

# IDLC2000-2M

## Industrial Diesel Generator Set EPA Certified Stationary Emergency

### Standby Power Rating

2000 kW 2500 kVA 60 Hz

### Prime Power Rating\*

1800 kW 2250 kVA 60 Hz

\*EPA Certified Prime Ratings are not available in the US or its Territories

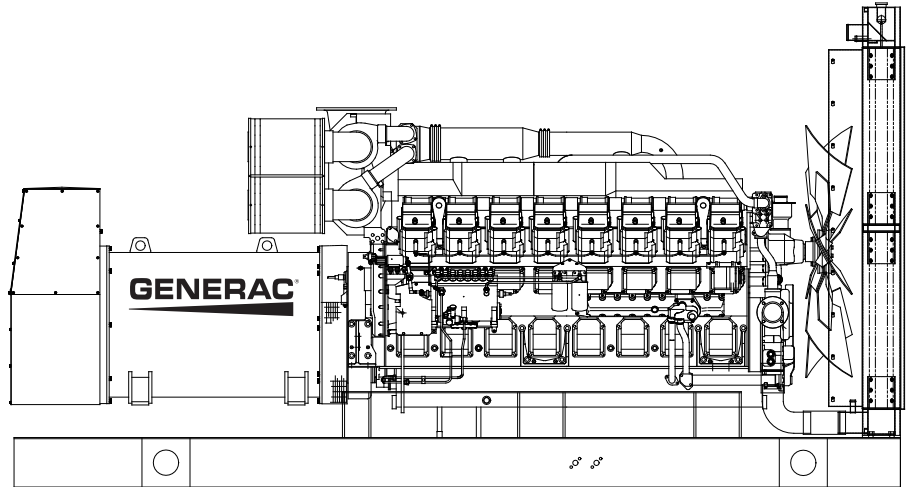


Image used for illustration purposes only

## Powering Ahead

For over 50 years, Generac has led the industry with innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac's gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial application under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.

## Standby and Prime Power Features

- ✓ Heavy-duty industrial diesel engine that meets the latest EPA emissions levels
- ✓ Brushless synchronous alternators with dynamic balancing and four pole construction
- ✓ Fully featured microprocessor based controller that's easy to use and field programmable for customized installations
- ✓ Generator sets are prototype tested and production tested to ensure easy startup
- ✓ Gen-set accepts rated load in one step
- ✓ Heavy duty construction that's designed for use in prime or standby applications
- ✓ Manufactured in a dedicated and secure ISO-9001 certified facility
- ✓ Generator sets are backed by a world wide network of parts and service centers
- ✓ Optional agency approvals available including UL2200 and NFPA110
- ✓ Optional environmental enclosures available including weather resistant, sound attenuated, containerized, and walk-in models
- ✓ Full range of genset accessories and factory installed options available

## Genset Ratings

Genset Model Number	Alternator	Voltage L-N / L-L	Phase	Hertz	150°C Rise Standby Rating		125°C Rise Prime Rating	
					kW / kVA	Amps	kW / kVA	Amps
IDLC2000-2M	PI734F-312	220/380	3	60	1716/2145	3263	1648/2060	3134
		240/416	3	60	1948/2435	3383	1800/2250	3126
		254/440	3	60	2000/2500	3284	1800/2250	2956
		277/480	3	60	2000/2500	3011	1800/2250	2710
	PI734F-07	347/600	3	60	2000/2500	2408	1800/2250	2168
	PI734G-312	220/380	3	60	1812/2265	3445	1744/2180	3316
		240/416	3	60	2000/2500	3474	1800/2250	3126
		254/440	3	60	2000/2500	3284	1800/2250	2956
277/480		3	60	2000/2500	3011	1800/2250	2710	

**NOTES:** Standby – Applicable for a varying emergency load for the duration of a utility power outage with no overload capability.

Prime – Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. A 10% overload capacity is available for 1 out of every 12 hours. The Prime Power option is only available on International applications.

Power ratings in accordance with ISO 8528-1, Second Edition dated 2005-06-01, definitions for Prime Power (PRP) and Emergency Standby Power (ESP).

## Alternator Specifications

Alternator Type	4-Pole, Rotating Field	Automatic Voltage Regulator	
Exciter Type	Brushless	PMG	Std MX321
Excitation System	PMG	Voltage Regulation	No Load to Full Load +/- 0.5%
Insulation	per NEMA MG1	PMG Regulator	
Material	Class H	Load Acceptance	100% of Rating, One Step
Standby Temp Rise	150°C	Subtransient Reactance	
Prime Temp Rise	125°C	480V, Per Unit	15%
Lead Connection	6 Lead, Reconnectable	TIF (1960 Weighting)	<50
Stator Pitch	2/3	Line Harmonics	5% Maximum
Amortisseur Winding	Full	Motor Starting kVA	30% Max Voltage Dip
Bearing	Single, Double Shielded	Alt @ 480V SkVA	PI734F-312 - 6600
Drive Coupling	Flexible Disk	Alt @ 480V SkVA	PI734G-312 - 3920
Unbalanced Load	20% of Standby Rating		

