

Kohler® Diesel

Model KDW2204T
High Speed Open Power Unit

4 Cylinders » 2199 cc » 33.0 kW/44.3 HP » 3000 RPM » 140.1 ft. lbs. @1800 RPM

Certification

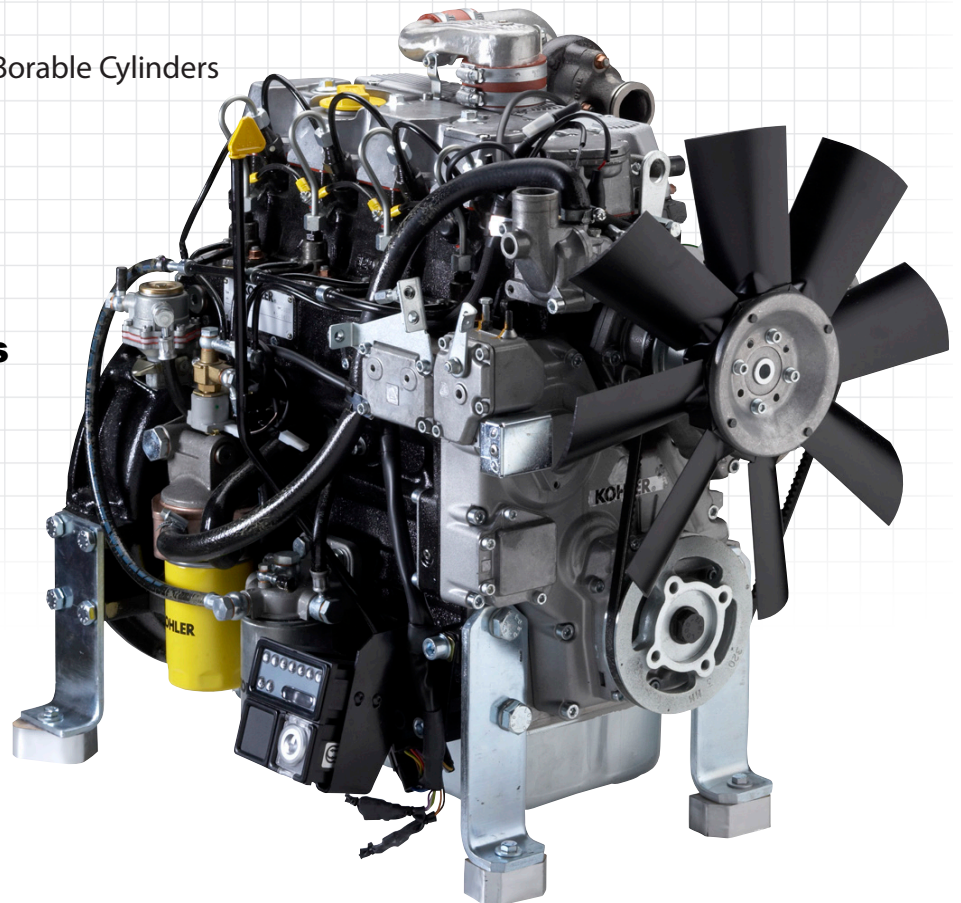
EPA TIER 3 ■
97/68/CE Step 2 ●
ECE R24-03 ▲

Features

4-Stroke Diesel Engine
Liquid-Cooled with Axial Fan
Indirect Fuel Injection
Water-Oil Heat Exchanger
Turbocharger Mitsubishi TD 025L
Double PTO on the Crankshaft
Counter-Clockwise Rotation (PTO Side)
Full-Pressure Lubrication
Automatic Extra Fuel Starting Device
Full-Flow Oil Filter
Torque Device
Variable Speed Governor
Cast-Iron Engine Block with Re-Borable Cylinders
Cast-Iron Cylinder Head
Hydraulic Valve Lifters

Applications

Fork Lift
Excavator
Generator
Compressor
Sweeper
Tractor



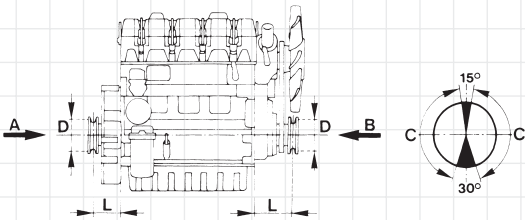
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Specifications

