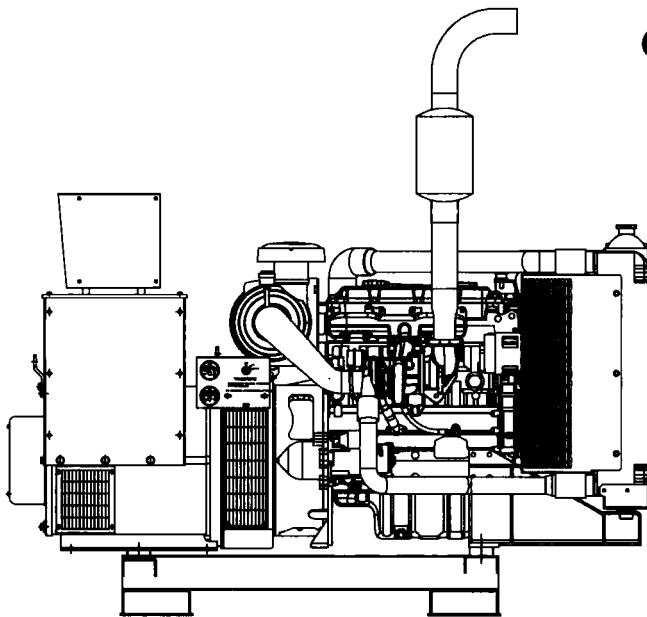


TAYLOR[®]

POWER SYSTEMS

Model: **P90CD1**

Unit Ratings:



		60Hz
Continuous Standby:	kw/kva	90
Prime:	kw/kva	81

Alternator Ratings at 1.0 Power Factor

Features

- Single source responsibility for the generator set and accessories.
- Prototype and production tested to insure one step load acceptance per NFPA 110.
- Two year limited warranty on generator sets and accessories.
- Unit conforms to CSA, NEMA, EGSA, ANSI and other standards.
- Analog control system with an ECU-9988 providing metering and monitoring.
- Heavy duty 4 cycle industrial engine for reliability and fuel efficiency.
- Brushless rotating field generator with class H insulation.
- Heavy duty steel base with integral vibration isolators.

APPLICATION & ENGINEERING DATA

ENGINE

Engine Specifications	60 Hz	50 Hz
Manufacturer	Perkins	
Engine, model, type	1104C-44TAG2 DIRECT INJECTION	
Cylinder arrangement	4 in-line	
Displacement, cu. in. (L)	269 (4.4)	
Bore and stroke, in. (mm)	4.13 (105) x 5 (127)	
Compression ratio	18.3:1	
Piston speed, ft/sec. (m/sec)	25 (7.62)	20.8 (6.35)
Rated rpm	1800	1500
Max. power at rated rpm, hp (kw)	157.5 (117.5)	138 (103)
Cylinder head material	Cast iron	
Crankshaft material	Forged steel	
Governor type	ELECTRIC	
Frequency regulation, no load to full load	.25%	
Frequency regulation, steady state	±0.01%	
Air cleaner type, all models	Dry paper element	
Combustion air, cfm (m ³ /min.)	276 (7.84)	221 (6.27)

EXHAUST

Exhaust System	60 Hz	50 Hz
Exhaust flow at rated kW, cfm (m ³ /min.)	721 (20.4)	594 (16.3)
Exhaust temperature at rated kW, dry exhaust, °F (°C)	1065 (574)	1009 (543)
Maximum allowable back pressure, in. Hg (kPa)	1.77" HG (6 KPa)	
Exhaust outlet size at hookup, in. (mm)	2.5" (63.9)	

ENGINE ELECTRICAL

Engine Electrical System	60 Hz	50 Hz
Battery charging alternator:		
Ground (negative/positive).....	Negative	
Volts (DC).....	12	
Ampere rating.....	65	
Starter motor rated voltage (DC)	12	
Recommended battery cold cranking amps (CCA) rating for 0°F (-18°C)	770	
Quantity of batteries	1	
Battery voltage (DC)	12	

FUEL

Fuel System	60 Hz	50 Hz
Fuel supply line, min. ID, in. (mm)	5/16 (7.93)	
Fuel return line, min. ID, in. (mm)	1/4 (6.35)	
Max. lift, engine-driven fuel pump, ft.	5.7	
Max. fuel flow, gph (Lph)	39 (150)	39 (150)
Fuel prime pump	manual	
Fuel filter	ENVIRONMENTAL ECO PLUS	
Recommended fuel	#2 diesel	

FUEL CONSUMPTION

Fuel Consumption	60 Hz	50 Hz
Diesel, gph (Lph) at % of load		
100%	7.85 (29.7)	5.58 (24.9)
75%	5.34 (22)	4.5 (17.1)
50%	3.72 (14.1)	3.1 (11.8)

COOLING

Cooling System	60 Hz	50 Hz
Ambient temperature °F (°C)	127 (53)	
Radiator system capacity, including engine, gal. (L)	3.3 (12.6)	
Engine jacket water flow, gpm (Lpm)	44.9 (170)	37.5 (142)
Heat rejected to cooling water at rated kW, dry exhaust Btu/min.	3641	2881
Water pump type	centrifugal	
Fan diameter, including blades, in. (mm)	22 (559)	
Fan hp (kW)	8 (6)	6.5 (5)
Max. restriction of cooling air, intake and discharge side of rad., kPa	200	
Radiator-cooled cooling air, cfm (m ³ /min.)	7966 (225.6)	5848 (1656)

LUBRICATION

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity with filter, qts. (L)	8.5 (8)	
Oil filter, quantity, type	1 spin on	
Oil cooler	INTEGRAL WATER COOLED	

ANALOG CONTROL PANEL

- Taylor Power Systems Analog Auto Start Control Panel. The panel is equipped with AC Voltmeter, AC Frequency Meter, Percent of Load Meter, Running Time Meter, Control Toggle Switch with Off/Auto/Manual positions, and ECU-9988 engine control with specific safety shutdown lights.
- Separate Oil Pressure and Water Temperature Gauge Located on Generator Set.
- Taylor Power Systems also supplies a manual key override by-pass switch that allows you to start the generator manually in the event of control systems failure.

ECU-9988 FEATURES

- Engine Started LED
- Overspeed Shutdown LED
- Overcrank Shutdown LED
- High Water Temperature Shutdown LED
- Low Oil Pressure Shutdown LED

The ECU automatically cranks, starts, and monitors the engine for Overcrank, Overspeed, High Water Temperature, and Low Oil Pressure. A built in speed switch uses a magnetic pickup to monitor engine speed for crank disconnect and overspeed. The bypass timer/logic assures Low Oil Pressure and High Water Temperature override during the crank period and an additional adjustable period after crank disconnect. The ECU monitors the Magnetic Pickup signal for problems during both cranking and running. If a problem is detected the engine will shutdown and Overcrank and Overspeed LED's will both turn on.