

Kohler® Diesel

Model KDW2204

High Speed

4 Cylinders » 2199 cc » 38 kW/51 HP » 3000 RPM » 106.2 N·m @ 2000 RPM

Certification

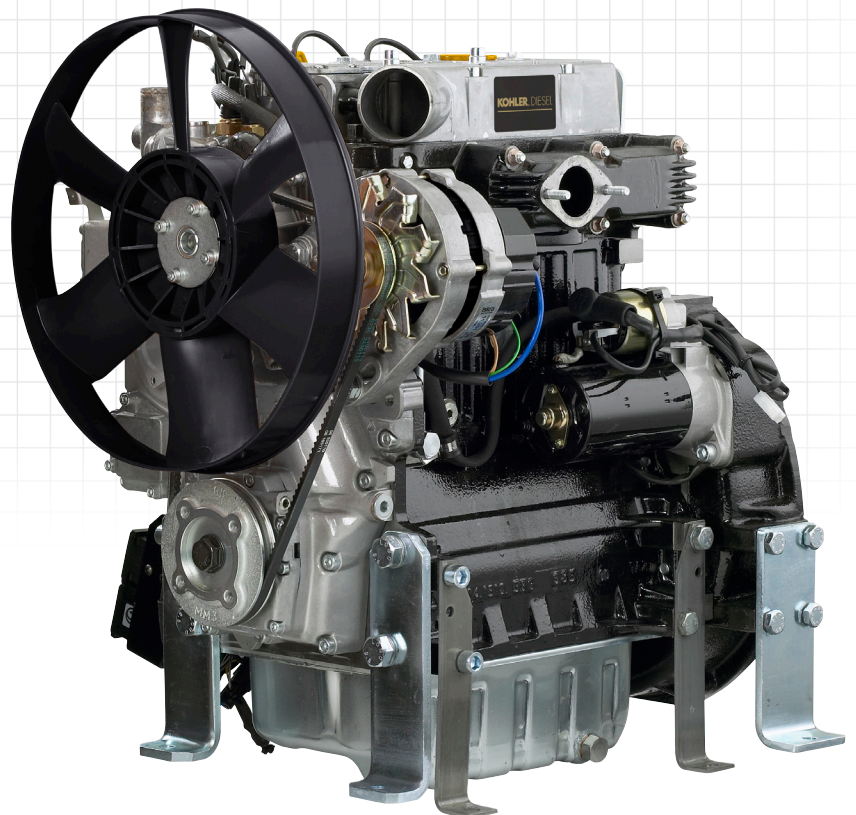
EPA TIER 2 ■
97/68/CE Step 2 ●
ECE R24-03 ▲

Features

4-Stroke Diesel Engine
Liquid-Cooled with Axial Fan
Indirect Fuel Injection
Water-Oil Heat Exchanger
Double PTO on the Crankshaft
Counter-Clockwise Rotation (PTO Side)
Full-Pressure Lubrication
Automatic Extra Fuel Starting Device
Full-Flow Oil Filter
Variable Speed Governor
Cast-Iron Crankcase with Re-Borable Cylinders
Cast-Iron Cylinder Head

Applications

Mini Excavator
Excavator
Fork Lift
Dumper
Generator Set
Aerial Platform
Compressor
High-Pressure Cleaner
Sweeper
Pump
Tractor



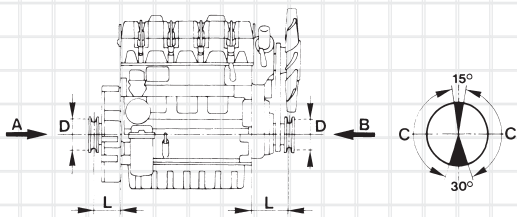
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Specifications

