

SMART FROG A/C  
Utility Grid Interactive  
Demand Response  
Load Shedding  
Blended Grid



## Product Data

### Features / Benefits

#### Generation

- 7kw backup generator

#### Solar Ready

- 4kw solar plug & play

#### Customer incentives

- Demand response
- Utilizing natural gas, solar power and grid power for optimal energy savings

#### Reliability

- R-410A refrigerant – environmentally sound, won't deplete ozone layer and low lifetime service cost
- Front – seating service values
- Inverter control drives compressor
- Intelligence monitors critical system parameters
- High pressure switch
- Suction pressure transducer
- Compressor discharge temperature
- Filter drier (field installed)

#### Energy Efficiency

- We are proud to announce PGC's future plans to publish a SEER rating on our 5 ton Smart Frog air conditioning system. It will be a range of 17 to 23 SEERs depending on communicating systems or non-communicating systems.

#### Durability

- Durable carbon fiber ABS Housing
- Microtube Technology™ refrigeration system
- Epoxy dip & electroplated

#### Sound

- Sound Level as low as 55 dBA in low speed
- Soft start and smooth ramp to operating speeds

#### Applications

- Line set up to 100 ft. (30.5 m) equivalent length
- No long-line accessories required
- Oil Separator

#### Comfort

- Variable speed compressor operate range from as wide as 2 ton to 5 ton
- Ratings provided with 2-stage thermostats, suitable communicating and non-communicating indoor products for 2-stage operation

#### Flexibility and installation:

- 2 or 4 control wires to outdoor unit
- Compatible with non-communicating thermostats



Smart Frog air conditioner offers high-efficiency variable speed performance in a remarkably small cabinet and provides up to 23 SEER cooling efficiency. The variable speed inverter capacity control delivers operation for exceptional load matching, dehumidification and zoning performance. This product has been designed and manufactured to provide flexible system matching and work with a wide variety of indoor units and controls.

**NOTE: Ratings and certifications contained in this document are pending final approval and are subject to change at any time.**



## Standard Features

Features	Unit Size - Voltage, Series	
	36	60
Variable speed rotary compressor	X	
Scroll Variable		X
Internal Pressure and Temperature Protection	X	X
Air - cooled integrated inverter drive	X	X
Field installed filter drier	X	X
Front seating service valves	X	X
Coil guard	X	X
Outdoor air temperature sensor	X	X
Suction pressure transducer	X	X
Enhanced diagnostics	X	X
R-410A refrigerant	X	X
Energy tracking capability	X	X
High pressure switch	X	X

## PHYSICAL DATA

Unit Size Series	36-A	60-A
<b>Compressor Type</b>	Variable Speed Rotary	Scroll Variable
<b>Refrigerant</b>	R-410A	
<b>Control</b>	TXV	
<b>Charge lb (kg)</b>	7	12.05
<b>COND FAN</b>		
<b>Air Qty (CFM)</b>	2500	4500
<b>Motor HP</b>	1/3	1/3
<b>Motor RPM</b>	3 speed up to 1050	3 speed up to 1050
<b>VALVE CONNECT</b>		
<b>Vapor</b>	3/4	7/8
<b>Liquid</b>	3/8	

### Maximum Total Equivalent Length - Outdoor Unit BELOW Indoor Unit

Size	Liquid Line Diameter	0-20 (0 - 6.1)	21 - 30 (6.4 - 9.1)	31 - 40 (9.4 - 12.2)	41 - 50 (12.5 - 15.2)	51-60 (15.5 - 18.3)	61 - 70 (18.6 - 21.3)	71 - 80 (21.6 - 24.4)
3 -Ton	3/8	100*	100*	100*	100*	100*	100*	100*
5 - Ton	3/8	100*	100*	100*	100*	100*	100*	--

\*maximum actual length not exceed 100ft (30.5 m)

† Total equivalent length accounts for losses due to elbows or fitting.

-- = outside acceptable range

# Smart Frog AC Inverter

The Smart Frog AC's built-in grid-connected inverter works in 1KW-5KW power range and solar panels are all that is needed to begin producing solar energy with the Smart Frog AC.

## Features

- The maximum efficiency of the inverter can reach 97.50%
- MPPT efficiency >99.50%
- Non-fan design
- Internal GFCI device
- Built-in leakage current protection device
- IP65 protection
- Transformer-less design
- External DC switch
- RS232 & RS485 communication
- Meet RoHS
- Designed for hanging with simple and easy installation



## Solar Inverter Specifications

Specifications	PGC Inverter	Specifications	PGC Inverter
Max. DC Power	4540W	Max. Continuous Output Current	21.9A/19A
Max. DC Voltage	550V	Max. Continuous Output Power	4000W
Max. Input Current	19A	Max. Output Power	4400W
Max. Input Short Circuit Current	52A	Max. Output Current	24A
System Start-Up Voltage	150V	Max. Output Overcurrent Protection	30A
Full load Voltage Range MPPT	250V-440V	Utility Interconnection Voltage and Frequency Trip Times	V:< 530 mS F:< 100 mS
Range of Input Operating Voltage	110V-530V	THD of AC Current	<3%
Max. Input Source Backfeed Current to Input Source	0A	Power Factors	0.99
DC Voltage Ripple	<5%	Number of Feed-In Phases	Single-Phase
Number of MPP Trackers	1	Max. Efficiency	97.5%
Max. Number of Strings	2	Euro ETA	97.0%
Operating Voltage Range	183-228V@208V 211-264V@240V	CEC Efficiency	97.5%
Operating Frequency Range	59.3-60.5Hz	MPPT Efficiency	99.5%
Nominal Output Frequency	60Hz	Normal Operation	-25C-+60C
Nominal Output Voltage	208V/240V	Output Power Temperature Derating and Max. Full Power Operating Ambient	45C
		Enclosure	Type 3R

# PGC7000 Generator



Rated AC output Continuous	7000W
Power Output	240VAC - 1PH
Over Current Protection	30A
Frequency	60HZ
Fuel Type	Natural Gas (NG) & Propane
Cooling System	Air Cooled