http://www.ycgenset.com

GENSET MODEL: YP7G
TECHNICAL DATA SHEET

IS014001:2004

IS09001:2000

YICHEONG POWER GENERATOR

YP7G

STANDARD SPECIFICATION

Genset Main Technical Data

3P, 50Hz@1500RPM, 400/230V

(380/220V and 415/240V are for optional)

Genset Model: YP7G
Engine Model: 403D-11G

Rated power:
7.2 KW 9 KVA

Standby power:
8 KW 10 KVA

General Features:

- Composed of Perkins strong powerful diesel engine and Leroy Somer or Marathon alternator.
- 24V DC start motor and storage battery.
- Brushless, Self-excited, IP23, H insulation.
- Engine cooling system: water-cooled.
- Key start panel control system as standard, digital auto-start panel is optional.
- Canopy: Super silent, Normal silent, trailer.
- Optional open type or super silent type, ATS and synchronizing/paralleling system.
- Steel base frame with Anti-Vibration mounting, base fuel tank with flexible rubber fuel lube and level indicator.
- Overall sprayed powder coating.
- All generating sets are gone through rigorous testing before being released to the market place,including 50%, 75%, 100%, 110% load and all protection function(over-speed stop, high water temperature, low oil pressure, battery charging failure, emergency stop).

Benefits:

※ Function stability credibility, service convenient.
※ Low operating cost results in optimal economy.
※ Gets the job done wherever you are.
※ Easy for installation, operation and maintenace.

ASSEMBLY

※ The engine and alternator are close coupled by means of an SAE flange. A full torsional analysis has been carried out to guarantee no harmful vibration will occur. Engine with radiator and alternator are on common spraying powder mounting.

※ Anti-vibration pads are affixed between engine alternator feet and the base frame.Thus ensuring complete vibration isolation of the rotating assemblies and enabling the machine to be placed on an uneven surface without any detrimental effects.

※ For drability and corrosion resistance,all iron and steel surfaces of canopy fabrications have been treated for coating by grit blast cleaning.Then covered by special three layers painting which provides an excellent corrosion resistant surface.

CONTROL SYSTEM AND PROTECTION

※ Controllers are available for all applications.It contains Deep Sea,ComAp or other famous brands. According to their different functions,the control systems can be specified into key start contrller model,automatic start control model and PCRC three remote control systems. See controller features inside.

WARRANTY

※ YICHEONG Company provides one-source responsibility for the generator set and accessories.Each YICHEONG generating set has been got through 2 hours Load test for running 0% ,25%,50%,75%,100% and 110% load,all protective devices and control function are simulated and checked before despatch.

※ Engine and Alternator are guaranted for a period of 12 months from the date of commissioning or 18 months from shipping, whichever occurs first.

※ Convenience for operation and maintenance,backed by Perkins global service network.

CRITERION

※ ISO8528, GB/T2820, ISO3046, BS4999, BS5514, BS50

※ EN12601:2001, EN60034-22:1997, EN60204-1:2006

※ ISO9001:2000, ISO14001:2004, SGS, TLC

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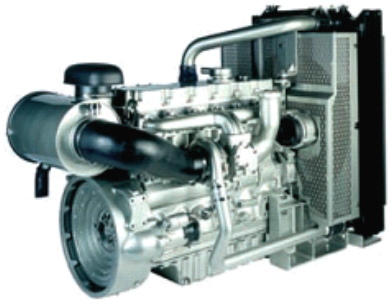
ENGINE SPECIFICATION

Engine model **403D-11G**



Perkins®

UK Perkins Benefits

Power to Meet your needs: Hitting the key power nodes, provide a clean & cost effective power solution.

State of Art Design: Common-rail fuel system, high power density, low exhaust emissions with the minimum of heat rejection and excellent fuel economy.

World-class Product Support: Network of 4000 distributors and service outlets, easy specify & order part online guides and service tools.

