you can depend on TAYLOR POWER SYSTEMS

Model: TD150

Shown with optional equipment

Ratings Range

		60Hz
Standby:	kW	132-150
	kVA	165-188
Prime:	kW	118-135
	kVA	148-169

Generator	Voltage	PH	Hz	Standby Rating		Prime Rating	
				kW/kVA	Amps	kW/kVA	Amps
UCI274F311	277/480	3	60	150/188	226	135/169	203
	139/240	3	60	150/188	452	135/169	407
	254/440	3	60	150/188	247	135/169	222
	127/220	3	60	150/188	493	135/169	444
	240/416	3	60	150/188	260	135/169	235
	120/208	3	60	150/188	522	135/169	469
	120/240	3	60	150/188	452	135/169	407
	219/380	3	60	145/181	275	135/169	257
	120/240	1	60	120/120	500	113/113	471
UCI274F06	120/240	1	60	150/150	625	135/135	563

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.
- 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.
- Electronic Isochronous Governor.
- EPA Tier 3 Certified Engine.

RATINGS: All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor.
STANDBY RATINGS: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271.
PRIME POWER RATINGS: Prime power ratings apply to installations where utility power in unavailable or unreliable. At varying load the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS5514, AS2789, and DIN 6271. For limited running time and base load ratings consult the factory. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.
GENERAL GUIDELINES FOR DERATION: Altitude: Derate 0.5% per 100m (328 ft.) elevation above 1000m (3279 ft.)

Perkins Diesel Engine

Model 1106D-E66TAG3

Basic technical data

Number of cylinders	6
Cylinder arrangement	Vertical in-line
Cycle	Four stroke
Induction system	Turbocharged, air to air charge cooled
Compression ratio	16.3:1
Bore	4.13 in. (105 mm)
Stroke	5.0 in. (127 mm)
Cubic capacity	402.8 cu in. (6.6 L)
Direction of rotation	Clockwise
Firing order	1,5,3,6,2,4

Cooling system

Cooling pack

Overall face area of matrix	852.4 in² (0.55 m²)
Width of matrix	27.4 in. (697 mm)
Height of matrix	31.1 in. (789 mm)

Radiator

Face area	315.5 in² (0.35 m²)
Number of rows and material	5, Aluminum
Matrix density and material	10.0, Aluminum fins per inch
Width of matrix	17.3 in. (439 mm)
Height of matrix	31.1 in. (789 mm)
Pressure cap setting	14.5 psi (100 kPa)

Charge cooler

Face area	201.5 in² (0.20 m²)
Number of rows and material	2, Aluminum
Matrix density and material	10.0, Aluminum fins per inch
Width of matrix	10.2 in. (258 mm)
Height of matrix	31.1 in. (789 mm)

Fan

diameter	24 in. (610 mm)
Drive ratio	1.2:1
Number of blades	7
Material	Nylon
Type	

Coolant

Total system capacity	
With radiator	
Without radiator	1.8 gal (9.5 L)
Coolant pump drive	Gear
Coolant pump drive ratio	2:1
Maximum top tank temperature	233° F (112° C)
Temperature rise across engine (rating dependent)	43.9-43.9° F (6.6-7.9 °C)
Thermostat operation range	185-203° F (85-95 °C)
Recommended coolant:	50% ethylene glycol with a corrosion Inhibitor (BS 658 : 1992 or MOD AL39) and 50% clean fresh water.

Designation	Units	Prime	Standby
		60 Hz	
Gross engine power	hp (kWb)	207 (154)	230 (171)
Electropak net engine power	hp (kWm)	196 (146)	219 (163)
Brake mean effective pressure	psi (kPa)	226 (1560)	251 (1731)
Engine coolant flow (against 5 psi (35 kPa) restriction)	gal/min (L/min)	45 (170)	45 (170)
Combustion air flow (at rated speed)	cfm (m³/min)	445 (12.6)	456 (12.9)
Exhaust gas flow (max.)	cfm (m³/min)	1077 (30.5)	1112 (31.5)
Exhaust gas temperature in manifold Max.	°F (°C)	1130 (610)	1157 (625)
Overall thermal efficiency (net)	%	36	37

