HF-50GF | 50 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

Standby Power Rating
55 kW, 68.8 kVA, 60 Hz

Prime Power Rating*
50 kW, 62.5 kVA, 60 Hz

**EPA Certified Prime ratings are not available in the US or its Territories.*

Image used for illustration purposes only

CODES AND STANDARDS

Not all codes and standards apply to all configurations. Contact factory for details.

- UL2200, UL6200, UL1236, UL489, UL142
- CSA C22.2, ULC S601
- BS5514 and DIN 6271
- SAE J1349
- NFPA 37, 70, 99, 110
- NEC 700, 701, 702, 708
- NEMA ICS10, MG1, 250, ICS6, AB1
- ANSI C62.41
- IBC 2009, CBC 2010, IBC 2012, ASCE 7-05, ASCE 7-10, ICC-ES AC-156 (2012)

POWERING AHEAD

Haifeng Power delivers innovative design and superior manufacturing across its industrial generator line.

Haifeng Power provides superior quality by engineering and manufacturing core generator components, including alternators, enclosures and base tanks, control systems and communications software.

Haifeng Power selects only engines proven in heavy-duty industrial applications under adverse conditions, and is committed to service support that continues after the generator purchase.

SPEC SHEET

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HAIFENG POWER

STANDARD FEATURES

ENGINE SYSTEM
- Oil Drain Extension
- Heavy Duty Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer

FUEL SYSTEM
- Fuel Lockoff Solenoid
- Primary Fuel Filter

COOLING SYSTEM
- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze
- 120 VAC Coolant Heater

ELECTRICAL SYSTEM
- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM
- Alternator Protection System
- 12 Leads (3-Phase, Non 600V)
- Class H Insulation Material
- Vented Rotor
- 2/3 Pitch
- Skewed Stator
- Auxiliary Voltage Regulator Power Winding
- Sealed Bearings
- Automated Manufacturing (Winding, Insertion, Lacing, Varnishing)
- Rotor Dynamically Spin Balanced
- Amortisseur Winding
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET
- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Extended Limited Warranty (Standby Rated Units)
- 1 Year Extended Limited Warranty (Prime Rated Units)

ENCLOSURE (IF SELECTED)
- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuation Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- Textured Polyester Powder Coat Paint

FUEL TANK
- 10 Hour Capacity
- Double Wall
- Vents
- Factory Pressure Tested - 2 PSI
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

CONTROL SYSTEM
DSE7320 Digital Control Panel

PROGRAM FUNCTIONS
- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)
- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Modbus® Protocol
- Predictive Maintenance Algorithm
- Single Point Ground

FULL SYSTEM STATUS DISPLAY
- Power Output (kW)
- Power Factor
- kW Hours, Total, and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

ALARMS AND WARNINGS
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Overspeed
- Battery Voltage
- Time and Date Stamped
- Snap Shots of Key Operation Parameters
- Alarms Spelled Out (No Alarm Codes)

SPEC SHEET

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CONFIGURABLE OPTIONS

ENGINE SYSTEM
- Block Heater
- Oil Make-Up System
- Oil Heater
- Industrial Exhaust Silencer (Open Set Only)

FUEL SYSTEM
- Flexible Fuel Lines
- Primary Fuel Filter

ELECTRICAL SYSTEM
- 10A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM
- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating

CIRCUIT BREAKER OPTIONS
- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

GENERATOR SET
- Extended Factory Testing
- IBC Seismic Certification
- 8 Position Load Center

ENCLOSURE
- Weather Protected Enclosure
- Level 1 Sound Attenuated
- Level 2 Sound Attenuated
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory)
- AC/DC Enclosure Lighting Kit
- Spring or Pad Vibration Isolators

FUEL TANK
- Overfill Protection Valve
- Fuel Fill Drop Tube
- 5 Gal Spill Return Hose
- Tank Risers
- Vent Extensions
- Fire Rated Fuel Hose
- Fill Extensions

CONTROL SYSTEM
- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Mushroom-Type, Surface Mount)
- Remote E-Stop (Mushroom-Type, Flush Mount)
- 10A Engine Run Relay
- Ground Fault Annunciator