Long-term Power Solution: Designed to fully comply with EU Stage Ⅱ emissions regulations, providing an emissions compliant power solution for the future.

ENGINE BASIC DATA	
NO. of Sylinder & type	3 in line
Air intake way	Naturally aspirated
Bore*Stroke(mm)	77*81
Cubic Capacity (L)	1.131
BMPE(kpa)	610
Compression ratio	23:01
Rated speed(RPM)	1500
Rated power	8.6KW / 10.75KVA
Gross power	9.5KW / 11.87KVA
Piston speed(m/s)	4.1
Engine Coolant flow(L/s)	27.3
Air intake flow(L/s)	0.7
Exhaust flow(L/s)	1.66
Exhaust temperature (℃)	368
Overall thermal efficiency	86.0%

LUBRICANTION SYSTEM	
Maximum sump capacity	5.2
Minimum sump cacacity	1.9
Pressure @Max. speed (kPa)	120
Max. continuous oil tem. (℃)	125
Oil flow at rated speed(l/min)	N/A

INDUCTION AIR SYSTEM	
Max. air intake restriction (paper element filter)	
Clean filter (kPa)	3
Dirty filter (kPa)	6.4

EXHAUST SYSTEM	
Max.back of pressure (kPa)	10.2
Diameter of exhaust pipe (mm)	34/40

FUEL SYSTEM	
Type of Injection	indirect injection
Fuel injection pump	cassette type
Fuel injection	pintle nozzle
Nozzle opening pressure(Mpa)	14.7
Maximum Particle Size	25 microns
Maximum suction head	0.8m
Maximum static pressure head	3m
Governor type of pump	mechanical

CONSUMPTION		
110% (L/h)	8kw/10kva	2.9
100% (L/h)	7.2kw/9kva	2.6
75% (L/h)	5.4kw/6.8kva	2
50% (L/h)	3.6kw/4.5kva	1.5
25% (L/h)	1.8kw/2.25kva	0.75

COOLING SYSTEM	
Coolant capacity (L)	5.2
Max. external system resistance	30.4 kPa
Thermostat operation range (℃)	75-87

ELECTRIC SYSTEM	
Alternator (12V)	40amps
Starter (12V)	Bosch1.1kw

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ALTERNATOR SPECIFICATION

Reliable performance

Voltage regulation

Voltage regulation maintained with in ±0.5% as follow:

- Power factor between 0.8-1.0 lagging.
- From no load to full load,any steady load.
- Speed droop variation under 5%.

Frequency/Speed undulation

- 0-100% load, Frequency/Speed Droop Ratio <5%.
- 25-100% load, any steady load undulation <0.25%.

Effect factor of telecom

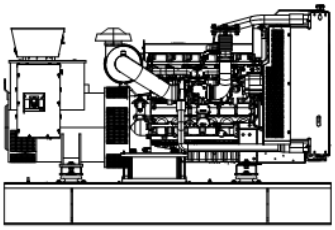
- TIF(MAMG1-22)<50; THF(BS EN60034) < 2%

Brand	LEROY SOMER	STAMFORD
Alternator Model	**LSA40VS1**	**PI044E**
Frequency and Speed	50Hz/1500rpm	50Hz/1500rpm
Voltage(V)	400/230	400/230
Prime Capacity(KVA)	10	10
Prime Power(KW)	8	8
Power Efficiency(%)	81.6	80.5
Imput Power(KW)	9.8	9.9
Voltage Regulation	±0.5%	±0.5%
Voltage regolator	AVR	AVR
Rated Power Factor	0.8	0.8
Stator Winding	2/3	2/3
Maximum Overspeed	2250min^{-1}	2250min^{-1}
Sustained Short Circuit	300%(3IN): 10S	55Amps
Cooling Air(m^3/s)	0.09	0.09

