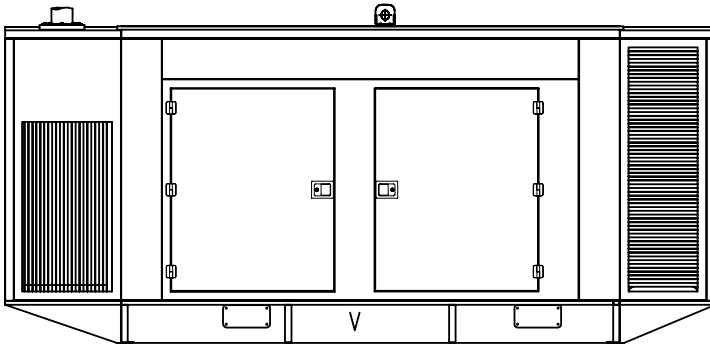




**Standard Features**

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- Two-year limited warranty covers all systems and components.
- Industrial diesel engine with 24-volt battery charging alternator.
- Stamford single-bearing alternator with insulation class H.
- Unit-mounted radiator with 45 °C.
- Subbase fuel tank (8hrs @ 80% rated load).
- Vibration isolators.
- Dry type air filter.
- Fuel Water separator.
- Main line breaker.
- Starting battery and cables with inbuilt battery charger.
- CPCB certified sound enclosure.
- Conveniently located fuel level indication and fuel filling point.
- Single point lifting arrangement.
- Operation and installation literature.



**Generator Set Ratings**

Genset	Engine	Alternator	Voltage	PH	Hz	Prime Rating	
						kW/kVA	Amps
KZA250	WD12D320E21	HCI 444C	240/415	3	50	200/250	347

**RATINGS:** All three-phase units are rated at 0.8 power factor.

**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. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

# Alternator Specifications

- Alternator meets BS EN 60034 and the relevant section of other international standards such as BS5000, VDE 0530, NEMA MG1-32, IEC34, CSA C22.2-100, AS1359.
- Self-ventilated and dripproof of IP23 construction.
- Superior voltage waveform form a 2/3 pitch wound stator.

Specifications	Alternator
Model	HCI444C
Type	4 pole
Exciter type	Brushless
Leads, quantity type	12, Reconnectable
Voltage regulator	AS440AVR
Insulation	
- Material	Class H
- Temperature rise	125°C, Prime
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Voltage regulation	+/- 1%
Rating Voltage	415V
Standby at 163°C, kVA	275
Prime at 125°C, kVA	250
Direct axis subtransient reactance (X <sup>d</sup> ), %	12

## Application Data

### Engine

#### Engine specifications

Engine model	WD12D320E21
Engine type	Turbo charged
Cylinder arrangement	6, in line
Displacement, L (cu. in.)	11.596(707.63)
Bore and stroke, mm (in.)	126 x 155 (4.96 x 6.10)
Compression ratio	17:1
Piston speed, m/min. (ft./min.)	390 (1279)
Rated rpm	1500
Max.power at rated rpm, kWm (BHP)	258.5 (346.5)
Governor: type, make/model	Electronic
Frequency regulation, no-load to full load	ISO 5%
Frequency regulation, steady state	+/- 1%
Frequency, Fixed, Hz	50
Air cleaner type, all models	Dry

### Exhaust

#### Exhaust System

Exhaust Manifold type	Dry
ExhaustflowatratedkW,kg/hr	1523.27
Exhaust temperature at rated kW, dry exhaust, °C (°F)	600 (1112)
Maximum allowable back pressure, kPa (in.Hg)	6 (1.77)
Exhaust outlet size at engine hookup, mm (in.)	79.2 (3.12)

### Engine Electrical

#### Engine Electrical System

Battery charging alternator	24 Volt
Ground (negative/positive)	Negative
Volts, VDC	24
Amps, Ah	32
Battery type - sealed maintenance free (PLT)	
- Qty.	2
Battery voltage (DC)	24 Volt

### Fuel

#### Fuel System

Fuel supply line, min. ID, mm (in.)	9 (0.35)
Fuel return line, mm. ID, mm (in.)	9 (0.35)
Max. lift engine-driven fuel pump, m (ft.)	0.014 (0.46)
Max.fuelflow,Lph(gph)	19.4(5.1)
Fuel prime pump	Manual
Fuelfilter:quantity,type	1, Secondary
Recommended fuel	#2 Diesel
Fuel tank capacity, L (gal)	398 (87.54)

### Lubrication

#### Lubricating System

Type	Full pressure
Oil pan capacity, L (qt.)	24 (25.36)
Oilpancapacitywithfilter,L(qt.)	24.72 (26.1)
Oilfilter:quantity,type	1, Spiral paper element
Oil cooler	Water cooled

## Application Data

### Cooling

#### Radiator System

Ambient temperature, °C (°F)	45°C (113)
Engine jacket water capacity, L (gal.)	23(6.0)
Radiator system capacity, including engine, L (gal.)	55(26.8)
Engine jacket water flow, Lpm (gpm)	322(85)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	110(6255)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	760(29.9)
Fan, kWm (HP)	5.1(6.83)
Max. restriction of cooling air, intake and discharge side of radiator, Pa (in.H <sub>2</sub> O)	0.14 (0.56)

### Operation Requirements

#### Air Requirements

Radiator-cooled cooling air, m <sup>3</sup> /min (scfm)	466.1(16460)
Combustion air, kg/hr	1476.6
Heat rejected to ambient air :	
Engine, kW (Btu/min.)	27.44(1560)
Generator, kW (Btu/min.)	16.8(955.2)
Air density, kg/m <sup>3</sup> (lbm/ft <sup>3</sup> )	1.20 (0.075)

