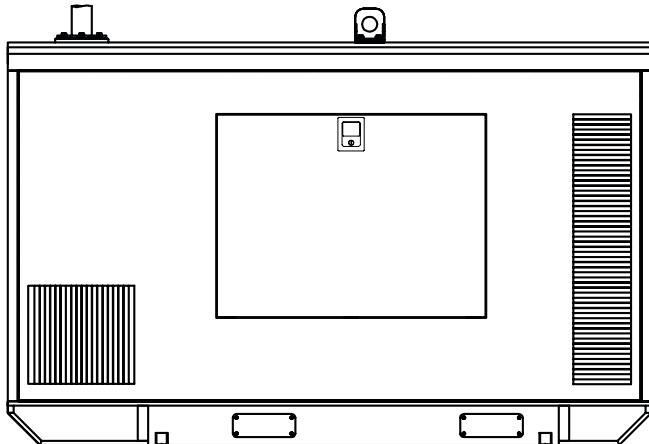


Model: **KT40**

KOHLER POWER SYSTEMS

Diesel



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 12-volt battery charging alternator.
- Single-bearing alternator with insulation class H.
- Unit-mounted radiator with 45°C.
- Subbase fuel tank (8 hrs @ 80% rated load).
- Vibration isolators.
- Dry type air filter with filter change indicator.
- Fuel Water separator.
- Main line breaker.
- Starting battery and cables with inbuilt battery charger.
- Sound enclosure with 75dB(A).
- Conveniently located fuel level indication.
- Operation and installation literature.

Generator Set Ratings

Genset	Engine	Alternator	Voltage	PH	Hz	Prime Rating	
						kW/kVA	Amps
KT40	497 TC	ECO 32-3S	240/415	3	50	32/40	55

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, IEC34 and CSA C22.2.
- Self-ventilated and dripproof construction.
- Superior voltage waveform form a 2/3 pitch wound stator.
- Sustained short circuit current of upto 300% of the rated current for upto 20 sec.

Specifications	Alternator
Type	4 Pole
Exciter type	Brushless
Insulation	
- Material	Class H
- Temperature rise, Prime	125°C
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Voltage regulation	+/- 1%
Voltage rating, V	415
Prime at 125°C, kVA	40

Application Data

Engine

Engine specifications	
Engine model	497 TC
Engine type	Turbocharged
Cylinder arrangement	4, inline
Displacement, L (cu. in.)	3.8 (231.89)
Bore and stroke, mm (in.)	97 x 128 (3.82 x 5.04)
Compression ratio	17.5:1
Piston speed, m/sec. (ft./sec.)	4.85 (15.91)
Rated rpm	1500
Max.power at rated rpm, kWm(BHP)	47.58 (63.8)
Governor: type, make/model	Mechanical, Bosch/RSV
Frequency regulation, no-load to full load	Class A2
Frequency regulation, steady state	ISO 8528 G2
Air cleaner type, all models	Dry

Exhaust

Exhaust System	
Exhaust Manifold type	Dry
Exhaust flow at rated kW, kg/hr	260.4
Exhaust temperature at rated kW, dry exhaust, °C (°F)	700 (1292)
Maximum allowable back pressure, kPa (in.Hg)	4 (1.2)
Exhaust outlet size at engine hookup, mm (in.)	75 (2.95)

Engine Electrical

Engine Electrical System	
Battery charging alternator	12 Volt
Ground (negative/positive)	Negative
Volts, VDC	12
Amps, Ah	32
Battery type - sealed maintenance free (PLT) - Qty.	1
Battery voltage, VDC	12

Fuel

Fuel System	
Fuel supply line, min. ID, mm (in.)	15 (0.59)
Fuel return line, mm. ID, mm (in.)	10 (0.39)
Max. lift engine-driven fuel pump, m (ft.)	1 (3.28)
Fuel prime pump	Manual
Fuel filter: quantity, type	1, Spin-on
Recommended fuel	HSD-ASTM D2
Fuel tank capacity, L	110

Lubrication

Lubricating System	
Type	Spin-on
Oil pan capacity, L	9
Oil pan capacity with filter, L	9.7
Oil filter: quantity, type	1, Spin-on
Oil cooler	Plate Type Engine Mounted

Application Data

Cooling

Radiator System	
Ambient temperature, °C (°F)	45 (113)
Engine jacket water capacity, L (gal.)	3 (0.79)
Radiator system capacity, including engine, L (gal.)	18.5 (4.89)
Engine jacket water flow, Lpm (gpm.)	100 (26.4)
Heat rejected to cooling water at rated kW, dry exhaust, kW	32.6
Water pump type	Impeller
Fan diameter, including blades, mm (in.)	457 (18)
Max. restriction of cooling air, intake and discharge side of radiator, kPa	0.125

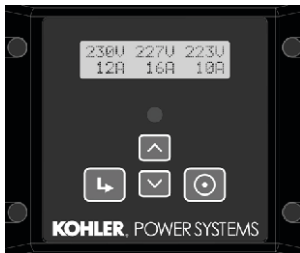
Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m ³ /min	185
Combustion air, kg/hr	232
Heat rejected to ambient air :	
Engine, kW (Btu/min.)	3.6 (204.91)
Generator, kW (Btu/min.)	4.24 (242)
Air density, kg/m ³ (lbm/ft ³)	1.2 (0.075)

