

Designed and built for optimal performance from inside out



The Diesel Generator Set PowerBox 20X incorporates features and benefits that set new industry standards. Together with an integrated approach to power solution and services from Cummins Power Generation, it's easy to see why Cummins generator sets are the preferred choice of electric power customers around the world.

Features	Benefits
<p>Container</p> <ul style="list-style-type: none"> Standard ISO 20' container CSC certified Standard 4-point lift with side ladder and fork lift slots Proper surface preparation with sand blast, primer & top coat Air inlet filter Container roof structure designed to allow extension of the exhaust pipe up to 6m All hardware including door, hinges and louvres are within the envelope of the container Heavy duty door hardware and stainless steel hinges Durable Metal flooring inside the container Well Insulated exhaust silencer mounted inside the container with rain cap Large louvred double access doors with removable dust filters; side doors access Controller accessible from outside of the container External topping points and drain points for fuel, oil & water Non-treated acoustic louver <p>Safety Features</p> <ul style="list-style-type: none"> Lockable side doors with internal panic release All side doors provided with "lock-in" feature Emergency stop button at both sides of the container <p>Genset</p> <ul style="list-style-type: none"> Greater versatility with Dual Frequency (50 and 60 Hz), and wide voltage range options Fuel pre-filter with water separator; spin on fuel filters Heavy duty air cleaner fitted as standard Heavy duty maintenance-free battery at better location for easy access Heat shields and fan guards 50 Hz - 83 dBA @ 1m at 75% load; 60 Hz - 81 dBA @ 7m at 75% load 110% internal bunding for all fluids within the genset compartment <p>Chassis</p> <p>Each unit is fitted within anti-vibration system, with bonded rubber mouth fitted as standard</p> <p>Cummins Engine</p> <ul style="list-style-type: none"> Cummins KTA 50, 50 litre heavy duty engine with ratings up to 1540 kW Rugged 4-cycle industrial diesel engine Low derating for temperature, altitude and humidity Step Timing Control System (STC) ensures optimum engine timing at all combinations of load and ambient temperatures 	<p>Lower Transportation & Storage Costs</p> <ul style="list-style-type: none"> Stackable like a regular container to save shipping costs and storage Easy to handle and transport across regions and borders <p>Outstanding Durability & Reliability</p> <ul style="list-style-type: none"> Durable finish and protection Safeguard against dust and sand ingress Suitable for multiple sets installation Minimize damage during shipment and transportation <p>Improved Serviceability</p> <ul style="list-style-type: none"> Easy access for setup, operations and monitoring <p>Environment Friendly</p> <ul style="list-style-type: none"> Enhanced noise reduction <p>Safety & Protection</p> <ul style="list-style-type: none"> Prevent door swing Facilitate easy access to the operator for emergency shutdown <p>Optimal Performance</p> <ul style="list-style-type: none"> Suitable for Continuous, Prime and Standby applications Better filtration and optimal performance in harsh environments Capable of working up to 55°C with minimal derate Genset package certified to meet EU Machinery, Low Voltage and EMI directives Lower Maintenance & Operation Costs CE guarding compliance for safety and protection <p>Noise & Environmental Protection</p> <ul style="list-style-type: none"> Weather and soundproof to meet the stringent noise level requirements at free field condition Reduces vibrations transmission through the chassis <p>Proven Technology</p> <ul style="list-style-type: none"> Leads the way in reliability, fuel efficiency and high performance Reliable power, low emission and fast response to load changes. Also ensures minimal heat rejection Optimal performance even in the harshest climate Improved cold starting, reduced light load fuel consumption and enhanced engine efficiency

