

## 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
- IMPOC Mixer
- Unattached switch cabinet and electric control cabinet
- Multi-functional 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(LxWxH), Silent	4200x1500x2100mm

### Dimension and weight open type

Dimension(LxWxH), open	3200x1100x1820mm
Weight, kg	3100

### Special statement

- 1 The technical data are based on a gas mixture of 80% methane and 20% carbon dioxide with a calorific value of 35.8 MJ/Nm<sup>3</sup> 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 + 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 200    Electric efficiency 34%

### Fuel Request

Fuel type	Natural gas
Fuel component	≥90% CH <sub>4</sub>
Fuel consumption @100% load, m <sup>3</sup> /h	59.0 (±5% )
H <sub>2</sub> S content	≤100ppm
NH <sub>3</sub> content	≤5ppm
Silicon content	≤5mg/Nm <sup>3</sup>
Impurities content	≤30mg/Nm <sup>3</sup>
Water content	no free water
Supply gas pressure range, kPa	10~20

Gen-set performance data and manufacturing technology					
Gen-set model	HGCM250	<b>Power and efficiency</b>			
Electric output power(kW)	200	Load	100%	75%	50%
Output Type	3 Phases 4 wires	Electric power (kW)	200	150	100
Voltage output	400/230 V	Electric efficiency	33%	32%	31%
Power factor cosφ	0.8 lagging	<b>Manufacturing technology</b> <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> <b>Standards and certificate</b> <ul style="list-style-type: none"> <li>ISO3046,ISO8528,GB2820</li> <li>BS5000PT99,AS1359,IEC34</li> <li>ISO9001:2015 quality system certification</li> </ul>			
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	Faraday	<b>Voltage</b>	<b>Power</b>
Alternator model	FD4M	380V	250kW
Rated output power (kW)	250	400V	250kW
Power factor	0.8	415V	250kW
Rated current @ 400V and 100% load (A)	360		
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)	±1%		
Housing protection	IP23		
TIF (NEMA)	<50		
Excitation method	Shunt		
Rated ambient temperature(°C)	40		
Rated stator temperature rise(°C)	125		

## Efficient gas engine

## HNNT14

Model	HNNT14
Brand	HONNY-CUMMINS
Type	4 stroke, water-cooled, wet cylinder liner, electronic-control ignition system, pre-mixed perfect mixed burning
Engine output(kWm)	240
Cylinders& Arrangement	6 in line
BoreXStroke(mm)	140x152
Displacement(L)	14
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	IMPOC
Gas valves	Intake 2 & exhaust 2 per cylinder
Ignition timing	1-5-3-6-2-4
Ignition controller	ECU
Starting method	Electric, 24 V motor
Idling speed(r/min)	700
Oil recommended	Gas engine special oil, SAE 15W-40 CF4 or above
Oil consumption	≤0.5g/kW.h
Oil pressure alarm /Stop	1.4/1.0 Bar
Exhaust temperature (after turbocharger )	600℃
Engine coolant capacity (Only engine )	21L
Lubrication oil capacity	39L
Max permit coolant temperature	100℃
Electrical efficiency	34%
Heat efficiency	52%
Starting motor	DC24V
Battery	2x12V , 150Ah

## DSE6120



The DSE6120 MKIII is an Auto Start Control Module suitable for a wide variety of single, diesel or gas, genset applications.

Monitoring an extensive number of engine parameters, the module will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs and remote PC.

The module includes USB connection and dedicated DSENet® terminals for system expansion.

The module is compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offers an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements.

The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality. The modules can be easily configured using the DSE Configuration Suite PC software. Selected front panel editing is also available.

## 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 exchanger 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