

Powered by

Cummins KTA50-G8

1375KVA at 50Hz, 400V

USP&E Cummins Series Diesel Generator Set

Genset Model	U1200-50
Prime Power(50HZ)	1100KW / 1375KVA
Standby Power(50HZ)	1200KW / 1500KVA
Frequency/Speed	50Hz/1500rpm
Voltage	230V/400V
Phases	Three phases, four wires
Manufacturer	USP&E

(1) PRP: Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO8528-1. A 10% overload capability is available for a period of 1 hour within 12-hour period of operation,

in accordance with ISO 3046-1.

(2) ESP: The Standby Power Rating is applicable for supplying emergency power in variable load applications for up to 200 hours per year in accordance with ISO8528-1. Overload is not allowed.

Circuit breaker info

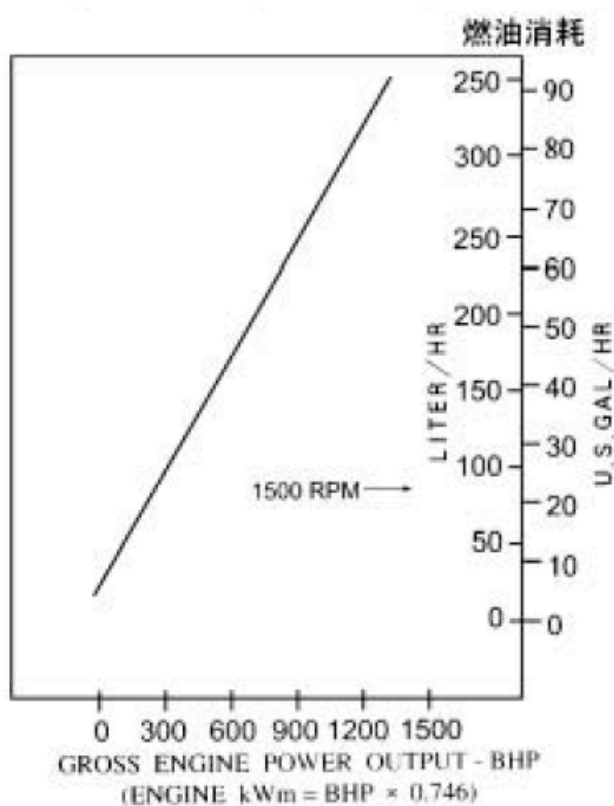
Brand	DELIXI
Manufacturer	DELIXI GROUP
Model	DW15-2500
Capacity	2500A

ENGINE DATA

Manufacturer	Chongqing Cummins Engine Co. Ltd.
Model	KTA50-G8
Engine speed	1500rpm
Engine power	
-----Prime power	1200kw /1608HP
-----Standby power	1429kw /1915HP
Type	4 cycle, 60° Vee, 16-cylinder

Bore * Stroke	159*159 mm
Displacement	50.3 L
Compression ratio	14.9:1
Idle speed	725 – 775 r/min
Brake mean effective pressure	1910kpa
Piston speed	7.9 m/s
Friction horsepower	116kw(155BHP)

Fuel Consumption



%	输出功率		燃油消耗	
	BHP	kWm	USgal/hr	Liter/hr
1800r/min				
备用功率				
100	-	-	-	-
常用功率				
100	-	-	-	-
75	-	-	-	-
50	-	-	-	-
25	-	-	-	-
0	-	-	-	-
1500r/min				
备用功率				
100	1915	1429	91.2	345
常用功率				
100	1608	1200	76.3	289
75	1206	900	58.7	222
50	804	600	40.9	155
25	402	300	21.7	82
0	0	0	0	0

Exhaust system

Maximum Allowable Back Pressure	6.7kpa
Exhaust Gas Temperature(prime power-standby power)	485°C-510°C(900° F -950° F)
Exhaust Gas Flow(prime power-standby power)	3845-4350L/s

Air induction system

Max. allowable intake air restriction	
-----With dirty filter element	25 in H ₂ O(6.23kpa)
-----With heavy duty Air Cleaner and clean filter element	15 in H ₂ O(3.74kpa)

Lubrication system



Oil pressure	
-----@ Idle speed	20 psi(138 kPa)
-----@Governor Speed	50-70psi(345-483Kpa)
Maximum Oil Temperature	250 °F(121°C)
Oil Capacity with OP 6023 Oil Pan:High-Low	47-39 US Gal(178-148 Liter)
Total system capacity(including bypass filter)	54US Gal (204Liter)
Augularity of op 6023 Oil Pan Front Down /Front Up/Side by side	30°/30°/30°