Features	Benefits
<p>Alternator (AC Generator)</p> <p>Next generation alternator model P7B complies with the design and performance of Cummins engine</p> <ul style="list-style-type: none"> Brushless and 2/3 pitch winding design PMG excitation system Epoxy Resin Insulation on all windings using VPI process <p>Cooling System</p> <p>Cummins cooling packages minimize heat rejection, and meet Limiting Ambient Temperature of 50 °C at Continuous rating</p> <p>PowerCommand® Control System</p> <p>Most advanced, reliable and capable generator set control system available in the market today</p> <ul style="list-style-type: none"> Convenient, easy-to-operate customer interface with integrated generator to set governing, voltage, regulation protection and paralleling functionality <p>Electrical System</p> <ul style="list-style-type: none"> PowerCommand Control, PCC3100 with paralleling, Paralleling selector switch for Genset to Genset or Genset to utility paralleling Key switch for PCC3100 Dual frequency electric fan suitable for both 50 and 60 Hz operations Auxiliary supply connection, 220 - 240VAC Internal Lighting of 24VDC / 240VAC and 240V Socket Plug External access to bus bar connection <p>Safety Features</p> <ul style="list-style-type: none"> Standard motorized 4-pole circuit breaker, Fixed Type Re-connectable Neutral / Earth link Limit Switch Low coolant level shutdown Battery Isolator <p>Fuel System</p> <ul style="list-style-type: none"> Standard free standing 900-litre fuel tank with external gauge Fuel filter with water separator External fuel connection (3-way valve) <p>Options</p> <ul style="list-style-type: none"> Battery charger Electric sump drain pump Anti condensation heater Added safety features include low fuel warning & shutdown and fuel leakage warning Water jacket heater Automatic oil top up system with 50 litre lubricating oil tank 	<p>Durability & Reliability</p> <ul style="list-style-type: none"> Reduces maintenance requirement and eliminates arcing hazard Allows for better operation with non-linear loads Provides sustained short circuit under fault conditions; improves performance of alternator with cyclical and non-linear loads Protects windings from environment contaminants <p>Enhanced Performance & Easy Maintenance</p> <ul style="list-style-type: none"> Suitable for multiple sets installation with vertical hot air discharge Easy access to jet wash to maintain the radiator <p>System Integration</p> <ul style="list-style-type: none"> Can be configured for multiple set parallel installations and grids connection <p>Enhanced Performance & Easy Operation</p> <ul style="list-style-type: none"> Continued day and night operation Easy to install and operate <p>Safety & Protection</p> <ul style="list-style-type: none"> Earth leakage protection Auto shutdown when door is open to ensure operator safety Radiator protection <p>Easy Operation</p> <ul style="list-style-type: none"> External fuel connection ensures easy connection to external fuel storage tank

PowerBox 20X

C-1250 D2R

50Hz

60Hz

Fuel consumption	Standby		Prime				Standby				Prime	
	kVA (kW)	kVA (kW)	kVA (kW)	kVA (kW)	kVA (kW)	kVA (kW)	kVA (kW)	kVA (kW)	kVA (kW)	kVA (kW)	kVA (kW)	kVA (kW)
Ratings	1400 (1120)	1256 (1005)	1588 (1270)	1400 (1120)								
Load	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full	1/4 1/2 3/4 Full
US gph	21.9 40.4 58.4 77.4	20.1 36.7 52.6 68.9	27.5 45.8 65.4 87.2	23.5 41.5 58.6 76.9								
L/hr	83 153 221 293	76 139 199 261	104 173 248 330	89 157 222 291								

Engine	Standby	Prime	Standby	Prime
Engine manufacturer	Cummins			
Engine model	KTA50G33			
Configuration	4-Cycle; 60° Vee; 16-Cylinder Diesel			
Aspiration	Turbocharged and Aftercooled			
Gross engine power output, kWm	1227	1097	1380	1220
BMEP at set rated load, kPa	1951	1744	1827	1620
Bore, mm	159			
Stroke, mm	159			
Rated speed, rpm	1500			
Piston speed, m/s	7.9			
Compression ratio	13.9:1			
Lube oil capacity, L	151			
Overspeed limit, rpm	1800 ±150			
Regenerative power, kWm	116			
Governor type	Electronic			
Starting voltage	24 Volts DC			

Fuel flow	Standby	Prime	Standby	Prime
Maximum fuel flow, L/hr	625			
Maximum fuel inlet restriction, mm Hg	203			
Maximum fuel inlet temperature (°C)	60			

Air	Standby	Prime	Standby	Prime
Combustion air, m³/min	104.8			
Maximum air cleaner restriction, mm H ₂ O	635			
	104.8	96.3	110.4	104.8

Exhaust	Standby	Prime	Standby	Prime
Exhaust gas flow at set rated load, m³/min	240.7			
Exhaust gas temperature, °C	525			
Maximum exhaust back pressure, mmHg	51			
	240.7	223.7	257.7	237.8
	525	520	475	460

50 Hz Rating

Ambient Temp	Continuous		Prime		Standby	
	kVA	kW	kVA	kW	kVA	kW
40 deg C	1005	804	1258	1005	1400	1120
45 deg C	1005	804	1258	1005	1400	1120
50 deg C	1005	804	1131	905	1260	1008
55 deg C	938	750	1025	820		

