TRADEWINDS® POWER CORP

MODEL: TPP1000

DUAL CONTAINERIZED GENERATOR SYSTEM

FUEL: DIESEL

ENGINE: 2 x PERKINS

SPECIFICATION SHEET

Power Ratings		kW	kVA
Power with 2 generators running in parallel	Standby	1000	1250
	Prime	900	1125
Amps 0.8 P.F. 3-phase (Volts)		3473 (208V), 3010 (240V), 1354 (480V)	
12-wire voltages: 3-Phase = 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 OF PARALLEL DUAL INSTALLATION:

Tradewinds Power Corp (TPC) PERKINS diesel powered dual generator sets are mounted in an ISO container on a DOT trailer. Self contained standby generator packages complete with mounted auto control panel, paralleling switchgear, fuel connector, air cleaners, exhaust silencers, and other accessories mounted on a rigid base frame.

Engine:

- 2 x PERKINS model 2806F-E18TAG1 6-cylinder EPA Tier 4 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 2800 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 lube oil filter

Alternator:

- 2 x 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.
- Permanent Magnet Generator (PMG) with Voltage Regulator upgrade.
- 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
- Automatic Battery Chargers, 10 amps.
- Starting Battery Groups (Racks, Cables, 2-4D's).

Enclosure and Arrangement of Complete Assembly:

- 53 ft ISO container single use weather enclosure with 4-man doors for mobile application. (4) Pad lockable doors with stainless steel hinges. Includes gas shock on each door. Doors with drip rail at each entry.
- Access panel in enclosure side for plenum access.
- 2" matted fiberglass thermal insulation and sound absorbent material and walls covered with .032" perforated aluminum. Discharge plenum interior covered with .040" skin. Discharge bird screen protection.
- Fixed intake louvers. Blown open gravity discharge damper.
- Exterior drains for radiator coolant and engine oil.
- 53' tandem axle chassis with spare tire with and hub-o-meter.
- 2000 Amp Cam Lock connection for building load.
- Non-UL sealed secondary double wall standalone fuel tank with 1200 gal usable capacity to provide 16.2 hours runtime for 2xTP500 T4.

Generator Options:

- Fuel transfer pump from tanker to day tank
- Secondary water fuel separation system
- Storage for 44 x 400A rated 50' cables

MODEL DEPICTED: Single TP500 T4 & switchgear within container

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

PARALLELING CONTROL & OTHER ELECTRICAL EQUIPMENT:

- Model 2020 Automatic Paralleling Control with Motorized Main Circuit Breakers cabled to Common Bus.
- Automatic Battery Chargers, 10 amps.
- 100amp load center for battery chargers, jacket water heaters, generator strip heaters, interior lights.
- AC & DC Lights, Duplex Receptacles, E-Stops.

WARRANTY:

- Engine covered under the original equipment manufacturer's warranty - consult Tradewinds Power Corp for details
- Complete package supplied with 1-year limited warranty

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

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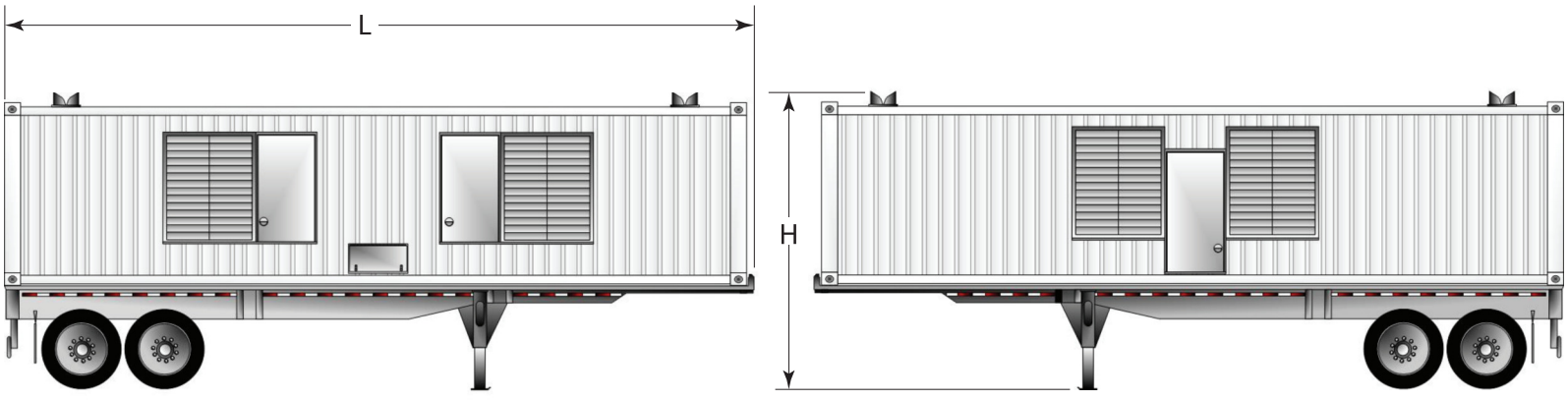
MODEL: TP1000

