

## 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

|                     |                              |
|---------------------|------------------------------|
| <b>Engine Brand</b> | 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/m³ )                   |           |          |          |          | 800(30)                      |
| Gas Consumption(LHV=36MJ/m³ ) (m³ /h)                          |           |          |          |          |                              |
| Continuous power                                               | 100% Load | 75% Load | 50% Load | 25% Load |                              |
| <b>1100kW</b>                                                  | 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                   | <b>Stamford</b>        |
| 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. |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

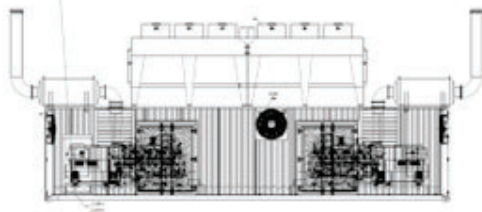
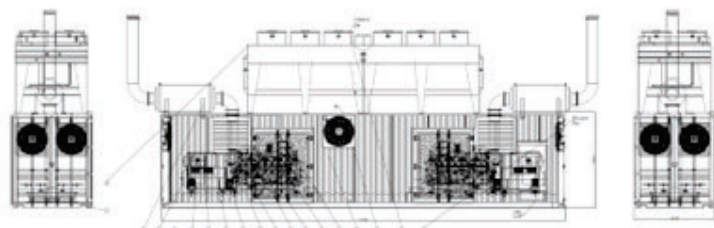
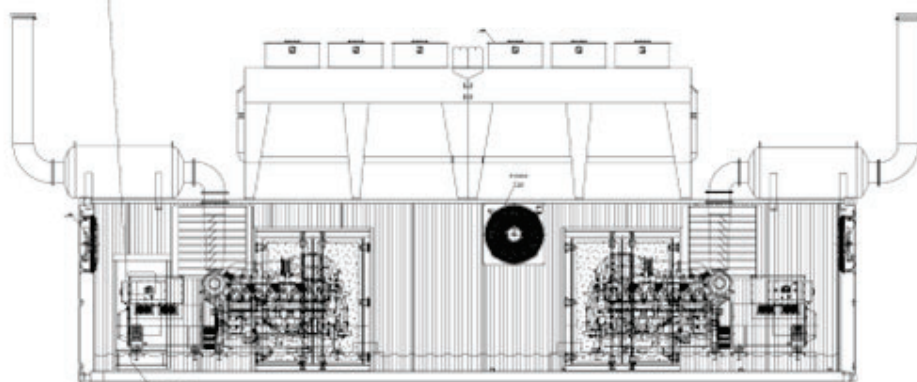
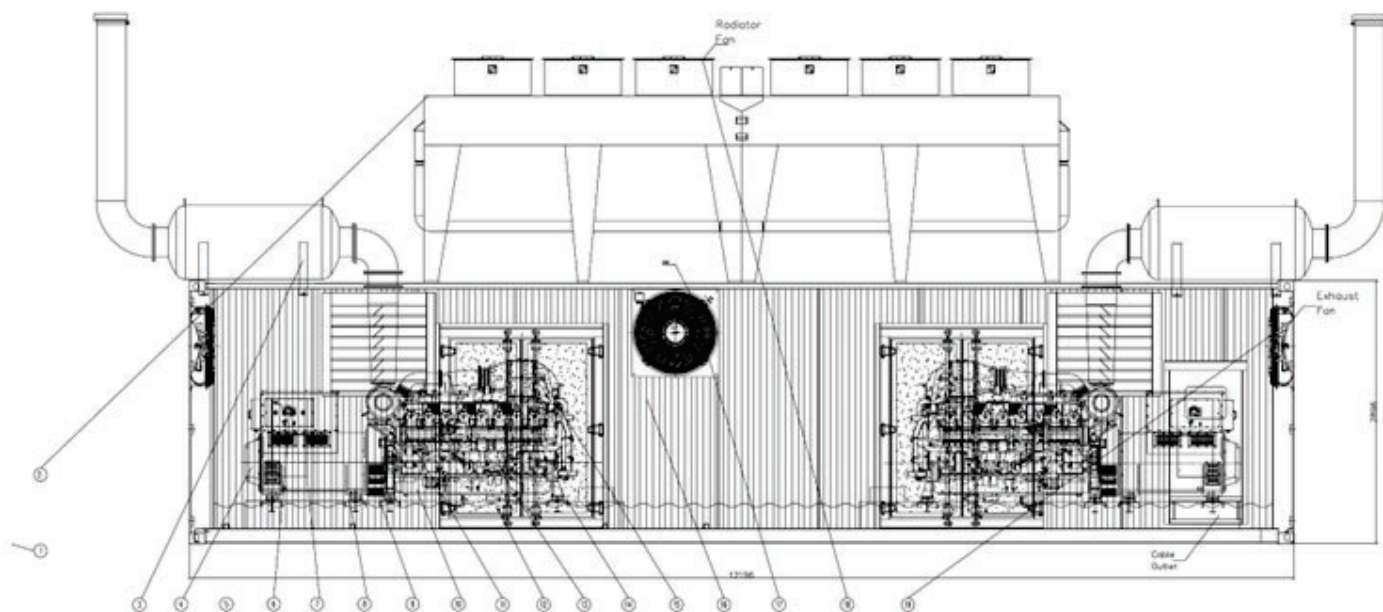
## Power Ratings definitions

| Ratings Definitions   | Operating condition                                                                                                                                      |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Continuous power(COP) | 1.Unlimited using time per year.<br>2.Continuous power is the maximum power available at a constant load factor.<br>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<br>5700 lbs |





|      |                                |
|------|--------------------------------|
| 19   | Exhaust Fan                    |
| 18   | Radiator Fan                   |
| 17   | Intake Fan                     |
| 16   | 40HQ container                 |
| 15   | Intercooler                    |
| 14   | Engine Mounting Angle          |
| 13   | Water Heater HWP40N            |
| 12   | Engine Oil Heater              |
| 11   | Turbocharger                   |
| 10   | Gas Engine K50N-G12            |
| 9    | High Flexible Coupling         |
| 8    | Bowl Shock Absorbing Pad       |
| 7    | Control Cabinet                |
| 6    | Control Panel                  |
| 5    | Cable Outlet                   |
| 4    | Alternator Stamford, S7L1D-C42 |
| 3    | Muffler                        |
| 2    | Radiator                       |
| 1    | Base                           |
| Item | Name                           |