## Genset Controller Specifications

### Generac IntelliGen NT Features

- Large back-lit graphical LCD Display  
64x128 pixel resolution
- Sealed Membrane Panel to IP65
- Push Buttons for Simple Control  
Start, Stop, Fault Reset, Horn Reset, Mode,  
Page, and Enter Keys
- Display Metering and Protection
  - Oil Pressure Warning / Shutdown
  - High/Low Coolant Temperature Warning
  - High Coolant Temperature Shutdown
  - Low Coolant Level Shutdown
  - Low Fuel Level Warning / Shutdown
  - Over Speed Protection
  - Battery Voltage Under/Over Warning
  - Running Hour Meter
  - Generator Under/Over Volts Warn/Shutdown
  - Generator Under/Over Freq Warn/Shutdown
  - Generator Over Current Shutdown
  - Generator Output Metering for V1-V3, I1-I3,  
Hz, kW, kWh, kVA, kVAh
  - User Configurable Inputs and Outputs
  - Up to 500 Event Based History Records
  - Integrated PLC Programming Functions
  - Interface to Remote Display or  
Remote Annunciator
- Controller capable of Both Single or Multiple  
Gensets Operating in Standby or  
Parallel Modes

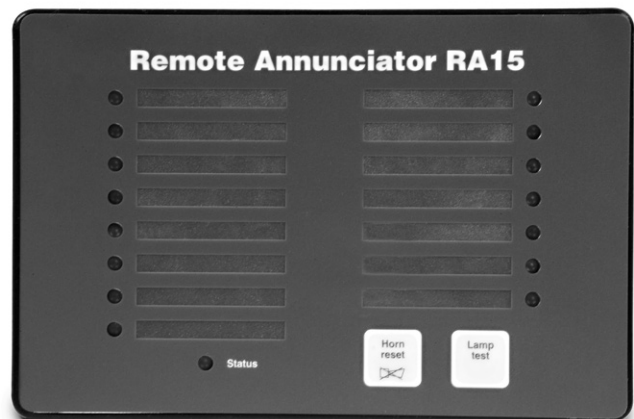


### NFPA110 Compliance

An optional Remote Annunciator is available to meet NFPA110 applications

### Remote Annunciator Features – RA15

- 15 LED Indicators with Function Labels
- Horn Reset and Lamp Test keys
- CAN Bus Connection for up to 600 Feet



## Engine Application Data

### Engine Specifications

Manufacturer	Mitsubishi
Engine Model #	S16R-Y2PTAW2-1
Engine Type	4 Cycle, 16 Cylinder
Induction System	Turbocharged, Inter Cooler
Displacement, L (in <sup>3</sup> )	65.4 (3989)
EPA Emissions Level	Tier 2
HP at Rated Speed BHP (kW <sub>m</sub> )	2923 (2181)
Rated RPM	1800
Bore and Stroke in(mm)	6.69 x 7.09 (170 x 180)
Compression Ratio	14.0:1
Air Filter Type	Dry
Governor Type/Model	Proact2
Governor Manufacturer	Woodward
Freq Reg NL to FL	Isochronous
Freq Reg Steady State	+/- 0.25%

### Engine Lubrication System

Oil Pan Capacity gal(L)	52.8 (200.0)
Oil Pan w/Filter	60.8 (230.0)
Oil Filter Quantity	4
Oil Filter Type	Cartridge
Oil Cooler	Water Cooled
Recommended Oil	15W-40
Oil Press psi(kPa)	71 (490)

### Engine Cooling System

Genset Max Ambient Temp °F(°C)	113 (45)
Engine Coolant Cap qt(L)	179.6 (169.9)
Engine + Radiator System Cap qt(L)	673.0 (636.8)
Water Pump Type	Centrifugal
Coolant Flow gpm (Lpm)	489 (1850.9)
Charge Cooler Flow gpm (Lpm)	243 (919.8)
Heat Rejected to Cooling Water @ Rated kW; Btu/min (kW)	44374 (780.0)
Heat Rejected to Charge Cooler @ Rated kW; Btu/min (kW)	44374 (780.0)
Heat Rejected to Ambient Air @ Rated kW; Btu/min (kW)	10240 (180.0)
Max Restriction of Cooling Air inH <sub>2</sub> O(kPa)	0.5 (0.124)

### Engine Exhaust System

Exhaust Manifold Type	Dry
Exhaust Flow @ Rated kW cfm(cmm)	19209 (544)
Exhaust Temp (dry manifold) °F(°C)	987 (516)
Max Back Pressure inH <sub>2</sub> O(kPa)	23.6 (5.9)
Exhaust Outlet Diameter in(mm)	13.39 (340)
Exhaust Outlet Type	JIS350A (approx 14")

### Engine Electrical System

Charging Alternator Volts dc	24
Charging Alternator Amps	30
Grounding Polarity	Negative
Starter Motor Volts dc	24
Battery Recommendations	
Battery Volts dc	24
Min Cold Cranking Amps	1100
Quantity Required	4

