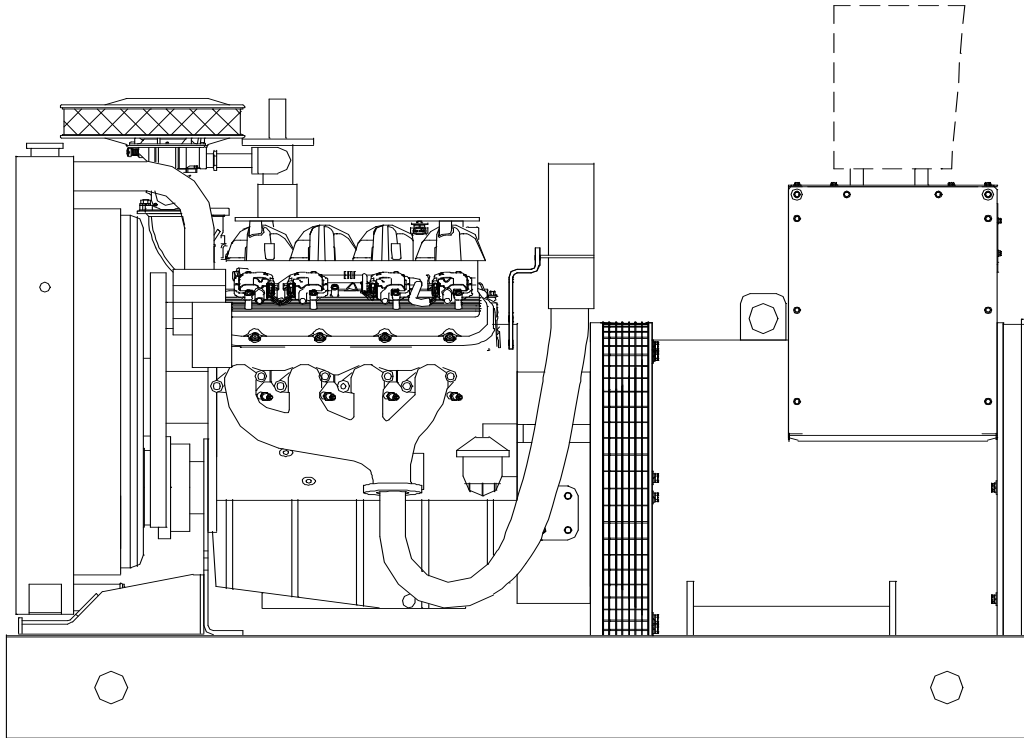


# LPG/NG

# 100F\*G4

## 100 KW @ 60 Hz. Stand-By Power

## 80 KW @ 60 Hz. Prime Power



- Katolight's commitment to quality has been an industry standard since 1952.
- Katolight specializes in custom designing any application to meet the customers' most stringent specifications.
- Each and every unit is factory tested. This can eliminate costly startup and installation delays.
- Katolight supplies a broad range of accessories, fully integrated to our generator sets, to match any requirement worldwide.
- All generator set components and accessories are covered by Katolight with a limited two-year warranty. Optional warranty periods are also available.
- Katolight product accepts 100% of nameplate rating, per NFPA 110.

Katolight Model	Volts	Hz	Phase	Power Factor	Standby Amps	Standby Ratings kW/kVA	Prime Ratings kW/kVA	Connection
100FRG4	277/480	60	3	0.8	150	100/125	80/100	12 LEAD HI WYE
100FPG4	120/208	60	3	0.8	347	100/125	80/100	12 LEAD LOW WYE
100FJG4	120/240	60	3	0.8	301	100/125	80/100	12 LEAD HI DELTA
100FNG4	347/600	60	3	0.8	120	100/125	80/100	4 LEAD WYE
100FNG4	120/240	60	1	1.0	417	97/97	78/78	12 LEAD ZIG-ZAG
100FDG4	120/240	60	1	1.0	417	100/100	80/80	4 LEAD

Derate 12-wire single phase 240 volt to 97 kW standby and 78 kW prime.

