

# **SPECIFICATION SHEET**

Power Ratings		kW	kVA	
Dames	Standby	450.0	562.5	
Power	Prime	405.0	506.3	
Amps 0.8 Power Factor 3-p	1563			
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 80°F (29°C) and an elevation of 1,000 feet (305 meters).

#### STANDARD FEATURES:

Tradewinds Power Corp (TPC) PERKINS diesel powered generator sets are UL2200 approved self contained standby generator packages complete with mounted auto control panel, fuel connector, air cleaners, exhaust silencers, and other accessories mounted on a rigid base frame. All TPC systems and components are prototyped, assembled and tested within a purpose built packaging, manufacturing, and test facility.

### Engine:

- PERKINS model 2506D-E15TAG3 6-cylinder diesel engines designed to provide economic and durable operation at prime and standby duties, hitting the key power nodes required by the power generation industry.
- Flexible packaging of the 6-cylinder engines caters for the space you have available, and with mechanically operated unit fuel injectors, electronic control and carefully matched turbocharging, our 2500 range gives you performance and economy
- Its premium features provide exceptional power to weight ratio resulting in exceptional fuel consumption
- · Designed to provide excellent service access for ease of maintenance
- · High compression ratios ensure clean rapid starting in all conditions
- Spin-on full-flow lub oil filter

### Alternator:

- · Marathon 4-pole, 12-wire brushless generator, single bearing
- 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:

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

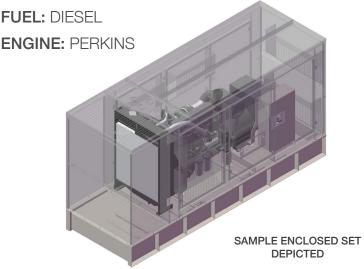
### Enclosure and Arrangement of Complete Assembly:

- Engine and generator close coupled on rigid frame with vibration isolators
- · Vertical radiator and exhaust discharge
- · Oil & Coolant Drain Lines with Brass Ball Check Valves

### Generator Options:

- 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
- UL double wall base mounted fuel tank
- · Residential rated interior mounted exhaust silencer kit

## STANDBY UL GENERATOR SET



### **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 Level, 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 CONTROL 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.





