

Kohler® Diesel

Model KDW2204

High Speed Open Power Unit

4 Cylinders » 2199 cc » 38 kW/51.1 HP » 3000 RPM » 106.2 ft. lbs. @ 2000 RPM

Certification

EPA Interim TIER 4 ■

97/68/CE ●

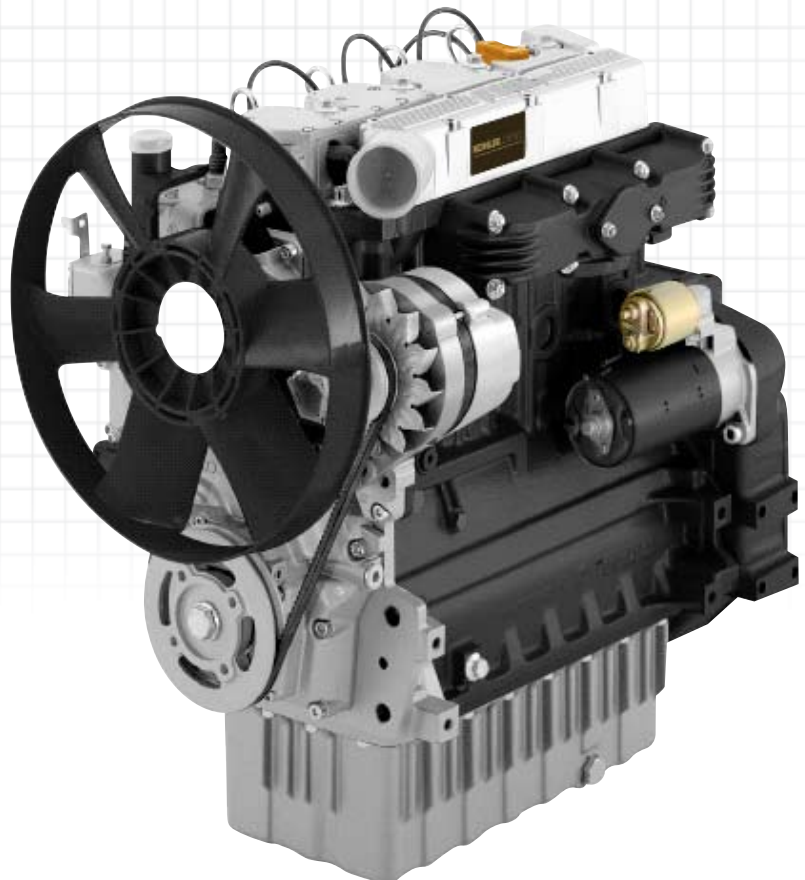
ECE R24-03 ▲

Features

- 4-Stroke Diesel Engine
- Liquid-Cooled with Axial Fan
- Indirect Fuel Injection
- 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
- Torque Device
- Hydraulic Valve Lifters

Applications

- Excavator
- Fork Lift
- Power Buggy
- Generator
- Aerial Platform
- Compressor
- High-Pressure Cleaner
- Sweeper
- Pump
- Tractor



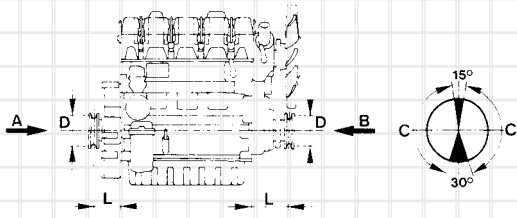
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Specifications