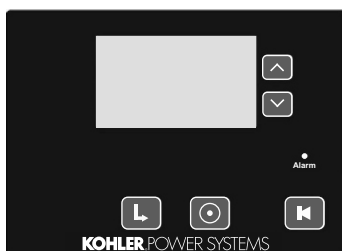
#### Fuel Consumption

Diesel, Lph (gph) at % load	Prime Rating
100%	49.4(13.0)
75%	37.1(9.8)
50%	24.7(6.5)

#### Exhaust Emissions

Per ISO 8178-5 mode cycle	CPCB Norms
Noise level	Conforms to CPCB Norms

## Controller



### Advance Digital Control (ADC 2300)

#### Compact Controller

LCD display:

- Runtime hours
- Current
- Voltage
- Frequency
- Engine Temperature
- Engine oil pressure
- Battery V
- Kilowatt
- Fuel Level
- KVAR / PF

LCD display faults:

- High engine temperature
- Low oil pressure
- Over & under speed
- Over & under voltage
- Over & under frequency
- E-stop
- Low Fuel level
- Over Load
- High Coolant temperature
- Low Coolant level
- E-S lock out
- Auxiliary fault

Display warning:

- Low battery voltage
- High battery voltage

### Standard Features and Accessories

#### Standard Features

- Ease of reading with wide screen LCD
- Master switch: Run/Off-Reset/Auto
- Remote two-wire start/stop capability
- Superior electronics
- Factory-built and production-tested
- One-source responsibility for the generating system and accessories
- Automatic start with programmed cranking cycle
- Field software upgrade possibility

#### Environmental Specifications

- Operating temperature: -20°C to 70°C (-4°F to 158°F)
- Storage temperature: -60°C to 70°C (-76°F to 158°F)
- Humidity: 0-95% condensing

#### Power Requirements

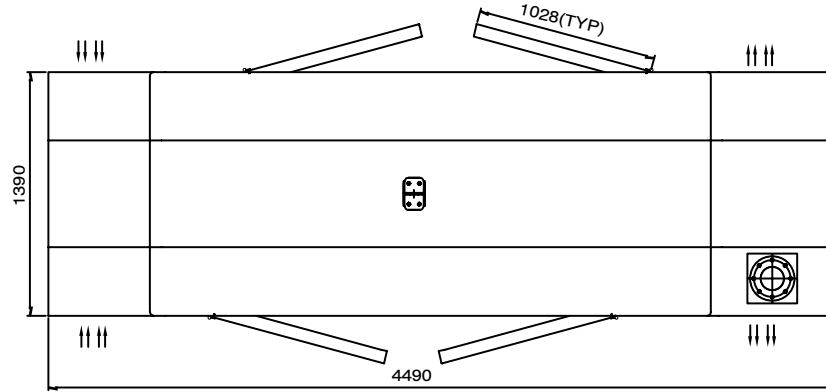
- 12 VDC with fuse protection
- 250 mA @ 12 VDC

#### Accessories

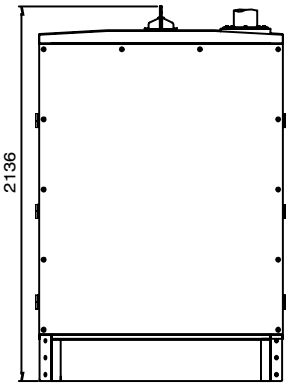
- Battery charger 12 V
- Mains sensing relay
- Earth leaking protection
- KWH meter
- Earth fault relay
- CBCT
- Multi-function meter

**Dimensions and Weights**

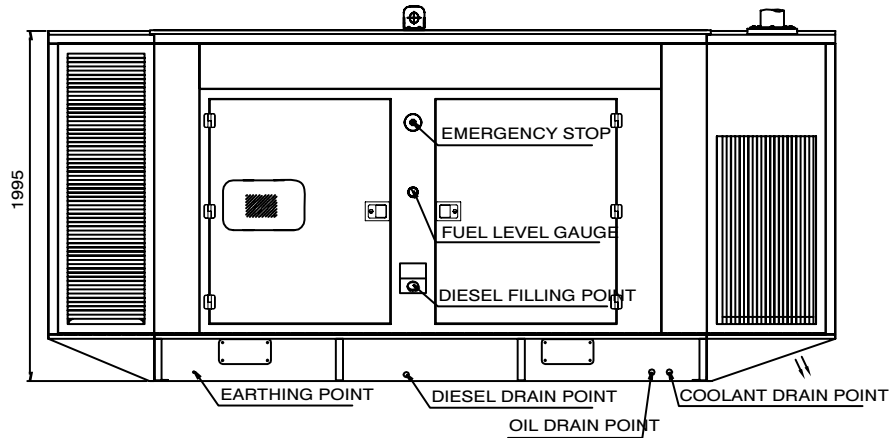
Overall Size, L x W x H, mm (in.)	4490 x 1390 x 2136 (176.8 x 54.7 x 84.1)
Weight (Radiator model) :	
Wet, max., kg	3854
Dry, max., kg	3775



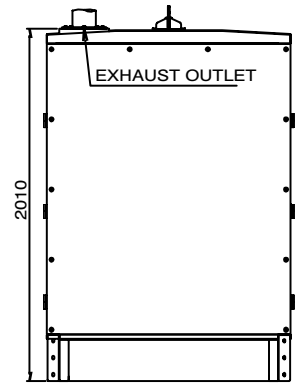
**TOP VIEW**



**LHS**



**FRONT VIEW**



**RHS**

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

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