## STANDARD EQUIPMENT

### CONTROL PANEL

- Model #45 control panel
- AC voltmeter, 3<sup>1</sup>/<sub>2</sub>" , 2% accuracy
- AC ammeter, 3<sup>1</sup>/<sub>2</sub>" , 2% accuracy
- Combination VM/AM selector switch, 4 position
- Frequency meter, 3<sup>1</sup>/<sub>2</sub>" , 55-65 Hz.
- Vibration shock mounts (4)
- Engine control - KASSEC-12 VDC, with cyclic cranking timer
- 4 engine shutdowns with separate failure lights
  - \* High water temperature
  - \* Low oil pressure
  - \* Engine overspeed
  - \* Engine overcrank
- Engine gauges - 2"
  - \* Battery voltmeter
  - \* Water temperature
  - \* Oil pressure
  - \* Running time meter - 5 digits
- 3 position mode switch (auto-off-manual)

### ENGINE

- Air cleaner
- Oil pump
- Full flow oil filter
- Jacket water pump
- Thermostat
- Exhaust manifold - dry
- Blower fan & fan drive
- Radiator - unit mounted
- Vibration isolators - pad type
- Electric starting motor - 12v

### ENGINE (cont.)

- Governor – Electric Isochronous
- Base - formed steel
- Flywheel & Housing
- Charging alternator - 12v
- Battery box & cables
- Flexible fuel & exhaust connectors

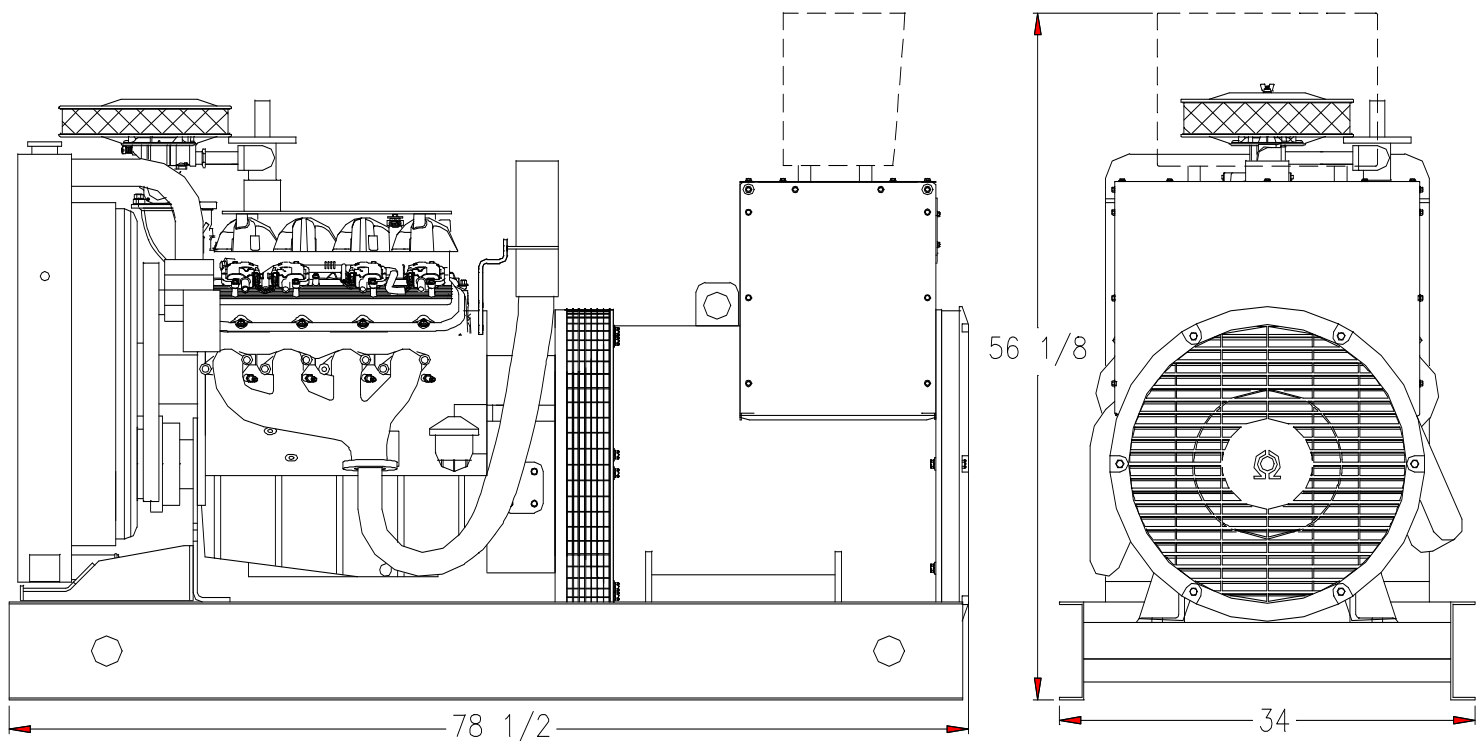
### GENERATOR

- A.C. Generator
- Brushless design
- Single bearing
- Direct connection with flex plate
- Class H insulation
- All models manufactured to meet NEMA MG1-22.4 and CSA standards
- Telephone influence factor is well within NEMA standards
- Wave form deviation factor is no more than 5%, well within NEMA standards
- Harmonic content is 3.0% maximum
- Permanently lubricated ball type bearings
- Generator is self-ventilated
- Drip-proof construction

