

Natural Gas

1000kw

1600kw

2000kw Gensets

Products and Services brochure

1000kw nat gas generator \$495k
1600kw nat gas generator \$595k
2000kw nat gas generator \$850k
two years warranty unlimited hours
emissions control
remote maintenance package
and more.....

TRU2000 natural gas generator set

Specifications

Frequency	Voltage	Prime power	Continuous power
60Hz	AC 277/480V		1000kW/1250kVA
Speed	Noise(Open)	Noise(Container)	
1800rpm	≤110dB (A) @7m	≤95dB (A) @7m	

Standard configuration

◆Electronic governor ECU	◆DC24V Charging generator	◆Radiator, cooling fan
◆Ingress protection rating IP23	◆Insulation class H	◆DeepSea DSE8610 controller
◆Air filter	◆Silencers	◆Battery floating charger
◆Battery pack and connection cable	◆Circuit breaker	◆Forklift slot
◆Package: PE film	◆Vibration damper	◆Generator set usage information

Engine parameters- There are two complete systems in each Container

Engine Brand	Cummins
Engine Model	K50N-G10S
Engine Speed	1800 rpm
Prime power	N/A
Continuous power	1100kW
Bore×Stroke	159×159 mm
Displacement	50.3L
No. of cylinders	16-V type,4 Cycle
Governor type	ECU
Air Intake method	Turbocharged and Aftercooled
Compression Ratio	11.5:1
Start-up method	DC24V electrical start

Gas System

Minimum Fuel Inlet Pressure @ Inlet of GMF Sensor Housing(kPa)	5			
Maximum Fuel Inlet Pressure @ Inlet of GMF Sensor Housing(kPa)	20			
Maximum Fuel Pressure Variation	+/-1			
Acceptable Fuel	Pipeline Quality Natural Gas			
Minimum Fuel Methane Number*—MN	80			
Minimum Fuel Energy Content*—BTU/scf(MJ/m ³)	800(30)			
Gas Consumption(LHV=36MJ/m ³) (m ³ /h)				
Continuous power	100% Load	75% Load	50% Load	25% Load
1100kW	285.6	224.6	162.2	102.1

Air Intake system

Maximum Allowable Intake Air Restriction	
with Clean Element (kPa)	3.7
with Dirty Element (kPa)	6.2
Intake Air Flow@100% load COP (L/s)	1381

Cooling system

Coolant Capacity	
Engine Only(L)	165.5
After-cooler Only(L)	29.2
Thermostat (Modulating) Range (°C)	82-93
Minimum Allowable Pressure Cap @ sea level-(kPa)	48

Lubrication system

Oil Pressure	
@ Minimum Low Idle (kPa)	138
@ Governed Speed (kPa)	345-483
Maximum Allowable Oil Temperature (°C)	121
Total System Capacity (Including By-Pass Filter) (L)	234.7

Exhaust system

Max. exhaust back pressure (kPa)	10.0
Exhaust gas temperature@ 100% load COP(°C)	463
Exhaust gas flow @ 100% load COP(L/s)	3200

Alternator parameter

Alternator brand	Stanford
Alternator model	S6L1D-F41
Rated output power @480 V (kW/kVA)	1150/1438
No. of bearings	1
Insulation class	H
Voltage Regulation (steady state)	± 1%
Ingress protection rating	IP23
Coil pitch	2/3
Connection	Three-phase, four-wire
Excitation method	PMG
Power factor	0.8
Efficiency	0.95
TIF	< 50
THF	< 2%

Control function

Operation function	Power switch, start, stop, emergency stop, closing/opening, parallel connection, etc.
Controller Model	DeepSea DSE8610
Display	4 Line LCD with backlight
Communication	USB, RS485, RS232, Ethernet
Configurable Inputs/Outputs	11/8
Ingress Protection Rating	IP65
Display function	Phase voltage, line voltage, current, frequency, phase sequence, active power, reactive power, apparent power, power factor, accumulated power generation, engine speed, oil pressure, cooling water temperature, running time, accumulated start-up times, battery voltage, etc.

