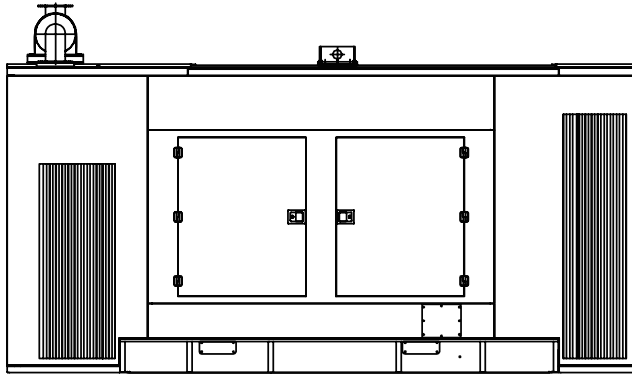


KOHLER POWER SYSTEMS

ISO 9001
KOHLER
 POWER SYSTEMS
 NATIONALLY REGISTERED

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.
- One-year limited warranty covers all systems and components.
- Industrial diesel engine with 24-volt battery charging alternator.
- Single-bearing alternator with class H insulation.
- Unit-mounted radiator with 50°C.
- Subbase fuel tank.
- Vibration isolators.
- Dry type air filter with restriction indicator.
- Fuel Water separator.
- Main line breaker.
- Starting battery with inbuilt battery charger & cables.
- Sound enclosure with noise level less than 75dB(A).
- Exhaust flexible.
- Operation and installation literature.

Generator Set Ratings

Genset	engine	Alternator	Voltage	PH	Hz	Prime Rating	
						kW/kVA	Amps
KVS380	TAD 1343 GE	HCI 444F	240/415	3	50	304/380	528

RATINGS: All 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 specification 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 drip-proof of IP23 construction.
- Superior voltage waveform from a 2/3 pitch wound stator.

Specifications	Alternator
Model	HCI 444F
Type	4 pole
Exciter type	Brushless
Leads, quantity type	12, Reconnectable
Voltage regulator	AS440
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	380
Direct axis subtransient reactance (X"d), %	11

Application Data

Engine

Engine Specifications

Engine model	TAD 1343 GE
Engine type	Turbocharged, Charge air cooled
Cylinder arrangement	6, inline
Displacement, L (cu. in.)	12.78 (779.7)
Bore and stroke, mm (in.)	131 x 158 (5.16 x 6.22)
Compression ratio	18.1 : 1
Piston speed, m/min. (ft./min.)	474 (1555)
Rated rpm	1500
Max. power at rated rpm, kWm (BHP)	366(498)
Governor: type, make/model	Volvo / EMS 2.2
Frequency regulation, no-load to full load	Isochronous
Frequency regulation, steady state	+/- 0.25%
Frequency	Field convertible
Air cleaner type, all models	Dry

Exhaust

Exhaust System (50Hz)

Exhaust flow at rated kW, m ³ /min (cfm)	56 (1978)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	400 (752)
Maximum allowable back pressure, kPa (in.Psi)	9 (1.3)
Exhaust outlet size at engine hookup, mm (in.)	98.5 (3.88)

Engine electrical

Engine Electrical System

Battery charging alternator	24 Volt
Ground (negative/positive)	Negative
Volts, VDC	24
Amps, A	60
Starter motor rated voltage, VDC	24
Battery, recommended cold cranking amps (CCA) :-	
- Qty., CCA rating above 0°C (32°F)	Two, 950
Battery voltage, VDC	12

Fuel

Fuel System

Fuel supply line, min. ID, mm (in.)	10 (0.39)
Fuel return line, mm. ID, mm (in.)	10 (0.39)
Max. lift engine-driven fuel pump, m (ft.)	2 (6.6)
Max. fuel flow, Lph (gph)	120(31.7)
Fuel prime pump	Manual
Fuel filter: quantity, type	2, Primary/Secondary with water separator
Recommended fuel	#2 Diesel
Fuel tank capacity, L	646

Lubrication

Lubricating System

Type	Full pressure
Oil pan capacity, L (qt.)	30 (32)
Oil pan capacity with filter, L (qt.)	36 (38)
Oil filter: quantity, type	3, Cartridge
Oil cooler	Water cooled

Application Data

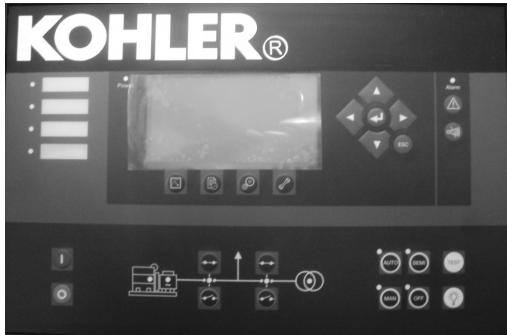
Cooling

Radiator System	
Ambient temperature, °C (°F)	50 (122)
Engine jacket water capacity, L (gal.)	20 (5.28)
Radiator system capacity, including engine, L (gal.)	44 (11.6)
Engine jacket waterflow, Lpm(gpm)	288(76)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	141 (8019)
Heat rejected to charge air cooler at rated kW, dry exhaust, kW (Btu/min.)	72 (4095)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	890 (35)
Fan, kWm (HP)	10 (14)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H ₂ O)	0.125 (0.5)

Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m ³ /min (scfm)	462 (16317)
Combustion air, m ³ /min (cfm)	26 (918)
Heat rejected to ambient air :	
Engine, kW (Btu/min.)	18 (1024)
Generator, kW (Btu/min.)	20.2 (1149)
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
25%	22.3 (4.91)
50%	39.1 (8.60)
75%	56.9 (12.52)
100%	76.1 (16.74)
exhaust emissions	
Per ISO 8178-5 mode cycle	CPCB norms

Controller



Viewable / Selectable Parameters (May require optional module)

- Voltage: phase-to-neutral, total voltage
- Runtime hours
- Current
- Frequency
- Power (active/reactive/apparent)
- Power factor
- Engine speed
- Oil pressure
- Coolant temperature
- Battery voltage
- Event log with real-time clock
- Generator set status

Protections

- Low oil pressure
- Over crank
- Overspeed
- Over & under voltage
- Over & under frequency
- E-stop
- Reverse power
- Short circuit
- Unbalanced voltage/current
- Busbar & generator protection package

Standard Features and Accessories

Standard Features

- Pushbuttons for start/stop and breaker operations
- Soft key for all operation and ease of use
- Full text LCD display (240 X 128 pixel)
- Operational down to -40 C/F including LCD
- kWh meter
- Operation hours/start/maintenance counters
- Event recorder with real-time clock
- Free PC utility software for commissioning
- Configurable inputs/outputs
- User programmable logic

Optional

- Auto load sharing - Auto synchronization panel
- Input/Output module
- Modbus communication via RS-485 as an option

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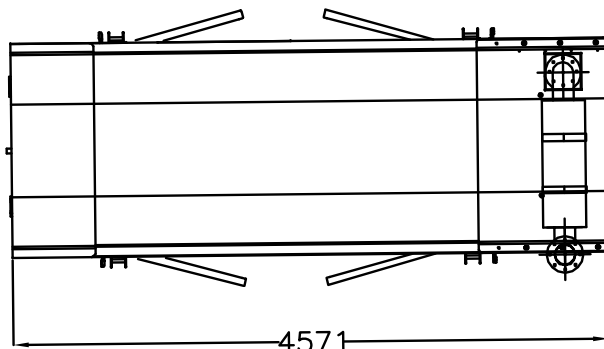
Dimensions and Weights

Overall Size, L x W x H, mm 4571 x 1640 x 2220

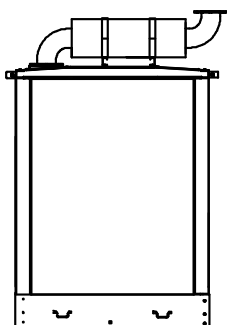
Weight (Radiator model):

Wet, max., kg 4872

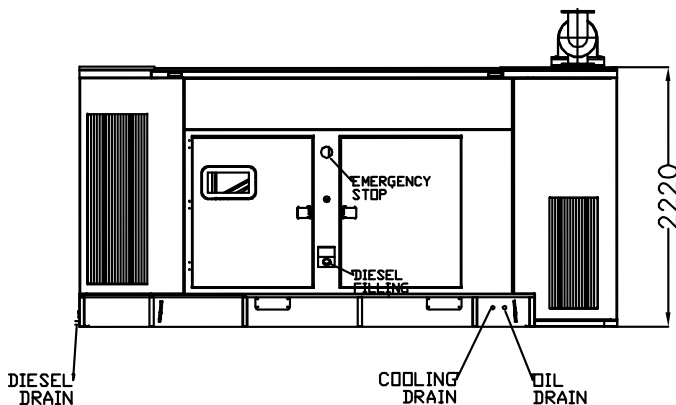
Dry, max., kg 4947



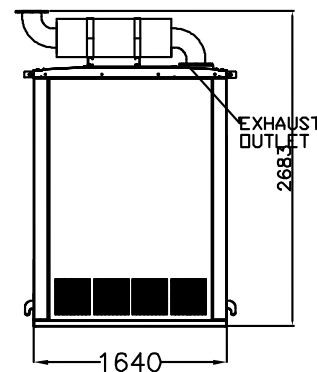
TOP VIEW



ALTERNATOR
END VIEW



ELEVATION RIGHT HAND SIDE



ENGINE END
VIEW

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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