DUAL CONTAINERIZED GENERATOR SYSTEM

INDIVIDUAL ENGINE SPECIFICATION	
Manufacturer	Perkins
Model	2806F-E18TAG1
Emissions	EPA Tier 4
Engine speed (rpm)	1800
Nominal Engine hp 1800rpm	744
Cyclinder arrangement	Vertical inline
Combustion system	Direct Electronic unit injection
Aspiration	Turbocharged air-to-air chargecooled
Engine type	Diesel
Diesel Fuel Grade	ASTM D975 D2
Number of Cylinders	6
Displacement in³ (liters)	1106 (18.1)
Bore and Stroke inches (mm)	5.7 x 5.72 (145 X 183)
Cooling	Water-cooled
Governor	Electronic
Starting aids	Glow Plugs
Compression ratio	16.0:1
Air cleaner type	Medium duty dry type
Exhaust Aftertreatment	DOC/DPF/SCR
Oil Filter	Full flow with water separator
COOLING SYSTEM FOR OPERATING AT 120º AMBIENT:	
Total coolant capacity gals (Liter)	14.8 (56.0)
Recommended lubricating oil grade	SAE 15W40
Oil consumption at full load	< 0.1% of fuel consumption
Maximum top tank temperature F°(C°)	244.6 (10.07)
LUBRICATING SYSTEM:	
Total lubricating max. capacity quarts (Liter)	78.1 (74.0)
Recommended lubricating oil grade	SAE 10W-30
Oil Cooler	Integral with filter header
Oil Filter	Full-flow replaceable filter

ENGINE ELECTRICAL SYSTEM:	
Starting motor voltage	24 volt
Charger	85 amp alternator with DC output
Wet Cell Battery	Lead Acid
INDIVIDUAL ALTERNATOR:	
Configuration	Brushless, 12-wire, 4-pole
Frequency	60 Hz
PMG supplied 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 130°C Temp. Rise	6429 Frame 480V
Load acceptance	One Step, 90% per NFPA 110
Compliance	NEMA, IEEE & ANSI for temp. rise
TIF Factor	Self ventilated drip-proof
FUEL CONSUMPTION: PER HOUR GALS (LITERS) SETS IN PARALLEL	
Standby Power	73.9 (280.2)
Prime Power	66.9 (253.4)
75%	50.0 (189.4)
50%	36.5 (138.4)
CONTROL PANEL SPECIFICATIONS:	
Manufacturer (Model)	Basler (DGC-2020)
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:	
Fuel transfer pump	From tanker to day tank
Fuel filtration	Secondary water fuel separation
On board cable storage	44 off 400 A rated 50 foot cables

DIMENSIONS & ARRANGEMENT DRAWING CONTAINERIZED MODEL: TPP1000



KEY DIMENSIONS inches (mm), WEIGHT pounds (kg) DAILY SERVICE MOUNTED FUEL TANK US gals (L)									
Configuration	Height		Length		Width		Dry Weight lbs (kg)	Wet Weight lbs (kg)	Fuel Tank
Containerized Trailer Mounted	H	162 (4,115)	L	480 (12,192)	W	96 (2,438)	60,000 (27,215)	75,500 (34,246)	260 (985)
Note: Dimensions and weights may change depending on optional features supplied. An electrical stub area is positioned at approx. 240" from either end of the ISO Container.									