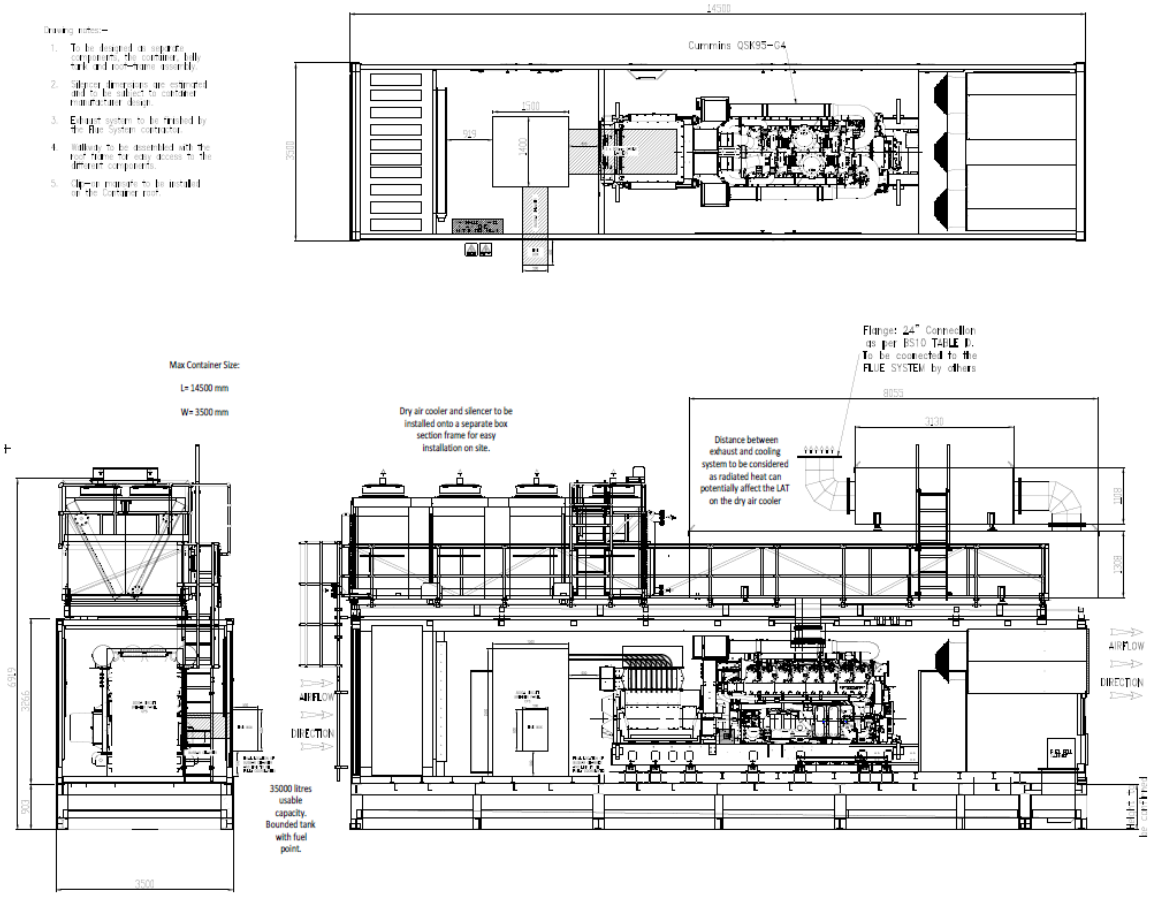
3. COMMERCIAL CONDITIONS

*Please refer to the MSA contract between Cummins and CyrusOne.

4. PROPOSAL DRAWINGS



5. Equipment Specifications

a. Genset.

Generator set C3750D5 (STANDBY RATED AT 3000kW):

Configuration Summary

Genset Model
- C3750 D5, 3750kVA Standby, Emergency Standby power (ESP)
- Emissions Level: none
- Local Codes and/or Regulation: CE
- Output Voltage: 400/230, 3 Phase, Wye, 4 Wire

Engine
- QSK95G4
- Engine Air Cleaner - Duty Rating: Normal Duty
- Engine Coolant Heater: 230/400V - Minimum 4C (40F) Ambient Temperature Applications

Sub-Base Anti-Vibration Mounts
- Standard AVMs

Main Generator
- P80LV W, 6 Leads, 50 Hertz (Hz), 400V, 125°C,
- Generator Accessories
- Stator Winding Temp. Sensors - 2 RTD's Per Phase
- Generator Bearing Temp. Sensor RTDs
- Voltage Regulator - PMG
- Main Generator Heater: 240V
- Generator Output Terminals: Standard Configuration 1 hole Lug

Cooling System
- Remote Mounted Electric Radiator, 40°C,
- Engine Coolant Mixture: 50% Antifreeze, 50% Water

