# OMD Series Generator Set Technical Specification

## Generator Set:

Power Factor	0.8 (Lagging)		
Frequency	Voltage	Current	Standby Power
50Hz	AC400/230V	180A	138KVA/110KW
Speed			Prime power
1500rpm			125KVA/100KW

## Main Technical Parameters of Engine

Number of Cylinders       6         Bore × Stroke (mm)       ∮ 105/135         Displacement (L)       7.02         Compression Ratio       16:1         Cylinder Firing Order       1-5-3-6-2-4         Air Intake Method       Turbocharged & Intercooled         Governing System       Mechanical Governing / Electronic G (Optional)         Starting Mode       Electric Start 24V         Cooling Method       Forced Water Cooling         Total Coolant Capacity (L)       24.5         Coolant Outlet Temperature (°C)       ≤90         Rated Power/Speed (kW/r/min)       132kW/1500 145kW/1500         Maximum No-Load Speed (r/min)       ≤1575/1890         Minimum Stable Idle Speed (r/min)       ≤600         Fuel Consumption Rate (g/kW·h)       215         Lubrication Class       CD         Oil Pressure at Rated Condition       0.3 ~ 0.50 Mpa         Fuel Injection Timing (BTDC)       17° ±1°         Valve Clearance (mm)       0.30 ~ 0.40	M6M198D			
Number of Cylinders       6         Bore × Stroke (mm)       ∮ 105/135         Displacement (L)       7.02         Compression Ratio       16:1         Cylinder Firing Order       1-5-3-6-2-4         Air Intake Method       Turbocharged & Intercooled         Governing System       Mechanical Governing / Electronic G (Optional)         Starting Mode       Electric Start 24V         Cooling Method       Forced Water Cooling         Total Coolant Capacity (L)       24.5         Coolant Outlet Temperature (°C)       ≤ 90         Rated Power/Speed (kW/r/min)       132kW/1500 145kW/1500         Maximum No-Load Speed (r/min)       ≤ 1575/1890         Minimum Stable Idle Speed (r/min)       ≤ 600         Fuel Consumption Rate (g/kW·h)       215         Lubrication Class       CD         Oil Pressure at Rated Condition       0.3 ~ 0.50 Mpa         Fuel Injection Timing (BTDC)       17° ±1°         Valve Clearance (mm)       0.30 ~ 0.40         Crankshaft Rotation Direction       Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	145			
Bore × Stroke (mm)       ∮ 105/135         Displacement (L)       7.02         Compression Ratio       16:1         Cylinder Firing Order       1 -5 -3 -6 -2 -4         Air Intake Method       Turbocharged & Intercooled         Governing System       Mechanical Governing / Electronic G (Optional)         Starting Mode       Electric Start 24V         Cooling Method       Forced Water Cooling         Total Coolant Capacity (L)       24.5         Coolant Outlet Temperature (°C)       ≤90         Rated Power/Speed (kW/r/min)       132kW/1500 145kW/1500         Maximum No-Load Speed (r/min)       ≤1575/1890         Minimum Stable Idle Speed (r/min)       ≤600         Fuel Consumption Rate (g/kW·h)       215         Lubrication Class       CD         Oil Pressure at Rated Condition       0.3 ~ 0.50 Mpa         Fuel Injection Timing (BTDC)       17° ±1°         Valve Clearance (mm)       0.30 ~ 0.40         Crankshaft Rotation Direction       Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	In-line, water-cooled, four-stroke, direct injection			
