



# RS 20000

## Residential Standby GenSet

### Model 20 GGMA

### Gaseous Fueled 60 Hz



## Residential GenSet

- **Very Quiet Operation - 66 dB(A) at 7 m**
- **Aluminum weather resistant housing**
- **Fully Automatic Operation when used with an Onan Automatic Transfer Panel**
- **Available for use with Natural Gas or LP Vapor**
- **Attractive and Discreet Housing**
- **Electronic Governor for Precise Frequency Control**
- **Includes 120 V Coolant Heater**
- **Listed to UL 2200**

## Models and Ratings

<u>Order Model</u>	<u>Fuel</u>	<u>Voltage</u>	<u>Rated kW</u>	<u>kVa</u>	<u>Rated Amps</u>	<u>Circuit Breaker</u>
20GGMA-6110	Nat. Gas	120/240	20	25	83.3	90-Amp, 2-Pole
20GGMA-6111	LP Vapor	120/240	20	25	83.3	90 Amp, 2-Pole

Ratings apply to altitudes up to 3500 ft (1829 m), 85°F (30°C). Total Power available will decrease 5% for each 1000 ft (305 m) above sea level and 1.0% for each 10°F (5.5°C) increase in ambient temperature above 85°F (30°C)

## Weight, Size and Sound Level

- 1105 lb (501 kg)
- Footprint Dimensions (for recommended installation): Length: 64.4 in (1635 mm); width: 30 in (762 mm); height: 46.7 in (1184.89 mm)
- Overall Dimensions: Length 85.3 in (2166.68 mm); width: 30 in (762 mm); height: 46.7 in (1184.89 mm)
- 66 dB(A) at 7 m, average

## Site Derating Factors:

Natural Gas

Engine power available up to 3000 ft (915 m) at ambient temperatures up to 104° F (40° C). Above 3000 ft (915 m) derate at 4% per 1000 ft (305 m), and 1.1% per 10° F (2% per 10° C) above 104° F (40° C).

Propane

Engine power available up to 3000 ft (915 m) at ambient temperatures up to 104° F (40° C). Above 3000 ft (915 m) derate at 4% per 1000 ft (305 m), and 1.1% per 10° F (2% per 10° C) above 104° F (40° C).

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## Engine Facts

**Engine:** GM Industrial, spark-ignited  
**Design:** In-line 4-cylinder, liquid-cooled  
**Compression Ratio:** 10:5:1  
**Displacement:** 181 cu in (3.0 L)

**Cooling System:** 127° F (53° C) ambient cooling system  
**Oil Sump Capacity:** 4.5 qt (4.3 L) with filter  
**Operating Speed:** 1800 RPM

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## Engine Features

- Electronic ignition
  - Electronic governor
  - Full-pressure lubrication
  - High-capacity oil sump, spin-on oil filter
  - Solenoid shift starter
  - 60-amp, engine-driven battery charger
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## Exhaust Muffler

- Enclosed exhaust silencer
  - Low noise
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## Control System Features

- Automatic remote starting
  - Controls generator set starting and shutdown
  - Control components designed to withstand the vibration levels typical in generator sets
  - Field circuit breaker
  - High temperature, low oil pressure, overcrank and overspeed shutdowns
  - Running time meter
  - 90-amp UL-listed circuit breaker
  - DC control fuse
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## Generator Details

**Design:** Brushless, revolving field, single bearing, 4-pole, drip-proof construction

**Insulation System:** Class H per NEMA MG1-1.65 and BS2757

**Temperature Rise:** At rated load is less than 125°C at standby rating, per NEMA MG1.22.40, IEEE 115 and IEC 34-1

**Exciter Type:** The excitation system derives is a self (shant) excited system with the voltage directly from the generator set output.

