

## Rating Range —3 Φ / 60 Hz Operation

Standby: kW 255-350  
 kVA 318-437

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 2000 kW and gaseous powered 30 kW to 400 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

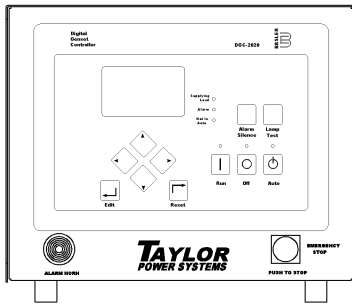
Genset Model Number	Alternator	Voltage L-N / L-L	Phase	Hertz	Natural Gas 130° Rise Standby Rating		LP Gas 130° Rise Standby Rating	
					kW / kVA	Amps	kW / kVA	Amps
TG350	433CSL6216	277/480	3	60	350/437	525	255/318	382
		139/240	3	60	350/437	1051	255/318	765
		127/220	3	60	350/437	1147	255/318	834
		240/416	3	60	350/437	606	255/318	441
		120/208	3	60	350/437	1212	255/318	882
		120/240	3	60	350/437	1051	255/318	765
		220/380	3	60	350/437	664	255/318	483
		120/240	1	60	241/241	1004	220/220	916

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

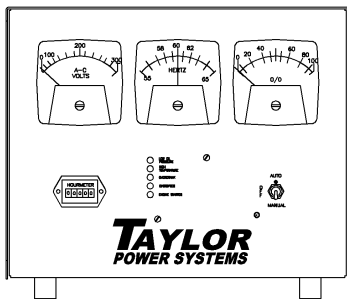
Basic Technical Data		Lubrication System	
Manufacturer	Doosan	Type	Full Pressure
Model	D183TIC	Oil pan capacity	37 qt (35 L)
Number of cylinders	10	Oil pan capacity with filter	44.5 qt (42.1 L)
Cylinder arrangement	Vertical in-line	Oil filter: qty and type	2, Cartridge
Cycle	4		
Induction system	Turbocharged, Charge Air-Cooled	Electrical System	
Compression ratio	10.5.:1	Ignition system	N/A
Bore	5.04 in (128 mm)	Battery charging alternator:	
Stroke	5.59 in (142 mm)	Ground	negative
Cubic capacity	1115 cu in (18.273 L)	Volts	24
Piston speed	1677 ft/min (511 m/min)	Ampere rating	45
Main bearings: qty and type	12, Precision Half-Shell	Starter motor rated voltage	24
Governor type	Electronic	Battery, recommended cold cranking amps (CCA):	
Rated rpm	1800	Qty rating for -18 °C (0 °F)	Two, 1000
Max power at rated rpm	530 hp (395 kW)	Battery voltage	12
Engine power at Standby rating	N/A	Operation Requirements	
Frequency regulation, no-load to full-load	Isochronous	Radiator-cooled cooling air, m <sup>3</sup> /min (scfm) ‡	19500 scfm (552 m <sup>3</sup> /min)
Frequency regulation, steady state	± 0.5%	Combustion air	664 cfm (1328 m <sup>3</sup> /min)
Frequency	Fixed	Heat rejected to ambient air: Engine	3121 Btu/min (55 kW)
Air cleaner type	Dry	Alternator	1195 Btu/min (21 kW)
		Fuel System	
		Fuel Type	LP Gas, Natural Gas or Dual Fuel
		Fuel Consumption	
		Natural Gas	
		100% Load	3984 cfh (112.9 m <sup>3</sup> /hr)
		75% Load	3053 cfh (86.5 m <sup>3</sup> /hr)
		50% Load	2109 cfh (59.8 m <sup>3</sup> /hr)
		25% Load	1253 cfh (35.5 m <sup>3</sup> /hr)
		LP Gas	
		100% Load	1289 cfh (36.5 m <sup>3</sup> /hr)
		75% Load	979 cfh (27.7 m <sup>3</sup> /hr)
		50% Load	701 cfh (19.9 m <sup>3</sup> /hr)
		25% Load	446 cfh (12.6 m <sup>3</sup> /hr)
Exhaust System			
Exhaust manifold type	Wet		
Exhaust flow at rated kW	2366 cfm (1411 kg/hr)		
Exhaust temperature at rated kW	1382 °F (750 °C)		
Maximum allowable back pressure	3.0 in (10.2 kPa)		
Exhaust outlet size at engine hookup	N/A		
Cooling System			
Ambient temperature	122 °F (50 °C)		
Engine jacket water capacity	11 gal (50 L)		
Radiator system capacity, including engine	43 gal (163 L)		
Engine jacket water flow	174 gpm (660 Lpm)		
Heat rejected to cooling water at rated	20400 Btu/min (359 kW)		
Max restriction of cooling air, intake and discharge side of radiator	0.5 H <sub>2</sub> O (0.125 kPa)		

# Generator Controller Options



## 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

# Alternator Specifications

<b>Manufacturer</b>	Marathon	<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 field.</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>	MAGNAPLUS	
<b>Insulation</b>	NEMA	
<b>Material</b>	Class H	
<b>Temperature Rise</b>	130 °C, Standby	
<b>Hertz</b>	60	
<b>Phase</b>	3	
<b>RPM</b>	1800	
<b>Exciter</b>	Rotating	
<b># Leads</b>	12 Reconnectable or 4 Single Phase	
<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>	250 CFM	
<b>Peak Motor Starting</b>	30% Voltage Dip, 760 skVA	
<b>Voltage Regulation</b>	1 Phase Sensing 1%	
<b>no-load and full-load</b>	Optional 3 Phase Sensing 1/2%	

## STANDARD FEATURES

- Heavy Duty Steel Base
- Vibration Isolators
- Oil Drain Valve with Extension
- Battery Rack
- Battery Cables
- High Ambient Unit Mounted Radiator
- Battery Charging Alternator
- Factory Paint
- Factory Test Prior to Shipment
- 2 Year Warranty
- Owners Manual

## AVAILABLE ACCESSORIES

### OPEN UNIT

- Narrow Skid Base
- Radiator Duct Flange
- Ship Loose Flex Exhaust
- Ship Loose Critical Silencer

### ENCLOSED UNIT

- Wide Skid Base
- Standard Enclosure With Internal Silencer
- Sound Attenuated Enclosure With Silencer
- Load Center With Lights and GFI Receptacle

### CONTROLLER

- DGC2020 Control Panel
- DGC2020 Control Panel with Modem
- DGC2020 with Generator Protection
- DGC2020 with Modem and Generator Protection
- Flush or Surface Mount Remote Annunciator
- Remote Mount Break Glass E-Stop Switch
- Analog Control Panel

## MISCELLANEOUS

- Flexible Fuel Lines
- Coolant Drain Kit
- Water Jacket Heater
- Oil Pan Heater
- Generator Strip Heater
- Battery
- Battery Charger
- Pad Type Battery Heater
- Battery Heater Blanket with Thermostat
- Line Circuit Breaker
- Dual Fuel

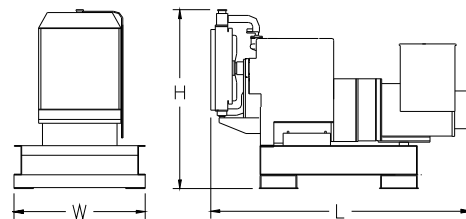
## WARRANTY

- 3 Year Warranty
- 5 Year Warranty

## WEIGHTS AND DIMENSIONS

OVERALL SIZE, L x W x H, in.: 140 in x 90 in x 93 in  
WEIGHT: 9892 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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