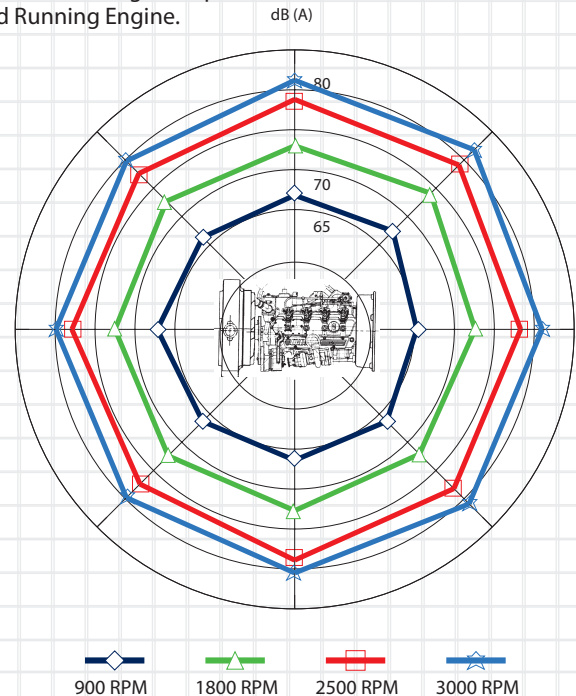
Cylinders	No. of Cylinders	4
Displacement	cc/cu. in.	2199/134.2
Bore	mm/in.	88/3.5
Stroke	mm/in.	90.4/3.6
Compression Ratio		22.5:1
Rating kW/HP	N (80/1269/CEE) ISO 1585	48/64.4
	NB ISO 3046 IFN	44.3/59.4
	NA ISO 3046 ICXN	40.8/54.7
Max. Torque	N·m/ft. lbs. @ 2000 RPM	144/100.2
Max. Torque 3 PTO	N·m/ft. lbs. @ 3000 RPM	39.2/29
Minimum Idling Speed RPM		900
Water Pump Delivery @ 3000 RPM	liters/gallons per min.	100/26
Oil Consumption	kg/lbs. per hour	0.025/0.055
Oil Capacity		
with Dynamic Horizontal Stabilizer	liters/quarts	4.5/4.8
without Dynamic Horizontal Stabilizer	liters/quarts	5.7/6
Max. Allowable Angle of Operation (Peak Values)		25° (35°)
Volume of Air Required for Correct Combustion @ 3000 R.P.M.	liters/gallons per min.	3300/117
Volume of Air Required for Correct Cooling @ 3000 R.P.M.	m ³ /cu. ft. per min.	128/4520
Dry Weight	kg/lbs.	192/423
Recommended Battery	V/Ah	12/88
Minimum Pulley Diameters for Belt Drive		



V Belt	$D \text{ (mm)} \geq 73 [L \text{ (mm)} + 118]$	$\frac{N \text{ (kW)}}{n \text{ (RPM)}}$
Cogged Belt	$D \text{ (mm)} \geq 46 [L \text{ (mm)} + 118]$	$\frac{N \text{ (kW)}}{n \text{ (RPM)}}$
Maximum Allowable Axial Load in Both Directions A-B=300 kg/661 lbs.		
C - Zone in Which the Radial Load Acts on the Pulley		

Sound Pressure Level dB (A)

Sound Pressure Level Polar Diagram Open Field at 7 Meters - No Load Running Engine.



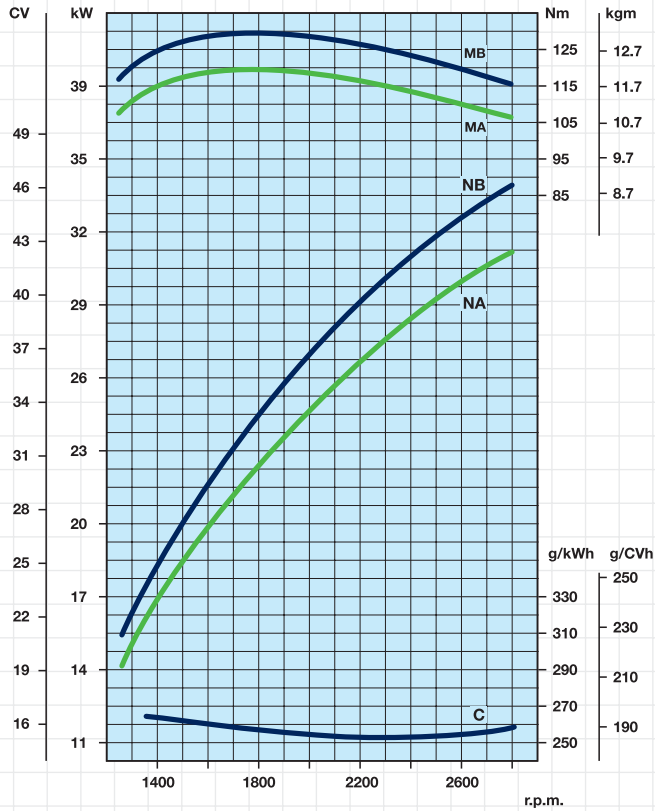
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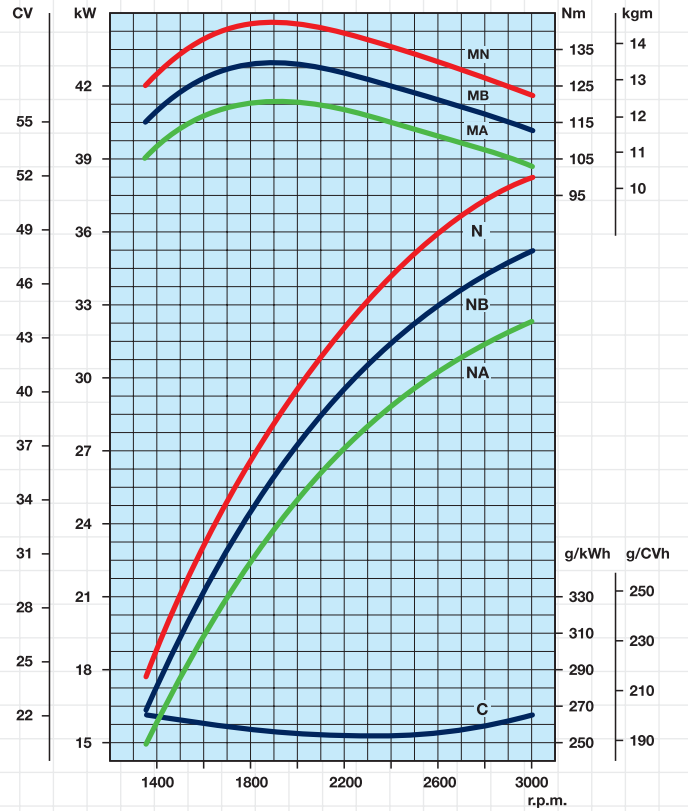
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Curves