### VOLTAGE REGULATOR

- Voltage adjust rheostat
- EMI filter (Internal Electromagnetic Interference)
- Underspeed protection
- Overexcitation protection
- Fully encapsulated
- Regulation - 1%

For illustration purposes only.



## ENGINE TECHNICAL DATA

60 Hz

Model: .....	8.1L	
Type: .....	4-Cycle	
Aspiration: .....	Natural	
Cylinder Arrangement: (Number, inline, V, etc.): .....	8-V	
Displacement - Cu. In. (lit) .....	494 (8.1)	
Bore - in. (cm) x stroke - in. (cm) .....	4.25 (10.8) x 4.5 (11.1)	
Compression Ratio: .....	9.1:1	
Rated RPM .....	1800	
Rating .....	<b>Standby</b>	<b>Prime</b>
BMEP: psi (kPa) .....	144 (993)	129 (889)
Maximum Power at Rated RPM – bhp (kW) .....	162 (121)	143 (107)

## INSTALLATION DATA \*

<b>Dimensions &amp; Weight</b>				
Length: in. (cm) .....	78.5 (199)			
Width: in. (cm) .....	34 (86)			
Height: in. (cm) .....	56.1 (142)			
Weight (dry): lb. (Kg) .....	1,400 (635)			
<b>Liquid Capacity</b>				
Total Oil System: gal (lit) .....	1.9 (7.1)			
Engine Jacket Water Capacity: gal (lit) .....	3.6 (13.7)			
System Coolant Capacity: gal (lit) .....	7.9 (29.9)			
<b>Electrical System</b>				
Electric Volts DC .....	12			
Cold Cranking Amps under 0°F (-17.8°C) .....	600			
<b>Exhaust System</b>				
Gas Temp. (Stack): °F (°C) .....	1,210 (654)	1,150 (621)		
Gas Volume at Stack Temp: CFM (m <sup>3</sup> /min) .....	735 (20.8)	685 (19.4)		
Maximum Allowable Back Pressure:				
in. H <sub>2</sub> O (kPa) .....	40.7 (10.2)	40.7 (10.2)		
Emissions - HC: g/hp-hr .....	0.82	C/F		
Emissions - CO: g/hp-hr .....	35.7	C/F		
Emissions - NO <sub>x</sub> : g/hp-hr .....	4.02	C/F		
<b>Cooling System</b>				
Ambient Capacity of Radiator: °F °C .....	118 (48)	118 (48)		
Maximum Allowable Static Pressure on Rad. Exhaust: in. H <sub>2</sub> O (kPa) .....				
	0.5 (.12)	0.5 (.12)		
Water Pump Capacity: gpm (lit/min) .....	36.9 (140)	36.9 (140)		
Heat Rejection to Coolant: BTUM (KW) .....	4,140 (73)	3,850 (68)		
Heat Radiated to Ambient: BTUM (kW) .....	3,564 (63)	3,324 (58)		
<b>Air Requirements</b>				
Aspirating: CFM (m <sup>3</sup> /min) .....	259 (7.3)	241 (6.8)		
Air Flow Required for Rad. Cooled Unit: CFM (m <sup>3</sup> /min) .....				
	12,112 (343)	11,510 (326)		
Air Flow Required for Heat Exchanger/Remote Rad. based on 20°F Rise: CFM (m <sup>3</sup> /min) .....				
	9,900 (280)	9,233 (261)		
<b>Fuel Consumption: (NG-1000 BTU/ft<sup>3</sup> / LP-2500 BTU/ft<sup>3</sup>)</b>				
	<b>NG</b>	<b>LPG</b>	<b>NG</b>	<b>LPG</b>
At 100% of Power Rating: ft <sup>3</sup> /hr (m <sup>3</sup> /hr) .....	1,180 (33.4)	602 (17.0)	1,100 (31.1)	561 (44.2)
At 75% of Power Rating: ft <sup>3</sup> /hr (m <sup>3</sup> /hr) .....	910 (25.8)	478 (13.5)	848 (24.0)	446 (12.6)
At 50% of Power Rating: ft <sup>3</sup> /hr (m <sup>3</sup> /hr) .....	840 (23.8)	390 (11.0)	782 (22.1)	364 (10.3)
<b>Sound Level Data ♦</b>				
Sound level at full load				
23 ft (7m) opu w/ critical grade muffler (dBA) .....	88	86		
23 ft (7m) Sound Attenuated Housing (dBA) .....	80	78		
Sound level at no load				
23 ft (7m) opu w/ critical grade muffler (dBA) .....	84	83		
23 ft (7m) Sound Attenuated Housing (dBA) .....	78	77		
<b>Deration Derate 7% for NG applications</b>				
Altitude				
3.5% per 1,000 ft above .....	3,000 ft			
3.5% per 305 m above .....	914 m			
Temperature				
3% per 10°F above .....	85 °F			
6% per 11°C above .....	29 °C			