Displacement (L)  Compression Ratio  Cylinder Firing Order  Air Intake Method  Governing System  Starting Mode  Cooling Method  Total Coolant Capacity (L)  Coolant Outlet Temperature (°C)  Rated Power/Speed (kW/r/min)  Maximum No-Load Speed (r/min)  Fuel Consumption Rate (g/kW·h)  Lubrication Class  Oil Pressure at Rated Condition  Fuel Cirankshaft Rotation Direction  Cylinder Firing Order  1-5-3-6-2-4  Mechanical Governing / Electronic Governing / Elect	6			
Compression Ratio  Cylinder Firing Order  Air Intake Method  Governing System  Starting Mode  Electric Start 24V  Cooling Method  Total Coolant Capacity (L)  Rated Power/Speed (kW/r/min)  Maximum No-Load Speed (r/min)  Minimum Stable Idle Speed (r/min)  Fuel Consumption Rate (g/kW·h)  Lubrication Class  Oil Pressure at Rated Condition  Fuel Injection Timing (BTDC)  Valve Clearance (mm)  Crankshaft Rotation Direction  Libricating Oil Sump Capacity (L)  11-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1-5-3-6-2-4  1exploade & Intercooled  Mechanical Governing / Electronic G  (Optional)  Selectric Start 24V  24.5  ≥ 90  Rated Power/Speed (kW/r/min)  132kW/1500 145kW/1500  ≤ 1575/1890  CD  Oil Pressure at Rated Condition  0.3 ~ 0.50 Mpa  Fuel Injection Timing (BTDC)  Valve Clearance (mm)  Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	∮ 105/135			
Cylinder Firing Order  Air Intake Method  Governing System  Starting Mode  Cooling Method  Total Coolant Capacity (L)  Rated Power/Speed (kW/r/min)  Maximum No-Load Speed (r/min)  Fuel Consumption Rate (g/kW·h)  Lubrication Class  Oil Pressure at Rated Condition  Fuel Clearance (mm)  Crankshaft Rotation Direction  Lubricating Oil Sump Capacity (L)  1-5-3-6-2-4  Turbocharged & Intercooled  Mechanical Governing / Electronic G (Optional)  Selectric Start 24V  Forced Water Cooling  1-5-3-6-2-4  Turbocharged & Intercooled  1-5-3-6-2-4  Turbocharged & Intercooled  1-5-3-6-2-4  Turbocharged & Intercooled  1-5-3-6-2-4  Turbocharged & Intercooled  Mechanical Governing / Electronic G (Optional)  1-5-3-6-2-4  Turbocharged & Intercooled  1-5-3-6-2-4  Turbocharged & Intercooled  1-5-3-6-2-4  Mechanical Governing / Electronic G (Optional)  124-5  Sep 90  Rated Power/Speed (kW/r/min)  132kW/1500 145kW/1500  132kW/1500 1	7.02			
Air Intake Method  Governing System  Mechanical Governing / Electronic G (Optional)  Starting Mode  Electric Start 24V  Cooling Method  Total Coolant Capacity (L)  Coolant Outlet Temperature (°C)  Rated Power/Speed (kW/r/min)  Maximum No-Load Speed (r/min)  Minimum Stable Idle Speed (r/min)  Fuel Consumption Rate (g/kW·h)  Lubrication Class  Oil Pressure at Rated Condition  Fuel Injection Timing (BTDC)  Valve Clearance (mm)  Crankshaft Rotation Direction  Lubricating Oil Sump Capacity (L)  Teletronic G  Mechanical Governing / Electronic G  (Optional)  Mechanical Governing / Electronic G  (Optional)  Selectric Start 24V  Electric Start 24V  24.5  ≥ 90  8 90  8 1575/1890  ≤ 1575/1890  ≤ 600  CD  Oil Pressure at Rated (r/min)  7 215  CD  Oil Pressure at Rated Condition  O.3 ~ 0.50 Mpa  Fuel Injection Timing (BTDC)  Valve Clearance (mm)  Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	16:1			