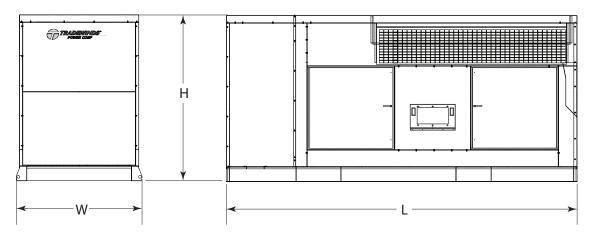
# STANDBY UL2200 GENERATOR SET

Engine speed (rpm)  Nominal Engine hp 1800rpm  689  Cyclinder arrangement  Combustion system  Aspiration  Engine type  Diesel  Diesel Fuel Grade  Number of Cylinders  Displacement in³ (liters)  Bore and Stroke inches (mm)  Cooling  Governor  Starting aids  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Maximum Allowable Oil Temperature F (C)  Liubricating system:  Total lubricating capacity quarts (Liter)  Total lubricating capacity quarts (Liter)  Total Iubricating capacity quarts (Liter)  Total Iubricating capacity quarts (Liter)  Total lubricating capacity quarts (Liter)	ENGINE SPECIFICATION	
Emissions Engine speed (rpm) 1800 Nominal Engine hp 1800rpm 689 Cyclinder arrangement Vertical inline Combustion system Direct Injection Aspiration Engine type Diesel Diesel Fuel Grade Nomber of Cylinders Displacement in³ (liters) Bore and Stroke inches (mm) Cooling Governor Starting aids Compression ratio Air cleaner type Exhaust Silencer dBA Oil Filter COOLING SYSTEM FOR OPERATING AT 120° AMBIENT: Total coolant capacity gals (Liter) Diesel Fuel Grade Maximum Allowable Oil Temperature F (C) Coli consumption at full load Recommended lubricating oil grade SAE 15W40  Vertical inline 1800 Nominal Engine Mounted Nertical inline Nertic	Manufacturer	Perkins
Engine speed (rpm)  Nominal Engine hp 1800rpm  689  Cyclinder arrangement  Combustion system  Aspiration  Engine type  Diesel  Diesel Fuel Grade  Number of Cylinders  Bore and Stroke inches (mm)  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Cyclinder ASTM D975 D2  ASTM D975 D2	Model	2506A-E15TAG3
Nominal Engine hp 1800rpm  Cyclinder arrangement  Combustion system  Aspiration  Engine type  Diesel  Diesel  Diesel  Diesel ASTM D975 D2  Number of Cylinders  Bore and Stroke inches (mm)  Cooling  Governor  Starting aids  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  Diesel  Nertical inline  Vertical inline  Vertical inline  Servical inline  Cooled  ASTM D975 D2	Emissions	EPA Tier 3
Cyclinder arrangement  Combustion system  Aspiration  Engine type  Diesel  Diesel Fuel Grade  Number of Cylinders  Displacement in³ (liters)  Bore and Stroke inches (mm)  Cooling  Governor  Starting aids  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Maximum Allowable Oil Temperature F (C)  Diesel  Diesel  ASTM D975 D2  ASTM	Engine speed (rpm)	1800
Combustion system  Aspiration  Engine type  Diesel  Diesel Fuel Grade  Number of Cylinders  Displacement in³ (liters)  Bore and Stroke inches (mm)  Cooling  Governor  Starting aids  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Radiator System  Maximum Allowable Oil Temperature F (C)  Diesel  Diesel  ASTM D975 D2  ASTM D975	Nominal Engine hp 1800rpm	689
Aspiration  Engine type Diesel Diesel Fuel Grade Number of Cylinders Displacement in³ (liters) Bore and Stroke inches (mm) Cooling Governor Electronic Starting aids Compression ratio Air cleaner type Exhaust Silencer dBA Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT: Total coolant capacity gals (Liter) Cooling System Radiator System Maximum Allowable Oil Temperature F (C) Dil Consumption at full load Recommended lubricating oil grade  Diesel Diesel ASTM D975 D2	Cyclinder arrangement	Vertical inline
Engine type  Diesel Fuel Grade  ASTM D975 D2  Number of Cylinders  Displacement in³ (liters)  Bore and Stroke inches (mm)  Cooling  Governor  Starting aids  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Radiator System  Maximum Allowable Oil Temperature F (C)  Diesel  ASTM D975 D2  ASTM D975 D2  ASTM D975 D2  ASTM D975 D2  Bore and Stroke inches (mm)  5.39 x 6.73 (137 X 171)  Cooled  Belectronic  Blectronic  Glow Plugs  Abdum duty dry type  Exhaust Silencer dBA  80dBA  Coll Filter  Engine Mounted/water separate  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  15.3 (58.0)  Cooling System  Radiator System  Engine Mounted  Maximum Allowable Oil Temperature F (C)  250 (121)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  SAE 15W40	Combustion system	Direct Injection
Diesel Fuel Grade  Number of Cylinders  Displacement in³ (liters)  Bore and Stroke inches (mm)  Cooling  Water-cooled  Governor  Electronic  Starting aids  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Radiator System  Maximum Allowable Oil Temperature F (C)  Dil Consumption at full load  Recommended lubricating oil grade  SAE 15W40	Aspiration	Turbo air-to-air charge cooled
Number of Cylinders  Displacement in³ (liters)  Bore and Stroke inches (mm)  Cooling  Water-cooled  Governor  Electronic  Starting aids  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Radiator System  Maximum Allowable Oil Temperature F (C)  Dil Consumption at full load  Recommended lubricating oil grade  5.39 x 6.73 (137 X 171)  Mater-cooled  Blectronic  Glow Plugs  Glow Plugs  Medium duty dry type  Medium duty dry type  Electronic  Should Hellow Plugs  Should Hellow	Engine type	Diesel
Displacement in³ (liters)  Bore and Stroke inches (mm)  Cooling  Water-cooled  Governor  Electronic  Starting aids  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Radiator System  Maximum Allowable Oil Temperature F (C)  Dil Consumption at full load  Recommended lubricating oil grade  SAE 15W40	Diesel Fuel Grade	ASTM D975 D2
Bore and Stroke inches (mm)  Cooling  Water-cooled  Governor  Electronic  Starting aids  Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  Engine Mounted/water separato  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Water-cooled  Radiator System  Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  SAE 15W40	Number of Cylinders	6