\* Installation data based on 480 volt, 60 Hz. application and open power unit.

♦ For sound level readings with other Katolight housings, please contact factory.

Sound level data acquired per Test Method SAE J1074. Installation factors and site conditions can affect sound levels.

## Control Panel

\*\* NOTE: #45 series control panel is standard on all units, see page 2 of spec sheet for standard features.

- Model #45 Series Control Panel Options
  - Emergency stop button
  - Alarm buzzer with silencing switch
  - Auxiliary relay for dry contacts (2 max.)
  - A separate low water level light is optional
  - Hooded panel lights (2) and on/off switch
  - NEMA 12 Panel Face
  - Additional LED lights (4 max.) One or two of the following conditions may be indicated:
    - Y unit not in auto
    - Y low fuel level
    - Y low water level
    - Y low water temp.
    - Y EPS supplying load
    - Y pre-alarm oil
    - Y pre-alarm temp.
    - Y charger malfunction
- Model #50 Series Control Panel
  - STANDARD FEATURES: same as #45 series control panel except for these added features:
    - Hooded panel lights (2) and on/off switch
    - 4 Engine shutdowns
    - 12 light engine control package meeting NFPA-110 requirement
    - Repetitive alarm buzzer and silencing switch
    - Light and alarm press to test
- #50 SERIES OPTIONS
  - Emergency stop button
  - Additional space for one 3<sup>1</sup>/<sub>2</sub> meter
  - Auxiliary relay for dry contacts (2 max.)
  - A separate low water level light is optional
  - Additional LED lights (4 max.) One to four additional conditions may be indicated: customer to specify
  - NEMA 12 Panel Face
- Model #60 and #80 Series Custom Control Panels
  - It may be necessary to use a 60 or 80 series control panel on certain units where numerous options are required.
- Microprocessor Control Panel- KDGC
- KGM-250 Genmaster

## GEN-SET OPTIONS

### Cooling System

- Remote Radiator
- High Ambient Radiator
- Heat Exchanger Cooling
- Radiator Duct Flange

## Fuel System

- Fuel Strainer
- Dual Fuel
  - Y Manual Change-over
  - Y Auto Change-over

## Exhaust System

- Residential Grade Muffler
- Critical Grade Muffler
- Hospital Grade Muffler
- Rain Cap

## Engine Electrical System

- Battery
  - Y Lead-Acid
  - Y Nicad
- Battery Warmer Plate
- Battery Rack
- Battery Charger
  - Y Automatic
  - Y Trickle
  - Y Mounted & Wired

## Generator

- Main Line Circuit Breaker
  - Y Shunt trip
  - Y Auxiliary switch
- PMG Excitation & DVR 2000 Regulator
- Space Heaters 120/240 volt
- Special Testing
- Additional Temperature Rise Generators Available (80°C, 105°C, & 130°C)

## Additional Optional Equipment

- Spring vibration isolators
- Oil Drain Extension
- Housings
  - Y Sound Attenuated
  - Y Weather Proof
  - Y Aluminum
  - Y Interior lights AC or DC
  - Y Floor Plate
- Jacket Water Heater
- Crankcase Oil Heater
- Remote Annunciator
- 12 Light Annunciator
  - Y Flush Mounted
  - Y Surface Mounted
  - Y 4 additional lights, if needed
- Export Boxing
- Warranties
  - Y 1 Year
  - Y 2 Year
  - Y 5 Year
- Operating instructions under plexi-glass
- Service indicator light
- Wind rated enclosure