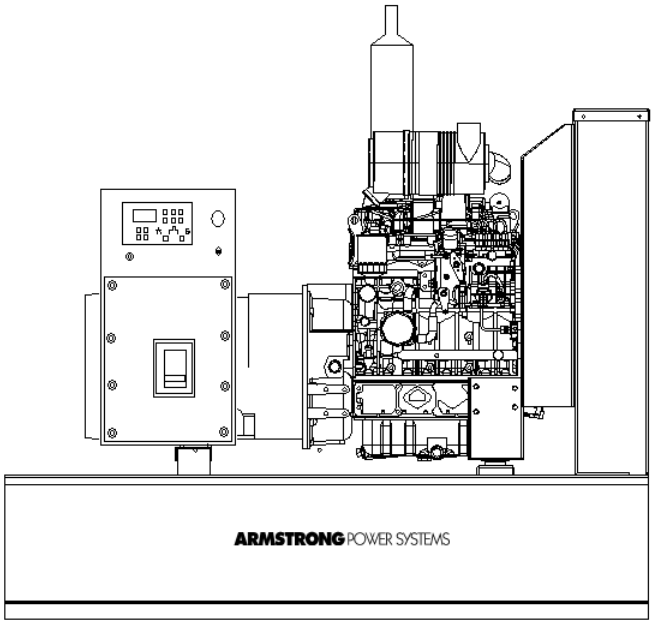
ARMSTRONG POWER SYSTEMS

Model: A50KB
Diesel Generator Set



FEATURES

- Armstrong provides one-source responsibility for the generator system and its accessories.
- All units and components are factory tested during prototype and manufacturing stages assuring long product life.
- Generator set accepts one-step 100% of full load per NFPA 110.
- A **one-year** limited **warranty** covers all systems and components. Extended warranties are available.
- Rugged 4 cycle heavy-duty diesel engine, with swirl intake ports for a low fuel consumption and excellent transient response.
- **Generator features:**
  - Unique Volts per Hertz compensated electronic AVR excitation system delivers reliable voltage response for in rush loads.
  - Brushless, rotating-field generator has low reactance, 2/3 pitch, class H insulation, minimizes voltage distortion when powering non-linear loads.
- **More features:**
  - Controllers are available to meet your most demanding applications.
  - In the event of low oil pressure or high coolant temperature the self-protecting system will automatically stop the engine.
  - Integrated fuel Tank

GENERATOR SET RATINGS

Model	Volt Code	Voltage	Winding Connection	Phase	Power Factor	Hz	Amps Standby	Standby kW / kVA	Prime kW / kVA
A50KB	61	480 / 277	12 - HI WYE	3	0.8	60	60	40 / 50	36 / 45
A50KB	63	440 / 254	12 - HI WYE	3	0.8	60	66	40 / 50	36 / 45
A50KB	64	240 / 139	12 – HI DELTA	3	0.8	60	120	40 / 50	36 / 45
A50KB	65	220 / 127	12 – LOW WYE	3	0.8	60	131	40 / 50	36 / 45
A50KB	66	208 / 120	12 – LOW WYE	3	0.8	60	139	40 / 50	36 / 45
A50KB	67	240 / 120	12 – 2 DELTA	1	1.0	60	167	40 / 40	36 / 36
A50KB	51	415 / 240	12 – HI WYE	3	0.8	50	63	36 /45	29 /36
A50KB	53	380 / 220	12 – HI WYE	3	0.8	50	68	36 /45	29 /36
A50KB	55	220 / 127	12 – LOW WYE	3	0.8	50	118	36 /45	29 /36
A50KB	57	220 / 110	12 – 2 DELTA	1	1.0	50	164	36 / 36	29 / 29

Stand-By ratings are continuous electrical service during the interruption of normal power. No overload capacity is specified at these ratings.
Prime ratings available with variable loads are continuous, 10% overload capacity for one hour in twelve hours periods.
Both ratings per BS 5514, DIN 6271, ISO-3046
Many industrial, commercial and residential voltages are available

ALTERNATOR SPECIFICATIONS

Type	**Four pole, revolving field**
Rotor Insulation	**Class H**
7Temperature Rise	**150°C Standby**
Material	**Epoxy resin**
Line-To-Line Harmonic Factor (Max)	**5%**
Telephone Interference Factor (Tif)	**1%**
Voltage Regulator	**Solid State**
Cooling	**Self-ventilated and drip proof**
Bearing	**1 each, pre-lubed**
Coupling	**Direct, Flexible Disc**
Load Capacity (Standby)	**100%**
Overload Capacity (Prime)	**110%**
Voltage Regulation	
No Load To Full Load	**±1 %**
One Step Load Acceptance	
Per NFPA 110	**100%**

