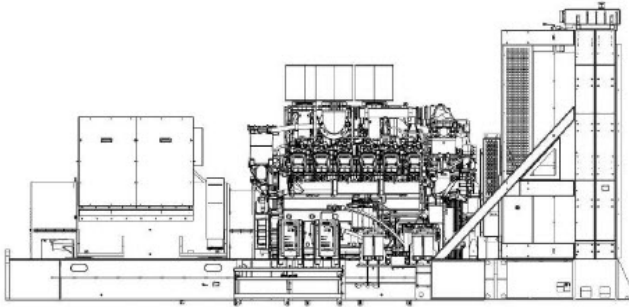




Standard Features

- Discovery Energy, LLC and its affiliates dba Rehiko provides one-source responsibility for the generating system and accessories.
- Approved for use with certified renewable Hydrotreated Vegetable Oil (HVO) / Renewable Diesel (RD) fuels compliant with EN15940/ASTM D975.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- cULus listing (UL 2200 and CSA C22.2 No. 100).
- The generator set accepts rated load in one step.
- The 60 Hz emergency generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- A standard three-year unlimited-hour warranty for standby applications in the U.S. and Canada.. Five-year basic, five-year comprehensive, and ten-year extended limited warranties are also available for purchase in some jurisdictions.
- A standard two-year or 8700-hour limited warranty for prime power applications.

Alternator Features

- The pilot-excited, permanent magnet (PM) alternator provides superior short-circuit capability.
- All models are brushless, rotating-field alternators.
- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.

Other Features

- Rehiko designed controllers for one-source system integration and remote communication.
- The low coolant level shutdown prevents overheating (standard on radiator models only). Conscious Care qualified. Reduce operating cost, fuel consumption, and greenhouse gas emissions.

Enclosure Features

- See Enclosure Spec sheet for details.

Alternator	Voltage	Ph	Hz	Peak kVA	kW/kVA	Amps
KH07801TO4D	277/480	3	60	9957	2500/3125	3759

RATINGS: All three-phase units are rated at 0.8 power factor.
Standby Ratings: The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating.
Prime Power Ratings: 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 and ISO-3046-1. For limited running time and continuous ratings, consult the factory.
Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates.
The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

Model: KD2500-A, continued

Alternator Specifications

Specifications	Alternator
Alternator manufacturer	Rehlko
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Permanent-Magnet Pilot Exciter
Voltage regulator	Solid State, Volts/Hz
Insulation	NEMA MG1, UL 1446, Vacuum Pressure Impregnated (VPI)
Insulation: Material	Class H, Synthetic, Nonhygroscopic
Insulation: Temperature Rise	130°C, 150°C Standby
Bearing: quantity, type	1 or 2, Sealed
Coupling	Flexible disc or Coupling
Amortisseur windings	Full
Alternator winding type	> 600 V Random Wound, < 600 V Form Wound
Voltage regulation, no-load to full-load RMS	+/-0.25%
Unbalanced load capability	100% of Rated Standby Current
• The pilot-excited, permanent magnet (PM) alternator provides superior short-circuit capability. • All models are brushless, rotating-field alternators. • NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting. • Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds. • Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field. • Self-ventilated and drip-proof construction. • Superior voltage waveform from two-thirds pitch windings and skewed stator. • Brushless alternator with brushless pilot exciter for excellent load response.	

Engine

Engine Specification	
Engine Manufacturer	Kohler Diesel
Engine Model	KD62V12A
Engine: type	4-Cycle, Turbocharged, Intercooled
Cylinder arrangement	12-V
Displacement, L (cu. in.)	62 (3783)
Bore and stroke, mm (in.)	175 x 215 (6.89 x 8.46)
Compression ratio	16.0:1
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	2700 (3621)
Governor: type, make/model	KODEC Electronic Control
Frequency regulation, no-load to-full load	Isochronous
Frequency regulation, steady state	±0.25%
Frequency	Fixed

Exhaust

Exhaust System	
Heat rejected to exhaust, kW	2130
Exhaust flow at rated kW, m ³ /min. (cfm)	533 (18833)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	470 (878)
Maximum allowable back pressure, kPa (in. Hg)	8.5 (2.5)

Model: KD2500-A, continued

Engine Electrical

Engine Electrical System

Starter motor qty. at starter motor power rating, rated voltage (DC)	Standard: 2 @ kW, 24; Redundant (optional); 2 @ 15 kW, 24
Battery charging alternator: Ground (negative/positive)	Negative
Battery charging alternator: Volts (DC)	24
Battery charging alternator: Ampere rating	140
Quantity, CCA rating each, type (with standard starters)	4, 1110, AGM
Quantity, CCA rating each, type (with optional redundant starters)	8, 1110, AGM
Battery voltage (DC)	12

Fuel

Fuel System

Fuel type	Diesel
Fuel supply line, min. ID, mm (in.)	25 (1.0)
Fuel return line, min. ID, mm (in.)	19 (0.75)
Max. fuel flow, Lph (gph)	877 (232)
Min./max. fuel pressure at engine supply connection, kPa (in. Hg)	- 50/50 (- 14.8/14.8)
Maximum diesel fuel lift, m (ft.)	6 (20)
Max. return line restriction, kPa (in. Hg)	30 (8.9)
Fuel filter: quantity, type	2, Primary Engine Filter
Fuel Filter Secondary	2, Fuel/Water Separator
Recommended fuel	#2 Diesel ULSD/HVO/RD