Governing System  Mechanical Governing / Electronic G (Optional)  Starting Mode  Electric Start 24V  Cooling Method  Forced Water Cooling  Total Coolant Capacity (L)  Coolant Outlet Temperature (°C)  Rated Power/Speed (kW/r/min)  Maximum No-Load Speed (r/min)  Minimum Stable Idle Speed (r/min)  Fuel Consumption Rate (g/kW·h)  Lubrication Class  Oil Pressure at Rated Condition  Fuel Injection Timing (BTDC)  Valve Clearance (mm)  Crankshaft Rotation Direction  Lubricating Oil Sump Capacity (L)  Mechanical Governing / Electronic G (Optional)  Electric Start 24V  Forced Water Cooling  132kW/1500 145kW/1500  ≤ 90  81575/1890  € 600  215  CD  CD  Oil Pressure at Rated Condition  70.3 ~ 0.50 Mpa  17° ±1°  Valve Clearance (mm)  Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	1-5-3-6-2-4			
Starting Mode  Electric Start 24V  Cooling Method  Forced Water Cooling  Total Coolant Capacity (L)  Coolant Outlet Temperature (°C)  Rated Power/Speed (kW/r/min)  Maximum No-Load Speed (r/min)  Minimum Stable Idle Speed (r/min)  Fuel Consumption Rate (g/kW⋅h)  Lubrication Class  Oil Pressure at Rated Condition  Fuel Injection Timing (BTDC)  Valve Clearance (mm)  Crankshaft Rotation Direction  Lubricating Oil Sump Capacity (L)  Electric Start 24V  Electric Star	Turbocharged & Intercooled			
Cooling Method       Forced Water Cooling         Total Coolant Capacity (L)       24.5         Coolant Outlet Temperature (°C)       ≤90         Rated Power/Speed (kW/r/min)       132kW/1500 145kW/1500         Maximum No-Load Speed (r/min)       ≤1575/1890         Minimum Stable Idle Speed (r/min)       ≤600         Fuel Consumption Rate (g/kW·h)       215         Lubrication Class       CD         Oil Pressure at Rated Condition       0.3 ~ 0.50 Mpa         Fuel Injection Timing (BTDC)       17° ±1°         Valve Clearance (mm)       0.30 ~ 0.40         Crankshaft Rotation Direction       Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	Mechanical Governing / Electronic Governing (Optional)			
Total Coolant Capacity (L)  Coolant Outlet Temperature (°C)  Rated Power/Speed (kW/r/min)  Maximum No-Load Speed (r/min)  Minimum Stable Idle Speed (r/min)  Fuel Consumption Rate (g/kW·h)  Lubrication Class  Oil Pressure at Rated Condition  Fuel Injection Timing (BTDC)  Valve Clearance (mm)  Crankshaft Rotation Direction  Lubricating Oil Sump Capacity (L)  24.5  ≤90  ≤90  ≤90  132kW/1500 145kW/1500  ≤1575/1890  ≤600  CD  0.3 ~ 0.50 Mpa  17° ±1°  0.30 ~ 0.40  Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	Electric Start 24V			
Coolant Outlet Temperature (°C) ≤90  Rated Power/Speed (kW/r/min) 132kW/1500 145kW/1500  Maximum No-Load Speed (r/min) ≤1575/1890  Minimum Stable Idle Speed (r/min) ≤600  Fuel Consumption Rate (g/kW·h) 215  Lubrication Class CD  Oil Pressure at Rated Condition 0.3 ~ 0.50 Mpa  Fuel Injection Timing (BTDC) 17° ±1°  Valve Clearance (mm) 0.30 ~ 0.40  Crankshaft Rotation Direction Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L) 18				
Rated Power/Speed (kW/r/min)132kW/1500 145kW/1500Maximum No-Load Speed (r/min)≤1575/1890Minimum Stable Idle Speed (r/min)≤600Fuel Consumption Rate (g/kW·h)215Lubrication ClassCDOil Pressure at Rated Condition0.3 ~ 0.50 MpaFuel Injection Timing (BTDC)17° ±1°Valve Clearance (mm)0.30 ~ 0.40Crankshaft Rotation DirectionCounterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	24.5			