Fuel system

Type injection system	Direct injection Cummins PT
Max restriction at PT Fuel Injection Pump	
-----with clean fuel filter	4 in Hg(13.3kpa)
-----with dirty fuel filter	8 in Hg(26.7kpa)
Max allowable head on injector return line	6.5 in Hg(22kpa)
Maximum Fuel Flow to Injection Pump.	151US gph(570L/h)

Cooling system

Coolant capacity	
-----Engine only	43.5 US gal(165L)
Max coolant friction head external to engine	10psi(67kpa)
Maximum Static Head of Coolant Above Engine Crank Centerline.	60ft(18.3m)
Standard thermostat(modulating) range	82-93 °C
Min. allowable pressure cap	67 Kpa
Max. allowable top tank temperature for standby/prime power	104 °C-100°C
Engine coolant flow under 4psi	27.8 L/min
under max.resistance	25.2 L/min

Electric system

Min. recommended battery capacity	24V
Battery charging System,Negative Ground	35amper
Cold Soak @ 50 °F (10 °C) and Above	0° FCCA 1280
Cold Soak @ 32 °F to 50 °F (0 °C to 10 °C).	0° FCCA 1800
Cold Soak @ 0 °F to 32 °F (-18 °C to 0 °C).	0° FCCA 1800
Max allowable resistance of starting circuit with 24V starter	0.002 Ω
Standard cranking motor(heave duty, positive engagement)	24 V

ALTERNATOR SPECIFICATIONS

ALTERNATOR GENERAL DATA

Manufacturer	Leroy-somer Electro-technique (Fuzhou) Company Ltd.
Model	LSA50.2 L8
Output power	1200KW
AVR model	R448 V50
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude	≤ 1000 m
Overspeed	2250RPM
Number of Pole	4
Exciter type	AREP
Insulation class	H
Voltage regulation	±0.5%
Sustained short circuit current	300% (3 IN) : 10s
Total harmonics (TGH/THC)	< 3.5 %
Wave form : NEMA = TIF	< 50
Wave form : I.E.C. = THF	< 2%
Bearing	single
Coupling	Direct

OTHER ALTERNATOR DATA

REACTANCES (%) - TIME CONSTANTS (ms): CLASS : H / 400 V

Kcc	Short-circuit ratio	0.31
Xd	Direct axis synchronous reactance unsaturated	378
Xq	Quadrature axis synchronous reactance unsaturated	227
T'do	Open circuit time constant	3910
X'd	Direct axis transient reactance saturated	17.4
T'd	Short circuit transient time constant	180
X''d	Direct axis subtransient reactance saturated	14.8
T''d	Subtransient time constant	18
X''q	Quadrature axis subtransient reactance saturated	15.4
Xo	Zero sequence reactance unsaturated	3.3
X2	Negative sequence reactance saturated	15.1
Ta	Armature time constant	27

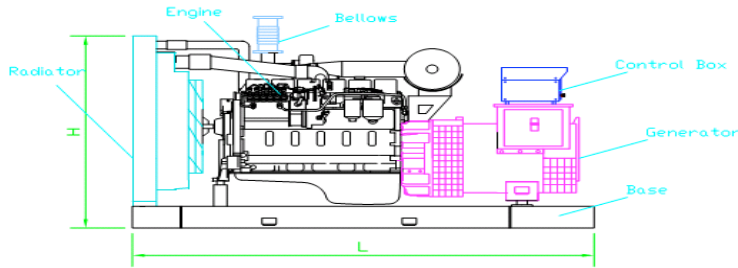
OTHER DATA - CLASS : H / 400 V

Io(A)	No load excitation current	0.9
ic(A)	Full load excitation current	3.9
uc(V)	Full load excitation voltage	42
ms	Recovery time(ΔU =20 % trans.)	500
Kvs	Motor start (ΔU = 20% sust) or (ΔU = 50% Trans)	2704

%	Transient dip (rated step load) - PF : 0,8 LAG	12.4
W	No load losses	15420
W	Heat rejection	57110

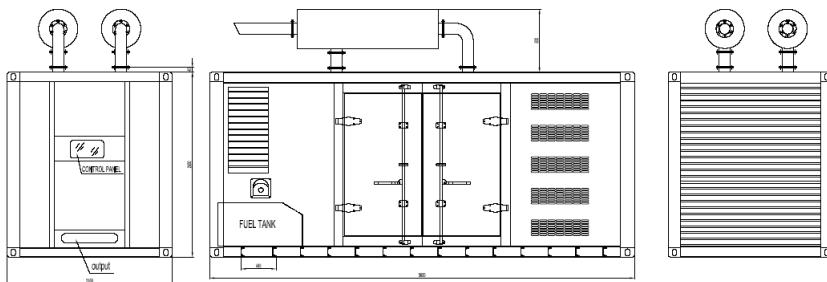
Dimension & Weight

Open Version



Open Type (Standard Configuration)
 Overall Size: 5560×2050×2310mm(L*W*H)
 Weight: 10900kg

