

- 4 cylinders
- 2199 cm<sup>3</sup>
- 48.0 kW/65.3 HP
- 3000 rpm
- Nm. 190@1800

## Homologation

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

## Construction

- 4-stroke diesel engine with cylinders in line
- Fluid-cooled with axial fan.
- Indirect injection.
- Single-shaft distribution with rod, valve levers and hydraulic tappets.
- Geared distribution control.
- Water-oil heat exchanger.
- Turbocompressor Mitsubishi TD 025L.
- Double pto on the crankshaft.
- Two pto on the distribution.
- Counterclockwise, rotation.
- Forced lubrication with vane pump on the crankshaft.
- Total passage external oil filter.
- Positionable fan and water pump.
- Automatic extra fuel starting device.
- Centrifugal governor.
- Torque regulator.
- Cast iron engine block with re-borable integral liners.
- Cast iron cylinder head.

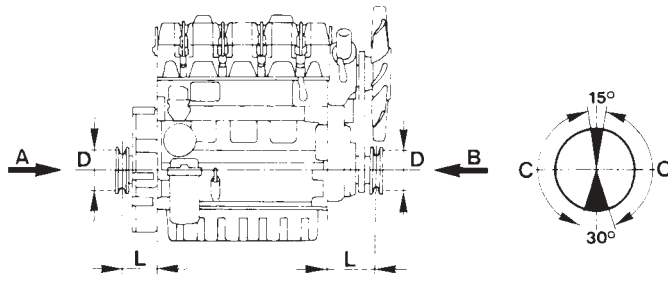


## Applications

- Fork lift
- Excavator
- Gen set
- Compressor
- Sweeper
- Tractor

## Specifications

Cylinders	N.	4
Displacement	cm <sup>3</sup>	2199
Bore	mm	88
Stroke	mm	90.4
Compression ratio		22.8:1
Rating kW/HP	N (80/1269/CEE) ISO 1585	48.0/65.3
	NB ISO 3046 IFN	44.3/60.2
	NA ISO 3046 ICXN	40.8/55.5
Max. torque	Nm.	190@1800
Max. torque 3 P.T.O.	Nm.	39.2@3000
Min. idling speed		900
Water pump delivery at 3000 r.p.m.	l/min.	128
Oil consumption	kg/h.	0.032
Oil sump capacity		
with dynamic horizontal stabilizer	l	4.5
without dynamic horizontal stabilizer	l	5.7
Max. allowable inclination for short periods of operation (peak values)		25° (35°)
Vol. of air required for correct cooling @ 3000 r.p.m.	l/min.	4200
Vol. of air required for correct combustion @ 3000 r.p.m.	m <sup>3</sup> /min.	180
Dry weight	kg	197
Recommended battery	V/Ah	12/88
Minimum pulley diameters for belt drive		



V belt	$D \text{ (mm)} \geq 73 [L \text{ (mm)} + 118]$	$\frac{N \text{ (kW)}}{n \text{ (RPM)}}$
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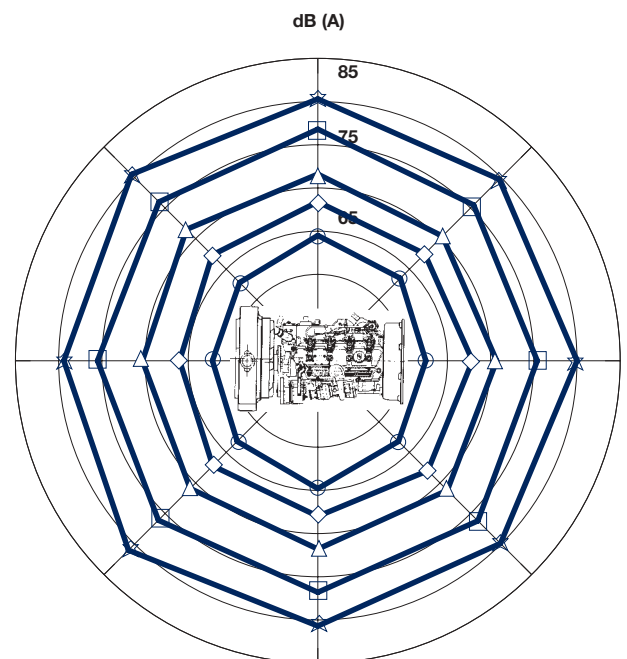
Cogged belt	$D \text{ (mm)} \geq 46 [L \text{ (mm)} + 118]$	$\frac{N \text{ (kW)}}{n \text{ (RPM)}}$
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Max. allowable axial load in both directions A-B = 300 kg  
C - zone in which the radial load acts on the pulley



