



## **Guangdong Westinpower Co., Ltd**

RN255NT

Gas Generator Set Data Sheet

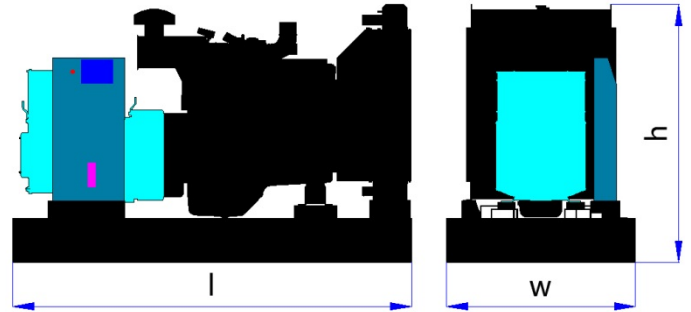


## RN-NT Series GAS Generator

Type: RN255NT

### Main Data

|                               |                                   |
|-------------------------------|-----------------------------------|
| Rated Power:                  | 255kVA/204kW                      |
| Speed/Frequency:              | 1500 rpm /50Hz                    |
| Voltage classes:              | 400/230V                          |
| Power factor :                | 0.8                               |
| Rated current:                | 365A                              |
| Starting mode:                | 24V/DC electrical starting        |
| Steady voltage regulation:    | $\leq \pm 1\%$                    |
| Transient voltage regulation: | $- 15\% \leq \delta u \leq +20\%$ |
| Voltage regulation range:     | $\pm 5\%$                         |
| Voltage wave motion rate:     | $\leq \pm 1\%$                    |
| Voltage recovery time:        | $\leq 4s$                         |
| Steady frequency regulation:  | $\leq \pm 0.5\%$                  |
| Frequency fluctuation rate:   | $- 15\% \leq \delta f \leq +10\%$ |
| Frequency fluctuation rate:   | $\leq \pm 0.5\%$                  |
| Frequency steady time:        | $\leq 3s$                         |



### Weight and Dimensions

|              | Dimensions<br>l×w×h(mm) | Weight<br>(Kg) |
|--------------|-------------------------|----------------|
| Open Type:   | 3570*1000*1210          | 2050           |
| Silent Type: |                         |                |

### Operating environment

|                         |                           |
|-------------------------|---------------------------|
| Environment temperature | $\leq 40^{\circ}\text{C}$ |
| Altitude                | $\leq 1000\text{m}$       |
| Relative humidity       | $\leq 90\%$               |

Note:1. When the environment temperature is higher than  $40^{\circ}\text{C}$  or the altitude is more than 1000 meters, power will fall, need to correct.  
2. Humidity is too large, need to make corresponding

### Introduction

- Fuel requirements: Technical data is based on a calorific fuel value of 10 kWh/Nm<sup>3</sup> for natural gas;
- Manufacturing standards: ISO8528-5、GB/T2820.5-2009、GB/T22343-2008;
- Every gas gensets have been pass the test under the load of 0%、25%、50%、75%、100% and the response ability of static, dynamic test, all the protection device and control system are pass strict inspection before they leave factory

## Westinpower Gas Engine

Type: E2876 LE212

### Main Data

Manufacture: MAN  
Air intake way: Turbocharged - Intercooled  
Cooling way: Closed cooling cycle  
Cylinder /Arrangement: 6/L  
Displacement: 12.82L  
Bore: 128mm  
Stroke: 166mm  
Compression ratio: 13:1  
Rated RPM @50Hz: 1500rpm  
Max. standby power@50Hz: 220KW  
Governor: Electronic  
Dimension (l×w×h) : 1520\*830\*1210  
Weight: 990kg

### Lubrication system

Lube oil filling quantity min/max: 50/70L

### Gas System

Gas type: natural gas  
Gas supply pressure: 20~50kPa  
main composition: ≥55%  
Combustion air: 1165kg/h

### Air intake system

Air-fuel ratio: 1.7λ

### Exhaust system

Exhaust gas flow: 1205kg/h  
Exhaust heat based on 120 °C: 125kw  
Max back pressure: 40mbar

### Cooling system

Coolant filling quantity: 16L  
Coolant heat: 120kw  
Coolant temperature min. 80 °C  
Coolant temperature max. 88 °C

## Westinpower Gas Engine Features

- Mixer: Best air-fuel ratio adjustment, burn more fully.
- High energy and single cylinder ignition technology、 Integrated prevent tempering device、 The technology of supercharge and inter-cooling and lean-burn
- Low consumption ,low noise Energy conservation and environment protection.