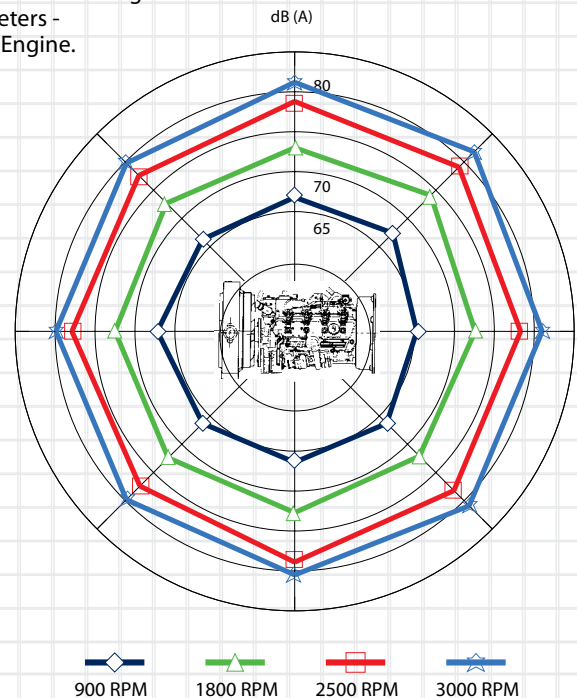
Cylinders	No. of Cylinders	4
Displacement	cc/cu. in.	2199/134.2
Bore	mm/in.	88/3.5
Stroke	mm/in.	90.4/3.6
Compression Ratio		22.5:1
Rating kW/HP	N (80/1269/CEE) ISO 1585	38.0/51.0
	NB ISO 3046 IFN	34.5/46.3
	NA ISO 3046 ICXN	32.0/42.9
Max. Torque	N·m/ft. lbs. @ 2000 RPM	144/106.2
Max. Torque 3 PTO	N·m/ft. lbs.	39.2/29
Minimum Idling Speed RPM		900
Water Pump Delivery @ 3000 RPM	liters/min/gpm	100/26
Oil Consumption	kg/h/lb/h	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/min/cfm	3300/117
Volume of Air Required for Correct Cooling @ 3000 R.P.M.	m ³ /min/cfm	128/4520
Dry Weight	kg/lbs	214/472
Recommended Battery	V/Ah	12/88
Minimum Pulley Diameters for Belt Drive		



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

Sound Pressure Level dB (A)

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



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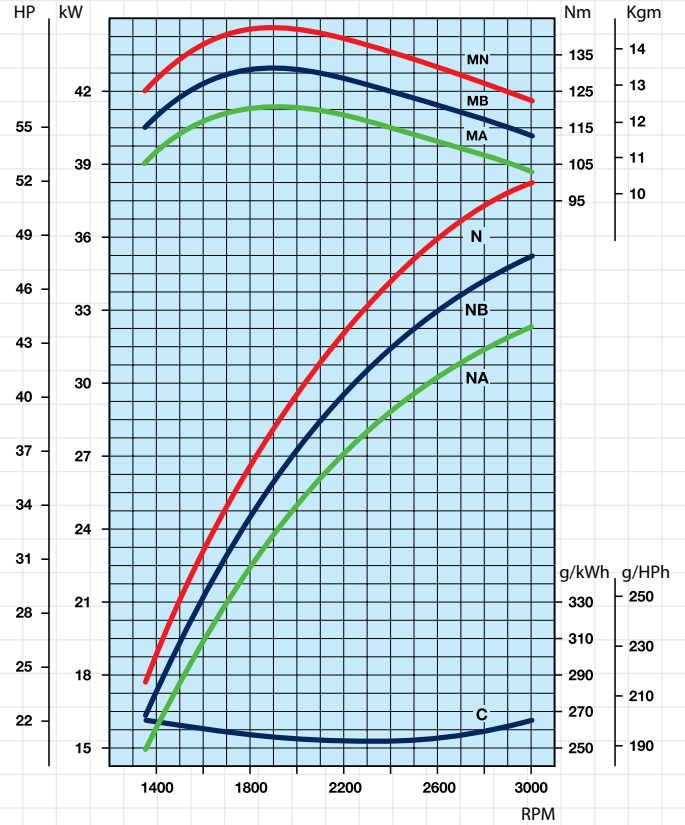
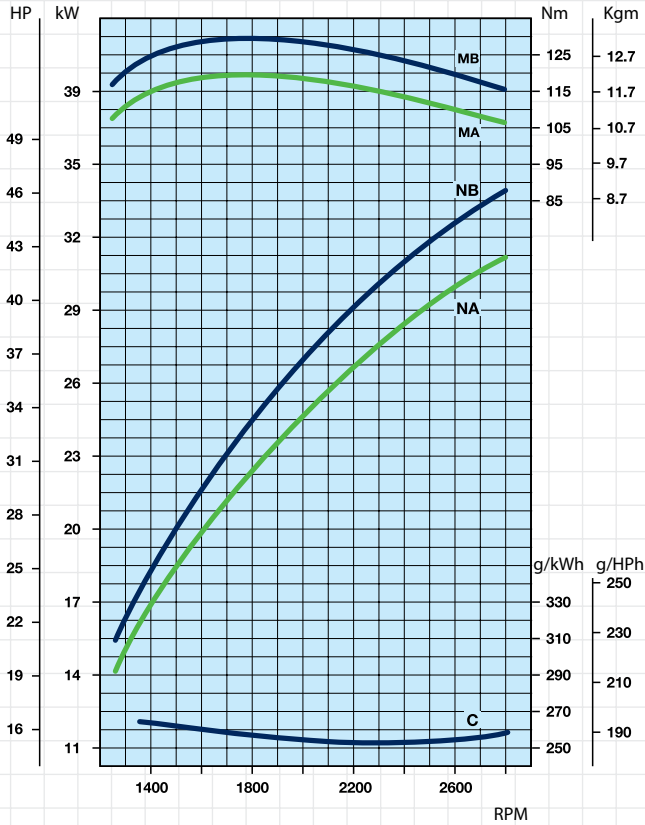
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Curves

