you can depend on TAYLOR POWER SYSTEMS

Model: TD250

Shown with optional equipment

Ratings Range

		60Hz
Standby:	kW	204-250
	kVA	255-318
Prime:	kW	192-225
	kVA	240-281

Generator	Voltage	PH	Hz	Standby Rating		Prime Rating	
				kW/kVA	Amps	kW/kVA	Amps
HCI434D311	277/480	3	60	250/318	376	225/281	338
	139/240	3	60	250/318	753	225/281	676
	254/440	3	60	250/318	411	225/281	369
	127/220	3	60	250/318	822	225/281	738
	240/416	3	60	250/318	435	225/281	390
	120/208	3	60	250/318	870	225/281	781
	120/240	3	60	250/318	754	225/281	677
	219/380	3	60	250/318	463	225/281	418
	120/240	1	60	168/168	700	153/153	638

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.)

Iveco Diesel Engine
Model CURSOR87 TE1D

Basic technical data

Number of cylinders	6
Cylinder arrangement	Vertical in-line
Cycle	Four stroke
Induction system	turbocharged
Compression ratio	16.5:1
Bore	4.6 in. (117 mm)
Stroke	5.31 in. (135 mm)
Cubic capacity	531 cu in. (8.7 L)
Firing order	1,4,2,6,3,5

Cooling system

Type	Liquid
Recommended Coolant	water x 50%paraflu 11
Coolant Capacity	
Engine only	4 gal (15 L)
Radiator and hose	12.7 gal (48 L)
Coolant pump flow	76 gal/min. (287.5 l/min)
Pressure cap setting	10 psi (70 kPa)
Shutdown switch setting	217.4°F (103°C)
Max. additional restriction	.03 psi (196 Pa)

Fan

Fan diameter	27.5 in (700 mm)
Number of blades	8
Fan drive ratio	1.03:1
Speed	1854 rpm
Fan air flow	15362 cfm (7.25 m^3/s)

Designation	Units	Standby
		60 Hz
Continuous Power (gross)	hp (kWm)	283 (211)
Stand-by Power (gross)	Hp (kWm)	389 (290)
Fan Consumption	Hp (kWm)	18.5 (13.8)
Continuous Power (net)	Hp (kWm)	270 (201)
Stand-b Power (net)	Hp (kWm)	337 (251)
Mean piston speed	m/s	8.1
Brake mean effective pressure	bar	22.2

Fuel system

Injection type	direct common rail
Governor	Bosch EDC7 UC31

Exhaust system

Maximum back pressure	0.73 psi (5 kPa)
Gas flow at stand-by power	(1557 kg/h)
Energy to exhaust	668 kcal/kwh

Fuel Consumption gal/hr (L/hr.)

Power Rating				
Speed	Standby	100%	80%	50%
60Hz	18.7 (70.8)	n/a	n/a	n/a

Lubrication system

Lubricating oil capacity total system	7.4 gal (28 L)
Maximum sump capacity	6.1 gal (23 L)
Minimum sump capacity	3.3 gal (12.5 L)
Lubricating oil pressure	
At rated speed	43.5-72.5 psi (300-500 kPa)
Oil temperature (normal operation)	32 ° F (0 °C)
Oil temperature (max)	248 ° F (120 °C)
Oil consumption at full load as a % of fuel consumption	<0.2

Electrical system

Type	24 volt negative earth
Alternator voltage	28V
Alternator output	90 A
Starter motor type	Denso
Starter motor power	6.0 hp (4.5 kW)
Number of teeth on flywheel	149
Number of teeth on starter pinion	10
Battery recommended CCA	184 Ah x2
Battery discharge current	1200 amp

Induction system

Air consumption at 100% of load	735 cfm (1248 m^3/hr)
Air intake restriction Clean filter	.3 psi (2 kPa)
Air intake restriction dirty filter	.7 psi (5 kPa)
Air filter type	dry

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 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

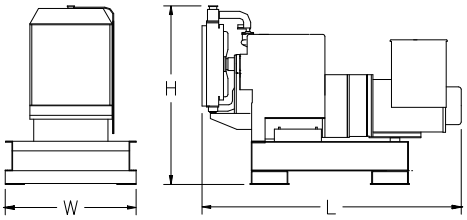
- **Heavy duty steel base**
- **Vibration isolators**
- **Oil drain valve with extension**
- **Battery rack**
- **Battery cables**
- **Water jacket heater**
- **Owners manual**
- **Electronic Isochronous Governor**

Optional Accessories

- ☐ Critical Exhaust Silencer
- ☐ Flex Exhaust Connector
- ☐ 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.: 122 in. x 66 in. x 72 in.
WEIGHT (WET): 5,030 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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