

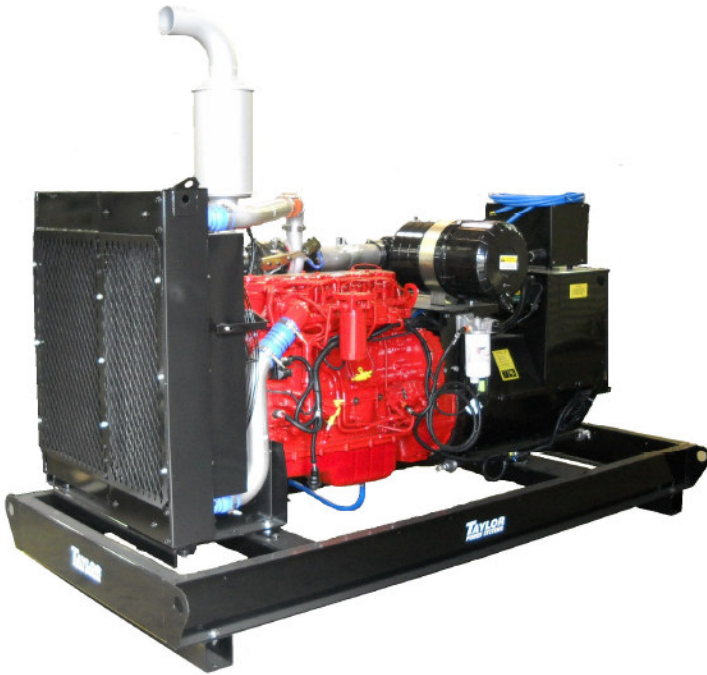


Model: TA210

Unit Ratings

		60Hz
Standby:	kW/kva	210
Prime:	kW/kva	189

Alternator Ratings at 1.0 Power Factor



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.
- 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.
- Analog Control system with an ECU-CAN76 providing metering and monitoring.
- EPA Tier 3 Certified Engine.

Cummins Inc.

Engine Data Sheet

ENGINE MODEL : QSB7-G5 NR3

GENERAL ENGINE DATA

Type.....4-Cycle; In-line; 6-Cylinder Diesel
Aspiration.....Turbocharged and Charge Air Cooled
Bore x Stroke.....
1in x in (mm x mm) 4.21 x 4.88 (107 x 124)
Displacement.....in³ (liter) 408 (6.69)
Compression Ratio.....17.2 : 1
Governed Engine Speed.....1800 rpm
Gross Engine Power Output.....hp(kW) 324 (242)
Brake Mean Effective Pressure.....psi (kPa) 349 (2404)
Piston Speed.....ft/min (m/s) 1464 (7.4)
Intake Air Flow.....cfm (liter/s) 569 (269)
Exhaust Gas Temperature.....°F (°C) 988 (532)
Exhaust Gas Flow.....cfm (liter/s) 1549 (732)
Heat Rejection to Jacket Coolant -
BTU/min (kW) 4858 (86)
Heat Rejection to Exhaust.....BTU/min (kW) 4858 (86)
Heat Rejection to Fuel.....BTU/min (kW) 52 (1)
Heat Rejected to Aftercooler....BTU/min (kW) 2786 (49)
Charge Air Flow.....lb/min (kg/min) 42 (19)
Turbocharger Compressor Outlet Pressure –
Psi (kPa) 35 (239)
Turbocharger Compressor Outlet Temperature –
°F (°C) 399 (204)
Dry Weight (Approximate)
Fan to Flywheel Engine.....lb (kg) 1047 (475)
Wet Weight (Approximate)
Fan to Flywheel Engine.....lb (kg) 1069 (485)
Moment of Inertia of Rotating Components
With FW 9857 Flywheel
(lb m)(ft²) (kg x m²) 24.7 (1.55)

With FW 9878 Flywheel
(lb m)(ft²) (kg x m²) 36.8 (2.47)

Center of Gravity from Rear Face of Block
in (mm) 13.7 (348)

Center of Gravity Above Crankshaft Centerline
in (mm) 5.91 (150)

Maximum Static Loading at Rear Main Bearing
lb (kg) N/A N/A

ENGINE MOUNTING

Maximum Bending Moment
at Rear Face of Block.....(lb)(ft) (N x m) 1000 (1356)

EXHAUST SYSTEM

Maximum Back Pressure.....in Hg (kPa) 3 (10.2)

AIR INDUCTION SYSTEM

Maximum Intake Air Restriction
With Dirty Filter Element..... in H₂O (kPa) 25 (6.2)
With Clean Filter Element..... in H₂O (kPa) 15 (3.7)

COOLING SYSTEM

Jacket Water Circuit Requirements

Coolant Capacity – Engine Only....US gal (L) 2.7 (10.2)
Maximum Static Head of Coolant Above Engine Crank
Centerline.....ft(m) 60 (18.3)
Standard Thermostat (Modulating) Range
F° (C°) 175-203 (79-95)
Minimum Pressure Cap.....psi (kPa) 15 (103)
Maximum Top Tank Temperature for Standby/Prime
Power.....F°(C°) 233/225 (112/107)
Maximum Coolant Friction Head External to Engine
Psi (kPa) 5 (35)

Charge Air Cooler Requirements

Maximum Temp. Rise between Engine Air Intake and
Intake Manifold 1500/1800 rpm.....F°(C°) 45 (25)

Maximum Air Pressure Drop from Turbo Air Outlet to
Intake Manifold 1500/1800 rpm
in Hg (kPa) 2.5/4 (8.5/13.5)
Maximum Intake Manifold Temperature @77°F (25°C)
ambient 1500/1800 rpm.....°F (°C) 122 (50)