Exhaust system

Maximum back pressure	1.8 psi (12.2 kPa)
Exhaust outlet size	3.5 in. (90 mm)

Fuel system

Type of injection	Direct
Fuel injection pump	Common rail
Fuel atomizer	Unit injector / multi-hole

Fuel lift pump

Max flow through customer filter	0.4 gal/min. (1.5 L/min.)
Max fuel supply restriction at lift pump	
Max fuel return restriction at low idle	
Max fuel return flow	
Maximum suction head	30 kPa
Maximum static pressure head	600 kPa
Governor type	Control by ECM
Speed control to	ISO 8528, G3

Fuel Consumption gal/hr (L/hr.)

Power Rating				
Speed	110%	100%	75%	50%
60Hz		11.3 (42.7)	9.2 (34.8)	6.9 (26.1)

Lubrication system

Lubricating oil capacity total system	4.4 gal (16.5 L)
Maximum sump capacity	4.1 gal (15.5 L)
Minimum sump capacity	3.3 gal (12.5 L)
Maximum engine operating angles	
Front up, front down, right side or left side	25°

Lubricating oil pressure

Relief valve opens	62 psi (430 kPa)
At maximum no-load speed	65 psi (450 kPa)
Oil temperature (continuous operation)	257° F (125° C)
Oil temperature (maximum intermittent operation)	
Oil consumption at full load as a % of fuel consumption	0.1%

Electrical system

Type	12 volt negative earth
Alternator type	Denso A127i
Alternator voltage	12V
Alternator output	100A
Starter motor type	Denso P95
Starter motor voltage	12V
Starter motor power	4.0 hp (3.0 kW)
Number of teeth on flywheel	126
Number of teeth on starter pinion	10
Minimum cranking speed	60 rev/min

Induction system

Maximum air intake restriction

Clean filter	.73 psi (5 kPa)
dirty filter	1.2 psi (8 kPa)
Air filter type	paper element

Generator Controller Options

Digital Control Panel

The DGC-2020 digital genset controller provides integrated engine-genset control, protection, and metering. Microprocessor based technology allows for exact measurement, setpoint adjustment, and timing functions. Front panel 3 position controls and indicators enable quick and simple operation. The panel is also equipped with a emergency stop push button and an Alarm Horn with silence button. A wide temperature-range liquid crystal display (LCD) with backlighting can be viewed under a wide range of ambient light and temperature conditions down to 104° F (40° C).

Features SAE J1939 Engine ECU communications, Multilingual capability, Remote RS-485 communications for Optional RDP-110 Remote Annunciator, Extremely rugged, fully encapsulated design with 4 programmable contact inputs and 10 contact outputs (2 Adc rated).

It also features Modbus Communications with RS-485, Battery Backup for Real Time Clock, UL recognized, CSA certified, CE approved, HALT (Highly Accelerated Life Tests) tested, IP 54 Front Panel rating with integrated gasket, and NFPA 110Level 1 Compatible.

Analog Top Mount Controller

This Generator control panel has analog instruments to monitor AC voltage, AC frequency, percent of load and, run time/hour meter. Safety shutdowns provide red LED indication for overspeed, overcrank, low oil pressure, and high coolant temperature. Provide green LED indication of engine running. Control switch is provided for local and remote starting with 3 position run/off/remote switch.

There is also an engine mounted emergency by-pass key switch with mechanical oil pressure and coolant temperature gauge.

Analog End Mount Controller

This Generator control panel has analog instruments to monitor AC voltage, AC frequency, and percent of load. The analog engine instruments monitor oil pressure, water temperature, battery voltage, fuel level, and run time/hour meter. Safety shutdowns provide red LED indication for overspeed, overcrank, low oil pressure, and high coolant temperature. Provide green LED indication of engine running. Control switch is provided for local and remote starting with 3 position run/off/remote switch.