**Alternator Cooling:** Direct drive centrifugal blower

**Rotor:** Supported by a pre-lubricated maintenance-free ball bearing

**AC Wave form Total Harmonic Distortion:** less than 5% total no load to full load

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## GenSet Performance

**Voltage:** 120/240 VAC, single phase, 1.0 pf

**Voltage Regulation:** ±1%, no load to full load

**Frequency Regulation:** Isochronous, 0% no load to full load

**Random Frequency Variation:** ±0.5% @ 60 Hz

**Operating Temperature:** -10° F (-23.3° C) or -20° F with optional coolant heater to 104° F (40° C)

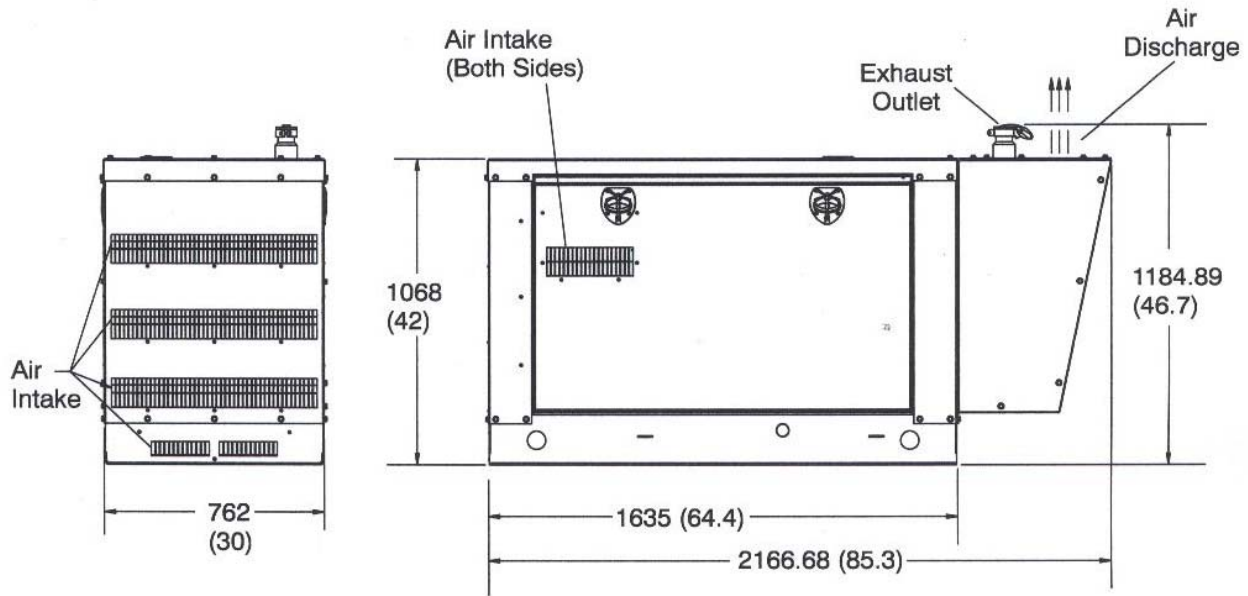
### Fuel Consumption-Natural Gas

Load:	1/4	1/2	3/4	Full
Cfh:	151.7	208.4	269.1	334.8
m <sup>3</sup> /hr:	4.3	5.9	7.6	9.5

### Fuel Consumption-Propane

Load:	1/4	1/2	3/4	Full
Cfh:	52.8	72.3	93.1	115.6
m <sup>3</sup> /hr:	1.5	2.0	2.6	3.3

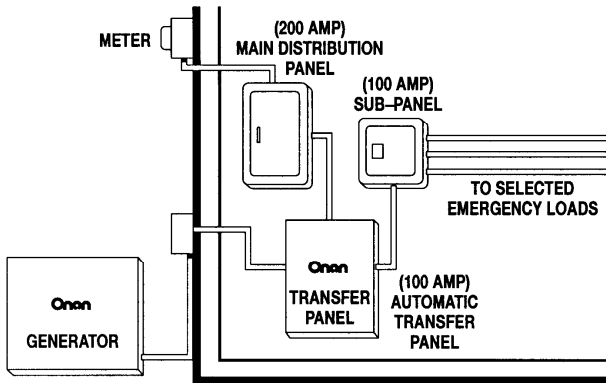
# Basic Dimensions



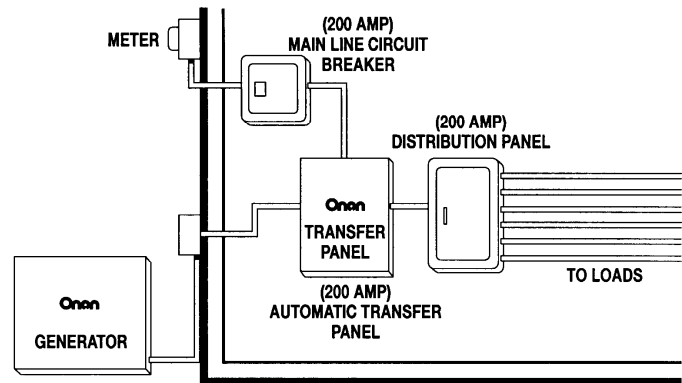
mm(in)

Drawing Reference Number 0500-4511 or 500-4512

# Automatic Transfer Panel Configurations



**Dedicated Emergency Standby Service System (100 Amp)**



**Full-Service Rating Standby System (200 Amp)**

100&200

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## Housing Features

- Weather protective design, two easy service access doors -- key-lockable
- Internal starting battery tray and tie down
- Heavy-duty aluminum housing

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## Options and Accessories

- Battery, 12 V, 325 cca (Part #416-0774)
- Battery heater kit (Part #333-0469)
- Full line of complementing automatic transfer panels

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## Warranty Policy

The Onan RS 20000 Home Standby System comes with a standard one-year warranty. Additional two and five-year warranty options are available. See your certified distributor or dealer for details.

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## After Sale Support

**GENUINE ONAN MAINTENANCE CARE PARTS AND PRODUCTS** - For your ongoing satisfaction and the dependability of your Onan genset, Onan offers a complete line of parts, oil and maintenance chemicals specifically designed for Onan gensets and available at your nearby Onan dealer.

**EASY TO LOCATE CERTIFIED ONAN SERVICE AND PARTS DEALERS** - Onan has trained, tested and certified over 1000 authorized Onan Service Dealers covering most major metropolitan areas in the U.S. and Canada. To easily locate the certified Onan Service Dealer no matter where you travel, call 1-800-888-ONAN or look in the yellow pages under "generators, electric".

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See your distributor for more information



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CSA-certified for electrical equipment. Meets CSA C22.2



**Important:** Backfeed to a utility system can cause electrocution and/or property damage. Do not connect to any building's electrical system except through an approved device or after building main switch is open. Standby Rating based on: Applicable for supplying emergency power for the duration of normal power interruption. No sustained overload capability is available for this rating. (Equivalent to Fuel Stop Power in accordance with ISO3046, AS2789, DIN6271, and BS5514.) Nominally rated. (See T-030 document for more information.)