Maximum Intake Manifold Temperature for engine
protection (Shut Down Threshold).....°F(°C) 203 (95)

LUBRICATION SYSTEM

Oil Pressure @ Idle Speed.....psi (kPa) 10 (69)
Oil Pressure @ Governed Speed
psi (kPa) 40-60 (276-414)
Maximum Oil Temperature.....°F(°C) 280 (138)
Oil Capacity with OP 9457 Oil Pan: Low – High
US gal (liter) 4.0-4.6 (15.1-17.4)
Total System Capacity (Including Filter)
US gal (liter) 5.0 (18.9)

FUEL SYSTEM

Type Injection System.....Bosch HPCR

Maximum Restriction at Lift Pump (clean/dirty filter)
in Hg (kPa) 5/10 (17/34)

Maximum Allowable Head on Injector Return Line
(Consisting of Friction Head and Static Head)
In Hg (kPa) 6 (20)

Maximum Return Fuel Flow
US gal (liter/hr) 27 (103)

Maximum Fuel Inlet Temperature
°F(°C) 160 (71)

ELECTRICAL SYSTEM

Cranking Motor (Heavy Duty, Positive Engagement)
(volt) 12 24

Battery Charging System, Negative Ground
(ampere) 100 70

Maximum Allowable Resistance of Cranking Circuit
(ohm) 0.001 0.002

Minimum Recommended Battery Capacity
Cold Crank @ 0°F to 32°F (-18°C to 0°C)
0°F (CCA) 1100 (550)

COLD START CAPABILITY

Minimum Ambient Temperature for NFPA 110 Cold
Start (90 degree F Coolant Temperature)
°F (°C) 40 (4)
Minimum Ambient Temperature for Unaided Cold Start
°F (°C) 10 (-12)

Generator Controller



Analog Top Mount Controller

This Generator control panel has analog instruments to monitor AC voltage, AC frequency, percent of load and, run time/hour meter. Safety shutdowns provide red LED indication for overspeed, overcrank, low oil pressure, and high coolant temperature. Provide green LED indication of engine running. Control switch is provided for local and remote starting with 3 position run/off/remote switch.

There is also an engine mounted emergency by-pass key switch with mechanical oil pressure and coolant temperature gauge.

AC Alternator Specifications

Taylor Power Systems uses Full Output Rated 4 Lead design Single Phase Generators, which provide superior motor starting, and generator efficiency.

Class H Insulation System . . . utilizes an unsaturated polyester varnish for optimal insulation life and superior moisture protection. An epoxy overcoat is added for increased environmental protection. Field windings are wet wound with epoxy and designed to withstand overspeeds of 125%. All windings are 100% copper with class H insulation.

Linkboards . . . are standard to simplify voltage reconnection and support lead termination.

PM300 Voltage Regulator . . . is encapsulated for reliable performance in all environments. The PM300 regulator provides 1% regulation, underspeed protection, stability adjustment to optimize transient performance, and EMI filtering to commercial standards.

Optimized Electrical Design . . . with four-pole, brushless features, utilizes a 2/3 pitch winding to minimize harmonic distortion. The main rotor, utilizing Marathon Electric's unirotor construction, provides exceptional waveshape and voltage balance. The unirotor construction method incorporates full amortisseur windings facilitating parallel operation and non-linear loads.

Enhanced Ventilation . . . created by a high efficiency cast aluminum fan and optimized internal air flow patterns, maximizes heat transfer and minimizes hot spot differentials for extended winding life. Durable aluminum alloy fans avoid breakage problems associated with steel weldments or plastic fans.

Fully Guarded . . . for operator safety and generator protection. No rotating or electrically energized parts are exposed. All openings are covered by louvers or screens.

Heavy Duty Bearings . . . are double shielded and pre-lubricated for the life of the bearing. This helps resist contamination and ensures a maximum bearing life.

Design Specs and Agency Approvals . . . are important at Taylor Power Systems. All MAGNAPLUS® units meet NEMA MG1-32, BS5000, and IEC 34-1 requirements. MAGNAPLUS® generators are also CE Certified, CSA Certified and fully UL Listed.

Standard Features and Optional Accessories

Standard Features

- **Heavy duty steel base**
- **Vibration isolators**
- **Battery**
- **Battery rack**
- **Battery cables**
- **Battery Charger**
- **Spark arresting muffler**
- **Flexible fuel lines**
- **PMG Exciter**
- **Water jacket heater**
- **Electronic Isochronous Governor**
- **Owners manual**

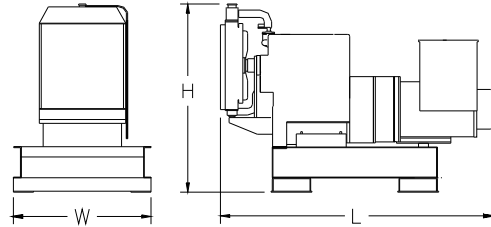
Optional Accessories

Exhaust Silencer
Sub-Base Fuel Tank
Above ground fuel tank
Oil pan heater
Battery heater
Generator strip heater
Line circuit breaker
Automatic transfer switch
Elevated base

WEIGHTS AND DIMENSIONS

OVERALL SIZE, L x W x H, in.: 98 in. x 36 in. x 88 in.
WEIGHT (WET): 2,968 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.

DISTRIBUTED BY:



947 Industrial Park Drive
Clinton, Mississippi 39056
Phone (601) 922-4444
Toll Free (800) 748-9980
Fax (601) 932-4028
www.taylorpower.com