



- 2 cylinders
- 851 cm³
- 14 kW/19 HP
- 3600 r.p.m.
- Nm. 42@2200

Homologation

- EPA TIER 2 ■ *
- ECE R 24-03 ▲

Construction

- 4-stroke air cooled diesel engine
- Direct injection
- Flywheel fan air cooling
- Mechanical fuel feeding supplement
- Forced lubrication with oil pump
- Full flow oil filter with external cartridge
- Automatic mechanical fuel supplement
- Torque regulator
- Centrifugal speed governor
- Crankcase in die-cast aluminium
- Electric starting
- Counter-clockwise rotation (viewed from power take-off side)
- Aluminium alloy independent heads
- Independent cast-iron cylinders



Applications

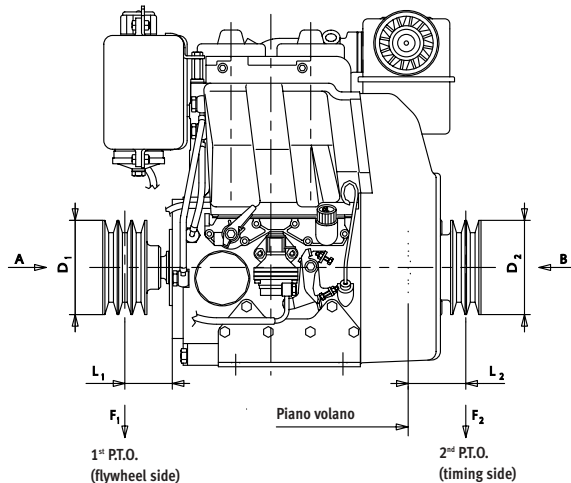
- Dumper
- Vibrating Roller
- Generating Set
- Welding Set
- High pressure cleaner
- Hydraulic power pack
- Agricultural pump
- Two-wheel tractor

* EPA - For information contact Lombardini

Specifications

Cylinders	N.	2
Displacement	cm ³	851
Bore	mm	85
Stroke	mm	75
Compression ratio		19:1
Rating kW/HP	N (80/1269/CEE) ISO 1585	14/19
	NB ISO 3046 IFN	13/17.7
	NA ISO 3046 ICXN	12/16.3
Max. torque	Nm.	42@2200
Max. torque 3 P.T.O.	Nm.	18.0
Counterclockwise rotation		
Engine speed - 3 P.T.O. ratio		1:0.87
Minimum idling speed r.p.m.		1000
Fuel tank capacity	l	4
Oil consumption	kg/h.	0.0085
Oil sump capacity	l	1,8
Min. allowable oil pressure	bar	0.8
Max. allowable inclination for short periods of operation (peak values)		25° (35°)
Vol. of air required for correct combustion @ 3600/3000 r.p.m.	l/min.	1330/1110
Vol. of air required for correct cooling @ 3600/3000 r.p.m.	l/min.	14200/11835
Dry weight	kg	63
Recommended battery	V/Ah	12/55
Axial load	(continuous)	kg 100
	(intermittent)	kg 300

Minimum pulley diameters for belt drive



$$D_1 \text{ (mm)} \geq 700 \cdot [45 + L_1 \text{ (mm)}] \frac{N \text{ (kW)}}{n \text{ (RPM)}}$$

$$D_2 \text{ (mm)} \geq 1540 \cdot [17 + L_2 \text{ (mm)}] \frac{N \text{ (kW)}}{n \text{ (RPM)}}$$

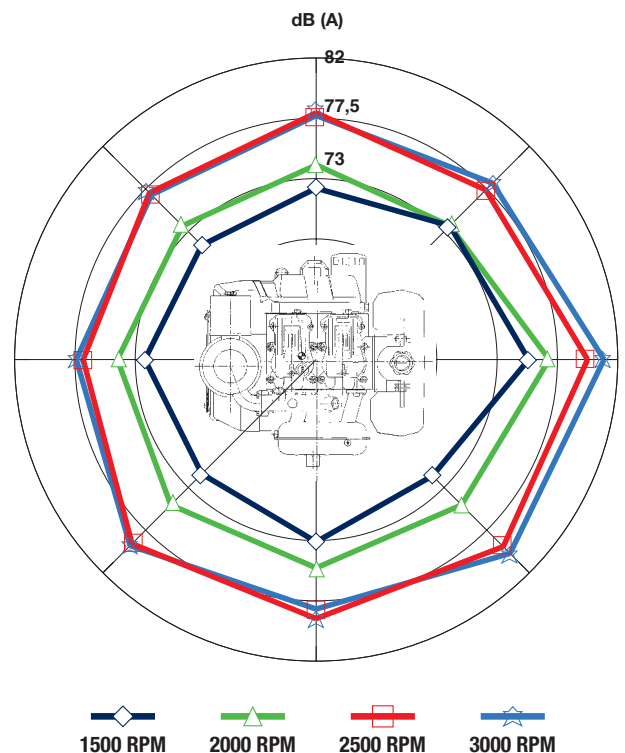
$$F_1 \text{ (N)} = \frac{82000}{45 + L_1 \text{ (mm)}}$$

