

Prime Rating Range	
Genset model	KDG0500P1
Frequency	50Hz
kVA	500



The Kohler Advantage

- One-stop solution for the generating system and accessories
- Manufactured in India with global expertise
- Compact design with ease of maintenance
- Excellent motor starting capability
- Best in class block loading capacity
- Flexible & creative customized solutions to meet customer needs
- Fast response time
- Two-years or 3000 hours as per standard warranty terms from date of initial startup

Special Features

- Full authority electronic engine with superior energy efficiency and fuel economy
- Integral vibration isolation eliminates the need for under-unit vibration spring isolators
- Advanced Digital Controller (ADC) with 3 auto crank cycles and in built AMF logic
- Alternator features:
 - Alternator meets Indian and relevant section of other international standards
 - Self-ventilated and dripproof of IP23 construction
 - Superior voltage waveform by 2/3 pitch wound stator
 - Sustained short circuit current of up to 300% of the rated current

Standard Features

- Engine coupled, skid mounted alternator
- Single - bearing alternator with insulation Class H
- Unit mounted radiator with 50°C ambient temperature
- Base frame mounted fuel tank with minimum 8 hrs running capacity
- Dry type air filter with restriction indicator
- DG circuit breaker
- Electric start with battery
- Fuel water separator
- Conveniently located fuel level indicator
- Exhaust tail pipe as standard scope of supply
- Weather proof enclosure to withstand harsh climate
- Ease of accessibility to all routine service points
- Four point bottom lifting

Conformance Standards

- ISO 3046
- BS 5514
- ISO 8528
- IS 4722
- IEC 34
- BS 5000 (Part 99)
- IS: 13364 (Part 1&2)

Generator Set Ratings

Genset	Engine	Voltage	Phase	Hz	Prime Rating		Amps
					kWe	kVA	
KDG0500P1	TAD1651GE	415	3	50	400	500	695.6

PRIME POWER RATINGS: Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1 and BS 5514. For limited running time and base load ratings, consult the factory. Obtain the technical information bulletin (TIB-101) on ratings guidelines for the complete ratings definitions.

Engine Specifications

Specifications	500 kVA
Engine : model, type	TAD1651GE, TCIC
No. of cylinders	6
Cylinder arrangement	Inline
Displacement, L (cu. in.)	16.12 (984)
Bore and stroke, mm (in.)	144 x 165 (5.67 x 6.50)
Compression ratio	16.5:1
Governor type	EMS 2.2
Governor Class	Class A1
Frequency regulation, steady state	ISO 8528 G3
Air cleaner type, Qty	Dry, 1
Unit-mounted radiator ambient temperature °C (°F)	50 (122)
Max. power kWm (BHP) @ rated speed (rpm)	441 (600) @ 1500
Diesel Fuel Consumption	
100% Load (Lph)	100.2
75% Load (Lph)	77.8
Lube Oil Consumption	
100% load (Lph)	0.1
Fuel System	
Fuel priming	Manual
Fuel filter : Type, Qty	Primary / Secondary, 2
Recommended fuel	HSD-ASTM D2
Fuel tank capacity, L	660
Fuel filter change period	Initial - 100 hrs / 3 months, Subsequent 500 hrs / 12 months, whichever is earlier
Lubrication System	
System type	Forced Lubrication
Lube oil type	Kohler Oil
Oil pan capacity with filter, L	48
Oil filter: Quantity, Type	3, Cartridge
Oil and oil filter change period	Initial - 100 hrs / 3 months, Subsequent 500 hrs / 12 months, whichever is earlier
Exhaust System	
Maximum allowable back pressure, KPa (in.Hg)	10 (2.9)
Exhaust outlet size at engine hookup, mm (in)	110 (4.33)
Silencer Type, Quantity	Residential, 1
Exhaust temperature at rated kW, dry exhaust, °C (°F)	500 (932)
Cooling System	
Ambient temperature, °C (°F)	50 (122)
Coolant capacity including engine, L (gal)	60 (15.9)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	890 (35)
Engine Electrical System	
Starter Motor rated voltage VDC	24 V
Battery charging alternator	24 V, 80 Amp
Ground (negative/positive)	Negative
Battery type-	Flooded type, Maintenance free
Battery rating (Amp-hour)	105
Quantity	2
Battery voltage, VDC	24

Alternator Specifications

Specifications	500 kVA
Type	4 Pole
Exciter type	Brushless
Voltage regulator	AVR
Insulation - Material - Temperature rise, Prime	Class H 125°C
Bearing: Quantity, Type	1, Sealed
Coupling	Close coupled
Voltage regulation	+/-1%
Excitation	Self excitation
Frequency, Fixed, Hz	50
Full load current - 3 Phase	695.6
Prime at 125° C, kVA	500

Advanced Digital Controller (ADC3503)

Standard Features

- Master switch: Control On/Off
- Event Log
- Remote two-wire start/stop capability
- One-source responsibility for generating system & accessories
- Automatic start with programmed cranking cycle
- Field software upgrade possibility
- Operating temperature: -30°C to 70°C (-22°F to 158°F)
- Storage temperature: -40°C to 85°C (-40°F to 185°F)
- Humidity: 0-95% condensing
- Control Panel
 - Alternator to control panel connection with copper cable only
 - MCCB/MCB details : with short circuit and overload protection
 - Inbuilt AMF controller
 - Output Aluminium cable size : (Sq.mm x run) : 3.5 core :