KDW2204 B1 @ 2800 RPM ■ ● ▲

KDW2204 @ 3000 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) _____

Output Power for Fixed Speed
Application (Including Generator Sets)

Engine Power kW

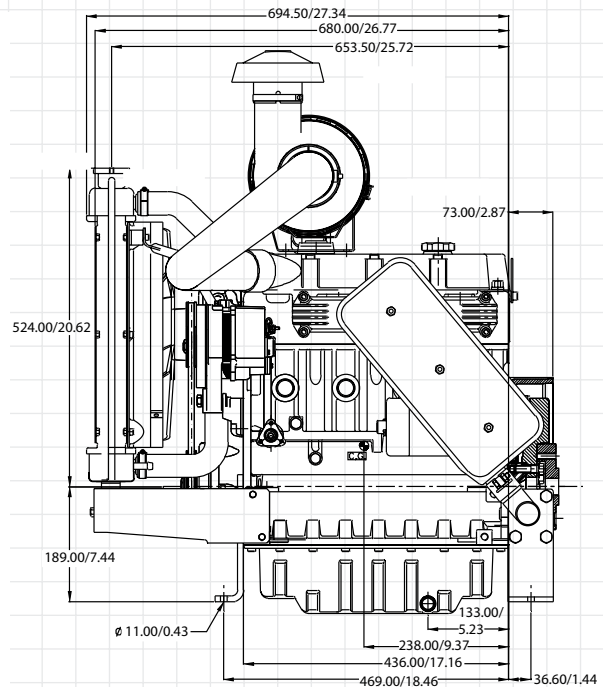
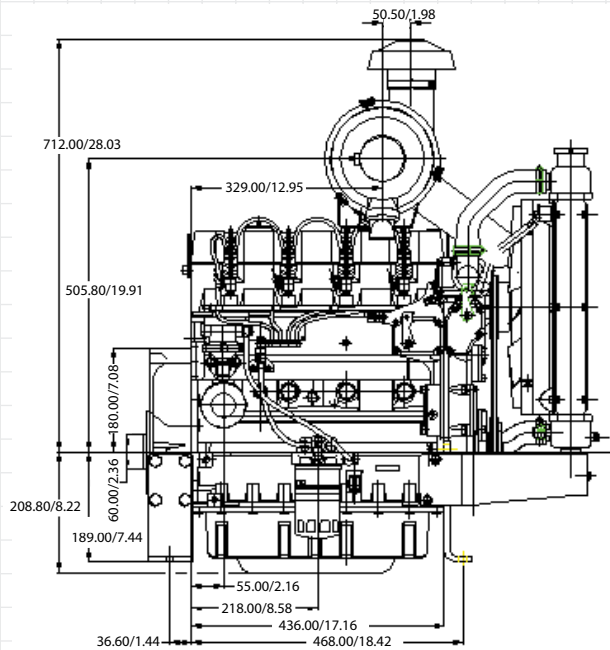
RPM	Intermittent (NB)	Continuous (NA)
3000	35	31.8
1800	22.5	20.5
1500	19.5	17.7

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Technical Drawings



Standard Features (Open Power Unit)

- | | |
|----------------------------|--------------------------------------|
| Base Engine | Group 5 Interchange Housing |
| Mounted Top Tank Radiator | 3000 RPM |
| Radiator Fan Guard | Safety Shutdown Low Oil Pressure |
| Suction Fan | and High Coolant Temperature |
| Mounted Air Cleaner | Muffler and Guard |
| Muffler and Guard | Safety Shutdown for Low Oil Pressure |
| 12 V Electric Starter | and High Coolant Temperature |
| 45 Amp External Alternator | |
| Fuel Filter with Valve | |
| Mounting Feet | |
| Mounted Control Panel | |

Accessories

- Optional Charging Systems
- SAE Housings and Drives
- Shaft Extensions
- Hydraulic Drives
- Dry Air Cleaners
- Various Mufflers and Manifolds
- Various Muffler Guards and Flanges
- Top Tank and Cross-Flow Radiators
- Suction & Pusher Fans
- High-Capacity Oil Sump
- Wiring Harness Extension
- Extended Dipstick