$$F_2 \text{ (N)} = \frac{37200}{17 + L_2 \text{ (mm)}}$$



Sound pressure level dB (A)

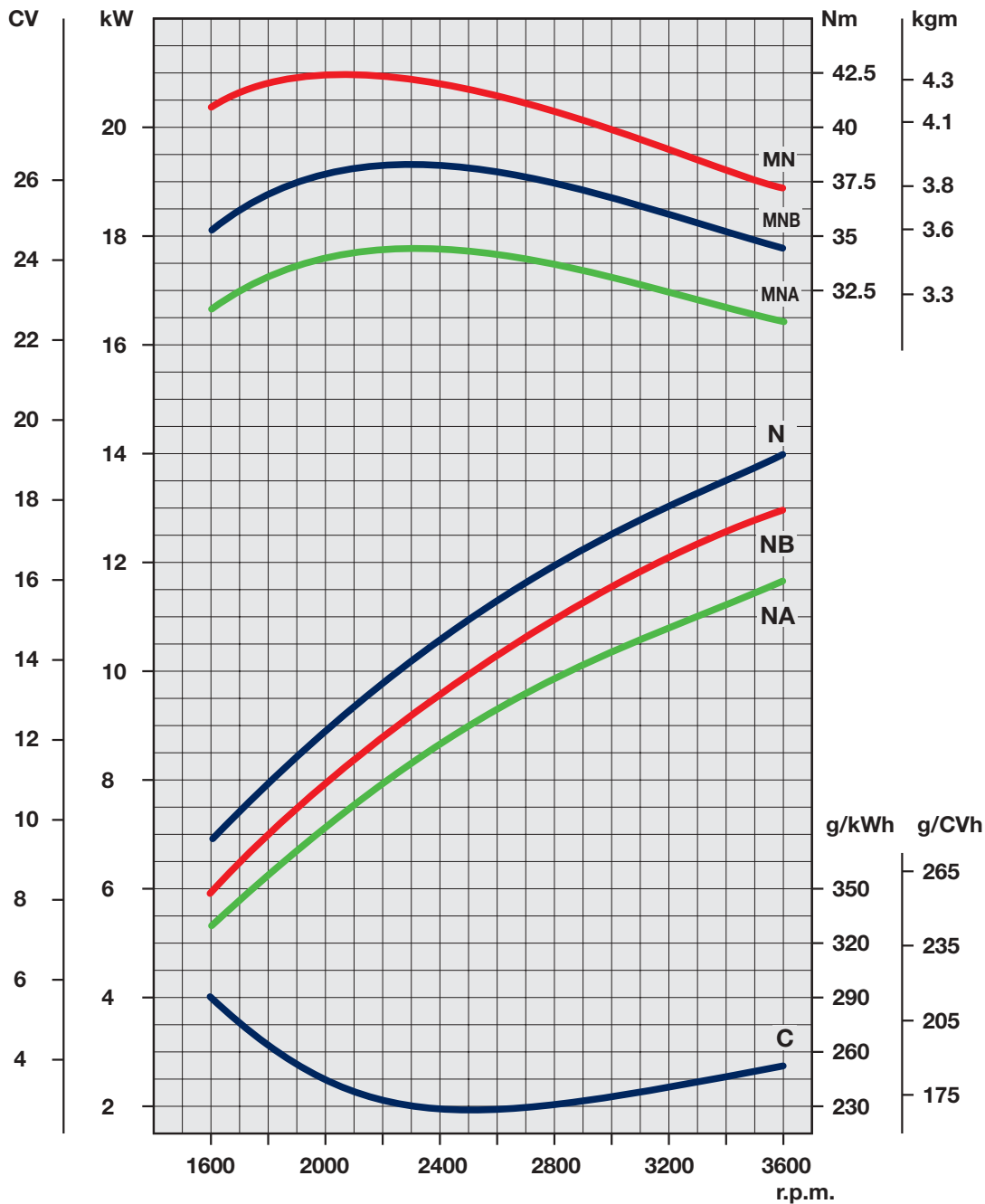
Sound level polar diagram open field - 7 meters microphone - no load running engine.



