

Ratings — 3 Φ / 60 Hz Operation

Standby:	kW	100
	kVA	125
Prime:	kW	90
	kVA	113

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 Tier 3 Certified Engine.

Genset Ratings

Genset Model Number	Alternator	Voltage L-N / L-L	Phase	Hertz	130° Rise Standby Rating		105° Rise Prime Rating	
					kW / kVA	Amps	kW / kVA	Amps
TMC100	362CSL1606	277/480	3	60	100/125	150	90/113	136
		139/240	3	60	100/125	301	90/113	272
		254/440	3	60	100/125	164	90/113	148
		127/220	3	60	100/125	328	90/113	297
		240/416	3	60	100/125	173	90/113	157
		120/208	3	60	100/125	347	90/113	314
		120/240	3	60	100/125	301	90/113	272
		219/380	3	60	96/120	182	88/110	167
	120/240	1	60	79/79	329	72/72	300	
	363CSL1617	120/240	1	60	100/100	417	90/90	375

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

Manufacturer	Perkins
Model	1104D-E44TAG2
Number of cylinders	4
Cylinder arrangement	Vertical in-line
Cycle	Four stroke
Induction system	Turbocharged, air to air charge cooled
Compression ratio	16.2:1
Bore	4.13 in. (105 mm)
Stroke	5.0 in. (127 mm)
Cubic capacity	268.5 cu in. (4.4 L)
Direction of rotation	Anti-clockwise when viewed from flywheel
Firing order	1,3,4,2
Governor type	ECM, Isochronous 0.25%
Gross engine power	157 hp (117 kWb)
Electropak net engine power	149 hp (111 kWm)
Brake mean effective pressure	257 psi (1771 kPa)
Engine coolant flow (against 5 psi (35 kPa) restriction)	37 gal/min (169 L/min)
Cooling fan air flow (29 psi (200 kPa) external restriction)	7,924 cfm (224.4 m ³ /min)
Combustion air flow (at rated speed)	300 cfm (8.5 m ³ /min)
Exhaust gas flow (max)	706 cfm (20.0 m ³ /min)
Exhaust gas mass flow (max)	22.7 lb/min (10.3 kg/min)
Exhaust gas temperature in manifold (max)	942 °F (506 °C)
Boost pressure ratio	2.8
Overall thermal efficiency (net)	37%

Cooling System

Coolant	
Total System Capacity	
With radiator	4.5 gal (17 L)
Without radiator	1.8 gal (7.0 L)
Coolant Pump Drive	Gear
Coolant pump drive ratio	2:1
Maximum top tank temperature	233° F (112° C)
Temperature rise across engine	
(rating dependent)	43.9-44.6° F (6.6-7.0 °C)
Thermostat operation range	185-203° F (85-95 °C)
Recommended coolant:	50% ethylene glycol with a corrosion inhibitor (BS 658 : 1992 or MOD AL39) and 50% clean fresh water.

Exhaust System

Maximum back pressure	2.1 psi (12 kPa)
Exhaust outlet size	2.5 in (64 mm)

Lubrication System

Lubricating oil capacity total system	2.1 gal (8.0 L)
Maximum sump capacity	1.8 gal (7.0 L)
Minimum sump capacity	1.4 gal (5.5 L)
Maximum engine operating angles (front up, front down, right side or left side)	25°

Lubricating Oil Pressure

Oil Temperature (continuous operation)	257 °F (125 °C)
Oil Temperature (maximum intermittent operation)	275 °F (135 °C)

Electrical System

Type	12 volt negative earth
Alternator type	Denso A115i
Alternator Voltage	12V
Alternator Output	65A
Starter motor type	Denso P95
Starter motor voltage	12V
Starter motor power	4.0 hp (3.0 kW)
Minimum cranking speed	80 rev/min

Induction System

Maximum air intake restriction

Clean filter	.73 psi (5 kPa)
Dirty filter	1.2 psi (8 kPa)
Air filter type	2 stage cyclonic/paper element

Duct allowance with 50% glycol

1800 rev/min	1800 rev/min
127 °F (53 °C)	114 °F (46 °C)
17.4 psi (120 kPa)	29 psi (200 kPa)
6,427 cfm (182 m ³ /min)	5,438 cfm (154 m ³ /min)