### Sound pressure level dB (A)

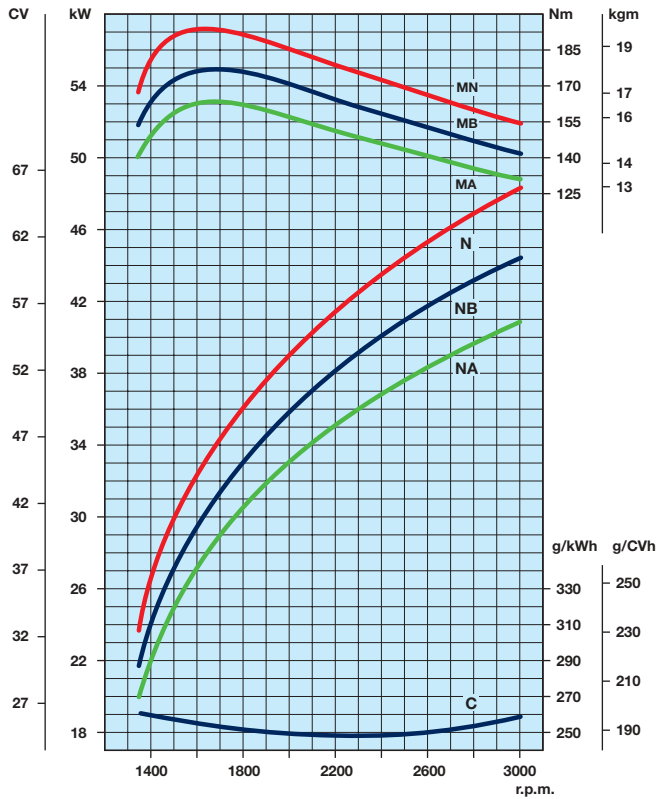
Sound level polar diagram open field - 7 meters microphone - no load running engine.



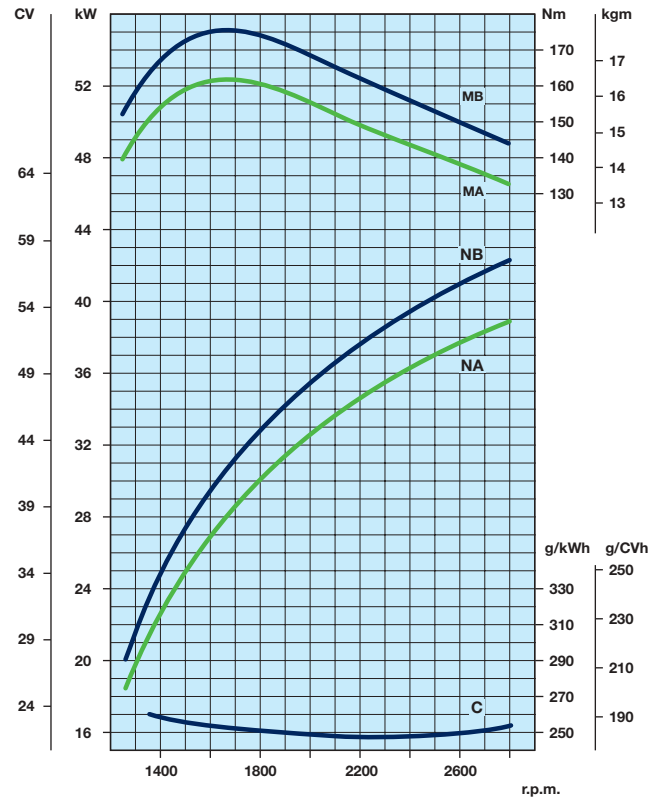
1000 RPM    1500 RPM    2000 RPM    2500 RPM    3000 RPM