- ❑ Four pole, revolving field, direct coupled to engine flywheel, provides excellent alignment.
- ❑ Insulation is of class H, ready to be used on harsh environments where sea spray, sand and chemical corrosion are existing factors.
- ❑ Voltage regulator provides Volts/Hertz compensation to improve the motor starting capabilities, therefore support the engine handling transient loads.
- ❑ Dynamically balanced rotor, with damper winding, help dissipate transient voltage interference during load variations.
- ❑ The windings have a 2/3 pitch in order to reduce the harmonic content of voltage.
- ❑ Robust mechanical structure permits easy access to connections.

ENGINE SPECIFICATIONS

Manufacturer	**Kubota**
Model	**V3600-T-BG**
Bore	**3.86in. (98.0mm)**
Stroke	**4.33in. (110.0mm)**
Number Of Cylinders	**4**
Piston Displacement	**202.48 in.^{3} (3.318L)**
Compression Ratio	**23.0:1**
Combustion System	**IDI**
Engine Type	**In-Line – 4 Cycle**
Aspiration	**Turbocharged**
Engine Crankcase Vent System	**Closed**
Cylinder	**Borable**
Crankshaft Material	**Forged Steel**
Governor, Make	**Mechanical**
Frequency Regulation,	
No Load To Full Load	**5 %**
Air Cleaner	**Dry Element**

- ❑ Robust, compact, heavy duty Kubota diesel engine, for reliable endurance.
- ❑ Many various accessories available along with power take-off points.
- ❑ Indirect fuel injection system with Kubota E-TVCS Three Vortex Combustion System, reduces emissions and improves fuel consumption.
- ❑ High in Output Low in fuel Consumption.
- ❑ High capacity governor and large size flywheel, makes Kubota engines control the speed regulation within 5%.
- ❑ Super Glow Systems, is standard equipment to help start the engine in cold temperatures, at -4°F (-20°c), the engine will start with only 10 seconds of preheating time.

Powered By: Kubota

STANDARD EQUIPMENT

ENGINE
- Air Cleaner
- Fuel Pump
- Fuel Filter
- Oil Pump
- Full Flow Oil Filter
- Jacket Water Pump
- Thermostat and Housing
- Exhaust Manifold Dry
- Oil Cooler
- Blower Fan & Fan Drive
- Radiator - Unit Mounted
- Electric Starting Motor 12v
- Housing & Flywheel
- Charging Alternator - 12v
- Battery Kit & Battery Rack

GENERATOR
- Synchronous, Brush-less
- Four Pole
- Single Bearing
- Direct Coupled With Flex
- Class H Insulation
- Drip-Proof Construction

CONTROL PANEL
- Digital Control Panel
- Auto Start Module
- Electric Hour Meter
- Stop-Manual-Auto Pushbuttons
- Standard Engine Control Monitoring
- Automatic Shutdowns
  * High Water Temperature
  * Low Oil Pressure
  *Protective 12vdc Circuit Breaker
- -Display For:
  * Water Temperature
  * Oil Pressure
  * Overcrank
  * Underspeed
  * Overspeed
  * Battery Charging/Voltage

GENERAL
- Industrial Muffler
- Integrated Fuel tank 45 gal
- In Frame Lifting Points