There is also an engine mounted emergency by-pass key switch.

AC Alternator Specifications

STANDARDS

Stamford industrial generators meet the requirements of BS EN 60034 and the relevant section of other international standards such as B55000, VDE 0530, NEMA MG1-32, 1EC34, CSA C22.2-100, A51359.

Other standards and certifications can be considered on request.

VOLTAGE REGULATORS

MX341 AVR

This sophisticated AVR is incorporated into the Stamford Permanent Magnet Generator (PMG) control system.

The PMG provides power via the AVR to the main exciter, giving a source of constant excitation power independent of generator output. The main exciter output is then fed to the main rotor, through a full wave bridge, protected by a surge suppressor. The AVR has in-built protection against sustained over-excitation, caused by internal or external faults. This de-excites the machine after a minimum of 5 seconds.

An engine relief load acceptance feature can enable full load to be applied to the generator in a single step.

If three-phase sensing is required with the PMG system the MX321 AVR must be used.

We recommend three-phase sensing for applications with greatly unbalanced or highly non-linear loads.

(Optional) MX321 AVR

The most sophisticated of all our AVRs combines all the features of the MX341 with, additionally, three-phase rms sensing, for improved regulation and performance. Over voltage protection is built-in and short circuit current level adjustments is an optional facility.

WINDINGS & ELECTRICAL PERFORMANCE

All generator stators are wound to *2/3* pitch. This eliminates triplen (3rd, 9th, 15th **...)** harmonics on the voltage waveform and is found to be the optimum design for trouble-free supply of non-linear loads. The *2/3* pitch design avoids excessive neutral currents sometimes seen with higher winding pitches, when in parallel with the mains. A frilly connected damper winding reduces oscillations during paralleling. This winding, with the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.

SHAFT

The generator rotor is dynamically balanced to better than B56861:Part 1 Grade 2.5 for minimum vibration in operation.

INSULATION/IMPREGNATION

The insulation system is class H.

All wound components are impregnated with materials and processes designed specifically to provide the high build required for static windings and the high mechanical strength required for rotating components.

QUALITY ASSURANCE

Generators are manufactured using production procedures having a quality assurance level to BS EN ISO 9001.

Standard Features and Optional Accessories

Standard Features

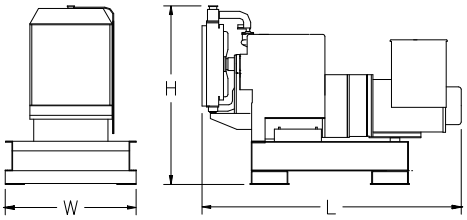
- **Heavy duty steel base**
- **Vibration isolators**
- **Oil drain valve with extension**
- **Battery rack**
- **Battery cables**
- **Water jacket heater**
- **Owners manual**
- **Electronic Isochronous Governor**

Optional Accessories

- □ Critical Exhaust Silencer
- □ Flex Exhaust Connector
- □ Top Mount Analog Control Panel
- □ End Mount Analog Control Panel
- □ DGC2020 Digital Control Panel
- □ Modem for DGC2020
- □ Enhanced Gen Protection for DGC2020
- □ Surface Mount Remote Annunciator Panel for DGC2020
- □ Flush Mount Remote Annunciator Panel for DGC2020
- □ Remote Mount Break Glass E-Stop Switch
- □ Line Circuit Breaker
- □ 3 phase sensing
- □ Generator strip heater
- □ Radiator duct flange for open unit
- □ Weather Enclosure with external muffler
- □ Weather Enclosure with internal muffler
- □ Sound Attenuated weather enclosure
- □ Oil Pan Heater
- □ Battery
- □ Battery Charger
- □ Battery Heaters
- □ Sub-Base Fuel Tank
- □ Flexible Fuel Lines

WEIGHTS AND DIMENSIONS

OVERALL SIZE, L x W x H, in.: 108 in. x 46 in. x 54 in.
WEIGHT (WET): 3,126 lbs.
Note: Dim and weights reflect standard open unit with no options



Note: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

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