## Curves

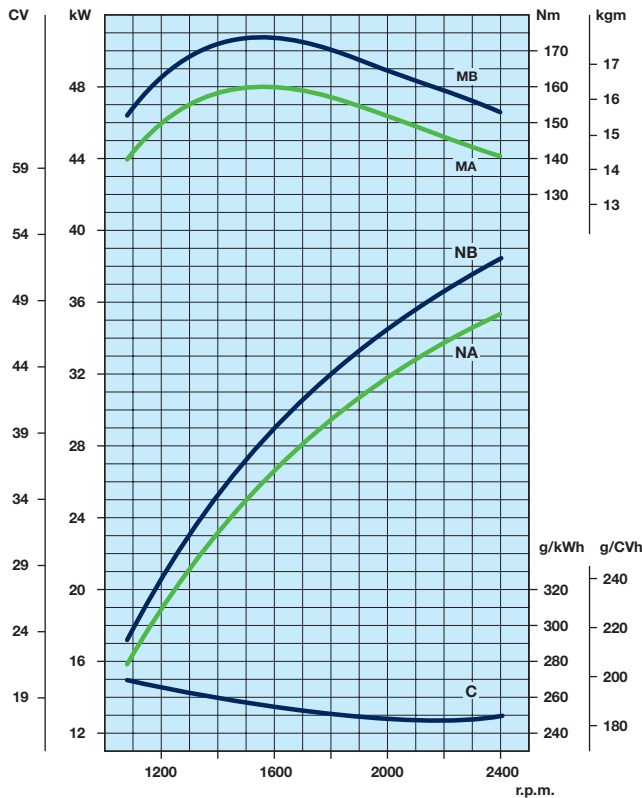
LDW 2204/T @ 3000 r.p.m. ■ ● ▲



LDW 2204/T B1 @ 2800 r.p.m. ■ ● ▲



LDW 2204/T B3 @ 2400 r.p.m. ■ ● ▲



**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)

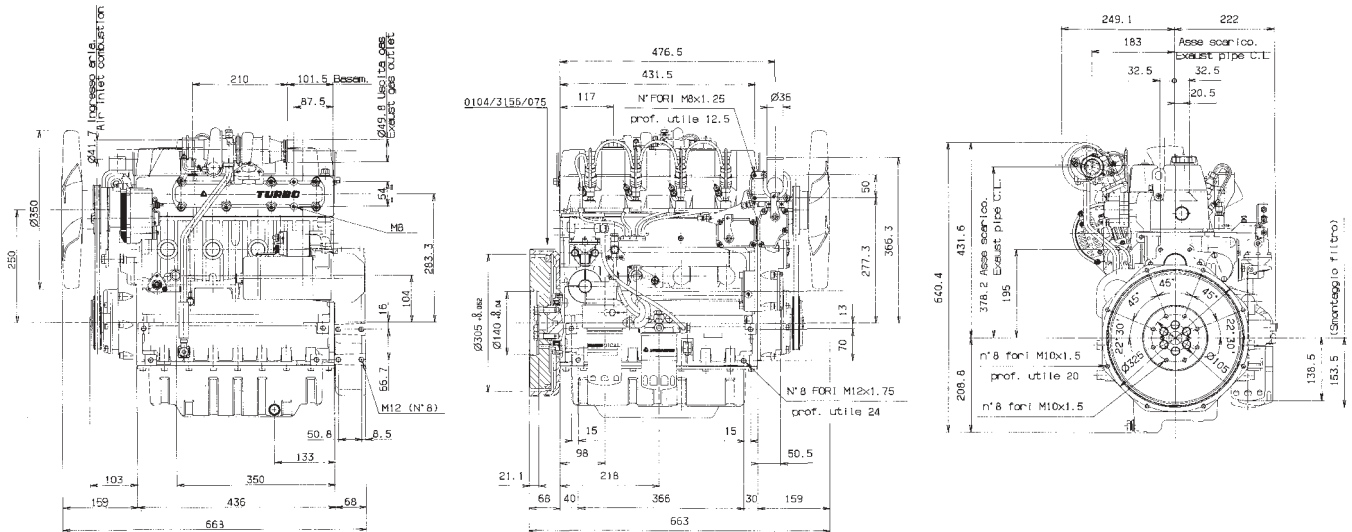
**C** Specific fuel consumption - (NB curve)

### Output power for fixed speed application (including generating sets)

#### Engine power kW

r.p.m.	Intermittent (NB)	Continuous (NA)
3000	44	40
1800	31.5	28.6
1500	26	23.6

## Technical drawings \*



\* More specific dimensions are available on [www.lombardini.it](http://www.lombardini.it) (see table at the bottom of the page)

### Standard equipment

- External oil filter
- Intake manifold
- Exhaust manifold
- Intake fan
- Accelerator control
- Electric starter and 12V alternator
- Thermostatic valve
- Fuel feed diaphragm pump
- Water pump
- Flanging plate
- Flywheel with ring gear
- Use, maintenance and spare parts booklet

### Accessories

- Different guards according to use
- Clutches
- Clutch flywheels
- Flanges
- Hydraulic pump adaptors
- Keyswitch panel
- Electric stop
- Electronic plant for plugs
- Alternators
- Radiators
- Blowing fan
- Engine feet
- Fuel tanks
- Mufflers separated
- Dry air-cleaners separated
- Cyclonic precleaners
- Fuel filter on engine
- Cab heating system
- High capacity oil sump



ISO 9001 Cert. n. 0446 - 1405  
QS. 9000 Cert. n. 2231/0



Files for this product available on [www.lombardini.it](http://www.lombardini.it)

Data sheet	LDW2204TDS.PDF
Owner manual	LDW2204TOM.PDF
Service manual	LDW2204TSM.PDF
Technical drawing	LDW2204TTD.DWG
Power curve	LDW2204TPC.PDF



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