PowerLine GENERATORS

Frontier POWER PRODUCTS

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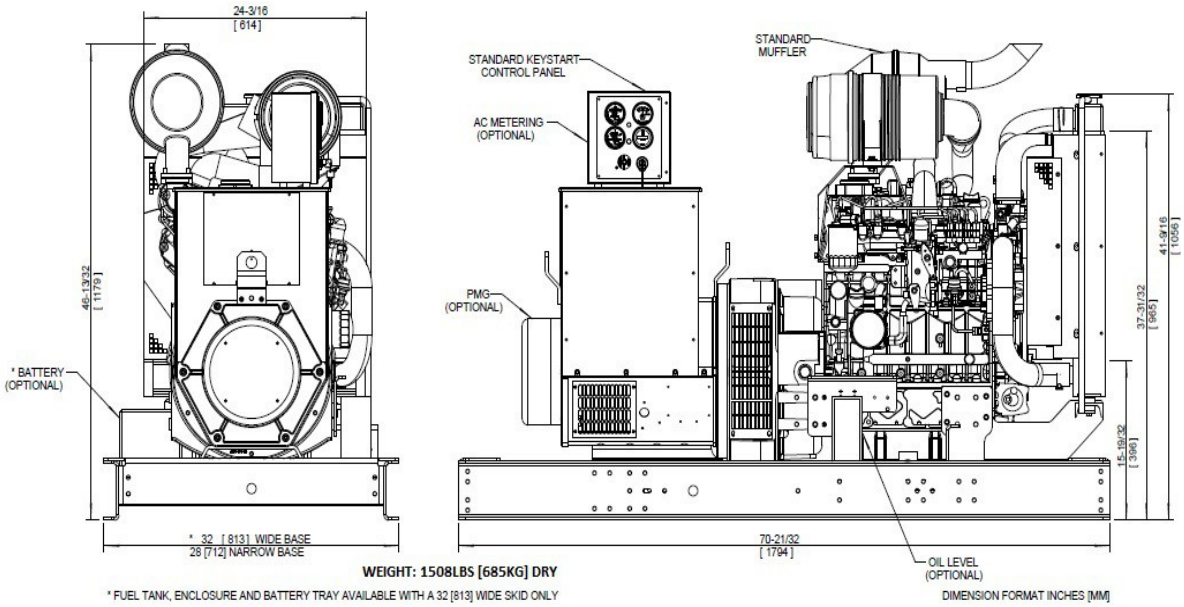
PowerLine™ Model KS3800-T3 38 kWe Generator



General Information

- The generator set rating is 35 kilowatts prime power output and 38 kilowatts intermittent or standby power output. These ratings are based upon standard rating conditions. It may be necessary to derate the set's output for altitudes above 1000' (300 meters) or for ambient temperatures above 104 F (40 C). Please contact the manufacturer for details on ratings criteria for the engine and generator or for derate information.
- The engine and brushless four pole AC generator are directly coupled and mounted on a rugged steel base frame. All components are suitable for prime or intermittent usage.
- The entire set is thoroughly load tested prior to shipment.

Standard Engine

- Kubota diesel model V3600-T-E3BG. In-line, four cylinder, turbocharged engine with full flow, replaceable lube oil, fuel and air filters. Mechanical speed regulation, <5%, no load to full load. EPA certification is "Interim Tier 4". (Meets other emissions regulations.)
- Liquid cooled with industrial grade radiator and belt driven blower fan.
- SAE housing and flywheel, directly connected, single bearing generator. (CCW rotation)

Standard Generator

- Newage Stamford brushless, four pole (1800 rpm) generator.
- Solid state, +/- 1% automatic voltage regulation.
- CSA approved construction.

Standard Controls and Accessories

- Key start panel with oil pressure, coolant temperature, hour meter and glow plug indicator.
- Manual safety shutdown over-ride, fuse protection.
- Safety shutdowns, energized-to-run, for low oil pressure/high coolant temperature.
- Four anti-vibration mounts between generator set and base frame.
- Electric fuel transfer and priming pump (12 VDC).
- Battery rack and cables (no battery) for 12 VDC starting system.