Fuel Consumption (Density @ 0.85 kg/m ³)	
Diesel, Lph (gph) at % load	Prime Rating
100%	9.2 (2.4)
75%	6.8 (1.8)
50%	5 (1.3)

Exhaust Emissions	
Per ISO 8178-5 mode cycle	CPCB norms

Noise Level	
Noise level	CPCB norms



Advance Digital Control (ADC 2200)

Compact Controller

LCD display:

- Runtime hours
- Current
- Voltage
- Frequency
- Engine Temperature
- Engine oil pressure
- Battery V
- Kilowatt

LCD display faults:

- High engine temperature
- Low oil pressure
- Overspeed
- Over & under voltage
- Over & under frequency
- E-stop
- Auxiliary fault
- Low Fuel level
- Over Load

Display warning:

- Low battery voltage
- High battery voltage

Controller

Standard Features and Accessories

Standard Features

- 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 or 24 VDC with fuse protection
- 250 mA @ 12 VDC
- 125 mA @ 24 VDC

Accessories

- Battery charger 12 V
- Mains sensing relay
- Earth leaking protection

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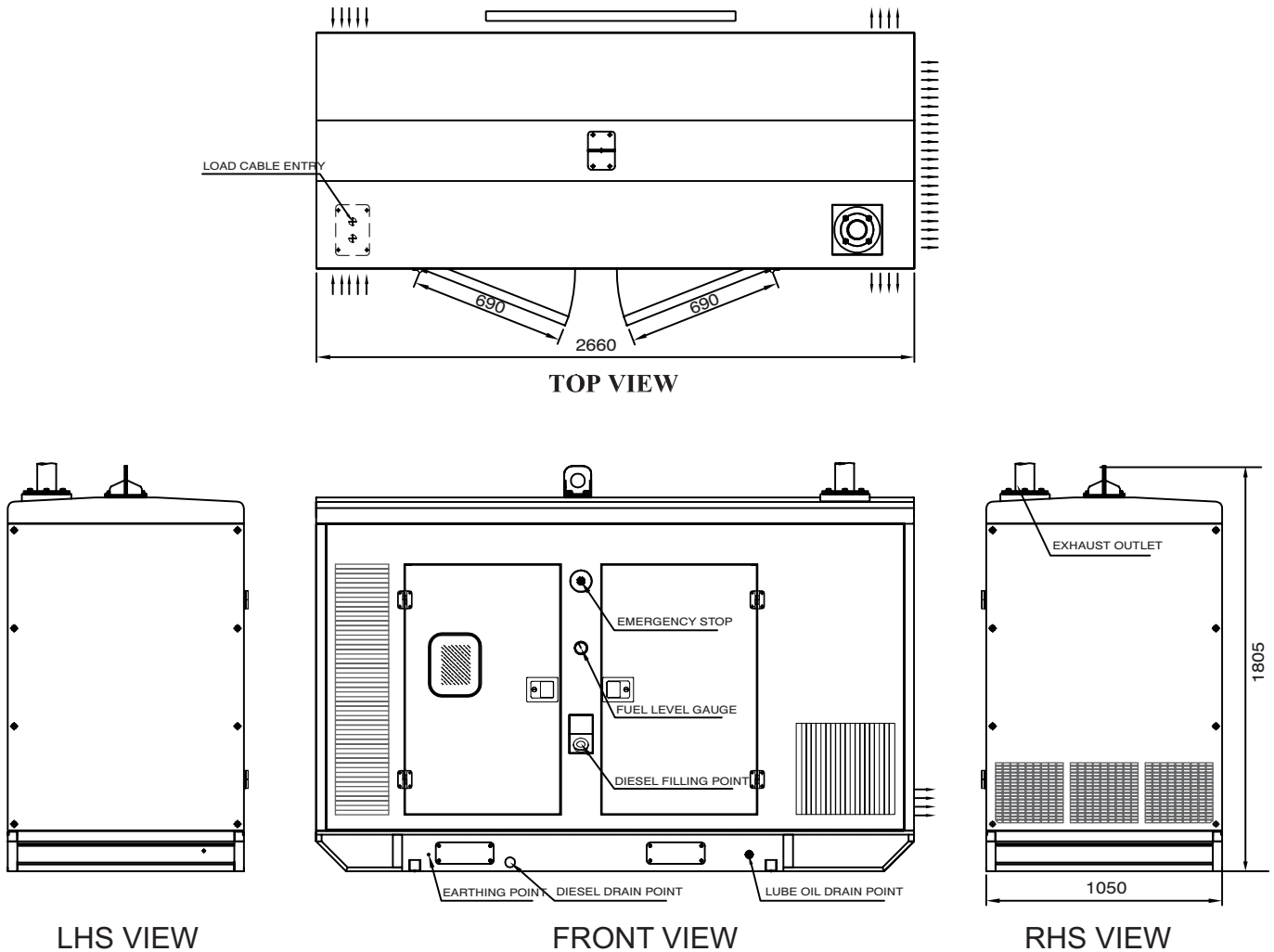
Dimensions and Weights

Overall Size, L x W x H, mm (in.) 2660 x 1050 x 1805 (104.7 x 41.3 x 71.0)

Weight (Radiator model):

Total genset weight, Dry, kg (lb.) 1179 (2599)

Total genset weight, Wet, kg (lb.) 1300 (2866)



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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