60 Hz Rating

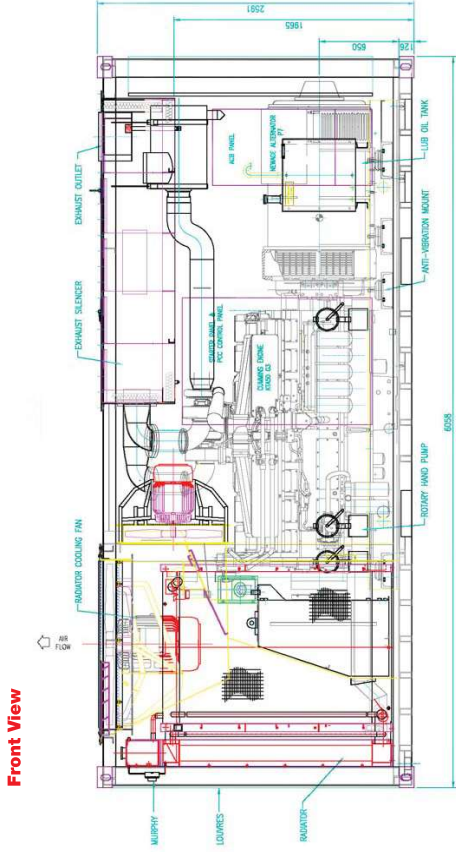
Ambient Temp	Continuous		Prime		Standby	
	kVA	kW	kVA	kW	kVA	kW
40 deg C	1120	896	1400	1120	1588	1270
45 deg C	1120	896	1400	1120	1588	1270
50 deg C	1120	896	1288	1030	1425	1140
55 deg C	1063	850	1156	925		

RATING DEFINITIONS

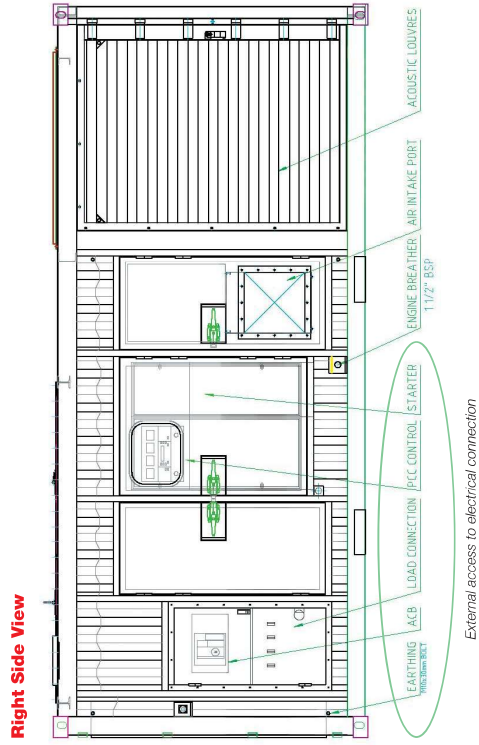
Standby:	Limited Time Running:	Prime (Unlimited Running Time):	Base Load (Continuous):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power is in accordance with ISO 8528, Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.	Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous power in accordance with ISO 8528, ISO 3046, AS 2789, DIN 6271 and BS 5514.

PowerBox 20X

Our innovation. Your solutions



Front View



Right Side View

Cummins Power Generation's PowerBox 20X is specially engineered to provide optimal, cost-effective power even in the harshest environments. Whatever your needs wherever in the world, the PowerBox 20X is the choice for reliable energy and your bottom line.

The new PowerBox 20X is ideal for long-term power projects in a wide variety of on-site prime power applications such as powering remote villages, industrial plants, refineries or mining operations. Whether paralleled with the utility or isolated from the grid, these power units are designed to be easy to use.

Greater versatility in a compact package made Cummins Power Generation's PowerBox 20X the preferred choice for a wide array of applications around the world.



Refinery



Remote Island



Mining



Construction



Power Plant

Dedicated to Your Needs

Our commitment goes beyond the sale, by helping customers keep their equipment running better and fixing it quickly when it breaks down.

Our global distributor network has factory-trained and certified technicians with full-stocked parts and service vehicles.

To find out more about our integrated range of products, specifications and solutions or to discuss your site requirements, please contact your local Power Generation distributor or visit our website at www.cumminspower.com.

This outline drawing is to provide representative configuration details for model series only.

Model (mm)	Length (mm)	Width (mm)	Height (mm)	Set Weight*	
				Dry (kg)	Wet (kg)
C1250 D2R	6038	2438	2591	17500	19400

*Note: Weights represent a set with standard features. Specifications may change without notice.