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Curves

MD 191 @ 3600 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)

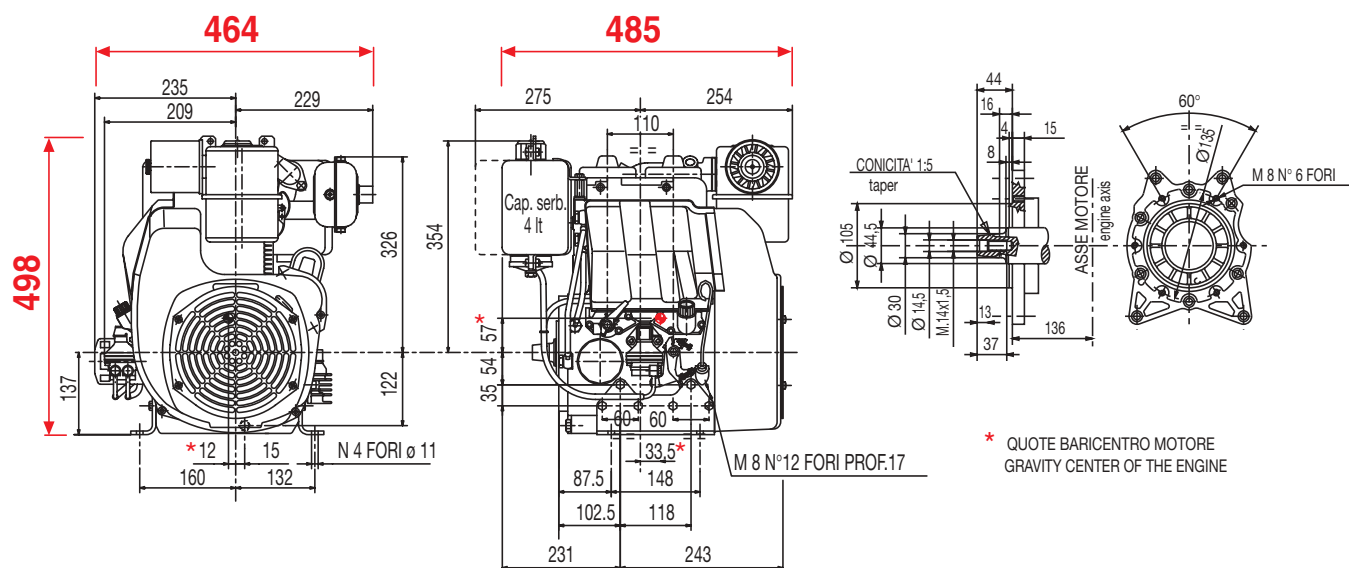
Output power for fixed speed application (including generating sets)

Engine power kW

r.p.m.	Intermittent (NB)	Continuous (NA)
3600	13.0	12.0
3000	11.5	10.5



Technical drawings *



* More specific dimensions are available on www.ruggerini.it (see table at the bottom of the page)

Standard equipment

- Electric starter with 12V alternator
- Black paint on sheet metal parts
- Remote throttle
- Oil bath air filter with prefilter
- External oil filter
- Oil pressure switch
- Combined manifold and exhaust muffler
- \varnothing 30 mm conical shaft power take-off
- Fuel lift pump
- Counter-clockwise rotation on power take-off side
- Fuel tank with filter
- Automatic mechanical supplement
- Oil cooler
- User maintenance - spare parts booklet

Accessories on request

- Different guards according to use
- Range of alternative alternators
- Engine feet
- Compression release
- Flanges
- Control board
- Dry air filter
- External fuel filter
- Clutches
- Range of flywheels for various clutches
- Hydraulic pump adapters
- Range of fuel tanks of various sizes
- Mufflers and exhaust pipes
- Controls
- Pulleys
- Varnishing



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Files for this product available on www.ruggerini.it

Data sheet	MD191DS.PDF
Owner manual	MD191OM.PDF
Service manual	MD191SM.PDF
Technical drawing	MD191TD.DWG
Power curve	MD191PC.PDF

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