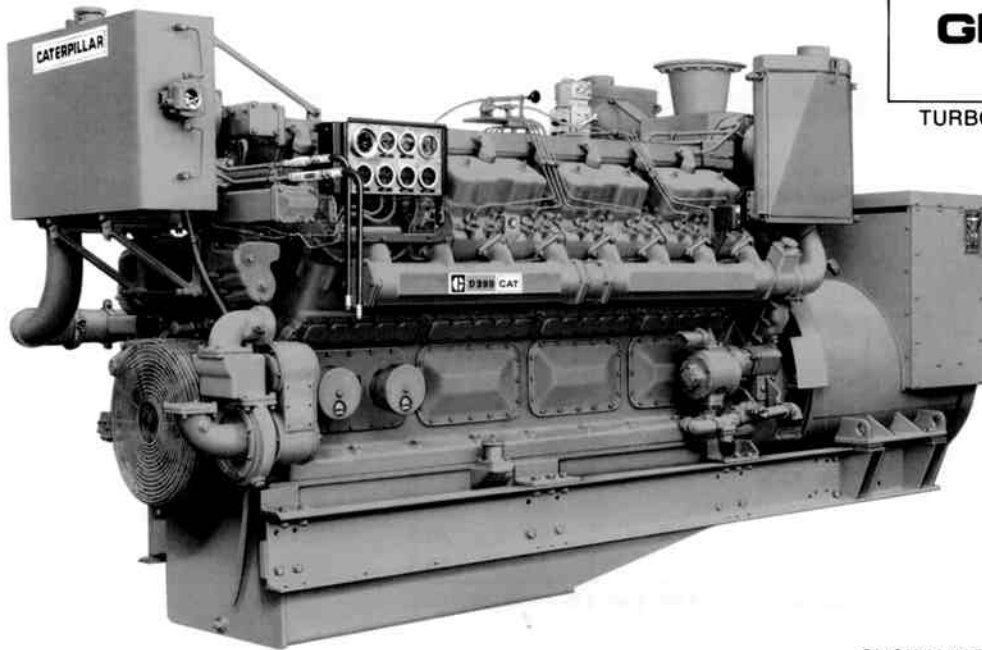


# CATERPILLAR

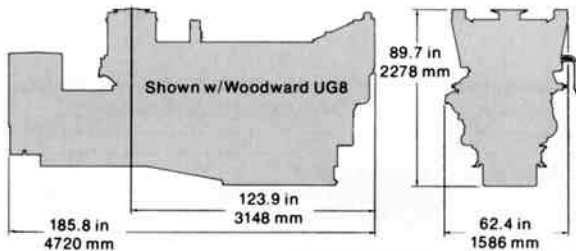
# D399

## MARINE GENERATOR SET

TURBOCHARGED-AFTERCOOLED



SHOWN WITH ACCESSORY EQUIPMENT



### V16, 4-STROKE-CYCLE DIESEL

BORE—in (mm) .....	6.25 (159)
STROKE—in (mm) .....	8.00 (203)
DISPLACEMENT—cu in (liter) .....	3,927 (64.4)
ROTATION (from flywheel end) .....	Counterclockwise
CAPACITY FOR LIQUIDS—U.S. Gal (liter)	
Cooling System (engine only) .....	85.0 (321.8)
Lube Oil System (refill) .....	160.0 (605.7)
ENGINE WEIGHT, Net Dry (approximate)—lb (kg) .....	17,660 (8009)
GENERATOR WEIGHT (approximate)—lb (kg) .....	7,860 (3565)

### STANDARD EQUIPMENT

#### Air Intake System:

- Air Cleaner Adapters
- Air Cleaner Service Indicators
- Single-Stage Dry Air Cleaners

#### Control System:

- Manual Shutoff Control
- Woodward UG8 or EG3P/2301

#### Cooling System:

- Coolant Expansion Tank
- Coolant Pump
- Coolant Thermostats
- Lube Oil Cooler

#### Exhaust System:

- Watercooled Turbocharger Shield
- Watershielded Exhaust Manifolds

#### Fuel System:

- Flexible Fuel Supply Lines
- Fuel Filter
- Fuel Priming Pump
- Fuel Transfer Pump

#### Instruments and Gauges:

- Instrument Panel
- Fuel Pressure Gauge
- Intake Manifold Temperature Gauges
- Lubricating Oil Pressure and Temperature Gauges
- Pyrometer
- Tachometer
- Water Temperature Gauge