Protective function	Over-speed, under-speed, over-voltage, under-voltage, over-frequency, under-frequency, over-current, over-power, low oil pressure, high water temperature, low battery voltage, charging failure, etc.
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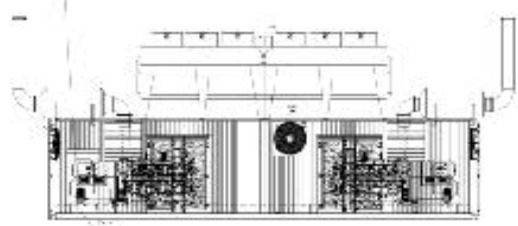
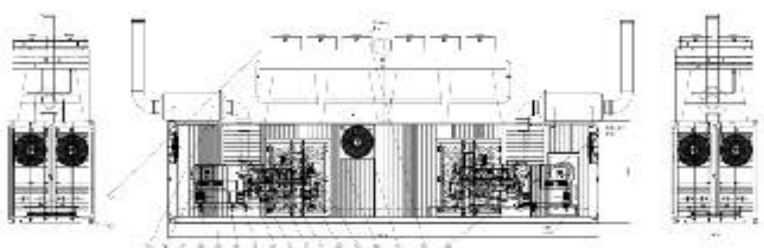
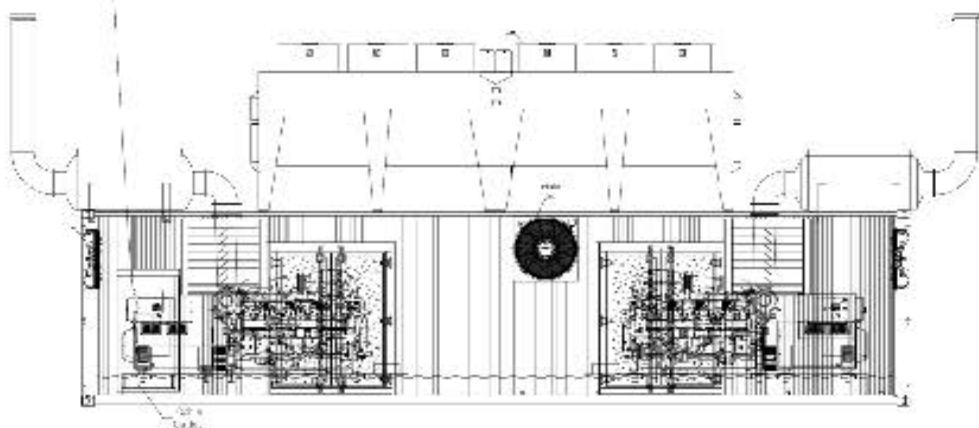
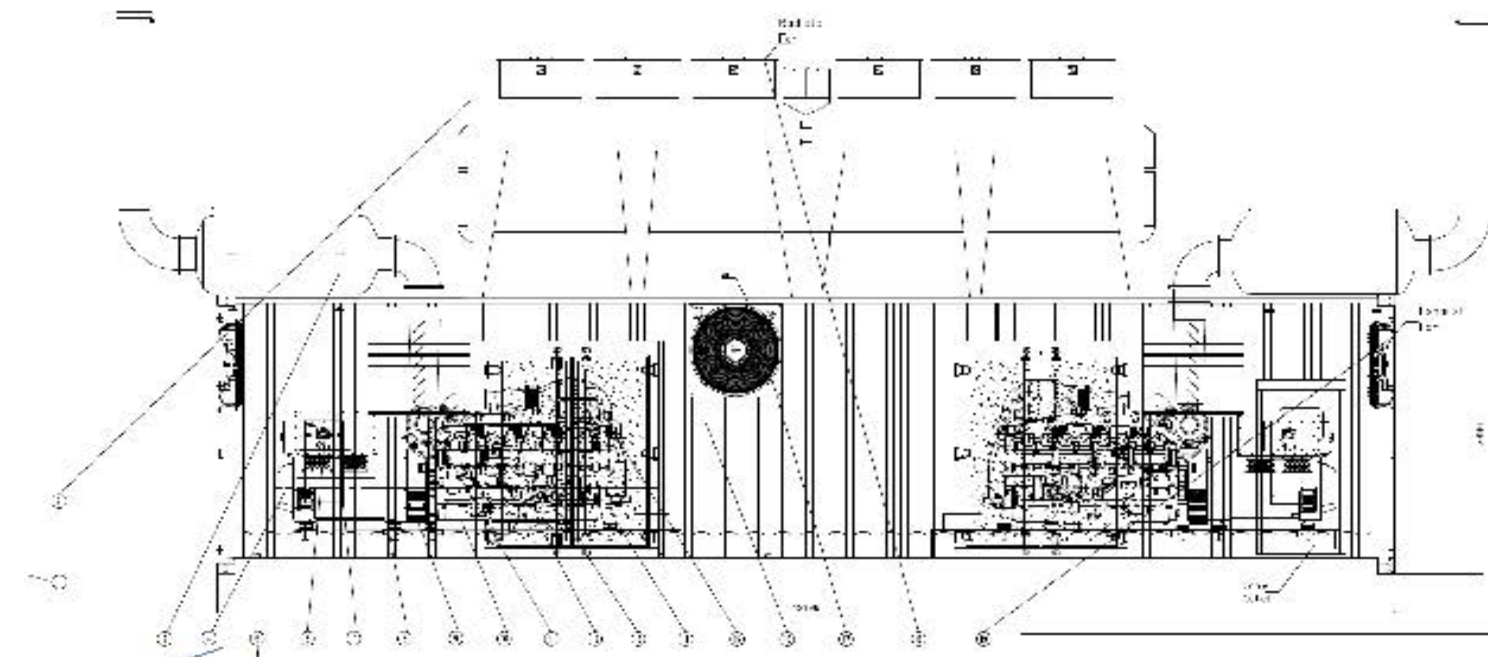
Power Ratings definitions

