

**UL2200 GASEOUS GENERATOR SET**
**FUEL: GASEOUS**
**ENGINE: FORD**
**SPECIFICATION SHEET**

Power Ratings	Standby		Prime	
Gaseous Fuel	kW	kVA	kW	kVA
VPG	32.0	40.0	28.8	36.0
Natural Gas (NG)	30.0	37.5	27.0	33.8
Ampage 0.8 PF 208V	111		100	
12-wire voltages: 1P = 120/240; 3P = 120/208, 120/240, 480/277				

**Rating Definitions: Rated for 1800 rpm.**

Standby ratings are applicable for the duration of any power outage. No overload is available at these ratings. Prime ratings are continuous per BS 5514, DIN 6271, ISO3046 & IEC 34-1. Overload capacity on prime-power ratings is 10% for one hour in each twelve hours of operation. All single phase ratings are based on a 1.0 power factor, three (3) phase ratings based on a 0.8 power factor. Ratings are established based on 85°F (29°C) and an elevation of 1,000 feet (305 meters).

**STANDARD FEATURES:**

Tradewinds Power Corp (TPC) Gaseous FORD powered generator sets are UL2200 approved self contained standby generator packages complete with mounted auto control panel, gas connections, air cleaners, exhaust silencers, and other accessories mounted in a weather protective enclosure. All TPC systems and components are prototyped, assembled and tested within a purpose built packaging, manufacturing, and test facility.

**Engine:**

- FORD 2.5L gaseous engine
- Full ECU engine control with coil-on-plug variable timing ignition
- Integrated knock sensing and control
- Heavy duty rated for standby and continuous prime power operation
- Cooling system capable of operation at 120°F ambient
- FORD 4-cycle gaseous-fueled engine is constructed for long-life, and heavy-duty operation, is EPA certified, spark-ignited, and designed for maximum reliability and durability.
- Water-cooled and stoichiometric with replaceable dry cylinder liners
- Cast iron block and heads with overhead valve configuration
- Thermostatically controlled jacket water heater

**Alternator:**

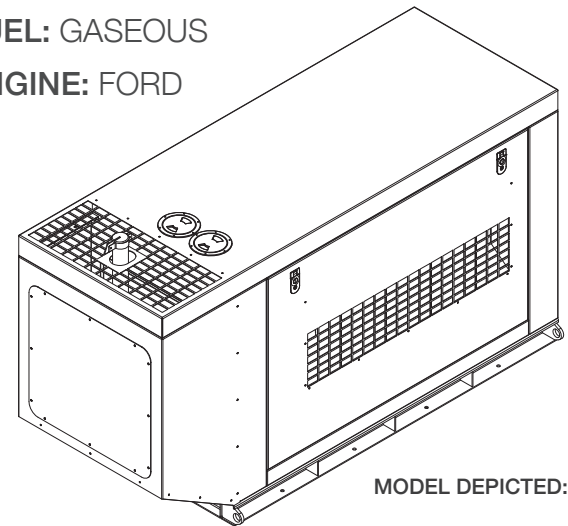
- Marathon 4-pole, 12-wire brushless generator, single bearing
- Alternators are oversized with volts per hertz tracking with PMG for enhanced motor starting for engineers to standardize on one package
- Superior voltage waveform achieved by a 2/3 pitch and skewed rotor.
- Vacuum-impregnated windings with fungus-resistant epoxy for dependability and long-life
- Sustained short-circuit capability enabling down-line circuit breakers to trip without collapsing the generator field

**Starting System:**

- 12-VDC Starter
- Engine mounted Battery Charging Alternator
- Battery Cables and Rack along with Grounding Strap

**Enclosure and Arrangement of Complete Assembly:**

- Engine and generator close coupled mounted on vibration isolators
- Weather Protective Enclosure constructed of Marine Grade Aluminum 0.125 thickness, SS Hardware, white powder coat paint finish on both sides, sound Insulation resistant to high temperatures, fuel and oil, hinged / removable / keyed alike doors
- Residential rated interior mounted exhaust silencer kit
- Vertical radiator and exhaust discharge
- Oil & Coolant Drain Lines with Brass Ball Check Valves
- 175mph wind load rating


**MODEL DEPICTED: TF30**
**AUTOMATIC ENGINE CONTROLLER DGC2020:**

- Automatic engine controller with analog display of all functions
- Microprocessor Based, Navigation key with large LCD display
- SAE J1939 CANBUS Communication
- Event Recording
- Transfer Switch Control (main failures)
- Alternator Protection: under/over voltage, under/over frequency
- Engine Protection: Low oil pressure, High coolant temperature, Over speed & over crank, Sender Unit failure, Fuel Failure sensor, Battery Charger Failure
- All protections are programmable as Alarms or Pre-alarms
- Metering ( ample range ): Volts, Current, Hz, Watts, VA, Pf, Oil Pressure, Coolant Temperature, RPM, DC Volts, Fuel pressure, Engine running time
- Engine Control with Timers
- External remote start input (on or off load)
- 16 programmable contact inputs - 7 Contact outputs

**SCADA interface points:**

- No fuel
- Low battery charging voltage
- Engine running
- Common engine alarm
- Switch in Emergency Position


**DGC-2020 DIGITAL CONTROLLER**
**OPTIONAL EQUIPMENT:**

- Low coolant level switch
- Water separator fuel filter
- Space heater
- Generator drip covers
- 17-light remote annunciator panel