Soundproof Version



Soundproof Type
 Overall size: 7000× 2300×2800mm(L*W*H)
 Weight: 12500kg

1. Standard supply scope

Exhaust silencer	Flexible pipes	flange	Base frame	Main circuit breaker
Starting battery	Battery wires	Battery charger	Float battery charger	AVR
Cooling radiator	Wires diagram	manual books	Auto control panel	

2. Optional supply scope

Engine and radiator	Alternator part	Electrical part	Fuel Tank part	Others
Water preheater	PMG	ATS	External daily fuel tank	Silent canopy
Lub oil preheater	Anti-condensation heater	Synchronization panel	Automatic fuel pump	Weatherproof canopy
Spare parts	Parallel droop	ABB breaker	oil drain pump	Mobile Trailer

Sales Promises

- USP&E provides a full line of brand new and high quality products. Each and every unit is strictly factory tested before shipment.
- Quality Warranty is according to our standard conditions: 12 months from BL date or 1,000 running hours, whichever comes first.

· All the products from USP&E are CE marked.

Control Panel Specification

Control Panel Specification

Reach 1.0 control panel is an automatic and intelligent control panel which is designed with an intuitive design and a big user friendly graphical display for various application. It can carry out functions including automatic start/stop, data measure and alarming. The controller uses LCD display, English display interface with operation easy and reliable.



Reach 1.0

Features:

- ◆ protection: Automatic start/stop, load transfer and alarming of generator;
- ◆ Three channel analog inputs, may joint with Resistive-type temperature/ pressure/ fuel level sensors, Several temperature and pressure sensors can be used directly (ie. VDO, DATCON, CUMMINS), also may select “user defined” sensor via entering 8 point curves;
- ◆ Display of generator cumulated electric energy;
- ◆ Security password-protected programming levels.
- ◆ Several crank success conditions are optional;
- ◆ Power supply range is wide, accommodating to different starting battery voltage environments;
- ◆ All parameters use digital modulation, abandoning analog modulation using conventional electronic potentiometer, reliability and stability are increased;
- ◆ Built-in watch dog can never be dead halt, ensuring smooth program execution;

Parameters:

Generator Volts, Amps, Frequency, active power, apparent power , power factor, Engine Oil Pressure, battery volt, Engine speed, engine temperature, Engine Hours Run, fuel level.

Protection:

- Low Oil Pressure
- High Engine Temperature
- High voltage and low voltage
- Overspeed
- Volt adjuster and frequency adjuster.
- Emergency stop
- Fail to start

USP&E CONTAINER TYPE SILENT ENCLOSURE SPECIFICATION

USP&E container type silent generator's design is based on the normal or automatic diesel generator set and extended with the state-of-art noise enclosure to make the noise of the generator less than 85dB(A) at 1m, or 70~75dB(A) at 7m, 60~65dB(A) at 15m.

High performance

- multi-way air intake and exhaust guarantee the power performance of generator.
- large-scale impedance combined type silencer effectively reduce noise of the generator.

Construction features

- Cold steel materials.
- Zinc plated and Corrosion resistance.
- Elegant appearance and reliable quality.
- Stainless steel locks and hinges.
- Access to all weather conditions.
- ★ Fireproof, waterproof and dustproof.
- ★ Ladders in the side for easy access to the top.
- ★ High quality soundproof materials could efficiently reduce noise.

Maintenance features

- 180° revolvable and disassemble door for easy maintenance.
- Container type locks for easy operation and indefectible.
- ★ Lights inside of the canopy for maintenance.

Security and Safety

- ★ Transparent viewing window make the control panel clear at a glance.
- ★ Emergency stop button mounted on the canopy exterior.
- ★ Pipe of lube oil and cooling fluid is mounted on the bottom of generator for easy let.
- ★ Fuel refill and battery can easily be accessed by lockable door.
- ★ Cooling fan and battery are fully guarded.
- ★ Heat insulation of exhaust smoke system inside the canopy.
- ★ Fire extinguishers are easily got at the door.

Transportation

- ★ Container type is much easier to delivery.