

## Main configuration and features

- Highly efficient gas engine
- AC synchronous alternator
- Gas safety train and gas protection device against leakage
- High efficient water-air inter-cooler
- High efficient turbocharger
- Wet exhaust manifold
- Ignition system, including: ignition module, ignition lead, ignition coil, spark plug, ignition sensor
- Ignition high energy signal panel
- Speed control system, including: actuator, speed governor, throttle valve, speed sensor
- Mixer
- Unattached switch cabinet and electric control cabinet
- Multi-function control system with simple operation
- Monitoring battery voltage and charging automatically
- Industrial silencer with silencing ability of 12-20dB(A)
- Reducer valve (optional)
- Gas leakage detector (optional)
- Auto refilling oil system(optional)
- Communication module (optional)

### Soundproof canopy and control cabinet

Structure type	Open or Soundproof
Canopy painting	High-class powder coating
Electrical control cabinet	Integrated into unit,IP54
Noise level@7m, dB(A)	75

### Dimension and weight open type

Dimension(LxWxH), mm	5600x2000x2480
Weight, kg	8200

### Special statement

1 The technical data are based on a gas mixture of 80% methane and 20% carbondioxid with a calorific value of 35.8 MJ/Nm3 and a methane no. > 70

2 The technical data is measured in standard conditions:  
 Absolute atmospheric pressure:100kPa  
 Ambient temperature:25°C  
 Relative air humidity: 30%

3 Rating adaptation at ambient conditions acc to DIN ISO 3046/1.  
 The tolerance for the specific fuel consumption is  $\pm 5\%$  at rated output.

4 Dimension and weight above are just for standard product ,and may be subject to change. As this document is used only for presale reference, take the specification supplied by us before ordering as final.



### Power and efficiency @50Hz

Electric power -kW 400    Electric efficiency 35%

### Fuel Request

Fuel type	Natural gas
Fuel component	$\geq 90\%$ CH4
Fuel consumption @100% load ,m3/h	114.3
H2S content	$\leq 100$ ppm
NH3 content	$\leq 5$ ppm
Silicon content	$\leq 5$ mg/Nm3
Impurities content	$\leq 30$ mg/Nm3
Water content	no free water
Supply gas pressure range, kPa	5~20

## Gen-set performance data and manufacturing technology

Gen-set model		Power and efficiency			
Gen-set model	HGCM500	Load	100%	75%	50%
Electric output power(kW)	400	Electric power (kW)	400	300	200
Output Type	3 Phases 4 wires	Electric efficiency	35%	34%	34.0%
Voltage output	400/230 V	<p><b>Manufacturing technology</b></p> <ul style="list-style-type: none"> <li>Special welded base frame, inner vibration isolators and design for whole lifting</li> <li>With high-class paint, enduring brightness as well resistance against abrasion and defacing</li> <li>Installation manual, operation and maintenance manual wiring program</li> </ul> <p><b>Standards and certificate</b></p> <ul style="list-style-type: none"> <li>ISO3046,ISO8528,GB2820</li> <li>BS5000PT99,AS1359,IEC34</li> <li>ISO9001:2015 quality system certification</li> </ul>			
Power factor cosφ	0.8 lagging				
Frequency (Hz)	50				
Rated speed (RPM)	1500				
Voltage Stabilized regulation	≤±1.5%				
Voltage Instantaneous regulation	≤±20%				
Voltage Recovery time (s)	≤1				
Voltage Fluctuation ratio	≤1%				
Voltage Wave aberration ratio	≤5%				
Frequency Stabilized regulation	≤1%(adjustable)				
Frequency Instantaneous regulation	-10%~12%				
Frequency Recovery time (s)	≤7				
Frequency Fluctuation ratio	≤1%				

## AC alternator performance data

Alternator brand		Voltage	Power
Alternator brand	Faraday		
Alternator model	FD5MP	380V	450kW
Rated output power (kW)	450	400V	450kW
Power factor	0.8	415V	450kW
Rated current @ 400V and 100% load (A)	721.6		
Excitation system	Brushless		
THD	<2%		
Bearing number	1		
Winding material	100% copper		
Wiring connection	Star		
Rotor insulation class	H		
Winding pitch	2/3		
AVR model	SX440		
Voltage fluctuation(no load to full load)	±0.5%		
Housing protection	IP23		
TIF (NEMA)	<50		
Excitation method	Shunt		
Rated ambient temperature(°C)	40		
Rated stator temperature rise(°C)	125		

