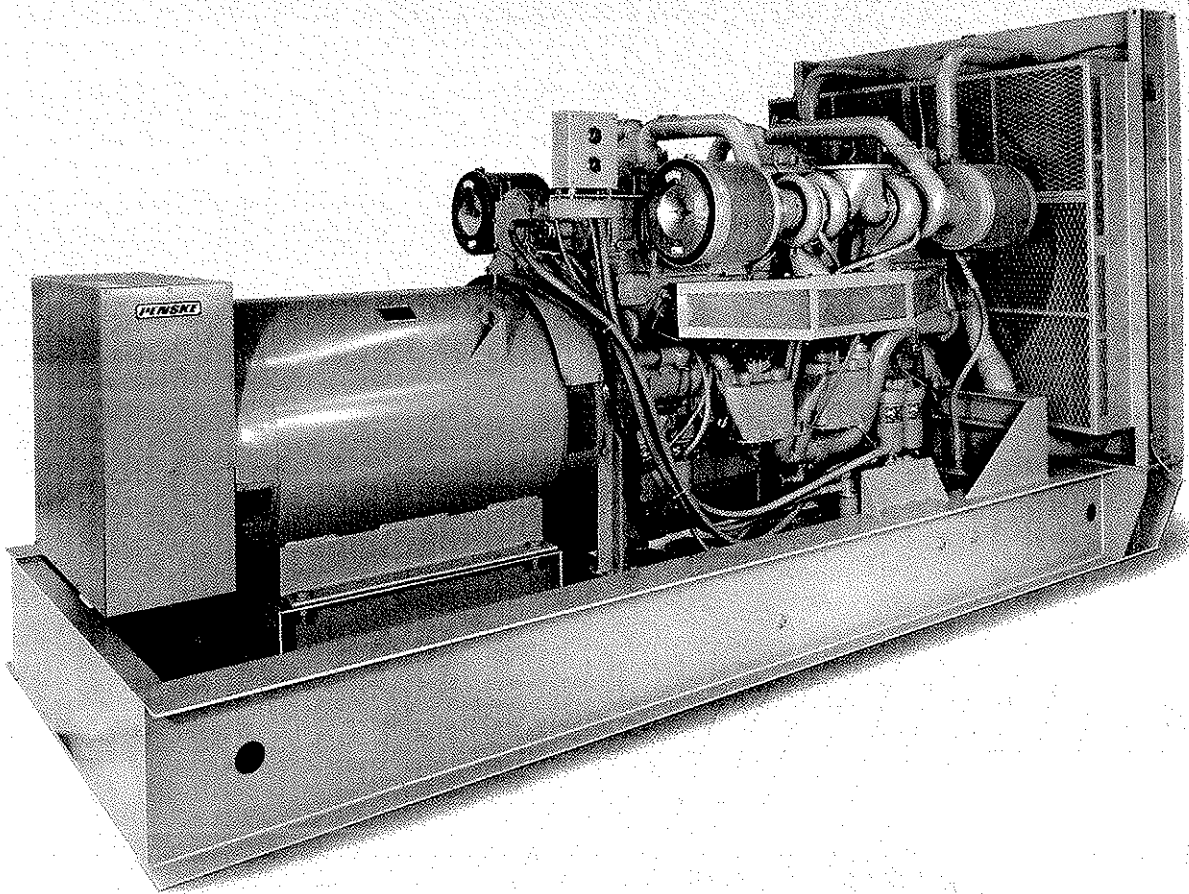


PENSKE **Electric Generator Set**

**7
6
5
KW**



MODEL-PG125T
DIESEL DRIVEN
RADIATOR COOLED

AN ENGINEERED PRODUCT OF THE

PENSKE ENERGY GROUP

The Company

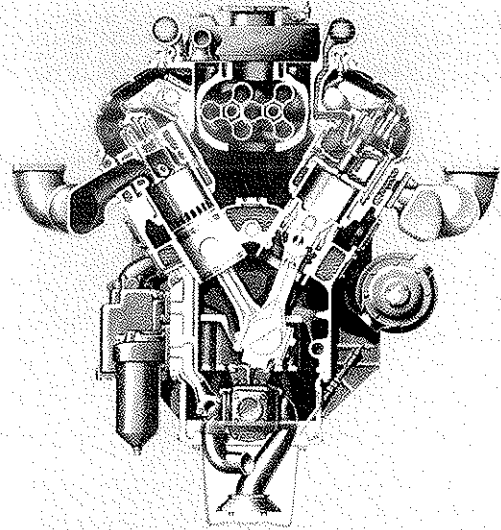
The Penske Energy Group offers complete power packages to fulfill the needs of standby and prime power systems. Each unit is designed, fabricated and tested at our own facility to insure rated performance and dependability. We custom design and build our own switchgear and controls to match the diesel generating unit. The units are serviced by Penske professional technicians anywhere in the world.

The Engine

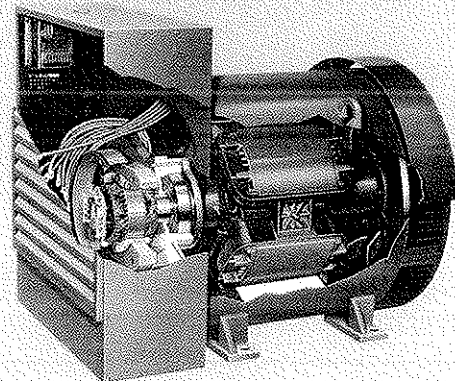
The GM Detroit Diesel engine provides durable, sure starting power for the Penske Electric Generator Set. Detroit Diesels are time-proven engines with more than forty years and 2.5 million engines worth of engineering and practical application experience behind them. The two-cycle design utilized by Detroit Diesel permits quick starting and provides unequalled performance in response to load changes while providing heavy-duty engine reliability. State-of-the-art engine technology and metallurgy, plus the precise Unit Injector fuel system, assure smooth, clean burning engine performance. By utilizing an uncomplicated, proven design, Detroit Diesel offers an easily maintained engine with high parts interchangeability between engine models.

The Generator