Lubrication

Lubrication System

Type	Full Pressure
Oil pan capacity with filter, L (qt.)	378 (400)
Oil filter: quantity, type	6, Cartridge
Oil cooler	Water-Cooled

Model: KD2500-A, continued

Cooling	
Radiator System	
Ambient temperature, °C (°F)	50 (122)
Engine jacket water flow, Lpm (gpm)	2110 (557)
Charge cooler water capacity, Total: radiator + engine, L	368 (97)
Engine jacket water capacity, L (gal.)	180 (48)
Radiator system capacity, including engine, L (gal.)	877 (232)
Radiator system capacity, including engine, L (gal.) (Non-IBC):	509 (134)
Charge cooler water flow, Lpm (gpm)	600 (159)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	884 (50317)
Heat rejected to air charge cooler at rated kW, dry exhaust, kW (Btu/min.)	790 (44967)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	2235 (88) 1901 (75)
Fan, kWm (HP)	90 (120.7) 85 (114)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H2O)	0.125 (0.5)
* Enclosure with enclosed silencer reduces ambient temperature capability by 5 °C (9 °F)	

Remote Radiator System	
Exhaust manifold type	Dry
Connection Size	Class 150 ANSI Flange
Water inlet/outlet, mm (in.)	216 (8.5) Bold Circle
Charge air cooler inlet/outlet (pipe dia. of flange), mm (in.)	178 (7.0) Bolt Circle
Static head allowable above engine, kPa (ft. H2O)	250 (83.6)
Note:	Contact your local distributor for cooling system options and specifications based on your specific requirements.

Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m3/min. (scfm) *	2809 (99200)
Cooling air required for generator set when equipped with city water cooling or remote radiator, based on 14°C (25°F) rise, m3/min. rise and ambient temp. of 29°C (85°F) m3/min. (cfm)	1048 (37022)
Combustion air, m3/min. (cfm)	204 (7187)
Heat rejected to ambient air: Engine, kW (Btu/min.)	135 (7684)
Heat rejected to ambient air: Alternator, kW (Btu/min.)	160 (9099)
*Air density = 1.20 kg/m3 (0.075 lbm/ft3)	

Fuel Consumption

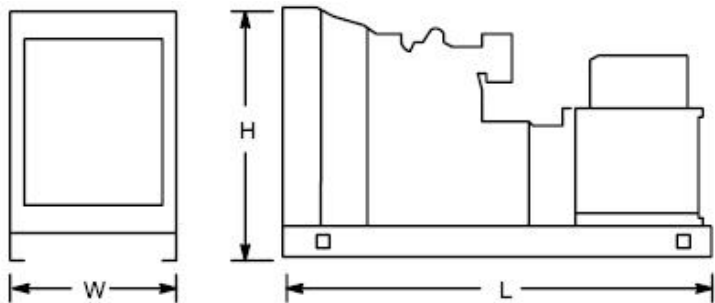
Diesel, Lph (gph), at % load	Rating
Standby Fuel Consumption at 100% load	654.4 Lph (172.9 gph)
Standby Fuel Consumption at 75% load	576.5 Lph (152.3 gph)
Standby Fuel Consumption at 50% load	374.8 Lph (99.0 gph)
Standby Fuel Consumption at 25% load	210.4 Lph (55.6 gph)
Prime Fuel Consumption at 100% load	618.1 Lph (163.3 gph)
Prime Fuel Consumption at 75% load	513.4 Lph (135.7 gph)

Model: KD2500-A, continued

Prime Fuel Consumption at 50% load	340.8 Lph (90.0 gph)
Prime Fuel Consumption at 25% load	195.0 Lph (51.5 gph)
Continuous Fuel Consumption at 0% load	** Volumetric Fuel consumption is up to 4% higher when using HVO/RD than #2 ULSD.

Dimensions and Weights

Dim Weight Spec	Dim Weight Value
Fuel	Diesel
Engine Manufacturer	Rehlko
Overall Size, L x W x H, mm (in.):	6766 x 2901 x 3254 (266.4 x 114.2 x 128.1)
Weight (radiator model), wet, kg (lb.):	24050 (53025)
Overall size, L x W x H, mm (in.), Sound Level 2 Enclosure	11418 x 3488 x 4777 (451 x 137 x 188)
Overall size, L x W x H, mm (in.), Sound Level 2 Walk-In Enclosure	13493 x 3488 x 4777 (531 x 137 x 188)
Max. weight, Sound Level 1 Enclosure	13220 x 4157 x 5725.2 (520.5 x 163.6 x 221.5)
Max. weight, Sound Level 2 Enclosure	40064 (88330)
Max. weight, Sound Level 2 Walk-In Enclosure	41894 (92364)
Fuel tank capacity, L (gal)	41345 (91155)
Sound Pressure Level at 60 Hz with full load dB, SL1	Refer to G6-154
Sound Pressure Level at 60 Hz with full load dB, SL2	88
Sound Pressure Level at 60 Hz with full load dB, SL2 Walk-In	76
	74



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.