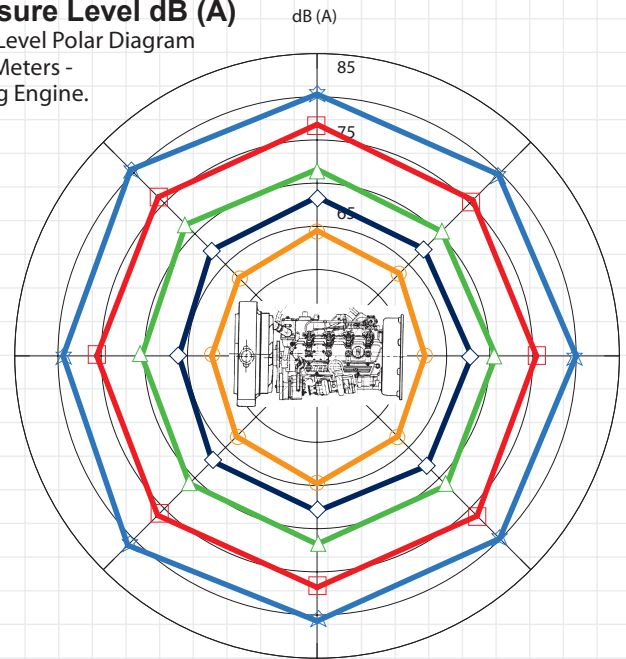
Cylinders	No. of Cylinders	4
Displacement	cc/cu. in.	2199/134.2
Bore	mm/in.	88/3.5
Stroke	mm/in.	90.4/3.6
Compression Ratio		22.8:1
Rating kW/HP	N (80/1269/CEE) ISO 1585	48.0/64.4
	NB ISO 3046 IFN	44.3/59.4
	NA ISO 3046 ICXN	40.8/54.7
Max. Torque	N·m/ft. lbs. @ 1800 RPM	190/140.1
Max. Torque 3 P.T.O.	N·m/ft. lbs. @ 3000 RPM	39.2/29
Minimum Idling Speed R.P.M.		900
Water Pump Delivery @ 3000 RPM	liters/min/gpm	128/34
Oil Consumption	kph/lbh	0.032/0.071
Oil Capacity		
with Dynamic Horizontal Stabilizer	liters/quarts	4.5/4.8
without Dynamic Horizontal Stabilizer	liters/quarts	5.7/6.0
Max. Allowable Angle of Operation (Peak Values)		25° (35°)
Volume of Air Required for Correct Combustion @ 3000 R.P.M.	liters/min/cfm	4200/148
Volume of Air Required for Correct Cooling @ 3000 R.P.M.	m ³ /min/cfm	180/6357
Dry Weight	kg/lbs	219/482.8
Recommended Battery	V/Ah	12/88
Minimum Pulley Diameters for Belt Drive		



V Belt	$D \text{ (mm)} \geq 73 [L_1 + 118]$	$\frac{N \text{ (kW)}}{n \text{ (RPM)}}$
Cogged Belt	$D \text{ (mm)} \geq 46 [L_2 + 118]$	$\frac{N \text{ (kW)}}{n \text{ (RPM)}}$
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.



○ 1000 RPM
 ◇ 1500 RPM
 △ 2000 RPM
 □ 2500 RPM
 ★ 3000 RPM

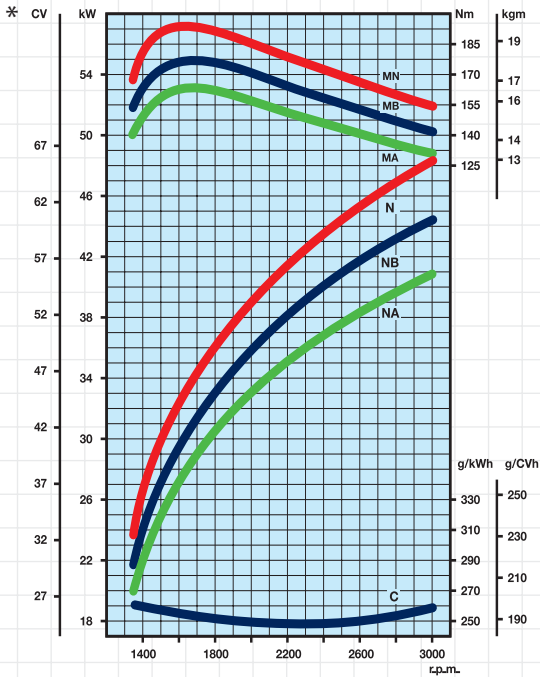
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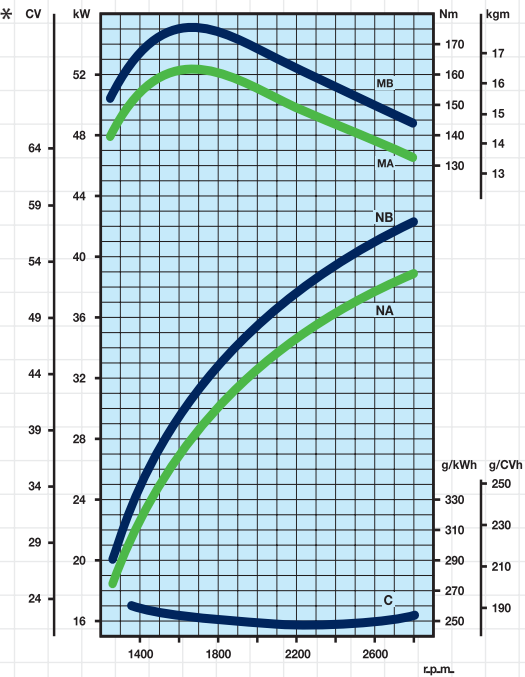
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Curves

