** High performance fuel supply system and intake system, makes fuel atomized & with air mixed more sufficient, combustion totally, pollutant emission lower.

Alternator: STAMFORD Series

• **Winding design:** Generator windings with 2 / 3 pitch winding and the original sinusoidal winding design of new technologies to ensure the generator asymmetric load, nonlinear load, in parallel and so the design is too large by conventional winding neutral current effective inhibition.

• **All damping design:** Rotor completely continuous and reliable strong damping structural design gives enhanced anti-jamming capability of generator to ensure the stable operation of motor under different conditions, without oscillation.

• **Special excitation system:** Short voltage built-up time, strong anti-linear load capability, stabilized output and bear short circuit current 300% rated current up to 10 seconds.

Tellhow TCA Series Control System

DEESEA DSE7320 is an Auto Start Control Module and the DSE7320 is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.



Features

1. Magnetic pick-up and CAN bus sensing
2. 3 phase generator monitoring
3. 3 phase mains (utility) monitoring
4. 9 configurable inputs
5. 8 configurable outputs
6. Control logic facilities
7. Advanced communications
8. Back-lit 4 line text LCD display
9. Configurable event log (250)
10. Configurable timers & alarms
11. Fuel usage monitoring
12. Power monitoring
13. KW overload protection
14. Load switching
15. True dual mutual standby
16. DSENet® expansion
17. Automatically transfers between mains (utility) and generator power
18. 132 x 64 pixel ratio display for clarity
19. Real time clock provides accurate event logging
20. Set maintenance periods can be configured to maintain optimum engine performance
21. Ethernet communications provides advanced remote monitoring at low cost
22. Simplified configuration using DSE PC Configuration Suite Software



HYBRID POWER SYSTEMS P/L

ENGINEERED POWER SYSTEMS

ALTERNATIVE ENERGY SOLUTIONS
SOLAR, WIND, GENERATORS, TRANSFORMERS

Standard and Optional Configuration

System	Standard	Optional
Intake System	Cylindrical air filter	Heavy-duty air filter
Cooling system	Radiator Cooling fluid draining pipe with valve Fan and belt Coolant level sensor Coolant temperature sensor Radiator ducts	Water jacket water heater
Exhaust system	Dry manifold Industrial muffler	Stainless steel exhaust pipe Residential silencer
Fuel system	Fuel filter High-pressure oil pump Fuel hose	Fuel-water separator
Alternator	Brushless Excitation H insulation class/ H temperature rising class AVR	H insulation class/ F temperature rising class Permanent excitation Winding temperature measurement device Anti-condensation heater
Power terminal	ABB circuit breaker Four class protection level four User-specified control panel Electronic	Huatong circuit breaker Model: CDM6S- 100L 100A 3300 Class: three
Speed governor		
Control panel	TCA control panel ComAp control module Control module: MRS10	Control module: IL-NT-MRS16 IL-NT-AMF25 User-specified control panel
Lubrication system	Oil filter With a discharge valve of the discharge pipe Oil pump	Manual exhaust pump
Installation	Generating-set is a one-unit structure Generating-set installed at the high strength steel base frame Integrated vibration absorber between engine/ alternator & base frame Control cabinet installed in the generating-set base	
Start/ charging equipment	24v motor start Battery cable with bracket Battery float	
Others	Generating-set body with engine colour painting and base frame with black colour painting SAE standard	



HYBRID POWER SYSTEMS P/L

ENGINEERED POWER SYSTEMS

ALTERNATIVE ENERGY SOLUTIONS
SOLAR, WIND, GENERATORS, TRANSFORMERS

Technical Parameters

Generating set model	THSC36PS	Speed regulation mode	Electronic
Prime power (KW)	35	Fuel consumption rate under full load (g/kWh)	216
Standby power (KW)	/	Fuel type	Domestic 0# Diesel (normal temperature)
Genset volume (KVA)	45	Coolant flow rate (m ³ /min)	0.132
Rated speed (RPM)	1500	Gas consumption (m ³ /min)	2.88
Rated voltage (V)	415	Smoke exhaust volume (m ³ /min)	7.8
Rated current (A)	62.6	Air flow rate (m ³ /min)	112.8
Rated frequency (Hz)	50	Cooling method	Closed cooling
Rated PF	0.8	Lube volume (L)	10.9
Phase	3	Coolant volume (L)	18.4
Genset weight (Kg)	1496	Weight (Kg)	350
Genset dimension (LxWxH)	2650X1070X1673 (mm)	Alternator model	Stamford UCI 224D
Engine model	Cummins 4BTA3.9-G2	Rated voltage (V)	415
Rated power of engine (KW)	50	Rated frequency (Hz)	50
Standby power of engine (KW)	55	Rated speed (RPM)	1500
Construction features of engine	Four stroke and turbocharging	PF	0.8
Cylinders/arrangement	4/L	Phase and connection	3 and Y shape
Borexstroke (mm)	102 × 120	Efficiency (%)	88.5
Displacement (L)	3.9	Excitation type	Brushless excitation
Compression ratio	16.5 : 1	Insulation level	H
Starting method	Electric start	Protection level	IP23
Fuel injection type	PT Direct injection	Weight (Kg)	290