Fuel System

Type of injection	Direct
Fuel injection pump	Common rail
Fuel atomizer	Unit injector/ multi-hole

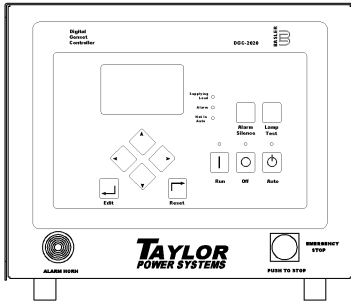
Fuel Lift Pump

Max flow through customer filter	34.3 gal/hour (130 L/hr)
Maximum suction head	17 kPa (1.7 m)

Fuel Consumption

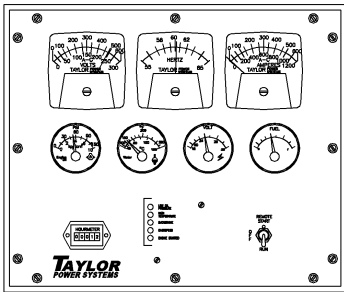
110% Load	7.9 gal/hr (29.96 L/hr)
100% Load	7.3 gal/hr (27.77 L/hr)
75% Load	5.8 gal/hr (22.04 L/hr)
50% Load	4.2 gal/hr (16.07 L/hr)

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

- Analog instruments to monitor AC voltage, AC frequency, oil pressure, water temperature, battery voltage, fuel level, run time/hour meter and percent of load
- Red LED indication for overspeed, overcrank, low oil pressure, and high coolant temperature
- Green LED indication of engine running
- Control switch is provided for local and remote starting with 3 position run/off/remote switch
- Engine mounted emergency by-pass key switch

Alternator Specifications

<p>Manufacturer Marathon</p> <p>Type Ext. Voltage Regulated, Brushless</p> <p>Gen Frame MAGNAPLUS</p> <p>Insulation NEMA</p> <p>Material Class H</p> <p>Temperature Rise 130 °C, Standby</p> <p>Hertz 60</p> <p>Phase 3</p> <p>RPM 1800</p> <p>Exciter Rotating</p> <p># Leads 12 Reconnectable or 4 Single Phase</p> <p>PF 0.8</p> <p>Ambient 40°C</p> <p>Coupling Single Bearing Flexible</p> <p>Amortisseur Windings Full</p> <p>Cooling Air Volume 250 CFM</p> <p>Peak Motor Starting 30% Voltage Dip, 205 skVA</p> <p>Voltage Regulation 1 Phase Sensing 1%</p> <p>no-load and full-load Optional 3 Phase Sensing 1/2%</p>	<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
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STANDARD FEATURES

- Trailer with integral fuel tank
- Vibration Isolators
- Oil Drain Valve with Extension
- Battery
- Battery Rack
- Battery Cables
- Water jacket heater
- Flexible Fuel Lines
- High Ambient Unit Mounted Radiator
- Battery Charging Alternator
- Factory Paint
- Factory Test Prior to Shipment
- 2 Year Warranty

AVAILABLE ACCESSORIES

ENCLOSED UNIT

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

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

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

- Line Circuit Breaker
- Output Power Cable
- 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
- Diesel Locomotive cable
- Extenda-Lites
- Hydraulic Brake Kit
- Pintle ring hitch
- Spare tire kit
- Lug wrench
- Hydraulic Jack
- Single Point Lift

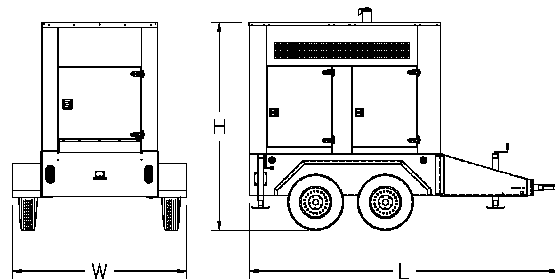
WARRANTY

- 3 Year Warranty
- 5 Year Warranty

WEIGHTS AND DIMENSIONS

OVERALL SIZE, L x W x H, in.: 170 in. x 75 in. x 105 in.
WEIGHT (DRY): 4755 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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