### Ventilation Requirements

Cooling Airflow scfm(cmm)	102700 (2909)
Combustion Airflow cfm(cmm)	7274 (206)
Heat Rejected to Ambient	
From Engine Btu/min(kW)	10240 (180)
From Alternator Btu/min(kW)	5687 (100)
Recommended Free Area Intake	
Louver Size ft <sup>2</sup> (m <sup>2</sup> )	220.0 (20.45)

### Engine Fuel System

Recommended Fuel	#2 Diesel
Fuel Line at Engine	
Supply Line Min ID in(mm)	1 (25)
Return Line Min ID in(mm)	1 (25)
Fuel Pump Type	Engine Driven
Fuel Pump Max Lift ft (m)	3 (1)
Max Flow to Pump gph(Lph)	330.3 (1250.2)
Fuel Filter	
Secondary Filter	4 µm
Secondary Water Separator	Not Included
Primary Filter	Optional
Primary Water Separator	Optional

### Fuel Consumption – Standby Rating

100% Load gph(Lph)	159.4 (603.3)
75% Load gph(Lph)	117 (442.8)
50% Load gph(Lph)	80.8 (305.8)
25% Load gph(Lph)	46.2 (174.9)

### Fuel Consumption – Prime Rating

100% Load gph(Lph)	145 (548.8)
75% Load gph(Lph)	106.5 (403.1)
50% Load gph(Lph)	73.6 (278.6)
25% Load gph(Lph)	42.1 (159.3)

### Engine Output Deratings - Standby

Rated Temp	40°C
Rated Altitude	1500 m
Max Altitude	5000 m
Temperature Derate	-5% / 10°C
Altitude Derate	-1% / 100 m

## Additional Standard Genset Features

- ✓ Structural Steel Sub-Base
- ✓ Sub-Base Lifting Eyes
- ✓ Unit Mounted Radiator
- ✓ Radiator Mounted Fan
- ✓ Fan Guard
- ✓ Battery Charging Alternator
- ✓ Battery Rack and Cables
- ✓ Unit Mounted Control Panel
- ✓ Spin-On Filters for Oil and Fuel
- ✓ Enamel Finish
- ✓ One Set - Operation / Maintenance Manual
- ✓ Factory Tested Prior to Shipment
- ✓ Limited Warranty

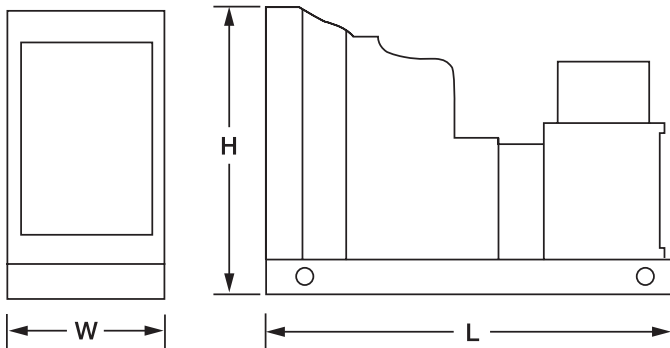
## Optional Agency Approvals

- UL2200 (Review Option Availability)
- NFPA110 (Request Remote Annunciator)

## Weight and Dimensions (Open Unit)

Weight – Wet lb(kg)	32190 (14601)
Overall Dimensions	Length x Width x Height
inches	236 x 107 x 114
mm	5994 x 2718 x 2896

Note: Drawing is provided for reference only. Use engineering outline for installation planning



## Available Accessories and Options

### Open Unit

- Industrial Silencer     Residential Silencer
- Critical Silencer     Super Critical Silencer
- Exhaust Flex Pipe     Rain Cap
- Radiator Duct Flange

### Enclosed Units

- Weather Resistant Enclosure
- Sound Attenuated w/Internal Critical Silencer
- ISO Container     Walk-In Enclosure

### Alternator Accessories

- PMG Exciter and AVR Upgrade
- Alternator Space Heater
- Exciter Field Circuit Breaker
- Alternator Drip Shield

### Genset Accessories

- Voltage Adjust Potentiometer
- Starting Battery
- Battery Charger     Auto/Float
- Auto/Float Equalize Timer     Manual     Automatic
- Battery Heater
- Engine Coolant Heater
- Oil & Coolant Drain Valves (Engine/Radiator)
- Oil & Coolant Drain Extended to Base
- Main Output Breaker     Wall Mount     Unit Mount
- Transfer Switch     Manual     Automatic

### Control Panel

- Remote Annunciator
- Remote Communications
- Remote E-Stop

### Fuel System and Sub-Base Fuel Tank

- Sub-Base Tank     Single Wall     Double Wall
- UL142 Double Wall with Containment
- Tank Run Time @ 100% Load
  - 12-16 Hours     24-36 Hours
- Flex Fuel Line
- Primary Fuel / Water Separator

### Vibration Isolators

- Location     Under Tank     Between Tank
- Elastomer Isolator     Pad Isolator
- Standard Spring     Spring for Seismic Zone 4

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