



# Model: TG350



Shown with optional features.

## Rating Range — 3 Φ / 60 Hz Operation

Standby: kW 255-350  
kVA 318-437

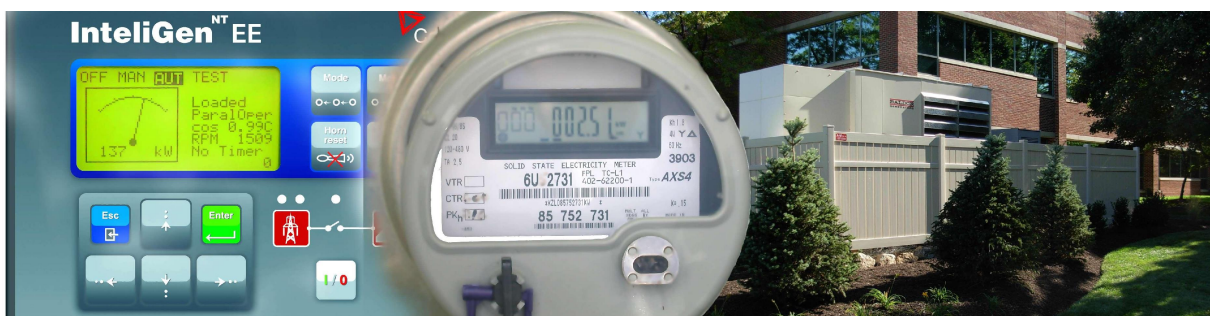
## FEATURES

- 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. 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.

## GEN SET 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

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

## Generator Controller Options



- Dashboard Style LCD Panel
- NFPA 110
- SAE J1939 ECU Communications
- Load Share Synch Features
- Metering, Data Trending, Alarms
- Engine Status Indicators
- Fuel Consumption
- CanBus, ModBus
- Ethernet Communications
- Remote Contacts Form C, RS 232/485



- Internet Bridge Module
- Internet Connection & Web Browser
- Remote Access & Control
- IntelliMonitor Network Management
- SNMP, PC SCADA
- Site Overview & Statistic Settling
- Automatic Downloads, Report Writer
- Receive Emails or IM Text
- CAT 5e, RS232/485, RJ 45
- Ethernet or Dial Up Connection
- Fleet Scalability

## 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 Voltage Regulation no-load and full-load</b>	30% Voltage Dip, 760 skVA 1 Phase Sensing 1% Optional 3 Phase Sensing 1/2%	