Maximum No-Load Speed (r/min)≤1575/1890Minimum Stable Idle Speed (r/min)≤600Fuel Consumption Rate (g/kW·h)215Lubrication ClassCDOil Pressure at Rated Condition0.3 ~ 0.50 MpaFuel Injection Timing (BTDC)17° ±1°Valve Clearance (mm)0.30 ~ 0.40Crankshaft Rotation DirectionCounterclockwise (viewed from power Lubricating Oil Sump Capacity (L)				
Minimum Stable Idle Speed (r/min) $\leq$ 600Fuel Consumption Rate (g/kW·h)215Lubrication ClassCDOil Pressure at Rated Condition $0.3 \sim 0.50 \text{ Mpa}$ Fuel Injection Timing (BTDC) $17^{\circ} \pm 1^{\circ}$ Valve Clearance (mm) $0.30 \sim 0.40$ Crankshaft Rotation DirectionCounterclockwise (viewed from power Lubricating Oil Sump Capacity (L)				
Fuel Consumption Rate (g/kW·h)215Lubrication ClassCDOil Pressure at Rated Condition $0.3 \sim 0.50 \text{ Mpa}$ Fuel Injection Timing (BTDC) $17^{\circ} \pm 1^{\circ}$ Valve Clearance (mm) $0.30 \sim 0.40$ Crankshaft Rotation DirectionCounterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	≤1575/1890			
Lubrication ClassCDOil Pressure at Rated Condition $0.3 \sim 0.50 \text{ Mpa}$ Fuel Injection Timing (BTDC) $17^{\circ} \pm 1^{\circ}$ Valve Clearance (mm) $0.30 \sim 0.40$ Crankshaft Rotation DirectionCounterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	≤600			
Oil Pressure at Rated Condition $0.3 \sim 0.50 \text{ Mpa}$ Fuel Injection Timing (BTDC) $17^{\circ} \pm 1^{\circ}$ Valve Clearance (mm) $0.30 \sim 0.40$ Crankshaft Rotation DirectionCounterclockwise (viewed from power Lubricating Oil Sump Capacity (L)	215			
Fuel Injection Timing (BTDC) $17^{\circ} \pm 1^{\circ}$ Valve Clearance (mm) $0.30 \sim 0.40$ Crankshaft Rotation Direction Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L) $18$	CD			
Valve Clearance (mm)  Crankshaft Rotation Direction  Lubricating Oil Sump Capacity (L)  0.30 ~ 0.40  Counterclockwise (viewed from power 18)	0.3 ~ 0.50 Mpa			
Crankshaft Rotation Direction Counterclockwise (viewed from power Lubricating Oil Sump Capacity (L) 18	17° ±1°			
Lubricating Oil Sump Capacity (L) 18	0.30 ~ 0.40			
	Counterclockwise (viewed from power output end)			
Lubricating Oil Consumption Rate (g/kW·h) ≤1.63	18			
	≤1.63			
Exhaust Temperature (°C) ≤600	≤600			
Technical Parameters of Alternator				
Alternator Brand OMD	OMD			
Alternator Model OMDL-120-4	OMDL-120-4			
Number of Bearings 1	1			
Insulation Class H	Н			
Steady-State Voltage Deviation ≤±2.5%	≤±2.5%			

Protection Class	IP21
Coil Pitch	2/3
Winding Configuration	12
Excitation Method	Brushless Self-Excited
Power Factor	0.8 (Lagging)
Alternator Efficiency	93.30%

#### **Power Definitions**

**Prime power:** The maximum power that the generator set can continuously deliver within 24 hours under specified maintenance intervals and environmental conditions. Also referred to as continuous power.

**Standby Power**: The overload power that the generator set can deliver for 1 hour within every 12 hours under specified maintenance intervals and environmental conditions. This is 10% higher than the rated power and is commonly referred to as maximum power.

#### Standard Reference Conditions:

1) Ambient Temperature: 25°C

2) Altitude: ≤2000m

3) Relative Humidity: 30%

### Dimension & Weight

	Length	Width	Height	Weight
Net Dimensions & Weight (Open type)	2300mm	800mm	1300mm	1020kg
Net Dimensions & Weight (Silent type-Container)	3000mm	1300mm	1800mm	1780kg

## Electronic Governing Generator Set:

