



XQ20-2
STANDBY 20 kW
PRIME 18 kW
60 Hz

Voltage	Standby kW (kVA)	Prime kW (kVA)
208/120V 3 PH	20 (25)	18 (22.5)
480/277V 3 PH	20 (25)	18 (22.5)
240/120V 1 PH	17 (17)	15 (15)

FEATURES

GENERATOR SET

- Heavy duty industrial Tier 2 EPA approved emissions certified diesel engine
- Complete system designed and built at ISO 9001 certified facility
- Factory tested to design specifications at full load conditions

ENGINE

- Governor, mechanical
- Electrical system, 12V DC
- Cartridge type filters
- Fuel/water separator
- Battery rack and cables

GENERATOR

- Insulation system, class H
- Screen protected and drip-proof, self exciting, self-regulating with fully interconnected damper windings, IC06 cooling system and sealed-for-life bearings
- Electrical design in accordance with BS5000 Part 99, IEC60034-1, EN61000-6, NEMA MG-1.22

CONTROL SYSTEM

- Manual/Autostart control panel
- Vibration isolated, NEMA 1 enclosure with lockable hinged door
- DC and AC wiring harnesses

MULTI-VOLTAGE DISTRIBUTION PANEL

- Switchable voltage output:
 - 480/277V 3 phase
 - 208/120V 3 phase
 - 240/120V 1 phase
- Convenience receptacles
- Hinged door over main connectors

MOUNTING ARRANGEMENT

- Heavy-duty fabricated steel base raised for forklift access
- Anti-Vibration mounting pads
- Complete OSHA guarding
- Three-way valves to allow connection of auxiliary fuel tank
- UL listed double walled fuel tank base with 24 hour minimum fuel supply.
- Containment area for oil, coolant and fuel spill.

SOUND ATTENUATED ENCLOSURE

- Fully weatherproof sound attenuated enclosure with internal exhaust silencer
- Highly corrosion resistant construction
 - Body made from sheet steel components pretreated with zinc phosphate prior to polyester powder coating at 200° C (392° F)

CIRCUIT BREAKER

- UL/CSA (mainline) listed
- 3-pole with solid neutral
- NEMA 1 steel enclosure, vibration isolated

FEATURES (CONT'D)

AUTOMATIC VOLTAGE REGULATOR

- Voltage within the limits of $\pm 0.5\%$ for 3 Phase and $\pm 1\%$ for Single Phase operation at steady state from no load to full load

EQUIPMENT FINISH

- All electroplated hardware
- Anti-corrosive protection prior to painting
- High gloss polyurethane paint for durability and scuff resistance

QUALITY STANDARDS

- BS4999, BS5000, BS5514, IEC60034, EN61000-6, NEMA MG-1.22

DOCUMENTATION

- Operation and maintenance manuals provided
- Wiring diagrams included

WARRANTY

- All equipment carries full manufacturers warranty

OPTIONAL EQUIPMENT*

ENGINE

- Electronic governor
- Automatic lube oil make-up system

GENERATOR

- Anti-condensation heater 110-120V AC

COOLING SYSTEM

- Coolant heater 110-120V AC

MISCELLANEOUS ACCESSORIES

- Additional operator's manual pack
- French or Spanish language labels

EXTENDED SERVICE COVERAGE

- Extended service coverage available

*Some options may not be available on all models.
Not all options are listed.

XQ20-2

Materials and specifications are subject to change without notice.

Generator Set Technical Data — 1800 rpm/60 Hz			Standby		Prime	
Power Rating*	kVA	kW	25	20	22.8	18
Lubricating System Type: Full Pressure Oil Filter: Spin-On, Full Flow Oil Cooler: Water Cooled Oil Type Required: API CF-4 Total Oil Capacity Oil Pan	L L	U.S. gal U.S. gal	10.6 8.9	2.8 2.35	10.6 8.9	2.8 2.35
Fuel System Fuel Filter Type: Replaceable Element Recommended Fuel: #2 Diesel Generator Set Fuel Consumption 100% Load 75% Load 50% Load Fuel Tank Capacity	L/hr L/hr L/hr L	G/hr G/hr G/hr U.S. gal	7.1 5.0 3.7 177	1.9 1.3 1.0 46.7	5.2 4.5 3.4 177	1.6 1.2 0.9 46.7
Engine Electrical System Voltage/Ground: 12/Negative Battery Charging Generator Ampere Rating	Amps		55		55	
Cooling System Water Pump Type: Centrifugal Radiator System Capacity Including Engine Maximum Coolant Static Head Minimum Temperature to Engine Temperature Rise Across Engine Heat Rejected to Coolant at Rated Power Radiator Fan Load	L m H ₂ O °C °C kW kW	U.S. Gal ft H ₂ O °F °F Btu/min hp	6.96 3.1 76 6.6 19.9 0.4	1.83 10.2 169 11.9 1132 0.54	6.96 3.1 76 6.0 22.2 0.4	1.83 10.2 169 10.8 1263 0.54
Air Requirements Combustion Air Flow Maximum Air Cleaner Restriction Radiator Cooling Air Generator Cooling Air	m ³ /min kPa m ³ /min m ³ /min	cfm in H ₂ O cfm cfm	1.74 6.4 33.7 10.8	61 25.6 1190 382	1.74 6.4 33.7 10.8	61 25.6 1190 382
Exhaust System Exhaust Backpressure (Measured) Exhaust Flow at Rated kW Exhaust Temperature at Rated kW — Dry Exhaust	kPa m ³ /min °C	in Hg cfm °F	1.3 4.76 510	5.4 168 950	1.7 4.34 440	6.8 153 824
Generator Set Noise Rating** (With enclosure) at 7 m (23 ft)	dB(A)		65		65	

