

Ratings Range — 60 Hertz Operation

Standby: kW 80
 kVA 100

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

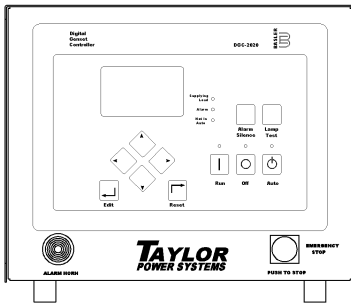
Genset Model Number	Alternator	Voltage L-N / L-L	Phase	Hertz	Natural Gas 130° Rise Standby Rating		LP Gas 130° Rise Standby Rating	
					kW / kVA	Amps	kW / kVA	Amps
TG80	362CSL1604	277/480	3	60	80/100	120	N/A	N/A
		139/240	3	60	80/100	241	N/A	N/A
		127/220	3	60	80/100	262	N/A	N/A
		240/416	3	60	80/100	139	N/A	N/A
		120/208	3	60	80/100	278	N/A	N/A
		120/240	3	60	80/100	241	N/A	N/A
		220/380	3	60	80/100	142	N/A	N/A
	120/240	1	60	66/66	275	N/A	N/A	
	363CSL1617	120/240	1	60	80/80	333	N/A	N/A

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

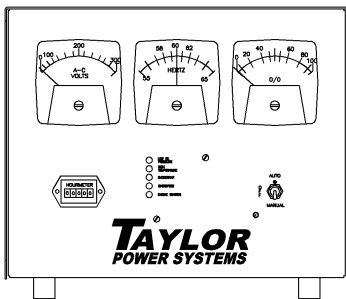
Basic Technical Data		Lubrication System	
Manufacturer	General Motors	Type	Full Pressure
Model	Vortec 5.7 L	Oil pan capacity	5.0 qt (4.7 L)
Number of cylinders	8	Oil pan capacity with filter	6.5 qt (6.2 L)
Cylinder arrangement	Vertical in-line	Oil filter: qty and type	1, Cartridge
Cycle	4	Electrical System	
Induction system	Turbocharged	Ignition system	Individual Coil, Near Plug Ignition
Compression ratio	9.1:1	Battery charging alternator:	
Bore	4.00 in (101.6 mm)	Ground	negative
Stroke	3.48 in (88.4 mm)	Volts	12
Cubic capacity	350 cu in (5.7 L)	Ampere rating	70
Piston speed	1044 ft/min (318 m/min)	Starter motor rated voltage	12
Main bearings: qty and type	5, M400 Copper Lead	Battery, recommended cold cranking amps (CCA):	
Governor type	Electronic	Qty rating for -18 °C (0 °F)	1,630
Rated rpm	1800	Battery voltage	12
Max power at rated rpm	133 hp (99 kW)	Operation Requirements	
Engine power at Standby rating	N/A	Radiator-cooled cooling air, m ³ /min (scfm) ‡	5500 scfm (156 m ³ /min)
Frequency regulation, no-load to full-load	Isochronous	Combustion air	237 cfm (6.8 m ³ /min)
Frequency regulation, steady state	± 0.5%	Heat rejected to ambient air: Engine	2700 Btu/min (47 kW)
Frequency	Fixed	Alternator	825 Btu/min (14.5 kW)
Air cleaner type	Dry	Fuel System	
		Fuel Type	Natural Gas
		Fuel Consumption	
Exhaust System		<u>Natural Gas</u>	
Exhaust manifold type	Dry	100% Load	1185 cfh (33.6 m ³ /hr)
Exhaust flow at rated kW	670 cfm (18.9 m ³ /min)	75% Load	981 cfh (27.8 m ³ /hr)
Exhaust temperature at rated kW	1200 °F (649 °C)	50% Load	777 cfh (22.0 m ³ /hr)
Maximum allowable back pressure	3.0 in (10.2 kPa)	25% Load	573 cfh (16.2 m ³ /hr)
Exhaust outlet size at engine hookup	N/A		
Cooling System			
Ambient temperature	122 °F (50 °C)		
Engine jacket water capacity	1.8 gal (6.8 L)		
Radiator system capacity, including engine	6.0 gal (22.5 L)		
Engine jacket water flow	38 gpm (144 Lpm)		
Heat rejected to cooling water at rated kW	3540 Btu/min (62 kW)		
Max restriction of cooling air, intake and discharge side of radiator	0.5 H ₂ 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

Manufacturer	Marathon	<ul style="list-style-type: none"> • NEMA MG1, IEEE, AND ANSI standards compliance for temperature and motor starting. • Sustained short-circuit current of the rated current for up to 10 seconds. • Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field. • Self-ventilated and dripproof construction. • Superior voltage waveform from a two-thirds pitch stator and skewed rotor. • Linkboards • Optimized Electrical Design • Enhanced Ventilation • Fully Guarded • Heavy Duty Bearings
Type	Ext. Voltage Regulated, Brushless	
Gen Frame	MAGNAPLUS	
Insulation	NEMA	
Material	Class H	
Temperature Rise	130 °C, Standby	
Hertz	60	
Phase	3	
RPM	1800	
Exciter	Rotating	
# Leads	12 Reconnectable or 4 Single Phase	
PF	0.8	
Ambient	40°C	
Coupling Single Bearing	Flexible	
Amortisseur Windings	Full	
Cooling Air Volume	250 CFM	
Peak Motor Starting	30% Voltage Dip, 175 skVA	
Voltage Regulation	1 Phase Sensing 1%	
no-load and full-load	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

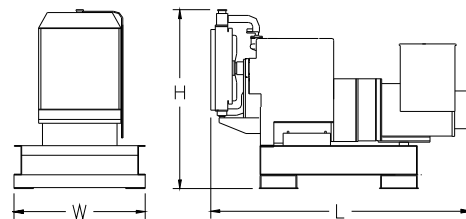
WARRANTY

- 3 Year Warranty
- 5 Year Warranty

WEIGHTS AND DIMENSIONS

OVERALL SIZE, L x W x H, in.: 96 in x 46 in x 62 in
WEIGHT: 2406 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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