## Stamford Generator

Type: S4L1S-D4

### Main Data

Manufacturer: Stamford  
 Rated power: 330kVA/264kW  
 Voltage classes: 400/230V  
 Phase : 3  
 Power factor: : 0.8  
 Excitation way : : SHUNT  
 AVR Type: AS440  
 Rated ambient temperature: 40°C  
 Dimension (l×w×h) : 155 x 87 x 107(cm)  
 Weight: 940kg

### Performance data

Bearing number : 1  
 Poles : 4  
 Insulation class : H  
 Temperature rise : F  
 Protection : I  
 P23  
 Altitude : ≤1000m  
 Overspeed : 2250rpm  
 THC : <5%  
 THF : <2%

Note: We will separately provided if you need the more parameter.

## Control Panel

Type: easYgen-1800



### Controller introduction

Operating voltage:12/24V

Operating current:12V 380mA  
 24V 188mA

Operating temperature:-25°C~70°C

Relative humidity: (20-93) %RH

IP Rating: front IP65  
 back IP20

Mounting-hole Size: 214×160mm  
 Net: 0.85kg

## Gas valve group



On industrial, thermal technology production processes and combustion equipment, we according to the customer Wentworth components and components from other famous manufacturers are used for combustion

Design and production of air valve set.

- Maximum working pressure: 16.0 bar [1600 kPa] [240 PSI]
- Maximum nominal diameter: DN 200

## Ball valve



Maximum working pressure

- Thread design: 5.0 bar [500 kPa] [70 PSI]
- Flange design: 16.0 bar [1600 kPa] [240 PSI]

Durable switch lightweight structure

## Pressure regulator



Maximum working pressure

500 mbar [50 kPa] [7 PSI]

Preloading balance

Safety diaphragm

Internal pulse connection and inlet side pressure measurement connection

## Valve detection system



VDK 200A test system for 2 single solenoid valves

VPS 504, VPS 508 detection system for DMV, MB

Vpm-vc for large amount of detection controller  
(230 VAC / 120 VAC)



MOTORTECH's VariFuel2 is a high-tech variable Venturi type air/gas mixer that can constantly adjust to any fuel changes and allows the engine to operate at its most efficient point. Series 100, 140, 200, 250, 300 and 350 are available for engines with an air requirement up to 12,000 m<sup>3</sup>/h. Coupled to an air/fuel ratio controller, lean-burn or stoichiometric, it precisely regulates the mixture. The VariFuel2 is very popular for applications with constant changes in calorific value of fuel.

VariFuel2 air/gas mixers are equipped with a high precision stepper motor which is extremely precisely actuated by the VariStep3 stepper motor driver. Different flow bodies and variable gas inlet and mixture outlet configurations allow flexible adaptation of the gas mixer to the respective application.

The VariFuel2-TEM air/gas mixer is based on the proven design of the VariFuel2 series and is specially designed for use with MWM<sup>®</sup> gas engines. Designed as a replacement and plug-and-play solution, the VariFuel2-TEM easily fits into the existing engine structure without any mechanical modifications.

In addition to full compatibility, both mechanically and in connection with existing TEM controllers, the VariFuel2-TEM contributes to an improvement of the starting behavior and mixture control via its variable fuel ring and enables low-maintenance operation over a long period of time.

The stepper motor driver developed by MOTORTECH guarantees the ideal control of the various types of MOTORTECH VariFuel2 and VariFuel2+ air/gas mixers and ITB throttle bodies with integrated stepper motor.

The EmCon5 is a lean-burn emission controller for gas engine co-generation units. It is designed to control the exhaust gas emission levels based on indirect measurements. Simply three input signals are required for the control purpose: manifold inlet pressure and temperature and engine load. A CH<sub>4</sub> input signal is optional. Use of an oxygen sensor is not required. Following initial measurements of the engine emission levels and successful analysis, the EmCon5 guarantees optimal operation of the gas engine at the predefined emission limits.

All controller parameters are freely programmable. The adjustments and modifications are made via the computer-program "WinScope". The EmCon5 fits perfectly with the VariFuel2 and VariFuel2+ air/gas mixer series.



Efficiency-enhanced engines, stricter emission regulations, highly compressed mixtures, as well as the use of a great variety of gas types are putting even greater demands on the entire ignition system. Based on its already known MIC3 series, MOTORTECH provides a new enhanced version to customers to also fulfill these greater demands in the future.

