

SWITCHGEAR

40 ft (12 m) containers include standard 600 VAC class EMCP II component floor standing switchgear intended for single unit application with the following equipment/features:

Microprocessor based automatic engine start/stop control module with cycle crank, cooldown timer, six engine fault shutdowns with flashing LEDs for overcrank, overspeed, high coolant temperature, low oil pressure, emergency stop, and spare shutdown. Digital display with backlit LCD for engine hours, rpm, battery voltage, oil pressure, and coolant temperature.

Engine mode selector switch for auto/manual/cooldown/off-reset operation. Amps/volts phase selector switch. Digital AC meters, 0.5% accuracy, true RMS, with backlit LCD for generator voltage, amperage, and frequency. Voltage adjust rheostat. Current and potential transformers. Engine alarm module with LEDs and horn to warn of high coolant temperature, low lube oil pressure, low coolant temperature, low battery voltage, engine control not in auto, low fuel level, and two spares. Lamp test pushbutton. Woodward 2301A load sharing electronic governor control with panel mounted speed adjusted rheostat, and isochronous/droop switch.

Set of three-phase bus bars, tin plated aluminum, rated for capacity of generator set, connected off the generator main circuit breaker and extended to access on exterior of container. Isolated neutral bus bar, tin plated aluminum, rated for half of generator capacity. Ground bus bar, tin plated aluminum, connected to container frame. Generator main circuit breaker, three-pole, fixed mounted insulated case with stored energy close mechanism. Provided with manual operation, automatic solid state trip unit for overcurrent protection with adjustable ampere/instantaneous settings for overload/high fault current protection, two sets of auxiliary switch contacts, and 24 VDC shunt trip. Breaker rated for generator set capacity.

Power supply distribution group provides low voltage for container module interior lights, generator space heater, engine jacket water heater, battery charger, with automatic voltage sensing

changeover circuit to disconnect from shore power when generator power is available. Includes three fused receptacles for connection to customer shore power. Engine jacket water heater circuit includes service disconnect switch. System includes power transformer to provide 120 VAC from generator output voltage with 30 A fuses and receptacles or customer supplied power.

4160 VAC class EMCP II style switchgear, intended for single unit application with the following equipment/features:

Similar to 600 VAC Class EMCP II floor standing switchgear with the following differences:

- 5kV class current and potential transformers.
- All bus bars are silver plated copper.
- Generator main circuit breaker, three-pole, drawout mounted vacuum type with stored energy close mechanism. Provided with electric operation, two sets of auxiliary switch contacts, and 24 VDC shunt trip, breaker control transformer, and breaker control switch with open/close position indicating lamps. Breaker rated for generator set capacity, 5kV class, 250MVA.
- Surge capacitor, three-pole, connected off of generator.
- Protective relays, solid state, drawout switchboard class, causing main circuit breaker trip and engine shutdown when a fault is detected.
- Three time overcurrent relays with instantaneous setting, single phase, 50/51 device.
- Negative phase sequence time overcurrent relay, three phase, 460 device.
- Ground fault time overcurrent relay, 51G device.
- Differential current relay, three phase, 87M device, with six current transformers.
- Lockout relay, 86 device.
- Neutral grounding resistor, 300

amp, 10 second rating, 760 degree C rise, in a separate screened safety enclosure.

- General dimensions of 2030 mm (80 in) high by 1420 mm (56 in) wide by 1750 mm (69 in) deep.

