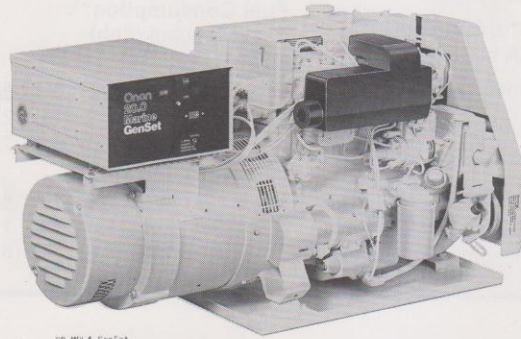




MARINE



20 MDL4 GenSet
Onan A-12959C C-3699A

Onan

20 kW GenSet

Series MDL4
Diesel-Fueled
Water-Cooled
60 or 50 Hertz

Standard Features

- Powerful, Quiet, Compact Marine GenSet
- Diesel Engine
- Brushless, AC Alternator
- Integral Heat Exchanger and Water-Cooled Exhaust Manifold
- Three-Point Mounting System with Vibration Isolators
- 12 Volt DC Battery Charging
- Air Intake Silence
- Distributor Injection Pump with Integral Governor
- Drip Pan and Steel Base Plate
- Rigid Steel Fuel Return Line
- Removable Lifting Eye
- Oil Drain Valve with Hose
- Coolant Recovery System
- Transformer Voltage Regulator
- Plug-in for Optional Remote Gauge Kit
- Control System Mounted Control Console, vibration isolated and positionable for 3 directions with:
 - Start-Run-Stop Switch
 - DC Control Circuit Breaker
 - Field Circuit Breaker (3-phase models)
 - Hourmeter
 - Manual Reset Fault Relay indicating Engine Shutdown for:
 - Overspeed
 - High Engine Temperature
 - High Exhaust Temperature
 - Low Oil Pressure

GenSet Performance

Operating Environment,
maximum ambient:

Air Temperature: 175° F (80° C)

Sea Water Temperature: 100° F (38° C)

Maximum Operating Angle:

30° in any direction,
intermittent

Temperature Rise: Within
NEMA MG1-22.40 at rated load

Voltage Regulation: No load to
rated load: 1-phase: $\pm 5\%$, 3
Phase: $\pm 2\%$

Frequency Regulation: 3 hertz
(5%) no load to rated load

Sound Level: 73 dB(A) at 1
meter with optional Onan
Sound Shield

Engine Detail

Model: Onan L423D-M

Design: 4-cycle, water-cooled diesel

Cylinders: 4, in-line

Bore: 3.50 in. (89 mm)

Stroke: 3.62 in. (92 mm)

Displacement:
140 in³ (2294 cm³)

Compression Ratio: 21.5:1

Max Fuel Lift: 4 ft (1.2 m)

Lube Oil Capacity: 6 qt (5.7 L)

Coolant Capacity: 10 qt (9.5 L)

Power (max)

at 1800 r/min:
3.3 bhp (24.9 kW)

at 1500 r/min:
27 bhp (20.2 kW)

Cranking Current: 325A rolling, 425A breakaway

Coolant Flow Rate:

60-Hz: 34 gpm (129 L/min)

50-Hz: 28 gpm (106 L/min)

Raw Water Flow:

60-Hz: 14.5 gpm (54.9 L/min)

50-Hz: 12.1 gpm (45.7 L/min)

Heat Rejection Max:

60-Hz:
1550 Btu/min (1640 KJ/m)

50-Hz:
1280 Btu/min (1350 KJ/m)

Fuel Consumption: #2 diesel gpm (Lph)

60-Hz:

Load	0	1/4	1/2	3/4	4/4
	0.4	0.8	1.2	1.6	2.1
	(1.5)	(3.0)	(4.5)	(6.0)	(7.9)

50-Hz:

Load	0	1/4	1/2	3/4	4/4
	0.3	0.7	1.0	1.3	1.7
	(1.1)	(2.5)	(3.8)	(5.0)	(6.4)

Alternator Detail

Design: Onan brushless, revolving field, 4-pole alternator. Rigidly coupled to engine and permanently aligned.

Voltage Regulator: Single phase - Self-regulating. Load circuit inductively coupled to exciter circuit for instantaneous response to load changes and boost capability for heavy loads and motor starting.

Three Phase - Solid state voltage regulator. No SCR tracking problems.

Exciter System: Brushless with 8-pole stator mounted in endbell. Rotating rectifier assemblies are encapsulated for protection from adverse environments.

Cooling: Direct drive centrifugal blower.