Ratings Definitions	Operating condition
Continuous power(COP)	<ol style="list-style-type: none"> 1. Unlimited using time per year. 2. Continuous power is the maximum power available at a constant load factor. 3. No overload capability is allowed.

Size&Weight

	Length/A	Width/B	Height/C	Weight
40 Foot Container	12192mm/ 40ft	2438mm/ 8ft	2896mm/ 9.5ft	26000kg 5700 lbs





19	Radical Fan
17	In-ase fan
15	4040 container
15	Intercooler
14	Engine Mounting Angle
13	Water Heater-4WP40N
12	Engine Oil cooler
11	Turbocharger
10	Gas engine K50N 012
9	High Flexible Coupling
8	Bow Shock Absorbing Pad
7	Control Cabinet
6	Control Panel
5	Cable Guide
4	Alternator Stamford S7L1D 042
3	Muffler
2	Reflector
1	Base
16m	Name

Equipment Specifications and Technical Parameters

➤ 0.8MW natural gas generator set

Specifications

Frequency	Voltage	Continuous power
60Hz	AC 415V	800kW/1000kVA
Speed	Noise(Open)	Noise(Container)
1800rpm	≤115dB (A) @7m	≤95dB (A) @7m

Standard configuration

◆Electronic governor ECU	◆DC24V Charging generator	◆Water tank radiator, cooling fan
◆Ingress protection rating IP23	◆Insulation class H	◆SmartGen HGM9510 controller
◆Thermal efficiency: 40%	◆External mufflers	◆Battery floating charger
◆Electrical efficiency:38%	◆Delixi 3-pole ACB	◆Battery and connection cable
◆NOx Emission: 500mg/m ³	◆Vibration damper	◆Generator set usage information

