



# TGR150

## Ratings Range — 60 Hertz Operation

Prime: kW 125  
kVA 156

Throughout its 80 year history, **Taylor Machine Works**, which manufactures heavy machinery for industries worldwide, has maintained a reputation of having unparalleled products with service to match. **Taylor Power Systems** is no different!

In the early 1980's Taylor Machine Works created Taylor Power Systems to distribute industrial engines and manufacture generator sets offering diesel powered 9 kW to 3250 kW and gaseous powered 30 kW to 425 kW. Taylor Power Systems provides quality standby and prime generator sets in stationary or mobile configurations for a wide variety of applications for example the Healthcare and Telecommunications Industries, Public Utilities, Federal, State and Local Government agencies, Educational and Financial Institutions as well as Agricultural.

Taylor Power Systems is your 21st Century Power Source!

- 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. Extended warranties also available.
- 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.
- EPA Certified Engine

## Genset Ratings

Genset Model Number	Alternator	Voltage L-N / L-L	Phase	Hertz	Natural Gas 105° Rise Prime Rating	
					kW / kVA	Amps
TGR150	UCI274F311	120/208	3	60	125/156	434
		127/220	3	60	125/156	411
		120/240	3	60	125/156	376
		139/240	3	60	125/156	376
		220/380	3	60	125/156	238
		240/416	3	60	125/156	217
		277/480	3	60	125/156	188

**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 is 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.) Temperature: Derate 1.0% per 10°C (18°F) temperature above 40°C (104°F).

# Application and Engineering Data

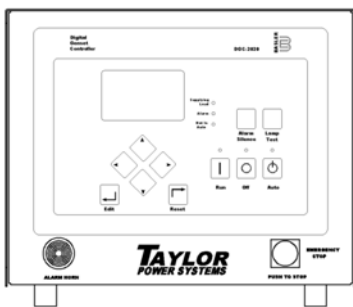
Basic Technical Data		Lubrication System	
Manufacturer	Doosan	Type	Full Pressure
Model	8.1L CAC	Total Oil System	7.2 gal (27.5 L)
Number of cylinders	6	Engine Jacket Water Capacity	5 gal (22.7 L)
Cylinder arrangement	Vertical in-line	System Coolant Capacity	240 gal ( 63 L)
Cycle	4	Electrical System	
Induction system		Ignition system	
Compression ratio	10.5:1	Battery charging alternator:	
Bore	4.37 in (11.1 mm)	Ground	
Stroke	5.97 in (13.9 mm)	Volts	24
Cubic capacity	492 cu in (8.1 L)	Ampere rating	
Piston speed		Starter motor rated voltage	
Main bearings: qty and type		Battery, recommended cold cranking amps (CCA):	900
Engine Governor type	Bosch	Qty rating for -17.8 °C (0 °F)	900
Rated rpm	1800	Battery voltage	24
Max power at rated rpm	NG-149 kWm (199 bhp)	Operation Requirements	
Engine power at Standby rating		Ambient Capacity of Radiator	50° C (122° F)
Frequency regulation, no-load to full-load		Maximum Restriction of Cooling Air, Intake and Discharge Side of Radiator	0.12 kPa ( 0.5 in H <sup>2</sup> O)
Frequency regulation, steady state	± 0.5%	Water Pump Capacity	240 L/min (63 gpm)
Frequency		Heat Rejection to Coolant	164.4 kW (9,357 BTUM)
Air cleaner type	Dry	Heat Radiated to Ambient	25.1 kW (1,425 BTUM)
Exhaust System		Fuel Inlet	
Gas Temp. (Stack) °C (°F)	732 (1,350)	Fuel Supply Connection Size	1 1/2" NPT
Gas Volume at Stack Temp: m <sup>3</sup> /min (CFM)	31.9 (1,129)	Fuel Supply Pressure	178-279 mm H <sup>2</sup> O (7-11 in. H <sup>2</sup> O)
Maximum allowable back pressure	5.1 in (5.1 kPa)	Fuel Consumption (NG)	
Exhaust outlet size at engine hookup	N/A	100% of Power Rating	43.6 m <sup>3</sup> /hr (1539 ft <sup>3</sup> /hr)
Cooling System		75% of Power Rating	33.7 m <sup>3</sup> /hr (1191 ft <sup>3</sup> /hr)
Ambient temperature	122 °F (50 °C)	50% of Power Rating	23.9 m <sup>3</sup> /hr (845 ft <sup>3</sup> /hr)
Engine jacket water capacity	2.6 gal (10 L)		
Radiator system capacity, including engine	6.4 gal (24.2 L)		
Engine jacket water flow	33 gpm (125 Lpm)		
Heat rejected to cooling water at rated	7320 Btu/min (129 kW)		
Max restriction of cooling air, intake and discharge side of radiator	0.5 H <sub>2</sub> O (0.125 kPa)		



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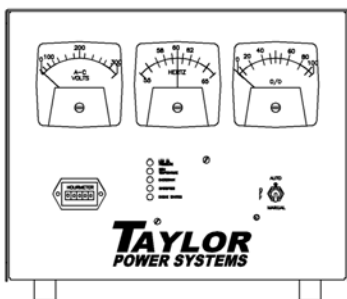
## Generator Controller Options

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### Digital Control Panel

- Integrated engine-genset control, protection, and metering
- Microprocessor allows for exact measurement, setpoint adjustment, and timing functions
- Front panel 3 position controls and indicators enable quick and simple operation
- Emergency stop push button and an Alarm Horn with silence button
- A wide temperature-range liquid crystal display (LCD) with backlighting
- SAE J1939 Engine ECU communications
- Multilingual capability
- Remote RS-485 communications for Optional RDP-110 Remote Annunciator
- 4 programmable contact inputs and 10 contact outputs (2 A/c rated)
- 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 110 Level 1 Compatible.