Primary Electrical Isolation Device
- Genset breaker panel, 5000A Schneider breaker, free standing, cable connection included from the alternator. Bus bars for load connection and load bank connections
- External cable box with the bus bar extensions from the breaker panel for load connections and load bank connections

On-Set PCC3.3 Generator Control System
- PowerCommand Control 3.3
- Control Panel Mounting (Viewed From Generator End) : Left Facing
- Control Language : English
- Paralleleing Options : none
- Key Switch
- Warning - Low Battery Voltage
- Warning – High Bearing Temperature
- Shutdown - Audible Alarm
- Shutdown - Low Coolant Level
- Shutdown – High Alternator Temperature
- Shutdown - Alarm Relay (3PDT)
- Relays – Auxiliary 3-10A x 3PDT
- Gauge - Exhaust Gas Temp (Pyrometer)

- Control Network Communications Interface
- Meters - AC Output Analog
- Display - Control LCD
- Control Cabinet Heater: None Supplied

Starting Batteries

- Two sets of Heavy Duty Long Life Starter batteries, two chargers for both sets of batteries

Battery Charger

- 2 x Heavy duty battery charger

Miscellaneous Options

- Oil Drain Pump - Manual
- Oil Sampling Valve
- REN valve for life oil top up

Warranty

- 3 Years, extended warranty

Cummins
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b. Weatherproof Acoustic Enclosure.

C3750D5e Generator Sets shall be supplied fitted within the following type acoustic container enclosures, each designed to meet an average noise level of 75 dBA at 1 meter:

Dimensions – LxWxH 14500 x 3500 x 6920 (including belly tank height) not to exceed the specification given:

- Enclosures are fitted with welded lifting lugs on the top rail of the containers. Suitable for top lifting using a spreader beam.
- Steel chequer plate floor, bunded with sump and alarm switch.
- Walls and roof lined with 75mm thick mineral wool retained by galvanised perforated steel sheet.
- End mounted air inlet attenuator complete with motorized dumper and blade weather louvres and bird guards.
- Gravity flap air outlet louvre fitted to partition wall wet area side.
- 2 personnel access doors,. Emergency stops at the side of each personnel access door. 1 personnel access door into front plenum chamber. Small access door at low level at the side of the twin ACB panel to allow connection of load test cables.
- Inlet end removable.
- Roof mounted gas exhaust silencer **65 dBA @ 1 m** with bolt on flanged end suitable for connection of discharge flue
- Mounting pads for the generator set, radiator and ACB panel.
- Cable entry gland plate below ACB panel and at high level in container side walls.
- **35,000 LITRE** / 48 HOUR Autonomy double skin fuel belly tank, with associated fuel feed & return pipework between fuel tank & generator set, floor sump leak detection switches, fuel system panel, drop weight fuel fire wire cut off valve & all associated cabling & testing of system once connected to site fuel system.
- Duplex Fuel Pre-Filter System, mounted at generator fuel inlet point on base frame, with 'hot-swap' filter change capability.
- AC led lighting, emergency lighting, 13-amp socket outlet, TP & N distribution board.
- Battery charger and radiator fan control panel fitted & connected.
- Fuel pipe work from set to tank, including fire drop valve fitted with switches. Distribution board.
- Jacket water heaters cabled & connected to auxiliary power distribution board.
- Emergency stop unit internal to enclosure, with external E-Stop at each access door into generator compartment.
- External & internal lights
- Supply & installation of cabling & containment from alternator to 250amp MCB to supply radiator fan motors starter panel.
- Cabling from radiator fan motors starter panel to the radiator fan motors, including local isolator for each fan motor.
- Supply & install cable termination extension box to alternator unit, as well as 90 degree copper connection busbars for termination of load cabling
- Shot blasted and finish painted to BS4800/BS381C/RAL colour in two pack acrylic painted to Client specification
- Cabling from generator set alternator to the 5000amp Switchboard within the generator enclosure. These cables will be installed as detailed within the enclosure on cable ladder.

c. Exhaust Discharge Chimney Flues.

Cummins will provide Twin wall Exhaust air Stainless Steel discharge flue system from each generator set as follows:

600mm inside diameter / 700mm outside diameter Twin wall Insulated Stainless Steel pressurised flue system per Generator set.
Each flue will connect to the horizontal silencer unit mounted on the roof of the generator set enclosure by means of a stainless-steel flange and gasket.
Flue runs will be as per architectural drawing provided at tender stage, and will include for termination point of flue pipes per engine at 16 metres from generator base, affixed to support structure & grouped to accommodate 2No flues.
We have included for P1001 Uni-strut vertical support brackets on enclosure roof only to support the horizontal flue run if required.
We have included for a P1001 Uni-strut vertical support bracket for each horizontal run, as well as stainless steel drains to ground level,
1 no EPA inspection port will be provided per flue.
Access to install each flue will be by a Genie Z 80 type MEWP Boom.

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