Engine Technical Information

Manufacturer	Kubota
Model	V3600-T-E3BG
Cylinders	Four
Bore X Stroke	98 mm X 120mm (3.86" X 4.72")
Displacement	3620 cc (220 cu.in.)
Output, inter.	43.1 kWm (57.8 HP)
Output, cont.	39.2 kWm (52.6 HP)
Comp. ratio	21.8:1
Engine weight	284 kg (626 lbs.) dry

Fuel System

Fuel type	#2 Diesel
Injection pump	Bosch PFR
Nozzle type	Throttle type
Transfer pump	Electric, 12VDC
Fuel lift	1 meter (3.3 ft.)
Suction fitting	5/16" push-on
Return fitting	3/16" push-on

Specific Fuel Consumption (Inter. Rating)
0.246 kg/kW/hr (ISO 3046)
0.401 lb/HP/hr (SAE J1349)
(Actual fuel consumption varies with site conditions and fuel energy content.)

Lube Oil System

Grade	API Classification CF

or other approved – see owner's manual

Capacity	13.2 liters (3.49 US gal.)
Pump	Trochoidal, positive feed
Filter	Full flow, spin-on

Air Intake System

Filter	Replaceable element
- Combustion air	1.58 m3/min. (55.7 cfm)

Total max. restriction 500mm (20") H2O

DC Electrical System

Starter	12V, 3.0 kW
Alternator	12V, 45 Amp.
Glow plugs	In combustion chambers
Battery required	12V 136 AH equivalent, min.
Run solenoid	12V, ETR

Cooling System

Radiator	Finned tube type
Material	Copper core, soldered tanks
Pressure	88 kPa (12.9 psi) max
Fan type	Blower, Nylon
Water pump	Gear case mounted
Type	Centrifugal, belt drive
Thermostat	Wax pellet type
Stat. cracking temp.	71C (160F)

Cooling System, cont'd.

Fully open stat. temp.	85C (185F)
Recommended coolant	50/50*

*Use low silicate ethylene glycol and high quality water. Consult manufacturer for details.

Air-to-boil @ 9.5 kWe	50C (122F)
Cooling air required	94 m3/min (3338 cfm)

Exhaust System

Muffler type	Industrial grade
Mounting	Vertical with rain cap
Restriction	38mm (1.5") Hg max.

Noise Level @ 1 m (3.3')

Levels are with industrial grade muffler and open (no enclosure) configuration.

Full load, inter.	92.7 dB (A)
Full load, prime	92.5 dB (A)
No load	89.7 dB (A)

Generator Technical Information

Manufacturer	Newage/Stamford
Model	UCI224C (Standard)
Construction	Four pole, brushless Open drip-proof (IP23) Single bearing
Excitation (std.)	Full wave bridge rectifier
Excitation (opt.)	"Permanent Magnet Generator"- Provides up to 300% current for motor starting
Cooling air flow	16.86 m3/min (595 cfm)
Leads	4 or 12, application dependent

60 Hz voltages and ratings

- 30/33 kW, 30/33 kVA	120/240 – 1 ϕ
- 35/38 kW, 43.75/47.5 kVA	120/208 – 3 ϕ
- 35/38 kW, 43.75/47.5 kVA	277/480 – 3 ϕ

50 Hz & other voltages are available.

Power Factor	Single phase ratings @ 1.0 PF Three phase ratings @ 0.8 PF
Voltage reg.	SX460 solid state +/- 1.5% NL -> FL
Temp. rise	105C rise Prime (40C ambient) 125C rise Intermittent (40C)
Tel. interference	THF < 2%
Winding pitch	Two thirds
Control system	Self excited

Ancillary Equipment

Mounting	Steel base with mounting holes
Isolators	Four composite mounts

CSA approved construction