INSTALLATION AND APPLICATION DATA

	Item	Units	Type of Operation and Application			
			60 Hz		50 Hz	
			Prime	Standby	Prime	Standby
Engine	Rated Speed	rpm	1800		1500	
	Gross Engine Output	bhp (kWm)	63.0 (46.9)	70.0 (52.2)	54.0 (40.3)	60 (44.7)
	BMEP	psi (kPa)	136.9 (943)	152.1 (1048)	140.8 (970)	156.4 (1078)
	Mean Piston Speed	Ft/s (m/s)	21.56 (0.55)		17.9 (0.46)	
Cooling System	Ambient Air Temperature	°F (°C)	122 (50)			
	Engine Heat Reject to Coolant	BTU/min (kW)	2337 (41.1)	2727 (47.9)	2103 (37.0)	2337 (41.1)
	Pusher Fan Air Flow	Cfm (m3)	4750 (134)		3870 (109)	
	Coolant Flow	gal/min (L/min)	21 (80)		15.8 (60)	
	Coolant Capacity	qt (L)	7.7 (8.5)			
	Thermostat Start to Open	°F (°C)	170 (76.5)			
	Thermostat Fully Open	°F (°C)	194 (90)			
	Blower Fan Diameter	in. (mm)	18 (457.2)			
Fuel System	Max. Transfer Pump Suction	ft (m)	3 (0.9)			
	Fuel Type		Diesel #2			
	Fuel Consumption @ 25% Power	gal/hr (L/hr)	0.76 (2.87)	0.85 (3.21)	0.65 (2.46)	0.72 (2.72)
	Fuel Consumption @ 50% Power	gal/hr (L/hr)	1.52 (5.75)	1.69 (6.39)	1.30 (4.92)	1.45 (5.48)
	Fuel Consumption @ 75% Power	gal/hr (L/hr)	2.28 (8.63)	2.54 (9.61)	1.96 (7.41)	2.17 (8.21)
	Fuel Consumption @ 100% Power	gal/hr (L/hr)	3.04 (11.5)	3.38 (12.79)	2.61 (9.87)	2.90 (10.97)
Air Requirement	Combustion Air Flow	ft^3/min (m^3/min)	3814 (108)		4750 (134)	
	Air Intake Restriction	In.H_2O (kPa)	18.1 (4.5)			
	Exhaust Temperature	°F (°C)	842 (450)		797 (425)	
	Maximun Allowable Back Pressure	In.H_2O (kPa)	60.6 (15.1)			
Lubrication System	Specific Oil consumption		0.95g/kW-hr			
	Oil Pan Capacity	qt (L)	13 (14.3)			
	Total Engine Oil Cap. w/filter	qt (L)	14 (15.4)			
	Oil Filter Type		Cartridge			
Engine Electricals	Battery Charging Alternator	Volts, Ground	14V, negative			
	Baterry Charging Alternator	Rated amps	45			
	Recommended Battery Cold Crank	CCA amps	600			
	Starter Motor	Volts, Ground	12V, negative			
Operation	Temperature and Altidtude Losses		Consult Factory			

OPTIONAL EQUIPMENT

Cooling System
- ❑ Remote Radiator
- ❑ Jacket Water Heater

Fuel System
- ❑ Fuel/Water Separator
- ❑ Auxiliary Fuel Pump
- ❑ Sub-Base UL Tank 142 Double Wall

Start System
- ❑ Battery Nicad
- ❑ Battery Warmer Plate
- ❑ Battery Charger
  - ❑ Automatic Float Equalizing
  - ❑ Trickle

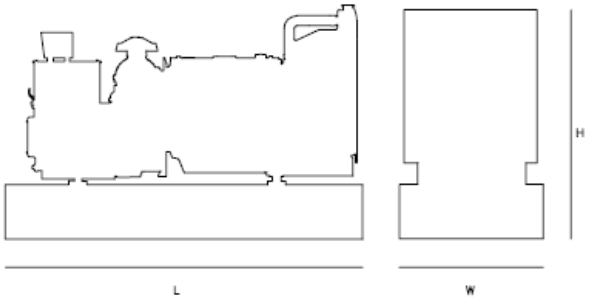
Switchgear
- ❑ Main Line Circuit Breaker
  - ❑ Shunt trip
  - ❑ Auxiliary switch
- ❑ Automatic Transfer Switch
- ❑ Paralleling
- ❑ Protective Relays

Generator
- ❑ Permanent Magnet Excitation
- ❑ Space Heaters

Control Panel
- ❑ NFPA 110 Ready
- ❑ Remote Annunciation Panel
- ❑ Audible Alarm

General
- ❑ Spring vibration isolators
- ❑ Flexible Connector
- ❑ Battery Charger 5 amp
- ❑ Aluminum Enclosure-White
- ❑ Lockable & Removable Doors
- ❑ Sound Attenuation
- ❑ Interior lights AC or DC
- ❑ Trailer
- ❑ Export Packaging
- ❑ Special Testing
- ❑ Warranties
  - ❑ ____ Year

For Other Options Consult



DIMENSIONS AND WEIGHT

	Units	Open Unit
Length	In. (mm)	71 (1803)
Width	In. (mm)	31 (787)
Height	In. (mm)	52 (1320)
Weight	Lbs (kg)	1451 (657)

General configuration for reference only, do not use these dimensions for installation purposes. Contact your local dealer for certified drawings.

ARMSTRONG POWER SYSTEMS

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