Penske uses generators of 4 pole revolving field design with static type, silicon controlled voltage regulator and brushless rotating, three phase, full wave rectifier exciter system. The generators are manufactured to meet or exceed NEMA standards, and all testing is done in accordance with IEEE Standard 115 methods. The standard insulation system is Class F. The temperature rise of both the rotor and the stator, measured by resistance, is a maximum of 130°C for continuous operation at the standby rating, based on a 40°C ambient temperature. The generators are supplied with an internally braced, fabricated steel plate frame and fully guarded. Drip covers are available as an option.



Detroit Diesel
"V" engine cut-away view



Brushless AC generator

Specifications

PENSKE MODEL NUMBER —PG125T

Basic Engine — 12V-149T (9123-7305)
 Displacement Cu. In. (LTR) — 1792 (29.36)
 Compression Ratio — 17:1
 Number of Cylinders — 12

Number of Main Bearings — 8
 Bore In. (MM) — 5.75 (146)
 Stroke In. (MM) — 5.75 (146)

RATINGS:

	60 Hz — 1800 RPM		50 Hz — 1500 RPM	
*Rated Horsepower Less Fan BHP (kW)	1130	(843)	950	(709)
*KW w/Fan Loss	765		650	
*KW Less Fan	800		670	
BMEP PSI (KG/CM ²)	138.7	(9.8)	139.9	(9.8)
Piston Speed Ft/Min (M/Sec)	1725	(525.8)	1437.5	(438.2)

FUEL SYSTEM:

Average Fuel Rate Full Load Gal/KW-HR (LTR/KW-HR)	0.077	(0.291)	0.079	(0.299)
Fuel Supply Pump Suction Lift-Max. Ft. (M)	4	(1.2)	4	(1.2)
Pump Flow GPH (LTR/HR)	225	(852)	187	(709)
Recommended Fuel Supply Line Size I.D. IN (MM)	1.5	(38.1)	1.5	(38.1)
Recommended Fuel Return Line Size I.D. IN (MM)	1.25	(31.8)	1.25	(31.8)