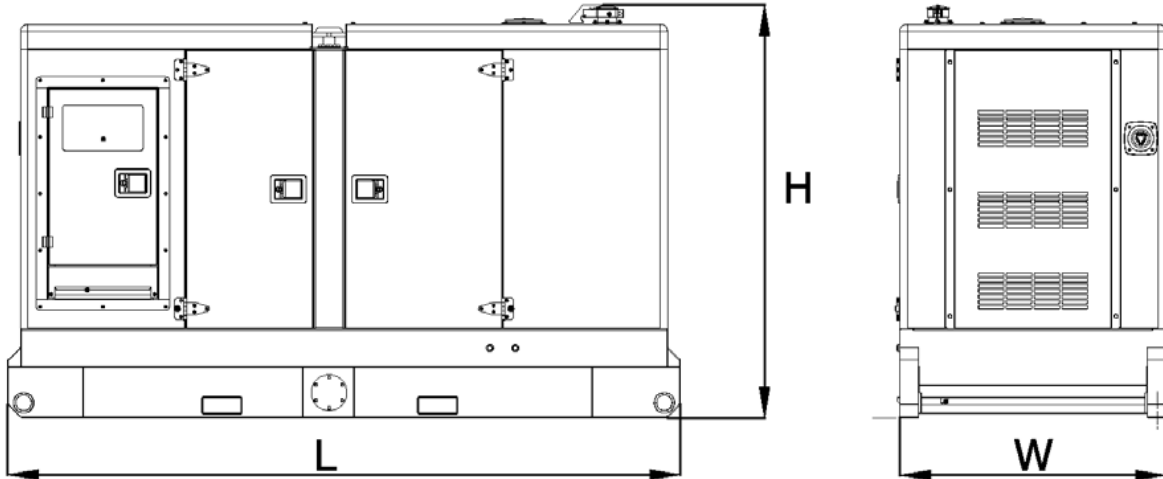


HYBRID POWER SYSTEMS P/L

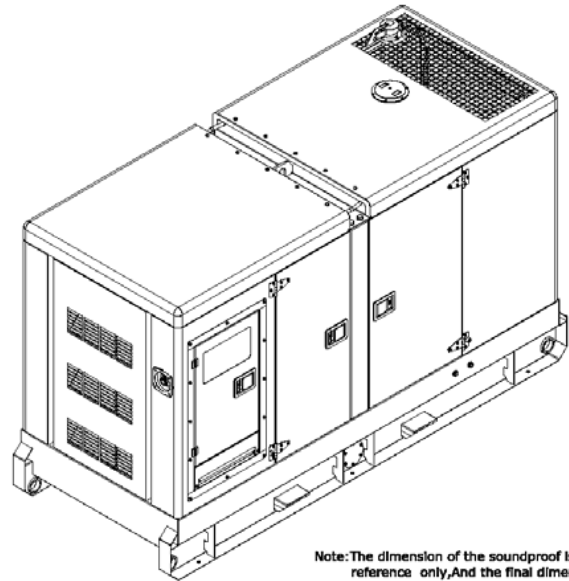
ENGINEERED POWER SYSTEMS

ALTERNATIVE ENERGY SOLUTIONS
SOLAR, WIND, GENERATORS, TRANSFORMERS

Measurement (LxWxH) : 2650 x 1070 x 1673 (mm)



- All metal canopy parts are painted by environmentally friendly polyester powder paint.
- Emergency stop push button is installed outside of the canopy
- Hinged doors allow 180° opening rotation
- Control panel viewing window
- Excellent waterproof design
- Superior intake exhaust system
- Internally mounted excellent silencer
- Easy lifting and moving
- Easy maintenance and operation



Note: The dimension of the soundproof is for reference only. And the final dimension is subject to the actual production.

Fuel rate	Based on 35° API (16° C or 60° F) of the proportion of fuel. The oil at 29° C (85° F), the low heating value is LHV 42 780 kJ/kg (18,390 Btu/lb) and weight is 838.9 g/litre (7.001 lbs/U.S. gal.).
Fuel type standard	According with EN 590 diesel fuel standards Grade No.1-D according to ASTM D 975-03 standard Grade No.2-D according to ASTM D 975-03 standard
Environmental conditions	Altitude : ≤1000m (>1000m when the power correction to be done) Ambient temperature : 40°C Relative humidity : ≤60%