Up to 200 meter cable length	500 kVA
Output Aluminium cable size: (Sq. mm)	400 X 3 runs



Optional Features

- Microprocessor based AMF change over panel
- Synchronizing controller
- Remote monitoring system
- Customized Synchronizing panel

Controller Information

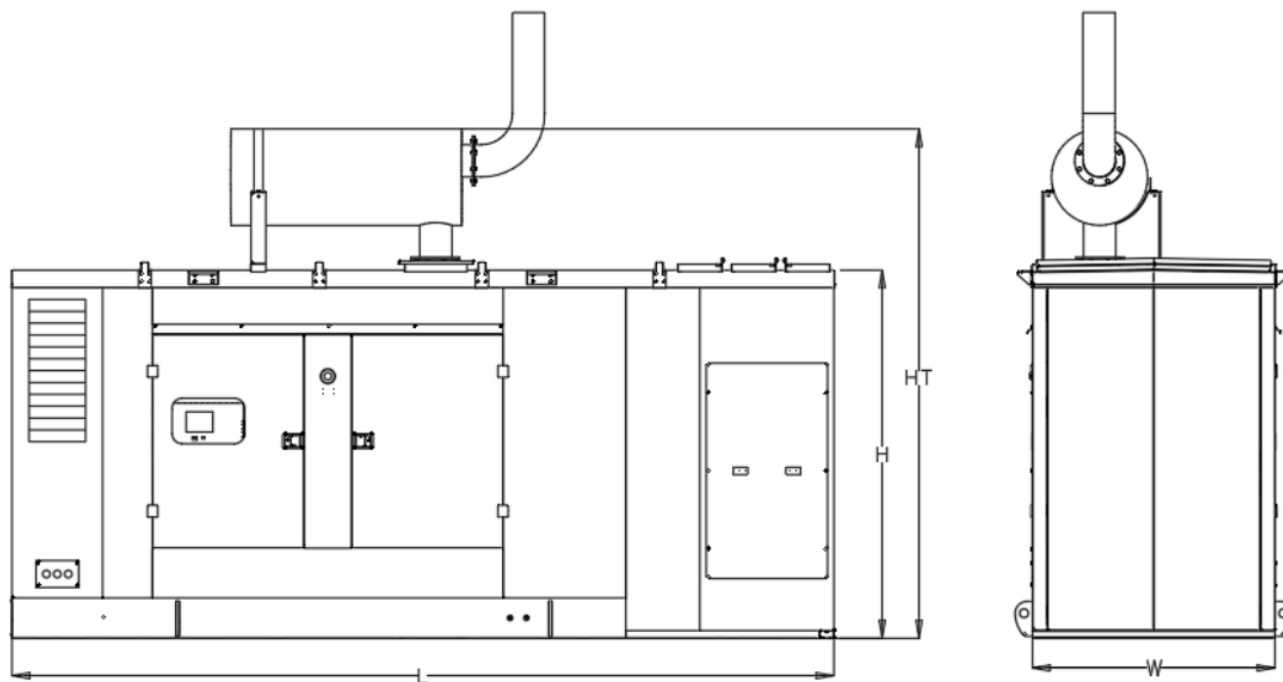
LCD Display	LCD Display Faults	Display Warnings	Optional Accessories	Power Requirements
Runtime hours	High engine temperature	Low battery voltage	Battery charger	8 V to 35 V continuous
Engine speed	Low oil pressure	High battery voltage	Mains sensing relay inbuilt	100 mA @ 12 VDC
Power factor KVAR	Overspeed / Underspeed	Low fuel level	Earth leakage protection	105 mA @ 24 VDC
Current	Over and under voltage	Maintenance Alarm (water in fuel)	VAF meter (Multifunction)	
Voltage	Over and under frequency	High engine temperature	kW-hr display	
Frequency	Emergency stop	Maintenance warning		
Engine temperature	Auxiliary fault			
Engine oil pressure	Low fuel level			
Battery voltage	Over load current			
Kilowatt & kVA	Phase reversal			
Fuel level				

Regulatory Compliance

Specifications	500 kVA
As per ISO 8178-5 mode cycle (Engine emission)	CPCB-II compliant
Noise level measured at 1 meter distance	< 75 dB (A)

Dimensions and weight

Specifications	500 kVA
Overall Size, L x W x H (mm)	5560 x 1640 x 2483
Overall Size with silencer, L x W x HT (mm)	5560 x 1640 x 3433
Dry weight, max (kg)	6000



NOTE : Drawing provided is for reference only and should not be used for planning installation. Please contact the Company for latest updated details.

* Disclaimer: Product images shown are for illustration purpose and may not be an exact representation of product.

* All the data is as per respective manufacturers' specification. Please refer O & M manual for maintenance and preservation guidelines.

* Fuel consumption data is based on HS Diesel having specific gravity of 0.85 and conforming to IS:1460 Standard. Fuel consumption tolerance is +5%.

KOHLER reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

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