COOLING SYSTEM:

Capacity Engine Only Gal (LTR)	36	(136)	36	(136)
Capacity Engine & Unit Mtd. Rad. Gal (LTR)	89	(337)	89	(337)
Max. Allowable Static Head Ft. (M)	30	(9.1)	30	(9.1)
Max. Allowable Press Drop External to Engine PSI (KG/CM ²)	5	(.4)	5	(.4)
Engine Coolant Flow GPM (LTR/MIN)	333	(1261)	274	(1037)
Raw Water Requirement H.E. Cooled (Double Pass) 85°F Raw Water GPM (LTR/MIN)	85	(322)	79	(299)
Heat Rejection to Jacket Water (including Oil Cooler and Intercooler — if applicable) BTU/MIN. (kW)	33900	(597)	28500	(502)
Max. Jacket Water Temp. °F (°C)	200	(93)	200	(93)
Radiator Data				
Fan HP Unit Mtd. Radiator	44		25	
Air Flow Thru Unit Mtd. Radiator CFM (M ³ /MIN)	56500	(1599)	47000	(1330)
Max. Allowable Static Air Pressure at Exhaust Side of Radiator at 100°F (38°C) Ambient In/H ₂ O (MM/H ₂ O)	0.3	(7.6)	0.2	(5.1)
Max. Allowable Suction at Intake Side of Radiator at 100°F (38°C) Ambient In/H ₂ O (MM/H ₂ O)	0.2	(5.1)	0.13	(3.3)

ENGINE ROOM VENTILATION REQUIREMENTS:

(See Radiator Air Flow if Applicable)

Combustion Air CFM (M ³ /Min)	3680	(104)	3000	(85)
Heat Radiated by Engine BTU/Min (kW)	8170	(143.7)	6960	(122.4)
Heat Rejected by Generator BTU/Min (kW)	2406	(42.3)	2141	(37.6)

EXHAUST SYSTEM:

Gas Volume CFM (M ³ /Min)	8980	(254)	7515	(213)
Gas Temp. (Exhaust) °F (°C)	870	(465)	905	(485)
Max. Permissible Back Press., No Load (At Turbocharger or Manifold Outlet) In/H ₂ O (MM/H ₂ O)	21.7	(551)	15	(380)
Max. Permissible Back Press., Full Load (At Turbocharger or Manifold Outlet) In/H ₂ O (MM/H ₂ O)	29.9	(760)	20.4	(518)
Recommended stack—single outlet (minimum) In	12		12	

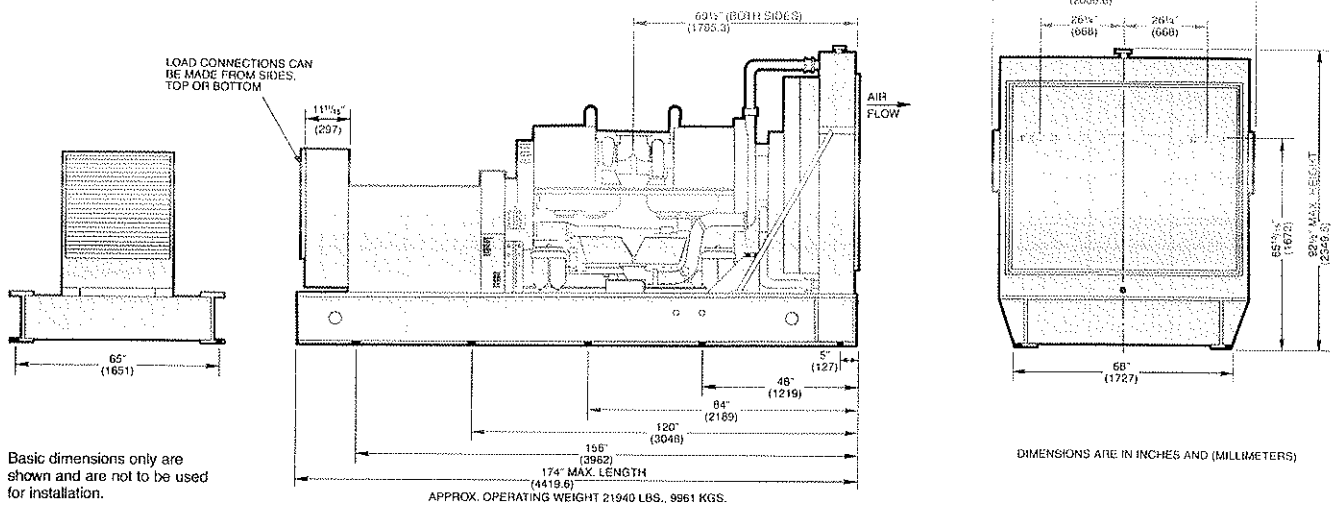
STARTING SYSTEM:

Electric Dual Motor System Voltage	24		24	
Recommended Battery Capacity, A.H.	(4)205		(4)205	
Air System — Single Motor				
Min. Air Press. at Motor PSI (KG/CM ²)	90	(6.3)	90	(6.3)
Max. Air Press. at Motor PSI (KG/CM ²)	150	(10.5)	150	(10.5)
Suggested Accumulator Capacity for 3 cranks of 2 Sec. each Gal. (LTR)	300	(1136)	300	(1136)

NOTES: *Rating at SAE STD. Ambient Conditions: 85°F — Air Inlet Temperature, 29.00 IN. HG. Barometer (dry) at 500 Ft. Altitude. Subject to ±5% Tolerance.

(Ratings shown in specification apply to engines used for standby electric set power systems which must deliver rated power continuously for an interval between interruption and restoration of the normal power source. For prime power ratings, consult with the Penske Sales Engineer.)

Principal Dimensions



Standard Equipment

Basic Engine
 AC Brushless Generator (.8 P.F.)
 Automatic Voltage Regulator
 Underfrequency Protection
 Structural Steel Base
 Unit Mounted Radiator w/Fan
 Medium Duty Air Cleaners
 Mounted Fuel and Lube Oil Filter with Replaceable Elements
 Electric Start
 Woodward Hydraulic Governor

Automatic Safety Shutdown
 Engine Instrument Panel with Oil Pressure and Temp. Gauges and Push Button Start
 Instruction Manuals
 Manual Control Panel with Unit Mounted NEMA I enclosure
 AC Ammeter
 AC Voltmeter
 Frequency Meter
 Hour Meter

Voltage Adjusting Rheostat
 Phase Selector Switch
 Fuses
 Indicating Lights for;
 Low Oil Pressure
 Overspeed
 High Water Temperature
 Overcrank
 Full Load Test (One hour duration)
 Alpine Green Paint

Optional Equipment

STARTING SYSTEM

- Battery Racks
 - Unit Mounted
 - Floor Mounted
- Automatic Starting
- Hydraulic Starting
- Air Starting
- Heater (Engine Coolant)
- Starting Batteries

GOVERNORS

- Motorized Speed Changer
- Isochronous
- Electro-Hydraulic Load-Sensing

FUEL SUPPLY

- Fuel Level Indicator
- Electric Fuel Transfer Pump and Day Tank
- Day Tank With Float Switch

WEATHERPROOF ENCLOSURES

EXHAUST SYSTEM

- Flexible Exhaust Connections
- High Level Critical Silencing Muffler
- Industrial Silencing Muffler
- Residential Silencing Muffler

COOLING SYSTEM

- Remote Mounted Radiator
- Heat Exchanger
- Radiator Air Discharge Duct Adapter

ELECTRICAL

- Automatic Transfer Switch Specify Size
- Automatic Paralleling
- Manual Paralleling

CONTROL PANELS

- Floor Mounted
- Wall Mounted
- Engine Mounted

Additional options available upon request

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