Cooling Governor Electronic Starting aids Compression ratio Air cleaner type Exhaust Silencer dBA Oil Filter Engine Mounted/water separate  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT: Total coolant capacity gals (Liter) Cooling System Water-cooled Radiator System Engine Mounted Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM: Total lubricating capacity quarts (Liter) Air Cleaner type Medium duty dry type  Medium duty dry type  Medium duty dry type  Engine Mounted/water separate  User-cooled Engine Mounted  Engine Mounted  Air Cleaner  16.4 (62.0)  Oil consumption at full load  Co.1% of fuel consumption  Recommended lubricating oil grade  SAE 15W40	Displacement in <sup>3</sup> (liters)	927.5 (15.2)
Governor  Starting aids  Glow Plugs  Compression ratio  16.0:1  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Water-cooled  Radiator System  Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  Electronic  Glow Plugs  Glow Plugs  Medium duty dry type  Engine Mounted/water separator  15.3 (58.0)  Water-cooled  Engine Mounted  250 (121)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  SAE 15W40	Bore and Stroke inches (mm)	5.39 x 6.73 (137 X 171)
Starting aids Compression ratio 16.0:1  Air cleaner type Exhaust Silencer dBA Oil Filter Engine Mounted/water separato  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT: Total coolant capacity gals (Liter) 15.3 (58.0)  Cooling System Water-cooled Radiator System Engine Mounted Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM: Total lubricating capacity quarts (Liter) 16.4 (62.0) Oil consumption at full load Recommended lubricating oil grade SAE 15W40	Cooling	Water-cooled
Compression ratio  Air cleaner type  Exhaust Silencer dBA  Oil Filter  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT: Total coolant capacity gals (Liter)  Cooling System  Radiator System  Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM: Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  Medium duty dry type  Medium duty dry type  Engine Mounted/water separator  15.3 (58.0)  Water-cooled  Engine Mounted  250 (121)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  SAE 15W40	Governor	Electronic
Air cleaner type  Exhaust Silencer dBA  Oil Filter  Engine Mounted/water separate  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Water-cooled  Radiator System  Engine Mounted  Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  Madium duty dry type  Medium duty dry type  80dBA  80dBA  15.3 (58.0)  16.4 (62.0)  16.4 (62.0)  SAE 15W40	Starting aids	Glow Plugs
Exhaust Silencer dBA  Oil Filter  Engine Mounted/water separate  COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Water-cooled  Radiator System  Engine Mounted  Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  80dBA  80dBA  Engine Mounted/water separate  15.3 (58.0)  250 (121)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  16.4 (62.0)  SAE 15W40	Compression ratio	16.0:1
COOLING SYSTEM FOR OPERATING AT 120° AMBIENT: Total coolant capacity gals (Liter)  Cooling System  Radiator System  Maximum Allowable Oil Temperature F (C)  LUBRICATING SYSTEM: Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  Engine Mounted  250 (121)  LUBRICATING SYSTEM:  16.4 (62.0)  SAE 15W40	Air cleaner type	Medium duty dry type
COOLING SYSTEM FOR OPERATING AT 120° AMBIENT:  Total coolant capacity gals (Liter)  Cooling System  Water-cooled  Radiator System  Engine Mounted  Maximum Allowable Oil Temperature F (C)  250 (121)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  SAE 15W40	Exhaust Silencer dBA	80dBA
Total coolant capacity gals (Liter)  Cooling System  Water-cooled  Radiator System  Engine Mounted  Maximum Allowable Oil Temperature F (C)  250 (121)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  15.3 (58.0)  16.4 (62.0)  16.4 (62.0)  SAE 15W40	Oil Filter	Engine Mounted/water separator
Cooling System Water-cooled  Radiator System Engine Mounted  Maximum Allowable Oil Temperature F (C) 250 (121)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter) 16.4 (62.0)  Oil consumption at full load < 0.1% of fuel consumption  Recommended lubricating oil grade SAE 15W40	COOLING SYSTEM FOR OPERATING AT 120° AMB	IENT:
Radiator System  Engine Mounted  Maximum Allowable Oil Temperature F (C) 250 (121)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter) 16.4 (62.0)  Oil consumption at full load < 0.1% of fuel consumption  Recommended lubricating oil grade SAE 15W40	Total coolant capacity gals (Liter)	15.3 (58.0)
Maximum Allowable Oil Temperature F (C) 250 (121)  LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter) 16.4 (62.0)  Oil consumption at full load < 0.1% of fuel consumption  Recommended lubricating oil grade SAE 15W40	Cooling System	Water-cooled
LUBRICATING SYSTEM:  Total lubricating capacity quarts (Liter)  Oil consumption at full load  Recommended lubricating oil grade  16.4 (62.0)  < 0.1% of fuel consumption  SAE 15W40	Radiator System	Engine Mounted
Total lubricating capacity quarts (Liter) 16.4 (62.0)  Oil consumption at full load < 0.1% of fuel consumption  Recommended lubricating oil grade SAE 15W40	Maximum Allowable Oil Temperature F (C)	250 (121)
Oil consumption at full load < 0.1% of fuel consumption  Recommended lubricating oil grade SAE 15W40	LUBRICATING SYSTEM:	
Recommended lubricating oil grade SAE 15W40	Total lubricating capacity quarts (Liter)	16.4 (62.0)
	Oil consumption at full load	< 0.1% of fuel consumption
Oil Filter Full flow spin on, cartridge type	Recommended lubricating oil grade	SAE 15W40
	Oil Filter	Full flow spin on, cartridge type