*Three phase power rating
**dBA levels are for guidance only

SPECIFICATIONS

GENERATOR

Voltage Regulation ± 0.5% 3 Phase at steady state from no load to full load
Frequency ± 0.8% for constant load from no load to 100% load
Waveform Distortion THD <1.8%, at no load
Radio Interference Compliance with EN61000-6
Telephone Interference TIF <50, THF <2%
Overspeed Limit 2250 rpm
Insulation Class H
Temperature Rise Within Class H limits
Available Voltages 480/277 Volt 3 phase,
208/120 Volt 3 phase,
240/120 Volt single phase
Deration Consult factory for available outputs
Ratings At 30° C (86° F), 152.4 m (500 ft),
60% humidity, 0.8 pf (3-Phase), 1.0 pf (1-Phase)

ENGINE

Manufacturer Caterpillar®
Model C2.2
Type 4-Cycle
Aspiration Natural
Cylinder Configuration In-line 4
Displacement — L (in³) 2.2 (135)
Bore — mm (in) 84 (3.3)
Stroke — mm (in) 100 (3.9)
Compression ratio 23.3
Governor
Type Mechanical
Class Class A1
Air cleaner type Dry, replaceable paper element,
type with restriction indicator
Piston speed — m/sec (ft/sec) 6.0 (19.7)
Engine speed — rpm 1800
Maximum power at rated rpm — kW (hp)
Standby 24.3 (32.6)
Prime 22 (30)
BMEP — kPa (psi)
Standby 731 (106)
Prime 658 (95.4)

CONTROL PANEL

- NEMA 1 steel enclosure with hinged lockable door with viewing window.
- Manual run/off.
- Autostart standard.
- Separate pre-heat pushbutton.
- Red emergency stop pushbutton.
- Lamp test/reset pushbutton.
- AC instrumentation: 1-voltmeter, 1-ammeter, 1-frequency meter.
- Engine gauges for: oil pressure, coolant temperature, battery volts, fuel level.
- Fuel level display with momentary activation pushbutton.
- Battery charger, 5 Amp constant voltage, UL listed (optional).
- Hours run meter.
- Voltage adjust potentiometer.
- Cycle cranking with 3 adjustable time crank/rest periods.
- 1 — 7 Position voltmeter phase selector switch.
- 1 — 4 Position ammeter phase selector switch.
- Shutdowns: high coolant temperature/low coolant level, low oil pressure, overcrank, overspeed.
- Low fuel level/fuel tank leak alarm.
- Printed circuit board control logic.
- Panel light.

DISTRIBUTION PANEL

- 1 — 3 Pole MCCB with solid neutral (4 Wire). UL/CSA listed with shunt trip.
- Integral trip unit for thermal and magnetic overload protection on MCCB.
- Main bus connection studs enclosed with hinged transparent cover for easy access and operator safety.
- Cover for bus studs includes safety lockout feature to keep unit from operating with door open.



- 2 — Single phase — California style Twistlocks, 50 Amps @ 208 Volt phase to phase, 120 Volt phase to neutral (adjustable to 240/139) or 240/120 single phase when operating in single phase voltage position.
- 2 — Single phase — GFCI Duplex receptacles, 20 Amps @ 120 Volts.***
- Individual circuit breaker protection for receptacles. Also act as on/off switches.

*** Receptacles not for use with unit operating at 480/277V or 240/139V 3 phase.

Model	Length mm (in)	Width mm (in)	Height mm (in)	Weight	
				With Lube Oil & Coolant kg (lb)	With Fuel, Lube Oil & Coolant kg (lb)
XQ20-2	1980 (78)	820 (32.3)	1395 (55)	921 (2030)	1070 (2359)

RATING DEFINITIONS

Standby — Applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The generator on the generator set is peak prime rated (as defined in ISO8528-3) at 86° F.

Prime — Applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and the generator set can supply 10% overload power for 1 hour in 12 hours.

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