- Service Meter
- Tachometer Drive, Dual
- Lubricating System:**
- Emergency Connections
- Lube Oil Filter
- Manual Sump Pump
- Prelube Pump
- Mounting Systems:**
- Lifting Eyes
- Mounting Rails
- Power Takeoffs:**
- Flywheel Housing, SAE No. 00
- Front Accessory Drive
- Protection Devices:**
- Coolant Temperature and Oil Pressure Contactors
- Oil Pressure, Coolant Temperature and Overspeed Shutoffs (1200 rpm)

### ACCESSORY EQUIPMENT\*

#### Cat SRCR Generator:

- 60 Hz, 230-460V
- 50 Hz, 200-400V

#### Cooling Systems:

- Emergency Jacket Water Connections
- Heat Exchangers
- Sea Water Pump and Drive

#### Exhaust System:

- Muffler

#### Fuel System:

- Double Wall Fuel Lines
- Duplex Fuel Filters

#### Instruments and Gauges:

- Exhaust Pyrometer and Thermocouples
- Tachometer

#### Lubricating System:

- Duplex Oil Filters

#### Power Takeoffs:

- Auxiliary Drives
- Front Enclosed Clutch
- Stub Shaft

#### Protection Devices:

- Electrical and Hydra-Mechanical Shutoffs

#### Spare Parts:

- ABS, BV, DnV, GL, LR, NK, R.I.Na
- Approved Parts Kits (engine and generator)

#### Starting Systems:

- Air Starting
- Battery Chargers
- Battery Sets
- Charging Alternators (24, 30-32V)
- Electric Starting (24, 30-32V)
- Glow Plugs (24, 30-32V)

\*Consult your Caterpillar Dealer for additional accessory equipment.

**RATINGS**
**JACKET WATER  
AFTERCOOLED**

	rpm	kW	kV·A
<b>PRIME POWER—60 Hz</b>	1200	850*	1063
	<b>Percent Load</b>	<b>U.S. gph</b>	<b>liter/h</b>
<b>Fuel Rate</b>	100	65.3	247.4
	75	48.1	182.1
	50	33.7	127.4
	25	20.1	76.0

	rpm	kW	kV·A
<b>PRIME POWER—50 Hz</b>	1000	700	875
	<b>Percent Load</b>	<b>U.S. gph</b>	<b>liter/h</b>
<b>Fuel Rate</b>	100	51.8	195.9
	75	38.7	146.6
	50	26.3	99.5
	25	15.5	58.6

\* Society rating: ABS, DnV, LR—800 kW.

**RATING DEFINITION**

Prime Power—For continuous electrical service.

6270 standard conditions of 97.8 kPa (28.97 in Hg) and 20°C (68°F).

**RATING CONDITIONS**

Ratings are based on SAE J816 standard conditions of 29.38 in Hg (99.2 kPa) and 85°F (30°C). These ratings also apply at DIN

Fuel rates are based on fuel oil having an HHV of 19,590 Btu/lb (45 570 kJ/kg) and weighing 7.076 lb/U.S. gal (848 g/liter).

**SRCR GENERATOR**
**Construction:**

Revolving field, single-bearing AC generator with statically-regulated, statically-excited system. Built to IEEE-45 standards.

**Excitation:**

By rectified alternating current. Voltage buildup relay only moving part.

**Regulation:**

Volts-per-hertz regulation. Silicon-controlled rectifier. Transistorized voltage regulator automatically maintains voltage within  $\pm 1\%$  from no load to full load. No external voltage regulator needed. Shock mounted and epoxy encapsulated for protection against vibration and unfavorable atmospheric conditions.

tection against vibration and unfavorable atmospheric conditions.

**Insulation:**

High temperature Class F insulation in stator and rotor. Treated against abrasion and fungus deterioration with epoxy impregnation and an additional overcoat of asphaltic material.

**Parallel Operation:**

Equipped with reactive droop compensation.

**Coupling:**

Close-coupled, multiple steel disc-type. Piloted shaft provides precise alignment and minimizes linear vibration.

**Voltage Level:**

Adjustable from rated voltage a minimum of  $\pm 5\%$ .

**Voltage Droop:**

Adjustable for proper division of reactive kV·A when operating in parallel with other generators.

**Voltage Gain:**

Adjustable to compensate for engine speed variation when operating with a speed droop governor.

**Marine Requirements:**

Embedded temperature detectors and generator space heater are standard equipment.

Materials and specifications are subject to change without notice.

The International System of Units (SI) is used in this publication.