


# Product Specifications For C175-20 (50 Hz)



## Generator Set Specifications

<b>Standby Rating</b>	4000(no fan)/3900 kVA
<b>Prime Power Rating</b>	3600(no fan)/3500 kVA
<b>Emissions/Fuel Strategy</b>	Low Fuel, Low Emissions
<b>Voltage</b>	3300 to 11000 Volts
<b>Frequency</b>	50 Hz
<b>Speed</b>	1500 RPM
<b>Duty Cycle</b>	Standby, Mission Critical, Prime, Continuous
<b>Maximum Rating</b>	4000 kVA
<b>Minimum Rating</b>	3150 kVA

## Engine Specifications

<b>Engine Model</b>	C175-20 SCAC, V-20, 4-Stroke Water-Cooled Diesel
<b>Bore</b>	175 mm
<b>Stroke</b>	220 mm
<b>Displacement</b>	105.8 l
<b>Compression Ratio</b>	15.3:1
<b>Aspiration</b>	Turbo Aftercooled
<b>Fuel System</b>	Common Rail
<b>Governor Type</b>	ADEM  A4

# Generator Set Dimensions

Length - Minimum	6642.8 mm
Length - Maximum	8397 mm
Width - Minimum	2170.2 mm
Width - Maximum	8397 mm
Height - Minimum	2224.3 mm
Height - Maximum	3827 mm
Dry Weight - Genset (minimum)	25000 kg
Dry Weight - Genset (maximum)	30000 kg

## C175-20 (50 Hz) Standard Equipment

### Air Inlet

4 x Single element canister air cleaners with service indicator(s).

### Control Panel

Engine cycle crank  
Oil pressure (psi, kPa or bar)  
Digital Indicators  
Coolant temperature  
Environmental sealed front face  
Frequency (Hz)  
True RMS AC metering, 3-phase, +/-2% accuracy  
Text alarm/event descriptions  
Low coolant level  
Volts (L-L & L-N)  
Auto/start/stop control  
Warning/shutdown Indicators:  
Emergency stop pushbutton  
Engine cool-down timer  
DC volts  
High coolant temperature  
Operating hours  
Low oil pressure

Cat ECS 100

Amps (per phase & average)

4 Programmable relay Inputs

Alarm acknowledge

4 Programmable relay output

Failure to start (overcrank)

Overspeed

Lamp test

24 Volt DC operation

Wall mounted controls

RPM

## **Cooling System**

SCAC cooling

Coolant sensors

JW Inlet: 6" ANSI / JW Outlet: 5" Cat Flange

AC Inlet: 6" ANSI / AC Outlet: 3-1/2" ANSI

## **Exhaust**

Dry exhaust manifold

Bolted flange (ANSI 6" & DIN 150) with bellow for each turbo (Qty 4). 50 Hz

## **Fuel**

Filters x 3

Secondary/tertiary fuel filters

4 Micron spin on type

10 Micron spin on type

Engine mounted filters x 3

Primary fuel filter water/fuel water separator

## **Generators And Attachments**

Salient pole

RFI suppression

Anti-condensation space heater

IEC platinum Stator RTDs

Form wound

NEMA Class H insulation

Voltage regulator

Reactive droop capability

Min/max Exciter limiter

3 Phase voltage sensing

Exciter diode monitor

6 Leads

3 Phase brushless

Right side extension box, bottom cable entry

Permanent magnet excitation (PMG)

Class H temperature rise at 40C ambient

## **Governing System**

ADEM A4

Redundant shutdown (Overspeed protection through a duplicate speed sensing system)

## **Lube System**

Oil drain lines and valve

Gear type lube oil pump

Oil filter, filler and dipstick

Integral lube Oil cooler

Lubricating oil

Fumes disposal

## **Mounting Systems**

Rails - Engine/Generator

Rubber anti-vibration mounts - shipped loose

## **Starting / Charging System**

Batteries and battery rack w/cables

Dual 24 volt electric starting motors

Battery disconnect switch

## **General**

SAE standard rotation

Right hand servicing

Paint - Caterpillar yellow with high gloss black rails

## **C175-20 (50 Hz) Optional Equipment**

### **Air Inlet Systems**

Single element air cleaner

### **Control Panels**

EMCP 4.4

Controller and MV and HV power connection locations

Load share module

Controller voltage and current sensing groups

Speed adjust

Annunciator modules

Customer interface options

Generator temperature monitoring

E-Stop

Interconnect harness

Generator harness  
Modbus monitoring of packages  
Vandal proof panel door

## **Cooling System**

Package mounted radiators  
Remote radiators  
Fuel cooler

## **Crankcase Systems**

Explosive relief valves  
Crankcase ventilation system

## **Exhaust System**

Front housing - Standby or mission critical  
Front housing - Prime or continuous  
Exhaust collectors/manifold  
Mufflers (15, 25 and 34 dBA)

## **Fuel System**

Primary fuel filter

## **Generators And Attachments**

Medium voltage - 3000 Frames - 50 Hz, 3 phase, 1500 rpm, FW, PM, No of leads=6, Pitch 0.6667  
Thermostat for space heater  
Generator air cleaner  
Differential current transformers - (5, 9 and 15 kV Class)

## **Instrumentation**

Pyrometer and thermocouples

## **Lube System**

Lube oil heater  
Lube oil heater with Crankcase explosion relief valves  
Drain group oil pans  
Lubricating oil  
Electric prelube pumps  
Oil filters

## **Mounting System**

Rubber anti-vibration mounts  
Spring type linear vibration isolators  
IBC vibration isolators - Shipped loose

## **Special Tests / Reports**

Generator test report  
PGS Test report @ 1.0 power factor  
PGS Test report @ 0.8 power factor  
Standard genset TVA (Torsional Vibration Analysis) report  
Custom generator TVA report  
Special test charge - Engine only  
Genset fuel consumption test  
Standard engine test charge

## **Starting / Charging System**

24 Volt electric starting motor  
Air starting motor  
Air pressure regulator  
Starter location covers  
24 Volt battery set - Dry  
20, 35 and 50 Amp Battery chargers  
Charging alternators - Dry  
Jacket water heaters

## **General**

Special paint - 3500, Colors (other than Caterpillar yellow or high performance paints)  
US aid emblem  
Service tools  
Engine barring group  
Manual  
Engine barring air powered  
control GP - air powered bar group