Engine parameters

Engine Brand	Cummins
Engine Model	K38N-G8S
Engine Speed	1800 rpm
Prime power	N/A
Continuous power	890kW
Bore×Stroke	159×159 mm
Displacement	50.3L
No. of cylinders	16-V type,4 Cycle
Governor type	ECU
Air Intake method	Turbocharged and Aftercooled
Compression Ratio	11.5:1
Start-up method	DC24V electrical start with charging generator

Gas System

Minimum Fuel Inlet Pressure @ Inlet of GMF Sensor Housing(kPa)	10			
Maximum Fuel Inlet Pressure @ Inlet of GMF Sensor Housing(kPa)	35			
Maximum Fuel Pressure Variation	+/-1			
Acceptable Fuel	Natural gas			
Minimum Fuel Methane Number*–MN	80			
Minimum Fuel Energy Content*–BTU/scf(MJ/m ³)	800(30)			
Gas Consumption(The LHV of the gas: 34MJ/m ³) (m ³ /h)				
Continuous power	100% Load	75% Load	50% Load	25% Load
890kW	248.5	197.2	143.3	90.4

Air Intake system

Maximum Allowable Intake Air Restriction with Clean Element (kPa)	3.7
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with Dirty Element (kPa)	6.2
Intake Air Flow@100% load COP ft ³ /min (L/s)	2360(1114)

Cooling system

Coolant Capacity	
Engine Only(L)	131.5
After-cooler Only(L)	29.2
Thermostat (Modulating) Range (°C)	82-93
Minimum Allowable Pressure Cap @ sea level-(kPa)	48

Lubrication system

Oil Pressure	
@ Minimum Low Idle (kPa)	138
@ Governed Speed (kPa)	345-483
Maximum Allowable Oil Temperature (°C)	121
Total System Capacity (Including By-Pass Filter) (L)	170.3

Exhaust system

Max. exhaust back pressure (kPa)	10.0
Exhaust gas temperature@ COP100% load(°C)	471
Exhaust flow Volume@ COP100% load(L/s)	2612

Alternator parameters

Alternator brand	Stamford
Alternator model	S6L1D-E42
Capacity(kW/kVA)/415V	920/1150
Voltage(V)	4150
Frequency(Hz)	60
Phase	3
Connection type	Y
Power factor	0.8
Number of Poles	4
Speed	1800rpm
Insulation class	H
Winding number	312
Winding type	Pitch 2/3*
Bearing type	Double bearing
Altitude recommended	≤1000m
Ingress protection rating	IP23
Cooling method	IC01
Maximum over speed(rpm)	2250 RPM for two minutes
Excitation method	PMG

AVR type	MX341
Voltage Regulation (steady state)	± 1%
Short circuit current capacity	3In: 10s
Total Harmonic Distortion THD (**)	< 5%
Waveform: I.E.C. THF (**)	< 2%
Waveform: NEMA TIF (**)	< 50

Control system

Operation function	Parallel operation, data measurement, alarm protection, etc.
Controller Model	SmartGen HGM9510 controller
Display	480x272 pixel LCD with backlight
Communication	USB, RS485 & Ethernet
Configurable Inputs/Outputs	7/8
Ingress Protection Rating	IP55
Display function	Phase voltage, line voltage, current, frequency, phase sequence, active power, reactive power, apparent power, power factor, accumulated power generation, engine speed, oil pressure, cooling water temperature, running time, accumulated start-up times, battery voltage, etc.
Protective function	Over-speed, under-speed, over-voltage, under-voltage, over-frequency, under-frequency, over-current, over-power, low oil pressure, high water temperature, low battery voltage, charging failure, etc.