Ignition coils are becoming more and more important in modern, state of the art ignition systems. MOTORTECH offers a series of high performance ignition coils produced in its European facilities which are specially designed for use with newest technologies of MOTORTECH ignitions controllers

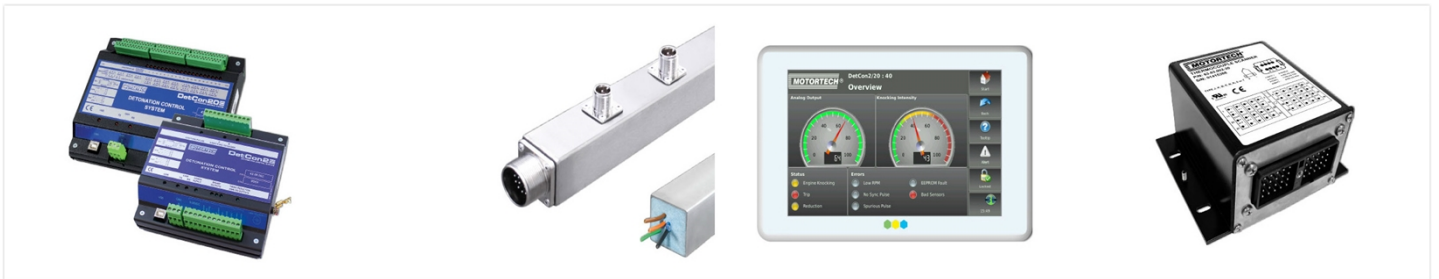
A wide range of standard ignition pickups are available from MOTORTECH to allow service companies and operators to select what they need to do a professional installation.

High quality, designed to meet the application and temperature requirements, MOTORTECH pickups will last and ensure you are not experiencing any unexpected shut downs.

The spark plug leads installed by engine manufacturers are not always the best choice when it comes to longevity and trouble-free operation of the engine. Especially for use on CATERPILLAR<sup>®</sup> G3300 and G3400 series gas engines, MOTORTECH offers suitable spark plug leads for easy replacement of original parts and as an upgrade for every engine. These spark plug leads offer several advantages when being compared to the OEM or aftermarket competition and solve the problems faced by plant operators on regular basis.

The SparkView is a handheld device developed by MOTORTECH that can monitor the high voltage required by the spark plug while the engine is running. With a measuring clamp or cable and the display for up to 40 kV, it is easy to determine the condition of the spark plugs and the time at which they need to be replaced. This guarantees a constant performance of the engine and a maximum utilization of the spark plugs.





The gas engine operators are calling for increased power output from their engines. More load means higher temperatures, pressures and tougher operation. This mostly ends in catastrophic engine damages due to detonation or pre-ignition.

As MOTORTECH has proven for years, detonation can be detected professionally with the DetCon2 or DetCon20. Single cylinder sensors constantly monitor the sound level of the combustion chamber. If detonation is detected the system will take steps to eliminate detonation immediately.

MOTORTECH stainless steel, vibration resistant rail assembly will withstand any harsh environment commonly found in the oil & gas industry. The proven design is made for engine manufacturers and the global aftermarket. Do not go low-tech and take the risk of engine down time because of equipment being under repair. Eliminate the need for constant rewiring, connector exchanges or straightening out weak and bent aluminum wiring rails.

The operating data of the DetCon Detonation Control system will be completely visualized via HMI module (Human Machine Interface). The overview screen shows the relevant information as engine knocking, knock intensity and status for activated load reduction or emergency shutdown of engine.

The control keys guarantee simple navigation through the different display pages and menus. All in all the PowerView3 HMI module is also able to provide error diagnostics on-site without requiring a laptop!

The TempScan20 temperature module monitors up to 20 thermocouples and provides the temperature information to the PowerView3 HMI module via CANopen.

Channels are independently configurable as Type J, K, B, E, N, R, S or T thermocouples  
Temperature information can include

- Exhaust temperature
- Winding temperature
- Fluid temperature

No additional programming or configuration required



## Standard configuration accessories

### Fitting

- gas filter ※
- air filter ※
- oil filter ※
- battery,battery cable
- outlet cabinet
- Industrial muffler
- Bellows
- exhaust flange
- shock absorber

### Data

- test report
- electrical schematic diagram
- instruction manual
- certification
- warranty card

Note: With ※ Is mounted on the set (the gas used for gas cooker,not equip with gas filter)

## Optional accessories

- residential muffler
- exhaust pipe
- power cable
- battery charger
- maintenance-free storage battery
- space heater
- jacket heater
- oil heater
- ATS
- parallel operation
- grid Connection
- silent type generator set
- silent container genset

### Spare

- gas filter
- air filter
- oil filter
- silent container genset

### Other

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

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