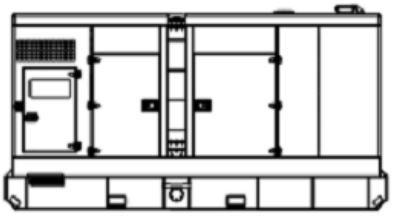
Alternators meet the requirement of BSEN 60034 and the relevant section of other international standards such as BS5000, VDE0530, NEMA MG1-32, IEC34, CSA22.2-100, As1359, and other standards & certifications can be considered on request.
The 2/3 pitch design avoids excessive neutral currents. With the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.
Brushless alternator with pilot exciter for excellent load response.
Class H insulation, easy parallelling with mains or other generators, standard 2/3 pitch stator windings avoid excessive neutral currents.
Backed by worldwide service network.

DIMENSION AND WEIGHT

Open frame type
Size (L*W*H, mm) 1565×730×1200
Gross weight: 352kg



Super silent canopy
Over size (L*W*H, mm) 1850×740×1160
Gross weight: 532kg



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CONTROL SYSTEM

1.Standard: DSE702K Key Start

Providing the standard functions as follows:

(Also can be made according to the customers' special requirements)

※ Start/Stop controller

※ Ampere meter

※ Voltmeter and selector switch

※ Frequency meter/Water temperature gauge/Oil pressure gauge/ Hour counter/Batery voltage meter

※ Emergency stop pushbutton

※ Alarm System: Over speed, High Engine Temperature, Low Oil Pressure, Charge Failure.

※ Protection System: Over speed, High Engine Temperature, Low Oil Pressure, Emergency Stop. And the other protection function presetting.

DSE702K

2.Option:Deep Sea DSE5210 Digital Auto Start

3.Option:Deep Sea DES5220 Digital Auto Start (AMF) (Option assembled with the ATS)

DigitalAuto-start Generator controller integrating digital, intelligent and network techniques is used for automatic control system of diesel generator. It can carry out functions including automatic start/stop, data measure and alarming. Optionally assembled with the ATS, it can carry out auto-switching between the outer power and generating set power.(AMF)

DSE5210

DSE5220

Functions:

※ Automatic Start/Stop

※ 3 start attempts failure and Automatic Crank Disconnect

※ Parameters display(V/A/Hz/Hour)

※ Engine monitoring and protection

※ Charge alternator exciting and Charge alternator fail alarm

※ Running hour counting

※ Settings can be adjustable via key buttons on front panel

Shutdown:

※ Loss of Speed Signal

※ Alternator Under/Over Voltage

※ Alternator Under/Over Frequency

※ Mains Under/Over Voltage

※ Mains Under/Over Frequency

※ Under/Over Speed

※ Low Oil Pressure

※ High Engine Temperature

Warning:

※ Alternator Under/Over Voltage

※ Alternator Under/Over Frequency

※ Mains Under/Over Voltage

※ Mains Under/Over Frequency

※ Under/Over Speed

※ Low Oil Pressure Pre-Alarm

※ High Engine Temp. Pre-Alarm

※ High/Low Battery Voltage

※ Over-current

※ Periodic maintenance

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Optional Parts:

Engine	Alternator	Generator Set	Fuel System	Canony
• Heater 2KW&4KW (Coolant & Lube Oil) • Battery Charger 3.5A & 7A	• AVR PMG with regulator • Anti-damp and anti-corrosion treatment • Anti-condensation heater	• Tools with the machine	• Low fuel level alarm • Automatic fuel feeding system	• Super silent (65-68Dba@7m) • Normal silent (75-78Dba@7m)
Lubricating System	**Exhaust Gas System**	**Cooling System**	**Control Panel**	**Output Voltage**
•Oil with the machine	• Protection board from hotness • Low frequency silencer	• Front heat protection • 50℃ radiator • Coolant(-30℃)	• Remote controller • Auto-paralleling control panel • Auto Transfer /changeover Switch (ATS)	• 440/254V • 416/240V • 220/127V • 208/120V

Circuit Breaker

Paralleling/synchronizing System

ATS

Super silent canopy

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