KDW2204 @ 3000 RPM ■ ● ▲



KDW2204 B1 @ 2800 RPM ■ ● ▲



N Power curve - 80/1269/CEE - ISO 1585 -

NB Power curve - ISO 3046/1 - IFN -

NA Power curve - ISO 3046/1 - ICXN -

MN Torque curve - (N curve)

MB (B curve - MA (A curve)

C Specific fuel consumption - (NB curve)

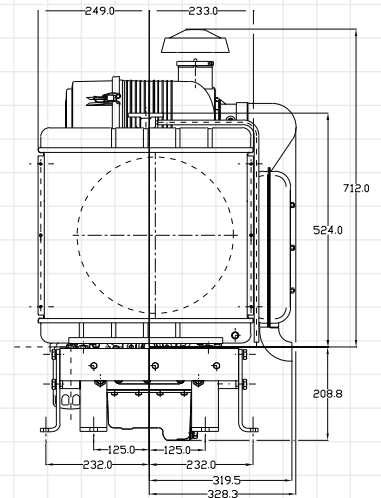
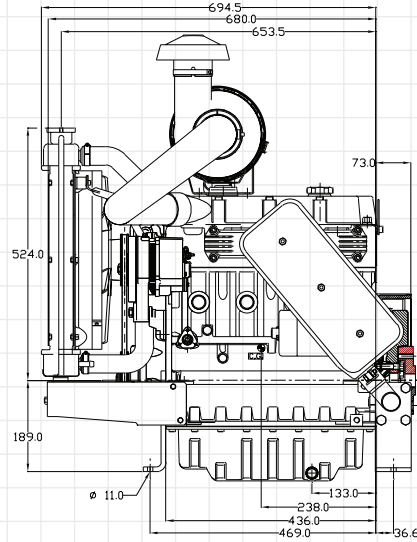
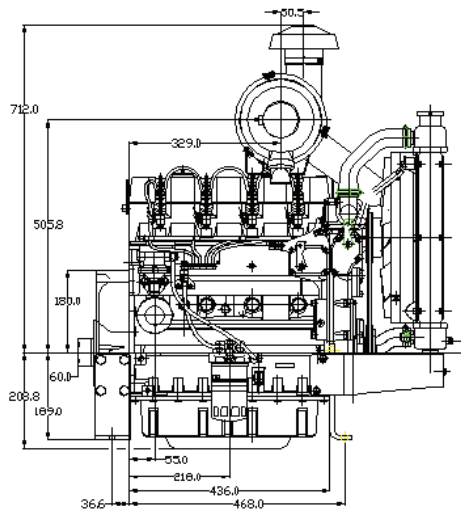
RPM	Intermittent (NB)	Continuous (NA)
3000	34.5	32
1800	22.5	20.5
1500	19.5	17.7

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Technical Drawings



Standard Equipment (Open Power Unit)

- Base Engine
- Mounted Top Tank Radiator
- Radiator Fan Guard
- Suction Fan
- Mounted Air Cleaner
- 12 V Electric Starter
- Fuel Filter with Valve
- 45 Amp External Alternator
- Mounting Feet
- Mounted Control Panel
- 3000 RPM
- Group 5 Interchange

Accessories

- 12 V Electric Starter
- Optional Charging Systems
- SAE Housings and Drives, Shaft Extensions, Hydraulic Drives
- Dry Type Air Cleaners
- Various Design Mufflers and Manifolds
- Muffler Guards and Loose Flanges
- High Coolant Temperature and Low Oil Pressure Safety
- Shutdown Systems
- Remote Fuel Filters
- Fuel Lift Pump
- Engine Mounted and Remote Radiators
- Suction and Pusher Fans
- Mounting Feet
- Control Panels