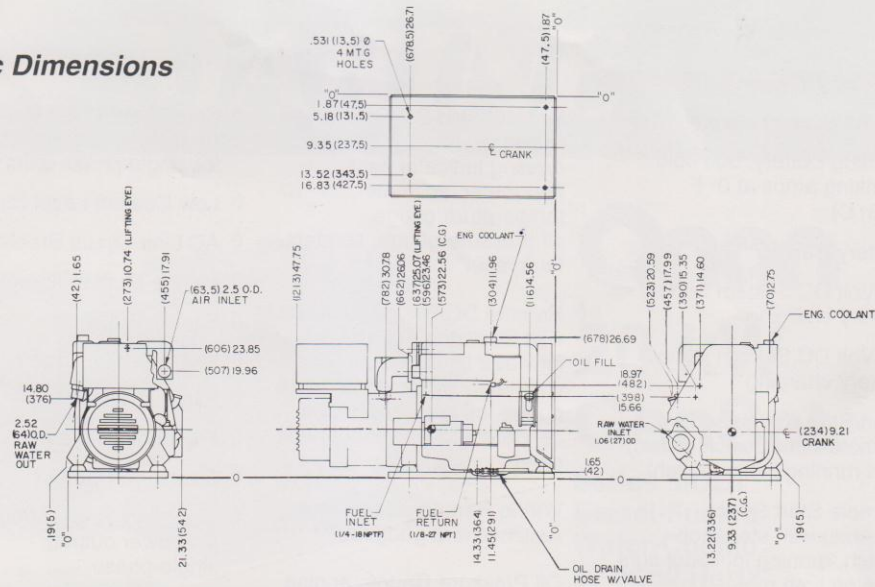
Cooling Air:

60-Hz: 275 ft³/min (7.8 m³/min)

50-Hz: 230 ft³/min (6.4 m³/min)

Insulation System: Class F per NEMA MG1-1.65. Insulating varnish conforms to MIL-I-24092 Grade CB, Class 155° C.

Basic Dimensions



Dimensions: Generator Set: Length: 48 in. (1219 mm)

Width: 21.5 in. (546 mm)

Height: 26.7 in. (678 mm)

All models, including those with heat exchanger cooling, have the same overall dimensions.

Approximate wet weight: 1025 lb (465 kg)

Caution: Outline drawing provided for reference only and should not be used for installation.

Rating Detail



member



MEMBER

60-Hz Models 1800 rpm

◇ 20 MDL4-L1* 3-phase, 12-wire, reconnectable

120/208V	68A
127/220	66
139/240	60
120/240	60
240/416	35
254/440	33
277/480	30

20 kW, 25 kVA at 0.8 PF

◇ 20 MDL4-J2* 1-phase, 3 wire, reconnectable

120/240V	83A
20 kW, 20 kVA	at 1.0 PF

50-Hz Models 1500 rpm

◇ 16 MDL4-Z1* 3-phase, 12-wire, reconnectable

110/190V	61A	110/240V	58A
115/200	58	115/200	58
120/208	56	220/380	30
127/220	53	230/400	29
110/220	53	240/416	28
115/230	50	254/440	26
16 kW, 20 kVA at 0.8 PF			

◇ 16 MDL4-P2* 1-phase, 3-wire, reconnectable

120/240V	67A
16 kW, 16 kVA	at 1.0 PF

Standard models are CSA certified.
Onan Corporation, Fridley, is approved under Lloyd's Register quality assurance scheme for machinery (QAM010). Ratings apply at altitudes of 295 ft (90 m), standard cooling, 77° F (25° C), with 2# diesel fuel.

¹*Single-phase power can be taken in capacities up to 2/3 of rated 3-phase kVA.

²*This model, connected 120V 2-wire, is reconnectable to deliver rated output at 240V 2-wire, or 120/240V 3-wire.

Options and Accessories

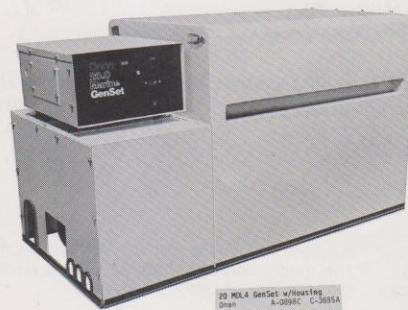
- ◇ Sound Shield Housing
- ◇ Starting Battery, 500 cold cranking amps at 0° F (-18° C)
- ◇ Battery Cables
- ◇ 24-Volt DC System without battery charging
- ◇ 32-Volt DC System without battery charging
- ◇ Start/Stop Switch and Remote Start Switch (Basic) with running indicator light
- ◇ Remote Start Switch (Deluxe) with start/stop switch, running indicator light running time meter, battery condition meter
- ◇ Set Mounted DC Gauge Package with start/stop, running indicator light, hourmeter, voltmeter, temperature gauge, oil pressure gauge, senders, fault reset.
- ◇ Remote DC Gauge Package with start/stop, running indicator light, hourmeter, voltmeter, water temperature gauge, oil pressure gauge, senders; (12-volt and 24-volt only)
- ◇ Wiring Harness for remote switches and gauges
- ◇ Oil Pressure Gauge, engine mounted
- ◇ Solid State Voltage Regulation (2% regulation) for single-phase units
- ◇ Low Coolant Level Shutdown
- ◇ AC Line Circuit Breaker
- ◇ Marine Muffler, fiberglass
- ◇ Siphon Break Kit
- ◇ Wet Exhaust Hose
- ◇ Exhaust Tubes
- ◇ Electronic Governor
- ◇ Overspeed Cutout
- ◇ Extended Stack Generator, full power output, single-phase
- ◇ Lloyd's Registry Certificate

See your Onan Distributor

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 FAX: 98 85 829 - TELEX. 215896
 ΑΦΜ: 95642252 - ΔΟΥ: Π. ΦΑΛΗΡΟ

Optional Onan Sound Shield



Overall Housed Dimensions
Length: 49.9 in. (1268 mm)
Width: 24.2 in. (615 mm)
Height: 27.7 in. (704 mm)
Weight: 125 lb (57 kg)

Backfeed to utility system can cause electrocution or property damage. Do not connect to any building electrical system except through an approved device and after building main switch is opened.