ENGINE ELECTRICAL SYSTEM:				
Starting motor voltage	24 volt			
Charger	70 amp 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	+/- 2%.			
Coupling	SAE Adapter, Flexible Disc, Direct			
Bearing	Single			
Manufacturer	Marathon			
Model	572RSL4025			
Load acceptance	One Step, 100% per NFPA 110			
Compliance	NEMA, IEEE & ANSI for temp. rise			
TIF Factor	Self ventilated drip-proof			
FUEL CONSUMPTION: PER HOUR GALS (LITERS)				
Standby power	30.1 (114)			
Prime power	26.7 (101)			
75%%	21.1 (80)			
50%	15.0 (57)			
CONTROL PANEL SPECIFICATIONS:				
Manufacturer (Model)	Basler (DGC-2020ES)			
MPC-10 Controller Inputs	16			
MPC-10 Controller Outputs	12			
Operating power/consumption	6-32 VDC; Average load 14.2W			
Communications	UL 508 R & CSA C22.2 #14			
GENERATOR OPTIONS:				
Aluminum Enclosure	Sound attenuated to 68 dBA			
Base arrangement	Rigid steel base frame with AVMs			

### **DIMENSIONS & ARRANGEMENT DRAWING UL2200 MODEL:** TP450 T3

Spill containment



KEY DIMENSIONS (inches), WEIGHT (pounds) FUEL TANK ( US gals)									
Description & Configuration	Hei	ght	nt Length		Width		Dry Weight lbs	Fuel Tank	
Open set	H1	77.00	L1	139.00	W1	47.00	7222	520	
Enclosed Set	H2	98.00	L2	188.00	W2	64.00	11790	TBA	

UL double wall base mounted