**WARRANTY:**

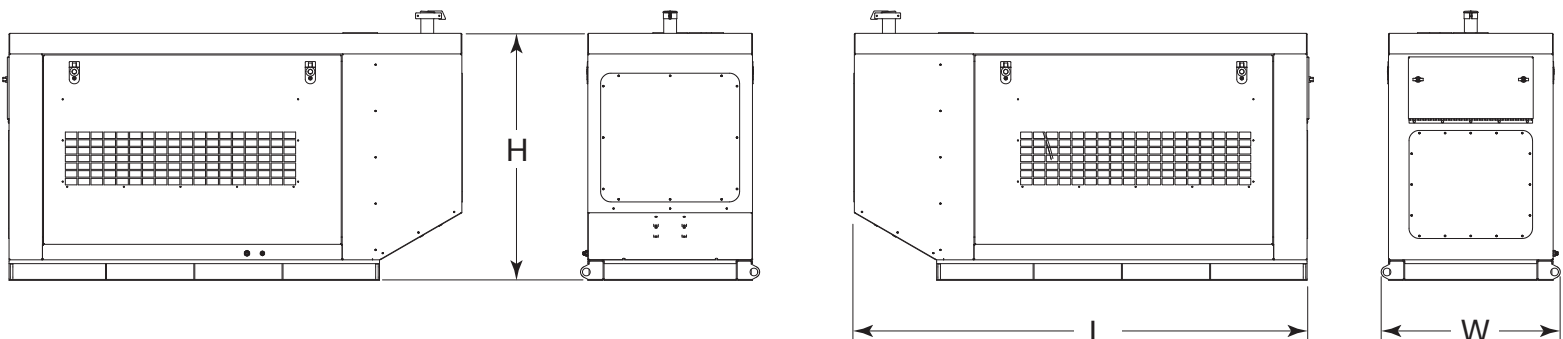
- Engine covered under the original equipment manufacturer's warranty - consult Tradewinds Power Corp for details
- Complete package supplied with 2-year limited warranty

*The manufacture reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.*

**FORD UL2200 GASEOUS GENERATOR SET**

ENGINE SPECIFICATION:	
Manufacturer	FORD
Model	MSG-425
Emissions	EPA Tier 3
Engine speed (rpm)	1800
Max. Nominal Engine hp 1800rpm	VPG 49hp NG 47.5hp
Cylinder arrangement	Inline
Combustion system	Spark Ignition
Aspiration	Natural
Engine type	Gaseous LPG/NG
Gaseous Fuel	Air-valve Mixer based fueling
Number of Cylinders	4
Displacement in <sup>3</sup> (liters)	152.5 (2.5)
Bore and Stroke inches (mm)	3.5 X 3.93 (89 x 100)
Cooling	Water-cooled
Governor	Electronic Throttle Body
Starting aids	NA
Compression ratio	9.7:1
Air cleaner type	Medium duty dry type
Exhaust After-treatment	3-way Catalyst
Fuel switch	Fuel Cut-off Valve
COOLING SYSTEM FOR OPERATING AT 120°F AMBIENT:	
Cooling System	Water-cooled
Engine Coolant Capacity quarts (Liters)	TBA
Fan	Belt driven pusher fan
Radiator	Engine mounted
Air flow - lb/hr NG (LPG)	TBA
LUBRICATING SYSTEM:	
Total lubricating capacity quarts (Liter)	7.0 (6.63)
Recommended lubricating oil grade	SAE 5W30
Oil Pressure – psi (bars)	TBA
Maximum Allowable Oil Temperature F (C)	TBA

ENGINE ELECTRICAL SYSTEM:	
Starting motor voltage	12 volt
Charger	65 A Alternator with DC output
Wet Cell Battery	Lead Acid
ALTERNATOR:	
Configuration	Brushless, 12-wire, 4-pole
Frequency	60 Hz
Voltage regulation	+ / - 1%, V/Hz, Electronic, EMI filtered
No load to full load voltage regulation	+/- 0.5%.
Coupling	SAE Adapter, Flexible Disc, Direct
Bearing	Single
Manufacturer	Marathon
Model	284-1742
Load acceptance	One Step, 100% per NFPA 110
Compliance	NEMA, IEEE & ANSI for temp. rise
Construction	Self ventilated drip-proof
FUEL CONSUMPTION: lb/hp-hr LPG (NG) STANDBY RATING	
100%	36.5 (6.8)
75%	TBA
50%	TBA
25%	TBA
CONTROL PANEL SPECIFICATIONS:	
Model	DGC2020
Microprocessor based	Navigation key & large LCD display
Operating power	Nominal 12-24 VDC
Consumption	14.2W run mode
Remote communication capability	Optional
ENCLOSURE AND ARRANGEMENT OF COMPLETE ASSEMBLY:	
Coupling	Close coupled to flywheel flange
Enclosure	Aluminum for weather protection
Base arrangement	Rigid steel base frame with AVMS
Spill containment	For Oil and Coolant

**DIMENSIONS & ARRANGEMENT DRAWING UL2200 MODEL: TF30**

**KEY DIMENSIONS AND WEIGHT**

Description	Height	Length	Width	Weight lbs (Kg)
Dimensions inches	48.00	88.00	32.00	1265 (575)