## Efficient gas engine

## HGGM500

Model	HNKT38
Brand	HONNY CUMMINS
Type	4 stroke, water-cooled, wet cylinder liner, electronic-control ignition system, pre-mixed perfect mixed burning
Engine output(kWm)	550
Cylinders& Arrangement	12V
BoreXStroke(mm)	159*159
Displacement(L)	37.8
Compression ratio	11:1
Speed(RPM)	1500
Rotation direction	Anti-clockwise viewed on flywheel
Ignition timing	°BTDC 20
Aspiration	Intercooled and Turbocharged
Cooling Method	Water cooled by fan radiator
Gas mixer	Honny or equivalent
Gas valves	Intake 2 & exhaust 2 per cylinder
Ignition timing	1R-6L-5R-2L-3R-4L-6R-1L-2R-5L-4R-3L
Ignition controller	ECU
Starting method	Electric, 24 V motor
Idling speed(r/min)	700
Exhaust temperature (after turbocharger )	620℃
Oil recommended	Gas engine special oil, SAE 15W-40 CF4 or
Oil consumption	≤0.5g/kW.h
Lubrication oil capacity (Total)	135L
Oil pressure	310Kpa ~448Kpa
Engine coolant capacity (Only engine )	134L
Max permit coolant temperature	100℃
Electrical efficiency	36%
Heat efficiency	51.3%
Starting motor	DC24V
Battery	4x12V , 200Ah

# Diesel generator set



## UK Brand -DSE7320 control system

DSE7320 MKII



The DSE7310 MKII is an Auto Start Control Module and the DSE7320 MKII is an Auto Mains (Utility) Failure Control Module suitable for a wide variety of single, diesel or gas, gen-set applications

Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem).

The DSE7320 MKII will also monitor the mains (utility) supply. The modules include USB, RS232 and RS485 ports as well as dedicated DSENet® terminals for system expansion.

The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality. Dual mutual standby is now available on both the DSE7310 MKII & DSE7320 MKII using RS232 or RS485 communications. This provides for a simpler and more convenient installation with more advanced features such as true engine hours balancing.

The modules can be easily configured using the DSE Configuration Suite PC software. Selected front panel editing is also available.

### COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF GEN-SET APPLICATIONS

DSE2130 DSE2157 DSE2548 DSE2510/20	MODEM MODBUS	PC					
	232 485		8	6	6		
DSENET® EXPANSION	RS232 AND RS485	USB PORT	CONFIGURABLE INPUTS	DC OUTPUTS	ANALOGUE INPUT	EMERGENCY STOP	DC POWER SUPPLY 8-35V

# Diesel generator set



## Standard configuration

Engine	Alternator	Canopy(optional) and base	Electrical cabinet
Gas engine Ignition system Electronic governing system Water to air intercooler Electrical start motor Battery system	AC alternator H class insulation IP23 protection AVR voltage regulator	Steel monocoque base frame Engine bracket Vibration isolators Alternator base Soundproof canopy	Air circuit breaker Gen-set controller
Gas supply system	Lubrication system	Standard voltage	Induction/ exhaust system
Gas safety train Air/fuel mixer	Oil filter(on the engine) Oil pump(on the engine)	380/220V 416/240V 440/254V 480/277V	Air filter Exhaust silencer Exhaust bellows Ventilation fan
Heat exchange system ( optional )	Service and documents		
Exhaust heat ex-changer Jacket water heat exchanger Mixture circulation pump Jacket water heater(optional) Expansion tank, Shut-off valve Three-way auto proportional valve Emergency radiator	Tools package Installation and operation manual Maintenance manual Software manual Parts manual	Engine operation and maintenance manual Gas quality specification Control system manual After service guide Standard package	

## Optional configuration

Engine	Alternator	Exhaust system
Heavy duty air filter Auto A/F ratio controller	Space heater AVR Treatments against humidity and corrosion	Guard shield from touch Residential silencer Three-way catalytic converter
Canopy and base	Lubrication system	Voltage
SECC base frame Lightning protection	Automatic oil filling switch Auxiliary oil tank	208V 220V 240V
Service and documents	Gas supply system	
Service tools Maintenance and service parts	Gas flow gauge Gas pressure reducer valve Gas blower	Emergency relief flare Free water separator Gas purification plant

Data is subject to change without prior notice as new products are always developed.

Please contact Honny or local agent with any doubts or for more information.