



# TD2000

## Ratings Range — 60 Hertz Operation

Standby:                    kW    2000  
                                   kVA    2500

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 Tier 2 Certified for Stationary Emergency Standby use only.

## Genset Ratings

Genset Model Number	Alternator	Voltage L-L	Phase	Hertz	130° Rise Standby Rating	
					kW / kVA	Amps
TD2000	744RSL4054	480V	3	60	2000/2000	3011
	744RSL4056	480V	3	60	2000/2000	3011
	744FSM4374	4160V	3	60	2000/2000	347
	1020FDH1242	12470V	3	60	2000/2000	116
	1020FDH1242	13200V	3	60	2000/2000	109
	1020FDH1242	13800V	3	60	2000/2000	105

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	Mitsubishi
Model	S16R-Y2PTAW2-1
Number of cylinders	16
Cylinder arrangement	
Cycle	Four stroke
Induction system	Turbocharged intercooler
Compression ratio	14.0:1
Bore	6.69 in (170 mm)
Stroke	7.09 in (180 mm)
Cubic capacity	3989 cu in (65.4 L)
Direction of rotation	
Firing order	
Governor type	Isochronous
Gross engine power	2923 bhp (2181 kWm)
Electropak net engine power	
Brake mean effective pressure	
Engine coolant flow (against 5 psi (35 kPa) restriction)	489 gpm (1850.9 Lpm)
Cooling fan air flow (29 psi (200 kPa) external restriction)	102700 scfm (2909 cmm)
Combustion air flow (at rated speed)	7274 cfm (206 cmm)
Exhaust gas flow (max)	19209 cfm (544 cmm)
Exhaust gas mass flow (max)	
Exhaust gas temperature in manifold (max)	987° F (516° C)
Boost pressure ratio	
Overall thermal efficiency (net)	

## Cooling System

Coolant	
Total System Capacity	
With radiator	673.0 qt (636.8 L)
Without radiator	179.6 qt (169.9 L)
Coolant Pump Drive	Centrifugal
Coolant pump drive ratio	
Maximum top tank temperature	
Temperature rise across engine (rating dependent)	
Thermostat operation range	
Recommended coolant:	

## Exhaust System

Maximum back pressure	23.6 H <sub>2</sub> O (5.9 kPa)
Exhaust outlet size	13.39 in (340 mm)

## Lubrication System

Lubricating oil capacity total system	
Maximum sump capacity	52.8 gal (200.0 L)
Minimum sump capacity	
Maximum engine operating angles (front up, front down, right side or left side)	

## Lubricating Oil Pressure

Oil Temperature (continuous operation)	
Oil Temperature (maximum intermittent operation)	

## Electrical System

Type	
Alternator type	
Alternator Voltage	24 V
Alternator Output	30 A
Starter motor type	
Starter motor voltage	24 V
Starter motor power	
Minimum cranking speed	

## Induction System

Clean filter	
Dirty filter	
Air filter type	

## Duct allowance with 50% glycol

## Fuel System

Type of injection	
Fuel injection pump	Engine driven
Fuel atomizer	

## Fuel Lift Pump

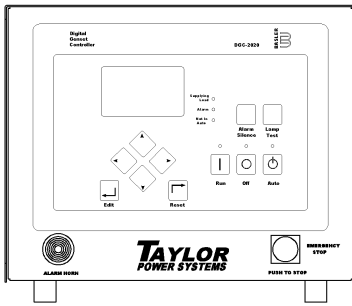
Max flow through customer filter	330.3 gph (1250.2 Lph)
Maximum suction head	3 ft (1 m)

## Fuel Consumption

110% Load	
100% Load	159.4 gph (603.3 Lph)
75% Load	117.0 gph (442.8 Lph)
50% Load	80.8 gph (305.8 Lph)

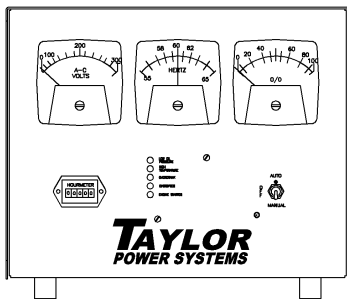


# Generator Controller Options



## 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>	MAGNAMAX	
<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>	4 BAR	
<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>	3150 CFM	
<b>Peak Motor Starting</b>	30% Voltage Dip, 5800 kVA	
<b>Voltage Regulation no-load and full-load</b>	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
- Sub-Base Fuel Tank

### 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

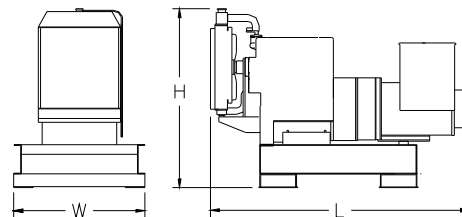
## APPROVALS AND LISTINGS

- UL Standard 2200

## WEIGHTS AND DIMENSIONS

OVERALL SIZE, L x W x H,: 267 in. x 96 in. x 102 in.  
WEIGHT: 34000 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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