➤ 40HQ Container 1.6MW Generator Set

Power: 1.6MW (Composed of two 0.8MW generator sets)

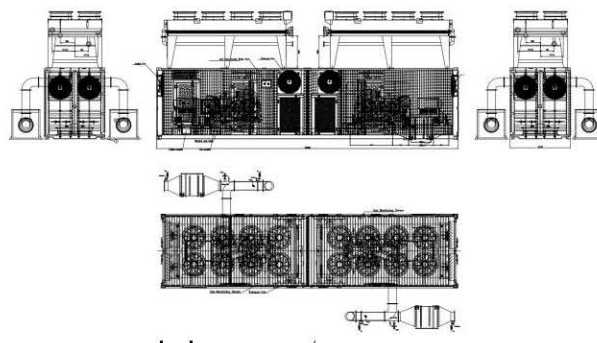
Type: 40HQ Container

Fuel: Natural Gas

Dimensions: 12.192×2.438×2.896m

Noise Level: 95dB@7m

The schematic diagram is as follows:



➤ **Oil Field Gas Plant Project 8MW+6MW**



➤ **Oil Field Gas Plant Project 1MW*15**



➤ **Landfill Biogas Plant Project 1MW*10**



➤ **Natural Gas Power Plant Project 1MW*14**



TRU1000 natural gas generator set

Specifications

Frequency	Voltage	Prime power	Continuous power
60Hz	AC 277/480V		1000kW/1250kVA
Speed	Noise(Open)	Noise(Container)	
1800rpm	≤110dB (A) @7m	≤95dB (A) @7m	

Standard configuration

◆Electronic governor ECU	◆DC24V Charging generator	◆Radiator, cooling fan
◆Ingress protection rating IP23	◆Insulation class H	◆DeepSea DSE8610 controller
◆Air filter	◆Silencers	◆Battery floating charger
◆Battery pack and connection cable	◆Circuit breaker	◆Forklift slot
◆Package: PE film	◆Vibration damper	◆Generator set usage information

Engine parameters- There are two complete systems in each Container

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Continuous power	1100kW
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No. of cylinders	16-V type,4 Cycle
Governor type	ECU
Air Intake method	Turbocharged and Aftercooled
Compression Ratio	11.5:1
Start-up method	DC24V electrical start

Gas System

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Acceptable Fuel	Pipeline Quality Natural Gas			
Minimum Fuel Methane Number*—MN	80			
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Gas Consumption(LHV=36MJ/m ³) (m ³ /h)				
Continuous power	100% Load	75% Load	50% Load	25% Load
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Alternator parameter

Alternator brand	Stanford
Alternator model	S6L1D-F41
Rated output power @480 V (kW/kVA)	1150/1438
No. of bearings	1
Insulation class	H
Voltage Regulation (steady state)	± 1%
Ingress protection rating	IP23
Coil pitch	2/3
Connection	Three-phase, four-wire
Excitation method	PMG
Power factor	0.8
Efficiency	0.95
TIF	< 50
THF	< 2%

Control function

Operation function	Power switch, start, stop, emergency stop, closing/opening, parallel connection, etc.
Controller Model	DeepSea DSE8610
Display	4 Line LCD with backlight
Communication	USB, RS485, RS232, Ethernet
Configurable Inputs/Outputs	11/8
Ingress Protection Rating	IP65
Display function	Phase voltage, line voltage, current, frequency, phase sequence, active power, reactive power, apparent power, power factor, accumulated power generation, engine speed, oil pressure, cooling water temperature, running time, accumulated start-up times, battery voltage, etc.

Protective function	Over-speed, under-speed, over-voltage, under-voltage, over-frequency, under-frequency, over-current, over-power, low oil pressure, high water temperature, low battery voltage, charging failure, etc.
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Size&Weight

	Length/A	Width/B	Height/C	Weight
20 Foot Container	6192mm/ 40ft	2438mm/ 8ft	2896mm/ 9.5ft	18000kg