### Analog Controller

- Monitor AC voltage, AC frequency, percent of load and, run time/hour meter
- Overspeed, overcrank, low oil pressure, and high coolant temperature indicators
- Green LED indication of engine running
- Control switch for local and remote starting with 3 position run/off/remote switch
- Emergency by-pass key switch gauge
- Mechanical oil pressure gauge
- Coolant temperature gauge

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## Alternator Specifications

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<b>Manufacturer</b>	Stamford	<ul style="list-style-type: none"><li>• NEMA MG1, IEEE, AND ANSI standards compliance for temperature and motor starting.</li><li>• Sustained short-circuit current of the rated current for up to 10 seconds.</li><li>• Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator</li><li>• Self-ventilated and dripproof construction.</li><li>• Superior voltage waveform from a two-thirds pitch stator and skewed rotor.</li><li>• Linkboards</li><li>• Optimized Electrical Design</li><li>• Enhanced Ventilation</li><li>• Fully Guarded</li><li>• Heavy Duty Bearings</li></ul>
<b>Type</b>	Ext. Voltage Regulated, Brushless	
<b>Gen Frame</b>	UCI274	
<b>Insulation</b>	NEMA	
<b>Material</b>	Class H	
<b>Temperature Rise</b>	105 °C, Prime	
<b>Hertz</b>	60	
<b>Phase</b>	3	
<b>RPM</b>	1800	
<b>Exciter</b>	Rotating	
<b># Leads</b>	12 Reconnectable	
<b>PF</b>	0.8	
<b>Ambient</b>	40°C	
<b>Coupling Single Bearing</b>	Flexible	
<b>Amortisseur Windings</b>	Full	
<b>Cooling Air Volume</b>	1,308 CFM	
<b>Peak Motor Starting</b>	30% Voltage Dip, 665 skVA @ 480V	
<b>Voltage Regulation</b>	1 Phase Sensing 1%	
<b>no-load and full-load</b>		



## STANDARD FEATURES

- Vibration Isolators
- Oil Drain Valve with Extension
- Battery
- Battery Rack
- Battery Cables
- Battery Disconnect Switch
- High Ambient Unit Mounted Radiator
- Battery Charging Alternator
- 5 Gallon Reserve Oil Tank
- Wellhead Gas Fuel System
- Factory Test Prior to Shipment
- 1 Year TaylorTrak Monitoring Service
- 1 Year Prime Warranty
- Owners Manual

- ☐ Line Circuit Breaker
- ☐ Non-Fusible NEMA 3R Disconnect Box
- ☐ Engine RPM Control Module
- ☐ Y-YY-ZZ Multi-voltage selector switch
- ☐ 20 amp 120vac and GFI receptacle
- ☐ 20 amp 120vac GFI and 30 amp 120/240vac twist lock receptacle
- ☐ 30 amp 120vac RV receptacle
- ☐ Cam-Loks
- ☐ Extenda-Lites
- ☐ Winterization Kit
- ☐ Heavy Duty Trailer

## AVAILABLE ACCESSORIES

### ENCLOSED UNIT

- ☐ Standard Enclosure With Internal Silencer
- ☐ Sound Attenuated Enclosure With Silencer

### CONTROLLER

- ☐ Analog Control Panel
- ☐ DGC2020 Control Panel
- ☐ DGC2020 Control Panel with Modem
- ☐ DGC2020 with Generator Protection
- ☐ DGC2020 with Modem and Generator Protection

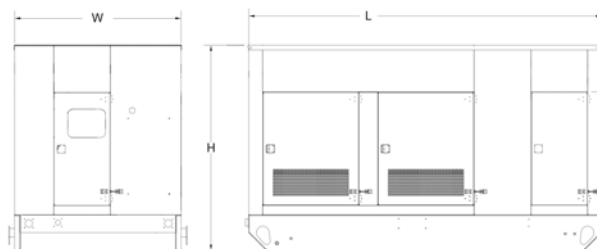
### MISCELLANEOUS

- ☐ Coolant Drain Kit
- ☐ Water Jacket Heater
- ☐ Oil Pan Heater
- ☐ Battery Charger
- ☐ Pad Type Battery Heater
- ☐ Battery Heater Blanket with Thermostat

## WEIGHTS AND DIMENSIONS

OVERALL SIZE, L x W x H: 150 in. x 70.75 in. x 87 in.  
WEIGHT (DRY): 7962 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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