WARRANTY
- 2 Year Extended Limited Warranty
- 5 Year Extended Limited Warranty

ENGINEERED OPTIONS

ENGINE SYSTEM
- Coolant Heater Ball Valves
- Fluid Containment Pan

CONTROL SYSTEM
- Spare Inputs (x4) / Outputs (x4)
- Battery Disconnect Switch

ALTERNATOR SYSTEM
- 3rd Breaker System

GENERATOR SET
- Special Testing
- Motorized Dampers
- Door Open Alarm Horn

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HAIFENG POWER

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General	
Make	**Perkins 1104D-44TG1**
EPA Emissions Compliance	**EPA Tier 3 (Stationary Emergency)**
Cylinder #	**4**
Type	**In-line**
Displacement - in³ (L)	**269 (4.41)**
Bore - in (mm)	**4.13 (105)**
Stroke - in (mm)	**5.0 (127)**
Compression Ratio	**18.2:1**
Intake Air Method	**Turbocharged**
Cylinder Head	**Cast Iron**
Piston Type	**Aluminum**
Crankshaft Type	**Forged Steel**
Engine Governing	
Governor	**Electronic**
Frequency Regulation (Steady State)	**±0.5%**
Lubrication System	
Oil Pump Type	**Gear Driven**
Oil Filter Type	**Full-Flow Spin-On Cartridge**
Crankcase Oil Capacity - qt (L)	**8.9 (8.4)**

Cooling System	
Cooling System Type	**Closed Recovery**
Water Pump Type	**Belt-Driven, Centrifugal**
Fan Type	**Pusher**
Fan Speed - RPM	**2,250**
Fan Diameter - in (mm)	**22 (560)**
Fuel System	
Fuel Type	**Ultra Low Sulfur Diesel #2**
Fuel Specifications	**ASTM**
Fuel Filtering (Microns)	**5**
Fuel Inject Pump Make	**In-line Injection Pump**
Fuel Pump Type	**Engine Driven**
Injector Type	**Direct**
Engine Type	**Direct Injection**
Fuel Supply Line - in (mm)	**0.31 (7.92) NPT**
Fuel Return Line - in (mm)	**0.31 (7.92) NPT**
Engine Electrical System	
System Voltage	**12 VDC**
Battery Charger Alternator	**Standard**
Battery Size	**2 × 12 V (Group 31)**
Battery Voltage	**12 VDC**
Ground Polarity	**Negative**

ALTERNATOR SPECIFICATIONS

Standard Model	**Stamford UCI224E**
Poles	**4**
Field Type	**Revolving**
Insulation Class - Rotor	**H**
Insulation Class - Stator	**H**
Total Harmonic Distortion	**<5%**
Telephone Interference Factor (TIF)	**<50**

Standard Excitation	**Brushless, Self-Excited**
Bearings	**Single Sealed**
Coupling	**Direct, Flexible Disc**
Prototype Short Circuit Test	**Yes**
Voltage Regulator Type	**Digital AVR**
Number of Sensed Phases	**All**
Regulation Accuracy (Steady State)	**±1.0%**

SPEC SHEET

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HAIFENG POWER

OPERATING DATA

POWER RATINGS - DIESEL (STANDBY)

Connection	Power	Current
Single-Phase 120/240 VAC @1.0pf	50 kW	208 A
Three-Phase 120/240 VAC (high-leg) @0.8pf	50 kW	150 A
Three-Phase 120/208 VAC @0.8pf	50 kW	173 A
Three-Phase 277/480 VAC @0.8pf	50 kW	75 A
Three-Phase 346/600 VAC @0.8pf	50 kW	60 A

MOTOR STARTING CAPABILITIES (SKVA VS. VOLTAGE DIP)

277/480 VAC 3Ø	sKVA @30%	208/240 VAC 3Ø	sKVA @30%
UCI224E	98	UCI224E	75

Fuel Consumption Rates – Diesel gph (Lph), Standby	
25% Load	**1.3 (4.9)**
50% Load	**2.3 (8.7)**
75% Load	**3.3 (12.5)**
100% Load	**4.3 (16.4)**
Fuel Pump Lift - ft (m)	**3 (1)**
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)	**3.6 (13.5)**

Cooling (Standby)	
Coolant Flow - gpm (Lpm)	**12.2 (46)**
Coolant System Capacity - gal (L)	**4.4 (16.5)**
Heat Rejection to Coolant - BTU/hr (kW)	**135,900 (39.8)**
Inlet Air - cfm (m³/hr)	**7,500 (212)**
Maximum Operating Ambient Temperature - °F (°C)	**122 (50)**
Maximum Additional Radiator Backpressure - in H2O (kPa)	**0.5 (0.12)**

Combustion Air Requirements (Standby)	
Flow at Rated Power - cfm (m³/min)	**166 (4.7)**

Engine (Standby)	
Rated Engine Speed - RPM	**1,800**
Horsepower at Rated kW - hp	**84**
Piston Speed - ft/min (m/min)	**1,500 (457)**
BMEP - psi (kPa)	**138 (952)**

Exhaust (Standby)	
Exhaust Flow (Rated Output) - cfm (m³/min)	**448 (12.7)**
Maximum Allowable Backpressure - inHg (kPa)	**1.5 (5.1)**
Exhaust Temperature (Rated Output) - °F (°C)	**1,044 (562)**

*Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions. All performance ratings in accordance with BS5514 and DIN6271 standards. *Fuel supply installation must accommodate fuel consumption rates at 100% load.*

SPEC SHEET