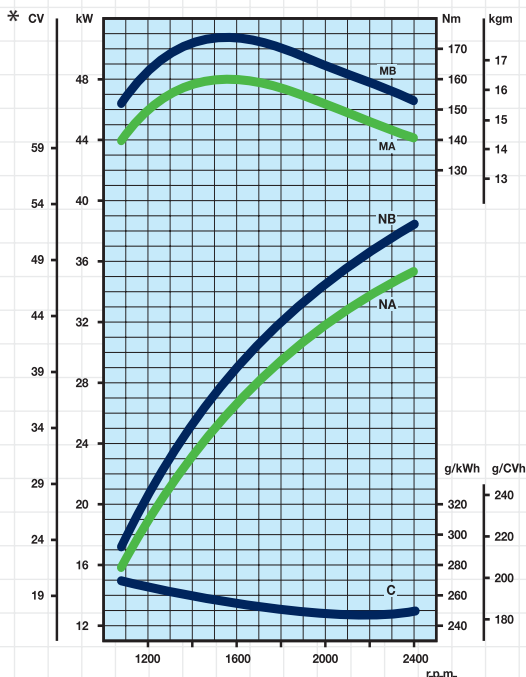
KDW2204T B1 @ 2800 RPM ■ ● ▲



KDW2204T @ 3000 RPM ■ ● ▲



KDW2204T B3 @ 2400 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	31.5	28.6
1500	26	23.6

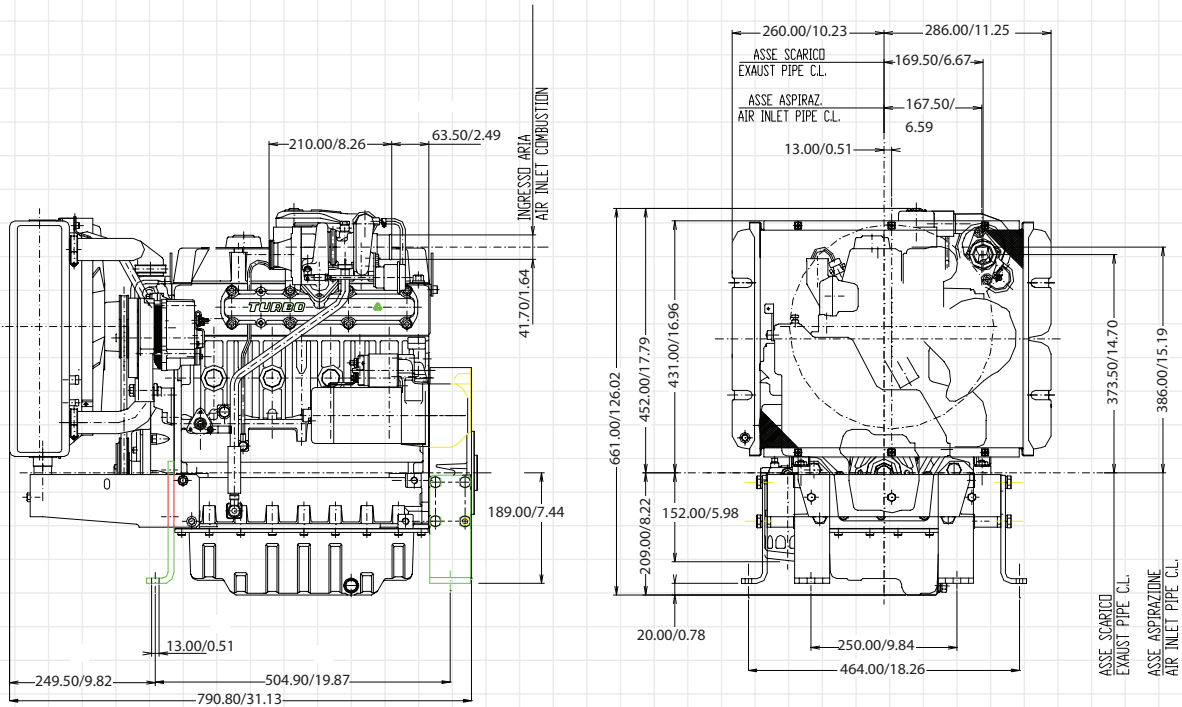
*European Equivalent of HP (1 CV = 0.986 HP)

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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
- Muffler and Guard
- 12 V Electric Starter
- 45 Amp External Alternator
- Fuel Filter with Valve
- Mounting Feet
- Mounted Control Panel
- Group 5 Interchange Housing
- 3000 RPM
- Safety Shutdown Low Oil Pressure and High Coolant Temperature

Accessories

- Optional Charging Systems
- SAE Housings and Drives
- Shaft Extensions
- Hydraulic Drives
- Dry Air Cleaners
- Various Mufflers and Manifolds
- Various Muffler Guards and Flanges
- Remote Oil Filter
- Top Tank and Cross-Flow Radiators
- Suction & Pusher Fans
- High-Capacity Oil Sump
- 2nd PTO Two-Groove Pulley
- Wiring Harness Extension
- Extended Dipstick